REPORT

2020 Annual Groundwater Report

Nebraska Public Power District - Sheldon Station

Submitted to:

Nebraska Public Power District
Sheldon Station, 4500 West Pella Road
Hallam, Nebraska

Submitted by:

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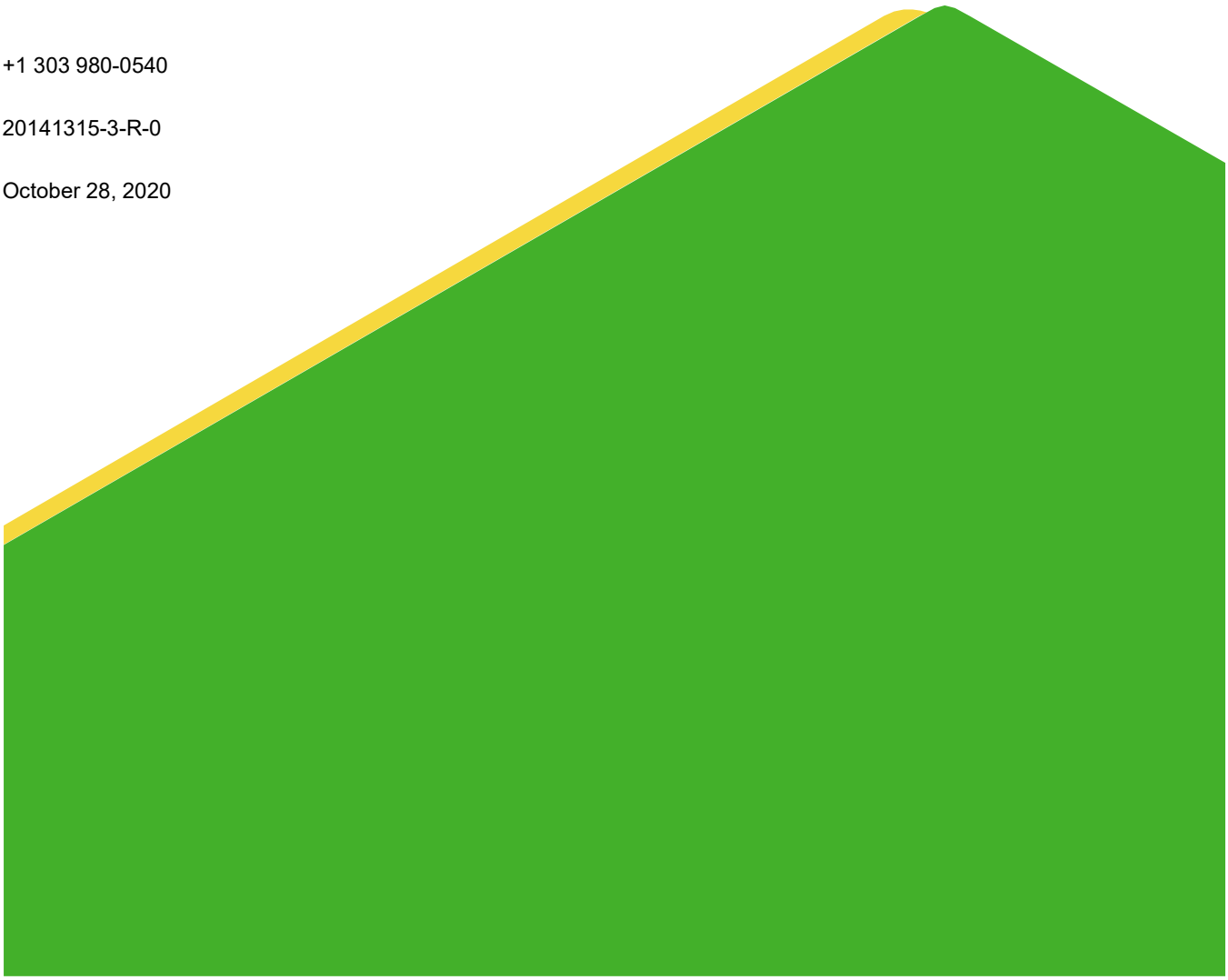

Executive Summary

This report presents the results from groundwater monitoring that occurred at Nebraska Public Power District's Sheldon Station in 2020. The facility entered 2020 under a detection monitoring program and remains in detection monitoring based on the results of the first (Q1) and third (Q3) quarter 2020 sampling and analysis events.

For the Q1 2020 sampling event, no potential exceedances were identified for the monitoring program. A false-positive was identified for field-measured pH at AP4-MW4. Field-measured pH at AP4-MW5 was identified as a verified exceedance. A successful alternative source demonstration was completed showing that the verified exceedance for field-measured pH at AP4-MW5 was not caused by the facility. As a result, the facility remained in detection monitoring entering the Q3 2020 sampling event.

During the Q3 2020 sampling event, no potential exceedances or false-positives were identified for the monitoring program. Field-measured pH at AP4-MW5 was identified as a verified exceedance. The previously completed alternative source demonstration will be reviewed for the ongoing verified exceedance for field-measured pH at AP4-MW5. Following review of the previously completed alternative source demonstration and a determination that the previously identified conclusions are still valid, the Sheldon Station monitoring program remains in detection monitoring entering 2021.

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1.0 INTRODUCTION

Golder Associates Inc. (Golder) has prepared this report describing the 2020 annual groundwater sampling events and comparative statistical analysis for Nebraska Public Power District's (NPPD) Sheldon Station Ash Landfill No. 4 (AP4) in Hallam, Nebraska. This report was written to meet the requirements of the site's permitted sampling and analysis plan (SAP) as approved by the Nebraska Department of Environment and Energy (NDEE) and the federal Coal Combustion Residual (CCR) rule's sections on groundwater monitoring and corrective action, 40 CFR 257.90-98 and applicable revisions to the CFR.

1.1 Facility Information

Sheldon Station is owned and operated by NPPD and can generate 225 MW of power. The facility is located in southeastern Nebraska in Section 19, T7N; R6E; and is 18 miles south of Lincoln, in Lancaster County. The village of Hallam is the closest community to the site and is 1.5 miles south of the facility. NPPD constructed Sheldon Station in 1958, switching the facility entirely to low-sulfur coal from Wyoming's Powder River Basin in 1974. The active CCR landfill at the site (AP4) contains fly ash and bottom ash.

1.2 Purpose

The United States Environmental Protection Agency (USEPA)'s CCR rule established specific requirements for reporting of groundwater monitoring and corrective action at CCR facilities in 40 CFR 257.90 to 40 CFR 247.98. Per part (e) of 40 CFR 257.90, no later than January 31, 2018, and annually thereafter, owners or operators of CCR units must prepare an annual groundwater monitoring and corrective action report. The permitted SAP for AP4 was developed to comply with both the federal CCR regulations and NDEE requirements. At the request of the NDEE, reports are prepared on a semi-annual basis, following each sampling event.

2.0 GROUNDWATER MONITORING NETWORK PROGRAM STATUS

The groundwater monitoring network for the active CCR landfill at Sheldon Station consists of seven monitoring wells, as shown on Figure 1. The two upgradient monitoring wells are AP4-MW1 and AP4-MW2. The five downgradient monitoring wells are AP4-MW3, AP4-MW4, AP4-MW5, AP4-MW6, and AP4-MW7.

2.1 Completed Key Actions in 2020

The sixth detection monitoring sampling event was completed during the first quarter of 2020, with an associated semi-annual report provided to the NDEE within 30 days of the end of the quarter. Following the Q1 2020 sampling event, an alternative source demonstration was completed for field pH at AP4-MW5.

The seventh detection monitoring sampling event was completed during the third quarter of 2020. Following the seventh detection monitoring event, the associated semi-annual report was provided to the NDEE within 30 days of the end of the quarter.

2.2 Installation and Decommissioning of Monitoring Wells

No monitoring wells were installed or decommissioned at Sheldon Station during 2020.

2.3 Problems and Resolutions

As discussed in the alternative source demonstration included as APPENDIX A and discussed in Section 3.4.2, a number of issues were identified with the probe used for measurement of field pH in 2020 (MP-20). Prior to sampling in Q1 2020, NPPD attempted to calibrate the pH probe, which at that time would not accept the pH

calibration curve. To complete the field activities in Q1 2020, a separate field meter was borrowed from NPPD's Gerald Gentleman Station. After completing field sampling, the field pH probe typically used at Sheldon Station was sent to QED Environmental Systems, Inc. (QED; the probe manufacturer) for repairs. The field pH probe was also sent to QED for repairs in Q2 2020 following sampling conducted in support of the ASD. No issues were noted during the Q3 2020 sampling event, but readings were recorded from both the MP-20 and a Lab Accumet pH probe. Variation was noted between the two simultaneous readings. For consistency with past results, the results from the MP-20 were used for comparative statistics.

During the data evaluation of the samples collected during the Q3 2020 detection monitoring sampling event, the initial reported value for total dissolved solids (TDS) at AP4-MW5 was noted as being inconsistent with past measurements at the well and the other analyzed constituents for the Q3 2020 event. TDS was re-analyzed out of hold time by the contracted analytical laboratory (Eurofins TestAmerica Cedar Falls), with the subsequent out of hold time result used within the statistical analysis included within this report.

2.4 Proposed Key Activities for 2021

The eighth and ninth detection monitoring events are scheduled for 2021.

A baseline update is planned to occur either prior to collection of the eighth or ninth detection monitoring event. Per the USEPA Unified Guidance, for monitoring programs where samples are collected on a semi-annual basis, statistical baselines should be reviewed for the potential to incorporate compliance data following collection of four to eight comparative samples, or every two to four years.

3.0 GROUNDWATER MONITORING ANALYTICAL PROGRAM STATUS

Analytical activities associated with the groundwater monitoring program are described below.

3.1 Samples Collected

Sheldon Station staff collected eight initial baseline samples on a quarterly basis between September 15, 2015 and May 16, 2017, at each of the two upgradient and five downgradient monitoring wells. Detection monitoring samples have been collected on a semi-annual basis beginning on September 19, 2017. This report outlines the results of the detection monitoring sampling event that occurred on September 1, 2020. Specific dates for each sample collected as part of the program are provided in Table 1 through Table 7. Sampling was conducted in accordance with the site sampling and analysis plan (Golder 2017c).

3.1.1 Groundwater Elevation and Flow Rate

Groundwater elevations were measured in each well during each sampling event prior to purging. Elevation measurements can be found in Table 8. Groundwater elevations and interpolated groundwater contours from the March 2020 (Q1 2020) detection monitoring sampling event and September 2020 (Q3 2020) detection monitoring sampling event are shown in Figures 1 and 2, respectively. Figure 3 shows groundwater elevations over time at the site.

The groundwater flow rate across Ash Pond 4 was estimated with the equation $V_s = k \times i/n_e$, where:

- V_s is the groundwater flow rate, in feet per day (ft/day);
- k is the hydraulic conductivity in ft/day, estimated at 0.005 ft/day from slug testing results from system wells;

- i is the hydraulic gradient in feet per feet (ft/ft), calculated based on groundwater elevations during each monitoring event;
- n_e is the effective porosity, a unitless parameter, estimated to be 0.2 for site soils.

The average groundwater flow rate for March 2020 was estimate at 8.0 x 10^{-4} ft/day. The average groundwater flow rate for September 2020 was estimated to be 8.6 x 10^{-4} ft/day.

3.2 Monitoring Data (Analytical Results)

Analytical Results for the CCR rule Appendix III detection monitoring results for the March 8, and September 1, 2020, monitoring events are shown in Table 1 through Table 7.

3.3 Comparative Statistical Analysis

The comparative statistical analysis is summarized below with results presented in Table 9 through Table 15. A full description of the steps taken for the comparative statistical analysis can be found in the Groundwater Monitoring Statistical Methods Certification (Golder 2017b).

3.3.1 Definitions

The following definitions are used in discussion of the comparative statistical analysis:

- SSI – a statistically significant increase, defined as an analytical result that exceeds the statistical limit established by the baseline statistical analysis, which has been verified by confirmatory re-sampling and analysis.
- Elevated CUSUM – occurs when the calculated CUSUM value is greater than the Shewhart-CUSUM limit established by the baseline statistical analysis, but the analytical result does not exceed the Shewhart-CUSUM limit. An elevated CUSUM is an indication that concentrations are gradually increasing and that analytical results may exceed the Shewhart-CUSUM limit in the future.
- Potential Exceedance – defined as an initial elevated CUSUM or an analytical result that exceeds the Shewhart-CUSUM limit or non-parametric prediction limit established by the baseline statistical analysis. Confirmatory resampling will determine if a potential exceedance is a false-positive or a verified SSI. Non-detect results that exceed either the Shewhart-CUSUM limit or the non-parametric prediction limit are not considered potential exceedances.
- False-positive – defined as an analytical result or elevated CUSUM that exceeded the associated statistical limit, but can be clearly attributed to laboratory error, changes in analytical precision, or is invalidated through confirmatory re-sampling. False-positives are not used in calculation of any subsequent CUSUM values.
- Confirmatory re-sampling – designated as the next sampling event.
- Verified exceedance – interpreted as two consecutive samples exceeding the statistical limit (the original sample and the confirmatory re-sample, or two consecutive elevated CUSUMs) for the same parameter at the same well.

3.3.2 Potential Exceedances

No potential exceedances were identified for samples collected during the either the Q1 2020 or the Q3 2020 detection monitoring events.

3.3.3 False-Positives

During the Q3 2019 detection monitoring event, the upper CUSUM value for field-measured pH at AP4-MW4 exceeded the upper statistical limit and was identified as a potential exceedance. Both the sample and the associated CUSUM were below the upper statistical limit in the Q1 2020 detection monitoring event, and the Q3 2019 potential exceedance has been identified as a false-positive.

No false-positives were identified for samples collected during the Q3 2020 detection monitoring event.

3.3.4 Verified Statistically Significant Increases

Field-measured pH for samples collected from AP4-MW5 indicated a verified SSI during the Q1 2020 monitoring event. A potential exceedance as an elevated CUSUM value for field-measured pH at AP4-MW5 identified during the Q3 2019 monitoring event was verified through confirmatory re-sampling during the Q1 2020 detection monitoring event as a second elevated CUSUM. The analytical results for field-measured pH at AP4-MW5 during both the Q3 2019 and Q1 2020 sampling events remained within the statistical limits.

Field pH for samples collected from AP4-MW5 were previously identified as a verified SSI during the Q1 2020 monitoring event was also identified as a verified SSI during the Q3 2020 monitoring event. An elevated CUSUM was also identified during the Q3 2020 monitoring event. The analytical result for field pH at AP4-MW5 during the Q3 2020 sampling event remains within the statistical limits.

3.4 Program Transitions

Beginning in Q3 2017, the groundwater monitoring program at Sheldon Station transitioned from the initial baseline period to detection monitoring. During the initial baseline period, eight independent samples from each well within the program were collected and analyzed for the constituents listed in Appendix III and Appendix IV of the rule prior to October 17, 2017, as specified in 40 CFR 257.94(b).

3.4.1 Detection Monitoring

Samples for the detection monitoring program are collected on a semi-annual basis, beginning with the sample collected in September 2017. NPPD plans to continue to collect semi-annual samples under the detection monitoring program in 2021.

3.4.2 Alternative Source Demonstrations

Resulting from the SSI for the upper CUSUM limit for field pH at AP4-MW5 verified during the Q1 2020 sampling event, NPPD and Golder pursued an alternative source demonstration (ASD). As specified in 40 CFR 257.94, the ASD was completed within 90 days of identification of the verified SSI (SSI identified April 24, 2020; ASD dated July 22, 2020, included as APPENDIX A). Following completion of the successful ASD, Sheldon Station's AP4 remains in detection monitoring. Based on the results of the Q3 2020 sampling event and the ongoing SSI for field-measured pH at AP4-MW5, the previously completed ASD was reviewed. As the associated conclusions from the previously completed ASD remain true, Sheldon Station will remain in detection monitoring entering 2021.

3.4.3 Assessment Monitoring

The current groundwater monitoring program at Sheldon Station is not in assessment monitoring. Assessment monitoring has not been triggered as described in 40 CFR 257.95.

3.4.4 Corrective Measures and Assessment

The current groundwater monitoring program at Sheldon Station does not indicate the need for corrective measures. An assessment of corrective measures, as described in 40 CFR 257.96, has not been required. No alternative source demonstration stemming from SSIs identified as part of an assessment monitoring program has been made. No actions are required at this time.

4.0 RECOMMENDATIONS AND CLOSING

This report presents the results from the CCR detection monitoring events that occurred on March 8, and September 1, 2020, along with the associated comparative statistical analysis. Pursuant to 40 CFR 257.94, NPPD prepared a successful alternative source demonstration for field-measured pH at AP4-MW5 and remained in detection monitoring for the Q3 2020 event. Following the continued verified exceedance for field-measured pH at AP4-MW5 during the Q3 2020 monitoring event, pursuant to 40 CFR 257.94, the previously prepared alternative source demonstration was reviewed and the associated conclusions remain true. Based on review of the alternative source demonstration, NPPD will remain in detection monitoring entering 2021.

As described in the Groundwater Monitoring System Certification (Golder 2017a) and the Groundwater Monitoring Statistical Methods Certification (Golder 2017b), the groundwater monitoring and analytical procedures meet the general requirements of the CCR rule, and modifications to the monitoring network and sampling program are not recommended at this time.

5.0 REFERENCES

Golder Associates, Inc. (Golder). 2017a. Coal Combustion Residuals Landfill Groundwater Monitoring System Certification. October 11, 2017.

Golder Associates, Inc. (Golder). 2017b. Groundwater Monitoring Statistical Methods Certification, Sheldon Station Ash Landfill No. 4. October 11, 2017.

Golder Associates, Inc. (Golder). 2017c. Sampling and Analysis Plan, Sheldon Station Ash Landfill No. 4. October 11, 2017.

United States Environmental Protection Agency. (USEPA). 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities – Unified Guidance. Office of Resource Conservation and Recovery. EPA-R-09-007. March 2009.

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Signature Page

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https://golderassociates.sharepoint.com/sites/124836/project files/6 deliverables/reports/3-r_sheldon_2020_ccr_annual/3-r-0/20141315-3-r-0-sheldon_2020_ccr_annual_28oct20.docx

Tables

NEBRASKA PUBLIC POWER DISTRICT
SHELDON STATION

Table 1: Data Summary Table - AP4-MW1

Analytes	Units	9/15/2015	11/23/2015	3/15/2016	5/18/2016	8/9/2016	11/9/2016	3/7/2017	5/16/2017	9/19/2017	3/21/2018	9/11/2018	3/20/2019	9/17/2019	3/8/2020	9/1/2020
		Background Collection								Detection Monitoring [1]						
Appendix III																
Boron, Total	mg/L	0.0784	< 0.150	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	0.100
Calcium, Total	mg/L	89.8	90.4	95.1	103	93.0	88.3	103	92.3	91.0	99.6	82.4	94.2	93.7	85.3	94.0
Chloride	mg/L	22.5	7.05	5.57	6.43	6.24	11	5.37	7.48	7.47	6.52	5.61	6.15	1.18	6.74	7.27
Fluoride	mg/L	< 0.500	0.598	0.923	0.796	0.604	< 0.500	0.656	1.22	1.2	0.846	0.723	1.07	0.194	0.552	0.816
Field pH	pH units	6.95	6.94	7.46	7.26	7.19	7.19	7.32	7.19	7.17	7.36	7.23	7.59	7.60	7.37	7.16
Sulfate	mg/L	22.8	23.7	22.2	22.2	22.8	24.5	20.6	21.7	24.4	23.4	19.6	23.2	4.79	25.7	25.3
Total Dissolved Solids	mg/L	440	462	428	430	462	464	484	520	464	408	406	416	392	422	396
Appendix IV																
Antimony, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---
Arsenic, Total	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	---	---	---
Barium, Total	mg/L	0.23	0.258	0.221	0.199	0.193	0.209	0.269	0.231	---	---	---	---	---	---	---
Beryllium, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---
Cadmium, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Chromium, Total	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	---	---	---	---	---	---	---
Cobalt, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Fluoride	mg/L	< 0.500	0.598	0.923	0.796	0.604	< 0.500	0.656	1.22	---	---	---	---	---	---	---
Lead, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Lithium, Total	mg/L	0.0508	0.0513	0.0504	0.0505	0.0506	0.0546	< 0.05	< 0.05	---	---	---	---	---	---	---
Mercury, Total	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	---	---	---	---	---	---	---
Molybdenum, Total	mg/L	0.00725	0.00823	0.00724	0.00647	0.00656	0.00655	0.00883	0.00739	---	---	---	---	---	---	---
Radium-226	pCi/L	0.257 ± 0.0866	0.293 ± 0.104	0.35 ± 0.097	0.314 ± 0.0878	0.417 ± 0.111	0.527 ± 0.33	0.208 ± 0.0918	0.373 ± 0.125	---	---	---	---	---	---	---
Radium-228	pCi/L	2.14 ± 0.411	2.68 ± 0.446	1.49 ± 0.319	1.19 ± 0.318	1.26 ± 0.383	2.09 ± 0.453	2.02 ± 0.392	1.88 ± 0.383	---	---	---	---	---	---	---
Radium-226 + Radium-228	pCi/L	2.397 ± 0.42	2.973 ± 0.458	1.84 ± 0.333	1.51 ± 0.33	1.67 ± 0.399	2.62 ± 0.561	2.22 ± 0.403	2.25 ± 0.403	---	---	---	---	---	---	---
Selenium, Total	mg/L	0.00901	0.0123	0.0101	0.00873	0.00826	0.00816	0.0114	0.00999	---	---	---	---	---	---	---
Thallium, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---

Legend:
---. Not analyzed
mg/L, milligrams per liter
pCi/L, picocuries per liter
U, Result is less than the sample detection limit (varies by sample for radiological results).

NOTES:
1. As indicated by the CCR rule (40 CFR 257.94), the Detection Monitoring Program monitors all constituents found in Appendix III.

NEBRASKA PUBLIC POWER DISTRICT
SHELDON STATION

Table 2: Data Summary Table - AP4-MW2

Analytes	Units	9/15/2015	11/23/2015	3/15/2016	5/18/2016	8/9/2016	11/9/2016	3/7/2017	5/16/2017	9/19/2017	3/21/2018	9/11/2018	3/20/2019	9/17/2019	3/8/2020	9/1/2020
		Background Collection								Detection Monitoring [1]						
Appendix III																
Boron, Total	mg/L	0.0831	< 0.500	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.100
Calcium, Total	mg/L	335	321	294	320	289	286	342	278	293	331	263	297	291	239	292
Chloride	mg/L	89.9	93.3	83.6	94.2	92.7	92.5	87	88.6	88.6	94.3	92	87.6	88.8	93.9	106.0
Fluoride	mg/L	< 0.500	3.1	0.596	0.666	0.558	< 0.500	< 0.500	0.935	0.677	0.687	< 0.500	0.612	0.702	0.715	< 0.500
Field pH	pH units	6.98	6.99	7.37	7.2	7.16	7.13	7.25	7.18	7.16	7.26	7.19	7.44	7.60	7.33	7.09
Sulfate	mg/L	884	888	797	804	901	842	774	797	894	879 E	827	923	855	857	874
Total Dissolved Solids	mg/L	1720	1840	1700	1830	1900	1790	2360	1780	2210	1650	1680	1730	1570	1740	1620
Appendix IV																
Antimony, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---
Arsenic, Total	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	---	---	---
Barium, Total	mg/L	0.0115	0.0117	0.0107	0.0102	0.00996	0.012	0.0138	0.0103	---	---	---	---	---	---	---
Beryllium, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---
Cadmium, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Chromium, Total	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	---	---	---	---	---	---	---
Cobalt, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Fluoride	mg/L	< 0.500	3.1	0.596	0.666	0.558	< 0.500	< 0.500	0.935	---	---	---	---	---	---	---
Lead, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Lithium, Total	mg/L	0.0811	0.0754	0.0699	0.0681	0.0523	0.0705	0.0661	0.0694	---	---	---	---	---	---	---
Mercury, Total	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	---	---	---	---	---	---	---
Molybdenum, Total	mg/L	0.00543	0.00555	0.00526	0.00533	0.00519	0.00494	0.00627	0.00491	---	---	---	---	---	---	---
Radium-226	pCi/L	0.258 ± 0.0937	0.241 ± 0.0886	0.28 ± 0.0846	0.312 ± 0.0834	0.334 ± 0.097	0.778 ± 0.403	0.25 ± 0.103	0.188 ± 0.0925	---	---	---	---	---	---	---
Radium-228	pCi/L	2.02 ± 0.457	2.53 ± 0.497	2.07 ± 0.384	2.2 ± 0.449	2.41 ± 0.467	2.49 ± 0.485	2.01 ± 0.41	2.01 ± 0.405	---	---	---	---	---	---	---
Radium-226 + Radium-228	pCi/L	2.278 ± 0.467	2.771 ± 0.505	2.35 ± 0.394	2.51 ± 0.456	2.74 ± 0.477	3.27 ± 0.631	2.26 ± 0.423	2.2 ± 0.415	---	---	---	---	---	---	---
Selenium, Total	mg/L	0.714	0.697	0.634	0.706	0.628	0.628	0.779	0.657	---	---	---	---	---	---	---
Thallium, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---

Legend:
---. Not analyzed
mg/L, milligrams per liter
pCi/L, picocuries per liter
U, Result is less than the sample detection limit (varies by sample for radiological results).
E, Result exceeded calibration range.

NOTES:
1. As indicated by the CCR rule (40 CFR 257.94), the Detection Monitoring Program monitors all constituents found in Appendix III.

NEBRASKA PUBLIC POWER DISTRICT
SHELDON STATION

Table 3: Data Summary Table - AP4-MW3

Analytes	Units	9/15/2015	11/23/2015	3/15/2016	5/18/2016	8/9/2016	11/9/2016	3/7/2017	5/16/2017	9/19/2017	3/21/2018	9/11/2018	3/20/2019	9/17/2019	3/8/2020	9/1/2020
		Background Collection								Detection Monitoring [1]						
Appendix III																
Boron, Total	mg/L	0.0687	< 0.150	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.100
Calcium, Total	mg/L	82.4	85.9	89.8	88.5	87.5	85	95.8	86.1	83.7	92.3	74.7	88.5	87.8	81.1	84.1
Chloride	mg/L	12.4	< 5.00	< 5.00	< 5.00	6.94	5.4	< 5.00	5.18	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00
Fluoride	mg/L	< 0.500	0.975	1.08	1.1	0.513	0.884	1.04	1.82	1.2	1.29	1.05	1.29	1.24	1.24	1.34
Field pH	pH units	7.15	7.21	7.60	7.38	7.30	7.34	7.39	7.40	7.28	7.48	7.43	7.69	7.60	7.56	7.3
Sulfate	mg/L	33.2	24.4	25.2	34.6	31.2	29	20.6	21.7	33.2	30.7	20	35	32.3	30.3	26.7
Total Dissolved Solids	mg/L	418	460	390	420	488	430	428	442	494	404	374	426	378	374	378
Appendix IV																
Antimony, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---
Arsenic, Total	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	---	---	---
Barium, Total	mg/L	0.218	0.235	0.225	0.222	0.206	0.232	0.271	0.238	---	---	---	---	---	---	---
Beryllium, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---
Cadmium, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Chromium, Total	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	---	---	---	---	---	---	---
Cobalt, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Fluoride	mg/L	< 0.500	0.975	1.08	1.1	0.513	0.884	1.04	1.82	---	---	---	---	---	---	---
Lead, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Lithium, Total	mg/L	0.0502	< 0.0500	0.0519	< 0.05	< 0.05	0.0538	0.0520	0.0547	---	---	---	---	---	---	---
Mercury, Total	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	---	---	---	---	---	---	---
Molybdenum, Total	mg/L	0.00922	0.0101	0.00992	0.00873	0.00928	0.00978	0.0116	0.00983	---	---	---	---	---	---	---
Radium-226	pCi/L	0.401 ± 0.101	0.389 ± 0.106	0.384 ± 0.103	0.501 ± 0.104	0.4 ± 0.102	0.426 ± 0.292	0.318 ± 0.108	0.188 ± 0.0889	---	---	---	---	---	---	---
Radium-228	pCi/L	3.69 ± 0.576	2.87 ± 0.491	2.91 ± 0.463	3.42 ± 0.547	2.65 ± 0.477	3.19 ± 0.561	2.35 ± 0.432	2.26 ± 0.422	---	---	---	---	---	---	---
Radium-226 + Radium-228	pCi/L	4.091 ± 0.474	3.259 ± 0.502	3.3 ± 0.474	3.92 ± 0.557	3.04 ± 0.487	3.62 ± 0.632	2.67 ± 0.445	2.45 ± 0.431	---	---	---	---	---	---	---
Selenium, Total	mg/L	0.0138	0.0164	0.0165	0.0145	0.0152	0.0154	0.0201	0.0191	---	---	---	---	---	---	---
Thallium, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---

Legend:
---. Not analyzed
mg/L, milligrams per liter
pCi/L, picocuries per liter
U, Result is less than the sample detection limit (varies by sample for radiological results).

NOTES:
1. As indicated by the CCR rule (40 CFR 257.94), the Detection Monitoring Program monitors all constituents found in Appendix III.

NEBRASKA PUBLIC POWER DISTRICT
SHELDON STATION

Table 4: Data Summary Table - AP4-MW4

Analytes	Units	9/15/2015	11/23/2015	3/15/2016	5/18/2016	8/9/2016	11/9/2016	3/7/2017	5/16/2017	9/19/2017	3/21/2018	9/11/2018	3/20/2019	9/17/2019	3/8/2020	9/1/2020
		Background Collection								Detection Monitoring [1]						
Appendix III																
Boron, Total	mg/L	0.0674	< 0.150	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.100
Calcium, Total	mg/L	128	123	103	115	111	105	132	95.4	108	109	97.1	100	112	91.9	104
Chloride	mg/L	13	8.99	< 5.00	6.71	8.55	7.77	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00
Fluoride	mg/L	< 0.500	0.987	0.946	0.949	< 0.500	0.732	0.786	1.33	1.18	1.2	0.796	1.17	1.12	0.983	1.110
Field pH	pH units	7.02	7.17	7.40	7.25	7.15	7.22	7.23	7.31	7.23	7.32	7.29	7.60	7.75	7.43	7.22
Sulfate	mg/L	82.8	127	62.6	89.5	99.6	110	123	59.4	53.5	100	81.9	85.7	109	114	95.5
Total Dissolved Solids	mg/L	506	590	476	518	582	556	576	666	498	530	466	486	490	516	510
Appendix IV																
Antimony, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---
Arsenic, Total	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	---	---	---
Barium, Total	mg/L	0.151	0.14	0.168	0.128	0.131	0.177	0.123	0.158	---	---	---	---	---	---	---
Beryllium, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---
Cadmium, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Chromium, Total	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	---	---	---	---	---	---	---
Cobalt, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Fluoride	mg/L	< 0.500	0.987	0.946	0.949	< 0.500	0.732	0.786	1.33	---	---	---	---	---	---	---
Lead, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Lithium, Total	mg/L	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	---	---	---	---	---	---	---
Mercury, Total	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	---	---	---	---	---	---	---
Molybdenum, Total	mg/L	0.00509	0.0054	0.00493	0.00443	0.00481	0.00466	0.00642	0.00483	---	---	---	---	---	---	---
Radium-226	pCi/L	0.45 ± 0.107	0.451 ± 0.124	0.362 ± 0.104	0.471 ± 0.0996	0.36 ± 0.0976	< 0.481 U ± 0.277	0.327 ± 0.112	0.185 ± 0.0900	---	---	---	---	---	---	---
Radium-228	pCi/L	2.78 ± 0.489	1.59 ± 0.370	1.86 ± 0.360	2.62 ± 0.468	2.05 ± 0.452	1.39 ± 0.384	1.93 ± 0.397	1.9 ± 0.388	---	---	---	---	---	---	---
Radium-226 + Radium-228	pCi/L	3.23 ± 0.501	2.041 ± 0.390	2.23 ± 0.375	3.09 ± 0.478	2.41 ± 0.462	1.56 ± 0.474	2.25 ± 0.413	2.08 ± 0.399	---	---	---	---	---	---	---
Selenium, Total	mg/L	0.0259	0.0137	0.0181	0.0132	0.0198	0.0119	0.0104	0.013	---	---	---	---	---	---	---
Thallium, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---

Legend:
---. Not analyzed
mg/L, milligrams per liter
pCi/L, picocuries per liter
U, Result is less than the sample detection limit (varies by sample for radiological results).

NOTES:
1. As indicated by the CCR rule (40 CFR 257.94), the Detection Monitoring Program monitors all constituents found in Appendix III.

Table 5. Data Summary Table - AP4-MW5

Analytes		9/15/2015	11/23/2015	3/15/2016	5/18/2016	8/9/2016	11/9/2016	3/7/2017	5/16/2017	9/19/2017	3/21/2018	9/11/2018	3/20/2019	9/17/2019	3/8/2020	9/1/2020
	Units	Background Collection								Detection Monitoring [1]						
Appendix III																
Boron, Total	mg/L	0.0934	< 0.150	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	0.133
Calcium, Total	mg/L	358	520	439	460	523	517	608	310	488	537	146	541	504	363	579
Chloride	mg/L	8.98	8.99	5.77	6.97	7.98	10	5.69	6.76	< 5.00	6.59	< 5.00	5.1	5.43	6.03	6.19
Fluoride	mg/L	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	1.27	0.658	0.601	< 0.500	0.664	0.61	< 0.500	< 0.500
Field pH	pH units	6.75	7.05	7.08	6.89	6.81	6.82	6.90	6.90	6.82	6.97	7.27	7.23	7.26	7.06	6.82
Sulfate	mg/L	1420	1480	969	1410	1620	1570	1350	740	784	1630	468	1470	1370	1540	1580
Total Dissolved Solids	mg/L	2540	2740	1950	2620	2860	2920	3010	1490	1710	2690	1020	2390	2210	2500	2740 H
Appendix IV																
Antimony, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---
Arsenic, Total	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	---	---	---
Barium, Total	mg/L	0.017	0.00903	0.0117	0.00926	0.00843	0.00795	0.00756	0.0124	---	---	---	---	---	---	---
Beryllium, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---
Cadmium, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Chromium, Total	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	---	---	---	---	---	---	---
Cobalt, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Fluoride	mg/L	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	1.27	---	---	---	---	---	---	---
Lead, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Lithium, Total	mg/L	0.0948	0.1330	0.1210	0.1280	0.1480	0.1680	0.1660	0.1080	---	---	---	---	---	---	---
Mercury, Total	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	---	---	---	---	---	---	---
Molybdenum, Total	mg/L	0.00444	0.00329	0.0035	0.00274	0.00263	0.00284	0.00373	0.00344	---	---	---	---	---	---	---
Radium-226	pCi/L	0.167 ± 0.0816	0.156 ± 0.103	0.267 ± 0.084	0.176 ± 0.0734	0.217 ± 0.0891	< 0.397 U ± 0.253	0.105 ± 0.068	< 0.109 U ± 0.058	---	---	---	---	---	---	---
Radium-228	pCi/L	2.08 ± 0.432	< 0.471 U ± 0.297	2 ± 0.392	1.02 ± 0.317	1.36 ± 0.373	0.972 ± 0.383	0.934 ± 0.294	< 0.361 U ± 0.234	---	---	---	---	---	---	---
Radium-226 + Radium-228	pCi/L	2.247 ± 0.44	0.505 ± 0.314	2.27 ± 0.40	1.19 ± 0.325	1.57 ± 0.384	1.21 ± 0.459	1.04 ± 0.302	< 0.361 U ± 0.241	---	---	---	---	---	---	---
Selenium, Total	mg/L	0.0563	< 0.00500	0.0286	0.0236	0.00561	< 0.00500	< 0.00500	0.0562	---	---	---	---	---	---	---
Thallium, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---

Legend:
---. Not analyzed
mg/L, milligrams per liter
pCi/L, picocuries per liter
U, Result is less than the sample detection limit (varies by sample for radiological results).
H, Sample was prepped or analyzed beyond the specified holding time.
NOTES:
1. As indicated by the CCR rule (40 CFR 257.94), the Detection Monitoring Program monitors all constituents found in Appendix III.

NEBRASKA PUBLIC POWER DISTRICT
SHELDON STATION

Table 6: Data Summary Table - AP4-MW6

Analytes	Units	9/15/2015	11/23/2015	3/15/2016	5/18/2016	8/9/2016	11/9/2016	3/7/2017	5/16/2017	9/19/2017	3/21/2018	9/11/2018	3/20/2019	9/17/2019	3/8/2020	9/1/2020
		Background Collection								Detection Monitoring [1]						
Appendix III																
Boron, Total	mg/L	0.0862	< 0.150	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.100
Calcium, Total	mg/L	103	105	101	104	106	101	118	94.1	106	106	92.7	90.6	101	99.2	99.5
Chloride	mg/L	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	5.28	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00
Fluoride	mg/L	0.87	0.85	1.37	1.61	1.21	1.45	1.35	1.62	1.62	2.19	1.31	1.5	1.46	2.08	1.82
Field pH	pH units	6.92	7.21	7.46	7.19	7.11	7.21	7.35	7.33	7.16	7.40	7.32	7.63	7.22	7.49	7.20
Sulfate	mg/L	58.5	96.6	51.3	50.7	70.6	69.1	59.3	53.4	50	60.5	46.7	57.7	65.2	75.5	51.8
Total Dissolved Solids	mg/L	468	506	506	436	514	530	584	550	498	432	396	440	458	422	454
Appendix IV																
Antimony, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---
Arsenic, Total	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	---	---	---
Barium, Total	mg/L	0.0725	0.0611	0.0622	0.0589	0.0605	0.0629	0.0672	0.0568	---	---	---	---	---	---	---
Beryllium, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---
Cadmium, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Chromium, Total	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	---	---	---	---	---	---	---
Cobalt, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Fluoride	mg/L	0.869	0.845	1.37	1.61	1.21	1.45	1.35	1.62	---	---	---	---	---	---	---
Lead, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Lithium, Total	mg/L	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	---	---	---	---	---	---	---
Mercury, Total	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	---	---	---	---	---	---	---
Molybdenum, Total	mg/L	0.00329	0.0039	0.00393	0.00344	0.00281	0.00397	0.00455	0.00411	---	---	---	---	---	---	---
Radium-226	pCi/L	0.287 ± 0.0872	0.232 ± 0.0917	0.227 ± 0.0771	0.261 ± 0.073	0.361 ± 0.113	0.545 ± 0.358	0.163 ± 0.0907	0.17 ± 0.0861	---	---	---	---	---	---	---
Radium-228	pCi/L	0.983 ± 0.307	0.766 ± 0.31	0.672 ± 0.243	0.699 ± 0.279	1.27 ± 0.439	0.735 ± 0.378	0.451 ± 0.245	0.752 ± 0.244	---	---	---	---	---	---	---
Radium-226 + Radium-228	pCi/L	1.27 ± 0.319	0.998 ± 0.323	0.899 ± 0.254	0.961 ± 0.288	1.63 ± 0.454	1.28 ± 0.521	0.614 ± 0.261	0.921 ± 0.259	---	---	---	---	---	---	---
Selenium, Total	mg/L	0.0103	0.00883	0.0109	0.00974	0.00984	0.0098	0.0112	0.0104	---	---	---	---	---	---	---
Thallium, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---

Legend:
---. Not analyzed
mg/L, milligrams per liter
pCi/L, picocuries per liter
U, Result is less than the sample detection limit (varies by sample for radiological results).

NOTES:
1. As indicated by the CCR rule (40 CFR 257.94), the Detection Monitoring Program monitors all constituents found in Appendix III.

NEBRASKA PUBLIC POWER DISTRICT
SHELDON STATION

Table 7: Data Summary Table - AP4-MW7

Analytes		9/15/2015	11/23/2015	3/15/2016	5/18/2016	8/9/2016	11/9/2016	3/7/2017	5/16/2017	9/19/2017	3/21/2018	9/11/2018	3/20/2019	9/17/2019	3/8/2020	9/1/2020
	Units	Background Collection								Detection Monitoring [1]						
Appendix III																
Boron, Total	mg/L	0.0758	< 0.150	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200	< 0.100
Calcium, Total	mg/L	67.7	68.7	72	66.2	69.4	66.9	79	67.6	67.5	64.3	65.5	66.4	69.4	66.6	66.3
Chloride	mg/L	16.1	11.8	11.4	11.2	13	11.7	10.6	12.9	13.3	12.5	12.1	12.9	11.3	11.8	9.89
Fluoride	mg/L	< 0.500	< 0.500	0.738	< 0.500	< 0.500	< 0.500	< 0.500	1.02	< 0.500	0.52	< 0.500	< 0.500	0.589	< 0.500	0.513
Field pH	pH units	7.20	7.45	7.65	7.39	7.40	7.48	7.57	7.52	7.46	7.56	7.54	7.94	7.15	7.70	7.39
Sulfate	mg/L	46	39.8	40.4	43.3	40.7	45.6	36.8	35.2	42.7	41.6	34.5	44.2	51.1	49.9	40.6
Total Dissolved Solids	mg/L	546	548	516	558	588	616	534	538	598	476	480	536	504	510	404
Appendix IV																
Antimony, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---
Arsenic, Total	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	---	---	---	---	---	---	---
Barium, Total	mg/L	0.165	0.161	0.154	0.137	0.146	0.159	0.177	0.159	---	---	---	---	---	---	---
Beryllium, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---
Cadmium, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Chromium, Total	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	---	---	---	---	---	---	---
Cobalt, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Fluoride	mg/L	< 0.500	< 0.500	0.738	< 0.500	< 0.500	< 0.500	< 0.500	1.02	---	---	---	---	---	---	---
Lead, Total	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	---	---	---	---	---	---	---
Lithium, Total	mg/L	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	---	---	---	---	---	---	---
Mercury, Total	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	---	---	---	---	---	---	---
Molybdenum, Total	mg/L	0.00841	0.00827	0.00823	0.0069	0.00785	0.00788	0.00955	0.00768	---	---	---	---	---	---	---
Radium-226	pCi/L	0.189 ± 0.0807	0.206 ± 0.865	0.277 ± 0.0928	0.25 ± 0.0781	0.29 ± 0.0907	< 0.404 U ± 0.271	0.357 ± 0.112	0.227 ± 0.092	---	---	---	---	---	---	---
Radium-228	pCi/L	1.2 ± 0.313	1.92 ± 0.396	1.58 ± 0.322	1.52 ± 0.342	1.60 ± 0.415	2.52 ± 0.481	1.91 ± 0.372	1.67 ± 0.358	---	---	---	---	---	---	---
Radium-226 + Radium-228	pCi/L	1.389 ± 0.323	2.126 ± 0.405	1.86 ± 0.335	1.77 ± 0.350	1.89 ± 0.425	2.83 ± 0.552	2.27 ± 0.389	1.89 ± 0.369	---	---	---	---	---	---	---
Selenium, Total	mg/L	0.00812	0.00846	0.00898	0.00834	0.00926	0.00764	0.00995	0.0103	---	---	---	---	---	---	---
Thallium, Total	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	---	---	---	---	---	---	---

Legend:
---. Not analyzed
mg/L, milligrams per liter
pCi/L, picocuries per liter
U, Result is less than the sample detection limit (varies by sample for radiological results).

NOTES:
1. As indicated by the CCR rule (40 CFR 257.94), the Detection Monitoring Program monitors all constituents found in Appendix III.

Table 8 - Sheldon Station Ash Landfill No. 4
Groundwater Levels (ft amsl)

Sample Period	Upgradient Wells		Downgradient Wells				
	AP4-MW1	AP4-MW2	AP4-MW3	AP4-MW4	AP4-MW5	AP4-MW6	AP4-MW7
MP Elev.	**1425.95**	**1445.03**	**1411.72**	**1396.10**	**1403.10**	**1386.61**	**1424.29**
QTR-2002-4	1410.90	1422.78	1392.14	1375.99	1385.78	1374.15	1401.53
QTR-2003-1	1409.36	1421.35	1390.20	1374.01	1383.07	1374.06	1399.28
QTR-2003-2	1412.99	1421.11	1396.11	1376.52	1387.68	1376.90	1398.78
QTR-2003-3	1411.22	1421.87	1390.91	1372.66	1382.35	1369.46	1401.34
QTR-2003-4	1410.02	1422.24	1390.31	1373.48	1382.30	1369.10	1401.38
QTR-2004-1	1411.81	1420.78	1393.01	1377.92	1384.12	1377.59	1398.98
QTR-2004-2	1412.04	1420.72	1394.77	1375.64	1383.75	1374.83	1400.70
QTR-2004-3	1411.24	1421.22	1393.89	1375.55	1384.18	1373.85	1408.14
QTR-2004-4	1409.40	1421.39	1391.65	1373.40	1381.88	1374.65	1407.23
QTR-2005-1	1409.32	1420.12	1390.66	1372.78	1381.29	1374.62	1401.20
QTR-2005-2	1410.36	1419.77	1388.86	1372.63	1381.27	1374.55	1399.82
QTR-2005-3	1425.95	1445.03	1411.72	1396.10	1403.10	1386.61	1424.29
QTR-2005-4	1407.83	1419.58	1387.67	1372.52	1380.80	1369.44	1399.32
QTR-2006-1	1406.35	1418.91	1387.02	1372.42	1380.15	1371.76	1397.99
QTR-2006-2	1408.37	1418.43	1387.52	1372.42	1383.05	1372.36	1397.48
QTR-2006-3	1403.26	1417.13	1386.38	1372.30	1379.83	1370.22	1399.99
QTR-2006-4	1404.91	1419.42	1386.32	1372.25	1380.51	1369.90	1399.89
QTR-2007-1	1407.21	1417.13	1390.63	1372.89	1382.85	1374.67	1397.74
QTR-2007-3	1409.61	1417.42	1391.60	1373.85	1382.19	1370.84	1409.74
QTR-2008-2	1415.33	1417.33	1406.98	1385.69	1395.04	1379.15	1414.16
QTR-2008-3	1412.64	1418.64	1393.61	1376.05	1385.14	1373.43	1413.10
QTR-2009-2	1409.86	1417.98	1390.72	1374.15	1381.58	1374.49	1403.78
QTR-2009-3	1408.87	1417.88	1389.01	1372.47	1380.60	1370.31	1407.03
QTR-2010-2	1413.98	1418.11	1405.12	1381.85	1390.80	1375.51	1414.59
QTR-2010-3	1411.22	1419.23	1392.72	1374.81	1383.50	1374.39	1413.39
QTR-2011-2	1409.32	1418.12	1389.92	1374.80	1382.48	1374.55	1403.83
QTR-2011-3	1411.24	1418.58	1391.87	1373.60	1382.88	1373.56	1411.18
QTR-2012-2	1412.85	1418.13	1399.77	1377.74	1388.74	1375.41	1413.29
QTR-2012-3	1408.70	1418.58	1390.03	1372.72	1381.35	1369.47	1410.77
QTR-2013-2	1411.47	1416.93	1391.01	1375.34	1388.23	1375.31	1402.57
QTR-2013-4	1410.46	1417.32	1391.21	1373.05	1382.79	1370.11	1407.27
QTR-2014-2	1407.80	1416.98	1387.42	1372.03	1383.19	1374.23	1400.05
QTR-2014-4	1407.74	1417.08	1387.30	1372.10	1381.27	1371.75	1404.99
QTR-2015-2	1412.00	1415.13	1405.17	1379.63	1394.50	1375.75	1409.78
QTR-2015-3	1412.05	1418.38	1393.87	1376.77	1386.49	1371.86	1412.67
QTR-2015-4	1410.50	1418.89	1391.46	1374.49	1383.76	1372.41	1408.79
QTR-2016-1	1412.60	1420.38	1394.97	1377.65	1387.59	1374.66	1405.38
QTR-2016-2	1414.94	1418.83	1406.92	1384.72	1395.85	1376.79	1410.62
QTR-2016-3	1412.06	1419.51	1393.22	1375.65	1386.20	1373.11	1414.29
QTR-2016-4	1410.10	1419.93	1390.81	1373.60	1382.98	1372.41	1408.39
QTR-2017-1	1408.24	1419.54	1389.29	1372.83	1381.40	1373.83	1403.49
QTR-2017-2	1410.15	1419.00	1389.52	1373.35	1386.96	1373.96	1402.41
QTR-2017-3	1410.40	1419.35	1392.04	1372.70	1383.00	1372.12	1409.31
QTR-2018-1	1408.01	1418.76	1389.65	1372.37	1381.38	1374.21	1402.92
QTR-2018-3	1410.46	1417.88	1397.84	1375.90	1389.87	1374.85	1410.27
QTR-2019-1	1413.80	1418.53	1400.72	1383.19	1391.10	1377.89	1411.27
QTR-2019-3	1412.07	1422.34	1399.14	1377.58	1390.40	1374.46	1415.12
QTR-2020-1	1414.38	1424.75	1399.62	1378.73	1390.27	1374.60	1411.49
QTR-2020-2	1414.67	1427.03	1403.73	1380.90	1394.55	1375.70	1415.83
QTR-2020-3	1411.10	1428.23	1394.10	1375.29	1387.19	1373.30	1414.78
Mean	1410.82	1420.08	1393.60	1375.74	1385.42	1373.86	1406.63
SD	3.30	4.35	5.98	4.45	4.95	2.96	6.23
Maximum	1415.33	1428.23	1406.98	1385.69	1395.85	1379.15	1415.83
Minimum	1403.26	1415.13	1386.32	1372.03	1379.83	1369.10	1397.48
Range	12.07	13.10	20.66	13.66	16.02	10.05	18.35
	Hydraulic Gradient		0.03				

MP = Measuring Point
MSL = Mean Sea Level (measured to nearest 0.01')

Table 9: Comparative Statistics - AP4-MW1

		Statistical Method	Statistical Limit	Q1 2020 Detection Monitoring Result	Q1 2020 CUSUM Value	Q1 2020 - Within Limit?	Q3 2020 Detection Monitoring Result	Q3 2020 CUSUM Value	Q3 2020 - Within Limit?
Appendix III Analytes	**Unit**			3/8/2020			9/1/2020		
Boron, Total	mg/L	NPPL	0.200	< 0.200	---	Yes	0.1	---	Yes
Calcium, Total	mg/L	CUSUM	120.1	85.3	94.4	Yes	94.0	94.4	Yes
Chloride	mg/L	NPPL	22.50	6.74	---	Yes	7.27	---	Yes
Fluoride	mg/L	CUSUM	1.835	0.852	0.725	Yes	0.816	0.725	Yes
pH, Field	pH units	CUSUM	6.40, 7.98	7.37	7.19, 7.66	Yes	7.16	7.19, 7.46	Yes
Sulfate	mg/L	CUSUM	28.0	25.7	24.5	Yes	25.3	26.1	Yes
Total Dissolved Solids	mg/L	CUSUM	599	422	461	Yes	396	461	Yes

Notes:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

Table 10: Comparative Statistics - AP4-MW2

		Statistical Method	Statistical Limit	Q1 2020 Detection Monitoring Result	Q1 2020 CUSUM Value	Q1 2020 - Within Limit?	Q3 2020 Detection Monitoring Result	Q3 2020 CUSUM Value	Q3 2020 - Within Limit?
Appendix III Analytes	**Unit**			3/8/2020			9/1/2020		
Boron, Total	mg/L	NP-PL	0.500	< 0.200	---	Yes	< 0.100	---	Yes
Calcium, Total	mg/L	CUSUM	418	239	308	Yes	292	308	Yes
Chloride	mg/L	CUSUM	106.7	93.9	90.2	Yes	106.0	102.4	Yes
Fluoride	mg/L	NP-PL	3.100	0.715	---	Yes	< 0.500	---	Yes
pH, Field	pH units	CUSUM	6.57, 7.74	7.33	7.16, 7.67	Yes	7.09	7.16, 7.47	Yes
Sulfate	mg/L	CUSUM	1059	857	836	Yes	874	836	Yes
Total Dissolved Solids	mg/L	NP-PL	2360	1740	---	Yes	1620	---	Yes

Notes:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

Table 11: Comparative Statistics - AP4-MW3

		Statistical Method	Statistical Limit	Q1 2020 Detection Monitoring Result	Q1 2020 CUSUM Value	Q1 2020 - Within Limit?	Q3 2020 Detection Monitoring Result	Q3 2020 CUSUM Value	Q3 2020 - Within Limit?
Appendix III Analytes	**Unit**			3/8/2020			9/1/2020		
Boron, Total	mg/L	NP-PL	0.200	< 0.200	---	Yes	< 0.100	---	Yes
Calcium, Total	mg/L	CUSUM	105.6	81.1	87.6	Yes	84.1	87.6	Yes
Chloride	mg/L	NP-PL	12.40	< 5	---	Yes	< 5.00	---	Yes
Fluoride	mg/L	CUSUM	2.85	1.24	0.99	Yes	1.34	0.99	Yes
pH, Field	pH units	CUSUM	6.73, 7.96	7.56	7.35, 7.75	Yes	7.30	7.35, 7.57	Yes
Sulfate	mg/L	CUSUM	51.2	30.3	27.5	Yes	26.7	27.5	Yes
Total Dissolved Solids	mg/L	CUSUM	567	374	435	Yes	378	435	Yes

Notes:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

Table 12: Comparative Statistics - AP4-MW4

		Statistical Method	Statistical Limit	Q1 2020 Detection Monitoring Result	Q1 2020 CUSUM Value	Q1 2020 - Within Limit?	Q3 2020 Detection Monitoring Result	Q3 2020 CUSUM Value	Q3 2020 - Within Limit?
Appendix III Analytes	**Unit**			3/8/2020			9/1/2020		
Boron, Total	mg/L	NP-PL	0.200	< 0.200	---	Yes	< 0.100	---	Yes
Calcium, Total	mg/L	CUSUM	172	91.9	114.1	Yes	104	114	Yes
Chloride	mg/L	NP-PL	13.00	< 5	---	Yes	< 5.00	---	Yes
Fluoride	mg/L	CUSUM	2.08	0.983	0.841	Yes	1.11	0.84	Yes
pH, Field	pH units	CUSUM	6.71, 7.73	7.43	7.22, 7.59	Yes (Previous Result - False Positive)	7.22	7.22, 7.47	Yes
Sulfate	mg/L	CUSUM	208.9	114	94.2	Yes	95.5	94.2	Yes
Total Dissolved Solids	mg/L	CUSUM	826	516	558.8	Yes	510	559	Yes

Notes:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

Table 13: Comparative Statistics - AP4-MW5

		Statistical Method	Statistical Limit	Q1 2020 Detection Monitoring Result	Q1 2020 CUSUM Value	Q1 2020 - Within Limit?	Q3 2020 Detection Monitoring Result	Q3 2020 CUSUM Value	Q3 2020 - Within Limit?
Appendix III Analytes	**Unit**						9/1/2020		
Boron, Total	mg/L	NP-PL	0.200	< 0.200	---	Yes	0.133	---	Yes
Calcium, Total	mg/L	CUSUM	903	363	467	Yes	579	482	Yes
Chloride	mg/L	CUSUM	14.82	6.03	7.64	Yes	6.19	7.64	Yes
Fluoride	mg/L	NP-PL	1.270	< 0.5	---	Yes	< 0.500	---	Yes
pH, Field	pH units	CUSUM	6.38, 7.42	7.06	6.90, 7.66	No - Verified SSI	6.82	6.90, 7.47	No - Verified SSI Originally Identified Q1 2020
Sulfate	mg/L	CUSUM	2698	1540	1320	Yes	1580	1320	Yes
Total Dissolved Solids	mg/L	CUSUM	4898	2500	2516	Yes	2740 H	2516	Yes

Notes:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

H: Sample was prepped or analyzed beyond the specified holding time.

Table 14: Comparative Statistics - AP4-MW6

		Statistical Method	Statistical Limit	Q1 2020 Detection Monitoring Result	Q1 2020 CUSUM Value	Q1 2020 - Within Limit?	Q3 2020 Detection Monitoring Result	Q3 2020 CUSUM Value	Q3 2020 - Within Limit?
Appendix III Analytes	**Unit**			3/8/2020			9/1/2020		
Boron, Total	mg/L	NP-PL	0.200	< 0.200	---	Yes	< 0.100	---	Yes
Calcium, Total	mg/L	CUSUM	134.3	99.2	104	Yes	99.5	104.0	Yes
Chloride	mg/L	NP-PL	5.00	< 5.00	---	Yes	< 5.00	---	Yes
Fluoride	mg/L	CUSUM	2.64	2.08	1.91	Yes	1.82	2.14	Yes
pH, Field	pH units	CUSUM	6.48, 7.96	7.49	7.22, 7.40	Yes	7.20	7.22, 7.22	Yes
Sulfate	mg/L	CUSUM	132.4	75.5	63.7	Yes	51.8	63.7	Yes
Total Dissolved Solids	mg/L	CUSUM	718	422	512	Yes	454	512	Yes

Notes:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

Table 15: Comparative Statistics - AP4-MW7

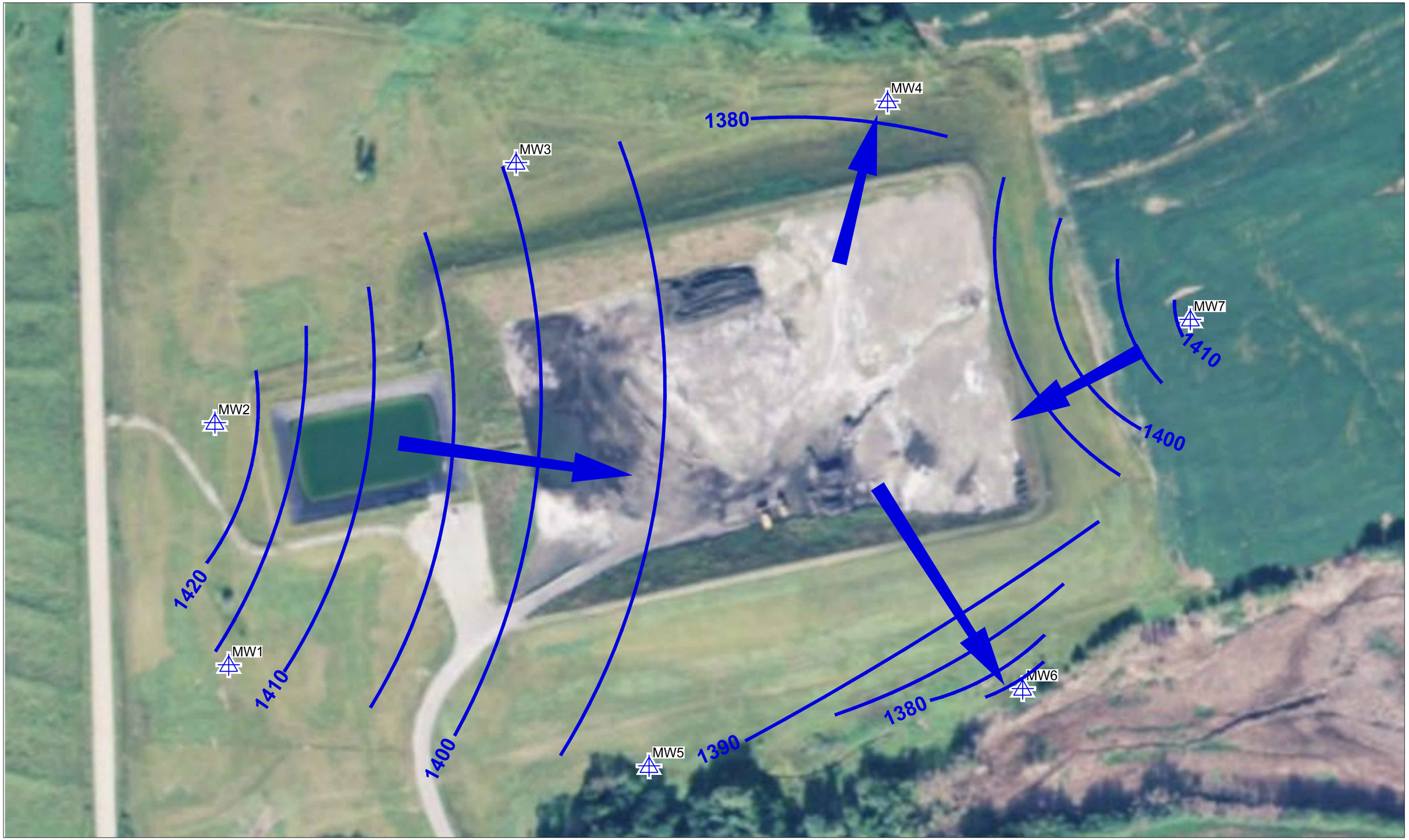
		Statistical Method	Statistical Limit	Q1 2020 Detection Monitoring Result	Q1 2020 CUSUM Value	Q1 2020 - Within Limit?	Q3 2020 Detection Monitoring Result	Q3 2020 CUSUM Value	Q3 2020 - Within Limit?
Appendix III Analytes	**Unit**			3/8/2020			9/1/2020		
Boron, Total	mg/L	NP-PL	0.200	< 0.200	---	Yes	< 0.100	---	Yes
Calcium, Total	mg/L	NP-PL	79.0	66.6	---	Yes	66.3	---	Yes
Chloride	mg/L	CUSUM	20.09	11.8	12.3	Yes	9.89	12.34	Yes
Fluoride	mg/L	NP-PL	1.020	< 0.50	---	Yes	0.513	---	Yes
pH, Field	pH units	CUSUM	6.85, 8.07	7.70	7.46, 7.57	Yes	7.39	7.46, 7.46	Yes
Sulfate	mg/L	CUSUM	58.4	49.9	52.3	Yes	40.6	48.1	Yes
Total Dissolved Solids	mg/L	CUSUM	700	510	556	Yes	404	556	Yes

Notes:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

Figures



GOLDER

0 75 150
1" = 150' FEET

FIGURE 1
ASH LANDFILL NO. 4
GROUNDWATER CONTOURS
MARCH 2020

Path: \\Denver\facad\08093-81799\SS\ | File Name: SS GW Maps 2020 Q1.dwg

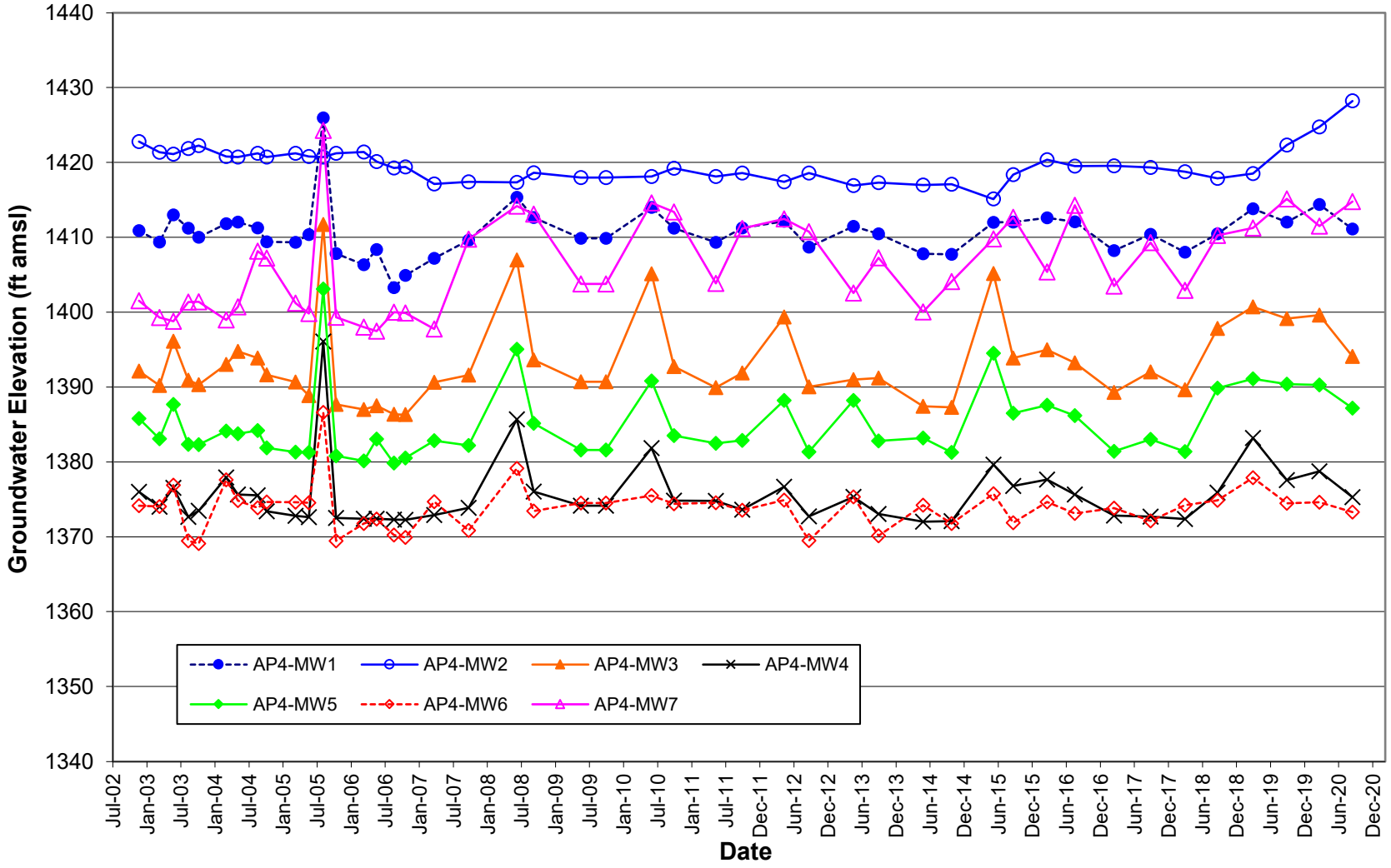
GOLDER

0 75 150
1" = 150' FEET

FIGURE 2
ASH LANDFILL NO. 4
GROUNDWATER CONTOURS
SEPTEMBER 2020

Path: \\Denver.golder.gds\acad\MPPD\Shidon\99_PROJECTS\20141315_MPPD 2020 GW\ | File Name: SS GW Maps 2020 Q3.dwg

FIGURE 3
Sheldon Station Ash Landfill No. 4
Groundwater Elevations



APPENDIX A

Alternative Source Demonstration - Field-Measured pH, AP4-MW5, Q1 2020

GOLDER

REPORT

Alternate Source Demonstration

Nebraska Public Power District

Submitted to:

Nebraska Public Power District

Sheldon Station, 4500 W Pella Road, Hallam, NE 68368

Submitted by:

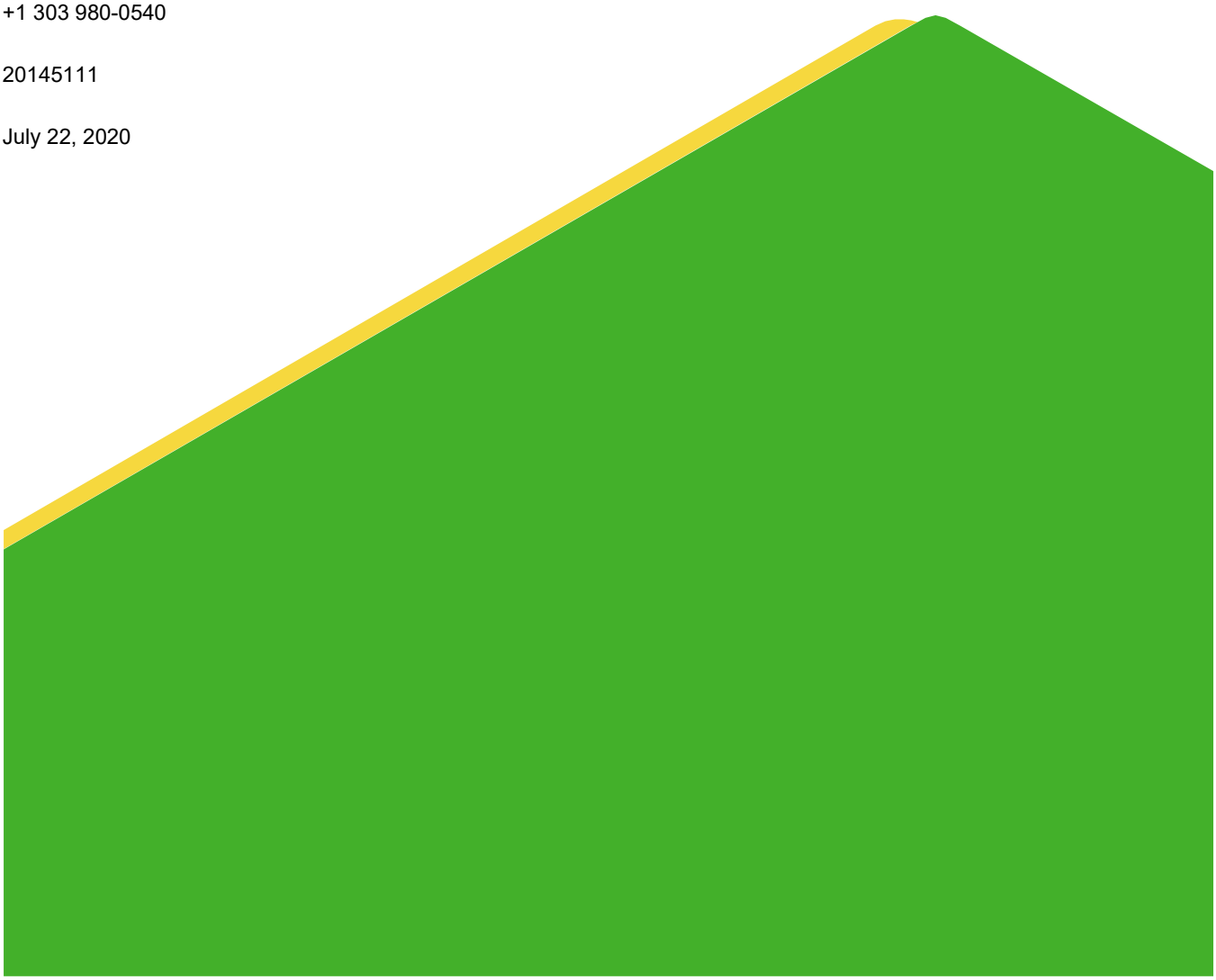
Golder Associates Inc.

7245 W Alaska Drive, Suite 200, Lakewood, Colorado, USA 80226

+1 303 980-0540

20145111

July 22, 2020



Distribution List

Nebraska Public Power District

Golder Associates, Inc.

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1.0 INTRODUCTION

On behalf of Nebraska Public Power District (NPPD), Golder Associates Inc. (Golder) performed a statistical evaluation of groundwater quality from the first quarter groundwater detection monitoring event of 2020 (Q1 2020) at the Sheldon Station (SS or Site) Ash Landfill No.4 (or CCR Unit), located at 4500 W Pella Road, Hallam, Lancaster County, Nebraska (Figure 1). The statistical evaluation was performed in accordance with applicable provisions of 40 Code of Federal Regulations (CFR) Part 257, "Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals (CCR) from Electric Utilities; Final Rule" (CCR Final Rule), as amended, and corresponding regulations under Nebraska Administrative Code (NAC) Title 132, Chapter 7 (Integrated Solid Waste Management Regulations, Groundwater Monitoring and Remedial Action).

Statistical analyses of the Appendix III detection monitoring data for field pH in groundwater at the downgradient monitoring well AP4-MW5 indicated a potential exceedance of the statistical limit based on the parametric Cumulative Sum analysis (CUSUM) in the Q3 2019 sampling results, which was subsequently verified as evidence of an statistically-significant increase (SSI) after the Q1 2020 event. Although determination of an SSI generally indicates that the groundwater monitoring program should transition from detection monitoring to assessment monitoring, 40 CFR §257.94(e)(2) and NAC Title 132 Chapter 7 004.03C allows the owner or operator (i.e., NPPD) 90 days from the date of determination (SSI verified on April 24, 2020; 90 days from the date of determination: July 23, 2020) to demonstrate a source other than the CCR Unit, or another condition, caused the SSI for field pH at AP4-MW5.

Golder's review of the hydrological and geologic conditions, as well as field personnel notes, at the Site indicated the potential for the SSI to have resulted from a source other than the CCR Unit. To assess potential field pH sources and the natural variability of the field pH in groundwater, NPPD collected supplemental groundwater samples, and Golder reviewed analytical results. Based upon this assessment and in accordance with provisions of the CCR Final Rule and NAC Title 132 Chapter 7, Golder prepared this Alternative Source Demonstration (ASD) for the CCR Unit. This ASD includes an evaluation of geological, hydrogeological, and chemical information regarding groundwater obtained from monitoring wells installed adjacent to the CCR Unit and ash contact waters obtained from within the CCR Unit.

This ASD conforms to the requirements of 40 CFR §257.94(e)(2) and NAC Title 132 Chapter 7 004.03C and provides the basis for concluding that the apparent SSI for field pH in groundwater at AP4-MW5 is not a result of a release from the CCR Unit. The following sections provide a summary of the SS CCR Unit, an overview of supplemental sampling activities, description of recent field pH probe repairs (Q3 2019 – Q2 2020), and geochemical assessment results demonstrating that field instrument malfunction is likely responsible for the field pH SSI in groundwater at AP4-MW5.

2.0 BACKGROUND

2.1 Description of Waste Disposal Area

The Ash Landfill No. 4 at SS was constructed in 2002 and is located in the southwest quarter of Section 19, Township 7N, Range 6E, near Hallam, Lancaster County, Nebraska (Figure 1). The ash disposal facility consists of a 11.3-acre single cell and contains both fly ash and bottom ash. The configuration of the liner and contact water collection system (CWCS) at Ash Landfill No. 4 is as follows, from top to bottom:

- At least three feet of select fill or fly ash, serving as a protective layer to prevent trafficking damage to the liner

- Eight-oz. geotextile (Trevira 011/280)
- One foot of contact water collection material and four-inch perforated piping to reduce drainage lengths (ADS N-12 LF)
- Three feet of low-permeability soil (LPS) liner

The configuration of the liner system on the side slopes is, from top to bottom:

- Protective layer of 0.67 feet of revegetated soil, covered by fly ash
- Three feet of LPS liner

Leachate collected in the CWCS drains to a composite-lined evaporation pond located immediately south of the CCR Unit (Figure 1). This pond stores contact water pumped from the CWCS and enhances evaporative loss. The Evaporation Pond liner consists of two feet of LPS, overlain by textured 60-mil high-density polyethylene (HDPE) geomembrane.

Beneath the landfill LPS liner is an underdrain system, which consists of a series of trenches and drains that surround the base of the landfill to collect groundwater. Groundwater within the underdrain system flows to the southern end of the Evaporation Pond to a sump within an interceptor trench. The underdrain consists of perforated pipe within a gravel trench. The interceptor trench runs east and west along the southern edge of the Evaporation Pond and collects groundwater flowing from the south. The intent of this underdrain/interceptor drain system is to keep groundwater five feet below the base of the landfill liner. Water from the sump is pumped to the Evaporation Pond or, under the facility's NPDES permit (NE0111490), can be discharged to a tributary of Olive Branch according to Outfall 003.

2.2 Site Geology and Hydrology

A well drilling program was initiated at Sheldon Station between 1998 and 1999. The borings were used to characterize the nature of the Pleistocene Age sediments and glacial till present in the area. In the area of the CCR facility, the thickness of the till ranges from approximately 180 to 200 feet, thinning toward the north. The composition of the till varies throughout the formation, generally consisting of predominately clay to silty clay with sand lenses. The uppermost water-bearing zone is typically encountered between 15 and 25 feet below the ground surface in the area, well above the principal groundwater reservoir for the area (typically found approximately 300 feet below ground surface).

Regional groundwater in the upper water-bearing zone near Ash Landfill No. 4 flows from the southeast to the northwest. However, Sheldon Station is located in a geologic area dominated by glacial drift, and groundwater flow in the glacial deposits observed at Sheldon Station mimic local surface topography. The local groundwater flow system at Ash Landfill No. 4 varies from the regional groundwater flow pattern due to surface topography, which consists of a hill to the north and surface water drainages to the east and west of Ash Landfill No. 4. Thus, groundwater generally flows towards the landfill from the north and south, and away from the landfill to the east and west.

2.3 Groundwater Monitoring Network

Design of the CCR Final Rule-compliant ash landfill monitoring program considered the size, disposal and operational history, anticipated groundwater flow direction, and saturated thickness of the uppermost aquifer. Based on these factors, a monitoring well network that consists of two background monitoring wells and

five downgradient monitoring wells was installed around the ash landfill. The monitoring wells are listed in Table 1 and presented in Figure 1.

Table 1: Monitoring Well Network

Location	Background Monitoring Wells	Downgradient Monitoring Wells
Ash Landfill #4	AP4-MW1, AP4-MW2	AP4-MW3, AP4-MW4, AP4-MW5, AP4-MW6, AP4-MW7

The two upgradient monitoring wells included in the groundwater monitoring program are used to represent the background groundwater quality, including its potential variability. The five downgradient wells were installed along the western, northern, and eastern boundaries of the active ash landfill. The depths of the monitoring wells were selected such that the monitoring wells are screened 10 to 37 feet below the ground surface to yield groundwater samples that are representative of water quality in the uppermost water-bearing zone. Figure 2 presents the groundwater levels in the monitoring wells between Q4 2002 and Q2 2020. Water levels in all monitoring wells have been generally stable over the last 18 years.

2.4 Groundwater Conditions

Between September 2015 and May 2017, NPPD collected eight quarterly independent baseline groundwater samples from each of the background and downgradient monitoring wells listed in Table 1, as required by 40 CFR §257.94. The results of the baseline monitoring phase were used to develop appropriate and statistically valid baseline values for each constituent at each monitoring well (Golder 2017A).

Following completion of the eight baseline monitoring events, NPPD started collecting groundwater samples on a semiannual basis in September 2017 to support the detection monitoring program. Groundwater samples for detection monitoring were collected at the two background and five downgradient monitoring wells and analyzed for 40 CFR Part 257 Appendix III constituents. During the detection monitoring program, the results of groundwater analysis are compared to the calculated prediction limits to determine whether groundwater quality remains consistent, or if changes are considered an SSI.

During the baseline monitoring period, field pH values were variable in the upgradient and downgradient groundwater (Figure 3). Field pH values in upgradient groundwater (based on 16 samples from two wells) ranged from 6.94 to 7.46 Standard Units (SU) between September 2015 and May 2017. Downgradient groundwater quality was also variable (based on 40 samples from 5 wells), with field pH values ranging from 6.75 to 7.65 SU.

Field pH values in groundwater at AP4-MW5 remained relatively steady compared to other downgradient wells during the baseline monitoring period, with values ranging between 6.75 and 7.08 SU in the eight samples collected. For field pH at AP4-MW5, a value of 7.42 SU was calculated as the upper statistical limit and a value of 6.384 SU was calculated as the lower statistical limit.

The Q3 2019 detection monitoring event reported a pH value of 7.26 SU in groundwater at AP4-MW5 and the parametric CUSUM value (7.62 SU) exceeded the calculated statistical limit of 7.42 SU. Verification sampling was completed in March 2020 (i.e., Q1 2020) and although the sample result was below the statistical limit at 7.06, a confirmed SSI for field pH at AP4-MW5 was identified based on the CUSUM value of 7.66 SU.

3.0 DATA SOURCES USED IN ALTERNATIVE SOURCE REVIEW

To assess groundwater downgradient of the SS CCR Unit, Golder reviewed previously collected data and performed supplemental sampling activities. The following sections summarize the supplemental sampling activities.

3.1 Groundwater

3.1.1 Monitoring Data

As part of the baseline monitoring, NPPD SS field personnel collected groundwater samples from the seven monitoring wells listed in Table 1. Between September 2015 and May 2017, quarterly samples were collected to establish background concentrations for Appendix III and Appendix IV constituents (Golder 2017B). After May 2017, groundwater samples were collected twice a year (Q1 and Q3) and analyzed for Appendix III constituents as part of the ongoing detection monitoring program at NPPD SS.

3.1.2 Supplemental Groundwater Samples

On June 6, 2020, an additional set of groundwater samples were collected from the seven wells listed in Table 1 to support advanced geochemical modeling.

These samples were analyzed for field parameters, major cations, major anions, and select dissolved metals. Laboratory reports for supplemental groundwater samples are presented in Appendix B.

3.2 Ash Impacted Water

To characterize the potential for the material in the ash landfill to increase the field pH, NPPD SS field personnel retrieved pond water from Ash Landfill No. 4 and a surface water sample from Evaporation Pond on June 6, 2020. The samples were analyzed for the same suite of parameters as the groundwater: field parameters, major cations, major anions, and select dissolved metals. Laboratory reports for supplemental ash impacted water samples are presented in Appendix B.

3.3 Geochemical Analysis Methods

The geochemical analysis of groundwater and surface water samples included field parameters, major cations and anions, and dissolved metals. The methods selected for these analyses are summarized below.

Field Parameters: Parameters measured in the field using a handheld meter included pH, conductivity, and temperature. The pH of each sample was also measured in the laboratory.

Major Cations and Anions: Geochemical modeling of mineral solubility, metal attenuation, and background contributions required analysis of major cations and anions because they affect and participate in sorption and mineral dissolution/precipitation reactions. Major anions included chloride, sulfate, and bicarbonate and major cations included calcium, magnesium, potassium, and sodium.

Metals: Metals analyses (i.e., Appendix III and IV) are important to understand the geochemical properties of groundwater. For groundwater, metals analysis allows for the delineation of a potential plume, and identification of background contributions from natural sources or off-site locations.

The laboratory analyzed the ash landfill water, groundwater, and surface water samples using the following methods:

- Alkalinity following Standard Method (SM) 2320B Alkalinity by Titration (2005)
- Chloride, fluoride, and sulfate following USEPA SW846 Test Method 9056A Determination of Inorganic Anions by Ion Chromatography Revision 1 (February 2007)
- pH following SM 4500 H+ B (2017)
- Antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chromium, cobalt, lead, lithium, magnesium, molybdenum, potassium, selenium, sodium, and thallium following USEPA SW-846 Test Method 6020A (November 2004)
- Ammonia following USEPA 350.1 Determination of Ammonia Nitrogen by Automated Colorimetry, Revision 2 (August 1993)
- Total Kjeldahl nitrogen following USEPA 351.2 Determination of Total Kjeldahl Nitrogen by Semi-Automated Colorimetry, Revision 2 (August 1993)
- Total nitrate-nitrite nitrogen following USEPA 353.2 Determination of Nitrate-Nitrite Nitrogen by Automated Colorimetry, Revision 2 (August 1993)
- Mercury following USEPA SW846 Test Method 7470A, Manual Cold-Vapor Technique (2015)
- Radium 226 following USEPA SW846 Test Method 9315: Alpha-emitting Radium Isotopes
- Radium 228 following USEPA SW846 Test Method 9320: Radium-228

4.0 SOURCE EVALUATION

4.1 Field Instrument Malfunction

To assess the quality of the field pH measurements at AP4-MW5, Golder reviewed the field data and pH probe maintenance records for potential issues that could bias field pH readings high. Figure 3 presents an annotated time series of field pH measurements from the Site, highlighting the following events:

- **Q1 2019-** Field pH at all seven monitoring wells were approximately 0.4 SU higher relative to each monitoring well's baseline average.
- **Prior to collecting Q3 2019 sample-** Due to problems trying to calibrate the pH probe, NPPD SS sent their field pH probe (MP-20) to the Manufacturer (QED Environmental Systems, Inc; QED) for repairs. QED documented in their bill to NPPD (Appendix C) that the pH probe appeared to be missing a piece, but that it appeared to be calibrating without it. QED replaced the pH probe, pH fluid, and salt in the probe and returned it to NPPD.
- **Q3 2019-** Field pH for five of the seven wells (including AP4-MW5) remain elevated over historical background. Wells MW-6 and MW-7 had larger pH changes than any previous quarterly pH change. It is Golder's understanding that this variability could be caused by a drifting probe and is unlikely to be a real change. The analysis of the groundwater data from this sampling event identified the potential SSI for field pH at AP4-MW5.
- **Q1 2020-** Prior to sampling, NPPD attempted to test the pH probe and could not get the probe to accept the pH calibration curve, indicating a new or continuing problem with the field meter. To complete the Q1 2020 sampling, NPPD borrowed a field meter from NPPD's Gerald Gentlemen Station. The field pH decreased in

five wells, relative to Q3 2019. Analysis of the groundwater data from this sampling event verified the SSI for field pH at AP4-MW5.

- **Following the Q1 2020 sampling-** NPPD returned the probe to QED for repairs. QED confirmed the calibration problem, cleaned the probe, repaired a loose wire, replaced the probe and was able to successfully calibrate the pH probe (Appendix C). QED returned the probe to NPPD.
- **Q2 2020-** In support of the ASD, NPPD prepared to collect the supplemental samples described in Section 3.1.2. The pH probe again failed to accept the calibration curve. To complete the ASD sample collection, NPPD field staff used the field probe from NPPD Gerald Gentlemen Station. The field pH at all monitoring wells were back in the range of historical measurements.
- **Following the Q2 2020 sampling-** NPPD returned the probe to QED for repairs. QED found that the pH probe "…fairly quickly drifted out of range high" after calibration (Appendix C). QED cleaned the probe and returned it to NPPD.

The following correspondence indicate the original probe was damaged prior to the Q3 2019 sampling. The higher field pH values observed in all wells in Q1 2019 indicated the probe might be biased high, which was later confirmed by QED repair technicians in June 2020. Field pH values for all seven monitoring wells decreased in Q1 and Q2 of 2020, when measured by a different pH probe. The SSI for field pH at AP4-MW5 was likely a result of the instrument malfunction documented above.

Figure 4 presents the time series of the laboratory pH values at the Site for the same period. While the laboratory pH measurements were not made within the prescribed hold time (within 15 minutes), these data can still provide useful information as a quality control check on field pH measurements and show general pH trends in groundwater at the Site. The elevated field pH trends between Q3 2018 and Q3 2019 are not observed in the laboratory pH data, providing further evidence that the increase does not reflect an actual change in groundwater conditions.

4.2 Groundwater Geochemistry

Historical concentrations of Appendix III analytes and Appendix IV analytes in groundwater at SS, including analytes that are typically indicators of potential CCR seepage (e.g., boron, molybdenum, fluoride), are presented in time series plots in Appendix A. The plots include the results of the supplemental samples that were collected in support of this ASD. Sampling for the selected Appendix IV analytes concluded in Q3 2017, which means there is a gap in the data plots until the supplemental sampling results are shown in Q2 2020.

The concentrations of the indicators of potential CCR seepage are generally stable or within the range of background variability. If impacts from CCR leachate were causing the increase in field pH at AP4-MW5, concentrations of the indicators would also be expected to increase, which they are not. This finding is consistent with an alternative source (such as instrument malfunction) impacting the field pH at AP4-MW5 and not leachate from the CCR Unit.

Figure 5 presents a Piper diagram with relative major ion chemistry for the monitoring well groundwater samples (Q2 2020 supplemental monitoring well samples) and coal ash impacted waters (Ash Landfill No. 4 Leachate Collection Sump and Evaporation Pond water). The groundwater at the upgradient monitoring well AP4-MW1 was dominated by calcium and bicarbonate. The groundwater at the upgradient monitoring well AP4-MW2 was dominated by calcium and sulfate. Samples from the downgradient monitoring wells AP4-MW3, AP4-MW4,

AP4-MW6, and AP4-MW7 were also majority calcium and bicarbonate ions. Groundwater from downgradient well AP4-MW5 appears to be a mixture of calcium bicarbonate waters from AP4-MW1 with calcium sulfate waters from AP4-MW2. Ash Landfill No. 4 leachate and evaporation pond waters are dominated by sodium and sulfate. The Piper diagram does not indicate water from the CCR Unit impacting the groundwater at AP4-MW5, which is consistent with the concentrations of Appendix III analytes and Appendix IV analytes observed in groundwater at AP4-MW5 (Appendix A).

Given the characteristics of the groundwater geochemistry at the Site, the increase in field pH that triggered the SSI at AP4-MW5 is not consistent with leachate from the CCR Unit impacting downgradient groundwater.

5.0 CONCLUSION

In accordance with §257.94(e)(2) and NAC Title 132 Chapter 7, this ASD has been prepared in response to the identification of an SSI for field pH at monitoring well AP4-MW5 following the Q1 2020 sampling event for Ash Landfill No.4 at Sheldon Station.

A review of historical analytical results and the recent field pH probe repair record indicates that the elevated field pH in groundwater at AP4-MW5 was not the result of seepage from the ash landfill but can be attributed to a malfunctioning field pH probe. Therefore, no further action (i.e., transition to Assessment Monitoring) is warranted, and the Sheldon Station ash landfill will remain in detection monitoring.

6.0 REFERENCES

Golder Associates Inc. 2017A. Coal Combustion Residuals Landfill Groundwater Monitoring System Certification, Nebraska Public Power District Sheldon Station, Hallam, Nebraska.

Golder Associates Inc. 2017B. Sampling and Analysis Plan; Permit No. NE0204285, Sheldon Station Ash Landfill No. 4. Nebraska Public Power District Sheldon Station, Hallam, Nebraska.

Signature Page

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Staff Geochemist

Jacob Sauer
Senior Engineer

GL/ES/JS/cc

Figures

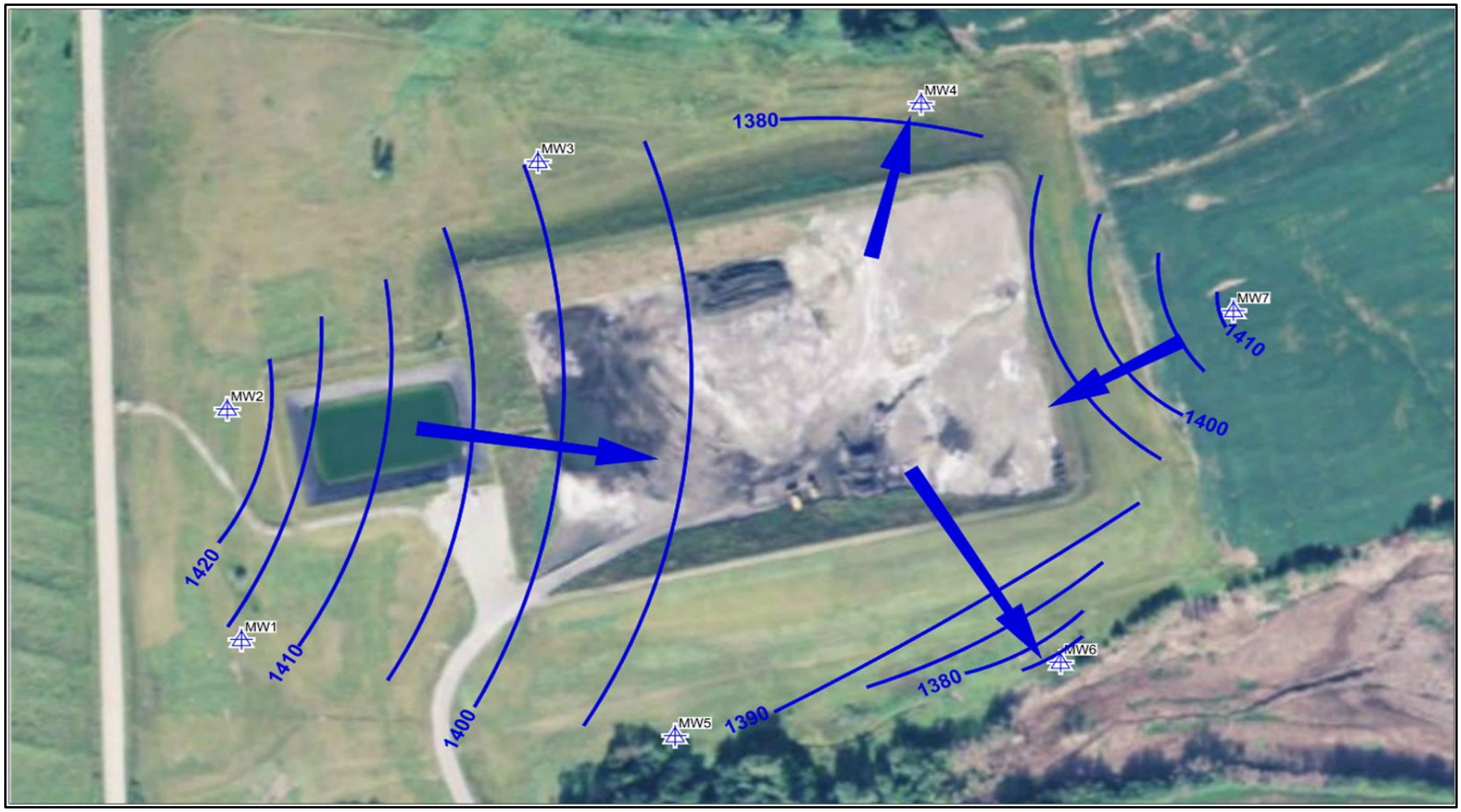


Figure 1

Site Map with Groundwater Contours- March 2020

Alternate Source Demonstration

Nebraska Public Power District - Sheldon Station

7/22/2020 20145111

Golder Associates

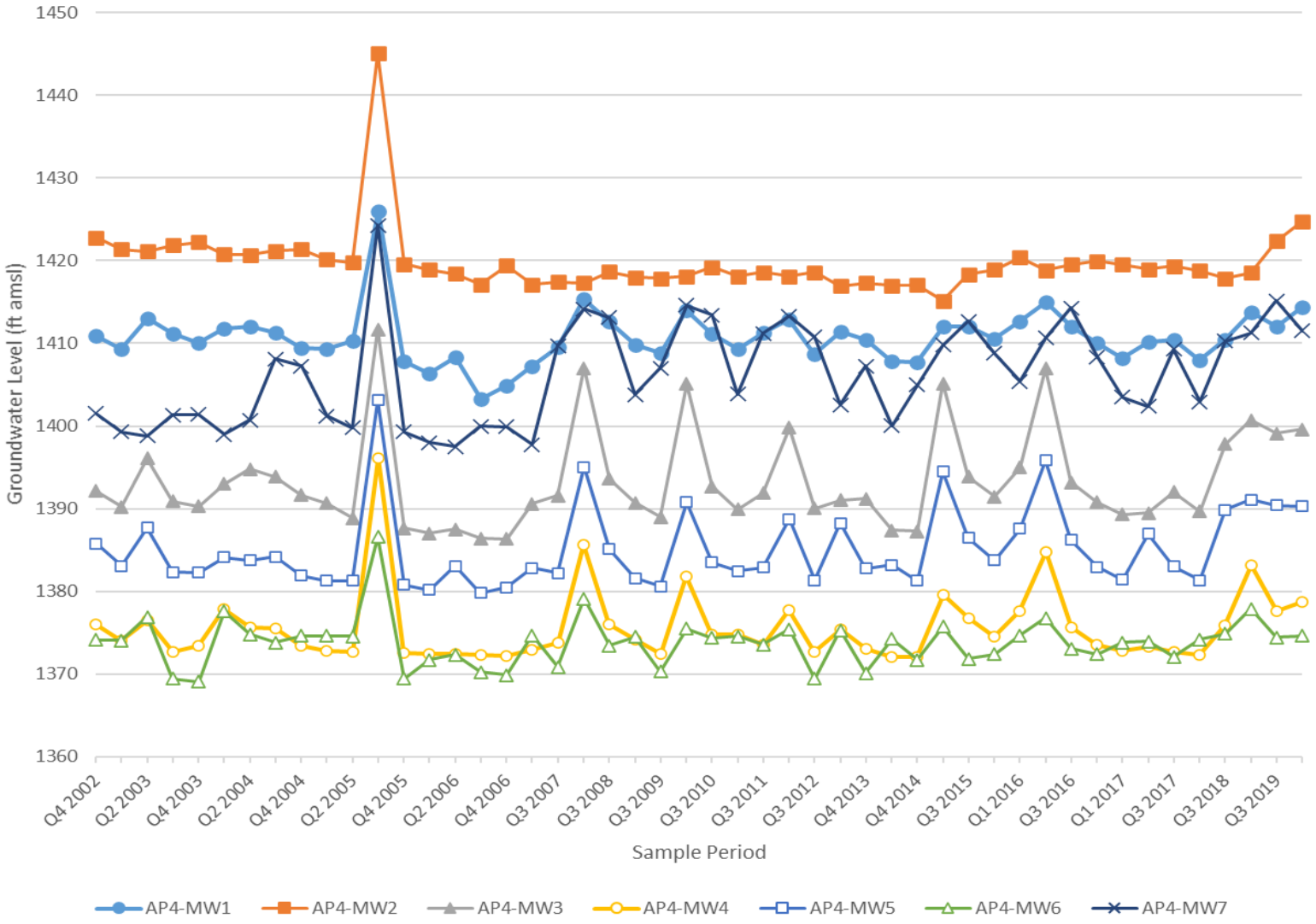


Figure 2

Groundwater Monitoring Well Water Levels

Alternate Source Demonstration

Nebraska Public Power District - Sheldon Station

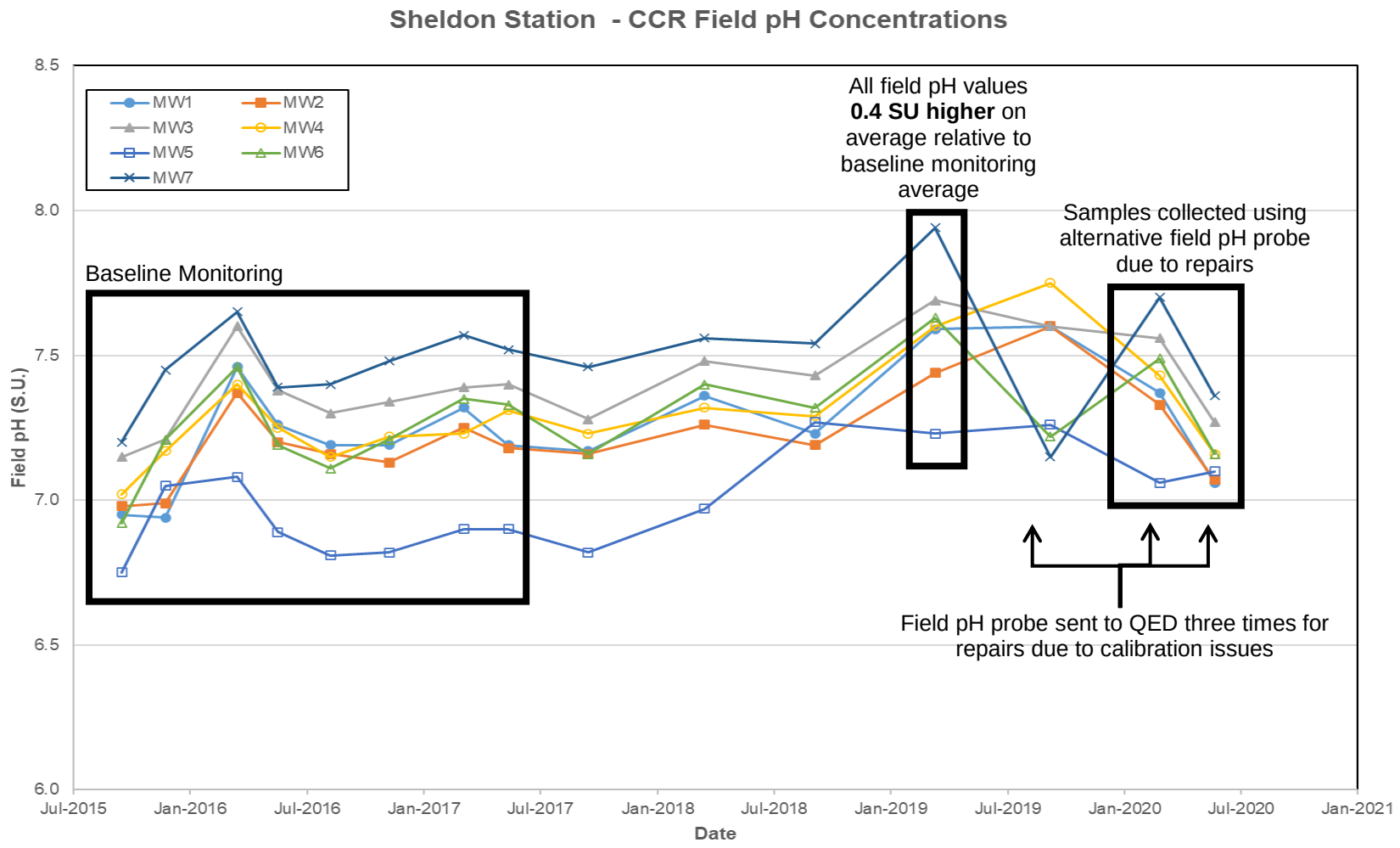


Figure 3

Annotated Time Series of Field pH Measurements

Alternate Source Demonstration

Nebraska Public Power District - Sheldon Station

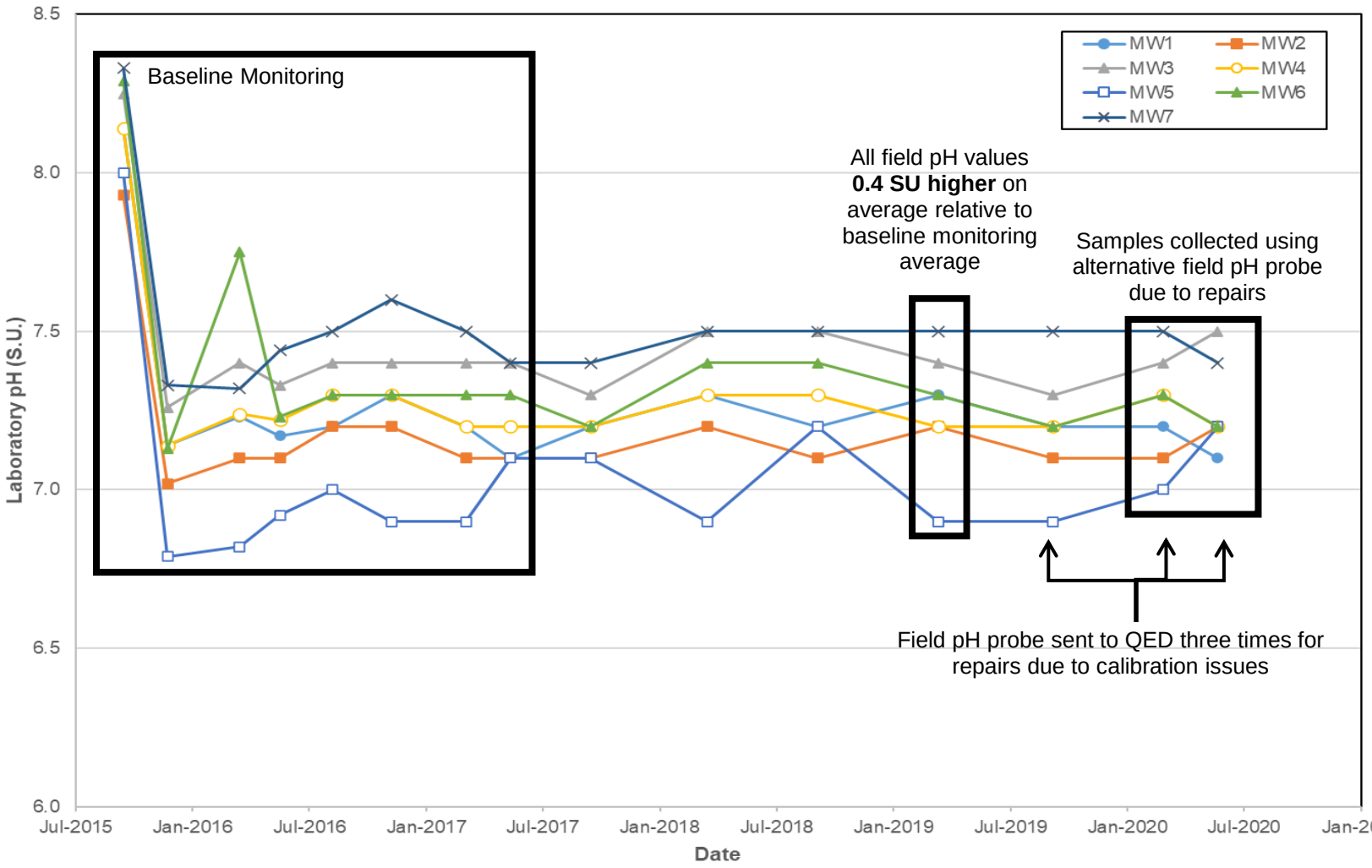


Figure 4

Annotated Time Series of Laboratory pH Measurements

Alternate Source Demonstration

Nebraska Public Power District - Sheldon Station

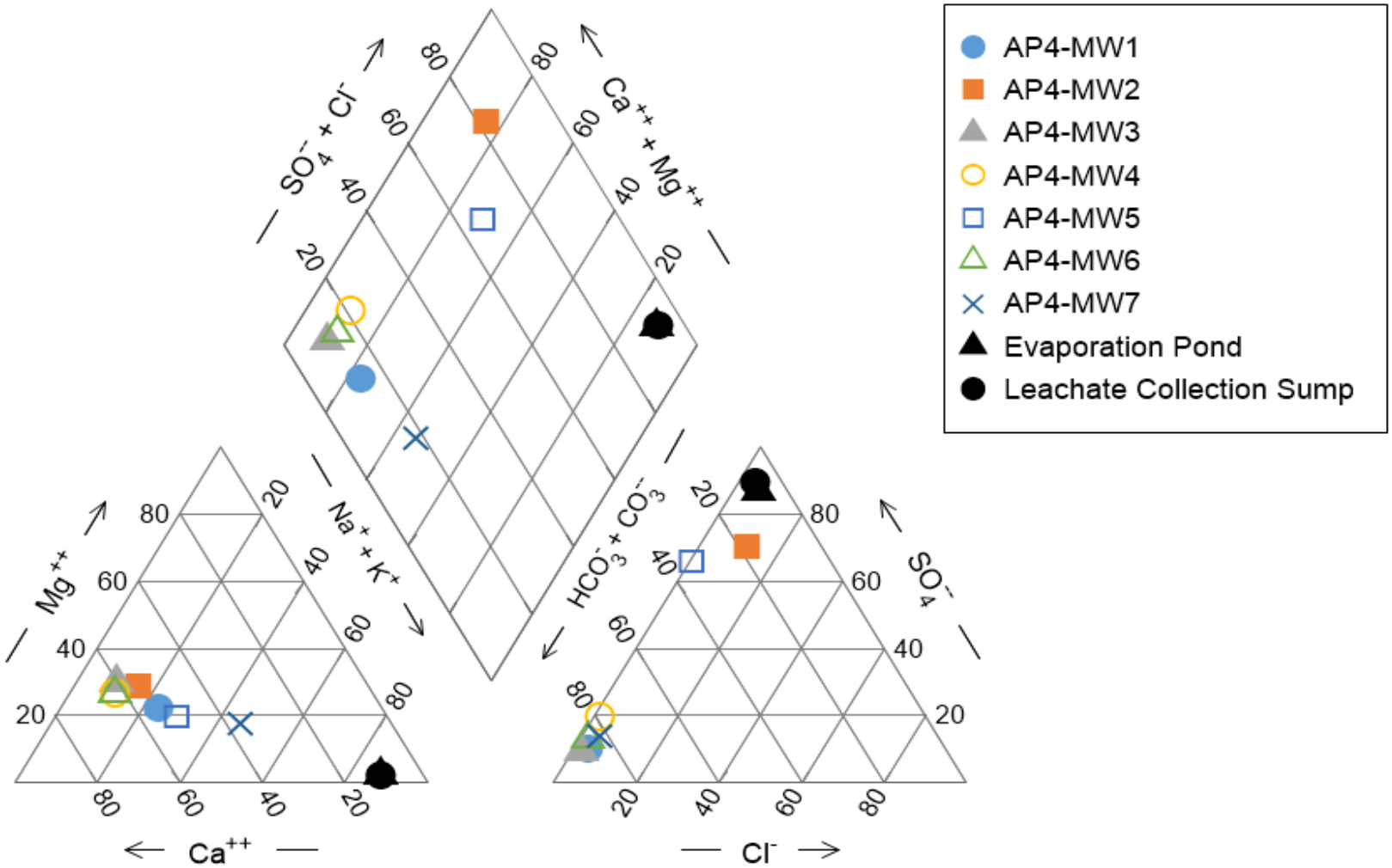


Figure 5

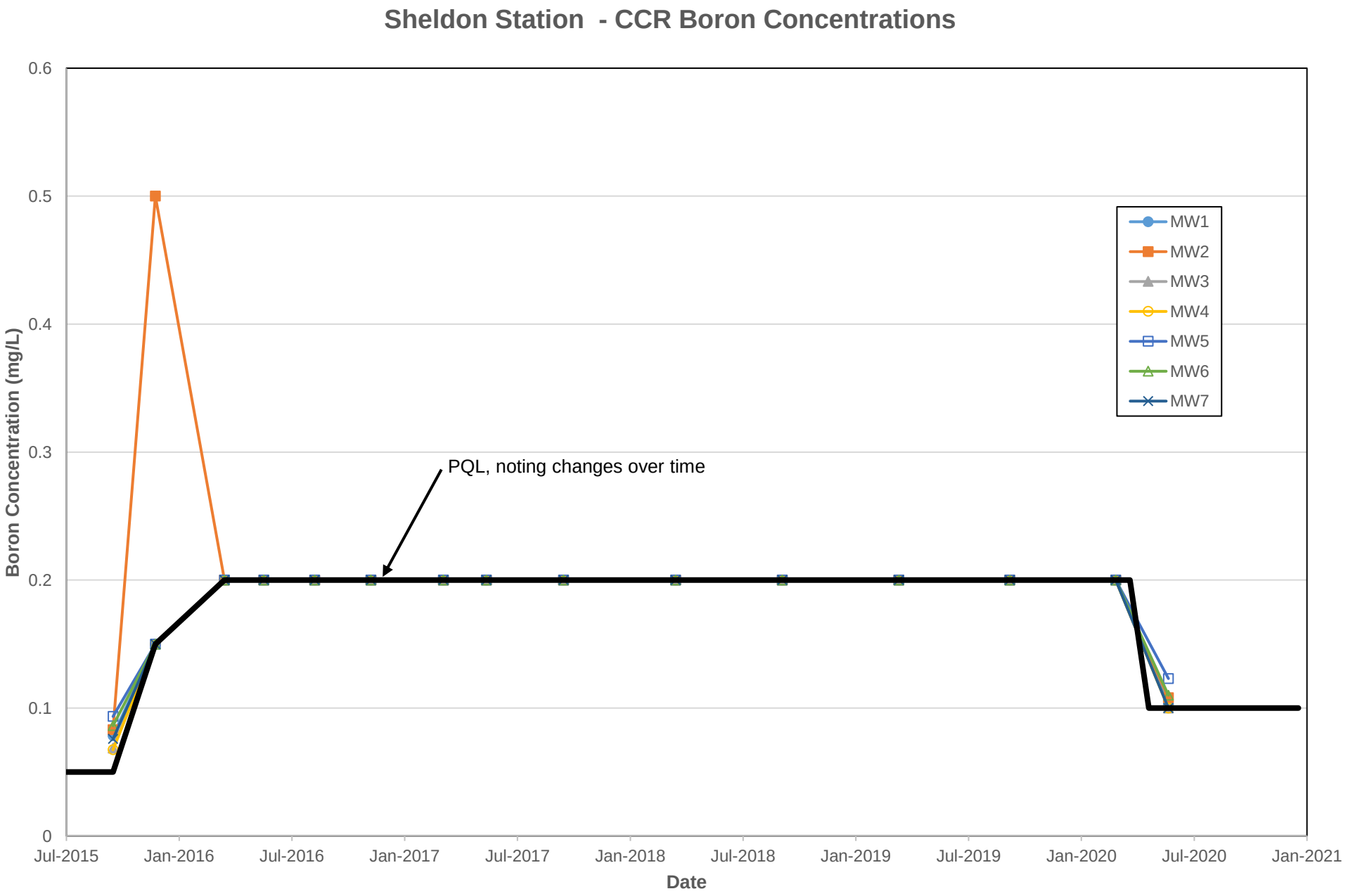
Piper Diagram of Groundwater and CCR Impacted Waters

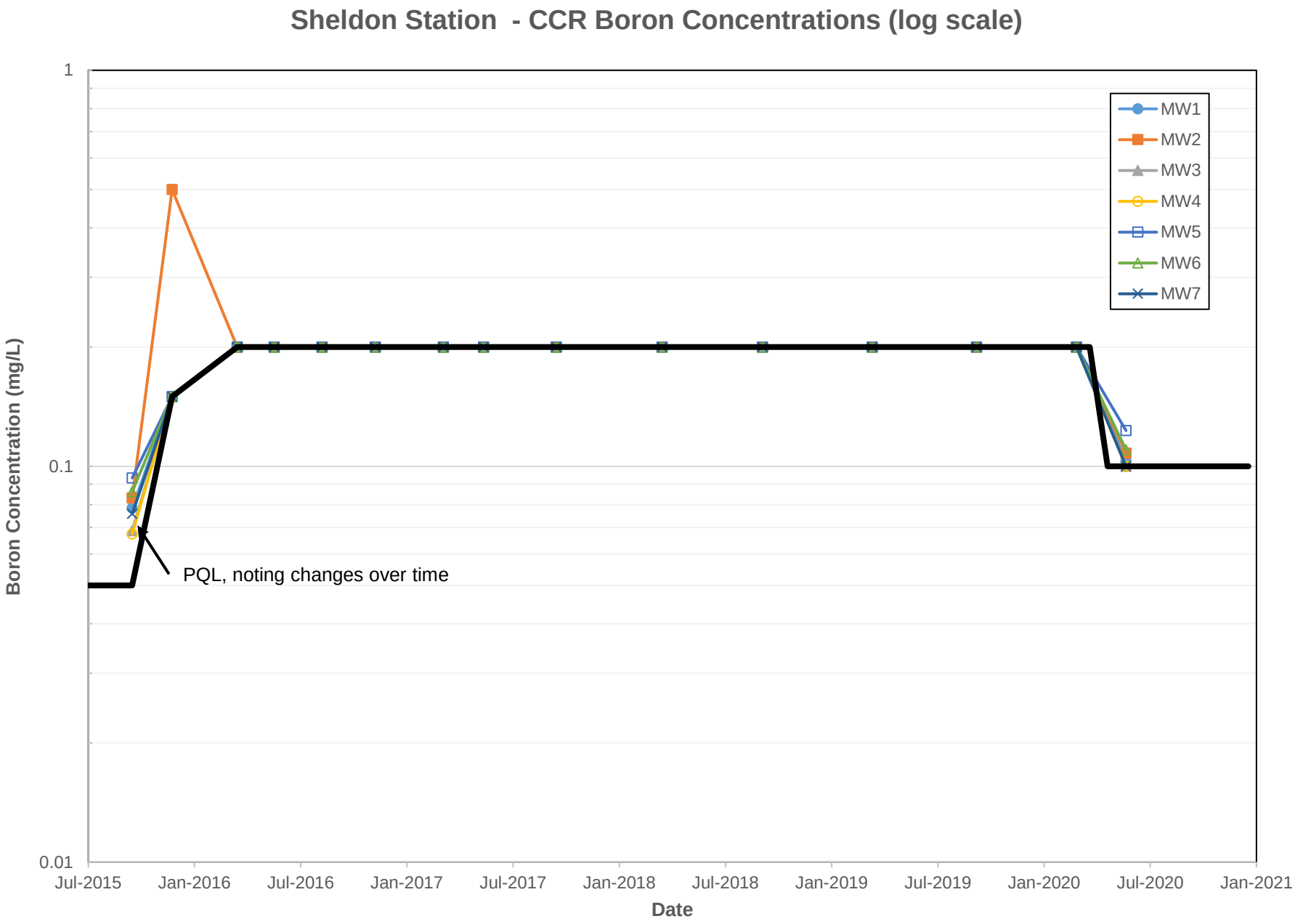
Alternate Source Demonstration

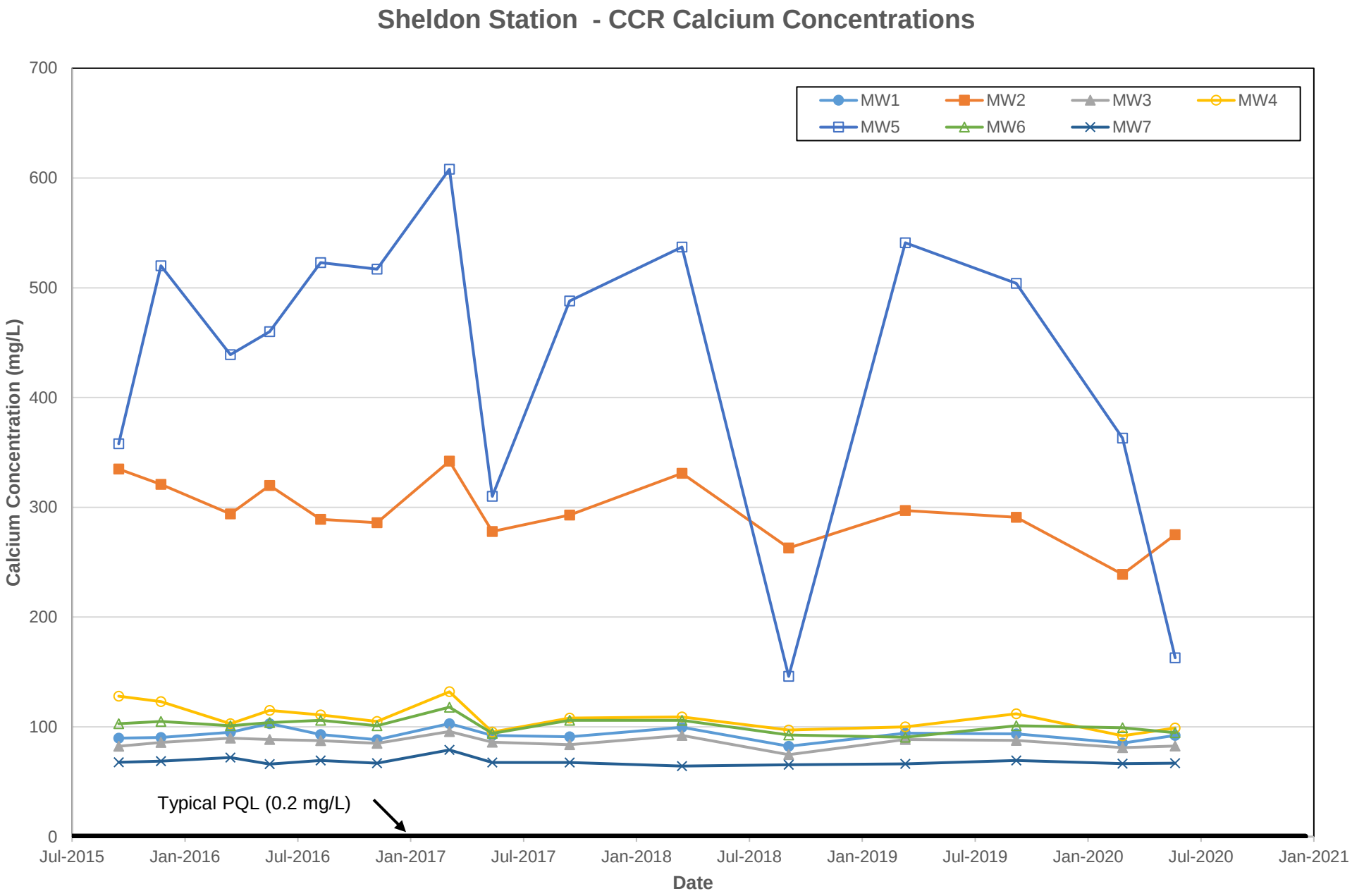
Nebraska Public Power District - Sheldon Station

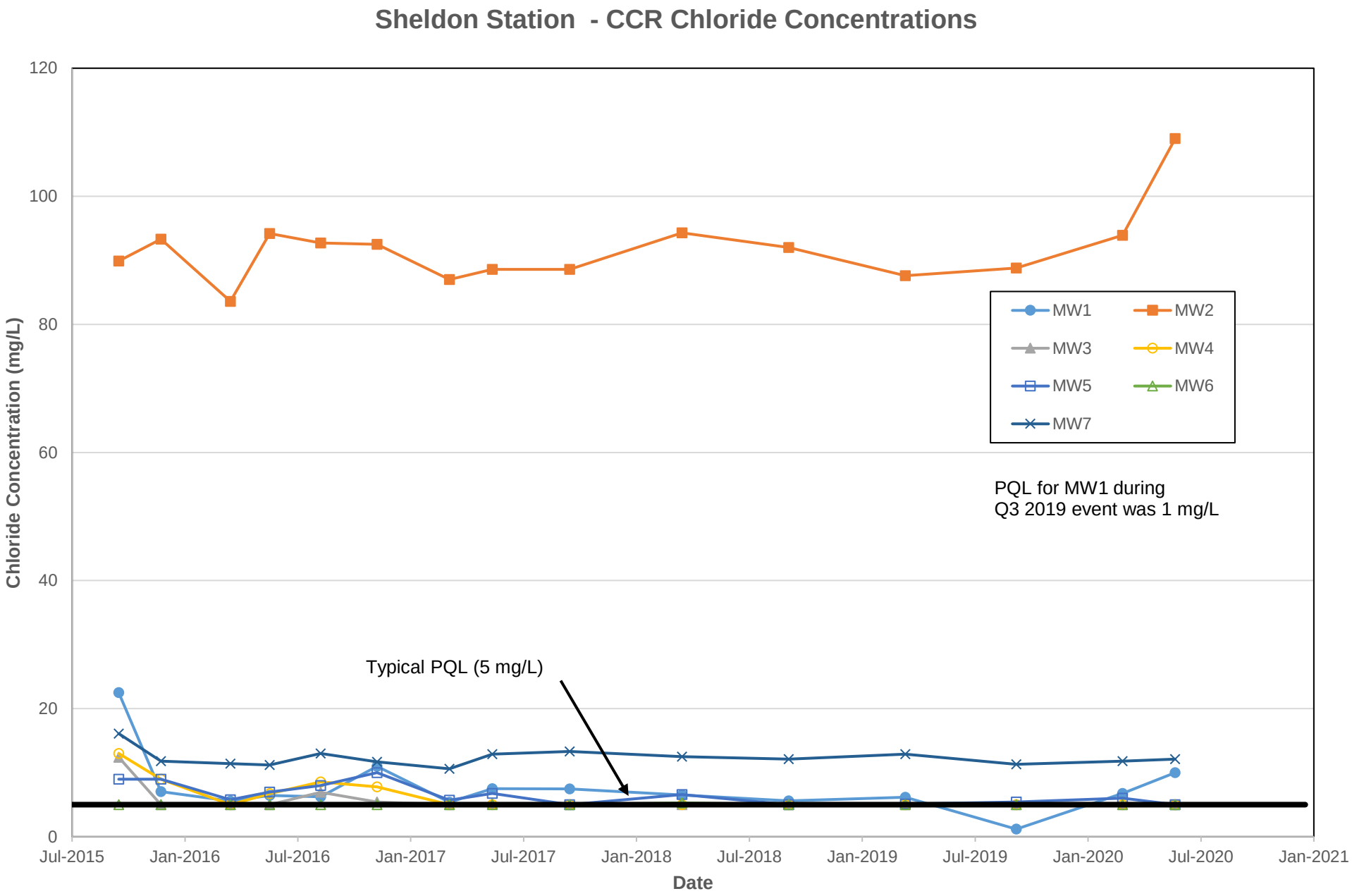
APPENDIX A

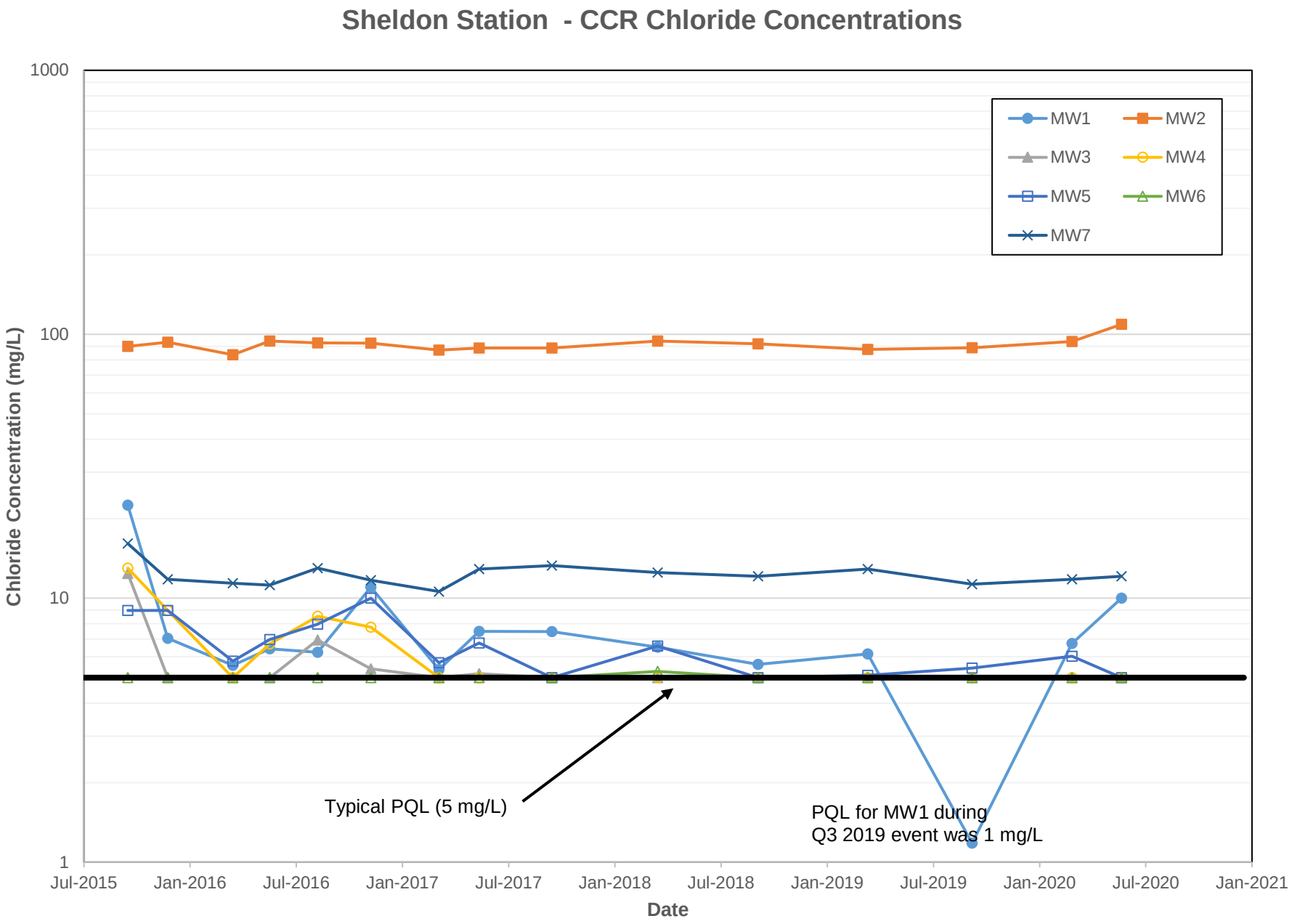
Historical Concentrations of Appendix III and Selected Appendix IV Analytes

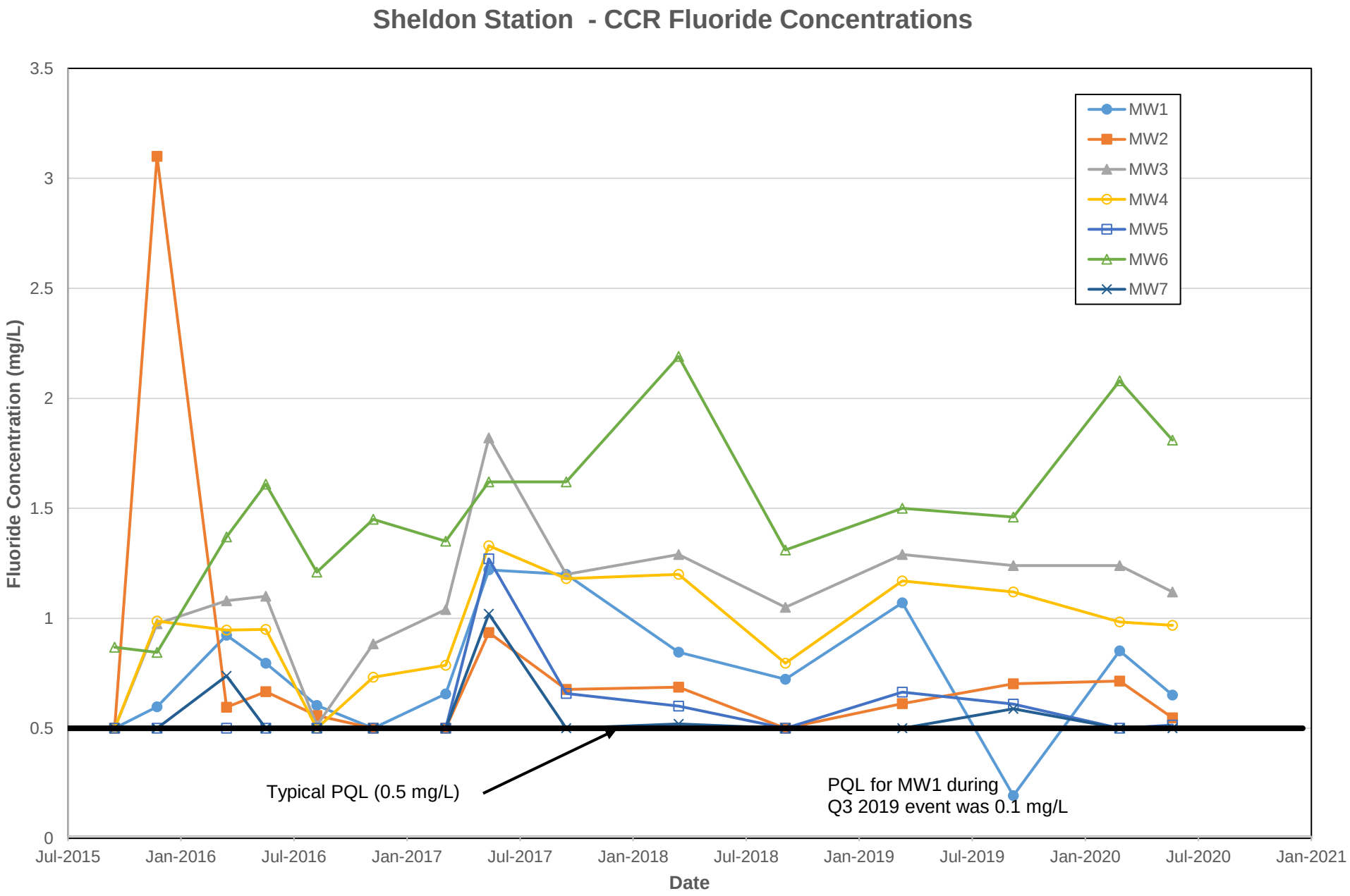

Sheldon Station - CCR Boron Concentrations
Boron Concentration (mg/L)
0.6
0.5
0.4
0.3
0.2
0.1
0
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date
MW1
MW2
MW3
MW4
MW5
MW6
MW7
PQL, noting changes over time

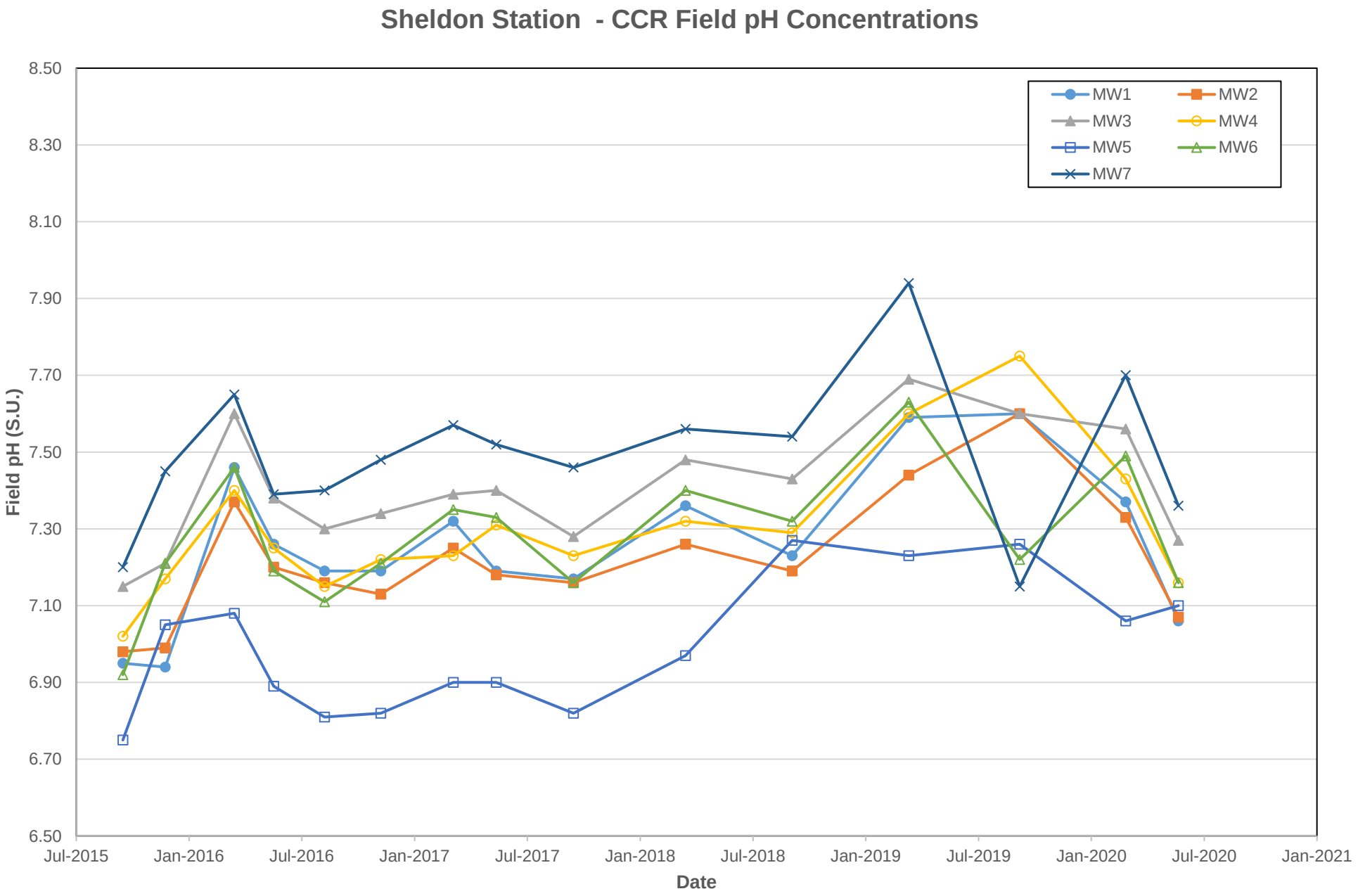

Sheldon Station - CCR Boron Concentrations (log scale)
Boron Concentration (mg/L)
1
0.1
0.01
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date
MW1
MW2
MW3
MW4
MW5
MW6
MW7
PQL, noting changes over time

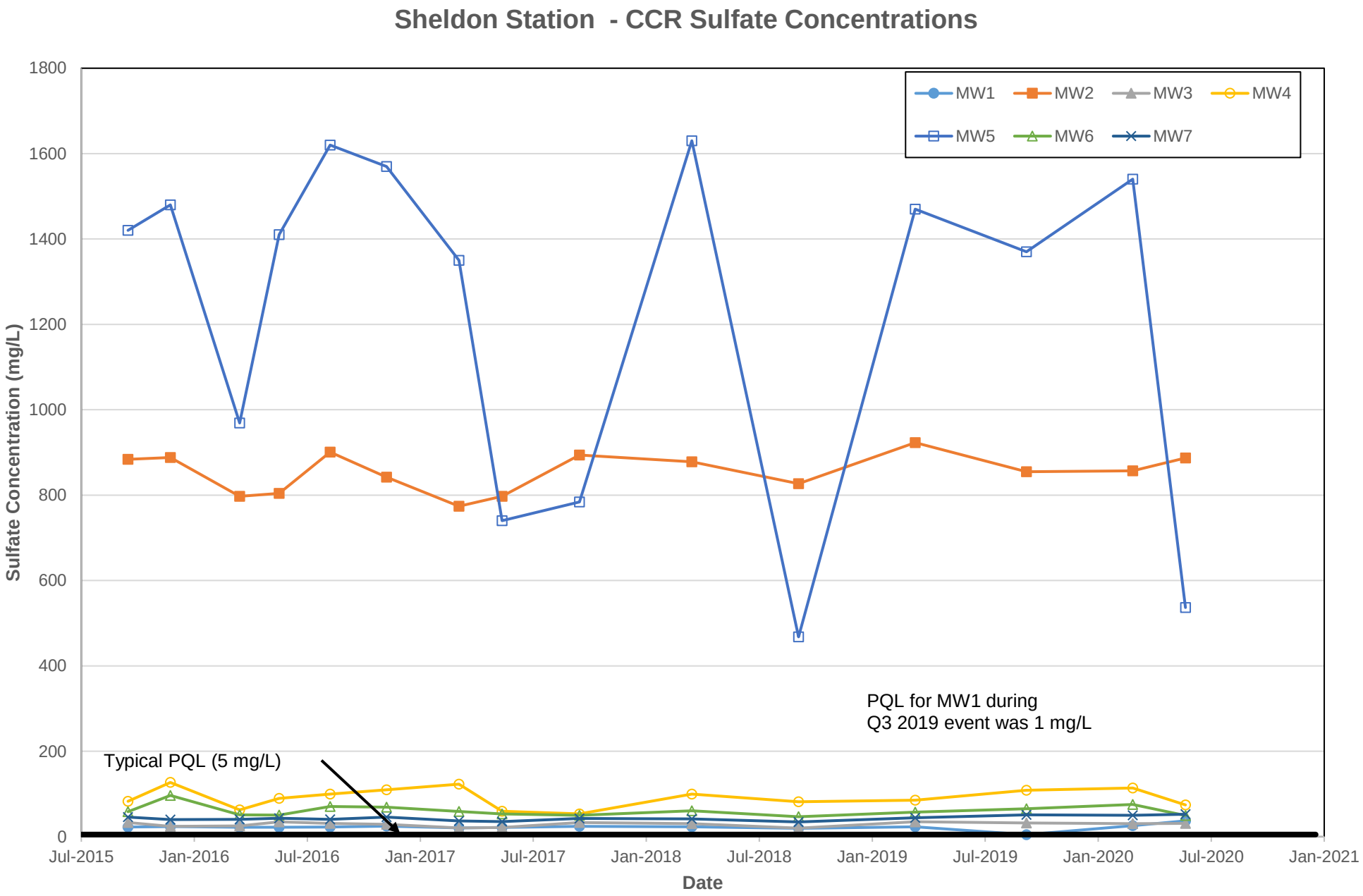

Sheldon Station - CCR Calcium Concentrations
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Calcium Concentration (mg/L)
700
600
500
400
300
200
100
0
Typical PQL (0.2 mg/L)
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date

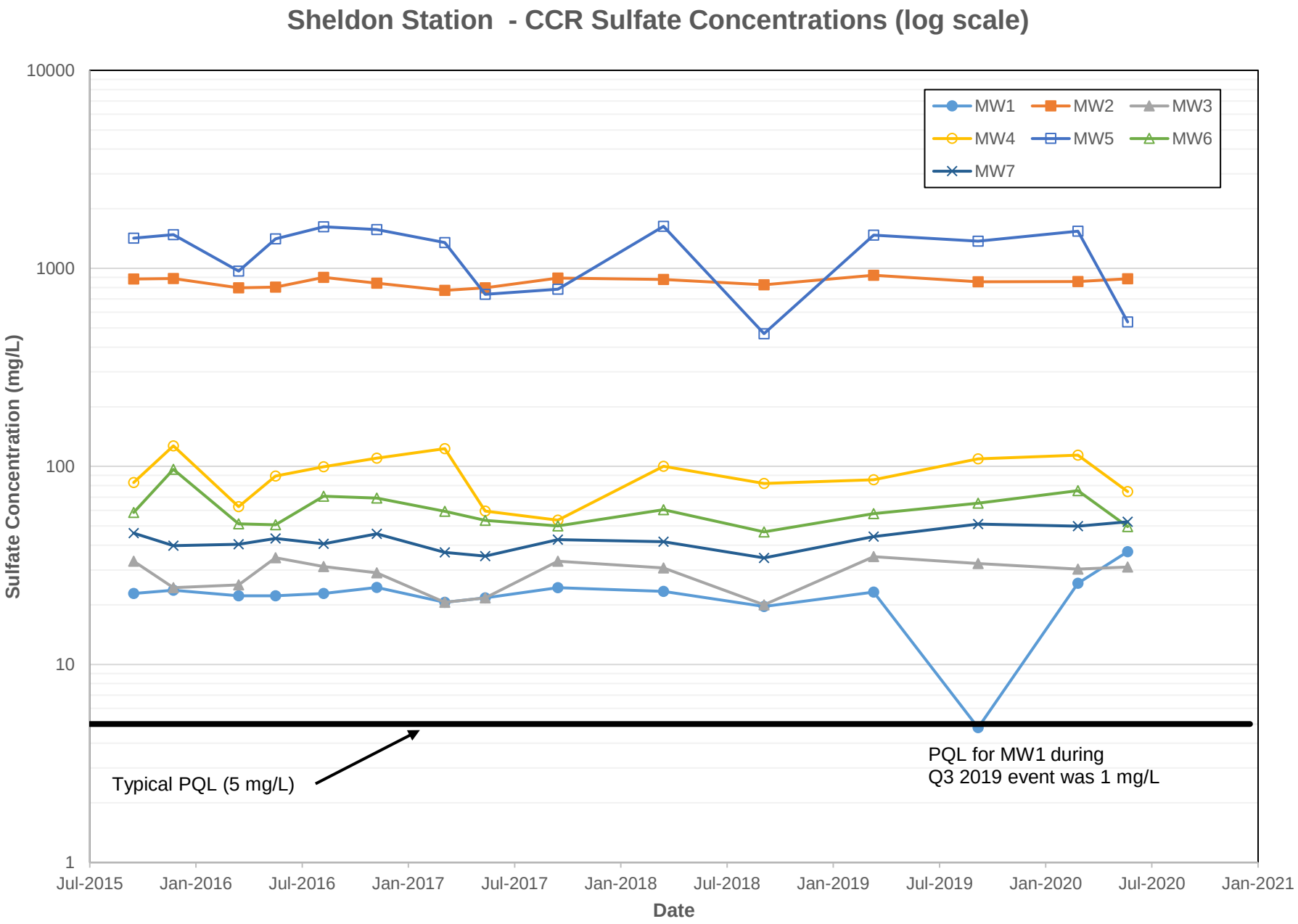

Sheldon Station - CCR Chloride Concentrations
Chloride Concentration (mg/L)
120
100
80
60
40
20
0
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date
MW1
MW2
MW3
MW4
MW5
MW6
MW7
PQL for MW1 during
Q3 2019 event was 1 mg/L
Typical PQL (5 mg/L)

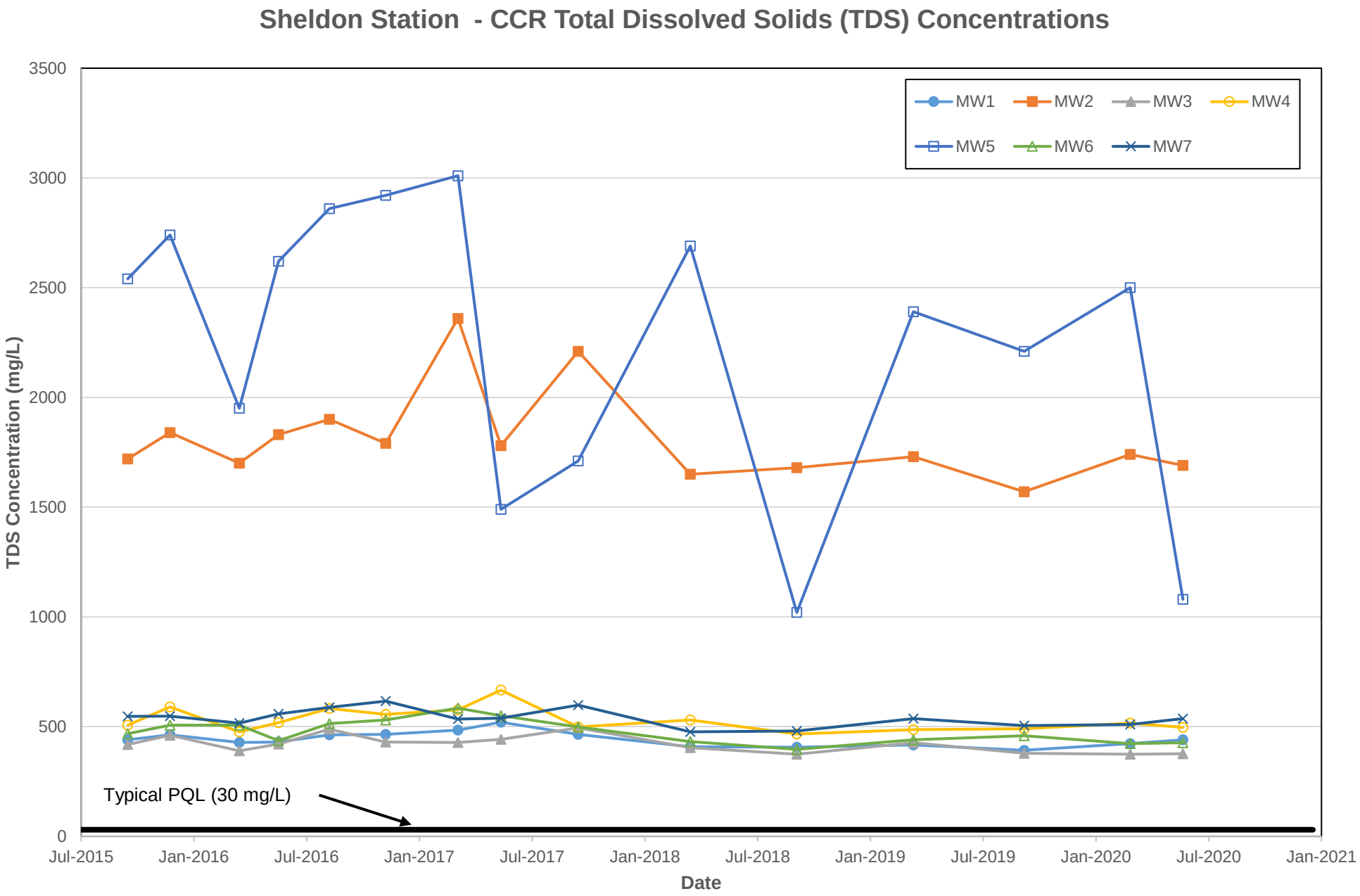

Sheldon Station - CCR Chloride Concentrations
1000
100
10
1
Chloride Concentration (mg/L)
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Typical PQL (5 mg/L)
PQL for MW1 during
Q3 2019 event was 1 mg/L
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date

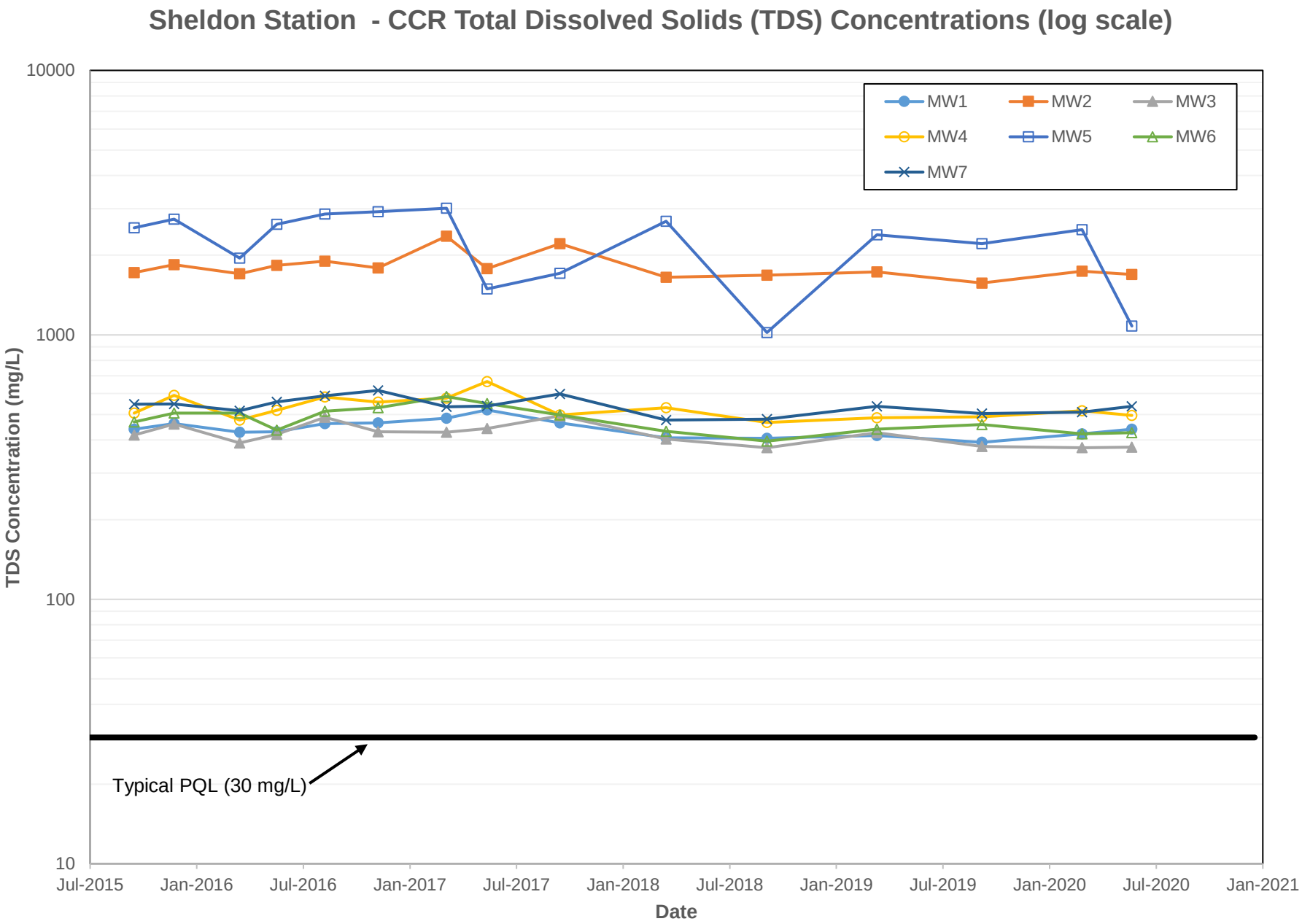

Sheldon Station - CCR Fluoride Concentrations
Fluoride Concentration (mg/L)
3.5
3
2.5
2
1.5
1
0.5
0
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Typical PQL (0.5 mg/L)
PQL for MW1 during
Q3 2019 event was 0.1 mg/L

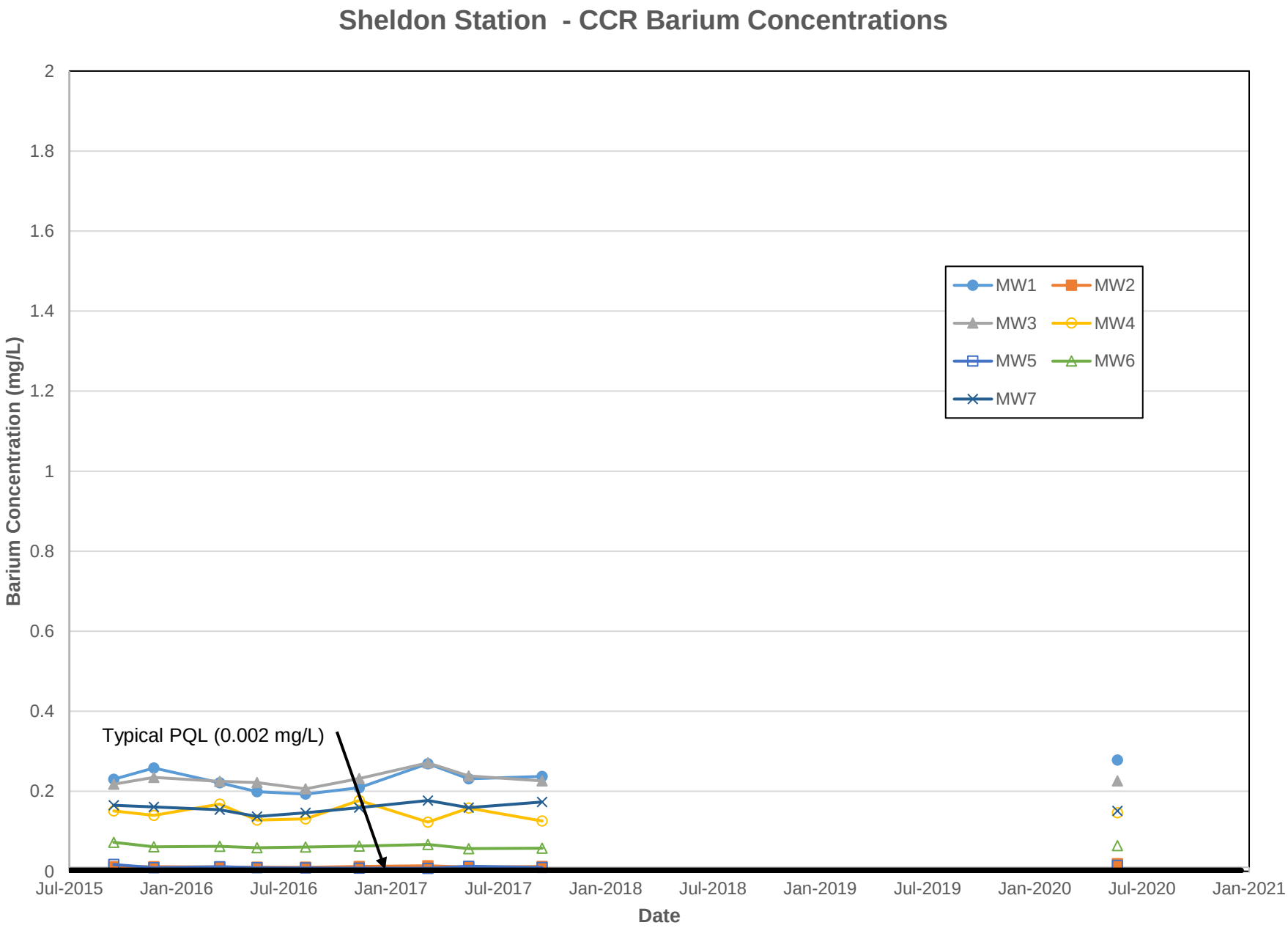

Sheldon Station - CCR Field pH Concentrations
8.50
8.30
8.10
7.90
7.70
7.50
7.30
7.10
6.90
6.70
6.50
Field pH (S.U.)
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date
MW1
MW2
MW3
MW4
MW5
MW6
MW7

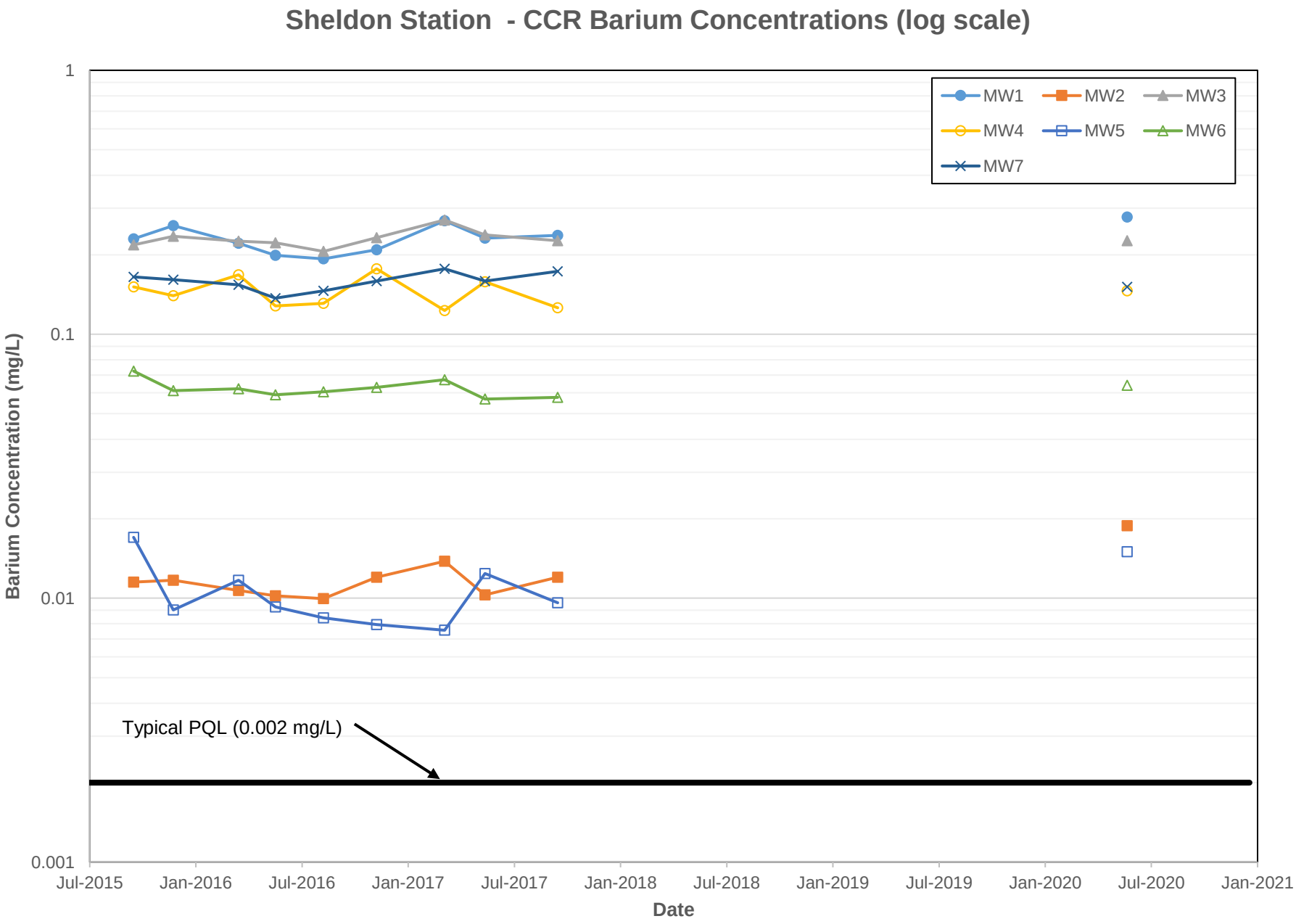

Sheldon Station - CCR Sulfate Concentrations
Sulfate Concentration (mg/L)
1800
1600
1400
1200
1000
800
600
400
200
0
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date
MW1
MW2
MW3
MW4
MW5
MW6
MW7
PQL for MW1 during
Q3 2019 event was 1 mg/L
Typical PQL (5 mg/L)

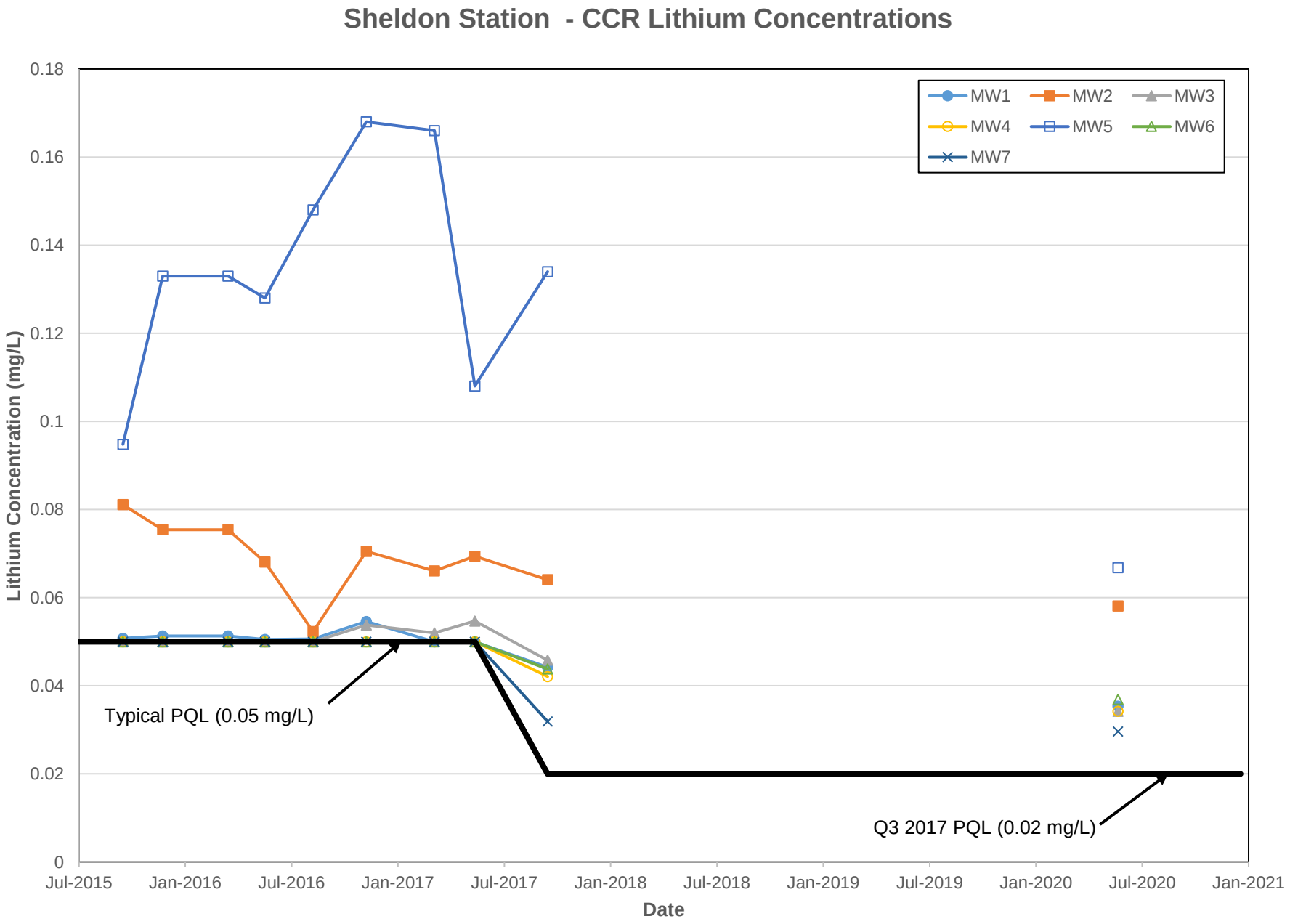

Sheldon Station - CCR Sulfate Concentrations (log scale)
Sulfate Concentration (mg/L)
10000
1000
100
10
1
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Typical PQL (5 mg/L)
PQL for MW1 during
Q3 2019 event was 1 mg/L

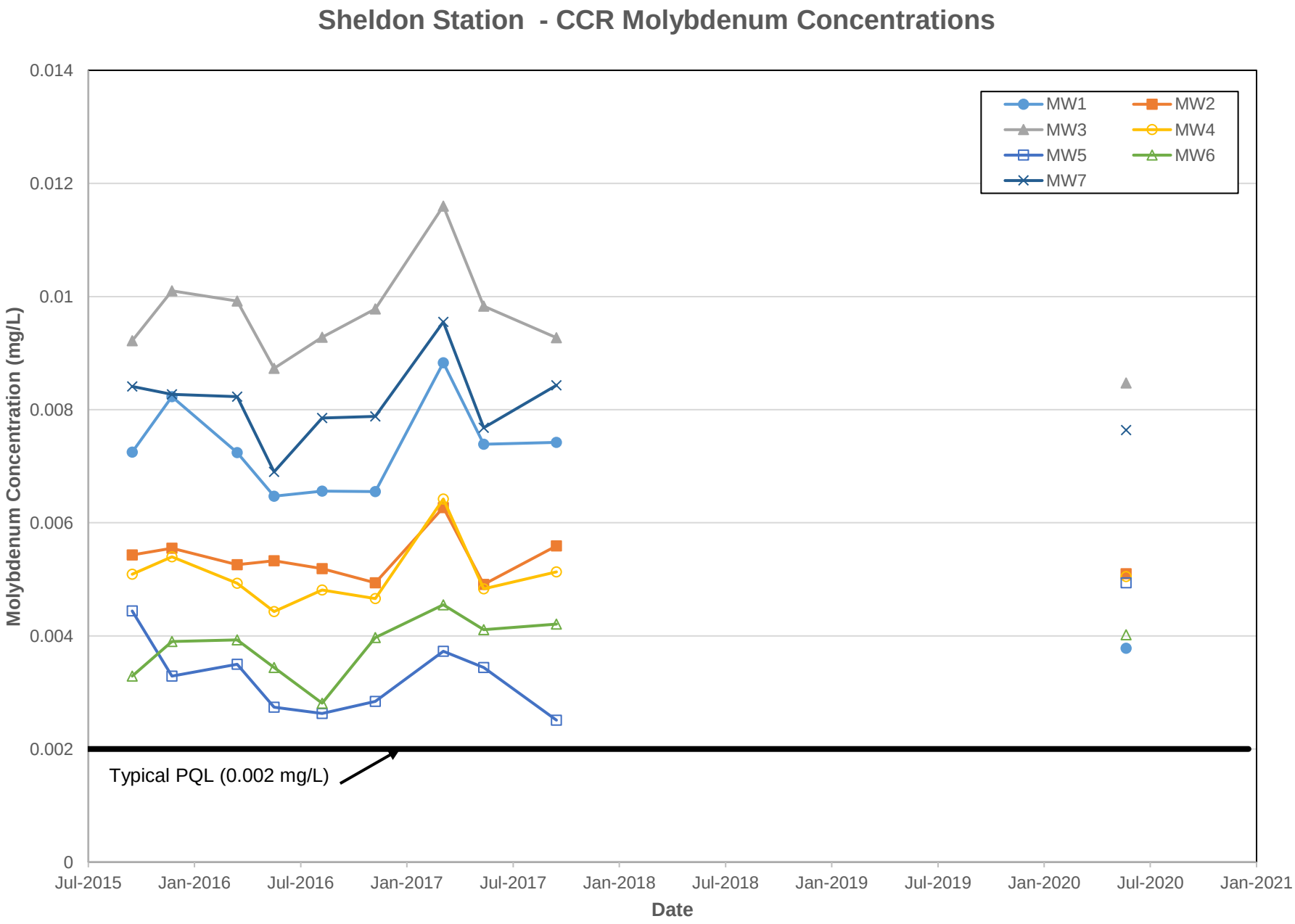

Sheldon Station - CCR Total Dissolved Solids (TDS) Concentrations
TDS Concentration (mg/L)
3500
3000
2500
2000
1500
1000
500
0
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Typical PQL (30 mg/L)


Sheldon Station - CCR Total Dissolved Solids (TDS) Concentrations (log scale)
10000
1000
100
10
TDS Concentration (mg/L)
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Typical PQL (30 mg/L)
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date

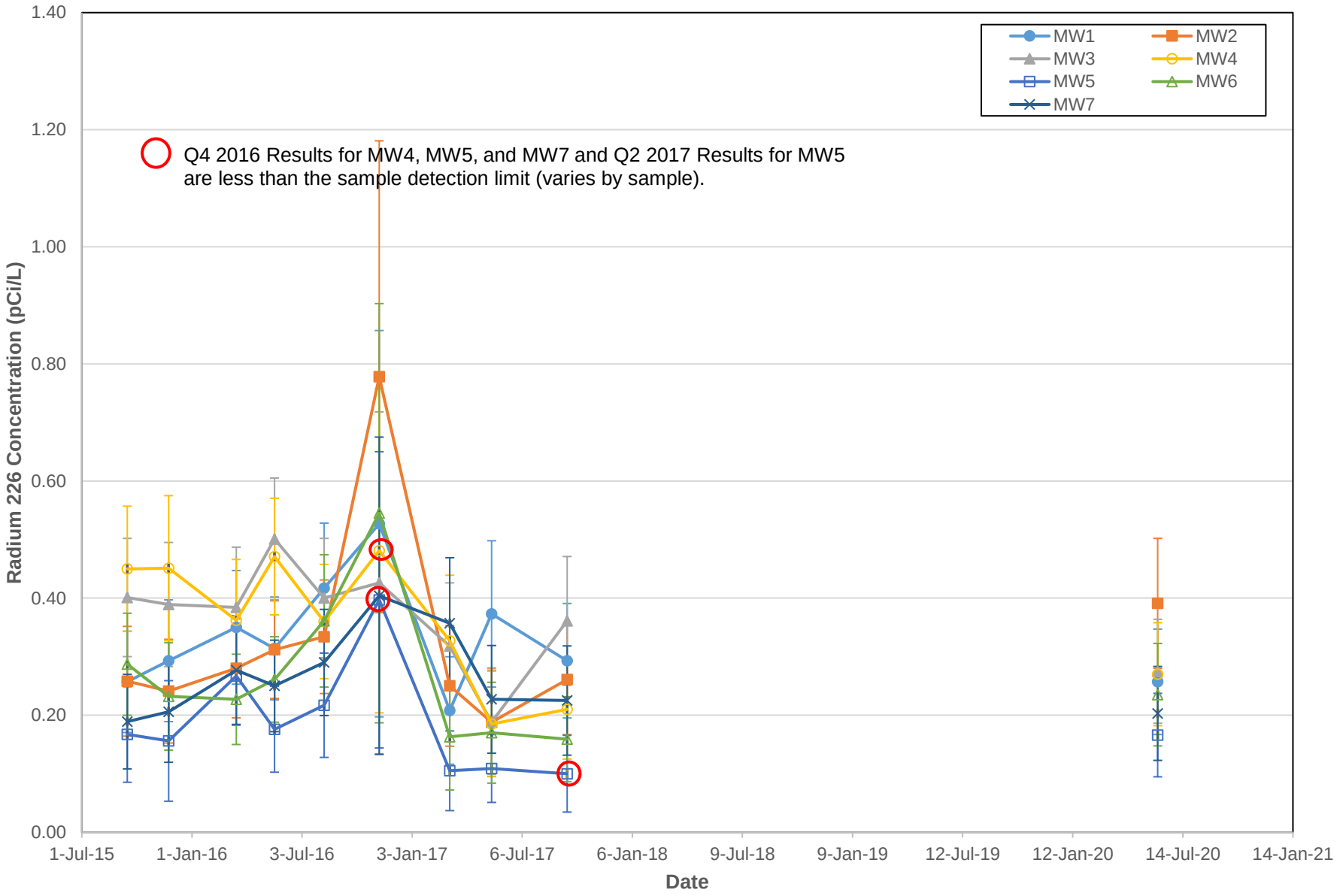

Sheldon Station - CCR Barium Concentrations
Barium Concentration (mg/L)
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Typical PQL (0.002 mg/L)
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date


Sheldon Station - CCR Barium Concentrations (log scale)
Barium Concentration (mg/L)
1
0.1
0.01
0.001
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Typical PQL (0.002 mg/L)
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date

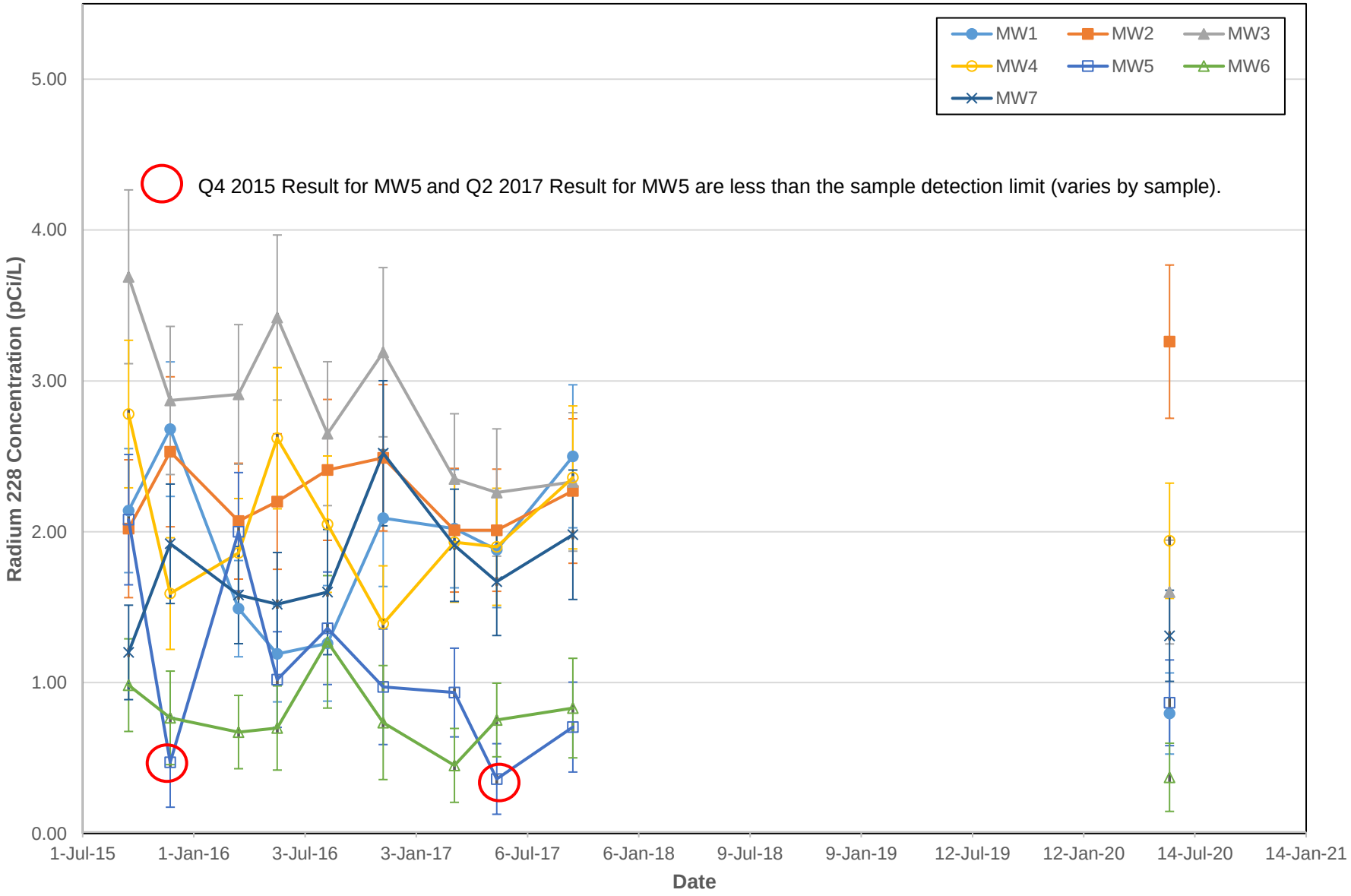

Sheldon Station - CCR Lithium Concentrations
Lithium Concentration (mg/L)
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Typical PQL (0.05 mg/L)
Q3 2017 PQL (0.02 mg/L)


Sheldon Station - CCR Molybdenum Concentrations
Molybdenum Concentration (mg/L)
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Typical PQL (0.002 mg/L)
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date

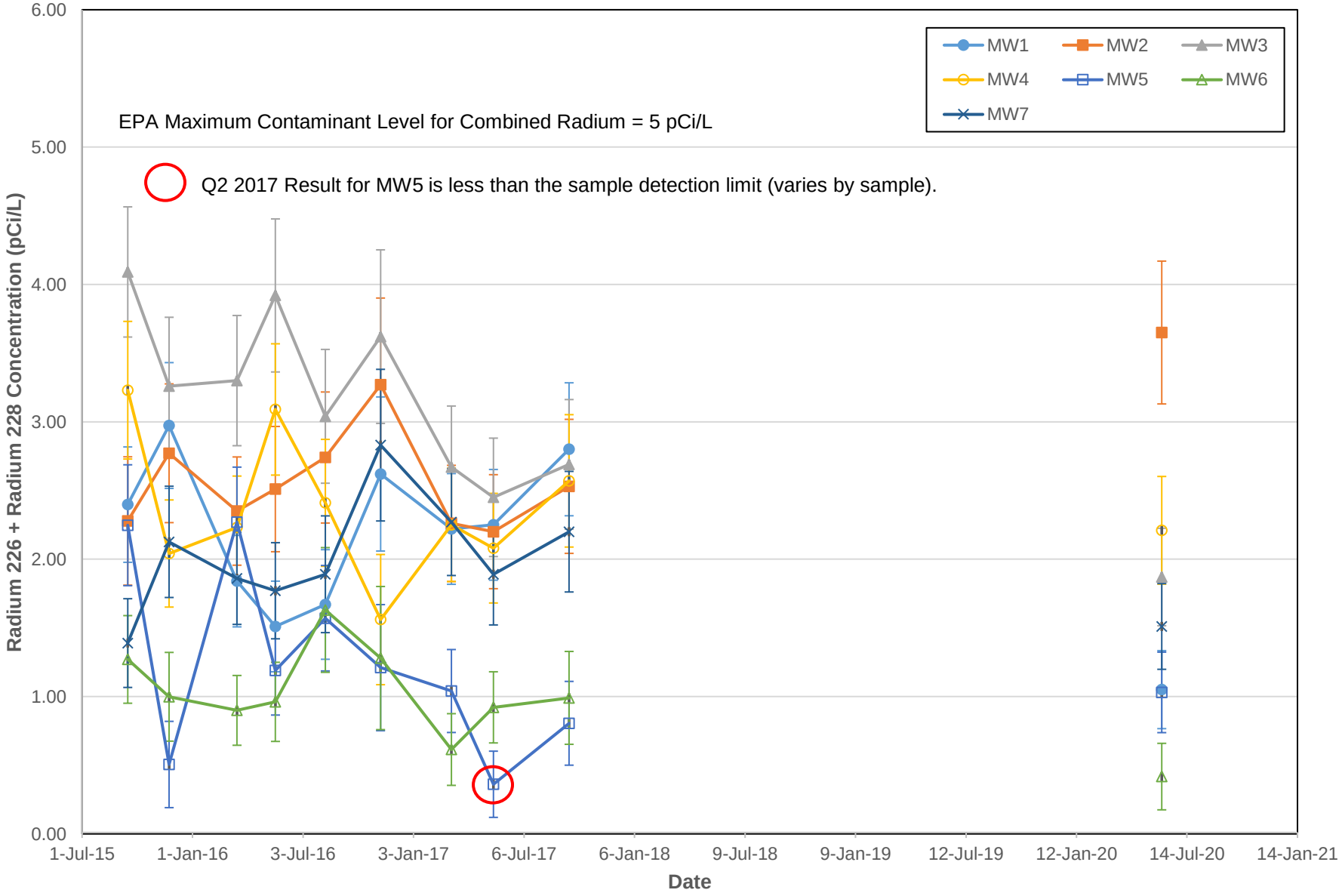
Sheldon Station - CCR Radium 226 Concentrations

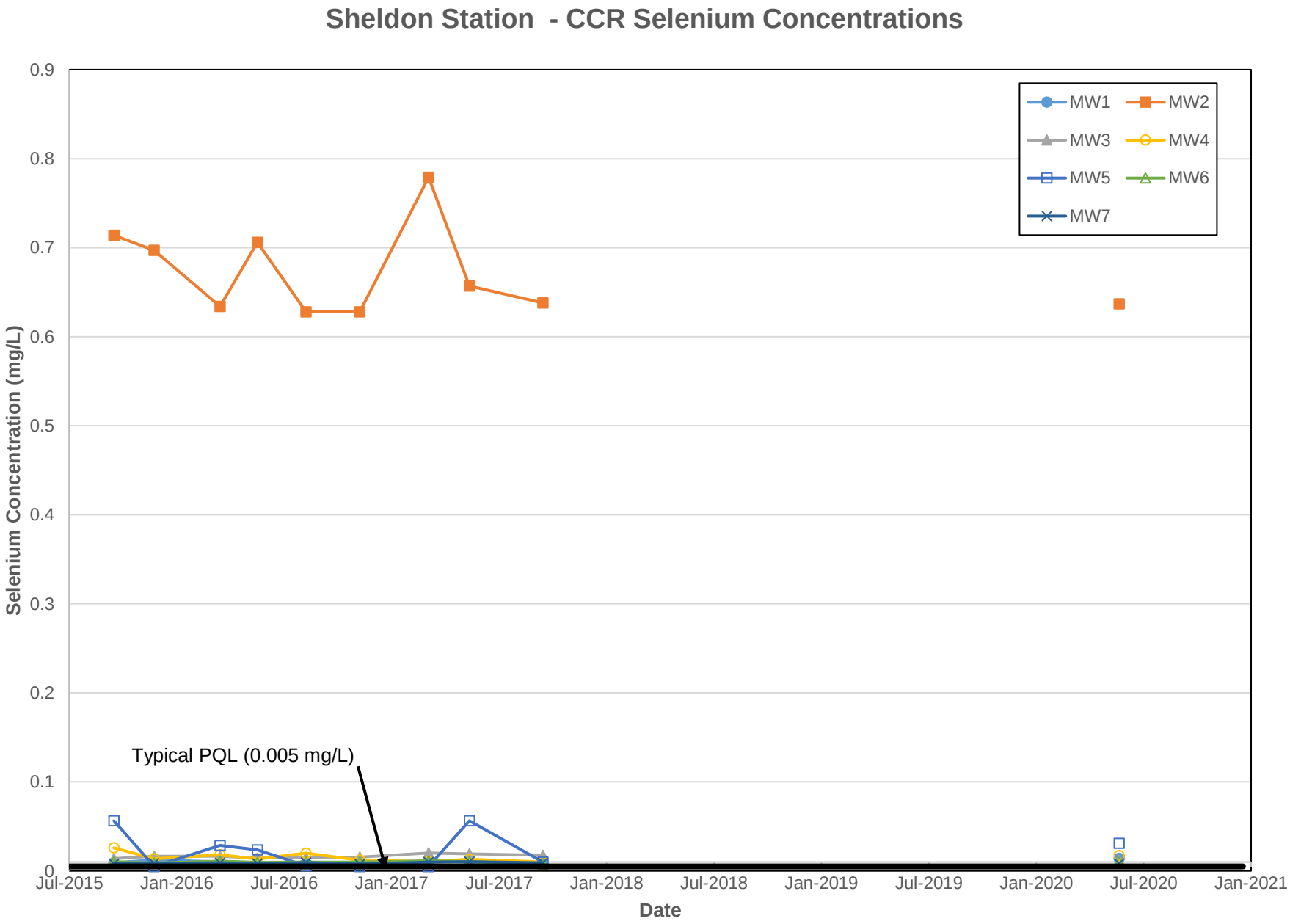


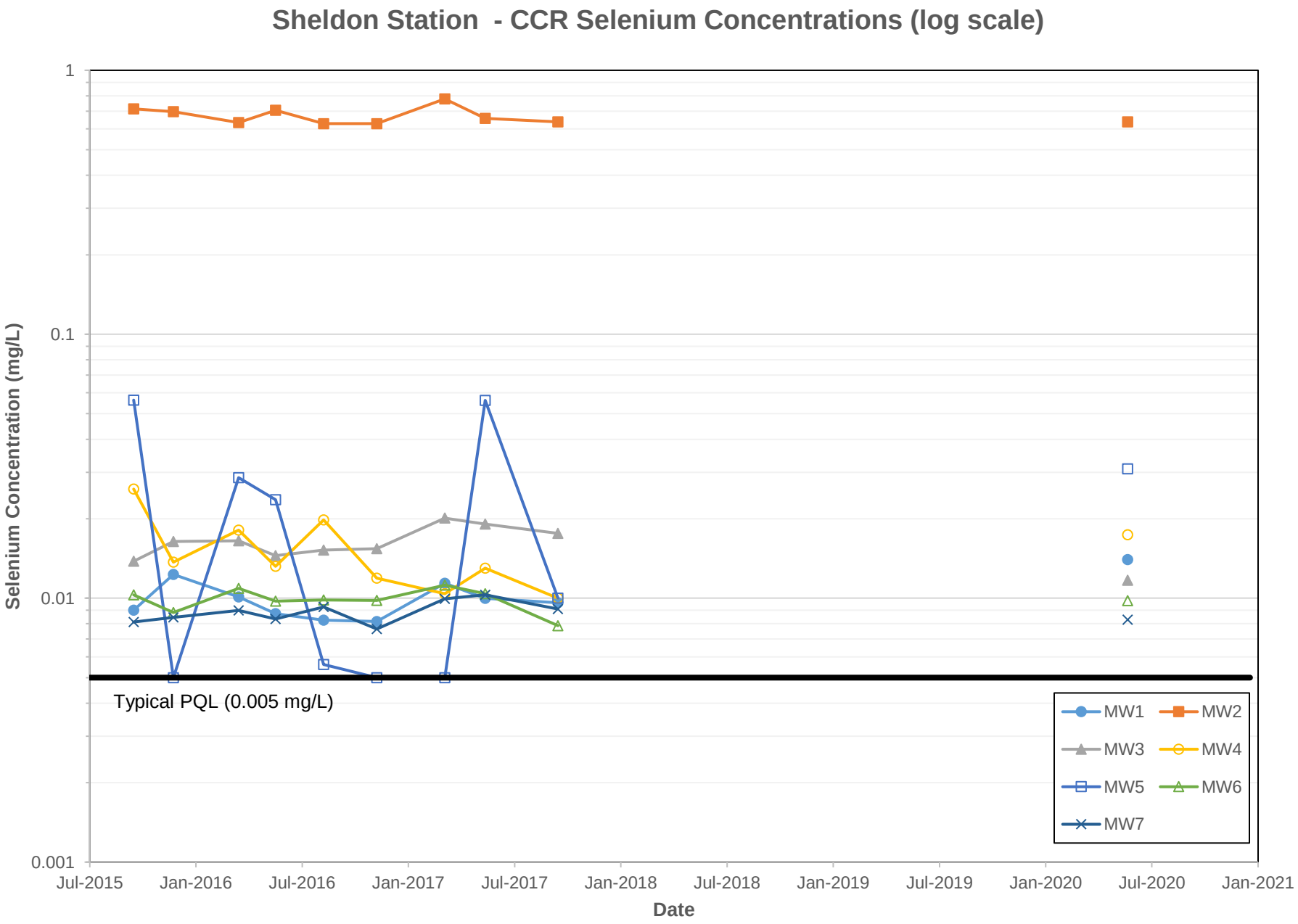
Sheldon Station - CCR Radium 228 Concentrations

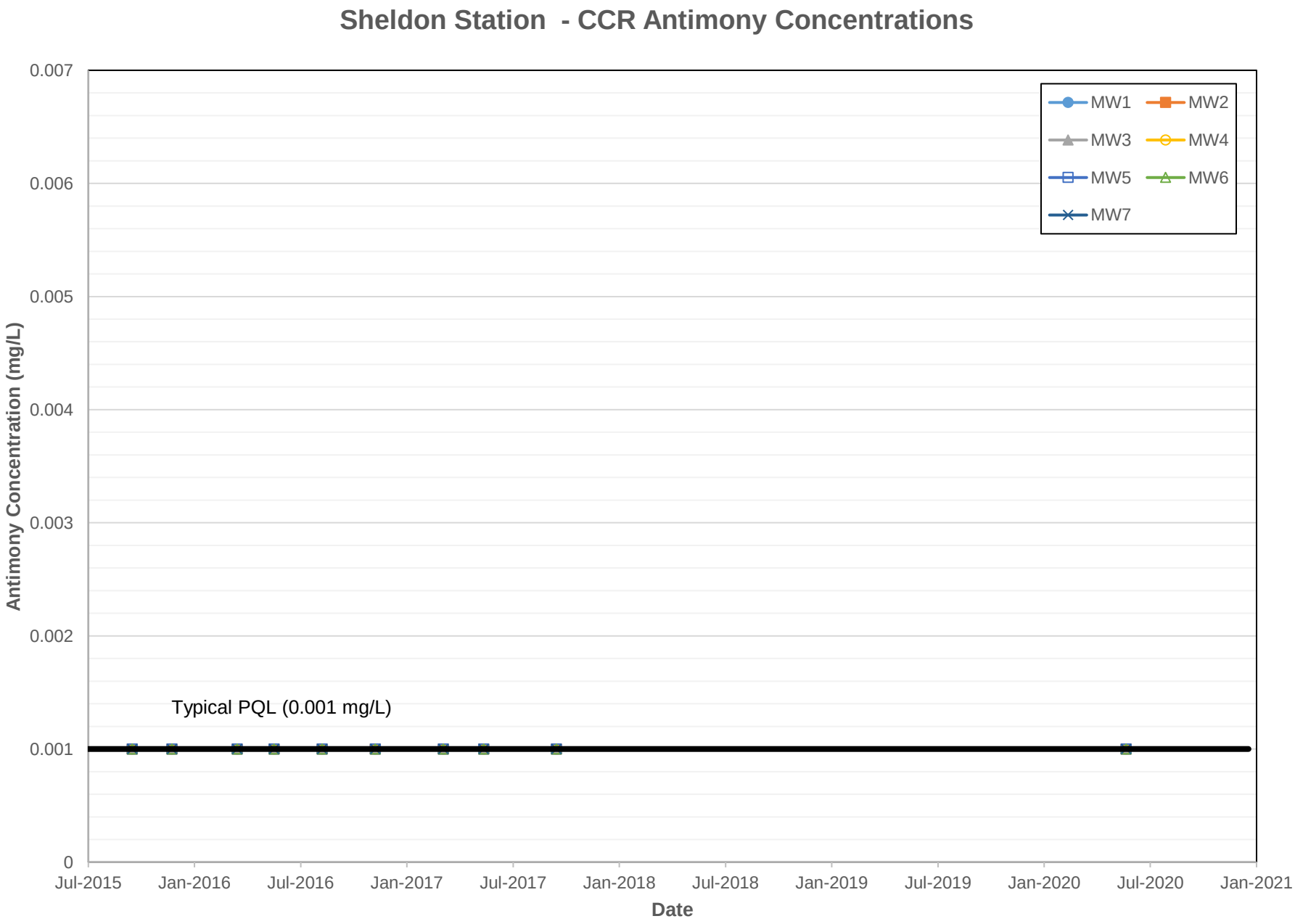


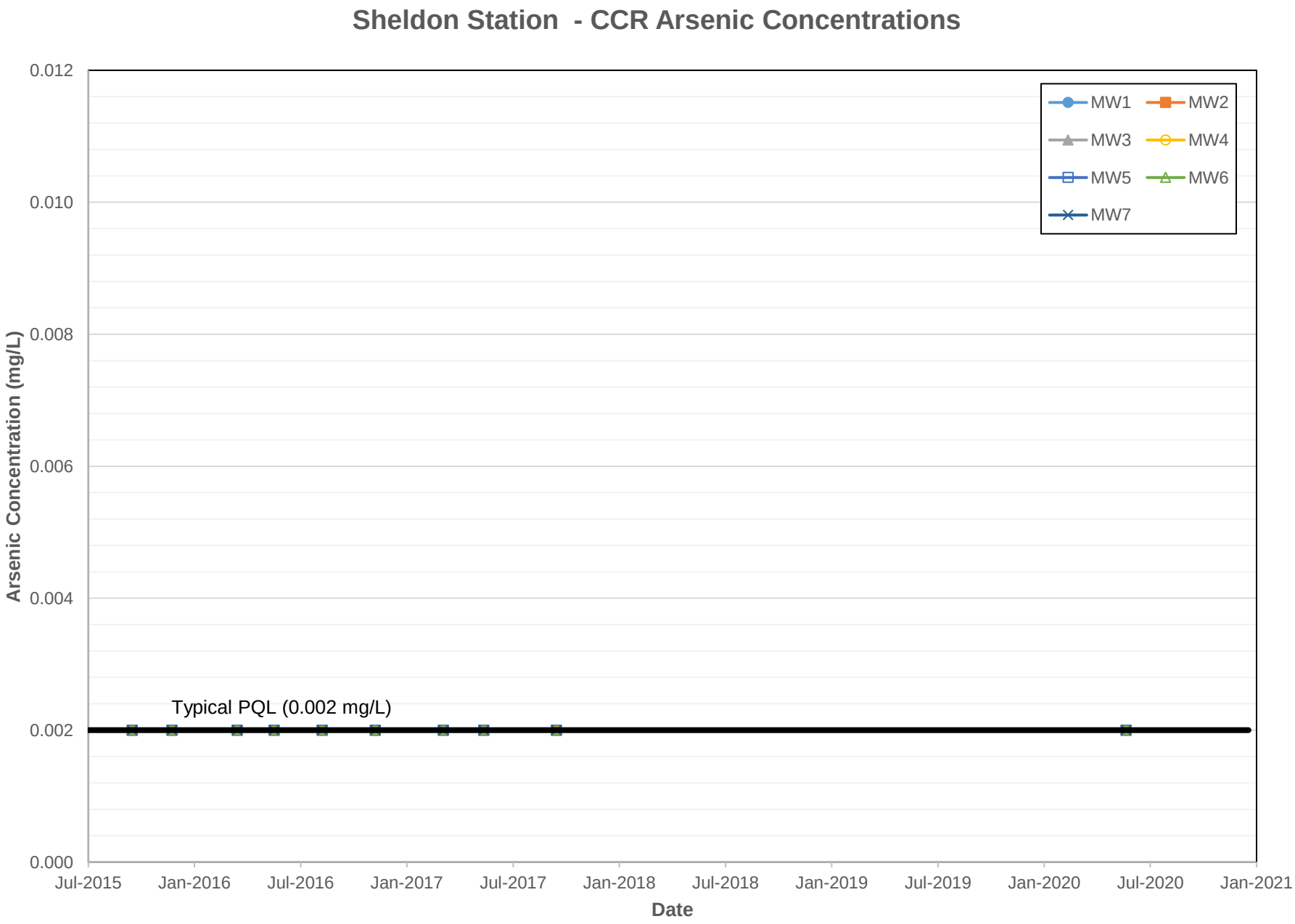
Sheldon Station - CCR Radium 226 + Radium 228 Concentrations

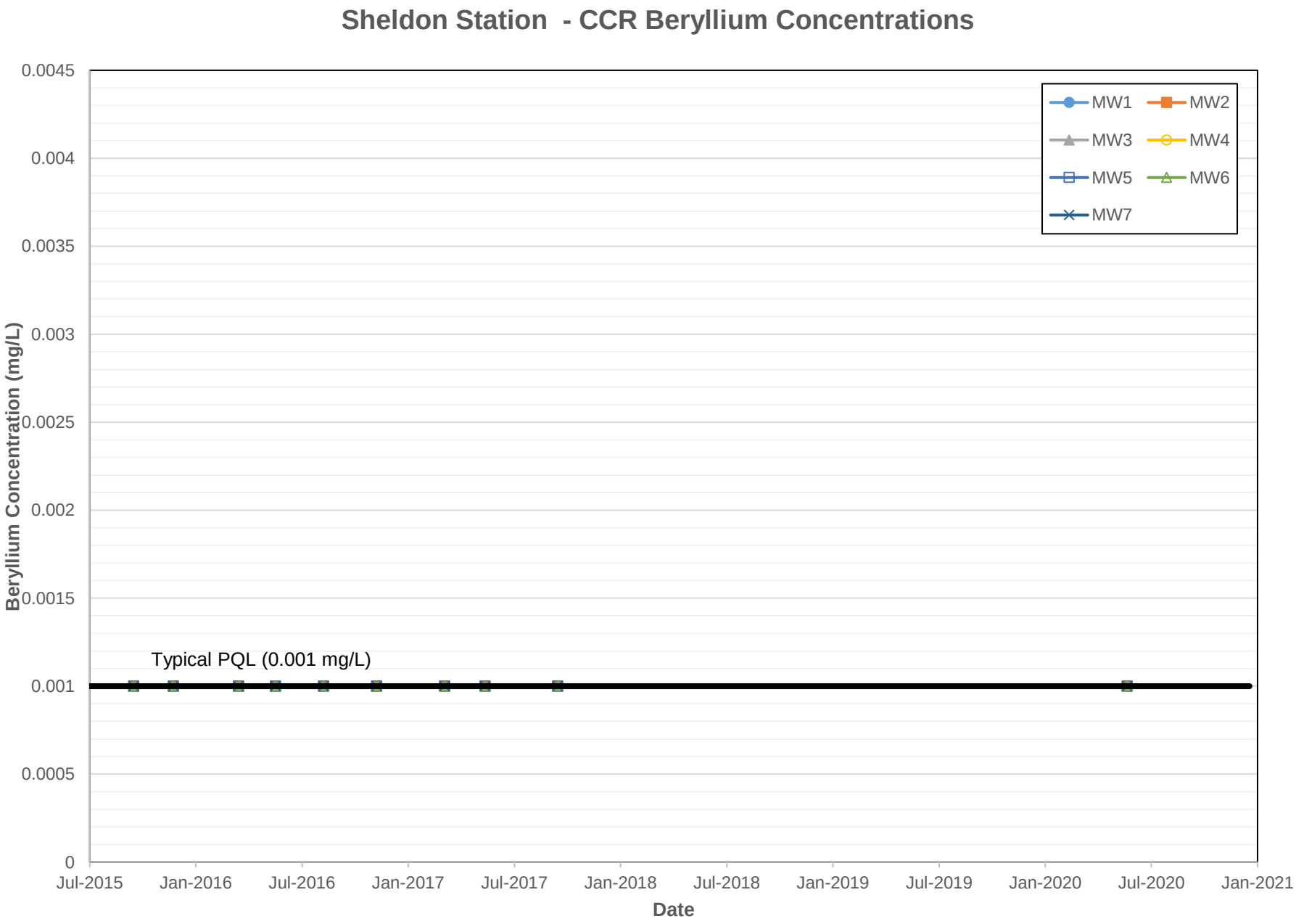


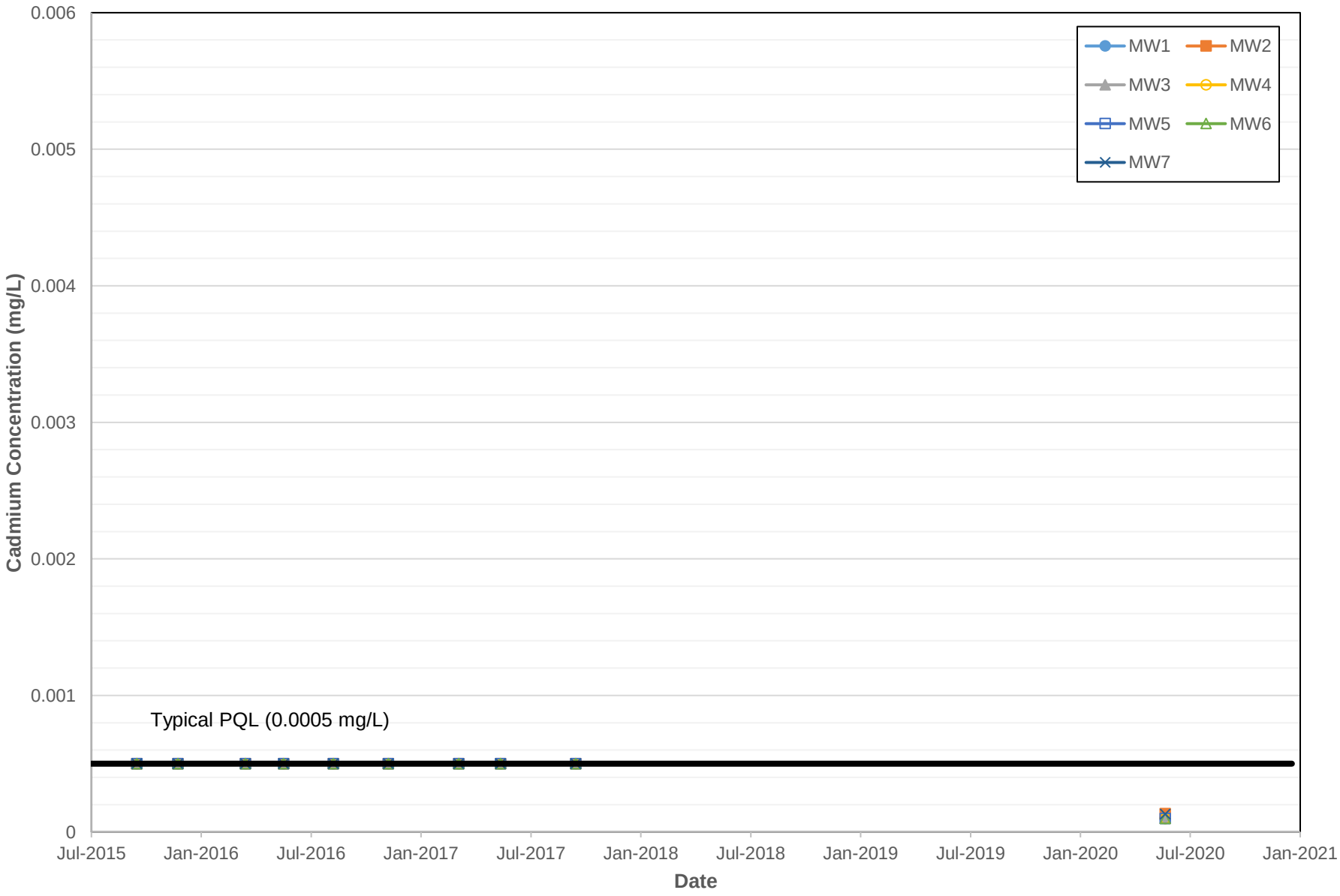

Sheldon Station - CCR Selenium Concentrations
Selenium Concentration (mg/L)
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Typical PQL (0.005 mg/L)
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date

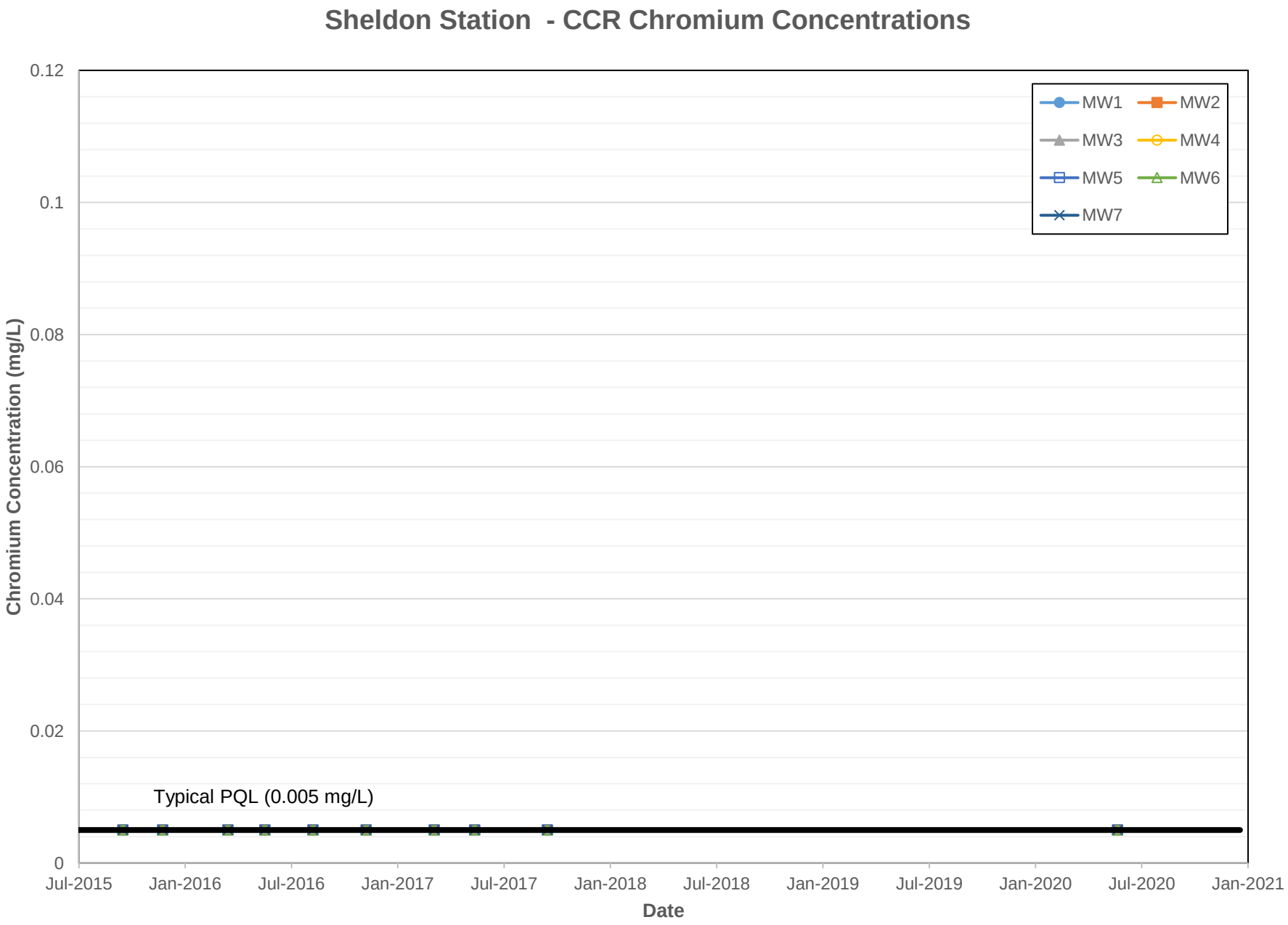

Sheldon Station - CCR Selenium Concentrations (log scale)
Selenium Concentration (mg/L)
1
0.1
0.01
0.001
Typical PQL (0.005 mg/L)
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date
MW1
MW2
MW3
MW4
MW5
MW6
MW7

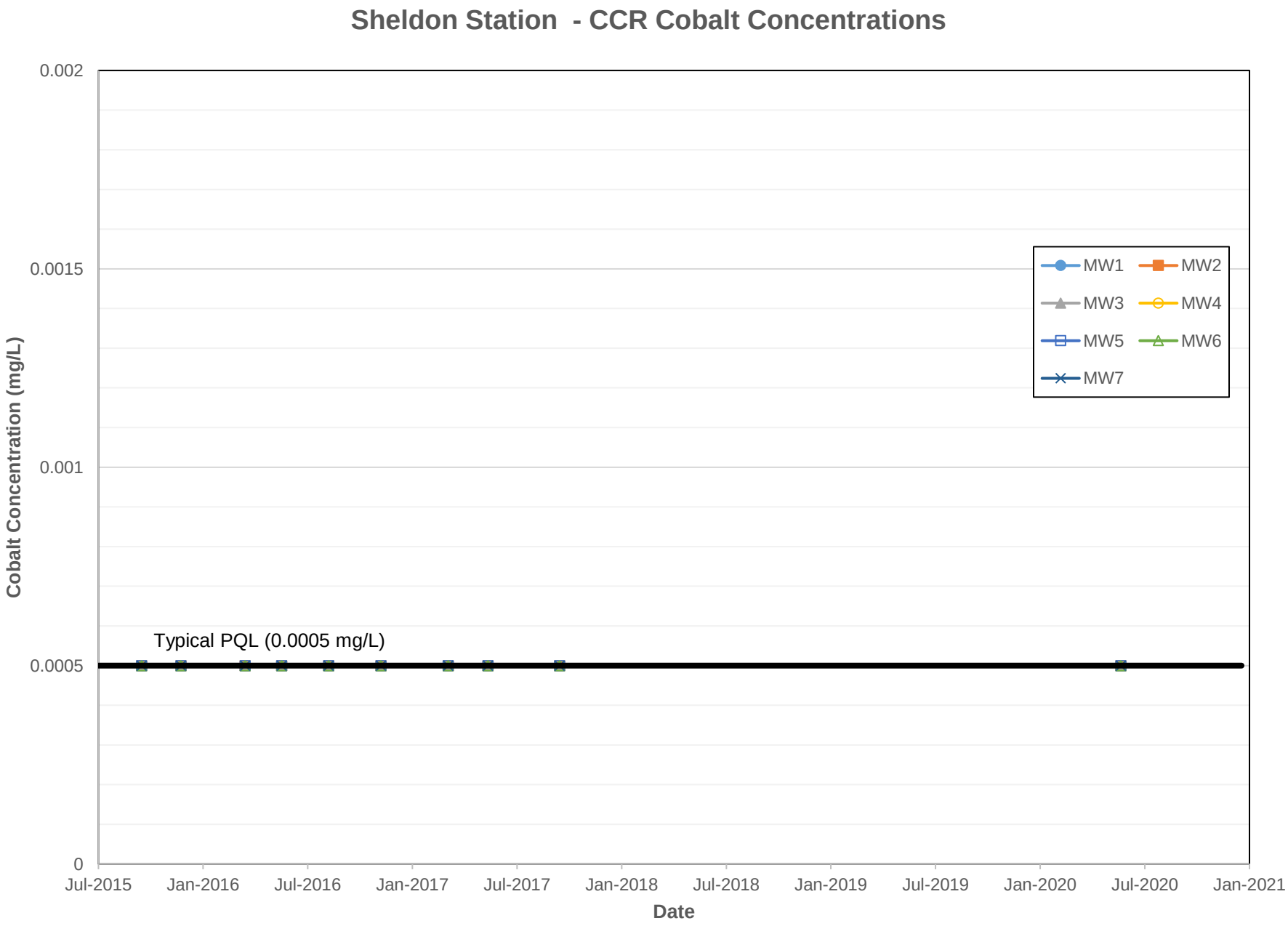

Sheldon Station - CCR Antimony Concentrations
Antimony Concentration (mg/L)
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Typical PQL (0.001 mg/L)
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date

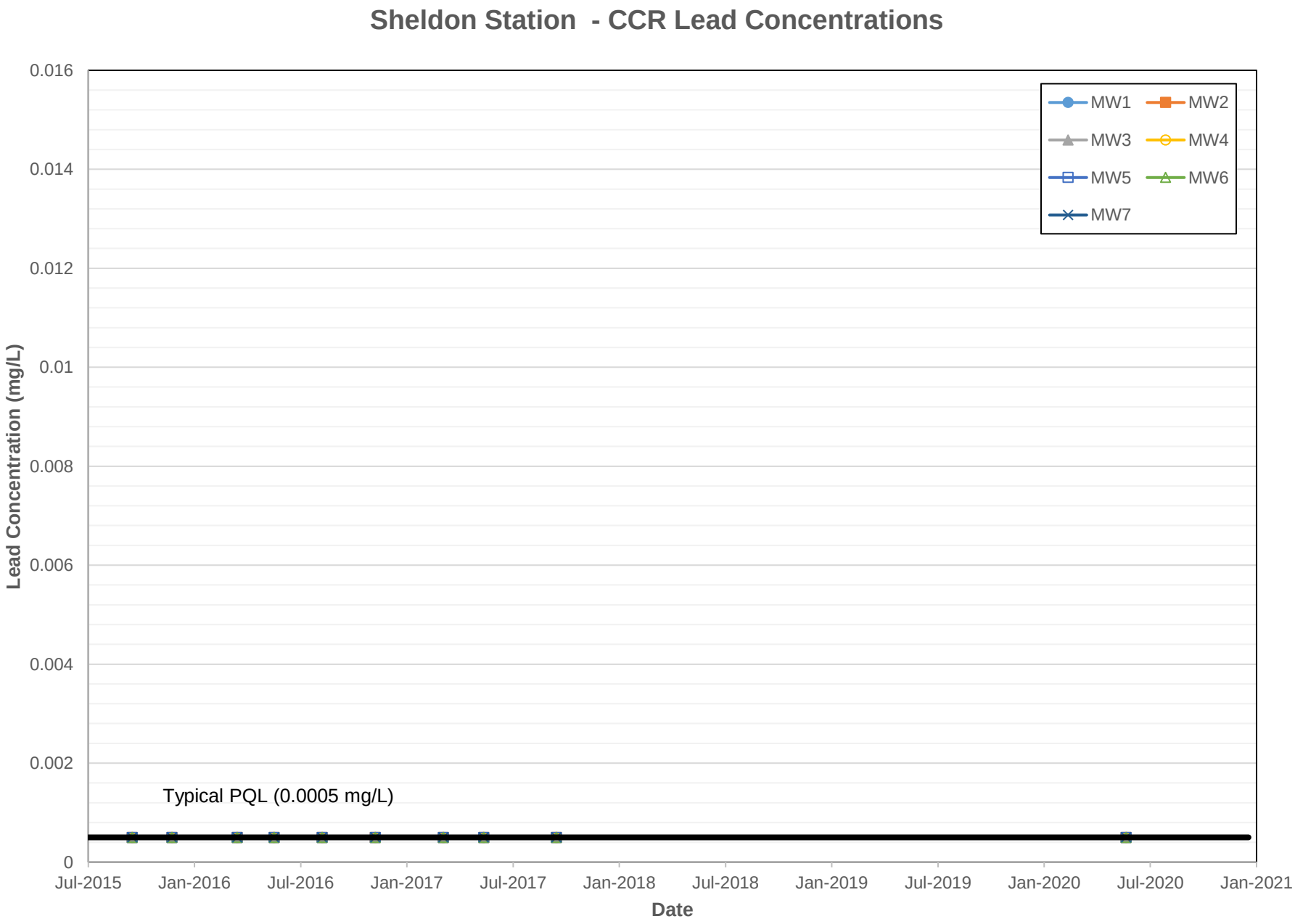

Sheldon Station - CCR Arsenic Concentrations
0.012
0.010
0.008
0.006
0.004
0.002
0.000
Arsenic Concentration (mg/L)
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Typical PQL (0.002 mg/L)
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date

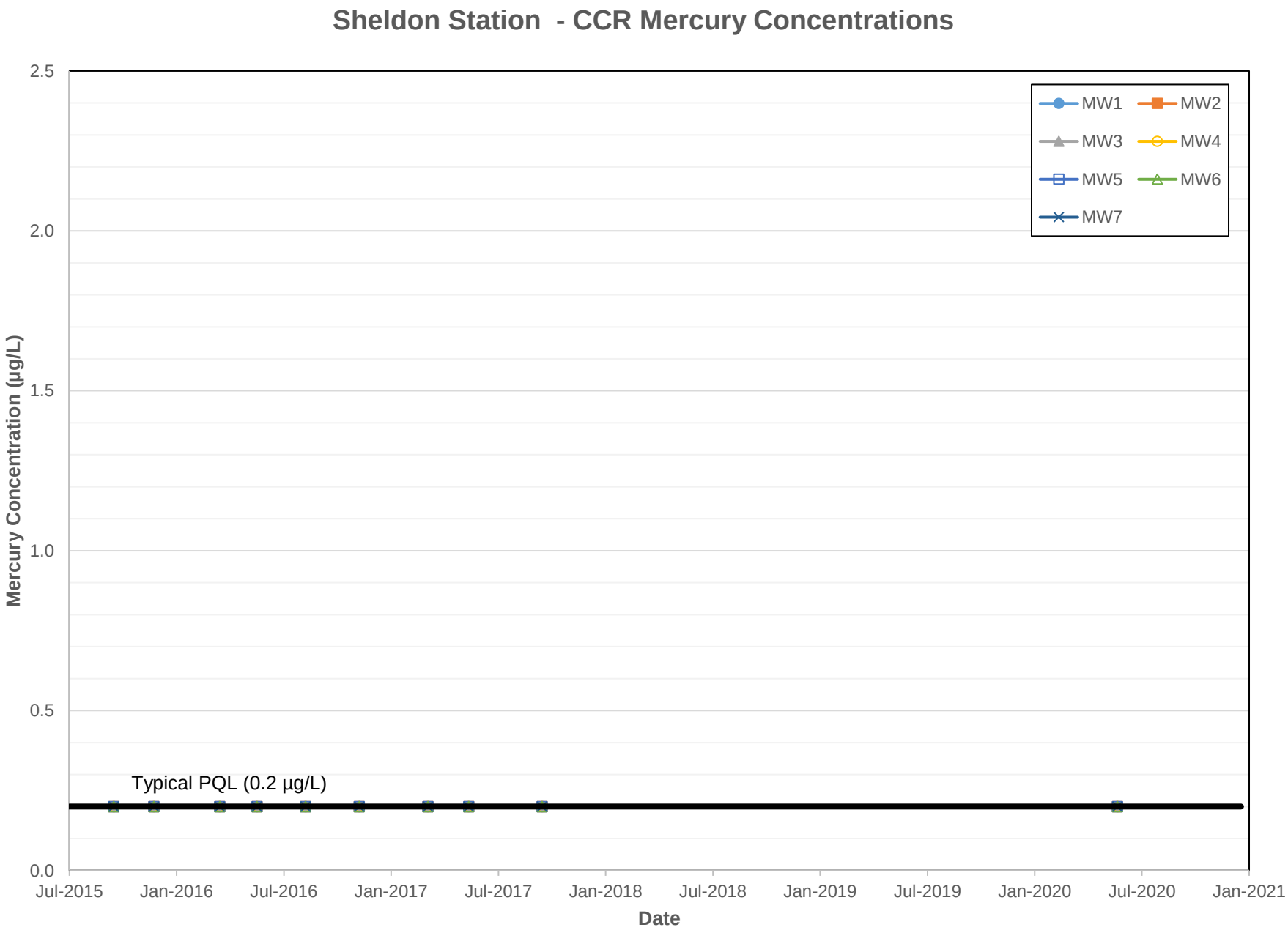

Sheldon Station - CCR Beryllium Concentrations
Beryllium Concentration (mg/L)
0.0045
0.004
0.0035
0.003
0.0025
0.002
0.0015
0.001
0.0005
0
Typical PQL (0.001 mg/L)
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date

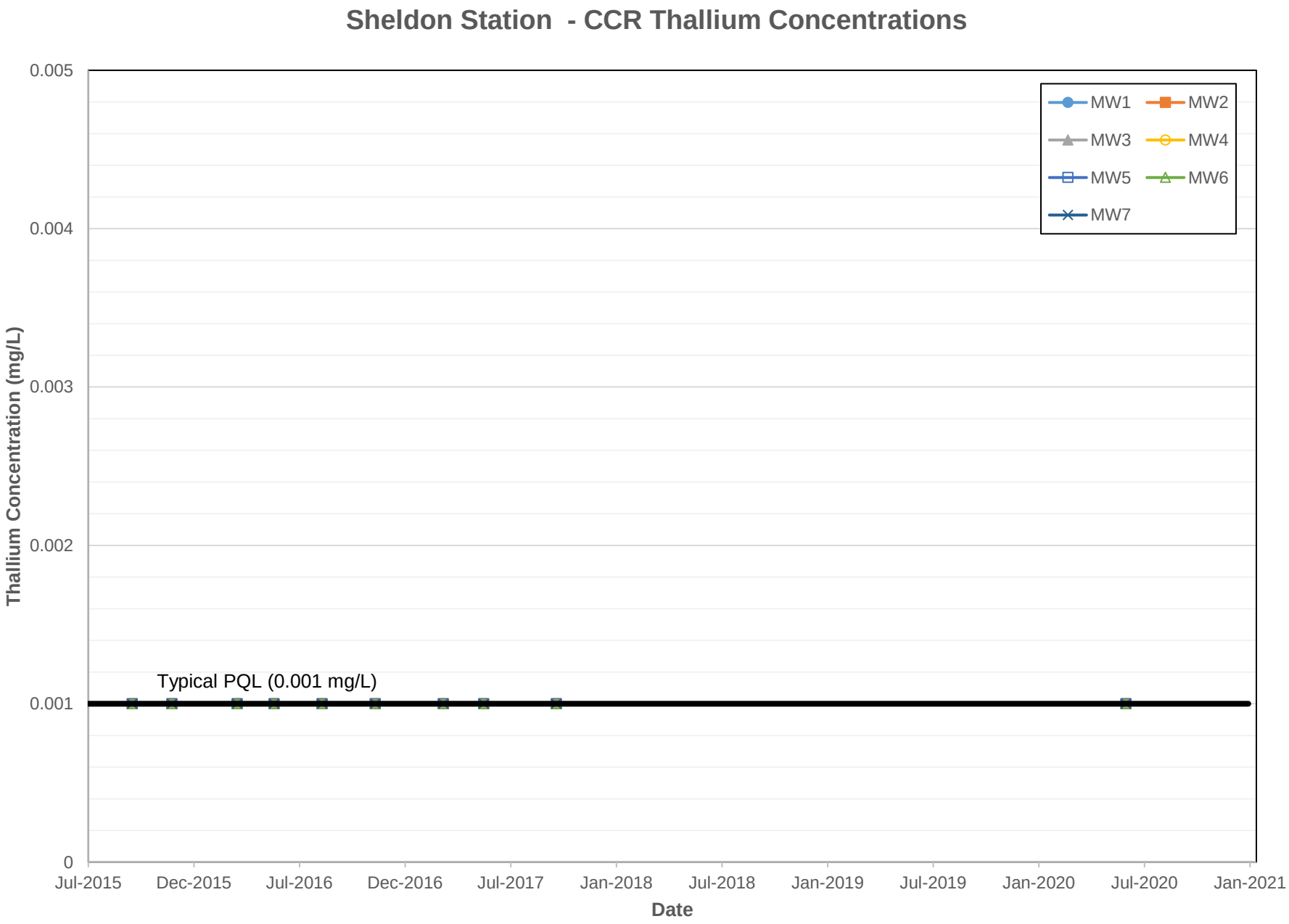

Sheldon Station - CCR Cadmium Concentrations
Cadmium Concentration (mg/L)
0.006
0.005
0.004
0.003
0.002
0.001
0
Typical PQL (0.0005 mg/L)
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date


Sheldon Station - CCR Chromium Concentrations
0.12
0.1
0.08
0.06
0.04
0.02
0
Chromium Concentration (mg/L)
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Typical PQL (0.005 mg/L)
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date


Sheldon Station - CCR Cobalt Concentrations
0.002
0.0015
0.001
0.0005
0
Cobalt Concentration (mg/L)
Typical PQL (0.0005 mg/L)
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date


Sheldon Station - CCR Lead Concentrations
Lead Concentration (mg/L)
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Typical PQL (0.0005 mg/L)
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date


Sheldon Station - CCR Mercury Concentrations
Mercury Concentration (µg/L)
2.5
2.0
1.5
1.0
0.5
0.0
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Typical PQL (0.2 µg/L)
Jul-2015
Jan-2016
Jul-2016
Jan-2017
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date


Sheldon Station - CCR Thallium Concentrations
Thallium Concentration (mg/L)
0.005
0.004
0.003
0.002
0.001
0
Typical PQL (0.001 mg/L)
MW1
MW2
MW3
MW4
MW5
MW6
MW7
Jul-2015
Dec-2015
Jul-2016
Dec-2016
Jul-2017
Jan-2018
Jul-2018
Jan-2019
Jul-2019
Jan-2020
Jul-2020
Jan-2021
Date

APPENDIX B

Supplemental Sampling Laboratory Report

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 310-183200-2
Client Project/Site: Sheldon Station Ash Landfill #4 CCR
Revision: 1

For:
Nebraska Public Power District
4500 West Pella Road
Hallam, Nebraska 68368

Attn: Todd A. Chinn

Authorized for release by:
7/15/2020 4:08:08 PM

Shawn Hayes, Senior Project Manager
(319)229-8211
Shawn.Hayes@Eurofinset.com

Table of Contents

Case Narrative

Client: Nebraska Public Power District
Job ID: 310-183200-2
Project/Site: Sheldon Station Ash Landfill #4 CCR

Job ID: 310-183200-2

Laboratory: Eurofins TestAmerica, Cedar Falls

Narrative

Job Narrative
310-183200-2

Comments
No additional comments.

Receipt
The samples were received on 6/4/2020 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 0.9º C, 4.6º C, 5.3º C and 5.7º C.

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

Sample Summary

Client: Nebraska Public Power District
Job ID: 310-183200-2
Project/Site: Sheldon Station Ash Landfill #4 CCR

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
310-183200-1	AP4-MW1	Ground Water	06/02/20 08:21	06/04/20 10:30	
310-183200-2	AP4-MW2	Ground Water	06/02/20 09:18	06/04/20 10:30	
310-183200-3	AP4-MW3	Ground Water	06/02/20 10:10	06/04/20 10:30	
310-183200-4	AP4-MW4	Ground Water	06/02/20 11:28	06/04/20 10:30	
310-183200-5	AP4-MW5	Ground Water	06/02/20 15:06	06/04/20 10:30	
310-183200-6	AP4-MW6	Ground Water	06/02/20 13:49	06/04/20 10:30	
310-183200-7	AP4-MW7	Ground Water	06/02/20 12:15	06/04/20 10:30	
310-183200-8	AP4-MW Blind Duplicate	Ground Water	06/02/20 00:00	06/04/20 10:30	
310-183200-9	Evaporation Pond	Ground Water	06/02/20 16:13	06/04/20 10:30	
310-183200-10	Leacheate Collection Sump	Ground Water	06/02/20 16:25	06/04/20 10:30	

Detection Summary

Client: Nebraska Public Power District
Job ID: 310-183200-2
Project/Site: Sheldon Station Ash Landfill #4 CCR

Client Sample ID: AP4-MW1 — Lab Sample ID: 310-183200-1

No Detections.

Client Sample ID: AP4-MW2 — Lab Sample ID: 310-183200-2

No Detections.

Client Sample ID: AP4-MW3 — Lab Sample ID: 310-183200-3

No Detections.

Client Sample ID: AP4-MW4 — Lab Sample ID: 310-183200-4

No Detections.

Client Sample ID: AP4-MW5 — Lab Sample ID: 310-183200-5

No Detections.

Client Sample ID: AP4-MW6 — Lab Sample ID: 310-183200-6

No Detections.

Client Sample ID: AP4-MW7 — Lab Sample ID: 310-183200-7

No Detections.

Client Sample ID: AP4-MW Blind Duplicate — Lab Sample ID: 310-183200-8

No Detections.

Client Sample ID: Evaporation Pond — Lab Sample ID: 310-183200-9

No Detections.

Client Sample ID: Leacheate Collection Sump — Lab Sample ID: 310-183200-10

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: AP4-MW1
Date Collected: 06/02/20 08:21
Date Received: 06/04/20 10:30

Lab Sample ID: 310-183200-1
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.257		0.0870	0.0900	1.00	0.0802	pCi/L	06/11/20 06:18	07/06/20 09:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*06/11/20 06:18*	*07/06/20 09:41*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.795		0.259	0.269	1.00	0.345	pCi/L	06/11/20 06:33	06/24/20 12:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:44*	*1*
Y Carrier	*84.1*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:44*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.05		0.273	0.284	5.00	0.345	pCi/L		07/08/20 07:59	1

Client Sample ID: AP4-MW2
Date Collected: 06/02/20 09:18
Date Received: 06/04/20 10:30

Lab Sample ID: 310-183200-2
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.391		0.106	0.111	1.00	0.0794	pCi/L	06/11/20 06:18	07/06/20 09:41	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*06/11/20 06:18*	*07/06/20 09:41*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.26		0.410	0.508	1.00	0.354	pCi/L	06/11/20 06:33	06/24/20 12:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:44*	*1*
Y Carrier	*85.6*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:44*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	3.65		0.423	0.520	5.00	0.354	pCi/L		07/08/20 07:59	1

Client Sample ID: AP4-MW3
Date Collected: 06/02/20 10:10
Date Received: 06/04/20 10:30

Lab Sample ID: 310-183200-3
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.275		0.0852	0.0888	1.00	0.0654	pCi/L	06/11/20 06:18	07/07/20 13:36	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*06/11/20 06:18*	*07/07/20 13:36*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.60		0.311	0.344	1.00	0.334	pCi/L	06/11/20 06:33	06/24/20 12:44	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*107*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:44*	*1*
Y Carrier	*81.9*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:44*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.87		0.322	0.355	5.00	0.334	pCi/L		07/08/20 07:59	1

Client Sample ID: AP4-MW4
Date Collected: 06/02/20 11:28
Date Received: 06/04/20 10:30

Lab Sample ID: 310-183200-4
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.270		0.0845	0.0880	1.00	0.0619	pCi/L	06/11/20 06:18	07/07/20 13:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*06/11/20 06:18*	*07/07/20 13:37*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.94		0.338	0.382	1.00	0.351	pCi/L	06/11/20 06:33	06/24/20 12:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:45*	*1*
Y Carrier	*85.6*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:45*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.21		0.348	0.392	5.00	0.351	pCi/L		07/08/20 07:59	1

Client Sample ID: AP4-MW5
Date Collected: 06/02/20 15:06
Date Received: 06/04/20 10:30

Lab Sample ID: 310-183200-5
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.166		0.0697	0.0713	1.00	0.0674	pCi/L	06/11/20 06:18	07/07/20 13:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*06/11/20 06:18*	*07/07/20 13:37*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.866		0.272	0.284	1.00	0.361	pCi/L	06/11/20 06:33	06/24/20 12:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*105*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:45*	*1*
Y Carrier	*86.4*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:45*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.03		0.281	0.293	5.00	0.361	pCi/L		07/08/20 07:59	1

Client Sample ID: AP4-MW6
Date Collected: 06/02/20 13:49
Date Received: 06/04/20 10:30

Lab Sample ID: 310-183200-6
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	**0.235**		0.0850	0.0875	1.00	0.0813	pCi/L	06/11/20 06:18	07/07/20 13:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*06/11/20 06:18*	*07/07/20 13:37*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.372	U	0.225	0.226	1.00	0.372	pCi/L	06/11/20 06:33	06/24/20 12:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*102*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:45*	*1*
Y Carrier	*83.4*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:45*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	**0.417**		0.241	0.242	5.00	0.372	pCi/L		07/08/20 07:59	1

Client Sample ID: AP4-MW7
Date Collected: 06/02/20 12:15
Date Received: 06/04/20 10:30

Lab Sample ID: 310-183200-7
Matrix: Ground Water

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.203		0.0781	0.0802	1.00	0.0781	pCi/L	06/11/20 06:18	07/07/20 13:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*06/11/20 06:18*	*07/07/20 13:37*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.31		0.276	0.302	1.00	0.309	pCi/L	06/11/20 06:33	06/24/20 12:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*109*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:45*	*1*
Y Carrier	*87.9*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:45*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.51		0.287	0.312	5.00	0.309	pCi/L		07/08/20 07:59	1

Client Sample ID: AP4-MW Blind Duplicate
Lab Sample ID: 310-183200-8

Date Collected: 06/02/20 00:00
Matrix: Ground Water
Date Received: 06/04/20 10:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.199		0.0805	0.0824	1.00	0.0830	pCi/L	06/11/20 06:18	07/07/20 13:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.4*		*40 - 110*	*06/11/20 06:18*	*07/07/20 13:37*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.38		0.315	0.340	1.00	0.369	pCi/L	06/11/20 06:33	06/24/20 12:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*99.4*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:45*	*1*
Y Carrier	*84.5*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:45*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.58		0.325	0.350	5.00	0.369	pCi/L		07/08/20 07:59	1

Client Sample ID: Evaporation Pond
Lab Sample ID: 310-183200-9

Date Collected: 06/02/20 16:13
Matrix: Ground Water
Date Received: 06/04/20 10:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.0850	U	0.0481	0.0482	1.00	0.0850	pCi/L	06/11/20 06:18	07/07/20 13:37	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.7*		*40 - 110*	*06/11/20 06:18*	*07/07/20 13:37*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.415	U	0.243	0.243	1.00	0.415	pCi/L	06/11/20 06:33	06/24/20 12:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*91.7*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:45*	*1*
Y Carrier	*82.2*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:45*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.415	U	0.248	0.248	5.00	0.415	pCi/L		07/08/20 07:59	1

Client Sample ID: Leacheate Collection Sump
Lab Sample ID: 310-183200-10

Date Collected: 06/02/20 16:25
Matrix: Ground Water
Date Received: 06/04/20 10:30

Method: 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.0812	U	0.0381	0.0381	1.00	0.0812	pCi/L	06/11/20 06:18	07/07/20 15:52	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*06/11/20 06:18*	*07/07/20 15:52*	*1*

Method: 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	<0.331	U	0.201	0.202	1.00	0.331	pCi/L	06/11/20 06:33	06/24/20 12:45	1

Carrier	*%Yield*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*103*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:45*	*1*
Y Carrier	*83.4*		*40 - 110*	*06/11/20 06:33*	*06/24/20 12:45*	*1*

Method: Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	<0.331	U	0.205	0.206	5.00	0.331	pCi/L		07/08/20 07:59	1

Definitions/Glossary

Client: Nebraska Public Power District
Job ID: 310-183200-2
Project/Site: Sheldon Station Ash Landfill #4 CCR

Qualifiers

Rad

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

Glossary

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

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-473090/15-A
Matrix: Water
Analysis Batch: 475151

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473090

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	<0.0740	U	0.0262	0.0263	1.00	0.0740	pCi/L	06/11/20 06:18	07/06/20 11:45	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*06/11/20 06:18*	*07/06/20 11:45*	*1*

Lab Sample ID: LCS 160-473090/1-A
Matrix: Water
Analysis Batch: 475151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473090

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-226			11.3	9.744		1.00	1.00	0.0748	pCi/L	86	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*102*		*40 - 110*

Lab Sample ID: LCSD 160-473090/2-A
Matrix: Water
Analysis Batch: 475151

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 473090

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-226			11.3	9.680		0.996	1.00	0.0791	pCi/L	85	75 - 125	0.03	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*108*		*40 - 110*

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-473092/15-A
Matrix: Water
Analysis Batch: 474470

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 473092

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.5364		0.300	0.304	1.00	0.460	pCi/L	06/11/20 06:34	06/24/20 12:49	1

Carrier	*MB %Yield*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Ba Carrier	*104*		*40 - 110*	*06/11/20 06:34*	*06/24/20 12:49*	*1*
Y Carrier	*84.5*		*40 - 110*	*06/11/20 06:34*	*06/24/20 12:49*	*1*

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-473092/1-A
Matrix: Water
Analysis Batch: 474385

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 473092

Analyte			Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits		
Radium-228			8.72	8.257		0.967	1.00	0.350	pCi/L	95	75 - 125		

Carrier	*LCS %Yield*	*LCS Qualifier*	*Limits*
Ba Carrier	*102*		*40 - 110*
Y Carrier	*86.4*		*40 - 110*

Lab Sample ID: LCSD 160-473092/2-A
Matrix: Water
Analysis Batch: 474385

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 473092

Analyte			Spike Added	LCSD Result	LCSD Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits	RER	RER Limit
Radium-228			8.72	8.560		0.986	1.00	0.349	pCi/L	98	75 - 125	0.16	1

Carrier	*LCSD %Yield*	*LCSD Qualifier*	*Limits*
Ba Carrier	*108*		*40 - 110*
Y Carrier	*85.2*		*40 - 110*

QC Association Summary

Client: Nebraska Public Power District
Job ID: 310-183200-2
Project/Site: Sheldon Station Ash Landfill #4 CCR

Rad

Prep Batch: 473090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	PrecSep-21	
310-183200-2	AP4-MW2	Total/NA	Ground Water	PrecSep-21	
310-183200-3	AP4-MW3	Total/NA	Ground Water	PrecSep-21	
310-183200-4	AP4-MW4	Total/NA	Ground Water	PrecSep-21	
310-183200-5	AP4-MW5	Total/NA	Ground Water	PrecSep-21	
310-183200-6	AP4-MW6	Total/NA	Ground Water	PrecSep-21	
310-183200-7	AP4-MW7	Total/NA	Ground Water	PrecSep-21	
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	PrecSep-21	
310-183200-9	Evaporation Pond	Total/NA	Ground Water	PrecSep-21	
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	PrecSep-21	
MB 160-473090/15-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-473090/1-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
LCSD 160-473090/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep-21	

Prep Batch: 473092

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	PrecSep_0	
310-183200-2	AP4-MW2	Total/NA	Ground Water	PrecSep_0	
310-183200-3	AP4-MW3	Total/NA	Ground Water	PrecSep_0	
310-183200-4	AP4-MW4	Total/NA	Ground Water	PrecSep_0	
310-183200-5	AP4-MW5	Total/NA	Ground Water	PrecSep_0	
310-183200-6	AP4-MW6	Total/NA	Ground Water	PrecSep_0	
310-183200-7	AP4-MW7	Total/NA	Ground Water	PrecSep_0	
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	PrecSep_0	
310-183200-9	Evaporation Pond	Total/NA	Ground Water	PrecSep_0	
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	PrecSep_0	
MB 160-473092/15-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-473092/1-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
LCSD 160-473092/2-A	Lab Control Sample Dup	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: Nebraska Public Power District
Job ID: 310-183200-2
Project/Site: Sheldon Station Ash Landfill #4 CCR

Client Sample ID: AP4-MW1
Lab Sample ID: 310-183200-1
Date Collected: 06/02/20 08:21
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			473090	06/11/20 06:18	RBR	TAL SL
Total/NA	Analysis	9315		1	475151	07/06/20 09:41	SCB	TAL SL
Total/NA	Prep	PrecSep_0			473092	06/11/20 06:33	RBR	TAL SL
Total/NA	Analysis	9320		1	474385	06/24/20 12:44	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	475734	07/08/20 07:59	SMP	TAL SL

Client Sample ID: AP4-MW2
Lab Sample ID: 310-183200-2
Date Collected: 06/02/20 09:18
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			473090	06/11/20 06:18	RBR	TAL SL
Total/NA	Analysis	9315		1	475151	07/06/20 09:41	SCB	TAL SL
Total/NA	Prep	PrecSep_0			473092	06/11/20 06:33	RBR	TAL SL
Total/NA	Analysis	9320		1	474385	06/24/20 12:44	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	475734	07/08/20 07:59	SMP	TAL SL

Client Sample ID: AP4-MW3
Lab Sample ID: 310-183200-3
Date Collected: 06/02/20 10:10
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			473090	06/11/20 06:18	RBR	TAL SL
Total/NA	Analysis	9315		1	475699	07/07/20 13:36	JLC	TAL SL
Total/NA	Prep	PrecSep_0			473092	06/11/20 06:33	RBR	TAL SL
Total/NA	Analysis	9320		1	474385	06/24/20 12:44	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	475734	07/08/20 07:59	SMP	TAL SL

Client Sample ID: AP4-MW4
Lab Sample ID: 310-183200-4
Date Collected: 06/02/20 11:28
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			473090	06/11/20 06:18	RBR	TAL SL
Total/NA	Analysis	9315		1	475699	07/07/20 13:37	JLC	TAL SL
Total/NA	Prep	PrecSep_0			473092	06/11/20 06:33	RBR	TAL SL
Total/NA	Analysis	9320		1	474385	06/24/20 12:45	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	475734	07/08/20 07:59	SMP	TAL SL

Lab Chronicle

Client: Nebraska Public Power District
Job ID: 310-183200-2
Project/Site: Sheldon Station Ash Landfill #4 CCR

Client Sample ID: AP4-MW5
Lab Sample ID: 310-183200-5
Date Collected: 06/02/20 15:06
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			473090	06/11/20 06:18	RBR	TAL SL
Total/NA	Analysis	9315		1	475699	07/07/20 13:37	JLC	TAL SL
Total/NA	Prep	PrecSep_0			473092	06/11/20 06:33	RBR	TAL SL
Total/NA	Analysis	9320		1	474385	06/24/20 12:45	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	475734	07/08/20 07:59	SMP	TAL SL

Client Sample ID: AP4-MW6
Lab Sample ID: 310-183200-6
Date Collected: 06/02/20 13:49
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			473090	06/11/20 06:18	RBR	TAL SL
Total/NA	Analysis	9315		1	475699	07/07/20 13:37	JLC	TAL SL
Total/NA	Prep	PrecSep_0			473092	06/11/20 06:33	RBR	TAL SL
Total/NA	Analysis	9320		1	474385	06/24/20 12:45	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	475734	07/08/20 07:59	SMP	TAL SL

Client Sample ID: AP4-MW7
Lab Sample ID: 310-183200-7
Date Collected: 06/02/20 12:15
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			473090	06/11/20 06:18	RBR	TAL SL
Total/NA	Analysis	9315		1	475699	07/07/20 13:37	JLC	TAL SL
Total/NA	Prep	PrecSep_0			473092	06/11/20 06:33	RBR	TAL SL
Total/NA	Analysis	9320		1	474385	06/24/20 12:45	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	475734	07/08/20 07:59	SMP	TAL SL

Client Sample ID: AP4-MW Blind Duplicate
Lab Sample ID: 310-183200-8
Date Collected: 06/02/20 00:00
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			473090	06/11/20 06:18	RBR	TAL SL
Total/NA	Analysis	9315		1	475699	07/07/20 13:37	JLC	TAL SL
Total/NA	Prep	PrecSep_0			473092	06/11/20 06:33	RBR	TAL SL
Total/NA	Analysis	9320		1	474385	06/24/20 12:45	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	475734	07/08/20 07:59	SMP	TAL SL

Lab Chronicle

Client: Nebraska Public Power District
Job ID: 310-183200-2
Project/Site: Sheldon Station Ash Landfill #4 CCR

Client Sample ID: Evaporation Pond
Lab Sample ID: 310-183200-9
Date Collected: 06/02/20 16:13
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			473090	06/11/20 06:18	RBR	TAL SL
Total/NA	Analysis	9315		1	475699	07/07/20 13:37	JLC	TAL SL
Total/NA	Prep	PrecSep_0			473092	06/11/20 06:33	RBR	TAL SL
Total/NA	Analysis	9320		1	474385	06/24/20 12:45	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	475734	07/08/20 07:59	SMP	TAL SL

Client Sample ID: Leacheate Collection Sump
Lab Sample ID: 310-183200-10
Date Collected: 06/02/20 16:25
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	PrecSep-21			473090	06/11/20 06:18	RBR	TAL SL
Total/NA	Analysis	9315		1	475699	07/07/20 15:52	JLC	TAL SL
Total/NA	Prep	PrecSep_0			473092	06/11/20 06:33	RBR	TAL SL
Total/NA	Analysis	9320		1	474385	06/24/20 12:45	AJD	TAL SL
Total/NA	Analysis	Ra226_Ra228		1	475734	07/08/20 07:59	SMP	TAL SL

Laboratory References:

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

Accreditation/Certification Summary

Client: Nebraska Public Power District
Job ID: 310-183200-2
Project/Site: Sheldon Station Ash Landfill #4 CCR

Laboratory: Eurofins TestAmerica, Cedar Falls

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	101044	11-01-20
Colorado	Petroleum Storage Tank Program	IA100001 (OR)	09-29-20
Georgia	State	IA100001 (OR)	09-29-20
Illinois	NELAP	200024	11-29-20
Iowa	State	007	12-01-21
Kansas	NELAP	E-10341	01-31-21
Minnesota	NELAP	019-999-319	12-31-20
Minnesota (Petrofund)	State	3349	08-22-21
North Dakota	State	R-186	09-30-20
Oregon	NELAP	IA100001	09-29-20
USDA	US Federal Programs	P330-19-00003	01-02-22

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-22
ANAB	Dept. of Defense ELAP	L2305	04-06-22
ANAB	Dept. of Energy	L2305.01	04-06-22
ANAB	ISO/IEC 17025	L2305	04-06-22
Arizona	State	AZ0813	12-08-20
Connecticut	State	PH-0241	03-31-21
Florida	NELAP	E87689	06-30-21
Illinois	NELAP	004553	11-30-20
Iowa	State	373	09-17-20
Kansas	NELAP	E-10236	10-31-20
Kentucky (DW)	State	KY90125	12-31-20
Louisiana	NELAP	04080	07-01-21
Louisiana (DW)	State	LA011	12-31-20
Maryland	State	310	09-30-20
Missouri	State	780	06-30-22
Nevada	State	MO000542020-1	07-31-20
New Jersey	NELAP	MO002	06-30-21
New York	NELAP	11616	04-01-21
NRC	NRC	24-24817-01	12-31-22
Oklahoma	State	9997	08-31-20
Pennsylvania	NELAP	68-00540	02-28-21
Texas	NELAP	T104704193-19-13	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542019-11	07-31-20
Virginia	NELAP	10310	06-14-21
Washington	State	C592	08-30-20
West Virginia DEP	State	381	10-31-20

Method Summary

Client: Nebraska Public Power District
Job ID: 310-183200-2
Project/Site: Sheldon Station Ash Landfill #4 CCR

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	TAL SL
9320	Radium-228 (GFPC)	SW846	TAL SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	TAL SL
PrecSep_0	Preparation, Precipitate Separation	None	TAL SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	TAL SL

Protocol References:

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

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

Laboratory References:

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

eurofins | Environment Testing TestAmerica

310-183200 Chain of Custody

Cooler/Sample Receipt and Temperature

Client Information

Client: Nebraska Public Power District

City/State: CITY Hallam STATE NE | Project: Sheldon Station Ash Landfill

Receipt Information

Date/Time Received: DATE 5/4/20 TIME 1030 | Received By: CC

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes:* Cooler ID: –
Multiple Coolers?	☒ Yes	☐ No	*If yes:* Cooler # 1 of 4
Cooler Custody Seals Present?	☒ Yes	☒ No CC 5/4/20	*If yes:* Cooler custody seals intact? ☒ Yes ☐ No
Sample Custody Seals Present?	☐ Yes	☒ No	*If yes:* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?	☐ Yes	☒ No	*If yes:* Which VOA samples are in cooler? ↓

Temperature Record

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

Thermometer ID: P | Correction Factor (°C): 0.1

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 4.5 | Corrected Temp (°C): 4.6

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

eurofins | Environment Testing TestAmerica

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Nebraska Public Power District

City/State: CITY Hallam STATE NE

Project: Sheldon Station Ash landfill

Receipt Information

Date/Time Received: DATE 6/4/20 TIME 1030

Received By: CC

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes ☐ No	*If yes:* Cooler ID:	—
Multiple Coolers?	☒ Yes ☐ No	*If yes:* Cooler #	2 of 4
Cooler Custody Seals Present?	☒ Yes ☐ No	*If yes:* Cooler custody seals intact?	☒ Yes ☐ No
Sample Custody Seals Present?	☐ Yes ☒ No	*If yes:* Sample custody seals intact?	☐ Yes ☐ No
Trip Blank Present?	☐ Yes ☐ No	*If yes:* Which VOA samples are in cooler?	↓

APA-MW4, Evaporation Pond, AP4-Duplicate

Temperature Record

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

Thermometer ID: P

Correction Factor (°C): 0.1

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 7.2

Corrected Temp (°C): 7.3

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:	1L Plastic	250mL Plastic
Uncorrected Temp (°C):	5.3	6.8
Corrected Temp (°C):	5.4	6.9

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☒ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

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Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Nebraska Public Power District

City/State: CITY Hallam STATE NE | Project: Sheldon Station Ash Landfill

Receipt Information

Date/Time Received: DATE 6/4/20 TIME 1030 | Received By: CC

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes:* Cooler ID: —
Multiple Coolers?	☒ Yes	☐ No	*If yes:* Cooler # 3 of 4
Cooler Custody Seals Present?	☒ Yes	☐ No	*If yes:* Cooler custody seals intact? ☒ Yes ☐ No
Sample Custody Seals Present?	☐ Yes	☒ No	*If yes:* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?	☐ Yes	☒ No	*If yes:* Which VOA samples are in cooler? ↓

Temperature Record

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

Thermometer ID: P | Correction Factor (°C): 0.1

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 5.6 | Corrected Temp (°C): 5.7

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:	1L Plastic	250mL Plastic
Uncorrected Temp (°C):	1.8	2.6
Corrected Temp (°C):	1.9	2.7

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

eurofins | Environment Testing TestAmerica

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Nebraska Public Power District

City/State: CITY Wallam STATE NE | Project: Sheldon Station Ash Landfill

Receipt Information

Date/Time Received: DATE 6/4/20 TIME 1030 | Received By: CC

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes ☐ No	*If yes:* Cooler ID:	—
Multiple Coolers?	☒ Yes ☐ No	*If yes:* Cooler #	4 of 4
Cooler Custody Seals Present?	☒ Yes ☐ No	*If yes:* Cooler custody seals intact?	☒ Yes ☐ No
Sample Custody Seals Present?	☐ Yes ☒ No	*If yes:* Sample custody seals intact?	☐ Yes ☐ No
Trip Blank Present?	☐ Yes ☒ No	*If yes:* Which VOA samples are in cooler?	↓

Temperature Record

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

Thermometer ID: P | Correction Factor (°C): 0.1

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 10.1 | Corrected Temp (°C): 10.2

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:	1 L Plastic	250 Plastic
Uncorrected Temp (°C):	0.8	2.4
Corrected Temp (°C):	0.9	2.5

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

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

Chain of Custody Record

TestAmerica Omaha SC
2

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Todd Chinn + TRICIA NOVAK	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Todd A. Chinn	Phone: 402-787-5256	E-Mail: shawn.hayes@testamericainc.com		Page: 1 of 2
Company: Nebraska Public Power District				Job #:
Address: 4500 West Pella Road	Due Date Requested:			
City: Hallam	TAT Requested (days): 5Day TAT for all analyses except RAD 226 + 228			
State, Zip: NE, 68368				
Phone: 402-787-5256	PO #: Purchase Order not required			
Email: tachinn@nppd.com	WO #:			
Project Name: Sheldon Station Ash Landfill #4 CCR	TestAmerica Project #: 31006953			
Site: Nebraska				

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM4500 H+ pH, 2540C TDS	9056A Chloride, Fluoride, Sulfate	Alkalinity (Total, Bicarbonate, Carbonate, Hydroxide)	Silica (SiO2)	6020 CCR Metals + Mg, K, Na and 7470A Mercury	350.1 Ammonia, 353.2 Nitrate+Nitrite	351.2 TKN (needed for Total Nitrogen)	365.1 Phosphate	Total Nitrogen	9315 Radium-226	9320 Radium-228			Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N											
AP4-MW1	6-2-20	0821	G	GW			X	X	X	X	X	X	X	X	X	X	X				
AP4-MW2	6-2-20	0918	G	GW			X	X	X	X	X	X	X	X	X	X	X				
AP4-MW3	6-2-20	1010	G	GW			X	X	X	X	X	X	X	X	X	X	X				
AP4-MW4	6-2-20	1128	G	GW			X	X	X	X	X	X	X	X	X	X	X				
AP4-MW5	6-2-20	1506	G	GW			X	X	X	X	X	X	X	X	X	X	X				
AP4-MW6	6-2-20	1349	G	GW			X	X	X	X	X	X	X	X	X	X	X				
AP4-MW7	6-2-20	1215	G	GW			X	X	X	X	X	X	X	X	X	X	X				
AP4-MW Blind Duplicate	6-2-20	/	G	GW			X	X	X	X	X	X	X	X	X	X	X				
Evaportion Pond	6-2-20	1613	G	GW			X	X	X	X	X	X	X	X	X	X	X				
Leachate Collection Sump	6-2-20	1625	G	GW			X	X	X	X	X	X	X	X	X	X	X				
Underdrain Sump	6-2-20	1636	G	GW			X	X	X	X	X	X	X	X	X	X	X				

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	6-3-2020 1600	NPPD	[signature]	6/04/20 1630	Eurofins
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

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

Chain of Custody Record

TestAmerica Omaha SC
268

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Todd Chinn + TRICIA NOVAK	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Todd A. Chinn	Phone: 402-787-5256	E-Mail: shawn.hayes@testamericainc.com		Page: 2 of 2
Company: Nebraska Public Power District				Job #:
Address: 4500 West Pella Road	Due Date Requested:			
City: Hallam	TAT Requested (days): 5 Day TAT for all analysis except RAD226 + 228			
State, Zip: NE, 68368				
Phone: 402-787-5256	PO #: Purchase Order not required			
Email: tachinn@nppd.com	WO #:			
Project Name: Sheldon Station Ash Landfill #4 CCR	TestAmerica Project #: 31006953			
Site: Nebraska				

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2SO3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - ph 4-5
Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM4500 H+ pH, 2540C TDS	9056A Chloride, Fluoride, Sulfate	Alkalinity (Total, Bicarbonate, Carbonate, Hydroxide)	Silica (SiO2)	6020 CCR Metals + Mg, K, Na and 7470A Mercury	350.1 Ammonia. 353.2 Nitrate+Nitrite	351.2 TKN (needed for Total Nitrogen)	365.1 Phosphate	Total Nitrogen	9315 Radium-226	9320 Radium-228			Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N											
Interceptor Trench	6-2-20	1649	G	GW			X	X	X	X	X	X	X	X	X	X	X				

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 060420 1030	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Login Sample Receipt Checklist

Client: Nebraska Public Power District

Job Number: 310-183200-2

Login Number: 183200
List Number: 1
Creator: Miller, Drew E

List Source: Eurofins TestAmerica, Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	2 of the three temp checks failed on Cooler 2. Associated samples written down
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Nebraska Public Power District

Job Number: 310-183200-2

Login Number: 183200
List Number: 2
Creator: Mazariegos, Leonel A

List Source: Eurofins TestAmerica, St. Louis
List Creation: 06/05/20 12:07 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Nebraska Public Power District

Job Number: 310-183200-2

Login Number: 183200
List Number: 3
Creator: Mazariegos, Leonel A

List Source: Eurofins TestAmerica, St. Louis
List Creation: 06/09/20 04:41 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Tracer/Carrier Summary

Client: Nebraska Public Power District
Job ID: 310-183200-2
Project/Site: Sheldon Station Ash Landfill #4 CCR

Method: 9315 - Radium-226 (GFPC)

Matrix: Ground Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba (40-110)
310-183200-1	AP4-MW1	107
310-183200-2	AP4-MW2	102
310-183200-3	AP4-MW3	107
310-183200-4	AP4-MW4	103
310-183200-5	AP4-MW5	105
310-183200-6	AP4-MW6	102
310-183200-7	AP4-MW7	109
310-183200-8	AP4-MW Blind Duplicate	99.4
310-183200-9	Evaporation Pond	91.7
310-183200-10	Leacheate Collection Sump	103

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)
Lab Sample ID	Client Sample ID	Ba (40-110)
LCS 160-473090/1-A	Lab Control Sample	102
LCSD 160-473090/2-A	Lab Control Sample Dup	108
MB 160-473090/15-A	Method Blank	104

Tracer/Carrier Legend

Ba = Ba Carrier

Method: 9320 - Radium-228 (GFPC)

Matrix: Ground Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
310-183200-1	AP4-MW1	107	84.1
310-183200-2	AP4-MW2	102	85.6
310-183200-3	AP4-MW3	107	81.9
310-183200-4	AP4-MW4	103	85.6
310-183200-5	AP4-MW5	105	86.4
310-183200-6	AP4-MW6	102	83.4
310-183200-7	AP4-MW7	109	87.9
310-183200-8	AP4-MW Blind Duplicate	99.4	84.5
310-183200-9	Evaporation Pond	91.7	82.2
310-183200-10	Leacheate Collection Sump	103	83.4

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

Tracer/Carrier Summary

Client: Nebraska Public Power District
Job ID: 310-183200-2
Project/Site: Sheldon Station Ash Landfill #4 CCR

Method: 9320 - Radium-228 (GFPC)

Matrix: Water
Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (40-110)	Y (40-110)
LCS 160-473092/1-A	Lab Control Sample	102	86.4
LCSD 160-473092/2-A	Lab Control Sample Dup	108	85.2
MB 160-473092/15-A	Method Blank	104	84.5

Tracer/Carrier Legend

Ba = Ba Carrier
Y = Y Carrier

APPENDIX C

Field Meter Repair and Maintenance Records from Manufacturer (QED)

Quote #: R39770
Quote Date: 08/15/2019
Site Reference: MP20
PO:

Prepared For:
Todd Chinn
402-787-5256
tachinn@nppd.com

Represented By:
Bill Reetz
785-764-1674
bill@abetterearthllc.com
CSR -

Bill To:
NEBRASKA PUBLIC POWER DISTRICT
PO BOX 1740

COLUMBUS, NE 68602-1740

Ship To:
NEBRASKA PUBLIC POWER DISTRICT
4500 WEST PELLA RD
SHELDON STATION
HALLAM, NE 68368
USA

Device #1 MP20 Serial # 25451 **Date Purchased 01/09/2009**

Evaluation:
Came in with the serial number tag missing. Assigned S# 25451. Replace DO solution and membrane. pH reference probe is missing the top bulb part from the stem. Replace pH fluid and salt. pH still calibrates without that portion which is unusual. ORP calibrates. DO and conductivity calibrate. Circulator works. No kits or accessories in case.

Qty	Item	Description	Unit Price	Extended Price
1.50		FLOW CELL-REPAIR LABOR	$90.00	$135.00
1.00	39579	PROBE ASSY PH/REF/ORP MP20	$800.00	$800.00
1.00	38345	KIT PH/DO MP20	$130.00	$130.00
			Labor Total:	**$135.00**
			Parts Total:	**$930.00**
			Device Total:	**$1,065.00**
			Sales Total:	**$1,065.00**
			Overall Total:	**$1,065.00**

SHIPPING TERMS:
If Shipping and Handling charges have been included these are estimated only. If no amount is shown, this does not indicate that that there are no shipping charges only that there were none estimated. Please note that this amount is only an estimate and is subject to change based on dimensional size / weight requirements of freight carriers and any applicable fuel surcharges. This amount is only intended to provide a general cost estimate as your actual costs may be higher or lower. Price does not include any duties, taxes or other costs associated with government regulations.

TERMS & CONDITIONS: Payment Terms: NET 30
Estimated shipping time 5-10 working days after receipt of Purchase Order, transit time not included. Pricing valid for 30 days. All prices are in U. S. DOLLARS, FOB SHIPPING POINT, USA. A copy of your purchase order, or signed quote, is required at time of order. Payment terms (shown above) are calculated from invoice date, subject to credit approval. A service charge of 1% per month will be applied to all past due invoices.

Unless shown as separate line item(s), total price shown DOES NOT include applicable sales tax or shipping & handling charges. Applicable sales taxes, shipping and handling charges will be added to the invoice. Estimates available upon request.

After acceptance of an order, no order can be returned without QED approval. Standard equipment, not custom in nature, can generally be returned for credit within 30 days of purchase. The equipment must be unused and in its original packaging and is subject to a 15% restocking fee. Custom equipment or tubing cut to a requested length cannot be returned for credit. All products will be returned freight prepaid to sellers facility.

Invoice To: _____ Ship To: _____

_____ _____

_____ _____

_____ Attn: _____

REQUESTED DELIVERY DATE: ____ / ____ / 2019 Amount Approved: $ _____

Accepted by: _____ PO Number: _____

Print Name: _____ Company: _____

Title: _____ Date: _____

[__] Check box if this order is necessary to your (or another contractors) contract with the federal government.

To place an order, complete the above section and email to: info@qedenv.com (or fax to: 734-995-1170). Please note that a hard copy of your PO may be required or pay with credit card if you do not have terms with QED before shipment.

If you are going to use a credit card please call us and provide that information and reference the quote number.

When placing orders, please make paperwork out to: QED Environmental Systems, Inc.

Mailing Address:	Remit To Address:
PO Box 3726	PO Box 935668
Ann Arbor, MI, 48106	Atlanta, GA 31193-5668

Quote #: R42146
Quote Date: 03/11/2020
Site Reference: MP20
PO:

Prepared For:
Todd Chinn
402-787-5256
tachinn@nppd.com

Represented By:
Bill Reetz
785-764-1674
bill@abetterearthllc.com
CSR - Cameron Slem
cslem@qedenv.com

Bill To:
NEBRASKA PUBLIC POWER DISTRICT
PO BOX 1740

COLUMBUS, NE 68602-1740

Ship To:
NEBRASKA PUBLIC POWER DISTRICT
4500 WEST PELLA RD
SHELDON STATION
HALLAM, NE 68368
USA

Device #1 MP20 Serial # 24541

Evaluation:
Replaced DO membrane and solution. Replaced pH solution and pellets. DO and conductivity calibrate. pH fails cal. Remove and give sensor a deep clean. When putting back, the red wire from cable to board came loose from the connector. Secured wire with a dab of solder. Replace sensor, refurb and test. pH calibrates now. The circulator works. No flow cell, maintenance items or accessories in case.

No Warranty Coverage

Qty	Item	Description	Unit Price	Extended Price
1.50		FLOW CELL-REPAIR LABOR	$90.00	$135.00
			Labor Total:	**$135.00**
			Parts Total:	**$0.00**
			Device Total:	**$135.00**
			Sales Total:	**$135.00**
			Overall Total:	**$135.00**

SHIPPING TERMS:
If Shipping and Handling charges have been included these are estimated only. If no amount is shown, this does not indicate that that there are no shipping charges only that there were none estimated. Please note that this amount is only an estimate and is subject to change based on dimensional size / weight requirements of freight carriers and any applicable fuel surcharges. This amount is only intended to provide a general cost estimate as your actual costs may be higher or lower. Price does not include any duties, taxes or other costs associated with government regulations.

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Invoice To: _____ Ship To: _____

_____ _____

_____ _____

_____ Attn: _____

REQUESTED DELIVERY DATE: ____ / ____ / 2020 Amount Approved: $ _____

Accepted by: _____ PO Number: _____

Print Name: _____ Company: _____

Title: _____ Date: _____

To place an order, complete the above section and email to: info@qedenv.com (or fax to: 734-995-1170). Please note that a hard copy of your PO may be required or pay with credit card if you do not have terms with QED before shipment.

If you are going to use a credit card please call us and provide that information and reference the quote number.

When placing orders, please make paperwork out to: QED Environmental Systems, Inc.

Mailing Address:	Remit To Address:
PO Box 3726	PO Box 935668
Ann Arbor, MI, 48106	Atlanta, GA 31193-5668

Quote #: R42988
Quote Date: 06/18/2020
Site Reference: MP20
PO:

Prepared For:
Patricia Novak
402-787-5239
panovak@nppd.com

Represented By:
Bill Reetz
785-764-1674
bill@abetterearthllc.com
CSR - Aaron Lehman
alehman@qedenv.com

Bill To:
NEBRASKA PUBLIC POWER DISTRICT
PO BOX 1740

COLUMBUS, NE 68602-1740

Ship To:
NEBRASKA PUBLIC POWER DISTRICT
4500 WEST PELLA RD
SHELDON STATION
HALLAM, NE 68368
USA

Device #1 MP20 Serial # MP20-25451

Evaluation:
Conductivity and DO calibrate fine. Calibrated pH in 7 buffer and it fairly quickly drifted out of range high. Remove sensor and clean. Reinstall and test. All sensors calibrate, circulator works. Passed stabilization.

No Warranty Coverage

Qty	Item	Description	Unit Price	Extended Price
1.50		FLOW CELL-REPAIR LABOR	$90.00	$135.00
			Labor Total:	**$135.00**
			Parts Total:	**$0.00**
			Device Total:	**$135.00**
			Sales Total:	**$135.00**
			Overall Total:	**$135.00**

SHIPPING TERMS:
If Shipping and Handling charges have been included these are estimated only. If no amount is shown, this does not indicate that that there are no shipping charges only that there were none estimated. Please note that this amount is only an estimate and is subject to change based on dimensional size / weight requirements of freight carriers and any applicable fuel surcharges. This amount is only intended to provide a general cost estimate as your actual costs may be higher or lower. Price does not include any duties, taxes or other costs associated with government regulations.

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subject to a 15% restocking fee. Custom equipment or tubing cut to a requested length cannot be returned for credit. All products will be returned freight prepaid to sellers facility.

Invoice To: _____ Ship To: _____

_____ _____

_____ _____

_____ Attn: _____

REQUESTED DELIVERY DATE: ____ / ____ / 2020 Amount Approved: $ _____

Accepted by: _____ PO Number: _____

Print Name: _____ Company: _____

Title: _____ Date: _____

To place an order, complete the above section and email to: info@qedenv.com (or fax to: 734-995-1170). Please note that a hard copy of your PO may be required or pay with credit card if you do not have terms with QED before shipment.

If you are going to use a credit card please call us and provide that information and reference the quote number.

When placing orders, please make paperwork out to: QED Environmental Systems, Inc.

Mailing Address:
PO Box 3726
Ann Arbor, MI, 48106

Remit To Address:
PO Box 935668
Atlanta, GA 31193-5668

golder.com

APPENDIX B

Addendum to Q1 2020 ASD - Additional Analytical Data Collected in Support of ASD

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 310-183200-1
Client Project/Site: Sheldon Station Ash Landfill #4 CCR

For:
Nebraska Public Power District
4500 West Pella Road
Hallam, Nebraska 68368

Attn: Todd A. Chinn

Authorized for release by:
6/11/2020 9:55:25 AM

Shawn Hayes, Senior Project Manager
(319)229-8211
shawn.hayes@testamericainc.com

Table of Contents

Job ID: 310-183200-1

Laboratory: Eurofins TestAmerica, Cedar Falls

Narrative

Job Narrative
310-183200-1

Comments
No additional comments.

Receipt
The samples were received on 6/4/2020 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperatures of the 4 coolers at receipt time were 0.9º C, 4.6º C, 5.3º C and 5.7º C.

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

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

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

Sample Summary

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
310-183200-1	AP4-MW1	Ground Water	06/02/20 08:21	06/04/20 10:30	
310-183200-2	AP4-MW2	Ground Water	06/02/20 09:18	06/04/20 10:30	
310-183200-3	AP4-MW3	Ground Water	06/02/20 10:10	06/04/20 10:30	
310-183200-4	AP4-MW4	Ground Water	06/02/20 11:28	06/04/20 10:30	
310-183200-5	AP4-MW5	Ground Water	06/02/20 15:06	06/04/20 10:30	
310-183200-6	AP4-MW6	Ground Water	06/02/20 13:49	06/04/20 10:30	
310-183200-7	AP4-MW7	Ground Water	06/02/20 12:15	06/04/20 10:30	
310-183200-8	AP4-MW Blind Duplicate	Ground Water	06/02/20 00:00	06/04/20 10:30	
310-183200-9	Evaporation Pond	Ground Water	06/02/20 16:13	06/04/20 10:30	
310-183200-10	Leacheate Collection Sump	Ground Water	06/02/20 16:25	06/04/20 10:30	
310-183200-11	Underdrain Sump	Ground Water	06/02/20 16:36	06/04/20 10:30	
310-183200-12	Interceptor Trench	Ground Water	06/02/20 16:49	06/04/20 10:30	

Detection Summary

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Client Sample ID: AP4-MW1 — Lab Sample ID: 310-183200-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.0		5.00		mg/L	5		9056A	Total/NA
Sulfate	37.1		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.651		0.500		mg/L	5		9056A	Total/NA
Barium	0.278		0.00200		mg/L	1		6020A	Total/NA
Boron	0.103		0.100		mg/L	1		6020A	Total/NA
Calcium	92.2		0.500		mg/L	1		6020A	Total/NA
Lithium	0.0354		0.0100		mg/L	1		6020A	Total/NA
Magnesium	22.6		0.500		mg/L	1		6020A	Total/NA
Molybdenum	0.00378		0.00200		mg/L	1		6020A	Total/NA
Potassium	1.62		0.500		mg/L	1		6020A	Total/NA
Selenium	0.0140		0.00500		mg/L	1		6020A	Total/NA
Sodium	45.9		1.00		mg/L	1		6020A	Total/NA
Nitrate Nitrite as N	3.39		0.100		mg/L	1		353.2	Total/NA
Alkalinity as CaCO3 to pH 4.5	352		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	352		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	440		30.0		mg/L	1		SM 2540C	Total/NA
pH	7.1	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Nitrogen, Total	3.39		1.00		mg/L	1		Total Nitrogen	Total/NA
Silica (SiO2), molybdate-reactive	26.8		2.00		mg/L	1		SM4500 SiO2 C	Dissolved

Client Sample ID: AP4-MW2 — Lab Sample ID: 310-183200-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	109		5.00		mg/L	5		9056A	Total/NA
Sulfate	887		10.0		mg/L	10		9056A	Total/NA
Fluoride	0.548		0.500		mg/L	5		9056A	Total/NA
Barium	0.0188		0.00200		mg/L	1		6020A	Total/NA
Boron	0.108		0.100		mg/L	1		6020A	Total/NA
Cadmium	0.000135		0.000100		mg/L	1		6020A	Total/NA
Calcium	275		0.500		mg/L	1		6020A	Total/NA
Lithium	0.0581		0.0100		mg/L	1		6020A	Total/NA
Magnesium	87.0		0.500		mg/L	1		6020A	Total/NA
Molybdenum	0.00510		0.00200		mg/L	1		6020A	Total/NA
Potassium	4.40		0.500		mg/L	1		6020A	Total/NA
Selenium	0.637		0.0200		mg/L	4		6020A	Total/NA
Sodium	87.9		1.00		mg/L	1		6020A	Total/NA
Nitrate Nitrite as N	5.45		1.00		mg/L	10		353.2	Total/NA
Alkalinity as CaCO3 to pH 4.5	238		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	238		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	1690		150		mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Nitrogen, Total	5.45		1.00		mg/L	1		Total Nitrogen	Total/NA
Silica (SiO2), molybdate-reactive	29.7		2.00		mg/L	1		SM4500 SiO2 C	Dissolved

Client Sample ID: AP4-MW3 — Lab Sample ID: 310-183200-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	31.0		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.12		0.500		mg/L	5		9056A	Total/NA
Barium	0.226		0.00200		mg/L	1		6020A	Total/NA
Calcium	82.5		0.500		mg/L	1		6020A	Total/NA
Lithium	0.0342		0.0100		mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: AP4-MW3 (Continued)
Lab Sample ID: 310-183200-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	24.9		0.500		mg/L	1		6020A	Total/NA
Molybdenum	0.00847		0.00200		mg/L	1		6020A	Total/NA
Potassium	2.58		0.500		mg/L	1		6020A	Total/NA
Selenium	0.0117		0.00500		mg/L	1		6020A	Total/NA
Sodium	14.0		1.00		mg/L	1		6020A	Total/NA
Nitrate Nitrite as N	5.17		1.00		mg/L	10		353.2	Total/NA
Alkalinity as CaCO3 to pH 4.5	309		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	309		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	376		30.0		mg/L	1		SM 2540C	Total/NA
pH	7.5	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Nitrogen, Total	5.17		1.00		mg/L	1		Total Nitrogen	Total/NA
Silica (SiO2), molybdate-reactive	27.1		2.00		mg/L	1		SM4500 SiO2 C	Dissolved

Client Sample ID: AP4-MW4
Lab Sample ID: 310-183200-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	74.5		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.968		0.500		mg/L	5		9056A	Total/NA
Barium	0.146		0.00200		mg/L	1		6020A	Total/NA
Calcium	98.9		0.500		mg/L	1		6020A	Total/NA
Lithium	0.0342		0.0100		mg/L	1		6020A	Total/NA
Magnesium	25.6		0.500		mg/L	1		6020A	Total/NA
Molybdenum	0.00505		0.00200		mg/L	1		6020A	Total/NA
Potassium	2.17		0.500		mg/L	1		6020A	Total/NA
Selenium	0.0174		0.00500		mg/L	1		6020A	Total/NA
Sodium	19.5		1.00		mg/L	1		6020A	Total/NA
Nitrate Nitrite as N	6.08		1.00		mg/L	10		353.2	Total/NA
Alkalinity as CaCO3 to pH 4.5	323		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	323		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	496		30.0		mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Nitrogen, Total	6.08		1.00		mg/L	1		Total Nitrogen	Total/NA
Silica (SiO2), molybdate-reactive	25.4		2.00		mg/L	1		SM4500 SiO2 C	Dissolved

Client Sample ID: AP4-MW5
Lab Sample ID: 310-183200-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	537		10.0		mg/L	10		9056A	Total/NA
Fluoride	0.515		0.500		mg/L	5		9056A	Total/NA
Barium	0.0150		0.00200		mg/L	1		6020A	Total/NA
Boron	0.123		0.100		mg/L	1		6020A	Total/NA
Calcium	163		0.500		mg/L	1		6020A	Total/NA
Lithium	0.0668		0.0100		mg/L	1		6020A	Total/NA
Magnesium	37.9		0.500		mg/L	1		6020A	Total/NA
Molybdenum	0.00494		0.00200		mg/L	1		6020A	Total/NA
Potassium	5.16		0.500		mg/L	1		6020A	Total/NA
Selenium	0.0309		0.00500		mg/L	1		6020A	Total/NA
Sodium	106		1.00		mg/L	1		6020A	Total/NA
Nitrate Nitrite as N	2.03		0.100		mg/L	1		353.2	Total/NA
Alkalinity as CaCO3 to pH 4.5	290		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	290		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	1080		150		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: AP4-MW5 (Continued)
Lab Sample ID: 310-183200-5

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.2	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Nitrogen, Total	2.03		1.00		mg/L	1		Total Nitrogen	Total/NA
Silica (SiO2), molybdate-reactive	24.0		2.00		mg/L	1		SM4500 SiO2 C	Dissolved

Client Sample ID: AP4-MW6
Lab Sample ID: 310-183200-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	49.6		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.81		0.500		mg/L	5		9056A	Total/NA
Barium	0.0641		0.00200		mg/L	1		6020A	Total/NA
Boron	0.110		0.100		mg/L	1		6020A	Total/NA
Calcium	94.7		0.500		mg/L	1		6020A	Total/NA
Lithium	0.0369		0.0100		mg/L	1		6020A	Total/NA
Magnesium	24.9		0.500		mg/L	1		6020A	Total/NA
Molybdenum	0.00402		0.00200		mg/L	1		6020A	Total/NA
Potassium	2.15		0.500		mg/L	1		6020A	Total/NA
Selenium	0.00978		0.00500		mg/L	1		6020A	Total/NA
Sodium	18.4		1.00		mg/L	1		6020A	Total/NA
Nitrate Nitrite as N	3.76		0.100		mg/L	1		353.2	Total/NA
Alkalinity as CaCO3 to pH 4.5	337		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	337		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	426		30.0		mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Nitrogen, Total	3.76		1.00		mg/L	1		Total Nitrogen	Total/NA
Silica (SiO2), molybdate-reactive	26.3		2.00		mg/L	1		SM4500 SiO2 C	Dissolved

Client Sample ID: AP4-MW7
Lab Sample ID: 310-183200-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12.1		5.00		mg/L	5		9056A	Total/NA
Sulfate	52.5		5.00		mg/L	5		9056A	Total/NA
Barium	0.151		0.00200		mg/L	1		6020A	Total/NA
Cadmium	0.000131		0.000100		mg/L	1		6020A	Total/NA
Calcium	66.9		0.500		mg/L	1		6020A	Total/NA
Lithium	0.0296		0.0100		mg/L	1		6020A	Total/NA
Magnesium	19.8		0.500		mg/L	1		6020A	Total/NA
Molybdenum	0.00764		0.00200		mg/L	1		6020A	Total/NA
Potassium	2.15		0.500		mg/L	1		6020A	Total/NA
Selenium	0.00828		0.00500		mg/L	1		6020A	Total/NA
Sodium	96.4		1.00		mg/L	1		6020A	Total/NA
Total Kjeldahl Nitrogen	1.19		1.00		mg/L	1		351.2	Total/NA
Nitrate Nitrite as N	16.4		10.0		mg/L	100		353.2	Total/NA
Alkalinity as CaCO3 to pH 4.5	326		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	326		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	536		30.0		mg/L	1		SM 2540C	Total/NA
pH	7.4	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Nitrogen, Total	17.6		1.00		mg/L	1		Total Nitrogen	Total/NA
Silica (SiO2), molybdate-reactive	27.2		2.00		mg/L	1		SM4500 SiO2 C	Dissolved

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Client Sample ID: AP4-MW Blind Duplicate — Lab Sample ID: 310-183200-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13.5		5.00		mg/L	5		9056A	Total/NA
Sulfate	55.4		5.00		mg/L	5		9056A	Total/NA
Barium	0.143		0.00200		mg/L	1		6020A	Total/NA
Cadmium	0.000192		0.000100		mg/L	1		6020A	Total/NA
Calcium	63.4		0.500		mg/L	1		6020A	Total/NA
Lithium	0.0277		0.0100		mg/L	1		6020A	Total/NA
Magnesium	18.6		0.500		mg/L	1		6020A	Total/NA
Molybdenum	0.00749		0.00200		mg/L	1		6020A	Total/NA
Potassium	1.93		0.500		mg/L	1		6020A	Total/NA
Selenium	0.00876		0.00500		mg/L	1		6020A	Total/NA
Sodium	98.4		1.00		mg/L	1		6020A	Total/NA
Total Kjeldahl Nitrogen	1.01		1.00		mg/L	1		351.2	Total/NA
Nitrate Nitrite as N	14.9		10.0		mg/L	100		353.2	Total/NA
Alkalinity as CaCO3 to pH 4.5	336		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	336		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	536		30.0		mg/L	1		SM 2540C	Total/NA
pH	7.5	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Nitrogen, Total	15.9		1.00		mg/L	1		Total Nitrogen	Total/NA
Silica (SiO2), molybdate-reactive	26.8		2.00		mg/L	1		SM4500 SiO2 C	Dissolved

Client Sample ID: Evaporation Pond — Lab Sample ID: 310-183200-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	70.5		5.00		mg/L	5		9056A	Total/NA
Sulfate	1320		20.0		mg/L	20		9056A	Total/NA
Fluoride	2.37		0.500		mg/L	5		9056A	Total/NA
Barium	0.0468		0.00200		mg/L	1		6020A	Total/NA
Boron	4.06		0.100		mg/L	1		6020A	Total/NA
Cadmium	0.000150		0.000100		mg/L	1		6020A	Total/NA
Calcium	55.0		0.500		mg/L	1		6020A	Total/NA
Magnesium	7.95		0.500		mg/L	1		6020A	Total/NA
Molybdenum	0.430		0.00200		mg/L	1		6020A	Total/NA
Potassium	35.6		0.500		mg/L	1		6020A	Total/NA
Selenium	0.0140		0.00500		mg/L	1		6020A	Total/NA
Sodium	535		4.00		mg/L	4		6020A	Total/NA
Total Kjeldahl Nitrogen	1.09		1.00		mg/L	1		351.2	Total/NA
Alkalinity as CaCO3 to pH 4.5	109		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	99.3		5.00		mg/L	1		SM 2320B	Total/NA
Carbonate Alkalinity as CaCO3	9.46		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	2160		150		mg/L	1		SM 2540C	Total/NA
pH	8.8	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Nitrogen, Total	1.09		1.00		mg/L	1		Total Nitrogen	Total/NA

Client Sample ID: Leacheate Collection Sump — Lab Sample ID: 310-183200-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	42.0		5.00		mg/L	5		9056A	Total/NA
Sulfate	1180		20.0		mg/L	20		9056A	Total/NA
Fluoride	3.66		0.500		mg/L	5		9056A	Total/NA
Antimony	0.00216		0.00100		mg/L	1		6020A	Total/NA
Barium	0.0586		0.00200		mg/L	1		6020A	Total/NA
Boron	6.49		0.400		mg/L	4		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: Leacheate Collection Sump (Continued)
Lab Sample ID: 310-183200-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.000267		0.000100		mg/L	1		6020A	Total/NA
Calcium	53.9		0.500		mg/L	1		6020A	Total/NA
Chromium	0.0378		0.00500		mg/L	1		6020A	Total/NA
Magnesium	5.25		0.500		mg/L	1		6020A	Total/NA
Molybdenum	0.608		0.00200		mg/L	1		6020A	Total/NA
Potassium	49.7		0.500		mg/L	1		6020A	Total/NA
Selenium	0.0632		0.00500		mg/L	1		6020A	Total/NA
Sodium	501		4.00		mg/L	4		6020A	Total/NA
Alkalinity as CaCO3 to pH 4.5	94.6		10.0		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	56.8		10.0		mg/L	1		SM 2320B	Total/NA
Carbonate Alkalinity as CaCO3	37.8		10.0		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	1930		150		mg/L	1		SM 2540C	Total/NA
pH	9.3	HF	0.1		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: Underdrain Sump
Lab Sample ID: 310-183200-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	67.6		5.00		mg/L	5		9056A	Total/NA
Sulfate	832		10.0		mg/L	10		9056A	Total/NA
Fluoride	0.833		0.500		mg/L	5		9056A	Total/NA
Arsenic	0.00203		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0180		0.00200		mg/L	1		6020A	Total/NA
Boron	0.302		0.100		mg/L	1		6020A	Total/NA
Cadmium	0.000159		0.000100		mg/L	1		6020A	Total/NA
Calcium	317		0.500		mg/L	1		6020A	Total/NA
Cobalt	0.00306		0.000500		mg/L	1		6020A	Total/NA
Lithium	0.124		0.0100		mg/L	1		6020A	Total/NA
Magnesium	84.0		0.500		mg/L	1		6020A	Total/NA
Molybdenum	0.190		0.00200		mg/L	1		6020A	Total/NA
Potassium	9.72		0.500		mg/L	1		6020A	Total/NA
Selenium	0.0154		0.00500		mg/L	1		6020A	Total/NA
Sodium	59.5		1.00		mg/L	1		6020A	Total/NA
Nitrate Nitrite as N	0.249		0.100		mg/L	1		353.2	Total/NA
Alkalinity as CaCO3 to pH 4.5	361		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	361		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	1720		150		mg/L	1		SM 2540C	Total/NA
pH	6.9	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Silica (SiO2), molybdate-reactive	25.8		2.00		mg/L	1		SM4500 SiO2 C	Dissolved

Client Sample ID: Interceptor Trench
Lab Sample ID: 310-183200-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	27.2		5.00		mg/L	5		9056A	Total/NA
Sulfate	151		5.00		mg/L	5		9056A	Total/NA
Fluoride	0.707		0.500		mg/L	5		9056A	Total/NA
Antimony	0.00294		0.00100		mg/L	1		6020A	Total/NA
Arsenic	0.00238		0.00200		mg/L	1		6020A	Total/NA
Barium	0.0484		0.00200		mg/L	1		6020A	Total/NA
Boron	0.165		0.100		mg/L	1		6020A	Total/NA
Calcium	117		0.500		mg/L	1		6020A	Total/NA
Cobalt	0.000676		0.000500		mg/L	1		6020A	Total/NA
Lithium	0.0614		0.0100		mg/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: Interceptor Trench (Continued)
Lab Sample ID: 310-183200-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	36.4		0.500		mg/L	1		6020A	Total/NA
Molybdenum	0.206		0.00200		mg/L	1		6020A	Total/NA
Potassium	5.16		0.500		mg/L	1		6020A	Total/NA
Sodium	38.2		1.00		mg/L	1		6020A	Total/NA
Alkalinity as CaCO3 to pH 4.5	295		5.00		mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	295		5.00		mg/L	1		SM 2320B	Total/NA
Total Dissolved Solids	616		30.0		mg/L	1		SM 2540C	Total/NA
pH	7.1	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Silica (SiO2), molybdate-reactive	23.8		2.00		mg/L	1		SM4500 SiO2 C	Dissolved

This Detection Summary does not include radiochemical test results.

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Client Sample ID: AP4-MW1
Lab Sample ID: 310-183200-1

Date Collected: 06/02/20 08:21
Matrix: Ground Water

Date Received: 06/04/20 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10.0**		5.00		mg/L			06/08/20 09:32	5
Sulfate	**37.1**		5.00		mg/L			06/08/20 09:32	5
Fluoride	**0.651**		0.500		mg/L			06/08/20 09:32	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:02	1
Arsenic	<0.00200		0.00200		mg/L		06/05/20 08:16	06/08/20 16:02	1
Barium	**0.278**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:02	1
Beryllium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:02	1
Boron	**0.103**		0.100		mg/L		06/05/20 08:16	06/08/20 16:02	1
Cadmium	<0.000100		0.000100		mg/L		06/05/20 08:16	06/08/20 16:02	1
Calcium	**92.2**		0.500		mg/L		06/05/20 08:16	06/08/20 16:02	1
Chromium	<0.00500		0.00500		mg/L		06/05/20 08:16	06/08/20 16:02	1
Cobalt	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:02	1
Lead	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:02	1
Lithium	**0.0354**		0.0100		mg/L		06/05/20 08:16	06/08/20 16:02	1
Magnesium	**22.6**		0.500		mg/L		06/05/20 08:16	06/08/20 16:02	1
Molybdenum	**0.00378**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:02	1
Potassium	**1.62**		0.500		mg/L		06/05/20 08:16	06/08/20 16:02	1
Selenium	**0.0140**		0.00500		mg/L		06/05/20 08:16	06/08/20 16:02	1
Sodium	**45.9**		1.00		mg/L		06/05/20 08:16	06/08/20 16:02	1
Thallium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:02	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/04/20 14:11	06/04/20 20:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500		mg/L		06/04/20 22:41	06/05/20 18:47	1
Total Kjeldahl Nitrogen	<1.00		1.00		mg/L		06/08/20 08:20	06/08/20 21:08	1
Nitrate Nitrite as N	**3.39**		0.100		mg/L			06/08/20 17:28	1
Phosphate as PO4	<0.310		0.310		mg/L		06/05/20 07:23	06/05/20 19:38	1
Alkalinity as CaCO3 to pH 4.5	**352**		5.00		mg/L			06/05/20 09:22	1
Bicarbonate Alkalinity as CaCO3	**352**		5.00		mg/L			06/05/20 09:22	1
Carbonate Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Hydroxide Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Total Dissolved Solids	**440**		30.0		mg/L			06/04/20 15:49	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.1**	**HF**	0.1		SU			06/04/20 15:03	1
Nitrogen, Total	**3.39**		1.00		mg/L			06/05/20 07:41	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silica (SiO2), molybdate-reactive	**26.8**		2.00		mg/L			06/09/20 14:08	1

Client Sample ID: AP4-MW2
Lab Sample ID: 310-183200-2
Date Collected: 06/02/20 09:18
Matrix: Ground Water
Date Received: 06/04/20 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**109**		5.00		mg/L			06/08/20 10:19	5
Sulfate	**887**		10.0		mg/L			06/08/20 16:34	10
Fluoride	**0.548**		0.500		mg/L			06/08/20 10:19	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:04	1
Arsenic	<0.00200		0.00200		mg/L		06/05/20 08:16	06/08/20 16:04	1
Barium	**0.0188**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:04	1
Beryllium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:04	1
Boron	**0.108**		0.100		mg/L		06/05/20 08:16	06/08/20 16:04	1
Cadmium	**0.000135**		0.000100		mg/L		06/05/20 08:16	06/08/20 16:04	1
Calcium	**275**		0.500		mg/L		06/05/20 08:16	06/08/20 16:04	1
Chromium	<0.00500		0.00500		mg/L		06/05/20 08:16	06/08/20 16:04	1
Cobalt	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:04	1
Lead	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:04	1
Lithium	**0.0581**		0.0100		mg/L		06/05/20 08:16	06/08/20 16:04	1
Magnesium	**87.0**		0.500		mg/L		06/05/20 08:16	06/08/20 16:04	1
Molybdenum	**0.00510**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:04	1
Potassium	**4.40**		0.500		mg/L		06/05/20 08:16	06/08/20 16:04	1
Selenium	**0.637**		0.0200		mg/L		06/05/20 08:16	06/09/20 11:32	4
Sodium	**87.9**		1.00		mg/L		06/05/20 08:16	06/08/20 16:04	1
Thallium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:04	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/04/20 14:11	06/04/20 20:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500		mg/L		06/04/20 22:38	06/05/20 18:44	1
Total Kjeldahl Nitrogen	<1.00		1.00		mg/L		06/08/20 08:20	06/08/20 20:59	1
Nitrate Nitrite as N	**5.45**		1.00		mg/L			06/08/20 17:29	10
Phosphate as PO4	<0.310		0.310		mg/L		06/05/20 07:23	06/05/20 19:39	1
Alkalinity as CaCO3 to pH 4.5	**238**		5.00		mg/L			06/05/20 09:22	1
Bicarbonate Alkalinity as CaCO3	**238**		5.00		mg/L			06/05/20 09:22	1
Carbonate Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Hydroxide Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Total Dissolved Solids	**1690**		150		mg/L			06/04/20 15:49	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.2**	**HF**	0.1		SU			06/04/20 15:07	1
Nitrogen, Total	**5.45**		1.00		mg/L			06/05/20 07:41	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silica (SiO2), molybdate-reactive	**29.7**		2.00		mg/L			06/09/20 14:08	1

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Client Sample ID: AP4-MW3
Lab Sample ID: 310-183200-3
Date Collected: 06/02/20 10:10
Matrix: Ground Water
Date Received: 06/04/20 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/08/20 10:35	5
Sulfate	**31.0**		5.00		mg/L			06/08/20 10:35	5
Fluoride	**1.12**		0.500		mg/L			06/08/20 10:35	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:07	1
Arsenic	<0.00200		0.00200		mg/L		06/05/20 08:16	06/08/20 16:07	1
Barium	**0.226**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:07	1
Beryllium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:07	1
Boron	<0.100		0.100		mg/L		06/05/20 08:16	06/08/20 16:07	1
Cadmium	<0.000100		0.000100		mg/L		06/05/20 08:16	06/08/20 16:07	1
Calcium	**82.5**		0.500		mg/L		06/05/20 08:16	06/08/20 16:07	1
Chromium	<0.00500		0.00500		mg/L		06/05/20 08:16	06/08/20 16:07	1
Cobalt	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:07	1
Lead	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:07	1
Lithium	**0.0342**		0.0100		mg/L		06/05/20 08:16	06/08/20 16:07	1
Magnesium	**24.9**		0.500		mg/L		06/05/20 08:16	06/08/20 16:07	1
Molybdenum	**0.00847**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:07	1
Potassium	**2.58**		0.500		mg/L		06/05/20 08:16	06/08/20 16:07	1
Selenium	**0.0117**		0.00500		mg/L		06/05/20 08:16	06/08/20 16:07	1
Sodium	**14.0**		1.00		mg/L		06/05/20 08:16	06/08/20 16:07	1
Thallium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:07	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/04/20 14:11	06/04/20 20:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500		mg/L		06/04/20 22:38	06/05/20 18:43	1
Total Kjeldahl Nitrogen	<1.00		1.00		mg/L		06/08/20 08:20	06/08/20 20:54	1
Nitrate Nitrite as N	**5.17**		1.00		mg/L			06/08/20 17:31	10
Phosphate as PO4	<0.310		0.310		mg/L		06/05/20 07:23	06/05/20 19:37	1
Alkalinity as CaCO3 to pH 4.5	**309**		5.00		mg/L			06/05/20 09:22	1
Bicarbonate Alkalinity as CaCO3	**309**		5.00		mg/L			06/05/20 09:22	1
Carbonate Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Hydroxide Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Total Dissolved Solids	**376**		30.0		mg/L			06/04/20 15:49	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.5**	**HF**	0.1		SU			06/04/20 15:16	1
Nitrogen, Total	**5.17**		1.00		mg/L			06/05/20 07:41	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silica (SiO2), molybdate-reactive	**27.1**		2.00		mg/L			06/09/20 14:08	1

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Client Sample ID: AP4-MW4
Lab Sample ID: 310-183200-4

Date Collected: 06/02/20 11:28
Matrix: Ground Water

Date Received: 06/04/20 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/08/20 10:50	5
Sulfate	**74.5**		5.00		mg/L			06/08/20 10:50	5
Fluoride	**0.968**		0.500		mg/L			06/08/20 10:50	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:10	1
Arsenic	<0.00200		0.00200		mg/L		06/05/20 08:16	06/08/20 16:10	1
Barium	**0.146**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:10	1
Beryllium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:10	1
Boron	<0.100		0.100		mg/L		06/05/20 08:16	06/08/20 16:10	1
Cadmium	<0.000100		0.000100		mg/L		06/05/20 08:16	06/08/20 16:10	1
Calcium	**98.9**		0.500		mg/L		06/05/20 08:16	06/08/20 16:10	1
Chromium	<0.00500		0.00500		mg/L		06/05/20 08:16	06/08/20 16:10	1
Cobalt	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:10	1
Lead	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:10	1
Lithium	**0.0342**		0.0100		mg/L		06/05/20 08:16	06/08/20 16:10	1
Magnesium	**25.6**		0.500		mg/L		06/05/20 08:16	06/08/20 16:10	1
Molybdenum	**0.00505**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:10	1
Potassium	**2.17**		0.500		mg/L		06/05/20 08:16	06/08/20 16:10	1
Selenium	**0.0174**		0.00500		mg/L		06/05/20 08:16	06/08/20 16:10	1
Sodium	**19.5**		1.00		mg/L		06/05/20 08:16	06/08/20 16:10	1
Thallium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:10	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/04/20 14:11	06/04/20 20:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500		mg/L		06/04/20 22:38	06/05/20 18:41	1
Total Kjeldahl Nitrogen	<1.00		1.00		mg/L		06/08/20 08:20	06/08/20 20:53	1
Nitrate Nitrite as N	**6.08**		1.00		mg/L			06/08/20 17:32	10
Phosphate as PO4	<0.310		0.310		mg/L		06/05/20 07:23	06/05/20 19:41	1
Alkalinity as CaCO3 to pH 4.5	**323**		5.00		mg/L			06/05/20 09:22	1
Bicarbonate Alkalinity as CaCO3	**323**		5.00		mg/L			06/05/20 09:22	1
Carbonate Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Hydroxide Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Total Dissolved Solids	**496**		30.0		mg/L			06/04/20 15:49	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.2**	**HF**	0.1		SU			06/04/20 15:17	1
Nitrogen, Total	**6.08**		1.00		mg/L			06/05/20 07:41	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silica (SiO2), molybdate-reactive	**25.4**		2.00		mg/L			06/09/20 14:08	1

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Client Sample ID: AP4-MW5
Lab Sample ID: 310-183200-5

Date Collected: 06/02/20 15:06
Matrix: Ground Water

Date Received: 06/04/20 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/08/20 11:06	5
Sulfate	**537**		10.0		mg/L			06/08/20 16:50	10
Fluoride	**0.515**		0.500		mg/L			06/08/20 11:06	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:20	1
Arsenic	<0.00200		0.00200		mg/L		06/05/20 08:16	06/08/20 16:20	1
Barium	**0.0150**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:20	1
Beryllium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:20	1
Boron	**0.123**		0.100		mg/L		06/05/20 08:16	06/08/20 16:20	1
Cadmium	<0.000100		0.000100		mg/L		06/05/20 08:16	06/08/20 16:20	1
Calcium	**163**		0.500		mg/L		06/05/20 08:16	06/08/20 16:20	1
Chromium	<0.00500		0.00500		mg/L		06/05/20 08:16	06/08/20 16:20	1
Cobalt	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:20	1
Lead	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:20	1
Lithium	**0.0668**		0.0100		mg/L		06/05/20 08:16	06/08/20 16:20	1
Magnesium	**37.9**		0.500		mg/L		06/05/20 08:16	06/08/20 16:20	1
Molybdenum	**0.00494**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:20	1
Potassium	**5.16**		0.500		mg/L		06/05/20 08:16	06/08/20 16:20	1
Selenium	**0.0309**		0.00500		mg/L		06/05/20 08:16	06/08/20 16:20	1
Sodium	**106**		1.00		mg/L		06/05/20 08:16	06/08/20 16:20	1
Thallium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:20	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/04/20 14:11	06/04/20 20:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500		mg/L		06/04/20 22:38	06/05/20 18:40	1
Total Kjeldahl Nitrogen	<1.00		1.00		mg/L		06/08/20 08:20	06/08/20 20:55	1
Nitrate Nitrite as N	**2.03**		0.100		mg/L			06/08/20 17:33	1
Phosphate as PO4	<0.310		0.310		mg/L		06/05/20 07:23	06/05/20 19:29	1
Alkalinity as CaCO3 to pH 4.5	**290**		5.00		mg/L			06/05/20 09:22	1
Bicarbonate Alkalinity as CaCO3	**290**		5.00		mg/L			06/05/20 09:22	1
Carbonate Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Hydroxide Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Total Dissolved Solids	**1080**		150		mg/L			06/04/20 15:49	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.2**	**HF**	0.1		SU			06/04/20 15:17	1
Nitrogen, Total	**2.03**		1.00		mg/L			06/05/20 07:41	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silica (SiO2), molybdate-reactive	**24.0**		2.00		mg/L			06/09/20 14:08	1

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Client Sample ID: AP4-MW6
Lab Sample ID: 310-183200-6

Date Collected: 06/02/20 13:49
Matrix: Ground Water
Date Received: 06/04/20 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			06/08/20 11:22	5
Sulfate	**49.6**		5.00		mg/L			06/08/20 11:22	5
Fluoride	**1.81**		0.500		mg/L			06/08/20 11:22	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:23	1
Arsenic	<0.00200		0.00200		mg/L		06/05/20 08:16	06/08/20 16:23	1
Barium	**0.0641**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:23	1
Beryllium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:23	1
Boron	**0.110**		0.100		mg/L		06/05/20 08:16	06/08/20 16:23	1
Cadmium	<0.000100		0.000100		mg/L		06/05/20 08:16	06/08/20 16:23	1
Calcium	**94.7**		0.500		mg/L		06/05/20 08:16	06/08/20 16:23	1
Chromium	<0.00500		0.00500		mg/L		06/05/20 08:16	06/08/20 16:23	1
Cobalt	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:23	1
Lead	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:23	1
Lithium	**0.0369**		0.0100		mg/L		06/05/20 08:16	06/08/20 16:23	1
Magnesium	**24.9**		0.500		mg/L		06/05/20 08:16	06/08/20 16:23	1
Molybdenum	**0.00402**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:23	1
Potassium	**2.15**		0.500		mg/L		06/05/20 08:16	06/08/20 16:23	1
Selenium	**0.00978**		0.00500		mg/L		06/05/20 08:16	06/08/20 16:23	1
Sodium	**18.4**		1.00		mg/L		06/05/20 08:16	06/08/20 16:23	1
Thallium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:23	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/04/20 14:11	06/04/20 20:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500		mg/L		06/04/20 22:38	06/05/20 18:39	1
Total Kjeldahl Nitrogen	<1.00		1.00		mg/L		06/08/20 08:20	06/08/20 21:07	1
Nitrate Nitrite as N	**3.76**		0.100		mg/L			06/08/20 17:34	1
Phosphate as PO4	<0.310		0.310		mg/L		06/05/20 07:23	06/05/20 19:40	1
Alkalinity as CaCO3 to pH 4.5	**337**		5.00		mg/L			06/05/20 09:22	1
Bicarbonate Alkalinity as CaCO3	**337**		5.00		mg/L			06/05/20 09:22	1
Carbonate Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Hydroxide Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Total Dissolved Solids	**426**		30.0		mg/L			06/04/20 15:49	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.2**	**HF**	0.1		SU			06/04/20 15:18	1
Nitrogen, Total	**3.76**		1.00		mg/L			06/05/20 07:41	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silica (SiO2), molybdate-reactive	**26.3**		2.00		mg/L			06/09/20 14:08	1

Client Sample ID: AP4-MW7
Lab Sample ID: 310-183200-7
Date Collected: 06/02/20 12:15
Matrix: Ground Water
Date Received: 06/04/20 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**12.1**		5.00		mg/L			06/08/20 12:09	5
Sulfate	**52.5**		5.00		mg/L			06/08/20 12:09	5
Fluoride	<0.500		0.500		mg/L			06/08/20 12:09	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:25	1
Arsenic	<0.00200		0.00200		mg/L		06/05/20 08:16	06/08/20 16:25	1
Barium	**0.151**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:25	1
Beryllium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:25	1
Boron	<0.100		0.100		mg/L		06/05/20 08:16	06/08/20 16:25	1
Cadmium	**0.000131**		0.000100		mg/L		06/05/20 08:16	06/08/20 16:25	1
Calcium	**66.9**		0.500		mg/L		06/05/20 08:16	06/08/20 16:25	1
Chromium	<0.00500		0.00500		mg/L		06/05/20 08:16	06/08/20 16:25	1
Cobalt	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:25	1
Lead	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:25	1
Lithium	**0.0296**		0.0100		mg/L		06/05/20 08:16	06/08/20 16:25	1
Magnesium	**19.8**		0.500		mg/L		06/05/20 08:16	06/08/20 16:25	1
Molybdenum	**0.00764**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:25	1
Potassium	**2.15**		0.500		mg/L		06/05/20 08:16	06/08/20 16:25	1
Selenium	**0.00828**		0.00500		mg/L		06/05/20 08:16	06/08/20 16:25	1
Sodium	**96.4**		1.00		mg/L		06/05/20 08:16	06/08/20 16:25	1
Thallium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:25	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/04/20 14:11	06/04/20 20:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500		mg/L		06/04/20 22:41	06/05/20 19:08	1
Total Kjeldahl Nitrogen	**1.19**		1.00		mg/L		06/08/20 08:20	06/08/20 20:59	1
Nitrate Nitrite as N	**16.4**		10.0		mg/L			06/08/20 18:36	100
Phosphate as PO4	<0.310		0.310		mg/L		06/05/20 07:23	06/05/20 19:34	1
Alkalinity as CaCO3 to pH 4.5	**326**		5.00		mg/L			06/09/20 10:22	1
Bicarbonate Alkalinity as CaCO3	**326**		5.00		mg/L			06/09/20 10:22	1
Carbonate Alkalinity as CaCO3	<5.00		5.00		mg/L			06/09/20 10:22	1
Hydroxide Alkalinity as CaCO3	<5.00		5.00		mg/L			06/09/20 10:22	1
Total Dissolved Solids	**536**		30.0		mg/L			06/04/20 15:49	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.4**	**HF**	0.1		SU			06/04/20 15:20	1
Nitrogen, Total	**17.6**		1.00		mg/L			06/05/20 07:41	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silica (SiO2), molybdate-reactive	**27.2**		2.00		mg/L			06/09/20 14:08	1

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Client Sample ID: AP4-MW Blind Duplicate
Lab Sample ID: 310-183200-8

Date Collected: 06/02/20 00:00
Matrix: Ground Water
Date Received: 06/04/20 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13.5**		5.00		mg/L			06/08/20 12:24	5
Sulfate	**55.4**		5.00		mg/L			06/08/20 12:24	5
Fluoride	<0.500		0.500		mg/L			06/08/20 12:24	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:28	1
Arsenic	<0.00200		0.00200		mg/L		06/05/20 08:16	06/08/20 16:28	1
Barium	**0.143**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:28	1
Beryllium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:28	1
Boron	<0.100		0.100		mg/L		06/05/20 08:16	06/08/20 16:28	1
Cadmium	**0.000192**		0.000100		mg/L		06/05/20 08:16	06/08/20 16:28	1
Calcium	**63.4**		0.500		mg/L		06/05/20 08:16	06/08/20 16:28	1
Chromium	<0.00500		0.00500		mg/L		06/05/20 08:16	06/08/20 16:28	1
Cobalt	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:28	1
Lead	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:28	1
Lithium	**0.0277**		0.0100		mg/L		06/05/20 08:16	06/08/20 16:28	1
Magnesium	**18.6**		0.500		mg/L		06/05/20 08:16	06/08/20 16:28	1
Molybdenum	**0.00749**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:28	1
Potassium	**1.93**		0.500		mg/L		06/05/20 08:16	06/08/20 16:28	1
Selenium	**0.00876**		0.00500		mg/L		06/05/20 08:16	06/08/20 16:28	1
Sodium	**98.4**		1.00		mg/L		06/05/20 08:16	06/08/20 16:28	1
Thallium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:28	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/04/20 14:11	06/04/20 20:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500		mg/L		06/04/20 22:41	06/05/20 19:07	1
Total Kjeldahl Nitrogen	**1.01**		1.00		mg/L		06/08/20 08:20	06/08/20 20:57	1
Nitrate Nitrite as N	**14.9**		10.0		mg/L			06/08/20 18:45	100
Phosphate as PO4	<0.310		0.310		mg/L		06/05/20 07:23	06/05/20 19:27	1
Alkalinity as CaCO3 to pH 4.5	**336**		5.00		mg/L			06/09/20 10:22	1
Bicarbonate Alkalinity as CaCO3	**336**		5.00		mg/L			06/09/20 10:22	1
Carbonate Alkalinity as CaCO3	<5.00		5.00		mg/L			06/09/20 10:22	1
Hydroxide Alkalinity as CaCO3	<5.00		5.00		mg/L			06/09/20 10:22	1
Total Dissolved Solids	**536**		30.0		mg/L			06/04/20 15:49	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.5**	**HF**	0.1		SU			06/04/20 15:29	1
Nitrogen, Total	**15.9**		1.00		mg/L			06/05/20 07:41	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silica (SiO2), molybdate-reactive	**26.8**		2.00		mg/L			06/09/20 14:08	1

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Client Sample ID: Evaporation Pond
Lab Sample ID: 310-183200-9

Date Collected: 06/02/20 16:13
Matrix: Ground Water

Date Received: 06/04/20 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**70.5**		5.00		mg/L			06/08/20 12:40	5
Sulfate	**1320**		20.0		mg/L			06/09/20 13:37	20
Fluoride	**2.37**		0.500		mg/L			06/08/20 12:40	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:31	1
Arsenic	<0.00200		0.00200		mg/L		06/05/20 08:16	06/08/20 16:31	1
Barium	**0.0468**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:31	1
Beryllium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:31	1
Boron	**4.06**		0.100		mg/L		06/05/20 08:16	06/08/20 16:31	1
Cadmium	**0.000150**		0.000100		mg/L		06/05/20 08:16	06/08/20 16:31	1
Calcium	**55.0**		0.500		mg/L		06/05/20 08:16	06/08/20 16:31	1
Chromium	<0.00500		0.00500		mg/L		06/05/20 08:16	06/08/20 16:31	1
Cobalt	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:31	1
Lead	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:31	1
Lithium	<0.0100		0.0100		mg/L		06/05/20 08:16	06/08/20 16:31	1
Magnesium	**7.95**		0.500		mg/L		06/05/20 08:16	06/08/20 16:31	1
Molybdenum	**0.430**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:31	1
Potassium	**35.6**		0.500		mg/L		06/05/20 08:16	06/08/20 16:31	1
Selenium	**0.0140**		0.00500		mg/L		06/05/20 08:16	06/08/20 16:31	1
Sodium	**535**		4.00		mg/L		06/05/20 08:16	06/09/20 11:34	4
Thallium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:31	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/04/20 14:11	06/04/20 20:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500		mg/L		06/04/20 22:41	06/05/20 19:06	1
Total Kjeldahl Nitrogen	**1.09**		1.00		mg/L		06/08/20 08:20	06/08/20 20:56	1
Nitrate Nitrite as N	<0.100		0.100		mg/L			06/08/20 18:46	1
Phosphate as PO4	<0.310		0.310		mg/L		06/05/20 07:23	06/05/20 19:28	1
Alkalinity as CaCO3 to pH 4.5	**109**		5.00		mg/L			06/09/20 10:22	1
Bicarbonate Alkalinity as CaCO3	**99.3**		5.00		mg/L			06/09/20 10:22	1
Carbonate Alkalinity as CaCO3	**9.46**		5.00		mg/L			06/09/20 10:22	1
Hydroxide Alkalinity as CaCO3	<5.00		5.00		mg/L			06/09/20 10:22	1
Total Dissolved Solids	**2160**		150		mg/L			06/04/20 15:49	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.8**	**HF**	0.1		SU			06/04/20 15:31	1
Nitrogen, Total	**1.09**		1.00		mg/L			06/05/20 07:41	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silica (SiO2), molybdate-reactive	<1.00		1.00		mg/L			06/09/20 14:08	1

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Client Sample ID: Leacheate Collection Sump
Lab Sample ID: 310-183200-10

Date Collected: 06/02/20 16:25
Matrix: Ground Water
Date Received: 06/04/20 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**42.0**		5.00		mg/L			06/08/20 12:56	5
Sulfate	**1180**		20.0		mg/L			06/09/20 13:52	20
Fluoride	**3.66**		0.500		mg/L			06/08/20 12:56	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00216**		0.00100		mg/L		06/05/20 08:16	06/08/20 16:33	1
Arsenic	<0.00200		0.00200		mg/L		06/05/20 08:16	06/08/20 16:33	1
Barium	**0.0586**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:33	1
Beryllium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:33	1
Boron	**6.49**		0.400		mg/L		06/05/20 08:16	06/09/20 11:37	4
Cadmium	**0.000267**		0.000100		mg/L		06/05/20 08:16	06/08/20 16:33	1
Calcium	**53.9**		0.500		mg/L		06/05/20 08:16	06/08/20 16:33	1
Chromium	**0.0378**		0.00500		mg/L		06/05/20 08:16	06/08/20 16:33	1
Cobalt	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:33	1
Lead	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:33	1
Lithium	<0.0100		0.0100		mg/L		06/05/20 08:16	06/08/20 16:33	1
Magnesium	**5.25**		0.500		mg/L		06/05/20 08:16	06/08/20 16:33	1
Molybdenum	**0.608**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:33	1
Potassium	**49.7**		0.500		mg/L		06/05/20 08:16	06/08/20 16:33	1
Selenium	**0.0632**		0.00500		mg/L		06/05/20 08:16	06/08/20 16:33	1
Sodium	**501**		4.00		mg/L		06/05/20 08:16	06/09/20 11:37	4
Thallium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:33	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/04/20 14:11	06/04/20 20:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500		mg/L		06/04/20 22:41	06/05/20 19:04	1
Total Kjeldahl Nitrogen	<1.00		1.00		mg/L		06/08/20 08:20	06/08/20 21:06	1
Nitrate Nitrite as N	<0.100		0.100		mg/L			06/08/20 18:48	1
Phosphate as PO4	<0.310		0.310		mg/L		06/05/20 07:23	06/05/20 19:35	1
Alkalinity as CaCO3 to pH 4.5	**94.6**		10.0		mg/L			06/09/20 10:22	1
Bicarbonate Alkalinity as CaCO3	**56.8**		10.0		mg/L			06/09/20 10:22	1
Carbonate Alkalinity as CaCO3	**37.8**		10.0		mg/L			06/09/20 10:22	1
Hydroxide Alkalinity as CaCO3	<10.0		10.0		mg/L			06/09/20 10:22	1
Total Dissolved Solids	**1930**		150		mg/L			06/04/20 15:49	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**9.3**	**HF**	0.1		SU			06/04/20 15:33	1
Nitrogen, Total	<1.00		1.00		mg/L			06/05/20 07:41	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silica (SiO2), molybdate-reactive	<1.00		1.00		mg/L			06/09/20 14:08	1

Client Sample ID: Underdrain Sump
Lab Sample ID: 310-183200-11

Date Collected: 06/02/20 16:36
Matrix: Ground Water
Date Received: 06/04/20 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**67.6**		5.00		mg/L			06/08/20 13:11	5
Sulfate	**832**		10.0		mg/L			06/08/20 17:05	10
Fluoride	**0.833**		0.500		mg/L			06/08/20 13:11	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:36	1
Arsenic	**0.00203**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:36	1
Barium	**0.0180**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:36	1
Beryllium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:36	1
Boron	**0.302**		0.100		mg/L		06/05/20 08:16	06/08/20 16:36	1
Cadmium	**0.000159**		0.000100		mg/L		06/05/20 08:16	06/08/20 16:36	1
Calcium	**317**		0.500		mg/L		06/05/20 08:16	06/08/20 16:36	1
Chromium	<0.00500		0.00500		mg/L		06/05/20 08:16	06/08/20 16:36	1
Cobalt	**0.00306**		0.000500		mg/L		06/05/20 08:16	06/08/20 16:36	1
Lead	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:36	1
Lithium	**0.124**		0.0100		mg/L		06/05/20 08:16	06/08/20 16:36	1
Magnesium	**84.0**		0.500		mg/L		06/05/20 08:16	06/08/20 16:36	1
Molybdenum	**0.190**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:36	1
Potassium	**9.72**		0.500		mg/L		06/05/20 08:16	06/08/20 16:36	1
Selenium	**0.0154**		0.00500		mg/L		06/05/20 08:16	06/08/20 16:36	1
Sodium	**59.5**		1.00		mg/L		06/05/20 08:16	06/08/20 16:36	1
Thallium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:36	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/04/20 14:11	06/04/20 20:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500		mg/L		06/04/20 22:41	06/05/20 19:03	1
Total Kjeldahl Nitrogen	<1.00		1.00		mg/L		06/08/20 14:44	06/09/20 19:05	1
Nitrate Nitrite as N	**0.249**		0.100		mg/L			06/08/20 18:49	1
Phosphate as PO4	<0.310		0.310		mg/L		06/05/20 07:23	06/05/20 19:26	1
Alkalinity as CaCO3 to pH 4.5	**361**		5.00		mg/L			06/05/20 09:22	1
Bicarbonate Alkalinity as CaCO3	**361**		5.00		mg/L			06/05/20 09:22	1
Carbonate Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Hydroxide Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Total Dissolved Solids	**1720**		150		mg/L			06/04/20 15:49	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**6.9**	**HF**	0.1		SU			06/04/20 15:34	1
Nitrogen, Total	<1.00		1.00		mg/L			06/05/20 07:41	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silica (SiO2), molybdate-reactive	**25.8**		2.00		mg/L			06/09/20 14:08	1

Client Sample ID: Interceptor Trench
Lab Sample ID: 310-183200-12
Date Collected: 06/02/20 16:49
Matrix: Ground Water
Date Received: 06/04/20 10:30

Method: 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**27.2**		5.00		mg/L			06/08/20 13:27	5
Sulfate	**151**		5.00		mg/L			06/08/20 13:27	5
Fluoride	**0.707**		0.500		mg/L			06/08/20 13:27	5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.00294**		0.00100		mg/L		06/05/20 08:16	06/08/20 16:38	1
Arsenic	**0.00238**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:38	1
Barium	**0.0484**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:38	1
Beryllium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:38	1
Boron	**0.165**		0.100		mg/L		06/05/20 08:16	06/08/20 16:38	1
Cadmium	<0.000100		0.000100		mg/L		06/05/20 08:16	06/08/20 16:38	1
Calcium	**117**		0.500		mg/L		06/05/20 08:16	06/08/20 16:38	1
Chromium	<0.00500		0.00500		mg/L		06/05/20 08:16	06/08/20 16:38	1
Cobalt	**0.000676**		0.000500		mg/L		06/05/20 08:16	06/08/20 16:38	1
Lead	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 16:38	1
Lithium	**0.0614**		0.0100		mg/L		06/05/20 08:16	06/08/20 16:38	1
Magnesium	**36.4**		0.500		mg/L		06/05/20 08:16	06/08/20 16:38	1
Molybdenum	**0.206**		0.00200		mg/L		06/05/20 08:16	06/08/20 16:38	1
Potassium	**5.16**		0.500		mg/L		06/05/20 08:16	06/08/20 16:38	1
Selenium	<0.00500		0.00500		mg/L		06/05/20 08:16	06/08/20 16:38	1
Sodium	**38.2**		1.00		mg/L		06/05/20 08:16	06/08/20 16:38	1
Thallium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 16:38	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/04/20 14:11	06/04/20 20:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500		mg/L		06/04/20 22:41	06/05/20 19:02	1
Total Kjeldahl Nitrogen	<1.00		1.00		mg/L		06/08/20 14:44	06/09/20 19:07	1
Nitrate Nitrite as N	<0.100		0.100		mg/L			06/08/20 17:35	1
Phosphate as PO4	<0.310		0.310		mg/L		06/05/20 08:00	06/05/20 20:09	1
Alkalinity as CaCO3 to pH 4.5	**295**		5.00		mg/L			06/05/20 09:22	1
Bicarbonate Alkalinity as CaCO3	**295**		5.00		mg/L			06/05/20 09:22	1
Carbonate Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Hydroxide Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Total Dissolved Solids	**616**		30.0		mg/L			06/04/20 15:49	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.1**	**HF**	0.1		SU			06/04/20 15:35	1
Nitrogen, Total	<1.00		1.00		mg/L			06/05/20 07:41	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silica (SiO2), molybdate-reactive	**23.8**		2.00		mg/L			06/09/20 14:08	1

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Qualifiers

General Chemistry

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

Glossary

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

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-281488/3
Matrix: Water
Analysis Batch: 281488

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00		mg/L			06/08/20 09:01	1
Sulfate	<1.00		1.00		mg/L			06/08/20 09:01	1
Fluoride	<0.100		0.100		mg/L			06/08/20 09:01	1

Lab Sample ID: LCS 310-281488/4
Matrix: Water
Analysis Batch: 281488

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.17		mg/L		102	90 - 110
Sulfate	10.0	10.22		mg/L		102	90 - 110
Fluoride	2.00	1.833		mg/L		92	90 - 110

Lab Sample ID: 310-183200-1 MS
Matrix: Ground Water
Analysis Batch: 281488

Client Sample ID: AP4-MW1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0		25.0	33.40		mg/L		94	80 - 120
Sulfate	37.1		25.0	61.07		mg/L		96	80 - 120
Fluoride	0.651		5.00	5.259		mg/L		92	80 - 120

Lab Sample ID: 310-183200-1 MSD
Matrix: Ground Water
Analysis Batch: 281488

Client Sample ID: AP4-MW1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0		25.0	33.37		mg/L		93	80 - 120	0	15
Sulfate	37.1		25.0	61.02		mg/L		96	80 - 120	0	15
Fluoride	0.651		5.00	5.290		mg/L		93	80 - 120	1	15

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 310-281167/1-A
Matrix: Water
Analysis Batch: 281473

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281167

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 15:33	1
Arsenic	<0.00200		0.00200		mg/L		06/05/20 08:16	06/08/20 15:33	1
Barium	<0.00200		0.00200		mg/L		06/05/20 08:16	06/08/20 15:33	1
Beryllium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 15:33	1
Boron	<0.100		0.100		mg/L		06/05/20 08:16	06/08/20 15:33	1
Cadmium	<0.000100		0.000100		mg/L		06/05/20 08:16	06/08/20 15:33	1
Calcium	<0.500		0.500		mg/L		06/05/20 08:16	06/08/20 15:33	1
Chromium	<0.00500		0.00500		mg/L		06/05/20 08:16	06/08/20 15:33	1
Cobalt	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 15:33	1
Lead	<0.000500		0.000500		mg/L		06/05/20 08:16	06/08/20 15:33	1
Lithium	<0.0100		0.0100		mg/L		06/05/20 08:16	06/08/20 15:33	1
Magnesium	<0.500		0.500		mg/L		06/05/20 08:16	06/08/20 15:33	1

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

Lab Sample ID: MB 310-281167/1-A
Matrix: Water
Analysis Batch: 281473

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281167

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Molybdenum	<0.00200		0.00200		mg/L		06/05/20 08:16	06/08/20 15:33	1
Potassium	<0.500		0.500		mg/L		06/05/20 08:16	06/08/20 15:33	1
Selenium	<0.00500		0.00500		mg/L		06/05/20 08:16	06/08/20 15:33	1
Sodium	<1.00		1.00		mg/L		06/05/20 08:16	06/08/20 15:33	1
Thallium	<0.00100		0.00100		mg/L		06/05/20 08:16	06/08/20 15:33	1

Lab Sample ID: LCS 310-281167/2-A
Matrix: Water
Analysis Batch: 281473

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281167

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0400	0.03381		mg/L		85	80 - 120
Arsenic	0.0800	0.07174		mg/L		90	80 - 120
Barium	0.0800	0.08102		mg/L		101	80 - 120
Beryllium	0.0400	0.04317		mg/L		108	80 - 120
Boron	1.76	1.775		mg/L		101	80 - 120
Cadmium	0.0400	0.04114		mg/L		103	80 - 120
Calcium	4.00	4.074		mg/L		102	80 - 120
Chromium	0.0800	0.08440		mg/L		105	80 - 120
Cobalt	0.0400	0.04060		mg/L		102	80 - 120
Lead	0.0400	0.04128		mg/L		103	80 - 120
Lithium	0.200	0.1972		mg/L		99	80 - 120
Magnesium	4.00	4.251		mg/L		106	80 - 120
Molybdenum	0.0800	0.07431		mg/L		93	80 - 120
Potassium	4.00	4.242		mg/L		106	80 - 120
Selenium	0.0800	0.07237		mg/L		90	80 - 120
Sodium	4.00	4.446		mg/L		111	80 - 120
Thallium	0.0320	0.03172		mg/L		99	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-281082/1-A
Matrix: Water
Analysis Batch: 281118

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281082

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		06/04/20 14:11	06/04/20 19:20	1

Lab Sample ID: LCS 310-281082/2-A
Matrix: Water
Analysis Batch: 281118

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281082

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00167	0.001563		mg/L		94	80 - 120

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 310-281128/1-A
Matrix: Water
Analysis Batch: 281276

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281128

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500		mg/L		06/04/20 22:38	06/05/20 17:56	1

Lab Sample ID: LCS 310-281128/2-A
Matrix: Water
Analysis Batch: 281276

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281128

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	4.00	3.941		mg/L		98	90 - 110

Lab Sample ID: MB 310-281129/1-A
Matrix: Water
Analysis Batch: 281276

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281129

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500		mg/L		06/04/20 22:41	06/05/20 18:45	1

Lab Sample ID: LCS 310-281129/2-A
Matrix: Water
Analysis Batch: 281276

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281129

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	4.00	3.723		mg/L		93	90 - 110

Lab Sample ID: 310-183200-1 MS
Matrix: Ground Water
Analysis Batch: 281276

Client Sample ID: AP4-MW1
Prep Type: Total/NA
Prep Batch: 281129

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	<0.500		4.00	3.917		mg/L		98	90 - 110

Lab Sample ID: 310-183200-1 MSD
Matrix: Ground Water
Analysis Batch: 281276

Client Sample ID: AP4-MW1
Prep Type: Total/NA
Prep Batch: 281129

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia as N	<0.500		4.00	3.945		mg/L		99	90 - 110	1	10

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 310-281354/1-A
Matrix: Water
Analysis Batch: 281451

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281354

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Kjeldahl Nitrogen	<1.00		1.00		mg/L		06/08/20 08:20	06/08/20 20:39	1

Method: 351.2 - Nitrogen, Total Kjeldahl (Continued)

Lab Sample ID: LCS 310-281354/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 281451 — **Prep Batch: 281354**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Kjeldahl Nitrogen	4.01	3.736		mg/L		93	90 - 110

Lab Sample ID: MB 310-281428/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 281561 — **Prep Batch: 281428**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Kjeldahl Nitrogen	<1.00		1.00		mg/L		06/08/20 14:44	06/09/20 18:51	1

Lab Sample ID: LCS 310-281428/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 281561 — **Prep Batch: 281428**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Kjeldahl Nitrogen	4.01	3.940		mg/L		98	90 - 110

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 310-281449/14 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 281449

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	<0.100		0.100		mg/L			06/08/20 17:12	1

Lab Sample ID: MB 310-281449/50 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 281449

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	<0.100		0.100		mg/L			06/08/20 18:07	1

Lab Sample ID: MB 310-281449/80 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 281449

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	<0.100		0.100		mg/L			06/08/20 18:50	1

Lab Sample ID: LCS 310-281449/11 ^5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 281449

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	20.3	20.63		mg/L		102	90 - 110

Method: 353.2 - Nitrogen, Nitrate-Nitrite (Continued)

Lab Sample ID: LCS 310-281449/51 ^5
Matrix: Water
Analysis Batch: 281449

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	20.3	20.73		mg/L		102	90 - 110

Lab Sample ID: LCS 310-281449/81 ^5
Matrix: Water
Analysis Batch: 281449

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	20.3	20.72		mg/L		102	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 310-281150/1-A
Matrix: Water
Analysis Batch: 281275

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281150

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphate as PO4	<0.310		0.310		mg/L		06/05/20 07:23	06/05/20 19:20	1

Lab Sample ID: LCS 310-281150/2-A
Matrix: Water
Analysis Batch: 281275

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281150

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	5.01	5.338		mg/L		107	90 - 110

Lab Sample ID: MB 310-281158/1-A
Matrix: Water
Analysis Batch: 281275

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 281158

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphate as PO4	<0.310		0.310		mg/L		06/05/20 08:00	06/05/20 20:07	1

Lab Sample ID: LCS 310-281158/2-A
Matrix: Water
Analysis Batch: 281275

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 281158

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	5.01	5.421		mg/L		108	90 - 110

Lab Sample ID: 310-183200-12 MS
Matrix: Ground Water
Analysis Batch: 281275

Client Sample ID: Interceptor Trench
Prep Type: Total/NA
Prep Batch: 281158

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	<0.100		1.00	1.031		mg/L		103	90 - 110

Method: 365.1 - Phosphorus, Total (Continued)

Lab Sample ID: 310-183200-12 MSD
Client Sample ID: Interceptor Trench
Matrix: Ground Water
Prep Type: Total/NA
Analysis Batch: 281275
Prep Batch: 281158

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Phosphorus as P	<0.100		1.00	0.9679		mg/L		97	90 - 110	6	19

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 310-281176/1
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 281176

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3 to pH 4.5	<5.00		5.00		mg/L			06/05/20 09:22	1
Bicarbonate Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Carbonate Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1
Hydroxide Alkalinity as CaCO3	<5.00		5.00		mg/L			06/05/20 09:22	1

Lab Sample ID: LCS 310-281176/2
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 281176

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3 to pH 4.5	1000	997.5		mg/L		100	90 - 110

Lab Sample ID: 310-183200-1 MS
Client Sample ID: AP4-MW1
Matrix: Ground Water
Prep Type: Total/NA
Analysis Batch: 281176

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3 to pH 4.5	352		100	470.3		mg/L		119	66 - 124

Lab Sample ID: 310-183200-1 MSD
Client Sample ID: AP4-MW1
Matrix: Ground Water
Prep Type: Total/NA
Analysis Batch: 281176

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity as CaCO3 to pH 4.5	352		100	470.3		mg/L		119	66 - 124	0	17

Lab Sample ID: MB 310-281506/1
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 281506

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3 to pH 4.5	<5.00		5.00		mg/L			06/09/20 10:22	1
Bicarbonate Alkalinity as CaCO3	<5.00		5.00		mg/L			06/09/20 10:22	1
Carbonate Alkalinity as CaCO3	<5.00		5.00		mg/L			06/09/20 10:22	1
Hydroxide Alkalinity as CaCO3	<5.00		5.00		mg/L			06/09/20 10:22	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 310-281506/2
Matrix: Water
Analysis Batch: 281506

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity as CaCO3 to pH 4.5			1000	1017		mg/L		102	90 - 110		

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

Lab Sample ID: MB 310-281059/1
Matrix: Water
Analysis Batch: 281059

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<30.0		30.0		mg/L			06/04/20 11:52	1

Lab Sample ID: LCS 310-281059/2
Matrix: Water
Analysis Batch: 281059

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			1000	980.0		mg/L		98	90 - 110		

Lab Sample ID: 310-183200-1 DU
Matrix: Ground Water
Analysis Batch: 281059

Client Sample ID: AP4-MW1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	440			438.0		mg/L				0.5	24

Lab Sample ID: 310-183200-5 DU
Matrix: Ground Water
Analysis Batch: 281059

Client Sample ID: AP4-MW5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	1080			1060		mg/L				2	24

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-281099/1
Matrix: Water
Analysis Batch: 281099

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.00	6.9		SU		99	98 - 102		

Lab Sample ID: 310-183200-8 DU
Matrix: Ground Water
Analysis Batch: 281099

Client Sample ID: AP4-MW Blind Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	7.5	HF		7.4		SU				1	20

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Method: SM4500 SiO2 C - Silica, Molybdosilicate Method

Lab Sample ID: MB 310-281510/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 281541

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silica (SiO2), molybdate-reactive	<1.00		1.00		mg/L			06/09/20 14:08	1

Lab Sample ID: LCS 310-281510/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Dissolved
Analysis Batch: 281541

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Silica (SiO2), molybdate-reactive			5.00	4.615		mg/L		92	85 - 115		

HPLC/IC

Analysis Batch: 281488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	9056A	
310-183200-2	AP4-MW2	Total/NA	Ground Water	9056A	
310-183200-2	AP4-MW2	Total/NA	Ground Water	9056A	
310-183200-3	AP4-MW3	Total/NA	Ground Water	9056A	
310-183200-4	AP4-MW4	Total/NA	Ground Water	9056A	
310-183200-5	AP4-MW5	Total/NA	Ground Water	9056A	
310-183200-5	AP4-MW5	Total/NA	Ground Water	9056A	
310-183200-6	AP4-MW6	Total/NA	Ground Water	9056A	
310-183200-7	AP4-MW7	Total/NA	Ground Water	9056A	
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	9056A	
310-183200-9	Evaporation Pond	Total/NA	Ground Water	9056A	
310-183200-9	Evaporation Pond	Total/NA	Ground Water	9056A	
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	9056A	
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	9056A	
310-183200-11	Underdrain Sump	Total/NA	Ground Water	9056A	
310-183200-11	Underdrain Sump	Total/NA	Ground Water	9056A	
310-183200-12	Interceptor Trench	Total/NA	Ground Water	9056A	
MB 310-281488/3	Method Blank	Total/NA	Water	9056A	
LCS 310-281488/4	Lab Control Sample	Total/NA	Water	9056A	
310-183200-1 MS	AP4-MW1	Total/NA	Ground Water	9056A	
310-183200-1 MSD	AP4-MW1	Total/NA	Ground Water	9056A	

Metals

Prep Batch: 281082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	7470A	
310-183200-2	AP4-MW2	Total/NA	Ground Water	7470A	
310-183200-3	AP4-MW3	Total/NA	Ground Water	7470A	
310-183200-4	AP4-MW4	Total/NA	Ground Water	7470A	
310-183200-5	AP4-MW5	Total/NA	Ground Water	7470A	
310-183200-6	AP4-MW6	Total/NA	Ground Water	7470A	
310-183200-7	AP4-MW7	Total/NA	Ground Water	7470A	
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	7470A	
310-183200-9	Evaporation Pond	Total/NA	Ground Water	7470A	
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	7470A	
310-183200-11	Underdrain Sump	Total/NA	Ground Water	7470A	
310-183200-12	Interceptor Trench	Total/NA	Ground Water	7470A	
MB 310-281082/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-281082/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 281118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	7470A	281082
310-183200-2	AP4-MW2	Total/NA	Ground Water	7470A	281082
310-183200-3	AP4-MW3	Total/NA	Ground Water	7470A	281082
310-183200-4	AP4-MW4	Total/NA	Ground Water	7470A	281082
310-183200-5	AP4-MW5	Total/NA	Ground Water	7470A	281082
310-183200-6	AP4-MW6	Total/NA	Ground Water	7470A	281082
310-183200-7	AP4-MW7	Total/NA	Ground Water	7470A	281082
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	7470A	281082

Metals (Continued)

Analysis Batch: 281118 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-9	Evaporation Pond	Total/NA	Ground Water	7470A	281082
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	7470A	281082
310-183200-11	Underdrain Sump	Total/NA	Ground Water	7470A	281082
310-183200-12	Interceptor Trench	Total/NA	Ground Water	7470A	281082
MB 310-281082/1-A	Method Blank	Total/NA	Water	7470A	281082
LCS 310-281082/2-A	Lab Control Sample	Total/NA	Water	7470A	281082

Prep Batch: 281167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	3010A	
310-183200-2	AP4-MW2	Total/NA	Ground Water	3010A	
310-183200-3	AP4-MW3	Total/NA	Ground Water	3010A	
310-183200-4	AP4-MW4	Total/NA	Ground Water	3010A	
310-183200-5	AP4-MW5	Total/NA	Ground Water	3010A	
310-183200-6	AP4-MW6	Total/NA	Ground Water	3010A	
310-183200-7	AP4-MW7	Total/NA	Ground Water	3010A	
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	3010A	
310-183200-9	Evaporation Pond	Total/NA	Ground Water	3010A	
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	3010A	
310-183200-11	Underdrain Sump	Total/NA	Ground Water	3010A	
310-183200-12	Interceptor Trench	Total/NA	Ground Water	3010A	
MB 310-281167/1-A	Method Blank	Total/NA	Water	3010A	
LCS 310-281167/2-A	Lab Control Sample	Total/NA	Water	3010A	

Analysis Batch: 281473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	6020A	281167
310-183200-2	AP4-MW2	Total/NA	Ground Water	6020A	281167
310-183200-3	AP4-MW3	Total/NA	Ground Water	6020A	281167
310-183200-4	AP4-MW4	Total/NA	Ground Water	6020A	281167
310-183200-5	AP4-MW5	Total/NA	Ground Water	6020A	281167
310-183200-6	AP4-MW6	Total/NA	Ground Water	6020A	281167
310-183200-7	AP4-MW7	Total/NA	Ground Water	6020A	281167
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	6020A	281167
310-183200-9	Evaporation Pond	Total/NA	Ground Water	6020A	281167
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	6020A	281167
310-183200-11	Underdrain Sump	Total/NA	Ground Water	6020A	281167
310-183200-12	Interceptor Trench	Total/NA	Ground Water	6020A	281167
MB 310-281167/1-A	Method Blank	Total/NA	Water	6020A	281167
LCS 310-281167/2-A	Lab Control Sample	Total/NA	Water	6020A	281167

Analysis Batch: 281593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-2	AP4-MW2	Total/NA	Ground Water	6020A	281167
310-183200-9	Evaporation Pond	Total/NA	Ground Water	6020A	281167
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	6020A	281167

General Chemistry

Analysis Batch: 281059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	SM 2540C	
310-183200-2	AP4-MW2	Total/NA	Ground Water	SM 2540C	
310-183200-3	AP4-MW3	Total/NA	Ground Water	SM 2540C	
310-183200-4	AP4-MW4	Total/NA	Ground Water	SM 2540C	
310-183200-5	AP4-MW5	Total/NA	Ground Water	SM 2540C	
310-183200-6	AP4-MW6	Total/NA	Ground Water	SM 2540C	
310-183200-7	AP4-MW7	Total/NA	Ground Water	SM 2540C	
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	SM 2540C	
310-183200-9	Evaporation Pond	Total/NA	Ground Water	SM 2540C	
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	SM 2540C	
310-183200-11	Underdrain Sump	Total/NA	Ground Water	SM 2540C	
310-183200-12	Interceptor Trench	Total/NA	Ground Water	SM 2540C	
MB 310-281059/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-281059/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-183200-1 DU	AP4-MW1	Total/NA	Ground Water	SM 2540C	
310-183200-5 DU	AP4-MW5	Total/NA	Ground Water	SM 2540C	

Analysis Batch: 281099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	SM 4500 H+ B	
310-183200-2	AP4-MW2	Total/NA	Ground Water	SM 4500 H+ B	
310-183200-3	AP4-MW3	Total/NA	Ground Water	SM 4500 H+ B	
310-183200-4	AP4-MW4	Total/NA	Ground Water	SM 4500 H+ B	
310-183200-5	AP4-MW5	Total/NA	Ground Water	SM 4500 H+ B	
310-183200-6	AP4-MW6	Total/NA	Ground Water	SM 4500 H+ B	
310-183200-7	AP4-MW7	Total/NA	Ground Water	SM 4500 H+ B	
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	SM 4500 H+ B	
310-183200-9	Evaporation Pond	Total/NA	Ground Water	SM 4500 H+ B	
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	SM 4500 H+ B	
310-183200-11	Underdrain Sump	Total/NA	Ground Water	SM 4500 H+ B	
310-183200-12	Interceptor Trench	Total/NA	Ground Water	SM 4500 H+ B	
LCS 310-281099/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-183200-8 DU	AP4-MW Blind Duplicate	Total/NA	Ground Water	SM 4500 H+ B	

Prep Batch: 281128

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-2	AP4-MW2	Total/NA	Ground Water	Distill/Ammonia	
310-183200-3	AP4-MW3	Total/NA	Ground Water	Distill/Ammonia	
310-183200-4	AP4-MW4	Total/NA	Ground Water	Distill/Ammonia	
310-183200-5	AP4-MW5	Total/NA	Ground Water	Distill/Ammonia	
310-183200-6	AP4-MW6	Total/NA	Ground Water	Distill/Ammonia	
MB 310-281128/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 310-281128/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Prep Batch: 281129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	Distill/Ammonia	
310-183200-7	AP4-MW7	Total/NA	Ground Water	Distill/Ammonia	
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	Distill/Ammonia	
310-183200-9	Evaporation Pond	Total/NA	Ground Water	Distill/Ammonia	
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	Distill/Ammonia	

General Chemistry (Continued)

Prep Batch: 281129 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-11	Underdrain Sump	Total/NA	Ground Water	Distill/Ammonia	
310-183200-12	Interceptor Trench	Total/NA	Ground Water	Distill/Ammonia	
MB 310-281129/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 310-281129/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	
310-183200-1 MS	AP4-MW1	Total/NA	Ground Water	Distill/Ammonia	
310-183200-1 MSD	AP4-MW1	Total/NA	Ground Water	Distill/Ammonia	

Prep Batch: 281150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	365.2/365.3/365	
310-183200-2	AP4-MW2	Total/NA	Ground Water	365.2/365.3/365	
310-183200-3	AP4-MW3	Total/NA	Ground Water	365.2/365.3/365	
310-183200-4	AP4-MW4	Total/NA	Ground Water	365.2/365.3/365	
310-183200-5	AP4-MW5	Total/NA	Ground Water	365.2/365.3/365	
310-183200-6	AP4-MW6	Total/NA	Ground Water	365.2/365.3/365	
310-183200-7	AP4-MW7	Total/NA	Ground Water	365.2/365.3/365	
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	365.2/365.3/365	
310-183200-9	Evaporation Pond	Total/NA	Ground Water	365.2/365.3/365	
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	365.2/365.3/365	
310-183200-11	Underdrain Sump	Total/NA	Ground Water	365.2/365.3/365	
MB 310-281150/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 310-281150/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 281151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	Total Nitrogen	
310-183200-2	AP4-MW2	Total/NA	Ground Water	Total Nitrogen	
310-183200-3	AP4-MW3	Total/NA	Ground Water	Total Nitrogen	
310-183200-4	AP4-MW4	Total/NA	Ground Water	Total Nitrogen	
310-183200-5	AP4-MW5	Total/NA	Ground Water	Total Nitrogen	
310-183200-6	AP4-MW6	Total/NA	Ground Water	Total Nitrogen	
310-183200-7	AP4-MW7	Total/NA	Ground Water	Total Nitrogen	
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	Total Nitrogen	
310-183200-9	Evaporation Pond	Total/NA	Ground Water	Total Nitrogen	
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	Total Nitrogen	
310-183200-11	Underdrain Sump	Total/NA	Ground Water	Total Nitrogen	
310-183200-12	Interceptor Trench	Total/NA	Ground Water	Total Nitrogen	

Prep Batch: 281158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-12	Interceptor Trench	Total/NA	Ground Water	365.2/365.3/365	
MB 310-281158/1-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 310-281158/2-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	
310-183200-12 MS	Interceptor Trench	Total/NA	Ground Water	365.2/365.3/365	
310-183200-12 MSD	Interceptor Trench	Total/NA	Ground Water	365.2/365.3/365	

Analysis Batch: 281176

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	SM 2320B	
310-183200-2	AP4-MW2	Total/NA	Ground Water	SM 2320B	
310-183200-3	AP4-MW3	Total/NA	Ground Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 281176 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-4	AP4-MW4	Total/NA	Ground Water	SM 2320B	
310-183200-5	AP4-MW5	Total/NA	Ground Water	SM 2320B	
310-183200-6	AP4-MW6	Total/NA	Ground Water	SM 2320B	
310-183200-11	Underdrain Sump	Total/NA	Ground Water	SM 2320B	
310-183200-12	Interceptor Trench	Total/NA	Ground Water	SM 2320B	
MB 310-281176/1	Method Blank	Total/NA	Water	SM 2320B	
LCS 310-281176/2	Lab Control Sample	Total/NA	Water	SM 2320B	
310-183200-1 MS	AP4-MW1	Total/NA	Ground Water	SM 2320B	
310-183200-1 MSD	AP4-MW1	Total/NA	Ground Water	SM 2320B	

Analysis Batch: 281275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	365.1	281150
310-183200-2	AP4-MW2	Total/NA	Ground Water	365.1	281150
310-183200-3	AP4-MW3	Total/NA	Ground Water	365.1	281150
310-183200-4	AP4-MW4	Total/NA	Ground Water	365.1	281150
310-183200-5	AP4-MW5	Total/NA	Ground Water	365.1	281150
310-183200-6	AP4-MW6	Total/NA	Ground Water	365.1	281150
310-183200-7	AP4-MW7	Total/NA	Ground Water	365.1	281150
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	365.1	281150
310-183200-9	Evaporation Pond	Total/NA	Ground Water	365.1	281150
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	365.1	281150
310-183200-11	Underdrain Sump	Total/NA	Ground Water	365.1	281150
310-183200-12	Interceptor Trench	Total/NA	Ground Water	365.1	281158
MB 310-281150/1-A	Method Blank	Total/NA	Water	365.1	281150
MB 310-281158/1-A	Method Blank	Total/NA	Water	365.1	281158
LCS 310-281150/2-A	Lab Control Sample	Total/NA	Water	365.1	281150
LCS 310-281158/2-A	Lab Control Sample	Total/NA	Water	365.1	281158
310-183200-12 MS	Interceptor Trench	Total/NA	Ground Water	365.1	281158
310-183200-12 MSD	Interceptor Trench	Total/NA	Ground Water	365.1	281158

Analysis Batch: 281276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	350.1	281129
310-183200-2	AP4-MW2	Total/NA	Ground Water	350.1	281128
310-183200-3	AP4-MW3	Total/NA	Ground Water	350.1	281128
310-183200-4	AP4-MW4	Total/NA	Ground Water	350.1	281128
310-183200-5	AP4-MW5	Total/NA	Ground Water	350.1	281128
310-183200-6	AP4-MW6	Total/NA	Ground Water	350.1	281128
310-183200-7	AP4-MW7	Total/NA	Ground Water	350.1	281129
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	350.1	281129
310-183200-9	Evaporation Pond	Total/NA	Ground Water	350.1	281129
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	350.1	281129
310-183200-11	Underdrain Sump	Total/NA	Ground Water	350.1	281129
310-183200-12	Interceptor Trench	Total/NA	Ground Water	350.1	281129
MB 310-281128/1-A	Method Blank	Total/NA	Water	350.1	281128
MB 310-281129/1-A	Method Blank	Total/NA	Water	350.1	281129
LCS 310-281128/2-A	Lab Control Sample	Total/NA	Water	350.1	281128
LCS 310-281129/2-A	Lab Control Sample	Total/NA	Water	350.1	281129
310-183200-1 MS	AP4-MW1	Total/NA	Ground Water	350.1	281129
310-183200-1 MSD	AP4-MW1	Total/NA	Ground Water	350.1	281129

General Chemistry

Prep Batch: 281354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	351.2	
310-183200-2	AP4-MW2	Total/NA	Ground Water	351.2	
310-183200-3	AP4-MW3	Total/NA	Ground Water	351.2	
310-183200-4	AP4-MW4	Total/NA	Ground Water	351.2	
310-183200-5	AP4-MW5	Total/NA	Ground Water	351.2	
310-183200-6	AP4-MW6	Total/NA	Ground Water	351.2	
310-183200-7	AP4-MW7	Total/NA	Ground Water	351.2	
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	351.2	
310-183200-9	Evaporation Pond	Total/NA	Ground Water	351.2	
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	351.2	
MB 310-281354/1-A	Method Blank	Total/NA	Water	351.2	
LCS 310-281354/2-A	Lab Control Sample	Total/NA	Water	351.2	

Prep Batch: 281428

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-11	Underdrain Sump	Total/NA	Ground Water	351.2	
310-183200-12	Interceptor Trench	Total/NA	Ground Water	351.2	
MB 310-281428/1-A	Method Blank	Total/NA	Water	351.2	
LCS 310-281428/2-A	Lab Control Sample	Total/NA	Water	351.2	

Analysis Batch: 281449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	353.2	
310-183200-2	AP4-MW2	Total/NA	Ground Water	353.2	
310-183200-3	AP4-MW3	Total/NA	Ground Water	353.2	
310-183200-4	AP4-MW4	Total/NA	Ground Water	353.2	
310-183200-5	AP4-MW5	Total/NA	Ground Water	353.2	
310-183200-6	AP4-MW6	Total/NA	Ground Water	353.2	
310-183200-7	AP4-MW7	Total/NA	Ground Water	353.2	
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	353.2	
310-183200-9	Evaporation Pond	Total/NA	Ground Water	353.2	
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	353.2	
310-183200-11	Underdrain Sump	Total/NA	Ground Water	353.2	
310-183200-12	Interceptor Trench	Total/NA	Ground Water	353.2	
MB 310-281449/14	Method Blank	Total/NA	Water	353.2	
MB 310-281449/50	Method Blank	Total/NA	Water	353.2	
MB 310-281449/80	Method Blank	Total/NA	Water	353.2	
LCS 310-281449/11 ^5	Lab Control Sample	Total/NA	Water	353.2	
LCS 310-281449/51 ^5	Lab Control Sample	Total/NA	Water	353.2	
LCS 310-281449/81 ^5	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 281451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Total/NA	Ground Water	351.2	281354
310-183200-2	AP4-MW2	Total/NA	Ground Water	351.2	281354
310-183200-3	AP4-MW3	Total/NA	Ground Water	351.2	281354
310-183200-4	AP4-MW4	Total/NA	Ground Water	351.2	281354
310-183200-5	AP4-MW5	Total/NA	Ground Water	351.2	281354
310-183200-6	AP4-MW6	Total/NA	Ground Water	351.2	281354
310-183200-7	AP4-MW7	Total/NA	Ground Water	351.2	281354
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	351.2	281354

General Chemistry (Continued)

Analysis Batch: 281451 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-9	Evaporation Pond	Total/NA	Ground Water	351.2	281354
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	351.2	281354
MB 310-281354/1-A	Method Blank	Total/NA	Water	351.2	281354
LCS 310-281354/2-A	Lab Control Sample	Total/NA	Water	351.2	281354

Analysis Batch: 281506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-7	AP4-MW7	Total/NA	Ground Water	SM 2320B	
310-183200-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	SM 2320B	
310-183200-9	Evaporation Pond	Total/NA	Ground Water	SM 2320B	
310-183200-10	Leacheate Collection Sump	Total/NA	Ground Water	SM 2320B	
MB 310-281506/1	Method Blank	Total/NA	Water	SM 2320B	
LCS 310-281506/2	Lab Control Sample	Total/NA	Water	SM 2320B	

Filtration Batch: 281510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Dissolved	Ground Water	Filtration	
310-183200-2	AP4-MW2	Dissolved	Ground Water	Filtration	
310-183200-3	AP4-MW3	Dissolved	Ground Water	Filtration	
310-183200-4	AP4-MW4	Dissolved	Ground Water	Filtration	
310-183200-5	AP4-MW5	Dissolved	Ground Water	Filtration	
310-183200-6	AP4-MW6	Dissolved	Ground Water	Filtration	
310-183200-7	AP4-MW7	Dissolved	Ground Water	Filtration	
310-183200-8	AP4-MW Blind Duplicate	Dissolved	Ground Water	Filtration	
310-183200-9	Evaporation Pond	Dissolved	Ground Water	Filtration	
310-183200-10	Leacheate Collection Sump	Dissolved	Ground Water	Filtration	
310-183200-11	Underdrain Sump	Dissolved	Ground Water	Filtration	
310-183200-12	Interceptor Trench	Dissolved	Ground Water	Filtration	
MB 310-281510/1-A	Method Blank	Dissolved	Water	Filtration	
LCS 310-281510/2-A	Lab Control Sample	Dissolved	Water	Filtration	

Analysis Batch: 281541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-1	AP4-MW1	Dissolved	Ground Water	SM4500 SiO2 C	281510
310-183200-2	AP4-MW2	Dissolved	Ground Water	SM4500 SiO2 C	281510
310-183200-3	AP4-MW3	Dissolved	Ground Water	SM4500 SiO2 C	281510
310-183200-4	AP4-MW4	Dissolved	Ground Water	SM4500 SiO2 C	281510
310-183200-5	AP4-MW5	Dissolved	Ground Water	SM4500 SiO2 C	281510
310-183200-6	AP4-MW6	Dissolved	Ground Water	SM4500 SiO2 C	281510
310-183200-7	AP4-MW7	Dissolved	Ground Water	SM4500 SiO2 C	281510
310-183200-8	AP4-MW Blind Duplicate	Dissolved	Ground Water	SM4500 SiO2 C	281510
310-183200-9	Evaporation Pond	Dissolved	Ground Water	SM4500 SiO2 C	281510
310-183200-10	Leacheate Collection Sump	Dissolved	Ground Water	SM4500 SiO2 C	281510
310-183200-11	Underdrain Sump	Dissolved	Ground Water	SM4500 SiO2 C	281510
310-183200-12	Interceptor Trench	Dissolved	Ground Water	SM4500 SiO2 C	281510
MB 310-281510/1-A	Method Blank	Dissolved	Water	SM4500 SiO2 C	281510
LCS 310-281510/2-A	Lab Control Sample	Dissolved	Water	SM4500 SiO2 C	281510

Analysis Batch: 281561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-11	Underdrain Sump	Total/NA	Ground Water	351.2	281428

General Chemistry (Continued)

Analysis Batch: 281561 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-183200-12	Interceptor Trench	Total/NA	Ground Water	351.2	281428
MB 310-281428/1-A	Method Blank	Total/NA	Water	351.2	281428
LCS 310-281428/2-A	Lab Control Sample	Total/NA	Water	351.2	281428

Lab Chronicle

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Client Sample ID: AP4-MW1
Lab Sample ID: 310-183200-1

Date Collected: 06/02/20 08:21
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	281488	06/08/20 09:32	CTB	TAL CF
Total/NA	Prep	3010A			281167	06/05/20 08:16	HED	TAL CF
Total/NA	Analysis	6020A		1	281473	06/08/20 16:02	ACJ	TAL CF
Total/NA	Prep	7470A			281082	06/04/20 14:11	HIS	TAL CF
Total/NA	Analysis	7470A		1	281118	06/04/20 20:00	HIS	TAL CF
Total/NA	Prep	Distill/Ammonia			281129	06/04/20 22:41	JSH	TAL CF
Total/NA	Analysis	350.1		1	281276	06/05/20 18:47	JMH	TAL CF
Total/NA	Prep	351.2			281354	06/08/20 08:20	AFZ	TAL CF
Total/NA	Analysis	351.2		1	281451	06/08/20 21:08	JMH	TAL CF
Total/NA	Analysis	353.2		1	281449	06/08/20 17:28	JMH	TAL CF
Total/NA	Prep	365.2/365.3/365			281150	06/05/20 07:23	WJF	TAL CF
Total/NA	Analysis	365.1		1	281275	06/05/20 19:38	JMH	TAL CF
Total/NA	Analysis	SM 2320B		1	281176	06/05/20 09:22	LBB	TAL CF
Total/NA	Analysis	SM 2540C		1	281059	06/04/20 15:49	SAS	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	281099	06/04/20 15:03	ARG	TAL CF
Dissolved	Filtration	Filtration			281510	06/09/20 10:53	LBB	TAL CF
Dissolved	Analysis	SM4500 SiO2 C		1	281541	06/09/20 14:08	LBB	TAL CF
Total/NA	Analysis	Total Nitrogen		1	281151	06/05/20 07:41	LBB	TAL CF

Client Sample ID: AP4-MW2
Lab Sample ID: 310-183200-2

Date Collected: 06/02/20 09:18
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	281488	06/08/20 10:19	CTB	TAL CF
Total/NA	Analysis	9056A		10	281488	06/08/20 16:34	CTB	TAL CF
Total/NA	Prep	3010A			281167	06/05/20 08:16	HED	TAL CF
Total/NA	Analysis	6020A		1	281473	06/08/20 16:04	ACJ	TAL CF
Total/NA	Prep	3010A			281167	06/05/20 08:16	HED	TAL CF
Total/NA	Analysis	6020A		4	281593	06/09/20 11:32	ACJ	TAL CF
Total/NA	Prep	7470A			281082	06/04/20 14:11	HIS	TAL CF
Total/NA	Analysis	7470A		1	281118	06/04/20 20:02	HIS	TAL CF
Total/NA	Prep	Distill/Ammonia			281128	06/04/20 22:38	JSH	TAL CF
Total/NA	Analysis	350.1		1	281276	06/05/20 18:44	JMH	TAL CF
Total/NA	Prep	351.2			281354	06/08/20 08:20	AFZ	TAL CF
Total/NA	Analysis	351.2		1	281451	06/08/20 20:59	JMH	TAL CF
Total/NA	Analysis	353.2		10	281449	06/08/20 17:29	JMH	TAL CF
Total/NA	Prep	365.2/365.3/365			281150	06/05/20 07:23	WJF	TAL CF
Total/NA	Analysis	365.1		1	281275	06/05/20 19:39	JMH	TAL CF
Total/NA	Analysis	SM 2320B		1	281176	06/05/20 09:22	LBB	TAL CF
Total/NA	Analysis	SM 2540C		1	281059	06/04/20 15:49	SAS	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	281099	06/04/20 15:07	ARG	TAL CF

Client Sample ID: AP4-MW2

Lab Sample ID: 310-183200-2

Date Collected: 06/02/20 09:18

Matrix: Ground Water

Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	Filtration			281510	06/09/20 10:53	LBB	TAL CF
Dissolved	Analysis	SM4500 SiO2 C		1	281541	06/09/20 14:08	LBB	TAL CF
Total/NA	Analysis	Total Nitrogen		1	281151	06/05/20 07:41	LBB	TAL CF

Client Sample ID: AP4-MW3

Lab Sample ID: 310-183200-3

Date Collected: 06/02/20 10:10

Matrix: Ground Water

Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	281488	06/08/20 10:35	CTB	TAL CF
Total/NA	Prep	3010A			281167	06/05/20 08:16	HED	TAL CF
Total/NA	Analysis	6020A		1	281473	06/08/20 16:07	ACJ	TAL CF
Total/NA	Prep	7470A			281082	06/04/20 14:11	HIS	TAL CF
Total/NA	Analysis	7470A		1	281118	06/04/20 20:04	HIS	TAL CF
Total/NA	Prep	Distill/Ammonia			281128	06/04/20 22:38	JSH	TAL CF
Total/NA	Analysis	350.1		1	281276	06/05/20 18:43	JMH	TAL CF
Total/NA	Prep	351.2			281354	06/08/20 08:20	AFZ	TAL CF
Total/NA	Analysis	351.2		1	281451	06/08/20 20:54	JMH	TAL CF
Total/NA	Analysis	353.2		10	281449	06/08/20 17:31	JMH	TAL CF
Total/NA	Prep	365.2/365.3/365			281150	06/05/20 07:23	WJF	TAL CF
Total/NA	Analysis	365.1		1	281275	06/05/20 19:37	JMH	TAL CF
Total/NA	Analysis	SM 2320B		1	281176	06/05/20 09:22	LBB	TAL CF
Total/NA	Analysis	SM 2540C		1	281059	06/04/20 15:49	SAS	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	281099	06/04/20 15:16	ARG	TAL CF
Dissolved	Filtration	Filtration			281510	06/09/20 10:53	LBB	TAL CF
Dissolved	Analysis	SM4500 SiO2 C		1	281541	06/09/20 14:08	LBB	TAL CF
Total/NA	Analysis	Total Nitrogen		1	281151	06/05/20 07:41	LBB	TAL CF

Client Sample ID: AP4-MW4

Lab Sample ID: 310-183200-4

Date Collected: 06/02/20 11:28

Matrix: Ground Water

Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	281488	06/08/20 10:50	CTB	TAL CF
Total/NA	Prep	3010A			281167	06/05/20 08:16	HED	TAL CF
Total/NA	Analysis	6020A		1	281473	06/08/20 16:10	ACJ	TAL CF
Total/NA	Prep	7470A			281082	06/04/20 14:11	HIS	TAL CF
Total/NA	Analysis	7470A		1	281118	06/04/20 20:06	HIS	TAL CF
Total/NA	Prep	Distill/Ammonia			281128	06/04/20 22:38	JSH	TAL CF
Total/NA	Analysis	350.1		1	281276	06/05/20 18:41	JMH	TAL CF
Total/NA	Prep	351.2			281354	06/08/20 08:20	AFZ	TAL CF
Total/NA	Analysis	351.2		1	281451	06/08/20 20:53	JMH	TAL CF
Total/NA	Analysis	353.2		10	281449	06/08/20 17:32	JMH	TAL CF

Client Sample ID: AP4-MW4

Lab Sample ID: 310-183200-4

Date Collected: 06/02/20 11:28

Matrix: Ground Water

Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	365.2/365.3/365			281150	06/05/20 07:23	WJF	TAL CF
Total/NA	Analysis	365.1		1	281275	06/05/20 19:41	JMH	TAL CF
Total/NA	Analysis	SM 2320B		1	281176	06/05/20 09:22	LBB	TAL CF
Total/NA	Analysis	SM 2540C		1	281059	06/04/20 15:49	SAS	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	281099	06/04/20 15:17	ARG	TAL CF
Dissolved	Filtration	Filtration			281510	06/09/20 10:53	LBB	TAL CF
Dissolved	Analysis	SM4500 SiO2 C		1	281541	06/09/20 14:08	LBB	TAL CF
Total/NA	Analysis	Total Nitrogen		1	281151	06/05/20 07:41	LBB	TAL CF

Client Sample ID: AP4-MW5

Lab Sample ID: 310-183200-5

Date Collected: 06/02/20 15:06

Matrix: Ground Water

Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	281488	06/08/20 11:06	CTB	TAL CF
Total/NA	Analysis	9056A		10	281488	06/08/20 16:50	CTB	TAL CF
Total/NA	Prep	3010A			281167	06/05/20 08:16	HED	TAL CF
Total/NA	Analysis	6020A		1	281473	06/08/20 16:20	ACJ	TAL CF
Total/NA	Prep	7470A			281082	06/04/20 14:11	HIS	TAL CF
Total/NA	Analysis	7470A		1	281118	06/04/20 20:08	HIS	TAL CF
Total/NA	Prep	Distill/Ammonia			281128	06/04/20 22:38	JSH	TAL CF
Total/NA	Analysis	350.1		1	281276	06/05/20 18:40	JMH	TAL CF
Total/NA	Prep	351.2			281354	06/08/20 08:20	AFZ	TAL CF
Total/NA	Analysis	351.2		1	281451	06/08/20 20:55	JMH	TAL CF
Total/NA	Analysis	353.2		1	281449	06/08/20 17:33	JMH	TAL CF
Total/NA	Prep	365.2/365.3/365			281150	06/05/20 07:23	WJF	TAL CF
Total/NA	Analysis	365.1		1	281275	06/05/20 19:29	JMH	TAL CF
Total/NA	Analysis	SM 2320B		1	281176	06/05/20 09:22	LBB	TAL CF
Total/NA	Analysis	SM 2540C		1	281059	06/04/20 15:49	SAS	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	281099	06/04/20 15:17	ARG	TAL CF
Dissolved	Filtration	Filtration			281510	06/09/20 10:53	LBB	TAL CF
Dissolved	Analysis	SM4500 SiO2 C		1	281541	06/09/20 14:08	LBB	TAL CF
Total/NA	Analysis	Total Nitrogen		1	281151	06/05/20 07:41	LBB	TAL CF

Client Sample ID: AP4-MW6

Lab Sample ID: 310-183200-6

Date Collected: 06/02/20 13:49

Matrix: Ground Water

Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	281488	06/08/20 11:22	CTB	TAL CF
Total/NA	Prep	3010A			281167	06/05/20 08:16	HED	TAL CF
Total/NA	Analysis	6020A		1	281473	06/08/20 16:23	ACJ	TAL CF
Total/NA	Prep	7470A			281082	06/04/20 14:11	HIS	TAL CF
Total/NA	Analysis	7470A		1	281118	06/04/20 20:10	HIS	TAL CF

Client Sample ID: AP4-MW6

Lab Sample ID: 310-183200-6

Date Collected: 06/02/20 13:49

Matrix: Ground Water

Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Distill/Ammonia			281128	06/04/20 22:38	JSH	TAL CF
Total/NA	Analysis	350.1		1	281276	06/05/20 18:39	JMH	TAL CF
Total/NA	Prep	351.2			281354	06/08/20 08:20	AFZ	TAL CF
Total/NA	Analysis	351.2		1	281451	06/08/20 21:07	JMH	TAL CF
Total/NA	Analysis	353.2		1	281449	06/08/20 17:34	JMH	TAL CF
Total/NA	Prep	365.2/365.3/365			281150	06/05/20 07:23	WJF	TAL CF
Total/NA	Analysis	365.1		1	281275	06/05/20 19:40	JMH	TAL CF
Total/NA	Analysis	SM 2320B		1	281176	06/05/20 09:22	LBB	TAL CF
Total/NA	Analysis	SM 2540C		1	281059	06/04/20 15:49	SAS	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	281099	06/04/20 15:18	ARG	TAL CF
Dissolved	Filtration	Filtration			281510	06/09/20 10:53	LBB	TAL CF
Dissolved	Analysis	SM4500 SiO2 C		1	281541	06/09/20 14:08	LBB	TAL CF
Total/NA	Analysis	Total Nitrogen		1	281151	06/05/20 07:41	LBB	TAL CF

Client Sample ID: AP4-MW7

Lab Sample ID: 310-183200-7

Date Collected: 06/02/20 12:15

Matrix: Ground Water

Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	281488	06/08/20 12:09	CTB	TAL CF
Total/NA	Prep	3010A			281167	06/05/20 08:16	HED	TAL CF
Total/NA	Analysis	6020A		1	281473	06/08/20 16:25	ACJ	TAL CF
Total/NA	Prep	7470A			281082	06/04/20 14:11	HIS	TAL CF
Total/NA	Analysis	7470A		1	281118	06/04/20 20:13	HIS	TAL CF
Total/NA	Prep	Distill/Ammonia			281129	06/04/20 22:41	JSH	TAL CF
Total/NA	Analysis	350.1		1	281276	06/05/20 19:08	JMH	TAL CF
Total/NA	Prep	351.2			281354	06/08/20 08:20	AFZ	TAL CF
Total/NA	Analysis	351.2		1	281451	06/08/20 20:59	JMH	TAL CF
Total/NA	Analysis	353.2		100	281449	06/08/20 18:36	JMH	TAL CF
Total/NA	Prep	365.2/365.3/365			281150	06/05/20 07:23	WJF	TAL CF
Total/NA	Analysis	365.1		1	281275	06/05/20 19:34	JMH	TAL CF
Total/NA	Analysis	SM 2320B		1	281506	06/09/20 10:22	WJF	TAL CF
Total/NA	Analysis	SM 2540C		1	281059	06/04/20 15:49	SAS	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	281099	06/04/20 15:20	ARG	TAL CF
Dissolved	Filtration	Filtration			281510	06/09/20 10:53	LBB	TAL CF
Dissolved	Analysis	SM4500 SiO2 C		1	281541	06/09/20 14:08	LBB	TAL CF
Total/NA	Analysis	Total Nitrogen		1	281151	06/05/20 07:41	LBB	TAL CF

Client Sample ID: AP4-MW Blind Duplicate

Lab Sample ID: 310-183200-8

Date Collected: 06/02/20 00:00

Matrix: Ground Water

Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	281488	06/08/20 12:24	CTB	TAL CF

Client Sample ID: AP4-MW Blind Duplicate

Lab Sample ID: 310-183200-8

Date Collected: 06/02/20 00:00

Matrix: Ground Water

Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			281167	06/05/20 08:16	HED	TAL CF
Total/NA	Analysis	6020A		1	281473	06/08/20 16:28	ACJ	TAL CF
Total/NA	Prep	7470A			281082	06/04/20 14:11	HIS	TAL CF
Total/NA	Analysis	7470A		1	281118	06/04/20 20:15	HIS	TAL CF
Total/NA	Prep	Distill/Ammonia			281129	06/04/20 22:41	JSH	TAL CF
Total/NA	Analysis	350.1		1	281276	06/05/20 19:07	JMH	TAL CF
Total/NA	Prep	351.2			281354	06/08/20 08:20	AFZ	TAL CF
Total/NA	Analysis	351.2		1	281451	06/08/20 20:57	JMH	TAL CF
Total/NA	Analysis	353.2		100	281449	06/08/20 18:45	JMH	TAL CF
Total/NA	Prep	365.2/365.3/365			281150	06/05/20 07:23	WJF	TAL CF
Total/NA	Analysis	365.1		1	281275	06/05/20 19:27	JMH	TAL CF
Total/NA	Analysis	SM 2320B		1	281506	06/09/20 10:22	WJF	TAL CF
Total/NA	Analysis	SM 2540C		1	281059	06/04/20 15:49	SAS	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	281099	06/04/20 15:29	ARG	TAL CF
Dissolved	Filtration	Filtration			281510	06/09/20 10:53	LBB	TAL CF
Dissolved	Analysis	SM4500 SiO2 C		1	281541	06/09/20 14:08	LBB	TAL CF
Total/NA	Analysis	Total Nitrogen		1	281151	06/05/20 07:41	LBB	TAL CF

Client Sample ID: Evaporation Pond

Lab Sample ID: 310-183200-9

Date Collected: 06/02/20 16:13

Matrix: Ground Water

Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	281488	06/08/20 12:40	CTB	TAL CF
Total/NA	Analysis	9056A		20	281488	06/09/20 13:37	CTB	TAL CF
Total/NA	Prep	3010A			281167	06/05/20 08:16	HED	TAL CF
Total/NA	Analysis	6020A		1	281473	06/08/20 16:31	ACJ	TAL CF
Total/NA	Prep	3010A			281167	06/05/20 08:16	HED	TAL CF
Total/NA	Analysis	6020A		4	281593	06/09/20 11:34	ACJ	TAL CF
Total/NA	Prep	7470A			281082	06/04/20 14:11	HIS	TAL CF
Total/NA	Analysis	7470A		1	281118	06/04/20 20:17	HIS	TAL CF
Total/NA	Prep	Distill/Ammonia			281129	06/04/20 22:41	JSH	TAL CF
Total/NA	Analysis	350.1		1	281276	06/05/20 19:06	JMH	TAL CF
Total/NA	Prep	351.2			281354	06/08/20 08:20	AFZ	TAL CF
Total/NA	Analysis	351.2		1	281451	06/08/20 20:56	JMH	TAL CF
Total/NA	Analysis	353.2		1	281449	06/08/20 18:46	JMH	TAL CF
Total/NA	Prep	365.2/365.3/365			281150	06/05/20 07:23	WJF	TAL CF
Total/NA	Analysis	365.1		1	281275	06/05/20 19:28	JMH	TAL CF
Total/NA	Analysis	SM 2320B		1	281506	06/09/20 10:22	WJF	TAL CF
Total/NA	Analysis	SM 2540C		1	281059	06/04/20 15:49	SAS	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	281099	06/04/20 15:31	ARG	TAL CF
Dissolved	Filtration	Filtration			281510	06/09/20 10:53	LBB	TAL CF
Dissolved	Analysis	SM4500 SiO2 C		1	281541	06/09/20 14:08	LBB	TAL CF

Client Sample ID: Evaporation Pond
Lab Sample ID: 310-183200-9

Date Collected: 06/02/20 16:13
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Total Nitrogen		1	281151	06/05/20 07:41	LBB	TAL CF

Client Sample ID: Leacheate Collection Sump
Lab Sample ID: 310-183200-10

Date Collected: 06/02/20 16:25
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	281488	06/08/20 12:56	CTB	TAL CF
Total/NA	Analysis	9056A		20	281488	06/09/20 13:52	CTB	TAL CF
Total/NA	Prep	3010A			281167	06/05/20 08:16	HED	TAL CF
Total/NA	Analysis	6020A		1	281473	06/08/20 16:33	ACJ	TAL CF
Total/NA	Prep	3010A			281167	06/05/20 08:16	HED	TAL CF
Total/NA	Analysis	6020A		4	281593	06/09/20 11:37	ACJ	TAL CF
Total/NA	Prep	7470A			281082	06/04/20 14:11	HIS	TAL CF
Total/NA	Analysis	7470A		1	281118	06/04/20 20:19	HIS	TAL CF
Total/NA	Prep	Distill/Ammonia			281129	06/04/20 22:41	JSH	TAL CF
Total/NA	Analysis	350.1		1	281276	06/05/20 19:04	JMH	TAL CF
Total/NA	Prep	351.2			281354	06/08/20 08:20	AFZ	TAL CF
Total/NA	Analysis	351.2		1	281451	06/08/20 21:06	JMH	TAL CF
Total/NA	Analysis	353.2		1	281449	06/08/20 18:48	JMH	TAL CF
Total/NA	Prep	365.2/365.3/365			281150	06/05/20 07:23	WJF	TAL CF
Total/NA	Analysis	365.1		1	281275	06/05/20 19:35	JMH	TAL CF
Total/NA	Analysis	SM 2320B		1	281506	06/09/20 10:22	WJF	TAL CF
Total/NA	Analysis	SM 2540C		1	281059	06/04/20 15:49	SAS	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	281099	06/04/20 15:33	ARG	TAL CF
Dissolved	Filtration	Filtration			281510	06/09/20 10:53	LBB	TAL CF
Dissolved	Analysis	SM4500 SiO2 C		1	281541	06/09/20 14:08	LBB	TAL CF
Total/NA	Analysis	Total Nitrogen		1	281151	06/05/20 07:41	LBB	TAL CF

Client Sample ID: Underdrain Sump
Lab Sample ID: 310-183200-11

Date Collected: 06/02/20 16:36
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	281488	06/08/20 13:11	CTB	TAL CF
Total/NA	Analysis	9056A		10	281488	06/08/20 17:05	CTB	TAL CF
Total/NA	Prep	3010A			281167	06/05/20 08:16	HED	TAL CF
Total/NA	Analysis	6020A		1	281473	06/08/20 16:36	ACJ	TAL CF
Total/NA	Prep	7470A			281082	06/04/20 14:11	HIS	TAL CF
Total/NA	Analysis	7470A		1	281118	06/04/20 20:25	HIS	TAL CF
Total/NA	Prep	Distill/Ammonia			281129	06/04/20 22:41	JSH	TAL CF
Total/NA	Analysis	350.1		1	281276	06/05/20 19:03	JMH	TAL CF
Total/NA	Prep	351.2			281428	06/08/20 14:44	AFZ	TAL CF
Total/NA	Analysis	351.2		1	281561	06/09/20 19:05	JMH	TAL CF

Lab Chronicle

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Client Sample ID: Underdrain Sump
Lab Sample ID: 310-183200-11
Date Collected: 06/02/20 16:36
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	353.2		1	281449	06/08/20 18:49	JMH	TAL CF
Total/NA	Prep	365.2/365.3/365			281150	06/05/20 07:23	WJF	TAL CF
Total/NA	Analysis	365.1		1	281275	06/05/20 19:26	JMH	TAL CF
Total/NA	Analysis	SM 2320B		1	281176	06/05/20 09:22	LBB	TAL CF
Total/NA	Analysis	SM 2540C		1	281059	06/04/20 15:49	SAS	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	281099	06/04/20 15:34	ARG	TAL CF
Dissolved	Filtration	Filtration			281510	06/09/20 10:53	LBB	TAL CF
Dissolved	Analysis	SM4500 SiO2 C		1	281541	06/09/20 14:08	LBB	TAL CF
Total/NA	Analysis	Total Nitrogen		1	281151	06/05/20 07:41	LBB	TAL CF

Client Sample ID: Interceptor Trench
Lab Sample ID: 310-183200-12
Date Collected: 06/02/20 16:49
Matrix: Ground Water
Date Received: 06/04/20 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		5	281488	06/08/20 13:27	CTB	TAL CF
Total/NA	Prep	3010A			281167	06/05/20 08:16	HED	TAL CF
Total/NA	Analysis	6020A		1	281473	06/08/20 16:38	ACJ	TAL CF
Total/NA	Prep	7470A			281082	06/04/20 14:11	HIS	TAL CF
Total/NA	Analysis	7470A		1	281118	06/04/20 20:28	HIS	TAL CF
Total/NA	Prep	Distill/Ammonia			281129	06/04/20 22:41	JSH	TAL CF
Total/NA	Analysis	350.1		1	281276	06/05/20 19:02	JMH	TAL CF
Total/NA	Prep	351.2			281428	06/08/20 14:44	AFZ	TAL CF
Total/NA	Analysis	351.2		1	281561	06/09/20 19:07	JMH	TAL CF
Total/NA	Analysis	353.2		1	281449	06/08/20 17:35	JMH	TAL CF
Total/NA	Prep	365.2/365.3/365			281158	06/05/20 08:00	WJF	TAL CF
Total/NA	Analysis	365.1		1	281275	06/05/20 20:09	JMH	TAL CF
Total/NA	Analysis	SM 2320B		1	281176	06/05/20 09:22	LBB	TAL CF
Total/NA	Analysis	SM 2540C		1	281059	06/04/20 15:49	SAS	TAL CF
Total/NA	Analysis	SM 4500 H+ B		1	281099	06/04/20 15:35	ARG	TAL CF
Dissolved	Filtration	Filtration			281510	06/09/20 10:53	LBB	TAL CF
Dissolved	Analysis	SM4500 SiO2 C		1	281541	06/09/20 14:08	LBB	TAL CF
Total/NA	Analysis	Total Nitrogen		1	281151	06/05/20 07:41	LBB	TAL CF

Laboratory References:

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

Accreditation/Certification Summary

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Laboratory: Eurofins TestAmerica, Cedar Falls

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
AIHA-LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	101044	11-01-20
Colorado	Petroleum Storage Tank Program	IA100001 (OR)	09-29-20
Colorado	Petroleum Storage Tank Program	IA100001 (OR)	09-29-20
Georgia	State	IA100001 (OR)	09-29-20
Illinois	NELAP	200024	11-29-20
Iowa	State	007	12-01-21
Kansas	NELAP	E-10341	01-31-21
Minnesota	NELAP	019-999-319	12-31-20
Minnesota	NELAP	019-999-319	12-31-20
Minnesota (Petrofund)	State	3349	08-22-21
North Dakota	State	R-186	09-30-20
Oregon	NELAP	IA100001	09-29-20
USDA	US Federal Programs	P330-19-00003	01-02-22

Method Summary

Client: Nebraska Public Power District
Job ID: 310-183200-1
Project/Site: Sheldon Station Ash Landfill #4 CCR

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL CF
6020A	Metals (ICP/MS)	SW846	TAL CF
7470A	Mercury (CVAA)	SW846	TAL CF
350.1	Nitrogen, Ammonia	MCAWW	TAL CF
351.2	Nitrogen, Total Kjeldahl	MCAWW	TAL CF
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL CF
365.1	Phosphorus, Total	EPA	TAL CF
SM 2320B	Alkalinity	SM	TAL CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CF
SM 4500 H+ B	pH	SM	TAL CF
SM4500 SiO2 C	Silica, Molybdosilicate Method	SM	TAL CF
Total Nitrogen	Nitrogen, Total	EPA	TAL CF
3010A	Preparation, Total Metals	SW846	TAL CF
351.2	Nitrogen, Total Kjeldahl	MCAWW	TAL CF
365.2/365.3/365	Phosphorus, Total	MCAWW	TAL CF
7470A	Preparation, Mercury	SW846	TAL CF
Distill/Ammonia	Distillation, Ammonia	None	TAL CF
Filtration	Sample Filtration	None	TAL CF

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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

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310-183200 Chain of Custody

Cooler/Sample Receipt and Temperature

Client Information

Client: Nebraska Public Power District

City/State: CITY Hallam STATE NE | Project: Sheldon Station Ash Landfill

Receipt Information

Date/Time Received: DATE 5/4/20 TIME 1030 | Received By: CC

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes:* Cooler ID: —
Multiple Coolers?	☒ Yes	☐ No	*If yes:* Cooler # 1 of 4
Cooler Custody Seals Present?	☒ Yes	☒ No CC 5/4/20	*If yes:* Cooler custody seals intact? ☒ Yes ☐ No
Sample Custody Seals Present?	☐ Yes	☒ No	*If yes:* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?	☐ Yes	☒ No	*If yes:* Which VOA samples are in cooler? ↓

Temperature Record

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

Thermometer ID: P | Correction Factor (°C): 0.1

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 4.5 | Corrected Temp (°C): 4.6

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

eurofins | Environment Testing TestAmerica

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Nebraska Public Power District

City/State: CITY Wallam STATE NE

Project: Sheldon Station Ash landfill

Receipt Information

Date/Time Received: DATE 6/4/20 TIME 1030

Received By: CC

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes ☐ No	*If yes:* Cooler ID:	—
Multiple Coolers?	☒ Yes ☐ No	*If yes:* Cooler #	2 of 4
Cooler Custody Seals Present?	☒ Yes ☐ No	*If yes:* Cooler custody seals intact?	☒ Yes ☐ No
Sample Custody Seals Present?	☐ Yes ☒ No	*If yes:* Sample custody seals intact?	☐ Yes ☐ No
Trip Blank Present?	☐ Yes ☐ No	*If yes:* Which VOA samples are in cooler?	↓

APA-MW4, Evaporation Pond, AP4-Duplicate

Temperature Record

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

Thermometer ID: P

Correction Factor (°C): 0.1

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 7.2

Corrected Temp (°C): 7.3

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:	1L Plastic	250mL Plastic
Uncorrected Temp (°C):	5.3	6.8
Corrected Temp (°C):	5.4	6.9

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☒ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

eurofins | Environment Testing TestAmerica

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Nebraska Public Power District

City/State: CITY Hallam STATE NE | Project: Sheldon Station Ash Landfill

Receipt Information

Date/Time Received: DATE 6/4/20 TIME 1030 | Received By: CC

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes:* Cooler ID: —
Multiple Coolers?	☒ Yes	☐ No	*If yes:* Cooler # 3 of 4
Cooler Custody Seals Present?	☒ Yes	☐ No	*If yes:* Cooler custody seals intact? ☒ Yes ☐ No
Sample Custody Seals Present?	☐ Yes	☒ No	*If yes:* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?	☐ Yes	☒ No	*If yes:* Which VOA samples are in cooler? ↓

Temperature Record

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

Thermometer ID: P | Correction Factor (°C): 0.1

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 5.6 | Corrected Temp (°C): 5.7

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:	1L Plastic	250mL Plastic
Uncorrected Temp (°C):	1.8	2.6
Corrected Temp (°C):	1.9	2.7

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

eurofins | Environment Testing TestAmerica

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Nebraska Public Power District

City/State: CITY Hallam STATE NE | Project: Sheldon Station Ash Landfill

Receipt Information

Date/Time Received: DATE 6/4/20 TIME 1030 | Received By: CC

Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes ☐ No	*If yes:* Cooler ID:	—
Multiple Coolers?	☒ Yes ☐ No	*If yes:* Cooler #	4 of 4
Cooler Custody Seals Present?	☒ Yes ☐ No	*If yes:* Cooler custody seals intact?	☒ Yes ☐ No
Sample Custody Seals Present?	☐ Yes ☒ No	*If yes:* Sample custody seals intact?	☐ Yes ☐ No
Trip Blank Present?	☐ Yes ☒ No	*If yes:* Which VOA samples are in cooler?	↓

Temperature Record

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

Thermometer ID: P | Correction Factor (°C): 0.1

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 10.1 | Corrected Temp (°C): 10.2

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:	1 L Plastic	250 Plastic
Uncorrected Temp (°C):	0.8	2.4
Corrected Temp (°C):	0.9	2.5

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

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

Chain of Custody Record

TestAmerica Omaha SC
2

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Todd Chinn + TRICIA NOVAK	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Todd A. Chinn	Phone: 402-787-5256	E-Mail: shawn.hayes@testamericainc.com		Page: 1 of 2
Company: Nebraska Public Power District				Job #:
Address: 4500 West Pella Road	Due Date Requested:			
City: Hallam	TAT Requested (days): 5Day TAT for all analyses except RAD 226 + 228			
State, Zip: NE, 68368				
Phone: 402-787-5256	PO #: Purchase Order not required			
Email: tachinn@nppd.com	WO #:			
Project Name: Sheldon Station Ash Landfill #4 CCR	TestAmerica Project #: 31006953			
Site: Nebraska				

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM4500 H+ pH, 2540C TDS	9056A Chloride, Fluoride, Sulfate	Alkalinity (Total, Bicarbonate, Carbonate, Hydroxide)	Silica (SiO2)	6020 CCR Metals + Mg, K, Na and 7470A Mercury	350.1 Ammonia, 353.2 Nitrate+Nitrite	351.2 TKN (needed for Total Nitrogen)	365.1 Phosphate	Total Nitrogen	9315 Radium-226	9320 Radium-228			Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N											
AP4-MW1	6-2-20	0821	G	GW			X	X	X	X	X	X	X	X	X	X	X				
AP4-MW2	6-2-20	0918	G	GW			X	X	X	X	X	X	X	X	X	X	X				
AP4-MW3	6-2-20	1010	G	GW			X	X	X	X	X	X	X	X	X	X	X				
AP4-MW4	6-2-20	1128	G	GW			X	X	X	X	X	X	X	X	X	X	X				
AP4-MW5	6-2-20	1506	G	GW			X	X	X	X	X	X	X	X	X	X	X				
AP4-MW6	6-2-20	1349	G	GW			X	X	X	X	X	X	X	X	X	X	X				
AP4-MW7	6-2-20	1215	G	GW			X	X	X	X	X	X	X	X	X	X	X				
AP4-MW Blind Duplicate	6-2-20	/	G	GW			X	X	X	X	X	X	X	X	X	X	X				
Evaportion Pond	6-2-20	1613	G	GW			X	X	X	X	X	X	X	X	X	X	X				
Leachate Collection Sump	6-2-20	1625	G	GW			X	X	X	X	X	X	X	X	X	X	X				
Underdrain Sump	6-2-20	1636	G	GW			X	X	X	X	X	X	X	X	X	X	X				

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	6-3-2020 1600	NPPD	[signature]	6/04/20 1630	Eurofins
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

6/11/2020

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

Chain of Custody Record

TestAmerica Omaha SC
268

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Todd Chinn + TRICIA NOVAK	Lab PM: Hayes, Shawn M	Carrier Tracking No(s):	COC No:
Client Contact: Todd A. Chinn	Phone: 402-787-5256	E-Mail: shawn.hayes@testamericainc.com		Page: 2 of 2
Company: Nebraska Public Power District				Job #:
Address: 4500 West Pella Road	Due Date Requested:			
City: Hallam	TAT Requested (days): 5 Day TAT for all analysis except RAD226 + 228			
State, Zip: NE, 68368				
Phone: 402-787-5256	PO #: Purchase Order not required			
Email: tachinn@nppd.com	WO #:			
Project Name: Sheldon Station Ash Landfill #4 CCR	TestAmerica Project #: 31006953			
Site: Nebraska				

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM4500 H+ pH, 2540C TDS	9056A Chloride, Fluoride, Sulfate	Alkalinity (Total, Bicarbonate, Carbonate, Hydroxide)	Silica (SiO2)	6020 CCR Metals + Mg, K, Na and 7470A Mercury	350.1 Ammonia. 353.2 Nitrate+Nitrite	351.2 TKN (needed for Total Nitrogen)	365.1 Phosphate	Total Nitrogen	9315 Radium-226	9320 Radium-228			Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	N											
Interceptor Trench	6-2-20	1649	G	GW			X	X	X	X	X	X	X	X	X	X	X				

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time:	Company	Received by: / Date/Time: 060420 1030 / Company: eha
Relinquished by:	Date/Time:	Company	Received by: / Date/Time: / Company
Relinquished by:	Date/Time:	Company	Received by: / Date/Time: / Company

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

6/11/2020

Login Sample Receipt Checklist

Client: Nebraska Public Power District

Job Number: 310-183200-1

Login Number: 183200

List Source: Eurofins TestAmerica, Cedar Falls

List Number: 1

Creator: Miller, Drew E

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	2 of the three temp checks failed on Cooler 2. Associated samples written down
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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