2021 CCR Annual Groundwater Monitoring and Corrective Action Report

Bottom Ash Pond 2

Sherburne County (Sherco) Generating Plant
Becker, Minnesota

Prepared for:
Northern States Power Company, a Minnesota Corporation

January 31, 2022

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2021 CCR ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

Bottom Ash Pond 2

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.

Signature of Preparer:

David Katzner, P.G. #57700
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Date: January 31, 2021

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY 1
2. INTRODUCTION 2
2.1 Annual Groundwater Monitoring Report Requirements 2
3. SITE DESCRIPTION 5
3.1 Site Hydrogeology 5
4. MONITORING RESULTS 6
4.1 Compliance with §257.90(e) 6
4.1.1 Groundwater Monitoring System (§257.90(e)(1)) 6
4.1.2 Well Installation or Decommissioning (§257.90(e)(2)) 6
4.1.3 Summary of Monitoring Data (§257.90(e)(3)) 6
4.1.4 Transition Between Monitoring Programs (§257.90(e)(4)) 7
4.1.5 Other Information (§257.90(e)(5)) 7
5. DISCUSSION 8
5.1 Key Actions Completed 8
5.2 Problems 9
5.2.1 Problems Encountered 9
5.2.2 Resolution of Problems 9
5.3 Key Activities for 2022 11
6.0 REFERENCES 12

TABLES

Table 1 CCR Groundwater Monitoring System
Table 2 Summary of Data Collected
Table 3 Count of Parameters Analyzed by Well
Table 4 Spring 2021 Groundwater Summary Data
Table 5 Fall 2021 Groundwater Summary Data

FIGURES

Figure 1 Site Location Map
Figure 2 CCR Groundwater Monitoring System
Figure 3 Water Table Elevation Contour Map (05/03/2021)
Figure 4 Water Table Elevation Contour Map (11/01/2021)

APPENDICES

Appendix A – Spring 2021 Detection Monitoring Event Laboratory Report and Field Datasheets
Appendix B – Fall 2021 Detection Monitoring Event Laboratory Report and Field Datasheets

1. EXECUTIVE SUMMARY

Bottom Ash Pond 2 at the Sherburne County Generating Plant is subject to groundwater monitoring and corrective action requirements under U.S. Code of Federal Regulations, Title 40, Parts §257.90 to §257.98. Bottom Ash Pond 2 operated under the detection monitoring program in §257.94 at both the start of this annual reporting period on January 1, 2021 and at the end of the annual reporting period on December 31, 2021. Statistical analysis performed on year 2021 groundwater data indicated no statistically significant increases over background for Appendix III to 40 CFR §257 constituents pursuant to §257.94(e). As such, no additional notifications were required and Bottom Ash Pond 2 ended the current annual reporting period in detection monitoring under §257.94.

Because Bottom Ash Pond 2 operated under the detection monitoring program in §257.94 during 2021, statistical analysis to determine statistically significant levels above groundwater protection standards for one or more of the constituents listed in Appendix IV to 40 CFR §257 pursuant to §257.95(g) (i.e. assessment monitoring) was not performed. 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.

2. INTRODUCTION

This report presents the documentation of the status of groundwater monitoring and corrective action for the year 2021 (YR2021) for Bottom Ash Pond 2 (BAP2) at the Sherburne County Generating Plant (Sherco) located in Becker, Minnesota. The BAP2 is owned and operated by Northern States Power Company, a Minnesota Corporation (NSPM).

BAP2 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 CCR from electric utilities. In particular, this report addresses the requirements of 40 CFR Section 257.90(e), annual groundwater monitoring and corrective action for YR2021.

This report has been prepared in general accordance with the reporting procedures outlined in the Sherco Bottom Ash Pond 2 CCR Groundwater Sampling and Analysis Plan (Carlson McCain, 2020b). Any deviations from the requirements of the Groundwater Sampling and Analysis Plan are described in subsequent sections of this report.

2.1 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 5.4 of the CCR Groundwater Sampling and Analysis Plan (Carlson McCain, 2020b) also includes a list of items to be included in the annual report that are similar to items 1 through 5 above, with the addition of a water table contour map using data collected from the current year.

In this report, 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), and Section 5 (Discussion) summarizes key actions completed in YR2021, describes any problems reported in YR2021 and the actions to resolve the problems, and key activities projected for 2022.

3. SITE DESCRIPTION

The BAP2 is located in the City of Becker, Sherburne County, Minnesota. The BAP2 is approximately 18 acres in size and is part of a larger generating plant site. Construction of the BAP2 was completed in 2020 and no modifications to the facility have been made since. The BAP2 location is shown on Figure 1 and an aerial photograph and site layout map for BAP2 are shown on Figure 2.

3.1 Site Hydrogeology

The site hydrogeology is discussed in more detail in the Bottom Ash Pond 2 Groundwater Monitoring System Certification (Carlson McCain, 2020a), 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, 2020a.

The Facility is located in the Anoka Sand Plain physiogeographic region. The site consists of moderate to highly permeable alluvial deposits above and below a low-permeability glacial till identified as the Superior till. Precambrian granite, the first bed rock encountered, is considered impermeable. Groundwater flows 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 4 to 54 feet/year.

The conceptual model for the hypothetical (or potential) release of a constituent of concern (COC) from the BAP2 focuses on groundwater as the transport mechanism. The water table beneath the BAP2 typically occurs below the Superior till. Exfiltration from BAP2 area is anticipated to move vertically downward from the base 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. Upon reaching the water table, a COC would likely travel mainly horizontally to the southwest and toward the Mississippi River.

4. MONITORING RESULTS

Section 4.1 below presents the monitoring results obtained during YR2021 in terms of the specific requirements of §257.90(e) that are to be included in this report.

4.1 Compliance with §257.90(e)

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

The area of the BAP2 and all upgradient and downgradient monitoring well locations included in the BAP2 CCR groundwater monitoring system are shown and labeled on Figure 2. A summary of the monitoring wells included in the BAP2 CCR Groundwater Monitoring System is included in Table 1.

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

No monitoring wells that are part of the groundwater monitoring system for the BAP2 were installed or decommissioned during YR2021.

Due to excessively high field turbidity and total suspended solids in the spring monitoring event sample from well P-175, the well was redeveloped on June 2, 2021. A well development form for the redevelopment of well P-175 was placed in BAP2's operating record for compliance with §257.91(e)(1).

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

Monitoring data collected during YR2021 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 2021 monitoring results is provided on Table 4 and a summary of the fall 2021 monitoring results is provided on Table 5.

Baseline Monitoring Data
As required by §257.94(b), a baseline data set was completed by collecting eight independent samples from each of the wells in the groundwater monitoring system from March 2 through July 30, 2020. Each of the baseline samples were analyzed for the detection monitoring/Appendix III constituents and the assessment monitoring/Appendix IV constituents. Summary data from the

eight baseline monitoring events and Laboratory reports and field datasheets for the baseline dataset are included the 2020 CCR Annual Groundwater and Corrective Action Monitoring Report (Carlson McCain, 2021).

Groundwater Elevations and Flow Direction

Groundwater elevations and flow direction in the vicinity of the BAP2 during the spring and fall of 2021 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 BAP2 along with other nearby monitoring wells and water level piezometers not included in the BAP2 CCR monitoring system. For both of the events, the flow direction was generally to the 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 towards the Mississippi River.

Groundwater elevations in the vicinity of the BAP2 were low during YR2021 compared to recent years and were calculated to be approximately 0.55 feet above historic lows during the fall monitoring event. The low groundwater levels at BAP2 are consistent with drought conditions experienced throughout Minnesota during 2021. No significant changes in groundwater gradients or flow direction have been observed due to low groundwater levels in the vicinity of BAP2.

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

No transition from the detection monitoring program to the assessment monitoring program occurred during YR2021.

4.1.5 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.

5. 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 5.1 below discusses the key actions completed for the groundwater monitoring program at the BAP2; Section 5.2 discusses any problems encountered with the groundwater monitoring and actions to resolve such problems; and Section 5.3 discusses key activities that may occur in the upcoming year.

5.1 Key Actions Completed

Key actions that were completed during YR2021 include the following items:

- The 2020 Annual CCR Groundwater Monitoring and Corrective Report (Carlson McCain, 2021) was completed, placed in the facility's operating record on January 28, 2021, and posted on the BAP2's publicly available website by February 27, 2021.
- Monitoring wells were sampled during the spring event conducted on May 4-5, 2021 and analyzed for all Appendix III constituents as required by §257.94(b) and (c).
- Well P-175 was redeveloped on June 2, 2021. A well development form for the redevelopment of well P-175 was placed in BAP2's operating record for compliance with §257.91(e)(1).
- Monitoring well P-175, as part of the spring monitoring event, was resampled on June 10, 2021 and analyzed for all Appendix III constituents.
- Monitoring wells, except P-152A, were sampled during the fall monitoring event conducted on November 2-4, 2021 and analyzed for all Appendix III constituents as required by §257.94(b) and (c). Well P-152A was not sampled due to low water levels and is described in Section 5.2 of this report.
- Bladder pumps installed in wells P-175, P-176 and P-177 were adjusted to lower positions in the well water columns on November 2-3, 2021. Well P-175, P-176 and P-177 pump issues and adjustments of the bladder pumps in the wells are described in Section 5.2 of this report.
- Statistical evaluation of the spring and fall monitoring event data was performed on June 21, 2021 and January 10, 2021, respectively, for compliance with §257.93(h) to determine whether a statistically significant increase has occurred for Appendix III constituents at the monitoring wells.

5.2 Problems

5.2.1 Problems Encountered

P-175 Sample Quality Issues
The sample obtained from well P-175 during the spring monitoring event on May 5, 2021 exhibited an abnormally high field turbidity of 250 NTU along with a total suspended solids (TSS) concentration of 2,280 mg/L. The abnormally high TSS was identified during data validation and the issue or inconsistency may impact the validity of the P-175 sampling data. Data validation procedures are described in Section 5.1.1 of the CCR Groundwater Sampling and Analysis Plan (Carlson McCain, 2020b). Any sample with a field turbidity result over 5 NTU or TSS detection over 5 mg/L indicates the presence of sediment that can interfere with the laboratory analysis possibly producing anomalous results of other sample constituents. As such, the spring sample from well P-175 was flagged as potentially invalid. The high field turbidity and TSS values appeared at the time to be a result of excessive sediment build up in the water column of well P-175.

Low Groundwater Level Issues
Low groundwater levels prevented a sample from being collected from well P-152A during the fall monitoring event. Attempts were made to collect a sample from the well using the dedicated bladder pump installed in the well and a non-dedicated submersible pump and associated tubing. The water level in the well was below the top of the bladder pump which prevented the bladder pump from functioning. A submersible pump generally needs at least a one-foot water column in wells for the pump to work, but only a 0.89-foot water column was present in well P-152A at the time of sampling.

P-175, P-176 and P-177 Pump Issues
Low groundwater levels also caused bladder pumps in wells P-175, P-176 and P-177 to malfunction when the wells were first attempted to be sampled for the fall monitoring event. It was identified that water levels were below the top of the bladder pumps in each of the three wells, likely causing the malfunction of the pumps. Further investigation of the issue identified that the dedicated bladder pumps in wells P-175, P-176 and P-177 were installed 4.36, 3.82 and 2.98 feet from the respective well bottoms, leaving space for the pumps to be adjusted lower in the water columns in each well.

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 YR2021. No corrective action was required at the facility during YR2021.

5.2.2 Resolution of Problems

P-175 Sample Quality Issues
To remove excessive sediment build up in the water column of well P-175, the dedicated bladder pump was removed and the well was redeveloped on June 2, 2021 using a 12-volt submersible

pump. Approximately 36 gallons of water were removed from the well and the purge water was clear after about 30 gallons were removed. Once redevelopment was complete, the bladder pump was reinstalled in the well. The well was purged and resampled on June 10, 2021 and reported low field turbidity and TSS results and other parameter concentrations appeared normal.

The June 10, 2021 resampling of well P-175 confirmed that the sample obtained on May 5, 2021 was of low quality due to excessive sediment build up in the well and; as such, the May 5, 2021 sampling data from P-175 (with the exception of the static water level and water level elevation) was invalidated and removed from the data set. The June 10, 2021 sampling data was used during YR2021 data interpretation and will also continue to be used during future data interpretation.

Low Groundwater Level Issues

Low groundwater levels prevented samples from being collected from well P-152A, an upgradient well, during the fall monitoring event and represents a data gap from the fall monitoring event.

BAP2 has five upgradient wells in the monitoring system and the minimum number of background wells BAP2 is required to have is one. Interwell statistical analysis is performed on the monitoring system wells at BAP2. Considering BAP2 has five upgradient wells to pool for interwell statistical analysis, missing data from one well for possibly several monitoring events won't significantly affect data interpretation at BAP2. Well P-152A will once again be sampled as soon groundwater levels sufficiently recover at the well location.

P-175, P-176 and P-177 Pump Issues

Since the dedicated bladder pumps in wells P-175, P-176 and P-177 had adequate space to be adjusted lower in each of the monitoring wells, adjusting the bladder pumps lower in the water columns of each of the three wells appeared to be a viable solution to the pump issues. With relatively short water columns in each of the wells, the newly targeted installation depth for the bottom of the bladder pumps in the wells was about 0.7 feet above the well bottoms to maximize the available water columns and avoid uptake of sediment during purging and sampling of the wells. On November 2-3, 2021, Carlson McCain, Inc. removed the bladder pumps from the wells, disassembled the tubing and compression fitting portion of each pump assembly, fabricated the pumps with new longer tubing at custom lengths, and re-installed the bladder pumps in their respective wells. Due the nature of the work on the bladder pumps in wells P-175, P-176 and P-177, the project manager requested that the field sampler complete the following actions prior to sampling of the wells:

- Remove the bladder pump from well P-176, purge the well with a submersible pump to remove excess sediment, and reinstall the bladder pump prior to sampling of the well. Excess sediment was observed in the well water and on the pump itself during process of deepening the bladder pump.

- Purge five well volumes from wells P-175, P-176 and P-177 to reduce the potential for cross-contamination from the handling and fabrication of the pump assemblies outside of the well environments.

Once the pump adjustment work and project manager requested actions were completed, wells P-175, P-176 and P-177 were successfully sampled on November 4, 2021 for the fall monitoring event. The November 4, 2021 samples from wells P-175, P-176 and P-177 reported reasonably low field turbidity and TSS results and other parameter concentrations appeared normal. As such, the results from the three wells were accepted and used for YR2021 data interpretation.

Other Problems
No other significant problems with the groundwater monitoring system, or deviations from the CCR Groundwater Sampling and Analysis Plan requiring resolution were reported at the facility during YR2021.

5.3 Key Activities for 2022

The following key actions are anticipated at the BAP2 in the year 2022:

1. Routine, semi-annual detection monitoring events at monitoring system wells are planned in the spring between March 15 and May 15, 2021 and in the fall between September 15 and November 15, 2022.
2. Statistical evaluation of monitoring event data for compliance with §257.93(h) to determine whether a statistically significant increase has occurred for Appendix III constituents at the monitoring wells.

6.0 REFERENCES

Carlson McCain, 2020a. CCR Groundwater Monitoring System Certification, Bottom Ash Pond 2, Sherco Generating Plant, prepared for Northern States Power Company, A Minnesota Corporation, September 21, 2020.

Carlson McCain, 2020b. CCR Groundwater Sampling and Analysis Plan, Bottom Ash Pond 2, Sherco Generating Plant, prepared for Northern States Power Company, A Minnesota Corporation, September 21, 2020.

Carlson McCain, 2020c. Statistical Analysis Plan, Bottom Ash Pond 2, Sherco Generating Plant, prepared for Northern States Power Company, A Minnesota Corporation, September 21, 2020.

Carlson McCain, 2021. 2020 CCR Annual Groundwater Monitoring and Corrective Action Report, Bottom Ash Pond 2, Sherco Generating Plant, prepared for Northern States Power Company, A Minnesota Corporation, January 28, 2021.

Tables

Table 1

CCR Groundwater Monitoring System

Bottom Ash Pond 2

Well ID	Minnesota Unique Well ID	Date Installed	Location Site Coordinates (ft)		Elevation Top of Riser Pipe	Screen Length (ft)	Elevation Top of Screen	Elevation Bottom of Screen	Monitoring Status	Hydrologic Location
			Easting	Northing						
P-17	NA	8/26/81	2030284.10	866284.10	964.34	20	923	903	Routine Semi-annual	Up-Gradient
P-152A	806318	10/10/14	2031471.60	866696.40	965.87	10	934	924	Routine Semi-annual	Up-Gradient
P-158	812967	9/23/15	2029122.00	866410.00	966.55	10	927	917	Routine Semi-annual	Up-Gradient
P-173	844707	10/30/19	2029804.64	865401.54	998.49	10	928	918	Routine Semi-annual	Downgradient
P-174	844706	10/31/19	2029310.84	865400.22	1000.67	10	929	919	Routine Semi-annual	Downgradient
P-175	844705	10/31/19	2029018.22	865613.31	1002.92	10	929	919	Routine Semi-annual	Downgradient
P-176	844703	11/1/19	2029018.73	865941.35	1002.65	10	929	919	Routine Semi-annual	Downgradient
P-177	844704	11/4/19	2029567.92	866324.19	966.26	10	930	920	Routine Semi-annual	Up-Gradient
P-178A	844708	10/29/19	2030540.43	865533.40	966.46	10	929	919	Routine Semi-annual	Up-Gradient

*Notes:

Elevation is feet above mean sea level

Table 2
Summary of Data Collected
Bottom Ash Pond 2

Upgradient Wells				
Well ID	Number of Samples	Spring 2021[1]	Spring 2021 Resample[2]	Fall 2021[1]
P-17	2	5/4/2021	--	11/2/2021
P-152A	1	5/4/2021	--	NS[3]
P-158	2	5/4/2021	--	11/2/2021
P-177	2	5/4/2021	--	11/4/2021
P-178A	2	5/4/2021	--	11/2/2021

Downgradient Wells				
Well ID	Number of Samples	Fall 2021[1]	Spring 2021 Resample[2]	Fall 2021[1]
P-173	2	5/5/2021	--	11/2/2021
P-174	2	5/5/2021	--	11/2/2021
P-175	2	5/5/2021	6/10/2021	11/4/2021
P-176	2	5/5/2021	--	11/4/2021

[1] Sampled for detection monitoring for parameters listed in Appendix III of 40 CFR §257 as required by §257.94(a).

[2] Well P-175 was resampled as part of the spring detection monitoring event due to anomalous data in the original May, 2021 sample.

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

Table 3

Count of Parameters Analyzed by Well

Bottom Ash Pond 2

Appendix III Parameters									
Parameter	Well ID and Number of Samples								
	P-01A-1	P-17	P-22	P-23	P-152A	P-155	P-156	P-157	P-158
Boron, total (mg/L)	2	2	2	2	1	2	2	2	2
Calcium, total (mg/L)	2	2	2	2	1	2	2	2	2
Chloride, total (mg/L)	2	2	2	2	1	2	2	2	2
Fluoride, total (mg/L)	2	2	2	2	1	2	2	2	2
pH (lab) (pH)	2	2	2	2	1	2	2	2	2
Sulfate, total (mg/L)	2	2	2	2	1	2	2	2	2
Total Dissolved Solids (mg/L)	2	2	2	2	1	2	2	2	2

Appendix IV Parameters									
Parameter	Well ID and Number of Samples								
	P-01A-1	P-17	P-22	P-23	P-152A	P-155	P-156	P-157	P-158
Antimony, total (mg/L)	0	0	0	0	0	0	0	0	0
Arsenic, total (mg/L)	0	0	0	0	0	0	0	0	0
Barium, total (mg/L)	0	0	0	0	0	0	0	0	0
Beryllium, total (mg/L)	0	0	0	0	0	0	0	0	0
Cadmium,total (mg/L)	0	0	0	0	0	0	0	0	0
Chromium, total (mg/L)	0	0	0	0	0	0	0	0	0
Cobalt, total (mg/L)	0	0	0	0	0	0	0	0	0
Fluoride, total (mg/L)	0	0	0	0	0	0	0	0	0
Lead, total (mg/L)	0	0	0	0	0	0	0	0	0
Lithium Total (mg/L)	0	0	0	0	0	0	0	0	0
Mercury, total (mg/L)	0	0	0	0	0	0	0	0	0
Molybdenum, total (mg/L)	0	0	0	0	0	0	0	0	0
Selenium, total (mg/L)	0	0	0	0	0	0	0	0	0
Thallium, total (mg/L)	0	0	0	0	0	0	0	0	0
Radium, 226 and 228 combined (pCi/L)	0	0	0	0	0	0	0	0	0

Table 4
Spring 2021 Groundwater Summary Data
Bottom Ash Pond 2

Appendix III Parameters										
Parameter	Units	GWPS	Well ID and Sample Date							
			P-17 5/4/2021	P-152A 5/4/2021	P-158 5/4/2021	P-173 5/5/2021	P-174 5/5/2021	P-175 6/10/2021	P-176 5/5/2021	P-177 5/4/2021	P-178A 5/4/2021
Boron, total	mg/L	NA	<0.0500	<0.0500	0.561	0.163	0.224	0.161	0.729	0.0946	0.109
Calcium, total	mg/L	NA	65.4	57.2	88.4	68.5	100	84.6	79.4	71.4	32.3
Chloride, total	mg/L	NA	11.4	3.45	7.67	6.3	1.4	7.52	3.33	2.08	2.85
Fluoride, total	mg/L	NA	<0.7500	<0.7500	<0.7500	<0.7500	<0.7500	<0.7500	<0.7500	<0.7500	<0.7500
pH, Lab	pH	NA	7.85	7.92	7.8	7.96	7.75	7.88	7.95	7.74	8.02
Sulfate, total	mg/L	NA	18.3	16.1	107	25.1	48.8	66.3	64.8	22.3	37.6
Total Dissolved Solids	mg/L	NA	280	236	402	290	422	342	348	270	240

Field Parameters										
Parameter	Units	GWPS	Well ID and Sample Date							
			P-17 5/4/2021	P-152A 5/4/2021	P-158 5/4/2021	P-173 5/5/2021	P-174 5/5/2021	P-175 6/10/2021	P-176 5/5/2021	P-177 5/4/2021	P-178A 5/4/2021
ORP	mV	NA	173	154	153	173	173	256	175	131	165
Oxygen, dissolved	mg/L	NA	9.3	9.3	9.8	9	8.6	10.5	9.3	8.1	8.2
pH, field	pH	NA	8	7.9	7.8	7.9	7.8	8.6	8	7.6	7.9
Specific Cond, field	µmhos/cm	NA	480	370	860	500	604	250	650	520	450
Static Water Level	ft	NA	38.44	39.21	40.97	72.75	75.28	77.74	77.26	40.46	40.46
Temperature	degrees C	NA	8.5	9.6	9.6	9.5	9.6	16.4	10.3	10.6	10.3
Turbidity, field	NTU	NA	1	1	0.9	2	2.5	3.7	9.1	4	1
Water Level Elevation	ft	NA	925.9	926.66	925.58	925.74	925.39	925.18	925.39	925.8	926

GWPS = Groundwater Protection Standard

NA = Not Applicable

Two dashed lines = Not Analyzed

Downgradient Well

Table 5
Fall 2021 Groundwater Summary Data
Bottom Ash Pond 2

Appendix III Parameters											
Parameter	Units	GWPS	Well ID and Sample Date								
			P-17	P-152A[1]	P-158	P-173	P-174	P-175	P-176	P-177	P-178A
			11/2/2021	11/2/2021	11/2/2021	11/2/2021	11/2/2021	11/4/2021	11/4/2021	11/4/2021	11/2/2021
Boron, total	mg/L	NA	<0.0500	--	0.853	0.134	0.166	0.189	0.478	0.0976	0.201
Calcium, total	mg/L	NA	64	--	103	71.9	82.8	68.8	78.2	66.5	38.5
Chloride, total	mg/L	NA	15.1	--	9.04	5.67	<1.000	2.31	3.59	2.08	3.4
Fluoride, total	mg/L	NA	<0.7500	--	<0.7500	<0.7500	<0.7500	<0.7500	<0.7500	<0.7500	<0.7500
pH, Lab	pH	NA	7.78	--	7.71	7.78	7.68	7.73	7.68	7.71	7.89
Sulfate, total	mg/L	NA	18.9	--	120	26	23.3	26	66	28.1	44.4
Total Dissolved Solids	mg/L	NA	290	--	488	288	334	266	370	282	268

Field Parameters											
Parameter	Units	GWPS	Well ID and Sample Date								
			P-17	P-152A[1]	P-158	P-173	P-174	P-175	P-176	P-177	P-178A
			11/2/2021	11/2/2021	11/2/2021	11/2/2021	11/2/2021	11/4/2021	11/4/2021	11/4/2021	11/2/2021
ORP	mV	NA	183	--	201	191	197	157	160	203	190
Oxygen, dissolved	mg/L	NA	6.4	--	8.2	7.7	8	7.1	7.5	10.3	7.3
pH, field	pH	NA	7.8	--	7.4	7.5	7.3	7.6	7.5	7.5	7.6
Specific Cond, field	µmhos/cm	NA	500	--	780	540	610	460	590	510	510
Static Water Level	ft	NA	40.64	41.46	42.94	75.07	77.48	79.82	79.3	42.6	42.8
Temperature	degrees C	NA	9.8	--	10.2	9.2	9.7	11.1	12.3	11.1	9.9
Turbidity, field	NTU	NA	1.1	--	1.4	1.9	2.3	15	2.9	2.7	2
Water Level Elevation	ft	NA	923.7	924.41	923.61	923.42	923.19	923.1	923.35	923.66	923.66

GWPS = Groundwater Protection Standard

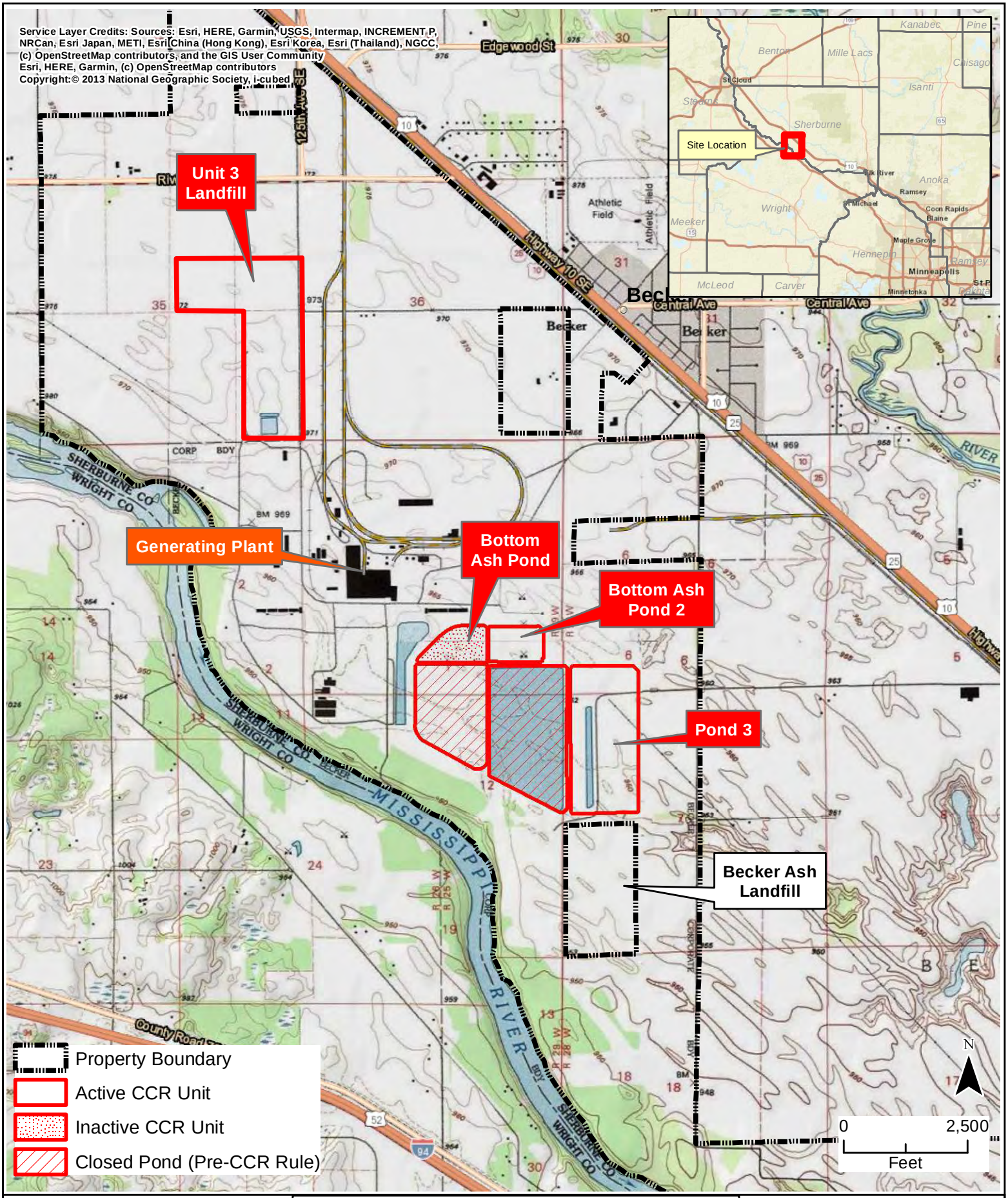
NA = Not Applicable

Two dashed lines = Not Analyzed

Downgradient Well

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

Figures



CARLSON McCAIN

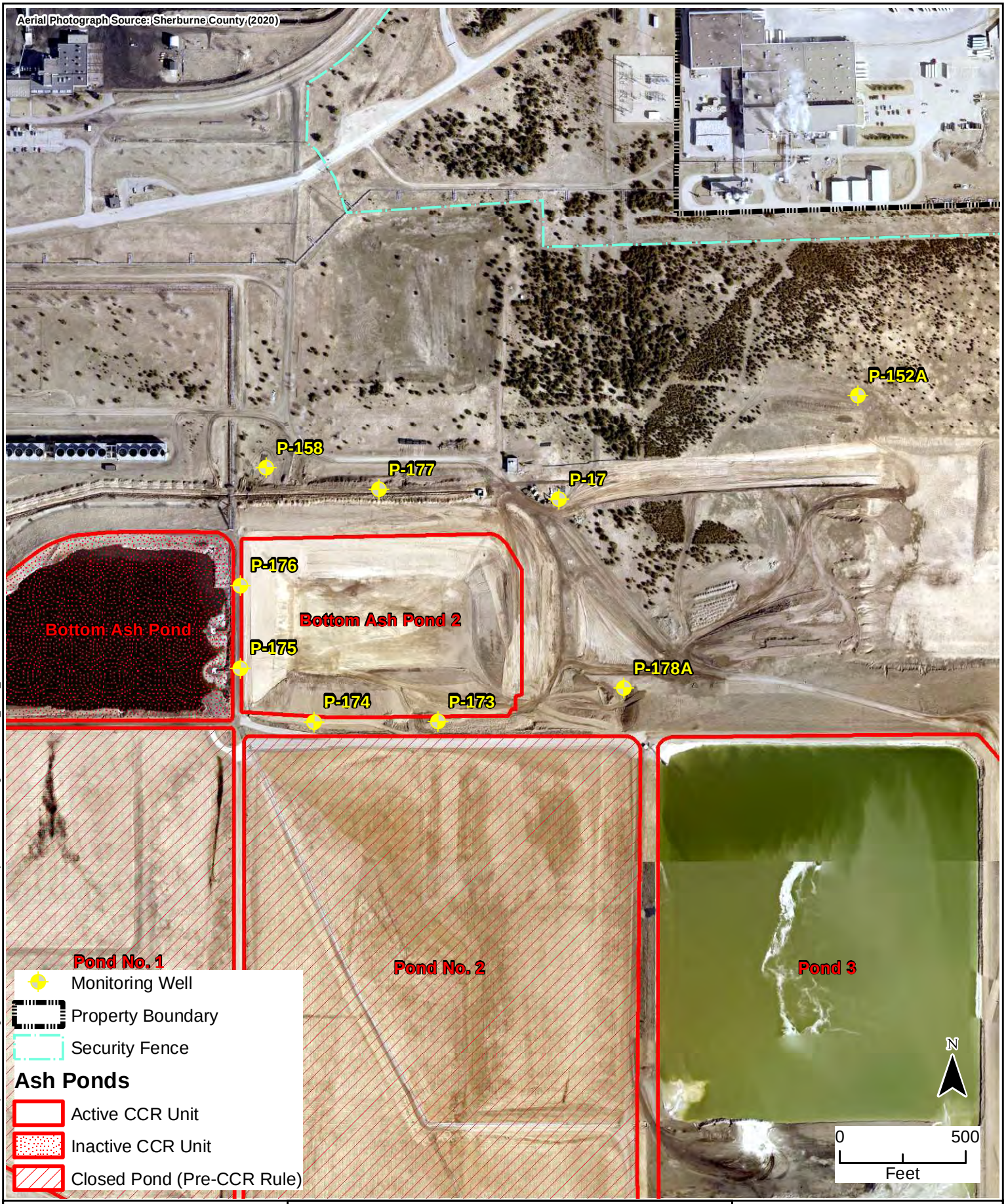
2021 CCR ANNUAL GROUNDWATER MONITORING REPORT

Bottom Ash Pond 2

Sherburne County Generating Plant
Becker, Minnesota

FIGURE 1

SITE LOCATION MAP



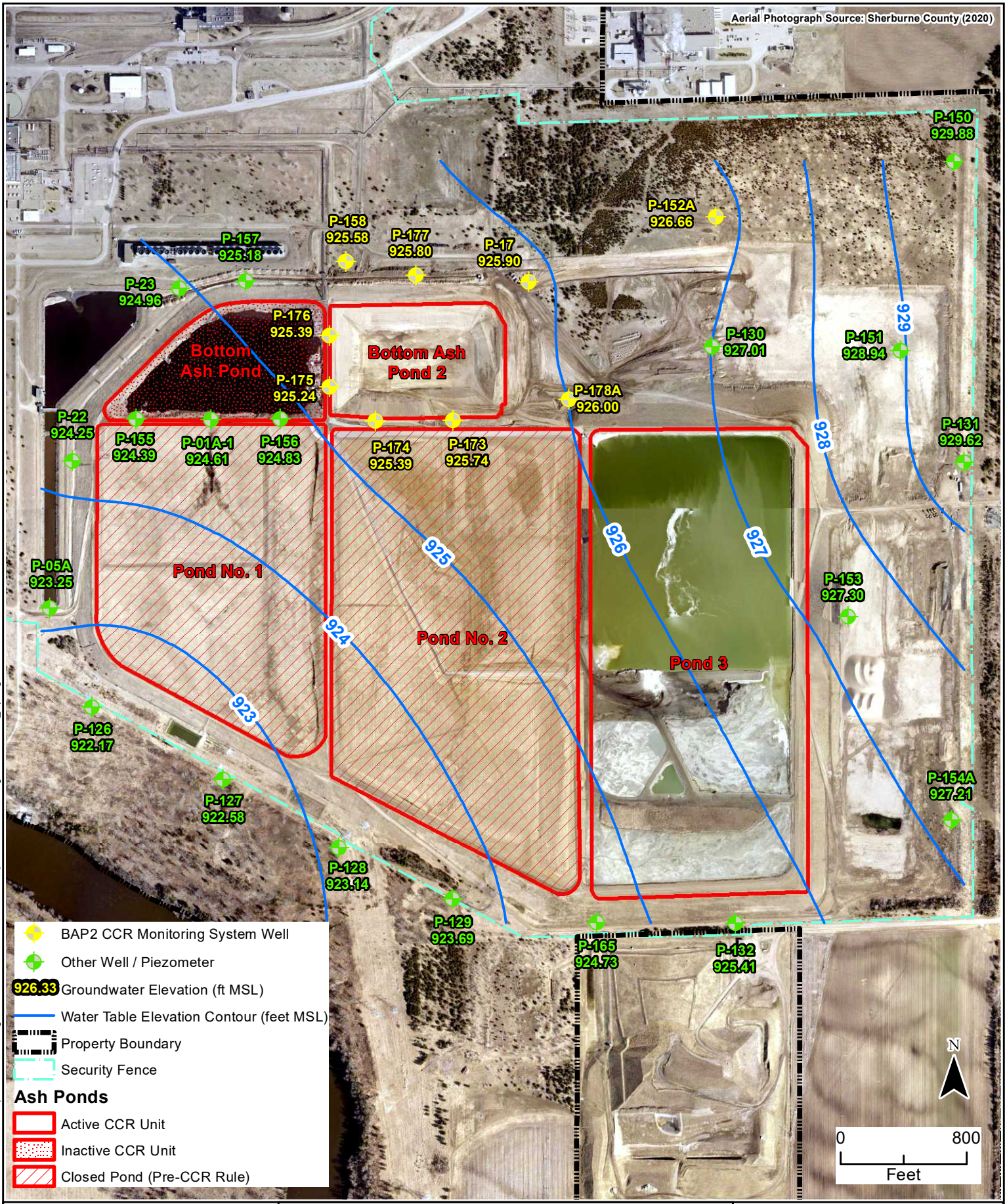
Document Path: P:\Projects\XCEL\6559 Ash Operations and Mgmt\Sherco\2021 CCR Annual Reports\BAP2\GIS\Figure 2 - BAP2_CCR_EMS.mxd

CARLSON McCAIN

2021 CCR ANNUAL GROUNDWATER MONITORING REPORT
Bottom Ash Pond 2
Sherburne County Generating Plant
Becker, Minnesota

FIGURE 2

CCR GROUNDWATER MONITORING SYSTEM



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CARLSON McCAIN

2021 CCR ANNUAL GROUNDWATER MONITORING REPORT
Bottom Ash Pond 2
Sherburne County Generating Plant
Becker, Minnesota

FIGURE 3
WATER TABLE ELEVATION CONTOUR MAP (05/03/2021)

Document Path: P:\Projects\XCEL\6559 Ash Operations and Mgmt\Sherco\2021 CCR Annual Reports\BAP2\GIS\Figure 4 - BAP2_Fall2Contours.mxd

CARLSON McCAIN

2021 CCR ANNUAL GROUNDWATER MONITORING REPORT
Bottom Ash Pond 2
Sherburne County Generating Plant
Becker, Minnesota

FIGURE 4
WATER TABLE ELEVATION CONTOUR MAP (11/01/2021)

Appendix A

Spring 2021 Detection Monitoring Event
Field Datasheets and Laboratory Reports

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client Xcel Sherco Project Sherco Ponds, Spring 2021 Project No. 21-04548

Monitoring Point ID P-17 Labeled P17

Inside Diameter 2 (inches) Key # 2106 ☒ Locked ☐ Not Locked

Casing Material: ☒ PVC ☐ Steel ☐ Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	58.76	Feet
Static water level measurement before purging (Start Depth)	38.44	Feet
Static water level measurement at time of sampling (Final Depth)	38.44	Feet
Static Water Level Elevation Before Purging	NA	Feet

Purge Method Bladder Pump Pump ID BPC-1

Date Purged 5/4/21 Water Column 20.32 Feet

Time Purged 1258 - 1358 One Casing Volume 3.31 Gallons

Pump Rate 0.2 (GPM) LPM Volume Purged 12 Gallons

Field Sampling Data

Date Sampled 5/4/21

Time Sampled 1400

Sampling Equip. Pump

Meter ID MPS-7 TM-6

Analyzed by CSP

Field Parameter Measurements of Sample

pH	8.0	(units)	D.O	9.3	(mg/l)
Spec. Cond.	480	(µmhos/cm)	Turbidity	1.0	(NTU)
Temp. Observed	8.4	(°C)	Eh	173	(mV)
Temp. Corrected	8.5	(°C)	Other	NA	

Field Measurements Temp. Corrected: ☒ Yes ☐ No ☐ NA

Sample for Soluble Metals Filtered in Field: ☒ Yes (@ final) ☐ No ☒ NA

Temperature Correction Factor: +0.1 °C

Weather Conditions During Sampling: 54°F sunny wind NW @ 15 mph

Sample Description: clear no odor

Observations: N/A

B-5

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
1318	8.0	480	8.4	9.4	1.2	174	4
1338	8.0	480	8.4	9.3	1.0	173	8
1358	8.0	480	8.4	9.3	1.0	173	12
			@ 5/4/21				

Samples chilled immediately after collection: ☒ Yes ☐ Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Chris Pelosi Pace Analytical

Lead Technician Signature: Chris Pelosi Date: 5/4/21

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client Xcel Sherco Project Sherco Ponds, Spring 2021 Project No. 21-04548

Monitoring Point ID P-152A Labeled P152A

Inside Diameter 2 (inches) Key # 2106 ☒ Locked ☐ Not Locked

Casing Material: ☒ PVC ☐ Steel ☐ Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	~~42.18~~ 42.35	Feet
Static water level measurement before purging (Start Depth)	39.21	Feet
Static water level measurement at time of sampling (Final Depth)	39.21	Feet
Static Water Level Elevation Before Purging	NA	Feet

Purge Method Dedicated Bladder Pump Pump ID BPC-1

Date Purged 5/4/21 Water Column 3.14 Feet

Time Purged 1215 - 1245 One Casing Volume 1.61 Gallons

Pump Rate ~~15~~ 0.2 GPM / LPM Volume Purged 6 Gallons

Field Sampling Data

Date Sampled 5/4/21

Time Sampled 1250

Sampling Equip. Pump

Meter ID MPS-7 TM-6

Analyzed by CSF

Field Parameter Measurements of Sample

pH	7.9	(units)	D.O	9.3	(mg/l)
Spec. Cond.	370	(µmhos/cm)	Turbidity	1.0	(NTU)
Temp. Observed	9.5	(°C)	Eh	154	(mV)
Temp. Corrected	9.6	(°C)	Other	NA	

Field Measurements Temp. Corrected: ☒ Yes ☐ No ☐ NA

Sample for Soluble Metals Filtered in Field: ☐ Yes ☐ No ☒ NA

Temperature Correction Factor: +0.1 °C

Weather Conditions During Sampling: 54°F overcast wind NW @ 15mph

Sample Description: Clear no odor

Observations: NA

B-4 * Radium Collected

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
1225	7.9	370	9.5	9.3	1.0	156	2
1235	7.9	370	9.5	9.3	1.0	155	4
1245	7.9	370	9.5	9.3	1.0	154	6

Samples chilled immediately after collection: ☒ Yes ☐ Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Chris Pelesi Pace Analytical

Lead Technician Signature: CJPe Date: 5/4/21

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client Xcel Sherco Project Sherco Ponds, Spring 2021 Project No. 21-04548

Monitoring Point ID P-158 Labeled 812967

Inside Diameter 2 (inches) Key # 2106 ☒ Locked ☐ Not Locked

Casing Material: ☒ PVC ☐ Steel ☐ Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	49.16	Feet
Static water level measurement before purging (Start Depth)	40.97	Feet
Static water level measurement at time of sampling (Final Depth)	40.97	Feet
Static Water Level Elevation Before Purging	NA	Feet

Purge Method Bladder Pump Pump ID BPC-1

Date Purged 5/4/21 Water Column 8.19 Feet

Time Purged 1550 - 1611 One Casing Volume 1.33 Gallons

Pump Rate 0.2 (GPM) / LPM Volume Purged 4.2 Gallons

Field Sampling Data

Date Sampled 5/4/21

Time Sampled 1615

Sampling Equip. Pump

Meter ID MPS-7 TM-6

Analyzed by CSF

Field Parameter Measurements of Sample

pH	7.8	(units)	D.O	9.8	(mg/l)
Spec. Cond.	860	(µmhos/cm)	Turbidity	0.9	(NTU)
Temp. Observed	9.5	(°C)	Eh	153	(mV)
Temp. Corrected	9.6	(°C)	Other	NA	

Field Measurements Temp. Corrected: ☒ Yes ☐ No ☐ NA

Sample for Soluble Metals Filtered in Field: ☐ Yes ☐ No ☒ NA

Temperature Correction Factor: +0.1 °C

Weather Conditions During Sampling: 54°F sunny and NW@ 15mph

Sample Description: clear no odor

Observations: N/A

B-5 BAP2 DUPLICATE COLLECTED AT THIS WELL BAP2 RINSE COLLECTED 1620

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
1557	7.8	860	@ weir 5/4/21 ~~10.5~~ 9.5	9.9	1.0	153	1.4
1604	7.8	860	9.5	9.9	1.0	152	2.8
1611	7.8	860	9.5	9.8	0.9	153	@ weir 5/4/21 ~~3.64~~ 4.2
			@ weir 5/4/21				

Samples chilled immediately after collection: ☒ Yes ☐ Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Chris Pelosi Pace Analytical

Lead Technician Signature: [signature] Date: 5/4/21

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client Xcel Sherco Project Sherco Ponds, Spring 2021 Project No. 21-04548

Monitoring Point ID P-173 Labeled 841707

Inside Diameter 2 (inches) Key # 2106 ☒ Locked ☐ Not Locked

Casing Material: ☒ PVC ☐ Steel ☐ Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	80.30	Feet
Static water level measurement before purging (Start Depth)	72.75	Feet (measured 5/5/21 by DK)
Static water level measurement at time of sampling (Final Depth)	72.75	Feet
Static Water Level Elevation Before Purging	NA	Feet

Purge Method Bladder Pump Pump ID BPC-1

Date Purged 5/5/21 Water Column 7.55 Feet

Time Purged 910 - 931 One Casing Volume 1.23 Gallons

Pump Rate 0.2 (GPM) / LPM Volume Purged 4.2 Gallons

Field Sampling Data

Date Sampled 5/5/21

Time Sampled 935

Sampling Equip. Pump

Meter ID MPS-7 TM6

Analyzed by CSP

Field Parameter Measurements of Sample

pH	7.9	(units)	D.O	9.0	(mg/l)
Spec. Cond.	500	(µmhos/cm)	Turbidity	2.0	(NTU)
Temp. Observed	9.4	(°C)	Eh	173	(mV)
Temp. Corrected	9.5	(°C)	Other	N/A	

Field Measurements Temp. Corrected: ☒ Yes ☐ No ☐ NA

Sample for Soluble Metals Filtered in Field: ☐ Yes ☐ No ☒ NA

Temperature Correction Factor: +0.1 °C

Weather Conditions During Sampling: 43°F sunny wind 6@1mph

Sample Description: clear no odor

Observations: NA

* Radium

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
917	7.9	500	9.4	9.3	2.6	173	1.4
924	7.9	500	9.4	9.2	2.0	173	2.8
931	7.9	500	9.4	9.0	2.0	173	4.2

(MN on 5/5/21)

Samples chilled immediately after collection: ☒ Yes ☐ Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Chris Pelosi Pace Analytical

Lead Technician Signature: [signature] Date: 5/5/21

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client Xcel Sherco Project Sherco Ponds, Spring 2021 Project No. 21-04548

Monitoring Point ID P-174 Labeled 844706

Inside Diameter 2 (inches) Key # 2106 ☒ Locked ☐ Not Locked

Casing Material: ☒ PVC ☐ Steel ☐ Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	82.27	Feet
Static water level measurement before purging (Start Depth)	75.28	Feet (measured 5/5/21 by DK)
Static water level measurement at time of sampling (Final Depth)	75.29	Feet
Static Water Level Elevation Before Purging	NA	Feet

Purge Method Bladder Pump Pump ID BPC-1

Date Purged 5/5/21 Water Column 6.99 Feet

Time Purged 945 - 1003 One Casing Volume 1.14 Gallons

Pump Rate 0.2 (GPM) / LPM Volume Purged 3.6 Gallons

Field Sampling Data

Date Sampled 5/5/21

Time Sampled 1005

Sampling Equip. Pump

Meter ID MPS-7 TM-6

Analyzed by CSP

Field Parameter Measurements of Sample

pH	7.8	(units)	D.O	8.6	(mg/l)
Spec. Cond.	640	(µmhos/cm)	Turbidity	2.5	(NTU)
Temp. Observed	9.5	(°C)	Eh	173	(mV)
Temp. Corrected	9.6	(°C)	Other	N/A	

Field Measurements Temp. Corrected: ☒ Yes ☐ No ☐ NA

Sample for Soluble Metals Filtered in Field: ☐ Yes ☐ No ☒ NA

Temperature Correction Factor: +0.1 °C

Weather Conditions During Sampling: 45°F sunny and E@1mph

Sample Description: clear no odor

Observations: NA

* Radium

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
951	7.8	640	9.5	8.6	5.7	176	1.2
957	7.8	640	9.5	8.6	5.0	175	2.4
1003	7.8	640	9.5	8.6	2.5	173	3.6
			(NA) CLP 5/5/21				

Samples chilled immediately after collection: ☒ Yes ☐ Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Chris Pelosi Pace Analytical

Lead Technician Signature: [signature] Date: 5/5/21

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client Xcel Sherco Project Sherco Ponds, Spring 2021 Project No. 21-04548

Monitoring Point ID P-175 Labeled 844705

Inside Diameter 2 (inches) Key # 2106 ☒ Locked ☐ Not Locked

Casing Material: ☒ PVC ☐ Steel ☐ Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	84.11	Feet (pump bottom 79.55')
Static water level measurement before purging (Start Depth)	77.68	Feet (measured 5/3/21 by DK)
Static water level measurement at time of sampling (Final Depth)	77.68	Feet
Static Water Level Elevation Before Purging	NA	Feet

Purge Method Bladder Pump Pump ID BPC-1

Date Purged 5/5/21 Water Column 6.43 Feet

Time Purged 1015 - 1033 One Casing Volume 1.04 Gallons

Pump Rate 0.2 (GPM) / LPM Volume Purged 3.6 Gallons

Field Sampling Data

Date Sampled 5/5/21

Time Sampled 1035

Sampling Equip. Pump

Meter ID MPS-TM-6

Analyzed by CSP

Field Parameter Measurements of Sample

pH	7.9 (units)	D.O	8.1 (mg/l)
Spec. Cond.	290 (µmhos/cm)	Turbidity	250 (NTU)
Temp. Observed	10.2 (°C)	Eh	177 (mV)
Temp. Corrected	10.3 (°C)	Other	NA

Field Measurements Temp. Corrected: ☒ Yes ☐ No ☐ NA

Sample for Soluble Metals Filtered in Field: ☐ Yes ☐ No ☒ NA

Temperature Correction Factor: +0.1 °C

Weather Conditions During Sampling: 50°F sunny and NE @ 1 mph

Sample Description: cloudy brown @ ~~water~~ no odor

Observations: ~~N/A~~ (well purged) silty brown and did not clear. sample was also silty and brown in color.

* Radium

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
1021	7.9	290	10.2	8.2	250	178	1.2
1027	7.9	290	10.2	8.2	250	177	2.4
1033	7.9	290	10.2	8.1	250	177	3.6

@ 5/5/21

Samples chilled immediately after collection ☒ Yes ☐ Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Chris Pelosi Pace Analytical

Lead Technician Signature: [signature] Date: 5/5/21

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client: Xcel | Project: Sherco 3 ponds resample Spring 2024 | Project No.: 21-047116

Monitoring Point ID: P-175 | Labeled: 844705

Inside Diameter: 2 (inches) | Key #: 2106 | [X] Locked | [ ] Not Locked

Casing Material: [X] PVC [ ] Steel [ ] Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	84.11	Feet
Static water level measurement before purging (Start Depth)	77.74	Feet
Static water level measurement at time of sampling (Final Depth)	77.74	Feet
Static Water Level Elevation Before Purging	NA	Feet

Purge Method: dedicated bladder pump | Pump ID: BPC-1

Date Purged: 6/10/24 | Water Column: 6.37 Feet

Time Purged: 1110 – 1128 | One Casing Volume: 1.04 Gallons

Pump Rate: 0.2 (GPM) / LPM | Volume Purged: 3.6 Gallons

Field Sampling Data

Date Sampled: 6/10/24

Time Sampled: 1135

Sampling Equip.: pump

Meter ID: MPS-6 TM-5

Analyzed by: RGJ + KAJ

Field Parameter Measurements of Sample

pH	8.6 (units)	D.O	10.5 (mg/l)
Spec. Cond.	250 (µmhos/cm)	Turbidity	3.7 (NTU)
Temp. Observed	16.1 (°C)	Eh	256 (mV)
Temp. Corrected	16.4 (°C)	Other	NA

Field Measurements Temp. Corrected: [X] Yes [ ] No [ ] NA

Sample for Soluble Metals Filtered in Field: [ ] Yes [X] No [ ] NA

Temperature Correction Factor: +0.3 °C

Weather Conditions During Sampling: 88° F, sunny, SW wind @ 3mph

Sample Description: clear & odorless

Observations: NA

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
1116	8.6	250	16.2	10.5	NA	258	1.2
1122	8.6	250	16.1	10.5	NA	256	2.4
1128	8.6	250	16.1	10.5	NA	254	3.6
			KAJ 6/10/24				

Samples chilled immediately after collection: [X] Yes [ ] Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Riley Jacobson + Kendall Johnson

Lead Technician Signature: [signature] Date: 6/10/24

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client Xcel Sherco Project Sherco Ponds, Spring 2021 Project No. 21-04548

Monitoring Point ID P-176 Labeled 844703

Inside Diameter 2 (inches) Key # 2106 ☒ Locked ☐ Not Locked

Casing Material: ☒ PVC ☐ Steel ☐ Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	84.18	Feet
Static water level measurement before purging (Start Depth)	77.26	Feet (measured 5/5/21 by DK)
Static water level measurement at time of sampling (Final Depth)	77.26	Feet
Static Water Level Elevation Before Purging	NA	Feet

Purge Method Bladder Pump Pump ID BPC-1

Date Purged 5/5/21 Water Column 6.92 Feet

Time Purged 1045 - 1103 One Casing Volume 1.13 Gallons

Pump Rate 0.2 (GPM) / LPM Volume Purged 3.6 Gallons

Field Sampling Data

Date Sampled 5/5/21

Time Sampled 1105

Sampling Equip. Pump

Meter ID MPS-7 TM-6

Analyzed by CSP

Field Parameter Measurements of Sample

pH	8.0	(units)	D.O	9.3	(mg/l)
Spec. Cond.	650	(µmhos/cm)	Turbidity	4.1	(NTU)
Temp. Observed	10.2	(°C)	Eh	175	(mV)
Temp. Corrected	10.3	(°C)	Other	NA	

Field Measurements Temp. Corrected: ☒ Yes ☐ No ☐ NA

Sample for Soluble Metals Filtered in Field: ☐ Yes ☐ No ☒ NA

Temperature Correction Factor: +0.1 °C

Weather Conditions During Sampling: 50°F sunny and NE @ 1mph

Sample Description: clear no odor

Observations: NA

* Radium

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
1051	8.0	650	10.2	9.3	5.0	180	1.2
1057	8.0	650	10.2	9.3	4.1	176	2.4
1103	8.0	650	10.2	9.3	4.1	175	3.6
			(Major 5/5/21)				

Samples chilled immediately after collection: ☒ Yes ☐ Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Chris Pelosi Pace Analytical

Lead Technician Signature: [signature] Date: 5/5/21

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client Xcel Sherco Project Sherco Ponds, Spring 2021 Project No. 21-04548

Monitoring Point ID P-177 Labeled 844704

Inside Diameter 2 (inches) Key # 2106 ☒ Locked ☐ Not Locked

Casing Material: ☒ PVC ☐ Steel ☐ Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	46.53	Feet
Static water level measurement before purging (Start Depth)	40.46	Feet
Static water level measurement at time of sampling (Final Depth)	40.46	Feet
Static Water Level Elevation Before Purging	NA	Feet

Purge Method Bladder Pump Pump ID BPC-1

Date Purged 5/4/21 Water Column 6.07 Feet

Time Purged 1520 - 1535 One Casing Volume 0.99 Gallons

Pump Rate ~~0.15~~ 0.2 (GPM) / LPM Volume Purged 3 Gallons

Field Sampling Data

Date Sampled 5/4/21

Time Sampled 1540

Sampling Equip. Pump

Meter ID MPS-7 TM6

Analyzed by CSF

Field Parameter Measurements of Sample

pH	7.6	(units)	D.O	8.1	(mg/l)
Spec. Cond.	520	(µmhos/cm)	Turbidity	4.0	(NTU)
Temp. Observed	10.5	(°C)	Eh	131	(mV)
Temp. Corrected	10.6	(°C)	Other	N/A	

Field Measurements Temp. Corrected: ☒ Yes ☐ No ☐ NA

Sample for Soluble Metals Filtered in Field: ☐ Yes ☐ No ☒ NA

Temperature Correction Factor: +0.1 °C

Weather Conditions During Sampling: 54°F

Sample Description: clear no odor

Observations: N/A

B-4 + Replicate Samples

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
1525	7.6	520	10.5	8.2	4.1	134	1
1530	7.6	520	10.5	8.1	4.0	132	2
1535	7.6	520	10.5	8.1	4.0	131	3

(WS on 5/4/21)

Samples chilled immediately after collection: ☒ Yes ☐ Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Chris Pelosi Pace Analytical

Lead Technician Signature: Chris Pelosi Date: 5/4/21

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client Xcel Sherco Project Sherco Ponds, Spring 2021 Project No. 21-04548

Monitoring Point ID P-178A Labeled P178A

Inside Diameter 2 (inches) Key # 2106 ☒ Locked ☐ Not Locked

Casing Material: ☒ PVC ☐ Steel ☐ Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	@ 5/14/21 ~~46.53~~ 47.41	Feet
Static water level measurement before purging (Start Depth)	40.46	Feet
Static water level measurement at time of sampling (Final Depth)	40.46	Feet
Static Water Level Elevation Before Purging	NA	Feet

Purge Method Bladder Pump Pump ID BPC-1

Date Purged 5/14/21 Water Column 6.95 Feet

Time Purged 1405 - 1435 One Casing Volume 1.13 Gallons

Pump Rate 0.15 (GPM) / LPM Volume Purged 3.45 Gallons

Field Sampling Data

Date Sampled 5/14/21

Time Sampled 1440

Sampling Equip. Pump + filter

Meter ID MPS-7 TM-6

Analyzed by CSF

Field Parameter Measurements of Sample

pH	7.9	(units)	D.O	8.2	(mg/l)
Spec. Cond.	450	(µmhos/cm)	Turbidity	1.0	(NTU)
Temp. Observed	10.2	(°C)	Eh	165	(mV)
Temp. Corrected	10.3	(°C)	Other	NA	

Field Measurements Temp. Corrected: ☒ Yes ☐ No ☐ NA

Sample for Soluble Metals Filtered in Field: ☒ Yes ☐ No ☐ NA

Temperature Correction Factor: +0.1 °C

Weather Conditions During Sampling: 54°F sunny and NW@ 15mph

Sample Description: clear no odor

Observations: N/A

BB

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
1415	7.9	450	10.2	8.3	1.0	168	1.15
1425	7.9	450	10.2	8.3	1.0	167	2.30
1435	7.9	450	10.2	8.2	1.0	165	3.45
			WATER 5/14/21				

Samples chilled immediately after collection: ☒ Yes ☐ Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Chris Pelesi Pace Analytical

Lead Technician Signature: [signature] Date: 5/14/21

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

25 May 2021

Eric Ealy

Environmental Services-Water Minneapolis

250 Marquette Plaza

Minneapolis, MN 55401

cc:

RE: Sherco BAP2 CCR

Enclosed are the results of analyses for samples received by the laboratory on 05/05/2021 08:00-05/07/2021 06:50. If you have any questions concerning this report, please feel free to contact me.

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

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sample Qualifier	Laboratory ID	Matrix	Sampled	Received
P-17		MGE0052-03	Water	05/04/2021 14:00	05/05/2021 8:00
P-152A		MGE0052-24	Water	05/04/2021 12:50	05/05/2021 8:00
P-158		MGE0052-27	Water	05/04/2021 16:15	05/05/2021 8:00
P-177		MGE0052-28	Water	05/04/2021 15:40	05/05/2021 8:00
P-178A		MGE0052-29	Water	05/04/2021 14:40	05/05/2021 8:00
Duplicate CCR-BAP2		MGE0052-33	Water	05/04/2021 16:15	05/05/2021 8:00
Rinse CCR-BAP2		MGE0052-34	Water	05/04/2021 16:20	05/05/2021 8:00
P-173		MGE0077-24	Water	05/05/2021 9:35	05/07/2021 6:50
P-174		MGE0077-25	Water	05/05/2021 10:05	05/07/2021 6:50
P-175		MGE0077-26	Water	05/05/2021 10:35	05/07/2021 6:50
P-176		MGE0077-27	Water	05/05/2021 11:05	05/07/2021 6:50

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

P-17

MGE0052-03 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	11.4	1.00	mg/L		1	BGE0084	5/5/21 10:07	5/10/21 19:41	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGE0084	5/5/21 10:07	5/10/21 19:41	EPA 300.0	CRL
Sulfate	18.3	1.00	mg/L		1	BGE0084	5/5/21 10:07	5/10/21 19:41	EPA 300.0	CRL
Wet Chemistry										
pH	7.85		pH Units	M_TTT	1	BGE0082	5/5/21 10:05	5/5/21 11:42	SM 4500-H+ B	HRD
Total Dissolved Solids	280	25.0	mg/L		1	BGE0086	5/5/21 13:27	5/5/21 13:27	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGE0085	5/5/21 11:48	5/5/21 11:48	SM 2540D	HSD
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BGE0182	5/10/21 7:46	5/14/21 21:28	EPA 200.7	HRD
Calcium	65.4	2.00	mg/L		1	BGE0182	5/10/21 7:46	5/14/21 21:26	EPA 200.7	HRD

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

P-152A

MGE0052-24 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	3.45	1.00	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 12:54	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 12:54	EPA 300.0	CRL
Sulfate	16.1	1.00	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 12:54	EPA 300.0	CRL
Wet Chemistry										
pH	7.92		pH Units	M_TTT	1	BGE0082	5/5/21 10:05	5/5/21 14:13	SM 4500-H+ B	HRD
Total Dissolved Solids	236	25.0	mg/L		1	BGE0136	5/7/21 8:44	5/7/21 8:44	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGE0135	5/7/21 6:41	5/7/21 6:41	SM 2540D	HSD
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BGE0182	5/10/21 7:46	5/14/21 21:38	EPA 200.7	HRD
Calcium	57.2	2.00	mg/L		1	BGE0182	5/10/21 7:46	5/14/21 21:37	EPA 200.7	HRD

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

P-158

MGE0052-27 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	7.67	1.00	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 15:38	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 15:38	EPA 300.0	CRL
Sulfate	107	1.00	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 15:38	EPA 300.0	CRL
Wet Chemistry										
pH	7.80		pH Units	M_TTT	1	BGE0082	5/5/21 10:05	5/5/21 14:24	SM 4500-H+ B	HRD
Total Dissolved Solids	402	25.0	mg/L		1	BGE0136	5/7/21 8:44	5/7/21 8:44	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGE0135	5/7/21 6:41	5/7/21 6:41	SM 2540D	HSD
Total Metals by ICP										
Boron	0.561	0.0500	mg/L		1	BGE0182	5/10/21 7:46	5/14/21 21:53	EPA 200.7	HRD
Calcium	88.4	2.00	mg/L		1	BGE0182	5/10/21 7:46	5/14/21 21:52	EPA 200.7	HRD

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

P-177

MGE0052-28 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	2.08	1.00	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 15:58	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 15:58	EPA 300.0	CRL
Sulfate	22.3	1.00	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 15:58	EPA 300.0	CRL
Wet Chemistry										
pH	7.74		pH Units	M_TTT	1	BGE0082	5/5/21 10:05	5/5/21 14:28	SM 4500-H+ B	HRD
Total Dissolved Solids	270	25.0	mg/L		1	BGE0136	5/7/21 8:44	5/7/21 8:44	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGE0135	5/7/21 6:41	5/7/21 6:41	SM 2540D	HSD
Total Metals by ICP										
Boron	0.0946	0.0500	mg/L		1	BGE0182	5/10/21 7:46	5/14/21 21:59	EPA 200.7	HRD
Calcium	71.4	2.00	mg/L		1	BGE0182	5/10/21 7:46	5/14/21 21:57	EPA 200.7	HRD

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

P-178A

MGE0052-29 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	2.85	1.00	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 16:18	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 16:18	EPA 300.0	CRL
Sulfate	37.6	1.00	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 16:18	EPA 300.0	CRL
Wet Chemistry										
pH	8.02		pH Units	M_TTT	1	BGE0082	5/5/21 10:05	5/5/21 14:35	SM 4500-H+ B	HRD
Total Dissolved Solids	240	25.0	mg/L		1	BGE0160	5/9/21 9:11	5/9/21 9:11	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGE0159	5/9/21 7:13	5/9/21 7:13	SM 2540D	HSD
Total Metals by ICP										
Boron	0.109	0.0500	mg/L		1	BGE0182	5/10/21 7:46	5/14/21 22:04	EPA 200.7	HRD
Calcium	32.3	2.00	mg/L		1	BGE0182	5/10/21 7:46	5/14/21 22:02	EPA 200.7	HRD

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Duplicate CCR-BAP2

MGE0052-33 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	7.77	1.00	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 17:40	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 17:40	EPA 300.0	CRL
Sulfate	106	1.00	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 17:40	EPA 300.0	CRL
Wet Chemistry										
pH	7.80		pH Units	M_TTT	1	BGE0082	5/5/21 10:05	5/5/21 15:05	SM 4500-H+ B	HRD
Total Dissolved Solids	390	25.0	mg/L		1	BGE0160	5/9/21 9:11	5/9/21 9:11	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGE0159	5/9/21 7:13	5/9/21 7:13	SM 2540D	HSD
Total Metals by ICP										
Boron	0.554	0.0500	mg/L		1	BGE0182	5/10/21 7:46	5/14/21 22:19	EPA 200.7	HRD
Calcium	90.0	2.00	mg/L		1	BGE0182	5/10/21 7:46	5/14/21 22:18	EPA 200.7	HRD

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Rinse CCR-BAP2

MGE0052-34 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	< 1.00	1.00	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 18:01	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 18:01	EPA 300.0	CRL
Sulfate	< 1.00	1.00	mg/L		1	BGE0090	5/5/21 11:23	5/11/21 18:01	EPA 300.0	CRL
Wet Chemistry										
pH	6.27		pH Units	M_TTT	1	BGE0082	5/5/21 10:05	5/5/21 15:09	SM 4500-H+ B	HRD
Total Dissolved Solids	< 25.0	25.0	mg/L	M_K-06	1	BGE0160	5/9/21 9:11	5/9/21 9:11	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGE0159	5/9/21 7:13	5/9/21 7:13	SM 2540D	HSD
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BGE0182	5/10/21 7:46	5/14/21 22:25	EPA 200.7	HRD
Calcium	< 2.00	2.00	mg/L		1	BGE0182	5/10/21 7:46	5/14/21 22:24	EPA 200.7	HRD

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

P-173

MGE0077-24 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	6.30	1.00	mg/L		1	BGE0276	5/12/21 8:05	5/13/21 11:21	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGE0276	5/12/21 8:05	5/13/21 11:21	EPA 300.0	CRL
Sulfate	25.1	1.00	mg/L		1	BGE0276	5/12/21 8:05	5/13/21 11:21	EPA 300.0	CRL
Wet Chemistry										
pH	7.96		pH Units	M_TTT	1	BGE0166	5/7/21 11:47	5/7/21 16:21	SM 4500-H+ B	CRL
Total Dissolved Solids	290	25.0	mg/L		1	BGE0199	5/11/21 8:55	5/11/21 8:55	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGE0198	5/11/21 6:47	5/11/21 6:47	SM 2540D	HSD
Total Metals by ICP										
Boron	0.163	0.0500	mg/L		1	BGE0216	5/11/21 7:35	5/16/21 11:36	EPA 200.7	HRD
Calcium	68.5	1.50	mg/L		1	BGE0216	5/11/21 7:35	5/16/21 11:34	EPA 200.7	HRD

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Christine Keefe, Supervisor (612) 630-4506

Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

P-174

MGE0077-25 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	1.40	1.00	mg/L		1	BGE0276	5/12/21 8:05	5/13/21 11:41	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGE0276	5/12/21 8:05	5/13/21 11:41	EPA 300.0	CRL
Sulfate	48.8	1.00	mg/L		1	BGE0276	5/12/21 8:05	5/13/21 11:41	EPA 300.0	CRL
Wet Chemistry										
pH	7.75		pH Units	M_TTT	1	BGE0166	5/7/21 11:47	5/7/21 16:29	SM 4500-H+ B	CRL
Total Dissolved Solids	422	25.0	mg/L		1	BGE0199	5/11/21 8:55	5/11/21 8:55	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGE0198	5/11/21 6:47	5/11/21 6:47	SM 2540D	HSD
Total Metals by ICP										
Boron	0.224	0.0500	mg/L		1	BGE0216	5/11/21 7:35	5/16/21 11:41	EPA 200.7	HRD
Calcium	100	1.50	mg/L		1	BGE0216	5/11/21 7:35	5/16/21 11:39	EPA 200.7	HRD

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Certification # MN-027-053-197
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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

P-175

MGE0077-26 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	4.06	1.00	mg/L		1	BGE0276	5/12/21 8:05	5/13/21 12:01	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGE0276	5/12/21 8:05	5/13/21 12:01	EPA 300.0	CRL
Sulfate	40.1	1.00	mg/L		1	BGE0276	5/12/21 8:05	5/13/21 12:01	EPA 300.0	CRL
Wet Chemistry										
pH	8.04		pH Units	M_TTT	1	BGE0166	5/7/21 11:47	5/7/21 16:36	SM 4500-H+ B	CRL
Total Dissolved Solids	340	62.5	mg/L		1	BGE0199	5/11/21 8:55	5/11/21 8:55	SM 2540C	HSD
Total Suspended Solids	2280	125	mg/L		1	BGE0198	5/11/21 6:47	5/11/21 6:47	SM 2540D	HSD
Total Metals by ICP										
Boron	0.242	0.0500	mg/L		1	BGE0216	5/11/21 7:35	5/16/21 11:46	EPA 200.7	HRD
Calcium	254	1.50	mg/L		1	BGE0216	5/11/21 7:35	5/16/21 11:44	EPA 200.7	HRD

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

P-176

MGE0077-27 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	3.33	1.00	mg/L		1	BGE0276	5/12/21 8:05	5/13/21 12:22	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGE0276	5/12/21 8:05	5/13/21 12:22	EPA 300.0	CRL
Sulfate	64.8	1.00	mg/L		1	BGE0276	5/12/21 8:05	5/13/21 12:22	EPA 300.0	CRL
Wet Chemistry										
pH	7.95		pH Units	M_TTT	1	BGE0166	5/7/21 11:47	5/7/21 16:43	SM 4500-H+ B	CRL
Total Dissolved Solids	348	25.0	mg/L		1	BGE0227	5/12/21 8:51	5/12/21 8:51	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGE0226	5/12/21 6:43	5/12/21 6:43	SM 2540D	HSD
Total Metals by ICP										
Boron	0.729	0.0500	mg/L		1	BGE0216	5/11/21 7:35	5/16/21 11:51	EPA 200.7	HRD
Calcium	79.4	1.50	mg/L		1	BGE0216	5/11/21 7:35	5/16/21 11:49	EPA 200.7	HRD

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0084 - Wet Prep										
Blank (BGE0084-BLK1)				Prepared: 05/05/2021 Analyzed: 05/10/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
Blank (BGE0084-BLK2)				Prepared: 05/05/2021 Analyzed: 05/10/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
LCS (BGE0084-BS1)				Prepared: 05/05/2021 Analyzed: 05/10/2021						
Chloride	24.952	1.00	mg/L	25.000		99.8	90-110			
Fluoride	2.6800	0.750	mg/L	2.5000		107	90-110			
Sulfate	24.955	1.00	mg/L	25.000		99.8	90-110			
LCS (BGE0084-BS2)				Prepared: 05/05/2021 Analyzed: 05/10/2021						
Chloride	25.453	1.00	mg/L	25.000		102	90-110			
Fluoride	2.6760	0.750	mg/L	2.5000		107	90-110			
Sulfate	25.969	1.00	mg/L	25.000		104	90-110			
LCS (BGE0084-BS3)				Prepared: 05/05/2021 Analyzed: 05/11/2021						
Chloride	25.189	1.00	mg/L	25.000		101	90-110			
Fluoride	2.6120	0.750	mg/L	2.5000		104	90-110			
Sulfate	25.567	1.00	mg/L	25.000		102	90-110			
Duplicate (BGE0084-DUP1)		**Source: MGE0027-01**		Prepared: 05/05/2021 Analyzed: 05/10/2021						
Chloride	12.551	1.00	mg/L		12.753			1.60	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	8.8390	1.00	mg/L		8.8860			0.530	20	

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0084 - Wet Prep										
Duplicate (BGE0084-DUP2)		**Source: MGE0050-01**		Prepared: 05/05/2021 Analyzed: 05/10/2021						
Chloride	9.5020	1.00	mg/L		9.6600			1.65	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	6.8450	1.00	mg/L		6.9480			1.49	20	
Matrix Spike (BGE0084-MS1)		**Source: MGE0027-01**		Prepared: 05/05/2021 Analyzed: 05/10/2021						
Chloride	43.331	1.25	mg/L	31.250	12.753	97.9	90-110			
Fluoride	3.3663	0.938	mg/L	3.1250	<0.938	108	90-110			
Sulfate	40.134	1.25	mg/L	31.250	8.8860	100	90-110			
Matrix Spike (BGE0084-MS2)		**Source: MGE0050-01**		Prepared: 05/05/2021 Analyzed: 05/10/2021						
Chloride	41.474	1.25	mg/L	31.250	9.6600	102	90-110			
Fluoride	3.4763	0.938	mg/L	3.1250	<0.938	111	90-110			M_MS
Sulfate	39.318	1.25	mg/L	31.250	6.9480	104	90-110			
Matrix Spike Dup (BGE0084-MSD1)		**Source: MGE0027-01**		Prepared: 05/05/2021 Analyzed: 05/10/2021						
Chloride	43.744	1.25	mg/L	31.250	12.753	99.2	90-110	0.947	20	
Fluoride	3.4138	0.938	mg/L	3.1250	<0.938	109	90-110	1.40	20	
Sulfate	40.643	1.25	mg/L	31.250	8.8860	102	90-110	1.26	20	
Matrix Spike Dup (BGE0084-MSD2)		**Source: MGE0050-01**		Prepared: 05/05/2021 Analyzed: 05/10/2021						
Chloride	40.963	1.25	mg/L	31.250	9.6600	100	90-110	1.24	20	
Fluoride	3.3913	0.938	mg/L	3.1250	<0.938	109	90-110	2.48	20	
Sulfate	38.885	1.25	mg/L	31.250	6.9480	102	90-110	1.11	20	
Batch BGE0090 - Wet Prep										
Blank (BGE0090-BLK1)				Prepared: 05/05/2021 Analyzed: 05/11/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0090 - Wet Prep										
Blank (BGE0090-BLK2)				Prepared: 05/05/2021 Analyzed: 05/11/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
LCS (BGE0090-BS1)				Prepared: 05/05/2021 Analyzed: 05/11/2021						
Chloride	25.362	1.00	mg/L	25.000		101	90-110			
Fluoride	2.6490	0.750	mg/L	2.5000		106	90-110			
Sulfate	25.576	1.00	mg/L	25.000		102	90-110			
LCS (BGE0090-BS2)				Prepared: 05/05/2021 Analyzed: 05/11/2021						
Chloride	24.694	1.00	mg/L	25.000		98.8	90-110			
Fluoride	2.6520	0.750	mg/L	2.5000		106	90-110			
Sulfate	25.199	1.00	mg/L	25.000		101	90-110			
LCS (BGE0090-BS3)				Prepared: 05/05/2021 Analyzed: 05/11/2021						
Chloride	24.439	1.00	mg/L	25.000		97.8	90-110			
Fluoride	2.5690	0.750	mg/L	2.5000		103	90-110			
Sulfate	24.772	1.00	mg/L	25.000		99.1	90-110			
Duplicate (BGE0090-DUP1)		**Source: MGE0052-19**		Prepared: 05/05/2021 Analyzed: 05/11/2021						
Chloride	16.321	1.00	mg/L		16.472			0.921	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	58.237	1.00	mg/L		59.124			1.51	20	
Duplicate (BGE0090-DUP2)		**Source: MGE0052-20**		Prepared: 05/05/2021 Analyzed: 05/11/2021						
Chloride	11.942	1.00	mg/L		11.901			0.344	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	24.609	1.00	mg/L		24.734			0.507	20	

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0090 - Wet Prep										
Matrix Spike (BGE0090-MS1)		**Source: MGE0052-19**		Prepared: 05/05/2021 Analyzed: 05/11/2021						
Chloride	47.546	1.25	mg/L	31.250	16.472	99.4	90-110			
Fluoride	3.0950	0.938	mg/L	3.1250	<0.938	99.0	90-110			
Sulfate	90.181	1.25	mg/L	31.250	59.124	99.4	90-110			
Matrix Spike (BGE0090-MS2)		**Source: MGE0052-20**		Prepared: 05/05/2021 Analyzed: 05/11/2021						
Chloride	42.733	1.25	mg/L	31.250	11.901	98.7	90-110			
Fluoride	3.2038	0.938	mg/L	3.1250	<0.938	103	90-110			
Sulfate	56.209	1.25	mg/L	31.250	24.734	101	90-110			
Matrix Spike Dup (BGE0090-MSD1)		**Source: MGE0052-19**		Prepared: 05/05/2021 Analyzed: 05/11/2021						
Chloride	47.755	1.25	mg/L	31.250	16.472	100	90-110	0.438	20	
Fluoride	3.4163	0.938	mg/L	3.1250	<0.938	109	90-110	9.87	20	
Sulfate	90.384	1.25	mg/L	31.250	59.124	100	90-110	0.224	20	
Matrix Spike Dup (BGE0090-MSD2)		**Source: MGE0052-20**		Prepared: 05/05/2021 Analyzed: 05/11/2021						
Chloride	42.873	1.25	mg/L	31.250	11.901	99.1	90-110	0.327	20	
Fluoride	3.4025	0.938	mg/L	3.1250	<0.938	109	90-110	6.02	20	
Sulfate	56.255	1.25	mg/L	31.250	24.734	101	90-110	0.0822	20	
Batch BGE0219 - Wet Prep										
Blank (BGE0219-BLK1)				Prepared: 05/11/2021 Analyzed: 05/12/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
Blank (BGE0219-BLK2)				Prepared: 05/11/2021 Analyzed: 05/12/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0219 - Wet Prep										
LCS (BGE0219-BS1)				Prepared: 05/11/2021 Analyzed: 05/12/2021						
Chloride	25.694	1.00	mg/L	25.000		103	90-110			
Fluoride	2.6290	0.750	mg/L	2.5000		105	90-110			
Sulfate	25.881	1.00	mg/L	25.000		104	90-110			
LCS (BGE0219-BS2)				Prepared: 05/11/2021 Analyzed: 05/12/2021						
Chloride	25.749	1.00	mg/L	25.000		103	90-110			
Fluoride	2.6840	0.750	mg/L	2.5000		107	90-110			
Sulfate	26.122	1.00	mg/L	25.000		104	90-110			
LCS (BGE0219-BS3)				Prepared: 05/11/2021 Analyzed: 05/12/2021						
Chloride	25.577	1.00	mg/L	25.000		102	90-110			
Fluoride	2.6300	0.750	mg/L	2.5000		105	90-110			
Sulfate	25.977	1.00	mg/L	25.000		104	90-110			
Duplicate (BGE0219-DUP1)		**Source: MGE0077-04**		Prepared: 05/11/2021 Analyzed: 05/12/2021						
Chloride	14.815	1.00	mg/L		14.863			0.323	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	120.40	1.00	mg/L		120.94			0.446	20	
Duplicate (BGE0219-DUP2)		**Source: MGE0077-05**		Prepared: 05/11/2021 Analyzed: 05/12/2021						
Chloride	36.292	1.00	mg/L		36.173			0.328	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	89.959	1.00	mg/L		89.638			0.357	20	
Matrix Spike (BGE0219-MS1)		**Source: MGE0077-04**		Prepared: 05/11/2021 Analyzed: 05/12/2021						
Chloride	45.811	1.25	mg/L	31.250	14.863	99.0	90-110			
Fluoride	3.0163	0.938	mg/L	3.1250	<0.938	96.5	90-110			
Sulfate	152.40	1.25	mg/L	31.250	120.94	101	90-110			

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0219 - Wet Prep										
Matrix Spike (BGE0219-MS2)		**Source: MGE0077-05**		Prepared: 05/11/2021 Analyzed: 05/12/2021						
Chloride	67.411	1.25	mg/L	31.250	36.173	100	90-110			
Fluoride	3.2563	0.938	mg/L	3.1250	<0.938	104	90-110			
Sulfate	121.11	1.25	mg/L	31.250	89.638	101	90-110			
Matrix Spike Dup (BGE0219-MSD1)		**Source: MGE0077-04**		Prepared: 05/11/2021 Analyzed: 05/12/2021						
Chloride	46.596	1.25	mg/L	31.250	14.863	102	90-110	1.70	20	
Fluoride	3.3625	0.938	mg/L	3.1250	<0.938	108	90-110	10.9	20	
Sulfate	152.48	1.25	mg/L	31.250	120.94	101	90-110	0.0558	20	
Matrix Spike Dup (BGE0219-MSD2)		**Source: MGE0077-05**		Prepared: 05/11/2021 Analyzed: 05/12/2021						
Chloride	67.118	1.25	mg/L	31.250	36.173	99.0	90-110	0.437	20	
Fluoride	3.3075	0.938	mg/L	3.1250	<0.938	106	90-110	1.56	20	
Sulfate	120.24	1.25	mg/L	31.250	89.638	97.9	90-110	0.727	20	
Batch BGE0276 - Wet Prep										
Blank (BGE0276-BLK1)				Prepared: 05/12/2021 Analyzed: 05/13/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
Blank (BGE0276-BLK2)				Prepared: 05/12/2021 Analyzed: 05/13/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
LCS (BGE0276-BS1)				Prepared: 05/12/2021 Analyzed: 05/13/2021						
Chloride	25.516	1.00	mg/L	25.000		102	90-110			
Fluoride	2.5640	0.750	mg/L	2.5000		103	90-110			
Sulfate	25.621	1.00	mg/L	25.000		102	90-110			

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0276 - Wet Prep										
LCS (BGE0276-BS2)				Prepared: 05/12/2021 Analyzed: 05/13/2021						
Chloride	25.482	1.00	mg/L	25.000		102	90-110			
Fluoride	2.6830	0.750	mg/L	2.5000		107	90-110			
Sulfate	25.908	1.00	mg/L	25.000		104	90-110			
LCS (BGE0276-BS3)				Prepared: 05/12/2021 Analyzed: 05/13/2021						
Chloride	25.461	1.00	mg/L	25.000		102	90-110			
Fluoride	2.6430	0.750	mg/L	2.5000		106	90-110			
Sulfate	25.664	1.00	mg/L	25.000		103	90-110			
Duplicate (BGE0276-DUP1)		**Source: MGE0077-18**		Prepared: 05/12/2021 Analyzed: 05/13/2021						
Chloride	3.9280	1.00	mg/L		3.9370			0.229	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	38.517	1.00	mg/L		38.597			0.207	20	
Duplicate (BGE0276-DUP2)		**Source: MGE0077-19**		Prepared: 05/12/2021 Analyzed: 05/13/2021						
Chloride	4.6080	1.00	mg/L		4.6800			1.55	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	60.342	1.00	mg/L		60.783			0.728	20	
Matrix Spike (BGE0276-MS1)		**Source: MGE0077-18**		Prepared: 05/12/2021 Analyzed: 05/13/2021						
Chloride	34.561	1.25	mg/L	31.250	3.9370	98.0	90-110			
Fluoride	2.9413	0.938	mg/L	3.1250	<0.938	94.1	90-110			
Sulfate	69.708	1.25	mg/L	31.250	38.597	99.6	90-110			
Matrix Spike (BGE0276-MS2)		**Source: MGE0077-19**		Prepared: 05/12/2021 Analyzed: 05/13/2021						
Chloride	36.119	1.25	mg/L	31.250	4.6800	101	90-110			
Fluoride	3.2013	0.938	mg/L	3.1250	<0.938	102	90-110			
Sulfate	91.926	1.25	mg/L	31.250	60.783	99.7	90-110			

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0276 - Wet Prep										
Matrix Spike Dup (BGE0276-MSD1)		**Source: MGE0077-18**		Prepared: 05/12/2021 Analyzed: 05/13/2021						
Chloride	34.850	1.25	mg/L	31.250	3.9370	98.9	90-110	0.832	20	
Fluoride	3.2950	0.938	mg/L	3.1250	<0.938	105	90-110	11.3	20	
Sulfate	69.993	1.25	mg/L	31.250	38.597	100	90-110	0.408	20	
Matrix Spike Dup (BGE0276-MSD2)		**Source: MGE0077-19**		Prepared: 05/12/2021 Analyzed: 05/13/2021						
Chloride	35.874	1.25	mg/L	31.250	4.6800	99.8	90-110	0.681	20	
Fluoride	3.3475	0.938	mg/L	3.1250	<0.938	107	90-110	4.47	20	
Sulfate	91.925	1.25	mg/L	31.250	60.783	99.7	90-110	0.00135	20	

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0082 - Wet Prep										
LCS (BGE0082-BS1)				Prepared & Analyzed: 05/05/2021						
pH	7.0800		pH Units	7.0000		101	90-110			
LCS (BGE0082-BS2)				Prepared & Analyzed: 05/05/2021						
pH	7.0700		pH Units	7.0000		101	90-110			
Duplicate (BGE0082-DUP1)		**Source: MGE0052-01**		Prepared & Analyzed: 05/05/2021						
pH	7.7300		pH Units		7.7400			0.129	20	
Duplicate (BGE0082-DUP2)		**Source: MGE0052-11**		Prepared & Analyzed: 05/05/2021						
pH	7.7000		pH Units		7.7200			0.259	20	
Duplicate (BGE0082-DUP3)		**Source: MGE0052-21**		Prepared & Analyzed: 05/05/2021						
pH	7.8900		pH Units		7.8900			0.00	20	
Duplicate (BGE0082-DUP4)		**Source: MGE0052-31**		Prepared & Analyzed: 05/05/2021						
pH	7.8300		pH Units		7.7800			0.641	20	
Batch BGE0085 - Wet Prep										
Blank (BGE0085-BLK1)				Prepared & Analyzed: 05/05/2021						
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BGE0085-BS1)				Prepared & Analyzed: 05/05/2021						
Total Suspended Solids	90.000	5.00	mg/L	104.10		86.5	70-130			
Duplicate (BGE0085-DUP1)		**Source: MGE0029-04**		Prepared & Analyzed: 05/05/2021						
Total Suspended Solids	5.6471	5.88	mg/L		4.8000			16.2	20	M_K-06

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0085 - Wet Prep										
Duplicate (BGE0085-DUP2)		**Source: MGE0052-01**		Prepared & Analyzed: 05/05/2021						
Total Suspended Solids	31.600	10.0	mg/L		31.400			0.635	20	
Batch BGE0086 - Wet Prep										
Blank (BGE0086-BLK1)				Prepared & Analyzed: 05/05/2021						
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BGE0086-BS1)				Prepared & Analyzed: 05/05/2021						
Total Dissolved Solids	108.00	25.0	mg/L	100.10		108	70-130			
Duplicate (BGE0086-DUP1)		**Source: MGE0050-01**		Prepared & Analyzed: 05/05/2021						
Total Dissolved Solids	170.00	25.0	mg/L		172.00			1.17	20	
Duplicate (BGE0086-DUP2)		**Source: MGE0052-01**		Prepared & Analyzed: 05/05/2021						
Total Dissolved Solids	214.00	25.0	mg/L		214.00			0.00	20	
Batch BGE0101 - Wet Prep										
Blank (BGE0101-BLK1)				Prepared & Analyzed: 05/06/2021						
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BGE0101-BS1)				Prepared & Analyzed: 05/06/2021						
Total Suspended Solids	94.000	5.00	mg/L	104.10		90.3	70-130			
Duplicate (BGE0101-DUP1)		**Source: MGE0052-04**		Prepared & Analyzed: 05/06/2021						
Total Suspended Solids	344.00	25.0	mg/L		345.00			0.290	20	

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0102 - Wet Prep										
Blank (BGE0102-BLK1)				Prepared & Analyzed: 05/06/2021						
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BGE0102-BS1)				Prepared & Analyzed: 05/06/2021						
Total Dissolved Solids	90.000	25.0	mg/L	100.10		89.9	70-130			
Duplicate (BGE0102-DUP1)		**Source: MGE0052-04**		Prepared & Analyzed: 05/06/2021						
Total Dissolved Solids	246.00	25.0	mg/L		252.00			2.41	20	
Batch BGE0135 - Wet Prep										
Blank (BGE0135-BLK1)				Prepared & Analyzed: 05/07/2021						
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BGE0135-BS1)				Prepared & Analyzed: 05/07/2021						
Total Suspended Solids	92.000	5.00	mg/L	104.10		88.4	70-130			
Duplicate (BGE0135-DUP1)		**Source: MGE0052-14**		Prepared & Analyzed: 05/07/2021						
Total Suspended Solids	10.400	10.0	mg/L		10.800			3.77	20	
Batch BGE0136 - Wet Prep										
Blank (BGE0136-BLK1)				Prepared & Analyzed: 05/07/2021						
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BGE0136-BS1)				Prepared & Analyzed: 05/07/2021						
Total Dissolved Solids	96.000	25.0	mg/L	100.10		95.9	70-130			

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0136 - Wet Prep										
Duplicate (BGE0136-DUP1)		**Source: MGE0052-14**		Prepared & Analyzed: 05/07/2021						
Total Dissolved Solids	358.00	25.0	mg/L		372.00			3.84	20	
Batch BGE0159 - Wet Prep										
Blank (BGE0159-BLK1)				Prepared & Analyzed: 05/09/2021						
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BGE0159-BS1)				Prepared & Analyzed: 05/09/2021						
Total Suspended Solids	90.000	5.00	mg/L	104.10		86.5	70-130			
Duplicate (BGE0159-DUP1)		**Source: MGE0052-29**		Prepared & Analyzed: 05/09/2021						
Total Suspended Solids	<9.62	9.62	mg/L		<9.62				20	M_K-06
Duplicate (BGE0159-DUP2)		**Source: MGE0052-30**		Prepared & Analyzed: 05/09/2021						
Total Suspended Solids	9.6000	10.0	mg/L		8.0000			18.2	20	M_K-06
Batch BGE0160 - Wet Prep										
Blank (BGE0160-BLK1)				Prepared & Analyzed: 05/09/2021						
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BGE0160-BS1)				Prepared & Analyzed: 05/09/2021						
Total Dissolved Solids	86.000	25.0	mg/L	100.10		85.9	70-130			
Duplicate (BGE0160-DUP1)		**Source: MGE0052-29**		Prepared & Analyzed: 05/09/2021						
Total Dissolved Solids	240.00	25.0	mg/L		240.00			0.00	20	

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0160 - Wet Prep										
Duplicate (BGE0160-DUP2)		**Source: MGE0052-30**		Prepared & Analyzed: 05/09/2021						
Total Dissolved Solids	26456	25.0	mg/L		26410			0.174	20	M_E
Batch BGE0166 - Wet Prep										
LCS (BGE0166-BS1)				Prepared & Analyzed: 05/07/2021						
pH	7.1700		pH Units	7.0000		102	90-110			
LCS (BGE0166-BS2)				Prepared & Analyzed: 05/07/2021						
pH	7.1900		pH Units	7.0000		103	90-110			
Duplicate (BGE0166-DUP1)		**Source: MGE0077-01**		Prepared & Analyzed: 05/07/2021						
pH	7.7800		pH Units		7.7400			0.515	20	
Duplicate (BGE0166-DUP2)		**Source: MGE0077-11**		Prepared & Analyzed: 05/07/2021						
pH	7.8000		pH Units		7.8000			0.00	20	
Duplicate (BGE0166-DUP3)		**Source: MGE0077-21**		Prepared & Analyzed: 05/07/2021						
pH	8.1400		pH Units		8.1200			0.246	20	
Duplicate (BGE0166-DUP4)		**Source: MGE0077-30**		Prepared & Analyzed: 05/07/2021						
pH	7.9900		pH Units		8.0000			0.125	20	
Batch BGE0176 - Wet Prep										
Blank (BGE0176-BLK1)				Prepared & Analyzed: 05/10/2021						
Total Suspended Solids	<5.00	5.00	mg/L							

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0176 - Wet Prep										
LCS (BGE0176-BS1)				Prepared & Analyzed: 05/10/2021						
Total Suspended Solids	94.000	5.00	mg/L	104.10		90.3	70-130			
Duplicate (BGE0176-DUP1)		**Source: MGE0077-07**		Prepared & Analyzed: 05/10/2021						
Total Suspended Solids	17.600	10.0	mg/L		15.600			12.0	20	
Batch BGE0177 - Wet Prep										
Blank (BGE0177-BLK1)				Prepared & Analyzed: 05/10/2021						
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BGE0177-BS1)				Prepared & Analyzed: 05/10/2021						
Total Dissolved Solids	94.000	25.0	mg/L	100.10		93.9	70-130			
Duplicate (BGE0177-DUP1)		**Source: MGE0077-07**		Prepared & Analyzed: 05/10/2021						
Total Dissolved Solids	480.00	25.0	mg/L		480.00			0.00	20	
Batch BGE0198 - Wet Prep										
Blank (BGE0198-BLK1)				Prepared & Analyzed: 05/11/2021						
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BGE0198-BS1)				Prepared & Analyzed: 05/11/2021						
Total Suspended Solids	92.000	5.00	mg/L	104.10		88.4	70-130			
Duplicate (BGE0198-DUP1)		**Source: MGE0077-17**		Prepared & Analyzed: 05/11/2021						
Total Suspended Solids	1.2000	10.0	mg/L		<10.0				20	M_K-06

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0199 - Wet Prep										
Blank (BGE0199-BLK1)				Prepared & Analyzed: 05/11/2021						
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BGE0199-BS1)				Prepared & Analyzed: 05/11/2021						
Total Dissolved Solids	86.000	25.0	mg/L	100.10		85.9	70-130			
Duplicate (BGE0199-DUP1)		**Source: MGE0077-17**		Prepared & Analyzed: 05/11/2021						
Total Dissolved Solids	446.00	25.0	mg/L		446.00			0.00	20	
Batch BGE0226 - Wet Prep										
Blank (BGE0226-BLK1)				Prepared & Analyzed: 05/12/2021						
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BGE0226-BS1)				Prepared & Analyzed: 05/12/2021						
Total Suspended Solids	94.000	5.00	mg/L	104.10		90.3	70-130			
Duplicate (BGE0226-DUP1)		**Source: MGE0077-27**		Prepared & Analyzed: 05/12/2021						
Total Suspended Solids	0.80000	10.0	mg/L		0.60000			28.6	20	M_D-RL, M_K-06
Batch BGE0227 - Wet Prep										
Blank (BGE0227-BLK1)				Prepared & Analyzed: 05/12/2021						
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BGE0227-BS1)				Prepared & Analyzed: 05/12/2021						
Total Dissolved Solids	102.00	25.0	mg/L	100.10		102	70-130			

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0227 - Wet Prep										
Duplicate (BGE0227-DUP1)		**Source: MGE0077-27**		Prepared & Analyzed: 05/12/2021						
Total Dissolved Solids	336.00	25.0	mg/L		348.00			3.51	20	

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Total Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0182 - EPA 200.2, EPA 3005										
Blank (BGE0182-BLK1)				Prepared: 05/10/2021 Analyzed: 05/14/2021						
Calcium	<1.50	1.50	mg/L							
Boron	<0.0500	0.0500	mg/L							
LCS (BGE0182-BS1)				Prepared: 05/10/2021 Analyzed: 05/14/2021						
Boron	0.93123	0.0500	mg/L	1.0000		93.1	85-115			
Calcium	101.45	1.50	mg/L	100.00		101	85-115			
Duplicate (BGE0182-DUP1)		**Source: MGE0052-21**		Prepared: 05/10/2021 Analyzed: 05/14/2021						
Boron	0.036383	0.0500	mg/L		0.035672			1.97	20	
Calcium	68.388	1.50	mg/L		72.404			5.71	20	
Duplicate (BGE0182-DUP2)		**Source: MGE0052-22**		Prepared: 05/10/2021 Analyzed: 05/14/2021						
Boron	0.064578	0.0500	mg/L		0.068389			5.73	20	
Calcium	89.087	1.50	mg/L		95.046			6.47	20	
Matrix Spike (BGE0182-MS1)		**Source: MGE0052-21**		Prepared: 05/10/2021 Analyzed: 05/14/2021						
Calcium	170.66	1.50	mg/L	100.00	72.404	98.3	70-130			
Boron	0.97656	0.0500	mg/L	1.0000	0.035672	94.1	70-130			
Matrix Spike (BGE0182-MS2)		**Source: MGE0052-22**		Prepared: 05/10/2021 Analyzed: 05/14/2021						
Calcium	195.93	1.50	mg/L	100.00	95.046	101	70-130			
Boron	1.0165	0.0500	mg/L	1.0000	0.068389	94.8	70-130			
Matrix Spike Dup (BGE0182-MSD1)		**Source: MGE0052-21**		Prepared: 05/10/2021 Analyzed: 05/14/2021						
Calcium	170.40	1.50	mg/L	100.00	72.404	98.0	70-130	0.150	20	
Boron	0.99103	0.0500	mg/L	1.0000	0.035672	95.5	70-130	1.47	20	
Matrix Spike Dup (BGE0182-MSD2)		**Source: MGE0052-22**		Prepared: 05/10/2021 Analyzed: 05/15/2021						
Calcium	192.63	1.50	mg/L	100.00	95.046	97.6	70-130	1.70	20	
Boron	1.0212	0.0500	mg/L	1.0000	0.068389	95.3	70-130	0.462	20	

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

Total Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGE0216 - EPA 200.2, EPA 3005										
Blank (BGE0216-BLK1)				Prepared: 05/11/2021 Analyzed: 05/16/2021						
Boron	<0.0500	0.0500	mg/L							
Calcium	<1.50	1.50	mg/L							
LCS (BGE0216-BS1)				Prepared: 05/11/2021 Analyzed: 05/16/2021						
Boron	0.94056	0.0500	mg/L	1.0000		94.1	85-115			
Calcium	98.116	1.50	mg/L	100.00		98.1	85-115			
Duplicate (BGE0216-DUP1)		**Source: MGE0077-18**		Prepared: 05/11/2021 Analyzed: 05/16/2021						
Calcium	64.074	1.50	mg/L		63.223			1.34	20	
Boron	0.16959	0.0500	mg/L		0.17192			1.37	20	
Duplicate (BGE0216-DUP2)		**Source: MGE0077-19**		Prepared: 05/11/2021 Analyzed: 05/16/2021						
Boron	0.22155	0.0500	mg/L		0.22570			1.86	20	
Calcium	77.840	1.50	mg/L		77.544			0.381	20	
Matrix Spike (BGE0216-MS1)		**Source: MGE0077-18**		Prepared: 05/11/2021 Analyzed: 05/16/2021						
Boron	1.1228	0.0500	mg/L	1.0000	0.17192	95.1	70-130			
Calcium	163.84	1.50	mg/L	100.00	63.223	101	70-130			
Matrix Spike (BGE0216-MS2)		**Source: MGE0077-19**		Prepared: 05/11/2021 Analyzed: 05/16/2021						
Calcium	180.94	1.50	mg/L	100.00	77.544	103	70-130			
Boron	1.1753	0.0500	mg/L	1.0000	0.22570	95.0	70-130			
Matrix Spike Dup (BGE0216-MSD1)		**Source: MGE0077-18**		Prepared: 05/11/2021 Analyzed: 05/16/2021						
Calcium	164.96	1.50	mg/L	100.00	63.223	102	70-130	0.683	20	
Boron	1.1179	0.0500	mg/L	1.0000	0.17192	94.6	70-130	0.433	20	
Matrix Spike Dup (BGE0216-MSD2)		**Source: MGE0077-19**		Prepared: 05/11/2021 Analyzed: 05/16/2021						
Calcium	183.55	1.50	mg/L	100.00	77.544	106	70-130	1.44	20	
Boron	1.1789	0.0500	mg/L	1.0000	0.22570	95.3	70-130	0.306	20	

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	05/25/2021 09:29

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_K-06	The reporting limit has been increased, the reported result is acceptable. The maximum routine sample volume was used, but the amount of residue measured was below 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.
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

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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 — **Required** Client Information:

Company:	Xcel Energy
Address:	Environmental Services
	MP-7
Email To:	Chris Pelosi
Phone: (612) 597-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B — **Required** Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number	21-04548
Project Name:	Xcel Energy Sherco Ponds Spring

Section C — Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER___

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WP; AR; OT; TS

Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	GW-D	GW-CCR	GW-CCR-BAP2		(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~P-01A~~	~~WT~~	~~G~~						~~4~~	~~1~~	~~1~~	~~2~~						~~X~~	~~X~~			~~X~~	~~X~~				
2	P-03A	WT	G			5/4/21	1555		3	1	1	1						X				X					
3	P-03B	WT	G			5/4/21	1525		3	1	1	1						X				X					
4	~~P-04A~~	~~WT~~	~~G~~						~~3~~	~~1~~	~~1~~	~~1~~						~~X~~				~~X~~					
5	~~P-05A~~	~~WT~~	~~G~~						~~3~~	~~1~~	~~1~~	~~1~~						~~X~~				~~X~~					
6	P-17	WT	G			5/4/21	1400		2	1		1							X	X			X	X			
7	~~P-22~~	~~WT~~	~~G~~						~~4~~	~~1~~	~~1~~	~~2~~						~~X~~	~~X~~			~~X~~	~~X~~				
8	~~P-23~~	~~WT~~	~~G~~						~~4~~	~~1~~	~~1~~	~~2~~						~~X~~	~~X~~			~~X~~	~~X~~				
9	P-42	WT	G			5/4/21	1155		3	1	1	1						X				X					
10	P-43	WT	G			5/4/21	1345		3	1	1	1						X				X					
11	~~P-50~~	~~WT~~	~~G~~						~~3~~	~~1~~	~~1~~	~~1~~						~~X~~				~~X~~					
12	~~P-50B~~	~~WT~~	~~G~~						~~3~~	~~1~~	~~1~~	~~1~~						~~X~~				~~X~~					

Additional Comments:

*Submitting 30 Samples + 3 Dup + 3 RINSE - RCJ 5/4/21

Temp M40841:
pH strips: M00402 : 3.2°C

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature]	5/4/21	1800	[signature] Pace	5/4/21	1800
[signature] Pace	5/5/21	800	[signature] Xcel	5/5/21	0800

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Riley Jacobson + Chris Pelosi + Kendall Johnson

SIGNATURE of SAMPLER: [signature] [signature] DATE Signed (MM/DD/YY): 5/5/21

SAMPLE CONDITIONS

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
	Y/N	Y/N	Y/N
	Y/N (circled)	Y/N (circled)	Y/N (circled)
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

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CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Xcel Energy	Report To:	Chris Pelosi	Attention:	Steve Davis
Address:	Environmental Services	Copy To:	Riley Jacobson	Company Name:	
	MP-7			Address:	
Email To:	Chris Pelosi	Purchase Order No.:		Pace Quote Reference:	
Phone: (612) 597-7254	Fax:	Project Number	21-04548	Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Requested Due Date/TAT:	2 Weeks	Project Name:	Xcel Energy Sherco Ponds Spring	Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; OTHER OT; TISSUE TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Filtered (Y/N)	Requested Analysis: GW-D	GW-CCR	GW-CCR-BAP2	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
1	P-01A	WT	G			5/5/21	1325		4	1	1	2							X	X		X	X				
2	P-03A	WT	G			5/4/21	1555		3	1	1	1							X			X					
3	P-03B	WT	G			5/4/21	1525		3	1	1	1							X			X					
4	P-04A	WT	G			5/5/21	1520		3	1	1	1							X			X					
5	P-05A	WT	G			5/5/21	1310		3	1	1	1							X			X					
6	P-17	WT	G			5/4/21	1400		2	1		1								X	X		X	X			
7	P-22	WT	G			5/5/21	1445		4	1	1	2							X	X		X	X				
8	P-23	WT	G			5/5/21	1210		4	1	1	2							X	X		X	X				
9	P-42	WT	G			5/4/21	1155		3	1	1	1							X			X					
10	P-43	WT	G			5/4/21	1345		3	1	1	1							X			X					
11	P-50	WT	G			5/6/21	0950		3	1	1	1							X			X					
12	P-50B	WT	G			5/6/21	0845		3	1	1	1							X			X					

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Riley Jacobson	5/7/21	0650	HDR/Xcel	5/7/21	0650

SAMPLE CONDITIONS

Temp in °C	Received on Ice Y/N	Custody Sealed Cooler Y/N	Samples Intact Y/N
2.1	Y	Y	Y
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Riley Jacobson + Chris Pelosi + Kendall Johnson

SIGNATURE of SAMPLER: [signature] [signature] [signature]

DATE Signed (MM / DD / YY): 5/7/21

pH strips: M0004O2
Temp M400841: 2.1°C

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Section A Required Client Information:

Company:	Xcel Energy
Address:	Environmental Services
	MP-7
Email To:	Chris Pelosi
Phone: (612) 597-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B Required Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number	21-04548
Project Name:	Xcel Energy Sherco Ponds Spring

Section C Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: ☑ MN ☐ IL ☐ IN ☐ M NC ☐ OH ☐ SC ☐ WI ☑ OTHER

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
	WP
	AR
	OT
	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE C=COMP G=GRAB	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Filtered (Y/N)	Requested Analysis: GW-D	GW-CCR	GW-CCR-BAP2	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No. Lab I.D.
1	P-50D	WT	G			5/6/21	1045		3	1	1	1							X			X					
2	P-56	WT	G			5/4/21	1125		3	1	1	1							X			X					
3	P-60	WT	G			5/4/21	0920		3	1	1	1							X			X					
4	P-62	WT	G			5/4/21	0845		3	1	1	1							X			X					
5	P-66	WT	G			5/4/21	1435		3	1	1	1							X			X					
6	P-88	WT	G			5/4/21	1150		3	1	1	1							X			X					
7	P-89-1	WT	G			5/5/21	1415		3	1	1	1							X			X					
8	P-90	WT	G			5/4/21	1235		3	1	1	1							X			X					
9	P-90A	WT	G			5/4/21	1300		3	1	1	1							X			X					
10	P-92A	WT	G			5/4/21	0940		3	1	1	1							X			X					
11	P-92B	WT	G			5/4/21	0910		3	1	1	1							X			X					
12	P-92D	WT	G			5/4/21	0840		3	1	1	1							X			X					

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Riley Jr	5/7/21	0650	[illegible] / Xcel	5/7/21	0650

SAMPLE CONDITIONS

2.1	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Riley Jacobson + Chris Pelosi + Kendall Johnson		
SIGNATURE of SAMPLER:		DATE Signed (MM/DD/YY):	5/7/21

Temp in °C | Received on Ice | Custody Sealed Cooler | Samples Intact

pH strips: MD00402
Temp M400841: 2.1°C

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CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Required Client Information:

Company:	Xcel Energy
Address:	Environmental Services
	MP-7
Email To:	Chris Pelosi
Phone: (612) 597-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B Required Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number	21-04548
Project Name:	Xcel Energy Sherco Ponds Spring

Section C Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER

Filtered (Y/N)

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
	WP
	AR
	OT
	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: GW-D	GW-CCR	GW-CCR-BAP2	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
1	P-93A	WT	G			5/4/21	1115		3	1	1	1						X			X					
2	P-93B	WT	G			5/4/21	1045		3	1	1	1						X			X					
3	P-93D	WT	G			5/4/21	1020		3	1	1	1						X			X					
4	~~P-94A~~	WT	G						3	1	1	1						X			X					
5	P-101A	WT	G			5/4/21	1020		3	1	1	1						X			X					
6	P-101B	WT	G			5/4/21	1050		3	1	1	1						X			X					
7	~~P-126~~	WT	G						3	1	1	1						X			X					
8	~~P-127~~	WT	G						3	1	1	1						X			X					
9	~~P-128~~	WT	G						3	1	1	1						X			X					
10	~~P-129~~	WT	G						3	1	1	1						X			X					
11	~~P-130~~	WT	G						4	1	1	2						X	X		X				X	
12	P-131	WT	G			5/3/21	1035		4	1	1	2						X	X		X				X	

Additional Comments:

*Submitting 30 samples + 3 Dup + 3 RINSE -RLJ 5/4/21

pH strips: M000402
Temp M400841: 3.2°C

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Riley Jacobson Pace	5/4/21	1800	Cliff Pace	5/4/21	1800
Cliff Pace	5/5/21	800	[illegible] Xcel	5/5/21	0800

SAMPLE CONDITIONS

Temp in °C	Received on Ice Y/N	Custody Sealed Cooler Y/N	Samples Intact Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Riley Jacobson + Chris Pelosi + Kendall Johnson

SIGNATURE of SAMPLER: Riley Jacobson Cliff P

DATE Signed (MM / DD / YY): 5/5/21

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CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Required Client Information:

Company:	Xcel Energy
Address:	Environmental Services
	MP-7
Email To:	Chris Pelosi
Phone: (612) 597-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B Required Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number	21-04548
Project Name:	Xcel Energy Sherco Ponds Spring

Section C Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
	WP
	AR
	OT
	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Filtered (Y/N)	Requested Analysis: GW-D	GW-CCR	GW-CCR-BAP2	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
1	P-93A	WT	G			5/4/21	1115		3	1	1	1							X			X					
2	P-93B	WT	G			5/4/21	1045		3	1	1	1							X			X					
3	P-93D	WT	G			5/4/21	1020		3	1	1	1							X			X					
4	P-94A	WT	G			5/5/21	1505		3	1	1	1							X			X					
5	P-101A	WT	G			5/4/21	1020		3	1	1	1							X			X					
6	P-101B	WT	G			5/4/21	1050		3	1	1	1							X			X					
7	P-126	WT	G			5/5/21	1235		3	1	1	1							X			X					
8	P-127	WT	G			5/5/21	1120		3	1	1	1							X			X					
9	P-128	WT	G			5/5/21	1200		3	1	1	1							X			X					
10	P-129	WT	G			5/5/21	1040		3	1	1	1							X			X					
11	P-130	WT	G			5/5/21	0855		4	1	1	2							X	X		X			X		
12	P-131	WT	G			5/3/21	1035		4	1	1	2							X	X		X			X		

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature]	5/7/21	0050	[signature] Xcel	5/7/21	0650

SAMPLE CONDITIONS

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
2.1	Ø Y/N	Y/N	Ø Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Riley Jacobson + Chris Pelosi + Kendall Johnson

SIGNATURE of SAMPLER: [signature] [signature] [signature]

DATE Signed (MM/DD/YY): 5/7/21

pH strips: MD00402
Temp M400841: 2.1°C

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Section B
Required Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number	21-04548
Project Name:	Xcel Energy Sherco Ponds Spring

Section C
Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER ___

Filtered (Y/N)

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW, WATER WT, WASTE WATER WW, PRODUCT P, SOIL/SOLID SL, OIL OL, WP, AR, OT, TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	GW-D	GW-CCR	GW-CCR-BAP2		(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	P-132	WT	G			5/3/21	1305		4	1	1	2						X	X			X			X		
2	P-150	WT	G			5/3/21	0910		2	1		1							X						X		
3	~~P-151~~	~~WT~~	~~G~~						~~2~~	~~1~~		~~1~~							~~X~~						~~X~~		
4	P-152A	WT	G			5/4/21	1250		2	1		1							X	X			X	X	X		
5	P-153	WT	G			5/3/21	1435		2	1		1							X						X		
6	P-154A	WT	G			5/3/21	1400		2	1		1							X						X		
7	~~P-155~~	~~WT~~	~~G~~						~~2~~	~~1~~		~~1~~							~~X~~				~~X~~				
8	~~P-156~~	~~WT~~	~~G~~						~~2~~	~~1~~		~~1~~							~~X~~				~~X~~				
9	~~P-157~~	~~WT~~	~~G~~						~~2~~	~~1~~		~~1~~							~~X~~				~~X~~				
10	P-158	WT	G			5/4/21	1615		2	1		1							X	X			X	X			
11	~~P-162~~	~~WT~~	~~G~~						~~2~~	~~1~~		~~1~~							~~X~~						~~X~~		
12	~~P-163~~	~~WT~~	~~G~~						~~2~~	~~1~~		~~1~~							~~X~~						~~X~~		

Additional Comments:

*Submitting 30 Samples + 3 Dup + 3 RINSE - RDS 5/4/21

pH strips: M000402
Tip M400841: 3.2°C

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature] Pace	5/4/21	1800	[signature] Pace	5/4/21	1800
[signature] Pace	5/5/21	800	[signature] Xcel	5/5/21	0800

SAMPLE CONDITIONS

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
	Y/N	Y/N	Y/N
	(Y)/N	Y/N	(Y)/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Riley Jacobson + Chris Pelosi + Kendall Johnson

SIGNATURE of SAMPLER: [signatures]

DATE Signed (MM/DD/YY): 5/5/21

CHAIN-OF-CUSTODY / Analytical Request Document

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Pace Analytical™ www.pacelabs.com

Page: 4 of 5

Section A — Required Client Information:

Company:	Xcel Energy
Address:	Environmental Services
	MP-7
Email To:	Chris Pelosi
Phone: (612) 597-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B — Required Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number:	21-04548
Project Name:	Xcel Energy Sherco Ponds Spring

Section C — Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER ___

Section D Required Client Information

SAMPLE ID — One Character per box. (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WP; AP; OT; TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	GW-D	GW-CCR	GW-CCR-BAP2	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
1	P-132	WT	G			5/3/21	1305		4	1	1	2						X	X		X			X		
2	P-150	WT	G			5/3/21	0910		2	1		1							X					X		
3	P-151	WT	G			5/6/21	1550		2	1		1							X					X		
4	P-152A	WT	G			5/4/21	1250		2	1		1							X	X		X	X	X		
5	P-153	WT	G			5/3/21	1435		2	1		1							X					X		
6	P-154A	WT	G			5/3/21	1400		2	1		1							X					X		
7	P-155	WT	G			5/5/21	1345		2	1		1							X			X				
8	P-156	WT	G			5/5/21	1255		2	1		1							X			X				
9	P-157	WT	G			5/5/21	1140		2	1		1							X			X				
10	P-158	WT	G			5/4/21	1615		2	1		1							X	X		X	X			
11	P-162	WT	G			5/5/21	0845		2	1		1							X					X		
12	P-163	WT	G			5/5/21	0930		2	1		1							X					X		

Filtered (Y/N)

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
[signature]	5/7/21	0650	[signature] /Xcel	5/7/21	0650	2.1	Y/N (N circled)	Y/N	Y/N (N circled)
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Riley Jacobson + Chris Pelosi + Kendall Johnson

SIGNATURE of SAMPLER: [signatures]

DATE Signed (MM / DD / YY): 5/7/21

pH strips: M000402
Temp M400841: 2.1°C

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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 Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Xcel Energy	Report To:	Chris Pelosi	Attention:	Steve Davis
Address:	Environmental Services	Copy To:	Riley Jacobson	Company Name:	
	MP-7			Address:	
Email To:	Chris Pelosi	Purchase Order No.:		Pace Quote Reference:	
Phone: (612) 597-7254	Fax:	Project Number	21-04548	Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Requested Due Date/TAT:	2 Weeks	Project Name:	Xcel Energy Sherco Ponds Spring	Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER ____

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW, WATER WT, WASTE WATER WW, PRODUCT P, SOIL/SOLID SL, OIL OL, WP, AR, OT, TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	GW-D	GW-CCR	GW-CCR-BAP2		(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~P-164~~	WT	G						2	1		1							X						X		
2	~~P-165~~	WT	G						2	1		1							X						X		
3	~~P-173~~	WT	G						2	1		1								X				X			
4	~~P-174~~	WT	G						2	1		1								X				X			
5	~~P-175~~	WT	G						2	1		1								X				X			
6	~~P-176~~	WT	G						2	1		1								X				X			
7	P-177	WT	G			5/4/21	1540		2	1		1								X				X			
8	P-178A	WT	G			5/4/21	1440		4	1	1	2						X		X		X		X			
9	P-178B	WT	G			5/4/21	1505		3	1	1	1						X				X					
10	~~WELL #4~~	WT	G						3	1	1	1						X				X					
11	~~WELL #6~~	WT	G						3	1	1	1						X				X					
12	DUPLICATE NPDES (P-93D)	WT	G			5/4/21	1020		3	1	1	1						X				X					

Filtered (Y/N)

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Riley Jacobson Pace	5/4/21	1800	[signature] Pace	5/4/21	1800
[signature] Pace	5/5/21	800	[signature] Xcel	5/5/21	0800

SAMPLE CONDITIONS				
Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact	
	Y/N	Y/N	Y/N	
	Y/N (circled)	Y/N	Y/N (circled)	
	Y/N	Y/N	Y/N	
	Y/N	Y/N	Y/N	

Additional Comments:

* Submitting 30 Samples + 3 Dup +
- 3 RINSE - RUS 5/4/21

pH strips: MD0042
Temp MY008Y1 : 3.2°C

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Riley Jacobson + Chris Pelosi + Kendall Johnson

SIGNATURE of SAMPLER: [signatures]

DATE Signed (MM / DD / YY): 5/5/21

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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Required Client Information:

Company:	Xcel Energy
Address:	Environmental Services
	MP-7
Email To:	Chris Pelosi
Phone: (612) 597-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B Required Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number	21-04548
Project Name:	Xcel Energy Sherco Ponds Spring

Section C Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES
SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes: DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; TISSUE TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Filtered (Y/N)	Requested Analysis: GW-D	GW-CCR	GW-CCR-BAP2	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
1	P-164	WT	G			5/5/21	1000		2	1		1								X					X		
2	P-165	WT	G			5/6/21	1500		2	1		1								X					X		
3	P-173	WT	G			5/5/21	0935		2	1		1									X				X		
4	P-174	WT	G			5/5/21	1005		2	1		1									X				X		
5	P-175	WT	G			5/5/21	1035		2	1		1									X				X		
6	P-176	WT	G			5/5/21	1105		2	1		1									X				X		
7	P-177	WT	G			5/4/21	1540		2	1		1									X				X		
8	P-178A	WT	G			5/4/21	1440		4	1	1	2								X		X		X		X		
9	P-178B	WT	G			5/4/21	1505		3	1	1	1								X				X				
10	WELL #4	WT	G			5/6/21	1355		3	1	1	1								X				X				
11	WELL #6	WT	G			5/6/21	1335		3	1	1	1								X				X				
12	DUPLICATE NPDES (P-93D)	WT	G			5/4/21	1020		3	1	1	1								X				X				

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Riley Jacobson	5/7/21	0650	Xcel	5/7/21	0650

SAMPLE CONDITIONS

Temp in °C	Received on Ice Y/N	Custody Sealed Cooler Y/N	Samples Intact Y/N
2.1	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Riley Jacobson + Chris Pelosi + Kendall Johnson
SIGNATURE of SAMPLER: Riley Jacobson
DATE Signed (MM / DD / YY): 5/7/21

pH Strips: MD00402
Temp IR40084: 2.1°C

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CHAIN-OF-CUSTODY / Analytical Request Document

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Section A — Required Client Information:

Company:	Xcel Energy
Address:	Environmental Services
	MP-7
Email To:	Chris Pelosi
Phone: (612) 597-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B — Required Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number:	21-04548
Project Name:	Xcel Energy Sherco Ponds Spring

Section C — Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER___

Filtered (Y/N)

Section D Required Client Information — SAMPLE ID. One Character per box. (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WP; AR; OT; TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	GW-D	GW-CCR	GW-CCR-BAP2	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
1	RINSE NPDES	WT	G			5/4/21	1050		3	1	1	1						X			X					
2	~~DUPLICATE BAP~~	~~WT~~	~~G~~						~~2~~	~~1~~		~~1~~							~~X~~			~~X~~				
3	~~RINSE BAP~~	~~WT~~	~~G~~						~~2~~	~~1~~		~~1~~							~~X~~			~~X~~				
4	DUPLICATE BAP2 (P-158)	WT	G			5/4/21	1615		2	1		1								X			X			
5	RINSE BAP2	WT	G			5/4/21	1620		2	1		1								X			X			
6	DUPLICATE P3 (P-150)	WT	G			5/3/21	0910		2	1		1							X					X		
7	RINSE P3	WT	G			5/3/21	0920		2	1		1							X					X		
8																										
9																										
10		Ros 5/4/21																								
11																										
12																										

Additional Comments:

*Submitting 30 Samples + 3 Dup + 3 RINSE - Ros 5/4/21

pH strips: MPDW4-2
Temp MY0084: 3.2°C

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
[signature] Pace	5/4/21	1800	[signature] Pace	5/4/21	1800		Y/N	Y/N	Y/N
[signature] Pace	5/5/21	800	[signature] Xcel	5/5/21	0800		Y/N (N circled)	Y/N	Y/N (N circled)
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Riley Jacobson + Chris Pelosi + Kendall Johnson

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 5/5/21

Pace Analytical™
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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Address:	Environmental Services
	MP-7
Email To:	Chris Pelosi
Phone: (612) 587-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B Required Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number	21-04548
Project Name:	Xcel Energy Sherco Ponds Spring

Section C Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes: DRINKING WATER (DW), WATER (WT), WASTE WATER (WW), PRODUCT (P), SOIL/SOLID (SL), OIL (OL), WIPE (WP), AIR (AR), TISSUE (TS)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: GW-D	GW-CCR	GW-CCR-BAP2	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
1	RINSE NPDES	WT	G			5/4/21	1050		3	1	1	1						X			X					
2	DUPLICATE BAP (P-155)	WT	G			5/5/21	1345		2	1		1							X			X					
3	RINSE BAP	WT	G			5/5/21	1350		2	1		1							X			X					
4	DUPLICATE BAP2 (P-158)	WT	G			5/4/21	1615		2	1		1								X			X				
5	RINSE BAP2	WT	G			5/4/21	1620		2	1		1								X			X				
6	DUPLICATE P3 (P-150)	WT	G			5/3/21	0910		2	1		1							X					X			
7	RINSE P3	WT	G			5/3/21	0920		2	1		1							X					X			
8																											
9																											
10																											
11																											
12																											

Rev

Additional Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Riley Jacobson	5/7/21	0650	Xcel	5/7/21	0650	2.1

SAMPLE CONDITIONS: Y/N | Y/N | Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Riley Jacobson + Chris Pelosi + Kendall Johnson

SIGNATURE of SAMPLER: Riley Jacobson

DATE Signed (MM / DD / YY): 5/7/21

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

pH Strips: MD 0402
Temp M400841: 2.1°C

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

21 June 2021

Eric Ealy

Environmental Services-Water Minneapolis

250 Marquette Plaza

Minneapolis, MN 55401

cc:

RE: Sherco BAP2 CCR

Enclosed are the results of analyses for samples received by the laboratory on 06/11/2021 09:35. If you have any questions concerning this report, please feel free to contact me.

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

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

Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	06/21/2021 09:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sample Qualifier	Laboratory ID	Matrix	Sampled	Received
P-175		MGF0113-03	Water	06/10/2021 11:35	06/11/2021 9:35

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

Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	06/21/2021 09:46

P-175

MGF0113-03 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	7.52	1.00	mg/L		1	BGF0343	6/16/21 7:06	6/16/21 14:22	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGF0343	6/16/21 7:06	6/16/21 14:22	EPA 300.0	CRL
Sulfate	66.3	1.00	mg/L		1	BGF0343	6/16/21 7:06	6/16/21 14:22	EPA 300.0	CRL
Wet Chemistry										
pH	7.88		pH Units	M_TTT	1	BGF0264	6/11/21 9:54	6/11/21 13:04	SM 4500-H+ B	HRD
Total Dissolved Solids	342	25.0	mg/L		1	BGF0275	6/14/21 9:01	6/14/21 9:01	SM 2540C	HSD
Total Suspended Solids	5.80	5.00	mg/L		1	BGF0274	6/14/21 6:31	6/14/21 6:31	SM 2540D	HSD
Total Metals by ICP										
Boron	0.161	0.0500	mg/L		1	BGF0278	6/14/21 7:36	6/16/21 17:26	EPA 200.7	HRD
Calcium	84.6	1.50	mg/L		1	BGF0278	6/14/21 7:36	6/16/21 17:24	EPA 200.7	HRD

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

Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	06/21/2021 09:46

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGF0343 - Wet Prep										
Blank (BGF0343-BLK1)				Prepared & Analyzed: 06/16/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
Blank (BGF0343-BLK2)				Prepared & Analyzed: 06/16/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
LCS (BGF0343-BS1)				Prepared & Analyzed: 06/16/2021						
Chloride	25.292	1.00	mg/L	25.000		101	90-110			
Fluoride	2.7060	0.750	mg/L	2.5000		108	90-110			
Sulfate	25.356	1.00	mg/L	25.000		101	90-110			
LCS (BGF0343-BS2)				Prepared & Analyzed: 06/16/2021						
Chloride	25.533	1.00	mg/L	25.000		102	90-110			
Fluoride	2.7760	0.750	mg/L	2.5000		111	90-110			M_LCS-H
Sulfate	25.684	1.00	mg/L	25.000		103	90-110			
LCS (BGF0343-BS3)				Prepared & Analyzed: 06/16/2021						
Chloride	25.577	1.00	mg/L	25.000		102	90-110			
Fluoride	2.8560	0.750	mg/L	2.5000		114	90-110			M_LCS-H
Sulfate	25.694	1.00	mg/L	25.000		103	90-110			
LCS (BGF0343-BS4)				Prepared: 06/16/2021 Analyzed: 06/18/2021						
Chloride	24.176	1.00	mg/L	25.000		96.7	90-110			
Fluoride	2.2970	0.750	mg/L	2.5000		91.9	90-110			
Sulfate	24.034	1.00	mg/L	25.000		96.1	90-110			

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

Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	06/21/2021 09:46

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGF0343 - Wet Prep										
LCS (BGF0343-BS5)				Prepared: 06/16/2021 Analyzed: 06/18/2021						
Chloride	24.328	1.00	mg/L	25.000		97.3	90-110			
Fluoride	2.6140	0.750	mg/L	2.5000		105	90-110			
Sulfate	24.497	1.00	mg/L	25.000		98.0	90-110			
Duplicate (BGF0343-DUP1)		**Source: MGF0113-01**		Prepared & Analyzed: 06/16/2021						
Chloride	45.576	1.00	mg/L		45.619			0.0943	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	33.820	1.00	mg/L		33.851			0.0916	20	
Duplicate (BGF0343-DUP2)		**Source: MGF0113-02**		Prepared & Analyzed: 06/16/2021						
Chloride	11.379	1.00	mg/L		11.392			0.114	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	40.230	1.00	mg/L		40.263			0.0820	20	
Matrix Spike (BGF0343-MS1)		**Source: MGF0113-01**		Prepared & Analyzed: 06/16/2021						
Chloride	76.500	1.25	mg/L	31.250	45.619	98.8	90-110			
Fluoride	3.3138	0.938	mg/L	3.1250	<0.938	106	90-110			
Sulfate	65.006	1.25	mg/L	31.250	33.851	99.7	90-110			
Matrix Spike (BGF0343-MS2)		**Source: MGF0113-02**		Prepared & Analyzed: 06/16/2021						
Chloride	42.870	1.25	mg/L	31.250	11.392	101	90-110			
Fluoride	3.5600	0.938	mg/L	3.1250	<0.938	114	90-110			M_MS
Sulfate	71.821	1.25	mg/L	31.250	40.263	101	90-110			
Matrix Spike Dup (BGF0343-MSD1)		**Source: MGF0113-01**		Prepared & Analyzed: 06/16/2021						
Chloride	76.820	1.25	mg/L	31.250	45.619	99.8	90-110	0.417	20	
Fluoride	3.4600	0.938	mg/L	3.1250	<0.938	111	90-110	4.32	20	M_MS
Sulfate	65.353	1.25	mg/L	31.250	33.851	101	90-110	0.531	20	

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	06/21/2021 09:46

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGF0343 - Wet Prep										
Matrix Spike Dup (BGF0343-MSD2)		**Source: MGF0113-02**		Prepared & Analyzed: 06/16/2021						
Chloride	42.335	1.25	mg/L	31.250	11.392	99.0	90-110	1.26	20	
Fluoride	3.5700	0.938	mg/L	3.1250	<0.938	114	90-110	0.281	20	M_MS
Sulfate	70.934	1.25	mg/L	31.250	40.263	98.1	90-110	1.24	20	

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	06/21/2021 09:46

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGF0264 - Wet Prep										
LCS (BGF0264-BS1)				Prepared & Analyzed: 06/11/2021						
pH	7.0900		pH Units	7.0000		101	90-110			
LCS (BGF0264-BS2)				Prepared & Analyzed: 06/11/2021						
pH	7.0700		pH Units	7.0000		101	90-110			
Duplicate (BGF0264-DUP1)		**Source: MGF0112-01**		Prepared & Analyzed: 06/11/2021						
pH	7.6700		pH Units		7.6400			0.392	20	
Batch BGF0274 - Wet Prep										
Blank (BGF0274-BLK1)				Prepared & Analyzed: 06/14/2021						
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BGF0274-BS1)				Prepared & Analyzed: 06/14/2021						
Total Suspended Solids	98.000	5.00	mg/L	109.10		89.8	70-130			
Duplicate (BGF0274-DUP1)		**Source: MGF0112-01**		Prepared & Analyzed: 06/14/2021						
Total Suspended Solids	<12.5	12.5	mg/L		<12.5				20	M_K-06
Batch BGF0275 - Wet Prep										
Blank (BGF0275-BLK1)				Prepared & Analyzed: 06/14/2021						
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BGF0275-BS1)				Prepared & Analyzed: 06/14/2021						
Total Dissolved Solids	108.00	25.0	mg/L	112.10		96.3	70-130			

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	06/21/2021 09:46

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGF0275 - Wet Prep										
Duplicate (BGF0275-DUP1)		**Source: MGF0112-01**		Prepared & Analyzed: 06/14/2021						
Total Dissolved Solids	444.00	25.0	mg/L		440.00			0.905	20	

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	06/21/2021 09:46

Total Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGF0278 - EPA 200.2, EPA 3005										
Blank (BGF0278-BLK1)				Prepared: 06/14/2021 Analyzed: 06/16/2021						
Calcium	<1.50	1.50	mg/L							
Boron	<0.0500	0.0500	mg/L							
LCS (BGF0278-BS1)				Prepared: 06/14/2021 Analyzed: 06/16/2021						
Boron	1.1473	0.0500	mg/L	1.0000		115	85-115			
Calcium	104.52	1.50	mg/L	100.00		105	85-115			
Duplicate (BGF0278-DUP1)		**Source: MGF0112-01**		Prepared: 06/14/2021 Analyzed: 06/16/2021						
Boron	0.035197	0.0500	mg/L		0.040627			14.3	20	
Calcium	93.241	1.50	mg/L		99.405			6.40	20	
Matrix Spike (BGF0278-MS1)		**Source: MGF0112-01**		Prepared: 06/14/2021 Analyzed: 06/16/2021						
Boron	1.0118	0.0500	mg/L	1.0000	0.040627	97.1	70-130			
Calcium	202.07	1.50	mg/L	100.00	99.405	103	70-130			
Matrix Spike Dup (BGF0278-MSD1)		**Source: MGF0112-01**		Prepared: 06/14/2021 Analyzed: 06/16/2021						
Boron	1.0135	0.0500	mg/L	1.0000	0.040627	97.3	70-130	0.169	20	
Calcium	202.99	1.50	mg/L	100.00	99.405	104	70-130	0.453	20	

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Christine Keefe, Supervisor (612) 630-4506

Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	06/21/2021 09:46

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_LCS-H	The recovery of this analyte in the LCS was above the control limits. The sample result may be biased high.
M_K-06	The reporting limit has been increased, the reported result is acceptable. The maximum routine sample volume was used, but the amount of residue measured was below reference method limits.
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.

Pace Analytical™ www.pacelabs.com

Section A — **Required** Client Information:

Company:	Xcel Energy
Address:	Environmental Services
	MP-7
Email To:	Chris Pelosi
Phone: (612) 597-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B — **Required** Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number	
Project Name:	Xcel Energy Sherco Spring RE

Section C — Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☐ OTHER___

Filtered (Y/N)

Section D Required Client Information — **SAMPLE ID** — One Character per box. (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes — MATRIX / CODE: DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WP; AR; OT; TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	GW-CCR	GW-CCR-BAP2	Residual Chlorine (Y/N)	Pace Project No. Lab I.D.
1	P-137A	WT	G	—	—	6/10/21	0910		4	1	1	2						X			
2	P-151	WT	G	—	—	↓	1005		2	1		1						X			
3	P-165	WT	G	—	—	↓	1050		2	1		1						X			
4	P-175	WT	G	—	—	↓	1135		2	1		1							X		
5																					
6																					
7	NA KJS 6/10/21																				
8																					
9																					
10																					
11																					
12																					

Additional Comments:

pH strips: ND00402
Trip M400841

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
[signature]	6/11/21	910	VIA Pace Courier [signature]	6/11/21	910	4.1	Y/N (Y circled)	Y/N	Y/N (Y circled)
[signature] Pace	6/11/21	935	[signature]	6/11/21	0935		Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chris Pelosi + Kendall Johnson

SIGNATURE of SAMPLER: [signature] + [signature] DATE Signed (MM / DD / YY): 06/10/21

CHAIN-OF-CUSTODY / Analytical Request Document

Pace Analytical™ www.pacelabs.com

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

Section A Required Client Information:

Company:	Xcel Energy
Address:	Environmental Services MP-7
Email To:	Chris Pelosi
Phone: (612) 597-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B Required Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number	21-04549
Project Name:	Xcel Energy Sherco Ponds Spring

Section C Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER ___

Filtered (Y/N)

Section D Required Client Information — SAMPLE ID: One Character per box. (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW, WATER WT, WASTE WATER WW, PRODUCT P, SOIL/SOLID SL, OIL OL, WP, AR, OT, TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	GW-D	GW-CCR	GW-CCR-BAP2	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~P-50D~~	~~WT~~	~~G~~						3	1	1	1						X			X					
2	P-56	WT	G			5/4/21	1125		3	1	1	1						X			X					
3	P-60	WT	G			5/4/21	0920		3	1	1	1						X			X					
4	P-62	WT	G			5/4/21	0845		3	1	1	1						X			X					
5	P-66	WT	G			5/4/21	1435		3	1	1	1						X			X					
6	P-88	WT	G			5/4/21	1150		3	1	1	1						X			X					
7	~~P-89-1~~	~~WT~~	~~G~~						3	1	1	1						X			X					
8	P-90	WT	G			5/4/21	1235		3	1	1	1						X			X					
9	P-90A	WT	G			5/4/21	1300		3	1	1	1						X			X					
10	P-92A	WT	G			5/4/21	0940		3	1	1	1						X			X					
11	P-92B	WT	G			5/4/21	0910		3	1	1	1						X			X					
12	P-92D	WT	G			5/4/21	0840		3	1	1	1						X			X					

Additional Comments:

*Submitting 30 Samples + 3 DUP + 3 RINSE
-RGJ 5/4/21

HStrips: MD00412
Trip M400841: 3.2°C

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature] Pace	5/4/21	1800	[signature] Pace	5/4/21	1800
[signature] Pace	5/5/21	800	[signature] Xcel	5/5/21	0800

SAMPLE CONDITIONS

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
	Y/N	Y/N	Y/N
	(Y)/N	Y/N	(Y)/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Riley Jacobson + Chris Pelosi + Kendall Johnson

SIGNATURE of SAMPLER: [signature] [signature]

DATE Signed (MM/DD/YY): 5/5/21

Appendix B

Fall 2021 Detection Monitoring Event
Field Datasheets and Laboratory Reports

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client: Xcel Energy Project: Sherco Ponds Fall 2021 Project No.: 21-05223

Monitoring Point ID: P-17 Labeled: P-17

Inside Diameter: 2 (inches) Key #: 2106 [X] Locked [ ] Not Locked

Casing Material: [X] PVC [ ] Steel [ ] Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	58.76	Feet (measured 11/1/21 CW)
Static water level measurement before purging (Start Depth)	40.64	Feet
Static water level measurement at time of sampling (Final Depth)	40.64	Feet
Static Water Level Elevation Before Purging	NA	Feet

Purge Method: Bladder Pump Pump ID: RPC-1

Date Purged: 11/2/21 Water Column: 18.12 Feet

Time Purged: 1440-1516 One Casing Volume: 2.95 Gallons

Pump Rate: 0.25 (GPM) / LPM Volume Purged: 9 Gallons

Field Sampling Data

Date Sampled: 11/2/21

Time Sampled: 1520

Sampling Equip.: Pump

Meter ID: MPS-7/YSI5

Analyzed by: RCJ

Field Parameter Measurements of Sample

pH	7.8	(units)	D.O	6.4	(mg/l)
Spec. Cond.	500	(µmhos/cm)	Turbidity	1.1	(NTU)
Temp. Observed	9.7	(°C)	Eh	183	(mV)
Temp. Corrected	9.8	(°C)	Other	clear no odor	

Field Measurements Temp. Corrected: [X] Yes [ ] No [ ] NA

Sample for Soluble Metals Filtered in Field: [X] Yes [ ] No [X] NA

Temperature Correction Factor: +0.1 °C within ±2°C

Weather Conditions During Sampling: 40°F, Mostly Cloudy, NW@4MPH

Sample Description: clear no odor

Observations: none

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
1452	7.8	510	9.8	6.3	NM	181	3
1504	7.8	510	9.7	6.4	NM	183	6
1516	7.8	500	9.7	6.4	NM	183	9
				RCJ 11/2/21			

Samples chilled immediately after collection: [X] Yes [ ] Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Riley Jacobson Pace Analytical

Lead Technician Signature: [signature] Date: 11/2/21

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client: Xcel Energy Project: Sherco Ponds Fall 2021 Project No.: 21-05223

Monitoring Point ID: P-152A Labeled: P-152A

Inside Diameter: 2 (inches) Key #: 2106 [X] Locked [ ] Not Locked

Casing Material: [X] PVC [ ] Steel [ ] Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation: NA Feet

Total Well Depth: 42.35 Feet

Static water level measurement before purging (Start Depth): 41.46 Feet

Static water level measurement at time of sampling (Final Depth): 41.46 Feet

Static Water Level Elevation Before Purging: NA Feet

(measured 11/1/21 CJP)

Purge Method: Bladder Pump Pump ID: BPC-1

Date Purged: 11/2/21 Water Column: 0.89 Feet

Time Purged: 1525-1534 One Casing Volume: 0.15 Gallons

Pump Rate: 0.05 (GPM) / LPM Volume Purged: 0.45 Gallons

Field Sampling Data

Date Sampled: 11/2/21

Time Sampled: 1535

Sampling Equip.: pump/filter (crossed out)

Meter ID: MPS-7 TM-5

Analyzed by: RGJ

Field Parameter Measurements of Sample

(section crossed out)

pH ____ (units) D.O ____ (mg/l)

Spec. Cond. ____ (µmhos/cm) Turbidity ____ (NTU)

Temp. Observed ____ (°C) Eh ____ (mV)

Temp. Corrected ____ (°C) Other ____

Field Measurements Temp. Corrected: [X] Yes [ ] No [ ] NA

Sample for Soluble Metals Filtered in Field: [X] Yes (crossed out) [ ] No [X] NA

Temperature Correction Factor: +0.1

Weather Conditions During Sampling: 40°F overcast and w @ 5 mph

Sample Description: clear no odor

Observations: bladder pump removed to measure SWL. Top of bladder pump @ 39.50'

* + Radium (REMOVED Bladder Pump + Sampled w/ Grundfos - Still NO SAMPLE COLLECTED 11/4/21 RWJ)

Stabilization Test

Time	pH (units)	Specific Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
1528	8.0	430	8.5	6.8	NA	180	0.15
1531					↓		0.30
1534					↓		0.45

Samples chilled immediately after collection: [X] Yes [ ] Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Riley Jacobson Pace Analytical

Lead Technician Signature: (signature) Date: 11/2/21

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client Xcel Energy **Project** Sherco Ponds Fall 2021 **Project No.** 21-05223

Monitoring Point ID P-158 Labeled P-158

Inside Diameter 2 (inches) Key # 2106 [X] Locked [ ] Not Locked

Casing Material: [X] PVC [ ] Steel [ ] Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation NA Feet

Total Well Depth 49.16 Feet] measured 11/1/21 csp

Static water level measurement before purging (Start Depth) 42.94 Feet]

Static water level measurement at time of sampling (Final Depth) 42.94 Feet

Static Water Level Elevation Before Purging NA Feet

Purge Method Bladder Pump Pump ID BPC-1

Date Purged 11/2/21 Water Column 6.22 Feet

Time Purged 1245-1303 One Casing Volume 1.01 Gallons

Pump Rate 0.2 (GPM) / LPM Volume Purged 3.6 Gallons

Field Sampling Data

Date Sampled 11/2/21

Time Sampled 1305

Sampling Equip. Pump

Meter ID MPS-7 / TMS

Analyzed by RCJ

Field Parameter Measurements of Sample

pH 7.4 (units) D.O 8.2 (mg/l)

Spec. Cond. 780 (µmhos/cm) Turbidity 1.4 (NTU)

Temp. Observed 10.1 (°C) Eh 201 (mV)

Temp. Corrected 10.2 (°C) Other NA

Field Measurements Temp. Corrected: [X] Yes [ ] No [ ] NA

Sample for Soluble Metals Filtered in Field: [~~X~~] Yes [ ] No [X] NA

Temperature Correction Factor: +0.1 °C

Weather Conditions During Sampling: 40°F, Sunny, N @ 8MPH

Sample Description: clear no odor

Observations: none

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
1251	7.4	780	10.1	8.1	NA	201	1.2
1257	7.4	780	10.1	8.2	NA	201	2.4
1303	7.4	780	10.1	8.2	NA	201	3.6
				RCJ 11/2/21			

Samples chilled immediately after collection: [X] Yes [ ] Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Riley Jacobson Pace Analytical

Lead Technician Signature: [signature] Date: 11/2/21

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client: Xcel Energy Project: Sherco Ponds Fall 2021 Project No.: 21-05223

Monitoring Point ID: P-173 Labeled: 844707

Inside Diameter: 2 (inches) Key #: 2106 [X] Locked [ ] Not Locked

Casing Material: [X] PVC [ ] Steel [ ] Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	80.30	Feet (measured 11/1/21 CSP)
Static water level measurement before purging (Start Depth)	75.07	Feet
Static water level measurement at time of sampling (Final Depth)	75.07	Feet
Static Water Level Elevation Before Purging	NA	Feet

Purge Method: Bladder Pump Pump ID: BPC-1

Date Purged: 11/2/21 Water Column: 5.23 Feet

Time Purged: 0940 - 0955 One Casing Volume: 0.85 Gallons

Pump Rate: 0.2 (GPM / LPM) Volume Purged: 3 Gallons

Field Sampling Data

Date Sampled: 11/2/21

Time Sampled: 1000

Sampling Equip.: Pump

Meter ID: MPS-7/TM5

Analyzed by: ROS

Field Parameter Measurements of Sample

pH	7.5 (units)	D.O	7.7 (mg/l)
Spec. Cond.	540 (µmhos/cm)	Turbidity	1.9 (NTU)
Temp. Observed	9.1 (°C)	Eh	191 (mV)
Temp. Corrected	9.2 (°C)	Other	NA

Field Measurements Temp. Corrected: [X] Yes [ ] No [ ] NA

Sample for Soluble Metals Filtered in Field: [X] Yes [ ] No [X] NA

Temperature Correction Factor: +0.1 °C

Weather Conditions During Sampling: 32°, Sunny, NW 9MPH

Sample Description: clear no odor

Observations: * DUPLICATE BAP2 Collected here @ 1000 -ROS 11/2/21

* RINSE BAP2 Collected @ 1005 11/2/21 by ROS

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
0945	7.5	540	9.2	8.0	NA	190	1
0950	7.5	540	9.1	7.8	NA	191	2
0955	7.5	540	9.1	7.7	NA	191	3
				ROS 11/2/21			

Samples chilled immediately after collection: [X] Yes [ ] Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Riley Jacobson Pace Analytical

Lead Technician Signature: Riley Jacobson Date: 11/2/21

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client: Xcel Energy | Project: Sherco Ponds Fall 2021 | Project No.: 21-05223

Monitoring Point ID: P-174 | Labeled: 8447006

Inside Diameter: 2 (inches) | Key #: 2106 | [X] Locked | [ ] Not Locked

Casing Material: [X] PVC | [ ] Steel | [ ] Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	82.27	Feet (measured 11/2/21 CSP)
Static water level measurement before purging (Start Depth)	77.48	Feet
Static water level measurement at time of sampling (Final Depth)	77.48	Feet
Static Water Level Elevation Before Purging	NA	Feet

Purge Method: Bladder Pump | Pump ID: BPc-1

Date Purged: 11/2/21 | Water Column: 4.79 Feet

Time Purged: 1020 - 1035 | One Casing Volume: 0.78 Gallons

Pump Rate: 0.2 (GPM / LPM) | Volume Purged: 3 Gallons

Field Sampling Data

Date Sampled: 11/2/21 | Time Sampled: 1040 | Sampling Equip.: Pump | Meter ID: YSI-7/7MS | Analyzed by: RDS

Field Parameter Measurements of Sample

pH	7.3 (units)	D.O	8.0 (mg/l)
Spec. Cond.	610 (µmhos/cm)	Turbidity	2.3 (NTU)
Temp. Observed	9.6 (°C)	Eh	197 (mV)
Temp. Corrected	9.7 (°C)	Other	NA

Field Measurements Temp. Corrected: [X] Yes [ ] No [ ] NA

Sample for Soluble Metals Filtered in Field: [X] Yes [ ] No [ ] NA

Temperature Correction Factor: +0.1 °C

Weather Conditions During Sampling: 33°F, Sunny, NW 10MPH

Sample Description: clear no odor

Observations: none

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
1025	7.4	620	9.7	8.2	NA	195	1
1030	7.3	620	9.6	8.1	NA	196	2
1035	7.3	610	9.6	8.0	NA	197	3

RDS 11/2/21

Samples chilled immediately after collection: [X] Yes [ ] Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Riley Jacobson Pace Analytical

Lead Technician Signature: Riley Jacobson Date: 11/2/21

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client: Xcel Energy | Project: Sherco Ponds Fall 2021 | Project No.: 21-05223

Monitoring Point ID: P-175 | Labeled: 844705

Inside Diameter: 2 (inches) | Key #: 2106 | [X] Locked | [ ] Not Locked

Casing Material: [X] PVC [ ] Steel [ ] Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	84.15	Feet (measured 11/4/21 CJP)
Static water level measurement before purging (Start Depth)	79.82	Feet
Static water level measurement at time of sampling (Final Depth)	79.79	Feet
Static Water Level Elevation Before Purging	NA	Feet

Purge Method: Bladder Pump | Pump ID: BPC-2

Date Purged: 11/4/21 | Water Column: 4.33 Feet

Time Purged: 1410 - 1450 | One Casing Volume: 0.70 Gallons

Pump Rate: 0.10 (GPM) LPM | Volume Purged: 3.5 Gallons

Field Sampling Data

Date Sampled: 11/4/21

Time Sampled: 1500

Sampling Equip.: pump

Meter ID: MPS-6 TM-6

Analyzed by: CJP

Field Parameter Measurements of Sample

pH	7.6	(units)	D.O	7.1	(mg/l)
Spec. Cond.	460	(µmhos/cm)	Turbidity	15	(NTU)
Temp. Observed	11.0	(°C)	Eh	157	(mV)
Temp. Corrected	11.1	(°C)	Other	clear no odor	

Field Measurements Temp. Corrected: [X] Yes [ ] No [ ] NA

Sample for Soluble Metals Filtered in Field: [X] Yes [ ] No [ ] NA

Temperature Correction Factor: +0.1 °C

Weather Conditions During Sampling: 40°F sunny and 20 5mph

Sample Description: clear no odor

Observations: * removed bladder pump to measure SWL - Top of Bladder pump @ 77.94 ft bladder pump maintenance 11/4/21 CJP

~~* NO SAMPLE PUMPED - TOO LOW OF VOL.~~ (NA per 11/4/21) Typical BP - 81.83ft 11/4/21

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
1418	7.6	460	11.0	7.0	NA	152	0.70
1426	7.6	460	11.0	6.8		153	1.40
1434	7.6	460	10.9	7.1		155	2.10
1442	7.6	460	11.0	7.1		156	2.80
1450	7.6	460	11.0	7.1		157	3.50
			(NA per 11/4/21)				

Samples chilled immediately after collection: [X] Yes [ ] Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Chris Pelos Pace Analytical

Lead Technician Signature: [signature] Date: 11/4/21

purged 5 volumes per client request. CJP 11/4/21

24

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Client Xcel Energy **Project** Sherco Ponds Fall 2021 **Project No.** 21-05223

Well Description and Presampling Information

Monitoring Point ID P-176 Labeled 844703

Inside Diameter 2 (inches) Key # 2106 ☒ Locked ☐ Not Locked

Casing Material: ☒ PVC ☐ Steel ☐ Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	84.18	Feet (measured 11/1/21 CJP – confirmed 11/4/21 CJP)
Static water level measurement before purging (Start Depth)	79.30	Feet
Static water level measurement at time of sampling (Final Depth)	79.30	Feet
Static Water Level Elevation Before Purging	NA	Feet

Purge Method Bladder Pump Pump ID GP-2 / BPC-2

Date Purged 11/4/21 Water Column 4.88 Feet

Time Purged ~~1410~~ 1555 – 1635 One Casing Volume 0.80 Gallons

Pump Rate 0.10 (GPM) / LPM Volume Purged 10 + 4.0 Gallons

Field Sampling Data

Date Sampled 11/2/21

Time Sampled ~~1855~~ 1640

Sampling Equip. pump

Meter ID MPS-6 TM-6

Analyzed by CJP

Field Parameter Measurements of Sample

pH	7.5	(units)	D.O	7.5	(mg/l)
Spec. Cond.	590	(µmhos/cm)	Turbidity	2.9	(NTU)
Temp. Observed	12.2	(°C)	Eh	160	(mV)
Temp. Corrected	12.3	(°C)	Other	clear no odor	

Field Measurements Temp. Corrected: ☒ Yes ☐ No ☐ NA

Sample for Soluble Metals Filtered in Field: ~~☒ Yes~~ ☐ No ☒ NA

Temperature Correction Factor: +0.1 °C

Weather Conditions During Sampling: 40°F sunny mid

Sample Description: First 10gal purged w/ grundfos cloudy → clear tub 12 NTU @ end. bladder pump purged sl. cloudy → clear.

Observations: * removed bladder pump to measure SWL – Top of Bladder Pump @ 78.51

bladder pump maintenance 11/4/21 DK

~~* NO SAMPLE PUMPED – TOO LOW OF VOL~~ – Top of Bladder Pump 11/4/21 - 81.80'

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
@ ~~1418~~ 1603	7.7	590	12.3	~~@ 1609~~ 7.6	NA	169	0.8
@ ~~1426~~ 1611	7.5	590	12.2	7.6	↓	164	1.6
@ ~~1434~~ 1619	7.5	590	12.2	7.6	↓	163	2.4
@ ~~1442~~ 1627	7.5	590	12.2	7.6	↓	163	3.2
@ ~~1450~~ 1635	7.5	590	12.2	7.5	↓	160	4.0
			@ 11/4/21				

Samples chilled immediately after collection: ☒ Yes ☐ Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Chris Pilon Pace Analytical

Lead Technician Signature: [signature] Date: 11/4/21

purged ~~3 volumes~~ 10 gallons @ 11/4/21 with submersible grundfos pump to clear well @ 1520 – 1550 11/4/21

then purged 5 vol w/ bladder pump before collecting samples.

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client: Xcel Energy | Project: Sherco Ponds Fall 2021 | Project No.: 21-05223

Monitoring Point ID: P-177 | Labeled: 844704

Inside Diameter: 2 (inches) | Key #: 2106 | [X] Locked | [ ] Not Locked

Casing Material: [X] PVC | [ ] Steel | [ ] Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	46.44	Feet
Static water level measurement before purging (Start Depth)	42.60	Feet
Static water level measurement at time of sampling (Final Depth)	42.60	Feet
Static Water Level Elevation Before Purging	NA	Feet

measured 11/4/21 CJP

Purge Method: Bladder Pump | Pump ID: BPC-1

Date Purged: 11/4/21 | Water Column: 3.84 Feet

Time Purged: 1450-1515 | One Casing Volume: 0.63 Gallons

Pump Rate: 0.15 GPM / LPM | Volume Purged: 3.75 Gallons

Field Sampling Data

Date Sampled: ~~per @ 1120~~ 11/4/21

Time Sampled: ~~1120~~ 1520

Sampling Equip.: Pump

Meter ID: MPS-7/TM5

Analyzed by: RCS

Field Parameter Measurements of Sample

pH	7.5 (units)	D.O	10.3 (mg/l)
Spec. Cond.	510 (µmhos/cm)	Turbidity	2.7 (NTU)
Temp. Observed	11.0 (°C)	Eh	203 (mV)
Temp. Corrected	11.1 (°C)	Other	NA

Field Measurements Temp. Corrected: [X] Yes [ ] No [ ] NA

Sample for Soluble Metals Filtered in Field: [X] Yes [ ] No [X] NA

Temperature Correction Factor: +0.1 °C

Weather Conditions During Sampling: 48°F, Sunny, SE 13 MPH

Sample Description:

Observations: * removed bladder pump to measure SWL. - Top of Bladder Pump @ 41.61

RCS 11/4/21 ~~*NO SAMPLE PUMPED - TOO LOW OF VOL.~~ 11/4/21 - Sampled after DK lengthened tubing. RCS

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
1455	7.4	530	10.9	10.3	NA	204	0.75
1500	7.4	530	10.9	10.3	NA	204	1.50
1505	7.5	520	11.0	10.4	NA	204	2.25
1510	7.5	520	11.0	10.4	NA	203	3.00
1515	7.5	510	11.0	10.3	NA	203	3.75
				RCS 11/4/21			

Samples chilled immediately after collection: [X] Yes [ ] Other

Form Revised: 01/25/2021

Name/Affiliation of Sampler(s): Riley Jacobson Pace Analytical

Lead Technician Signature: Riley Jacobson Date: 11/4/21

Pace Analytical® Field Services Division

Well Sampling Field Data Log Sheet

Well Description and Presampling Information

Client: Xcel Energy | Project: Sherco Ponds Fall 2021 | Project No.: 21-05223

Monitoring Point ID: P-178A | Labeled: P-178A

Inside Diameter: 2 (inches) | Key #: 2106 | [X] Locked | [ ] Not Locked

Casing Material: [X] PVC | [ ] Steel | [ ] Stainless Steel

Depth Measurement and Elevations (from top of well casing)

Top of Casing Elevation	NA	Feet
Total Well Depth	47.40	Feet (measured 11/1/21 CSP)
Static water level measurement before purging (Start Depth)	42.80	Feet (measured 11/1/21 CSP)
Static water level measurement at time of sampling (Final Depth)	42.80	Feet
Static Water Level Elevation Before Purging	NA	Feet

Purge Method: Bladder Pump | Pump ID: BPC-1

Date Purged: 11/2/21 | Water Column: 4.60 Feet

Time Purged: 1345-1357 | One Casing Volume: 0.75 Gallons

Pump Rate: 0.2 (GPM) / LPM | Volume Purged: 2.4 Gallons

Field Sampling Data

Date Sampled: 11/2/21

Time Sampled: 1400

Sampling Equip.: Pump + Grab

Meter ID: MPS-7/TM5

Analyzed by: RDJ

Field Parameter Measurements of Sample

pH	7.6 (units)	D.O	7.3 (mg/l)
Spec. Cond.	510 (µmhos/cm)	Turbidity	2.0 (NTU)
Temp. Observed	9.8 (°C)	Eh	190 (mV)
Temp. Corrected	9.9 (°C)	Other	NA

Field Measurements Temp. Corrected: [X] Yes [ ] No [ ] NA

Sample for Soluble Metals Filtered in Field: [X] Yes [ ] No [ ] NA

Temperature Correction Factor: +0.1 °C

Weather Conditions During Sampling: 40°F, Partly Sunny, NE 8MPH

Sample Description: clear no odor

Observations: * bladder pump removed to measure SWL. top of bladder pump - 42.71'

Stabilization Test

Time	pH (units)	Specifc Conductance (µmhos/cm)	Temp (°C) (observed)	D.O. (mg/l)	Turbidity (NTU)	Eh (mV)	Volume Purged (cumulative gal)
1349	7.7	500	9.5	7.3	NA	192	0.8
1353	7.6	510	9.8	7.3	NA	191	1.6
1357	7.6	510	9.8	7.3	NA	190	2.4
			RDJ 11/2/21				

Samples chilled immediately after collection: [X] Yes [ ] Other

Form Revised 01/25/2021

Name/Affiliation of Sampler(s): Riley Jacobson Pace Analytical

Lead Technician Signature: Riley Jacobson Date: 11/2/21

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

03 December 2021

Eric Ealy

Environmental Services-Water Minneapolis

250 Marquette Plaza

Minneapolis, MN 55401

cc:

RE: Sherco BAP2 CCR

Enclosed are the results of analyses for samples received by the laboratory on 11/03/2021 07:20-11/05/2021 09:00. If you have any questions concerning this report, please feel free to contact me.

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

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

Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sample Qualifier	Laboratory ID	Matrix	Sampled	Received
P-17		MGK0016-03	Water	11/02/2021 15:20	11/03/2021 7:20
P-158		MGK0016-30	Water	11/02/2021 13:05	11/03/2021 7:20
P-173		MGK0016-31	Water	11/02/2021 10:00	11/03/2021 7:20
P-174		MGK0016-32	Water	11/02/2021 10:40	11/03/2021 7:20
P-178A		MGK0016-33	Water	11/02/2021 14:00	11/03/2021 7:20
Duplicate CCR-BAP2		MGK0016-39	Water	11/02/2021 10:00	11/03/2021 7:20
Rinse CCR-BAP2		MGK0016-40	Water	11/02/2021 10:05	11/03/2021 7:20
P-175		MGK0033-18	Water	11/04/2021 15:00	11/05/2021 9:00
P-176		MGK0033-19	Water	11/04/2021 16:40	11/05/2021 9:00
P-177		MGK0033-20	Water	11/04/2021 15:20	11/05/2021 9:00

Minneapolis Testing Laboratory
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WI-999071150
Christine Keefe, Supervisor (612) 630-4506

Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

P-17

MGK0016-03 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	15.1	1.00	mg/L		1	BGK0080	11/3/21 8:59	11/3/21 12:59	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGK0080	11/3/21 8:59	11/3/21 12:59	EPA 300.0	CRL
Sulfate	18.9	1.00	mg/L		1	BGK0080	11/3/21 8:59	11/3/21 12:59	EPA 300.0	CRL
Wet Chemistry										
pH	7.78		pH Units	M_TTT	1	BGK0079	11/3/21 8:57	11/3/21 10:03	SM 4500-H+ B	CRL
Total Dissolved Solids	290	25.0	mg/L		1	BGK0082	11/4/21 9:13	11/4/21 9:13	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGK0081	11/4/21 6:45	11/4/21 6:45	SM 2540D	HSD
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BGK0135	11/5/21 7:36	11/8/21 13:48	EPA 200.7	HRD
Calcium	64.0	1.50	mg/L		1	BGK0135	11/5/21 7:36	11/8/21 13:45	EPA 200.7	HRD

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Christine Keefe, Supervisor (612) 630-4506

Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

P-158

MGK0016-30 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	9.04	1.00	mg/L		1	BGK0089	11/3/21 12:20	11/4/21 14:41	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGK0089	11/3/21 12:20	11/4/21 14:41	EPA 300.0	CRL
Sulfate	120	1.00	mg/L		1	BGK0089	11/3/21 12:20	11/4/21 14:41	EPA 300.0	CRL
Wet Chemistry										
pH	7.71		pH Units	M_TTT	1	BGK0079	11/3/21 8:57	11/3/21 13:10	SM 4500-H+ B	CRL
Total Dissolved Solids	488	25.0	mg/L		1	BGK0134	11/6/21 8:45	11/6/21 8:45	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGK0133	11/6/21 6:43	11/6/21 6:43	SM 2540D	HSD
Total Metals by ICP										
Boron	0.853	0.0500	mg/L		1	BGK0135	11/5/21 7:36	11/8/21 15:10	EPA 200.7	HRD
Calcium	103	1.50	mg/L		1	BGK0135	11/5/21 7:36	11/8/21 15:08	EPA 200.7	HRD

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Christine Keefe, Supervisor (612) 630-4506

Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

P-173

MGK0016-31 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	5.67	1.00	mg/L		1	BGK0089	11/3/21 12:20	11/4/21 15:02	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGK0089	11/3/21 12:20	11/4/21 15:02	EPA 300.0	CRL
Sulfate	26.0	1.00	mg/L		1	BGK0089	11/3/21 12:20	11/4/21 15:02	EPA 300.0	CRL
Wet Chemistry										
pH	7.78		pH Units	M_TTT	1	BGK0079	11/3/21 8:57	11/3/21 13:24	SM 4500-H+ B	CRL
Total Dissolved Solids	288	25.0	mg/L		1	BGK0160	11/7/21 8:39	11/7/21 8:39	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGK0159	11/7/21 6:30	11/7/21 6:30	SM 2540D	HSD
Total Metals by ICP										
Boron	0.134	0.0500	mg/L		1	BGK0135	11/5/21 7:36	11/8/21 15:17	EPA 200.7	HRD
Calcium	71.9	1.50	mg/L		1	BGK0135	11/5/21 7:36	11/8/21 15:14	EPA 200.7	HRD

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WI-999071150
Christine Keefe, Supervisor (612) 630-4506

Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

P-174

MGK0016-32 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	< 1.00	1.00	mg/L		1	BGK0089	11/3/21 12:20	11/4/21 15:23	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGK0089	11/3/21 12:20	11/4/21 15:23	EPA 300.0	CRL
Sulfate	23.3	1.00	mg/L		1	BGK0089	11/3/21 12:20	11/4/21 15:23	EPA 300.0	CRL
Wet Chemistry										
pH	7.68		pH Units	M_TTT	1	BGK0079	11/3/21 8:57	11/3/21 13:28	SM 4500-H+ B	CRL
Total Dissolved Solids	334	25.0	mg/L		1	BGK0160	11/7/21 8:39	11/7/21 8:39	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGK0159	11/7/21 6:30	11/7/21 6:30	SM 2540D	HSD
Total Metals by ICP										
Boron	0.166	0.0500	mg/L		1	BGK0135	11/5/21 7:36	11/8/21 15:23	EPA 200.7	HRD
Calcium	82.8	1.50	mg/L		1	BGK0135	11/5/21 7:36	11/8/21 15:20	EPA 200.7	HRD

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

P-178A

MGK0016-33 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	3.40	1.00	mg/L		1	BGK0089	11/3/21 12:20	11/4/21 15:43	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGK0089	11/3/21 12:20	11/4/21 15:43	EPA 300.0	CRL
Sulfate	44.4	1.00	mg/L		1	BGK0089	11/3/21 12:20	11/4/21 15:43	EPA 300.0	CRL
Wet Chemistry										
pH	7.89		pH Units	M_TTT	1	BGK0079	11/3/21 8:57	11/3/21 13:34	SM 4500-H+ B	CRL
Total Dissolved Solids	268	25.0	mg/L		1	BGK0160	11/7/21 8:39	11/7/21 8:39	SM 2540C	HSD
Total Suspended Solids	6.80	5.00	mg/L		1	BGK0159	11/7/21 6:30	11/7/21 6:30	SM 2540D	HSD
Total Metals by ICP										
Boron	0.201	0.0500	mg/L		1	BGK0135	11/5/21 7:36	11/8/21 15:29	EPA 200.7	HRD
Calcium	38.5	1.50	mg/L		1	BGK0135	11/5/21 7:36	11/8/21 15:26	EPA 200.7	HRD

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

Duplicate CCR-BAP2

MGK0016-39 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	5.65	1.00	mg/L		1	BGK0089	11/3/21 12:20	11/4/21 17:47	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGK0089	11/3/21 12:20	11/4/21 17:47	EPA 300.0	CRL
Sulfate	25.9	1.00	mg/L		1	BGK0089	11/3/21 12:20	11/4/21 17:47	EPA 300.0	CRL
Wet Chemistry										
pH	7.83		pH Units	M_TTT	1	BGK0079	11/3/21 8:57	11/3/21 14:05	SM 4500-H+ B	CRL
Total Dissolved Solids	292	25.0	mg/L		1	BGK0160	11/7/21 8:39	11/7/21 8:39	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGK0159	11/7/21 6:30	11/7/21 6:30	SM 2540D	HSD
Total Metals by ICP										
Boron	0.132	0.0500	mg/L		1	BGK0135	11/5/21 7:36	11/8/21 15:51	EPA 200.7	HRD
Calcium	68.7	1.50	mg/L		1	BGK0135	11/5/21 7:36	11/8/21 15:49	EPA 200.7	HRD

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

Rinse CCR-BAP2

MGK0016-40 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	< 1.00	1.00	mg/L		1	BGK0142	11/5/21 9:40	11/5/21 12:28	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGK0142	11/5/21 9:40	11/5/21 12:28	EPA 300.0	CRL
Sulfate	< 1.00	1.00	mg/L		1	BGK0142	11/5/21 9:40	11/5/21 12:28	EPA 300.0	CRL
Wet Chemistry										
pH	6.27		pH Units	M_TTT	1	BGK0079	11/3/21 8:57	11/3/21 14:08	SM 4500-H+ B	CRL
Total Dissolved Solids	< 25.0	25.0	mg/L	M_K-06	1	BGK0160	11/7/21 8:39	11/7/21 8:39	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGK0159	11/7/21 6:30	11/7/21 6:30	SM 2540D	HSD
Total Metals by ICP										
Boron	< 0.0500	0.0500	mg/L		1	BGK0135	11/5/21 7:36	11/8/21 14:41	EPA 200.7	HRD
Calcium	< 1.50	1.50	mg/L		1	BGK0135	11/5/21 7:36	11/8/21 14:38	EPA 200.7	HRD

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

P-175

MGK0033-18 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	2.31	1.00	mg/L		1	BGK0142	11/5/21 9:40	11/5/21 20:23	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGK0142	11/5/21 9:40	11/5/21 20:23	EPA 300.0	CRL
Sulfate	26.0	1.00	mg/L		1	BGK0142	11/5/21 9:40	11/5/21 20:23	EPA 300.0	CRL
Wet Chemistry										
pH	7.73		pH Units	M_TTT	1	BGK0141	11/5/21 9:39	11/5/21 12:04	SM 4500-H+ B	CRL
Total Dissolved Solids	266	25.0	mg/L		1	BGK0174	11/9/21 8:57	11/9/21 8:57	SM 2540C	HSD
Total Suspended Solids	< 5.00	5.00	mg/L	M_K-06	1	BGK0173	11/9/21 6:59	11/9/21 6:59	SM 2540D	HSD
Total Metals by ICP										
Boron	0.189	0.0500	mg/L		1	BGK0162	11/6/21 9:11	11/8/21 17:32	EPA 200.7	HRD
Calcium	68.8	1.50	mg/L		1	BGK0162	11/6/21 9:11	11/8/21 17:30	EPA 200.7	HRD

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

P-176

MGK0033-19 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	3.59	1.00	mg/L		1	BGK0142	11/5/21 9:40	11/5/21 20:44	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGK0142	11/5/21 9:40	11/5/21 20:44	EPA 300.0	CRL
Sulfate	66.0	1.00	mg/L		1	BGK0142	11/5/21 9:40	11/5/21 20:44	EPA 300.0	CRL
Wet Chemistry										
pH	7.68		pH Units	M_TTT	1	BGK0141	11/5/21 9:39	11/5/21 12:08	SM 4500-H+ B	CRL
Total Dissolved Solids	370	25.0	mg/L		1	BGK0174	11/9/21 8:57	11/9/21 8:57	SM 2540C	HSD
Total Suspended Solids	15.6	5.00	mg/L		1	BGK0173	11/9/21 6:59	11/9/21 6:59	SM 2540D	HSD
Total Metals by ICP										
Boron	0.478	0.0500	mg/L		1	BGK0162	11/6/21 9:11	11/8/21 17:48	EPA 200.7	HRD
Calcium	78.2	1.50	mg/L		1	BGK0162	11/6/21 9:11	11/8/21 17:46	EPA 200.7	HRD

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

P-177

MGK0033-20 (Water) - Chain of Custody Number: Pace

Analyte	Result	Reporting Limit	Units	Analyte Qualifier	Dilution	Batch	Prepared	Analyzed	Method	Analyst
Anions by Ion Chromatography										
Chloride	2.08	1.00	mg/L		1	BGK0172	11/8/21 7:31	11/8/21 10:05	EPA 300.0	CRL
Fluoride	< 0.750	0.750	mg/L		1	BGK0172	11/8/21 7:31	11/8/21 10:05	EPA 300.0	CRL
Sulfate	28.1	1.00	mg/L		1	BGK0172	11/8/21 7:31	11/8/21 10:05	EPA 300.0	CRL
Wet Chemistry										
pH	7.71		pH Units	M_TTT	1	BGK0141	11/5/21 9:39	11/5/21 12:12	SM 4500-H+ B	CRL
Total Dissolved Solids	282	25.0	mg/L		1	BGK0174	11/9/21 8:57	11/9/21 8:57	SM 2540C	HSD
Total Suspended Solids	14.4	5.00	mg/L		1	BGK0173	11/9/21 6:59	11/9/21 6:59	SM 2540D	HSD
Total Metals by ICP										
Boron	0.0976	0.0500	mg/L		1	BGK0162	11/6/21 9:11	11/8/21 17:54	EPA 200.7	HRD
Calcium	66.5	1.50	mg/L		1	BGK0162	11/6/21 9:11	11/8/21 17:51	EPA 200.7	HRD

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0080 - Wet Prep										
Blank (BGK0080-BLK1)				Prepared & Analyzed: 11/03/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
Blank (BGK0080-BLK2)				Prepared & Analyzed: 11/03/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
LCS (BGK0080-BS1)				Prepared & Analyzed: 11/03/2021						
Chloride	24.494	1.00	mg/L	25.000		98.0	90-110			
Fluoride	2.3360	0.750	mg/L	2.5000		93.4	90-110			
Sulfate	24.425	1.00	mg/L	25.000		97.7	90-110			
LCS (BGK0080-BS2)				Prepared & Analyzed: 11/03/2021						
Chloride	24.618	1.00	mg/L	25.000		98.5	90-110			
Fluoride	2.3750	0.750	mg/L	2.5000		95.0	90-110			
Sulfate	24.609	1.00	mg/L	25.000		98.4	90-110			
LCS (BGK0080-BS3)				Prepared & Analyzed: 11/03/2021						
Chloride	24.719	1.00	mg/L	25.000		98.9	90-110			
Fluoride	2.3860	0.750	mg/L	2.5000		95.4	90-110			
Sulfate	24.721	1.00	mg/L	25.000		98.9	90-110			
Duplicate (BGK0080-DUP1)		**Source: MGK0016-06**		Prepared & Analyzed: 11/03/2021						
Chloride	6.8730	1.00	mg/L		6.8860			0.189	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	40.562	1.00	mg/L		40.609			0.116	20	

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0080 - Wet Prep										
Duplicate (BGK0080-DUP2)		**Source: MGK0016-07**		Prepared & Analyzed: 11/03/2021						
Chloride	12.976	1.00	mg/L		12.969			0.0540	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	61.723	1.00	mg/L		61.596			0.206	20	
Matrix Spike (BGK0080-MS1)		**Source: MGK0016-06**		Prepared & Analyzed: 11/03/2021						
Chloride	37.686	1.25	mg/L	31.250	6.8860	98.6	90-110			
Fluoride	3.0350	0.938	mg/L	3.1250	<0.938	97.1	90-110			
Sulfate	71.719	1.25	mg/L	31.250	40.609	99.6	90-110			
Matrix Spike (BGK0080-MS2)		**Source: MGK0016-07**		Prepared & Analyzed: 11/03/2021						
Chloride	44.711	1.25	mg/L	31.250	12.969	102	90-110			
Fluoride	3.1325	0.938	mg/L	3.1250	<0.938	100	90-110			
Sulfate	93.064	1.25	mg/L	31.250	61.596	101	90-110			
Matrix Spike Dup (BGK0080-MSD1)		**Source: MGK0016-06**		Prepared & Analyzed: 11/03/2021						
Chloride	37.923	1.25	mg/L	31.250	6.8860	99.3	90-110	0.625	20	
Fluoride	3.0713	0.938	mg/L	3.1250	<0.938	98.3	90-110	1.19	20	
Sulfate	71.918	1.25	mg/L	31.250	40.609	100	90-110	0.277	20	
Matrix Spike Dup (BGK0080-MSD2)		**Source: MGK0016-07**		Prepared & Analyzed: 11/03/2021						
Chloride	44.060	1.25	mg/L	31.250	12.969	99.5	90-110	1.47	20	
Fluoride	3.0600	0.938	mg/L	3.1250	<0.938	97.9	90-110	2.34	20	
Sulfate	92.738	1.25	mg/L	31.250	61.596	99.7	90-110	0.351	20	
Batch BGK0089 - Wet Prep										
Blank (BGK0089-BLK1)				Prepared: 11/03/2021 Analyzed: 11/04/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0089 - Wet Prep										
Blank (BGK0089-BLK2)				Prepared: 11/03/2021 Analyzed: 11/04/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
LCS (BGK0089-BS1)				Prepared: 11/03/2021 Analyzed: 11/04/2021						
Chloride	24.659	1.00	mg/L	25.000		98.6	90-110			
Fluoride	2.4170	0.750	mg/L	2.5000		96.7	90-110			
Sulfate	24.681	1.00	mg/L	25.000		98.7	90-110			
LCS (BGK0089-BS2)				Prepared: 11/03/2021 Analyzed: 11/04/2021						
Chloride	24.534	1.00	mg/L	25.000		98.1	90-110			
Fluoride	2.3760	0.750	mg/L	2.5000		95.0	90-110			
Sulfate	24.578	1.00	mg/L	25.000		98.3	90-110			
LCS (BGK0089-BS3)				Prepared: 11/03/2021 Analyzed: 11/04/2021						
Chloride	23.532	1.00	mg/L	25.000		94.1	90-110			
Fluoride	2.2740	0.750	mg/L	2.5000		91.0	90-110			
Sulfate	23.548	1.00	mg/L	25.000		94.2	90-110			
Duplicate (BGK0089-DUP1)		**Source: MGK0016-22**		Prepared: 11/03/2021 Analyzed: 11/04/2021						
Chloride	12.567	1.00	mg/L		12.555			0.0955	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	26.057	1.00	mg/L		26.019			0.146	20	
Duplicate (BGK0089-DUP2)		**Source: MGK0016-23**		Prepared: 11/03/2021 Analyzed: 11/04/2021						
Chloride	22.513	1.00	mg/L		22.488			0.111	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	90.341	1.00	mg/L		90.155			0.206	20	

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0089 - Wet Prep										
Matrix Spike (BGK0089-MS1)		**Source: MGK0016-22**		Prepared: 11/03/2021 Analyzed: 11/04/2021						
Chloride	44.318	1.25	mg/L	31.250	12.555	102	90-110			
Fluoride	3.1450	0.938	mg/L	3.1250	<0.938	101	90-110			
Sulfate	58.079	1.25	mg/L	31.250	26.019	103	90-110			
Matrix Spike (BGK0089-MS2)		**Source: MGK0016-23**		Prepared: 11/03/2021 Analyzed: 11/04/2021						
Chloride	54.025	1.25	mg/L	31.250	22.488	101	90-110			
Fluoride	3.1238	0.938	mg/L	3.1250	<0.938	100	90-110			
Sulfate	121.31	1.25	mg/L	31.250	90.155	99.7	90-110			
Matrix Spike Dup (BGK0089-MSD1)		**Source: MGK0016-22**		Prepared: 11/03/2021 Analyzed: 11/04/2021						
Chloride	44.059	1.25	mg/L	31.250	12.555	101	90-110	0.586	20	
Fluoride	3.1113	0.938	mg/L	3.1250	<0.938	99.6	90-110	1.08	20	
Sulfate	57.816	1.25	mg/L	31.250	26.019	102	90-110	0.453	20	
Matrix Spike Dup (BGK0089-MSD2)		**Source: MGK0016-23**		Prepared: 11/03/2021 Analyzed: 11/04/2021						
Chloride	54.206	1.25	mg/L	31.250	22.488	101	90-110	0.335	20	
Fluoride	3.1463	0.938	mg/L	3.1250	<0.938	101	90-110	0.718	20	
Sulfate	121.39	1.25	mg/L	31.250	90.155	99.9	90-110	0.0659	20	
Batch BGK0142 - Wet Prep										
Blank (BGK0142-BLK1)				Prepared & Analyzed: 11/05/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
Blank (BGK0142-BLK2)				Prepared & Analyzed: 11/05/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							

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Christine Keefe, Supervisor (612) 630-4506

Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0142 - Wet Prep										
LCS (BGK0142-BS1)				Prepared & Analyzed: 11/05/2021						
Chloride	24.496	1.00	mg/L	25.000		98.0	90-110			
Fluoride	2.3720	0.750	mg/L	2.5000		94.9	90-110			
Sulfate	24.509	1.00	mg/L	25.000		98.0	90-110			
LCS (BGK0142-BS2)				Prepared & Analyzed: 11/05/2021						
Chloride	24.658	1.00	mg/L	25.000		98.6	90-110			
Fluoride	2.3930	0.750	mg/L	2.5000		95.7	90-110			
Sulfate	24.707	1.00	mg/L	25.000		98.8	90-110			
LCS (BGK0142-BS3)				Prepared & Analyzed: 11/05/2021						
Chloride	24.673	1.00	mg/L	25.000		98.7	90-110			
Fluoride	2.3930	0.750	mg/L	2.5000		95.7	90-110			
Sulfate	24.684	1.00	mg/L	25.000		98.7	90-110			
Duplicate (BGK0142-DUP1)		**Source: MGK0033-08**		Prepared & Analyzed: 11/05/2021						
Chloride	0.34800	1.00	mg/L		0.34600			0.576	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	3.3870	1.00	mg/L		3.3980			0.324	20	
Duplicate (BGK0142-DUP2)		**Source: MGK0033-09**		Prepared & Analyzed: 11/05/2021						
Chloride	22.770	1.00	mg/L		22.752			0.0791	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	29.822	1.00	mg/L		29.786			0.121	20	
Matrix Spike (BGK0142-MS1)		**Source: MGK0033-08**		Prepared & Analyzed: 11/05/2021						
Chloride	30.926	1.25	mg/L	31.250	0.34600	97.9	90-110			
Fluoride	3.0913	0.938	mg/L	3.1250	<0.938	98.9	90-110			
Sulfate	34.288	1.25	mg/L	31.250	3.3980	98.8	90-110			

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250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0142 - Wet Prep										
Matrix Spike (BGK0142-MS2)		**Source: MGK0033-09**		Prepared & Analyzed: 11/05/2021						
Chloride	54.444	1.25	mg/L	31.250	22.752	101	90-110			
Fluoride	3.1475	0.938	mg/L	3.1250	<0.938	101	90-110			
Sulfate	61.706	1.25	mg/L	31.250	29.786	102	90-110			
Matrix Spike Dup (BGK0142-MSD1)		**Source: MGK0033-08**		Prepared & Analyzed: 11/05/2021						
Chloride	31.178	1.25	mg/L	31.250	0.34600	98.7	90-110	0.809	20	
Fluoride	3.1225	0.938	mg/L	3.1250	<0.938	99.9	90-110	1.01	20	
Sulfate	34.545	1.25	mg/L	31.250	3.3980	99.7	90-110	0.748	20	
Matrix Spike Dup (BGK0142-MSD2)		**Source: MGK0033-09**		Prepared & Analyzed: 11/05/2021						
Chloride	53.918	1.25	mg/L	31.250	22.752	99.7	90-110	0.971	20	
Fluoride	3.0600	0.938	mg/L	3.1250	<0.938	97.9	90-110	2.82	20	
Sulfate	61.215	1.25	mg/L	31.250	29.786	101	90-110	0.799	20	
Batch BGK0172 - Wet Prep										
Blank (BGK0172-BLK1)				Prepared & Analyzed: 11/08/2021						
Chloride	<1.00	1.00	mg/L							
Fluoride	<0.750	0.750	mg/L							
Sulfate	<1.00	1.00	mg/L							
LCS (BGK0172-BS1)				Prepared & Analyzed: 11/08/2021						
Chloride	24.347	1.00	mg/L	25.000		97.4	90-110			
Fluoride	2.3490	0.750	mg/L	2.5000		94.0	90-110			
Sulfate	24.329	1.00	mg/L	25.000		97.3	90-110			
LCS (BGK0172-BS2)				Prepared & Analyzed: 11/08/2021						
Chloride	24.466	1.00	mg/L	25.000		97.9	90-110			
Fluoride	2.3650	0.750	mg/L	2.5000		94.6	90-110			
Sulfate	24.481	1.00	mg/L	25.000		97.9	90-110			

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

Anions by Ion Chromatography - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0172 - Wet Prep										
Duplicate (BGK0172-DUP1)		**Source: MGK0033-20**		Prepared & Analyzed: 11/08/2021						
Chloride	2.0720	1.00	mg/L		2.0750			0.145	20	
Fluoride	<0.750	0.750	mg/L		<0.750				20	
Sulfate	28.118	1.00	mg/L		28.136			0.0640	20	
Matrix Spike (BGK0172-MS1)		**Source: MGK0033-20**		Prepared & Analyzed: 11/08/2021						
Chloride	33.515	1.25	mg/L	31.250	2.0750	101	90-110			
Fluoride	3.1338	0.938	mg/L	3.1250	<0.938	100	90-110			
Sulfate	60.000	1.25	mg/L	31.250	28.136	102	90-110			
Matrix Spike Dup (BGK0172-MSD1)		**Source: MGK0033-20**		Prepared & Analyzed: 11/08/2021						
Chloride	33.269	1.25	mg/L	31.250	2.0750	99.8	90-110	0.737	20	
Fluoride	3.1063	0.938	mg/L	3.1250	<0.938	99.4	90-110	0.881	20	
Sulfate	59.785	1.25	mg/L	31.250	28.136	101	90-110	0.359	20	

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0079 - Wet Prep										
LCS (BGK0079-BS1)				Prepared & Analyzed: 11/03/2021						
pH	7.0900		pH Units	7.0000		101	90-110			
LCS (BGK0079-BS2)				Prepared & Analyzed: 11/03/2021						
pH	7.1000		pH Units	7.0000		101	90-110			
Duplicate (BGK0079-DUP1)		**Source: MGK0016-01**		Prepared & Analyzed: 11/03/2021						
pH	7.3700		pH Units		7.4100			0.541	20	
Duplicate (BGK0079-DUP2)		**Source: MGK0016-11**		Prepared & Analyzed: 11/03/2021						
pH	7.5400		pH Units		7.5400			0.00	20	
Duplicate (BGK0079-DUP3)		**Source: MGK0016-21**		Prepared & Analyzed: 11/03/2021						
pH	7.6800		pH Units		7.6700			0.130	20	
Duplicate (BGK0079-DUP4)		**Source: MGK0016-31**		Prepared & Analyzed: 11/03/2021						
pH	7.7900		pH Units		7.7800			0.128	20	
Batch BGK0081 - Wet Prep										
Blank (BGK0081-BLK1)				Prepared & Analyzed: 11/04/2021						
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BGK0081-BS1)				Prepared & Analyzed: 11/04/2021						
Total Suspended Solids	92.000	5.00	mg/L	101.00		91.1	70-130			
Duplicate (BGK0081-DUP1)		**Source: MGK0016-02**		Prepared & Analyzed: 11/04/2021						
Total Suspended Solids	<12.5	12.5	mg/L		0.80000				20	M_K-06

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0082 - Wet Prep										
Blank (BGK0082-BLK1)				Prepared & Analyzed: 11/04/2021						
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BGK0082-BS1)				Prepared & Analyzed: 11/04/2021						
Total Dissolved Solids	94.000	25.0	mg/L	100.80		93.3	70-130			
Duplicate (BGK0082-DUP1)		**Source: MGK0016-02**		Prepared & Analyzed: 11/04/2021						
Total Dissolved Solids	1174.0	25.0	mg/L		1194.0			1.69	20	
Batch BGK0106 - Wet Prep										
Blank (BGK0106-BLK1)				Prepared & Analyzed: 11/05/2021						
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BGK0106-BS1)				Prepared & Analyzed: 11/05/2021						
Total Suspended Solids	96.000	5.00	mg/L	101.00		95.0	70-130			
Duplicate (BGK0106-DUP1)		**Source: MGK0016-12**		Prepared & Analyzed: 11/05/2021						
Total Suspended Solids	313.33	16.7	mg/L		313.33			0.00	20	
Batch BGK0107 - Wet Prep										
Blank (BGK0107-BLK1)				Prepared & Analyzed: 11/05/2021						
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BGK0107-BS1)				Prepared & Analyzed: 11/05/2021						
Total Dissolved Solids	104.00	25.0	mg/L	100.80		103	70-130			

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0107 - Wet Prep										
Duplicate (BGK0107-DUP1)		**Source: MGK0016-12**		Prepared & Analyzed: 11/05/2021						
Total Dissolved Solids	598.00	25.0	mg/L		602.00			0.667	20	
Batch BGK0133 - Wet Prep										
Blank (BGK0133-BLK1)				Prepared & Analyzed: 11/06/2021						
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BGK0133-BS1)				Prepared & Analyzed: 11/06/2021						
Total Suspended Solids	96.000	5.00	mg/L	101.00		95.0	70-130			
Duplicate (BGK0133-DUP1)		**Source: MGK0016-22**		Prepared & Analyzed: 11/06/2021						
Total Suspended Solids	4.5000	12.5	mg/L		3.6000			22.2	20	M_D-RL, M_K-06
Batch BGK0134 - Wet Prep										
Blank (BGK0134-BLK1)				Prepared & Analyzed: 11/06/2021						
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BGK0134-BS1)				Prepared & Analyzed: 11/06/2021						
Total Dissolved Solids	106.00	25.0	mg/L	100.80		105	70-130			
Duplicate (BGK0134-DUP1)		**Source: MGK0016-22**		Prepared & Analyzed: 11/06/2021						
Total Dissolved Solids	304.00	25.0	mg/L		306.00			0.656	20	
Batch BGK0141 - Wet Prep										
LCS (BGK0141-BS1)				Prepared & Analyzed: 11/05/2021						
pH	7.0900		pH Units	7.0000		101	90-110			

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0141 - Wet Prep										
LCS (BGK0141-BS2)				Prepared & Analyzed: 11/05/2021						
pH	7.1000		pH Units	7.0000		101	90-110			
Duplicate (BGK0141-DUP1)		**Source: MGK0033-01**		Prepared & Analyzed: 11/05/2021						
pH	7.5000		pH Units		7.5600			0.797	20	
Duplicate (BGK0141-DUP2)		**Source: MGK0033-11**		Prepared & Analyzed: 11/05/2021						
pH	7.8200		pH Units		7.8200			0.00	20	
Duplicate (BGK0141-DUP3)		**Source: MGK0033-21**		Prepared & Analyzed: 11/05/2021						
pH	7.6600		pH Units		7.6700			0.130	20	
Batch BGK0159 - Wet Prep										
Blank (BGK0159-BLK1)				Prepared & Analyzed: 11/07/2021						
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BGK0159-BS1)				Prepared & Analyzed: 11/07/2021						
Total Suspended Solids	100.00	5.00	mg/L	101.00		99.0	70-130			
Duplicate (BGK0159-DUP1)		**Source: MGK0016-31**		Prepared & Analyzed: 11/07/2021						
Total Suspended Solids	2.5000	12.5	mg/L		1.8000			32.6	20	M_D-RL, M_K-06
Batch BGK0160 - Wet Prep										
Blank (BGK0160-BLK1)				Prepared & Analyzed: 11/07/2021						
Total Dissolved Solids	<25.0	25.0	mg/L							

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0160 - Wet Prep										
LCS (BGK0160-BS1)				Prepared & Analyzed: 11/07/2021						
Total Dissolved Solids	90.000	25.0	mg/L	100.80		89.3	70-130			
Duplicate (BGK0160-DUP1)		**Source: MGK0016-31**		Prepared & Analyzed: 11/07/2021						
Total Dissolved Solids	292.00	25.0	mg/L		288.00			1.38	20	
Batch BGK0168 - Wet Prep										
Blank (BGK0168-BLK1)				Prepared & Analyzed: 11/08/2021						
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BGK0168-BS1)				Prepared & Analyzed: 11/08/2021						
Total Suspended Solids	96.000	5.00	mg/L	102.60		93.6	70-130			
Duplicate (BGK0168-DUP1)		**Source: MGK0033-01**		Prepared & Analyzed: 11/08/2021						
Total Suspended Solids	6.0000	12.5	mg/L		8.6000			35.6	20	M_K-06
Duplicate (BGK0168-DUP2)		**Source: MGK0033-02**		Prepared & Analyzed: 11/08/2021						
Total Suspended Solids	12.500	12.5	mg/L		12.400			0.803	20	
Batch BGK0169 - Wet Prep										
Blank (BGK0169-BLK1)				Prepared & Analyzed: 11/08/2021						
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BGK0169-BS1)				Prepared & Analyzed: 11/08/2021						
Total Dissolved Solids	100.00	25.0	mg/L	102.20		97.8	70-130			

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Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
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Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0169 - Wet Prep										
Duplicate (BGK0169-DUP1)		**Source: MGK0033-01**		Prepared & Analyzed: 11/08/2021						
Total Dissolved Solids	636.00	25.0	mg/L		632.00			0.631	20	
Duplicate (BGK0169-DUP2)		**Source: MGK0033-02**		Prepared & Analyzed: 11/08/2021						
Total Dissolved Solids	560.00	25.0	mg/L		556.00			0.717	20	
Batch BGK0173 - Wet Prep										
Blank (BGK0173-BLK1)				Prepared & Analyzed: 11/09/2021						
Total Suspended Solids	<5.00	5.00	mg/L							
LCS (BGK0173-BS1)				Prepared & Analyzed: 11/09/2021						
Total Suspended Solids	92.000	5.00	mg/L	102.60		89.7	70-130			
Duplicate (BGK0173-DUP1)		**Source: MGK0033-13**		Prepared & Analyzed: 11/09/2021						
Total Suspended Solids	<12.5	12.5	mg/L		<12.5				20	M_K-06
Duplicate (BGK0173-DUP2)		**Source: MGK0033-14**		Prepared & Analyzed: 11/09/2021						
Total Suspended Solids	16.000	12.5	mg/L		14.600			9.15	20	
Batch BGK0174 - Wet Prep										
Blank (BGK0174-BLK1)				Prepared & Analyzed: 11/09/2021						
Total Dissolved Solids	<25.0	25.0	mg/L							
LCS (BGK0174-BS1)				Prepared & Analyzed: 11/09/2021						
Total Dissolved Solids	110.00	25.0	mg/L	102.20		108	70-130			

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Wet Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0174 - Wet Prep										
Duplicate (BGK0174-DUP1)		**Source: MGK0033-13**		Prepared & Analyzed: 11/09/2021						
Total Dissolved Solids	250.00	25.0	mg/L		246.00			1.61	20	
Duplicate (BGK0174-DUP2)		**Source: MGK0033-14**		Prepared & Analyzed: 11/09/2021						
Total Dissolved Solids	550.00	25.0	mg/L		560.00			1.80	20	

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Total Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0135 - EPA 200.2, EPA 3005										
Blank (BGK0135-BLK1)				Prepared: 11/05/2021 Analyzed: 11/08/2021						
Boron	<0.0500	0.0500	mg/L							
Calcium	<1.50	1.50	mg/L							
LCS (BGK0135-BS1)				Prepared: 11/05/2021 Analyzed: 11/08/2021						
Calcium	96.865	1.50	mg/L	100.00		96.9	85-115			
Boron	0.93498	0.0500	mg/L	1.0000		93.5	85-115			
Duplicate (BGK0135-DUP1)		**Source: MGK0016-03**		Prepared: 11/05/2021 Analyzed: 11/08/2021						
Calcium	64.547	1.50	mg/L		64.030			0.804	20	
Boron	0.042945	0.0500	mg/L		0.048149			11.4	20	
Duplicate (BGK0135-DUP2)		**Source: MGK0016-04**		Prepared: 11/05/2021 Analyzed: 11/08/2021						
Boron	0.72949	0.0500	mg/L		0.75939			4.02	20	
Calcium	86.849	1.50	mg/L		86.069			0.903	20	
Matrix Spike (BGK0135-MS1)		**Source: MGK0016-03**		Prepared: 11/05/2021 Analyzed: 11/08/2021						
Calcium	163.82	1.50	mg/L	100.00	64.030	99.8	70-130			
Boron	0.99431	0.0500	mg/L	1.0000	0.048149	94.6	70-130			
Matrix Spike (BGK0135-MS2)		**Source: MGK0016-04**		Prepared: 11/05/2021 Analyzed: 11/08/2021						
Calcium	190.02	1.50	mg/L	100.00	86.069	104	70-130			
Boron	1.6833	0.0500	mg/L	1.0000	0.75939	92.4	70-130			
Matrix Spike Dup (BGK0135-MSD1)		**Source: MGK0016-03**		Prepared: 11/05/2021 Analyzed: 11/08/2021						
Boron	0.97416	0.0500	mg/L	1.0000	0.048149	92.6	70-130	2.05	20	
Calcium	160.07	1.50	mg/L	100.00	64.030	96.0	70-130	2.32	20	
Matrix Spike Dup (BGK0135-MSD2)		**Source: MGK0016-04**		Prepared: 11/05/2021 Analyzed: 11/08/2021						
Calcium	187.03	1.50	mg/L	100.00	86.069	101	70-130	1.59	20	
Boron	1.6886	0.0500	mg/L	1.0000	0.75939	92.9	70-130	0.311	20	

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

Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

Total Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BGK0162 - EPA 200.2, EPA 3005										
Blank (BGK0162-BLK1)				Prepared: 11/06/2021 Analyzed: 11/08/2021						
Calcium	<1.50	1.50	mg/L							
Boron	<0.0500	0.0500	mg/L							
LCS (BGK0162-BS1)				Prepared: 11/06/2021 Analyzed: 11/08/2021						
Calcium	93.896	1.50	mg/L	100.00		93.9	85-115			
Boron	0.89721	0.0500	mg/L	1.0000		89.7	85-115			
Duplicate (BGK0162-DUP1)		**Source: MGK0033-14**		Prepared: 11/06/2021 Analyzed: 11/08/2021						
Boron	0.22634	0.0500	mg/L		0.22873			1.05	20	
Calcium	85.896	1.50	mg/L		86.759			0.999	20	
Matrix Spike (BGK0162-MS1)		**Source: MGK0033-14**		Prepared: 11/06/2021 Analyzed: 11/08/2021						
Calcium	184.53	1.50	mg/L	100.00	86.759	97.8	70-130			
Boron	1.1404	0.0500	mg/L	1.0000	0.22873	91.2	70-130			
Matrix Spike Dup (BGK0162-MSD1)		**Source: MGK0033-14**		Prepared: 11/06/2021 Analyzed: 11/08/2021						
Calcium	181.16	1.50	mg/L	100.00	86.759	94.4	70-130	1.84	20	
Boron	1.1009	0.0500	mg/L	1.0000	0.22873	87.2	70-130	3.53	20	

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

Environmental Services-Water Minneapolis	Project Name/Location: Sherco BAP2 CCR	
250 Marquette Plaza		**Reported:**
Minneapolis MN, 55401	Project Manager: Eric Ealy	12/03/2021 09:20

Qualifiers and Definitions

M_TTT	Sample received at the lab outside of required hold time.
M_K-06	The reporting limit has been increased, the reported result is acceptable. The maximum routine sample volume was used, but the amount of residue measured was below reference method limits.
M_D-RL	The RPD for the sample duplicate was outside of QC acceptance limits due to<RL.
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

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CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Required Client Information:

Company:	Xcel Energy
Address:	Environmental Services
	MP-7
Email To:	Chris Pelosi
Phone: (612) 597-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B Required Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number	21-05223
Project Name:	Xcel Energy Sherco Ponds Fall 2021

Section C Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER

Filtered (Y/N)

Requested Analysis:

Valid Matrix Codes: DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WIPE WP; AIR AR; TISSUE TS

ITEM #	Section D Required Client Information — SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE)	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	GW-D	GW-CCR-BAP	GW-CCR-BAP2	GW-CCR-P3	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
1	~~P-01A~~	WT	G	-	-	WELL DRY	NO SAMPLE		4	1	1	2						X	X			X	X				
*1 2	P-03A	WT	G	-	-	11/2/21	1030		3	1	1	1						X				X					
*1 3	P-03B	WT	G	-	-	11/2/21	1055		3	1	1	1						X				X					
4	~~P-04A~~	WT	G	-	-	WELL DRY	NO SAMPLE		3	1	1	1						X				X					
5	~~P-05A~~	WT	G	-	-	WELL DRY	NO SAMPLE		3	1	1	1						X				X					
*1 6	P-17	WT	G	-	-	11/2/21	1520		2	1		1							X	X			X	X			
*1 7	P-22	WT	G	-	-	11/1/21	1515		4	1	1	2						X	X			X	X				
*1 8	P-23	WT	G	-	-	11/2/21	1200		4	1	1	2						X	X			X	X				
*1 9	P-42	WT	G	-	-	11/1/21	1125		3	1	1	1						X				X					
*1 10	P-43	WT	G	-	-	11/1/21	935		3	1	1	1						X				X					
*1 11	P-50	WT	G	-	-	11/2/21	1135		3	1	1	1						X				X					
*1 12	P-50B	WT	G	-	-	11/2/21	1200		3	1	1	1						X				X					

Additional Comments:

*1 samples delivered to Xcel lab 11/3/21 CJP

pH Strip: MS00402
Temp MH00841: 4.1°C

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
*1 [signature] Pace	11/3/21	720	[signature] Xcel	11/3/21	0720	4.1	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE				
PRINT Name of SAMPLER:	Chris Pelosi + Riley Jacobson	Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
SIGNATURE of SAMPLER: [signature]	DATE Signed (MM / DD / YY): 11/1/21				

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Address:	Environmental Services
	MP-7
Email To:	Chris Pelosi
Phone: (612) 597-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B Required Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number	21-05223
Project Name:	Xcel Energy Sherco Ponds Fall 2021

Section C Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
	WP
	AR
	OT
	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Filtered (Y/N)	Requested Analysis: GW-D	GW-CCR-BAP	GW-CCR-BAP2	GW-CCR-P3	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
*1	P-93A	WT	G	-	-	11/1/21	1420		3	1	1	1						X				X					
*2	P-93B	WT	G	-	-	11/1/21	1355		3	1	1	1						X				X					
3	P-93D	WT	G	-	-	11/3/21	1055		3	1	1	1						X				X					
*4	P-94A	WT	G	-	-	11/2/21	1345		3	1	1	1						X				X					
*5	P-101A	WT	G	-	-	11/2/21	940		3	1	1	1						X				X					
*6	P-101B	WT	G	-	-	11/2/21	1005		3	1	1	1						X				X					
7	P-126	WT	G	-	-	11/3/21	1145		3	1	1	1						X				X					
8	P-127	WT	G	-	-	11/3/21	1110		3	1	1	1						X				X					
9	P-128	WT	G	-	-	11/3/21	1235		3	1	1	1						X				X					
10	P-129	WT	G	-	-	11/3/21	1315		3	1	1	1						X				X					
11	P-130	WT	G	-	-	11/4/21	1425		4	1	1	2						X			X	X			X		
12	P-131	WT	G	-	-	11/4/21	1225		4	1	1	2						X			X	X			X		

Additional Comments:

*, samples delivered to Xcel lab 11/3/21 CJP.

- remaining samples delivered to Xcel lab as signed on COC.

pH strips: MD00402
Temp ID00841: 5.0°C

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Riley Jacobson Pace	11/5/21	0900	#50 / Xcel	11/5/21	0900	5.0	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Chris Pelosi + Riley Jacobson		
SIGNATURE of SAMPLER:		DATE Signed (MM / DD / YY):	11/3/21

Temp in °C | Received on Ice | Custody Sealed Cooler | Samples Intact

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CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Xcel Energy	Report To:	Chris Pelosi	Attention:	Steve Davis
Address:	Environmental Services MP-7	Copy To:	Riley Jacobson	Company Name:	
				Address:	
Email To:	Chris Pelosi	Purchase Order No.:		Pace Quote Reference:	
Phone: (612) 597-7254	Fax:	Project Number	21-05223	Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Requested Due Date/TAT:	2 Weeks	Project Name:	Xcel Energy Sherco Ponds Fall 2021	Pace Profile #:	

REGULATORY AGENCY: ☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER_MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER__

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WP; AR; OT; TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Filtered (Y/N)	Requested Analysis: GW-D	GW-CCR-BAP	GW-CCR-BAP2	GW-CCR-P3	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
*1	P-50D	WT	G	-	-	11/2/21	1225		3	1	1	1						X				X						
*2	P-56	WT	G	-	-	11/2/21	900		3	1	1	1						X				X						
*3	P-60	WT	G	-	-	11/2/21	835		3	1	1	1						X				X						
*4	P-62	WT	G	-	-	11/2/21	810		3	1	1	1						X				X						
*5	P-66	WT	G	-	-	11/1/21	0900		3	1	1	1						X				X						
*6	P-88	WT	G	-	-	11/2/21	1345		3	1	1	1						X				X						
*7	P-89-1	WT	G	-	-	11/2/21	1305		3	1	1	1						X				X						
*8	P-90	WT	G	-	-	11/1/21	1020		3	1	1	1						X				X						
*9	P-90A	WT	G	-	-	11/1/21	1050		3	1	1	1						X				X						
*10	P-92A	WT	G	-	-	11/1/21	1320		3	1	1	1						X				X						
*11	P-92B	WT	G	-	-	11/1/21	1255		3	1	1	1						X				X						
*12	P-92D	WT	G	-	-	11/1/21	1225		3	1	1	1						X				X						

Additional Comments:

*, Samples delived to Xcel lab 11/3/21 CJP

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*1 Chris Pelosi Pace	11/3/21	720	Xcel	11/3/21	0720	4.1

SAMPLER NAME AND SIGNATURE			Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
PRINT Name of SAMPLER:	Chris Pelosi + Riley Jacobson			Y/N	Y/N	Y/N
SIGNATURE of SAMPLER:		DATE Signed (MM / DD / YY): 11/1/21		Y/N	Y/N	Y/N
				Y/N	Y/N	Y/N

pH Strips: MD00402
Temp measured: 4.1°C

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Section A Required Client Information:

Company:	Xcel Energy
Address:	Environmental Services
	MP-7
Email To:	Chris Pelosi
Phone: (612) 597-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B Required Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number	21-05223
Project Name:	Xcel Energy Sherco Ponds Fall 2021

Section C Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ M ☐ OH ☐ SC ☐ WI ☑ OTHER

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER / DW; WATER / WT; WASTE WATER / WW; PRODUCT / P; SOLID/SOLD / SL; OIL / OL; WIPE / WP; AIR / AR; TISSUE / TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: GW-D	GW-CCR-BAP	GW-CCR-BAP2	GW-CCR-P3	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
1	P-132	WT	G	–	–	11/3/21	855		4	1	1	2						X			X	X			X		
2	~~P-150~~	~~WT~~	~~G~~	–	–	WELL DRY	NO SAMPLE		2	1		1									X				X		
3	P-151	WT	G	–	–	11/4/21	1300		2	1		1									X				X		
4	~~P-152A~~	~~WT~~	~~G~~	–	–	WELL DRY	NO SAMPLE		2	1		1							X	X	X		X	X	X		
5	P-153	WT	G	–	–	11/4/21	1135		2	1		1									X				X		
6	P-154A	WT	G	–	–	11/4/21	1100		2	1		1									X				X		
*1 7	P-155	WT	G	–	–	11/2/21	835		2	1		1							X				X				
*1 8	P-156	WT	G	–	–	11/2/21	925		2	1		1							X				X				
*1 9	P-157	WT	G	–	–	11/2/21	1230		2	1		1							X				X				
*1 10	P-158	WT	G	–	–	11/2/21	1305		2	1		1							X	X			X	X			
11	P-162	WT	G	–	–	11/4/21	845		2	1		1									X				X		
12	P-163	WT	G	–	–	11/4/21	930		2	1		1									X				X		

Additional Comments:

*1 samples delivered to Xcel lab 11/3/21 CJP.

remaining samples delivered to Xcel lab as signed on COC

pH Strips: MS00404

Temp M400841: 5.0 °C

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Riley Jacobson Pace	11/5/21	0900	Xcel	11/5/21	0960	5.0	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chris Pelosi + Riley Jacobson

SIGNATURE of SAMPLER: [signature] DATE Signed (MM / DD / YY): 11/3/21

Temp in °C | Received on Ice | Custody Sealed Cooler | Samples Intact

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	MP-7
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Phone: (612) 597-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B Required Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number	21-05223
Project Name:	Xcel Energy Sherco Ponds Fall 2021

Section C Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER

Filtered (Y/N)

Requested Analysis:

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER / DW; WATER / WT; WASTE WATER / WW; PRODUCT / P; SOIL/SOLID / SL; OIL / OL; WIPE / WP; AIR / AR; OTHER / OT; TISSUE / TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	GW-D	GW-CCR-BAP	GW-CCR-BAP2	GW-CCR-P3	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
*1	P-93A	WT	G	-	-	11/1/21	1420		3	1	1	1						X			X							
*1	P-93B	WT	G	-	-	11/1/21	1355		3	1	1	1						X			X							
3	P-93D	WT	G	-	-				3	1	1	1						X			X							
*1	4 P-94A	WT	G	-	-	11/2/21	1345		3	1	1	1						X			X							
*1	5 P-101A	WT	G	-	-	11/2/21	940		3	1	1	1						X			X							
*1	6 P-101B	WT	G	-	-	11/2/21	1005		3	1	1	1						X			X							
7	P-126	WT	G	-	-				3	1	1	1						X			X							
8	P-127	WT	G	-	-				3	1	1	1						X			X							
9	P-128	WT	G	-	-				3	1	1	1						X			X							
10	P-129	WT	G	-	-				3	1	1	1						X			X							
11	P-130	WT	G	-	-				4	1	1	2						X		X	X			X				
12	P-131	WT	G	-	-				4	1	1	2						X		X	X			X				

Additional Comments:

*1 samples delivered to Xcel lab 11/3/21
CS

pH Strip s: MP00402
Temp #400841 : 4.1°C

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*1 [signature] Pace	11/3/21	720	[signature] Xcel	11/3/21	0720	4.1

SAMPLER NAME AND SIGNATURE		
PRINT Name of SAMPLER:	Chris Pelosi + Riley Jacobson	
SIGNATURE of SAMPLER:	[signature]	DATE Signed (MM / DD / YY): 11/1/21

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

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Address:	Environmental Services	Copy To:	Riley Jacobson	Company Name:	
	MP-7			Address:	
Email To:	Chris Pelosi	Purchase Order No.:		Pace Quote Reference:	
Phone: (612) 597-7254	Fax:	Project Number	21-05223	Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Requested Due Date/TAT:	2 Weeks	Project Name:	Xcel Energy Sherco Ponds Fall 2021	Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: GW-D	GW-CCR-BAP	GW-CCR-BAP2	GW-CCR-P3	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
1	P-164	WT	G	-	-	11/4/21	1000		2	1		1									X				X			
2	P-165	WT	G	-	-	11/3/21	945		2	1		1									X				X			
*1, 3	P-173	WT	G	-	-	11/2/21	1000		2	1		1									X				X			
*1, 4	P-174	WT	G	-	-	11/2/21	1040		2	1		1									X				X			
5	P-175	WT	G	-	-	11/4/21	1500		2	1		1									X				X			
6	P-176	WT	G	-	-	11/4/21	1640		2	1		1									X				X			
7	P-177	WT	G	-	-	11/4/21	1520		2	1		1									X				X			
*1, 8	P-178A	WT	G	-	-	11/2/21	1400		4	1	1	2							X		X		X		X			
*1, 9	P-178B	WT	G	-	-	11/2/21	1425		3	1	1	1							X				X					
10	WELL #4	WT	G	-	-	11/3/21	1355		3	1	1	1							X				X					
11	WELL #6A	WT	G	-	-	11/3/21	1345		3	1	1	1							X				X					
*1, 12	DUPLICATE NPDES	WT	G	-	-	11/1/21	935		3	1	1	1							X				X					

Additional Comments:

*1, samples delivered to Xcel lab 11/3/21 CJP.
remaining samples delivered to Xcel lab as signed on COC

pH Strips MD00402
Temp MH00941: 5.0°C

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Riley Jacobson Pace	11/5/21	0900	Xcel	11/5/21	0900	5.0	(Y)/N	Y/N	(Y)/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE		Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
PRINT Name of SAMPLER:	Chris Pelosi + Riley Jacobson				
SIGNATURE of SAMPLER:	DATE Signed (MM/DD/YY): 11/3/21				

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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 Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Xcel Energy	Report To:	Chris Pelosi	Attention:	Steve Davis
Address:	Environmental Services	Copy To:	Riley Jacobson	Company Name:	
	MP-7			Address:	
Email To:	Chris Pelosi	Purchase Order No.:		Pace Quote Reference:	
Phone: (612) 597-7254	Fax:	Project Number	21-05223	Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Requested Due Date/TAT:	2 Weeks	Project Name:	Xcel Energy Sherco Ponds Fall 2021	Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
	WP
	AR
	OT
	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: GW-D	GW-CCR-BAP	GW-CCR-BAP2	GW-CCR-P3	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
1	P-132	WT	G						4	1	1	2						X			X	X			X		
2	P-150	WT	G						2	1		1									X				X		
3	P-151	WT	G						2	1		1									X				X		
4	P-152A	WT	G						2	1		1							X	X	X		X	X	X		
5	P-153	WT	G						2	1		1									X				X		
6	P-154A	WT	G						2	1		1									X				X		
*1 7	P-155	WT	G			11/2/21	835		2	1		1							X			X					
*1 8	P-156	WT	G			11/2/21	925		2	1		1							X			X					
*1 9	P-157	WT	G			11/2/21	1230		2	1		1							X			X					
*1 10	P-158	WT	G			11/2/21	1305		2	1		1							X	X			X	X			
11	P-162	WT	G						2	1		1									X				X		
12	P-163	WT	G						2	1		1									X				X		

Additional Comments:

*1 samples delivered to Xcel lab 11/3/21 CVF

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
*1 [signature] Pace	11/3/21	720	[signature] Xcel	11/3/21	0720

SAMPLE CONDITIONS

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
4.1	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chris Pelosi + Riley Jacobson

SIGNATURE of SAMPLER: [signature] DATE Signed (MM / DD / YY): 11/1/21

pH strip: MD00402

Temp M40083 41: 4.1°C

CHAIN-OF-CUSTODY / Analytical Request Document

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Section A — Required Client Information:

Company:	Xcel Energy
Address:	Environmental Services
	MP-7
Email To:	Chris Pelosi
Phone: (612) 597-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B — Required Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number:	21-05223
Project Name:	Xcel Energy Sherco Ponds Fall 2021

Section C — Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: ☑ NC ☐ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☑ WI OTHER

Filtered (Y/N)

Section D — Required Client Information

SAMPLE ID — One Character per box. (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; WATER WT; WASTE WATER WW; PRODUCT P; SOIL/SOLID SL; OIL OL; WP; AR; OT; TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	GW-D	GW-CCR-BAP	GW-CCR-BAP2	GW-CCR-P3	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No. Lab I.D.
*, 1	RINSE NPDES	WT	G	–	–	11/1/21	910		3	1	1	1						X				X					
*, 2	DUPLICATE BAP	WT	G	–	–	11/1/21	1515		2	1		1							X				X				
*, 3	RINSE BAP	WT	G	–	–	11/1/21	1520		2	1		1							X				X				
*, 4	DUPLICATE BAP2	WT	G	–	–	11/2/21	1000		2	1		1								X				X			
*, 5	RINSE BAP2	WT	G	–	–	11/2/21	1005		2	1		1								X				X			
6	DUPLICATE P3	WT	G	–	–	11/3/21	945		2	1		1									X				X		
7	RINSE P3	WT	G	–	–	11/3/21	950		2	1		1									X				X		
8	P-93D @162'	WT	G	–	–	11/3/21	1515		3	1	1	1															
9	P-93D @ 158'	WT	G	–	–	11/3/21	1535		3	1	1	1															
10																											
11							[initials] 11/4/21																				
12																											

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
Riley [signature]	11/5/21	0900	[signature] / Xcel	11/5/21	0900	5.0	Y/N (circled)	Y/N	Y/N (circled)
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chris Pelosi + Riley Jacobson

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11/3/21

Additional Comments:

*, samples delivered to Xcel lab 11/3/21 CJP

- remaining samples delivered to Xcel lab as signed on COC.

pH strips: MQ00402
Temp: MQ00841: 5.0°C

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CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Required Client Information:

Company:	Xcel Energy
Address:	Environmental Services
	MP-7
Email To:	Chris Pelosi
Phone: (612) 597-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B Required Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number	21-05223
Project Name:	Xcel Energy Sherco Ponds Fall 2021

Section C Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER / DW; WATER / WT; WASTE WATER / WW; PRODUCT / P; SOIL/SOLID / SL; OIL / OL; WP; AR; OT; TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: GW-D	GW-CCR-BAP	GW-CCR-BAP2	GW-CCR-P3	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No. / Lab I.D.
1	P-164	WT	G	-	-				2	1		1									X				X			
2	P-165	WT	G	-	-				2	1		1									X				X			
*1 3	P-173	WT	G	-	-	11/2/21	1000		2	1		1								X				X			
*1 4	P-174	WT	G	-	-	11/2/21	1040		2	1		1								X				X			
5	P-175	WT	G	-	-				2	1		1								X				X			
6	P-176	WT	G	-	-				2	1		1								X				X			
7	P-177	WT	G	-	-				2	1		1								X				X			
*1 8	P-178A	WT	G	-	-	11/2/21	1400		4	1	1	2						X		X		X		X			
*1 9	P-178B	WT	G	-	-	11/2/21	1425		3	1	1	1						X				X					
10	WELL #4	WT	G	-	-				3	1	1	1						X				X					
11	WELL #6A	WT	G	-	-				3	1	1	1						X				X					
*1 12	DUPLICATE NPDES	WT	G	-	-	11/1/21	935		3	1	1	1						X				X					

Additional Comments:

*1, samples delivered to Xcel lab 11/3/21
CR

pH Strips: MD00402
Temp MY00941: 4.1°C

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
*1 [signature] Pace 11/3/21	11/3/21	720	[signature] / Xcel	11/3/21	0720

SAMPLE CONDITIONS

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
4.1	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Chris Pelosi + Riley Jacobson

SIGNATURE of SAMPLER: [signature] [signature] DATE Signed (MM / DD / YY): 11/1/21

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CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Required Client Information:

Company:	Xcel Energy
Address:	Environmental Services
	MP-7
Email To:	Chris Pelosi
Phone: (612) 597-7254	Fax:
Requested Due Date/TAT:	2 Weeks

Section B Required Project Information:

Report To:	Chris Pelosi
Copy To:	Riley Jacobson
Purchase Order No.:	
Project Number	21-05223
Project Name:	Xcel Energy Sherco Ponds Fall 2021

Section C Invoice Information:

Attention:	Steve Davis
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Pelosi/ Riley Jacobson
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☑ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER MCES

SITE LOCATION: NC ☑ MN ☐ IL ☐ IN ☐ MI ☐ OH ☐ SC ☐ WI ☑ OTHER

Section D Required Client Information

SAMPLE ID
One Character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
	WP
	AR
	OT
	TS

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: GW-D	GW-CCR-BAP	GW-CCR-BAP2	GW-CCR-P3	(REPORT) NPDES	(REPORT) CCR-BAP	(REPORT) CCR-BAP2	(REPORT) CCR-P3	Residual Chlorine (Y/N)	Pace Project No. Lab I.D.
*1	1 RINSE NPDES	WT	G	-	-	11/1/21	910		3	1	1	1						X				X				
*1	2 DUPLICATE BAP	WT	G	-	-	11/1/21	1515		2	1		1							X				X			
*1	3 RINSE BAP	WT	G	-	-	11/1/21	1520		2	1		1							X				X			
*1	4 DUPLICATE BAP2	WT	G	-	-	11/2/21	1000		2	1		1								X				X		
*1	5 RINSE BAP2	WT	G	-	-	11/2/21	1005		2	1		1								X				X		
	6 DUPLICATE P3	WT	G	-	-				2	1		1									X				X	
	7 RINSE P3	WT	G	-	-				2	1		1									X				X	
	8																									
	9																									
	10																									
	11																									
	12																									

Additional Comments:

*1 Samples delivered to Xcel labs 11/3/21
CJR

pH Strips: MD00402
Temp #400841: 4.1°C

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
*1 [signature] Pace	11/3/21	720	[signature] / Xcel	11/3/21	0720	4.1

SAMPLER NAME AND SIGNATURE			Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
PRINT Name of SAMPLER:	Chris Pelosi + Riley Jacobson			Y/N	Y/N	Y/N
SIGNATURE of SAMPLER: [signature] Riley	DATE Signed (MM / DD / YY)	11/1/21		Y/N	Y/N	Y/N
				Y/N	Y/N	Y/N
				Y/N	Y/N	Y/N