2022 CCR ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

SCRUBBER SOLIDS POND NO. 3

Sherburne County (Sherco) Generating Plant Becker, Minnesota

Prepared for:

Northern States Power Company, a Minnesota Corporation

January 31, 2023



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Scrubber Solids Pond No. 3 Becker, Minnesota

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Geologist under the laws of the State of Minnesota.

Additionally, I certify that this report has been prepared to meet the requirements of § 257.90(e), Annual groundwater monitoring and corrective action report, as included in 40 CFR Part 257, Subpart D, Disposal of Coal Combustion Residuals from Electric Utilities.

LICENSED PROFESSIONAI GEOLOGIST

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Date: January 31, 2023

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EXECUTIVE SUMMARY

Scrubbers Solids Pond No. 3 at the Sherburne County Generating Plant is subject to the groundwater monitoring and corrective action requirements under U.S. Code of Federal Regulations, Title 40, Parts §257.90 to §257.98. Scrubber Solids Pond No. 3 operated under the assessment monitoring program in §257.95 throughout the annual reporting period beginning on January 1, 2022 and ending on December 31, 2022. Since Scrubber Solids Pond No. 3 was operated under the assessment monitoring program in §257.95 during all of 2022, statistically significant increases over background were not evaluated or determined for Appendix III to 40 CFR §257 constituents pursuant to §257.94(e) (i.e. detection monitoring). Statistical analysis performed on year 2022 groundwater data indicates no exceedances of groundwater protection standards for any constituents listed in Appendix IV to 40 CFR §257 and, as such, no remedies were selected pursuant to §257.97 and no remedial activities were initiated or are ongoing pursuant to §257.98 during the current annual reporting period.

1. INTRODUCTION

This report presents the documentation of the status of groundwater monitoring and corrective action for the year 2022 (YR2022) for Scrubber Solids Pond No. 3 (Pond 3) at the Sherburne County Generating Plant (Sherco) located in Becker, Minnesota. Pond 3 is owned and operated by Northern States Power Company, a Minnesota Corporation (NSPM).

Pond 3 is an existing coal combustion residuals (CCR) impoundment and is required to comply with provisions of the U.S. Code of Federal Regulations (CFR), Title 40, Parts 257 and 261 relating to disposal of coal combustion residuals from electric utilities. In particular, this report addresses the requirements of 40 CFR Section 257.90(e), annual groundwater monitoring and corrective action for YR2022.

This report has been prepared in general accordance with the reporting procedures outlined in the Sherco Scrubber Solids Pond No. 3 CCR Groundwater Sampling and Analysis Plan (Carlson McCain, 2021a). Any deviations from the requirements of the Groundwater Sampling and Analysis Plan are described in subsequent sections of this report.

1.1 Annual Groundwater Monitoring Report Requirements

According to §257.90(e), CCR units must prepare an annual groundwater monitoring and corrective action report each year that complies with the following:

"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:

- (1) 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;
- (2) 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;
- (3) 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;

- (4) 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); and
- **(5)** Other information required to be included in the annual report as specified in §§ 257.90 through 257.98.
- (6) 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. At a minimum, the summary must specify all of the following:
 - (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;
 - (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;
 - (iii) If it was determined that there was a statistically significant increase over background for one or more constituents listed in appendix III to this part pursuant to § 257.94(e):
 - (A) Identify those constituents listed in appendix III to this part and the names of the monitoring wells associated with such an increase; and
 - (B) Provide the date when the assessment monitoring program was initiated for the CCR unit.
 - (iv) If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in appendix IV to this part pursuant to § 257.95(g) include all of the following:
 - (A) Identify those constituents listed in appendix IV to this part and the names of the monitoring wells associated with such an increase;
 - (B) Provide the date when the assessment of corrective measures was initiated for the *CCR* unit;
 - (C) Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit; and
 - (D) Provide the date when the assessment of corrective measures was completed for the CCR unit.
 - (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
 - (vi) Whether remedial activities were initiated or are ongoing pursuant to § 257.98 during the current annual reporting period.

Section 5.2 of the CCR Groundwater Sampling and Analysis Plan (Carlson McCain, 2021a) also includes a list of items to be included in the annual report that is similar to items 1 through 5 above, with the addition of a water table contour map using data collected from the current year.

This report contains four additional sections following this introduction:

- Section 3 (Site Description) briefly describes the site location and hydrogeologic setting.
- Section 4 (Monitoring Results) discusses the reporting requirements of the CCR Sampling and Analysis Plan and §257.90(e).
- Section 5 (Discussion) summarizes key actions completed in YR2022, describes any problems reported in YR2022 and the actions to resolve the problems, and key activities projected for 2023.
- Section 5 provides a list of referenced documents.

2. SITE DESCRIPTION

Pond 3 is located in the City of Becker, Sherburne County, Minnesota. Pond 3 is approximately 115 acres in size and is part of a larger generating plant site. Phased construction resulted in the northern half of Pond 3 beginning operation in 2004 and the southern half in 2010. The Pond 3 location is shown on Figure 1 and an aerial photograph and site layout map for Pond 3 are shown on Figure 2.

2.1 Site Hydrogeology

The site hydrogeology is discussed in more detail in the Pond 3 Groundwater Monitoring System Certification (Carlson McCain, 2017), which was prepared for compliance with 40 CFR §257.91. Facility hydrogeology is briefly summarized below for convenience. Unless otherwise cited, the data presented in this section is credited to Carlson McCain, 2017.

The Facility is located in the Anoka Sand Plain physiographic region. The site consists of moderate to highly permeable alluvial deposits above and below a low-permeability glacial till. Precambrian granite, the first bed rock encountered, is considered impermeable. Groundwater flows west-southwest beneath the Facility toward the Mississippi River, which is the regional groundwater discharge for the surficial sand and gravel aquifer. The till layer exhibits variable thickness and is absent in some locations, and no perched groundwater conditions have been identified above the till. Groundwater travel velocities are estimated at 331 feet/year.

The conceptual model for the hypothetical (or potential) release of a constituent of concern (COC) from Pond 3 focuses on groundwater as the transport mechanism. The water table beneath Pond 3 is typically below the glacial till layer identified in Section 2.1.2 of the Pond 3 Groundwater Monitoring System Certification. Exfiltration from the Pond 3 area is anticipated to move vertically downward from the base of the pond until it reaches the water table and/or till contact. If the exfiltration first contacts the till, it may flow through the till in the downgradient direction, but may also flow locally along the till contact to a zone of higher permeability within the till or a discontinuity of the till until it reaches the water table. The lack of an identifiable perched zone above the till indicates that flow along the top of the till is minimal. Upon reaching the water table, a COC would likely travel mainly horizontally to the west-southwest toward the Mississippi River.

3. MONITORING RESULTS

Section 3.1 below presents the monitoring results obtained during YR2022 in terms of the specific requirements of §257.90(e) that are to be included in this report.

3.1 Compliance with §257.90(e)

3.1.1 Groundwater Monitoring System (§257.90(e)(1))

The area of Pond 3 and all upgradient and downgradient monitoring well locations included in the Pond 3 CCR groundwater monitoring system are shown and labeled on Figure 2. A summary of the monitoring wells included in the Pond 3 CCR Groundwater Monitoring System is included in Table 1.

3.1.2 Well Installation or Decommissioning (§257.90(e)(2))

No monitoring wells that are part of the groundwater monitoring system for Pond 3 were installed or decommissioned during YR2022.

In April 2022, well P-132 was modified by extending the riser pipe and protective casing approximately 2.5 feet higher since the top of protective casing was previously only about six inches above the ground surface. A section of 2-inch PVC casing was added to the existing casing with a coupler and a section of steel protective casing was welded onto the existing steel protective casing. The new well top of riser was surveyed and a monitoring well locking cap was reinstalled on top of the section of protective casing that was added. 30 gallons of water was purged from the well to remove any potential debris that may have entered the well during the maintenance work.

The dedicated bladder pump previously installed in well P-132 was removed prior to well maintenance work and the pump and tubing assemblies were dismantled. New, longer tubing, fittings, and parts were assembled and re-attached to the same pump previously installed in the well. The reassembled bladder pump was installed in the well at a depth of 35.6 feet at the bottom of the pump.

The well P-132 well and pump maintenance work is described in greater detail in the Monitoring Well Replacement Report (Carlson McCain, 2022b). This report was placed Pond 3's operating record for compliance with §257.91(e)(1).

3.1.3 Summary of Monitoring Data (§257.90(e)(3))

Monitoring data collected during YR2022 is summarized in Tables 2 and 3 and results are provided in Tables 4 and 5. Table 2 summarizes the data collected and includes the number of groundwater samples that were collected for analysis for each upgradient and downgradient well, the dates the samples were collected, and whether the samples were required

by the detection monitoring (i.e. constituents listed Appendix III to 40 CFR §257, hereafter referred to as "Appendix III constituents") or assessment monitoring (i.e. constituents listed in Appendix IV of 40 CFR §257, hereafter referred to as "Appendix IV constituents") programs. Table 3 summarizes the analytical parameters and the number of times that each parameter was analyzed for each well in the groundwater monitoring system. A summary of the spring 2022 monitoring results is provided on Table 4 and a summary of the fall 2022 monitoring results is provided on Table 5.

Assessment Monitoring Data

As discussed in a Technical Memorandum dated April 13, 2018 (Carlson McCain, 2018c), NSPM initiated an assessment monitoring program at the Pond 3 during YR2018, and assessment monitoring has continued since that time. Pursuant to the assessment monitoring semiannual sampling requirements listed in §257.95(d)(1), the following groundwater sampling events were conducted during YR2022:

- Ten of twelve wells in the Pond 3 groundwater monitoring system were sampled during the spring monitoring event conducted on May 4-6 and 26, 2022. Wells P-150 and P-152A could not be sampled due to low water levels, as described in Section 5.2 of this report. Samples were analyzed for Appendix III constituents and Appendix IV constituents. Laboratory reports and field datasheets for the spring monitoring event are included in this report as Appendix A.
- Nine of twelve wells in the Pond 3 groundwater monitoring system were sampled during the fall monitoring event conducted on November 2-4, 2022. Wells P-150 and P-152A were not sampled due to low water levels and well P-162 was not sampled due to pump/tubing issues, as described in Section 5.2 of this report. Samples were analyzed for all Appendix III constituents and only those Appendix IV constituents detected during the spring 2022 assessment monitoring event. Laboratory reports and field datasheets for the fall monitoring event are included in this report as Appendix B.

Recorded Concentrations, Background Concentrations and Groundwater Protection Standards
Pursuant to §257.95(d)(3), the annual groundwater monitoring and corrective action report must
include the recorded concentrations required by §257.95(d)(1), identify the background parameter
concentrations established under §257.94(b) and identify the groundwater protection standards
established under §257.95(d)(2).

- Recorded Concentrations: The concentrations for the spring and fall monitoring events that are recorded in the operating record are attached to this report as Appendices A and B, respectively, and summary tables of the data are also provided in Tables 4 and 5, respectively.
- <u>Background Concentrations</u>: The background wells at Pond 3 include P-130, P-131, P-150, P-151, P-152A, P-153 and P-154A and the background parameter concentrations were obtained as part of the baseline data set that was completed by collecting nine independent samples from each of the wells in the groundwater monitoring system from December 2016 through September 2017. Each of the baseline samples were analyzed for Appendix III and Appendix

IV constituents. Laboratory reports and field datasheets for the baseline dataset, which includes all background concentrations, are provided in Appendix A of the 2017 CCR Annual Groundwater Monitoring and Corrective Action Report (Carlson McCain, 2018b). The background dataset was evaluated and amended in December 2020 to include data obtained from the background wells during the fall 2017 and years 2018 and 2019. As part of the evaluation, data for each well and parameter was reviewed for outliers and trends, and certain outliers were discarded if a data point was determined to be an error.

• Groundwater Protection Standards: Pursuant to §257.95(h)(1) through §257.95(h)(3), groundwater protection standards have been established for each Appendix IV constituent as either: 1) the maximum contaminant level (MCL) established under 40 CFR §141.62 and §141.66, 2) for those constituents without an MCL (i.e. cobalt, lead, lithium, and molybdenum), the concentration listed in §257.95(h)(2), as amended on July 30, 2018, or 3) for constituents for which the background level is higher than the levels identified under 1) or 2), the background concentration.

The range of background concentrations for each Appendix III and Appendix IV constituent sampled pursuant to §257.94(b), as amended in December 2020, and the groundwater protection standard for each Appendix IV constituent are summarized on the following page.

	Parameter	Background Range	Groundwater Protection Standard
	Boron, total (mg/L)	<0.050 to 66.9	NA
III	Calcium, total (mg/L)	25 to 132	NA
Appendix III Parameters	Chloride, total (mg/L)	<1.0 to 74.6	NA
l pu	Fluoride, total (mg/L)	<0.750	NA
ppe ara	рН (lab) (рН)	7.34 to 8.23	NA
Ap Pe	Sulfate, total (mg/L)	2.53 to 45.1	NA
	Total Dissolved Solids (mg/L)	94 to 496	NA
	Antimony, total (mg/L)	< 0.0005	0.006
	Arsenic, total (mg/L)	<0.0005 to 0.0015	0.01
	Barium, total (mg/L)	<0.05 to 0.111	2
	Beryllium, total (mg/L)	<0.0005	0.004
	Cadmium, total (mg/L)	<0.0001 to <0.0005	0.05
 > ,,	Chromium, total (mg/L)	<0.0005 to 0.0027	0.1
Appendix IV Parameters	Cobalt, total (mg/L)	<0.0005 to 0.0013	0.006
ndi:	Fluoride, total (mg/L)	<0.750	4
) Ser	Lead, total (mg/L)	<0.0005 to 0.0121	0.015
^Paı	Lithium Total (mg/L)	<0.015 to <0.051	0.04^{1}
₹ _	Mercury, total (mg/L)	<0.0002	0.002
	Molybdenum, total (mg/L)	<0.0005 to 0.0011	0.1
	Radium, 226 and 228 combined (pCi/L)	<0.84 to 3.1	5
	Selenium, total (mg/L)	<0.0005 to 0.0017	0.05
	Thallium, total (mg/L)	<0.0005	0.002

¹ All §257.94(b) required background samples for lithium were obtained prior to amendment of §257.95(h)(2) on July 30, 2018, which implemented a groundwater protection standard of 0.04 mg/L for lithium. The analytical laboratory lowered the reporting limit for lithium from 0.05 mg/L to 0.015 mg/L in response to the rule amendment.

Statistical Analysis

Statistical analysis was performed on the YR2022 monitoring data using the procedures described in Pond 3's Statistical Analysis Plan (Carlson McCain, 2021b), and demonstrates compliance with §257.95(e), §257.95(f), and §257.95(g) as described below:

- 1. Subpart §257.95(e) (paraphrased): If the concentrations of all Appendix III and Appendix IV constituents are shown to be at or below background values for two consecutive monitoring events, the owner or operator may return to detection monitoring of the CCR unit.
 - a. Based on statistical comparisons of compliance data to background data for Appendix III and Appendix IV constituents, concentrations of one or more constituents continue to exceed background values, therefore Pond 3 will not return to detection monitoring at this time.
- 2. Subpart §257.95(f) (paraphrased): If the concentrations of any Appendix III or Appendix IV constituent are above background values, but all concentrations are below the applicable groundwater protection standard, the owner or operator must continue assessment monitoring.
 - a. Based on statistical comparisons of Appendix III and Appendix IV constituent concentrations to groundwater protection standards, all statistical results are below the applicable groundwater protection standards, therefore Pond 3 will continue assessment monitoring.
- 3. Subpart §257.95(g) (paraphrased): If one or more Appendix IV constituents are detected at statistically significant levels above the groundwater protection standard in any sampling event, the owner or operator must issue notifications of the exceedance(s) and initiate an assessment of corrective measures.
 - a. As stated in item 2.a, above, all Appendix III and Appendix IV concentrations are below applicable groundwater protection standards, therefore no additional notifications or assessment of corrective measures are required.

Groundwater Elevations and Flow Direction

Groundwater elevations and flow direction in the vicinity of Pond 3 during the spring and fall of 2022 monitoring events are shown on the water table elevation contour maps in Figures 3 and 4, respectively. The contours were derived from water level measurements from the wells included in the CCR groundwater monitoring system for Pond 3 along with other nearby monitoring wells and water level piezometers not included in the Pond 3 CCR monitoring system. For both of the events, the flow direction was generally to the west-southwest. The flow direction is consistent with

historical data from over 20 years of monitoring at the facility and is also consistent with the regional groundwater flow direction toward the Mississippi River.

Groundwater elevations at Pond 3 monitoring system wells continued to be low during YR2022 compared to recent years but were approximately 1.6 feet higher on average during the fall of 2022 monitoring event compared to the fall of 2021 monitoring event. The low groundwater levels at Pond 3 are consistent with drought conditions experienced throughout Minnesota during 2021 and 2022. No significant changes in groundwater gradients or flow direction have been observed due to low groundwater levels in the vicinity of Pond 3.

3.1.4 Transition Between Monitoring Programs (§257.90(e)(4))

Pond 3 first transitioned from the detection monitoring program (§257.94) to the assessment monitoring program (§257.95) in 2018, as described in Technical Memorandums dated January 15, 2018 (Carlson McCain, 2018a) and April 13, 2018 (Carlson McCain, 2018c). Since the initial transition to the assessment monitoring program (§257.95) during YR2018, Pond 3 has not transitioned between monitoring programs and continues monitoring under the assessment monitoring program.

3.1.5 Other Information (§257.90(e)(5))

No other information is required to be reported in this CCR Annual Groundwater Monitoring and Corrective Action Report pursuant to §257.90 through §257.98.

4. DISCUSSION

§257.90(e) states that "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."

Pursuant to the rule requirements, Section 4.1 below discusses the key actions completed for the groundwater monitoring program at the Pond 3; Section 4.2 discusses the any problems encountered with the groundwater monitoring and actions to resolve such problems; and Section 4.3 discusses key activities that may occur in the upcoming year.

4.1 Key Actions Completed

Key actions that were completed during YR2022 include the following items:

- The 2021 Annual CCR Groundwater Monitoring and Corrective Report (Carlson McCain, 2022a) was completed, placed in the facility's operating record on January 31, 2022, and posted on the Pond 3's publicly available website by February 28, 2022.
- Modifications to raise the level of the well P-132 riser pipe and protective casing were completed on April 21, 2022. The Monitoring Well Replacement Report (Carlson McCain, 2022b) which describes well and pump maintenance work completed at well P-132 was placed Pond 3's operating record for compliance with §257.91(e)(1).
- Eight of twelve monitoring wells were initially sampled during the spring monitoring event conducted on May 4-6, 2022 and analyzed for all Appendix III and Appendix IV constituents as required by §257.95(d)(1). Wells P-150 and P-152A were not sampled due to low groundwater levels and angled wells P-163 and P-164 were not sampled due pump/tubing issues.
- Shortly after the spring monitoring event, tubing and foot valves were replaced in angled wells P-162, P-163 and P-164 which attach to a Waterra® Hydrolift inertial pump for sampling those wells.
- Wells P-163 and P-164 were sampled as part of the spring monitoring event on May 26, 2022 and analyzed for all Appendix III and Appendix IV constituents as required by §257.95(d)(1).
- Nine of twelve monitoring wells were sampled during the fall event conducted on November 2-4, 2022 and analyzed for all Appendix III constituents and only those Appendix IV constituents that were detected during the spring 2022 event as part of semiannual sampling required by §257.95(d)(1). Wells P-150 and P-152A were not sampled due to low groundwater levels and angled well P-162 was not sampled due pump/tubing issues.
- A second unsuccessful attempt to sample well P-162 as part of the fall monitoring event was made on November 10, 2022.

- Laboratory reports and field datasheets for the spring and fall sampling events were placed in the operating record on August 8, 2022 and January 12, 2023, respectively.
- Statistical evaluation of the spring and fall monitoring event data was performed on August 2, 2022 and December 23, 2022, respectively, for compliance with §257.95(e) through (g).

4.2 Problems

4.2.1 Problems Encountered

Low Groundwater Level Issues

Low groundwater levels prevented samples from being collected from wells P-150 and P-152A during the spring and fall monitoring events during YR2022. Attempts were made to collect samples from the wells using the dedicated bladder pumps installed in the wells during both events and a non-dedicated submersible pump and associated tubing during the spring event. The water level in the wells was below the top of the bladder pumps which prevented the bladder pumps from functioning. Submersible pumps also generally need at least a one-foot water column in wells for the pumps to work, and the water column lengths in wells P-150 and P-152A were 0.1 and 0.8 feet, respectively, during the spring monitoring event. The water column lengths in wells P-150 and P-152A during the fall event were 1.54 and 2.19 feet, however, the field sampler elected to not attempt sampling the wells with a submersible pump. The submersible pump was not attempted likely due to concerns with obtaining poor quality samples that tend to cause detections of certain metals that are not representative of groundwater.

Angled Well Pump/Tubing Issues

The Waterra® Hydrolift inertial pump and associated tubing assemblies used for sampling angled wells P-162, P-163 and P-164 failed to function properly at wells P-163 and P-164 during the spring monitoring event and well P-162 during the fall monitoring resulting in the wells (at least initially) not being sampled. Two unsuccessful attempts were made to purge and sample well P-162 during the fall monitoring event on November 4 and 10, 2022. In each case, the pump appeared to work normally but the pump and tubing assemblies in the wells would not sustain continuous purge or did not produce any water at all.

The cause of the inertial pump and tubing assembly issues is uncertain at this time. One-half-inch inner diameter high density polyethylene (HPDE) tubing is used in the wells that was originally installed in each of the wells after well installation in 2016. Originally it was suspected that the tubing had become more pliable over the 6-year period of being in the wells resulting in less water being able to enter the tubing through the foot valves during each pump cycle. As such, each of the tubing assemblies in wells P-162, P-163 and P-164 were replaced immediately after the spring monitoring event. As expected, each of the pumps worked on May 26, 2022 when samples were successfully obtained from wells P-163 and P-164 for the spring monitoring event. However, the pump/tubing assembly failed once again during the fall monitoring event at well P-162 and problems sustaining a purge were encountered at well P-164 too. Another possible cause of the pump/tubing issues is lower groundwater levels in area as discussed above. The length of the water column was measured

in each of the wells during the spring monitoring event after the problems were first identified. The water column lengths in each of the angled wells P-162, P-163 and P-164 were greater than ten feet during the spring monitoring event. The end of the tubing assemblies in each of the wells are installed approximately one to two feet from the well bottoms.

Other Problems

No other significant problems with the groundwater monitoring system, or deviations from the CCR Groundwater Sampling and Analysis Plan were reported at the facility during YR2022. No corrective action was required at the facility during YR2022.

4.2.2 Resolution of Problems

Low Groundwater Level Issues

Low groundwater levels prevented samples from being collected from wells P-150 and P-152A during the spring and fall monitoring events, which represents a data gap from both the spring and fall monitoring events.

It is unknown whether groundwater levels will recover sufficiently to allow sampling of wells P-150 and P-152A using the dedicated bladder pump in the wells during the spring 2023 monitoring event. As such, NSPM may take action(s) to eliminate this data gap including but not limited to the following:

- Modifying the Pond 3 CCR groundwater monitoring system.
- Replacing wells P-150 and P-152A with deeper wells at the same location prior to the spring 2023 monitoring event.
- Lower the dedicated bladder pump in the well P-152A approximately 0.5 feet to maximize the ability to obtain samples from the well.

Alternatively, NSPM may wait for groundwater levels to sufficiently recover to be able to sample the wells with the dedicated bladder pumps in the wells. Considering Pond 3 has seven upgradient wells to pool for interwell statistical analysis, missing data from two background wells for possibly several monitoring events should not significantly affect data interpretation at Pond 3. Background water quality at Pond 3 continues to be accurately represented without samples from wells P-150 and P-152A in YR2022.

Angled Well Pump/Tubing Issues

Prior to the spring of 2023 monitoring event, the pump and tubing assemblies and water levels will be evaluated to determine if current purging and sampling methods are adequate to sustain a continuous purge in order to be able to sample angled wells P-162, P-163 and P-164. If not, alternative pumps or pumping methods will be considered including but not limited to installing bladder pumps in the wells for purging and sampling.

Failure of the inertial pump/tubing assembly in well P-162 prevented a water sample from obtained from the well during the fall monitoring event, which represents a data gap from the fall monitoring event.

Statistical analysis of data from P-162 through the spring of 2022 monitoring event indicates that boron, chromium, molybdenum, selenium and total dissolved solids consistently exhibit concentrations above background water quality in this well. Trend analysis indicates upward trends for detectable Appendix III and Appendix IV constituents including boron, chromium, selenium, sulfate and TDS and a downward trend for molybdenum in the data from well P-162. Review of time-concentration graphs indicates slow increases for the constituents with slow upward trends since monitoring of the well began in 2016. Monitoring results from well P-163, which is located about 630 feet south of well P-162, indicates constituents such as boron, sulfate and TDS in samples from the well have exhibited higher concentrations compared to well P-163. No new trends or increases in constituent concentrations above past results at well P-163 were identified during the fall monitoring event. Due to the slow-moving concentration increases for boron, chromium, selenium, sulfate and TDS at well P-162 prior to the fall monitoring event, and the lack of significant constituent concentration increases at well P-163 during the fall monitoring event; the likelihood of missing any significant constituent concentration increases at well P-162 during the fall monitoring event appears to be low.

4.3 Key Activities for 2023

The following key actions are anticipated at the Pond 3 in the year 2023:

- 1. Evaluation and any corrective action necessary to allow purging and sampling from angled wells P-162, P-163, and P-164 prior to the spring monitoring event.
- 2. Routine, semi-annual assessment monitoring events at monitoring system wells are planned in the spring between March 15 and May 15, 2023 and in the fall between September 15 and November 15, 2023.
- 3. Statistical analysis of monitoring results will be conducted to demonstrate compliance with §257.95(e) through (g).

5.0 REFERENCES

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Carlson McCain, 2021a. CCR Groundwater Sampling and Analysis Plan – Revision #2, Scrubber Solids Pond No. 3, Sherco Generating Plant, prepared for Northern States Power Company, A Minnesota Corporation, May 6, 2021.

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Carlson McCain, 2022a. 2021 CCR Annual Groundwater and Corrective Action Monitoring Report, Scrubber Solids Pond No. 3, Sherco Generating Plant, prepared for Northern States Power Company, A Minnesota Corporation, January 31, 2022.

Carlson McCain, 2022b. Monitoring Well Replacement Report, Sherco Generating Plant NPDES/SDS Permit No. MN0002186, prepared for Northern States Power Company, A Minnesota Corporation, June 23, 2022.

Tables

Table 1
CCR Groundwater Monitoring System
Scrubber Solids Pond No. 3

	Minnesota				Elevation		Screen	Well	Well		
	Unique	Date	Site Coord	linates (ft)	Top of	Well	Length	Diameter	Depth		Hydrologic
Well ID	Well ID	Installed	Easting	Northing	Riser Pipe	Type	(ft)	(inches)	(ft)	Monitoring Status	Location
P-130	722085	5/12/2005	2031446.8	865871.1	965.59	Vertical	10	2	46.84	Routine Semi-annual	Upgradient
P-131	722086	5/16/2005	2033046.4	865133.3	966.03	Vertical	10	2	48.55	Routine Semi-annual	Upgradient
P-132	722087	5/11/2005	2031594.6	862211.7	958.58	Vertical	10	2	38.88	Routine Semi-annual	Downgradient
P-150	806320	10/7/2014	2032983.1	867047.3	964.41	Vertical	10	2	36.65	Routine Semi-annual	Upgradient
P-151	806315	10/9/2014	2032644.2	865848.2	942.44	Vertical	10	2	20.16	Routine Semi-annual	Upgradient
P-152A	806318	10/10/2014	2031471.6	866696.4	965.87	Vertical	10	2	42.35	Routine Semi-annual	Upgradient
P-153	806314	10/13/2014	2032310.4	864158.5	944.94	Vertical	10	2	23.63	Routine Semi-annual	Upgradient
P-154A	806316	10/15/2014	2032966.3	862868.4	961.44	Vertical	10	2	49.53	Routine Semi-annual	Upgradient
P-162	822156	7/25/2016	2030610	864631.7	1020.9	Angled	20	2	166.00	Routine Semi-annual	Downgradient
P-163	822157	7/19/2016	2030604	863992	1024.98	Angled	20	2	176.00	Routine Semi-annual	Downgradient
P-164	822158	7/14/2016	2030610	863059.5	1020.49	Angled	20	2	167.00	Routine Semi-annual	Downgradient
P-165	822159	7/12/2016	2030714	862215.8	957.13	Vertical	10	2	40.13	Routine Semi-annual	Downgradient

*Notes:

Elevation is feet above mean sea level

Table 2
Summary of Data Collected
Sherco Scrubber Solids Pond No. 3

	Upgradient Wells												
Well	Number of	Sample	e Dates										
ID	Samples	Spring 2022 ¹	Fall 2022 ²										
P-130	2	5/6/2022	11/2/2022										
P-131	2	5/5/2022	11/2/2022										
P-150	0	NS ³	NS ³										
P-151	2	5/5/2022	11/3/2022										
P-152A	0	NS ³	NS ³										
P-153	2	5/5/2022	11/3/2022										
P-154A	2	5/5/2022	11/4/2022										

Downgradient Wells												
Well	Number of	Sample	e Dates									
ID	Samples	Spring 2022 ¹	Fall 2022 ²									
P-132	2	5/4/2022	11/4/2022									
P-162	1	5/5/2022	NS ⁴									
P-163	2	5/26/2022	11/4/2022									
P-164	2	5/26/2022	11/4/2022									
P-165	2	5/5/2022	11/4/2022									

¹ Assessment monitoring event sampled and analyzed for appendix III and appendix IV of §257 constituents as required by §257.95(b).

² Assessment monitoring semiannual resample event sampled and analyzed for appendix III of §257 and those appendix IV of §257 constituents detected during Spring 2021 as required by §257.95(d)(1).

³ No Sample. Low groundwater levels prevented a sample from being collected from the well during the specified monitoring event.

⁴ No Sample. Inertial pump/tubing issues prevented a sample from being collected from the well on the specified date.

Table 3
Count of Parameters Analyzed by Well
Sherco Scrubber Solids Pond No.3

Appendix III Parameters													
Parameter	Well ID and Number of Samples												
r arameter	P-130	P-131	P-132	P-150	P-151	P-152A	P-153	P-154A	P-162	P-163	P-164	P-165	
Boron, total (mg/L)	2	2	2	0	2	0	2	2	1	2	2	2	
Calcium, total (mg/L)	2	2	2	0	2	0	2	2	1	2	2	2	
Chloride, total (mg/L)	2	2	2	0	2	0	2	2	1	2	2	2	
Fluoride, total (mg/L)	2	2	2	0	2	0	2	2	1	2	2	2	
рН (lab) (рН)	2	2	2	0	2	0	2	2	1	2	2	2	
Sulfate, total (mg/L)	2	2	2	0	2	0	2	2	1	2	2	2	
Total Dissolved Solids (mg/L)	2	2	2	0	2	0	2	2	1	2	2	2	

	Appendix IV Parameters													
Parameter					Well	ID and Nu	mber of Sa	amples						
r arameter	P-130	P-131	P-132	P-150	P-151	P-152A	P-153	P-154A	P-162	P-163	P-164	P-165		
Antimony, total (mg/L)	1	1	1	0	1	0	1	1	1	1	1	1		
Arsenic, total (mg/L)	2	2	2	0	2	0	2	2	1	2	2	2		
Barium, total (mg/L)	2	2	2	0	2	0	2	2	1	2	2	2		
Beryllium, total (mg/L)	1	1	1	0	1	0	1	1	1	1	1	1		
Cadmium,total (mg/L)	1	1	1	0	1	0	1	1	1	1	1	1		
Chromium, total (mg/L)	2	2	2	0	2	0	2	2	1	2	2	2		
Cobalt, total (mg/L)	1	1	1	0	1	0	1	1	1	1	1	1		
Fluoride, total (mg/L)	2	2	2	0	2	0	2	2	1	2	2	2		
Lead, total (mg/L)	1	1	1	0	1	0	1	1	1	1	1	1		
Lithium Total (mg/L)	1	1	1	0	1	0	1	1	1	1	1	1		
Mercury, total (mg/L)	1	1	1	0	1	0	1	1	1	1	1	1		
Molybdenum, total (mg/L)	2	2	2	0	2	0	2	2	1	2	2	2		
Selenium, total (mg/L)	2	2	2	0	2	0	2	2	1	2	2	2		
Thallium, total (mg/L)	1	1	1	0	1	0	1	1	1	1	1	1		
Radium, 226 and 228 combined (pCi/L)	1	1	1	0	1	0	1	1	1	1	1	1		

Table 4 Spring 2022 Groundwater Summary Data Scrubber Solids Pond No. 3

Appendix III Parameters														
							V	Vell ID and	Sample Da	te				
Parameter	Units	GWPS	P-130	P-131	P-132	P-150 ¹	P-151	P-152A ¹	P-153	P-154A	P-162	P-163	P-164	P-165
			5/6/2022	5/5/2022	5/4/2022	5/5/2022	5/5/2022	5/5/2022	5/5/2022	5/5/2022	5/5/2022	5/26/2022	5/26/2022	5/6/2022
Boron, total	mg/L	NA	< 0.050	< 0.050	0.077		< 0.050		< 0.050	< 0.050	0.34	0.073	0.083	< 0.050
Calcium, total	mg/L	NA	42	75	83		46		25	72	140	84	75	71
Chloride, total	mg/L	NA	<1.0	25	1.9		16		<1.0	29	40	28	16	7.9
Fluoride, total	mg/L	NA	< 0.75	< 0.75	< 0.75		< 0.75		< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75
pH, Lab	pН	NA	7.89	7.85	7.7		7.97		8.11	7.96	7.74	7.8	7.84	7.87
Sulfate, total	mg/L	NA	3.6	31	51		15		4.1	33	180	76	69	28
Total Dissolved Solids	mg/L	NA	170	300	360		200		100	330	750	360	350	300

Appendix IV Parameters														
							V	Vell ID and	Sample Da	te				
Parameter	Units	GWPS	P-130	P-131	P-132	P-150 ¹	P-151	P-152A ¹	P-153	P-154A	P-162	P-163	P-164	P-165
			5/6/2022	5/5/2022	5/4/2022	5/5/2022	5/5/2022	5/5/2022	5/5/2022	5/5/2022	5/5/2022	5/26/2022	5/26/2022	5/6/2022
Antimony, total	mg/L	0.006	< 0.00050	< 0.00050	< 0.00050	-	< 0.00050		< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Arsenic, total	mg/L	0.01	0.00054	0.00063	< 0.00050		< 0.00050		0.0013	0.0013	0.00064	0.00057	0.00055	< 0.00050
Barium, total	mg/L	2	0.031	0.072	0.037		0.035		0.015	0.05	0.069	0.033	0.049	0.036
Beryllium, total	mg/L	0.004	< 0.00010	< 0.00010	< 0.00010	-	< 0.00010		< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Cadmium,total	mg/L	0.005	< 0.00010	< 0.00010	< 0.00010	-	< 0.00010		< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010	< 0.00010
Chromium, total	mg/L	0.1	0.0014	0.0015	0.0023	-	0.0015	-	0.00094	0.00093	0.0079	0.02	0.0092	0.0015
Cobalt, total	mg/L	0.006	< 0.00050	< 0.00050	< 0.00050	-	< 0.00050	-	< 0.00050	< 0.00050	< 0.00050	< 0.00050	<0.00050	< 0.00050
Fluoride, total	mg/L	4	< 0.75	< 0.75	< 0.75	-	< 0.75	-	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75
Lead, total	mg/L	0.015	< 0.00050	< 0.00050	< 0.00050	-	< 0.00050		< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050	< 0.00050
Lithium, total	mg/L	0.04	< 0.015	< 0.015	< 0.015	-	< 0.015		< 0.015	< 0.015	< 0.015	< 0.015	< 0.015	< 0.015
Mercury, total	mg/L	0.002	< 0.00020	< 0.00020	< 0.00020		< 0.00020		< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
Molybdenum, total	mg/L	0.1	< 0.00050	0.0006	< 0.00050		< 0.00050		0.00078	0.00075	0.0022	0.0016	0.00093	< 0.00050
Selenium, total	mg/L	0.05	< 0.00050	0.00058	0.0012		< 0.00050		< 0.00050	< 0.00050	0.0091	0.0096	0.008	0.00099
Thallium, total	mg/L	0.002	< 0.00050	< 0.00050	< 0.00050		< 0.00050		< 0.00050	< 0.00050	< 0.00050	< 0.00050	<0.00050	< 0.00050
Radium, 226 and 228 combined	pCi/L	5	<1.0	< 0.87	<1.4	-	< 0.84		< 0.96	<1.2	<1.3	<1.1	<1.4	< 0.60

						Field Para	meters										
							V	Vell ID and	l ID and Sample Date								
Parameter	Units	GWPS	P-130	P-131	P-132	P-150 ¹	P-151	P-152A ¹	P-153	P-154A	P-162	P-163	P-164	P-165			
			5/6/2022	5/5/2022	5/4/2022	5/5/2022	5/5/2022	5/5/2022	5/5/2022	5/5/2022	5/5/2022	5/26/2022	5/26/2022	5/6/2022			
ORP	mV	NA	124	170	160		166		180	168	108			126			
Oxygen, dissolved	mg/L	NA	10	7.7	8.3		10		11	4.5	5.9			10			
pH, field	pН	NA	7.6	7.5	7.3		7.7		7.4	7.8	7.6			7.7			
Specific Cond, field	μmhos/cm	NA	360	600	670		380		200	530	1190	467	427	580			
Static Water Level	ft	NA	40.65	38.7	34.63	36.56	15.71	41.45	19.77	36.38	149	163.7	156.5	33.94			
Temperature	degrees C	NA	11.1	10.5	11.7		9.3		10.5	10.3	9.2	10.7	11.8	10.4			
Turbidity, field	NTU	NA	2	0.87	1.3		1.8	-	0.92	0.6	1.1			1.4			
Water Level Elevation	ft	NA	924.94	927.33	923.95	927.85	926.73	924.42	925.17	925.06				923.19			
GWPS = Groundwater Protection Stan	Two dashed li	nes = Not Ana	lyzed	1 Low ground	water levels pi	evented a sam	ple from being	g collected fron	the well on the	ne specified da	te.						

NA = Not Applicable

Downgradient Well

2022 CCR Annual Groundwater Monitoring Report

Table 5
Fall 2022 Groundwater Summary Data
Scrubber Solids Pond No. 3

Appendix III Parameters														
							V	Vell ID and	Sample Dat	te				
Parameter	Units	GWPS	P-130	P-131	P-132	P-150 ¹	P-151	P-152A ¹	P-153	P-154A	P-162 ²	P-163	P-164	P-165
			11/2/2022	11/2/2022	11/4/2022	11/3/2022	11/3/2022	11/3/2022	11/3/2022	11/4/2022	11/4/2022	11/4/2022	11/4/2022	11/4/2022
Boron, total	mg/L	NA	< 0.050	< 0.050	0.093		< 0.050		< 0.050	< 0.050		0.37	0.069	0.057
Calcium, total	mg/L	NA	74	66	80		37		25	57		110	78	57
Chloride, total	mg/L	NA	2.9	10	1.5		6.4		<1.0	8		20	11	2.1
Fluoride, total	mg/L	NA	< 0.75	< 0.75	< 0.75		< 0.75		< 0.75	< 0.75		< 0.75	< 0.75	< 0.75
pH, Lab	pН	NA	7.7	7.87	7.71		7.96		8.09	7.94		7.91	8.01	7.86
Sulfate, total	mg/L	NA	10	13	32		7.7		5.1	23		120	55	18
Total Dissolved Solids	mg/L	NA	260	250	310		180		120	260		520	340	240

Appendix IV Parameters														
							I	Vell ID and	Sample Dat	te				
Parameter	Units	GWPS	P-130	P-131	P-132	P-150 ¹	P-151	P-152A ¹	P-153	P-154A	P-162 ²	P-163	P-164	P-165
			11/2/2022	11/2/2022	11/4/2022	11/3/2022	11/3/2022	11/3/2022	11/3/2022	11/4/2022	11/4/2022	11/4/2022	11/4/2022	11/4/2022
Antimony, total	mg/L	0.006												
Arsenic, total	mg/L	0.01	< 0.00050	0.00063	< 0.00050		< 0.00050		0.0014	0.0014	-	0.00056	0.00054	< 0.00050
Barium, total	mg/L	2	0.059	0.069	0.033		0.031		0.017	0.043	-	0.051	0.045	0.029
Beryllium, total	mg/L	0.004		-										
Cadmium,total	mg/L	0.005	-											
Chromium, total	mg/L	0.1	0.0012	0.0012	0.0022		0.00078		0.001	0.00092		0.01	0.0041	0.0014
Cobalt, total	mg/L	0.006	-											
Fluoride, total	mg/L	4	<0.75	< 0.75	< 0.75		< 0.75		< 0.75	< 0.75		< 0.75	< 0.75	<0.75
Lead, total	mg/L	0.015												
Lithium, total	mg/L	0.04												
Mercury, total	mg/L	0.002		-										
Molybdenum, total	mg/L	0.1	< 0.00050	< 0.00050	< 0.00050		0.00056		0.00079	0.00068		0.00071	< 0.00050	< 0.00050
Selenium, total	mg/L	0.05	0.00055	0.00066	0.0018		< 0.00050		0.00062	< 0.00050		0.025	0.0072	0.0013
Thallium, total	mg/L	0.002												
Radium, 226 and 228 combined	pCi/L	5												

					I	ield Paran	neters							
							V	Vell ID and	Sample Dat	te				
Parameter	Units	GWPS	P-130	P-131	P-132	P-150 ¹	P-151	P-152A ¹	P-153	P-154A	P-162 ²	P-163	P-164	P-165
			11/2/2022	11/2/2022	11/4/2022	11/3/2022	11/3/2022	11/3/2022	11/3/2022	11/4/2022	11/4/2022	11/4/2022	11/4/2022	11/4/2022
ORP	mV	NA	36	31	140		68		65	130		84	15	145
Oxygen, dissolved	mg/L	NA	7.5	10	10		8.5		9.9	2.1		11	9.1	10
pH, field	pН	NA	7.3	7.6	7.6		7.9		8.2	8		7.7	7.9	7.8
Specific Cond, field	μmhos/cm	NA	940	840	840		470		350	680		600	460	630
Static Water Level	ft	NA	39.58	37.12	33.88	35.14	14.29	40.16	18.51	35.18		163.7	156.5	33.67
Temperature	degrees C	NA	12.9	12.5	9.6		14.5		13.6	9.8		9.9	11.3	9.8
Turbidity, field	NTU	NA	5.1	2.4	1.2		1.8		2.6	2.1		4.4	8.6	1.4
Water Level Elevation	ft	NA	926.01	928.91	924.7	929.27	928.15	925.71	926.43	926.26				923.46

GWPS = Groundwater Protection Standard

Two dashed lines = Not Analyzed

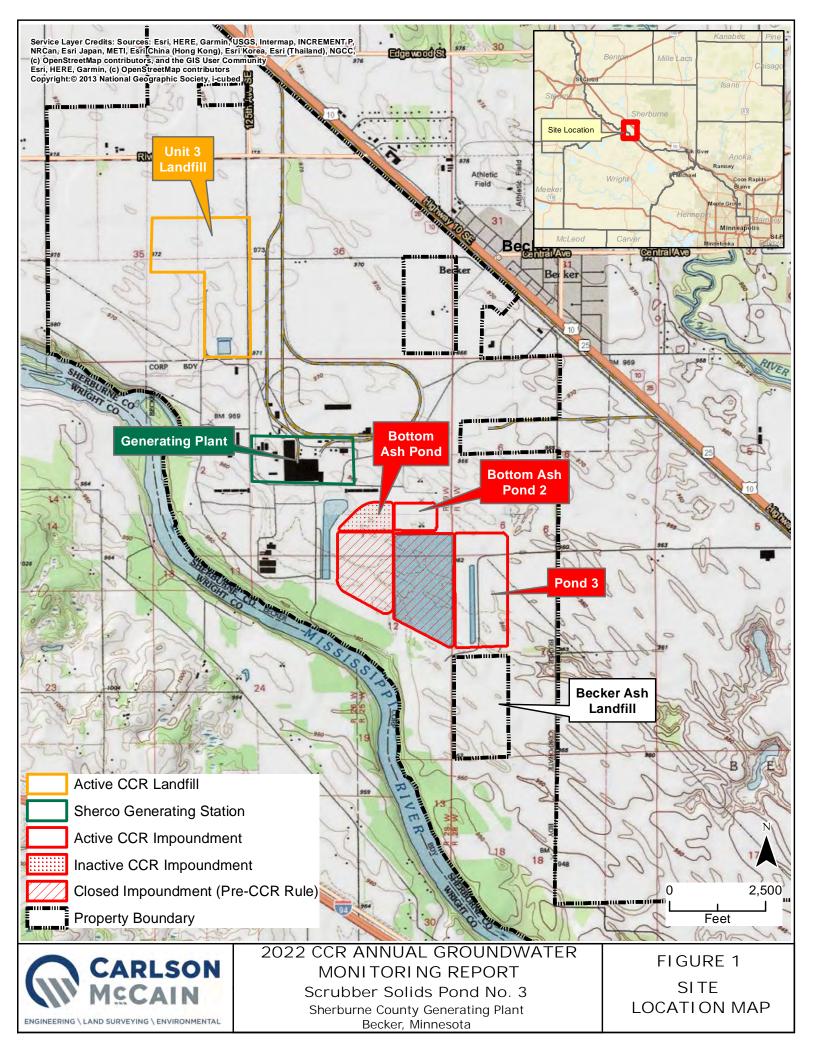
¹ Low groundwater levels prevented a sample from being collected from the well on the specified date.

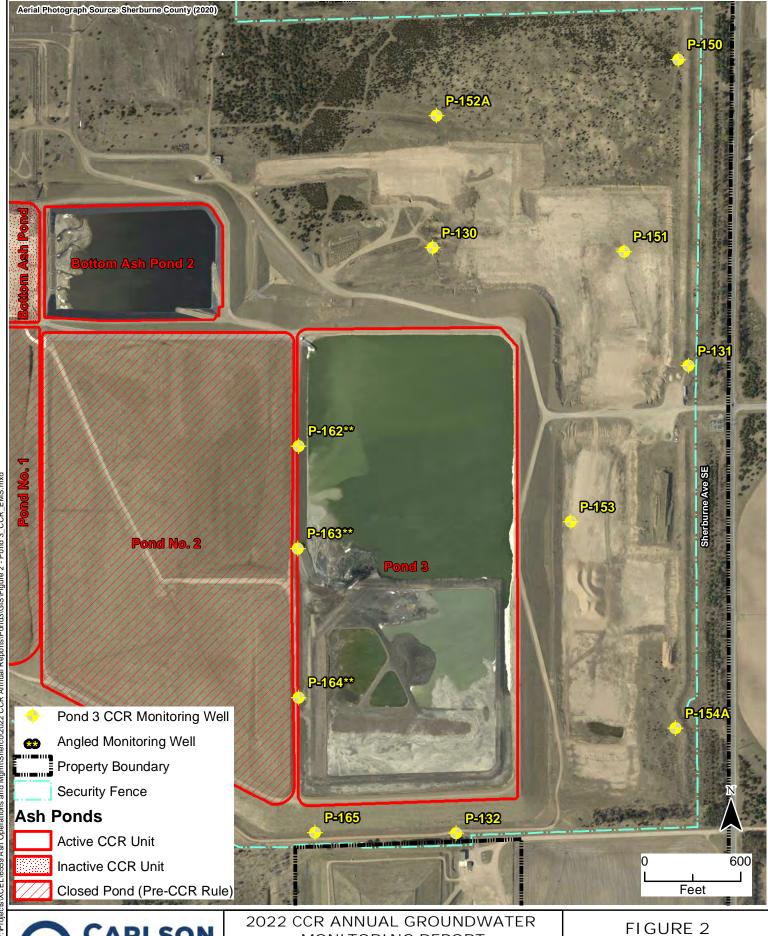
NA = Not Applicable

Downgradient Well

² Inertial pump/tubing issues prevented a sample from being collected from the well on the specified date.

Figures

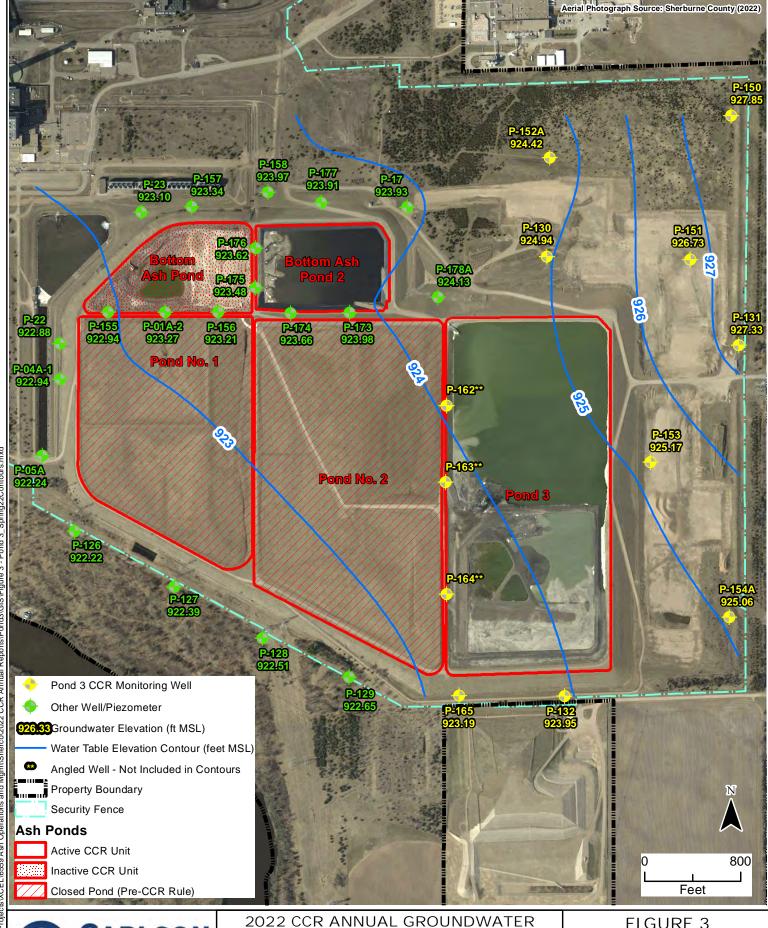






2022 CCR ANNUAL GROUNDWATER
MONITORING REPORT
Scrubber Solids Pond No. 3
Sherburne County Generating Plant
Becker, Minnesota

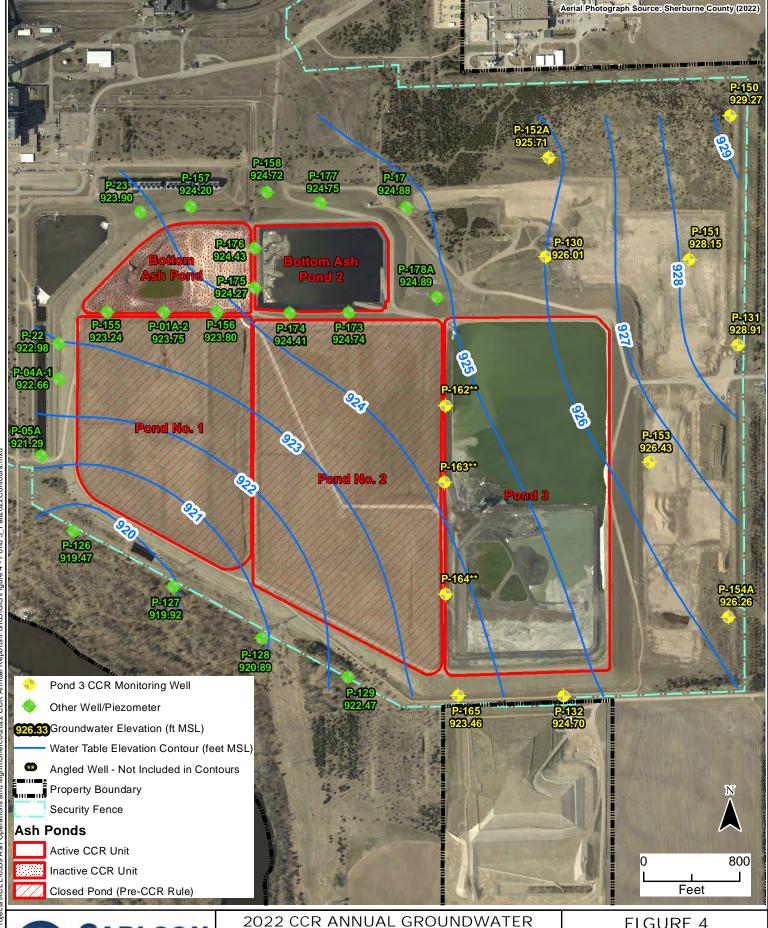
CCR GROUNDWATER
MONITORING SYSTEM





O22 CCR ANNUAL GROUNDWATER
MONITORING REPORT
Scrubber Solids Pond No. 3
Sherburne County Generating Plant
Becker, Minnesota

FIGURE 3 WATER TABLE ELEVATION CONTOUR MAP (5/2-5/2022)





2022 CCR ANNUAL GROUNDWATER
MONITORING REPORT
Scrubber Solids Pond No. 3
Sherburne County Generating Plant
Becker, Minnesota

FIGURE 4 WATER TABLE ELEVATION CONTOUR MAP (10/31-11/3/22)

Appendix A

Spring 2022 Assessment Monitoring Event Field Datasheets and Laboratory Reports



	Inside	Diameter	2	(inches)	Key#	2106	d	Locke	d	☐ Not	Locked
	Casin	g Material:	⊠ PVC	□ s	teel		Stainless St				
Ì	Miles II.	D	epth Meas	urement	and Elev	vation	s (from to	p of well	casing)	
					Top of	Casing	Elevation	N	9	Fee	t
١							Well Depth	10000	-84	Fee	
ı	Ct		er level meas						- 65	-	t*5/2/2 L
ı	50		vel measuren			3070/35454			.0.5	—Fee	
١	Purae Met	hod Bloods	Children	vater Leve	el Elevatio	n Belo	re Purging	Pump ID		Fee	t
ı	Date Pur		5/4/22		-		Wat	er Column			Feet
l	Time Pur		40-075	-8.	-			ng Volume		_	Gallons
ı	Pump F		0.2		GPM/L	PM		ne Purged		W-1	Gallons
L	-	_	5/6/22			:-I-I D	2000				
ı		Sampled_	1005	-	г			Measure			
ı		-	ump + Fiste	- [Coon		79	(units)		0.10	
ı	oampi	Meter ID		-	opec. emp. Obs	3105.000000	~	(µmhos/cm)		lity Z.	
		TWOCKED TILL	Pu 2 40		emp. Oos	erved	earre.	('C)		Eh 12	4 (mV)
ı	Δ,		Rus	T	omn Con	Section	166 11 1	and a	7345		4-
ļ	N-03	nalyzed by	Bor	7.0	emp. Corr	C (2)		(°C)	-	ier_ <i>µ</i>	<u>ut</u>
	Fi	nalyzed by_	ments Temp.	Corrected		Ø	Yes	☐ No	□ N	A.	<u>/</u>
	Fi	nalyzed by eld Measure e for Soluble	ments Temp. Metals Filter	Corrected red in Field	t	× ×			-	A.	<u>ut</u>
	Fi Sampl	nalyzed by _ eld Measure e for Soluble Tempe	ments Temp. Metals Filter rature Correc	Corrected red in Field tion Factor	t: : 10.3	*C	Yes Yes	□ No □ No .	□ N	A.	<u>vt</u>
	Fir Sampl Weather Co	nalyzed by eld Measure ie for Soluble Tempe onditions Du	ments Temp. Metals Filter rature Correct ring Sampling	Corrected red in Field tion Factor	t: : 10.3	*C	Yes	□ No □ No .	□ N	A.	<u>/ </u>
	Find Sample Door Sample Door	eld Measure e for Soluble Tempe onditions Du escription:	ments Temp. Metals Filter rature Correct ring Sampling	Corrected red in Field tion Factor	t: : 10.3	*C	Yes Yes	□ No □ No .	□ N	A.	<u>/ </u>
	Find Sample Door Sample Door	nalyzed by eld Measure ie for Soluble Tempe onditions Du	ments Temp. Metals Filter rature Correct ring Sampling	Corrected red in Field tion Factor	t: : 10.3	*C	Yes Yes	□ No □ No .	□ N	A.	<i>t</i>
	Fire Sample Weather Control Sample Do	eld Measure e for Soluble Tempe onditions Du escription:	ments Temp. Metals Filter rature Correct ring Sampling	Corrected red in Field tion Factor g: 52 F	: : <u>10.3</u> Sam	⊠ ⊠ *c	Yes Yes EQS/	□ No □ No	N	A A	
	Find Sample Door Sample Door	eld Measure e for Soluble Tempe onditions Du escription:	ments Temp. Metals Filter rature Correct ring Sampling	Corrected red in Field tion Factor g: 52 52	t: : 10.3		Yes Yes	□ No □ No □ No □ Turbidity (NTU)	□ N	A A	olume Purge
	Fire Sample Weather Control Sample Do	eld Measure e for Soluble Tempe onditions Du escription: ervations:	ments Temp. Metals Filter rature Correct ring Sampling	Corrected red in Field tion Factor g: 52 F	1: 10.3 Sann	(°C)	Yes Yes EQS/	□ No □ No □ No □ Turbidity	□ N □ N	A A	olume Purge
	Find Sample Domestime Sample Domestime	eld Measure eld Measure eld For Soluble Tempe onditions Du escription: ervations: pH (units)	ments Temp. Metals Filter rature Correct ring Sampling Accusion Specific Con (jumhos	Corrected red in Field tion Factor g: 52 ft ductance (om)	Temp (obser 10 -	(°C) (°C) (ved)	Yes Yes E Q S7	□ No □ No □ No □ Turbidity (NTU)	□ N □ N □ N	A A	olume Purge cumulative gal)
	Find Sample Do Obs	eld Measure e for Soluble Tempe onditions Du escription: ervations:	ments Temp. Metals Filter rature Correct ring Sampling rature Specific Con (jumhos)	Corrected red in Field tion Factor 2: 52 - 1	Temp (obser 10 -	(°C) (°C) (ved)	Yes Yes Position	No No No	N N N	A A	olume Purgec cumulative gal) / Z 2 · Y
	Fine Sample Do Obs	pH (units)	ments Temp. Metals Filter rature Correct ring Sampling Specific Con (jumbos) 37(Corrected red in Field tion Factor 2: 52 - 1	Temp (obser	(°C) (°C) (ved)	Ves Yes E Q S / D.O. (mg/l)	Turbidity (NTU) 2. Z. 7. D	Eh (mV)	A A	olume Purgeo cumulative gal)
	Fine Sample Do Obs	pH (units)	ments Temp. Metals Filter rature Correct ring Sampling Specific Con (jumbos) 37(Corrected red in Field tion Factor 2: 52 - 1	Temp (obser 10 -	(°C) (°C) (ved)	Pes Yes Pes Pes Pes Pes Pes Pes Pes Pes Pes P	Turbidity (NTU) 2. Z. Z. O	Eh (mV)	A A	olume Purger cumulative gal) / Z 2 · Y
	Fine Sample Do Obs	pH (units)	ments Temp. Metals Filter rature Correct ring Sampling Specific Con (jumbos) 37(Corrected red in Field tion Factor 2: 52 - 1	Temp (obser 10 -	(°C) (°C) (ved)	Ves Yes E Q S / D.O. (mg/l)	Turbidity (NTU) 2. Z. Z. O	Eh (mV)	A A	olume Purger cumulative gal) / Z 2 · Y
	Fine Sample Do Obs	pH (units)	ments Temp. Metals Filter rature Correct ring Sampling Received Specific Con (jumhos) 37 (36 (Corrected red in Field tion Factor g: 52 fg ductance form)	Temp (obser 10 -	(°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C)	Pes Yes Pes Pes (mg/l) 10 - 4 10 - 1	Turbidity (NTU) 2. Z. Z. O	Eh (mV)	A A	olume Purger cumulative gal) / Z 2 · Y
	Fire Sample Do Obs Time 0946 0957 0957	pH (units)	ments Temp. Metals Filter rature Correct ring Sampling Specific Con (jumbos) 37(Corrected red in Field tion Factor g: 52 fg ductance form)	Temp (obser 10 -	(°C) (°C) (ved)	Pes Yes Pes Pes (mg/l) 10 - 4 10 - 1	Turbidity (NTU) 2. Z. Z. O	Eh (mV)	A A	olume Purgec cumulative gal) / Z 2 · Y
1	Fine Sample Do Obs	pH (units)	ments Temp. Metals Filter rature Correct ring Sampling Received Specific Con (jumhos) 37 (36 (Corrected red in Field tion Factor (2: 52 -)	Temp (obser 10 - 10 - 10	(°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C)	Pes Yes Pes Pes (mg/l) 10 - 4 10 - 1	Turbidity (NTU) 2. Z. Z. O	Eh (mV)	A A	olume Purgec cumulative gal) / Z 2 · Y



8	Monitoring	g Point ID_	P-131				La	beled	131	
F	Inside	Diameter_	2	(inches)	Key# z	iole	□ Locke	d [Not Lock	ked
	Casing	Material:	₽ PVC	☐ Ste	ool	☐ Stainless	Steel			
		D	epth Meası	irement a	nd Eleva	tions (from	top of well	casing)	N.	
						sing Elevati			_ Feet	
		Ctotic wet	or loved money	consent has		otal Well Dep	th) 38		_Feet *	5/2/220
	Sta				The second second		th) 38.		Feet Feet	
	-					Before Purgi			Feet	
F	ourge Meth	nod Pedico	ded Fledde	0			Pump ID	1	- 2	
	Date Purg	3000	5/5/12	· ·			Vater Column		_	eet
1			10-1047	-	<u></u>		asing Volume		_	allons
	Pump R	ate	0.2	(GPM/LP	M Vo	olume Purged	S .	<u>/</u>	allons
	Date	Sampled_	5/5/22		Fie	d Parame	ter Measure	ments	of Sampl	е
	Time	Sampled	1050			pH 7.5	(units)	D.	0 7.	(mg/l)
	Sampli		imp + Filte	<u> </u>	Spec. Co	nd. 600	(µmhos/cm)	Turbidi	ty 0.8	(NTU)
		Meter ID 1	MO58	Te	mp Obser	ved 10.5	(°C)	E	h 170	(mV)
		-		_					loui	
	Fie	alyzed by_	ments Temp.	Te Corrected:	mp. Correc	ted \oS ✓ Yes	(°C)	Oth	-	Z
W	Fie Sample leather Co Sample De	alyzed by eld Measure for Soluble Tempe enditions Du	ments Temp. Metals Filter rature Correct ring Sampling	Corrected: ed in Field: tion Factor:	mp. Correc	ted \uS	(°C)	□ N/	1	
W	Fie Sample leather Co Sample De Obse	alyzed by eld Measure e for Soluble Tempe inditions Du escription: _(ments Temp. Metals Filter rature Correct ring Sampling	Corrected: ed in Field: tion Factor: 54°	mp. Correc	ted Non	(°C) No .	□ N/		ne Purged
_	Fie Sample Sample De Obse	eld Measure of for Soluble Tempe anditions Du escription: ervations: pH (units)	ments Temp. Metals Filter rature Correct ring Sampling Cleur, vo	Corrected: ed in Field: tion Factor: 50°	Temp ("Cobserved	Yes Yes C Dudy D.O. (mg/l)	C'C) No No Turbidity	Smph	Volum (cumi	ne Purged
_	Fie Sample Sample De Obse Time	alyzed by eld Measure e for Soluble Tempe enditions Du escription: (ervations: pH (units)	ments Temp. Metals Filter rature Correct ring Sampling Cleur, vo	Corrected: ed in Field: tion Factor: 50°	Temp ("Cobserved 10-5	Yes Yes C Dully D.O. (mg/l)	C'C) No No Turbidity	Smph	Volum (cum	ne Purged slative gal)
_	Fie Sample De Obser	alyzed byeld Measure e for Soluble Tempe enditions Du escription: _(ervations:	ments Temp. Metals Filter rature Correct ring Sampling Cleur, vo A Specific Cone (jumbos)	Corrected: ed in Field: tion Factor: 50°	Temp ("(observe)	Yes C Dudy D.O. (mg/l)	Turbidity (NTU)	N N Smph Smph (mV)	Volum (cum	ne Purged ilative gal)
_	Fie Sample Sample De Obse Time	alyzed by eld Measure e for Soluble Tempe enditions Du escription: (ervations: pH (units)	ments Temp. Metals Filter rature Correct ring Sampling Cleur, vo	Corrected: ed in Field: tion Factor: 50°	Temp ("Cobserved 10-5	Yes Yes C Dully D.O. (mg/l)	C'C) No No Turbidity	Smph	Volum (cum	ne Purged slative gal)
_	Fie Sample De Obser	alyzed byeld Measure e for Soluble Tempe enditions Du escription: _(ervations:	ments Temp. Metals Filter rature Correct ring Sampling Cleur, vo A Specific Cone (jumbos)	Corrected: ed in Field: tion Factor: 50°	Temp ("(observe)	Yes Yes C Dudy (mg/l)	Turbidity (NTU) O.87	N N Smph Smph (mV)	Volum (cum	ne Purged (lative gal)
_	Fie Sample De Obser	alyzed byeld Measure e for Soluble Tempe enditions Du escription: _(ervations:	ments Temp. Metals Filter rature Correct ring Sampling Cleur, vo A Specific Cone (jumbos)	Corrected: ed in Field: tion Factor: 50°	Temp ("(observe)	Yes Yes C Dudy (mg/l)	Turbidity (NTU) 1 0.87	N N Smph Smph (mV)	Volum (cum	ne Purged (lative gal)
_	Fie Sample De Obser	alyzed byeld Measure e for Soluble Tempe enditions Du escription: _(ervations:	ments Temp. Metals Filter rature Correct ring Sampling Cleur, vo A Specific Cone (jumbos)	Corrected: ed in Field: tion Factor: 50°	Temp ("(observe)	Yes Yes C Dudy (mg/l)	Turbidity (NTU) O.87	N N Smph Smph (mV)	Volum (cum	ne Purged (lative gal)
	Fie Sample De Obser	alyzed by _ eld Measure e for Soluble Tempe inditions Du escription: _ ervations: _ pH (units) 7.5 7.5	ments Temp. Metals Filter rature Correct ring Sampling Cleur, vo A Specific Cone (jumbos)	Te Corrected: ed in Field: tion Factor: 59° (Temp ("(observe)	Yes Yes C Dudy (mg/l)	Turbidity (NTU) O.87	N N Smph Smph (mV)	Volum (cum	ne Purged (lative gal)
ampl	Fie Sample De Obser	alyzed byeld Measure e for Soluble Tempe enditions Du escription:	ments Temp. Metals Filter rature Correct ring Sampling Cleur, vo A Specific Conc (jumhos) (g. U) 6 U)	Te Corrected: ed in Field: tion Factor: 59° (Temp ("Cobserve 10.5"	ted \osign Yes Yes C Pudy (mg/l) 7.7	Turbidity (NTU) O.87	N N Smph Smph (mV)	Volum (cum	ne Purged alative gal)



Static water level measurement at time of sampling (Final Depth) 34.63 Feet Static Water Level Elevation Before Purging AA Feet Purge Method Ded. Act Bladder I Water Column 1.99 Feet Purged 14.5 - 14.31 One Casing Volume 0.31 Column Pump Rate Date Purged 1.2 Column 1.99 Feet Pump Rate Date Sampled 514/12 Water Column 1.99 Feet Pump Rate Date Sampled 1.35 Phylogen Pump Rate Date Sample Date Sample Date Sample Pump Rate Date Sample Pump Rate Date Sample Pump Rate Date Sample Date	00110-0
Date Sampled 514\\\Climp + Filter\(\) Spec. Cond. \(\) Temp. Observed \(\) Temp. Corrected \(\) Yes \(\) No \(\) NA Sample for Soluble Metals Filtered in Field: \(\) Yes \(\) No \(\) NA Temperature Correction Factor: \(\) "C Weather Conditions During Sampling: \(\) Syncy \(\) Syncy \(\) Syncy \(\) Sample (observed) \(\) Temp. Observed \(\) Temp. Observed \(\) \(\) Temp. Observed \(\) \(\) \(\) No \(\) NA Temperature Corrected: \(\) Yes \(\) No \(\) NA Temperature Correction Factor: \(\) "C Weather Conditions During Sampling: \(\) Synyyy; \(\) Synyy;	
Total Well Depth Static water level measurement before purging (Start Depth) Static water level measurement at time of sampling (Final Depth) Static water level measurement at time of sampling (Final Depth) Static water level measurement at time of sampling (Final Depth) Static water level measurement at time of sampling (Final Depth) Static water level measurement at time of sampling (Final Depth) Static water level measurement at time of sampling (Final Depth) Static water level measurement at time of sampling (Final Depth) Static water level measurement at time of sampling (Final Depth) Static water level measurement at time of sampling (Final Depth) Static water level measurements at time of sampling (Pinal Depth) Pump ID Water Column Static water level measurement at time of sampling (Pinal Depth) Water Column Sample Description: Spect Cond.	
Static water level measurement before purging (Start Depth) 34.63 Feet Static water level measurement at time of sampling (Final Depth) 34.63 Feet Static Water Level Elevation Before Purging A Feet Purge Method Death Land Building Pump ID APC 2 Date Purged 514/12 Water Column 1.95 Feet Pump Rate 1 One Casing Volume 0.31 Column Pump Rate 1 One Casing Volume Pump Rate 1 One Casing Volume Pump Rate 1 One Casing Volume 0.31 Column Pump Rate 1 One Casing Volume Pump Rate 1 One Casing V	
Static water level measurement at time of sampling (Final Depth) Static Water Level Elevation Before Purging Purge Method Date Purged Static Water Level Elevation Before Purging Pump ID	+ 5/2/22
Static Water Level Elevation Before Purging A Feet Purge Method De Ander Standard Function Before Purging Pump ID Apper 2 Date Purged 5 14/22 Water Column 1.92 Filed Pump Rate O 31 CO Pump Ra	
Purge Method De Analyzed State Standard From Date Purged 514/12 Water Column 1.95 Field Parameter Measurements of Sampling Equip. Form Proceed 1.2 (umbos/cm) Turbidity 1.3 Meter ID 1/1/2 Sample for Soluble Metals Filtered in Field: Yes No NA Sample Description: Clark Processing Sampling: 61.54 Processing Volume Purged 1.2 (conditions During Volume Purged	
Time Purged 1435 - 1431 Pump Rate 1	
Pump Rate Pump	Feet
Date Sampled 5 400 Field Parameter Measurements of Sampler Sampled 145 Spec. Cond. (and (amhos/cm) Turbidity 1.3 Meter ID 1400 S TM D Temp. Observed 11.7 (°C) Eh 160 Analyzed by 1400 Temp. Corrected 11.7 (°C) Other 1400 Sample for Soluble Metals Filtered in Field: 1400 Yes No NA Temperature Correction Factor: 1400 Corrected: 1400 Sample Description: 1400 Sample Descrip	Gallons
Time Sampled 1455 Sampling Equip. Rump + Filter Meter ID WYS \$ TTN b Analyzed by WM Field Measurements Temp. Corrected: Yes No No NA Sample for Soluble Metals Filtered in Field: Yes No No NA Temperature Correction Factor: C Weather Conditions During Sampling: 61, SWYNY; wind E WW/H Sample Description: CLERY No DADY Observations: WA Time PH Specific Conductance (observed) (mg/l) (NTU) (mW) (cun 1427 73 610 11.7 8.3 1.3 162 0.	Gallons
Time Sampled 1455 Sampling Equip. Remp + Filter Meter ID WYS \$ TTN b Analyzed by WM Temp. Observed 11.7 (°C) Field Measurements Temp. Corrected: Yes No No NA Sample for Soluble Metals Filtered in Field: Yes No No NA Temperature Correction Factor: C Weather Conditions During Sampling: 61. SWYNY; wind E WW/H Sample Description: Clear No OAD Observations: NA Time PH Specifc Conductance (observed) (mg/l) (NTU) (mW) (cun 1421 73 610 11.7 8.3 1.3 162 0.1429 73 610 10.0	ple
Meter ID WOS 1 TM Temp. Observed 11.7 (°C) Eh 16 Analyzed by WM Temp. Corrected 1.7 (°C) Other M Field Measurements Temp. Corrected: Yes No NA Sample for Soluble Metals Filtered in Field: Yes No NA Temperature Correction Factor: C Weather Conditions During Sampling: 61. SWNM; wind E WM 1 Sample Description: CLEW NO DAD Observations: NA Time PH Specific Conductance Temp (°C) D.O. Turbidity Eh Volu (umbs) (umbs/cm) (observed) (mg/li) (NTU) (mV) (cun 1427 73 670 H.7 9.3 1.3 162 0.	5 (mg/l)
Analyzed by WM Temp. Corrected \\\-\7 (*c) Other \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	(UTV)
Field Measurements Temp. Corrected: Sample for Soluble Metals Filtered in Field: Temperature Correction Factor: Weather Conditions During Sampling: Sample Description: Clerk roo DADC Observations: MA Time pH Specifc Conductance Temp (°C) D.O. Turbidity Eh (NTU) (mV) (cun (NTU) (cun (NTU) (mV) (cun (NTU) (cun (NTU	O (mV)
Sample for Soluble Metals Filtered in Field: X Yes No NA Temperature Correction Factor: C Weather Conditions During Sampling: 61. SWMM; wind 5 WM/H Sample Description: CLEW NO DAD Observations: NA Time pH Specific Conductance Temp (°C) D.O. Turbidity Eh (voluments) (observed) (mg/l) (NTU) (mV) (cun 1427 73 670 H.7 9.3 1.3 162 0.1429 73 670 H.7 9.3 1.3 161 0.	1
1427 73 670 11.7 8.3 1.3 161 0.	
1427 73 670 11.7 8.3 130 162 0. 1429 73 670 11.7 8.3 1.3 161 0.	
1429 73 670 11.7 8.3 1.3 161 0.	
	mulative gal)
	mulative gal)
	mulative gal)
20)	mulative gal) પ્
Situin	4
amples chilled immediately after collection: Yes Other	mulative gal) પ્
Revisor 81/25/2021	mulative gal) પ ક
erAffiliation of Sampler(s): Kondra Moran Ruce,	mulative gal) પ્



Presampling Information	Monitoring Point ID _ Inside Diameter	772	T. M. CLAN CO.	Va #				-	08 800	
40	-	7		Key#_			□ Locked		☐ Not Loc	ked
	Casing Material:	[]X:PVC		iteel		tainless St				
ı	U	epth Meas	urement							
				Top of		Elevation	NA		Feet	
	Static wat	er level meas	urement h	efore nur	ning (Sta	rt Denth)	36.6	Ce	Feet A	-1-1-
	Static water le						*NA		Feet	t
			Water Leve				NA		Feet	
	Porge Method De de	cesed Bludg	2 lup	_			Pump ID			
	Date Purged		- A.	_8		Wate	er Column _		F6	eet
	Time Purged	_		-3			ng Volume_		G	allons
	Pump Rate			_GPM/I	LPM	Volun	ne Purged_		G	allons
	Date Sampled			F	ield Pa	rameter	Measurer	nents	of Sampl	е
	Time Sampled		_		pH		(units)	D	.0	(hgm)
I	Sampling Equip.	imp + Filte	1	Speo	Cond.		(µmhos/cm)		ity	
	Meter ID_		т	emp. Obs		Elcha !	(°C)		Eh	(mV)
	Analyzed by_			emp. Con		Lance	(°C)	Oth	er	
	Field Measure	ments Temp	Corrected	l:	⊠ Y	es .	D NO	□ N	Ą	
	Sample for Soluble	e Metals Filte			X Y	es	□ No	Q N	A	
									•	
		rature Correc		·	_ °C					
	Weather Conditions Du				°C					
1	Weather Conditions Du Sample Description:	ring Samplin	g:							_
	Weather Conditions Du 'Sample Description: Observations:	ring Samplin	g: Top of Bh	dder Di	.y -	Remos	ed Blad	lder		36.5
	Weather Conditions Du Sample Description:	ring Samplin	g: Top of Bh	dder Di	.y -	Remos	ed Blad	lder		36.50
	Weather Conditions Du Sample Description: Observations: ★ COULD AN	*34.68 - Specific Con	g:	dday D		D.O.	Turbidity	Eh	SCOL =	e Purged
	Weather Conditions Du 'Sample Description: Observations: ★ COULD NO	*34.68-	g:	ddod Di					SCOL =	
	Weather Conditions Du Sample Description: Observations: ★ COULD AN	*34.68 - Specific Con	g:	dday D		D.O.	Turbidity	Eh	: 5 (0 £ =	e Purged
	Weather Conditions Du Sample Description: Observations: ★ COULD AN	*34.68 - Specific Con	g:	dday D		D.O.	Turbidity	Eh	: 5 (0 £ =	e Purged
	Weather Conditions Du Sample Description: Observations: ★ COULD AN	*34.68 - Specific Con	g:	dday D		D.O. (mg/l)	Turbidity	Eh	: 5 (0 £ =	e Purged
	Weather Conditions Du Sample Description: Observations: ★ COULD AN	*34.68 - Specific Con	g:	dday D		D.O.	Turbidity	Eh	: 5 (0 £ =	e Purged
	Weather Conditions Du Sample Description: Observations: ★ COULD AN	*34.68 - Specific Con	g:	dday D		D.O. (mg/l)	Turbidity	Eh	: 5 (0 £ =	e Purged
	Weather Conditions Du Sample Description: Observations: ★ COULD AN	*34.68 - Specific Con	g:	dday D		D.O. (mg/l)	Turbidity	Eh	: 5 (0 £ =	e Purged
	Weather Conditions Du Sample Description: Observations: ** COULD AN Time pH (units)	Specific Con	g: Top of βlow LE ~ βL ductance /cm)	Temp (obser	(°C) ved)	D.O. (mg/l)	Turbidity	Eh	: 5 (0 £ =	e Purged
Sei	Weather Conditions Du Sample Description: Observations: ★ COULD AN	Specific Con	g: Top of βlow LE ~ βL ductance /cm)	dday D		D.O. (mg/l)	Turbidity	Eh	: 5 (0 £ =	e Purged
38	Weather Conditions Du Sample Description: Observations: **COULD AN Time pH (units) Time pH (units)	Specific Con (umbos	g: Top of βlow LE ~ βL ductance /cm)	Temp (obser	(°C) ved)	D.O. (mg/l)	Turbidity	Eh	: 5 (0 £ =	e Purged



Monito		0				-	2.c22 Proje	-	38930	
1 1	ring Point ID_				- 4		7000	abeled_		6315
	de Diameter	2_	(inches)		2104	_	Locke	d	□N	lot Locked
Cas	ing Material:			teel	-	ainless St				
		Depth Measi	urement			the same of the later of		casing	g)	
					Casing E				_	eet
	Static wa	ter level meas	urement b		Total We				_	eet
		vel measuren							100	eet ¥ 5 /2 /2 ₹
			Vater Leve		10.7		NI			eet
Purge M	lethod * Dedic	and bodder					Pump ID	1300	-7	
Date P	- 111	0 5/5/22					er Column	_		Feet
Time P		-1155		-0			ng Volume			Gallons
Pump	Rate	0.2		GPM)/L	.PM	Volur	ne Purged	2 (1_	Gallons
Da	ate Sampled_	5/5/22		F	ield Par	ameter	Measure	ments	of S	ample
Tir	ne Sampled_	1175			pH_		(units)	ı	0.0_	10.5 (mg/l)
Sam	pling Equip	Pump + Fire	<u> </u>	Spec.	Cond2	280	(µmhos/cm)	Turbi	idity_	1.8 (NTU)
		MP5-8	_ T	emp. Obs	erved_q	.3	(°C)		Eh_	164 (mV)
	Analyzed by_	Ren	_ Te	emp. Corr	rected 6	.3	(°C)	O	ther_	na
	Field Manager	5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-5-								
		ements Temp.			⊠ Ye	0.	☐ No		A.V	
Sam	ple for Solubl	le Metals Filter	red in Field	t:	⊠ Ye ⊠ Ye	0.	□ No □ No		AV AV	
Sam	ple for Solubi Tempe	le Metals Filter erature Correc	red in Field tion Factor	: :	⊠ Ye °C	s	□ No .		AIA	. 01-
Sam Weather	ple for Solubl Tempe Conditions De	le Metals Filter erature Correc uring Sampling	red in Field tion Factor 5 59	: 0 part	⊠ Ye °C	s	-		AIA	ngh
Sam Weather Sample	ple for Solubl Tempe Conditions De Description:	le Metals Filter erature Correct uring Sampling Clavr	red in Field tion Factor 5 59	: 0 part	⊠ Ye °C	s	□ No .		AIA	ngh
Sam Weather Sample	ple for Solubl Tempe Conditions De	le Metals Filter erature Correct uring Sampling Clavr	red in Field tion Factor 5 59	: 0 part	⊠ Ye °C	s	□ No .		AIA	ngh
Sam Weather Sample O	ple for Solubl Tempe Conditions De Description: bservations:	le Metals Filter erature Correc uring Sampling CLUV H	red in Field tion Factor a: 59°, a color	e D parti	¥ Ye og cle	indy	□ No . . Wind	□ 1 \S&@	AIA	
Sam Weather Sample O	ple for Soluble Temper Conditions Description: bservations: pH (units)	erature Correcturing Sampling	red in Field tion Factor g: 59", collect ductance	Temp (obser	Ye °C Ly Clé (°C) (ved)	D.O. (ma/l)	Turbidity (NTU)	□ 1 \ Sδ @ Eh (mV)	NA S S	Volume Purge
Sam Weather Sample O Time	ple for Soluble Tempor Conditions Do Description: bservations: pH (units)	Specific Con- (jumhoss	red in Field tion Factor g: 59", collect ductance	Temp (obser	Ye of C	D.O. (mg/l)	Turbidity (NTU)	S& @	NA S SI	Volume Purger (cumulative gal)
Weather Sample O Time	ple for Soluble Tempor Conditions Do Description: bservations: pH (units) 7.7	Specific Con- (jumbos) 3 8 0	red in Field tion Factor g: 59", collect ductance	Temp (obsert q, 1	Ye °C by Cli	D.O. (mg/l)	Turbidity (NTU)	□ 1 Sδ € (mV 146	NA S	Volume Purgeo (cumulative gal)
Weather Sample O	ple for Soluble Tempor Conditions Do Description: bservations: pH (units) 7.7	Specific Con- (jumhoss	red in Field tion Factor g: 59", collect ductance	Temp (obser	Ye °C by Cli	D.O. (mg/l)	Turbidity (NTU)	S& @	NA S	Volume Purgeo (cumulative gal)
Weather Sample O	ple for Soluble Tempor Conditions Do Description: bservations: pH (units) 7.7	Specific Con- (jumbos) 3 8 0	red in Field tion Factor g: 59", collect ductance	Temp (obsert q, 1	(°C) (ved)	D.O. (mg/l) 10.3	Turbidity (NTU)	□ 1 Sδ € (mV 146	NA S	Volume Purgeo (cumulative gal)
Weather Sample O Time	ple for Soluble Tempor Conditions Do Description: bservations: pH (units) 7.7	Specific Con- (jumbos) 3 8 0	red in Field tion Factor g: 59", collect ductance	Temp (obsert q, 1	(°C) (ved)	D.O. (mg/l)	Turbidity (NTU)	□ 1 Sδ € (mV 146	NA S	Volume Purgeo (cumulative gal)
Weather Sample O Time	ple for Soluble Tempor Conditions Do Description: bservations: pH (units) 7.7	Specific Con- (jumbos) 3 8 0	red in Field tion Factor g: 59", collect ductance	Temp (obsert q, 1	(°C) (ved)	D.O. (mg/l) 10.3	Turbidity (NTU)	□ 1 Sδ € (mV 146	NA S	Volume Purgeo (cumulative gal)
Weather Sample O	ple for Soluble Tempor Conditions Description: bservations:	Specific Con- (jumhos) 3 80	red in Field tion Factor g:	Temp (obser	(°C) (°C) (°C) (°C) (°C) (°C) (°C) (°C)	D.O. (mg/l) 10.3	Turbidity (NTU)	□ 1 Sδ € (mV 146	NA S	Volume Purgeo (cumulative gal)
Weather Sample O	ple for Soluble Tempor Conditions Description: bservations: pH (units) 7.7 7.7	Specific Con- (jumhosi 3 80 3 80	red in Field tion Factor g:	Temp (obser	Ye "C Ly Cli	D.O. (mg/l) 10.3	Turbidity (NTU)	□ 1 Sδ € (mV 146	NA S	Volume Purgeo (cumulative gal)
Weather Sample O Time 1114 11.18 11.22	ple for Soluble Tempor Conditions Do Description: bservations: bservations: pH (units) 7.7	Specific Con- (jumhosi 3 80 3 80	red in Field tion Factor g:	Temp (obser	Ye "C Ly Cli	D.O. (mg/l) 10.3	Turbidity (NTU)	□ 1 Sδ € (mV 146	NA S	Volume Purgeo (cumulative gal)
Sam Weather Sample O Time 1114 1119 1122	ple for Soluble Tempor Conditions Description: bservations: pH (units) 7.7 7.7	Specific Con- (jumhos) 3 80	red in Field tion Factor g:	Temp (obser	Ye "C Ly Cli	D.O. (mg/l) 10.3	Turbidity (NTU)	□ 1 Sδ € (mV 146	NA	Volume Purgeo (cumulative gal)



9	Monitoring Point ID_ Inside Diameter	- 72	(inches)	Key#	2104	0	Locked	beled 80	Not Locked
	Casing Material:	☑ PVC			ST - 1600	Stainless Ste	600	_	
ĺ	D	epth Meas	urement	and Ele	vations	(from to	p of well	casing)	
				Top of			NA		Feet
	Ctalla						42.35		Feet
ı	Static water le	er level mea							Feet
	Cidilo Water to		Water Lev						Feet
ä	Parge Method Dedice.		E				Pump ID		
	Date Porged					Wate	er Column		Feet
	Time Purged			_		One Casir	g Volume		Gallons
1	Pump Rate			_GPM/	LPM	Volun	ne Purged_		Gallons
	Date Sampled			F	ield Pa	rameter	Measure	ments of	Sample
	Time Sampled				pH	"	(units)	D.O	(mg/l)
i	Sampling Equip.	imp + Filte	1	Spec.	Cond.		μmhos/cm)	Turbidity	(NTU)
	Meter ID_		_	emp. Ob	somet.	12	(°C)	Eh	(m/v)
,	Analyzed by_		_	emp. Cor	rected	_	(°C)	Other	
	Field Measure	ments Lemn	Corrected	103					
	Sample for Soluble Tempe	e Metals Filte rature Correc	ered in Fiel ction Facto	d:	⊠ Y ⊠ Y _*C		□ No	NA NA	
	Sample for Soluble Tempe Weather Conditions Du	e Metals Filte rature Correc	ered in Fiel ction Facto	d:	arment.		F1.		
	Sample for Soluble Tempe Weather Conditions Du Sample Description:	e Metals Filte rature Correc ring Samplin	ered in Fiel ction Facto g:	d: r:	. °C .	es es	□ Ma_	□ NA	
	Sample for Soluble Tempe Weather Conditions Du Sample Description:	e Metals Filte rature Correcting Samplin	ered in Field ction Facto	d: r:	. °C .	es es	□ No	□ NA	mpt to Sound
	Sample for Soluble Tempe Weather Conditions Du Sample Description: Observations:	e Metals Filter rature Correct ring Samplin	ered in Field ction Factors:	d: r:	- Rense	es Led Braddi LS - Att	or orther for	ا NA	bmers, ble - N
	Sample for Soluble Tempe Weather Conditions Du Sample Description:	e Metals Filte rature Correcting Samplin	ered in Field ction Factors	d: r: S 3/s/2.z	. °C .	es 	□ No	□ NA	Volume Purged (cumulative gal)
	Sample for Soluble Tempe Weather Conditions Du Sample Description: Observations:	e Metals Filter rature Correct ring Samplin Top of Bu	ered in Field ction Factors	d: r: S 3/s/2.z	- Remo	es Led Braddi LS - Att	No No	I NA	Volume Purged
The state of the s	Sample for Soluble Tempe Weather Conditions Du Sample Description: Observations:	e Metals Filter rature Correct ring Samplin Top of Bu	ered in Field ction Factors	d: r: S 3/s/2.z	- Remo	es 	No No	I NA	Volume Purged
Emdune and	Sample for Soluble Tempe Weather Conditions Du Sample Description: Observations:	e Metals Filter rature Correct ring Samplin Top of Bu	ered in Field ction Factors	d: r: S 3/s/2.z	- Remo	es 	No No	I NA	Volume Purged
	Sample for Soluble Tempe Weather Conditions Du Sample Description: Observations:	e Metals Filter rature Correct ring Samplin Top of Bu	ered in Field ction Factors	d: r: S 3/s/2.z	- Remo	D.O. (mg/l)	No N	I NA	Volume Purged
	Sample for Soluble Tempe Weather Conditions Du Sample Description: Observations:	e Metals Filter rature Correct ring Samplin Top of Bu	ered in Field ction Factors	d: r: S 3/s/2.z	- Remo	es 	No N	I NA	Volume Purged
	Sample for Soluble Tempe Weather Conditions Du Sample Description: Observations:	e Metals Filter rature Correct ring Samplin Top of Bu	ered in Field ction Factors	d: r: S 3/s/2.z	- Remo	D.O. (mg/l)	No N	I NA	Volume Purged
	Sample for Soluble Tempe Weather Conditions Du Sample Description: Observations: Time pH (units)	e Metals Filterature Correcting Samplin Top of Bu 41.450+ Specific Cor (jumbos	ered in Field ction Factors	d: r: S 5/s/2.z Temp (obse	- Revesor	D.O. (mg/l)	No N	I NA	Volume Purged
Sa	Sample for Soluble Tempe Weather Conditions Du Sample Description: Observations: Time pH (units) oples chilled in modicity a	e Metals Filterature Correcting Samplin Top of Bu 41.450+ Specific Cor (jumbos	ered in Field ction Factors	d: r: S 3/s/2.z	- Remo	D.O. (mg/l)	No N	I NA	Volume Purged
58	Sample for Soluble Tempe Weather Conditions Du Sample Description: Observations: Time pH (units)	e Metals Filterature Correcting Samplin Top of Bu 41.450+ Specific Cor (jumbos	ered in Field ction Factors	d: r: S 5/s/2.z Temp (obse	- Revesor	D.O. (mg/l)	No N	I NA	Volume Purged



IIIOIIIIO	ing Point ID_	P-153		000-1-00		La	beled 2	04314
	le Diameter_	2_	(inches)	Key# Zı	ole	Locked	1 [Not Locked
Casir	ng Material:	₹ PVC	St	eel	Stainless St	teel		
11.6		epth Meas	urement a	and Elevati	ions (from to	op of well	casing)	
					sing Elevation			Feet
	Static um	tor loval mass	uromont ho		al Well Depth			Feet #5/2/22
s		ter level meas vel measuren					77	Feet Feet
				NEW 10 10 10 10 10 10 10 10 10 10 10 10 10	efore Purging			Feet
Purge Mo	ethod Dega	while Bludde	Λ.			Pump ID	BPC	2
Date Pu	-	122			Wat	er Column	3.86	Feet
Time Pu		5-1217				ng Volume	0.63	Gallons
Pump	Rate()・レ		GPM/LPN	Volui	me Purged	24	Gallons
Da	te Sampled	5/5/22		Field	i Parameter	Measure	ments of	Sample
Tim	e Sampled	1220		ı	H 1.4	(units)	D.O	10.6 (mg/t)
Samp		Pump + Filte		Spec. Cor	nd. 700	(µmhos/cm)	Turbidity	0.92 (NTU)
	77.77.00000 00 10 10 10 10 10 10 10 10 10 10 1	MPSS-TA	Λ₩ Te	mp. Observ	ed 10.5	(°C)	Eh	180 (mV)
1	analyzed by	WW	Te	mp. Correct	ed_ 10.5	(°C)	Other	_M
	-							_~~
F	ield Measure ole for Solubl	ements Temp. le Metals Filter erature Correc	Corrected: red in Field: tion Factor:	0 .	✓ Yes ✓ Yes C	□ No □ No	□ NA □ NA	
F Samp Weather C	ield Measure ole for Solubl Tempe Conditions Du	ements Temp. le Metals Filter erature Correc uring Sampling	Corrected: red in Field: tion Factor:	0 .	✓ Yes ✓ Yes C	☐ No	□ NA □ NA	
Samp Weather C	ield Measure ole for Solubl Tempe Conditions Du Description:	ements Temp. le Metals Filter erature Correc uring Sampling C\ &UV	Corrected: red in Field: tion Factor:	0 .	✓ Yes ✓ Yes C	□ No □ No	□ NA □ NA	
Samp Weather C	ield Measure ole for Solubl Tempe Conditions Du	ements Temp. le Metals Filter erature Correc uring Sampling C\ &UV	Corrected: red in Field: tion Factor:	0 .	✓ Yes ✓ Yes C	□ No □ No	□ NA □ NA	
Samp Weather C	ield Measure ole for Solubl Tempe Conditions Du Description: servations:	ements Temp. le Metals Filter erature Correc uring Sampling C\2007	Corrected: red in Field: tion Factor: a: 50 p	o !	¥ Yes ¥ Yes c Loudy	□ No □ No windse	□ NA □ NA	+
Samp Weather C	ield Measure ole for Solubl Tempe Conditions Du Description:	ements Temp. le Metals Filter erature Correc uring Sampling C\ 2007	Corrected: red in Field: tion Factor: a: 50 p	O .	Yes Yes C Loudy D.O.	□ No □ No □ No □ Turbidity	□ NA □ NA □ Smpl	+ Volume Purgeo
Weather C Sample D	ield Measure ole for Solubl Tempe Conditions Du Description: servations:	ements Temp. le Metals Filter erature Correc uring Sampling C\2007	Corrected: red in Field: tion Factor: a: 50 p	O o Temp (°C) (observed)	Yes Yes C Loudy D.O. (mg/l)	No N	□ NA □ NA □ NA	Volume Purgeo (cumulative gal)
Weather Cooperation	ield Measure ole for Solubl Tempe Conditions Du Description: servations:	ements Temp. le Metals Filter erature Correc uring Sampling C\ 2007 Specifc Con (jumhos)	Corrected: red in Field: tion Factor: a: 50 p	Temp (°C) (observed)	Yes Yes C Loudy D.O. (mg/l)	No N	□ NA □ NA □ NA □ NA □ NA	Volume Purgeo (cumulative gal)
Weather Constraints of the Sample Cons	pH (units)	ements Temp. le Metals Filter erature Correc uring Sampling C\2007 Vb4 Specifc Con (jumhos)	Corrected: red in Field: tion Factor: a: 50 p	Temp (°C) (observed) 10-5	Yes Yes C Loudy D.O. (mg/l)	Turbidity (NTU)	□ NA □ NA □ NA	Volume Purgeo (cumulative gat)
Weather Cook	pH (units)	ements Temp. le Metals Filter erature Correc uring Sampling C\2007 Specifc Con (jumhos)	Corrected: red in Field: tion Factor: a: 50 p	Temp (°C) (observed)	Yes Yes C Loudy D.O. (mg/l) 10.5	No N	Eh (mV)	Volume Purged (cumulative gal)
Weather Cook	pH (units)	ements Temp. le Metals Filter erature Correc uring Sampling C\2007 Specifc Con (jumhos)	Corrected: red in Field: tion Factor: a: 50 p	Temp (°C) (observed) 10-5	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purgeo (cumulative gal)
Weather Cook	pH (units)	ements Temp. le Metals Filter erature Correc uring Sampling C\2007 Specifc Con (jumhos)	Corrected: red in Field: tion Factor: a: 50 p	Temp (°C) (observed) 10-5	Yes Yes C Loudy D.O. (mg/l) 10.5	Turbidity (NTU)	Eh (mV)	Volume Purgeo (cumulative gal)
Weather Cook Sample Dob Time	pH (units)	Specific Con (jumnos)	Corrected: red in Field: tion Factor: a: 50 p	Temp (°C) (observed) 10.5	D.O. (mg/l) 10.6 20.6 20.6	Turbidity (NTU)	Eh (mV)	Volume Purgec (cumulative gal)
Weather Cook Sample Dob Time 1204 1213 1213	pH (units)	ements Temp. le Metals Filter erature Correc uring Sampling C\2007 Specifc Con (jumhos)	Corrected: red in Field: tion Factor: a: 50 p	Temp (°C) (observed) 10-5	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
Weather Cook Sample Cook Time 1201 12\3 12\12\12\1	pH (units)	Specific Con (jumhos) Zuo	Corrected: red in Field: tion Factor: a: 50 p	7 Temp (°C) (observed) 10.5 10.5	D.O. (mg/l) D.O. (mg/l) D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
Weather Cook Sample Dob Time 1204 1213 1213	pH (units)	Specific Con (jumnos)	Corrected: red in Field: tion Factor: a: 50 p	7 Temp (°C) (observed) 10.5 10.5	D.O. (mg/l) 10.6 20.6 20.6	Turbidity (NTU)	Eh (mV)	Volume Purgec (cumulative gal)



	Diameter_ Material:	2	(inches)	112						
Casing	Material:		(animo)	Key#	210	Le .	Locke	d 🗌	Not Lock	ted
q de la EMI		PVC	☐ St	eel		Stainless St	teel			
	D	epth Meası	rement a	and Ele	vation	s (from to	op of well	casing)	2111	47-16
				Top of		g Elevation		7.000	Feet	
	District			******		Well Depth		53		5/2/22
Ct.		er level meas vel measurem						38	Feet	
310	NIC WATER 16					re Purging		38	Feet	
Purge Met	nod Dedica	ted Blodderf		Librani	ni Dolo	ne r arging	Pump ID	BPC	4	
Date Pur	ged_5 \s	22	1507			Wat	ter Column	13.2	Transport of the last	et
	-	5-132	5	- 0		One Casi	ng Volume	2.16	Ga	allons
Pump R	ate 0	レ		GPN//	LPM	Volu	me Purged	66	Ga	allons
Date	Sampled	5 6 22		F	ield P	arameter	Measure	ments of	Sample	9
	Sampled		.,		-	7-8	(units)	D.O	11/	_
	ng Equip.	ump + Filte		Spec.	Cond.		(µmhos/cm)	Turbidity	0.40	
	Meter ID V	Mrs8 +T	Mb To	emp. Obs	served	10.3	(°C)	Eh	108	(mV)
An	alyzed by_	ium	_ Te	emp. Cor	rected	10-3	(°C)	Other	na	
Weather Co	Tempe nditions Du scription: _	Metals Filter rature Correct ring Sampling Class ye ADUPLICAT	ion Factor 5A° p WW E P3	artly(landi crei	HERE		□ NA		
		*RINSE !		LECIE	D F	EREE	160	n:		
Time	pH (units)	Specific Cond (µmhos/		Temp (obser		D.O. (mg/l)	Turbidity (NTU)	√ (mV)		e Purgeo lative gal)
1306	7.8	520		10.		4.3	0.668	\$168	2.2	
1317	7.8	530		10.	3	4.4	0.60	168	4.1	4
1328	7.8	530		10.	3	4.5	0.60	165	6.	le
						Je July Z				
				-		Special				_
Control billion	and the same			7	7					
amples chilled in		1		Yes [Oth	er				
e/Affiliation of S		Kendr	a M	1000	nl	Puce.				
errumation of S	amper(s): _	10	(, ,	(2,01)	4	1000		5/1	even -	



5	Client X	2		Project	Sherco Pe	nds Soing	2c22Proje	ct No		
Presampling Information	Monitoring	g Point ID_	P-162				Li	abeled	PILZ	
igo.	Inside	Diameter_	2	(inches)	Key# Z	ole	Locke	d [Not Locke	ed
g	Casing	Material:	☐ PVC	☐ Ste	el	☐ Stainless	Steel			
		D	epth Measu	irement a	ind Eleva	tions (from	top of well	casing)		
ese es					100	sing Elevatio			Feet	
		Static wat	er level meas	rement he		tal Well Dept		The state of the s	- 0	Approx.
n ar	Sta		vel measurem						reet	hate-
btio	877					Before Purgin	-		Feet	
202	100000000000000000000000000000000000000		HE KECK	Pump	-:		Pump ID	M		
Well Description and		ged					ater Column			
Š	Time Purg Pump R		142	1	GPM/LPI		sing Volume			lons
4	rump is	ate	0.4		GPM/LPI	vi voi	ume Purged	8.,	Gai	lons
	Date	Sampled_	5/5/2			d Paramete	er Measure	ements o	of Sample	
	28/15/3/20	Sampled_	1425	- "		pH_7.6	(units)	D.0	0 5.9	(mg/l)
	Sampli		ump + Fiste	- DOM:		nd. 1190	(µmhos/cm)		ty_1.1	(NTU)
Data	A		RUS-G	_	mp. Observ	The state of the s	-(,c)		h_108	_(mV)
E I		alyzed by_	•	_	mp. Correc		_('C)	Othe	er_MA-	
Sampling	285 T (175 T (17		ments Temp. e Metals Filter			✓ Yes	□ No	□ NA		
Sa	Sample		rature Correct			l⊠ Yes °C	□ No	□ NA		
Field	Weather Co		ring Sampling	-		ordy, 5	EQ ION	elH.		
	A 1 - 14 - 30 (3.77) (1.00) (1.00)		wer no			7,				
	Obse	ervations:	phae_	5/16/22	- Reylec	M measures	Sur +T	D, SWL	= 1551	+
Ŋ	-	Q	Stonz					TD	of hibing	= 1651
Ŋ	Time	pH (units)	Specific Cond (µmhos/		Temp (*C (observed		Turbidity	Eh		Purged
ĕ	1407	7.7	1220		8-8	(mg/l) 5.9	(NTU)	(mV)	2 - 2	itive gal)
u	14,4	7.4	120		8.7	5.9	1.2	106	2.0	
Stabilization Test	1421	2.6	119		8-9	5.9	1.1	108		72
0							1.7	10 0		
Sta							Pes		1	
							5/5/22			_
	been a second	- Paragraphy	0.00							
	emples chilled in		ifter collection:	\succeq	Yes	Other				
			Pleyer	abc.	0	0				
arri	e/Affiliation of S	amper(s): _	pay to	0	year					
L	ead Technician	Signature:	Tily	5/1			Date:	5/5	122	
		22	17	/						



~	Client Xce			Projec	ct Shuce	stend's	BING ?	2022 Projec	t No							
and rresampling information	Monitoring Poin	t ID_	P-163					Lai	beled	P163						
	Inside Diam	eter	2	(inches)	Key#	2104		□ Locked	[Not Locked						
,	Casing Mate	rial:	☐ PVC	□ s	iteel		Stainless St	eel								
	HOUT NO.	De	pth Meas	urement	and Ele	vations	(from to	p of well	casing)	1 L						
					Top of	Casing	Elevation			Feet						
Į.							Vell Depth		0.00	Feet						
			r level meas						-	- CONTRACTOR - CON						
1	Static wa	iter leve	el measuren	nent at time Water Leve		11501		MA NA		_Feet						
	Purge Method	Y	Pemp		ei Elevan	ori Deloi	e ruiging.	Pump ID	M	Feet						
ì	Date Purged	111111	15/22				Wat	er Column	-							
	Time Purged	10/10/2000	- M					ng Volume								
١	Pump Rate		MA		GPM /	LPM	Volur	ne Purged	Ø	Gallons						
	Date Samp	nled	m		F	ield Pa	rameter	Measure	ments o	of Sample						
1	Time Samp	5000	M	- 1		рН	41	(units)	D.							
	Sampling Eq			7	Spec.	Cond.		(umis) (umbos/cm)								
	Mete	6066 THE	1		emp. Ob	- CONTRACTOR -		(°C) 54	MA E	h (mV)						
	Analyzed	d by	Rus				7		Othe							
	Field Me	asuren	tonte Tomp	Commeter	7 C STO NESC	_										
U			ienis reind.	Corrected	10	1×4 Y	'es	□ No	I NA							
1	Sample for S					⊠ Y ⊠ Y		☐ No	☐ NA							
	T	oluble empera	Metals Filte sture Correc	red in Field tion Factor	d:	X X										
	To Weather Condition	ioluble empera ns Duri	Metals Filte iture Correcting Sampling	red in Field tion Factor	d:	X X										
	To Weather Condition Sample Descript	oluble empera ns Duri ion:/	Metals Filte ature Correct ng Sampling	red in Field tion Factor g: محمر	d: r _F o- ;	∑ °C	es .	□ No .	□ NA							
	Weather Condition Sample Descript Observation	oluble emperans Duri ion:	Metals Filte ature Correct ong Sampling MO SAMP	red in Field tion Factor g: _~~	d: r. ₇₀ .	5 °C	es ed Age	□ No .	□ NA	insple,						
THE REAL PROPERTY AND ADDRESS OF THE PARTY AND	Weather Condition Sample Descript Observation	oluble emperans Duri ion:	Metals Filte ature Correct ong Sampling MO SAMP	red in Field tion Factor g: _~~	d: r. ₇₀ .	5 °C	es ed Age	□ No .	□ NA							
The second secon	Weather Condition Sample Descript Observation	oluble emperans Duri	Metals Filte ature Correct ng Sampling MO SAMP MO SAMP	red in Field tion Factor g: ~A 2 E	5/6/2 S/6/2 COULD 3:	\$ - Tr	ed Age	No No Sample	// no	Res 5/5/22 W/						
The state of the s	Weather Condition Sample Descript Observation	oluble emperans Duri	Metals Filte ature Correct ong Sampling WH NO SAMP WHE Co	red in Field tion Factor g: ~A 2 E	5/6/2 S/6/2 SULD B	\$ - Tr	ed Age	No shi	□ NA	emple, Rus statez wy						
WICH BOOK IN THE PERSON NAMED IN THE PERSON NA	Weather Condition Sample Descript Observation	oluble emperans Duri	Metals Filte ature Correct ng Sampling MO SAMP MO SAMP	red in Field tion Factor g: ~A 2 E	5/6/2 S/6/2 COULD 3:	\$ - Tr	ed Age	No No Sample	// no	Res 5/5/22 W/						
	Weather Condition Sample Descript Observation	oluble emperans Duri	Metals Filte ature Correct ng Sampling MO SAMP MO SAMP	red in Field tion Factor g: ~A 2 E	5/6/2 S/6/2 COULD 3:	\$ - Tr	ed Age	No No Sample	// no	Res 5/5/22 W/						
STATE OF THE PARTY	Weather Condition Sample Descript Observation	oluble emperans Duri	Metals Filte ature Correct ng Sampling MO SAMP MO SAMP	red in Field tion Factor g: ~A 2 E	5/6/2 S/6/2 COULD 3:	\$ - Tr	ed Age	No No Sample	// no	Res 5/5/22 W/						
	Weather Condition Sample Descript Observation	oluble emperans Duri	Metals Filte ature Correct ng Sampling MO SAMP MO SAMP	red in Field tion Factor g: AA 2 E	5/6/2 S/6/2 COULD 3:	\$ - Tr	ed Age	No No Sample	// no	Res 5/5/22 W/						
	Weather Condition Sample Descript Observation	oluble emperans Duri	Metals Filte ature Correct ng Sampling MO SAMP MO SAMP	red in Field tion Factor g: AA 2 E	5/6/2 S/6/2 COULD 3:	\$ - Tr	ed Age	No No Sample	// no	Res 5/5/22 W/						
	Weather Condition Sample Descript Observation	oluble emperans Duri	Metals Filte ature Correct ng Sampling MO SAMP MO SAMP	red in Field tion Factor g: AA 2 E	5/6/2 S/6/2 COULD 3:	\$ - Tr	ed Age	No No Sample	// no	Res 5/5/22 W/						
	Weather Condition Sample Descript Observation	coluble emperans Duri	Metals Filte ature Correct ng Sampling NO SAMP LINE CO Specific Con (jumbos	red in Field tion Factor g: AA	5/6/2 S/6/2 COULD 3:	\$ - Tr	D.O. (mg/l)	No No Sample	// no	Res 5/5/22 W/						
m	Weather Condition Sample Descript Observation Observation Time ph (unit	roluble emperans Duri	Metals Filte ature Correct ong Sampling NO SAMP LINE Con Specific Con (jumhos	red in Field tion Factor g: AA	S/6/2 S/6/2 SOULD B	S °C · C · C · C · C · C · C · C · C · C	D.O. (mg/l)	No No Sample	// no	Res 5/5/22 W/						
5.0	Weather Condition Sample Descript Observation Observat	roluble emperans Duri	Metals Filte ature Correct ng Sampling NO SAMP LINE CO Specific Con (jumbos	red in Field tion Factor g: AA	S/6/2 S/6/2 SOULD B	S °C · C · C · C · C · C · C · C · C · C	D.O. (mg/l)	No No Sample	// no	Res 5/5/22 W/						
Sam	Weather Condition Sample Descript Observation Observat	r(s):	Metals Filte ature Correct ong Sampling NO SAMP LINE Con Specific Con (jumhos	red in Field tion Factor g: AA	S/6/2 S/6/2 SOULD B	S °C · C · C · C · C · C · C · C · C · C	D.O. (mg/l)	Turbidity (NTU)	// no	Volume Purge (cumulative ga						



CARLSON WELL PURGING AND SAMPLE COLLECTION

Well No.



Project Name,		French	w Ronds	Spring Ze	522			ject No.:	6559-04		
Date:	126/202	٧		Weather:	_ Clas	ly 650	;				
Purging Metho	od 💢	Pumpe	d 🗆 B	Bailed (Other ℓ	interra					
Pump Type:	Waterr	a		_ Bailer Typ	oe:						
Depth to Water (D.T.W.) 163.70 Depth to Bottom (D.T.B.) 176.00											
Volume Calculation: $(176.00 - 163.7) \times 0.163 = 2 \text{ gallons}$											
Gals./Well Vo	lume:	2.5		[(D.T.B. – D).T.W.) gal.	/ft.] = Gals.	/well volur	me]			
Time	Volume Removed (gal.)	Temp. (ºC)	рН	ORP (mv)	Cond. (uS/cm)	Turbidity (ntu)	DO (ppm)	Odor Y/N	Color		
1408	Initial_	10:8	20 ⁶	-	465	ALIZZANIA	Appariting golden and An	N	Char		
1614	5	B. CII	**************************************	4.000000000	466		essergence and a second	N	Clair		
1424	7.5	10.7	Simple.		467	Alexandria—	N _{ORDER} OLL	N	Clear		
		·.									
									1		
						234					
Sample No.:	[J-16]		•	*	Time:						
	□ Time				Sample No						
		2:				.: <u> </u>					
Containers:	4-					Pedian	$\frac{\gamma}{\gamma}$	·6CK	······································		
		- e171 Av.			Analysis:						
Signature	Deere	Katin			Date:	jagen /	26	, Zoz	7		

Stabilization Criteria:
Temperature is stabilized to \pm 0.5 degrees Celsius.
pH is stabilized to <u>+</u> 0.1 standard units.
Specific conductance (temperature corrected) is stabilized to \pm 10% μ S/cm.

Inside Well Diameter	gal./ft.
2"	0.163
4"	0.653
6"	1.469
8"	2.611



Client _	ring Point ID	P-16-CI	Projec			0	La	beled	PILE	iv T
	de Diameter	2	(inches)	Key#	2106		Locked	-		ocked
Cas	ing Material:	☐ PVC	□ s	iteel	□ s	tainless St				
No.		epth Meas	urement	and Ele	vations	(from to	p of well	casing)	ST TO	V N Th
				Top of	Casing	Elevation	NA		Feet	
						ell Depth			Feet	
		er level meas				Contract to the second			Feet	
	Static water le							-	Feet	
5 101		Static	Water Leve	el Elevation	on Before	Purging			Feet	
Purge M		4		-			Pump ID_			
Date P	-	A1		_			er Column _			Feet
Time P	-						ng Volume_			Gallons
Pump	Rate			_GPM /	LPM	Volur	ne Purged_			Gallons
Da	ate Sampled_			F	ield Pa	rameter	Measure	ments	of Sam	ple
Tir	ne Sampled		_		pH		(units)	D	0	_(mg/l)
Sam	pling Equip.	Pump + Filte	1	Spec.	Cond.		(µmhos/cm)			(NTU)
	Meter ID		Т Т	emp. Obs	served	0.0	(°C)		.10	(mV)
				destribed property	DOLL & COM					
	Analyzed by			emp. Cor					4-3	
	Analyzed by_		_	emp. Cor	rected_	John	(°C)	Oth	er	
	Analyzed by_ Field Measure	ments Temp	. Corrected	emp. Cor	rected _	es	(°C)	Oth	er A	
	Analyzed by_ Field Measure ple for Solubl	ments Temp e Metals Filte	. Corrected in Field	emp. Cor f: d;	rected _	es	(°C)	Oth	er A	
Sam	Analyzed by_ Field Measure ple for Solubl Tempe	ements Temp e Metals Filte erature Correc	. Corrected red in Field	emp. Cor f: d;	rected _	es	(°C)	Oth	er A	
Sam	Analyzed by_ Field Measure ple for Solubl Tempe Conditions Du	ements Temp e Metals Filte rature Correc iring Samplin	. Corrected red in Field	emp. Cor f: d;	rected _	es	(°C)	Oth	er A	
Sam Weather 'Sample	Analyzed by Field Measure iple for Solubl Tempe Conditions Du Description:	ements Temp e Metals Filte trature Correct pring Samplin	Corrected in Field cition Factor g:^1	emp. Cor d: r: <u>+0.3</u>	rected _	es es	(°C)	Oth	erA	
Sam Weather Sample	Analyzed by Field Measure ple for Solubl Tempe Conditions Du Description: _bservations: _	ements Temp e Metals Filte rature Correct iring Samplin	. Corrected in Field tion Factor g:	t: d: r: +0.3	rected _ ⊠ Y ⊠ Y °C	es es	(°C) No No No	Oth	erA	
Sam Weather Sample	Analyzed by Field Measure sple for Solubl Tempe Conditions Du Description: bservations:	ements Temp e Metals Filte grature Correct pring Samplin ANO SA tos/KCM + S	Corrected fred in Field stion Factor g:	course 3	Tected Y	es es os	No No.	Oth	erA	
Sam Weather Sample	Analyzed by Field Measure ple for Solubl Tempe Conditions Du Description: _bservations: _	ements Temp e Metals Filte rature Correct iring Samplin	Corrected in Field cition Factor g:	t: d: r: +0.3	Tected Y	es es Ons	(°C) No No No	Oth	erAA	ume Purge
Sam Weather Sample O	Analyzed by Field Measure sple for Solubl Tempe Conditions Du Description: bservations: ct s/e/sz by pH	ements Temp e Metals Filte rature Correct uring Samplin AND SA tbs/kcm + S	Corrected in Field cition Factor g:	COLLE	Tected Y	es es os	No No.	Oth	erAA	ume Purge
Sam Weather Sample O	Analyzed by Field Measure sple for Solubl Tempe Conditions Du Description: bservations: ct s/e/sz by pH	ements Temp e Metals Filte rature Correct uring Samplin AND SA tbs/kcm + S	Corrected in Field cition Factor g:	COLLE	Tected Y	es es Ons	No No.	Oth	erAA	ume Purge
Sam Weather Sample O	Analyzed by Field Measure sple for Solubl Tempe Conditions Du Description: bservations: ct s/e/sz by pH	ements Temp e Metals Filte rature Correct uring Samplin AND SA tbs/kcm + S	Corrected in Field cition Factor g:	COLLE	Tected Y	es es D.O. (mg/l)	No No.	Oth	erAA	ume Purge
Sam Weather Sample O	Analyzed by Field Measure sple for Solubl Tempe Conditions Du Description: bservations: ct s/e/sz by pH	ements Temp e Metals Filte rature Correct uring Samplin AND SA tbs/kcm + S	Corrected in Field cition Factor g:	COLLE	Tected Y	es es D.O. (mg/l)	No No.	Oth	erAA	ume Purge
Sam Weather Sample O	Analyzed by Field Measure sple for Solubl Tempe Conditions Du Description: bservations: ct s/e/sz by pH	ements Temp e Metals Filte rature Correct uring Samplin AND SA tbs/kcm + S	Corrected in Field cition Factor g:	COLLE	Tected Y	es es D.O. (mg/l)	No No No .	Oth	erAA	ume Purgeo
Sam Weather Sample O	Analyzed by Field Measure sple for Solubl Tempe Conditions Du Description: bservations: ct s/e/sz by pH	ements Temp e Metals Filte rature Correct uring Samplin AND SA tbs/kcm + S	Corrected in Field cition Factor g:	COLLE	Tected Y	es es D.O. (mg/l)	No No No .	Oth	erAA	ume Purgeo
Sam Weather Sample O	Analyzed by Field Measure sple for Solubl Tempe Conditions Du Description: bservations: ct s/e/sz by pH	ements Temp e Metals Filte rature Correct uring Samplin AND SA tbs/kcm + S	Corrected in Field cition Factor g:	COLLE	Tected Y	es es D.O. (mg/l)	No No No .	Oth	erAA	ume Purge
Sam Weather Sample O O Time	Analyzed by Field Measure sple for Solubl Tempe Conditions Du Description: bservations: ct s/e/sz by pH	ements Temp e Metals Filte erature Correct uring Samplin AND SA Specifc Cor (umbos	Corrected in Field stion Factor g:	COLLE	Tected Y	es es Ons Ons Ons SH. = H D.O. (mg/l)	No No No .	Oth	erAA	ume Purgeo
Sam Weather Sample O O Time	Analyzed by Field Measure sple for Solubl Tempe Conditions De Description: bservations: ct s/e/rz by pH (units)	ements Temp e Metals Filte erature Correct uring Samplin ****** ******* ****** ****** *****	Corrected in Field in Factor F	COULE So ; T.	Tected Y	es es Ons Ons Ons SH. = H D.O. (mg/l)	No No No .	Oth	erAA	
Sam Weather Sample O O O Time Time	Analyzed by Field Measure sple for Solubl Tempe Conditions De Description: bservations: ct s/e/rz by pH (units)	ements Temp e Metals Filte erature Correct uring Samplin ****** ******* ****** ****** *****	Corrected in Field in Factor F	COULE So ; T.	Tected Y	es es Ons Ons Ons SH. = H D.O. (mg/l)	No No No .	Oth	erAA	ume Purge
Sam Weather Sample O O O Mierre Time	Analyzed by Field Measure sple for Solubl Tempe Conditions Du Description: bservations: ct 5/6/12 by pH (units)	ements Temp e Metals Filte erature Correct uring Samplin ****** ******* ****** ****** *****	Corrected in Field stion Factor g:	COULE So ; T.	Tected Y	es es Ons Ons Ons SH. = H D.O. (mg/l)	No No No .	Oth	erAA	ume Purge



WELL PURGING AND SAMPLE COLLECTION

Well No.



Project Name	/Location:	Sher	co Renet	5 Spring	ZOZZ		Pro	ject No.:	655904	
Date:	5-26-20	122	, 	/ Weather:	clx	dy 65h	unel 5-	10 NN	6559 U4 E	
Purging Meth					Other _	<i>,</i>				
Pump Type:	Wafe	wa	***************************************	Bailer Typ	oe:	· · · · · · · · · · · · · · · · · · ·	A Marian	ý.		
Depth to Wat	er (D.T.W.)	156.50)	Depth to Bottom (D.T.B.) 166.00						
Volume Calcu	lation:	(166.00 -	156.50) x (0.163 = 1.55	gallons				***************************************	
Gals./Well Volume: 1.55 gallons [(D.T.B. – D.T.W.) gal./ft.] = Gals./well volume]										
Time	Volume Removed (gal.)	Temp. (ºC)	рН	ORP (mv)	Cond. (uS/cm)	Turbidity (ntu)	DO (ppm)	Odor Y/N	Color	
1459	Initial 25	12.0	- Company of the Comp		429	-	Anadolis*	je/	Clear	
1506	5.0	0.51	<u></u>	-Magazini -	428			A	Clear Clear	
1513	7.5	11.8	**************************************	•	427	•	**************************************	N	Clear	
Ave.	C.		4			1520				
Sample No.:		IP			Time:					
•	□ Time				Sample No					
Duplicate [Containers:	4	•		`	sampie No Analysis:	.:_ GW-CC	R, Radium	 l		
Containers										
			<u> </u>							
Signature:	David Katz	zner		l	Date:	5 /	26	/ 2022		

Stabilization Criteria:	
Temperature is stabilized to \pm 0.5 degrees Celsius.	
pH is stabilized to <u>+</u> 0.1 standard units.	
Specific conductance (temperature corrected) is stabilized to \pm 10% μ S/cm.	5

Inside Well Diameter	gal./ft.
2"	0.163
4"	0.653
6"	1.469
8"	2.611



=	Inside	Diameter	2	(inches)	Key# 2	iole	Locke		500 May 150 May					
Hommitten Brindings - pin nordings	Casin	g Material:	☑ PVC		iteel	Stainless S								
		D	epth Meas	urement	and Eleva	tions (from t	op of well	casing)						
	-				Top of Ca	sing Elevation	_ N	A	Feet					
		1421111111111111				tal Well Depth	_		Feet					
						g (Start Depth)								
	St	atic water lev				g (Final Depth)			- 32333					
	Purne Mel	thod To A	static i		el Elevation I	Before Purging								
	29-53 57 2003	ged 5	The second secon	horas		Wa	Pump ID ter Column							
			0 - 085	-8	7		ing Volume							
	Pump F	3333	0.2	7	GPM) LPI		me Purged							
1					F:-									
	540.50		5/4/72		Fiel	41								
	4007797555	Sampled_	0705	- 1		pH 7 - 7	(units)							
	Sampl		Spec. Cond. 580 (umhos/cm) Turbidity 1-4 (NTU)											
		Meter ID MS-C Temp. Observed 10-1 (°C) Eh 12-C (mV) Analyzed by RGS Temp. Corrected 10-4 (°C) Other MT												
ş														
ğ	- 2.5						• *	20.187	Feet Feet Feet Gallons Gallons Sample 10.4 (mg/l) 1-4 (NTU) 12.6 (mV)					
	2991050501				i:	⊠ Yes	☐ No	□ NA						
	2991050501	e for Soluble	Metals Filter	red in Field	d:		-							
	Sampl	e for Soluble Temper	Metals Filter rature Correc	red in Fiek tion Facto	1: 1: 1: +0-3	⊠ Yes ⊠ Yes °C	□ No □ No	□ NA						
	Sampl Weather Co	le for Soluble Temper onditions Du	Metals Filter rature Correct ring Sampling	red in Fiek tion Facto g:SZ ^F	1: 1: 1: +0-3	⊠ Yes	□ No □ No	□ NA						
AND THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN	Sample D	le for Soluble Temper onditions Dur escription: <u>c</u>	Metals Filter rature Correct ring Sampling	red in Field tion Facto g: _S2 F >Lv	1: d: r: <u>+0.3</u> , Smay,	⊠ Yes ⊠ Yes °C €@ SMP	No No	□ NA □ NA						
	Sample D	Temper Temper conditions Dur escription: _c servations: _c	Metals Filter rature Correct ring Sampling	red in Field tion Facto g: _S2 F >Lv	1: d: r: <u>+0.3</u> , Smay,	⊠ Yes ⊠ Yes °C €@ SMP	No No	□ NA □ NA						
The same of the sa	Sample D	Temper Temper conditions Dur escription: _c servations: _c	Metals Filter rature Correct ring Sampling Serve Acc	red in Field tion Facto is: 52 F	1: d: r: <u>+0.3</u> , Smay,	Yes Yes C C C SM	No No	□ NA □ NA	, (ξυΣ ≤ /617 z Volume Purgeo					
	Sample Weather Co	e for Soluble Temper conditions Dur escription: _c ervations: _c	Metals Filter rature Correct ring Sampling Serve Acc	red in Field tion Facto p: 52 F >Lv Repair ductance com)	1: d: r: +0.3 , Sunai, ,	Yes Yes C C C SM	No No No Turbidity	□ NA □ NA □ NA	Volume Purges					
	Sample Dobs Time	e for Soluble Temper conditions Dur escription: ervations: pH (units)	Metals Filter rature Correct ring Sampling Serve Programmes Specific Con- (jumhos)	red in Field tion Facto p: 52 F >Lv Repair ductance com)	t: t: +0.3 Servery, ed by D Temp ("C (observed)	Yes Yes C C C C C C C C C C C C C C C C C C C	No No No Turbidity (NTU)	□ NA □ NA □ NA	Volume Purged (cumulative gal)					
	Sample Do Obs	e for Soluble Temper conditions Dur escription: 2 ervations: pH (units)	Metals Filter rature Correct ring Sampling Serve Pro-	tion Field tion Facto SZF SZF SZV Departs ductance form	1: d: r. +0. 3 Survey, 10. 1	Yes Yes °C € @ 5 M bw . I K ous D.O. (mg/l) 10 . (e	No N	□ NA	Volume Purgeo (cumulative gal) 7. Z					
	Sample Do Obs	pH (units)	Metals Filter rature Correct ring Sampling Serve Pro-	tion Field tion Facto SZF SZF SZV Departs ductance form	t: d: r: +0.3 Suray, Temp (*C (observed) 10.1	N Yes N Yes C E C S M D.O. (mg/l) 10. (q	No No No Turbidity (NTU)	NA N	Volume Purged (cumulative gal)					
A STATE OF THE PARTY OF THE PAR	Sample Do Obs	pH (units)	Metals Filter rature Correct ring Sampling Serve Pro-	tion Field tion Facto SZF SZF SZV Departs ductance form	t: d: r: +0.3 Suray, Temp (*C (observed) 10.1	N Yes N Yes C E C S M D.O. (mg/l) 10. (q 10. 5	Turbidity (NTU) 1.9 1.4	□ NA	Volume Purgeo (cumulative gal) 7. Z					
A STATE OF THE PARTY OF THE PAR	Sample Do Obs	pH (units)	Metals Filter rature Correct ring Sampling Serve Pro-	tion Field tion Facto SZF SZF SZV Departs ductance form	t: d: r: +0.3 Suray, Temp (*C (observed) 10.1	N Yes N Yes C E C S M D.O. (mg/l) 10. (q	Turbidity (NTU) 1.9 1.4	□ NA	Volume Purgeo (cumulative gal) 7. Z					
The state of the s	Weather Co Sample Do Obs Time 08.46	pH (units)	Specific Con (umhos) 5 8 0	red in Field tion Factors: 52 F	1: d: r. +0. 3 F. +0. 3 F. +0. 3 Femp (*C (observed) 10. 10	N Yes N Yes C E C S M D.O. (mg/l) 10. (q 10. 5	Turbidity (NTU) 1.9 1.4	□ NA	Volume Purgeo (cumulative gal) 7. Z					
	Sample Weather Co Sample Do Obs Time 08.46 08.52 07.58	pH (units)	Specific Con (umhos) 5 8 0	red in Field tion Factors: 52 F	t: d: r: +0.3 Suray, Temp (*C (observed) 10.1	N Yes N Yes C E C S M D.O. (mg/l) 10. (q 10. 5	Turbidity (NTU) 1.9 1.4	□ NA	Volume Purgeo (cumulative gal) 7. Z					
	Weather Co Sample Do Obs Time 08.46	pH (units)	Specific Con (umhos) 5 8 0	red in Field tion Factors: 52 F	1: d: r. +0. 3 F. +0. 3 F. +0. 3 Femp (*C (observed) 10. 10	Yes X Yes C Yes C SM D.O. D.O. (mg/l) 10. (q) 10. 4	Turbidity (NTU) 1.9 1.4	□ NA	Volume Purgeo (cumulative gal) 7. Z					





09 June 2022

Eric Ealy

Environmental Services-Water Minneapolis

414 Nicollet Mall, GO-2

Minneapolis, MN 55401

RE: Sherco Pond 3 CCR

Enclosed are the results of analyses for samples received by the laboratory on 05/05/2022 07:30-05/27/2022 06:30. If you have any questions concerning this report, please feel free to contact me.

CC:

I certify that this analysis report was prepared under my direction or supervision under a system designed to assure that qualified personnel analyzed the submitted samples. All protocols for analysis were followed as required by Minnesota Rules and the Applicable Management Plan.

Sincerely,

Steve Davis

Project Manager



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sample Qualifier	Laboratory ID	Matrix	Sampled	Received
P-132		MHE0049-23	Water	05/04/2022 14:35	05/05/2022 7:30
P-130		MHE0072-12	Water	05/06/2022 10:05	05/06/2022 15:00
P-131		MHE0072-14	Water	05/05/2022 10:50	05/06/2022 15:00
P-151		MHE0072-16	Water	05/05/2022 11:25	05/06/2022 15:00
P-153		MHE0072-17	Water	05/05/2022 12:20	05/06/2022 15:00
P-154A		MHE0072-18	Water	05/05/2022 13:30	05/06/2022 15:00
P-162		MHE0072-19	Water	05/05/2022 14:25	05/06/2022 15:00
P-165		MHE0072-20	Water	05/06/2022 9:05	05/06/2022 15:00
Duplicate CCR-P3		MHE0072-22	Water	05/05/2022 13:30	05/06/2022 15:00
Rinse CCR-P3		MHE0072-23	Water	05/05/2022 12:50	05/06/2022 15:00
P-163		MHE0280-01	Water	05/26/2022 14:30	05/27/2022 6:30
P-164		MHE0280-02	Water	05/26/2022 15:20	05/27/2022 6:30



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

P-132
MHE0049-23 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatogra	phy									
Chloride	1.85	1.00	mg/L		1	BHE0153	5/6/22 7:22	5/6/22 12:34	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHE0153	5/6/22 7:22	5/6/22 12:34	EPA 300.0	CRL
Sulfate	51.1	1.00	mg/L		1	BHE0153	5/6/22 7:22	5/6/22 12:34	EPA 300.0	CRL
Wet Chemistry										
рН	7.70		pH Units	M_TTT	1	BHE0115	5/5/22 9:40	5/5/22 13:20	SM 4500-H+ B	CRL
Total Dissolved Solids	358	25.0	mg/L		1	BHE0142	5/6/22 8:53	5/6/22 8:53	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHE0141	5/6/22 6:54	5/6/22 6:54	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	< 0.500	0.500	ug/L		1	BHE0173	5/9/22 10:17	5/10/22 8:31	EPA 200.8	CRL
Barium	37.3	0.500	ug/L		1	BHE0173	5/9/22 10:17	5/10/22 8:31	EPA 200.8	CRL
Beryllium	< 0.100	0.100	ug/L		1	BHE0173	5/9/22 10:17	5/10/22 8:31	EPA 200.8	CRL
Cadmium	< 0.100	0.100	ug/L		1	BHE0173	5/9/22 10:17	5/10/22 8:31	EPA 200.8	CRL
Cobalt	< 0.500	0.500	ug/L		1	BHE0173	5/9/22 10:17	5/10/22 8:31	EPA 200.8	CRL
Chromium	2.29	0.500	ug/L		1	BHE0173	5/9/22 10:17	5/10/22 8:31	EPA 200.8	CRL
Molybdenum	< 0.500	0.500	ug/L		1	BHE0173	5/9/22 10:17	5/10/22 8:31	EPA 200.8	CRL
Lead	< 0.500	0.500	ug/L		1	BHE0173	5/9/22 10:17	5/10/22 8:31	EPA 200.8	CRL
Antimony	< 0.500	0.500	ug/L		1	BHE0173	5/9/22 10:17	5/10/22 8:31	EPA 200.8	CRL
Selenium	1.18	0.500	ug/L		1	BHE0173	5/9/22 10:17	5/10/22 8:31	EPA 200.8	CRL
Thallium	< 0.500	0.500	ug/L		1	BHE0173	5/9/22 10:17	5/10/22 8:31	EPA 200.8	CRL
Total Metals by ICP										
Boron	0.0767	0.0500	mg/L		1	BHE0172	5/9/22 9:56	5/11/22 14:54	EPA 200.7	HRD
Calcium	83.4	1.50	mg/L		1	BHE0172	5/9/22 9:56	5/11/22 14:53	EPA 200.7	HRD
Lithium	< 0.0150	0.0150	mg/L		1	BHE0172	5/9/22 9:56	5/11/22 14:53	EPA 200.7	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

P-132

MHE0049-23 (Water) - Chain of Custody Number: Pace

Analyte	F Result	Reporting Limit	Units	Analyte Qualifier Dilution	on Batch	Prepared	Analyzed	Method	Analyst
Mercury									
Mercury	< 0.200	0.200	ug/L	1	BHE0148	5/9/22 9:00	5/9/22 13:43	EPA 245.1/7470A	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

P-130 MHE0072-12 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatograph	y									
Chloride	< 1.00	1.00	mg/L		1	BHE0178	5/9/22 7:39	5/9/22 18:24	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHE0178	5/9/22 7:39	5/9/22 18:24	EPA 300.0	CRL
Sulfate	3.64	1.00	mg/L		1	BHE0178	5/9/22 7:39	5/9/22 18:24	EPA 300.0	CRL
Wet Chemistry										
pH	7.89		pH Units	M_TTT	1	BHE0179	5/9/22 7:43	5/9/22 10:46	SM 4500-H+ B	CRL
Total Dissolved Solids	168	25.0	mg/L		1	BHE0177	5/9/22 9:49	5/9/22 9:49	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHE0176	5/9/22 8:52	5/9/22 8:52	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	0.535	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:37	EPA 200.8	CRL
Barium	30.8	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:37	EPA 200.8	CRL
Beryllium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:37	EPA 200.8	CRL
Cadmium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:37	EPA 200.8	CRL
Cobalt	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:37	EPA 200.8	CRL
Chromium	1.44	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:37	EPA 200.8	CRL
Molybdenum	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:37	EPA 200.8	CRL
Lead	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:37	EPA 200.8	CRL
Antimony	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:37	EPA 200.8	CRL
Selenium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:37	EPA 200.8	CRL
Thallium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:37	EPA 200.8	CRL
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:07	EPA 200.7	HRD
Calcium	42.2	1.50	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:05	EPA 200.7	HRD
Lithium	< 0.0150	0.0150	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:05	EPA 200.7	HRD



Environmental Services-Water Minneapolis	Project Name/Location: Sherco Pond 3 CCR	
414 Nicollet Mall, GO-2		Reported:
Minneapolis MN, 55401	Project Manager: Eric Ealy	06/09/2022 10:41

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MHE0072-12 (Water) - Chain of Custody Number: Pace

Analyte	i Result	Reporting Limit	Units	Analyte Qualifier Dilutio	n Batch	Prepared	Analyzed	Method	Analyst
Mercury									
Mercury	< 0.200	0.200	ug/L	1	BHE0148	5/9/22 9:00	5/9/22 13:55	EPA 245.1/7470A	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

P-131
MHE0072-14 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatograph	ıy									
Chloride	24.5	1.00	mg/L		1	BHE0178	5/9/22 7:39	5/9/22 19:05	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHE0178	5/9/22 7:39	5/9/22 19:05	EPA 300.0	CRL
Sulfate	31.2	1.00	mg/L		1	BHE0178	5/9/22 7:39	5/9/22 19:05	EPA 300.0	CRL
Wet Chemistry										
рН	7.85		pH Units	M_TTT	1	BHE0179	5/9/22 7:43	5/9/22 10:59	SM 4500-H+ B	CRL
Total Dissolved Solids	304	25.0	mg/L		1	BHE0204	5/10/22 9:02	5/10/22 9:02	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHE0203	5/10/22 6:56	5/10/22 6:56	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	0.630	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:41	EPA 200.8	CRL
Barium	71.8	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:41	EPA 200.8	CRL
Beryllium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:41	EPA 200.8	CRL
Cadmium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:41	EPA 200.8	CRL
Cobalt	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:41	EPA 200.8	CRL
Chromium	1.51	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:41	EPA 200.8	CRL
Molybdenum	0.597	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:41	EPA 200.8	CRL
Lead	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:41	EPA 200.8	CRL
Antimony	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:41	EPA 200.8	CRL
Selenium	0.584	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:41	EPA 200.8	CRL
Thallium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:41	EPA 200.8	CRL
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:13	EPA 200.7	HRD
Calcium	74.6	1.50	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:11	EPA 200.7	HRD
Lithium	< 0.0150	0.0150	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:11	EPA 200.7	HRD



Environmental Services-Water Minneapolis

414 Nicollet Mall, GO-2

Minneapolis MN, 55401

Project Manager: Eric Ealy

Project Manager: Eric Ealy

Reported:

06/09/2022 10:41

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MHE0072-14 (Water) - Chain of Custody Number: Pace

Analyte	F Result	Reporting Limit	Units	Analyte Qualifier Dilution	n Batch	Prepared	Analyzed	Method	Analyst
Mercury									
Mercury	< 0.200	0.200	ug/L	1	BHE0148	5/9/22 9:00	5/9/22 14:00	EPA 245.1/7470A	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

P-151
MHE0072-16 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatograp	phy									
Chloride	15.9	1.00	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 9:50	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 9:50	EPA 300.0	CRL
Sulfate	14.8	1.00	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 9:50	EPA 300.0	CRL
Wet Chemistry										
pH	7.97		pH Units	M_TTT	1	BHE0179	5/9/22 7:43	5/9/22 11:11	SM 4500-H+ B	CRL
Total Dissolved Solids	200	25.0	mg/L		1	BHE0204	5/10/22 9:02	5/10/22 9:02	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHE0203	5/10/22 6:56	5/10/22 6:56	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:45	EPA 200.8	CRL
Barium	35.0	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:45	EPA 200.8	CRL
Beryllium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:45	EPA 200.8	CRL
Cadmium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:45	EPA 200.8	CRL
Cobalt	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:45	EPA 200.8	CRL
Chromium	1.47	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:45	EPA 200.8	CRL
Molybdenum	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:45	EPA 200.8	CRL
Lead	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:45	EPA 200.8	CRL
Antimony	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:45	EPA 200.8	CRL
Selenium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:45	EPA 200.8	CRL
Thallium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:45	EPA 200.8	CRL
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:18	EPA 200.7	HRD
Calcium	46.3	1.50	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:16	EPA 200.7	HRD
Lithium	< 0.0150	0.0150	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:16	EPA 200.7	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

P-151 MHE0072-16 (Water) - Chain of Custody Number: Pace

Analyte	F Result	Reporting Limit	Units	Analyte Qualifier Dilution	on Batch	Prepared	Analyzed	Method	Analyst
Mercury									
Mercury	< 0.200	0.200	ug/L	1	BHE0148	5/9/22 9:00	5/9/22 14:02	EPA 245.1/7470A	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

P-153 MHE0072-17 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatograp	hy									
Chloride	< 1.00	1.00	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 10:11	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 10:11	EPA 300.0	CRL
Sulfate	4.08	1.00	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 10:11	EPA 300.0	CRL
Wet Chemistry										
pH	8.11		pH Units	M_TTT	1	BHE0179	5/9/22 7:43	5/9/22 11:14	SM 4500-H+ B	CRL
Total Dissolved Solids	104	25.0	mg/L		1	BHE0204	5/10/22 9:02	5/10/22 9:02	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHE0203	5/10/22 6:56	5/10/22 6:56	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	1.26	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:49	EPA 200.8	CRL
Barium	15.3	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:49	EPA 200.8	CRL
Beryllium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:49	EPA 200.8	CRL
Cadmium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:49	EPA 200.8	CRL
Cobalt	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:49	EPA 200.8	CRL
Chromium	0.937	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:49	EPA 200.8	CRL
Molybdenum	0.784	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:49	EPA 200.8	CRL
Lead	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:49	EPA 200.8	CRL
Antimony	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:49	EPA 200.8	CRL
Selenium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:49	EPA 200.8	CRL
Thallium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 9:49	EPA 200.8	CRL
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 16:49	EPA 200.7	HRD
Calcium	25.0	1.50	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 16:46	EPA 200.7	HRD
Lithium	< 0.0150	0.0150	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 16:46	EPA 200.7	HRD



Environmental Services-Water Minneapolis	Project Name/Location: Sherco Pond 3 CCR	
414 Nicollet Mall, GO-2		Reported:
Minneapolis MN, 55401	Project Manager: Eric Ealy	06/09/2022 10:41

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MHE0072-17 (Water) - Chain of Custody Number: Pace

Analyte	F Result	Reporting Limit	Units	Analyte Qualifier Dilutio	n Batch	Prepared	Analyzed	Method	Analyst
Mercury									
Mercury	< 0.200	0.200	ug/L	1	BHE0148	5/9/22 9:00	5/9/22 14:04	EPA 245.1/7470A	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

P-154A MHE0072-18 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatograph	ıv						<u> </u>			
Chloride	28.8	1.00	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 10:31	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 10:31	EPA 300.0	CRL
Sulfate	33.0	1.00	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 10:31	EPA 300.0	CRL
Wet Chemistry										
pH	7.96		pH Units	M_TTT	1	BHE0179	5/9/22 7:43	5/9/22 11:17	SM 4500-H+ B	CRL
Total Dissolved Solids	326	25.0	mg/L		1	BHE0204	5/10/22 9:02	5/10/22 9:02	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHE0203	5/10/22 6:56	5/10/22 6:56	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	1.32	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:00	EPA 200.8	CRL
Barium	49.7	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:00	EPA 200.8	CRL
Beryllium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:00	EPA 200.8	CRL
Cadmium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:00	EPA 200.8	CRL
Cobalt	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:00	EPA 200.8	CRL
Chromium	0.926	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:00	EPA 200.8	CRL
Molybdenum	0.747	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:00	EPA 200.8	CRL
Lead	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:00	EPA 200.8	CRL
Antimony	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:00	EPA 200.8	CRL
Selenium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:00	EPA 200.8	CRL
Thallium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:00	EPA 200.8	CRL
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:24	EPA 200.7	HRD
Calcium	71.7	1.50	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:22	EPA 200.7	HRD
Lithium	< 0.0150	0.0150	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:22	EPA 200.7	HRD



Environmental Services-Water Minneapolis

414 Nicollet Mall, GO-2

Minneapolis MN, 55401

Project Manager: Eric Ealy

Project Manager: Eric Ealy

Reported:

06/09/2022 10:41

P-154A

MHE0072-18 (Water) - Chain of Custody Number: Pace

Analyte	F Result	Reporting Limit	Units	Analyte Qualifier Dilutio	n Batch	Prepared	Analyzed	Method	Analyst
Mercury									
Mercury	< 0.200	0.200	ug/L	1	BHE0148	5/9/22 9:00	5/9/22 14:05	EPA 245.1/7470A	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

P-162 MHE0072-19 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatogra	phy									
Chloride	40.1	1.00	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 10:52	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 10:52	EPA 300.0	CRL
Sulfate	182	1.00	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 10:52	EPA 300.0	CRL
Wet Chemistry										
рН	7.74		pH Units	M_TTT	1	BHE0179	5/9/22 7:43	5/9/22 11:21	SM 4500-H+ B	CRL
Total Dissolved Solids	746	25.0	mg/L		1	BHE0204	5/10/22 9:02	5/10/22 9:02	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHE0203	5/10/22 6:56	5/10/22 6:56	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	0.644	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:04	EPA 200.8	CRL
Barium	69.2	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:04	EPA 200.8	CRL
Beryllium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:04	EPA 200.8	CRL
Cadmium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:04	EPA 200.8	CRL
Cobalt	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:04	EPA 200.8	CRL
Chromium	7.92	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:04	EPA 200.8	CRL
Molybdenum	2.20	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:04	EPA 200.8	CRL
Lead	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:04	EPA 200.8	CRL
Antimony	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:04	EPA 200.8	CRL
Selenium	9.05	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:04	EPA 200.8	CRL
Thallium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:04	EPA 200.8	CRL
Total Metals by ICP										
Boron	0.342	0.0500	mg/L	•	1	BHE0198	5/9/22 10:51	5/11/22 17:29	EPA 200.7	HRD
Calcium	138	1.50	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:28	EPA 200.7	HRD
Lithium	< 0.0150	0.0150	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:28	EPA 200.7	HRD



Environmental Services-Water Minneapolis

414 Nicollet Mall, GO-2

Minneapolis MN, 55401

Project Manager: Eric Ealy

Project Manager: Eric Ealy

Project Manager: Eric Ealy

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MHE0072-19 (Water) - Chain of Custody Number: Pace

Analyte	F Result	Reporting Limit	Units	Analyte Qualifier Dilution	on Batch	Prepared	Analyzed	Method	Analyst
Mercury									
Mercury	< 0.200	0.200	ug/L	1	BHE0148	5/9/22 9:00	5/9/22 14:07	EPA 245.1/7470A	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

P-165 MHE0072-20 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatograp	hy									
Chloride	7.89	1.00	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 11:12	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 11:12	EPA 300.0	CRL
Sulfate	27.6	1.00	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 11:12	EPA 300.0	CRL
Wet Chemistry										
pH	7.87		pH Units	M_TTT	1	BHE0179	5/9/22 7:43	5/9/22 11:24	SM 4500-H+ B	CRL
Total Dissolved Solids	298	25.0	mg/L		1	BHE0204	5/10/22 9:02	5/10/22 9:02	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHE0203	5/10/22 6:56	5/10/22 6:56	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:08	EPA 200.8	CRL
Barium	35.9	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:08	EPA 200.8	CRL
Beryllium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:08	EPA 200.8	CRL
Cadmium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:08	EPA 200.8	CRL
Cobalt	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:08	EPA 200.8	CRL
Chromium	1.51	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:08	EPA 200.8	CRL
Molybdenum	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:08	EPA 200.8	CRL
Lead	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:08	EPA 200.8	CRL
Antimony	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:08	EPA 200.8	CRL
Selenium	0.986	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:08	EPA 200.8	CRL
Thallium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:08	EPA 200.8	CRL
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:35	EPA 200.7	HRD
Calcium	70.5	1.50	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:33	EPA 200.7	HRD
Lithium	< 0.0150	0.0150	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:33	EPA 200.7	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

P-165

MHE0072-20 (Water) - Chain of Custody Number: Pace

Analyte	F Result	Reporting Limit	Units	Analyte Qualifier Dilution	n Batch	Prepared	Analyzed	Method	Analyst
Mercury									
Mercury	< 0.200	0.200	ug/L	1	BHE0148	5/9/22 9:00	5/9/22 14:09	EPA 245.1/7470A	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

Duplicate CCR-P3 MHE0072-22 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatograph	ny									
Chloride	29.8	1.00	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 11:54	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 11:54	EPA 300.0	CRL
Sulfate	33.1	1.00	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 11:54	EPA 300.0	CRL
Wet Chemistry										
рН	8.04		pH Units	M_TTT	1	BHE0179	5/9/22 7:43	5/9/22 11:44	SM 4500-H+ B	CRL
Total Dissolved Solids	326	25.0	mg/L		1	BHE0204	5/10/22 9:02	5/10/22 9:02	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHE0203	5/10/22 6:56	5/10/22 6:56	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	1.33	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:12	EPA 200.8	CRL
Barium	50.8	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:12	EPA 200.8	CRL
Beryllium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:12	EPA 200.8	CRL
Cadmium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:12	EPA 200.8	CRL
Cobalt	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:12	EPA 200.8	CRL
Chromium	0.783	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:12	EPA 200.8	CRL
Molybdenum	0.699	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:12	EPA 200.8	CRL
Lead	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:12	EPA 200.8	CRL
Antimony	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:12	EPA 200.8	CRL
Selenium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:12	EPA 200.8	CRL
Thallium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:12	EPA 200.8	CRL
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:52	EPA 200.7	HRD
Calcium	71.5	1.50	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:49	EPA 200.7	HRD
Lithium	< 0.0150	0.0150	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:49	EPA 200.7	HRD



Environmental Services-Water Minneapolis	Project Name/Location: Sherco Pond 3 CCR	
414 Nicollet Mall, GO-2		Reported:
Minneapolis MN, 55401	Project Manager: Eric Ealy	06/09/2022 10:41

Duplicate CCR-P3

MHE0072-22 (Water) - Chain of Custody Number: Pace

Analyte	F Result	Reporting Limit	Units	Analyte Qualifier Diluti	on Batch	Prepared	Analyzed	Method	Analyst
Mercury									
Mercury	< 0.200	0.200	ug/L	1	BHE0148	5/9/22 9:00	5/9/22 14:10	EPA 245.1/7470A	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

Rinse CCR-P3 MHE0072-23 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
/ trialyto	Nesull	LIIIII	Office	Qualifier	Dilution	Datell	гіераіец	Allalyzed	Metriou	, and you
Anions by Ion Chromatography	•									
Chloride	< 1.00	1.00	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 12:14	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 12:14	EPA 300.0	CRL
Sulfate	< 1.00	1.00	mg/L		1	BHE0192	5/9/22 10:10	5/10/22 12:14	EPA 300.0	CRL
Wet Chemistry										
pH	6.29		pH Units	M_TTT	1	BHE0179	5/9/22 7:43	5/9/22 11:48	SM 4500-H+ B	CRL
Total Dissolved Solids	< 25.0	25.0	mg/L	M_ES	1	BHE0204	5/10/22 9:02	5/10/22 9:02	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHE0203	5/10/22 6:56	5/10/22 6:56	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:16	EPA 200.8	CRL
Barium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:16	EPA 200.8	CRL
Beryllium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:16	EPA 200.8	CRL
Cadmium	< 0.100	0.100	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:16	EPA 200.8	CRL
Cobalt	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:16	EPA 200.8	CRL
Chromium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:16	EPA 200.8	CRL
Molybdenum	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:16	EPA 200.8	CRL
Lead	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:16	EPA 200.8	CRL
Antimony	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:16	EPA 200.8	CRL
Selenium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:16	EPA 200.8	CRL
Thallium	< 0.500	0.500	ug/L		1	BHE0199	5/9/22 10:52	5/10/22 10:16	EPA 200.8	CRL
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 17:02	EPA 200.7	HRD
Calcium	< 1.50	1.50	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 16:59	EPA 200.7	HRD
Lithium	< 0.0150	0.0150	mg/L		1	BHE0198	5/9/22 10:51	5/11/22 16:59	EPA 200.7	HRD



Environmental Services-Water Minneapolis	Project Name/Location: Sherco Pond 3 CCR	
414 Nicollet Mall, GO-2		Reported:
Minneapolis MN, 55401	Project Manager: Eric Ealy	06/09/2022 10:41

Rinse CCR-P3

MHE0072-23 (Water) - Chain of Custody Number: Pace

Analyte	F Result	Reporting Limit	Units	Analyte Qualifier Dilutio	n Batch	Prepared	Analyzed	Method	Analyst
Mercury									
Mercury	< 0.200	0.200	ug/L	1	BHE0148	5/9/22 9:00	5/9/22 14:12	EPA 245.1/7470A	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

P-163 MHE0280-01 (Water) - Chain of Custody Number: 284537

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography	/									
Chloride	28.4	1.00	mg/L		1	BHF0013	6/1/22 11:52	6/2/22 11:07	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHF0013	6/1/22 11:52	6/2/22 11:07	EPA 300.0	CRL
Sulfate	76.1	1.00	mg/L		1	BHF0013	6/1/22 11:52	6/2/22 11:07	EPA 300.0	CRL
Wet Chemistry										
рН	7.80		pH Units	M_TTT	1	BHE0597	5/27/22 7:59	5/27/22 8:44	SM 4500-H+ B	CRL
Total Dissolved Solids	360	25.0	mg/L		1	BHE0620	5/31/22 9:34	5/31/22 9:34	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHE0619	5/31/22 7:18	5/31/22 7:18	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	0.569	0.500	ug/L		1	BHF0010	6/2/22 9:06	6/6/22 8:32	EPA 200.8	CRL
Barium	32.8	0.500	ug/L		1	BHF0010	6/2/22 9:06	6/6/22 8:32	EPA 200.8	CRL
Beryllium	< 0.100	0.100	ug/L		1	BHF0010	6/2/22 9:06	6/6/22 8:32	EPA 200.8	CRL
Cadmium	< 0.100	0.100	ug/L		1	BHF0010	6/2/22 9:06	6/6/22 8:32	EPA 200.8	CRL
Cobalt	< 0.500	0.500	ug/L		1	BHF0010	6/2/22 9:06	6/6/22 8:32	EPA 200.8	CRL
Chromium	20.1	0.500	ug/L		1	BHF0010	6/2/22 9:06	6/6/22 8:32	EPA 200.8	CRL
Molybdenum	1.62	0.500	ug/L		1	BHF0010	6/2/22 9:06	6/6/22 8:32	EPA 200.8	CRL
Lead	< 0.500	0.500	ug/L		1	BHF0010	6/2/22 9:06	6/6/22 8:32	EPA 200.8	CRL
Antimony	< 0.500	0.500	ug/L		1	BHF0010	6/2/22 9:06	6/6/22 8:32	EPA 200.8	CRL
Selenium	9.55	0.500	ug/L		1	BHF0010	6/2/22 9:06	6/6/22 8:32	EPA 200.8	CRL
Thallium	< 0.500	0.500	ug/L		1	BHF0010	6/2/22 9:06	6/6/22 8:32	EPA 200.8	CRL
Total Metals by ICP										
Boron	0.0726	0.0500	mg/L		1	BHF0009	6/2/22 9:01	6/7/22 17:54	EPA 200.7	HRD
Calcium	83.6	1.50	mg/L		1	BHF0009	6/2/22 9:01	6/7/22 17:51	EPA 200.7	HRD
Lithium	< 0.0150	0.0150	mg/L		1	BHF0009	6/2/22 9:01	6/7/22 17:51	EPA 200.7	HRD



Environmental Services-Water Minneapolis	Project Name/Location: Sherco Pond 3 CCR	
414 Nicollet Mall, GO-2		Reported:
Minneapolis MN, 55401	Project Manager: Eric Ealy	06/09/2022 10:41

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MHE0280-01 (Water) - Chain of Custody Number: 284537

Analyte	F Result	Reporting Limit	Units	Analyte Qualifier Diluti	on Batch	Prepared	Analyzed	Method	Analyst
Mercury									
Mercury	< 0.200	0.200	ug/L	1	BHE0554	6/1/22 9:04	6/1/22 16:38	EPA 245.1/7470A	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

P-164 MHE0280-02 (Water) - Chain of Custody Number: 284537

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatogra	phy									
Chloride	15.6	1.00	mg/L		1	BHF0013	6/1/22 11:52	6/2/22 11:27	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHF0013	6/1/22 11:52	6/2/22 11:27	EPA 300.0	CRL
Sulfate	69.1	1.00	mg/L		1	BHF0013	6/1/22 11:52	6/2/22 11:27	EPA 300.0	CRL
Wet Chemistry										
рН	7.84		pH Units	M_TTT	1	BHE0597	5/27/22 7:59	5/27/22 8:48	SM 4500-H+ B	CRL
Total Dissolved Solids	348	25.0	mg/L		1	BHE0620	5/31/22 9:34	5/31/22 9:34	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHE0619	5/31/22 7:18	5/31/22 7:18	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	0.549	0.500	ug/L		1	BHF0031	6/2/22 9:17	6/6/22 9:28	EPA 200.8	CRL
Barium	48.5	0.500	ug/L		1	BHF0031	6/2/22 9:17	6/6/22 9:28	EPA 200.8	CRL
Beryllium	< 0.100	0.100	ug/L		1	BHF0031	6/2/22 9:17	6/6/22 9:28	EPA 200.8	CRL
Cadmium	< 0.100	0.100	ug/L		1	BHF0031	6/2/22 9:17	6/6/22 9:28	EPA 200.8	CRL
Cobalt	< 0.500	0.500	ug/L		1	BHF0031	6/2/22 9:17	6/6/22 9:28	EPA 200.8	CRL
Chromium	9.22	0.500	ug/L		1	BHF0031	6/2/22 9:17	6/6/22 9:28	EPA 200.8	CRL
Molybdenum	0.929	0.500	ug/L		1	BHF0031	6/2/22 9:17	6/6/22 9:28	EPA 200.8	CRL
Lead	< 0.500	0.500	ug/L		1	BHF0031	6/2/22 9:17	6/6/22 9:28	EPA 200.8	CRL
Antimony	< 0.500	0.500	ug/L		1	BHF0031	6/2/22 9:17	6/6/22 9:28	EPA 200.8	CRL
Selenium	7.99	0.500	ug/L		1	BHF0031	6/2/22 9:17	6/6/22 9:28	EPA 200.8	CRL
Thallium	< 0.500	0.500	ug/L		1	BHF0031	6/2/22 9:17	6/6/22 9:28	EPA 200.8	CRL
Total Metals by ICP										
Boron	0.0833	0.0500	mg/L		1	BHF0030	6/2/22 9:15	6/7/22 16:57	EPA 200.7	HRD
Calcium	74.8	1.50	mg/L		1	BHF0030	6/2/22 9:15	6/6/22 18:05	EPA 200.7	HRD
Lithium	< 0.0150	0.0150	mg/L		1	BHF0030	6/2/22 9:15	6/6/22 18:05	EPA 200.7	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

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MHE0280-02 (Water) - Chain of Custody Number: 284537

Analyte	F Result	Reporting Limit	Units	Analyte Qualifier Diluti	on Batch	Prepared	Analyzed	Method	Analyst
Mercury									
Mercury	< 0.200	0.200	ug/L	1	BHE0554	6/1/22 9:04	6/1/22 16:40	EPA 245.1/7470A	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

Anions by Ion Chromatography - Quality Control

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHE0140 - Wet Prep										
Blank (BHE0140-BLK1)				Prepared	& Analyze	d: 05/05/2	022			
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
Blank (BHE0140-BLK2)				Prepared	& Analyze	d: 05/05/2	022			
Chloride	<1.00	1.00	mg/L	·	·		·	·		
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
LCS (BHE0140-BS1)				Prepared	& Analyze	d: 05/05/2	022			
Chloride	24.822	1.00	mg/L	25.000		99.3	90-110			
Fluoride	2.5520	0.750	mg/L	2.5000		102	90-110			
Sulfate	24.482	1.00	mg/L	25.000		97.9	90-110			
LCS (BHE0140-BS2)				Prepared	& Analyze	d: 05/05/2	022			
Chloride	24.979	1.00	mg/L	25.000		99.9	90-110			
Fluoride	2.5860	0.750	mg/L	2.5000		103	90-110			
Sulfate	24.568	1.00	mg/L	25.000		98.3	90-110			
LCS (BHE0140-BS3)				Prepared	& Analyze	d: 05/05/2	022			
Chloride	25.067	1.00	mg/L	25.000		100	90-110	<u> </u>	<u> </u>	
Fluoride	2.5940	0.750	mg/L	2.5000		104	90-110			
Sulfate	24.616	1.00	mg/L	25.000		98.5	90-110			
Duplicate (BHE0140-DUP1)	So	urce: MHE004	10-01	Prepared	& Analyze	d: 05/05/2	022			
Chloride	8.1310	1.00	mg/L	<u> </u>	8.1420			0.135	20	
Fluoride	0.063000	0.750	mg/L		0.063000			0.00	20	
Sulfate	8.3250	1.00	mg/L		8.3340			0.108	20	



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BHE0140 - Wet Prep										
Duplicate (BHE0140-DUP2)	Sou	rce: MHE004	19-02	Prepared	& Analyzed	d: 05/05/2	022			
Chloride	0.66100	1.00	mg/L		0.66000			0.151	20	
Fluoride	0.087000	0.750	mg/L		0.086000			1.16	20	
Sulfate	6.3450	1.00	mg/L		6.3290			0.252	20	
Matrix Spike (BHE0140-MS1)	Sou	rce: MHE004	10-01	Prepared	& Analyzed	d: 05/05/2	022			
Chloride	34.833	1.11	mg/L	27.778	8.1420	96.1	90-110			
Fluoride	2.7900	0.833	mg/L	2.7778	<0.833	100	90-110			
Sulfate	34.910	1.11	mg/L	27.778	8.3340	95.7	90-110			
Matrix Spike (BHE0140-MS2)	Sou	rce: MHE004	19-02	Prepared	& Analyzed	d: 05/05/2	022			
Chloride	28.587	1.11	mg/L	27.778	0.66000	101	90-110			
Fluoride	3.0233	0.833	mg/L	2.7778	0.086000	106	90-110			
Sulfate	34.514	1.11	mg/L	27.778	6.3290	101	90-110			
Matrix Spike Dup (BHE0140-MSD1)	Sou	rce: MHE004	10-01	Prepared	& Analyzed	d: 05/05/2	022			
Chloride	35.474	1.11	mg/L	27.778	8.1420	98.4	90-110	1.82	20	
Fluoride	2.8778	0.833	mg/L	2.7778	< 0.833	104	90-110	3.10	20	
Sulfate	35.540	1.11	mg/L	27.778	8.3340	97.9	90-110	1.79	20	
Matrix Spike Dup (BHE0140-MSD2)	Sou	rce: MHE004	19-02	Prepared	& Analyzed	d: 05/05/2	022			
Chloride	27.902	1.11	mg/L	27.778	0.66000	98.1	90-110	2.42	20	
Fluoride	2.9522	0.833	mg/L	2.7778	0.086000	103	90-110	2.38	20	
Sulfate	33.844	1.11	mg/L	27.778	6.3290	99.1	90-110	1.96	20	
Batch BHE0153 - Wet Prep										
Blank (BHE0153-BLK1)				Prepared	& Analyzed	d: 05/06/2	022			
Chloride	<1.00	1.00	mg/L							
Fluoride	< 0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR 414 Nicollet Mall, GO-2 Reported: Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
	rtoout	Liiiik	0.110	20701	. toodit	751.120	2	5		
Batch BHE0153 - Wet Prep										
Blank (BHE0153-BLK2)				Prepared	& Analyze	d: 05/06/2	022			
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
LCS (BHE0153-BS1)				Prepared	& Analyze	d: 05/06/2	022			
Chloride	25.241	1.00	mg/L	25.000		101	90-110			
Fluoride	2.6500	0.750	mg/L	2.5000		106	90-110			
Sulfate	24.906	1.00	mg/L	25.000		99.6	90-110			
LCS (BHE0153-BS2)				Prepared	& Analyze	d: 05/06/2	022			
Chloride	25.117	1.00	mg/L	25.000		100	90-110			
Fluoride	2.6260	0.750	mg/L	2.5000		105	90-110			
Sulfate	24.653	1.00	mg/L	25.000		98.6	90-110			
LCS (BHE0153-BS3)				Prepared	& Analyze	d: 05/06/2	022			
Chloride	25.277	1.00	mg/L	25.000		101	90-110			
Fluoride	2.6410	0.750	mg/L	2.5000		106	90-110			
Sulfate	24.845	1.00	mg/L	25.000		99.4	90-110			
Duplicate (BHE0153-DUP1)	Sou	ırce: MHE004	19-19	Prepared	& Analyze	d: 05/06/2	022			
Chloride	37.393	1.00	mg/L		37.398			0.0134	20	
Fluoride	<0.750	0.750	mg/L		< 0.750				20	
Sulfate	54.150	1.00	mg/L		54.165			0.0277	20	
Duplicate (BHE0153-DUP2)	Sou	ırce: MHE004	19-20	Prepared	& Analyze	d: 05/06/2	022			
Chloride	34.104	1.00	mg/L		34.112			0.0235	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	111.41	1.00	mg/L		111.21			0.182	20	



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BHE0153 - Wet Prep										
Matrix Spike (BHE0153-MS1)	Sour	ce: MHE004	19-19	Prepared	& Analyze	d: 05/06/2	2022			
Chloride	65.421	1.11	mg/L	27.778	37.398	101	90-110			
Fluoride	2.9811	0.833	mg/L	2.7778	< 0.833	107	90-110			
Sulfate	82.354	1.11	mg/L	27.778	54.165	101	90-110			
Matrix Spike (BHE0153-MS2)	Sour	ce: MHE004	19-20	Prepared	& Analyze	d: 05/06/2	2022			
Chloride	61.564	1.11	mg/L	27.778	34.112	98.8	90-110			
Fluoride	2.9144	0.833	mg/L	2.7778	<0.833	105	90-110			
Sulfate	138.59	1.11	mg/L	27.778	111.21	98.6	90-110			
Matrix Spike Dup (BHE0153-MSD1)	Sour	ce: MHE004	19-19	Prepared	& Analyze	d: 05/06/2	2022			
Chloride	65.168	1.11	mg/L	27.778	37.398	100	90-110	0.388	20	
Fluoride	2.9589	0.833	mg/L	2.7778	<0.833	107	90-110	0.748	20	
Sulfate	82.076	1.11	mg/L	27.778	54.165	100	90-110	0.339	20	
Matrix Spike Dup (BHE0153-MSD2)	Sour	ce: MHE004	19-20	Prepared	& Analyze	d: 05/06/2	2022			
Chloride	61.641	1.11	mg/L	27.778	34.112	99.1	90-110	0.124	20	
Fluoride	2.9311	0.833	mg/L	2.7778	<0.833	106	90-110	0.570	20	
Sulfate	138.67	1.11	mg/L	27.778	111.21	98.9	90-110	0.0625	20	
Batch BHE0178 - Wet Prep										
Blank (BHE0178-BLK1)				Prepared	& Analyze	d: 05/09/2	2022			
Chloride	<1.00	1.00	mg/L		-					
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
Blank (BHE0178-BLK2)				Prepared	& Analyze	d: 05/09/2	2022			
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							



Environmental Services-Water Minneapolis

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Minneapolis MN, 55401

Project Name/Location: Sherco Pond 3 CCR

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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHE0178 - Wet Prep										
LCS (BHE0178-BS1)				Prepared	& Analyze	d: 05/09/2	022			
Chloride	24.864	1.00	mg/L	25.000		99.5	90-110			
Fluoride	2.6070	0.750	mg/L	2.5000		104	90-110			
Sulfate	24.474	1.00	mg/L	25.000		97.9	90-110			
LCS (BHE0178-BS2)				Prepared	& Analyze	d: 05/09/2	022			
Chloride	24.726	1.00	mg/L	25.000		98.9	90-110			
Fluoride	2.5950	0.750	mg/L	2.5000		104	90-110			
Sulfate	24.262	1.00	mg/L	25.000		97.0	90-110			
LCS (BHE0178-BS3)				Prepared	& Analyze	d: 05/09/2	022			
Chloride	24.692	1.00	mg/L	25.000		98.8	90-110			
Fluoride	2.5870	0.750	mg/L	2.5000		103	90-110			
Sulfate	24.223	1.00	mg/L	25.000		96.9	90-110			
Duplicate (BHE0178-DUP1)	Sou	rce: MHE004	19-40	Prepared	& Analyze	d: 05/09/2	022			
Chloride	10.838	1.00	mg/L		10.380			4.32	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	57.982	1.00	mg/L		55.592			4.21	20	
Duplicate (BHE0178-DUP2)	Sou	rce: MHE004	19-42	Prepared	& Analyze	d: 05/09/2	022			
Chloride	6.5370	1.00	mg/L		6.5390			0.0306	20	
Fluoride	0.074000	0.750	mg/L		<0.750				20	
Sulfate	23.912	1.00	mg/L		23.962			0.209	20	
Matrix Spike (BHE0178-MS1)	Sou	rce: MHE004	19-40	Prepared	& Analyze	d: 05/09/2	022			
Chloride	37.709	1.11	mg/L	27.778	10.380	98.4	90-110			
Fluoride	2.8056	0.833	mg/L	2.7778	<0.833	101	90-110			
Sulfate	85.400	1.11	mg/L	27.778	55.592	107	90-110			



Environmental Services-Water Minneapolis

414 Nicollet Mall, GO-2

Minneapolis MN, 55401

Project Manager: Eric Ealy

Project Manager: Eric Ealy

Reported:

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Analyte	Dooult	Reporting Limit	Unite	Spike	Source	0/ DEC	%REC	RPD	RPD	Notes
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHE0178 - Wet Prep										
Matrix Spike (BHE0178-MS2)	Sou	rce: MHE004	19-42	Prepared	& Analyze	d: 05/09/2	022			
Chloride	34.266	1.11	mg/L	27.778	6.5390	99.8	90-110			
Fluoride	2.9489	0.833	mg/L	2.7778	<0.833	106	90-110			
Sulfate	51.892	1.11	mg/L	27.778	23.962	101	90-110			
Matrix Spike Dup (BHE0178-MSD1)	Sou	rce: MHE004	19-40	Prepared	& Analyze	d: 05/09/2	022			
Chloride	38.472	1.11	mg/L	27.778	10.380	101	90-110	2.00	20	
Fluoride	2.9067	0.833	mg/L	2.7778	<0.833	105	90-110	3.54	20	
Sulfate	85.968	1.11	mg/L	27.778	55.592	109	90-110	0.663	20	
Matrix Spike Dup (BHE0178-MSD2)	Sou	rce: MHE004	19-42	Prepared	& Analyze	d: 05/09/2	022			
Chloride	34.074	1.11	mg/L	27.778	6.5390	99.1	90-110	0.559	20	
Fluoride	2.9311	0.833	mg/L	2.7778	<0.833	106	90-110	0.605	20	
Sulfate	51.719	1.11	mg/L	27.778	23.962	99.9	90-110	0.335	20	
Batch BHE0192 - Wet Prep										
Blank (BHE0192-BLK1)				Prepared:	05/09/202	22 Analyze	ed: 05/10/2	.022		
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
LCS (BHE0192-BS1)				Prepared:	05/09/202	22 Analyze	ed: 05/10/2	022		
Chloride	24.787	1.00	mg/L	25.000		99.1	90-110		<u> </u>	
Fluoride	2.6240	0.750	mg/L	2.5000		105	90-110			
Sulfate	24.387	1.00	mg/L	25.000		97.5	90-110			
LCS (BHE0192-BS2)				Prepared:	05/09/202	22 Analyze	ed: 05/10/2	022		
Chloride	24.804	1.00	mg/L	25.000		99.2	90-110		<u> </u>	
Fluoride	2.6190	0.750	mg/L	2.5000		105	90-110			
Sulfate	24.276	1.00	mg/L	25.000		97.1	90-110			



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BHE0192 - Wet Prep										
Duplicate (BHE0192-DUP1)	Sour	ce: MHE007	72-17	Prepared:	05/09/202	22 Analyze	ed: 05/10/2	.022		
Chloride	0.81200	1.00	mg/L		0.81300			0.123	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	4.0770	1.00	mg/L		4.0790			0.0490	20	
Matrix Spike (BHE0192-MS1)	Sour	ce: MHE007	72-17	Prepared:	05/09/202	22 Analyze	ed: 05/10/2	2022		
Chloride	28.833	1.11	mg/L	27.778	0.81300	101	90-110			
Fluoride	3.0944	0.833	mg/L	2.7778	<0.833	111	90-110			M_MS
Sulfate	32.147	1.11	mg/L	27.778	4.0790	101	90-110			
Matrix Spike Dup (BHE0192-MSD1)	Sour	ce: MHE007	72-17	Prepared:	05/09/202	22 Analyze	ed: 05/10/2	2022		
Chloride	28.909	1.11	mg/L	27.778	0.81300	101	90-110	0.262	20	
Fluoride	3.1056	0.833	mg/L	2.7778	<0.833	112	90-110	0.358	20	M_MS
Sulfate	32.173	1.11	mg/L	27.778	4.0790	101	90-110	0.0829	20	
Batch BHF0013 - Wet Prep										
Blank (BHF0013-BLK1)				Prepared:	06/01/202	22 Analyze	d: 06/02/2	2022		
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
LCS (BHF0013-BS1)				Prepared:	06/01/202	22 Analyze	d: 06/02/2	2022		
Chloride	24.965	1.00	mg/L	25.000		99.9	90-110			
Fluoride	2.4670	0.750	mg/L	2.5000		98.7	90-110			
Sulfate	24.661	1.00	mg/L	25.000		98.6	90-110			
LCS (BHF0013-BS2)				Prepared:	06/01/202	22 Analyze	ed: 06/02/2	2022		
Chloride	25.197	1.00	mg/L	25.000		101	90-110		<u> </u>	<u> </u>
Fluoride	2.5690	0.750	mg/L	2.5000		103	90-110			
Sulfate	24.879	1.00	mg/L	25.000		99.5	90-110			



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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHF0013 - Wet Prep										
Duplicate (BHF0013-DUP1)	Sour	ce: MHE028	80-01	Prepared:	06/01/202	22 Analyze	ed: 06/02/2	2022		
Chloride	28.396	1.00	mg/L		28.407			0.0387	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	76.011	1.00	mg/L		76.079			0.0894	20	
Matrix Spike (BHF0013-MS1)	Sour	ce: MHE028	30-01	Prepared:	06/01/202	22 Analyze	ed: 06/02/2	2022		
Chloride	56.572	1.11	mg/L	27.778	28.407	101	90-110			
Fluoride	2.8822	0.833	mg/L	2.7778	<0.833	104	90-110			
Sulfate	104.04	1.11	mg/L	27.778	76.079	101	90-110			
Matrix Spike Dup (BHF0013-MSD1)	Sour	ce: MHE028	80-01	Prepared:	06/01/202	22 Analyze	ed: 06/02/2	2022		
Chloride	57.430	1.11	mg/L	27.778	28.407	104	90-110	1.50	20	
Fluoride	3.0011	0.833	mg/L	2.7778	<0.833	108	90-110	4.04	20	
Sulfate	104.74	1.11	mg/L	27.778	76.079	103	90-110	0.670	20	



Environmental Services-Water Minneapolis

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Project Name/Location: Sherco Pond 3 CCR

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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHE0094 - Wet Prep										
Blank (BHE0094-BLK1)				Prepared	& Analyze	d: 05/05/2	2022			
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BHE0094-BS1)				Prepared	& Analyze	d: 05/05/2	2022			
Total Suspended Solids	78.000	5.00	mg/L	102.20		76.3	70-130			
Duplicate (BHE0094-DUP1)	Source	e: MHE00	49-01	Prepared	& Analyze	d: 05/05/2	2022			
Total Suspended Solids	5.5000	12.5	mg/L		5.2000			5.61	20	M_ES
Duplicate (BHE0094-DUP2)	Source	e: MHE00	49-02	Prepared	& Analyze	d: 05/05/2	2022			
Total Suspended Solids	6.5000	12.5	mg/L		7.0000			7.41	20	M_ES
Batch BHE0095 - Wet Prep										
Blank (BHE0095-BLK1)				Prepared	& Analyze	d: 05/05/2	2022			
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BHE0095-BS1)				Prepared	& Analyze	d: 05/05/2	2022			
Total Dissolved Solids	116.00	25.0	mg/L	104.10		111	70-130			
Duplicate (BHE0095-DUP1)	Source	e: MHE00	49-01	Prepared	& Analyze	d: 05/05/2	2022			
Total Dissolved Solids	984.00	25.0	mg/L		992.00			0.810	20	
Duplicate (BHE0095-DUP2)	Source	e: MHE00	49-02	Prepared	& Analyze	d: 05/05/2	2022			
Total Dissolved Solids	220.00	25.0	mg/L		230.00			4.44	20	
Batch BHE0115 - Wet Prep										
LCS (BHE0115-BS1)				Prepared	& Analyze	d: 05/05/2	2022			
pH	7.0800		pH Units	7.0000	-	101	90-110			



Environmental Services-Water Minneapolis

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Project Manager: Eric Ealy

Project Manager: Eric Ealy

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHE0115 - Wet Prep										
_CS (BHE0115-BS2)				Prepared	& Analyze	d: 05/05/2	022			
PΗ	7.0900		pH Units	7.0000		101	90-110			
Duplicate (BHE0115-DUP1)	Sour	ce: MHE004	49-01	Prepared	& Analyze	d: 05/05/2	022			
pH	7.5900		pH Units		7.6200			0.394	20	
Duplicate (BHE0115-DUP2)	Sour	ce: MHE004	49-11	Prepared	& Analyze	d: 05/05/2	022			
Н	7.6200		pH Units		7.6200			0.00	20	
Ouplicate (BHE0115-DUP3)	Sour	ce: MHE004	49-21	Prepared	& Analyze	d: 05/05/2	022			
ρΗ	7.7900		pH Units		7.7900			0.00	20	
Ouplicate (BHE0115-DUP4)	Sour	ce: MHE004	49-31	Prepared	& Analyze	d: 05/05/2	022			
Н	7.7400		pH Units		7.7400			0.00	20	
Batch BHE0141 - Wet Prep										
Blank (BHE0141-BLK1)				Prepared	& Analyze	d: 05/06/2	022			
Total Suspended Solids	<5.00	5.00	mg/L							
_CS (BHE0141-BS1)				Prepared	& Analyze	d: 05/06/2	022			
Total Suspended Solids	76.000	5.00	mg/L	102.20		74.4	70-130			
Duplicate (BHE0141-DUP1)	Sour	ce: MHE004	49-10	Prepared	& Analyze	d: 05/06/2	022			
Total Suspended Solids	6.0000	12.5	mg/L		7.2000			18.2	20	M_ES
Ouplicate (BHE0141-DUP2)	Sour	ce: MHE004	49-11	Prepared	& Analyze	d: 05/06/2	022			
Total Suspended Solids	76.667	16.7	mg/L		79.600			3.75	20	



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Project Name/Location: Sherco Pond 3 CCR

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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHE0142 - Wet Prep										
Blank (BHE0142-BLK1)				Prepared	& Analyze	d: 05/06/2	2022			
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BHE0142-BS1)				Prepared	& Analyze	d: 05/06/2	2022			
Total Dissolved Solids	98.000	25.0	mg/L	104.10		94.1	70-130			
Duplicate (BHE0142-DUP1)	Source	e: MHE004	19-10	Prepared	& Analyze	d: 05/06/2	2022			
Total Dissolved Solids	456.00	25.0	mg/L		450.00			1.32	20	
Duplicate (BHE0142-DUP2)	Source	e: MHE004	19-11	Prepared	& Analyze	d: 05/06/2	2022			
Total Dissolved Solids	1598.0	25.0	mg/L		1686.0			5.36	20	
Batch BHE0157 - Wet Prep										
Blank (BHE0157-BLK1)				Prepared	& Analyze	d: 05/07/2	2022			
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BHE0157-BS1)				Prepared	& Analyze	d: 05/07/2	2022			
Total Suspended Solids	74.000	5.00	mg/L	102.20		72.4	70-130			
Duplicate (BHE0157-DUP1)	Source	e: MHE004	19-24	Prepared	& Analyze	d: 05/07/2	2022			
Total Suspended Solids	3.0000	12.5	mg/L		2.8000			6.90	20	M_ES
Batch BHE0158 - Wet Prep										
Blank (BHE0158-BLK1)				Prepared	& Analyze	d: 05/07/2	2022			
Total Dissolved Solids	<25.0	25.0	mg/L							
Total Dissolved Solids	<25.0	25.0	mg/L							



Environmental Services-Water Minneapolis
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
,										
Batch BHE0158 - Wet Prep										
LCS (BHE0158-BS1)				Prepared	& Analyze	d: 05/07/2	022			
Total Dissolved Solids	100.00	25.0	mg/L	104.10		96.1	70-130			
Duplicate (BHE0158-DUP1)	Source	e: MHE004	19-24	Prepared	& Analyze	d: 05/07/2	022			
Total Dissolved Solids	500.00	25.0	mg/L		504.00			0.797	20	
Batch BHE0170 - Wet Prep										
Batch Brigging - Wet Frep										
Blank (BHE0170-BLK1)				Prepared	& Analyze	d: 05/08/2	022			
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BHE0170-BS1)				Prepared	& Analyze	d: 05/08/2	022			
Total Suspended Solids	76.000	5.00	mg/L	102.20		74.4	70-130			
Duplicate (BHE0170-DUP1)	Source	e: MHE004	19-34	Prepared	& Analyze	d: 05/08/2	022			
Total Suspended Solids	60.500	12.5	mg/L		58.800			2.85	20	
Batch BHE0171 - Wet Prep										
•				Dropored	2 Analyza	d: 05/09/2	022			
Blank (BHE0171-BLK1) Total Dissolved Solids	<25.0	25.0	ma/l	Prepared	& Analyze	u. 05/06/2	UZZ			
iolai Dissoived Solids	<20.U	∠5.0	mg/L							
LCS (BHE0171-BS1)				Prepared	& Analyze	d: 05/08/2	022			
Total Dissolved Solids	74.000	25.0	mg/L	104.10		71.1	70-130			
Duplicate (BHE0171-DUP1)	Source	e: MHE004	19-34	Prepared	& Analyze	d: 05/08/2	022			
Total Dissolved Solids					,					



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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHE0176 - Wet Prep										
Blank (BHE0176-BLK1)				Prepared	& Analyze	d: 05/09/2	2022			
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BHE0176-BS1)				Prepared	& Analyze	d: 05/09/2	2022			
Total Suspended Solids	90.000	5.00	mg/L	100.90		89.2	70-130			
Duplicate (BHE0176-DUP1)	Sour	ce: MHE007	72-01	Prepared	& Analyze	d: 05/09/2	2022			
Total Suspended Solids	171.67	8.33	mg/L		174.33			1.54	20	
Duplicate (BHE0176-DUP2)	Sour	ce: MHE007	72-02	Prepared	& Analyze	d: 05/09/2	2022			
Total Suspended Solids	78.333	8.33	mg/L		72.333			7.96	20	
Batch BHE0177 - Wet Prep										
Blank (BHE0177-BLK1)				Prepared	& Analyze	ed: 05/09/2	.022			
Total Dissolved Solids	<25.0	25.0	mg/L	•	•					
LCS (BHE0177-BS1)				Prepared	& Analyze	d: 05/09/2	2022			
Total Dissolved Solids	92.000	25.0	mg/L	105.10		87.5	70-130			
Duplicate (BHE0177-DUP1)	Sour	ce: MHE007	72-01	Prepared	& Analyze	d: 05/09/2	2022			
Total Dissolved Solids	340.00	25.0	mg/L		352.00			3.47	20	
Duplicate (BHE0177-DUP2)	Sour	ce: MHE007	72-02	Prepared	& Analyze	ed: 05/09/2	2022			
Total Dissolved Solids	362.00	25.0	mg/L	•	354.00			2.23	20	
Batch BHE0179 - Wet Prep										
LCS (BHE0179-BS1)				Prenared	& Analyze	d· 05/00/2	2022			
pH	7.0800		pH Units	7.0000	& Allaly26	101	90-110			



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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHE0179 - Wet Prep										
LCS (BHE0179-BS2)				Prepared	& Analyze	d: 05/09/2	022			
pH	7.0900		pH Units	7.0000		101	90-110			
Duplicate (BHE0179-DUP1)	Sour	ce: MHE00	72-01	Prepared	& Analyze	d: 05/09/2	022			
pH	7.6100		pH Units		7.6600			0.655	20	
Duplicate (BHE0179-DUP2)	Sour	ce: MHE00	72-11	Prepared	& Analyze	d: 05/09/2	022			
рН	7.8000		pH Units		7.8100			0.128	20	
Duplicate (BHE0179-DUP3)	Sour	ce: MHE00	72-22	Prepared	& Analyze	d: 05/09/2	022			
рН	8.0800		pH Units		8.0400			0.496	20	
Batch BHE0203 - Wet Prep										
Blank (BHE0203-BLK1)				Prepared	& Analyze	d: 05/10/2	022			
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BHE0203-BS1)				Prepared	& Analyze	d: 05/10/2	022			
Total Suspended Solids	90.000	5.00	mg/L	100.90		89.2	70-130			
Duplicate (BHE0203-DUP1)	Sour	ce: MHE00	72-13	Prepared	& Analyze	d: 05/10/2	022			
Total Suspended Solids	203.00	25.0	mg/L		193.00			5.05	20	
Duplicate (BHE0203-DUP2)	Sour	ce: MHE00	72-14	Prepared	& Analyze	d: 05/10/2	022			
Total Suspended Solids	0.50000	12.5	mg/L		0.40000			22.2	20	M_D-RL, M_ES
Batch BHE0204 - Wet Prep										
Blank (BHE0204-BLK1)				Prepared	& Analyze	d: 05/10/2	022			
Total Dissolved Solids	<25.0	25.0	mg/L							



Environmental Services-Water Minneapolis

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Project Manager: Eric Ealy

Project Manager: Eric Ealy

Project Manager: Eric Ealy

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Allalyte	Nesuit	LIIIII	Ullis	Level	Resuit	70NEU	LIIIIIS	ארט	LIIIIII	Notes
Batch BHE0204 - Wet Prep										
LCS (BHE0204-BS1)				Prepared	& Analyze	d: 05/10/2	2022			
Total Dissolved Solids	94.000	25.0	mg/L	105.10		89.4	70-130			
Duplicate (BHE0204-DUP1)	Sour	ce: MHE00	72-13	Prepared	& Analyze	d: 05/10/2	2022			
Total Dissolved Solids	252.00	25.0	mg/L		298.00			16.7	20	
Duplicate (BHE0204-DUP2)	Sour	ce: MHE00	72-14	Prepared	& Analyze	d: 05/10/2	2022			
Total Dissolved Solids	302.00	25.0	mg/L		304.00			0.660	20	
Batch BHE0597 - Wet Prep										
LCS (BHE0597-BS1)				Prepared	& Analyze	d: 05/27/2	2022			
pH	7.0800		pH Units	7.0000		101	90-110			
LCS (BHE0597-BS2)				Prepared	& Analyze	d: 05/27/2	2022			
pH	7.0900		pH Units	7.0000		101	90-110			
Duplicate (BHE0597-DUP1)	Sour	ce: MHE02	81-01	Prepared	& Analyze	d: 05/27/2	2022			
pH	8.6400		pH Units		8.6600			0.231	20	
Batch BHE0619 - Wet Prep										
Blank (BHE0619-BLK1)				Prepared	& Analyze	d: 05/31/2	2022			
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BHE0619-BS1)				Prepared	& Analyze	d: 05/31/2	2022			
Total Suspended Solids	90.000	5.00	mg/L	100.90		89.2	70-130			



Environmental Services-Water Minneapolis	Project Name/Location: Sherco Pond 3 CCR	
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	Reporting		Spike	Source		%REC		RPD	
Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Sour	ce: MHE028	0-02	Prepared	& Analyze	d: 05/31/2	022			
1.0000	12.5	mg/L		0.80000			22.2	20	M_D-RL, M_ES
			Prepared	& Analyze	d: 05/31/2	022			
<25.0	25.0	mg/L							
			Prepared	& Analyze	d: 05/31/2	022			
96.000	25.0	mg/L	105.10		91.3	70-130			
Sour	ce: MHE028	0-02	Prepared	& Analyze	d: 05/31/2	022			
340.00	25.0	mg/L		348.00			2.33	20	
	Sour 1.0000	Source: MHE028 1.0000 12.5	Source: MHE0280-02 1.0000	Source: MHE0280-02 Prepared	Source: MHE0280-02	Source: MHE0280-02	Source: MHE0280-02 Prepared & Analyzed: 05/31/2022 1.0000 12.5 mg/L 0.80000 Prepared & Analyzed: 05/31/2022 Prepared & Analyzed: 05/31/2022	Source: MHE0280-02 Prepared & Analyzed: 05/31/2022 1.0000 12.5 mg/L 0.80000 22.2 25.0 25.0 mg/L Prepared & Analyzed: 05/31/2022 05/31/2022 96.000 25.0 mg/L 105.10 91.3 70-130 Source: MHE0280-02 Prepared & Analyzed: 05/31/2022	Source: MHE0280-02 Prepared & Analyzed: 05/31/2022 1.0000 12.5 mg/L 0.80000 22.2 20 Prepared & Analyzed: 05/31/2022 25.0 mg/L Prepared & Analyzed: 05/31/2022 25/31/2022 96.000 25.0 mg/L 105.10 91.3 70-130 Source: MHE0280-02 Prepared & Analyzed: 05/31/2022



RPD

%RFC

Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

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Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

Total Metals by ICPMS - Quality Control

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Source

Reporting

		Reporting		Spike	Source	0/556	%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
atch BHE0173 - EPA 200.2, EPA 3	3005									
lank (BHE0173-BLK1)				Prepared:	05/09/202	22 Analyze	ed: 05/10/20	022		
Cadmium	<0.100	0.100	ug/L							
rsenic	<0.500	0.500	ug/L							
Selenium	<0.500	0.500	ug/L							
ntimony	<0.500	0.500	ug/L							
arium	<0.500	0.500	ug/L							
eryllium	<0.500	0.500	ug/L							
nromium	<0.500	0.500	ug/L							
ead	<0.500	0.500	ug/L							
nallium	<0.500	0.500	ug/L							
obalt	<0.500	0.500	ug/L							
olybdenum	<0.500	0.500	ug/L							
CS (BHE0173-BS1)				Prepared:	05/09/202	22 Analyze	ed: 05/10/20	022		
hallium	93.945	0.500	ug/L	100.00		93.9	85-115			
rsenic	97.362	0.500	ug/L	100.00		97.4	85-115			
eryllium	96.547	0.500	ug/L	100.00		96.5	85-115			
balt	97.073	0.500	ug/L	100.00		97.1	85-115			
arium	97.606	0.500	ug/L	100.00		97.6	85-115			
admium	97.687	0.100	ug/L	100.00		97.7	85-115			
ead	93.791	0.500	ug/L	100.00		93.8	85-115			
elenium	95.254	0.500	ug/L	100.00		95.3	85-115			
ntimony	97.180	0.500	ug/L	100.00		97.2	85-115			
hromium	98.441	0.500	ug/L	100.00		98.4	85-115			
olybdenum	97.947	0.500	ug/L	100.00		97.9	85-115			
uplicate (BHE0173-DUP1)	Sou	ırce: MHE004	19-07	Prepared:	05/09/202	22 Analyze	ed: 05/10/20	022		
hromium	0.95728	0.500	ug/L		0.86110			10.6	20	
senic	0.41292	0.500	ug/L		0.39798			3.69	20	
nallium	0.066516	0.500	ug/L		<0.500				20	
elenium	0.60903	0.500	ug/L		0.57354			6.00	20	
ntimony	<0.500	0.500	ug/L		<0.500				20	
ead	<0.500	0.500	ug/L		<0.500				20	
olybdenum	0.66256	0.500	ug/L		0.57365			14.4	20	
balt	0.069844	0.500	ug/L		0.058403			17.8	20	
admium	<0.100	0.100	ug/L		<0.100				20	
arium	48.020	0.500	ug/L		46.131			4.01	20	
eryllium	0.095465	0.500	ug/L		<0.500				20	

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Total Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BHE0173 - EPA 200.2, EPA 3005										
Matrix Spike (BHE0173-MS1)	So	urce: MHE004	19-07	Prepared	: 05/09/202	2 Analyze	ed: 05/10/2	022		
Thallium	93.305	0.500	ug/L	100.00	<0.500	93.3	75-125			
Barium	150.07	0.500	ug/L	100.00	46.131	104	75-125			
Cadmium	95.794	0.100	ug/L	100.00	<0.100	95.8	75-125			
Cobalt	96.323	0.500	ug/L	100.00	0.058403	96.3	75-125			
Molybdenum	104.01	0.500	ug/L	100.00	0.57365	103	75-125			
Chromium	100.28	0.500	ug/L	100.00	0.86110	99.4	75-125			
Beryllium	99.160	0.500	ug/L	100.00	<0.500	99.2	75-125			
Arsenic	103.09	0.500	ug/L	100.00	0.39798	103	75-125			
Lead	90.516	0.500	ug/L	100.00	<0.500	90.5	75-125			
Antimony	101.87	0.500	ug/L	100.00	<0.500	102	75-125			
Selenium	98.725	0.500	ug/L	100.00	0.57354	98.2	75-125			
Matrix Spike Dup (BHE0173-MSD1)	So	urce: MHE004	19-07	Prepared	: 05/09/202	2 Analyze	ed: 05/10/2	2022		
Cadmium	98.645	0.100	ug/L	100.00	<0.100	98.6	75-125	2.93	20	
Chromium	104.24	0.500	ug/L	100.00	0.86110	103	75-125	3.87	20	
Lead	90.671	0.500	ug/L	100.00	<0.500	90.7	75-125	0.171	20	
Molybdenum	102.51	0.500	ug/L	100.00	0.57365	102	75-125	1.45	20	
Cobalt	100.25	0.500	ug/L	100.00	0.058403	100	75-125	4.00	20	
Antimony	100.67	0.500	ug/L	100.00	<0.500	101	75-125	1.18	20	
Barium	147.45	0.500	ug/L	100.00	46.131	101	75-125	1.76	20	
Arsenic	101.97	0.500	ug/L	100.00	0.39798	102	75-125	1.09	20	
Beryllium	97.992	0.500	ug/L	100.00	<0.500	98.0	75-125	1.18	20	
Thallium	92.972	0.500	ug/L	100.00	<0.500	93.0	75-125	0.358	20	
Selenium	96.837	0.500	ug/L	100.00	0.57354	96.3	75-125	1.93	20	
Batch BHE0199 - EPA 200.2, EPA 3005										
Blank (BHE0199-BLK1)				Prepared	: 05/09/202	2 Analyze	ed: 05/10/2	2022		
Selenium	<0.500	0.500	ug/L							
Lead	<0.500	0.500	ug/L							
Chromium	<0.500	0.500	ug/L							
Beryllium	<0.500	0.500	ug/L							
Barium	<0.500	0.500	ug/L							
Thallium	<0.500	0.500	ug/L							
Cadmium	<0.100	0.100	ug/L							
Molybdenum	<0.500	0.500	ug/L							
Antimony	<0.500	0.500	ug/L							
Cobalt	<0.500	0.500	ug/L							
Arsenic	<0.500	0.500	ug/L							

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Minneapolis MN, 55401

Project Name/Location: Sherco Pond 3 CCR

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Total Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BHE0199 - EPA 200.2, EPA	3005									
LCS (BHE0199-BS1)				Prepared:	05/09/202	2 Analyze	ed: 05/10/2	022		
Chromium	96.322	0.500	ug/L	100.00		96.3	85-115			
Arsenic	98.327	0.500	ug/L	100.00		98.3	85-115			
Barium	98.069	0.500	ug/L	100.00		98.1	85-115			
Cadmium	94.431	0.100	ug/L	100.00		94.4	85-115			
Beryllium	96.766	0.500	ug/L	100.00		96.8	85-115			
Lead	95.089	0.500	ug/L	100.00		95.1	85-115			
Selenium	94.627	0.500	ug/L	100.00		94.6	85-115			
Molybdenum	100.27	0.500	ug/L	100.00		100	85-115			
Thallium	93.995	0.500	ug/L	100.00		94.0	85-115			
Cobalt	95.207	0.500	ug/L	100.00		95.2	85-115			
Antimony	98.815	0.500	ug/L	100.00		98.8	85-115			
Duplicate (BHE0199-DUP1)	So	urce: MHE007	72-18	Prepared:	05/09/202	22 Analyze	ed: 05/10/2	022		
Thallium	0.060411	0.500	ug/L		<0.500				20	
Cadmium	<0.100	0.100	ug/L		<0.100				20	
Antimony	<0.500	0.500	ug/L		<0.500				20	
Cobalt	0.12183	0.500	ug/L		0.11728			3.81	20	
Chromium	0.58485	0.500	ug/L		0.92570			45.1	20	M_D
Beryllium	0.075460	0.500	ug/L		<0.500				20	
Molybdenum	0.84681	0.500	ug/L		0.74701			12.5	20	
_ead	<0.500	0.500	ug/L		< 0.500				20	
Barium	50.549	0.500	ug/L		49.687			1.72	20	
Arsenic	1.3526	0.500	ug/L		1.3245			2.10	20	
Selenium	<0.500	0.500	ug/L		<0.500				20	
Matrix Spike (BHE0199-MS1)	So	urce: MHE007	72-18	Prepared:	05/09/202	2 Analyze	ed: 05/10/2	022		
_ead	88.629	0.500	ug/L	100.00	<0.500	88.6	75-125			
Chromium	101.70	0.500	ug/L	100.00	0.92570	101	75-125			
Cadmium	98.387	0.100	ug/L	100.00	<0.100	98.4	75-125			
Thallium	90.762	0.500	ug/L	100.00	<0.500	90.8	75-125			
Cobalt	98.827	0.500	ug/L	100.00	0.11728	98.7	75-125			
Antimony	99.582	0.500	ug/L	100.00	<0.500	99.6	75-125			
Selenium	92.919	0.500	ug/L	100.00	<0.500	92.9	75-125			
Beryllium	96.376	0.500	ug/L	100.00	<0.500	96.4	75-125			
- Barium	150.86	0.500	ug/L	100.00	49.687	101	75-125			
Molybdenum	100.87	0.500	ug/L	100.00	0.74701	100	75-125			
Arsenic	103.44	0.500	ug/L	100.00	1.3245	102	75-125			

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Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BHE0199 - EPA 200.2, EPA 3005	5									
Matrix Spike Dup (BHE0199-MSD1)	Soi	urce: MHE007	72-18	Prepared	: 05/09/202	22 Analyze	ed: 05/10/2	2022		
Chromium	101.23	0.500	ug/L	100.00	0.92570	100	75-125	0.464	20	
Cadmium	96.775	0.100	ug/L	100.00	<0.100	96.8	75-125	1.65	20	
Lead	89.061	0.500	ug/L	100.00	<0.500	89.1	75-125	0.486	20	
Beryllium	95.932	0.500	ug/L	100.00	<0.500	95.9	75-125	0.462	20	
Thallium	90.968	0.500	ug/L	100.00	<0.500	91.0	75-125	0.227	20	
Arsenic	102.24	0.500	ug/L	100.00	1.3245	101	75-125	1.17	20	
Cobalt	95.981	0.500	ug/L	100.00	0.11728	95.9	75-125	2.92	20	
Barium	148.60	0.500	ug/L	100.00	49.687	98.9	75-125	1.51	20	
Selenium	95.142	0.500	ug/L	100.00	<0.500	95.1	75-125	2.36	20	
Antimony	98.475	0.500	ug/L	100.00	<0.500	98.5	75-125	1.12	20	
Molybdenum	99.426	0.500	ug/L	100.00	0.74701	98.7	75-125	1.44	20	
Batch BHF0010 - EPA 200.2, EPA 3005	5									
Blank (BHF0010-BLK1)				Prepared	: 06/02/202	22 Analyze	ed: 06/06/2	2022		
Lead	<0.500	0.500	ug/L							
Barium	<0.500	0.500	ug/L							
Arsenic	<0.500	0.500	ug/L							
Thallium	< 0.500	0.500	ug/L							
Chromium	<0.500	0.500	ug/L							
Selenium	< 0.500	0.500	ug/L							
Beryllium	<0.500	0.500	ug/L							
Cobalt	<0.500	0.500	ug/L							
Antimony	<0.500	0.500	ug/L							
Molybdenum	<0.500	0.500	ug/L							
Cadmium	<0.100	0.100	ug/L							



RPD

%RFC

Environmental Services-Water Minneapolis

414 Nicollet Mall, GO-2

Minneapolis MN, 55401

Project Manager: Eric Ealy

Project Manager: Eric Ealy

Reported:

06/09/2022 10:41

Total Metals by ICPMS - Quality Control

Snika

Source

Reporting

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
atch BHF0010 - EPA 200.2, EPA	3005									
CS (BHF0010-BS1)				Prepared:	06/02/202	2 Analyze	ed: 06/06/2	022		
Barium	100.88	0.500	ug/L	100.00		101	85-115			
elenium	97.592	0.500	ug/L	100.00		97.6	85-115			
ntimony	97.789	0.500	ug/L	100.00		97.8	85-115			
hromium	102.97	0.500	ug/L	100.00		103	85-115			
ead	99.893	0.500	ug/L	100.00		99.9	85-115			
rsenic	96.702	0.500	ug/L	100.00		96.7	85-115			
admium	98.819	0.100	ug/L	100.00		98.8	85-115			
olybdenum	100.15	0.500	ug/L	100.00		100	85-115			
eryllium	100.93	0.500	ug/L	100.00		101	85-115			
obalt	102.43	0.500	ug/L	100.00		102	85-115			
nallium	101.24	0.500	ug/L	100.00		101	85-115			
uplicate (BHF0010-DUP1)	Sou	rce: MHE028	31-02	Prepared:	06/02/202	2 Analyze	ed: 06/06/2	022		
rsenic	0.91308	0.500	ug/L		1.0119			10.3	20	
obalt	0.10212	0.500	ug/L		0.097902			4.22	20	
eryllium	0.091930	0.500	ug/L		<0.500				20	
arium	67.730	0.500	ug/L		69.740			2.93	20	
ad	<0.500	0.500	ug/L		< 0.500				20	
ntimony	0.29837	0.500	ug/L		0.25631			15.2	20	
elenium	12.326	0.500	ug/L		12.453			1.03	20	
olybdenum	35.864	0.500	ug/L		36.754			2.45	20	
hromium	3.9197	0.500	ug/L		3.9660			1.17	20	
nallium	0.044185	0.500	ug/L		<0.500				20	
admium	<0.100	0.100	ug/L		<0.100				20	
atrix Spike (BHF0010-MS1)	Sou	rce: MHE028	31-02	Prepared:	06/02/202	2 Analyze	ed: 06/06/2	022		
olybdenum	137.86	0.500	ug/L	100.00	36.754	101	75-125			
elenium	114.18	0.500	ug/L	100.00	12.453	102	75-125			
nromium	108.80	0.500	ug/L	100.00	3.9660	105	75-125			
nallium	91.503	0.500	ug/L	100.00	<0.500	91.5	75-125			
obalt	102.38	0.500	ug/L	100.00	0.097902	102	75-125			
ntimony	97.839	0.500	ug/L	100.00	0.25631	97.6	75-125			
arium	171.10	0.500	ug/L	100.00	69.740	101	75-125			
admium	95.091	0.100	ug/L	100.00	<0.100	95.1	75-125			
ead	88.264	0.500	ug/L	100.00	<0.500	88.3	75-125			
rsenic	105.11	0.500	ug/L	100.00	1.0119	104	75-125			
eryllium	93.769	0.500	ug/L	100.00	< 0.500	93.8	75-125			

Xcel Energy Minneapolis Testing Lab



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BHF0010 - EPA 200.2, EPA 3005										
Matrix Spike Dup (BHF0010-MSD1)	Sou	ırce: MHE028	31-02	Prepared	: 06/02/202	2 Analyze	ed: 06/06/2	2022		
Arsenic	105.09	0.500	ug/L	100.00	1.0119	104	75-125	0.0171	20	
Cobalt	101.90	0.500	ug/L	100.00	0.097902	102	75-125	0.472	20	
3arium	172.61	0.500	ug/L	100.00	69.740	103	75-125	0.878	20	
Cadmium	93.570	0.100	ug/L	100.00	<0.100	93.6	75-125	1.61	20	
_ead	88.406	0.500	ug/L	100.00	<0.500	88.4	75-125	0.161	20	
Selenium	113.95	0.500	ug/L	100.00	12.453	101	75-125	0.203	20	
Гhallium	90.949	0.500	ug/L	100.00	<0.500	90.9	75-125	0.607	20	
Antimony	98.822	0.500	ug/L	100.00	0.25631	98.6	75-125	0.999	20	
Chromium	108.58	0.500	ug/L	100.00	3.9660	105	75-125	0.201	20	
Molybdenum	137.47	0.500	ug/L	100.00	36.754	101	75-125	0.282	20	
Beryllium	93.114	0.500	ug/L	100.00	<0.500	93.1	75-125	0.701	20	
Batch BHF0031 - EPA 200.2, EPA 3005										
Blank (BHF0031-BLK1)				Prepared	: 06/02/202	2 Analyze	ed: 06/06/2	2022		
Antimony	<0.500	0.500	ug/L							
Arsenic	<0.500	0.500	ug/L							
3arium	<0.500	0.500	ug/L							
Beryllium	<0.500	0.500	ug/L							
Cadmium	<0.100	0.100	ug/L							
Cobalt	<0.500	0.500	ug/L							
Selenium	<0.500	0.500	ug/L							
		0.500	ug/L							
Γhallium	<0.500	0.500	ug/L							
Thallium Molybdenum	<0.500 <0.500	0.500	ug/L							
			_							



RPD

% DEC

Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

Total Metals by ICPMS - Quality Control

Snika

Source

Reporting

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHF0031 - EPA 200.2, EPA	3005									
CS (BHF0031-BS1)				Prepared:	06/02/202	22 Analyze	ed: 06/06/2	022		
Beryllium	96.643	0.500	ug/L	100.00		96.6	85-115			
Selenium	98.157	0.500	ug/L	100.00		98.2	85-115			
ead	96.890	0.500	ug/L	100.00		96.9	85-115			
admium	98.805	0.100	ug/L	100.00		98.8	85-115			
hromium	102.23	0.500	ug/L	100.00		102	85-115			
rsenic	94.773	0.500	ug/L	100.00		94.8	85-115			
obalt	100.45	0.500	ug/L	100.00		100	85-115			
hallium	97.897	0.500	ug/L	100.00		97.9	85-115			
arium	98.261	0.500	ug/L	100.00		98.3	85-115			
ntimony	96.147	0.500	ug/L	100.00		96.1	85-115			
lolybdenum	99.776	0.500	ug/L	100.00		99.8	85-115			
uplicate (BHF0031-DUP1)	Soui	ce: MHE028	30-02	Prepared:	06/02/202	22 Analyze	ed: 06/06/2	022		
ntimony	<0.500	0.500	ug/L		<0.500				20	
lolybdenum	0.73479	0.500	ug/L		0.92877			23.3	20	M_D
admium	<0.100	0.100	ug/L		<0.100				20	
hromium	9.3643	0.500	ug/L		9.2153			1.60	20	
eryllium	0.070437	0.500	ug/L		<0.500				20	
ead	<0.500	0.500	ug/L		<0.500				20	
hallium	0.039997	0.500	ug/L		<0.500				20	
arium	49.573	0.500	ug/L		48.543			2.10	20	
obalt	0.28440	0.500	ug/L		0.28720			0.981	20	
rsenic	0.46634	0.500	ug/L		0.54921			16.3	20	
elenium	8.0093	0.500	ug/L		7.9904			0.235	20	
latrix Spike (BHF0031-MS1)	Soui	ce: MHE028	30-02	Prepared:	06/02/202	22 Analyze	ed: 06/06/2	022		
obalt	104.37	0.500	ug/L	100.00	0.28720	104	75-125			
hromium	116.14	0.500	ug/L	100.00	9.2153	107	75-125			
ead	93.383	0.500	ug/L	100.00	<0.500	93.4	75-125			
eryllium	99.322	0.500	ug/L	100.00	<0.500	99.3	75-125			
arium	149.95	0.500	ug/L	100.00	48.543	101	75-125			
rsenic	101.29	0.500	ug/L	100.00	0.54921	101	75-125			
elenium	106.42	0.500	ug/L	100.00	7.9904	98.4	75-125			
lolybdenum	102.69	0.500	ug/L	100.00	0.92877	102	75-125			
cadmium	96.521	0.100	ug/L	100.00	<0.100	96.5	75-125			
hallium	95.502	0.500	ug/L	100.00	<0.500	95.5	75-125			
ntimony	99.381	0.500	ug/L	100.00	<0.500	99.4	75-125			

Xcel Energy Minneapolis Testing Lab



Barium

Lead

Cobalt

Cadmium

Minneapolis Testing Laboratory 1518 Chestnut Ave N Minneapolis, MN 55043 Certification # MN-027-053-197 WI-999071150 Christine Keefe, Supervisor (612) 630-4506

RPD

20

20

20

20

%REC

75-125

75-125

75-125

75-125

3.04

1.57

0.612

0.982

Environmental Services-Water Minneapolis

414 Nicollet Mall, GO-2

Minneapolis MN, 55401

Project Manager: Eric Ealy

Project Manager: Eric Ealy

Reported:

06/09/2022 10:41

Total Metals by ICPMS - Quality Control

Spike

100.00

100.00

100.00

100.00

Source

48.543

<0.100

<0.500

0.28720

106

98.1

94.0

103

Reporting

0.500

0.100

0.500

0.500

154.58

98.051

93.956

103.35

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHF0031 - EPA 200.2, EPA 300	5									
Matrix Spike Dup (BHF0031-MSD1)	Sour	ce: MHE028	30-02	Prepared	: 06/02/202	2 Analyze	d: 06/06/2	022		
Chromium	121.07	0.500	ug/L	100.00	9.2153	112	75-125	4.16	20	
Beryllium	101.60	0.500	ug/L	100.00	<0.500	102	75-125	2.27	20	
Molybdenum	105.28	0.500	ug/L	100.00	0.92877	104	75-125	2.49	20	
Antimony	100.74	0.500	ug/L	100.00	<0.500	101	75-125	1.36	20	
Arsenic	102.59	0.500	ug/L	100.00	0.54921	102	75-125	1.28	20	
Thallium	96.591	0.500	ug/L	100.00	<0.500	96.6	75-125	1.13	20	
Selenium	107.32	0.500	ug/L	100.00	7.9904	99.3	75-125	0.846	20	

ug/L

ug/L

ug/L

ug/L



Environmental Services-Water Minneapolis

414 Nicollet Mall, GO-2

Minneapolis MN, 55401

Project Manager: Eric Ealy

Project Manager: Eric Ealy

Reported:

06/09/2022 10:41

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHE0172 - EPA 200.2, EPA	3005									
Blank (BHE0172-BLK1)				Prepared	: 05/07/202	2 Analyze	ed: 05/11/2	022		
Boron	<0.0500	0.0500	mg/L							
Lithium	< 0.0150	0.0150	mg/L							
Calcium	<1.50	1.50	mg/L							
LCS (BHE0172-BS1)				Prepared	: 05/07/202	2 Analyze	ed: 05/11/2	022		
Lithium	0.98063	0.0150	mg/L	1.0000		98.1	85-115			
Calcium	99.194	1.50	mg/L	100.00		99.2	85-115			
Boron	1.0046	0.0500	mg/L	1.0000		100	85-115			
Duplicate (BHE0172-DUP1)	Sou	ırce: MHE004	9-01	Prepared	: 05/07/202	2 Analyze	ed: 05/11/2	022		
Boron	3.1090	0.0500	mg/L		3.1679			1.88	20	
Calcium	149.40	1.50	mg/L		151.41			1.34	20	
Lithium	0.010729	0.0150	mg/L		0.010605			1.16	20	
Ouplicate (BHE0172-DUP2)	Sou	ırce: MHE004	9-06	Prepared	: 05/07/202	2 Analyze	ed: 05/11/2	022		
Lithium	0.0050285	0.0150	mg/L		0.0043832			13.7	20	
Calcium	52.248	1.50	mg/L		55.747			6.48	20	
Boron	0.056383	0.0500	mg/L		0.069011			20.1	20	M_D
Matrix Spike (BHE0172-MS1)	Sou	ırce: MHE004	9-01	Prepared	: 05/07/202	2 Analyze	ed: 05/11/2	022		
Calcium	247.29	1.50	mg/L	100.00	151.41	95.9	70-130			
Boron	4.1186	0.0500	mg/L	1.0000	3.1679	95.1	70-130			
Lithium	1.0255	0.0150	mg/L	1.0000	0.010605	101	70-130			
Matrix Spike (BHE0172-MS2)	Sou	ırce: MHE004	9-06	Prepared	: 05/07/202	2 Analyze	ed: 05/11/2	022		
Lithium	1.0087	0.0150	mg/L	1.0000	0.0043832	100	70-130			
Boron	1.0786	0.0500	mg/L	1.0000	0.069011	101	70-130			
Calcium	158.14	1.50	mg/L	100.00	55.747	102	70-130			



Environmental Services-Water Minneapolis

414 Nicollet Mall, GO-2

Minneapolis MN, 55401

Project Manager: Eric Ealy

Project Manager: Eric Ealy

Reported:

06/09/2022 10:41

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
,		2			rtocare		Liiiiio	- 141 5		110.00
Batch BHE0172 - EPA 200.2, EPA 30										
Matrix Spike Dup (BHE0172-MSD1)	So	urce: MHE004	9-01	Prepared	: 05/07/202	2 Analyze	ed: 05/11/2	022		
Boron	4.1837	0.0500	mg/L	1.0000	3.1679	102	70-130	1.57	20	
Calcium	250.73	1.50	mg/L	100.00	151.41	99.3	70-130	1.38	20	
Lithium	1.0586	0.0150	mg/L	1.0000	0.010605	105	70-130	3.18	20	
Matrix Spike Dup (BHE0172-MSD2)	So	urce: MHE004	9-06	Prepared	: 05/07/202	2 Analyze	ed: 05/11/2	022		
Boron	1.1183	0.0500	mg/L	1.0000	0.069011	105	70-130	3.61	20	
Lithium	1.0191	0.0150	mg/L	1.0000	0.0043832	101	70-130	1.03	20	
Calcium	159.37	1.50	mg/L	100.00	55.747	104	70-130	0.775	20	
Batch BHE0198 - EPA 200.2, EPA 30	05									
Blank (BHE0198-BLK1)				Prepared	: 05/09/202	2 Analyze	ed: 05/11/2	022		
Boron	<0.0500	0.0500	mg/L							
Lithium	< 0.0150	0.0150	mg/L							
Calcium	<1.50	1.50	mg/L							
LCS (BHE0198-BS1)				Prepared	: 05/09/202	2 Analyze	ed: 05/11/2	022		
Lithium	0.99609	0.0150	mg/L	1.0000		99.6	85-115			
Calcium	100.20	1.50	mg/L	100.00		100	85-115			
Boron	0.99905	0.0500	mg/L	1.0000		99.9	85-115			
Duplicate (BHE0198-DUP1)	So	urce: MHE007	2-17	Prepared	: 05/09/202	2 Analyze	ed: 05/11/2	022		
Boron	0.034914	0.0500	mg/L		0.035910			2.81	20	
Lithium	0.0062576	0.0150	mg/L		0.0077459			21.3	20	M_D-RL
Calcium	24.514	1.50	mg/L		24.981			1.89	20	
Matrix Spike (BHE0198-MS1)	So	urce: MHE007	2-17	Prepared	: 05/09/202	2 Analyze	ed: 05/11/2	022		
Lithium	1.0069	0.0150	mg/L	1.0000	0.0077459	99.9	70-130			
Calcium	125.73	1.50	mg/L	100.00	24.981	101	70-130			
Boron	1.0529	0.0500	mg/L	1.0000	0.035910	102	70-130			



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHE0198 - EPA 200.2, EPA 300	5									
Matrix Spike Dup (BHE0198-MSD1)	So	urce: MHE007	72-17	Prepared	: 05/09/202	2 Analyze	ed: 05/11/2	022		
Lithium	1.0044	0.0150	mg/L	1.0000	0.0077459	99.7	70-130	0.250	20	
Boron	1.0408	0.0500	mg/L	1.0000	0.035910	100	70-130	1.16	20	
Calcium	125.20	1.50	mg/L	100.00	24.981	100	70-130	0.421	20	
Batch BHF0009 - EPA 200.2, EPA 300	5									
Blank (BHF0009-BLK1)				Prepared	: 06/02/202	2 Analyze	ed: 06/07/2	2022		
Boron	<0.0500	0.0500	mg/L							
Calcium	<1.50	1.50	mg/L							
Lithium	<0.0150	0.0150	mg/L							
LCS (BHF0009-BS1)				Prepared	: 06/02/202	2 Analyze	ed: 06/07/2	.022		
Lithium	1.0158	0.0150	mg/L	1.0000		102	85-115			
Calcium	101.33	1.50	mg/L	100.00		101	85-115			
Boron	0.97257	0.0500	mg/L	1.0000		97.3	85-115			
Duplicate (BHF0009-DUP1)	So	urce: MHE028	89-01	Prepared	: 06/02/202	2 Analyze	ed: 06/07/2	.022		
Calcium	98.181	1.50	mg/L		99.121			0.954	20	
Lithium	0.045567	0.0150	mg/L		0.047425			4.00	20	
Boron	0.093559	0.0500	mg/L		0.093752			0.206	20	
Matrix Spike (BHF0009-MS1)	So	urce: MHE028	89-01	Prepared	: 06/02/202	2 Analyze	ed: 06/07/2	.022		
Boron	1.0625	0.0500	mg/L	1.0000	0.093752	96.9	70-130			
Lithium	1.0522	0.0150	mg/L	1.0000	0.047425	100	70-130			
Calcium	201.99	1.50	mg/L	100.00	99.121	103	70-130			
Matrix Spike Dup (BHF0009-MSD1)	So	urce: MHE028	39-01	Prepared	: 06/02/202	2 Analyze	ed: 06/07/2	.022		
Boron	1.0824	0.0500	mg/L	1.0000	0.093752	98.9	70-130	1.86	20	
Calcium	200.39	1.50	mg/L	100.00	99.121	101	70-130	0.794	20	
Lithium	1.0258	0.0150	mg/L	1.0000	0.047425	97.8	70-130	2.54	20	



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BHF0030 - EPA 200.2, EPA 300	5									
Blank (BHF0030-BLK1)				Prepared	: 06/02/202	2 Analyze	ed: 06/07/2	022		
Boron	<0.0500	0.0500	mg/L							
Calcium	<1.50	1.50	mg/L							
Lithium	<0.0150	0.0150	mg/L							
LCS (BHF0030-BS1)				Prepared	: 06/02/202	2 Analyze	ed: 06/07/2	022		
Boron	0.98675	0.0500	mg/L	1.0000		98.7	85-115			
Calcium	98.850	1.50	mg/L	100.00		98.9	85-115			
Lithium	0.97808	0.0150	mg/L	1.0000		97.8	85-115			
Duplicate (BHF0030-DUP1)	So	urce: MHE030	02-03	Prepared	: 06/02/202	2 Analyze	ed: 06/07/2	022		
Boron	0.074784	0.0500	mg/L		0.078436			4.77	20	
Lithium	0.031209	0.0150	mg/L		0.032874			5.19	20	
Calcium	70.417	1.50	mg/L		72.552			2.99	20	
Matrix Spike (BHF0030-MS1)	So	urce: MHE030	02-03	Prepared	: 06/02/202	2 Analyze	ed: 06/07/2	022		
Boron	1.0343	0.0500	mg/L	1.0000	0.078436	95.6	70-130			
Lithium	1.0134	0.0150	mg/L	1.0000	0.032874	98.1	70-130			
Calcium	166.71	1.50	mg/L	100.00	72.552	94.2	70-130			
Matrix Spike Dup (BHF0030-MSD1)	So	urce: MHE030	02-03	Prepared	: 06/02/202	2 Analyze	ed: 06/06/2	022		
Calcium	168.04	1.50	mg/L	100.00	72.552	95.5	70-130	0.795	20	
Boron	0.98651	0.0500	mg/L	1.0000	0.078436	90.8	70-130	4.73	20	
Lithium	1.0312	0.0150	mg/L	1.0000	0.032874	99.8	70-130	1.75	20	



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

Mercury - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BHE0148 - EPA 245.1, EPA 7470A										
Blank (BHE0148-BLK1)				Prepared	& Analyze	d: 05/09/2	022			
Mercury	<0.200	0.200	ug/L							
LCS (BHE0148-BS1)				Prepared	& Analyze	d: 05/09/2	022			
Mercury	2.7048	0.200	ug/L	3.0000	-	90.2	85-115			
Duplicate (BHE0148-DUP1)	Soui	ce: MHE004	9-23	Prepared	& Analyze	d: 05/09/2	022			
Mercury	<0.200	0.200	ug/L	-	<0.200				20	
Duplicate (BHE0148-DUP2)	Soui	ce: MHE004	9-24	Prepared	& Analyze	d: 05/09/2	022			
Mercury	<0.200	0.200	ug/L	-	<0.200				20	
Matrix Spike (BHE0148-MS1)	Soui	ce: MHE004	9-23	Prepared	& Analyze	d: 05/09/2	022			
				0.0000	<0.200	87.9	70-130			
Mercury	2.6383	0.200	ug/L	3.0000	~0.200	67.9	70-130			
Mercury Matrix Spike (BHE0148-MS2)		0.200 ce: MHE004		Prepared						
•										
Matrix Spike (BHE0148-MS2)	Sour 2.6540	ce: MHE004	9-24 ug/L	Prepared	& Analyze <0.200	d: 05/09/2 88.5	022 70-130			
Matrix Spike (BHE0148-MS2) Mercury	Sour 2.6540	0.200	9-24 ug/L	Prepared 3.0000	& Analyze <0.200	d: 05/09/2 88.5	022 70-130	1.93	20	
Matrix Spike (BHE0148-MS2) Mercury Matrix Spike Dup (BHE0148-MSD1)	Sour 2.6540 Sour 2.5878	0.200 ce: MHE004	9-24 ug/L 9-23 ug/L	Prepared 3.0000 Prepared	& Analyzed <0.200 & Analyzed <0.200	d: 05/09/2 88.5 d: 05/09/2 86.3	022 70-130 022 70-130	1.93	20	
Matrix Spike (BHE0148-MS2) Mercury Matrix Spike Dup (BHE0148-MSD1) Mercury	Sour 2.6540 Sour 2.5878	0.200 0.200 0.200	9-24 ug/L 9-23 ug/L	Prepared 3.0000 Prepared 3.0000	& Analyzed <0.200 & Analyzed <0.200	d: 05/09/2 88.5 d: 05/09/2 86.3	022 70-130 022 70-130	1.93	20	
Matrix Spike (BHE0148-MS2) Mercury Matrix Spike Dup (BHE0148-MSD1) Mercury Matrix Spike Dup (BHE0148-MSD2)	2.6540 Sour 2.5878 Sour	0.200 0.200 rce: MHE004 0.200	9-24 ug/L 9-23 ug/L 9-24	Prepared 3.0000 Prepared 3.0000 Prepared	& Analyzed <0.200 & Analyzed <0.200 & Analyzed <0.200	d: 05/09/2 88.5 d: 05/09/2 86.3 d: 05/09/2	022 70-130 022 70-130			
Matrix Spike (BHE0148-MS2) Mercury Matrix Spike Dup (BHE0148-MSD1) Mercury Matrix Spike Dup (BHE0148-MSD2) Mercury	2.6540 Sour 2.5878 Sour	0.200 0.200 rce: MHE004 0.200	9-24 ug/L 9-23 ug/L 9-24	Prepared 3.0000 Prepared 3.0000 Prepared	& Analyzer <0.200 & Analyzer <0.200 & Analyzer <0.200 & O.200	d: 05/09/2 88.5 d: 05/09/2 86.3 d: 05/09/2 87.4	022 70-130 022 70-130 022 70-130			



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 06/09/2022 10:41

Mercury - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BHE0554 - EPA 245.1, EPA 7470A										
LCS (BHE0554-BS1)				Prepared	& Analyze	d: 06/01/2	022			
Mercury	2.7391	0.200	ug/L	3.0000		91.3	85-115			
Duplicate (BHE0554-DUP1)	Sou	rce: MHE028	0-01	Prepared	& Analyze	d: 06/01/2	022			
Mercury	<0.200	0.200	ug/L		<0.200				20	
Matrix Spike (BHE0554-MS1)	Sou	rce: MHE028	0-01	Prepared	& Analyze	d: 06/01/2	022			
Mercury	2.6159	0.200	ug/L	3.0000	<0.200	87.2	70-130			
Matrix Spike Dup (BHE0554-MSD1)	Sou	rce: MHE028	0-01	Prepared	& Analyze	d: 06/01/2	022			
Mercury	2.6821	0.200	ug/L	3.0000	<0.200	89.4	70-130	2.50	20	



Environmental Services-Water Minneapolis	Project Name/Location: Sherco Pond 3 CCR	
414 Nicollet Mall, GO-2		Reported:
Minneapolis MN, 55401	Project Manager: Eric Ealy	06/09/2022 10:41

Qualifiers and Definitions

M_TTT	Sample received at the lab outside of required hold time.
M_MS	The percent recovery and/or RPD were outside the acceptance limits for the MS/MSD due to possible matrix interference and/or non-homogeneous sample matrix.
M_ES	The reported value is an estimate. The amount of residue measured during analysis was outside of reference method limits.
M_E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
M_D-F	L The RPD for the sample duplicate was outside of QC acceptance limits due to <rl.< td=""></rl.<>
M_DIL	Sample was diluted. The MDL and MRL were raised due to the dilution.
M_D	The RPD for the sample duplicate was outside of QC acceptance limits possibly due to non-homogeneous matrix.
Z	Non Accredited Analyte
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.



Recolution Rec	sect	Section A	Section B		Section C									Page:	-	9 0
Seleve Davis Sele	Sedu	ired Client Information:	Required Project Information:		Invoice Informati	ion:								-		
MB-7 Page Name Company Name Page N	Somp			uosqo;	Attention:		Steve	Davis				REC	SULATO	RY AGE	NCY	
Application Parchine Order Note Parchine Order Order Note Parchine Order Note	Addre		Captari C	cobson	Company Name.	**					NPDE	13	UND WATE	F.	DRINKIN	IG WATE
Project Number Part Branch Protect Number Protect		MP-7			Address:						T UST	L RCR/		L	OTHER	MCES
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Public Name State	Phone		Project Number		Pace Project Ma		ad Jacob	nosc			LOCAT	NOI	L HO			OTHER
Page 10 Page 11 Page 12 Page	Redu			ergy She	erco Ponds Sprin						Filtered (Y.	N)			1	
The must be unique		A Sec	Valid Matrix Codes MATRIX DRIBKING WATER WASTE WASTE WASTE SOLUD		B C=COWb	OLLECTED		4		servatives	Requested Analysis:		2 de 17	4AB-90- 84-90-2 8000	(NULL)	
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P-01A-2 P-01A-2 P-03A P-03B P-03B P-04A-1 P-04A-1 WT 6 S/4/12 1/22 P-05A-1 WT 6 S/4/12 1/22 P-17 WT 6 S/4/12 1/22 P-17 WT 6 S/4/12 1/22 P-13 WT 6 S/4/12 1/22 P-22 WT 6 S/4/12 1/22 P-23 WT 6 S/4/12 1/22 P-23 WT 6 S/4/12 1/22 P-24 P-25 WT 6 S/4/12 1/22 P-3 WT 6 S/4/12 1/22 P-42 WT 6 S/4/12 1/22 P-42 WT 6 S/4/12 1/22 P-43 WT 6 S/4/12 1/22 P-50B S/4/12 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2	TEN		52		DATE	DATE			os ^z H	IOEN S _s eN	Office	W NO	136) (3E) (SE)	0/862	0.0	e Project No. Lab I.D.
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Samples Intact

Custody Sealed Cooler

901

O° ni qmeT

DATE Signed (MM / DD / YY) S/4/22

Kerda Mera 1

SAMPLER NAME AND SIGNATURE

SIGNATURE of SAMPLER:

N/A N/A

N/A N/A

N/A N/A

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Pace Analytical"

Pace Project No. Lab I.D. DRINKING WATE N/A N/A OTHER OTHER MCES SAMPLE CONDITIONS N/A N/A N/A REGULATORY AGENCY Z > Page: 1 N/A N/A GROUND WATER SC MN L HO L 1200 NC TIME RCRA X LOCATION × × 5/6/22 NPDES Filtered (Y/N) SITE DATE TSU T Requested Analysis: Other ACCEPTED BY / AFFILIATION EOSSSEN HOPN НСІ EONH *OSZH upreserved Steve Davis # OF CONTAINERS Brad Jacobson SAMPLE TEMP AT COLLECTION TIME 1500 818 0101 0 0 0 0 9 0 0 COMPOSITE END/GRAB Pace Profile #: 5/4/12 SIShr 515hr DATE DATE COLLECTED Pace Quote Reference: Pace Project Manager RELINQUISHED BY / AFFILIATION TIME Invoice Information: Xcel Energy Sherco Ponds Spring Company Name: COMPOSITE START Gove Section C DATE Attention: Address: SAMPLE TYPE PMOD=D BARD=D 0 O 0 9 0 O 9 9 9 9 9 9 TW Riley Jacobson M LM Brad Jacobson MT **™** W TW WT W TW TW TW MATRIX CODE Required Project Information: Purchase Order No. Project Number "All Metals Are Field Fillered Except Leachate Project Name: Section B Valle ... MATRIX Report To: Copy To: Required Client Information P-01A-2 P-03B P-04A -1 P-05A-1 P-03A P-50B P-22 P-42 P-43 P-50 P-17 P-23 **Environmental Services** 2 Weeks One Character per box. (A-Z, 0-91, ;-) Sample IDs MUST BE UNIQUE Brad Jacobson SAMPLE ID Xcel Energy Fax: Required Client Information: Requested Due Date/TAT: Additional Comments: Section D Phone; (612) 597-7254 Email To: Address: 10 # M3TI

e-File(ALLQ020rev.3,31Mar05))22Jun2005

5/6/22

DATE Signed (MM / DD / YY)

Cardre Maran

PRINT Name of SAMPLER: TULY Juco 1050

SIGNATURE of SAMPLER THE

SAMPLER NAME AND SIGNATURE

Orapped off 5/5/22 by LCM

PHStips MHOSISC

14600 Myso841

Samples Intact Y/N

N/A

N/A

Custody Sealed Cooler

Received on Ice

O° ni qmaT

Xcel Energy*

Amarillo Testing Laboratory 7201 N. Lakeside Road, Amarillo, TX 79108 Phone (806) 381-6461 – Fax (806) 381-6468

Chain of Custody

Denver Testing Laboratory 9500 Interstate 76, Henderson, CO 80640 Phone (303) 628-2606 – Fax (303) 628-2926

Minneapolis Testing Laboratory 1518 Chestnut Avenue North, Minneapolis, MN 55403 Phone (612) 630-4506 – Fax (612) 630-4367

Distribution: White: Return Original (electronic or hard copy) to Project Manager with Analytical Results; Canary: Laboratory; Pink: Generator's Copy
Matrix: (W) Water (S Solid (SL) Sludge (O) Other (Specify) Preservative: (I) Ice (N) Nitric Acid (S) Sulfuric Acid (H) Hydrochloric Acid (D) Sodium Hydroxide (X) Other (Specify)
(F) filtered (F15) filtered within 15 minutes (O-PO4)

Form 17-9084 Revision 01/2

CHAIN-OF-CUSTODY / Analytical Request Document

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Pace Analytical

Pace Project No. DRINKING WATE OTHER OTHER MCES of REGULATORY AGENCY Z N N Page: SCL _ __ GROUND WATER MN LHO NC CE 4 4 RCRA L L LOCATION xx × × NPDES Filtered (Y/N) SITE TSU T Requested Analysis: Methanol EOSSEN HOEN HCI EONH OSZH hpreserved Steve Davis # OF CONTAINERS Brad Jacobson SAMPLE TEMP AT COLLECTION 1275 S/4/22 1220 Onos TIME 8/2/22 1208 COMPOSITE END/GRAB Pace Profile #: 5/3/2C 5/3/22 DATE COLLECTED Pace Quote Reference: Pace Project Manager: TIME Invoice Information: Xcel Energy Sherco Ponds Spring Company Name: COMPOSITE START Section C DATE Address: G=GRAB C=COMP O O O O O O O O O 9 Riley Jacobson TW WT TW TW Brad Jacobson M MT M TW TW TW MATRIX CODE Required Project Information: Purchase Order No.: Project Number Project Name: Section B Report To: MATRIX
DIRIKGHG WATER
WATER
WASTE WATER
PRODUCT
SOULSOLD
OIL Copy To: Required Client Information P-50D P-90A P-92A P-92D P-62 P-66 P-89-1 P-90 P-56 D-60 P-88 Environmental Services 2 Weeks (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE Brad Jacobson One Character per box. SAMPLE ID Xcel Energy Required Client Information: **Fax:** Requested Due Date/TAT: Section D Phone; (612) 597-7254 Section A Company: Email To: Address: 9 8 10 2 က 6 ITEM #

Lab LD.

**All Metals Are Field Filtered Except Leachate Jet Strys. M Hours p e-File(ALLQ020rev.3,31Mar05))22Jun2005

11/15

Samples Intact

Sealed Cooler

Custody

90|

Received on

J° ni qmaT

Herda Horan

beeppen

SIGNATURE of SAMPLER

SAMPLER NAME AND SIGNATURE

DATE Signed (MM / DD / YY)

N/A N/A

N/A

N/A N/A N/A N/A

N/QN/A

2730 TIME

N/A N/A

SAMPLE CONDITIONS

DATE 5/5/22

ACCEPTED BY / AFFILIATION

TIME 210

DATE

RELINQUISHED BY / AFFILIATION

51512

1130

213/26

5/3/12 101D

O O

M TW.

P-93A

Additional Comments:

CHAIN-OF-CUSTODY / Analytical Request Document

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Pace Analytical

Pace Project No. Lab I.D. DRINKING WATER N/A N/A N/A Samples Intact of 6 OTHER OTHER MCES SAMPLE CONDITIONS Custody Sealed Cooler N/A N/A N/A N/A L REGULATORY AGENCY Page: 2 > > NA Received on lce N/A N/A N/A <u>|</u> SCL GROUND WATER J° ni qmaT MN L HO L 200 TIME X × ¥ Y No. × RCRA LOCATION × × NPDES Filtered (Y/N) 5/6/2 SITE DATE TSU T Requested Analysis: JehtC ACCEPTED BY / AFFILIATION Vethanol SOSSEN HOSN IOH EONH *OSZH Devieserved Steve Davis # OF CONTAINERS **Brad Jacobson** SAMPLER NAME AND SIGNATURE COLLECTION 1500 TA 9MBT BJ9MA2 TIME PRINT Name of SAMPLER: Riey 1300 Necton! 1430 1130 TIME 5/4/2 OG20 3260 0 0 0 9 0 COMPOSITE END/GRAE Pace Profile #: 5/6/22 5/5/2 5/5/22 5/5/2L 5/4/22 Mohr RELINQUISHED BY / AFFILIATION | DATE DATE COLLECTED Pace Quote Reference: Pace Project Manager: TIME Invoice Information: Xcel Energy Sherco Ponds Spring Company Name: COMPOSITE START Section C DATE ace Attention: Address: SAMPLE TYPE BARB C=COMP O O 9 0 9 9 9 0 0 9 9 G Riley Jacobson M M TW \ \ Brad Jacobson W TW TW TW TW W TW TW MATRIX CODE Required Project Information: Ourchase Order No.: roject Number Tup My0084: 5.2 Project Name: Section B Report To: MATRIX
DRINGG WATER
WATER
WASTE WATER
PRODUCT
SOIL/SOLID Copy To: Openped of stall by year Required Client Information P-50D P-90A P-92D P-92A P-93A P-56 D-60 P-62 P-66 P-88 P-89-1 P-90 2 Weeks **Environmental Services** One Character per box. (A-Z, 0-91,-) Sample IDs MUST BE UNIQUE Brad Jacobson SAMPLE ID Xcel Energy Required Client Information: Fax: Requested Due Date/TAT: Additional Comments: Section D Email To: Address: 10 ITEM # 9

e-File(ALLQ020rev.3,31Mar05))22Jun2005

5/6/22

DATE Signed (MM / DD / YY) Kerdra Novau

nebson

SIGNATURE OF SAMPLER THEY

put Aps: mount

CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Pace Analytical www.pacelebs.com

	Section B		Section C									Page:	3 of	
Required Client Information:	Required Project Information:	u:	Invoice Information:											
Company: Xcel Energy R	Report To: Brad Jacobson	copson	Attention:		Steve Davis	avis				REG	REGULATORY AGENCY	Y AGEN	5	
Address: Environmental Services O	Copy To: Riley Jacobson	cobson	Company Name:						L NPDES	1>	GROUND WATER	T	DRINKING WATER	>
MP-7			Address:						TSU T	I RCRA		0 L	OTHER MCES	()
Email To: Brad Jacobson	Purchase Order No.:		Pace Quote Reference.	nce:					SITE	I <u>≯</u> ∪N	MN L	N N	M	
Phone: (612) 597-7254 Fax: PP	Project Number		Pace Project Manager:		Brad Jacobson	on			LOCATION		L HO	SCI_ WILE	V OTHER	T
Requested Due Date/TAT: 2 Weeks	Project Name: Xcel Er	Xcel Energy Sherco	Ponds Spring	Pace Profile #:					Filtered (Y/N)	/ (N			//	1
Section D Required Client Information M	səp			COLLECTED		SS	Preservatives	atives	Requested Analysis:			//		l/
SAMPLE ID OCH A PORT OF THE P	DRINKING WATER DW WY WATER WW WASTER WW WASTE WHODUCH P PRODUCT P SOLESOLED OIL OIL	RIX CÔDE			PLE TEMP A	CONTAINE				SARS	SADAN (\$3020 \$3020 \$4.400 \$4.000 \$4.000 \$4.000 \$4.000 \$4.000 \$4.000 \$4.000 \$4.000 \$4.000 \$4.000 \$4.000 \$4.000 \$4.000 \$4.0		
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												N/A	N/A	
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Pace Project No. Lab I.D. DRINKING WATER Samples Intact N/A N/A N/A of 6 OTHER SAMPLE CONDITIONS OTHER MCES Sealed Cooler N/A N/A N/A N/A Custody L N REGULATORY AGENCY > Page: 4 N N/A N/A N/A Received on SC __ GROUND WATER 2.5 O° ni qmaT NC WN × × L HO L TIME 808 X Z RCRA DATE Signed (MM/DD/YY) S/C/C/22 LOCATION 5/6/22 NPDES iltered (Y/N) DATE SITE TSU Requested Analysis: × × × + landa Moran Tento ACCEPTED BY / AFFILIATION lonsities 195S2O3 HOEN IOH S ONH *OSZH pevieserved PRINT Name of SAMPLER: Raylor ben Steve Davis # OF CONTAINERS Brad Jacobson SAMPLER NAME AND SIGNATURE COLLECTION 0051 TA 9MBT 3J9MA2 TIME 533 Shol 0501 no TIME 128 0 0 0 E COMPOSITE ENDIGRAB Pace Profile #: IGNATURE of SAMPLER 5/5/12 5/16/22 215/2 24512 5/5/22 RELINQUISHED BY / AFFILIATION DATE DATE 11/5/2 COLLECTED Pace Project Manager: Pace Quote Reference TIME Invoice Information: Xcel Energy Sherco Ponds Spring Company Name: Section C (2) Mestherent Vd. to collect/bosompie-Pes 5/5/22 DATE Address: SAMPLE TYPE G=GRAB C=COMP O O O WT 0 O O O O O O 9 \ M TW 1× ₩. M M TW TW TW \ M L M T Brad Jacobson Riley Jacobson AMATRIX CODE Required Project Information: Purchase Order No. "All Metals Are Field Filtered Except Leachate Project Number Project Name: Section B Report To: Copy To: Section D Required Client Information MATRIX Orapped at by KM ststor P-154A P-131D 4-152A P-155 P-156 P-158 P-132 P-150 P-151 P-153 P-157 2 Weeks **Environmental Services** One Character per box. (A-Z, 0-91, ;-) Sample IDs MUST BE UNIQUE Brad Jacobson P Repes stell SAMPLE ID Xcel Energy MP-7 Required Client Information: Fax: Requested Due Date/TAT: Additional Comments: Phone: (612) 597-7254 Email To: Company Address: # MHTI

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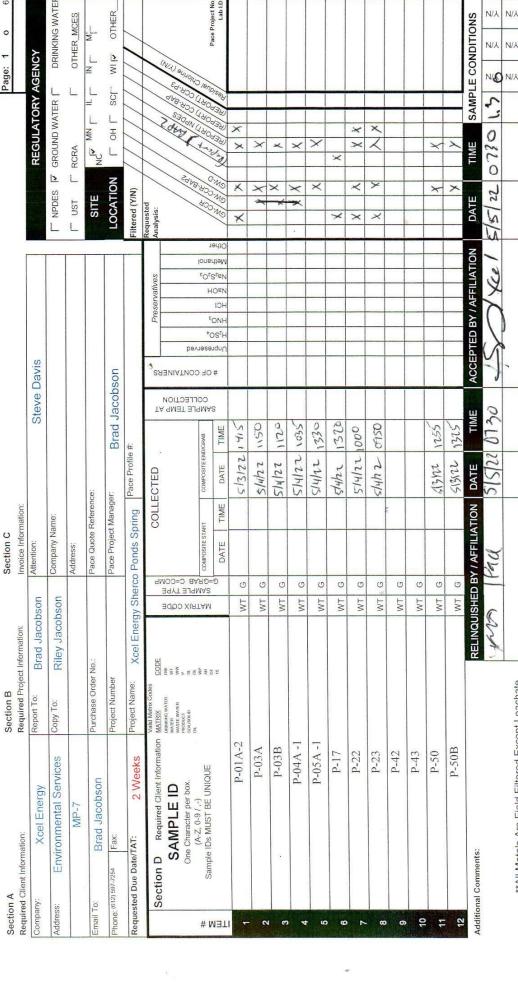
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Company: Xcel	Xcel Energy	Report To:	Brad Jacobson	noso	Attention:		Ste	Steve Davis	/is			REGU	REGULATORY AGENCY	, AGENC	34	
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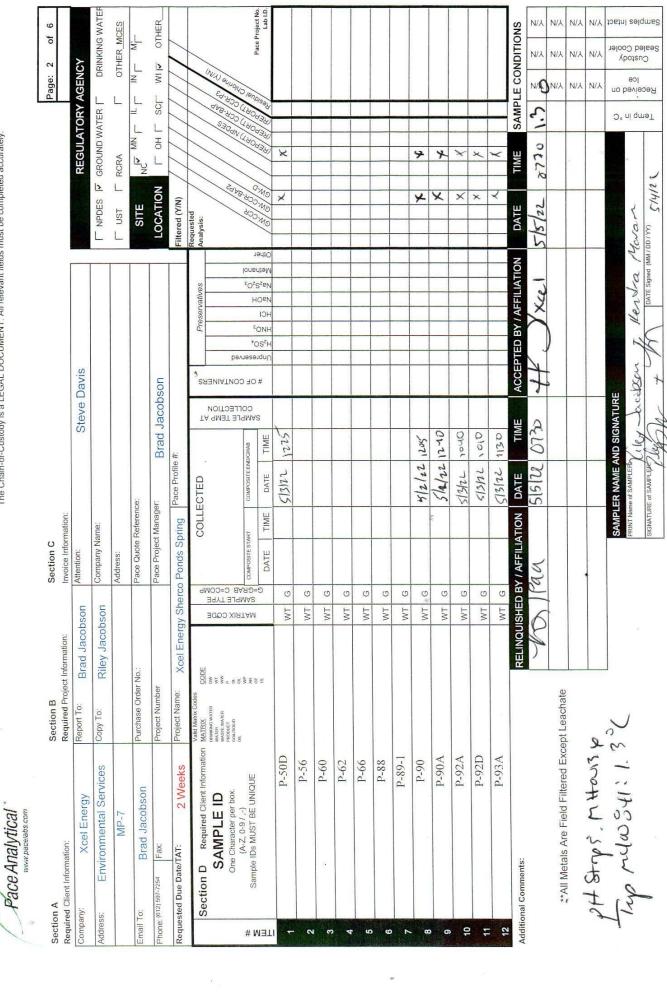
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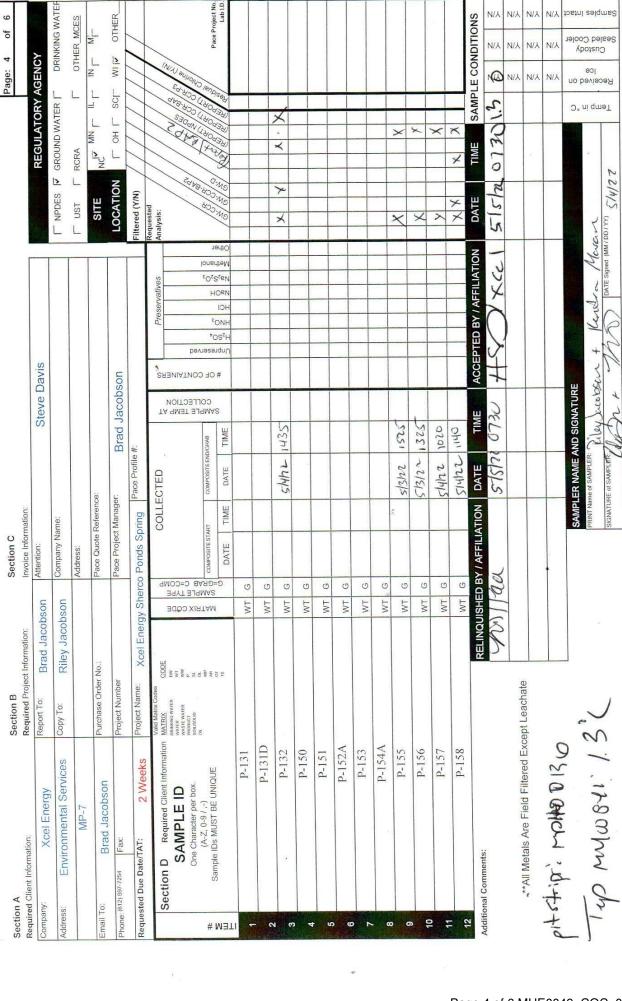
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Required Client Information:	Required Project Information:	nformation:	Invoice Information:					THE STATE OF THE PARTY OF THE P			
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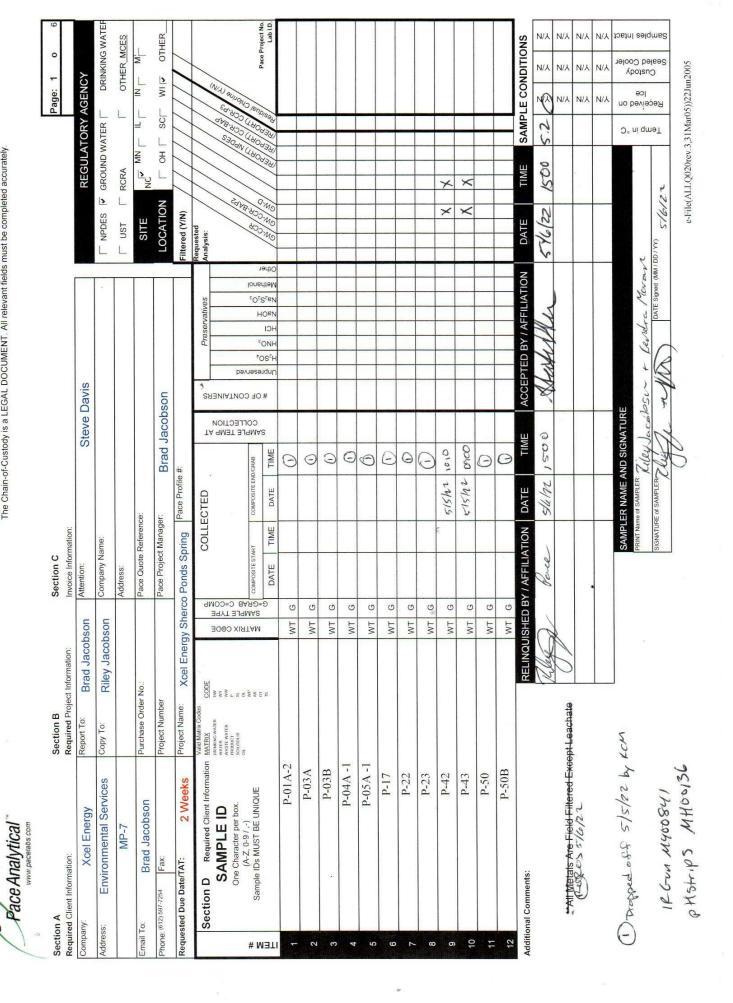
CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

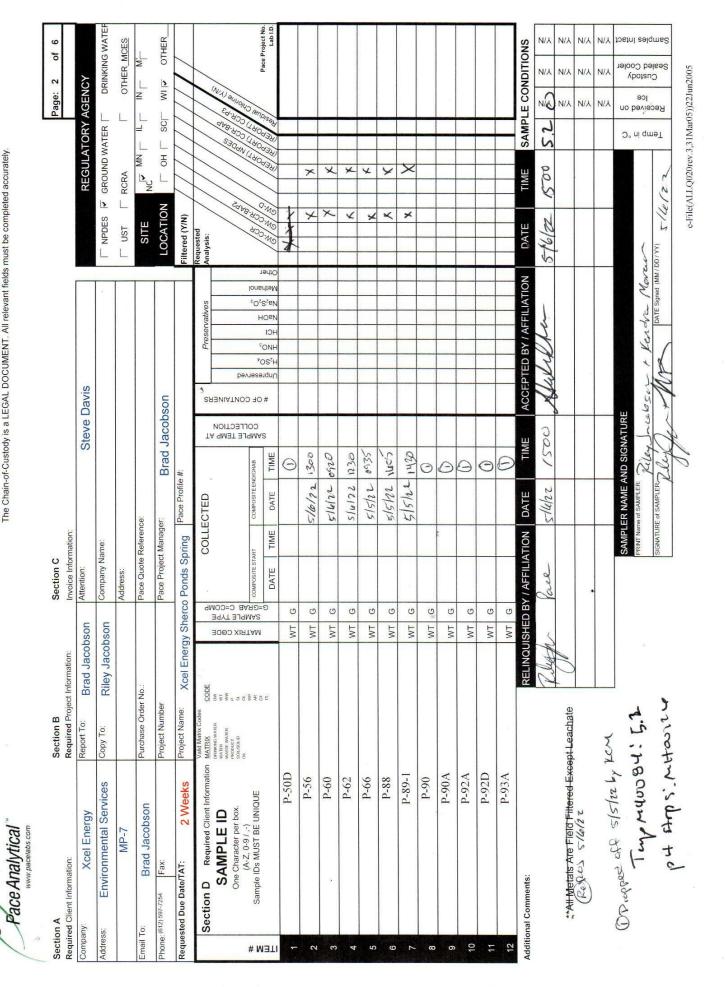
Section A	nation;	Section B Required Project Information:	Information:	Section C Invoice Information:									Page: 5	of 6
Company:	Xcel Energy	Report To:	Brad Jacobson	Attention:		Steve Davis	Davis				REGU	REGULATORY AGENCY	AGENCY	
Address: Env	Environmental Services	Copy To:	Riley Jacobson	Company Name:						☐ NPDES	GROUNI	GROUND WATER [70	DRINKING WATER
	MP-7			Address:						L UST	L RCRA			OTHER MCES
Email To:	Brad Jacobson	Purchase Order No.:	0.:	Pace Quote Reference	ce;					SITE	NC NC	IN I I	L N	M
Phone: (612) 597-7254	Fax:	Project Number		Pace Project Manager:		Brad Jacobson	son			LOCATION		OH L SCL	<u>></u>	OTHER
Requested Due Date/TAT:	TAT: 2 Weeks	Project Name:	Xcel Energy Sherco	so Ponds Spring	Pace Profile #:					Filtered (Y/N)			1	
Section D	SAMPLE ID One Character per box.	Valid Matrix Codes MATRIX DRINGONO WATER WASTER WATER PRODUCT PRODUCT	SIX CODE	COL	COLLECTED	LE TEMP AT LECTION	ONTAINERS (Preservatives		Requested Analysis:	1	2 48 400 83 GaN 84 400 84 400	AAB-842 (MY) GA-830 (MY) GARDING	
Sampl	(A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE		ITAM MAS	COMPOSITE STAR	COMPOSITE ENDA	r MAS	# OE C	HOE IC CON	ethanol ther	0-14-00-14.	7.30	190936 190936 190936) lengis	Pace Project No.
311	C91-d			DATE TIME	DATE	TIME	un _	NH NH	M	10 10	3)	10 W		rap
	791-1 D-163													
2	191-d													
3	+01-1		WT G									-		
4	P-165		WT G											
2	P-173		WT G		5/3/12 09	5460				×	×			
9	P-174		WT G		01 22K/5	1040				~	*			
7	P-175		WT		5/3/22 1125	5				×	×			
. «	P-176		WT		s/4/2 10	Kods				~	×			
. 6	P-177		WT G		21 22/1/5	0221				×	×			
. 0,	P-178A		WT G		S/V/W 13	355								
-	P-178B		WT G											
12	P-179A				5/3/12	1430				×				
Additional Comments:	:S:		RELINQUISHED	ED BY / AFFILIATION	STAZZ	TIME 67.30	ACCEP	ACCEPTED BY / AFFICIATION		ACL S	23.0		1 2 SAMPLE CONDITIONS	N/A
				/		5				771016		-	N/A	
All Me	*All Metals Are Field Filtered Except Leachate	ept Leachate											N/A	la constant
				•									N/A	- County
イエられて	1 HStripe. Mag 20	9		SAMP	SAMPLER NAME AND SIGNATURE	SIGNATUR						Э.		
-[-	14 (000 00.0)	2,		PRINT	(200 Lyal	+ /*	Kenda	Merca	<		ni qm	eivec eol	bed Ca
- the	1 . 110 001	/		SIGNATI	SIGNATURE of SAMPLERS	Z.	1	DATE Signed (MM / DD / YY)	Signed (MM / I	STULY STULY	11/12	ĐΤ		269

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

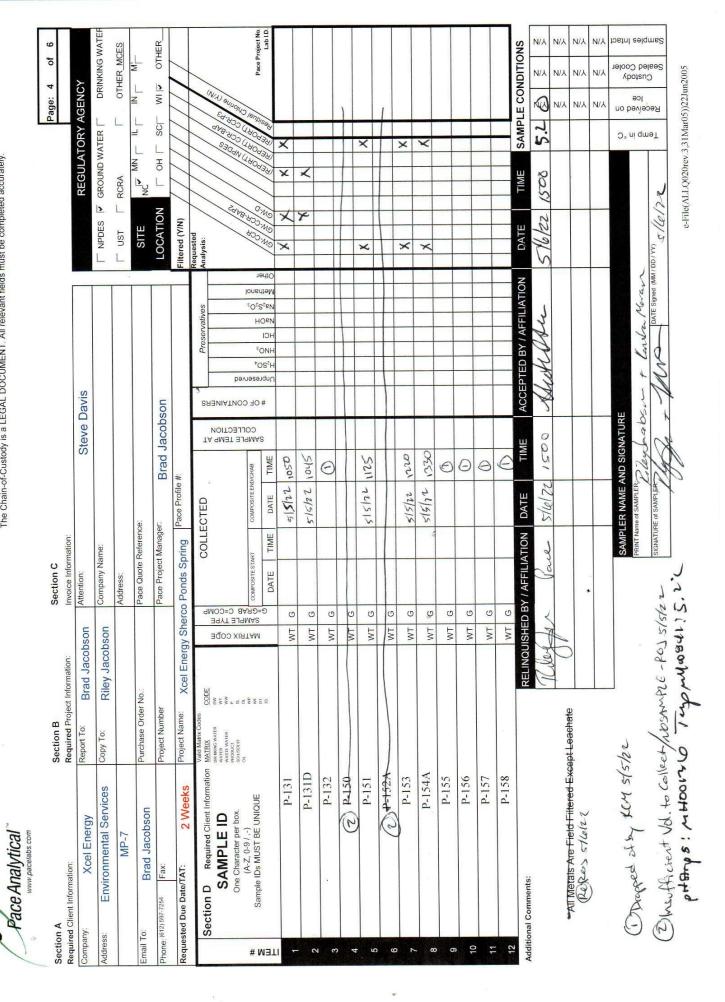
Pace Analytical "

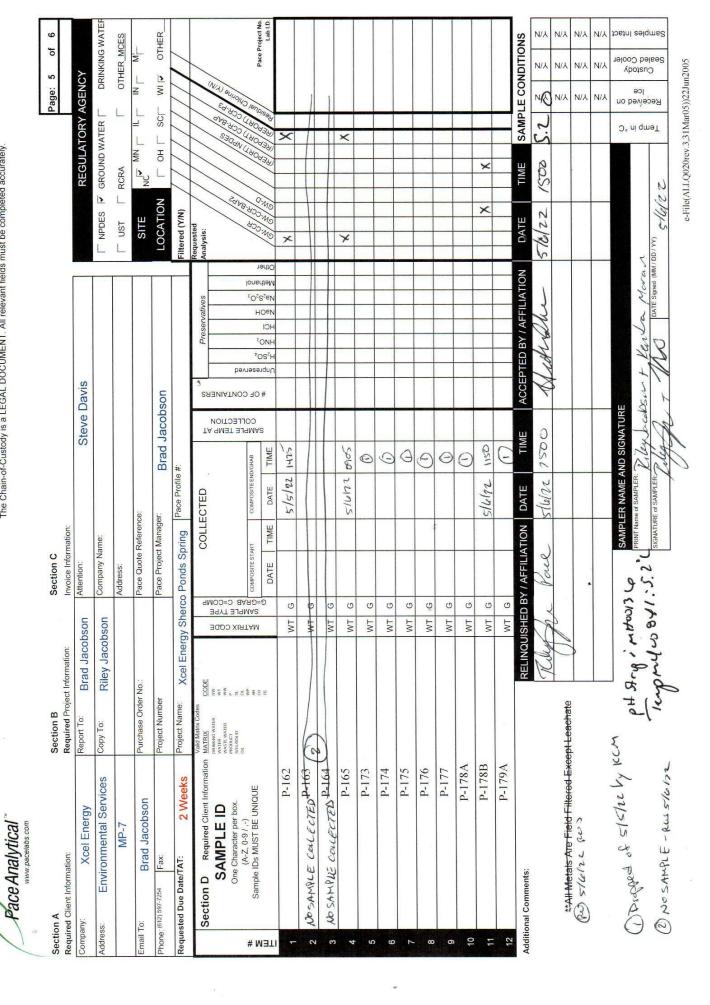
Pace Project No. Lab I.D. DRINKING WATE N/A N/A N/A Samples Intact OTHER MCES SAMPLE CONDITIONS of Sealed Cooler e-File(ALLQ020rev.3,31Mar05))22Jun2005 N/A N/A N/A N/A Custody Page: 6 REGULATORY AGENCY L Z > |> 901 NO N/A N/A Received on L_ SCL GROUND WATER | 2 J° ni qmaT 0720 Z HO × X NC C TIME X X RCRA XX ayer 1 L LOCATION × X X 15/2 iltered (Y/N) NPDES SITE DATE XX I UST Requested Analysis: Kerk meren X X ACCEPTED BY / AFFILIATION Methanol EOZSZEN Xe HOBN нсі EONH POSTH Unpreserved kechson Steve Davis # OF CONTAINERS Brad Jacobson SAMPLER NAME AND SIGNATURE COLLECTION TA 9MBT BJ9MAR 0730 TIME 1535 Oohi 0001 5440 かり 5051 221515 1020 1010 513/22 0920 TIME Sial COMPOSITE END/GRAB Pace Profile #: 5/972 STUPLE SIGNATURE of SAMPLER 5/3/22 573/2L SBILL 513/12 572/22 SIVIZ DATE DATE COLLECTED ace Quote Reference Pace Project Manager: TIME RELINQUISHED BY / AFFILIATION Invoice Information . Energy Sherco Ponds Spring Company Name: COMPOSITE START Section C DATE Las SAMPLE TYPE 9MOD=D 8AAD=D 9 O O 9 O O O O O O O 6 Brad Jacobson Riley Jacobson TW TW TW WT M TW TW M WT LM TW MATRIX CODE Required Project Information Xcel CODE DW WW WW DE SE OF OR SE urchase Order No. roject Number Project Name: **All Metals Are Field Filtered Except Leachate PHSTOS, MHOUSE Section B MATRIX
DIRINGO WATER
WATER
WASTE WATER
PRODUCT
SCUSOLED
OUL Report To: Copy To: Duplicate NPDES Duplicate BAP2 Duplicate BAP Rinse NPDES Duplicate P3 Rinse BAP2 Rinse BAP Section D Required Client Information Rinse P3 P-179D P-180A P-180D 2 Weeks **Environmental Services** One Character per box. (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE Brad Jacobson SAMPLE ID Xcel Energy Required Client Information: **Fax:** Requested Due Date/TAT: Additional Comments: 10ne: (612) 597-7254 Section A Company (ddress: mail To: 9 7 8 6 10 # MHTI 7 1

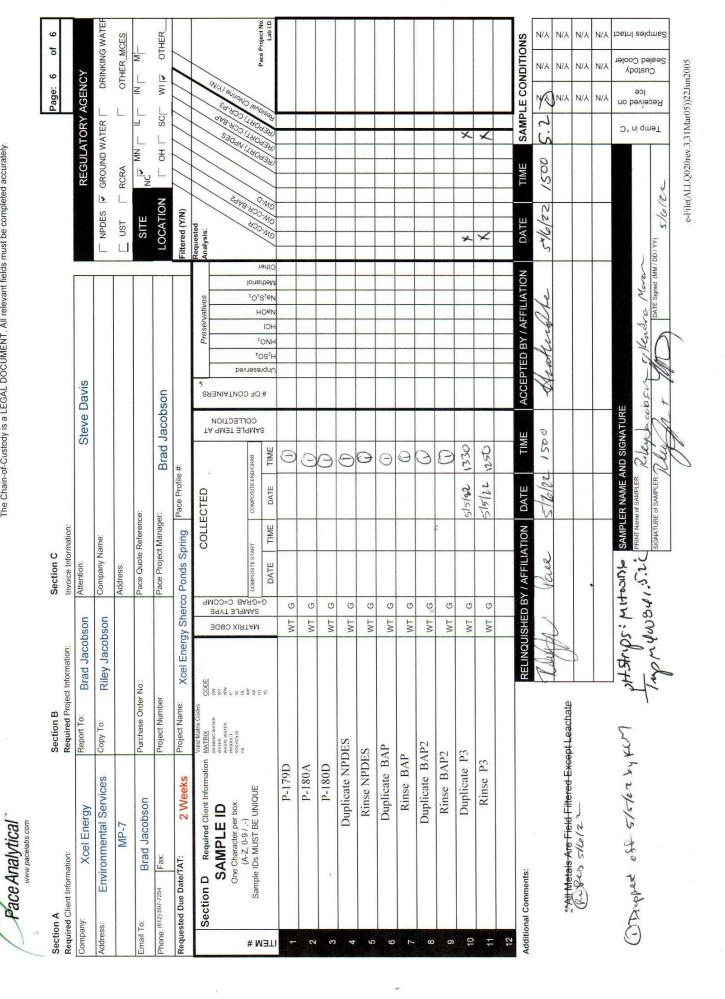




	Required Project Information:	nformation:	Invoi	Invoice Information	4.0									r age.	5 O	9
Company: Xcel Energy	Report To: B	Brad Jacobson	Attention:	ition:		S	Steve Davis	avis				RE	REGULATORY AGENCY	Y AGEN	СУ	
Address: Environmental Services	Copy To: R	Riley Jacobson		Company Name:							☐ NPDES	1>	GROUND WATER		DRINKING WATER	WATER
MP-7			Address	ess:							☐ UST	RCRA		L	THER	SES
Email To: Brad Jacobson	Purchase Order No.:		Pace	Pace Quote Reference:	ance:						SITE	NON	NW NW	I L	W	
Phone: (612) 597-7254 Fax:	Project Number		Pace	Pace Project Manager:	iger:	Brad J	Brad Jacobson	uc			LOCATION	NO	Ы НО	SC WIN	4	OTHER
Requested Due Date/TAT: 2 Weeks	Project Name:	Xcel Energy Sh	erco	Ponds Spring	Pace Profile #:	le #:					Filtered (Y/N)	// (1				
mation	Valid Matrix Codes MATRIX DIRANCHO WATER WATER WASTE WATER PRODUCT P SCOLEGE OL	SIX CODE	PE C=COMP	COL	COLLECTED	880	TE TEMP AT NOITOBL	SABNIATNO:	Preservatives		Requested Analysis:		830aN	CA-A-SO		
Sample IDs MUST BE UNIQUE			A5=5	COMPOSITE START DATE TIME	COMPOSITE ENDIGRAB	NDICHAB		Nubreser # OF C	NªOH HCI HNO ³	Na ₂ S ₂ O ₃ Methanol Other	0 M. CCA	GWO GW.D	[40939) [40939]	D lenpisad		Pace Project No. Lab I.D.
P-93D		TW	O			Θ							,			
P-94A		WT	9		sisher	0251						×	×			
3 P-101A		TW	9		5/6/22	Shot						v.	X			
P-101B		TW	9		slope	1105						×	X			
5 P-126		WT	ŋ			9										
P-126D		TW	9			Θ										
P-127		TW	9			<u>@</u>										
P-128		TW	₂ O		**	9										
P-128D		TW	9			Θ										
10 P-129		TW	9			Ø										
P-130		TW	9		5/10/26	5001					×	×	×			
12 P-130D		TW	9		5/8/12	240						×	×			
Additional Comments:		RELINQUISHE	0	BY / AFFILIATION	I DATE	TIME		CCEPTE	ACCEPTED BY / AFFILIATION	ATION	DATE	TIME		SAMPLE CONDITIONS	NDITION	NS
		The South	Pa	Pace	chol21	005/		Sha	when	1	2/9/5	2005/ 2	5.2	_	N/A	N/A
**All Metals Are Field Fillered Excel	eachate	10										2		N/A	N/A	N/A
Pures steller			•	3										N/A	N/A	N/A
	-1.1													N/A	N/A	N/A
O Danger at the Lynch 5/18/18		y		SAMI	SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: 72 Ley Success SIGNATURE of SAMPLEP [LEY]	AND SIGN 12 ley	ALCOR	URE UNDSELL	t herds	La Nevar		Steloc	O° ni qm∋T	Received on	Custody Sealed Cooler	Samples Intact







(724)850-5600



June 29, 2022

Christopher Pelosi Pace Analytical Minnesota 1700 Elm Street SE Suite 200 Minneapolis, MN 55414

RE: Project: Xcel Energy

Pace Project No.: 30489340

Dear Christopher Pelosi:

Enclosed are the analytical results for sample(s) received by the laboratory on May 16, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

Pace Analytical Services - Greensburg

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

Sincerely,

Megan A. Rager

megan.rager@pacelabs.com

Megan a Rager

(724)850-5600 Project Manager

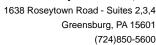
Enclosures

cc: Eric Ealy, Xcel Energy
Brad Jacobson, Pace Minneapolis Field
David Katzner, Xcel Energy
Chicago Building Ree, Acabatica Corriers

Ciara Ruikkie, Pace Analytical Services - Field Svcs

Division







CERTIFICATIONS

Project: Xcel Energy Pace Project No.: 30489340

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734 Arkansas Certification

California Certification #: 04222CA Colorado Certification #: PA01547 Connecticut Certification #: PH-0694

Delaware Certification EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040 Florida: Cert E871149 SEKS WET

Guam Certification Hawaii Certification Idaho Certification Illinois Certification Indiana Certification Iowa Certification #: 391

Kansas/TNI Certification #: E-10358 Kentucky Certification #: KY90133 KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012 Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020 Maryland Certification #: 308

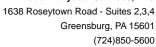
Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991 Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282

South Dakota Certification
Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L

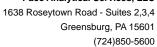




SAMPLE SUMMARY

Project: Xcel Energy
Pace Project No.: 30489340

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30489340001	P-01A-2	Water	05/03/22 14:15	05/16/22 09:55
30489340002	P-17	Water	05/04/22 13:20	05/16/22 09:55
30489340003	P-22	Water	05/04/22 10:00	05/16/22 09:55
30489340004	P-23	Water	05/04/22 09:50	05/16/22 09:55
30489340005	P-130	Water	05/06/22 10:05	05/16/22 09:55
30489340006	P-131	Water	05/05/22 10:50	05/16/22 09:55
30489340007	P-132	Water	05/04/22 14:35	05/16/22 09:55
30489340008	P-151	Water	05/05/22 11:25	05/16/22 09:55
30489340009	P-153	Water	05/05/22 12:20	05/16/22 09:55
30489340010	P-154A	Water	05/05/22 13:30	05/16/22 09:55
30489340011	P-155	Water	05/03/22 15:25	05/16/22 09:55
30489340012	P-156	Water	05/03/22 13:25	05/16/22 09:55
30489340013	P-157	Water	05/04/22 10:20	05/16/22 09:55
30489340014	P-158	Water	05/04/22 11:40	05/16/22 09:55
30489340015	P-162	Water	05/05/22 14:25	05/16/22 09:55
30489340016	P-165	Water	05/06/22 09:05	05/16/22 09:55
30489340017	Duplicate Bap	Water	05/04/22 10:20	05/16/22 09:55
30489340018	Rinse Bap	Water	05/04/22 10:00	05/16/22 09:55
30489340019	Duplicate P3	Water	05/05/22 13:30	05/16/22 09:55
30489340020	Rinse P3	Water	05/05/22 12:50	05/16/22 09:55





SAMPLE ANALYTE COUNT

Project: Xcel Energy
Pace Project No.: 30489340

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30489340001	P-01A-2	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340002	P-17	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340003	P-22	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340004	P-23	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340005	P-130	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340006	P-131	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340007	P-132	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340008	P-151	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340009	P-153	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340010	P-154A	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340011	P-155	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340012	P-156	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340013	P-157	EPA 903.1	RPS	1	PASI-PA

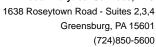


SAMPLE ANALYTE COUNT

Project: Xcel Energy
Pace Project No.: 30489340

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340014	P-158	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340015	P-162	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340016	P-165	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340017	Duplicate Bap	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340018	Rinse Bap	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340019	Duplicate P3	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30489340020	Rinse P3	EPA 903.1	RPS	1	PASI-PA
		EPA 904.0	JSM	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg





PROJECT NARRATIVE

Project: Xcel Energy Pace Project No.: 30489340

Method: EPA 903.1

Description: 903.1 Radium 226

Client: Pace-MN Field Services Division

Date: June 29, 2022

General Information:

20 samples were analyzed for EPA 903.1 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

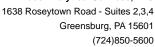
Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:





PROJECT NARRATIVE

Project: Xcel Energy
Pace Project No.: 30489340

Method: EPA 904.0

Description: 904.0 Radium 228

Client: Pace-MN Field Services Division

Date: June 29, 2022

General Information:

20 samples were analyzed for EPA 904.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

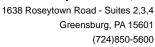
Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:





PROJECT NARRATIVE

Project: Xcel Energy Pace Project No.: 30489340

Method: Total Radium Calculation
Description: Total Radium 228+226

Client: Pace-MN Field Services Division

Date: June 29, 2022

General Information:

20 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.



Project: Xcel Energy
Pace Project No.: 30489340

Sample: P-01A-2	Lab ID: 30489	340001 Collected: 05/03/22 14:15	Received:	05/16/22 09:55 M	Matrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	0.509 ± 0.322 (0.364) C:NA T:88%	pCi/L	06/21/22 16:36	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.757 ± 0.381 (0.646) C:70% T:88%	pCi/L	06/10/22 12:04	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	1.27 ± 0.703 (1.01)	pCi/L	06/29/22 07:57	7440-14-4	
Sample: P-17	Lab ID: 30489		Received:	05/16/22 09:55 M	Matrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	0.0959 ± 0.297 (0.576) C:NA T:91%	pCi/L	06/21/22 16:36	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.380 ± 0.330 (0.657) C:72% T:91%	pCi/L	06/10/22 12:04	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.476 ± 0.627 (1.23)	pCi/L	06/29/22 07:57	7440-14-4	
Sample: P-22	Lab ID: 30489	0340003 Collected: 05/04/22 10:00	Received:	05/16/22 09:55 M	Matrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	0.156 ± 0.307 (0.551) C:NA T:91%	pCi/L	06/21/22 16:50	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.376 ± 0.375 (0.772) C:65% T:91%	pCi/L	06/10/22 12:04	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	$0.532 \pm 0.682 (1.32)$	pCi/L	06/29/22 07:57	7440-14-4	



Project: Xcel Energy
Pace Project No.: 30489340

Sample: P-23 PWS:	Lab ID: 30489 Site ID:	O340004 Collected: 05/04/22 09:50 Sample Type:	Received:	05/16/22 09:55 N	Matrix: Water	
-		. ,.			0.0	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	•	Services - Greensburg				
Radium-226	EPA 903.1	0.280 ± 0.285 (0.431) C:NA T:94%	pCi/L	06/21/22 16:36	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.0686 ± 0.428 (0.981) C:53% T:94%	pCi/L	06/10/22 12:05	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.349 ± 0.713 (1.41)	pCi/L	06/29/22 07:57	7440-14-4	
Sample: P-130	Lab ID: 30489		Received:	05/16/22 09:55 N	Matrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	0.0651 ± 0.156 (0.302) C:NA T:104%	pCi/L	06/21/22 16:36	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.212 ± 0.334 (0.724) C:67% T:104%	pCi/L	06/10/22 12:05	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.277 ± 0.490 (1.03)	pCi/L	06/29/22 07:57	7440-14-4	
Sample: P-131	Lab ID: 30489	9340006 Collected: 05/05/22 10:50	Received:	05/16/22 09:55 N	Matrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg		•	-	
Radium-226	EPA 903.1	0.109 ± 0.166 (0.266) C:NA T:97%	pCi/L	06/21/22 16:36	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.268 ± 0.289 (0.599) C:74% T:97%	pCi/L	06/10/22 12:05	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.377 ± 0.455 (0.865)	pCi/L	06/29/22 07:57	7440-14-4	



Project: Xcel Energy
Pace Project No.: 30489340

Sample: P-132	Lab ID: 30489		Received:	05/16/22 09:55 N	/latrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	0.000 ± 0.364 (0.737) C:NA T:90%	pCi/L	06/21/22 16:36	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.0795 ± 0.311 (0.706) C:75% T:90%	pCi/L	06/10/22 12:05	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.0795 ± 0.675 (1.44)	pCi/L	06/29/22 07:57	7440-14-4	
Sample: P-151 PWS:	Lab ID: 30489 Site ID:	0340008 Collected: 05/05/22 11:25 Sample Type:	Received:	05/16/22 09:55 N	Matrix: Water	
		. ,.				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	0.000 ± 0.191 (0.113) C:NA T:86%	pCi/L	06/21/22 17:02	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	-0.0143 ± 0.307 (0.725) C:70% T:86%	pCi/L	06/10/22 12:05	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	$0.000 \pm 0.498 (0.838)$	pCi/L	06/29/22 07:57	7440-14-4	
Sample: P-153	Lab ID: 30489	0340009 Collected: 05/05/22 12:20	Received:	05/16/22 09:55 N	Matrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg		•		
Radium-226	EPA 903.1	0.108 ± 0.234 (0.432) C:NA T:98%	pCi/L	06/21/22 17:02	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.402 ± 0.280 (0.530) C:76% T:98%	pCi/L	06/10/22 12:06	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.510 ± 0.514 (0.962)	pCi/L	06/29/22 07:57	7440-14-4	



Project: Xcel Energy
Pace Project No.: 30489340

Sample: P-154A PWS:	Lab ID: 30489 Site ID:	340010 Collected: 05/05/22 13:30 Sample Type:	Received:	05/16/22 09:55 M	latrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
1 drameters		Services - Greensburg	Office	Analyzed		— Quai
Radium-226	EPA 903.1	0.120 ± 0.322 (0.598) C:NA T:95%	pCi/L	06/21/22 17:40	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.515 ± 0.336 (0.631) C:74% T:95%	pCi/L	06/10/22 12:06	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.635 ± 0.658 (1.23)	pCi/L	06/29/22 07:57	7440-14-4	
Sample: P-155 PWS:	Lab ID: 30489 Site ID:	340011 Collected: 05/03/22 15:25 Sample Type:	Received:	05/16/22 09:55 N	latrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Gervices - Greensburg				
Radium-226	EPA 903.1	0.0874 ± 0.200 (0.118) C:NA T:92%	pCi/L	06/21/22 17:02	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.317 ± 0.341 (0.711) C:72% T:92%	pCi/L	06/10/22 12:06	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.404 ± 0.541 (0.829)	pCi/L	06/29/22 07:57	7440-14-4	
Sample: P-156	Lab ID: 30489	340012 Collected: 05/03/22 13:25	Received:	05/16/22 09:55 M	latrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg		•		
Radium-226	EPA 903.1	0.000 ± 0.287 (0.587) C:NA T:92%	pCi/L	06/21/22 17:02	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.169 ± 0.276 (0.600) C:78% T:92%	pCi/L	06/10/22 12:06	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.169 ± 0.563 (1.19)	pCi/L	06/29/22 07:57	7440-14-4	



Project: Xcel Energy
Pace Project No.: 30489340

Sample: P-157	Lab ID: 30489	340013 Collected: 05/04/22 10:20	Received:	05/16/22 09:55 N	fatrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	-0.0786 ± 0.218 (0.515) C:NA T:94%	pCi/L	06/21/22 17:02	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.302 ± 0.296 (0.607) C:79% T:94%	pCi/L	06/10/22 12:06	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.302 ± 0.514 (1.12)	pCi/L	06/29/22 07:57	7440-14-4	
Sample: P-158	Lab ID: 30489		Received:	05/16/22 09:55 N	Matrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	-0.0864 ± 0.208 (0.519) C:NA T:91%	pCi/L	06/21/22 17:02	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.344 ± 0.304 (0.610) C:73% T:91%	pCi/L	06/10/22 12:07	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.344 ± 0.512 (1.13)	pCi/L	06/29/22 07:57	7440-14-4	
Sample: P-162	Lab ID: 30489		Received:	05/16/22 09:55 M	Matrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	-0.0897 ± 0.352 (0.747) C:NA T:88%	pCi/L	06/21/22 17:02	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.390 ± 0.275 (0.518) C:80% T:88%	pCi/L	06/10/22 12:07	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.390 ± 0.627 (1.27)	pCi/L	06/29/22 07:57	7440-14-4	



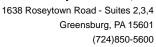
Project: Xcel Energy
Pace Project No.: 30489340

Sample: P-165	Lab ID: 30489	9340016 Collected: 05/06/22 09:05	Received:	05/16/22 09:55 N	Matrix: Water	
PWS:	Site ID:	Sample Type:	rtocorrou.	00/10/22 00:00	natio. Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg			-	
Radium-226	EPA 903.1	0.233 ± 0.188 (0.105) C:NA T:96%	pCi/L	06/21/22 17:23	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	-0.00829 ± 0.207 (0.495) C:78% T:96%	pCi/L	06/10/22 12:07	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.233 ± 0.395 (0.600)	pCi/L	06/29/22 07:57	7440-14-4	
Sample: Duplicate Bap	Lab ID: 30489		Received:	05/16/22 09:55 N	Matrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	0.111 ± 0.218 (0.398) C:NA T:94%	pCi/L	06/21/22 17:23	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.513 ± 0.328 (0.612) C:74% T:94%	pCi/L	06/10/22 12:07	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.624 ± 0.546 (1.01)	pCi/L	06/29/22 07:57	7440-14-4	
Sample: Rinse Bap	Lab ID: 30489	9340018 Collected: 05/04/22 10:00	Received:	05/16/22 09:55 N	Matrix: Water	
PWS:	Site ID:	Sample Type:				
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	0.0394 ± 0.204 (0.424) C:NA T:91%	pCi/L	06/21/22 17:23	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.357 ± 0.368 (0.761) C:68% T:91%	pCi/L	06/10/22 12:07	15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.396 ± 0.572 (1.19)	pCi/L	06/29/22 07:57	7440-14-4	



Project: Xcel Energy
Pace Project No.: 30489340

Sample: Duplicate P3 PWS:	Lab ID: 30489 Site ID:	340019 Collected: 05/05/22 13:30 Sample Type:	Received:	05/16/22 09:55	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	0.0376 ± 0.171 (0.102) C:NA T:91%	pCi/L	06/21/22 17:23	3 13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.106 ± 0.265 (0.591) C:80% T:91%	pCi/L	06/10/22 12:07	7 15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	0.144 ± 0.436 (0.693)	pCi/L	06/29/22 07:57	7440-14-4	
Sample: Rinse P3 PWS:	Lab ID: 30489 Site ID:	340020 Collected: 05/05/22 12:50 Sample Type:	Received:	05/16/22 09:55	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	0.111 ± 0.169 (0.271) C:NA T:95%	pCi/L	06/21/22 17:23	3 13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.248 ± 0.327 (0.697) C:70% T:95%	pCi/L	06/10/22 12:07	7 15262-20-1	
	Pace Analytical S	Services - Greensburg				
Total Radium	Total Radium Calculation	$0.359 \pm 0.496 (0.968)$	pCi/L	06/29/22 07:57	7440-14-4	





QUALITY CONTROL - RADIOCHEMISTRY

Project: Xcel Energy Pace Project No.: 30489340

QC Batch: 506544 Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30489340001, 30489340002, 30489340003, 30489340004, 30489340005, 30489340006, 30489340007,

30489340008, 30489340009, 30489340010, 30489340011, 30489340012, 30489340013, 30489340014, 30489340015, 30489340016, 30489340017, 30489340018, 30489340019, 30489340020

METHOD BLANK: 2453907 Matrix: Water

Associated Lab Samples: 30489340001, 30489340002, 30489340003, 30489340004, 30489340005, 30489340006, 30489340007,

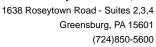
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30489340015, 30489340016, 30489340017, 30489340018, 30489340019, 30489340020

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-228
 0.297 ± 0.282 (0.575) C:76% T:98%
 pCi/L
 06/10/22 12:04

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





QUALITY CONTROL - RADIOCHEMISTRY

Project: Xcel Energy Pace Project No.: 30489340

QC Batch: 506543 Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30489340001, 30489340002, 30489340003, 30489340004, 30489340005, 30489340006, 30489340007,

30489340015, 30489340016, 30489340017, 30489340018, 30489340019, 30489340020

METHOD BLANK: 2453906 Matrix: Water

Associated Lab Samples: 30489340001, 30489340002, 30489340003, 30489340004, 30489340005, 30489340006, 30489340007,

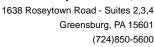
30489340008, 30489340009, 30489340010, 30489340011, 30489340012, 30489340013, 30489340014,

30489340015, 30489340016, 30489340017, 30489340018, 30489340019, 30489340020

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-226
 0.000 ± 0.179 (0.289) C:NA T:98%
 pCi/L
 06/21/22 16:36

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





QUALIFIERS

Project: Xcel Energy Pace Project No.: 30489340

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Date: 06/29/2022 08:00 AM

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. Is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

Face Analytical

MO#:30489340

Section C

Section B

Section A

uest Document at be completed accurately.

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Pace Project No. Lab I.D. DRINKING WATER OTHER. OTHER MCES Page: 🏂 80% REGULATORY AGENCY > 009 893 700 070 8 900 8 8 ₹ <u>_</u> ScT GROUND WATER ☐ NW NW L R T RCRA 1 506 KG3 65 AS LOCATION NPDES Filtered (Y/N) SITE × TSU T × × × Requested Analysis: × Jouedlah [©]C²S²EN HOBM 1700 SE Elm St, Minneapolis, MN 55408 IOF N N N N N N N N N [₽]ONH a OS²I bevreserdat Ciara Ruikkie 0 Ç. Tom Haiverson N # OF CONTAINERS Pace MN Field Services Carin Ferris СОГГЕСТІОИ SAMPLE TEMP AT 1320 1435 0.00 1125 24 330 TIME 000 513122 1415 200 COMPOSITE END/GRAB Pace Profile #: SIShr 212/5 5/4/22 5/4/22 27/N/S 22/22 5/5/rr Jul 2 SIVIL DATE COLLECTED Pace Quote Reference: Pace Project Manager: TIME Invoice Information: Xcel Energy Sherco Ponds Spring Company Name: COMPOSITE START DATE Address: Attention: SAMPLE TYPE

G=GRAB C=COMP WT Ø O ტ <u>ග</u> Ø ტ ഗ ტ ტ O ග ΜT Dave Anderson ΤW WT WT ΜT Ϋ́ ¥ Ž ۲× WΤ ۲× MATRIX CODE Chris Pelosi Required Project Information: Purchase Order No.: Project Number Project Name: Valid Matrix Code
MATRIX
DRINKING WATER
WATER
REDUCT Report To: Copy To: Required Client Information P-154A P-152A P-01A-2 151-8 P-153 P-130 2 Weeks 4 P-132 9-22 P-23 (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE 151-0 41-1 c/o Pace MN Field One Character per box. SAMPLE ID Chris Pelosi Xcel Energy RADIUM 0 Fax: Required Client Information: Requested Due Date/TAT: Section D Phone: (612) 597-7254 Company: Email To: Address: 10 11 12 ITEM #

(1) TRY WELLS. NOSAMPLE PUS 5/6/27

DATE Signed (MM/DD/YYZ) 10/27 + Kenda Moran PRINT Name of SAMPLER: Relex

SIGNATURE of SAMPLER

SAMPLER NAME AND SIGNATURE

>-File(ALLQ020rev.3,31Mar05))22Jun2005

Samples Intact

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Received on

O° ni qmeT

N/A N/A

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N/λ N/A

SAMPLE CONDITIONS

TIME 28

DATE

ACCEPTED BY / AFFILIATION

22/6/15

1630

5/4/22

TIME

DATE

RELINQUISHED BY / AFFILIATION

Additional Comments:

(M

N/A

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Face Analytical

30125620

DRINKING WATER Pace Project No. Lab I.D. OTHER_ OTHER MCES SAMPLE CONDITIONS 5 L Z REGULATORY AGENCY <u>×</u> Page: 2 220 9 0 0 ς ζ 0.72 93 015 $\frac{\infty}{0}$ CIL O E _ |-SCL GROUND WATER F L L P (<u>)</u> TIME RCRA L LOCATION iltered (Y/N) NPDES SITE DATE × UST × × × × × × \times × Requested Analysis: × × × × × Jeril ACCEPTED BY / AFFILIATION Methanol Va₂S₂O₃ HOek 1700 SE Elm St, Minneapolis, MN 55408 нсі EONH 8 N. 7 N OS^zH Unpreserved Ciara Ruikkie Tom Halverson # ОЕ СОИТЫИЕВЗ Ŋ Pace MN Field Services Carin Ferris соггестіои 1140 1020 35 1325 1425 5/4/22 1020 0001 72/1/5 TIME 515/12 1330 525 5/6/22 905 COMPOSITE END/GRAB Pace Profile #: 515/2 5/3/22 5/5/22 22/11/5 72127 21/1/25 DATE DATE COLLECTED Pace Project Manager: Pace Quote Reference: Xcel Energy Sherco Ponds Spring TIME Invoice Information: RELINQUISHED BY / AFFILIATION Company Name: COMPOSITE START Section C Address: Attention: DATE G=GRAB C=COMP Ø ტ ග ഗ ഗ þ O Ø Ø ഗ Ø ര **3**4YT ∃J9MA8 Dave Anderson ¥ \$ X ۲× × ₹ ξ ¥ × WT Υ MATRIX CODE Required Project Information: Purchase Order No.: Project Number Project Name: Valid Meltix Codes

MATRIX
DRINKSKI WATER
WATER
WATER
PRODUCT
SCHOOLD Section B Report To: Copy To: 570 Required Client Information RINSE BAP 5 DUPLICATE DUPLICATE 2 Weeks 8-162 1-163 1-4-b DS1-8 t51-d 851-1 P-155 P-16. (A-Z, 0-9 / .-) Sample IDs MUST BE UNIQUE c/o Pace MN Field RINSE One Character per box, Xcel Energy SAMPLE ID Chris Pelosi RADIUM Required Client Information: Fax: Requested Due Date/TAT: Section D Additional Comments: Phone: (612) 597-7264 Section A Company: Address: ITEM # 5 10 9 80

3 NO SAMPLE -RUS 5/6127

e-File(ALLQ020rev.3,31Mar05))22Jun2005

Samples Intact

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+ Jenka Heran

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SIGNATURE of SAMPLER

SAMPLER NAME AND SIGNATURE

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PM: MAR Due Date: 06/07/22 CLIENT: PaceMN Field

Face Analytical *

Client

Site

7487 Profile Number

Notes

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Container Codes

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BJN	1 Gallon Jug with HNO3	DG9S	DG9S 40mL amber VOA vial H2SO4
AG5U	100mL amber glass unprserved	VG9U	VG9U 40mL clear VOA vial
AG5T	100mL amber glass Na Thiosulfate	VG9T	40mL clear VOA vial Na Thiosul
NCO NCO	1 Gallon Jug	VG9H	JG9H 40mL clear VOA vial HCI
AG1S	1L amber glass H2SO4	JGFU	JGFU 4oz amber wide jar
AG1H	1L amber glass HCI	WGFU	WGFU 4oz wide jar unpreserved
AG1T	1 amber glass Na Thiosulfate	BG2U	BG2U 500mL clear glass unpreserved
BG1U	1L clear glass unpreserved	AG2U	AG2U 500mL amber glass unpreserved
AG3S	250mL amber glass H2SO4	WGKU	WGKU 8oz wide jar unpreserved
AG3U	250mL amber glass unpreserved		

Plastic / Misc.

		The state of the s
1 Gallon Cubitainer	EZI	5g Encore
1/2 Gallon Cubitainer	VOAK	Kit for Volatile Solid
120mL Coliform Na Thiosulfate		Wipe/Swab
1L plastic HNO3	ZPLC	Ziploc Bag
1L plastic unpreserved		
JEOmi pleatic HOOM	1000	10/0401

12GN SP5T

GCUB 1 Gallon Cubitainer

BP1U

BP1N

250mL plastic H2SO4 250mL plastic HNO3

BP3S BP3N

WT	
SL Solid	SL Solid
OL.	OL Non-aqueous liquid
WP	Wipe

500mL plastic unpreserved

500mL, plastic H2SO4

BP2S BP2U

250ml plastic NAOH

врзс

250mL plastic unpreserved

BP3U

WO#: 30489340

face Analytical *

Client

Container Count

PM: MAR Due Date: 06/07/22 CLIENT: PaceMN Field

Profile Number

SPLC

MGKN

WGFU

VOAK

NG9V

Notes

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on Cubitainer	EZI	5g Encore
allon Cubitainer	VOAK	Kit for Volatile Solid
L Coliform Na Thiosulfate		Wipe/Swab
stic HNO3	ZPLC	Ziploc Bag
istic unpreserved		

WT Water	SL	OL Non-aqueous liquid	WP Wipe		
BP3S 250mL plastic H2SO4	BP3N 250mL plastic HNO3	BP3U 250mL plastic unpreserved	BP3C 250ml plastic NAOH	BP2S 500mL plastic H2SO4	BP2U 500mL plastic unpreserved
250	25	2	Ŕ	Ñ	5

	FNV-FRM-GRUR-0017 00 29Dor2020	

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	Gallon	μg wi	Gallon Jug with HNO3	3		DG9S	40mL amber VOA vial H2SO4	amber	VOA v	ial H29	Š			GCUB 1 Gallon Cubitainer	1 Gallo	on Cub	tainer	
	100mL 8	amber g	glass un	100mL amber glass unprserved		NG9N	40mL c	40mL clear VOA via	OA vial					12GN 1/2 Gallon Cubitainer	1/2 G	allon (ubitai	ner
	100mL (amber (glass Na	100mL amber glass Na Thiosulfate	fate	VG9T	40mL c	40mL clear VOA vial Na Thiosul	OA vial	Na Th	iosul			SP5T	120mL Coliform Na Thios	. Colifo	m Na	Thi
	1 Gallon Jug	Jug		•		И ВЭН	40mL c	40mL clear VOA vial HCI	OA vial	모				BP1N	1L plas	1L plastic HNO3	03	
	1L amb	er glass	L amber glass H2SO4	+		JGFU	4oz an	4oz amber wide jar	de jar					BP1U	1L plas	1L plastic unpreserved	reserv	g
	1L amber glass HCl	er glass	, HCI			WGFU		4oz wide jar unpreserved	ınprese	rved				BP3S	250mL	250mL plastic H2SO4	H2SC	4
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Pittsburgh Lab Sample Condi	tion l	Upoi	n Re	eceipt	
Pace Analytical Client Name:	_P	ace	Mr	J Beld Semile	Project # <u>304 8934</u>
Courier: Fed Ex UPS USPS Clien Tracking #: 5466 884 536	ι 🗆 (40	Comm -	ercial	Pace Other	Label <u>m\S</u> LIMS Login V P
Custody Seal on Cooler/Box Present:		10	Seals	sintact: ☐ yes ☐] no
Thermometer Used	Type	of Ice:	Wet	Blue (None)	
Cooler Temperature Observed Temp	profession and the second	٠c	Corre	ection Factor:	°C Final Temp: °C
Temp should be above freezing to 6°C		-			
				pH paper Lot#	Date and Initials of person examining contents: のいち らんのラチ
Comments:	Yes	No	N/A	1004611	and the second s
Chain of Custody Present:				1.	
Chain of Custody Filled Out:	1			2.	
Chain of Custody Relinquished:				3.	
Sampler Name & Signature on COC:			·	4,	
Sample Labels match COC:				5.	
-Includes date/time/ID Matrix:	אין				
Samples Arrived within Hold Time:	/			6.	
Short Hold Time Analysis (<72hr remaining):		1		7.	
Rush Turn Around Time Requested:				8.	
Sufficient Volume:				9.	
Correct Containers Used:				10.	
-Pace Containers Used:					
Containers Intact:	1			11.	
Orthophosphate field filtered				12.	
Hex Cr Aqueous sample field filtered				13.	
Organic Samples checked for dechlorination:				14.	
Filtered volume received for Dissolved tests				15.	
All containers have been checked for preservation.				16. PULZ	
exceptions: VOA, coliform, TOC, O&G, Phenolics, Non-aqueous matrix	Radon	1		T	
All containers meet method preservation				Initial when completed MJ5	Date/time of
requirements.				Lot # of added preservative	preservation
Headspace in VOA Vials (>6mm):				17.	
Trip Blank Present:			1	18.	111.11.11.11.11.11.11.11.11.11.11.11.11
Trip Blank Custody Seals Present			/		
Rad Samples Screened < 0.5 mrem/hr				Initial when mj5	Date: 516-3 Survey Meter SN: 156-3
Client Notification/ Resolution:	-/ -			completed. O	1000 710 0 p 1011./ 70 7
Person Contacted:			Date/	Fime:	Contacted By:
Comments/ Resolution:					

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 \square A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)





13 July 2022 Eric Ealy

Environmental Services-Water Minneapolis

414 Nicollet Mall, GO-2

Minneapolis, MN 55401

RE: Sherco Ponds Spring

Enclosed are the results of analyses for samples received by the laboratory on 05/31/2022 13:15. If you have any questions concerning this report, please feel free to contact me.

CC:

I certify that this analysis report was prepared under my direction or supervision under a system designed to assure that qualified personnel analyzed the submitted samples. All protocols for analysis were followed as required by Minnesota Rules and the Applicable Management Plan.

Sincerely,

Steve Davis

Project Manager



Environmental Services-Water Minneapolis	Project Name/Location: Sherco Ponds Spring	
414 Nicollet Mall, GO-2		Reported:
Minneapolis MN, 55401	Project Manager: Eric Ealy	07/13/2022 07:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sample Qualifier	Laboratory ID	Matrix	Sampled	Received
P-163		MHE0301-01	Water	05/26/2022 14:30	05/31/2022 13:15
P-164		MHE0301-02	Water	05/26/2022 15:20	05/31/2022 13:15



Environmental Services-Water Minneapolis	Project Name/Location: Sherco Ponds Spring	
414 Nicollet Mall, GO-2		Reported:
Minneapolis MN, 55401	Project Manager: Eric Ealy	07/13/2022 07:06

SUBCONTRACTED ANALYSES

The following analyses were subcontracted to Pace Analytical. Please see attached for results.

Lab Number	Analysis
MHE0301-01	Total Radium
MHE0301-02	Total Radium



Environmental Services-Water Minneapolis Project Name/Location: Sherco Ponds Spring

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 07/13/2022 07:06

	R	eporting		Analyte				
Analyte	Result	Limit	Units	Qualifier Dilution Batch	Prepared	Analyzed	Method	Analyst



Environmental Services-Water Minneapolis
414 Nicollet Mall, GO-2
Minneapolis MN, 55401
Project Manager: Eric Ealy
Reported:
07/13/2022 07:06

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes



Environmental Services-Water Minneapolis	Project Name/Location: Sherco Ponds Spring	
414 Nicollet Mall, GO-2		Reported:
Minneapolis MN, 55401	Project Manager: Eric Ealy	07/13/2022 07:06

Qualifiers and Definitions

Z Non Accredited Analyte
DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

W Xcel Energy

Amarillo Testing Laboratory 7201 N. Lakeside Road, Amarillo, TX 79108 Phone (806) 381-6461 – Fax (806) 381-6468

Chain of Custody

Denver Testing Laboratory 9500 Interstate 76, Henderson, CO 80640 Phone (303) 628-2606 – Fax (303) 628-2926

Minneapolis Testing Laboratory 1518 Chestnut Avenue North, Minneapolis, MN 55403 Phone (612) 630-4506 – Fax (612) 630-4367

Facility/Project/Location: Facility/Project/Location: Project Manager/Requestor: Project Manager/Requestor: Project Manager/Requestor: Sampled By (print/signature): LSR #: ID P. IC Proceeding Metals: Sample ID/Location Date Time Volume/Amount Wet Chem.: Wetals: Metals: Metals: Metals: Relinquished by: Metals: Apale/Time Received by: Date Time Sample ID/Location Date Time Volume/Amount Metals: Apale/Time Received by: Date Time Sample ID/Location Date Time Sample ID/Location Date Time Volume/Amount Metals: Apale/Time Received by: Date/Time Date/Ti
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Distribution: White: Return Original (electronic or hard copy) to Project Manager with Analytical Results; Canary: Laboratory; Pink: Generator's Copy
Matrix: (W) Water (S Solid (SL) Sludge (O) Other (Specify) Preservative: (I) Ice (N) Nitric Acid (S) Sulfuric Acid (H) Hydrochloric Acid (D) Sodium Hydroxide (X) Other (Specify)
(F) filtered (F15) filtered within 15 minutes (O-PO4)
Note: ** - indicates lab use only
Form 17-9084 Revision 01/2

Revision 01/29/14



July 12, 2022

Steve Davis Xcel Energy, Inc. 1518 Chestnut Ave Minneapolis, MN 55414

RE: Project: Sherco Ponds Spring

Pace Project No.: 10610604

Dear Steve Davis:

Enclosed are the analytical results for sample(s) received by the laboratory on May 31, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

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

• Pace Analytical Services - Greensburg

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

Sincerely,

Jared Dickinson jared.dickinson@pacelabs.com (612)607-1700 Project Manager

Enclosures

cc: John Kaczmarek, Xcel Energy





CERTIFICATIONS

Project: Sherco Ponds Spring

Pace Project No.: 10610604

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734 **Arkansas Certification**

California Certification #: 04222CA Colorado Certification #: PA01547 Connecticut Certification #: PH-0694

Delaware Certification EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040 Florida: Cert E871149 SEKS WET

Guam Certification Hawaii Certification Idaho Certification Illinois Certification Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358 Kentucky Certification #: KY90133 KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012 Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020 Maryland Certification #: 308

Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082 Nebraska Certification #: NE-OS-29-14 Nevada Certification #: PA014572018-1 New Hampshire/TNI Certification #: 297617 New Jersey/TNI Certification #: PA051 New Mexico Certification #: PA01457

New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190 Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282

South Dakota Certification Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3 Utah/TNI Certification #: PA014572017-9 USDA Soil Permit #: P330-17-00091 Vermont Dept. of Health: ID# VT-0282 Virgin Island/PADEP Certification Virginia/VELAP Certification #: 460198 Washington Certification #: C868 West Virginia DEP Certification #: 143 West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS



SAMPLE SUMMARY

Project: Sherco Ponds Spring

Pace Project No.: 10610604

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10610604001	MHE0301-01	Water	05/26/22 14:30	05/31/22 14:00
10610604002	MHE0301-02	Water	05/26/22 15:20	05/31/22 14:00

REPORT OF LABORATORY ANALYSIS



SAMPLE ANALYTE COUNT

Project: Sherco Ponds Spring

Pace Project No.: 10610604

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10610604001	MHE0301-01	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
10610604002	MHE0301-02	EPA 903.1	SLC	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Sherco Ponds Spring

Pace Project No.: 10610604

Sample: MHE0301-01 PWS:	Lab ID: 10610 Site ID:	O604001 Collected: 05/26/22 14:30 Sample Type:	Received:	05/31/22 14:00 I	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	-0.0364 ± 0.166 (0.391) C:NA T:92%	pCi/L	07/12/22 11:25	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.0166 ± 0.317 (0.732) C:74% T:92%	pCi/L	07/01/22 12:33	15262-20-1	
Sample: MHE0301-02 PWS:	Lab ID: 10610 Site ID:	0604002 Collected: 05/26/22 15:20 Sample Type:	Received:	05/31/22 14:00 I	Matrix: Water	
Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical S	Services - Greensburg				
Radium-226	EPA 903.1	0.223 ± 0.293 (0.488) C:NA T:91%	pCi/L	07/12/22 11:25	13982-63-3	
	Pace Analytical S	Services - Greensburg				
Radium-228	EPA 904.0	0.106 ± 0.389 (0.877) C:65% T:91%	pCi/L	07/01/22 12:33	3 15262-20-1	

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL - RADIOCHEMISTRY

Project: Sherco Ponds Spring

Pace Project No.: 10610604

QC Batch: 511664 Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 10610604001, 10610604002

METHOD BLANK: 2480005 Matrix: Water

Associated Lab Samples: 10610604001, 10610604002

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-226
 0.0388 ± 0.177 (0.285) C:NA T:91%
 pCi/L
 07/12/22 11:25

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

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL - RADIOCHEMISTRY

Project: Sherco Ponds Spring

Pace Project No.: 10610604

QC Batch: 511665 Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 10610604001, 10610604002

METHOD BLANK: 2480006 Matrix: Water

Associated Lab Samples: 10610604001, 10610604002

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-228
 0.237 ± 0.300 (0.634) C:69% T:91%
 pCi/L
 07/01/22 12:35

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



QUALIFIERS

Project: Sherco Ponds Spring

Pace Project No.: 10610604

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Date: 07/12/2022 04:30 PM

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Sherco Ponds Spring

Pace Project No.: 10610604

Date: 07/12/2022 04:30 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10610604001	MHE0301-01	EPA 903.1	<u>511664</u>		,
10610604002	MHE0301-02	EPA 903.1	511664		
10610604001	MHE0301-01	EPA 904.0	511665		
10610604002	MHE0301-02	EPA 904.0	511665		

stribution:	Relinquished by:	Relinquished by:	Relinquished by:							**LIMS	Copies o	\$ampled	Project N	Facility/P	⊗ Xce
	hed by:	ned by:	find by: $\sqrt{3/3}$					· 	MHE03	Sample ID/Location	Copies of Report to:	Rnone #/E-mail Address:	윽	Facility/Project/Location:	Xcel Energy* Amarillo Testing Laboratory 7201 N. Lakeside Road, Apafillo, TX 79108 Phone (806) 381-6461 Fax (806) 381-6468
	Date/Time		Date/Time					707	01-01	/Location	1500856		1 /	was tonds	aboratory pefillo, TX 79108 tx (806) 381-6468
	Received by:	Received by:	Received by:				+		5/26/22	Date	581		201420	Doring	Chain of Custody Denver Testing Laboratory 9500 Interstate 76 Henderson, CO 80640 Phone (303) 628-2606 – Fax (303) 628-2926
			12/10				7	(C75)	0241	Time			1 .		Chain of Custody ver Testing Laboratory tate 76, Henderson, CO 806 628-2606 – Fax (303) 628-7
			j ,				-	(ح	Safet Matrix	y Relat	ed (Nu	clear)		Sustor poratory son, CO ((303) 62
			<u>.</u>		-		-	_) 2	Prese	rvative		-		dy 80640 28-2926
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			Comments:	10610		E 0#				Oil Te	sting:	(Com	p)	Ana	oolis Te anue No
			nts:			• • -	-				selecti	on(s)		Analyses	sting La rth, Mini 3 – Fax
			-			9				Asbes	tos:			o	iborato neapolis 612) 63
						10610604	V.			10fal 22	Radiu ·6/2	m 28			Minneapolis Testing Laboratory 1518 Chestnut Avenue North, Minneapolis, MN 55403 Phone (612) 630-4506 – Fax (612) 630-4367
						04									/
							-			** Sam	ple Ten	nperati	ure ° C	; _	284538
	_										ple pH				Page 10 of 14 2022 0706

Labeled by: np, incorrect containers). y of this form will be sent to the North Carolina DEHUR Certification Office المرابع is a discrepancy affecting North 4 Manager Review: Comments/Resolution: Date/Time: Person Contacted: Field Data Required? Yes Mo CLIENT NOTIFICATION/RESOLUTION sə٨ Pace Trip Blank Lot # (if purchased): A/N/ ON Trip Blank Custody Seals Present? $A/N\square$ ON SƏA 74. Trip Blank Present? ENA-FRM-MIN4-0140 A/N/ ON SeY Headspace in VOV Vials (greater than 6mm)? See Exception A/N\ οN□ S⊕Y□ T3° Extra labels present on soil VOA or WIDRO containers? A/M ON χθλ Headspace in Methyl Mercury Container? 015050 10A 8-0 dints 41-0 qint2 8-0 Res. Chlorine DRO/8015 (water) and Dioxin/PFAS bH Paper Lot# ON **Chlorine?** Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, ENA-FRM-MING-0142 A\N\\ ON S∌Y∐ Positive for Res. Yes See Exception (9biney) (HNO3, H2SO4, <2pH, NaOH >9 Sulfide, NaOH>10 Sinc Acetate A\N 🔲 oN 🗌 S9√ √ ⁷OS^zH∏ HO6N 🗌 compliance with EPA recommendation? All containers needing preservation are found to be in peeu cyeckeqs 12. Sample #1~7_ A/N[__ sə 🗸 All containers needing acid/base preservation have Matrix: Water Soil Oil Other-ENA-FRM-MIN4-0142 samples to the COC? S₉Y See Exception 11. If no, write ID/ Date/Time on Container Below: Is sufficient information available to reconcile the SəY Is sediment visible in the dissolved container? Yes TO. A/N\\ ON Field Filtered Volume Received for Dissolved Tests? oN oN ZYes 6 Containers Intact? -Pace Containers Used? SəÁ☑ .8 ON Correct Containers Used? Τ. ON sə∖[Z Sufficient Volume? S9√ ONZ .9 Rush Turn Around Time Requested? Turbidity | Mitrate | Mitrite | Orthophos | Other ONZ səX 5(71 LY2) sisylenA əmiT bloH thod2 Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome .c γ γ γ γ γ If Fecal: 38 hrs 38hr, <24 hrs, 34 hrs SamiT bloH nithiw bevirrA seldme? **'**t ON Sampler Name and/or Signature on COC? 3. ON A\N Sə٨Z Chain of Custody Relinquished? ON sə٨ τ. ON Chain of Custody Present and Filled Out? COMMENTS: ainia₁i∨ 🗆 siloqeanniM 🔼 Location (check one): 🔲 Duluth If Yes to either question, fill out a Regulated Soil Checklist ENV-FRM-MIN4-0154 and include with SCUR/COC paperwork. Hawaii and Puerto Rico)? MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? Did samples originate from a foreign source (internationally, including Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. Date/Initials of Person Examining Contents: Cooler Temp Corrected w/temp blank: Correction Factor: Temp (no temp blank Only): → → OC Cooler Temp Read w/temp blank: J°6 of gnisserf evods bluods qmeT T Container □ ENA-EBM-MINT-0145 See Exceptions Average Corrected Were All Container Temps Taken? □Yes □No □A/A Old Samples Originate in West Virginia? ☐ Yes (250)3T | (9840)3T | (4520)4T | (9240)5T | (3561)5T | (1400)7T | (2600)5T | (2700)7T | Delted □ Dry 🗌 9noN 3 ənja 🗌 19W □ ONT Z=Y= **Lemp Blank?** Other: Bubble Bags PuoN ☐Bubble Wrap Packing Material: Biological Tissue Frozen? 1/85 No N/A 咇过 Seals Intact? ON【 Custody Seal on Cooler/Box Present? 0145 Tracking Number: ENA-FRM-MIN4-See Exceptions CLIENT: XCEL USPS Commercial SpeeDee ПРасе QQC : MA Due Date: 06/14/22 Client San Led Ex contiet: 40901901 #OM Project-#: Client-Name: Sample Condition Upon Effective Date: 04/12/2022 CENTRAL SANCES (SCUR)

Page 18 of 21 MHE0301 Xcel General Report FINAL 07 13 2022 0706

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	No ∏Yes ∏No									
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	Story on the property of the story of the st	rsia gma ed Temp		Read Temp						
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Total Control of the	ON 29X	Project?	Mültiple Coole: Free answered yes, I	l z						
	n wny.	oste reasoi	וו ווס' ווומונ	CONTRACTOR						
	cted/date/time.	was conta	odw estesibni ,	If yes						
	ONITT	zay∏ ⊊bai	HAI MOIT			iejnoj	Type	201 əlqme2 qms	Tio ino	
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	alytical Services - inneapolis	:nA 93.69 M		t No.: 0142 Rev.01	nembood PNIM-M9:	ENN-I			$\overline{\Box}$	
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	Paviced . hasive 9	100CI 100CI	1	Name:	างอะกามธนา				1	

Internal Transfer Chain of Custody	n of Custody		6	
	re-Logged into eCOC.	State Of Origin: MN	Pace Analytical	Vtical
Workorder: 10610604 Workorder Name	Sharco Donde Orgina	ded: Yes		Ç
	Subcontract To	Owilei neceiveu Dale.	Dis I/2022 Results Requested By: 0/20/2022 Requested By: 0/20/2022	7707
Jared Dickinson	Pace Analytical Pittsburch			
Pace Analytical Minnesota 1700 Elm Street Minneapolis, MN 55414	1638 Roseytown Road Suites 2,3 & 4 Greensburg, PA 15601	86	MO#:30493940	
700/1-/00/210)	Phone (724)850-5600	SS/9SS muil	30483940	
Rem Sample ID Type	ple Collect Date/Time Lab ID Matrix B		LAB USE ONLY	E ONLY
MHE0301-01 PS	5/26/2022 14:30 10610604001 Water 2	×		
A WHE0301-02 PS	5/26/2022 15:20 10610604002 Water 2	×	700	
ge 2				
20 of				
21			Comments	
Zansfers Released By	Date/Time Received By Date	/Time		
E03	6+22 H:00 Z Mahr	3-27 9:25		
01 >				
O Joler Temperature on Receipt	C Custody Seal (Y) or N Received	i on Ice Y or	Samples Intact (Y) or N	-
Un order to maintain client confidentia This chain of custody is considered or	ality, location/name of the sampling site, sampler's name and s complete as is since this information is available in the owner	ignature may no laboratory.	t be provided on this COC document.	
Report				
FINAL				
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Page 13 3 2022 07	Page 13 3 2022 07			
90 Bdnesday, June 01, 2022 11:22:45 AM			MT-ALL-C-002rev.00 24March2009 Page	Page 1 of 1

Pittsburgh Lab Sample Condi	tion	Upo	n Re	eceipt		
Pace Analytical Client Name: Pace Analytical	d Ar n	ħ.	-	o Co.A. Duningt #		
Client Name: 10	ll-	110	/\/) (esota Project #		
Courier: Fed Ex UPS USPS Clien		0	! . 1	[] 3 Other		
Tracking #: 6466 8884 8062	ŧ Ш	Comm	ierciai	Pace Other Label 29 LIMS Login 10 Inc		
Custody Seal on Cooler/Box Present: Yes			01	/		
Thermometer Used		no		Is intact: Vyes no		
	Type	° C		et Blue None °C Final Temp: °C °C		
Cooler Temperature Observed Temp Temp should be above freezing to 6°C		_	COH	rection Factor: °C Final Temp: °C		
-				pH paper Lot# Date and Initials of person examining contents:		
Comments:	Yes	No	N/A	CODYGII contents: 0753 300		
Chain of Custody Present:				1.		
Chain of Custody Filled Out:	1			2.		
Chain of Custody Relinquished:	V			3.		
Sampler Name & Signature on COC:		1		4.		
Sample Labels match COC:				5.		
-Includes date/time/ID Matrix:	WT	-				
Samples Arrived within Hold Time:	/			6.		
Short Hold Time Analysis (<72hr remaining):		/		7.		
Rush Turn Around Time Requested:	ļ	1		8.	£:	2 Z
Sufficient Volume:			<u> </u>	9.	TIENT:	<u>.</u> C
Correct Containers Used:		ļ		10.		5 3
-Pace Containers Used:	4				PAC	ŀ.
Containers Intact:	V	<u> </u>	ļ	11.	Due D PACE_10_MIMN	Ì
Orthophosphate field filtered			1	12.	<u> </u>	E
Hex Cr Aqueous sample field filtered	<u> </u>		<u> </u>	13.	HH	S
Organic Samples checked for dechlorination:			1	14.	Due Date _MIMN	4939
Filtered volume received for Dissolved tests All containers have been checked for preservation.			/	15.	Ö	Ž
exceptions: VOA, coliform, TOC, O&G, Phenolics,	Padar	<u></u>		-16. pH <>-	6	O
Non-aqueous matrix	Radon	h			/23	
All containers meet method preservation				Initial when M / Date/time of	6/23/22	
requirements.		<u> </u>		completed preservation Lot # of added		
				preservative		
Headspace in VOA Vials (>6mm):				17.		
Trip Blank Present:			V	18.		
Trip Blank Custody Seals Present			V	Initial upon u		
Rad Samples Screened < 0.5 mrem/hr	V			Initial when completed: Date: 6-4-22 Survey Meter SN: 563		
Client Notification/ Resolution:						
Person Contacted:			Date/	Time: Contacted By:		
Comments/ Resolution:						
ACC						
-						
A shock in this hav indicates that addit	Honel	infor	matic	nn has been stered in evenerte		

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

Appendix B

Fall 2022 Assessment Monitoring Event Field Datasheets and Laboratory Reports



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ons							
ons							
ons							
_(mg/l) (NTU)							
(mV)							
Meter ID MS Ce $TM3$ Temp. Observed $12.$ Ce (°C) Eh 3 (e mV) Analyzed by $12.$ Temp. Corrected $12.$ °C) Other NA							
Field Measurements Temp. Corrected: Yes No NA Sample for Soluble Metals Filtered in Field: Yes No NA							
Purged							
tive gal)							
<u> </u>							
1							
0							
-							



동	Client Xcel	Proje	ect Sheres Pends	Fall 2022	Project	No. 22-	-06308		
Presampling Information	Monitoring Point ID	P-131			Labe	eled F	131		
ıforı	Inside Diameter	(inches)	Key# 2101	æ.	Locked		Not Locked		
ng l	Casing Material:	₽VC □	Steel	Stainless Ste	el				
lldm	Depth Measurement and Elevations (from top of well casing)								
resa			Top of Casin	_	NA	-	Feet		
nd P	Static wat	ter level measurement		Well Depth _	37.1		Feet Feet		
วก สเ	2.2. E. C. S.	evel measurement at tin			37.1		Feet		
Well Description and	2000 500 500 600	Static Water Le	vel Elevation Befo	ore Purging _	NA		Feet		
esci	Purge Method Do	adder Punp		10/-4-	Pump ID	- 6	Ţ		
ell D		11/2/22	25		er Column g Volume		Feet Gallons		
M		0-2	GPM/LPM			4.0	Gallons		
	Date Sampled	117 127	Field F	arameter l	Measurem	ents of	Sample		
		0 +3+5 1330			units)		10.6 (mg/l)		
	Sampling Equip.	Pup + filter	Spec. Cond.	840	μmhos/cm)	Turbidity			
Data	Meter ID MPS 16/75 Temp. Observed 17.2 (°C) Eh 31								
ling	Analyzed by P-C_S Temp. Corrected \(\lambda L \rightarrow \) Other \(\lambda A\rightarrow \)								
Sampl	Field Measurements Temp. Corrected: Sample for Soluble Metals Filtered in Field: Yes No NA								
ig pi	Temperature Correction Factor: +0.3 °C								
Field	Weather Conditions During Sampling: 73 5 Sunny SQ 20MP1								
	Sample Description: _ Observations:								
		, the Co		111					
	_ Time PH	Specifc Conductance	Temp (°C)	D.O.	Turbidity	Eh	Volume Purged		
#	Time (units)	(μmhos/cm)	(observed)	(mg/l)	(NTU)	(mV)	(cumulative gal)		
Tes	13000 7.6	830	12.3	10.3	2.le	71	2.0		
ation	1305,55 7.6	840	12.3	10.1		26	4,0		
Stabilization Test	1310/15 4 4	840	12.2	10.0	2.4	3 (6.0		
Stal				11/2/2					
				111616					
Se	amples chilled immediately	after collection:	Yes Oth	er	- L				
	Revised: 01/25/2021	O_{\perp}	1		1				
Nam	e/Affiliation of Sampler(s):	Mey	aceben	· Ø	all				
Le	ead Technician Signature:	jlily.	5/		Date:	11/21	122		

OReRos uhler



e e	Client Xcel Project	ct Sherce Rands Fall 2022 Project No. 22-06308													
mati	Monitoring Point ID_ P- (32	Labeled P(32													
ıforı	Inside Diameter 7 (inches)	Key # 210℃ ∑Locked Not Locked													
ng li	Casing Material: ☐ PVC ☐ S	Steel Stainless Steel													
Well Description and Presampling Information	Depth Measurement and Elevations (from top of well casing)														
resa		Top of Casing Elevation Feet													
nd P	Static water level measurement b	Total Well Depth 36.5 Feet Defore purging (Start Depth) 33.8 Feet													
on a	Static water level measurement at time														
riptic		el Elevation Before Purging NA Feet													
esci	Purge Method Dedicated Bladde pm Date Purged 1/14/12														
ell D	Time Purged 1020 - 1029	Water Column <u> </u>													
M	Pump Rate O. 7	GPM/LPM Volume Purged 1.8 Gallons													
	Date Sampled 1/14/22	Field Parameter Measurements of Sample													
	Time Sampled 1032	pH 7-6 (units) D.O 10.1 (mg/l)													
Sampling Equip. Pyhothill Spec. Cond. SHO (µmhos/cm) Turbidity 1.2 Meter ID MIS 0 Analyzed by SHO (µmhos/cm) Turbidity 1.2 Temp. Observed 9.6 (°C) Eh 140 Temp. Corrected 9.6 (°C) Other MA															
							Sampl	Field Measurements Temp. Corrected:							
							Field S	Temperature Correction Factor: 0 °C							
正	Sample Description: Clear w/ No ods														
	Observations: Non														
	Time pH Specifc Conductance	Temp (°C) D.O. Turbidity Eh Volume Purged													
st	(units) (μmhos/cm) (1/1)7-3 7-6 840	(observed) (mg/l) (NTU) (mV) (cumulative gal) 9.6 101 1-2 140 0-6													
n Te	1026 7.6 840	9.6 6.1 1,2 140 1,2													
Stabilization Test	1029 7.6 840	9.6 101 1.2 140 2001.0													
abili															
S		SA 1/4/22													
	amples chilled immediately after collection:	Yes Other													
	Revised: 01/25/2021	Paths													
ivam	e/Affiliation of Sampler(s):	111													
L	ead Technician Signature:	Date:Date:													



Monitoring Point ID	5	Client Xce	Project Sherce Kinds had	1 2022 Project No. 22-06308					
Static water level measurement before purging (Start Depth)	mati	Monitoring Point ID P-15	7	Labeled					
Static water level measurement before purging (Start Depth)	for	Inside Diameter 2	(inches) Key# 210Le	Locked Not Locked					
Static water level measurement before purging (Start Depth)	i b	Casing Material:		inless Steel					
Static water level measurement before purging (Start Depth)		Depth Me	easurement and Elevations (f	from top of well casing)					
Static water level measurement before purging (Start Depth)	San								
Static water level measurement at time of sampling (Final Depth) Static Water Level Elevation Before Purging Pump ID Date Purged Time Purged Pump Rate Date Sampled Sampling Equip. Sampling Equip. Meter ID Analyzed by Field Parameter Measurements of Sample Temp. Corrected Sample for Soluble Metals Filtered in Field: Temperature Correction Factor: Weather Conditions During Sampling: Sample Description: Observations: **Pump ID Date Pump ID Pump ID Spec. Cond. (units) D.O. (mg/l) Spec. Cond. ("C) Other MA Temperature Corrected: Yes No NA Sample Description: Observations: **Pump ID Analyzed by Temp. Corrected ("C) Other MA Temperature Correction Factor: Observations: **Pump ID Analyzed by Temp. Corrected ("C) Other MA Temperature Correction Factor: Observations: **Pump ID Analyzed by Turbidity NA Temperature Correction Factor: Observations: **Pump ID Specific Conductance ("C) Other MA Temperature Correction Factor: Observations: **Pump ID D.O. ("Mo/l) Turbidity Sample Description: Observations: **Pump ID D.O. ("Mo/l) Turbidity Sample Description: Observations: **Pump ID D.O. ("Mo/l) Turbidity Sample Description: Observations: **Pump ID D.O. ("Mo/l) Turbidity Time Time PH Specific Conductance ("Mo/l) ď		Total Well	Depth 36.66 Feet						
Static water level measurement at time of sampling (Final Depth) Static Water Level Elevation Before Purging Pump ID Date Purged Time Purged Pump Rate Date Sampled Sampling Equip. Meter ID Analyzed by Field Parameter Measurements of Sample Field Parameter Measurements of Sample Temp. Corrected Temp. Corrected Sample for Soluble Metals Filtered in Field: Temperature Correction Factor: Weather Conditions During Sampling: Sample Description: Observations: **Pump ID Pump ID Pump ID Spec. Cond. (units) D.O. (mg/l) Spec. Cond. ("C) Temp. Corrected ("C) Other MA Temperature Correction Factor: Weather Conditions During Sampling: Sample Description: Observations: **Pur of Pladder - 34. (e2 Remerced Bladder + get Wolume Purged (units) Cobservations: Time PH Specifc Conductance (units) Spec. Cond. Temp ("C) D.O. Turbidity Eh Volume Purged (cumulative gal)	and	Static water level m	neasurement before purging (Start	Depth) * DRY (3514) Feet					
Date Sampled	E O								
Date Sampled	ript		atic Water Level Elevation Before P						
Date Sampled	esc		0000127						
Date Sampled									
Date Sampled	We								
Time Sampled MA Spec. Cond. (units) D.O (mg/l) Sampling Equip. Spec. Cond. (timhos/trit) Turbidity (NTU) Meter ID Temp. Observed (°C) Eh (mV) Analyzed by Temp. Corrected (°C) Other M4 Field Measurements Temp. Corrected: Yes No NA Sample for Soluble Metals Filtered in Field: Yes No NA Temperature Correction Factor: C Weather Conditions During Sampling: Sample Description: Observations: Dry & Tep of Bladder - 34. &2' Remark Bladder & get Time PH Specifc Conductance Temp (°C) D.O. Turbidity Eh Volume Purged (cumulative gal)		1 dinp reace							
Sampling Equip. Spec. Cond. (pmhos/m) Turbidity (NTU) Meter ID Temp. Observed (°C) Other MA Field Measurements Temp. Corrected: Yes No NA Sample for Soluble Metals Filtered in Field: Yes No NA Temperature Correction Factor: MA C Weather Conditions During Sampling: Sample Description: Observations: *Dry @ Tep of Bluedder - 34. 62 Removed Bladder got Mader Level = 35.14 Time pH Specifc Conductance (pmhos/cm) (observed) (mg/l) (NTU) (mV) (mV) (mV)		Date Sampled w/3/2		meter Measurements of Sample					
Meter ID									
Field Measurements Temp. Corrected: Sample for Soluble Metals Filtered in Field: Yes No NA				11/5/1					
Field Measurements Temp. Corrected: Sample for Soluble Metals Filtered in Field: Yes No NA	Date								
Sample for Soluble Metals Filtered in Field: Temperature Correction Factor: Weather Conditions During Sampling: Sample Description: Observations: Observations: Are of Bladder - 34. (o2' Removed Bladder + got water Level = 35.14' Time ph Specifc Conductance (umhos/cm) (observed) (mg/l) (NTU) (mV) (cumulative gal)		Analyzed by W							
Weather Conditions During Sampling: Sample Description: Observations: APT O Top of Bladder - 34. 62' Removed Bladder + got water Level = 35.14' Time pH Specifc Conductance (umhos/cm) (observed) (mg/l) (NTU) (mV) (cumulative gal)	III								
Weather Conditions During Sampling: Sample Description: V	Sample for Soluble Metals Filtered in Field: Yes No NA								
Sample Description: Observations: *Dry @ Tep of Bladder - 34. 62' Removed Bladder + got water Level = 35.14' Time pH Specifc Conductance (umhos/cm) (observed) (mg/l) (NTU) (mV) (cumulative gal)									
Observations: * Dry @ Tep of Bludder - 34. 62 Removed Bladder & got water Level = 35.14 Time pH Specific Conductance (umhos/cm) (observed) (mg/l) (NTU) (mV) (cumulative gal)	II.		pining.						
Time pH Specifc Conductance Temp (°C) D.O. Turbidity Eh Volume Purged (units) (µmhos/cm) (observed) (mg/l) (NTU) (mV) (cumulative gal)			Top of Bladder - 34. 602	Removed Bladder + got					
Time (units) (μmhos/cm) (observed) (mg/l) (NTU) (mV) (cumulative gal)		water Level = 35.14	-11 11 11 100 100	3,23					
Time (units) (μmhos/cm) (observed) (mg/l) (NTU) (mV) (cumulative gal)		DH Specife	Conductance Tomp (°C)	DO Turkidity Eh Volume Burged					
Stabilization Test		I Ime		전 (1 전 전 MINISTER MEDITAL PROPERTY OF THE PRO					
Cw) (13/74)	est								
Stabilization (U)	T uc								
Rus (13/74)	atic								
113176	biliz		Re	/					
	Sta			73/29					
Samples chilled immediately after collection: Yes Other			tion: Yes Other						
Name/Affiliation of Sampler(s): Tiley Jacobser			ley Jacobsen						
Lead Technician Signature: Date: 118/22			The Do	Date: 11/2/11					
Date. 11/1/	L	Loud reclinician Signature.	and the	DateDate.					



등	Client Xc	el		Projec	t Sherce	Pends	Fall 2022	Projec	ct No. 22-	-06308	
mati	Monitoring Point ID β-151							La	Labeled PIST		
Ifor	Inside Diameter			(inches)	Key#	2101	J.	Locked	d 🗆	Not Locked	
Monitoring Point ID Project Shares Rall 2022 Monitoring Point ID Point ID Inside Diameter (inches) Key # 2101e Casing Material: PVC Steel Stainless Steel Top of Casing Elevation Total Well Depth						eel					
ildm	Depth Measurement and Elevations (from top of well casing)										
esa	Top of Casing Elevation Feet										
o D	Total Well Depth 70.16 Feet								0.000		
n and	Static water level measurement before purging (Start Depth) 14.29 Feet Static water level measurement at time of sampling (Final Depth) 14.29 Feet								Feet		
ptio	Static Water Level Elevation Before Purging VA Feet										
Well Description	Purge Met	$hod \underline{\mathcal{B}}$	lordser Pm	P	-3			Pump ID	BPC-	- \	
6	Date Pur	gea	11/3/22		_			er Column			
We	Pump F		50-140S	>	GPM/	I DM		ng Volume _. ne Purged	0.90	Gallons Gallons	
	1 dilip i		0		1/						
	Date Sampled 11/3/2 Field Parameter Measurements of Sample										
	Time Sampled $\mu \mu l 0$ $pH 7 - 7$ (units) D.O $S - S$ (mg/l)										
2	Sampling Equip. Kup Spec. Cond. 475 (µmhos/cm) Turbidity 1.8 (NTU) Meter ID MS 65M3 Spec. Cond. 475 (µmhos/cm) Turbidity 1.8 (NTU) Temp. Observed 14.2 (°C) Eh 68 (mV)										
y Data	Meter ID MS 6 5.MS Temp. Observed 14.2 (°C) Eh 68 (mV) Analyzed by 265 Temp. Corrected 14.5 (°C) Other M4										
pling	Field Measurements Temp. Corrected:										
Sam	Sample for Soluble Metals Filtered in Field: Yes No No NA										
TO	Temperature Correction Factor: <u>+o.3</u> °C										
Weather Conditions During Sampling: 61, Overcast, South					417						
	Sample Description: Clear resetty Observations: Ware										
	Time	рН	Specifc Con-	ductance	Tem	o (°C)	D.O.	Turbidity	Eh	Volume Purged	
#		(units)	(µmhos/			erved)	(mg/l)	(NTU)	(mV)	(cumulative gal)	
Tes	1335	7.9	487			13	9.0	2.3	67	1.0	
Stabilization Test	1400	7.9	48	0		.7	8.5	2.1	67	3.0	
iliz	1905	7.1	4)		1	· C	8.5	1.8	68	3.0	
Stat							po				
					-		113127				
	amples chilled (Revised: 01/25/20)		after collection:	, D	Yes	Oth	er				
	e/Affiliation of S		7:1,10	Jacobso	^~						
14011	on uniquon of c	sample (a).	nuy	1	7				1 1		
L	ead Technician	Signature:	Cal	ey/	4			Date:	11/3/	27	
				(100							



u _o	Client Xcel	Proje	ect Sheres lends	, fall 2022	Project N	No. 22-	06308		
esampling Information	Monitoring Point ID	P-1524			Labe	led Pr	52A		
for	Inside Diameter		Key# 210	æ	Locked		ot Locked		
i Bu	Casing Material:	PVC	Steel	Stainless Stee	el				
npli	Depth Measurement and Elevations (from top of well casing)								
esar	Top of Casing Elevation A Feet								
F P	Total Well Depth 42.35 Feet								
am	Static water level measurement before purging (Start Depth) + DRY Feet								
ption	Static water level measurement at time of sampling (Final Depth) Feet Static Water Level Elevation Before Purging VA Feet								
	Purge_Method	Static Water Lev	Pump ID						
Well Descri	Date Purged	1	= fc		Feet				
lell	Time Purged			One Casing	The state of the s		Gallons		
	Pump Rate		GPM / LPM	Volume	e Purged		Gallons		
mal	Date Sampled	11/3/22	Field F	Parameter N	Measureme	ents of S	ample		
	Time Sampled					- Cololatorio			
	Sampling Equip.		Spec. Cond.	(µ	mhos/cm)(1/3/	Rebidity	(NTU)		
Data	Meter ID		Temp. Observed(°C) Eh(m						
ng D	Analyzed by		Temp. Corrected(°C) Other						
=		rements Temp. Correcte							
Sam	Sample for Soluble Metals Filtered in Field: Yes No NA								
Field	Temperature Correction Factor: +0.3 °C								
ii.	Weather Conditions During Sampling: Sample Description:								
	Observations: * Top of Bladder lump @ 39.36 - DRY, Removed Bladder & got								
	water Level = 40.16 - NO SAMPLE								
10 10 1	Time PH	Specifc Conductance	Temp (°C)	D.O.	Turbidity	Eh	Volume Purged		
	Time (units)	(μmhos/cm)	(observed)	(mg/l)	(NTU)	(mV)	(cumulative gal)		
Tes				2					
Stabilization Test									
lizat				RU)					
tabi				11/3/20					
Ó									
Sa	amples chilled immediately	after collection:	Yes Oth	ner					
	Revised: 01/25/2021	71.1	1 2 4						
Nam	e/Affiliation of Sampler(s):	filey lace	, pSar	Jack)				
L	ead Technician Signature:	Liley 71 Date: 1/3/2 Z							
		(19)							



5	Client Xcel		_ Project	Shere lands	s tall 2012	2_Projec	t No. 22	-06308			
Presampling Information	Monitoring Point I	D P-153				Lat	beled(1,53			
	Inside Diamete	er Z	(inches)	Key# 210	Le	Locked		Not Locked			
9	Casing Materia	il: X PVC	St	eel	Stainless S	teel					
	Depth Measurement and Elevations (from top of well casing)										
	Top of Casing Elevation A Feet										
	Total Well Depth 73.63 Feet										
	Static water level measurement before purging (Start Depth) 18-51 Feet										
	Static water level measurement at time of sampling (Final Depth) Feet										
	Static Water Level Elevation Before PurgingFeet										
Purge Method Slowler Purp ID BPC 1 Date Purged 1430 - 1445 Time Purged 1430 - 1445 One Casing Volume 0.83 Ga							Feet				
j	Time Purged		145	-		ing Volume		The second secon			
1	Pump Rate	0.2		GPM / LPM		me Purged	6.0				
	4										
		d 11/3/22									
	Time Sample	pH $\stackrel{\leftarrow}{\not \sim}$ (units) D.O $\stackrel{\frown}{\not \sim}$ (mg/l)									
	Sampling Equip			Spec. Cond. 350 (μmhos/cm) Turbidity 7. Le (NTU)							
į	Meter ID MS L/5M3 Temp. Observed 13.3 (°C) Eh Lo S (mV)										
)	Analyzed by fto Temp. Corrected 13. (°C) Other NA										
	Field Measurements Temp. Corrected:										
į		Sample for Soluble Metals Filtered in Field:									
	Weather Conditions During Sampling: 62 F, Diercest Sels mpy										
	Sample Description: uear no day										
	Observations: neve 1										
	Time pH	Specifc Con	ductance	Temp (°C)	D.O.	Turbidity	Eh	Volume Purged			
	(units)	(µmhos		(observed)	(mg/l)	(NTU)	(mV)	(cumulative gal)			
	1435 8.2	361		13.3	10.4	1.9	64	1.0			
Stabilization Test	1440 8.7	~		13.3	10.1	2.6	64	2.0			
	1445 8.2	35	0	13.3	9.9	7.6	65	3.0			
į											
						(c)					
					11)	3/22					
s	amples chilled immediate	ely after collection		Yes Ot	her						
	Revised: 01/25/2021		/								
in	ne/Affiliation of Sampler(s	s): Kile	y lac	opsar		Tace					
		71					1	/			
L	ead Technician Signatur.	e: fill	4			Date:	11/3/	22			
			1								



등	Client Xcel Project Sherce Ends Fall 2022 Project No. 22-06308								
mati	Monitoring Point ID P-154A Monitoring Point ID P-154A Labeled 806514 8063								
ıfor	Inside Diameter 2 (inches) Key # 2101e \(\infty\) Locked \(\sum \) Not Locked								
Well Description and Presampling Information	Casing Material:								
Ildm	Depth Measurement and Elevations (from top of well casing)								
esal	Top of Casing Elevation Feet								
P P	Total Well Depth <u>U9.53</u> Feet								
na r	Static water level measurement before purging (Start Depth) 35.18 Feet Static water level measurement at time of sampling (Final Depth) 35.19 Feet								
otio	Static Water Level Elevation Before Purging NA Feet								
scrip	Purge Method Dedicated Bladdle purp Pump ID RPC-1								
De	Date Purged 11 4122 Water Column 12 35 Feet								
Well	Time Purged 0920-0956 One Casing Volume 2.34 Gallons								
	Pump Rate (), (2 GPM) LPM Volume Purged 7.2 Gallons								
	Date Sampled 11/4122 Field Parameter Measurements of Sample								
	Time Sampled 1000 pH 100 (units) D.O 7 , 1 (mg/l)								
	Sampling Equip. Wy Spec. Cond. 690 (µmhos/cm) Turbidity 2.1 (NTU)								
Data	Meter ID Mrs - U Temp. Observed 1. U (°C) Eh 13 U (mV)								
gui	Analyzed by Sym Temp. Corrected 9. % (°C) Other <u>NA</u>								
Idm	Field Measurements Temp. Corrected: XYes No NA Sample for Soluble Metals Filtered in Field: Yes No NA								
d Sam	Sample for Soluble Metals Filtered in Field:								
Field	Weather Conditions During Sampling: 35 of Colordy would Now a BMP4								
	Sample Description: Clear W! no odor								
	Observations: * DUP PC3 collected here * Ringe P-3 collected @ 1955								
	Time pH Specifc Conductance Temp (°C) D.O. Turbidity Eh Volume Purged (units) (μmhos/cm) (observed) (mg/l) (NTU) (mV) (cumulative gal)								
est	0932 8.0 670 9.7 1.7 2.1 126 2.4								
T L	0944 8.0 680 9.8 2.0 2.1 130 4.8								
zatic	0956 50 680 9.3 2.1 2.1 130 6.3 7.2								
Stabilization Test									
Sta	San 11/1/1/22								
	The state of the s								
S	amples chilled immediately after collection: Yes Other								
	Revised: 01/25/2021								
Nam	ne/Affiliation of Sampler(s):								
	9- L 1111m								
L	Lead Technician Signature:Date:								



5	Client Xcel Project Sherce Ends Fall 2022 Project No. 22-06308
Presampling Information	Monitoring Point ID P167 Labeled P162
nfor	Inside Diameter (inches) Key # 2100 \\[\textstyle \tex
l Bu	Casing Material:
Idm	Depth Measurement and Elevations (from top of well casing)
resa	Top of Casing Elevation Feet
	Total Well Depth Total
n and	Static water level measurement before purging (Start Depth) 149.00 155.00 Feet Com Past-
Well Description	Static Water Level Elevation Before Purging
scri	Purge Method <u>Dedicated Heck Purp</u> Pump ID M
ii De	Date Purged 11/4/22 Purges 11/4/22 Water Column Feet
Wel	Time Purged 0830 - 0845 0835 One Casing Volume Gallons
\\ -\\	Pump Rate GPM / LPM Volume Purged Gallons
	Date Sampled 114122 Field Parameter Measurements of Sample
	Time Sampled
<u>g</u>	Sampling Equip. Spec. Cond. (µmhos/cm) Turbidity (NTU)
Dat	Meter ID Temp. Observed (°C) inivitive Eh (mV)
ling	Analyzed by Temp. Corrected (°C) Other
Samp	Field Measurements Temp. Corrected: Yes No NA Sample for Soluble Metals Filtered in Field: Yes No NA
d Se	Temperature Correction Factor:A_ °C
Fiel	Weather Conditions During Sampling:
	Sample Description:
	Observations: * Purped Dry @ 2.0 Gal - No Sample Collected.
	Obstract in afternoon to attempt again - Measured SWL. Still nothing Purped - Contacted passifully
1 N	Time pH Specifc Conductance Temp (°C) D.O. Turbidity Eh Volume Purged (units) (μmhos/cm) (observed) (mg/l) (NTU) (mV) (cumulative gal)
est	0835 (amino) (amino) (my) (my) (my) (cumulative gal)
n T	0840
zatio	0845 PHINA 8-4 6.0
Stabilization Test	Renew
Ste	2/1/11
Q	amples shilled immediately after collection.
	amples chilled immediately after collection: Yes Other Revised: 01/25/2021
Nami	ne/Affiliation of Sampler(s): Riley Jucspson Juce
72,00	70.
Le	ead Technician Signature:Date:Date:



E .	Client Xc	el		Projec	t Sheres land	s tall 202	2_Proje	ct No. 22-	-06308
Well Description and Presampling Information	Monitorin	g Point ID_	7-163				La	abeled ?	163
nfor	Inside	Diameter_	7	(inches)	Key# 210	Le	Locke	d 🗌	Not Locked
ng l	Casing	g Material:	PVC	□ s	teel] Stainless S	teel		
ildu		D	epth Measu	rement	and Elevatio	ns (from t	op of well	casing)	Nevan Service
esa					Top of Casir	ng Elevation	N	4	Feet
d P _F		4					176 0		Feet
n an	C+	Static wat	ter level measu	rement be	efore purging (Start Depth)	163.7	TO CALA	
ation	30	alic water le			e of sampling (I el Elevation Bef				Feet Feet
scrip	Purge Met	hod Dedic	ated Keek			oro r arging	Pump ID	-	
Des			11/11/22			Wa	ter Column	15.20) Feet
Well			35-1050	2			ing Volume		
	Pump F	Rate	0.4		GPM/LPM	Volu	me Purged	(e.0	Gallons
10	Date	Sampled_	1/4/22		Field	Paramete	r Measure	ements of	Sample
			1055	- 7	рН	17.7	(units)	D.O	10 · 8 (mg/l)
	Sampl	ing Equip		- 1	Spec. Cond		_(μmhos/cm)	Turbidity_	4.4 (NTU)
Data			MPS-le/TM3	-	emp. Observed		(°C)		84 (mV)
		nalyzed by_			emp. Corrected		(°C)	Other	NA
ldm			ements Temp. e Metals Filter			ĽYes Yes	☐ No ☐ No	☐ NA	
Field Sampling		Tempe	rature Correct	on Factor	: to. 3 °C			DK NA	
Field	Weather Co	onditions D	ıring Sampling	37 F	Partly Clo	Dy 1) CIZA	IPH	
	Sample D	escription:	eleer no.	der					
	Obs	ervations:	NONE	Conjecte	d a "Crab"	@ stert	, but a	discarded	when
	purged	tull Vol	(3x) RUS	114/22					
	Time	pH (units)	Specifc Cond		Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged
est	1040	7.6	STO	an)	9.7	10.8	7.4	82	(cumulative gal)
Tu	1045	7.7	580	-	9.6	10.8	5.1	82	4.0
Stabilization Test	1050	7.7	600		9. Lo	10.8	4.4	84	6.0
ipilli	(
Sta			The state of the s			ev.	0		
						myt			
Sa	imples chilled i	mmediately a	after collection:		Yes Ot	her			
Form	Revised: 01/25/20.	21	04	1					
Nam	e/Affiliation of	Sampler(s): _	Filey	aco	been	Jes	2		
1	and Toobsisies	Signatura	7.11				D-1	11	6-
L.	ead Techniciar	i oignature: _	July 1	1			Date:	_1/14/	156



E	Client Xcel	Project Sheres Pends	s Fall 2022 Proje	ct No. 22-06308
Well Description and Presampling Information	Monitoring Point ID P-164		La	abeled PIGG
nfor	Inside Diameter 2	(inches) Key# 210	Le \(\sum_\) Locke	d Not Locked
I gui	Casing Material:	Steel	Stainless Steel	
ldm	Depth Meas	urement and Elevatio	ns (from top of well	casing)
esa		Top of Casir	(2) Year 1 (100) (100)	
E D	01-11-11-11-11-11-11-11-11-11-11-11-11-1		Well Depth 167	
n an	Static water level measuren	urement before purging (S		
otio		Water Level Elevation Bef		
crip	Purge Method Dodicated Keck	0	Pump ID	
Des	Date Purged Nは122	CORCUS WY/22	Water Column	-
Well	Time Purged 0955 - +e	1000	One Casing Volume	1.7-1 Gallons
	Pump Rate O. 4	GPM/LPM	Volume Purged	2.0 Gallons
NOW!	Date Sampled 114/27	Field F	Parameter Measure	ements of Sample
	Time Sampled 1000	pH	7 9 (units)	D.O 9 - ((mg/l)
	Sampling Equip. Ruy	Spec. Cond.	. 460 (μmhos/cm)	Turbidity 8.6 (NTU)
Data	Meter ID MPS-6/TI			Eh . H. GOND JULE
ng E	Analyzed by <u></u> という	Temp. Corrected	11-3 (°C)	Other NA (19)
Field Sampling	Field Measurements Temp		Yes No	□ NA
Sar	Sample for Soluble Metals Filte	red in Field:	Yes No	□ NA
ield	Weather Conditions During Sampling		and Mon	MPH
4	Sample Description: cleer ne	o'ody	60 g, 10 e 11	
	Observations: * Collecte	d as Grab Sample	@ Start of pur	ge - Leasoning became
10	of P-162, purged de	y e ~ 2.0 6	a \	3
	Time pH Specifc Con	ductance Temp (°C)	D.O. Turbidity	Eh Volume Purged (mV) (cumulative gal)
#	(units) (μmnos		(mg/l) (NTU)	. (0)
Tes	1000 7.9 46	0 11.0	9.1 8.6	14.6 2.0
tion	1005			15 4.6
Stabilization Test	1010		nelita	10.0
stab			www	
Sa	amples chilled immediately after collection:	Yes Ott	ner	
Form	Revised: 01/25/2021		0	
Vam	e/Affiliation of Sampler(s):/	ylusbour	Face	
T.	and Tachnician Signatures	1,00		114/2r
L	ead Technician Signature:	700	Date:	(17/1/1



등	Client Xcel Project Sherce Ends Fall 2022 Project No. 22-06308
Presampling Information	Monitoring Point IDP-165
nfor	Inside Diameter 2 (inches) Key # 210Le \(\sum{(Locked}\) \(\sum{\subset}\) Not Locked
ll gu	Casing Material: PVC Steel Stainless Steel
ildm	Depth Measurement and Elevations (from top of well casing)
resa	Top of Casing Elevation Feet
and P	Total Well Depth 40.32 Feet Static water level measurement before purging (Start Depth) 33.67 Feet
	Static water level measurement before purging (Start Depth) 35.67 Feet Static water level measurement at time of sampling (Final Depth) 33.67 Feet
ptio	Static Water Level Elevation Before Purging NA Feet
Well Description	Purge Method Dedicaled Blobble Tump Pump ID BPC-1
II De	Date Purged
We	Time Purged 1045-104 One Casing Volume 1.03 Gallons Pump Rate 0.2 GPM/LPM Volume Purged 3.6 Gallons
	Date Sampled 11/4/22 Field Parameter Measurements of Sample
	Time Sampled 1110 pH 7.3 (units) D.O 10.4 (mg/l) Sampling Equip. One Spec. Cond. 630 (μmhos/cm) Turbidity 1.4 (NTU)
Data	Sampling Equip. Moster ID MyS-8 Spec. Cond. 130 (μmhos/cm) Turbidity 1.9 (NTU) Temp. Observed 9.9 (°C) Eh 145 (mV)
ling Da	Analyzed by SFF Temp. Corrected 9.8 (°C) Other 1/4
nildi	Field Measurements Temp. Corrected: \(\mathbb{Z}\textsquare \) No \(\mathbb{N}\text{N}\text{N}\text{N}
Sampl	Sample for Soluble Metals Filtered in Field: Yes No MA
Field	Temperature Correction Factor: 60°C Weather Conditions During Sampling: 36°4 6 claudy, wind NW@9mpn
T.	Sample Description: Clear with no odus
	Observations: Nove
	Time pH Specifc Conductance Temp (°C) D.O. Turbidity Eh Volume Purged (μπhos/cm) (observed) (mg/l) (NTU) (mV) (cumulative gal)
sst	1059 78 1.30 90 1011 111 111 111
n Te	1058 78 630 98 104 14 142 2.4
zatio	1104 7.8 630 9.9 10.4 14 145 3,6
Stabilization Test	10 11 11
Sta	SK2 1111
	l Nether
	Imples chilled immediately after collection: Yes Other
	Revised: 01/25/2021
ivam	e/Affiliation of Sampler(s): Serena Ram
Le	ead Technician Signature:





05 December 2022

Eric Ealy

Environmental Services-Water Minneapolis

414 Nicollet Mall, GO-2

Minneapolis, MN 55401

RE: Sherco Pond 3 CCR

Enclosed are the results of analyses for samples received by the laboratory on 11/04/2022 05:30. If you have any questions concerning this report, please feel free to contact me.

CC:

I certify that this analysis report was prepared under my direction or supervision under a system designed to assure that qualified personnel analyzed the submitted samples. All protocols for analysis were followed as required by Minnesota Rules and the Applicable Management Plan.

Sincerely,

Steve Davis

Project Manager



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 12/05/2022 11:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sample Qualifier	Laboratory ID	Matrix	Sampled	Received
P-130		MHK0019-16	Water	11/02/2022 14:35	11/04/2022 5:30
P-131		MHK0019-18	Water	11/02/2022 13:30	11/04/2022 5:30
P-132		MHK0019-30	Water	11/04/2022 10:32	11/04/2022 5:30
P-151		MHK0019-31	Water	11/03/2022 14:10	11/04/2022 5:30
P-153		MHK0019-32	Water	11/03/2022 14:50	11/04/2022 5:30
P-154A		MHK0019-33	Water	11/04/2022 10:00	11/04/2022 5:30
P-163		MHK0019-35	Water	11/04/2022 10:55	11/04/2022 5:30
P-164		MHK0019-36	Water	11/04/2022 10:00	11/04/2022 5:30
P-165		MHK0019-37	Water	11/04/2022 11:10	11/04/2022 5:30
Duplicate CCR-P3		MHK0019-38	Water	11/04/2022 10:00	11/04/2022 5:30
Rinse CPR-P3		MHK0019-39	Water	11/04/2022 9:55	11/04/2022 5:30



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 12/05/2022 11:37

P-130 MHK0019-16 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	2.87	1.00	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 12:10	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 12:10	EPA 300.0	CRL
Sulfate	10.3	1.00	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 12:10	EPA 300.0	CRL
Wet Chemistry										
рН	7.70		pH Units	M_TTT	1	BHK0069	11/4/22 6:35	11/4/22 10:05	SM 4500-H+ B	CRL
Total Dissolved Solids	262	25.0	mg/L		1	BHK0078	11/5/22 9:36	11/5/22 9:36	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHK0077	11/5/22 7:08	11/5/22 7:08	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	< 0.500	0.500	ug/L		1	BHK0193	11/9/22 11:19	11/10/22 11:37	EPA 200.8	CRL
Barium	59.3	0.500	ug/L		1	BHK0193	11/9/22 11:19	11/10/22 11:37	EPA 200.8	CRL
Chromium	1.16	0.500	ug/L		1	BHK0193	11/9/22 11:19	11/10/22 11:37	EPA 200.8	CRL
Molybdenum	< 0.500	0.500	ug/L		1	BHK0193	11/9/22 11:19	11/10/22 11:37	EPA 200.8	CRL
Selenium	0.547	0.500	ug/L		1	BHK0193	11/9/22 11:19	11/10/22 11:37	EPA 200.8	CRL
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BHK0192	11/9/22 11:15	11/10/22 14:27	EPA 200.7	HRD
Calcium	73.7	1.50	mg/L		1	BHK0192	11/9/22 11:15	11/10/22 14:26	EPA 200.7	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 12/05/2022 11:37

P-131
MHK0019-18 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	10.3	1.00	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 12:51	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 12:51	EPA 300.0	CRL
Sulfate	12.7	1.00	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 12:51	EPA 300.0	CRL
Wet Chemistry										
рН	7.87		pH Units	M_TTT	1	BHK0069	11/4/22 6:35	11/4/22 10:19	SM 4500-H+ B	CRL
Total Dissolved Solids	254	25.0	mg/L		1	BHK0078	11/5/22 9:36	11/5/22 9:36	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHK0077	11/5/22 7:08	11/5/22 7:08	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	0.627	0.500	ug/L		1	BHK0193	11/9/22 11:19	11/10/22 11:41	EPA 200.8	CRL
Barium	68.6	0.500	ug/L		1	BHK0193	11/9/22 11:19	11/10/22 11:41	EPA 200.8	CRL
Chromium	1.21	0.500	ug/L		1	BHK0193	11/9/22 11:19	11/10/22 11:41	EPA 200.8	CRL
Molybdenum	< 0.500	0.500	ug/L		1	BHK0193	11/9/22 11:19	11/10/22 11:41	EPA 200.8	CRL
Selenium	0.660	0.500	ug/L		1	BHK0193	11/9/22 11:19	11/10/22 11:41	EPA 200.8	CRL
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BHK0192	11/9/22 11:15	11/10/22 14:31	EPA 200.7	HRD
Calcium	66.2	1.50	mg/L		1	BHK0192	11/9/22 11:15	11/10/22 14:30	EPA 200.7	HRD



Environmental Services-Water Minneapolis

414 Nicollet Mall, GO-2

Minneapolis MN, 55401

Project Name/Location: Sherco Pond 3 CCR

Reported:

12/05/2022 11:37

P-132
MHK0019-30 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	1.50	1.00	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 18:42	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 18:42	EPA 300.0	CRL
Sulfate	32.0	1.00	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 18:42	EPA 300.0	CRL
Wet Chemistry										
рН	7.71		pH Units	M_TTT	1	BHK0086	11/4/22 13:18	11/4/22 14:51	SM 4500-H+ B	CRL
Total Dissolved Solids	314	25.0	mg/L		1	BHK0088	11/7/22 8:57	11/7/22 8:57	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHK0087	11/7/22 6:45	11/7/22 6:45	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	< 0.500	0.500	ug/L		1	BHK0193	11/9/22 11:19	11/10/22 11:57	EPA 200.8	CRL
Barium	33.1	0.500	ug/L		1	BHK0193	11/9/22 11:19	11/10/22 11:57	EPA 200.8	CRL
Chromium	2.15	0.500	ug/L		1	BHK0193	11/9/22 11:19	11/10/22 11:57	EPA 200.8	CRL
Molybdenum	< 0.500	0.500	ug/L		1	BHK0193	11/9/22 11:19	11/10/22 11:57	EPA 200.8	CRL
Selenium	1.79	0.500	ug/L		1	BHK0193	11/9/22 11:19	11/10/22 11:57	EPA 200.8	CRL
Total Metals by ICP										
Boron	0.0926	0.0500	mg/L		1	BHK0192	11/9/22 11:15	11/10/22 14:43	EPA 200.7	HRD
Calcium	80.3	1.50	mg/L		1	BHK0192	11/9/22 11:15	11/10/22 14:42	EPA 200.7	HRD



Environmental Services-Water Minneapolis

414 Nicollet Mall, GO-2

Minneapolis MN, 55401

Project Name/Location: Sherco Pond 3 CCR

Reported:

12/05/2022 11:37

P-151 MHK0019-31 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	6.40	1.00	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 19:03	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 19:03	EPA 300.0	CRL
Sulfate	7.66	1.00	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 19:03	EPA 300.0	CRL
Wet Chemistry										
рН	7.96		pH Units	M_TTT	1	BHK0086	11/4/22 13:18	11/4/22 14:55	SM 4500-H+ B	CRL
Total Dissolved Solids	178	25.0	mg/L		1	BHK0088	11/7/22 8:57	11/7/22 8:57	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHK0087	11/7/22 6:45	11/7/22 6:45	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	< 0.500	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:29	EPA 200.8	CRL
Barium	31.1	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:29	EPA 200.8	CRL
Chromium	0.775	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:29	EPA 200.8	CRL
Molybdenum	0.559	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:29	EPA 200.8	CRL
Selenium	< 0.500	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:29	EPA 200.8	CRL
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BHK0197	11/9/22 11:22	11/10/22 15:36	EPA 200.7	HRD
Calcium	37.0	1.50	mg/L		1	BHK0197	11/9/22 11:22	11/10/22 15:34	EPA 200.7	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 12/05/2022 11:37

P-153 MHK0019-32 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	< 1.00	1.00	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 19:23	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 19:23	EPA 300.0	CRL
Sulfate	5.07	1.00	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 19:23	EPA 300.0	CRL
Wet Chemistry										
рН	8.09		pH Units	M_TTT	1	BHK0086	11/4/22 13:18	11/4/22 14:58	SM 4500-H+ B	CRL
Total Dissolved Solids	122	25.0	mg/L		1	BHK0088	11/7/22 8:57	11/7/22 8:57	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHK0087	11/7/22 6:45	11/7/22 6:45	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	1.38	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:33	EPA 200.8	CRL
Barium	17.2	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:33	EPA 200.8	CRL
Chromium	1.04	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:33	EPA 200.8	CRL
Molybdenum	0.785	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:33	EPA 200.8	CRL
Selenium	0.623	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:33	EPA 200.8	CRL
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BHK0197	11/9/22 11:22	11/10/22 15:47	EPA 200.7	HRD
Calcium	25.3	1.50	mg/L		1	BHK0197	11/9/22 11:22	11/10/22 15:46	EPA 200.7	HRD



Environmental Services-Water Minneapolis

414 Nicollet Mall, GO-2

Minneapolis MN, 55401

Project Name/Location: Sherco Pond 3 CCR

Reported:

12/05/2022 11:37

P-154A MHK0019-33 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	7.95	1.00	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 19:44	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 19:44	EPA 300.0	CRL
Sulfate	22.5	1.00	mg/L		1	BHK0091	11/7/22 6:45	11/7/22 19:44	EPA 300.0	CRL
Wet Chemistry										
рН	7.94		pH Units	M_TTT	1	BHK0086	11/4/22 13:18	11/4/22 15:02	SM 4500-H+ B	CRL
Total Dissolved Solids	258	25.0	mg/L		1	BHK0178	11/9/22 9:31	11/9/22 9:31	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHK0177	11/9/22 7:23	11/9/22 7:23	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	1.35	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:37	EPA 200.8	CRL
Barium	43.2	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:37	EPA 200.8	CRL
Chromium	0.919	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:37	EPA 200.8	CRL
Molybdenum	0.684	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:37	EPA 200.8	CRL
Selenium	< 0.500	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:37	EPA 200.8	CRL
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BHK0197	11/9/22 11:22	11/10/22 15:51	EPA 200.7	HRD
Calcium	57.1	1.50	mg/L		1	BHK0197	11/9/22 11:22	11/10/22 15:50	EPA 200.7	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 12/05/2022 11:37

P-163 MHK0019-35 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	19.6	1.00	mg/L		1	BHK0179	11/9/22 6:34	11/9/22 10:37	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHK0179	11/9/22 6:34	11/9/22 10:37	EPA 300.0	CRL
Sulfate	121	1.00	mg/L		1	BHK0179	11/9/22 6:34	11/9/22 10:37	EPA 300.0	CRL
Wet Chemistry										
рН	7.91		pH Units	M_TTT	1	BHK0086	11/4/22 13:18	11/4/22 15:19	SM 4500-H+ B	CRL
Total Dissolved Solids	520	25.0	mg/L		1	BHK0178	11/9/22 9:31	11/9/22 9:31	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHK0177	11/9/22 7:23	11/9/22 7:23	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	0.560	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:45	EPA 200.8	CRL
Barium	50.5	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:45	EPA 200.8	CRL
Chromium	10.4	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:45	EPA 200.8	CRL
Molybdenum	0.710	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:45	EPA 200.8	CRL
Selenium	25.0	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:45	EPA 200.8	CRL
Total Metals by ICP										
Boron	0.372	0.0500	mg/L		1	BHK0197	11/9/22 11:22	11/10/22 15:59	EPA 200.7	HRD
Calcium	113	1.50	mg/L		1	BHK0197	11/9/22 11:22	11/10/22 15:58	EPA 200.7	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 12/05/2022 11:37

P-164
MHK0019-36 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	11.4	1.00	mg/L		1	BHK0179	11/9/22 6:34	11/9/22 10:57	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHK0179	11/9/22 6:34	11/9/22 10:57	EPA 300.0	CRL
Sulfate	55.1	1.00	mg/L		1	BHK0179	11/9/22 6:34	11/9/22 10:57	EPA 300.0	CRL
Wet Chemistry										
рН	8.01		pH Units	M_TTT	1	BHK0086	11/4/22 13:18	11/4/22 15:22	SM 4500-H+ B	CRL
Total Dissolved Solids	342	25.0	mg/L		1	BHK0178	11/9/22 9:31	11/9/22 9:31	SM 2540C	HSD
Total Suspended Solids	5.80	5.00	mg/L		1	BHK0177	11/9/22 7:23	11/9/22 7:23	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	0.544	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:57	EPA 200.8	CRL
Barium	44.5	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:57	EPA 200.8	CRL
Chromium	4.11	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:57	EPA 200.8	CRL
Molybdenum	< 0.500	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:57	EPA 200.8	CRL
Selenium	7.16	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 12:57	EPA 200.8	CRL
Total Metals by ICP										
Boron	0.0693	0.0500	mg/L		1	BHK0197	11/9/22 11:22	11/10/22 16:03	EPA 200.7	HRD
Calcium	78.4	1.50	mg/L		1	BHK0197	11/9/22 11:22	11/10/22 16:02	EPA 200.7	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 12/05/2022 11:37

P-165 MHK0019-37 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	2.05	1.00	mg/L		1	BHK0179	11/9/22 6:34	11/9/22 11:18	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHK0179	11/9/22 6:34	11/9/22 11:18	EPA 300.0	CRL
Sulfate	18.2	1.00	mg/L		1	BHK0179	11/9/22 6:34	11/9/22 11:18	EPA 300.0	CRL
Wet Chemistry										
рН	7.86		pH Units	M_TTT	1	BHK0086	11/4/22 13:18	11/4/22 15:26	SM 4500-H+ B	CRL
Total Dissolved Solids	242	25.0	mg/L		1	BHK0178	11/9/22 9:31	11/9/22 9:31	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHK0177	11/9/22 7:23	11/9/22 7:23	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	< 0.500	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 13:01	EPA 200.8	CRL
Barium	28.6	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 13:01	EPA 200.8	CRL
Chromium	1.44	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 13:01	EPA 200.8	CRL
Molybdenum	< 0.500	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 13:01	EPA 200.8	CRL
Selenium	1.28	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 13:01	EPA 200.8	CRL
Total Metals by ICP										
Boron	0.0569	0.0500	mg/L		1	BHK0197	11/9/22 11:22	11/10/22 16:07	EPA 200.7	HRD
Calcium	57.4	1.50	mg/L		1	BHK0197	11/9/22 11:22	11/10/22 16:06	EPA 200.7	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 12/05/2022 11:37

Duplicate CCR-P3 MHK0019-38 (Water) - Chain of Custody Number: Pace

		Reporting		Analyte						
Analyte	Result	Limit	Units	Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	7.86	1.00	mg/L		1	BHK0179	11/9/22 6:34	11/9/22 11:39	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHK0179	11/9/22 6:34	11/9/22 11:39	EPA 300.0	CRL
Sulfate	21.7	1.00	mg/L		1	BHK0179	11/9/22 6:34	11/9/22 11:39	EPA 300.0	CRL
Wet Chemistry										
рН	7.95		pH Units	M_TTT	1	BHK0086	11/4/22 13:18	11/4/22 15:30	SM 4500-H+ B	CRL
Total Dissolved Solids	258	25.0	mg/L		1	BHK0178	11/9/22 9:31	11/9/22 9:31	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHK0177	11/9/22 7:23	11/9/22 7:23	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	1.35	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 13:05	EPA 200.8	CRL
Barium	42.9	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 13:05	EPA 200.8	CRL
Chromium	0.845	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 13:05	EPA 200.8	CRL
Molybdenum	0.711	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 13:05	EPA 200.8	CRL
Selenium	0.585	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 13:05	EPA 200.8	CRL
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L	·	1	BHK0197	11/9/22 11:22	11/10/22 16:11	EPA 200.7	HRD
Calcium	57.4	1.50	mg/L		1	BHK0197	11/9/22 11:22	11/10/22 16:10	EPA 200.7	HRD



Environmental Services-Water Minneapolis

414 Nicollet Mall, GO-2

Minneapolis MN, 55401

Project Name/Location: Sherco Pond 3 CCR

Reported:

12/05/2022 11:37

Rinse CPR-P3 MHK0019-39 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Datab	Dranarad	Analyzed	Method	Analyst
Analyte	Resuit	LITTIIL	Offics	Qualifier	Dilution	Batch	Prepared	Allalyzeu	Metriod	7 trialy 5t
Anions by Ion Chromatography										
Chloride	< 1.00	1.00	mg/L		1	BHK0179	11/9/22 6:34	11/9/22 11:59	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BHK0179	11/9/22 6:34	11/9/22 11:59	EPA 300.0	CRL
Sulfate	< 1.00	1.00	mg/L		1	BHK0179	11/9/22 6:34	11/9/22 11:59	EPA 300.0	CRL
Wet Chemistry										
pH	6.29		pH Units	M_TTT	1	BHK0086	11/4/22 13:18	11/4/22 15:33	SM 4500-H+ B	CRL
Total Dissolved Solids	< 25.0	25.0	mg/L	M_ES	1	BHK0178	11/9/22 9:31	11/9/22 9:31	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_ES	1	BHK0177	11/9/22 7:23	11/9/22 7:23	SM 2540D	HSD
Total Metals by ICPMS										
Arsenic	< 0.500	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 13:09	EPA 200.8	CRL
Barium	< 0.500	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 13:09	EPA 200.8	CRL
Chromium	< 0.500	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 13:09	EPA 200.8	CRL
Molybdenum	< 0.500	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 13:09	EPA 200.8	CRL
Selenium	< 0.500	0.500	ug/L		1	BHK0198	11/9/22 11:24	11/10/22 13:09	EPA 200.8	CRL
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L	·	1	BHK0197	11/9/22 11:22	11/10/22 16:15	EPA 200.7	HRD
Calcium	< 1.50	1.50	mg/L		1	BHK0197	11/9/22 11:22	11/10/22 16:14	EPA 200.7	HRD



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 12/05/2022 11:37

Accelete	D	Reporting	1124	Spike	Source	0/ DEC	%REC	DDD	RPD	NI.4.
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHK0071 - Wet Prep										
Blank (BHK0071-BLK1)				Prepared	& Analyze	d: 11/04/2	022			
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
Blank (BHK0071-BLK2)				Prepared	& Analyze	d: 11/04/2	022			
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
LCS (BHK0071-BS1)				Prepared	& Analyze	d: 11/04/2	022			
Chloride	24.700	1.00	mg/L	25.000		98.8	90-110			
Fluoride	2.4680	0.750	mg/L	2.5000		98.7	90-110			
Sulfate	24.471	1.00	mg/L	25.000		97.9	90-110			
LCS (BHK0071-BS2)				Prepared	& Analyze	d: 11/04/2	022			
Chloride	24.952	1.00	mg/L	25.000		99.8	90-110			
Fluoride	2.5270	0.750	mg/L	2.5000		101	90-110			
Sulfate	24.673	1.00	mg/L	25.000		98.7	90-110			
LCS (BHK0071-BS3)				Prepared	& Analyze	d: 11/04/2	022			
Chloride	25.064	1.00	mg/L	25.000		100	90-110	<u> </u>		
Fluoride	2.5360	0.750	mg/L	2.5000		101	90-110			
Sulfate	24.786	1.00	mg/L	25.000		99.1	90-110			
Duplicate (BHK0071-DUP1)	So	urce: MHK001	19-03	Prepared	& Analyze	d: 11/04/2	022			
Chloride	1.6330	1.00	mg/L	<u> </u>	1.6370			0.245	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	10.826	1.00	mg/L		10.998			1.58	20	



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

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Minneapolis MN, 55401 Project Manager: Eric Ealy 12/05/2022 11:37

Analyta	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Resuit	LIIIIII	Units	Level	Result	%REC	LITTIES	KPD	LIIIIII	Notes
Batch BHK0071 - Wet Prep										
Duplicate (BHK0071-DUP2)	Sou	rce: MHK00	19-04	Prepared	& Analyze	d: 11/04/2	022			
Chloride	18.770	1.00	mg/L		18.781			0.0586	20	
Fluoride	< 0.750	0.750	mg/L		<0.750				20	
Sulfate	53.900	1.00	mg/L		53.896			0.00742	20	
Matrix Spike (BHK0071-MS1)	Sou	rce: MHK00	19-03	Prepared	& Analyze	d: 11/04/2	022			
Chloride	26.283	1.11	mg/L	27.778	1.6370	88.7	90-110			M_MS
Fluoride	2.6278	0.833	mg/L	2.7778	<0.833	94.6	90-110			
Sulfate	35.149	1.11	mg/L	27.778	10.998	86.9	90-110			M_MS
Matrix Spike (BHK0071-MS2)	Sou	rce: MHK00	19-04	Prepared	& Analyze	d: 11/04/2	022			
Chloride	47.062	1.11	mg/L	27.778	18.781	102	90-110			
Fluoride	2.9844	0.833	mg/L	2.7778	<0.833	107	90-110			
Sulfate	82.022	1.11	mg/L	27.778	53.896	101	90-110			
Matrix Spike Dup (BHK0071-MSD1)	Sou	rce: MHK00	19-03	Prepared	& Analyze	d: 11/04/2	022			
Chloride	28.394	1.11	mg/L	27.778	1.6370	96.3	90-110	7.72	20	
Fluoride	2.8344	0.833	mg/L	2.7778	<0.833	102	90-110	7.57	20	
Sulfate	37.950	1.11	mg/L	27.778	10.998	97.0	90-110	7.66	20	
Matrix Spike Dup (BHK0071-MSD2)	Sou	rce: MHK00	19-04	Prepared	& Analyze	d: 11/04/2	022			
Chloride	46.067	1.11	mg/L	27.778	18.781	98.2	90-110	2.14	20	
Fluoride	2.8667	0.833	mg/L	2.7778	<0.833	103	90-110	4.03	20	
Sulfate	81.162	1.11	mg/L	27.778	53.896	98.2	90-110	1.05	20	
Batch BHK0091 - Wet Prep										
Blank (BHK0091-BLK1)				Prepared	& Analyze	d: 11/07/2	022			
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 12/05/2022 11:37

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHK0091 - Wet Prep										
Blank (BHK0091-BLK2)				Prepared	& Analyze	d: 11/07/2	022			
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
LCS (BHK0091-BS1)				Prepared	& Analyze	d: 11/07/2	022			
Chloride	24.983	1.00	mg/L	25.000		99.9	90-110			
Fluoride	2.5270	0.750	mg/L	2.5000		101	90-110			
Sulfate	24.829	1.00	mg/L	25.000		99.3	90-110			
LCS (BHK0091-BS2)				Prepared	& Analyze	d: 11/07/2	022			
Chloride	25.095	1.00	mg/L	25.000		100	90-110			
Fluoride	2.5660	0.750	mg/L	2.5000		103	90-110			
Sulfate	24.898	1.00	mg/L	25.000		99.6	90-110			
LCS (BHK0091-BS3)				Prepared	& Analyze	d: 11/07/2	022			
Chloride	25.087	1.00	mg/L	25.000		100	90-110			
Fluoride	2.5540	0.750	mg/L	2.5000		102	90-110			
Sulfate	24.869	1.00	mg/L	25.000		99.5	90-110			
Duplicate (BHK0091-DUP1)	Sour	ce: MHK001	19-16	Prepared	& Analyze	d: 11/07/2	022			
Chloride	2.4660	1.00	mg/L		2.8690			15.1	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	8.7300	1.00	mg/L		10.282			16.3	20	
Duplicate (BHK0091-DUP2)	Sour	ce: MHK001	19-17	Prepared	& Analyze	d: 11/07/2	022			
Chloride	27.998	1.00	mg/L		27.936			0.222	20	
Fluoride	<0.750	0.750	mg/L		0.066000				20	
Sulfate	49.544	1.00	mg/L		49.515			0.0585	20	



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BHK0091 - Wet Prep										
Matrix Spike (BHK0091-MS1)	Sou	rce: MHK001	19-16	Prepared	& Analyze	d: 11/07/2	022			
Chloride	30.017	1.11	mg/L	27.778	2.8690	97.7	90-110			
Fluoride	2.8356	0.833	mg/L	2.7778	<0.833	102	90-110			
Sulfate	37.709	1.11	mg/L	27.778	10.282	98.7	90-110			
Matrix Spike (BHK0091-MS2)	Sou	rce: MHK001	19-17	Prepared	& Analyze	d: 11/07/2	022			
Chloride	56.669	1.11	mg/L	27.778	27.936	103	90-110			
Fluoride	3.0933	0.833	mg/L	2.7778	<0.833	111	90-110			M_MS
Sulfate	78.206	1.11	mg/L	27.778	49.515	103	90-110			
Matrix Spike Dup (BHK0091-MSD1)	Sou	rce: MHK001	19-16	Prepared	& Analyze	d: 11/07/2	022			
Chloride	30.430	1.11	mg/L	27.778	2.8690	99.2	90-110	1.37	20	
Fluoride	2.8700	0.833	mg/L	2.7778	<0.833	103	90-110	1.21	20	
Sulfate	38.120	1.11	mg/L	27.778	10.282	100	90-110	1.08	20	
Matrix Spike Dup (BHK0091-MSD2)	Sou	rce: MHK001	19-17	Prepared	& Analyze	d: 11/07/2	022			
Chloride	55.797	1.11	mg/L	27.778	27.936	100	90-110	1.55	20	
Fluoride	3.0033	0.833	mg/L	2.7778	<0.833	108	90-110	2.95	20	
Sulfate	77.382	1.11	mg/L	27.778	49.515	100	90-110	1.06	20	
Batch BHK0179 - Wet Prep										
Blank (BHK0179-BLK1)				Prepared	& Analyze	d: 11/09/2	022			
Chloride	<1.00	1.00	mg/L							<u> </u>
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
LCS (BHK0179-BS1)				Prepared	& Analyze	d: 11/09/2	022			
Chloride	24.793	1.00	mg/L	25.000		99.2	90-110			
Fluoride	2.5680	0.750	mg/L	2.5000		103	90-110			
Sulfate	24.600	1.00	mg/L	25.000		98.4	90-110			



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR
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Minneapolis MN, 55401 Project Manager: Eric Ealy 12/05/2022 11:37

		Reporting		Spike	Source	0/	%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHK0179 - Wet Prep										
LCS (BHK0179-BS2)				Prepared	& Analyze	d: 11/09/2	022			
Chloride	24.784	1.00	mg/L	25.000		99.1	90-110			
Fluoride	2.5450	0.750	mg/L	2.5000		102	90-110			
Sulfate	24.393	1.00	mg/L	25.000		97.6	90-110			
Duplicate (BHK0179-DUP1)	Sou	rce: MHK00	56-01	Prepared	& Analyze	d: 11/09/2	022			
Chloride	13.334	1.00	mg/L		13.376			0.314	20	
Fluoride	< 0.750	0.750	mg/L		<0.750				20	
Sulfate	8.9550	1.00	mg/L		8.9890			0.379	20	
Matrix Spike (BHK0179-MS1)	Sou	rce: MHK00	56-01	Prepared	& Analyze	d: 11/09/2	022			
Chloride	41.143	1.11	mg/L	27.778	13.376	100	90-110			
Fluoride	2.8978	0.833	mg/L	2.7778	<0.833	104	90-110			
Sulfate	36.741	1.11	mg/L	27.778	8.9890	99.9	90-110			
Matrix Spike Dup (BHK0179-MSD1)	Sou	rce: MHK00	6-01	Prepared	& Analyze	d: 11/09/2	022			
Chloride	41.662	1.11	mg/L	27.778	13.376	102	90-110	1.25	20	
Fluoride	3.0233	0.833	mg/L	2.7778	<0.833	109	90-110	4.24	20	
Sulfate	37.219	1.11	mg/L	27.778	8.9890	102	90-110	1.29	20	



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHK0061 - Wet Prep										
Blank (BHK0061-BLK1)				Prepared	& Analyze	d: 11/04/2	2022			
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BHK0061-BS1)				Prepared	& Analyze	d: 11/04/2	2022			
Total Suspended Solids	98.000	5.00	mg/L	106.90		91.7	70-130			
Duplicate (BHK0061-DUP1)	Sour	ce: MHK00	04-25	Prepared	& Analyze	d: 11/04/2	2022			
Total Suspended Solids	1.5000	12.5	mg/L		0.80000			60.9	20	M_D-RL, M_ES
Duplicate (BHK0061-DUP2)	Sour	ce: MHK00	19-02	Prepared	& Analyze	d: 11/04/2	2022			
Total Suspended Solids	14.500	12.5	mg/L		12.000			18.9	20	
Batch BHK0062 - Wet Prep										
Blank (BHK0062-BLK1)				Prepared	& Analyze	d: 11/05/2	2022			
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BHK0062-BS1)				Prepared	& Analyze	d: 11/05/2	2022			
Total Dissolved Solids	110.00	25.0	mg/L	107.80		102	70-130			
Duplicate (BHK0062-DUP1)	Sour	ce: MHK00	04-25	Prepared	& Analyze	d: 11/05/2	2022			
Total Dissolved Solids	276.00	25.0	mg/L		282.00			2.15	20	
Duplicate (BHK0062-DUP2)	Sour	ce: MHK00	19-02	Prepared	& Analyze	d: 11/05/2	2022			
Total Dissolved Solids	1102.0	25.0	mg/L		1112.0			0.903	20	
Batch BHK0069 - Wet Prep										
LCS (BHK0069-BS1)				Prepared	& Analyze	d: 11/04/2	2022			
pH	7.0900		pH Units	7.0000		101	90-110			



Environmental Services-Water Minneapolis

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Amalida	Design	Reporting	l luite	Spike	Source	0/ DEC	%REC	DDD	RPD	Nata -
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHK0069 - Wet Prep										
LCS (BHK0069-BS2)				Prepared	& Analyze	d: 11/04/2	022			
pH	7.1100		pH Units	7.0000		102	90-110			
Duplicate (BHK0069-DUP1)	Sou	rce: MHK00	19-01	Prepared	& Analyze	d: 11/04/2	022			
pH	7.4900		pH Units		7.5100			0.267	20	
Duplicate (BHK0069-DUP2)	Sou	rce: MHK00	19-11	Prepared	& Analyze	d: 11/04/2	022			
pH	7.7200		pH Units		7.7400			0.259	20	
Duplicate (BHK0069-DUP3)	Sou	rce: MHK00	19-21	Prepared	& Analyze	d: 11/04/2	022			
pH	7.6100		pH Units		7.6300			0.262	20	
Batch BHK0077 - Wet Prep										
				Duamanad	0 Analus	d. 44/05/0	.000			
Blank (BHK0077-BLK1)				Prepared	& Analyze	d: 11/05/2	022			
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BHK0077-BS1)				Prepared	& Analyze	d: 11/05/2	022			
Total Suspended Solids	92.000	5.00	mg/L	106.90		86.1	70-130			
Duplicate (BHK0077-DUP1)	Sou	rce: MHK00	19-12	Prepared	& Analyze	d: 11/05/2	022			
Total Suspended Solids	372.00	25.0	mg/L		372.00			0.00	20	
Duplicate (BHK0077-DUP2)	Sou	rce: MHK00	19-13	Prepared	& Analyze	d: 11/05/2	022			
Total Suspended Solids	297.33	16.7	mg/L		290.00			2.50	20	
Batch BHK0078 - Wet Prep										
Blank (BHK0078-BLK1)				Prepared	& Analyze	d: 11/05/2	022			
Total Dissolved Solids	<25.0	25.0	mg/L		,					



Environmental Services-Water Minneapolis

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Project Manager: Eric Ealy

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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHK0078 - Wet Prep										
LCS (BHK0078-BS1)				Prepared	& Analyze	d: 11/05/2	2022			
Total Dissolved Solids	76.000	25.0	mg/L	107.80		70.5	70-130			
Duplicate (BHK0078-DUP1)	Sou	rce: MHK00	19-12	Prepared	& Analyze	d: 11/05/2	2022			
Total Dissolved Solids	626.00	25.0	mg/L		616.00			1.61	20	
Duplicate (BHK0078-DUP2)	Sou	rce: MHK00	19-13	Prepared	& Analyze	d: 11/05/2	2022			
Total Dissolved Solids	402.00	25.0	mg/L		402.00			0.00	20	
Batch BHK0086 - Wet Prep										
LCS (BHK0086-BS1)				Prepared	& Analyze	d: 11/04/2	2022			
pH	7.0900		pH Units	7.0000		101	90-110			
LCS (BHK0086-BS2)				Prepared	& Analyze	d: 11/04/2	2022			
pH	7.0900		pH Units	7.0000		101	90-110			
Duplicate (BHK0086-DUP1)	Sou	rce: MHK00	19-24	Prepared	& Analyze	d: 11/04/2	2022			
pH	7.6400		pH Units		7.6900			0.652	20	
Duplicate (BHK0086-DUP2)	Sou	rce: MHK00	19-34	Prepared	& Analyze	d: 11/04/2	2022			
pH	7.6400		pH Units		7.6400			0.00	20	
Batch BHK0087 - Wet Prep										
Blank (BHK0087-BLK1)				Prepared	& Analyze	d: 11/07/2	2022			
Total Suspended Solids	<5.00	5.00	mg/L	•	•					



Environmental Services-Water Minneapolis

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Minneapolis MN, 55401

Project Name/Location: Sherco Pond 3 CCR

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BHK0087 - Wet Prep										
LCS (BHK0087-BS1)				Prepared	& Analyze	ed: 11/07/2	022			
Total Suspended Solids	92.000	5.00	mg/L	106.90		86.1	70-130			
Duplicate (BHK0087-DUP1)	So	urce: MHK00	19-24	Prepared	& Analyze	d: 11/07/2	022			
Total Suspended Solids	<12.5	12.5	mg/L		<12.5				20	M_ES
Batch BHK0088 - Wet Prep										
Blank (BHK0088-BLK1)				Prepared	& Analyze	d: 11/07/2	022			
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BHK0088-BS1)				Prepared	& Analyze	d: 11/07/2	022			
Total Dissolved Solids	112.00	25.0	mg/L	107.80		104	70-130			
Duplicate (BHK0088-DUP1)	So	urce: MHK00	19-24	Prepared	& Analyze	d: 11/07/2	022			
Total Dissolved Solids	452.00	25.0	mg/L		442.00			2.24	20	
Batch BHK0177 - Wet Prep										
Blank (BHK0177-BLK1)				Prepared	& Analyze	d: 11/09/2	022			
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BHK0177-BS1)				Prepared	& Analyze	d: 11/09/2	022			
Total Suspended Solids	98.000	5.00	mg/L	106.90		91.7	70-130			
Duplicate (BHK0177-DUP1)	So	urce: MHK00	19-33	Prepared	& Analyze	d: 11/09/2	022			
Total Suspended Solids	<12.5	12.5	mg/L		0.40000				20	



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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHK0177 - Wet Prep										
Duplicate (BHK0177-DUP2)	Source	ce: MHK005	55-02	Prepared	& Analyze	ed: 11/09/2	022			
Total Suspended Solids	0.70000	5.00	mg/L		1.1000			44.4	20	M_D-RL
Batch BHK0178 - Wet Prep										
Blank (BHK0178-BLK1)				Prepared	& Analyze	d: 11/09/2	022			
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BHK0178-BS1)				Prepared	& Analyze	d: 11/09/2	022			
Total Dissolved Solids	118.00	25.0	mg/L	107.80		109	70-130			
Duplicate (BHK0178-DUP1)	Source	ce: MHK001	19-33	Prepared	& Analyze	d: 11/09/2	022			
Total Dissolved Solids	256.00	25.0	mg/L		258.00			0.778	20	



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

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Total Metals by ICPMS - Quality Control

Analyta	Dogult	Reporting	Llaita	Spike	Source	0/ DEC	%REC	DDD	RPD Limit	Notes
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHK0193 - EPA 200.2, EPA 3005										
Blank (BHK0193-BLK1)				Prepared:	11/09/202	2 Analyze	d: 11/10/20)22		
Barium	<0.500	0.500	ug/L							
Chromium	<0.500	0.500	ug/L							
Arsenic	<0.500	0.500	ug/L							
Molybdenum	<0.500	0.500	ug/L							
Selenium	<0.500	0.500	ug/L							
LCS (BHK0193-BS1)				Prepared:	11/09/202	2 Analyze	d: 11/10/20)22		
Chromium	96.824	0.500	ug/L	100.00		96.8	85-115			
Selenium	94.390	0.500	ug/L	100.00		94.4	85-115			
Barium	98.770	0.500	ug/L	100.00		98.8	85-115			
Arsenic	97.840	0.500	ug/L	100.00		97.8	85-115			
Molybdenum	95.790	0.500	ug/L	100.00		95.8	85-115			
Duplicate (BHK0193-DUP1)	So	urce: MHK000	04-03	Prepared:	11/09/202	2 Analyze	ed: 11/10/20)22		
Molybdenum	0.59858	0.500	ug/L		0.48900			20.2	20	
Chromium	1.3137	0.500	ug/L		1.2341			6.25	20	
Barium	51.312	0.500	ug/L		50.526			1.54	20	
Selenium	2.5299	0.500	ug/L		2.4796			2.01	20	
Arsenic	0.48552	0.500	ug/L		0.44088			9.64	20	
Duplicate (BHK0193-DUP2)	So	urce: MHK000)4-11	Prepared:	11/09/202	2 Analyze	d: 11/10/20)22		
Molybdenum	0.12414	0.500	ug/L		0.12541			1.02	20	
Arsenic	0.38216	0.500	ug/L		0.42824			11.4	20	
Barium	61.505	0.500	ug/L		60.400			1.81	20	
Chromium	1.1428	0.500	ug/L		1.1906			4.10	20	
Selenium	3.0001	0.500	ug/L		2.9588			1.39	20	
Matrix Spike (BHK0193-MS1)	So	urce: MHK000	04-03	Prepared:	11/09/202	2 Analyze	d: 11/10/20	022		
Chromium	102.50	0.500	ug/L	100.00	1.2341	101	75-125			
Barium	157.02	0.500	ug/L	100.00	50.526	106	75-125			
Molybdenum	101.87	0.500	ug/L	100.00	0.48900	101	75-125			
Selenium	100.97	0.500	ug/L	100.00	2.4796	98.5	75-125			
Arsenic	106.03	0.500	ug/L	100.00	0.44088	106	75-125			

Xcel Energy Minneapolis Testing Lab

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2

Minneapolis MN, 55401 Project Manager: Eric Ealy 12/05/2022 11:37

Total Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BHK0193 - EPA 200.2, EPA 3005										
Matrix Spike (BHK0193-MS2)	So	urce: MHK00(04-11	Prepared:	11/09/202	22 Analyze	ed: 11/10/2	022		
Molybdenum	102.16	0.500	ug/L	100.00	0.12541	102	75-125			
Arsenic	104.93	0.500	ug/L	100.00	0.42824	104	75-125			
Selenium	100.33	0.500	ug/L	100.00	2.9588	97.4	75-125			
Barium	164.77	0.500	ug/L	100.00	60.400	104	75-125			
Chromium	104.39	0.500	ug/L	100.00	1.1906	103	75-125			
Matrix Spike Dup (BHK0193-MSD1)	So	urce: MHK000	04-03	Prepared:	11/09/202	22 Analyze	ed: 11/10/2	022		
Chromium	103.97	0.500	ug/L	100.00	1.2341	103	75-125	1.43	20	
Selenium	101.65	0.500	ug/L	100.00	2.4796	99.2	75-125	0.675	20	
Molybdenum	103.75	0.500	ug/L	100.00	0.48900	103	75-125	1.82	20	
Barium	158.65	0.500	ug/L	100.00	50.526	108	75-125	1.03	20	
Arsenic	107.27	0.500	ug/L	100.00	0.44088	107	75-125	1.16	20	
Matrix Spike Dup (BHK0193-MSD2)	So	urce: MHK000)4-11	Prepared:	11/09/202	22 Analyze	ed: 11/10/2	022		
Arsenic	106.09	0.500	ug/L	100.00	0.42824	106	75-125	1.10	20	
Molybdenum	102.49	0.500	ug/L	100.00	0.12541	102	75-125	0.330	20	
Barium	165.17	0.500	ug/L	100.00	60.400	105	75-125	0.245	20	
Chromium	100.86	0.500	ug/L	100.00	1.1906	99.7	75-125	3.44	20	
Selenium	101.90	0.500	ug/L	100.00	2.9588	98.9	75-125	1.55	20	
Batch BHK0198 - EPA 200.2, EPA 3005										
Blank (BHK0198-BLK1)				Prepared:	11/09/202	22 Analyze	ed: 11/10/2	022		
Chromium	<0.500	0.500	ug/L							
Molybdenum	<0.500	0.500	ug/L							
Arsenic	<0.500	0.500	ug/L							
Selenium	<0.500	0.500	ug/L							
Barium	<0.500	0.500	ug/L							



Environmental Services-Water Minneapolis Project Name/Location: Sherco Pond 3 CCR 414 Nicollet Mall, GO-2 Reported: Minneapolis MN, 55401 Project Manager: Eric Ealy 12/05/2022 11:37

Total Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BHK0198 - EPA 200.2, EPA 3005										
LCS (BHK0198-BS1)				Prepared:	11/09/202	2 Analyze	ed: 11/10/2	022		
Selenium	95.778	0.500	ug/L	100.00		95.8	85-115			
Barium	102.30	0.500	ug/L	100.00		102	85-115			
Molybdenum	98.569	0.500	ug/L	100.00		98.6	85-115			
Chromium	100.72	0.500	ug/L	100.00		101	85-115			
Arsenic	100.70	0.500	ug/L	100.00		101	85-115			
Duplicate (BHK0198-DUP1)	So	urce: MHK001	19-32	Prepared:	11/09/202	2 Analyze	ed: 11/10/2	022		
Barium	17.120	0.500	ug/L		17.217			0.567	20	
Arsenic	1.3795	0.500	ug/L		1.3806			0.0784	20	
Chromium	0.97081	0.500	ug/L		1.0360			6.50	20	
Molybdenum	0.93489	0.500	ug/L		0.78471			17.5	20	
Selenium	0.64939	0.500	ug/L		0.62326			4.11	20	
Matrix Spike (BHK0198-MS1)	So	urce: MHK001	19-32	Prepared:	11/09/202	2 Analyze	ed: 11/10/2	022		
Barium	119.73	0.500	ug/L	100.00	17.217	103	75-125			
Molybdenum	98.931	0.500	ug/L	100.00	0.78471	98.1	75-125			
Selenium	96.303	0.500	ug/L	100.00	0.62326	95.7	75-125			
Chromium	97.362	0.500	ug/L	100.00	1.0360	96.3	75-125			
Arsenic	101.17	0.500	ug/L	100.00	1.3806	99.8	75-125			
Matrix Spike Dup (BHK0198-MSD1)	So	urce: MHK001	19-32	Prepared:	11/09/202	2 Analyze	ed: 11/10/2	022		
Barium	118.04	0.500	ug/L	100.00	17.217	101	75-125	1.42	20	
Selenium	96.269	0.500	ug/L	100.00	0.62326	95.6	75-125	0.0354	20	
Molybdenum	100.36	0.500	ug/L	100.00	0.78471	99.6	75-125	1.43	20	
Arsenic	103.85	0.500	ug/L	100.00	1.3806	102	75-125	2.62	20	
Chromium	101.43	0.500	ug/L	100.00	1.0360	100	75-125	4.09	20	



Environmental Services-Water Minneapolis

414 Nicollet Mall, GO-2

Minneapolis MN, 55401

Project Name/Location: Sherco Pond 3 CCR

Reported:

12/05/2022 11:37

Total Metals by ICP - Quality Control

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch BHK0192 - EPA 200.2, EPA 30	05									
Blank (BHK0192-BLK1)				Prepared:	11/09/202	2 Analyze	ed: 11/10/2	022		
Boron	<0.0500	0.0500	mg/L							
Calcium	<1.50	1.50	mg/L							
LCS (BHK0192-BS1)				Prepared:	11/09/202	2 Analyze	ed: 11/10/2	022		
Calcium	97.611	1.50	mg/L				85-115			
Boron	0.98919	0.0500	mg/L	1.0000		98.9	85-115			
Duplicate (BHK0192-DUP1)	Soi	urce: MHK000	04-01	Prepared:	11/09/202	2 Analyze	ed: 11/10/2	022		
Calcium	131.40	1.50	mg/L		129.37			1.56	20	
Boron	3.1603	0.0500	mg/L		3.0859			2.38	20	
Duplicate (BHK0192-DUP2)	Sou	urce: MHK000	04-02	Prepared:	11/09/202	2 Analyze	ed: 11/10/2	022		
Calcium	60.094	1.50	mg/L		60.218			0.206	20	
Boron	0.040047	0.0500	mg/L		0.042554			6.07	20	
Matrix Spike (BHK0192-MS1)	Soi	urce: MHK000	04-01	Prepared:	11/09/202	2 Analyze	ed: 11/10/2	022		
Calcium	226.71	1.50	mg/L		129.37		70-130			
Boron	4.1958	0.0500	mg/L	1.0000	3.0859	111	70-130			
Matrix Spike (BHK0192-MS2)	Soi	urce: MHK000	04-02	Prepared:	11/09/202	2 Analyze	ed: 11/10/2	022		
Calcium	161.97	1.50	mg/L		60.218		70-130			
Boron	0.99800	0.0500	mg/L	1.0000	0.042554	95.5	70-130			
Matrix Spike Dup (BHK0192-MSD1)	Soi	urce: MHK000	04-01	Prepared:	11/09/202	2 Analyze	ed: 11/10/2	022		
Calcium	227.86	1.50	mg/L		129.37		70-130	0.505	20	
Boron	4.1468	0.0500	mg/L	1.0000	3.0859	106	70-130	1.17	20	
Matrix Spike Dup (BHK0192-MSD2)	Soi	urce: MHK000	04-02	Prepared:	11/09/202	2 Analyze	ed: 11/10/2	022		
Boron	0.98611	0.0500	mg/L	1.0000	0.042554	94.4	70-130	1.20	20	
Calcium	161.54	1.50	mg/L		60.218		70-130	0.264	20	



Environmental Services-Water Minneapolis
Project Name/Location: Sherco Pond 3 CCR

414 Nicollet Mall, GO-2
Minneapolis MN, 55401
Project Manager: Eric Ealy
12/05/2022 11:37

Total Metals by ICP - Quality Control

RPD 2022	Limit	Notes
2022		
2022		
2022		
2022		
2.58	20	
0.171	20	
2022		
2022		
1.87	20	
0.244	20	
2	2022 2.58 0.171 2022	2022 2.58 20 0.171 20 2022



Environmental Services-Water Minneapolis	Project Name/Location: Sherco Pond 3 CCR	
414 Nicollet Mall, GO-2		Reported:
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/05/2022 11:37

Qualifiers and Definitions

M_MS	The percent recovery and/or RPD were outside the acceptance limits for the MS/MSD due to possible matrix interference
	and/or non-homogeneous sample matrix.

M_ES The reported value is an estimate. The amount of residue measured during analysis was outside of reference method limits.

M_E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.

M D-RL The RPD for the sample duplicate was outside of QC acceptance limits due to<RL.

M_DIL Sample was diluted. The MDL and MRL were raised due to the dilution.

Sample received at the lab outside of required hold time.

Z Non Accredited Analyte
DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

 M_TTTT

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Needing	Address: Company Ne Pace Project Pace Project Composite stw SAMPLE COPPOSITE STW	Brad ace Profile #: TED STED DATE TIME	Steve Davisor A SAMPLE TEMP AT COLLECTION # OF CONTAINERS # OF CONTAINERS # OF CONTAINERS # OF CONTAINERS	Preservatives	REG	REGULATORY AGENCY GROUND WATER DRIN	GE	NCY DRINKING WATER OTHER MCES
MP-7 d Jacobson d Jacobson D Weeks Project Number 2 Weeks Project Number Project Number Avail Matrix Codes Avail Matr	Company Na Address: Pace Quote Project Pace Suctions Fa SAMPLE TYPE Cowrosine STA	Brad are Profile #: TED NAPOSITE ENDIGINA DATE TIME	Dupreserved	Preservatives	12 L	UND WATER		NG WAT
d Jacobson d Jacobson Project Number 2 Weeks Project Name: Vald Matrix Codes Vald M	Address: Address: Address: Address: Address: Address: DATE TYPE O O O O C=GRAB C=COMP SAMMLE TYPE O O O O O O O O O O O O O O O O O O O	TED	Dupreserved	Preservatives	L			MCES
a Jacobson 2 Weeks Project Number 2 Weeks Project Number Project	Sherco Ponds Fall 22 Sherco Po	TED TENDE	Пиртезегией	Preservatives	-		OTT	MCTO
Project Number 2 Weeks Project Number Project Name: All Matrix Cacles Project Name: All Matrix Cacles CO WARTER CO WARTER CO WARTER WATER Sherco Project Manage	TED COMPOSITE END	Dubreserved	Preservatives		MN T ILT	N N	M.	
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Section D Required Client Information MALTER CODE SAMPLE ID WATER MALTER CODE WATER WATER CODE WATER WATER WATER WATER WATER WATER WATER WATER WATER WATER WATER WATER WATER WATER WATER WATER WATER WATER WATER WATER P-03A P-03A P-04A -1 P-05A -1 P-05A -1 P-05A -1 P-05A -1	0 0 0 G-6RAB C=COMP SAMPLE TYPE AS SAMPLE TYPE AS SAMPLE TYPE	FEENDYGRAB	# OF CONTRINERS # OCCLECTION	Preservatives	Filtered (Y/N)		1	
Sample IDs MUST BE UNIQUE (A-2, 0-91 ->) (B-01A-2 P-03A P-03B P-04A -1 P-05A -1 (2)	94/A0=0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	COMPOSITE END/GRAB DATE TIME	hubteserved			2 4 A A A A A A A A A A A A A A A A A A	(NIX) OU	
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P-03A P-03B P-04A -1 P-05A -1 (2)	0 0 0			Na Na Me	10/10/10/10	14)		Lab I.D.
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P-05A -1 (2)		0101 22/11			×)			
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1-44	WT G				-			
. ju	WT 6	11/3/22 0940			×			
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	WT G -	11/12 1320			: ×			
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12 () P-50B ⁻ w	WT G				× ×			
Additional Comments:	SHED BY / AFFILIATION	DATE TIME	ACCEPTED B	ACCEPTED BY / AFFILIATION	DATE TIME		SAMPLE CONDITIONS	ONS
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•	SIGNATURE	SIGNATURE of SAMPLER: 7 1827	2	DATE Signed (MM / DD / YY)	11/4/11		cn	swb

CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section C Invoice Information:	Steve Davis				Brad Jacobson		NC	MPLE TEME COLLECTIO	0						1	_					- 4				
ct Information:	Attention:	Company Name:	Address:	Pace Quote Reference:	Pace Project Manager:	Sherco Ponds Fall 22 Pace Profile #:	COLLECTED	C COMPOSITE START COMPOSITE ENDOGRABE	DATE TIME			26/8/11	28/11	- 11/122	0,21 2712111		5551 22/11/11 *	11/122 1430			3Y/AFFILIATION DATE TIME ACCEPTED	midize use			
Section B Required Project Information:	Report to: Brad Jacobson	Copy To: Riley Jacobson		Purchase Order No.:	Project Number	ne: Xcel Energy	ODE	§ ° % S § € 8	S W	W MT			WT	WT	WT	WT G	WT G	WT G	WT G	D TW	_	2002	2016	2	
	Xcel Energy	Services	MP-7	Brad Jacobson		Requested Due Date/TAT: 2 Weeks P	Section D Required Client Information Management SAMPLE ID	iaue		- Clos-4 (i)	x P-56	09-d	¥ P-62	P-66	P-88	P-89-1	P-90	P-90A	456-4 ()	() 1-93X	Additional Comments:	SV & SV R	Operation will be by sky	acrost 2 reacts to	

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Pace Analytical"

Pace Project No. Lab I.D. DRINKING WATER NIN OTHER Samples Intact OTHER MCES N/A N/A SAMPLE CONDITIONS of Sealed Cooler N/A N/A N/A L Z Custody REGULATORY AGENCY > N N/W Ice N/A N/A N/A Received on __ SCL ☐ NPDES F GROUND WATER ☐ O° ni qmeT L HO 525 TIME RCRA وحا 22/1/12 LOCATION gray Jees Dear Hoters iltered (Y/N) SITE DATE TSU T equested nalysis: 7/2 DATE Signed (MM / DD / YY) ACCEPTED BY / AFFILIATION lethanol EOSSSEV XC HOEN IOH EONH 705°H Jupreserved Steve Davis # OF CONTAINERS Brad Jacobson SAMPLER NAME AND SIGNATURE 252 SAMPLE TEMP AT COLLECTION TIME Short 1135 0151 ohs 019 大 105 1640 TIME 1705 2541 11/2/22/140 Pace Profile #: 1/2/12/1 2212/11 21/11 22/2/11 11/3/22 11/11/22 22/1/11 SIGNATURE of SAMPLER: 11/2/24 11/127 11/122 DATE 22/1/11 DATE COLLECTED Pace Quote Reference ace Project Manager: TIME Invoice Information Energy Sherco Ponds Fall 22 RELINQUISHED BY / AFFILIATION Company Name: Section C Attention: DATE Address: SAMPLE TYPE GRAB C=COMP 9 O 9 O O O 9 6 9 0 9 9 Riley Jacobson Brad Jacobson WT TW TW TW W W W TW TW \ M \ N M MATRIX CODE Required Project Information: Xce urchase Order No. Project Number Project Name: Section B Report To: Copy To: MATRIX pHStrps: 1 420133 @ NO SAMPLE - 165 Walth Osubmitted 11/1120 by SICR P-129 (%) P-101A P-101B P-126D P-128D P-130D 400-4 P-126 P-94A P-127 P-128 P-130 **Environmental Services** 2 Weeks (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE 20 Massi Required Client Info Brad Jacobson One Character per box. SAMPLE ID Xcel Energy 3 Required Client Information: Fax equested Due Date/TAT: Additional Comments: Section D Section A mail To: ompany: 10 H M3TI

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Pace Analytical

DRINKING WATER OTHER MCES Samples Intact SAMPLE CONDITIONS N/A N/A þ Sealed Coole N/A N/A N/A N/A Z Z REGULATORY AGENCY N N Custody Received on Ice N/A DIVA N/A = GROUND WATER SCL 200 MN O° ni qmeT LHO NG TIME RCRA DATE Signed (MM/DD/YY) LOCATION hory 72/4/11 NPDES iltered (Y/N) SITE L UST DATE Requested Analysis: Jahrer cere ACCEPTED BY / AFFILIATION lethanol XE EOSSEN HOP ICI EONH OSZH Jupreserved Leeks. Steve Davis # OF CONTAINERS Brad Jacobson SAMPLER NAME AND SIGNATURE COLLECTION 252 TA 9MBT 3J9MA2 TIME williarso 1330 1032 145B 0850 NA 140 45 1000 TIME COMPOSITE END/GRAB Pace Profile #: 11/3/22 12/4/11 11/3/22 11/3/22 14/122 DATE 11/3/22 1/4/27 11/2/12 11/3/22 SNATURE of SAMPLER DATE COLLECTED ace Quote Reference: ace Project Manager: TIME Invoice Information: Energy Sherco Ponds Fall 22 RELINQUISHED BY / AFFILIATION Company Name: Section C Attention: Address: DATE SAMPLE TYPE G=GRAB C=COMP 9 0 9 0 9 O O 9 O O Brad Jacobson Riley Jacobson WT WT WT WT WT \ M MATRIX CODE TW W W M WT M 7 Sex Required Project Information: Xcel Jurchase Order No.: Project Number Project Name: Section B Report To: Copy To: (3) NO SAMPLE - Res WEIL photons: popular 0 submitted 1/1/12 by SER 0 Required Client Information P-152A P-150 P-131D P-154A P-132 4-155 C P + 56 P-131 P-151 P-153 P-157 844 Environmental Services 2 Weeks One Character per box. (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE Brad Jacobson Xcel Energy SAMPLE ID MP-7 Required Client Information: Fax: Requested Due Date/TAT: Additional Comments: Section D 10ne: (612) Company: Email To: Address: # MBTI

e-File(ALLQ020rev.3,31Mar05))22Jun2005

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Pace Analytical"

Pace Project No. Lab I.D. DRINKING WATE OTHER OTHER MCES N/A N/A Samples Intact SAMPLE CONDITIONS of Sealed Cooler N/A N/A L REGULATORY AGENCY Page: 5 N N lce N/A N/A N/A Received on __ SC □ NPDES F GROUND WATER □ 30 J° ni qmeT L HO NC C 253 TIME T RCRA LOCATION iltered (Y/N) SITE 1200 11 4 39 T UST tequested inalysis: DATE Signed (MM / DD / ACCEPTED BY / AFFILIATION Nethanol OSSEN 1 HOPN IOH o celaser EONH OSZH Jupreserved Steve Davis # OF CONTAINERS Brad Jacobson SAMPLER NAME AND SIGNATURE SAMPLE TEMP AT COLLECTION 0224 TIME 1055 1110 0251 TIME Sp21 251511 NA 2/2/20 22/1/10 114/22 11/4/22 11/2/22 114122 IGNATURE of SAMPLER: DATE DATE COLLECTED Pace Quote Reference Pace Project Manager: Invoice Information. TIME RELINQUISHED BY / AFFILIATION Xcel Energy Sherco Ponds Fall 22 Sompany Name Section C DATE Attention: Address: SAMPLE TYPE G=GRAB C=COMP O 9 0 O 0 9 0 9 0 9 O O Brad Jacobson Riley Jacobson WT TW W TW. M ₩ W ₩ TW L M M 1 MATRIX CODE M Required Project Information. Purchase Order No. Project Number Project Name: Section B Report To: ptstps: mtoolss Copy To: MATRIX OS brittle Willer Ly SKR 6 2 NO SAMPLE - RUS INHIRE Required Client Information P-162 P-173 4195 4 P-177 P-178A P-178B TATE (P-164 P-165 #-+-4 P-163 Environmental Services 2 Weeks One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE Brad Jacobson Xcel Energy SAMPLE ID 0 0 Required Client Information: Fax: equested Due Date/TAT: Section D Additional Comments: company mail To: ddress: H M3TI 10

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Face Analytical"

Pace Project No. Lab I.D. DRINKING WATE OTHER OTHER MCES N/A N/A SAMPLE CONDITIONS of N/A N/A N/A N/A REGULATORY AGENCY L N N M N/A N/A ☐ NPDES F GROUND WATER ☐ SCL 40 HO 552 L C TIME L RCRA LOCATION iltered (Y/N) 14/2/ SITE DATE L UST ACCEPTED BY / AFFILIATION Nethanol Na₂S₂O₃ /xcx HOEN ICI EONH 705²H npreserved Steve Davis Brad Jacobson # OF CONTAINERS SAMPLE TEMP AT COLLECTION TIME 1250 1355 5550 1400 1000 TIME 11/12 11/12 22/1/17 22/h/11 11/4/22 DATE DATE COLLECTED ace Quote Reference Pace Project Manager RELINQUISHED BY / AFFILIATION TIME Invoice Information Xcel Energy Sherco Ponds Fall 22 Company Name 200 Section C Attention: DATE Address: G=GRAB C=COMP O O O O O O O 9 O O 9 SAMPLE TYPE Riley Jacobson Brad Jacobson ₩. M TW M W M LN MI WT W W \ \ **■**GOO XIRTAM Required Project Information urchase Order No. roject Number Project Name: Section B Report To: Copy To: MATRIX Duplicate BAP2 Duplicate NPDES Duplicate BAP Rinse NPDES Rinse BAP Rinse BAP2 Duplicate P3 pt Strp 5", m. Hoar 3 P-1807 CO81-4-C1071-4 Environmental Services 2 Weeks One Character per box. (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE Brad Jacobson SAMPLE ID Xcel Energy 0 MP-7 O 11/12 c by ske 9 Required Client Information: Fax: Requested Due Date/TAT: Additional Comments: Section D hone; (612) 597-7254 K Section A N company: Address: Email To: # MHTI 9 2 10 11

e-File(ALLQ020rev.3,31Mar05))22Jun2005

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SAMPLER NAME AND SIGNATURE

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Pace Analytical"

DRINKING WATE OTHER OTHER MCES N/A N/A Samples Intact SAMPLE CONDITIONS of Custody Sealed Cooler N/A N/A N/A N/A e-File(ALLQ020rev.3,31Mar05))22Jun2005 REGULATORY AGENCY 3 NY lce N/A N/X 1 SCT GROUND WATER 3,0 MN J. ui dmeT L HO 32 NC. RCRA TIME DATE Signed (MM/DD/YY) // Y/CT 1 LOCATION Ren Trus NPDES 14/22 iltered (Y/N) SITE T UST DATE Requested Analysis: Jayret Flores ACCEPTED BY / AFFILIATION lonedish Xe EOSSSEN HOBI ICI EONH "OS"H Kiley Jones BSCN nubreserved Steve Davis Brad Jacobson # OF CONTAINERS SAMPLER NAME AND SIGNATURE COLLECTION 525 TIME 2521 0511 11/122 1245 0121 1100 1355 1430 TIME COMPOSITE ENDIGRA Pace Profile #: 11/3/22 14/22 11/3/22 27/2/11 22/1/11 113/22 112/22 11/1/22 DATE DATE COLLECTED Pace Quote Reference Pace Project Manager: Invoice Information: Xcel Energy Sherco Ponds Fall 22 TIME RELINQUISHED BY / AFFILIATION Company Name: COMPOSITE START Section C Attention: DATE SAMPLE TYPE GRAB C=COMP 9 0 O 9 O 0 O O O O O WT G Riley Jacobson Brad Jacobson W TW WT \ M TW WT TW TW WT WT TW MATRIX CODE Required Project Information: Jurchase Order No.: Project Name: Project Number Section B Report To: MATRIX DRINKING WATER Copy To: of stross - 4003 1 4800 m ch 1 Required Client Information Oswantted while by skR COS-4 () NE6-4 P-92A P-89-1 P-90A 4-928 P-56 09-d P-62 99-d P-88 P-90 Environmental Services 2 Weeks (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE Brad Jacobson Xcel Energy SAMPLE ID MP-7 Required Client Information: Fax: Requested Due Date/TAT: Section D Additional Comments: hone; (612) 597-7254 Section A mail To: Company Address: 10 # MHTI

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Pace Analytical"

Pace Project No. Lab I.D. DRINKING WATER NIN OTHER OTHER MCES N/A N/A Samples Intact SAMPLE CONDITIONS of Sealed Cooler N/A N/A N/A e-File(ALLQ020rev.3,31Mar05))22Jun2005 L REGULATORY AGENCY Custody N N WN) Ice N/A N/A N/A Received on SCL NPDES F GROUND WATER O° ni qmeT L HO 525 NCT TIME RCRA 22/1/12 LOCATION gray Jees Dear Hours iltered (Y/N) SITE DATE L UST Requested Analysis: 7/2 DATE Signed (MM / DD / YY) ACCEPTED BY / AFFILIATION lethanol OSSSEV XC HOEN IOH EONH 7OSZH Jupreserved Steve Davis # OF CONTAINERS Brad Jacobson SAMPLER NAME AND SIGNATURE 052 SAMPLE TEMP AT COLLECTION TIME 1045 1135 0151 195 ohs 019 大大 1640 TIME 1705 25h1 11/2/22/140 Pace Profile #: 1/2/27 2212/11 11/12 22/2/11 11/3/22 1/14/22 22/1/11 SIGNATURE of SAMPLER: 11/3/22 11/27 11/122 DATE 22/1/11 DATE COLLECTED Pace Quote Reference ace Project Manager: TIME Invoice Information Xcel Energy Sherco Ponds Fall 22 RELINQUISHED BY / AFFILIATION Company Name: Section C Attention: DATE Address: SAMPLE TYPE GRAB C=COMP 9 O O O O O 9 6 9 0 9 9 Riley Jacobson Brad Jacobson TW L M M TW W TW W M W TW TW \ N M MATRIX CODE Required Project Information: urchase Order No. Project Number Project Name: Section B Report To: Copy To: MATRIX pHStrps: 1 420133 @ NO SAMPLE - 165 Water P-129 (2) Osubmitted 11/11/22 by SICK P-101A P-101B P-126D P-128D P-130D 456-4 P-94A P-126 P-127 P-128 P-130 Environmental Services 2 Weeks (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE W MUSSI Required Client Info **Brad Jacobson** One Character per box. SAMPLE ID Xcel Energy (Required Client Information: Fax equested Due Date/TAT: Section D Additional Comments: Section A mail To: Jone: (612 ompany: ITEM #

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Pace Analytical

DRINKING WATER OTHER MCES Samples Intact SAMPLE CONDITIONS N/A N/A o Sealed Coole N/A N/A N/A N/A e-File(ALLQ020rev.3,31Mar05))22Jun2005 REGULATORY AGENCY Z N N Custody Received on lce N/A DIN N/A = GROUND WATER SCT 200 L. NW O° ni qmeT LHO NC TIME RCRA IDATE Signed (MM/DD/YY) LOCATION any 72/4/11 NPDES iltered (Y/N) SITE L UST DATE Requested Analysis: Jahrer Seena ACCEPTED BY / AFFILIATION lethanol XE EOSSEN HOP ICI EONH OSEH Jupreserved Leels. Steve Davis # OF CONTAINERS Brad Jacobson SAMPLER NAME AND SIGNATURE COLLECTION 252 TA 9MBT 3J9MA2 TIME williagrasso 1330 1032 1450 TIME MA 140 45 1000 COMPOSITE END/GRAB Pace Profile #: 11/3/22 12/4/11 11/3/22 11/3/22 14/122 DATE 113/22 1/4/27 11/2/27 11/3/22 DATE SNATURE of SAMPLER COLLECTED ace Quote Reference: ace Project Manager: TIME Invoice Information: Energy Sherco Ponds Fall 22 RELINQUISHED BY / AFFILIATION Company Name: Section C Attention: Address: DATE SAMPLE TYPE G=GRAB C=COMP 9 O 9 0 9 O O O O O Brad Jacobson Riley Jacobson WT W WT WT WT L M T MATRIX CODE TW W W M WT M 7) Less Required Project Information: Xcel Jurchase Order No.: Project Number Project Name: Section B Report To: Copy To: (2) NO SAMPLE - Res WEIL 0 pHStrps: MAMISE Osum Heed 1/1/102 by SER (N Required Client Information P-152A P-150 P-131D P-154A P-132 4-155 - P+86 P-131 P-151 P-153 P-157 854 Environmental Services 2 Weeks One Character per box. (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE Brad Jacobson Xcel Energy SAMPLE ID MP-7 Required Client Information: Fax: Requested Due Date/TAT: Additional Comments: Section D 10ne: (612) Company: Email To: Address: # MBTI

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Face Analytical"

Pace Project No. Lab I.D. DRINKING WATE OTHER OTHER MCES N/A Samples Intact SAMPLE CONDITIONS of Sealed Cooler N/A e-File(ALLQ020rev.3,31Mar05))22Jun2005 N/A N/A N/A REGULATORY AGENCY L Page: 6 × × ME lce N/A N/A Received on ☐ NPDES F GROUND WATER ☐ SCL 40 O° ni qmeT L HO 552 الكي TIME L RCRA Somethan LOCATION iltered (Y/N) 14/2/ SITE DATE L UST Requested analysis: NATE Signed (MM / DD / YY) ACCEPTED BY / AFFILIATION Nethanol LOSS SEV XCV HOSN HCI 550 EONH 705²H ubueseuved Steve Davis Brad Jacobson SAMPLER NAME AND SIGNATURE SAMPLE TEMP AT COLLECTION TIME 1250 355 5250 1400 1000 TIME 11/1/22 11/12 22/1/12 22/1/11 11/4/22 DATE DATE COLLECTED ace Quote Reference Pace Project Manager RELINQUISHED BY / AFFILIATION TIME Invoice Information Xcel Energy Sherco Ponds Fall 22 Company Name: 200 Section C Attention: DATE Address: G=GRAB C=COMP O O O O O 9 O Ō O O 0 SAMPLE TYPE Riley Jacobson Brad Jacobson \ M M M M W W LN M WT W W \ N **■**GOO XIRTAM Required Project Information urchase Order No. roject Number Project Name: Section B Report To: Copy To: MATRIX **Duplicate BAP2** Duplicate NPDES Duplicate BAP Rinse NPDES Rimsc BAP Duplicate P3 Rinse BAP2 Required Client Information pt Strp 5! mHoa? 3 P-1807 CO81-4 C1021-d Environmental Services 2 Weeks One Character per box. (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE Brad Jacobson SAMPLE ID Xcel Energy 0 MP-7 O 11/12 c by SKR 9 Required Client Information: Fax: Requested Due Date/TAT: Additional Comments: Section D hone: (612) 597-7254 K Section A N company: Address: Email To: # MHLI 9 4 10 11