REPORT

2024 Annual CCR Groundwater Report

Nebraska Public Power District, Sheldon Station

Submitted to:

Nebraska Public Power District

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Submitted by:

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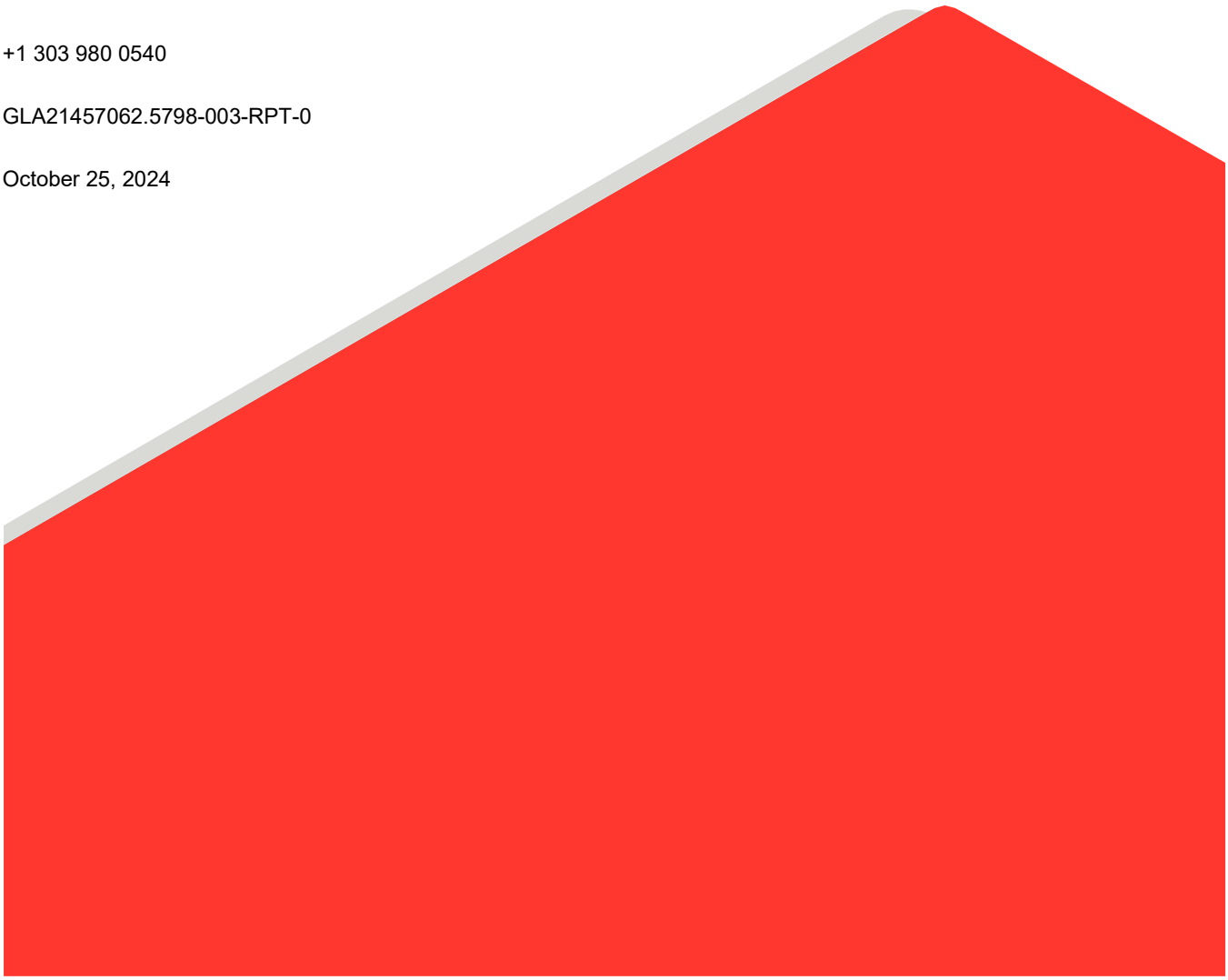

Executive Summary

This report presents results from the 2024 Coal Combustion Resiudals (CCR) groundwater monitoring program events at Nebraska Public Power District's Sheldon Station Ash Landfill 4. The facility entered 2024 under a detection monitoring program and remains in detection monitoring based on the results of the first (Q1) and third (Q3) quarter 2024 detection monitoring sampling and analysis events.

The following items of statistical significance were identified as a result of the 2024 sampling events:

- Sulfate at AP4-MW2 (upgradient) was reported as a potential exceedance for Q3 2023 within the 2023 annual report (WSP 2023) and was determined to be a false positive following confirmatory sampling.
- Sulfate at AP4-MW5 was identified as a potential exceedance for Q1 2024 and determined to be a false positive following confirmatory sampling.
- Chloride at AP4-MW7 was identified as a potential exceedance for Q1 2024 and determined to be a false positive following confirmatory sampling.
- Field-measured pH at AP4-MW6 was identified as a potential exceedance for Q1 2024 and determined to be a false positive following confirmatory sampling.
- Potential exceedances were identified for the following well-parameter pairs for the Q3 2024 sampling event. Confirmatory samples will be collected prior to determination of verified statistical significance.
    - Field-measured pH at AP4-MW3
    - Field-measured pH at AP4-MW4
    - Field-measured pH at AP4-MW7

The monitoring program for Ash Landfill 4 remains in detection monitoring entering 2025.

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1.0 INTRODUCTION

WSP USA Inc. (WSP) prepared this report describing the 2024 Coal Combustion Residuals (CCR) groundwater sampling events and comparative statistical analysis for Nebraska Public Power District's (NPPD) Sheldon Station Ash Landfill No. 4 (AP4; the Site) 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) (GAUSA 2022a) and the federal CCR Rule's Sections on groundwater monitoring and corrective action, 40 Code of Federal Regulations (CFR) 257.90 to 257.98, along with applicable revisions to the CCR Rule.

1.1 Facility Information

Sheldon Station is owned and operated by NPPD and can generate 225 megawatts (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's (USEPA) CCR Rule established specific requirements for reporting of groundwater monitoring and corrective action at CCR facilities in 40 CFR 257.90 to 40 CFR 257.98 (USEPA 2015). Per part (e) of 40 CFR 257.90, no later than January 31, 2018, and annually thereafter, owners or operators of active 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 separate NDEE requirements (GAUSA 2022a). In addition to the annual report for the federal CCR requirements, semi-annual reports are also prepared following each semi-annual sampling event, at the request of the NDEE. The annual report serves as a combined version of the two semi-annual reports.

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 in Figure 1 and Figure 2. The two upgradient monitoring wells are AP4-MW1 and AP4-MW2, which are marked by (U) throughout the text. The five downgradient monitoring wells are AP4-MW3, AP4-MW4, AP4-MW5, AP4-MW6, and AP4-MW7.

2.1 Completed Key Actions in 2024

A detection monitoring sampling event was completed during the first quarter (Q1) of 2024, with an associated semi-annual report provided to the NDEE within 30 days of the end of the quarter. Results of the Q1 2024 sampling event have been placed in the facility operating record and are discussed in this annual report.

A detection monitoring sampling event was completed during the third quarter (Q3) of 2024, with an associated semi-annual report provided to the NDEE within 30 days of the end of the quarter. Results of the Q3 2024 sampling event have been placed in the facility operating record and are discussed in this annual report.

2.2 Installation and Decommissioning of Monitoring Wells

No monitoring wells were installed or decommissioned at Sheldon Station during 2024.

2.3 Problems and Resolutions

During both the Q1 2024 and Q3 2024 monitoring events, analysis by Method 9056A required dilution due to the sample matrix, resulting in non-detects with elevated reporting limits for several well-parameter pairs. Results are consistent with past results and required dilutions. The following well-parameter pairs were reported as non-detects with elevated reporting limits:

- chloride, 5x dilution factor, elevated reporting limit equals 5.0 milligrams per liter (mg/L) in Q1 and Q3 2024: AP4-MW3, AP4-MW4, and AP4-MW6
- fluoride, 5x dilution factor, elevated reporting limit equals 1.00 mg/L in Q1 and Q3 2024, unless noted otherwise: AP4-MW1 (U; Q3 only), AP4-MW2 (U), AP4-MW5, and AP4-MW7

During evaluation of the analytical report for the Q1 2024 detection monitoring event, a number of issues were identified and requested for review by Eurofins Environment Testing Cedar Falls (Eurofins), the contracted analytical laboratory. Eurofins reviewed and revised the analytical report for the Q1 2024 detection monitoring report to address the following issues:

- The sample collected from AP4-MW2 (U) was re-analyzed for fluoride at a 5x dilution. The sample was initially reported at a 10x dilution. The result of the re-analysis was more consistent with past results for the well-parameter pair.
- In the original analytical report, AP4-MW3 was found to have a data entry error where the results for chloride and fluoride had been switched within the report. Both parameters are analyzed by Method 9056A.
- The samples for AP4-MW4 and AP4-MW5 were re-analyzed to confirm the original reported results for sulfate. The lab found the original results to be acceptable.

On the field notes for the Q1 2024 event, the date for collection of the samples at AP4-MW4 was noted as February 27, while the chain-of-custody included with the analytical report indicated sample collection occurred on February 26. In discussion with the NPPD staff that collected the samples, the February 26 date shown on the chain-of-custody was the correct sample collection date. No other problems were encountered as part of the field sampling in Q1 2024.

During review of the Q3 2024 analytical report, a request was made to Eurofins as the contracted analytical laboratory to confirm the reported results for calcium, sulfate, and total dissolved solids, due to differences in the results of the Q3 2024 event when compared to the Q1 2024 event. Eurofins confirmed that no issues were identified with the analysis or quality control associated with the results. Additionally, Eurofins noted that sulfate at AP4-MW5 had been analyzed twice using two different dilution factors, with the results of the two separate analyses found to be internally consistent. While the Q3 2024 results for calcium, sulfate, and total dissolved solids at AP4-MW5 vary from the Q1 2024 results, they are consistent with past results at the well. No changes were made to the analytical report as a result of the sample confirmation.

No other problems were encountered as part of the field and laboratory sampling in Q3 2024.

2.4 Proposed Key Activities for 2025

Detection monitoring sampling events are planned for the first and third quarters (Q1 and Q3) of 2025). The detection monitoring sampling events will consist of sampling, data review, and comparative statistical analysis. Following each detection monitoring sampling event, semi-annual reports will be provided to the NDEE and

placed in the facility operating record, and an annual report will be prepared to meet the requirements of the federal CCR rule.

3.0 GROUNDWATER MONITORING ANALYTICAL PROGRAM STATUS

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

3.1 Samples Collected

NPPD 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 3, 2024. Specific dates for each sample collected as part of the program are provided in Table 1 through Table 7.

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 February 2024 (Q1 2024) detection monitoring sampling event and the September 2024 (Q3 2024) detection monitoring sampling event are shown in Figure 1 and Figure 2, respectively. Figure 3 shows groundwater elevations over time at the site.

The groundwater flow rate across Ash Landfill 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 February 2024 was estimated to be 7 x 10^{-4} ft/day, based on the calculated hydraulic gradient for February 2024 of 0.028 ft/ft.

The average groundwater flow rate for September 2024 was estimated to be 7 x 10^{-4} ft/day, based on the calculated hydraulic gradient for September 2024 of 0.028 ft/ft.

3.2 Monitoring Data (Analytical Results)

Analytical results for the detection monitoring results for the February 2024 and September 2024 monitoring events are shown in Table 1 through Table 7.

3.3 Comparative Statistical Analysis

Comparative statistical analysis was conducted using the results of the most recent baseline update conducted prior to the Q1 2022 detection monitoring event (GAUSA 2022b) following guidance provided by the USEPA (2009). The results of the comparative statistical analysis are summarized below and 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 (GAI 2017a).

3.3.1 Definitions

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

- **Statistically significant increase (SSI)**—defined as a result that exceeds the statistical limit established by the baseline statistical analysis, which has been verified by confirmatory re-sampling and analysis.
- **Elevated cumulative summation (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 changing and that analytical results may exceed the Shewhart-CUSUM limit in the future. In the case of two-tailed analysis for field pH, an elevated CUSUM can also occur below the lower Shewhart-CUSUM statistical limit.
- **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 re-sampling 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 exceed 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 exceedances (verified SSIs)**—interpreted as two consecutive samples exceeding the statistical limit (the original sample and the confirmatory re-sample, or two consecutive elevated CUSUMs, or a combination of a sample result and an elevated CUSUM in either order) for the same parameter at the same well.

3.3.2 Potential Exceedances

The following potential exceedances were identified for the Q1 2024 sampling event:

- AP4-MW5, sulfate
- AP4-MW6, field-measured pH low elevated CUSUM
- AP4-MW7, chloride elevated CUSUM

Confirmatory samples were collected to determine whether the results were false positives or verified SSIs, with results discussed below in subsequent sections.

The following potential exceedances were identified for the Q3 2024 sampling event:

- AP4-MW3, field pH low elevated CUSUM
- AP4-MW4, field pH low elevated CUSUM
- AP4-MW7, field pH low elevated CUSUM

Confirmatory re-samples will be collected to determine whether the results are false positives or verified SSIs.

3.3.3 False Positives

For the potential exceedance identified for sulfate at AP4-MW2 (U) during the Q3 2023 detection monitoring event, confirmatory sampling indicated that the result was a false positive.

The following results that were identified as potential exceedances for the Q1 2024 sampling event were determined to be false positives following confirmatory re-sampling:

- AP4-MW5, sulfate
- AP4-MW6, field-measured pH
- AP4-MW7, chloride

3.3.4 Verified Exceedances

No verified SSIs were identified for either the Q1 2024 or the Q3 2024 detection monitoring events.

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 federal CCR 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 the first and third quarters of 2025.

3.4.2 Alternative Source Demonstrations

Results collected in 2024 for the detection monitoring program did not include items of verified statistical significance, and consequently, no alternative source demonstrations were conducted in 2024. Results of previous alternative source demonstrations have been included in prior annual reports (see for instance GAI 2021 and GAUSA 2022b).

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 the permitted SAP (GAUSA 2022a).

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 has not been required. No alternative source demonstration stemming from statistically significant levels of assessment monitoring Appendix IV parameters 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 for the CCR detection monitoring events that occurred on February 26, 2024 and September 3, 2024, along with the associated comparative statistical analysis, for NPPD's Sheldon Station Ash Landfill No. 4.

As described in the Groundwater Monitoring System Certification (GAI 2017b) and the Groundwater Monitoring Statistical Methods Certification (GAI 2017a), the groundwater monitoring and analytical procedures meet the general requirements of the CCR Rule and the permitted SAP (GAUSA 2022a), and modification to the monitoring network and sampling program are not recommended at this time.

Signature Page

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https://wsponline.sharepoint.com/:w:/r/Sites/Global-NPPD2023GWQualityRep/Project%20Files/6%20Deliverables/GLA21457062.5798/003-RPT-2024_Annual_CCR__GW_Rpt_NPPD_SS/Rev0/GLA21457062.5798-003-RPT-0-2024_Annual_CCR_GW_RPT_NPPD_SS_25OCT24.docx

5.0 REFERENCES

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GAUSA (Golder Associates USA Inc.). 2022a. Sampling and Analysis Plan Permit No. NE0204285, Sheldon Station Ash Landfill No. 4. March 1, 2022.

GAUSA. 2022b. Baseline Update for Groundwater Quality Monitoring at Nebraska Public Power District's Sheldon Station. April 6, 2022.

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

USEPA. 2015. Code of Federal Regulations Title 40 Part 257: Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities. April 17, 2015.

Tables

Table 1: Data Summary Table - AP4-MW1

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024	9/3/2024
	Units	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	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	0.130	< 0.100	< 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	96.2	93.7	92.6	101	85.2	99.4	79.5	92.8
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	7.13	7.17	6.81	7.59	7.19	7.33	7.57	7.54
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	0.856	0.615	0.611	0.524	0.811	< 1.00	< 1.00	< 1.00
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	6.8	7.14	7.11	7.20	7.04	6.95	7.10	7.00
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	25.2	27.2	26.2	22.7	23.2	27.3	23.8	22.3
Total Dissolved Solids	mg/L	440	462	428	430	462	464	484	520	464	408	406	416	392	422	396	388	388	396	368	362	400	402	430
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

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

Table 2: Data Summary Table - AP4-MW2

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024	9/3/2024
	Units	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	< 0.100	< 0.100	< 0.400	< 0.100	< 0.100	0.111	< 0.100	< 0.100
Calcium, Total	mg/L	335	321	294	320	289	286	342	278	293	331	263	297	291	239	292	296	288	295	336	269	309	290	306
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	113.0	111	115	99.6	106	111	99.9	99.8
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	< 0.500	0.533	< 0.500	< 0.500	0.544	< 1.00	< 1.00	< 1.00
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	7.05	7.08	7.09	7.1	6.97	6.97	6.97	6.97
Sulfate	mg/L	884	888	797	804	901	842	774	797	894	879 E	827	923	855	857	874	876	882	933	906	874	1120	873	944
Total Dissolved Solids	mg/L	1720	1840	1700	1830	1900	1790	2360	1780	2210	1650	1680	1730	1570	1740	1620	1680	1620	1560	1680	1380	1750	1610	1630
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
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.

Table 3: Data Summary Table - AP4-MW3

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024	9/3/2024
	Units	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	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 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	88.4	88.3	84.3	94.5	78.8	88.5	78.1	84.9
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	< 5.00	< 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	1.33	0.914	0.972	0.717	1.23	1.14	1.27	1.21
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	6.55	7.36	7.27	7.40	7.14	7.13	7.16	7.08
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	22.9	29.2	22.3	21	19.3	17.7	20.0	19.1
Total Dissolved Solids	mg/L	418	460	390	420	488	430	428	442	494	404	374	426	378	374	378	348	344	354	326	318	360	360	340
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

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

Table 4: Data Summary Table - AP4-MW4

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024	9/3/2024
	Units	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	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100
Calcium, Total	mg/L	128	123	103	115	111	105	132	95.4	108	109	97.1	100	112	91.9	104	112	109	102	119	100	117	108	117
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	< 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	0.989	0.900	0.837	0.626	1.03	< 1.00	1.09	1.06
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	7.23	7.17	7.13	7.3	7.02	6.97	7.05	6.99
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	97.5	87.3	84.7	76.1	96.7	96.5	130	102
Total Dissolved Solids	mg/L	506	590	476	518	582	556	576	666	498	530	466	486	490	516	510	466	452	452	436	460	504	526	500
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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024	9/3/2024
	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	< 0.100	< 0.100	< 0.400	< 0.100	0.109	0.125	< 0.100	0.109
Calcium, Total	mg/L	358	520	439	460	523	517	608	310	488	537	146	541	504	363	579	210	177	600	178	471	468	500	244
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	5.56	< 5.00	5.71	< 5.00	6.28	6.11	6.52	6.31
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	0.53	< 0.500	< 0.500	< 0.500	< 0.500	< 1.00	< 1.00	< 1.00
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	6.94	7.04	6.67	7.1	6.63	6.64	6.62	6.88
Sulfate	mg/L	1420	1480	969	1410	1620	1570	1350	740	784	1630	468	1470	1370	1540	1580	678	592	1670	426	1590	1550	1680	719
Total Dissolved Solids	mg/L	2540	2740	1950	2620	2860	2920	3010	1490	1710	2690	1020	2390	2210	2500	2740 H	1180	980	2450	750	2350	2660	2510	1270
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.

Table 6: Data Summary Table - AP4-MW6

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024	9/3/2024
	Units	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	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 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	105	99.9	99	116	97.2	112	99.6	102
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	< 5.00	< 5.00	< 5.00	< 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	1.53	1.20	1.35	102	1.45	1.28	1.44	1.54
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	7.16	7.17	7.15	7.20	7.04	6.91	7.07	6.97
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	58.4	61.8	53.8	52.3	59.8	65.9	66.3	53
Total Dissolved Solids	mg/L	468	506	506	436	514	530	584	550	498	432	396	440	458	422	454	414	414	402	382	394	428	438	428
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

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

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024	9/3/2024
	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	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 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	71.7	70.5	68.2	78.2	64.8	75.7	65.9	68.5
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	11.4	9.65	11.4	13.3	13.9	16.8	16.0	14.7
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	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	< 1.00	< 1.00	< 1.00
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	7.34	7.37	7.36	7.30	7.23	7.11	7.26	7.17
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	47.7	50.5	47	40.8	42.1	40.1	34.6	29.6
Total Dissolved Solids	mg/L	546	548	516	558	588	616	534	538	598	476	480	536	504	510	404	488	488	490	490	478	516	466	438
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							
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
QTR-2021-1	1410.62	1425.54	1390.69	1375.14	1386.42	1374.19	1405.72
QTR-2021-3	1410.46	1426.36	1392.03	1373.93	1384.00	1371.92	1412.38
QTR-2022-1	1408.46	1424.04	1389.13	1372.69	1381.70	1373.66	1404.24
QTR-2022-3	1408.65	1421.92	1390.69	1371.45	1379.75	1370.26	1408.57
QTR-2023-1	1405.85	1419.93	1386.32	1370.00	1378.27	1369.80	1400.39
QTR-2023-3	1405.35	1418.68	1386.93	1370.75	1379.99	1370.86	1398.38
QTR-2024-1	1405.43	1418.98	1387.26	1372.18	1379.84	1370.80	1397.63
QTR-2024-3	1405.25	1417.86	1385.97	1371.45	1379.25	1369.31	1398.27
Mean	1410.09	1419.86	1392.59	1374.89	1384.51	1373.29	1405.84
SD	2.67	2.67	5.35	3.36	4.31	2.39	5.75
Maximum	1415.33	1428.23	1406.98	1385.69	1395.85	1379.15	1415.83
Minimum	1403.26	1415.13	1385.97	1370.00	1378.27	1369.10	1397.48
Range	12.07	13.10	21.01	15.69	17.58	10.05	18.35
	Hydraulic Gradient		0.028				

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

Table 9: Comparative Statistics - AP4-MW1 (Upgradient)

		Statistical Method	Statistical Limit	Q1 2024 Detection Monitoring Result	Q1 2024 CUSUM Value	Q1 2024 - Within Limit?	Q3 2024 Detection Monitoring Result	Q3 2024 CUSUM Value	Q3 2024 - Within Limit?
Appendix III Analytes	**Unit**			2/26/2024			9/3/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	115.1	79.5	93.2	Yes	92.8	93.2	Yes
Chloride	mg/L	NP-PL	11.00	7.57	--	Yes	7.54	--	Yes
Fluoride	mg/L	CUSUM	1.95	< 1.00	0.73	Yes	< 1.00	0.73	Yes
pH, Field	pH units	CUSUM	6.49, 8.00	7.10	7.11, 7.25	Yes	7.00	7.05, 7.25	Yes
Sulfate	mg/L	CUSUM	31.6	23.8	23.6	Yes	22.3	23.6	Yes
Total Dissolved Solids	mg/L	CUSUM	584	402	434	Yes	430	434	Yes

NOTES:
NP-PL: Non-Parametric Prediction Limit
CUSUM: Parametric Shewhart-CUSUM Control Chart

Table 10: Comparative Statistics - AP4-MW2 (Upgradient)

		Statistical Method	Statistical Limit	Q1 2024 Detection Monitoring Result	Q1 2024 CUSUM Value	Q1 2024 - Within Limit?	Q3 2024 Detection Monitoring Result	Q3 2024 CUSUM Value	Q3 2024 - Within Limit?
Appendix III Analytes	**Unit**			2/26/2024			9/3/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	402	290	297	Yes	306	297	Yes
Chloride	mg/L	NP-PL	113	99.9	--	Yes	99.8	--	Yes
Fluoride	mg/L	NP-PL	0.94	< 1.00	--	Yes - See Text	< 1.00	--	Yes - See Text
pH, Field	pH units	CUSUM	6.55, 7.85	6.97	6.91, 7.20	Yes	6.97	6.84, 7.20	Yes
Sulfate	mg/L	CUSUM	1027	873	856	Yes - Prior Result was a False-Positive	944	901	Yes
Total Dissolved Solids	mg/L	NP-PL	2360	1610	--	Yes	1630	--	Yes

NOTES:
NP-PL: Non-Parametric Prediction Limit
CUSUM: Parametric Shewhart-CUSUM Control Chart
See discussion of non-detect reporting for compliance results in the text.

Table 11: Comparative Statistics - AP4-MW3

		Statistical Method	Statistical Limit	Q1 2024 Detection Monitoring Result	Q1 2024 CUSUM Value	Q1 2024 - Within Limit?	Q3 2024 Detection Monitoring Result	Q3 2024 CUSUM Value	Q3 2024 - Within Limit?
Appendix III Analytes	**Unit**			2/26/2024			9/3/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	105.2	78.1	86.5	Yes	84.9	86.5	Yes
Chloride	mg/L	NP-PL	12.40	< 5.00	--	Yes	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	2.48	1.27	1.09	Yes	1.21	1.09	Yes
pH, Field	pH units	CUSUM	6.81, 7.99	7.16	6.98, 7.40	Yes	7.08	6.81, 7.40	No - Potential Exceedance
Sulfate	mg/L	CUSUM	48.2	20.0	28.3	Yes	19.1	28.3	Yes
Total Dissolved Solids	mg/L	CUSUM	567	360	435	Yes	340	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 2024 Detection Monitoring Result	Q1 2024 CUSUM Value	Q1 2024 - Within Limit?	Q3 2024 Detection Monitoring Result	Q3 2024 CUSUM Value	Q3 2024 - Within Limit?
Appendix III Analytes	**Unit**			2/26/2024			9/3/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	153	108	109	Yes	117	109	Yes
Chloride	mg/L	NP-PL	8.99	< 5.00	--	Yes	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	1.67	1.09	0.97	Yes	1.06	0.97	Yes
pH, Field	pH units	CUSUM	6.73, 7.79	7.05	6.83, 7.26	Yes	6.99	6.68, 7.26	No - Potential Exceedance
Sulfate	mg/L	CUSUM	180	130	108	Yes	102	95	Yes
Total Dissolved Solids	mg/L	CUSUM	746	526	523	Yes	500	523	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 2024 Detection Monitoring Result	Q1 2024 CUSUM Value	Q1 2024 - Within Limit?	Q3 2024 Detection Monitoring Result	Q3 2024 CUSUM Value	Q3 2024 - Within Limit?
Appendix III Analytes	**Unit**			2/26/2024			9/3/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes	0.109	--	Yes
Calcium, Total	mg/L	CUSUM	798	500	450	Yes	244	450	Yes
Chloride	mg/L	CUSUM	15.58	6.52	6.37	Yes	6.31	6.37	Yes
Fluoride	mg/L	NP-PL	0.664	< 1.00	--	Yes - See Text	< 1.00	--	Yes - See Text
pH, Field	pH units	CUSUM	6.32, 7.63	6.62	6.43, 6.98	Yes	6.88	6.49, 6.98	Yes
Sulfate	mg/L	NP-PL	1630	1680	--	No - Potential Exceedance	719	--	Yes - Prior Result was a False Positive
Total Dissolved Solids	mg/L	CUSUM	4040	2510	2308	Yes	1270	2308	Yes

NOTES:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

See discussion of non-detect reporting for compliance results in the text.

Table 14: Comparative Statistics - AP4-MW6

		Statistical Method	Statistical Limit	Q1 2024 Detection Monitoring Result	Q1 2024 CUSUM Value	Q1 2024 - Within Limit?	Q3 2024 Detection Monitoring Result	Q3 2024 CUSUM Value	Q3 2024 - Within Limit?
Appendix III Analytes	**Unit**			2/26/2024			9/3/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	127	99.6	101.9	Yes	102	102	Yes
Chloride	mg/L	NP-PL	5.28	< 5.00	--	Yes	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	2.90	1.44	1.47	Yes	1.54	1.47	Yes
pH, Field	pH units	CUSUM	6.72, 7.82	7.07	6.69, 7.27	No - Potential Exceedance	6.97	3.73, 7.27	Yes - Prior Result was a False-Positive
Sulfate	mg/L	CUSUM	114.9	66.3	60.5	Yes	53	60.5	Yes
Total Dissolved Solids	mg/L	CUSUM	687	438	472	Yes	428	472	Yes

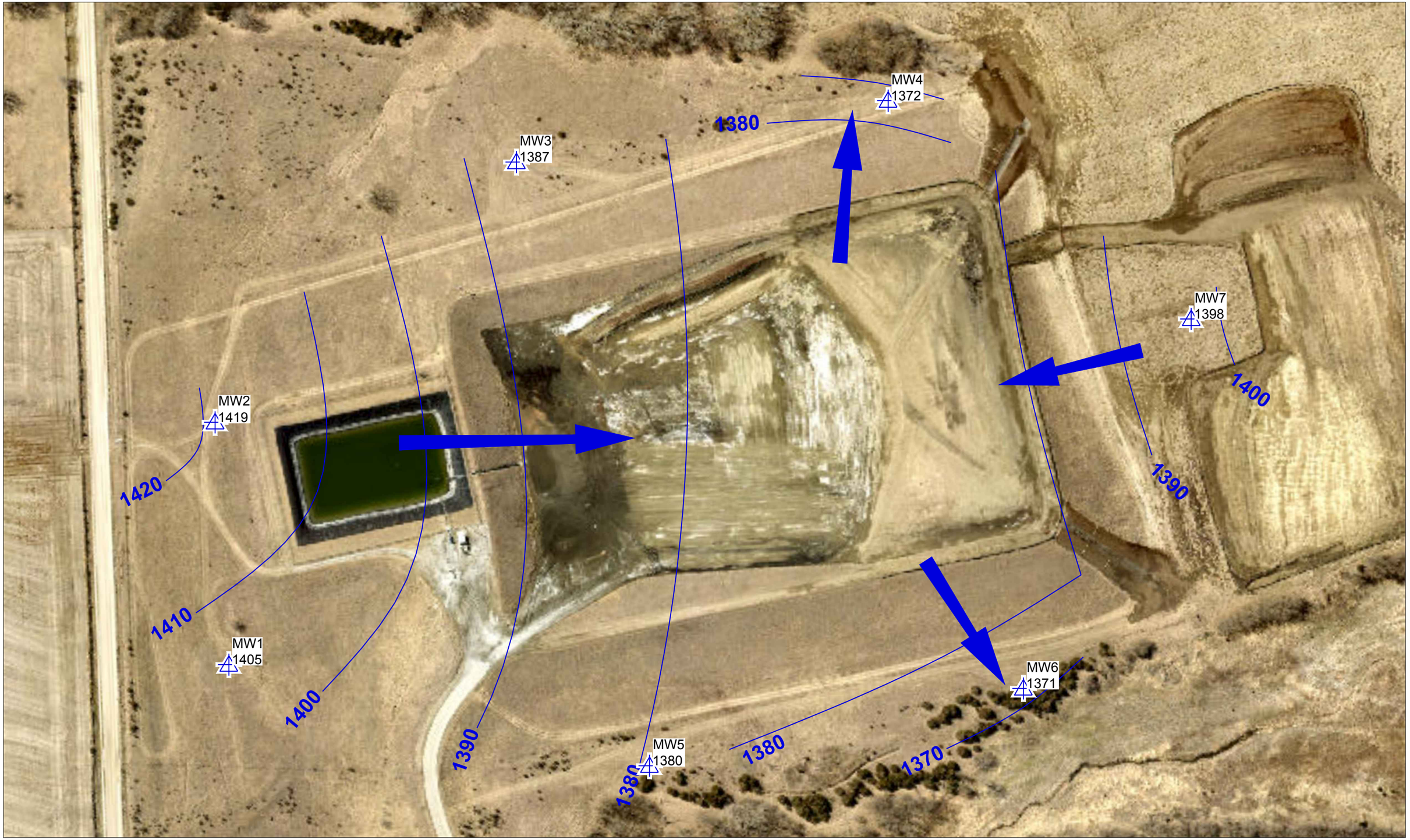
NOTES:
NP-PL: Non-Parametric Prediction Limit
CUSUM: Parametric Shewhart-CUSUM Control Chart

Table 15: Comparative Statistics - AP4-MW7

		Statistical Method	Statistical Limit	Q1 2024 Detection Monitoring Result	Q1 2024 CUSUM Value	Q1 2024 - Within Limit?	Q3 2024 Detection Monitoring Result	Q3 2024 CUSUM Value	Q3 2024 - Within Limit?
Appendix III Analytes	**Unit**			2/26/2024			9/3/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes	< 0.100	--	Yes
Calcium, Total	mg/L	NP-PL	79.0	65.9	--	Yes	68.5	--	Yes
Chloride	mg/L	CUSUM	17.9	16.0	18.3	No - Potential Exceedance	14.7	17.0	Yes - Prior Result was a False Positive
Fluoride	mg/L	NP-PL	1.02	< 1.00	--	Yes	< 1.00	--	Yes
pH, Field	pH units	CUSUM	6.87, 8.09	7.26	6.91, 7.48	Yes	7.17	6.82, 7.17	No - Potential Exceedance
Sulfate	mg/L	CUSUM	63.2	34.6	43.0	Yes	29.6	43.0	Yes
Total Dissolved Solids	mg/L	CUSUM	732	466	525	Yes	438	525	Yes

NOTES:
NP-PL: Non-Parametric Prediction Limit
CUSUM: Parametric Shewhart-CUSUM Control Chart

Figures



LEGEND

MW1 1406 — MONITORING WELL GROUNDWATER ELEVATION (ft AMSL)

0 75 150
1" = 150' FEET

FIGURE 1
ASH LANDFILL NO. 4
GROUNDWATER CONTOURS
FEBRUARY 2024

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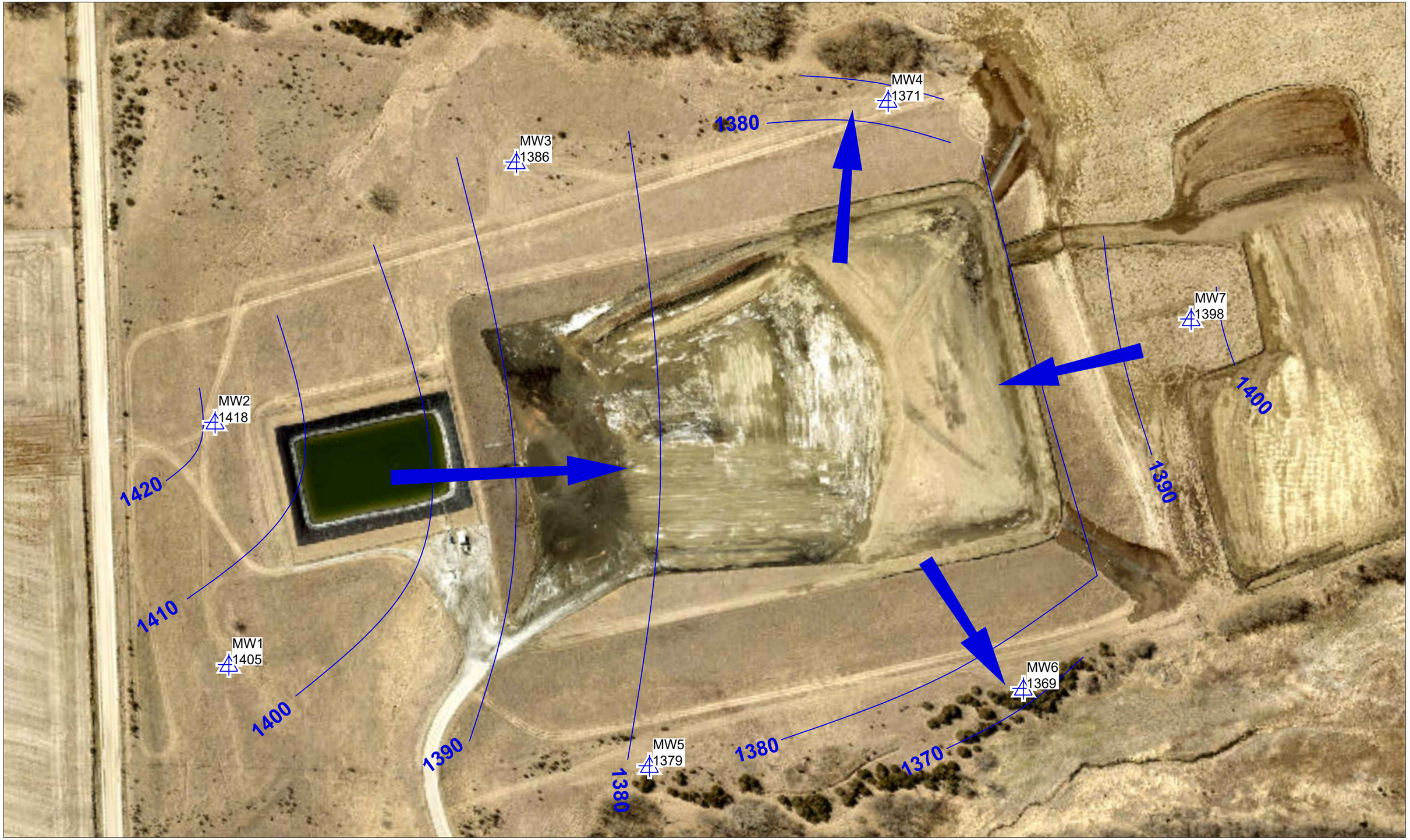


LEGEND

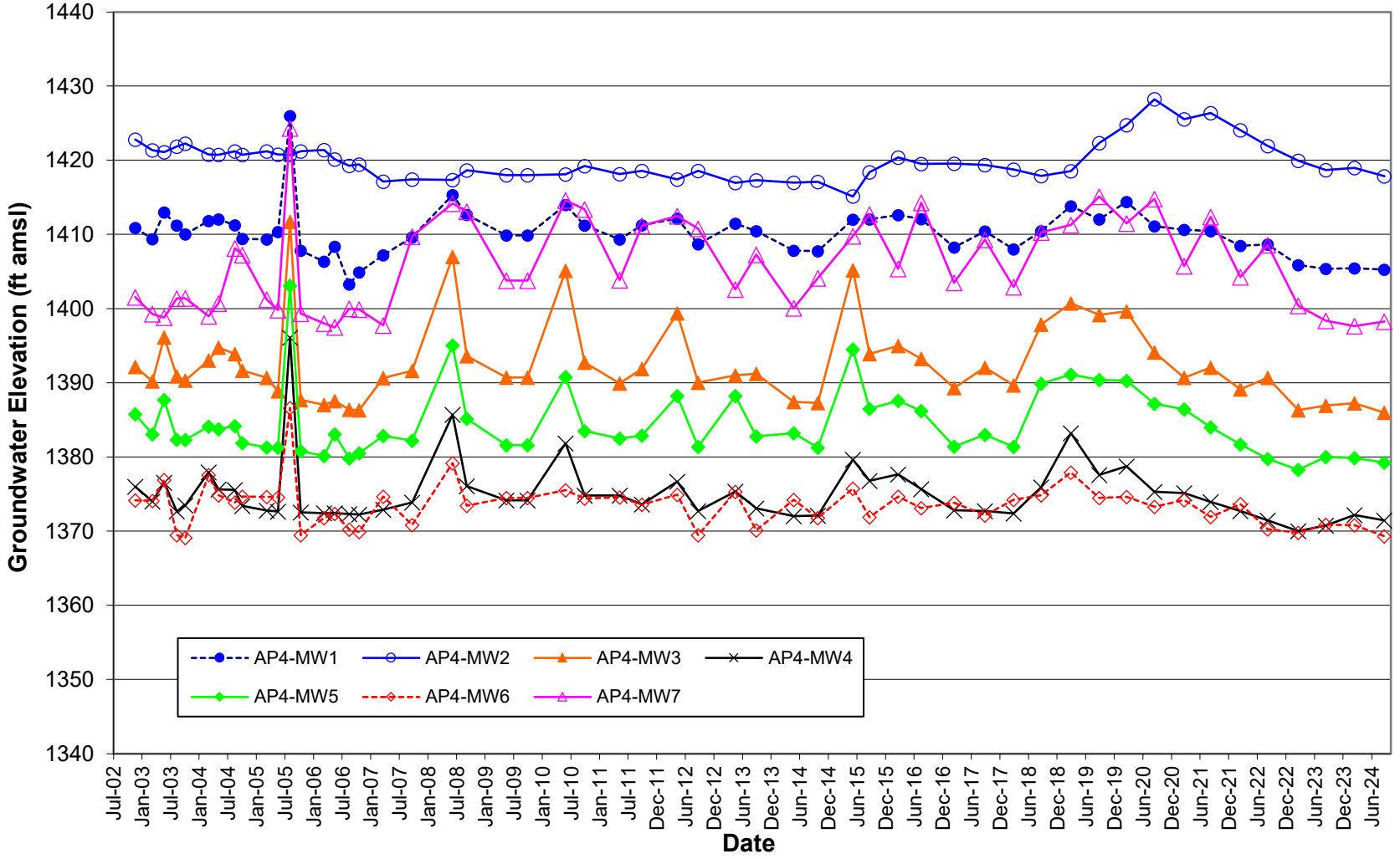
MW1 1405 — MONITORING WELL GROUNDWATER ELEVATION (ft AMSL)

0 75 150
1" = 150' FEET

FIGURE 2
ASH LANDFILL NO. 4
GROUNDWATER CONTOURS
SEPTEMBER 2024

Path: \\corp.ptwan.net\US\Central\Data\US_JK200\ACAD\NPPD\Sheldon\99_PROJECTS\NPPD SS 2024 GW\ | File Name: SS GW Maps 2024 Q3.dwg

FIGURE 2
Sheldon Station Ash Landfill No. 4
Groundwater Elevations



APPENDIX A

Q1 2024 Semi-annual Report

REPORT

Q1 2024 Semi-Annual Groundwater Report

Nebraska Public Power District - Sheldon Station

Submitted to:

Nebraska Public Power District

Compliance Sector Supervisor, Land Management Division
P.O. Box 98922, Lincoln, Nebraska, USA 68509-8922

Submitted by:

Nebraska Public Power District

Sheldon Station, 4500 West Pella Road, Hallam, Nebraska 68368

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202404161-RPT-0

April 2024

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APPENDICES

1.0 INTRODUCTION

WSP USA Inc. (WSP) prepared this report describing the first 2024 semi-annual groundwater sampling event 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; GAUSA 2022a), as approved by the Nebraska Department of Environment and Energy (NDEE) and the federal Coal Combustion Residuals (CCR) Rule's sections on groundwater monitoring and corrective action, 40 Code of Federal Regulations (CFR) 257.90-98 and applicable revisions to the Rule.

1.1 Facility Information

Sheldon Station is owned and operated by NPPD and can generate 225 megawatts (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's (USEPA) CCR Rule established specific requirements for reporting of groundwater monitoring and corrective action at CCR facilities in 40 CFR 257.90 to 40 CFR 257.98 (USEPA 2015). The permitted SAP for AP4 was developed to comply with both the federal CCR regulations and NDEE requirements (GAUSA 2022a). Under the NDEE reporting requirements, 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 in Figure 1. The two upgradient monitoring wells are AP4-MW1 and AP4-MW2, which are marked by (U) throughout the text. The five downgradient monitoring wells are AP4-MW3, AP4-MW4, AP4-MW5, AP4-MW6, and AP4-MW7.

2.1 Completed Key Actions in First Quarter 2024

A detection monitoring sampling event was completed during the first quarter of 2024.

2.2 Installation and Decommissioning of Monitoring Wells

No monitoring wells were installed or decommissioned at Sheldon Station during the first quarter of 2024.

2.3 Problems and Resolutions

During the first quarter 2024 monitoring event, analysis by Method 9056A required dilution due to the sample matrix, resulting in non-detects with elevated reporting limits for several well-parameter pairs. Results are consistent with past results and required dilutions. The following well-parameter pairs were reported as non-detects with elevated reporting limits:

- Chloride, 5x dilution factor, elevated reporting limit equals 5.0 milligrams per liter (mg/L): AP4-MW3, AP4-MW4, AP4-MW6
- Fluoride, 5x dilution factor, elevated reporting limit equals 1.00 mg/L: AP4-MW2, AP4-MW5, and AP4-MW7

Upon review of the analytical report in first quarter (Q1) 2024, a difference was noted in the provided reporting limit for fluoride across the collected samples when compared to past results, but consistent with the reporting limits provided for the previous sampling event (third quarter [Q3] 2023). Eurofins Environment Testing Ceder Falls (Eurofins), as the contracted analytical laboratory, was contacted for additional information. Eurofins noted that during a recent re-evaluation and certification of the minimum detectable levels (MDLs) for the laboratory instrument using method SW9056A for fluoride, the undiluted MDL for fluoride increased from 0.044 mg/L to 0.075 mg/L. The change in MDL resulted in a concurrent increase in the undiluted reporting limit, given as the practical quantitation limit (PQL), from 0.10 mg/L to 0.20 mg/L. Samples were analyzed using a similar dilution factor to prior results, resulting in non-detects reported as non-detect (ND) <1.0 mg/L for the samples. This result is not considered a statistical increase based on the difference in results stemming from changes to the laboratory reporting limits. However, efforts will be taken with the laboratory to review the necessity of the applied dilution factor in future samples.

During evaluation of the analytical report, a number of issues were identified and requested for review by the analytical laboratory. Eurofins reviewed and revised the report to address the following issues:

- The samples collected from AP4-MW2 was re-analyzed for Fluoride at a 5x dilution. The sample was initially reported at a 10x dilution. The result of the re-analysis was more consistent with past results.
- In the original analytical report, AP4-MW3 was found to have a data entry error where the results for Chloride and Fluoride had been switched within the report. Both parameters are analyzed by Method 9056A.
- The samples for AP4-MW4 and AP4-MW5 were re-analyzed to confirm the original reported results for sulfate. The lab found the original results to be acceptable.

Only the final revised analytical report has been included in Appendix A.

On the field notes, the date for collection of the samples at AP4-MW4 were noted as collected on February 27, while the chain-of-custody included with the analytical report indicates sample collection occurred on February 26. The date listed on the chain-of-custody is considered correct. No other problems were encountered as part of the field sampling in Q1 of 2024.

2.4 Proposed Key Activities for 2024

A detection monitoring sampling event is scheduled to occur in Q3 of 2024 and will consist of sampling, data review, and comparative statistics. Following the detection monitoring sampling event, the second semi-annual report for 2024 will be provided to the NDEE.

3.0 GROUNDWATER MONITORING ANALYTICAL PROGRAM STATUS

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

3.1 Samples Collected

NPPD 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 February 26, 2024. Specific dates for each sample collected as part of the program are provided in Table 1 through Table 7. The analytical report for the February 26, 2024, samples is included as Appendix A and associated field notes are included as Appendix B.

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 February 2024 (Q1 2024) detection monitoring sampling event are shown in Figure 1. Figure 2 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 February 2024 was estimated to be 6.9 x 10^{-4} ft/day, based on the calculated hydraulic gradient for February 2024 of 0.03 ft/ft.

3.2 Monitoring Data (Analytical Results)

Analytical results for the detection monitoring results for the February 2024 monitoring event are shown in Table 1 through Table 7. Time series of the parameters are included as Appendix C.

3.3 Comparative Statistical Analysis

Comparative statistical analysis was conducted using the previously approved results of the baseline update conducted prior to the Q1 2022 detection monitoring event (GAUSA 2022b) following guidance provided by the USEPA (2009). The results of the comparative statistical analysis are summarized below and 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 (GAI 2017a). Charts for the comparative statistical analysis are included as Appendix D.

3.3.1 Definitions

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

- Statistically Significant Increase (SSI) - defined as a result that exceeds the statistical limit established by the baseline statistical analysis, which has been verified by confirmatory re-sampling and analysis.
- Elevated Cumulative Sum (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 re-sampling 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 exceedances (verified SSIs) – 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

The following potential exceedances were identified for the Q1 2024 sampling event:

- AP4-MW5, Sulfate
- AP4-MW7, Chloride Elevated CUSUM

Confirmatory re-samples will be collected to determine whether the results are false-positives or verified SSIs.

3.3.3 False-Positives

No false-positives were identified for the Q1 2024 detection monitoring sampling event.

3.3.4 Verified Exceedances

No verified SSIs were identified for the Q1 2024 detection monitoring sampling event.

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 federal CCR 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 the third quarter of 2024.

3.4.2 Alternative Source Demonstrations

Resulting from the verified SSI for sulfate at AP4-MW1 (U) verified during the Q1 2022 detection monitoring event, NPPD and Golder pursued an alternative source demonstration (ASD; GAUSA 2022C). As an upgradient background location, groundwater from AP4-MW1 flows north towards the landfill, as shown in Figure 1. As such, AP4 is not considered the source of the verified SSI at AP4-MW1. A review of relevant site conditions and associated information was completed within 90 days of identification of the verified SSI and presented as an ASD. Following completion of the successful ASD and concurrence of the NDEE (NDEE 2022), Sheldon Station's AP4 remains in detection monitoring.

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 the permitted SAP (GAUSA 2022a).

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 has not been required. No alternative source demonstration stemming from statistically significant levels of Appendix IV parameters 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 detection monitoring sampling event that occurred February 26, 2024, along with the associated comparative statistical analysis.

As described in the Groundwater Monitoring System Certification (GAI 2017b) and the Groundwater Monitoring Statistical Methods Certification (GAI 2017a), the groundwater monitoring and analytical procedures meet the general requirements of the CCR Rule and the permitted SAP (GAUSA 2022a), and modifications to the monitoring network and sampling program are not recommended at this time.

WSP USA Inc.

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BCB/ELH/JJS

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Tables

Table 1. Data Summary Table - AP4-MW1

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024
	Units	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	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	0.130	< 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	96.2	93.7	92.6	101	85.2	99.4	79.5
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	7.13	7.17	6.81	7.59	7.19	7.33	7.57
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	0.856	0.615	0.611	0.524	0.811	< 1.00	< 1.00
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	6.8	7.14	7.11	7.20	7.04	6.95	7.10
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	25.2	27.2	26.2	22.7	23.2	27.3	23.8
Total Dissolved Solids	mg/L	440	462	428	430	462	464	484	520	464	408	406	416	392	422	396	388	388	396	368	362	400	402
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

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

Table 2. Data Summary Table - AP4-MW2

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024
	Units	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	< 0.100	< 0.100	< 0.400	< 0.100	< 0.100	0.111	< 0.100
Calcium, Total	mg/L	335	321	294	320	289	286	342	278	293	331	263	297	291	239	292	296	288	295	336	269	309	290
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	113.0	111	115	99.6	106	111	99.9
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	< 0.500	0.533	< 0.500	< 0.500	0.544	< 1.00	< 1.00
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	7.05	7.08	7.09	7.1	6.97	6.97	6.97
Sulfate	mg/L	884	888	797	804	901	842	774	797	894	879 E	827	923	855	857	874	876	882	933	906	874	1120	873
Total Dissolved Solids	mg/L	1720	1840	1700	1830	1900	1790	2360	1780	2210	1650	1680	1730	1570	1740	1620	1680	1620	1560	1680	1380	1750	1610
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
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.

Table 3. Data Summary Table - AP4-MW3

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024
	Units	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	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 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	88.4	88.3	84.3	94.5	78.8	88.5	78.1
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	< 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	1.33	0.914	0.972	0.717	1.23	1.14	1.27
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	6.55	7.36	7.27	7.40	7.14	7.13	7.16
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	22.9	29.2	22.3	21	19.3	17.7	20.0
Total Dissolved Solids	mg/L	418	460	390	420	488	430	428	442	494	404	374	426	378	374	378	348	344	354	326	318	360	360
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

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

Table 4. Data Summary Table - AP4-MW4

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024
	Units	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	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100
Calcium, Total	mg/L	128	123	103	115	111	105	132	95.4	108	109	97.1	100	112	91.9	104	112	109	102	119	100	117	108
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	< 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	0.989	0.900	0.837	0.626	1.03	< 1.00	1.09
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	7.23	7.17	7.13	7.3	7.02	6.97	7.05
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	97.5	87.3	84.7	76.1	96.7	96.5	130
Total Dissolved Solids	mg/L	506	590	476	518	582	556	576	666	498	530	466	486	490	516	510	466	452	452	436	460	504	526
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-22	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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024
	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	< 0.100	< 0.100	< 0.400	< 0.100	0.109	0.125	< 0.100
Calcium, Total	mg/L	358	520	439	460	523	517	608	310	488	537	146	541	504	363	579	210	177	600	178	471	468	500
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	5.56	< 5.00	5.71	< 5.00	6.28	6.11	6.52
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	0.53	< 0.500	< 0.500	< 0.500	< 0.500	< 1.00	< 1.00
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	6.94	7.04	6.67	7.1	6.63	6.64	6.62
Sulfate	mg/L	1420	1480	969	1410	1620	1570	1350	740	784	1630	468	1470	1370	1540	1580	678	592	1670	426	1590	1550	1680
Total Dissolved Solids	mg/L	2540	2740	1950	2620	2860	2920	3010	1490	1710	2690	1020	2390	2210	2500	2740 H	1180	980	2450	750	2350	2660	2510
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.

Table 6. Data Summary Table - AP4-MW6

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024
	Units	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	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 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	105	99.9	99	116	97.2	112	99.6
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	< 5.00	< 5.00	< 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	1.53	1.20	1.35	102	1.45	1.28	1.44
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	7.16	7.17	7.15	7.20	7.04	6.91	7.07
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	58.4	61.8	53.8	52.3	59.8	65.9	66.3
Total Dissolved Solids	mg/L	468	506	506	436	514	530	584	550	498	432	396	440	458	422	454	414	414	402	382	394	428	438
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

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

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024
	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	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 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	71.7	70.5	68.2	78.2	64.8	75.7	65.9
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	11.4	9.65	11.4	13.3	13.9	16.8	16.0
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	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	< 1.00	< 1.00
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	7.34	7.37	7.36	7.30	7.23	7.11	7.26
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	47.7	50.5	47	40.8	42.1	40.1	34.6
Total Dissolved Solids	mg/L	546	548	516	558	588	616	534	538	598	476	480	536	504	510	404	488	488	490	490	478	516	466
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							
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
QTR-2021-1	1410.62	1425.54	1390.69	1375.14	1386.42	1374.19	1405.72
QTR-2021-3	1410.46	1426.36	1392.03	1373.93	1384.00	1371.92	1412.38
QTR-2022-1	1408.46	1424.04	1389.13	1372.69	1381.70	1373.66	1404.24
QTR-2022-3	1408.65	1421.92	1390.69	1371.45	1379.75	1370.26	1408.57
QTR-2023-1	1405.85	1419.93	1386.32	1370.00	1378.27	1369.80	1400.39
QTR-2023-3	1405.35	1418.68	1386.93	1370.75	1379.99	1370.86	1398.38
QTR-2024-1	1405.43	1418.98	1387.26	1372.18	1379.84	1370.80	1397.63
Mean	1410.18	1419.90	1392.70	1374.95	1384.61	1373.36	1405.98
SD	2.61	2.68	5.32	3.36	4.29	2.35	5.71
Maximum	1415.33	1428.23	1406.98	1385.69	1395.85	1379.15	1415.83
Minimum	1403.26	1415.13	1386.32	1370.00	1378.27	1369.10	1397.48
Range	12.07	13.10	20.66	15.69	17.58	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 (Upgradient)

		Statistical Method	Statistical Limit	Q1 2024 Detection Monitoring Result	Q1 2024 CUSUM Value	Q1 2024 - Within Limit?
Appendix III Analytes	**Unit**			2/26/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	115.1	79.5	93.2	Yes
Chloride	mg/L	NP-PL	11.00	7.57	--	Yes
Fluoride	mg/L	CUSUM	1.95	< 1.00	0.73	Yes
pH, Field	pH units	CUSUM	6.49, 8.00	7.10	7.11, 7.25	Yes
Sulfate	mg/L	CUSUM	31.6	23.8	23.6	Yes
Total Dissolved Solids	mg/L	CUSUM	584	402	434	Yes

NOTES:
NP-PL: Non-Parametric Prediction Limit
CUSUM: Parametric Shewhart-CUSUM Control Chart

Table 10. Comparative Statistics - AP4-MW2 (Upgradient)

		Statistical Method	Statistical Limit	Q1 2024 Detection Monitoring Result	Q1 2024 CUSUM Value	Q1 2024 - Within Limit?
Appendix III Analytes	**Unit**			2/26/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	402	290	297	Yes
Chloride	mg/L	NP-PL	113	99.9	--	Yes
Fluoride	mg/L	NP-PL	0.94	< 1.00	--	Yes - See Text
pH, Field	pH units	CUSUM	6.55, 7.85	6.97	6.91, 7.20	Yes
Sulfate	mg/L	CUSUM	1027	873	856	Yes
Total Dissolved Solids	mg/L	NP-PL	2360	1610	--	Yes

NOTES:
NP-PL: Non-Parametric Prediction Limit
CUSUM: Parametric Shewhart-CUSUM Control Chart
See discussion of non-detect reporting for compliance results in the text.

Table 11. Comparative Statistics - AP4-MW3

		Statistical Method	Statistical Limit	Q1 2024 Detection Monitoring Result	Q1 2024 CUSUM Value	Q1 2024 - Within Limit?
Appendix III Analytes	**Unit**			2/26/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	105.2	78.1	86.5	Yes
Chloride	mg/L	NP-PL	12.40	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	2.48	1.27	1.09	Yes
pH, Field	pH units	CUSUM	6.81, 7.99	7.16	6.98, 7.40	Yes
Sulfate	mg/L	CUSUM	48.2	20.0	28.3	Yes
Total Dissolved Solids	mg/L	CUSUM	567	360	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 2024 Detection Monitoring Result	Q1 2024 CUSUM Value	Q1 2024 - Within Limit?
Appendix III Analytes	**Unit**			2/26/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	153	108	109	Yes
Chloride	mg/L	NP-PL	8.99	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	1.67	1.09	0.97	Yes
pH, Field	pH units	CUSUM	6.73, 7.79	7.05	6.83, 7.26	Yes
Sulfate	mg/L	CUSUM	180	130	108	Yes
Total Dissolved Solids	mg/L	CUSUM	746	526	523	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 2024 Detection Monitoring Result	Q1 2024 CUSUM Value	Q1 2024 - Within Limit?
Appendix III Analytes	**Unit**			2/26/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	798	500	450	Yes
Chloride	mg/L	CUSUM	15.58	6.52	6.37	Yes
Fluoride	mg/L	NP-PL	0.664	< 1.00	--	Yes - See Text
pH, Field	pH units	CUSUM	6.32, 7.63	6.62	6.43, 6.98	Yes
Sulfate	mg/L	NP-PL	1630	1680	--	No - Potential Exceedance
Total Dissolved Solids	mg/L	CUSUM	4040	2510	2308	Yes

NOTES:
NP-PL: Non-Parametric Prediction Limit
CUSUM: Parametric Shewhart-CUSUM Control Chart
See discussion of non-detect reporting for compliance results in the text.

Table 14. Comparative Statistics - AP4-MW6

		Statistical Method	Statistical Limit	Q1 2024 Detection Monitoring Result	Q1 2024 CUSUM Value	Q1 2024 - Within Limit?
Appendix III Analytes	**Unit**			2/26/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	126.9	99.6	101.9	Yes
Chloride	mg/L	NP-PL	5.28	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	2.90	1.44	1.47	Yes
pH, Field	pH units	CUSUM	6.72, 7.82	7.07	6.69, 7.27	Yes
Sulfate	mg/L	CUSUM	114.9	66.3	60.5	Yes
Total Dissolved Solids	mg/L	CUSUM	687	438	472	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 2024 Detection Monitoring Result	Q1 2024 CUSUM Value	Q1 2024 - Within Limit?
Appendix III Analytes	**Unit**			2/26/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	NP-PL	79.0	65.9	--	Yes
Chloride	mg/L	CUSUM	17.9	16.0	18.3	No - Potential Exceedance
Fluoride	mg/L	NP-PL	1.02	< 1.00	--	Yes
pH, Field	pH units	CUSUM	6.87, 8.09	7.26	6.91, 7.48	Yes
Sulfate	mg/L	CUSUM	63.2	34.6	43.0	Yes
Total Dissolved Solids	mg/L	CUSUM	732	466	525	Yes

NOTES:
NP-PL: Non-Parametric Prediction Limit
CUSUM: Parametric Shewhart-CUSUM Control Chart

Figures

MW4
1372

1380

MW3
1387

MW7
1398

1400

MW2
1419

1420

1410

1390

MW1
1405

1400

MW6
1371

MW5
1380

1380

1380

1370

LEGEND

MW1
1406

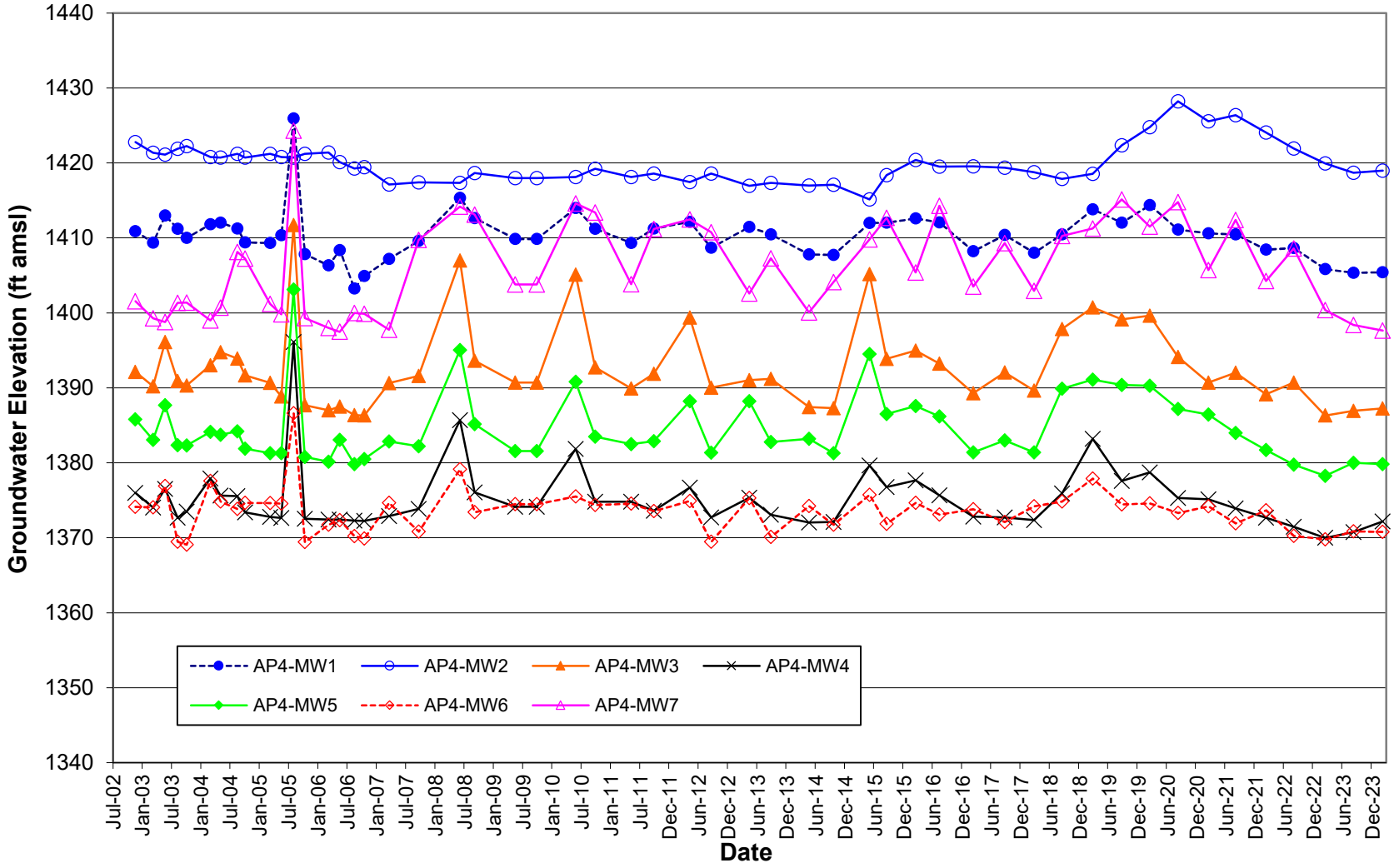
MONITORING WELL
GROUNDWATER ELEVATION (ft AMSL)

0 75 150
1" = 150' FEET

FIGURE 1
ASH LANDFILL NO. 4
GROUNDWATER CONTOURS
FEBRUARY 2024

Path: \\golder.gds\complexdata\office\denver\acad\NPPD\Sheldon\99_PRO_IEC\TS\NPPD SS 2024 GW\ | File Name: SS GW Maps 2024 Q1.dwg

FIGURE 2
Sheldon Station Ash Landfill No. 4
Groundwater Elevations



APPENDIX A

Analytical Report and Chain-of-Custody Documentation

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

ANALYTICAL REPORT

PREPARED FOR

Attn: Todd A. Chinn
Nebraska Public Power District
4500 West Pella Road
Hallam, Nebraska 68368

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JOB DESCRIPTION

Sheldon Station Ash Landfill #4 CCR New Permit

JOB NUMBER

310-275709-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

myEOL

Job Notes

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Authorization

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Authorized for release by
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Table of Contents

Job Narrative
310-275709-1

REVISION

The report being provided is a revision of the original report sent on 3/11/2024. The report (revision 1) is being revised due to After issuing the report the client contacted the lab questioning IC data when compared to historical results. The lab investigated IC data for samples: AP4-MW2 (310-275709-2), AP4-MW3 (310-275709-3), AP4-MW4 (310-275709-4), AP4-MW5 (310-275709-5). AP4-MW2 (310-275709-2) was reran for Fluride at a 5x dilution where previously reported at a 10x dilution. AP4-MW3 (310-275709-3) was found to have a data entry error and the results for Chloride and Fluoride were switched. AP4-MW4 (310-275709-4) and AP4-MW5 (310-275709-5) were reran to confirm and the lab found the original results acceptable.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 2/28/2024 9:05 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C.

HPLC/IC
Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: AP4-MW1 (310-275709-1), AP4-MW2 (310-275709-2), AP4-MW3 (310-275709-3), AP4-MW4 (310-275709-4), AP4-MW5 (310-275709-5), AP4-MW6 (310-275709-6), AP4-MW7 (310-275709-7) and AP4-MW Blind Duplicate (310-275709-8). Elevated reporting limits (RLs) are provided.

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

Metals
Method 6020B: The continuing calibration verification (CCV) associated with batch 310-414986 recovered above the upper control limit for Boron. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: AP4-MW1 (310-275709-1) and AP4-MW2 (310-275709-2).

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

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

Sample Summary

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-275709-1	AP4-MW1	Water	02/26/24 09:48	02/28/24 09:05
310-275709-2	AP4-MW2	Water	02/26/24 10:23	02/28/24 09:05
310-275709-3	AP4-MW3	Water	02/26/24 10:56	02/28/24 09:05
310-275709-4	AP4-MW4	Water	02/26/24 11:49	02/28/24 09:05
310-275709-5	AP4-MW5	Water	02/26/24 13:49	02/28/24 09:05
310-275709-6	AP4-MW6	Water	02/26/24 13:19	02/28/24 09:05
310-275709-7	AP4-MW7	Water	02/26/24 12:18	02/28/24 09:05
310-275709-8	AP4-MW Blind Duplicate	Water	02/26/24 00:00	02/28/24 09:05

Detection Summary

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW1 — Lab Sample ID: 310-275709-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.57		5.00		mg/L	5		9056A	Total/NA
Sulfate	23.8		5.00		mg/L	5		9056A	Total/NA
Calcium	79.5		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	402		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.3	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: AP4-MW2 — Lab Sample ID: 310-275709-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	99.9		10.0		mg/L	10		9056A	Total/NA
Sulfate	873		10.0		mg/L	10		9056A	Total/NA
Calcium	290		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	1610		250		mg/L	1		SM 2540C	Total/NA
pH	7.1	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: AP4-MW3 — Lab Sample ID: 310-275709-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	20.0		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.27		1.00		mg/L	5		9056A	Total/NA
Calcium	78.1		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	360		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.3	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: AP4-MW4 — Lab Sample ID: 310-275709-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	130		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.09		1.00		mg/L	5		9056A	Total/NA
Calcium	108		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	526		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: AP4-MW5 — Lab Sample ID: 310-275709-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.52		5.00		mg/L	5		9056A	Total/NA
Sulfate	1680		20.0		mg/L	20		9056A	Total/NA
Calcium	500		2.00		mg/L	4		6020B	Total/NA
Total Dissolved Solids	2510		250		mg/L	1		SM 2540C	Total/NA
pH	6.9	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: AP4-MW6 — Lab Sample ID: 310-275709-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	66.3		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.44		1.00		mg/L	5		9056A	Total/NA
Calcium	99.6		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	438		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW7 — Lab Sample ID: 310-275709-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	16.0		5.00		mg/L	5		9056A	Total/NA
Sulfate	34.6		5.00		mg/L	5		9056A	Total/NA
Calcium	65.9		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	466		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.5	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: AP4-MW Blind Duplicate — Lab Sample ID: 310-275709-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	103		5.00		mg/L	5		9056A	Total/NA
Sulfate	935		20.0		mg/L	20		9056A	Total/NA
Calcium	284		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	1740		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW1
Lab Sample ID: 310-275709-1
Date Collected: 02/26/24 09:48
Matrix: Water
Date Received: 02/28/24 09:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.57**		5.00		mg/L			03/07/24 19:43	5
Sulfate	**23.8**		5.00		mg/L			03/07/24 19:43	5
Fluoride	<1.00		1.00		mg/L			03/07/24 19:43	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100	^+	0.100		mg/L		02/29/24 09:00	02/29/24 18:25	1
Calcium	**79.5**		0.500		mg/L		02/29/24 09:00	02/29/24 18:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**402**		50.0		mg/L			02/28/24 19:27	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.3**	**HF**	1.0		SU			02/28/24 11:02	1

Client Sample Results

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW2
Lab Sample ID: 310-275709-2
Date Collected: 02/26/24 10:23
Matrix: Water
Date Received: 02/28/24 09:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**99.9**		10.0		mg/L			03/07/24 19:56	10
Sulfate	**873**		10.0		mg/L			03/07/24 19:56	10
Fluoride	<1.00		1.00		mg/L			03/25/24 23:24	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100	^+	0.100		mg/L		02/29/24 09:00	02/29/24 18:29	1
Calcium	**290**		0.500		mg/L		02/29/24 09:00	02/29/24 18:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1610**		250		mg/L			02/28/24 19:27	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.1**	**HF**	1.0		SU			02/28/24 11:04	1

Client Sample Results

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW3
Lab Sample ID: 310-275709-3
Date Collected: 02/26/24 10:56
Matrix: Water
Date Received: 02/28/24 09:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			03/07/24 20:09	5
Sulfate	**20.0**		5.00		mg/L			03/07/24 20:09	5
Fluoride	**1.27**		1.00		mg/L			03/07/24 20:09	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		02/29/24 09:00	02/29/24 17:37	1
Calcium	**78.1**		0.500		mg/L		02/29/24 09:00	02/29/24 17:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**360**		50.0		mg/L			02/28/24 19:27	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.3**	**HF**	1.0		SU			02/28/24 11:05	1

Client Sample Results

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW4
Lab Sample ID: 310-275709-4
Date Collected: 02/26/24 11:49
Matrix: Water
Date Received: 02/28/24 09:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			03/07/24 20:22	5
Sulfate	**130**		5.00		mg/L			03/07/24 20:22	5
Fluoride	**1.09**		1.00		mg/L			03/07/24 20:22	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		02/29/24 09:00	02/29/24 17:44	1
Calcium	**108**		0.500		mg/L		02/29/24 09:00	02/29/24 17:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**526**		50.0		mg/L			02/28/24 19:27	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.2**	**HF**	1.0		SU			02/28/24 11:06	1

Client Sample Results

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW5
Lab Sample ID: 310-275709-5
Date Collected: 02/26/24 13:49
Matrix: Water
Date Received: 02/28/24 09:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.52**		5.00		mg/L			03/07/24 15:50	5
Sulfate	**1680**		20.0		mg/L			03/08/24 11:40	20
Fluoride	<1.00		1.00		mg/L			03/07/24 15:50	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		02/29/24 09:00	02/29/24 17:51	1
Calcium	**500**		2.00		mg/L		02/29/24 09:00	03/01/24 17:38	4

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**2510**		250		mg/L			02/28/24 19:27	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**6.9**	**HF**	1.0		SU			02/28/24 11:07	1

Client Sample Results

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW6
Lab Sample ID: 310-275709-6

Date Collected: 02/26/24 13:19
Matrix: Water
Date Received: 02/28/24 09:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			03/07/24 15:50	5
Sulfate	**66.3**		5.00		mg/L			03/07/24 15:50	5
Fluoride	**1.44**		1.00		mg/L			03/07/24 15:50	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		02/29/24 09:00	02/29/24 17:40	1
Calcium	**99.6**		0.500		mg/L		02/29/24 09:00	02/29/24 17:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**438**		50.0		mg/L			02/28/24 19:27	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.2**	**HF**	1.0		SU			02/28/24 11:08	1

Client Sample Results

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW7
Lab Sample ID: 310-275709-7
Date Collected: 02/26/24 12:18
Matrix: Water
Date Received: 02/28/24 09:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**16.0**		5.00		mg/L			03/07/24 21:01	5
Sulfate	**34.6**		5.00		mg/L			03/07/24 21:01	5
Fluoride	<1.00		1.00		mg/L			03/07/24 21:01	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		02/29/24 09:00	02/29/24 17:54	1
Calcium	**65.9**		0.500		mg/L		02/29/24 09:00	02/29/24 17:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**466**		50.0		mg/L			02/28/24 19:27	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.5**	**HF**	1.0		SU			02/28/24 11:09	1

Client Sample Results

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW Blind Duplicate
Lab Sample ID: 310-275709-8
Date Collected: 02/26/24 00:00
Matrix: Water
Date Received: 02/28/24 09:05

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**103**		5.00		mg/L			03/07/24 21:41	5
Sulfate	**935**		20.0		mg/L			03/08/24 11:53	20
Fluoride	<1.00		1.00		mg/L			03/07/24 21:41	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		02/29/24 09:00	02/29/24 17:58	1
Calcium	**284**		0.500		mg/L		02/29/24 09:00	02/29/24 17:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1740**		50.0		mg/L			02/28/24 19:27	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.2**	**HF**	1.0		SU			02/28/24 11:10	1

Definitions/Glossary

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Qualifiers

Metals

Qualifier	Qualifier Description
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Glossary

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

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-415601/3
Matrix: Water
Analysis Batch: 415601

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			03/07/24 17:06	1
Sulfate	<1.00		1.00		mg/L			03/07/24 17:06	1
Fluoride	<0.200		0.200		mg/L			03/07/24 17:06	1

Lab Sample ID: LCS 310-415601/4
Matrix: Water
Analysis Batch: 415601

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.948		mg/L		99	90 - 110
Sulfate	10.0	10.35		mg/L		104	90 - 110
Fluoride	2.00	1.996		mg/L		100	90 - 110

Lab Sample ID: MB 310-416990/3
Matrix: Water
Analysis Batch: 416990

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			03/25/24 22:55	1
Sulfate	<1.00		1.00		mg/L			03/25/24 22:55	1
Fluoride	<0.200		0.200		mg/L			03/25/24 22:55	1

Lab Sample ID: LCS 310-416990/4
Matrix: Water
Analysis Batch: 416990

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	10.20		mg/L		102	90 - 110
Sulfate	10.0	10.74		mg/L		107	90 - 110
Fluoride	2.00	2.068		mg/L		103	90 - 110

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-414797/1-A
Matrix: Water
Analysis Batch: 415067

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 414797

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		02/29/24 09:00	03/01/24 17:17	1
Calcium	<0.500		0.500		mg/L		02/29/24 09:00	03/01/24 17:17	1

Lab Sample ID: LCS 310-414797/2-A
Matrix: Water
Analysis Batch: 415067

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 414797

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	2.00	2.010		mg/L		100	80 - 120

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

Lab Sample ID: LCS 310-414797/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 415133
Prep Batch: 414797

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron			0.200	0.1857		mg/L		93	80 - 120		

Lab Sample ID: 310-275709-4 DU
Client Sample ID: AP4-MW4
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 414986
Prep Batch: 414797

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Boron	<0.100			<0.100		mg/L				NC	20
Calcium	108			108.9		mg/L				1	20

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

Lab Sample ID: MB 310-414810/1
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 414810

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0		mg/L			02/28/24 19:27	1

Lab Sample ID: LCS 310-414810/2
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 414810

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Dissolved Solids			1000	966.0		mg/L		97	90 - 110		

Lab Sample ID: 310-275709-3 DU
Client Sample ID: AP4-MW3
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 414810

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	360			352.0		mg/L				2	20

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-414719/11
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 414719

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

Lab Sample ID: 310-275709-1 DU
Client Sample ID: AP4-MW1
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 414719

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	7.3	HF		7.3		SU				0.1	20

QC Association Summary

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

HPLC/IC

Analysis Batch: 415601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-275709-1	AP4-MW1	Total/NA	Water	9056A	
310-275709-2	AP4-MW2	Total/NA	Water	9056A	
310-275709-3	AP4-MW3	Total/NA	Water	9056A	
310-275709-4	AP4-MW4	Total/NA	Water	9056A	
310-275709-5	AP4-MW5	Total/NA	Water	9056A	
310-275709-5	AP4-MW5	Total/NA	Water	9056A	
310-275709-6	AP4-MW6	Total/NA	Water	9056A	
310-275709-7	AP4-MW7	Total/NA	Water	9056A	
310-275709-8	AP4-MW Blind Duplicate	Total/NA	Water	9056A	
310-275709-8	AP4-MW Blind Duplicate	Total/NA	Water	9056A	
MB 310-415601/3	Method Blank	Total/NA	Water	9056A	
LCS 310-415601/4	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 416990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-275709-2	AP4-MW2	Total/NA	Water	9056A	
MB 310-416990/3	Method Blank	Total/NA	Water	9056A	
LCS 310-416990/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 414797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-275709-1	AP4-MW1	Total/NA	Water	3005A	
310-275709-2	AP4-MW2	Total/NA	Water	3005A	
310-275709-3	AP4-MW3	Total/NA	Water	3005A	
310-275709-4	AP4-MW4	Total/NA	Water	3005A	
310-275709-5	AP4-MW5	Total/NA	Water	3005A	
310-275709-6	AP4-MW6	Total/NA	Water	3005A	
310-275709-7	AP4-MW7	Total/NA	Water	3005A	
310-275709-8	AP4-MW Blind Duplicate	Total/NA	Water	3005A	
MB 310-414797/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-414797/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-275709-4 DU	AP4-MW4	Total/NA	Water	3005A	

Analysis Batch: 414986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-275709-1	AP4-MW1	Total/NA	Water	6020B	414797
310-275709-2	AP4-MW2	Total/NA	Water	6020B	414797
310-275709-3	AP4-MW3	Total/NA	Water	6020B	414797
310-275709-4	AP4-MW4	Total/NA	Water	6020B	414797
310-275709-5	AP4-MW5	Total/NA	Water	6020B	414797
310-275709-6	AP4-MW6	Total/NA	Water	6020B	414797
310-275709-7	AP4-MW7	Total/NA	Water	6020B	414797
310-275709-8	AP4-MW Blind Duplicate	Total/NA	Water	6020B	414797
310-275709-4 DU	AP4-MW4	Total/NA	Water	6020B	414797

Analysis Batch: 415067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-275709-5	AP4-MW5	Total/NA	Water	6020B	414797
MB 310-414797/1-A	Method Blank	Total/NA	Water	6020B	414797

Metals (Continued)

Analysis Batch: 415067 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-414797/2-A	Lab Control Sample	Total/NA	Water	6020B	414797

Analysis Batch: 415133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-414797/2-A	Lab Control Sample	Total/NA	Water	6020B	414797

General Chemistry

Analysis Batch: 414719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-275709-1	AP4-MW1	Total/NA	Water	SM 4500 H+ B	
310-275709-2	AP4-MW2	Total/NA	Water	SM 4500 H+ B	
310-275709-3	AP4-MW3	Total/NA	Water	SM 4500 H+ B	
310-275709-4	AP4-MW4	Total/NA	Water	SM 4500 H+ B	
310-275709-5	AP4-MW5	Total/NA	Water	SM 4500 H+ B	
310-275709-6	AP4-MW6	Total/NA	Water	SM 4500 H+ B	
310-275709-7	AP4-MW7	Total/NA	Water	SM 4500 H+ B	
310-275709-8	AP4-MW Blind Duplicate	Total/NA	Water	SM 4500 H+ B	
LCS 310-414719/11	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-275709-1 DU	AP4-MW1	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 414810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-275709-1	AP4-MW1	Total/NA	Water	SM 2540C	
310-275709-2	AP4-MW2	Total/NA	Water	SM 2540C	
310-275709-3	AP4-MW3	Total/NA	Water	SM 2540C	
310-275709-4	AP4-MW4	Total/NA	Water	SM 2540C	
310-275709-5	AP4-MW5	Total/NA	Water	SM 2540C	
310-275709-6	AP4-MW6	Total/NA	Water	SM 2540C	
310-275709-7	AP4-MW7	Total/NA	Water	SM 2540C	
310-275709-8	AP4-MW Blind Duplicate	Total/NA	Water	SM 2540C	
MB 310-414810/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-414810/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-275709-3 DU	AP4-MW3	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW1
Lab Sample ID: 310-275709-1
Date Collected: 02/26/24 09:48
Matrix: Water
Date Received: 02/28/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	415601	DHM5	EET CF	03/07/24 19:43
Total/NA	Prep	3005A			414797	QTZ5	EET CF	02/29/24 09:00
Total/NA	Analysis	6020B		1	414986	A6US	EET CF	02/29/24 18:25
Total/NA	Analysis	SM 2540C		1	414810	D7CP	EET CF	02/28/24 19:27
Total/NA	Analysis	SM 4500 H+ B		1	414719	W9YR	EET CF	02/28/24 11:02

Client Sample ID: AP4-MW2
Lab Sample ID: 310-275709-2
Date Collected: 02/26/24 10:23
Matrix: Water
Date Received: 02/28/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	416990	QTZ5	EET CF	03/25/24 23:24
Total/NA	Analysis	9056A		10	415601	DHM5	EET CF	03/07/24 19:56
Total/NA	Prep	3005A			414797	QTZ5	EET CF	02/29/24 09:00
Total/NA	Analysis	6020B		1	414986	A6US	EET CF	02/29/24 18:29
Total/NA	Analysis	SM 2540C		1	414810	D7CP	EET CF	02/28/24 19:27
Total/NA	Analysis	SM 4500 H+ B		1	414719	W9YR	EET CF	02/28/24 11:04

Client Sample ID: AP4-MW3
Lab Sample ID: 310-275709-3
Date Collected: 02/26/24 10:56
Matrix: Water
Date Received: 02/28/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	415601	DHM5	EET CF	03/07/24 20:09
Total/NA	Prep	3005A			414797	QTZ5	EET CF	02/29/24 09:00
Total/NA	Analysis	6020B		1	414986	A6US	EET CF	02/29/24 17:37
Total/NA	Analysis	SM 2540C		1	414810	D7CP	EET CF	02/28/24 19:27
Total/NA	Analysis	SM 4500 H+ B		1	414719	W9YR	EET CF	02/28/24 11:05

Client Sample ID: AP4-MW4
Lab Sample ID: 310-275709-4
Date Collected: 02/26/24 11:49
Matrix: Water
Date Received: 02/28/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	415601	DHM5	EET CF	03/07/24 20:22
Total/NA	Prep	3005A			414797	QTZ5	EET CF	02/29/24 09:00
Total/NA	Analysis	6020B		1	414986	A6US	EET CF	02/29/24 17:44
Total/NA	Analysis	SM 2540C		1	414810	D7CP	EET CF	02/28/24 19:27
Total/NA	Analysis	SM 4500 H+ B		1	414719	W9YR	EET CF	02/28/24 11:06

Lab Chronicle

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW5
Lab Sample ID: 310-275709-5
Date Collected: 02/26/24 13:49
Matrix: Water
Date Received: 02/28/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	415601	DHM5	EET CF	03/07/24 15:50
Total/NA	Analysis	9056A		20	415601	DHM5	EET CF	03/08/24 11:40
Total/NA	Prep	3005A			414797	QTZ5	EET CF	02/29/24 09:00
Total/NA	Analysis	6020B		1	414986	A6US	EET CF	02/29/24 17:51
Total/NA	Prep	3005A			414797	QTZ5	EET CF	02/29/24 09:00
Total/NA	Analysis	6020B		4	415067	A6US	EET CF	03/01/24 17:38
Total/NA	Analysis	SM 2540C		1	414810	D7CP	EET CF	02/28/24 19:27
Total/NA	Analysis	SM 4500 H+ B		1	414719	W9YR	EET CF	02/28/24 11:07

Client Sample ID: AP4-MW6
Lab Sample ID: 310-275709-6
Date Collected: 02/26/24 13:19
Matrix: Water
Date Received: 02/28/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	415601	DHM5	EET CF	03/07/24 15:50
Total/NA	Prep	3005A			414797	QTZ5	EET CF	02/29/24 09:00
Total/NA	Analysis	6020B		1	414986	A6US	EET CF	02/29/24 17:40
Total/NA	Analysis	SM 2540C		1	414810	D7CP	EET CF	02/28/24 19:27
Total/NA	Analysis	SM 4500 H+ B		1	414719	W9YR	EET CF	02/28/24 11:08

Client Sample ID: AP4-MW7
Lab Sample ID: 310-275709-7
Date Collected: 02/26/24 12:18
Matrix: Water
Date Received: 02/28/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	415601	DHM5	EET CF	03/07/24 21:01
Total/NA	Prep	3005A			414797	QTZ5	EET CF	02/29/24 09:00
Total/NA	Analysis	6020B		1	414986	A6US	EET CF	02/29/24 17:54
Total/NA	Analysis	SM 2540C		1	414810	D7CP	EET CF	02/28/24 19:27
Total/NA	Analysis	SM 4500 H+ B		1	414719	W9YR	EET CF	02/28/24 11:09

Client Sample ID: AP4-MW Blind Duplicate
Lab Sample ID: 310-275709-8
Date Collected: 02/26/24 00:00
Matrix: Water
Date Received: 02/28/24 09:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	415601	DHM5	EET CF	03/07/24 21:41
Total/NA	Analysis	9056A		20	415601	DHM5	EET CF	03/08/24 11:53
Total/NA	Prep	3005A			414797	QTZ5	EET CF	02/29/24 09:00
Total/NA	Analysis	6020B		1	414986	A6US	EET CF	02/29/24 17:58
Total/NA	Analysis	SM 2540C		1	414810	D7CP	EET CF	02/28/24 19:27
Total/NA	Analysis	SM 4500 H+ B		1	414719	W9YR	EET CF	02/28/24 11:10

Lab Chronicle

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Laboratory References:

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

Accreditation/Certification Summary

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	IA100001	09-29-24

Method Summary

Client: Nebraska Public Power District
Job ID: 310-275709-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

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

Protocol References:

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

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

Laboratory References:

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

eurofins | Environment Testing America

310-275709 Chain of Custody

Cooler/Sample Receipt and Temperat

Client Information

Client: NPPD

City/State: CITY | STATE NE | Project:

Receipt Information

Date/Time Received: DATE 2-28-24 | TIME 905 | Received By: MC

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

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No *If yes:* Cooler ID:

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

Cooler Custody Seals Present? ☒ Yes ☐ No *If yes:* Cooler custody seals intact? ☒ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☒ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☐ Yes ☒ No *If yes:* Which VOA samples are in cooler? ↓

Temperature Record

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

Thermometer ID: X | Correction Factor (°C): 0

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

Uncorrected Temp (°C): 1.4 | Corrected Temp (°C): 1.4

• **Sample Container Temperature**

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

Exceptions Noted

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

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

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

Additional Comments

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

Chain of Custody Record

estAmerica Omaha SC
268

Client Information	Sampler: Todd A. Chinn	Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact: Todd A. Chinn	Phone: 402 787-5256	E-Mail:		Page:
Company: Nebraska Public Power District				Job #:
Address: 4500 West Pella Road	Due Date Requested: Normal TAT			
City: Hallam	TAT Requested (days): Normal			
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 New Permit	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)	6020 A Boron and Calcium	9056A Chloride, Fluoride, Sulfate	SM4500 H+ pH Short Holding Time	2540C TDS	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	D	N	N	N	X	
AP4-MW1	2-26-2024	0948	G	GW			X	X	X	X		
AP4-MW2	2-26-2024	1023	G	GW			X	X	X	X		
AP4-MW3	2-26-2024	1056	G	GW			X	X	X	X		
AP4-MW4	2-26-2024	1149	G	GW			X	X	X	X		
AP4-MW5	2-26-2024	1349	G	GW			X	X	X	X		
AP4-MW6	2-26-2024	1319	G	GW			X	X	X	X		
AP4-MW7	2-26-2024	1218	G	GW			X	X	X	X		
AP4-MW Blind Duplicate	2-26-2024	NA	G	GW			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:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: Todd A Chinn	2-27-2024 / 1600		MM	2-28-24 905	
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: 310-275709-1

Login Number: 275709
List Number: 1
Creator: Costello, Mackenzie K

List Source: Eurofins Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	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	

APPENDIX B

Field Notes

WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) NPPD SS Ash Landfill #4
Well Number AP4-MW01 Date 2-26-2024
Field Personnel Todd A. Chinn Patricia A. Novak
Sampling Organization NPPD
Identify MP Top of Casing

Depth to 10.9 / 31.9 of screen (Top / Bottom)
Pump Intake at (ft. below MP) 29.9
Purging Device; (pump type) MicroPurge
Total Volume Purged 2490 mL

Well Conditions/ Field Observations: 47°F, Sunny, 9mph from the South

Clock Time 24hr	Water Depth below MP ft	Pump Dial Setting	Purge Rate mL/min	Cum. Volume Purged in milliliters	Temp C°	Specific Conductivity µmhos	pH MP-20	pH Lab Accumet	%DO	ORP mv	Comments
0928	20.52	CPM4 10/5	96								Start Pump
0929		CPM4 10/5	96								Cell is full
0933		CPM4 10/5	96		12.5	718.3	7.11		35.9	228.3	
0938		CPM4 10/5	96		12.26	716.9	7.09		20.8	222.8	
0943		CPM4 10/5	96		12.13	716.1	7.09		19.5	217.3	
0948		CPM4 10/5	96		12.26	715.3	7.10		20.6	212.8	Sample#1 500mL
				1740							Sample#2 250mL
0954	21.21										Done

WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) NPPD SS Ash Landfill #4
Well Number APH-MW2 Date 2-26-2024
Field Personnel Todd A. Chinn Patricia A. Novak
Sampling Organization NPPD
Identify MP Top of Casing

Depth to 10.9 / 31.4 of screen (Top / Bottom)
Pump Intake at (ft. below MP) 29.9
Purging Device; (pump type) Micro Purge
Total Volume Purged 4640mL

Well Conditions/ Field Observations: 55°F, Sunny, 10mph from Southwest

Clock Time 24hr	Water Depth below MP ft	Pump Dial Setting	Purge Rate mL/min	Cum. Volume Purged in milliliters	Temp C°	Specific Conductivity µmhos	pH MP-20	pH Lab Accumet	%DO	ORP mv	Comments
1000	26.05	CPM4 10/5	160								Start Pump
1003		CPM4 10/5	160		12.62	2116	6.99		85.5	228.6	Cell is full
1008		CPM4 10/5	160		12.77	2116	6.96		70.3	223.3	
1013		CPM4 10/5	160		12.88	2122	6.98		69.8	219.8	
1018		CPM4 10/5	160	2000	12.88	2128	6.97		68.4	217.2	
1023	27.31	CPM4 10/5	160		13.01	2131	6.97		67.4	215.0	Sample #1 500mL
				1140							Sample #2 250mL
											Duplicate #1 500mL
											Duplicate #2 250mL
1029											Done

WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) NPPD SS Ash Landfill #4
Well Number AP4-MW3 Date 2-26-2024
Field Personnel Todd A. Chinn Patricia A. Novak
Sampling Organization NPPD
Identify MP top of Casing

Depth to 10.5 / 35.5 of screen (Top / Bottom)
Pump Intake at (ft. below MP) 33.5
Purging Device; (pump type) MicroPurge
Total Volume Purged 3350 mL

Well Conditions/ Field Observations: 59°F, Sunny, 9mph from the Southwest

Clock Time 24hr	Water Depth below MP ft	Pump Dial Setting	Purge Rate mL/min	Cum. Volume Purged in milliliters	Temp C°	Specific Conductivity µmhos	pH MP-20	pH Lab Accumet	%DO	ORP mv	Comments
1036	24.46	CPM4 10/5	124								Start Pump
1041		CPM4 10/5	124		13.93	731.6	7.27		81.6	215.5	Cell is full
1046		CPM4 10/5	124		14.07	633.1	7.13		20.1	209.3	
1051		CPM4 10/5	124	2000	14.23	631.4	7.15		21.2	204.6	
1056	25.5	CPM4 10/5	124		14.38	631.5	7.16		27.8	201.2	Sample #1 500mL
				600							Sample #2 250mL
1103											Done

WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) NPPD SS Ash Landfill #4
Well Number AP4-MW4 Date 2-27-2024
Field Personnel Todd A. Chinn & Patricia A. Novak
Sampling Organization NPPD
Identify MP Top of Casing

Depth to 11.0 / 37.0 of screen (Top / Bottom)
Pump Intake at (ft. below MP) 35.0
Purging Device; (pump type) Micro Purge
Total Volume Purged 3930 mL

Well Conditions/ Field Observations: 63°F, Sunny, 10 mph from the Southwest

Clock Time 24hr	Water Depth below MP ft	Pump Dial Setting	Purge Rate mL/min	Cum. Volume Purged in milliliters	Temp C°	Specific Conductivity µmhos	pH MP-20	pH Lab Accumet	%DO	ORP mv	Comments
1108	23.92	CPM4 10/5	85								Start Pump
1114		CPM4 10/5	85		15.14	962.0	7.10		86.1	219.2	Cell is full
1119		CPM4 10/5	85		15.16	1206	6.94		29.2	218.8	
1124		CPM4 10/5	85		15.49	1080	6.97		15.1	213.4	
1129		CPM4 10/5	85		15.77	968.3	7.02		13.5	208.0	
1134		CPM4 10/5	85		15.82	888.4	7.04		14.0	202.7	
1139		CPM4 10/5	85	2400	15.91	842.7	7.05		13.8	197.0	
1144		CPM4 10/5	85		15.73	823.9	7.06		13.3	188.3	
1149	25.0	CPM4 10/5	85		15.72	813.0	7.05		12.9	174.6	Sample #1 500 mL
				780							Sample #2 250 mL
1154											Done

WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) NPPD SS Ash Landfill #4
Well Number AP4-MW5 Date 2-26-2024
Field Personnel Todd A. Chinn Patricia A Novak
Sampling Organization NPPD
Identify MP Top of Casing

Depth to 10.2 / 36.2 of screen (Top / Bottom)
Pump Intake at (ft. below MP) 34.2
Purging Device; (pump type) Micro Purge
Total Volume Purged 2650 mL

Well Conditions/ Field Observations: 78°F, Sunny, 7 mph from the West

Clock Time 24hr	Water Depth below MP ft	Pump Dial Setting	Purge Rate mL/min	Cum. Volume Purged in milliliters	Temp C°	Specific Conductivity µmhos	pH MP-20	pH Lab Accumet	%DO	ORP mv	Comments
1328	23.26	CPM4 10/5	102								Start Pump
1333		CPM4 10/5	102		17.32	2528	6.91		89.8	169.2	Cell is full
1334		CPM4 10/5	102		16.92	2635	6.79		76.0	140.7	
1339		CPM4 10/5	102		16.68	2876	6.65		22.8	113.6	
1344		CPM4 10/5	102		16.74	2905	6.63		7.5	122.2	
1349	23.95	CPM4 10/5	102	1900	16.63	2900	6.62		4.5	129.6	Sample #1 500mL
											Sample #2 250mL
1354											Done

WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) NPPD SS Ash Landfill #4
Well Number AP4-MW6 Date 2-26-2024
Field Personnel Todd A. Chinn Patricia A. Novak
Sampling Organization NPPD
Identify MP Top of Casing

Depth to 10.1 / 36.1 of screen (Top / Bottom)
Pump Intake at (ft. below MP) 34.1
Purging Device; (pump type) Micro Purge
Total Volume Purged 5090mL

Well Conditions/ Field Observations: 73°F, Sunny, 10mph from the Southeast by the end 79° ± 18mph

Clock Time 24hr	Water Depth below MP ft	Pump Dial Setting	Purge Rate mL/min	Cum. Volume Purged in milliliters	Temp C°	Specific Conductivity µmhos	pH MP-20	pH Lab Accumet	%DO	ORP mv	Comments
1231	15.81	CPM4 10/5	96								Start Pump
1232		CPM4 10/5	96		14.80	873.0	7.01		46.1	83.3	Cell is full
1237		CPM4 10/5	96		15.50	952	6.97		7.3	40.6	
1242		CPM4 10/5	96		16.08	902.9	6.98		5.6	61.2	
1247		CPM4 10/5	96		16.76	871.0	6.99		6.9	76.6	
1252		CPM4 10/5	96	2100	17.15	842.5	7.01		9.5	86.4	
1257		CPM4 10/5	96		17.16	812.1	7.02		13.4	92.2	
1302		CPM4 10/5	96		17.20	787.5	7.04		17.5	95.0	
1307		CPM4 10/5	96		17.57	768.0	7.05		21.8	95.0	
1312		CPM4 10/5	96	2000	17.87	751.9	7.06		25.8	92.8	
1317		CPM4 10/5	96		18.12	742.1	7.07		29.0	90.5	Sample #1 500mL
1319	15.8	CPM4 10/5	96								Sample #2 250mL
				240							Done
1324											

WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) NPPD 58 Ash Landfill #4
Well Number AP4-MW7 Date 2-26-2024
Field Personnel Todd A Chinn Patricia A Novak
Sampling Organization NPPD
Identify MP Top of Casing

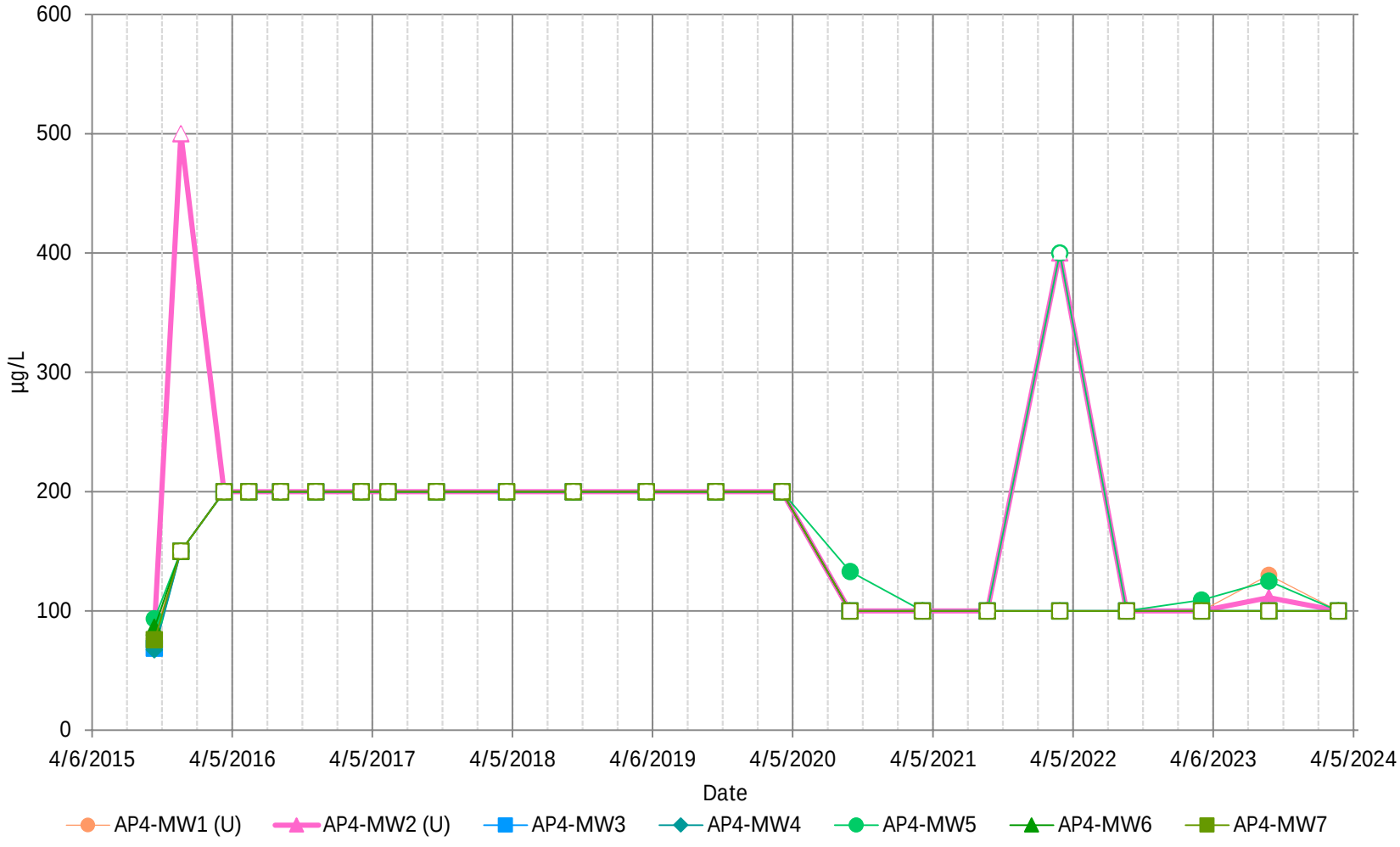
Depth to 10.5 / 35.5 of screen (Top / Bottom)
Pump Intake at (ft. below MP) 33.5
Purging Device; (pump type) MicroPurge
Total Volume Purged 2450mL

Well Conditions/ Field Observations: 73°F, Sunny, 11mph from the Southwest

Clock Time 24hr	Water Depth below MP ft	Pump Dial Setting	Purge Rate mL/min	Cum. Volume Purged in milliliters	Temp C°	Specific Conductivity µmhos	pH MP-20	pH Lab Accumet	%DO	ORP mv	Comments
1200	26.66	CPM4 10/5	102								Start Pump!
1203		CPM4 10/5	102		15.43	795.2	7.50		95.6	199.6	Cell is full
1208		CPM4 10/5	102		15.44	794.6	7.28		84.2	198.2	
1213		CPM4 10/5	102		15.51	792.3	7.26		83.1	196.1	
1218	27.15	CPM4 10/5	102		15.59	792.4	7.26		83.1	195.3	Sample #1 500mL
				1700							Sample #2 250mL
1224											Done

APPENDIX C

Time Series Data



Non-detects plotted at the practical quantitation limit with an open symbol

Figure C-1

Boron

Nebraska Public Power District

Sheldon Station

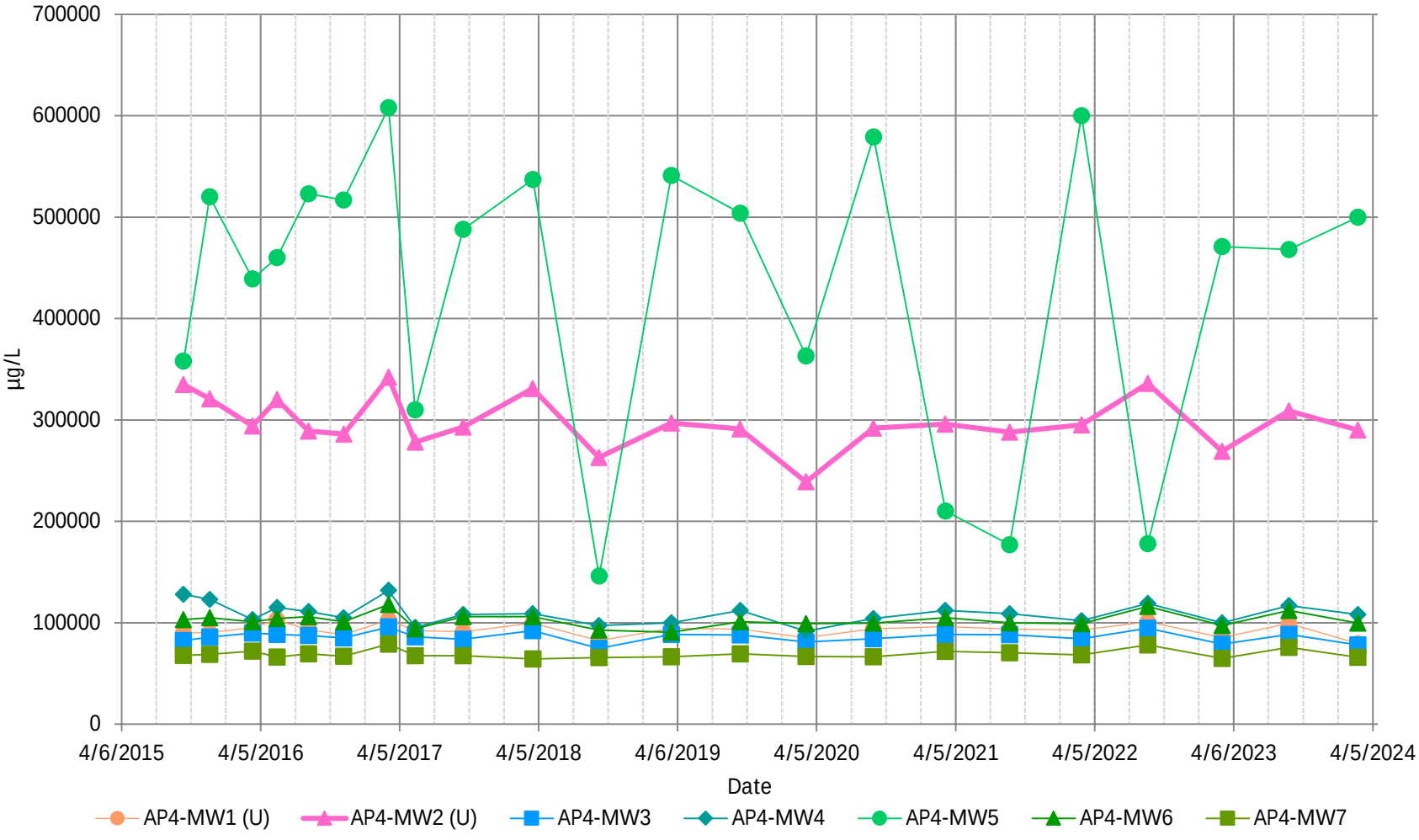
WSP USA Inc.

FINAL

4/19/2024

Denver, Colorado, USA

31405886.001



Non-detects plotted at the practical quantitation limit with an open symbol

Figure C-2

Calcium

Nebraska Public Power District

Sheldon Station

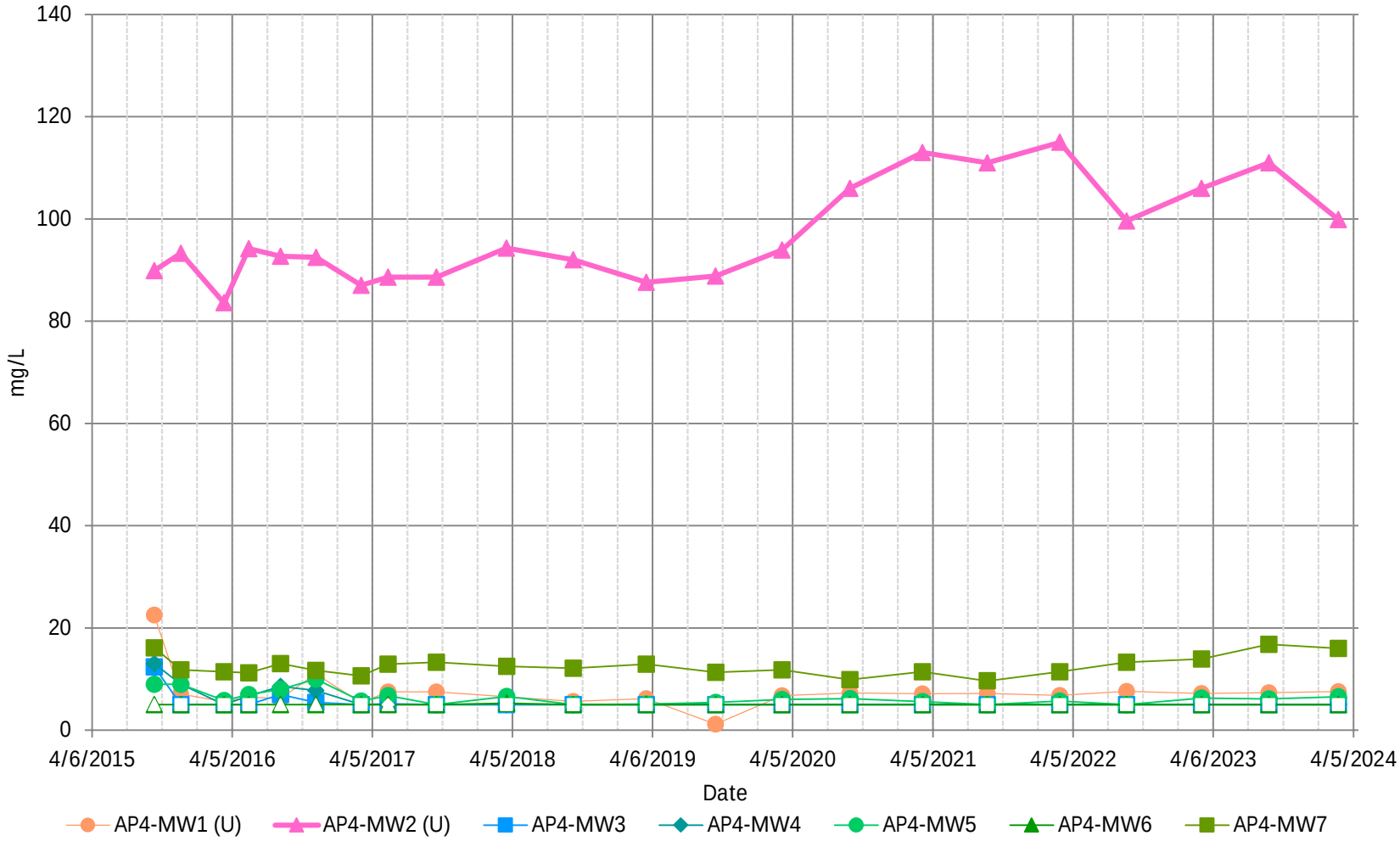
WSP USA Inc.

FINAL

4/19/2024

Denver, Colorado, USA

31405886.001



Non-detects plotted at the practical quantitation limit with an open symbol

Figure C-3

Chloride

Nebraska Public Power District

Sheldon Station

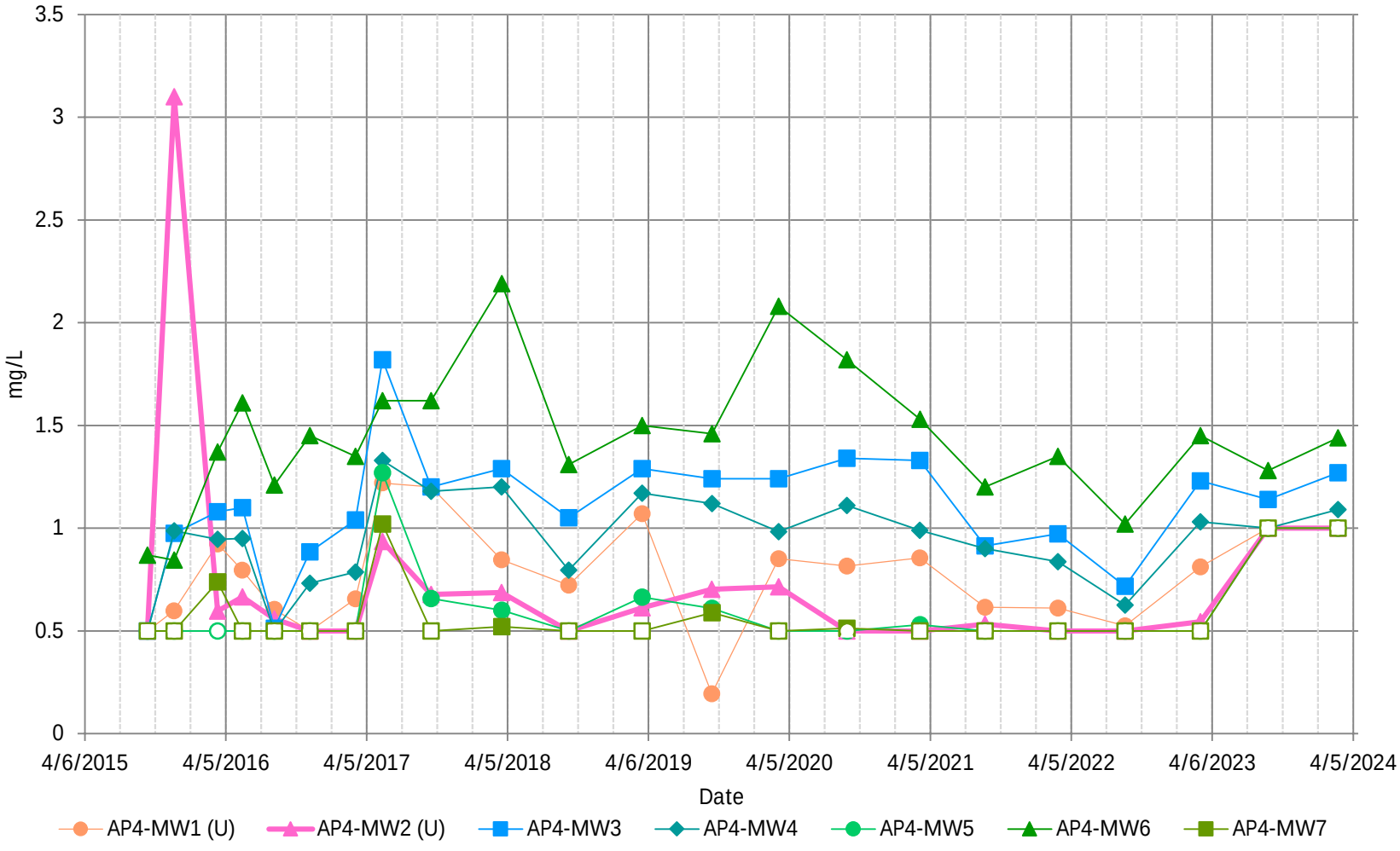
WSP USA Inc.

FINAL

4/19/2024

Denver, Colorado, USA

31405886.001



Non-detects plotted at the practical quantitation limit with an open symbol

Figure C-4

Fluoride

Nebraska Public Power District

Sheldon Station

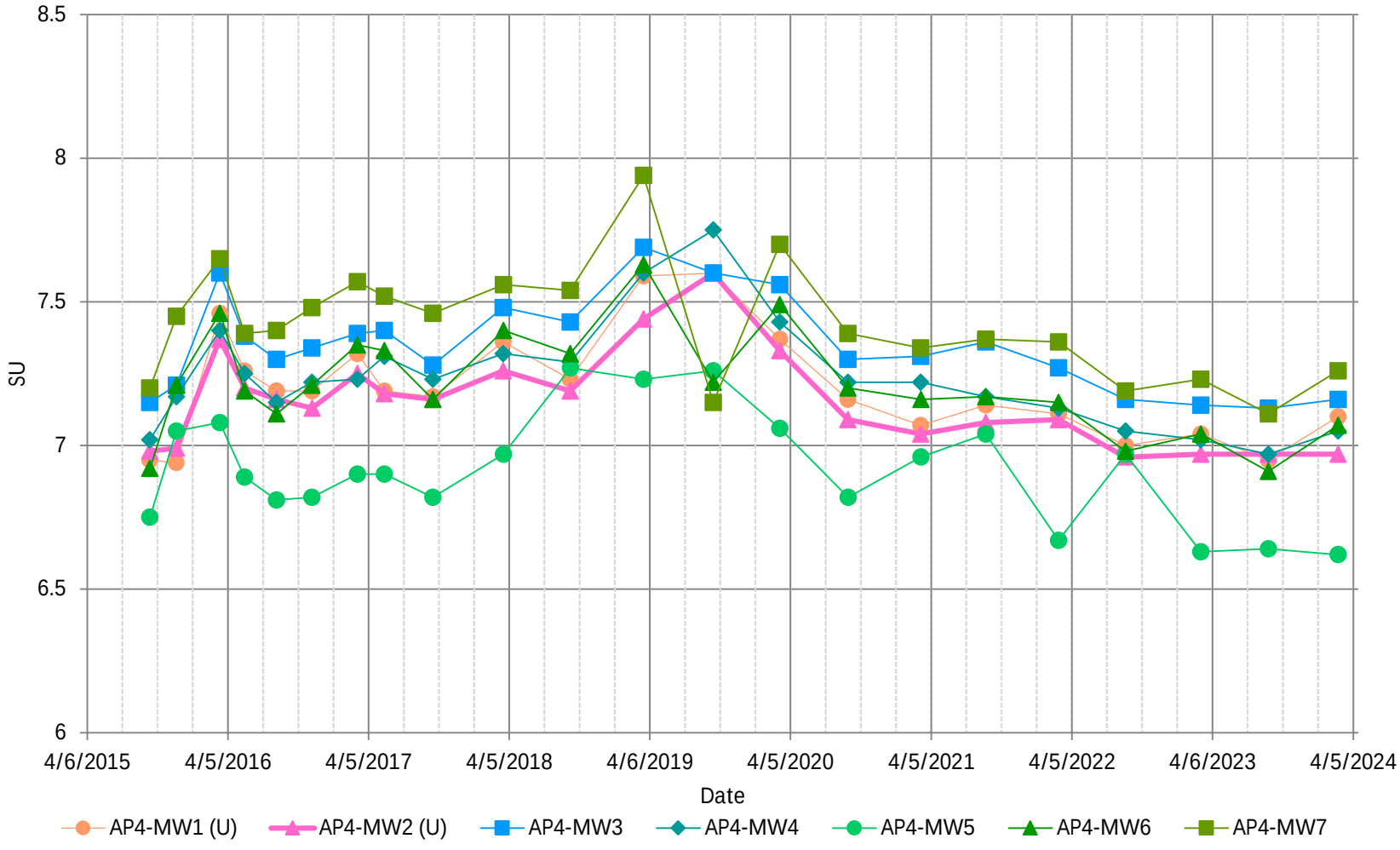
WSP USA Inc.

FINAL

4/19/2024

Denver, Colorado, USA

31405886.001



Non-detects plotted at the practical quantitation limit with an open symbol

Figure C-5

pH, Field-Measured

Nebraska Public Power District

Sheldon Station

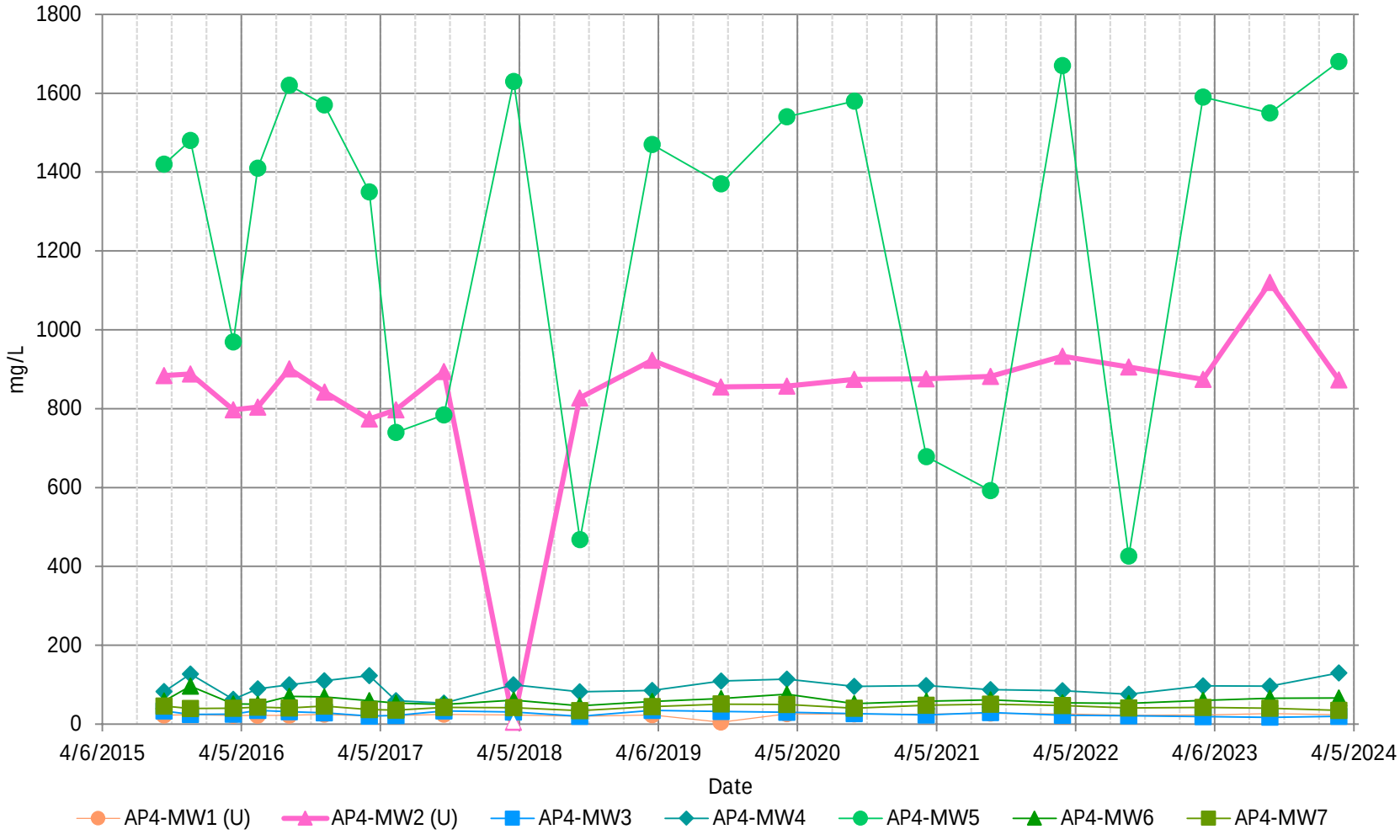
WSP USA Inc.

FINAL

4/19/2024

Denver, Colorado, USA

31405886.001



Non-detects plotted at the practical quantitation limit with an open symbol

Figure C-6

Sulfate

Nebraska Public Power District

Sheldon Station

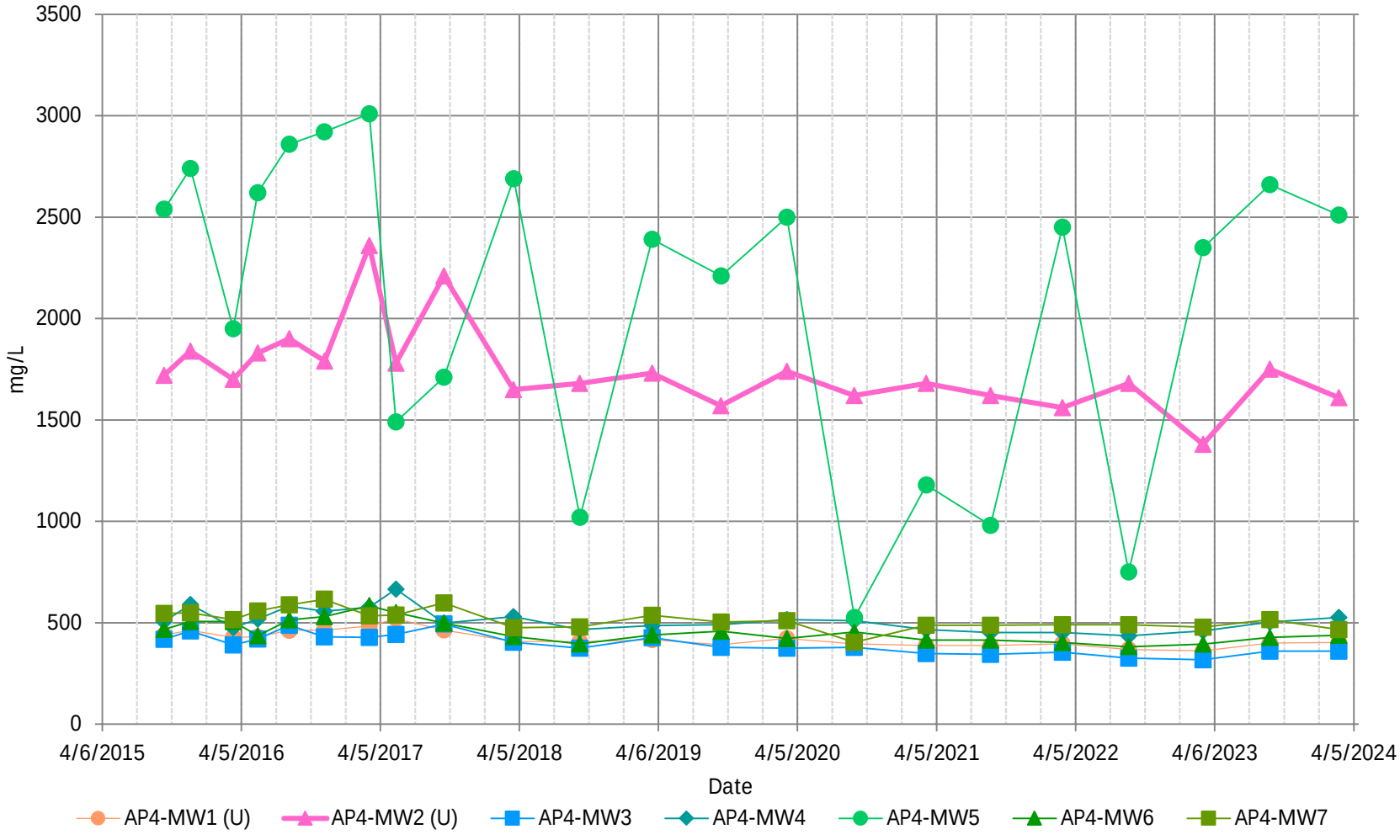
WSP USA Inc.

FINAL

4/19/2024

Denver, Colorado, USA

31405886.001



Non-detects plotted at the practical quantitation limit with an open symbol

Figure C-7

Total Dissolved Solids

Nebraska Public Power District

Sheldon Station

WSP USA Inc.

FINAL

4/19/2024

Denver, Colorado, USA

31405886.001

APPENDIX D

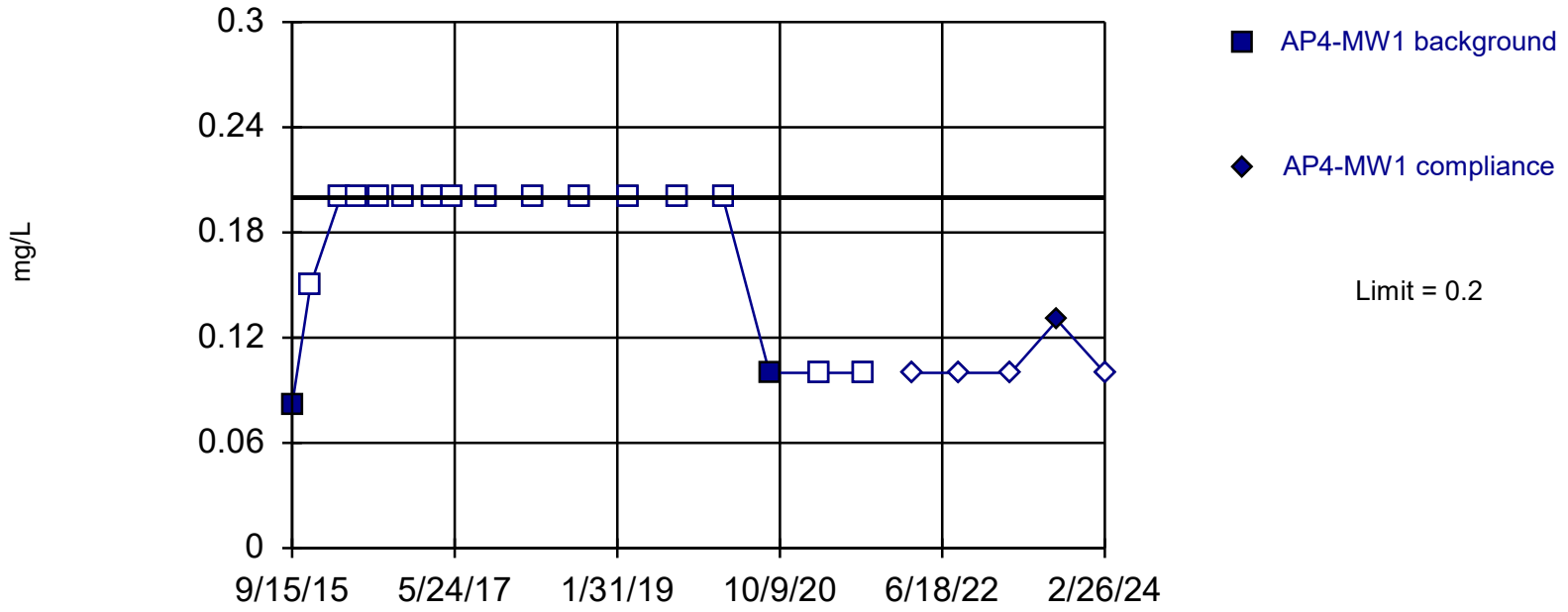
Comparative Statistical Analysis

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

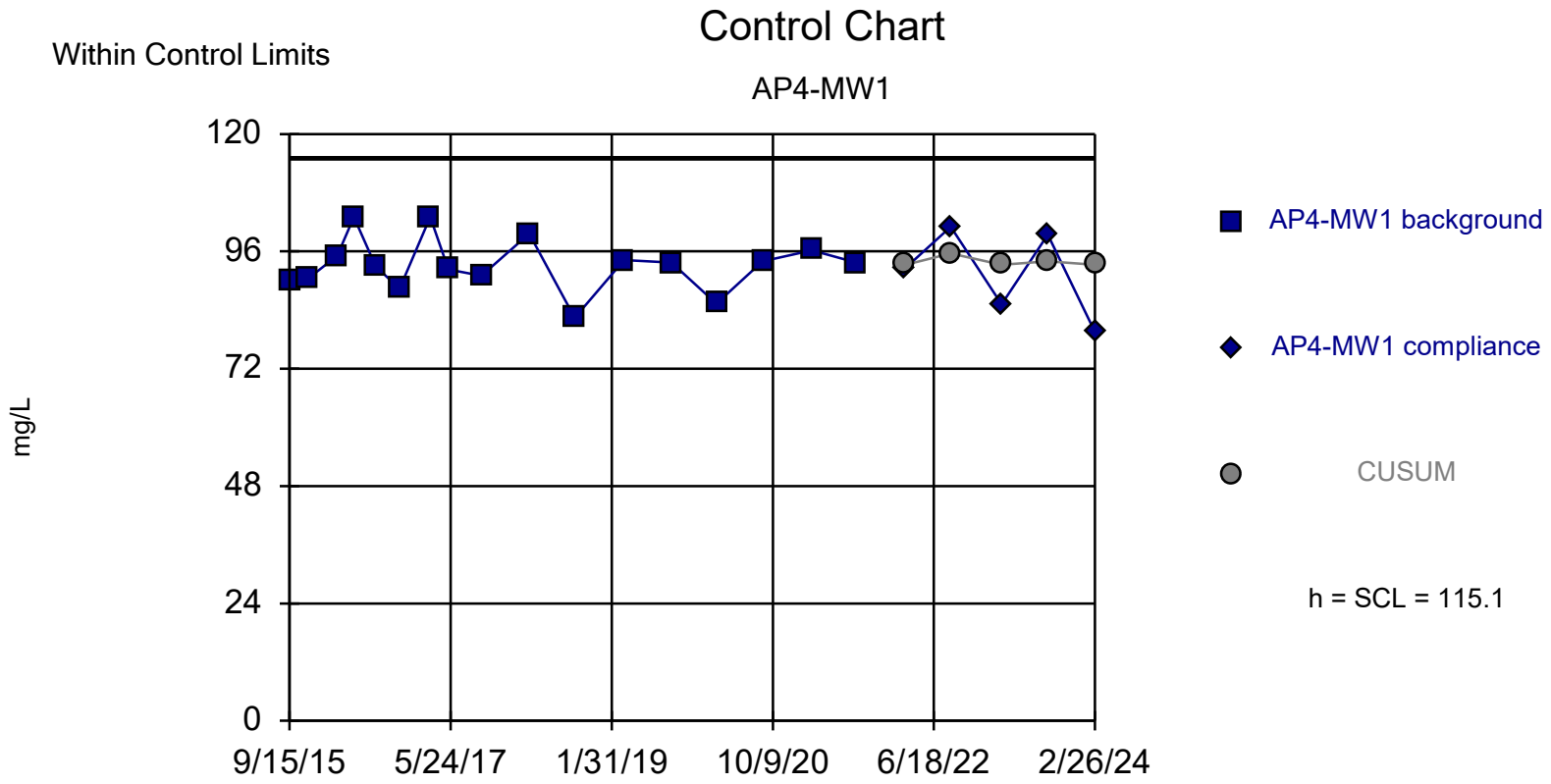
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 88.24% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 4/15/2024 12:05 PM

Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931



Background Data Summary: Mean=93.24, Std. Dev.=5.454, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9613, critical = 0.892. Report alpha = 0.00209. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

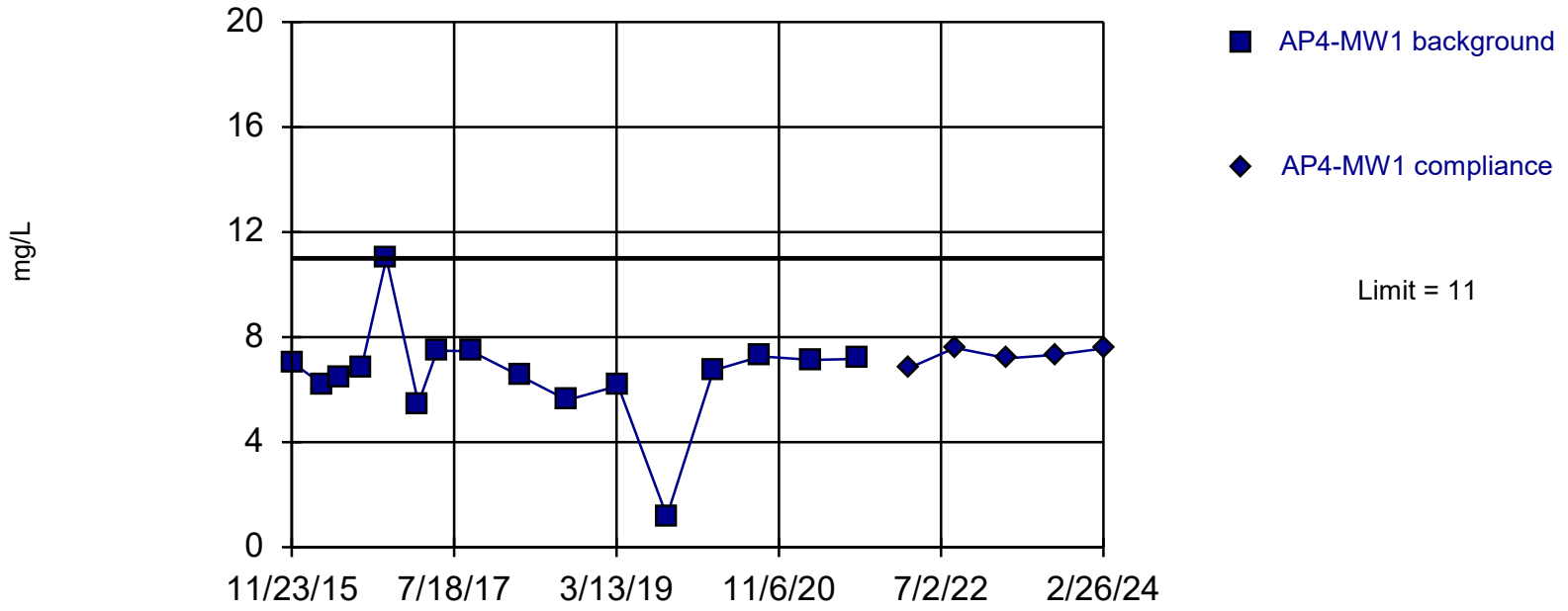
Constituent: Calcium Analysis Run 4/15/2024 12:08 PM

Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931

Within Limit

Prediction Limit

Intrawell Non-parametric

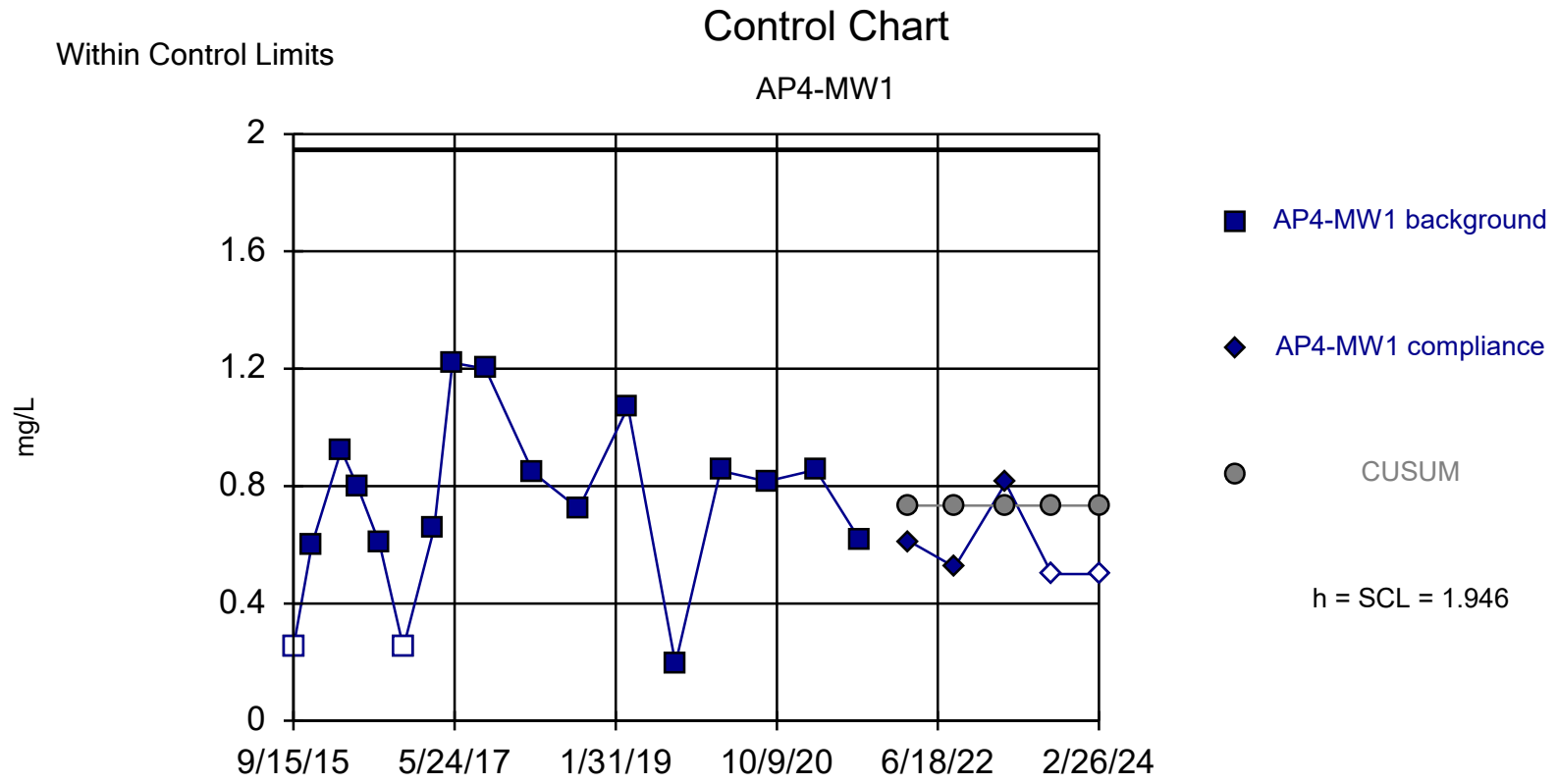


Non-parametric test used in lieu of control chart because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 16 background values. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 4/15/2024 12:10 PM

Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931

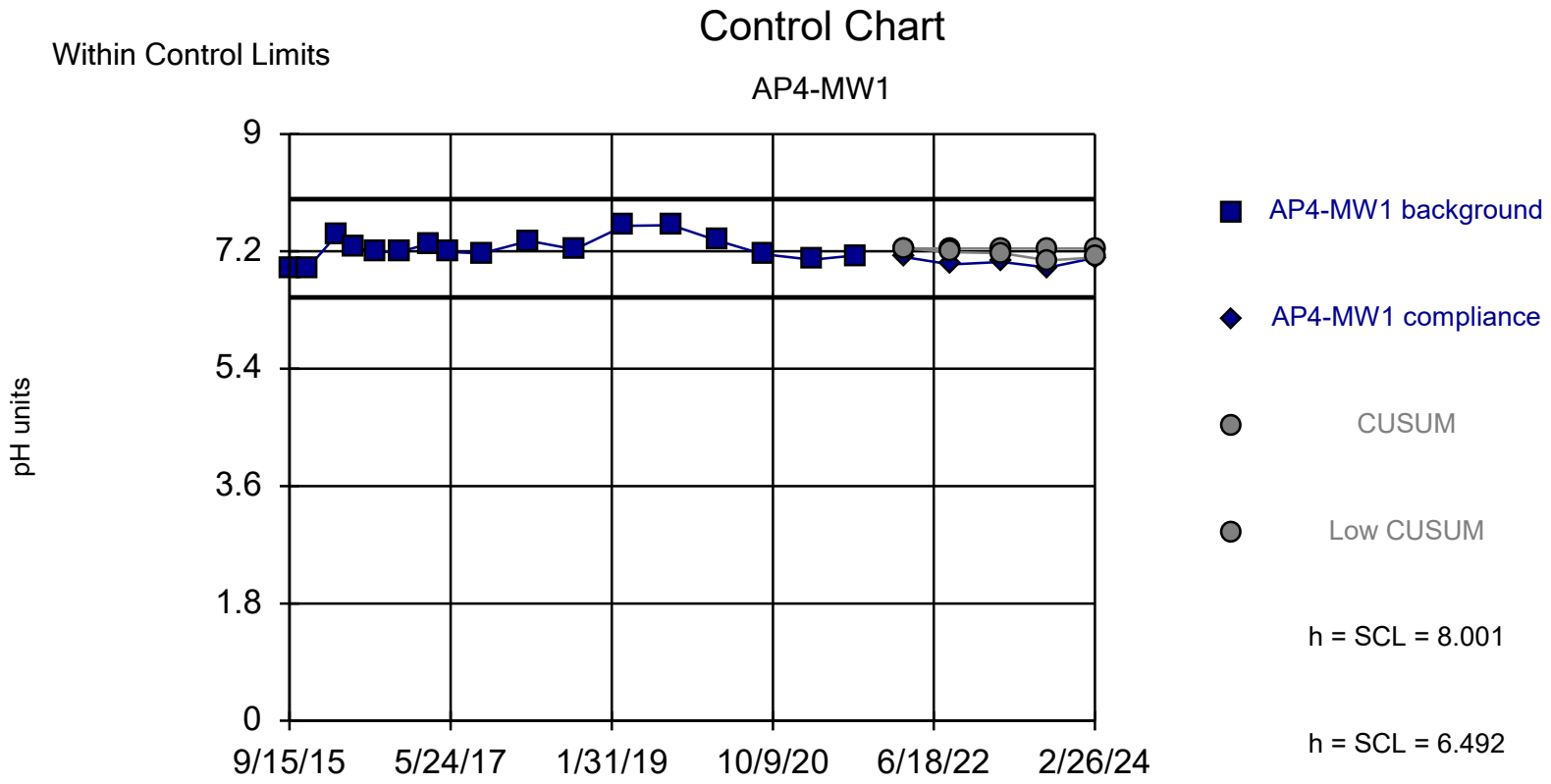
Hollow symbols indicate censored values.



Background Data Summary: Mean=0.7335, Std. Dev.=0.3031, n=17, 11.76% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9399, critical = 0.892. Report alpha = 0.00209. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Fluoride Analysis Run 4/15/2024 12:12 PM

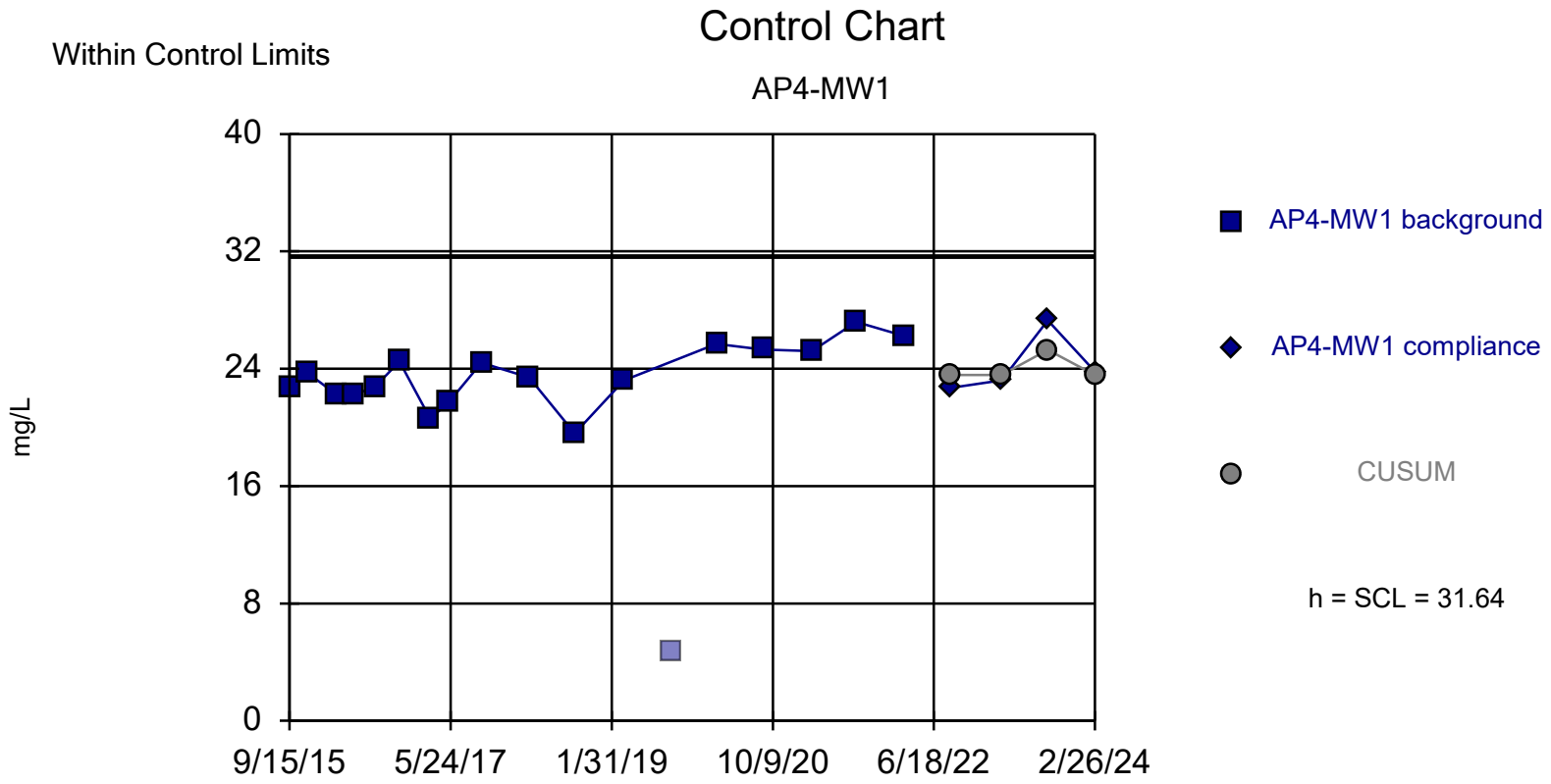
Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931



Background Data Summary: Mean=7.246, Std. Dev.=0.1887, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9501, critical = 0.892. Report alpha = 0.002018. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 4/16/2024 11:38 AM

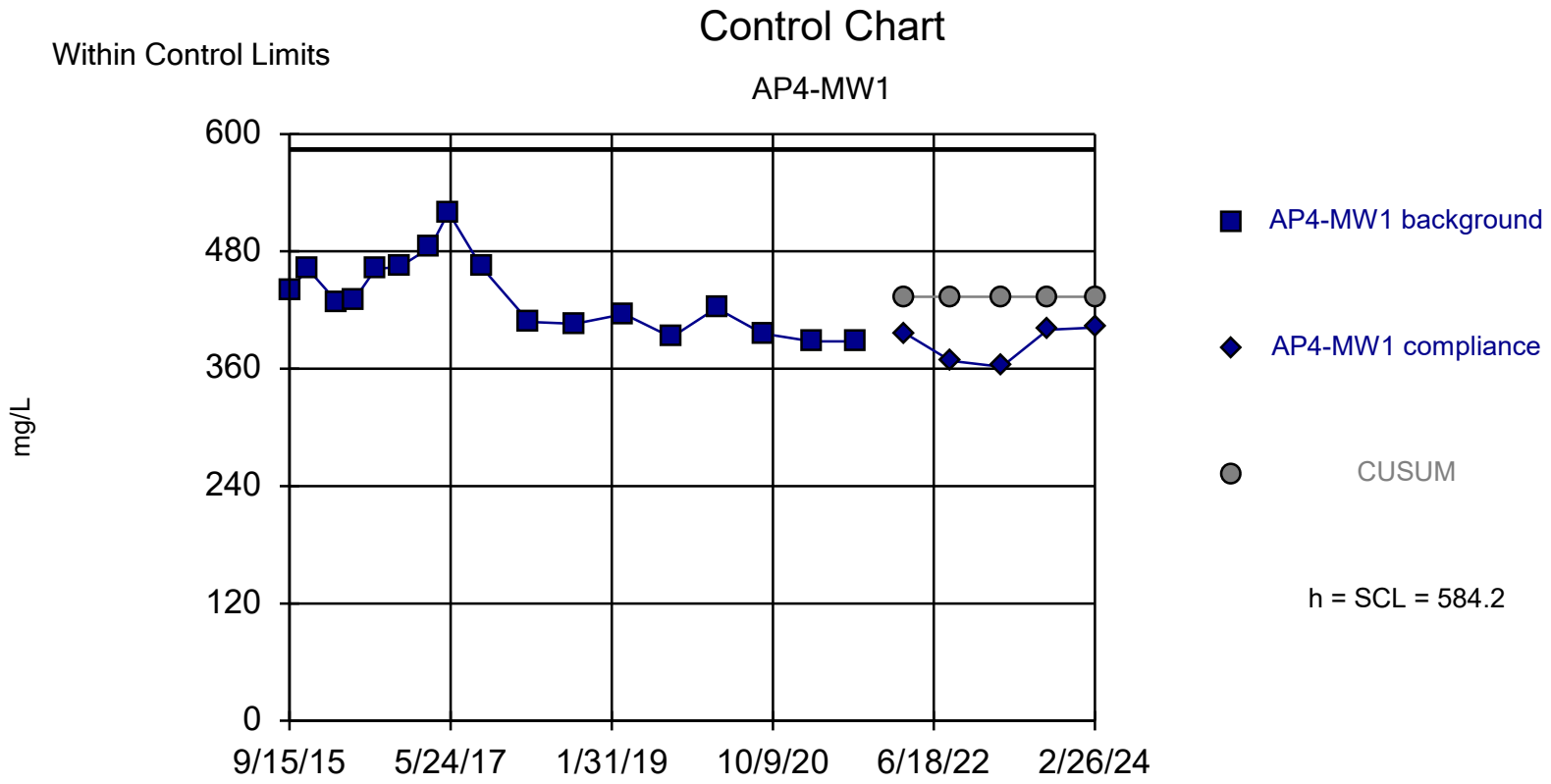
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=23.57, Std. Dev.=2.016, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9891, critical = 0.892. Report alpha = 0.001694. Dates ending 3/2/2022 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate Analysis Run 4/15/2024 1:25 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=433.5, Std. Dev.=37.68, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9301, critical = 0.892. Report alpha = 0.002106. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Total Dissolved Solids Analysis Run 4/15/2024 1:26 PM

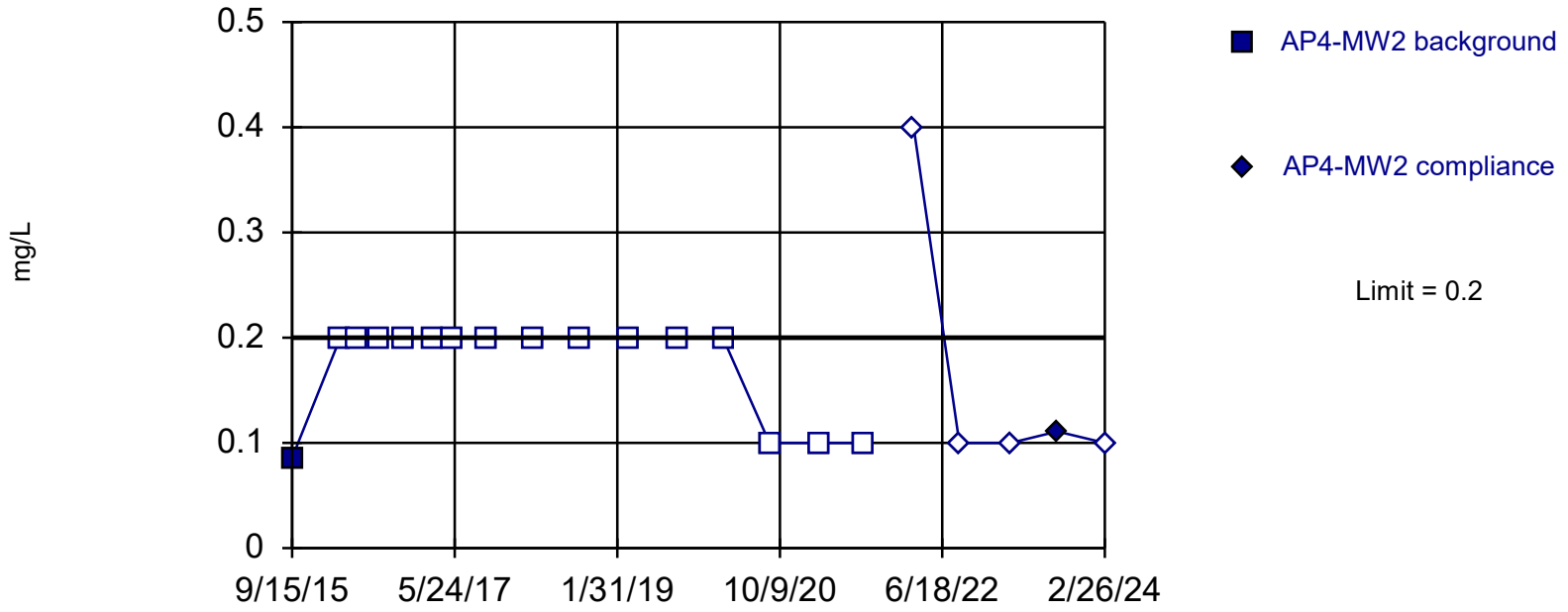
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

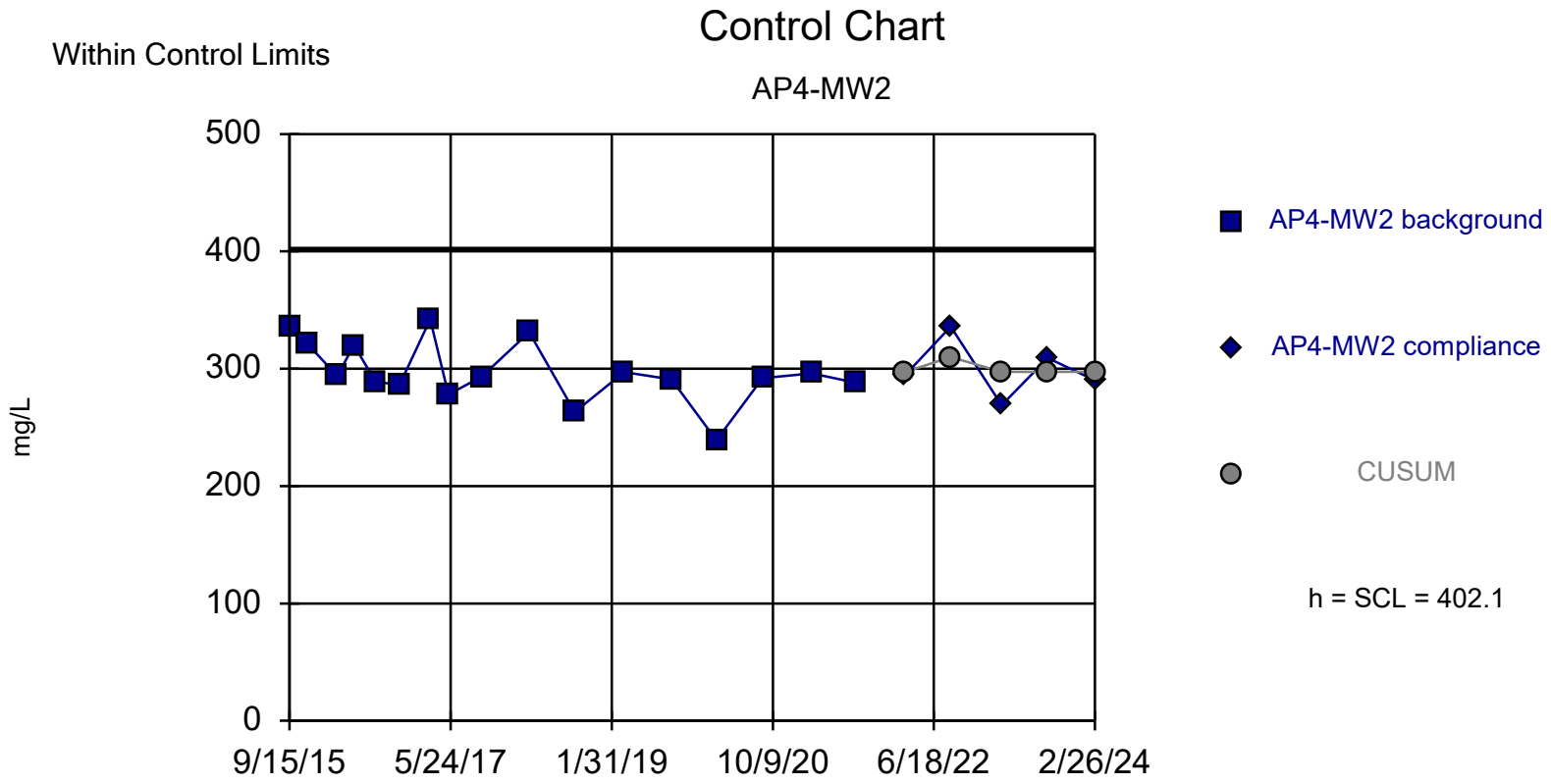
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 16 background values. 93.75% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 4/15/2024 12:16 PM

Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931



Background Data Summary: Mean=297.4, Std. Dev.=26.17, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9371, critical = 0.892. Report alpha = 0.002046. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

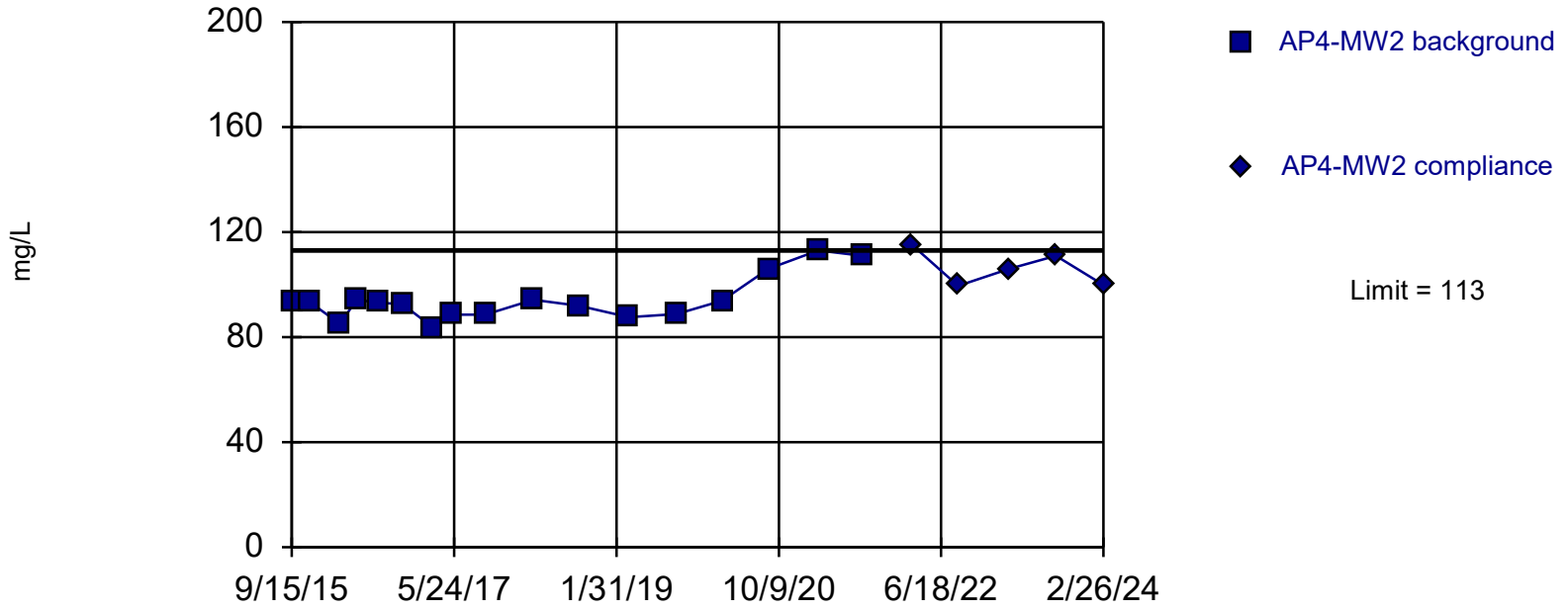
Constituent: Calcium Analysis Run 4/15/2024 12:19 PM

Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of control chart because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 17 background values. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 4/15/2024 12:20 PM

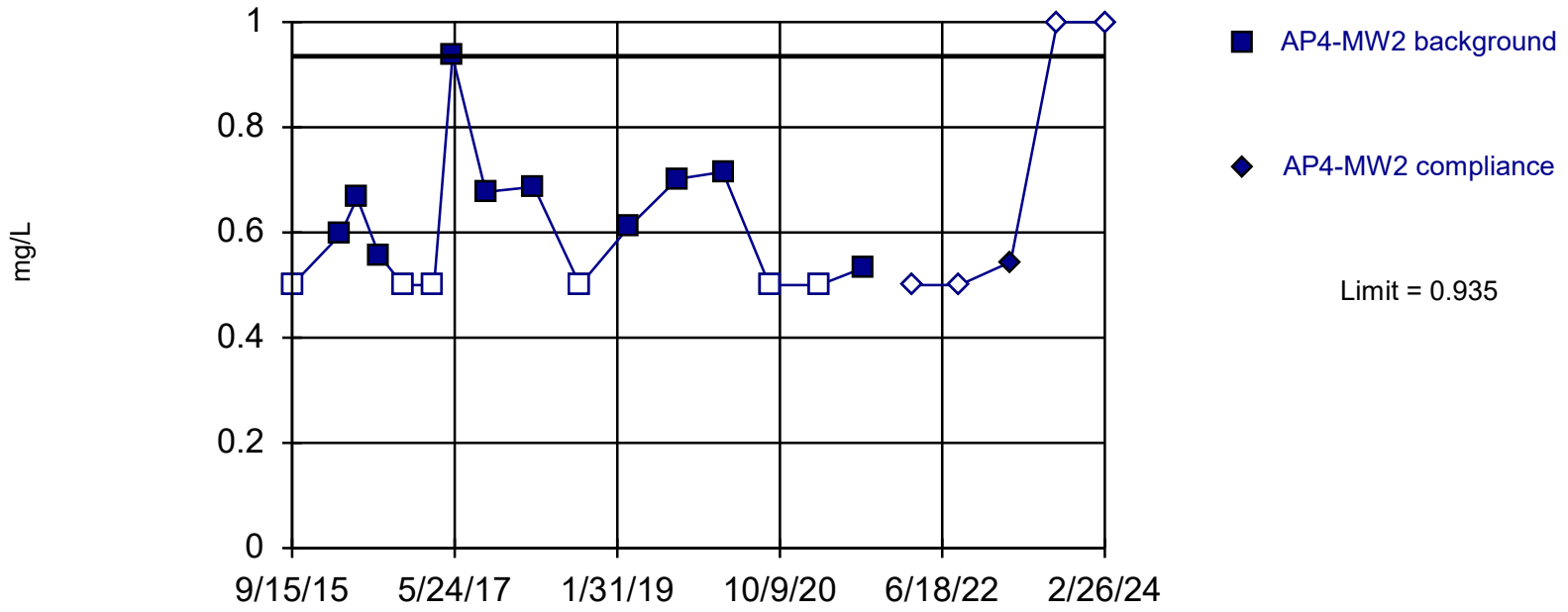
Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

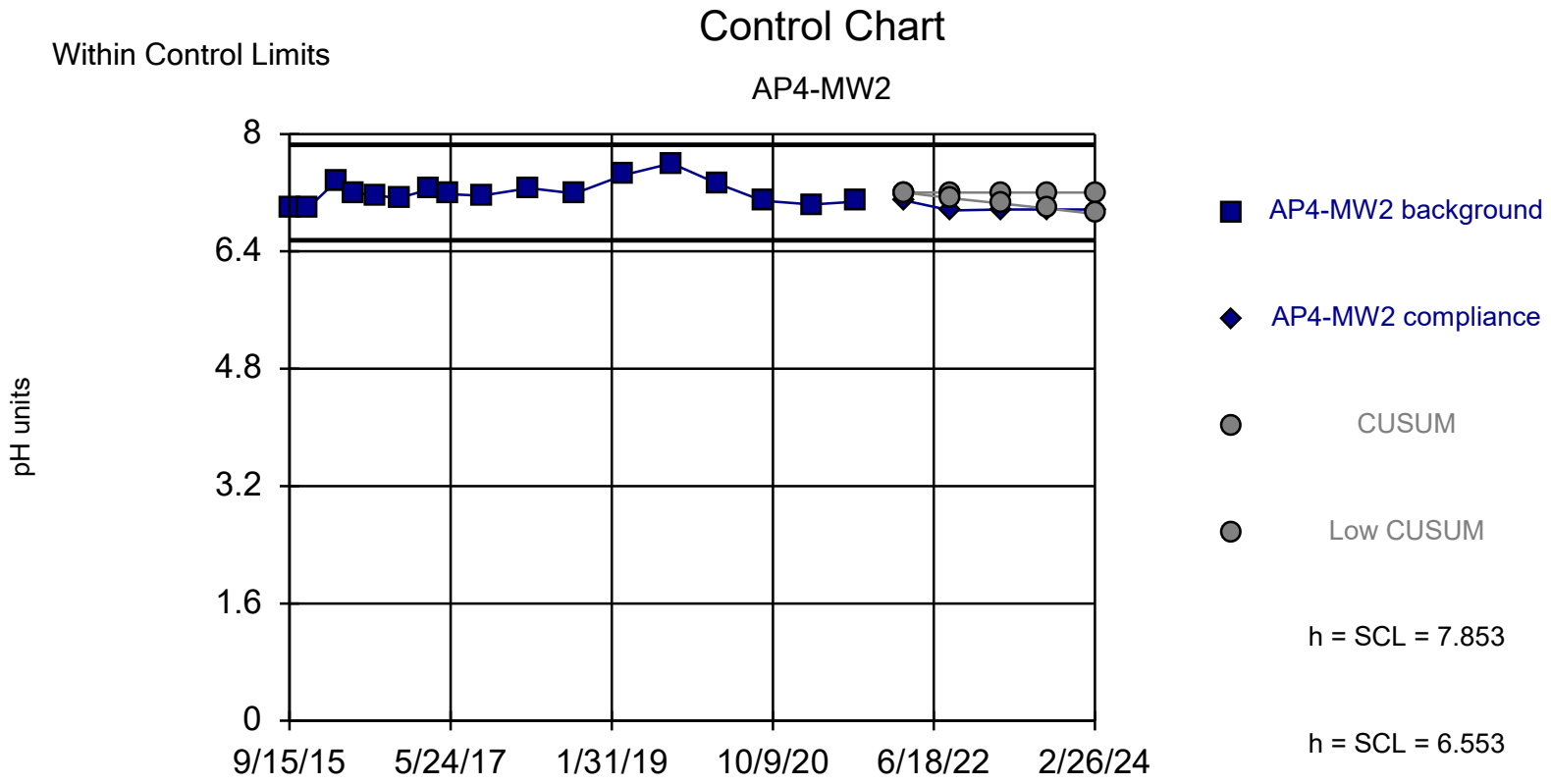
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 16 background values. 37.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Fluoride Analysis Run 4/15/2024 12:22 PM

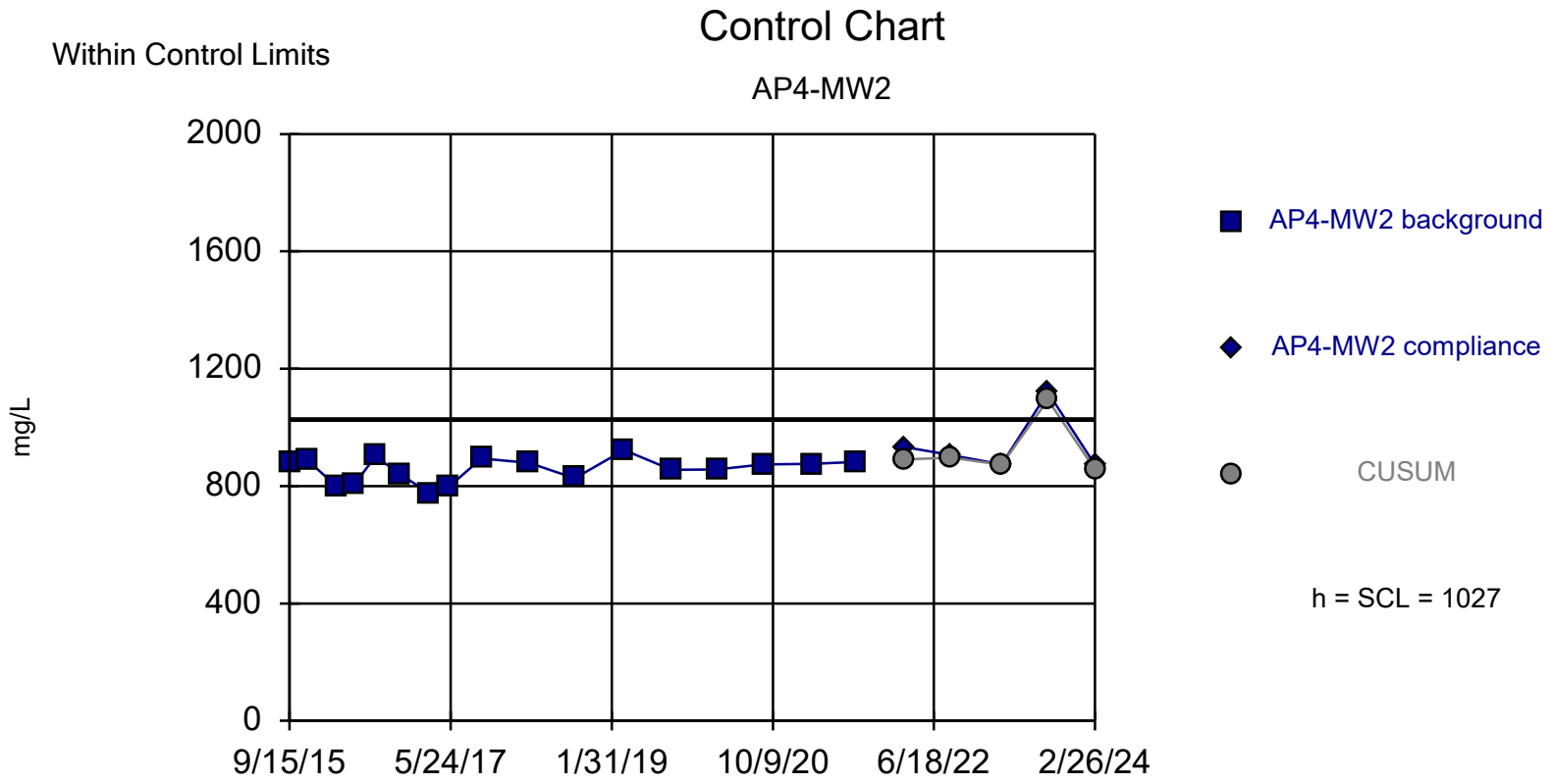
Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931



Background Data Summary: Mean=7.203, Std. Dev.=0.1625, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9453, critical = 0.892. Report alpha = 0.002018. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 4/16/2024 11:40 AM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=856.1, Std. Dev.=42.66, n=17. Exceedance nullified by following point per option settings. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9342, critical = 0.892. Report alpha = 0.002106. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

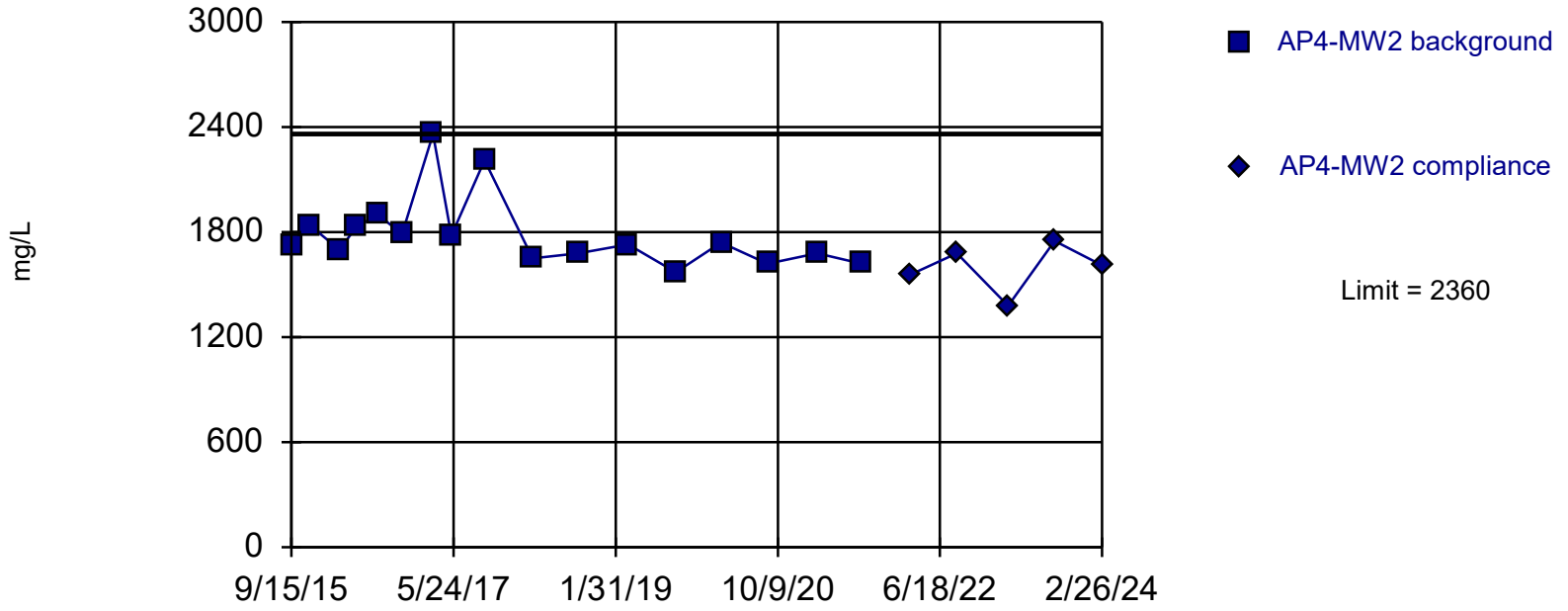
Constituent: Sulfate Analysis Run 4/15/2024 1:32 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of control chart because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 17 background values. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Total Dissolved Solids Analysis Run 4/15/2024 1:40 PM

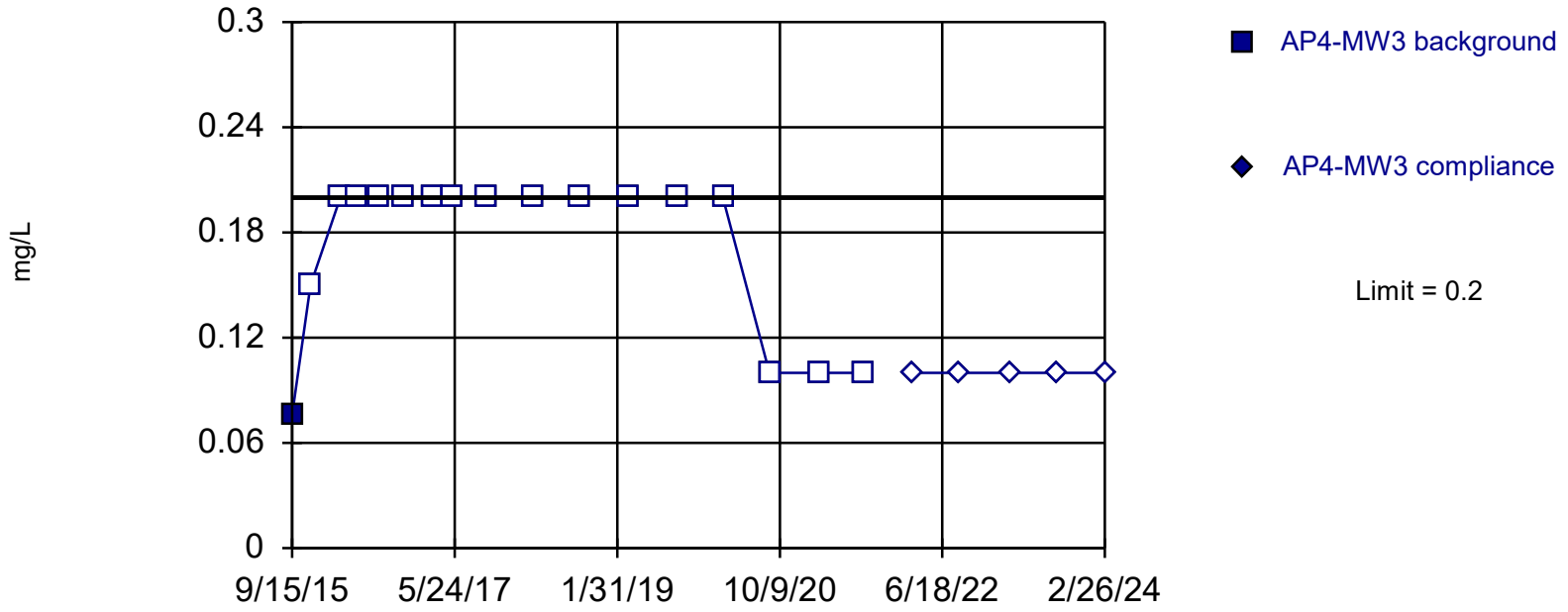
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

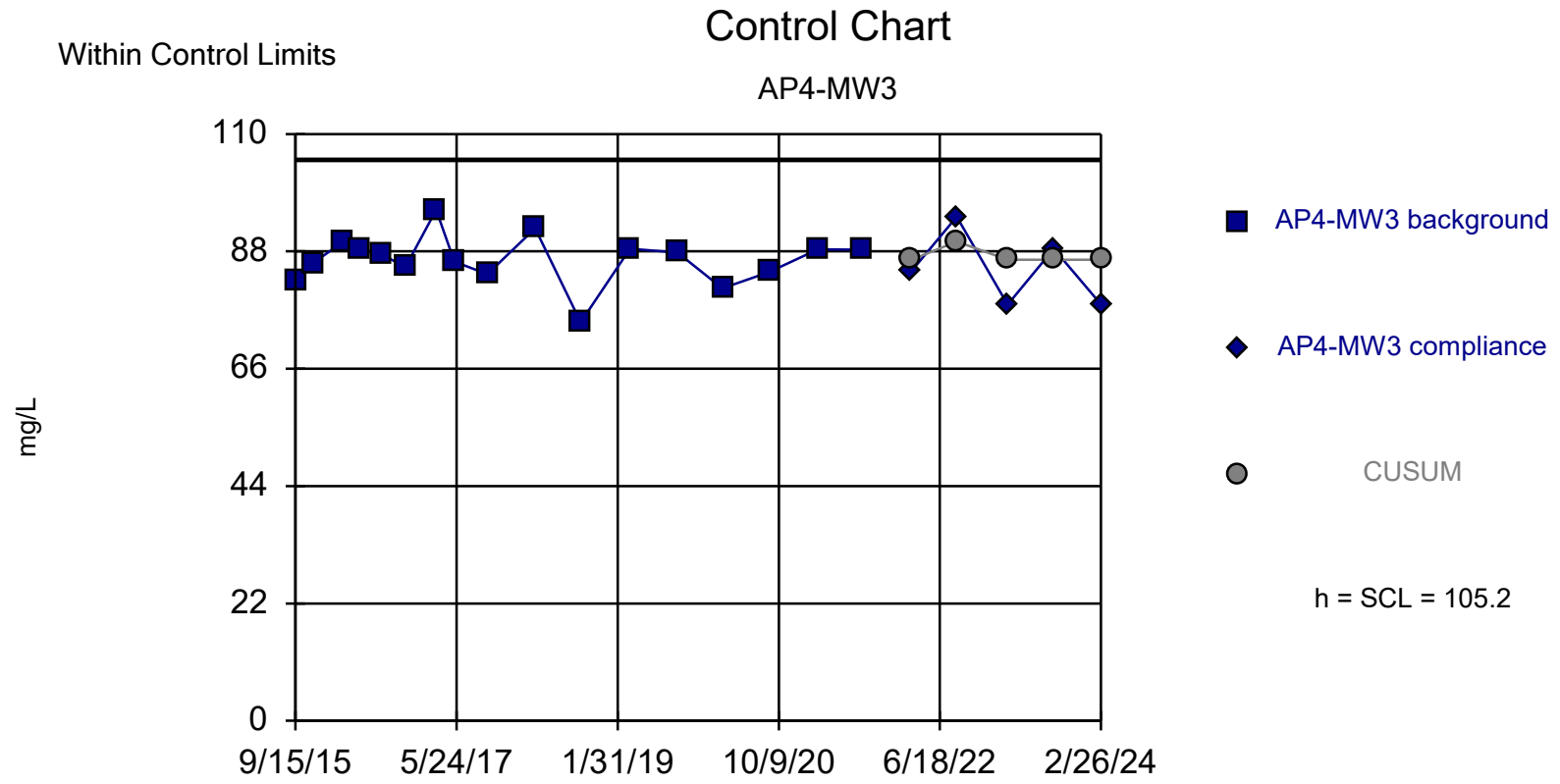
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 4/15/2024 12:25 PM

Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931



Background Data Summary: Mean=86.46, Std. Dev.=4.678, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9528, critical = 0.892. Report alpha = 0.002046. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium Analysis Run 4/15/2024 12:27 PM

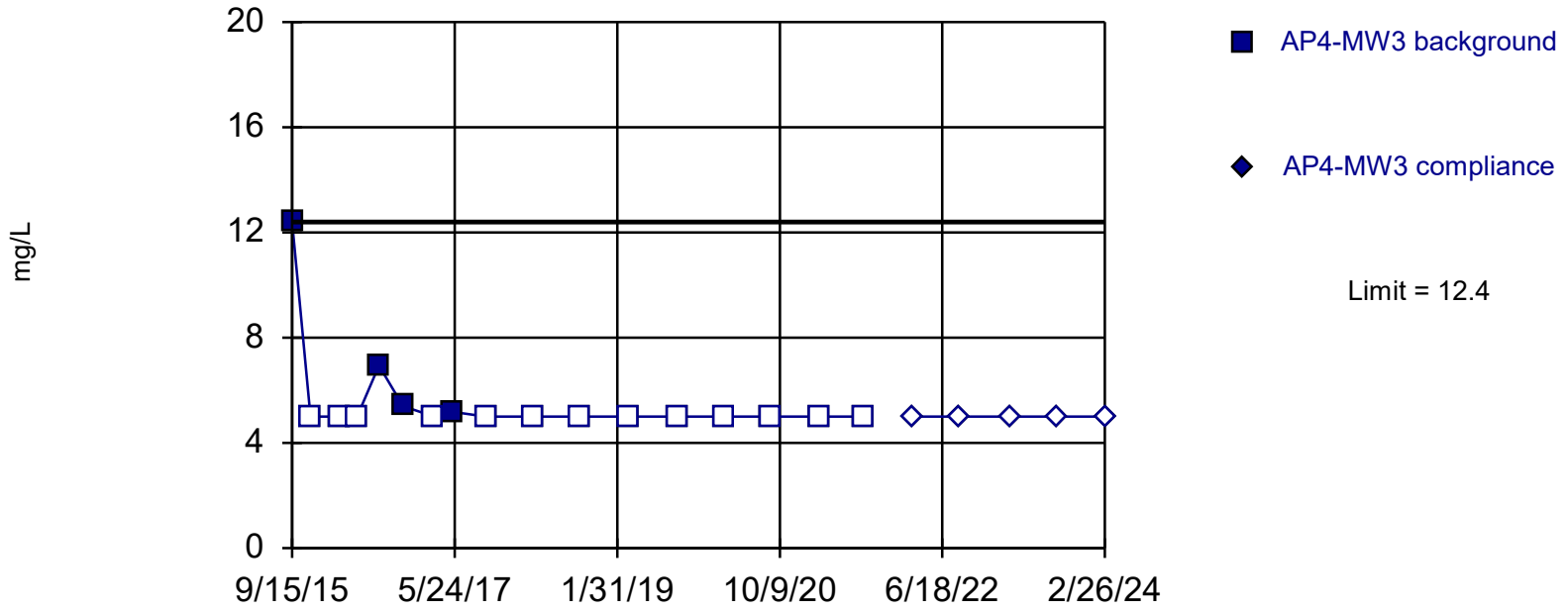
Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 76.47% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

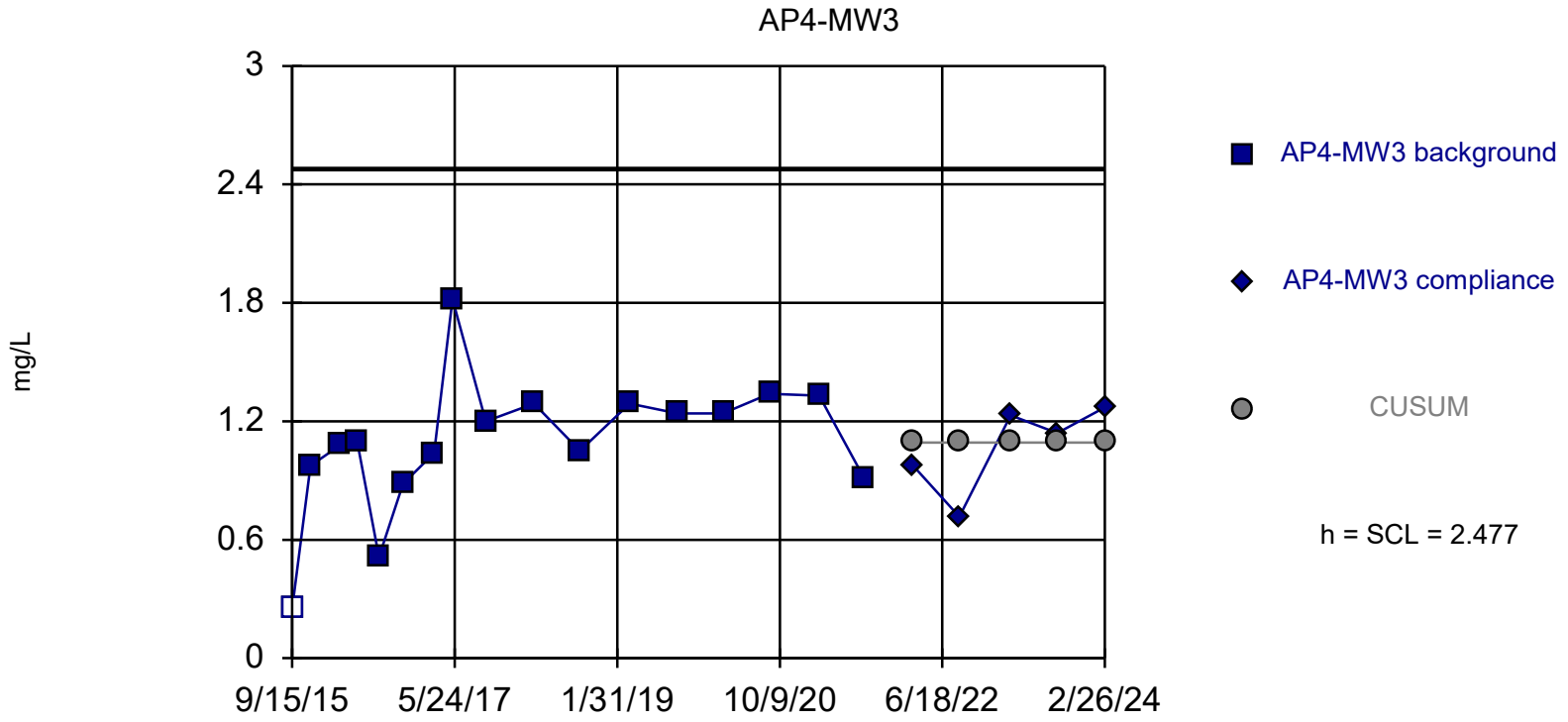
Constituent: Chloride Analysis Run 4/15/2024 1:42 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Control Chart

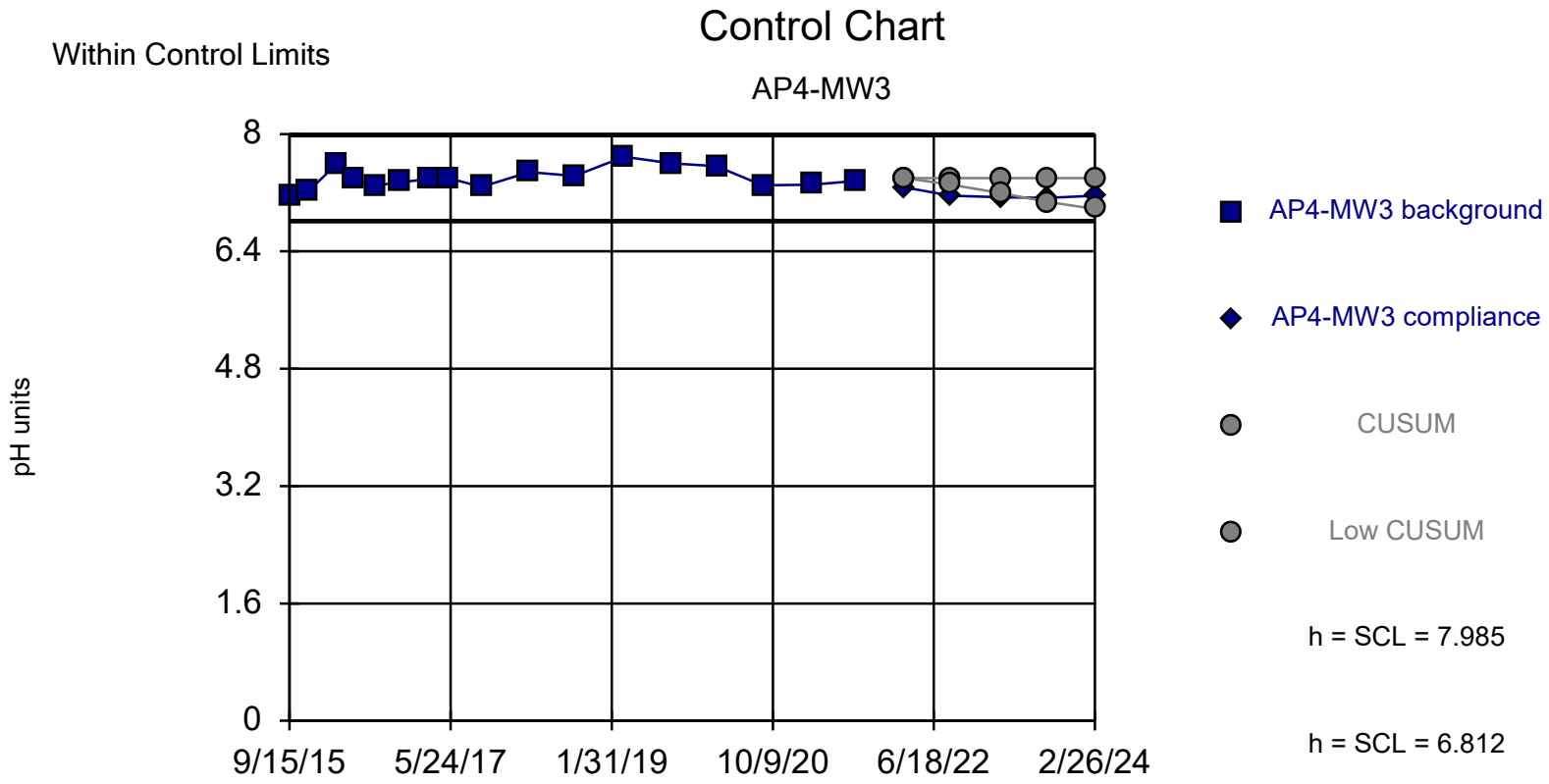
Within Control Limits



Background Data Summary: Mean=1.092, Std. Dev.=0.3464, n=17, 5.882% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9173, critical = 0.892. Report alpha = 0.002106. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Fluoride Analysis Run 4/15/2024 1:45 PM

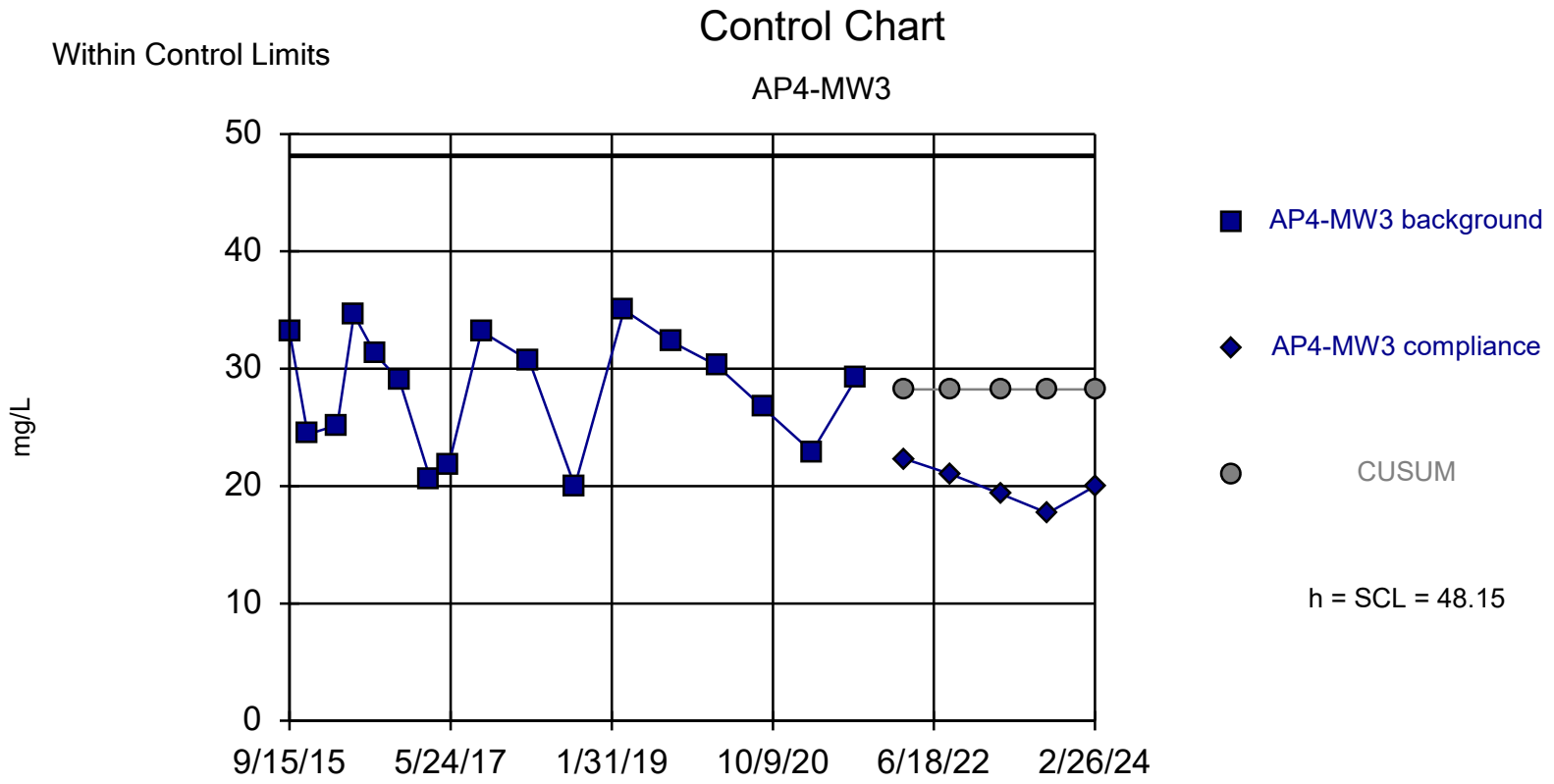
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=7.399, Std. Dev.=0.1466, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9619, critical = 0.892. Report alpha = 0.002018. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 4/16/2024 11:47 AM

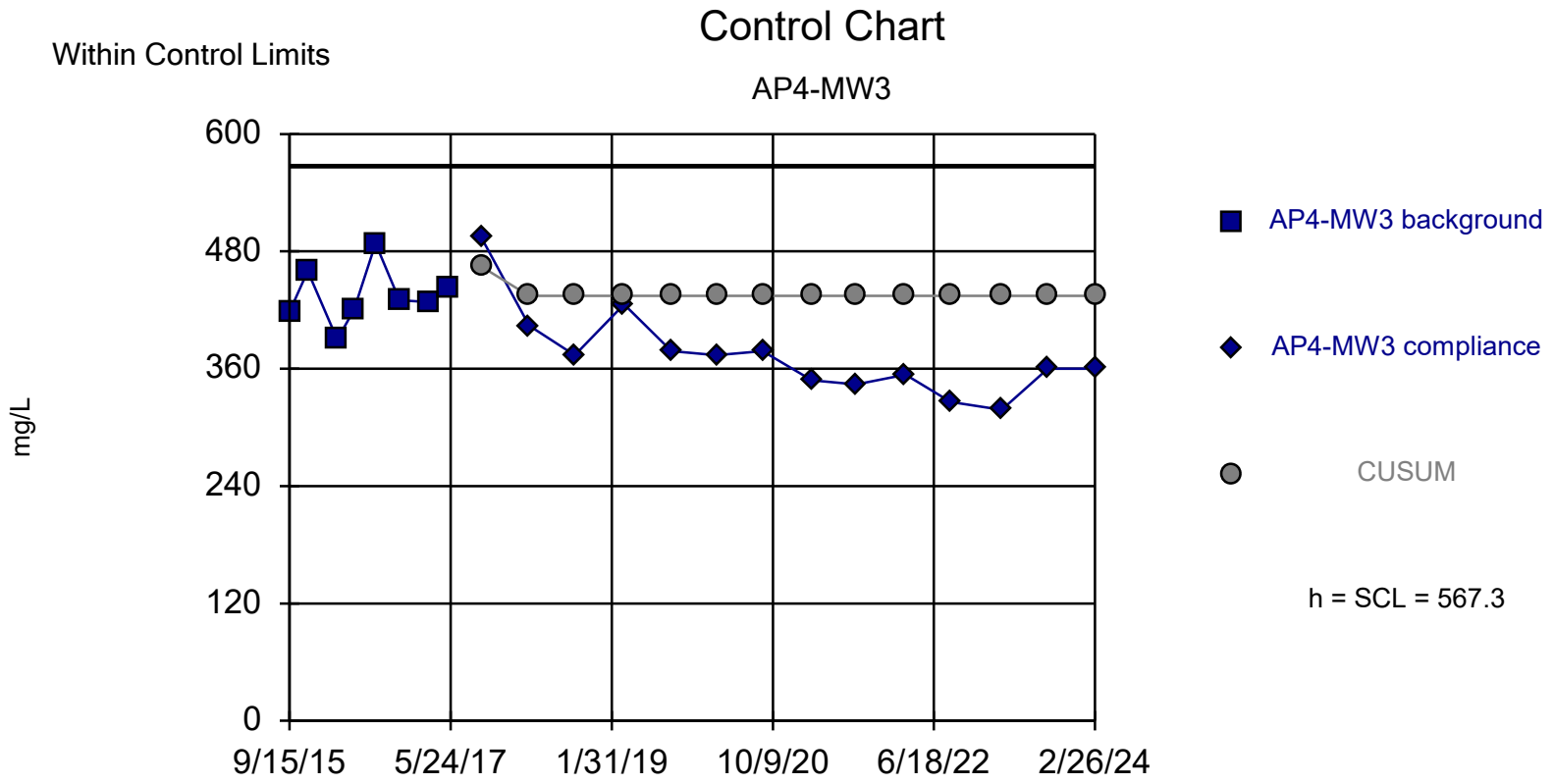
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=28.25, Std. Dev.=4.977, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9311, critical = 0.892. Report alpha = 0.002106. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate Analysis Run 4/15/2024 1:47 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=434.5, Std. Dev.=29.51, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9615, critical = 0.818. Report alpha = 0.01521. Dates ending 5/16/2017 used for control stats. Standardized h=4.5, SCL=4.5.

Constituent: Total Dissolved Solids Analysis Run 4/15/2024 1:48 PM

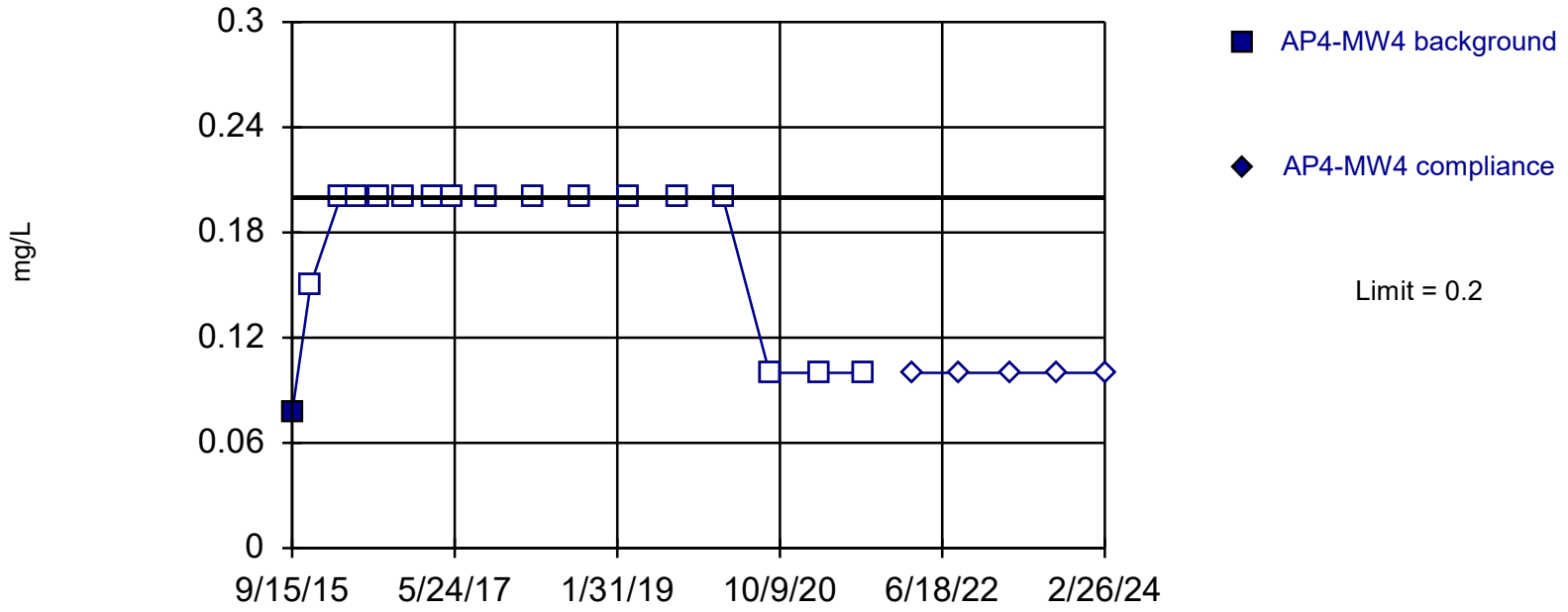
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

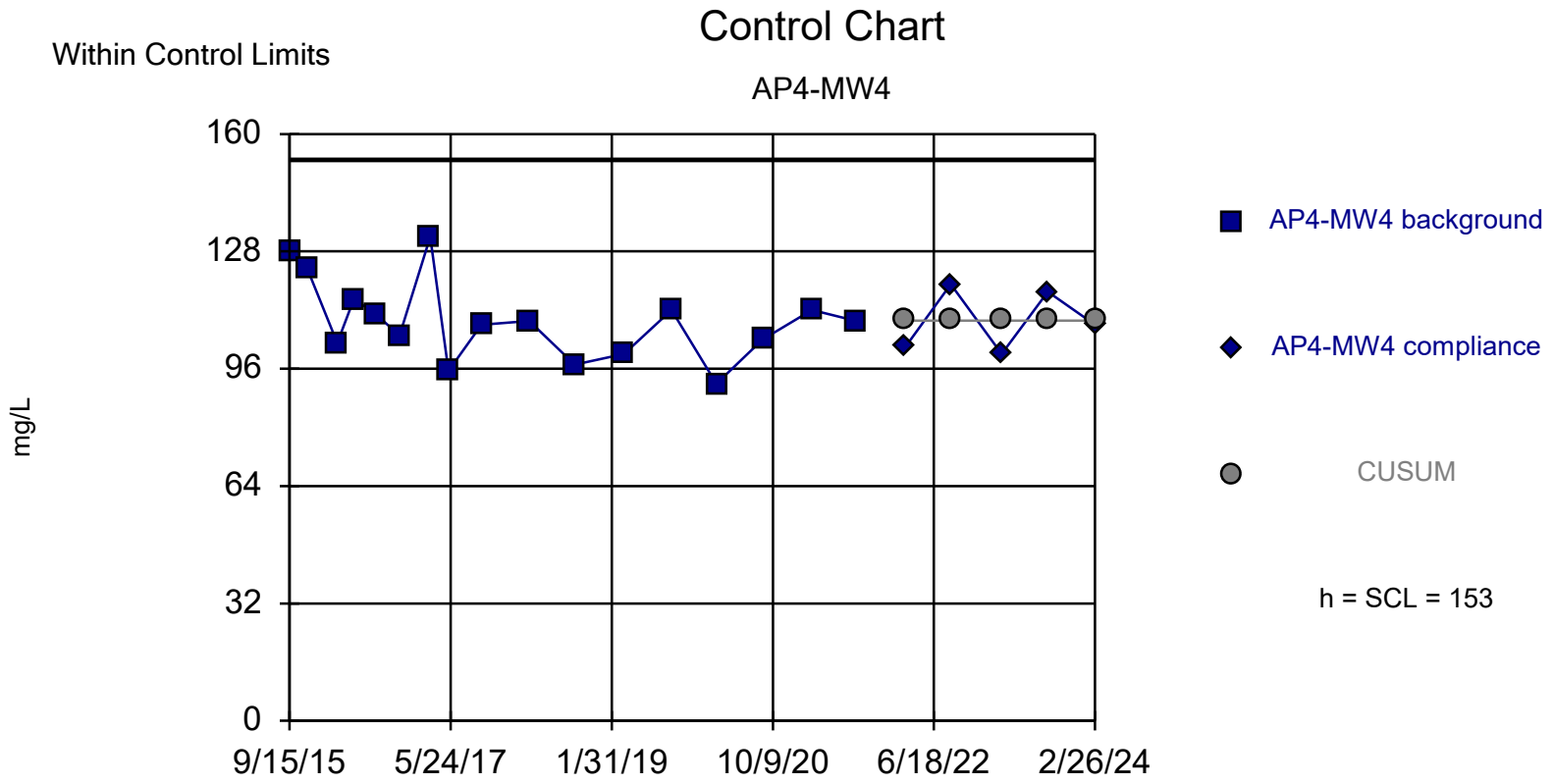
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 4/15/2024 12:31 PM

Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931



Background Data Summary: Mean=109.1, Std. Dev.=10.96, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9569, critical = 0.892. Report alpha = 0.002046. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium Analysis Run 4/15/2024 12:32 PM

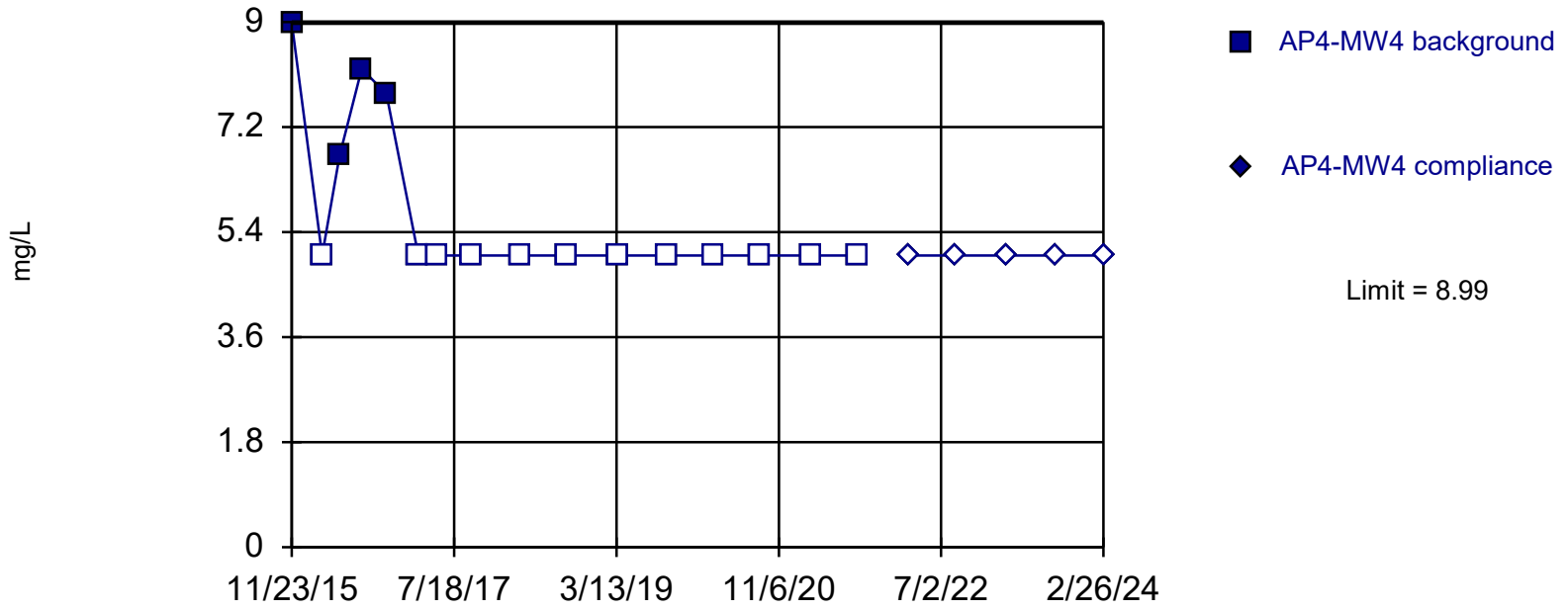
Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 16 background values. 75% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

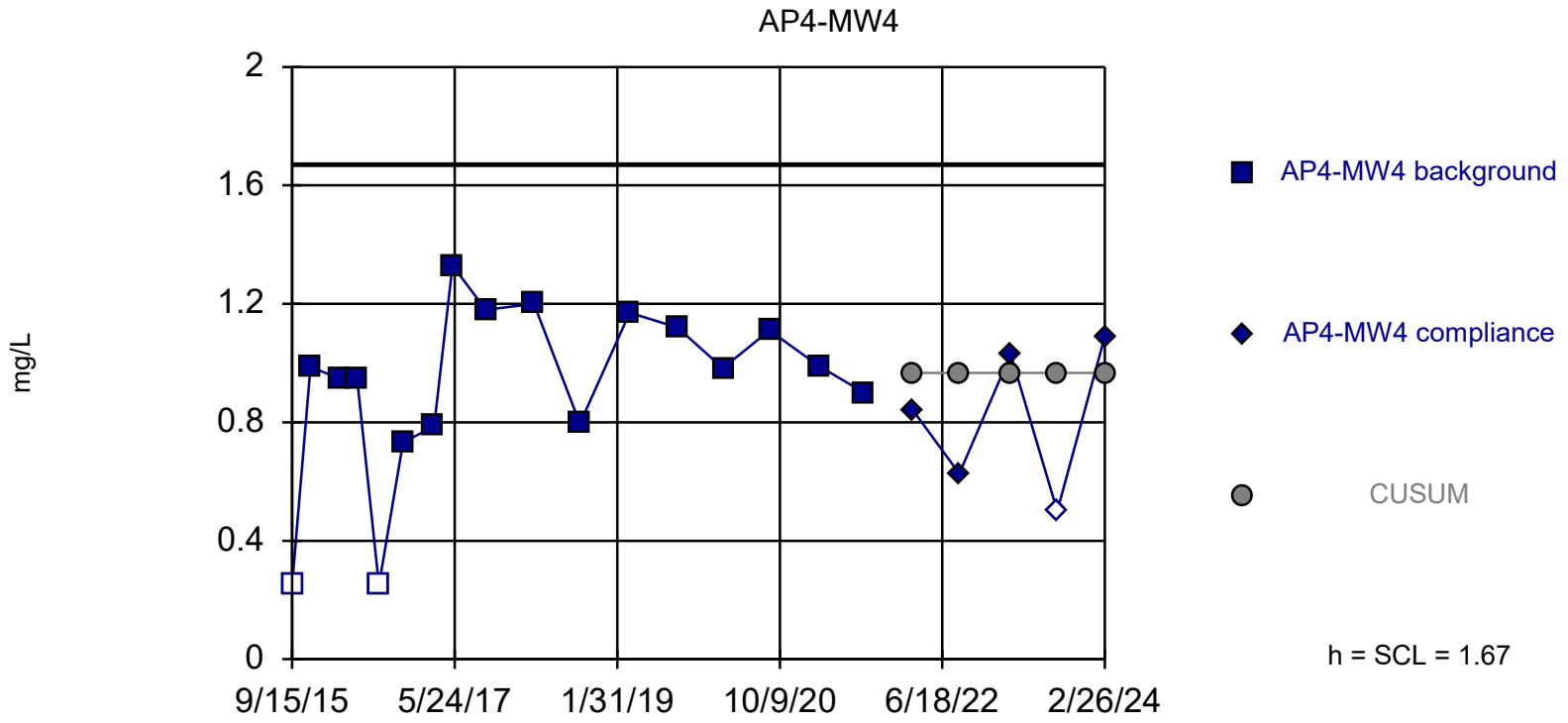
Constituent: Chloride Analysis Run 4/15/2024 12:33 PM

Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931

Hollow symbols indicate censored values.

Control Chart

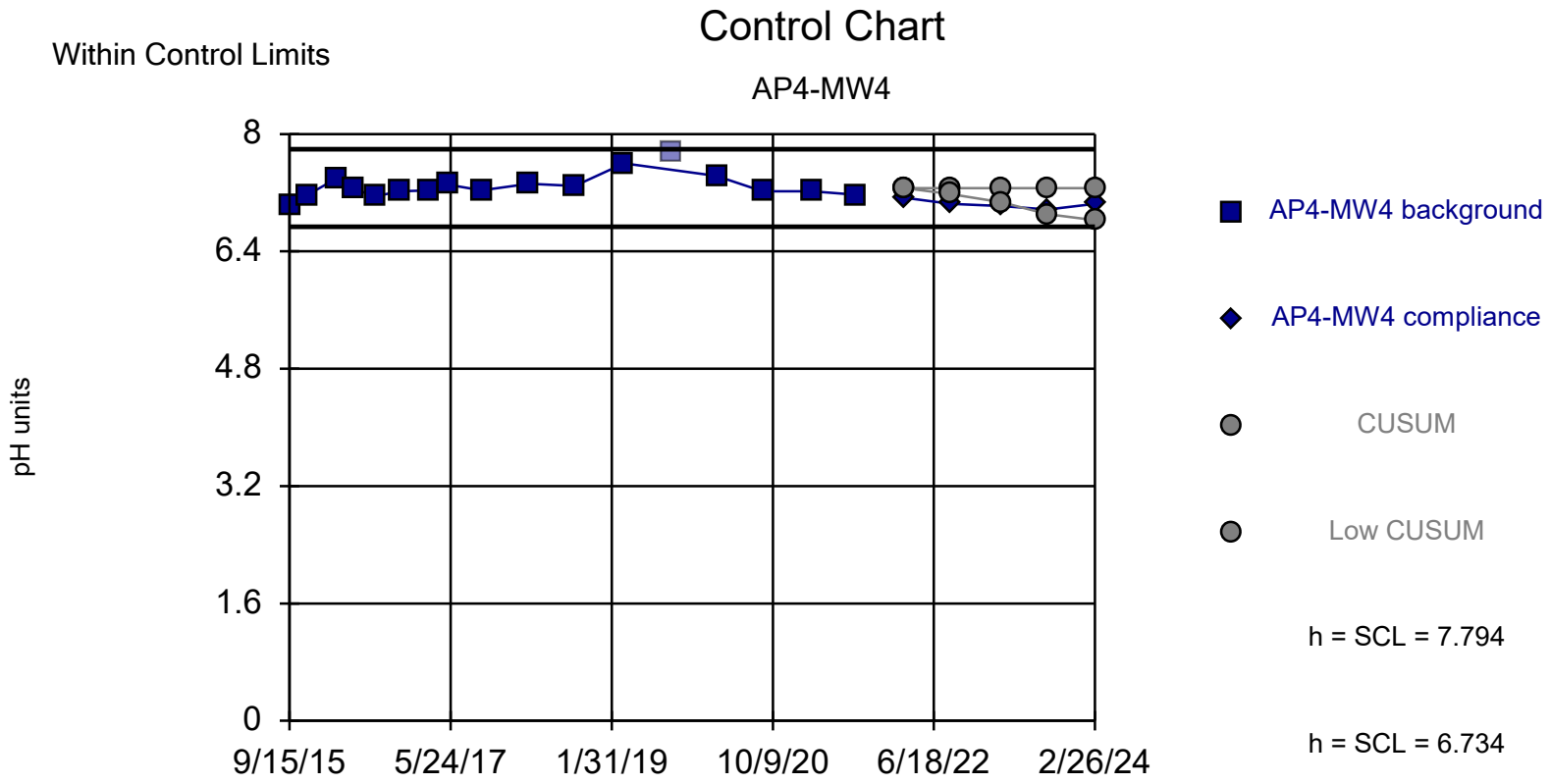
Within Control Limits



Background Data Summary (based on square transformation): Mean=0.9349, Std. Dev.=0.4633, n=17, 11.76% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9598, critical = 0.892. Report alpha = 0.002092. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Fluoride Analysis Run 4/15/2024 1:51 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

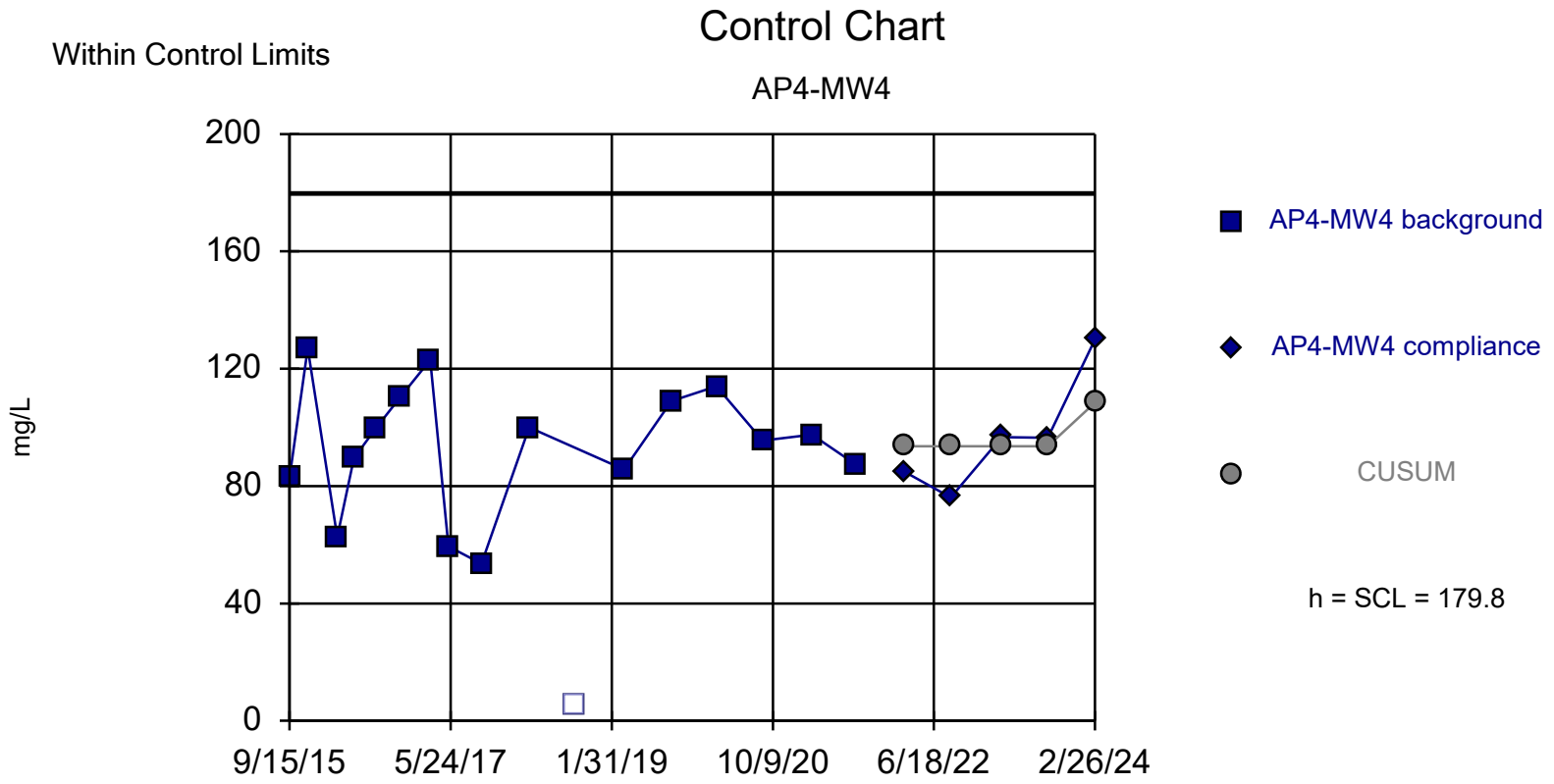


Background Data Summary: Mean=7.264, Std. Dev.=0.1325, n=16. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9275, critical = 0.887. Report alpha = 0.00226. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 4/16/2024 11:49 AM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

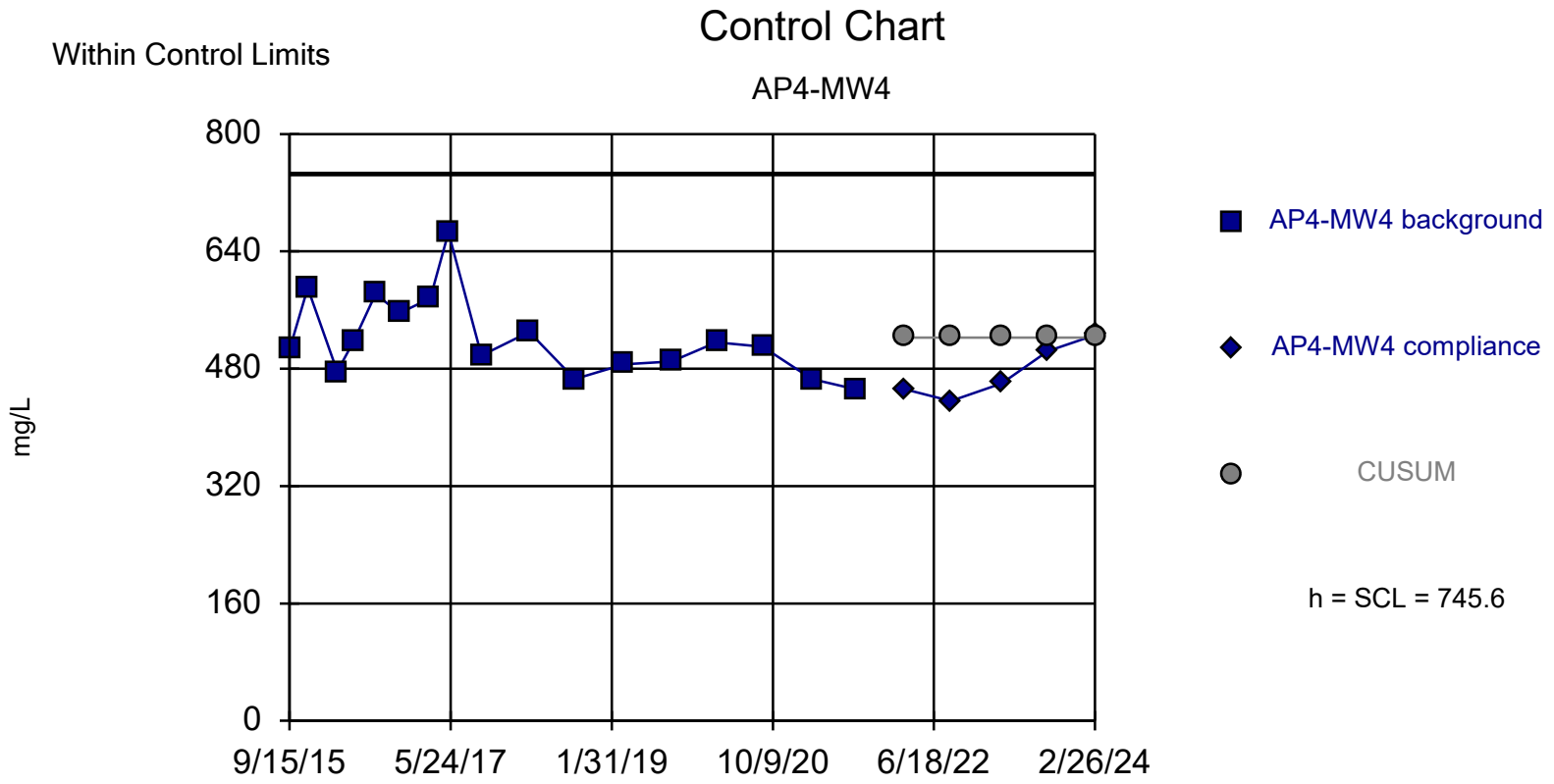
Hollow symbols indicate censored values.



Background Data Summary: Mean=93.53, Std. Dev.=21.56, n=16. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9551, critical = 0.887. Report alpha = 0.00244. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate Analysis Run 4/16/2024 8:07 AM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=522.6, Std. Dev.=55.75, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9137, critical = 0.892. Report alpha = 0.002166. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Total Dissolved Solids Analysis Run 4/15/2024 1:54 PM

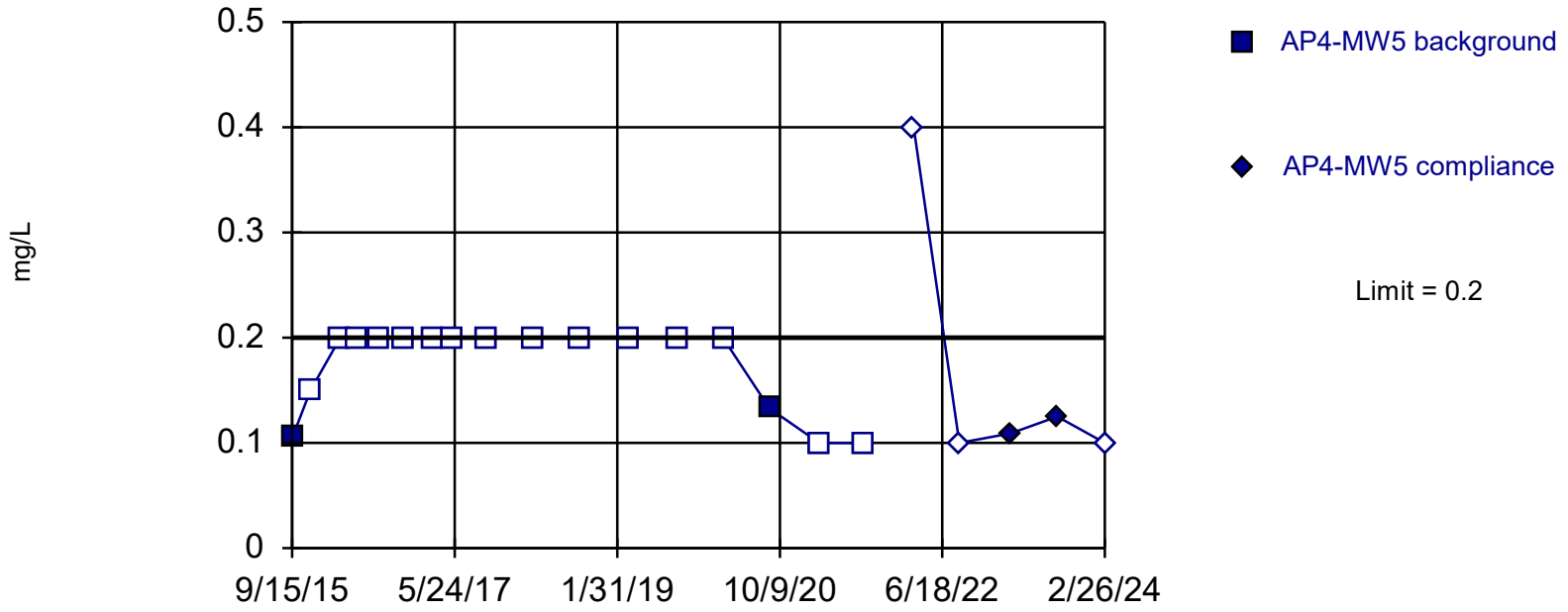
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

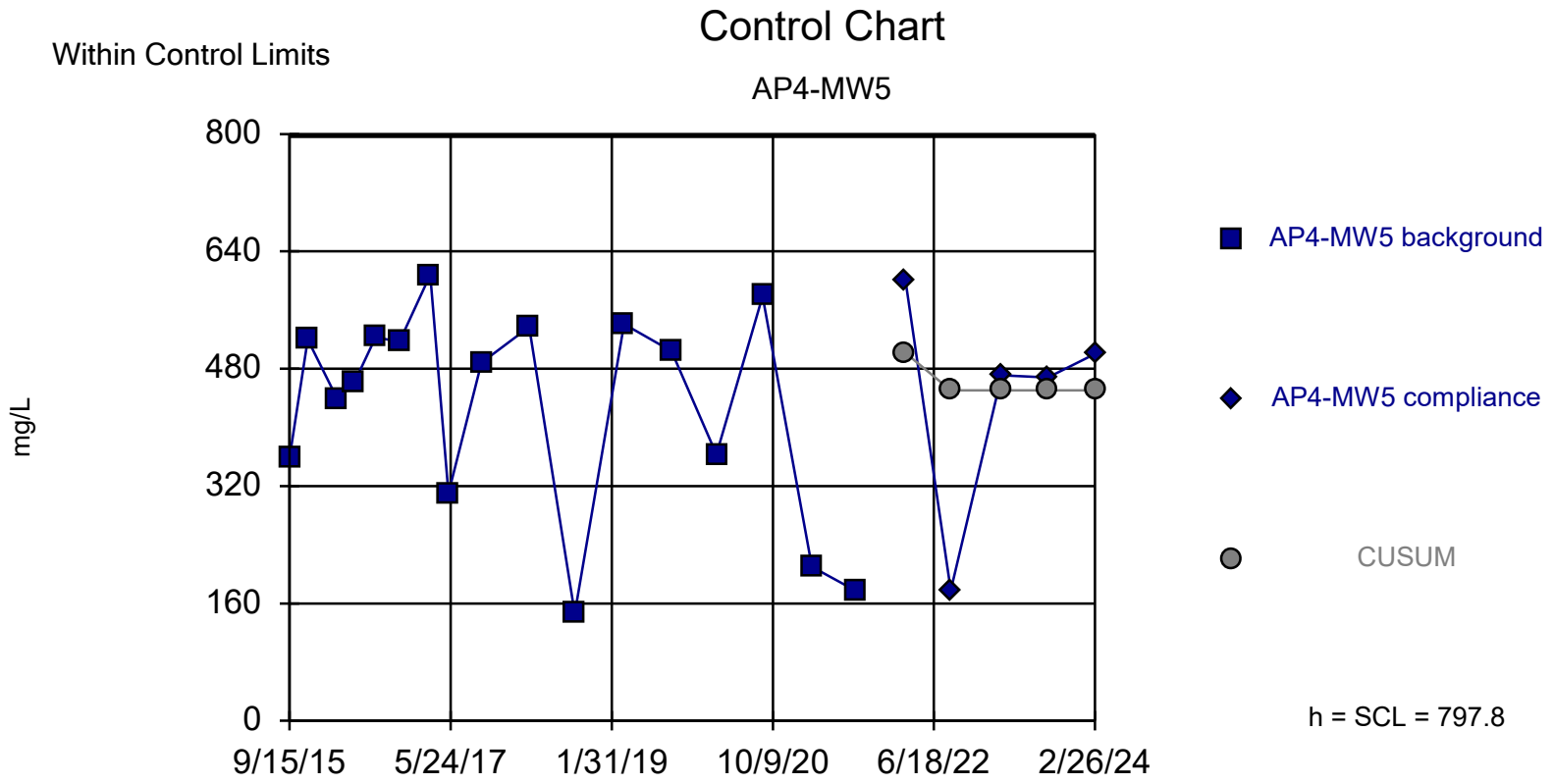
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 88.24% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 4/15/2024 12:43 PM

Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931

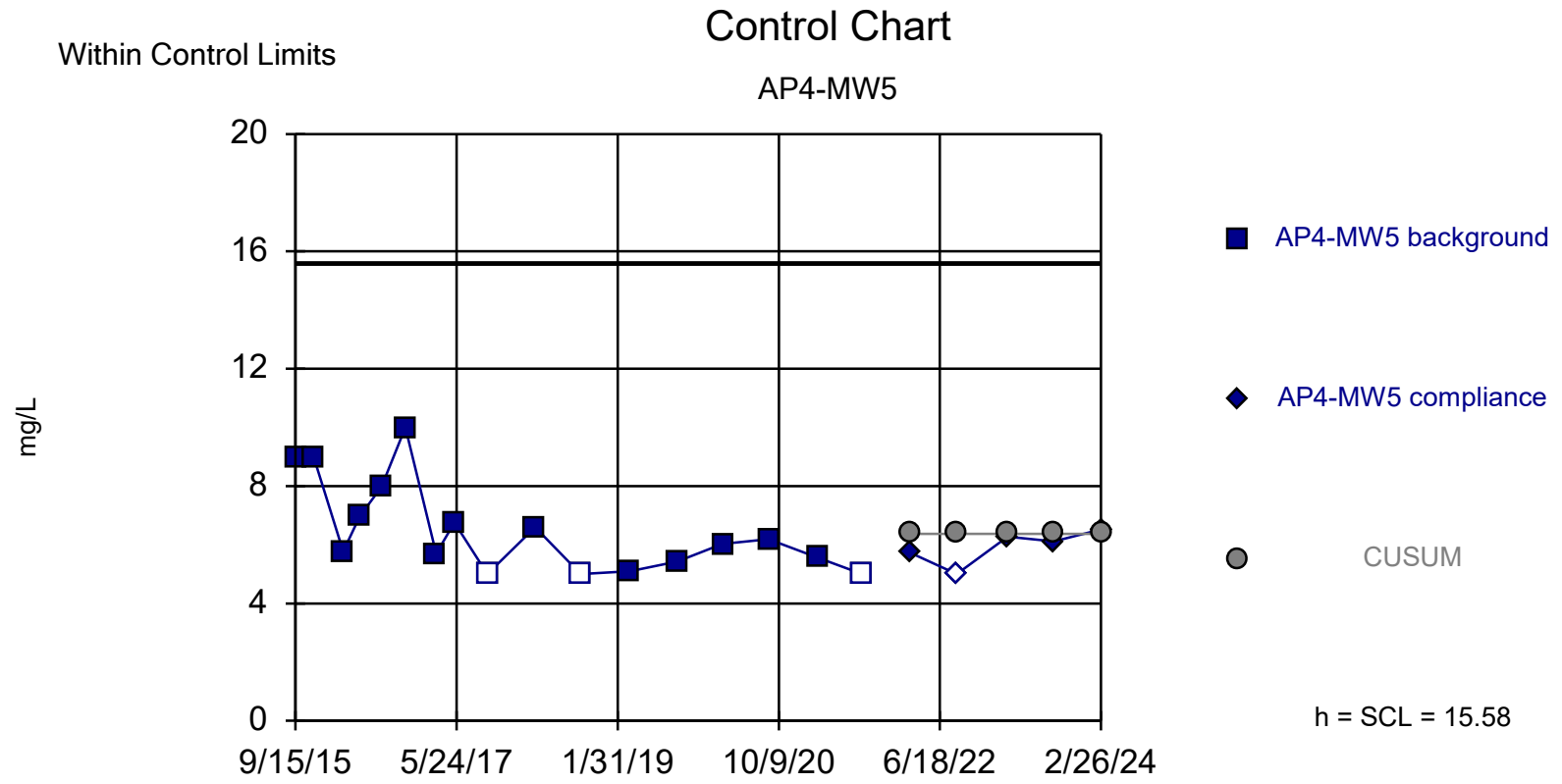


Background Data Summary (based on square transformation): Mean=202731, Std. Dev.=108424, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9305, critical = 0.892. Report alpha = 0.002046. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium Analysis Run 4/15/2024 12:44 PM

Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931

Hollow symbols indicate censored values.



Background Data Summary (based on natural log transformation): Mean=1.852, Std. Dev.=0.2235, n=17, 17.65% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8976, critical = 0.892. Report alpha = 0.002172. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Chloride Analysis Run 4/15/2024 3:25 PM

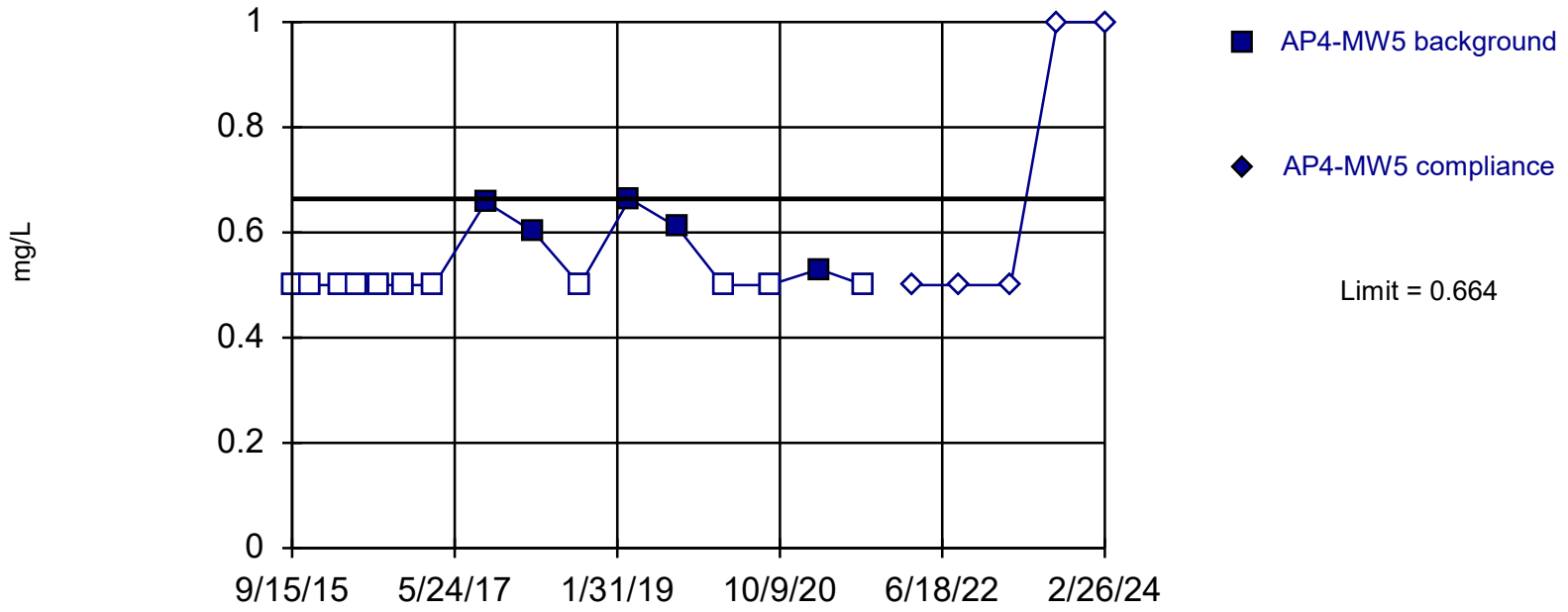
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

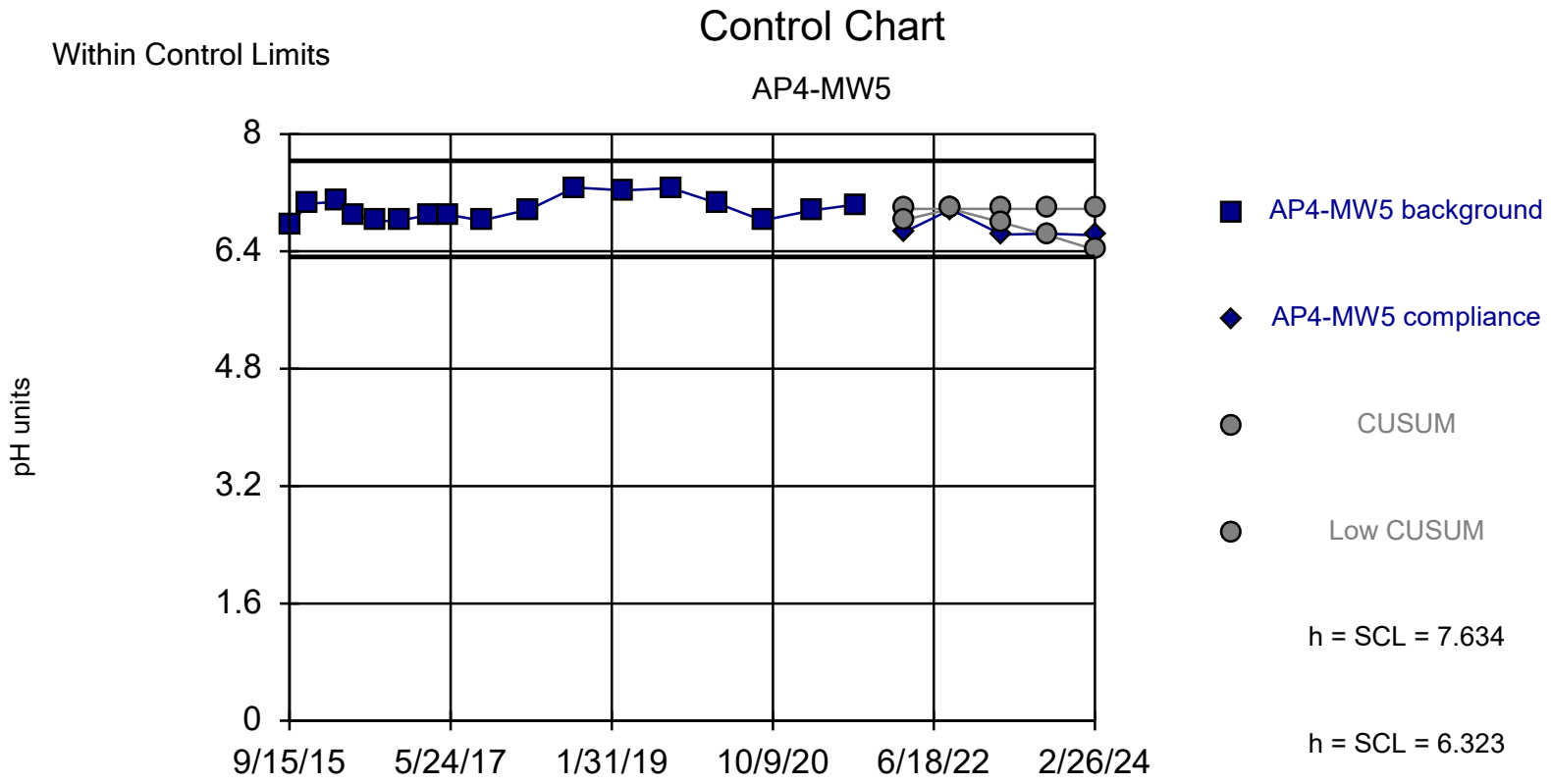
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 16 background values. 68.75% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Fluoride Analysis Run 4/15/2024 12:47 PM

Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931



Background Data Summary: Mean=6.978, Std. Dev.=0.1639, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9188, critical = 0.892. Report alpha = 0.00205. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

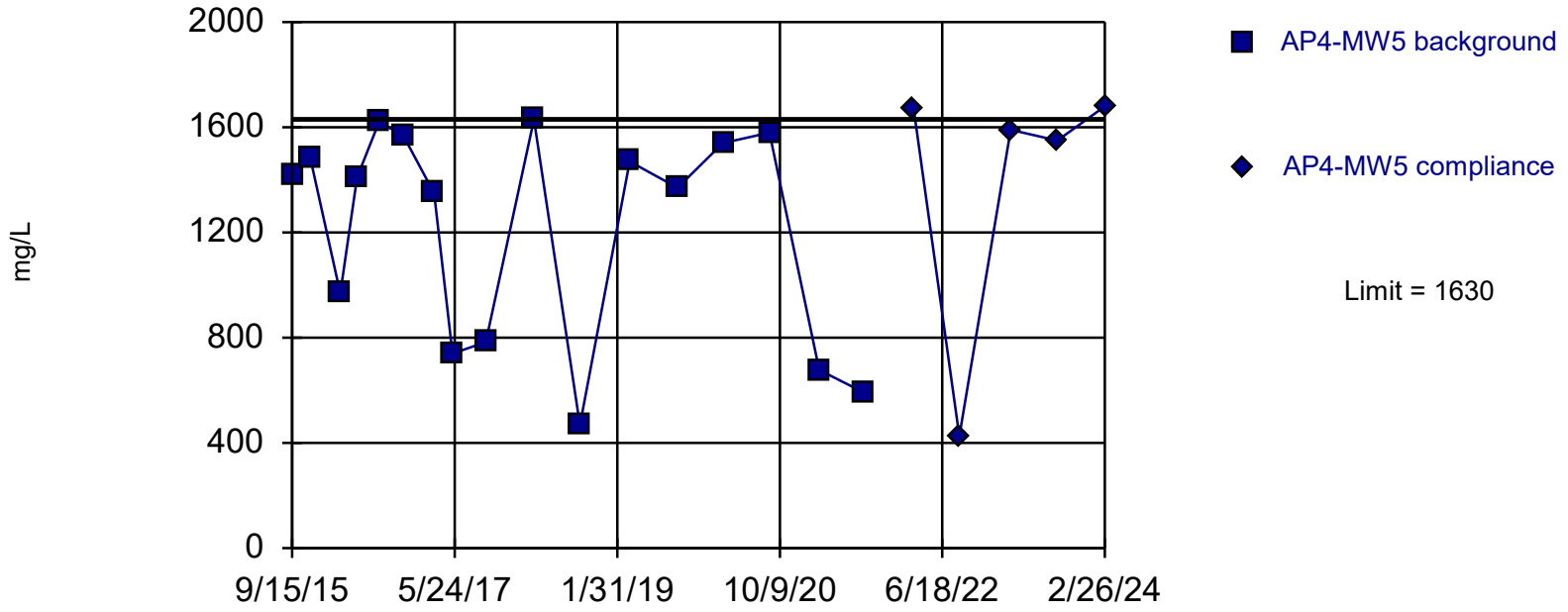
Constituent: pH, field measured Analysis Run 4/16/2024 11:52 AM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Exceeds Limit

Prediction Limit

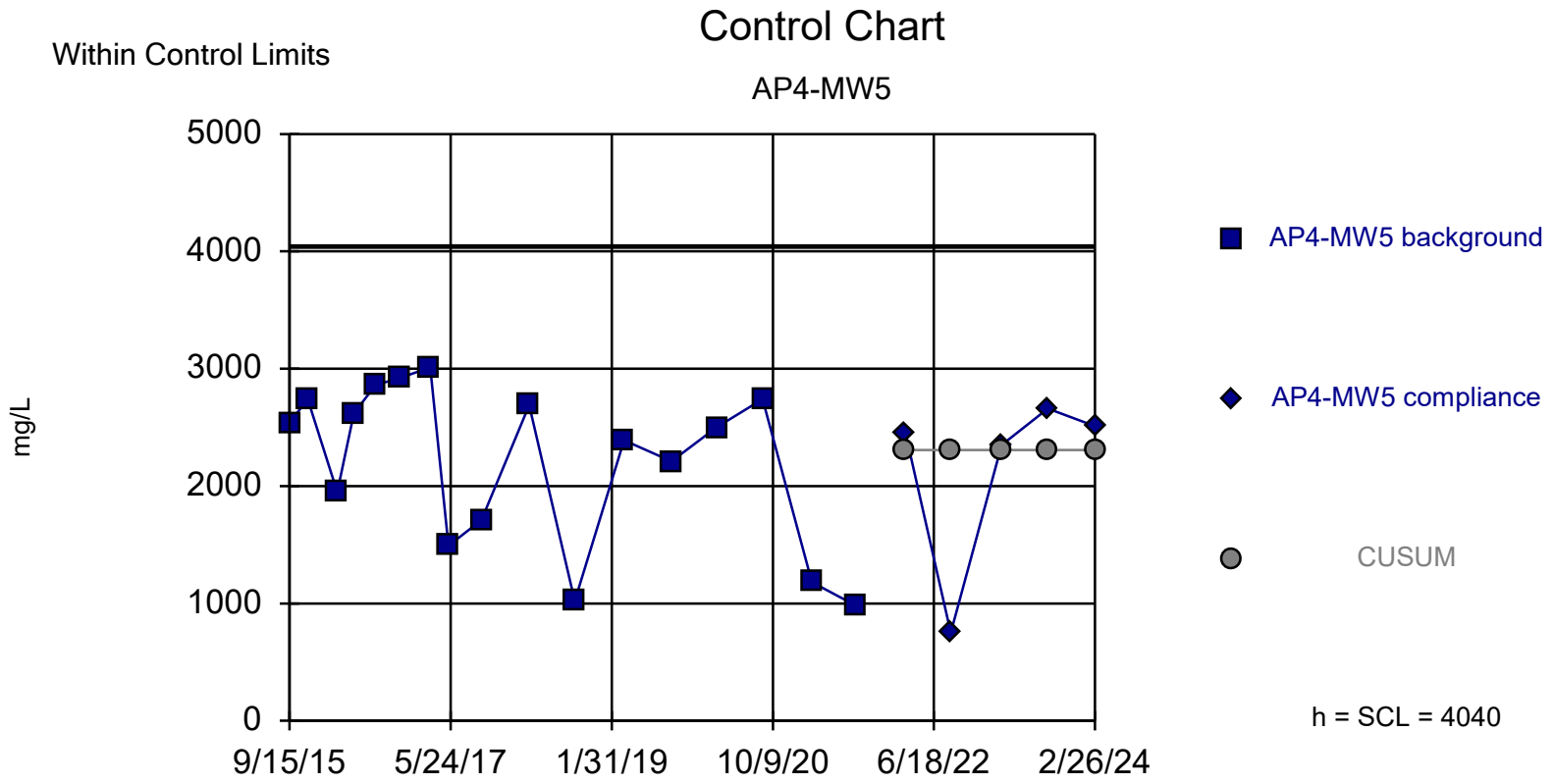
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 17 background values. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Sulfate Analysis Run 4/15/2024 3:43 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary (based on square transformation): Mean=5324676, Std. Dev.=2749578, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9112, critical = 0.892. Report alpha = 0.002172. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Total Dissolved Solids Analysis Run 4/15/2024 3:45 PM

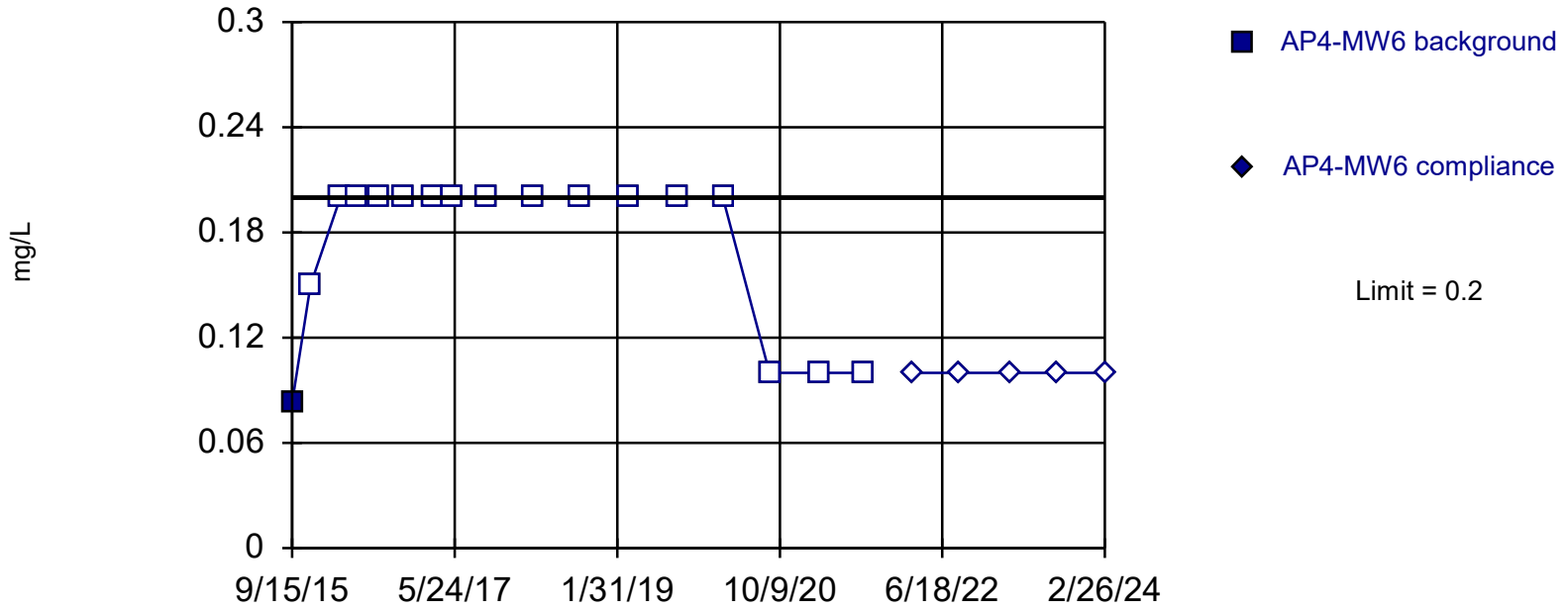
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

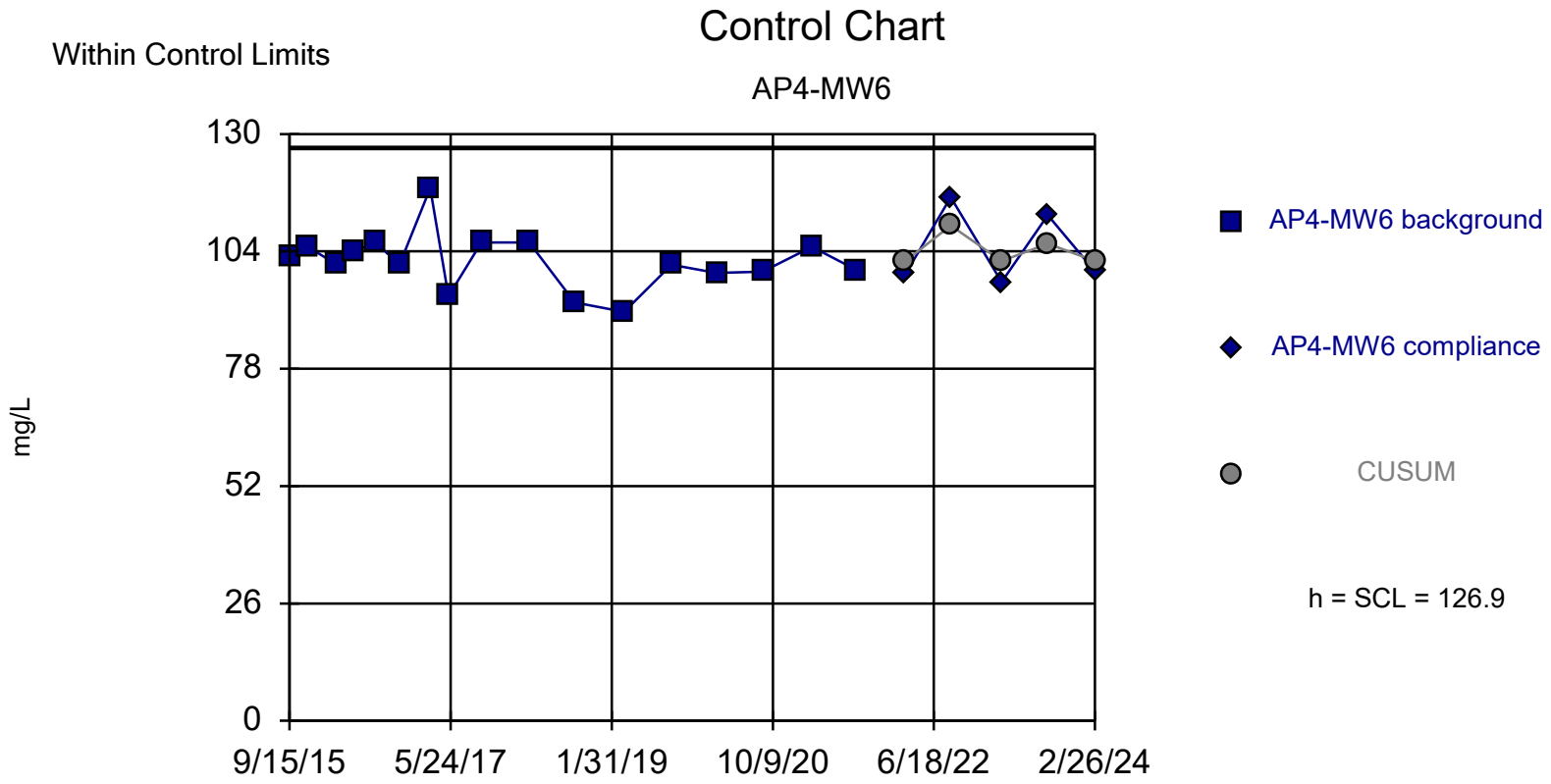
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 4/15/2024 12:49 PM

Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931



Background Data Summary: Mean=101.9, Std. Dev.=6.261, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.921, critical = 0.892. Report alpha = 0.002046. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium Analysis Run 4/15/2024 12:50 PM

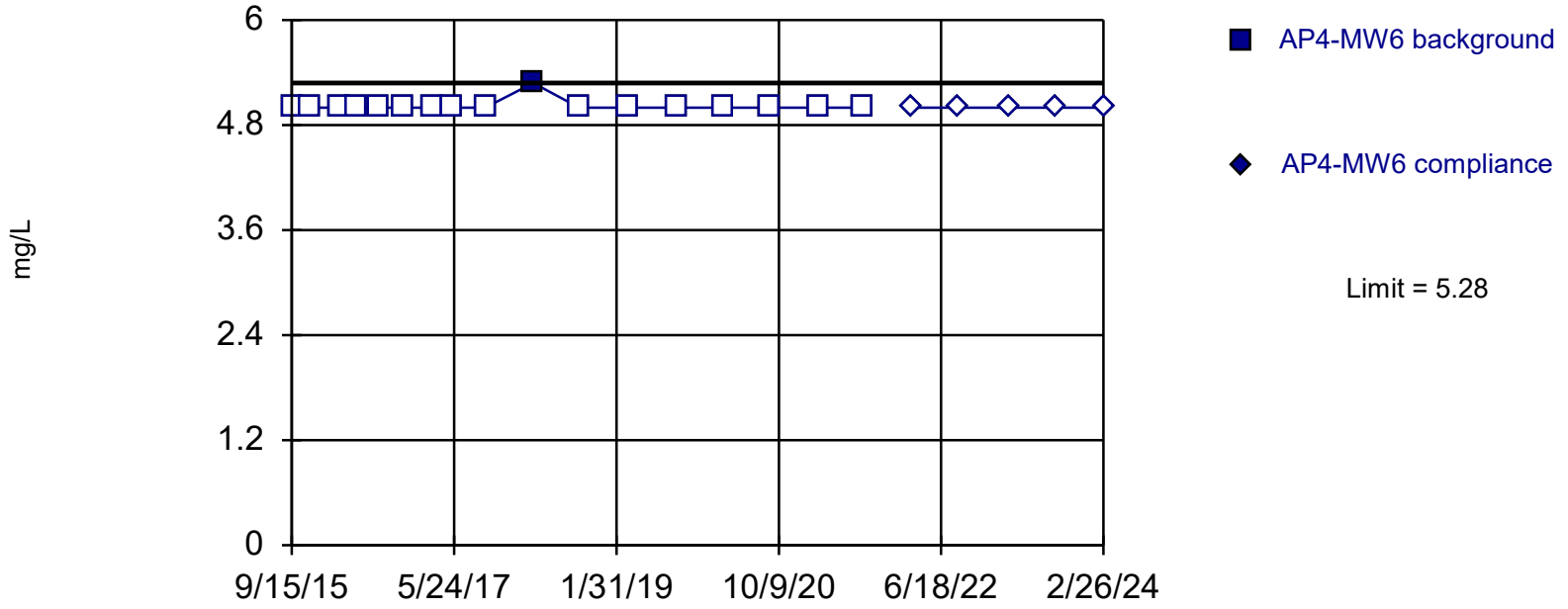
Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

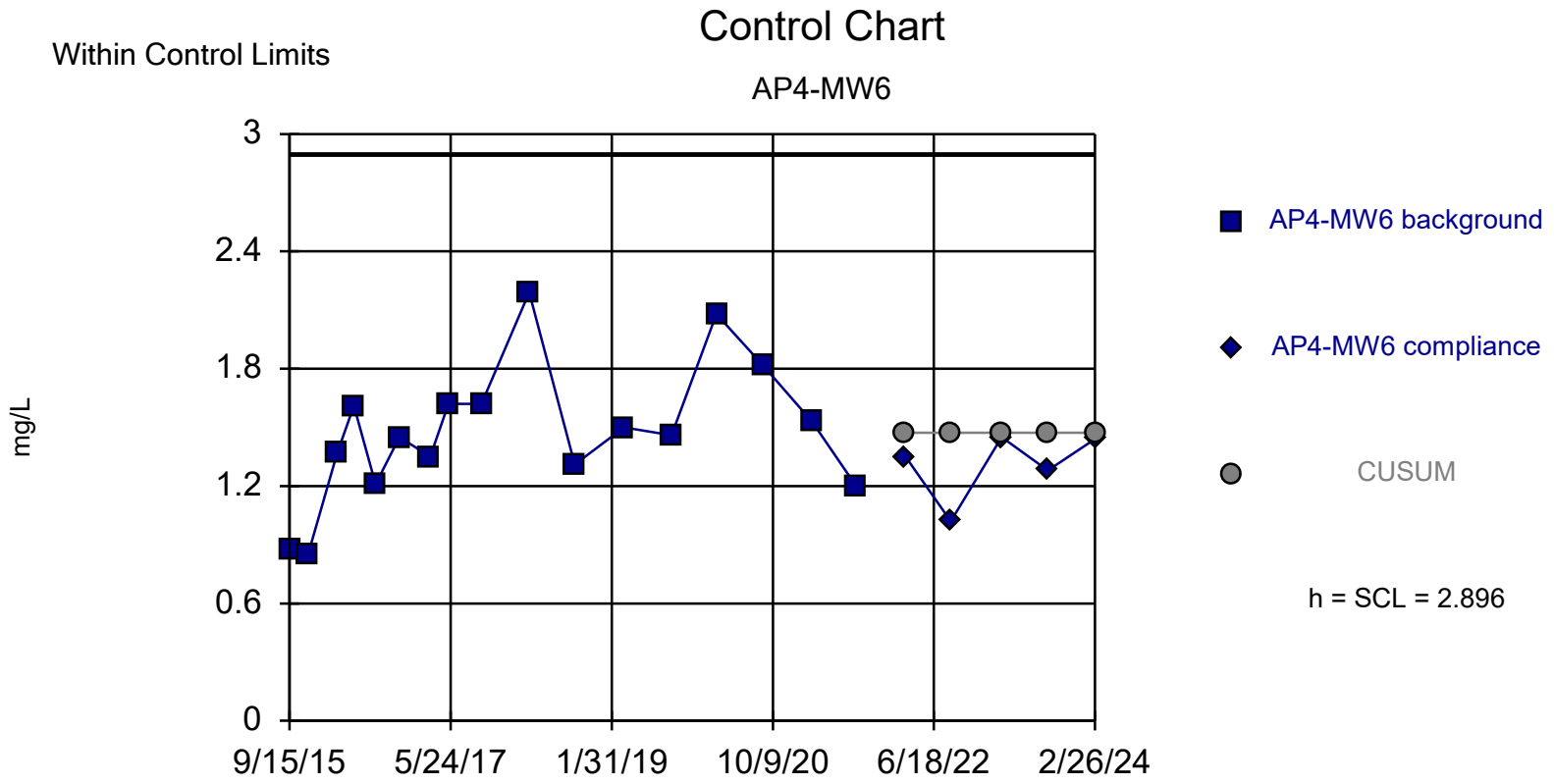
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 4/15/2024 3:49 PM

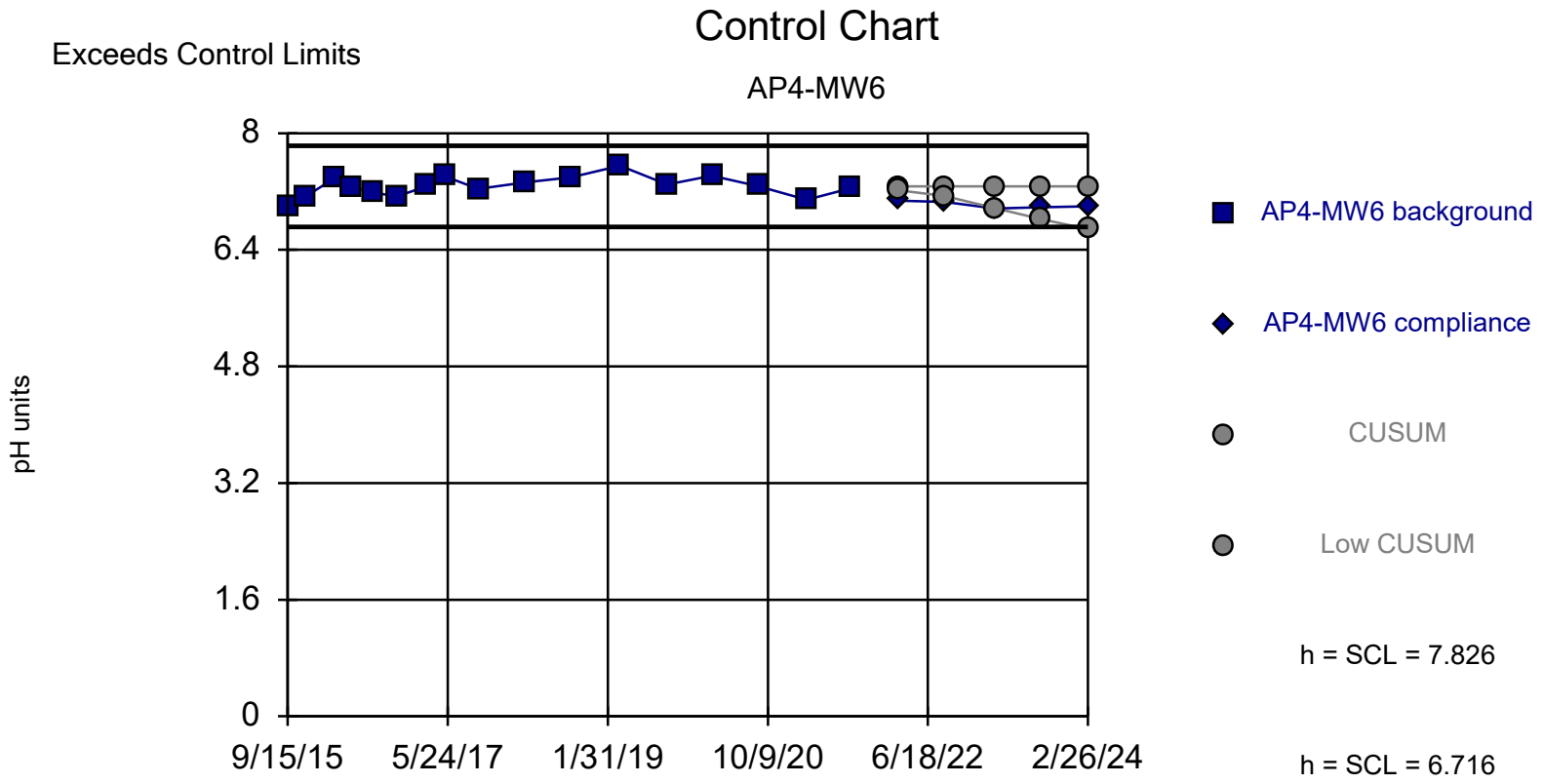
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=1.473, Std. Dev.=0.3557, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9584, critical = 0.892. Report alpha = 0.002046. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Fluoride Analysis Run 4/15/2024 12:53 PM

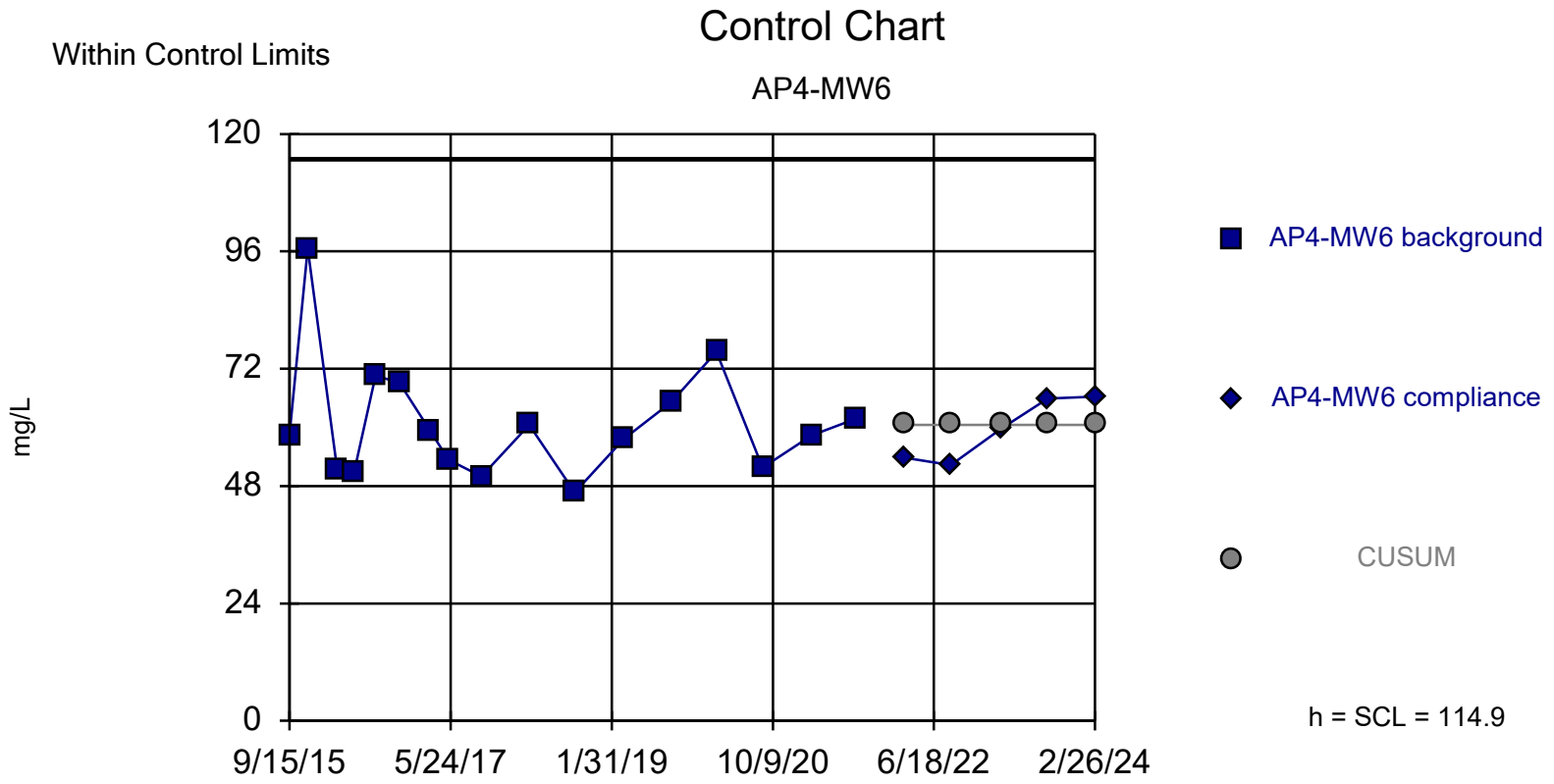
Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931



Background Data Summary: Mean=7.271, Std. Dev.=0.1388, n=17. Data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.984, critical = 0.892. Report alpha = 0.00205. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 4/16/2024 12:06 PM

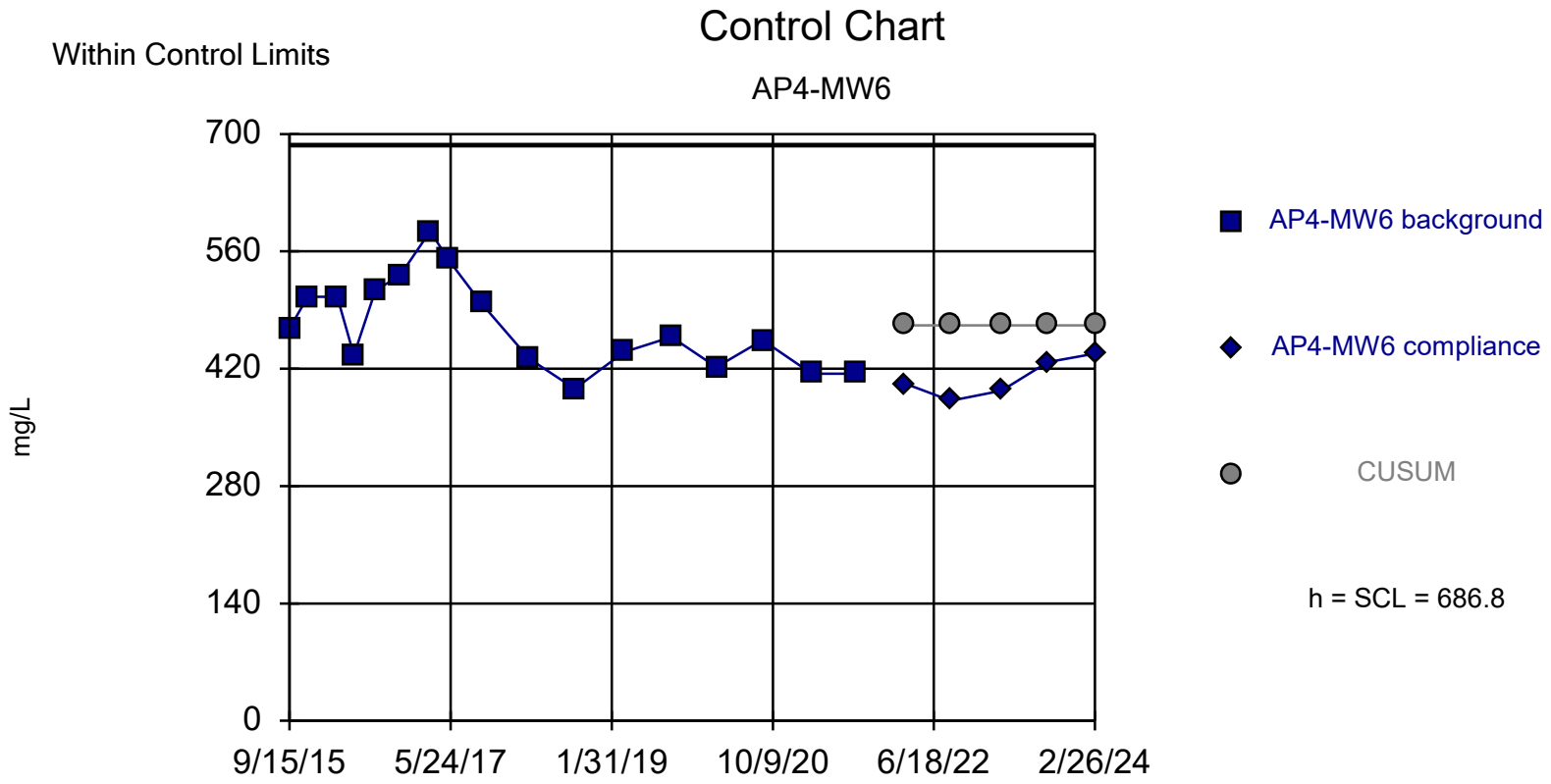
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary (based on square root transformation): Mean=7.778, Std. Dev.=0.7349, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8957, critical = 0.892. Report alpha = 0.002172. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate Analysis Run 4/15/2024 3:52 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=471.9, Std. Dev.=53.74, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9491, critical = 0.892. Report alpha = 0.002172. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Total Dissolved Solids Analysis Run 4/15/2024 3:54 PM

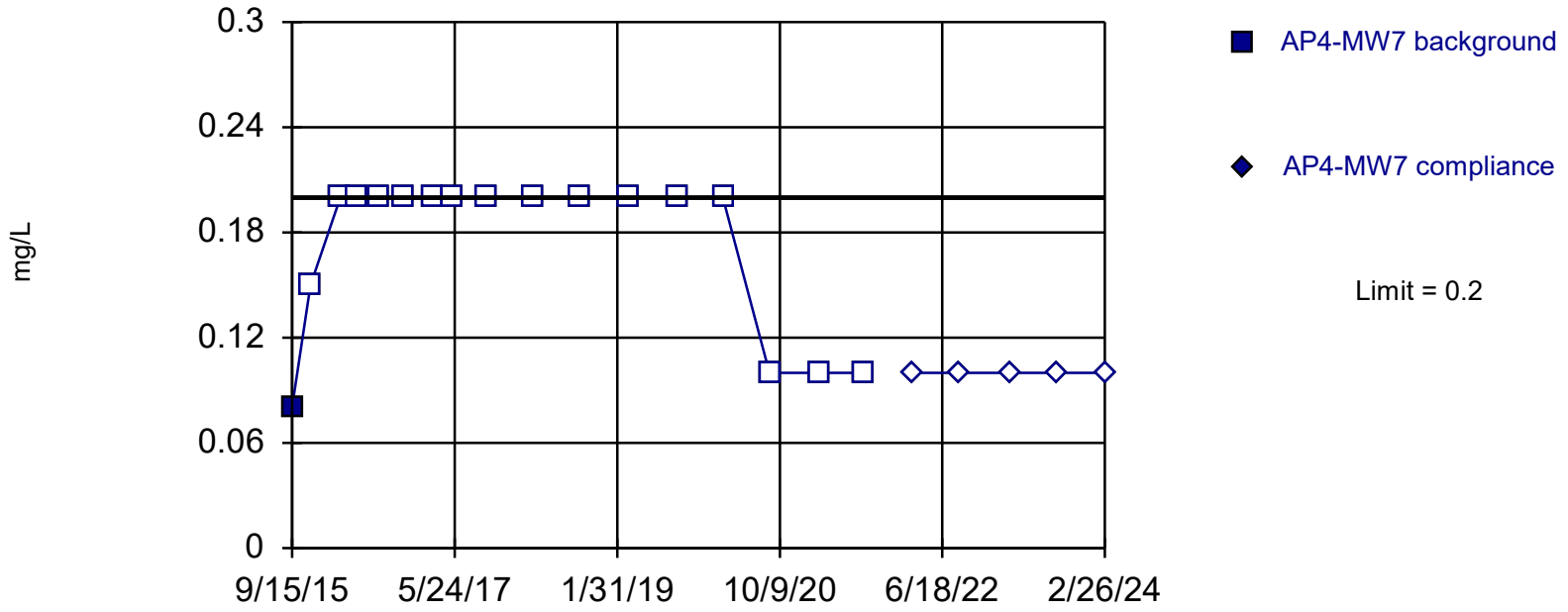
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

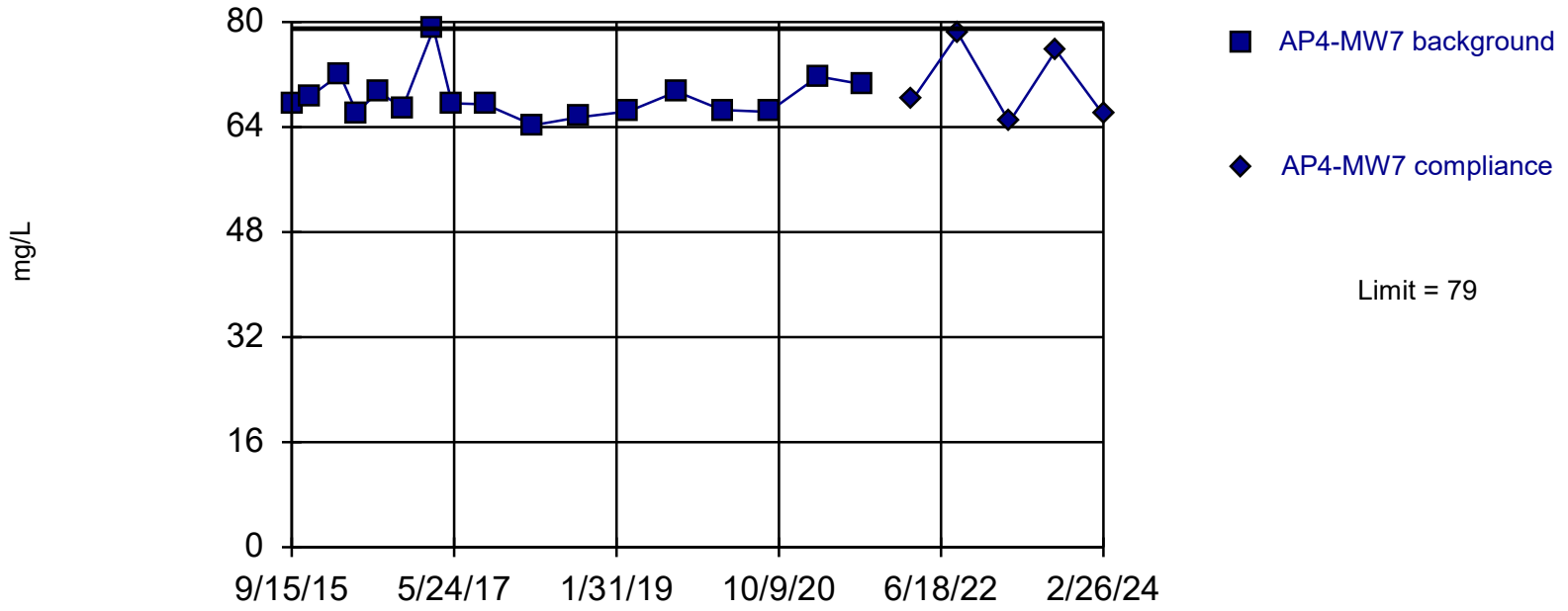
Constituent: Boron Analysis Run 4/15/2024 12:58 PM

Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931

Within Limit

Prediction Limit

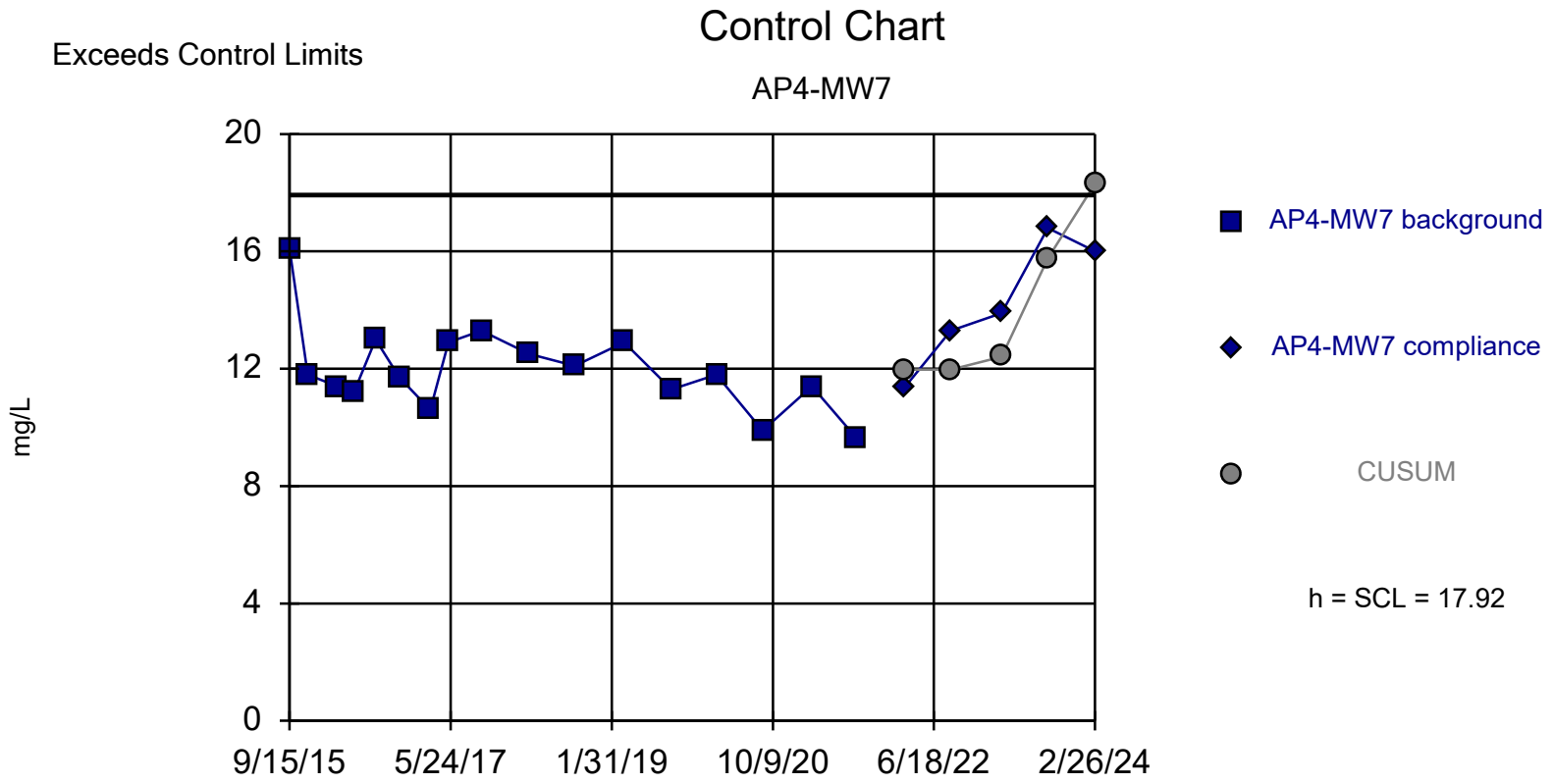
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 17 background values. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Calcium Analysis Run 4/15/2024 12:59 PM

Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931



Background Data Summary: Mean=11.97, Std. Dev.=1.486, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.916, critical = 0.892. Report alpha = 0.002172. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Chloride Analysis Run 4/15/2024 3:57 PM

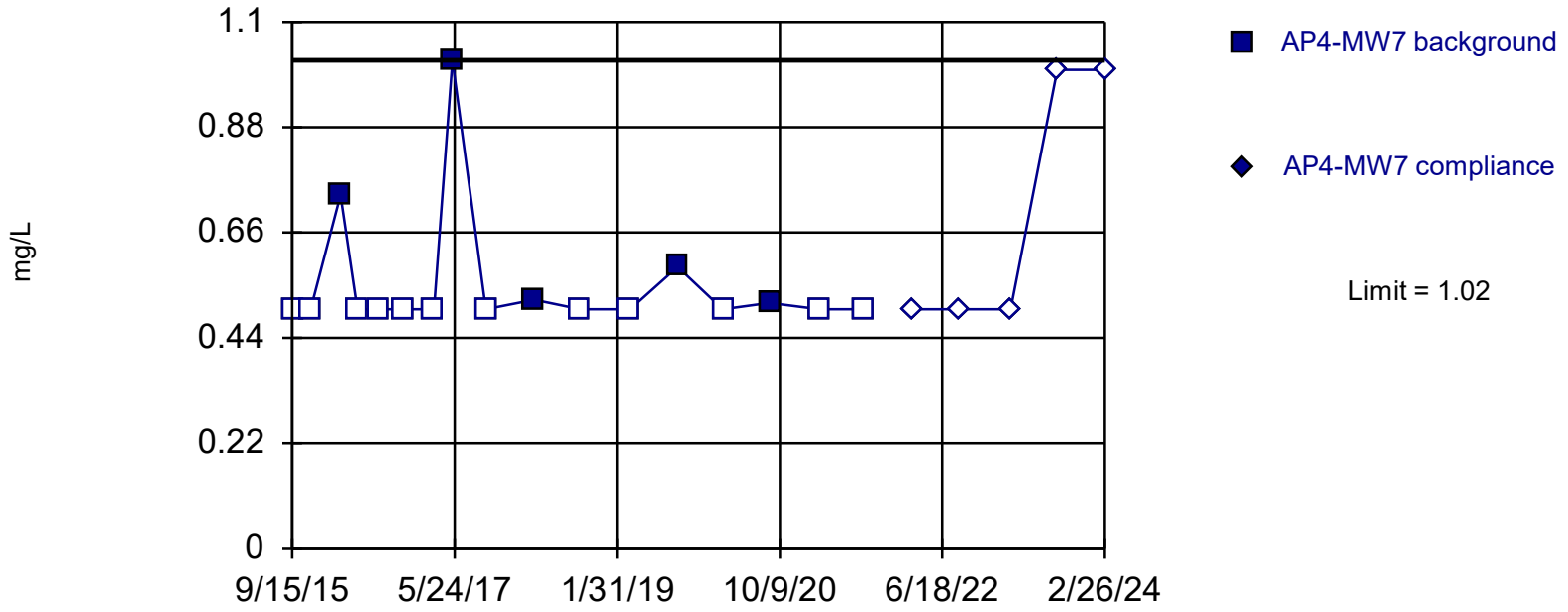
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

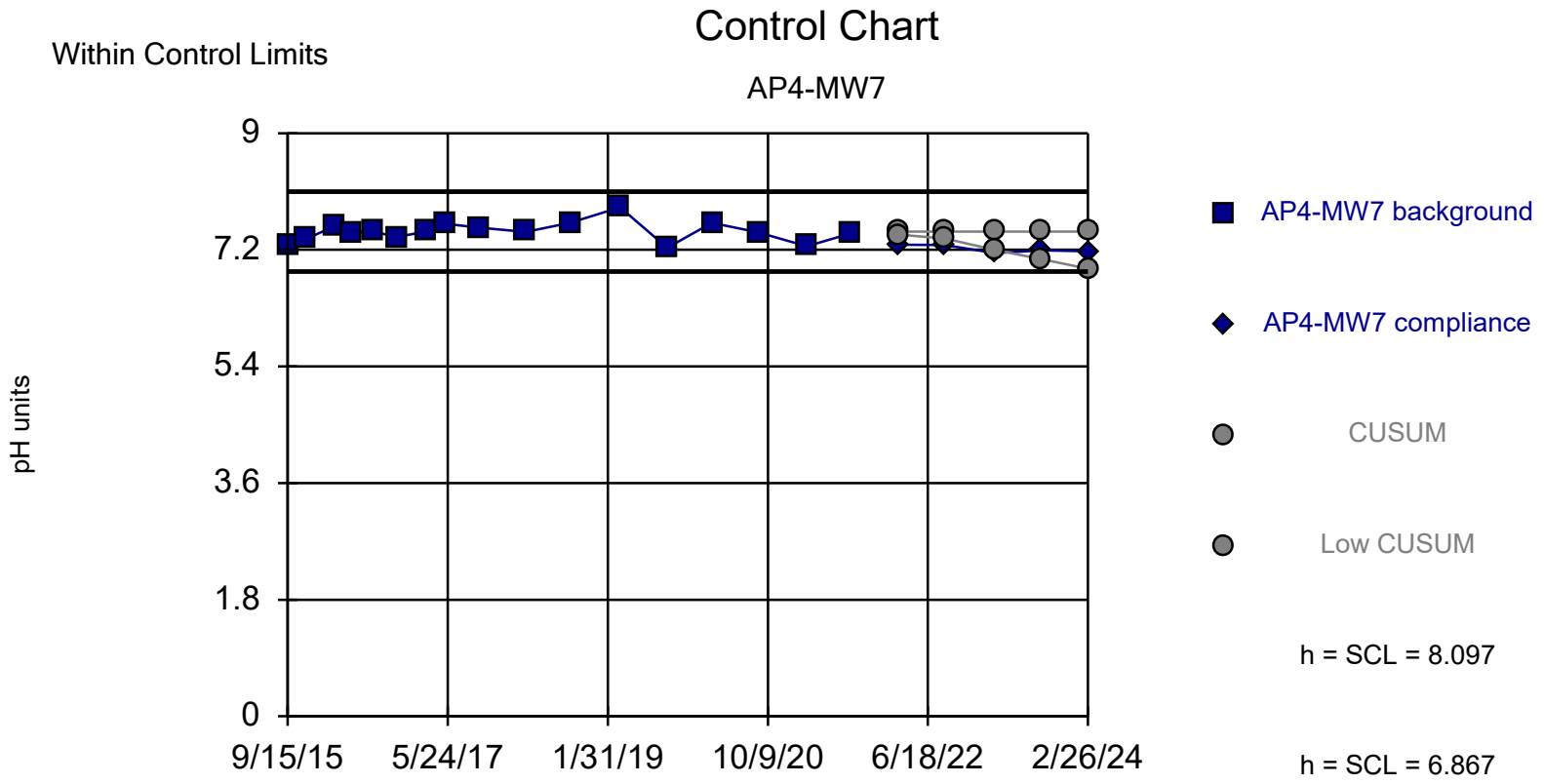
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 70.59% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Fluoride Analysis Run 4/15/2024 1:00 PM

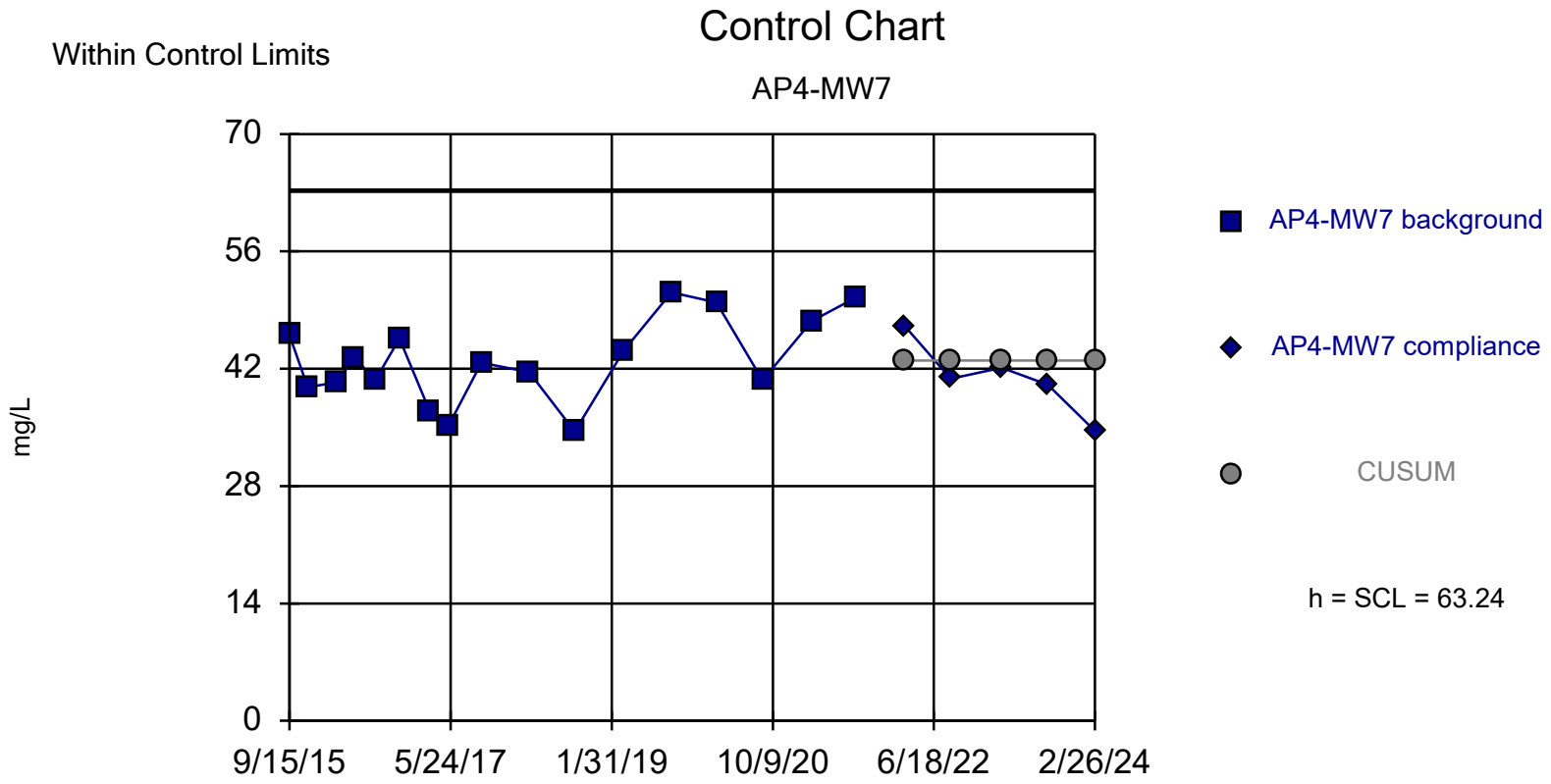
Sheldon Station Client: NPPD Data: 15059_Analytical Results II_20240415174931



Background Data Summary: Mean=7.482, Std. Dev.=0.1538, n=17. Data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9485, critical = 0.892. Report alpha = 0.00205. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 4/16/2024 12:02 PM

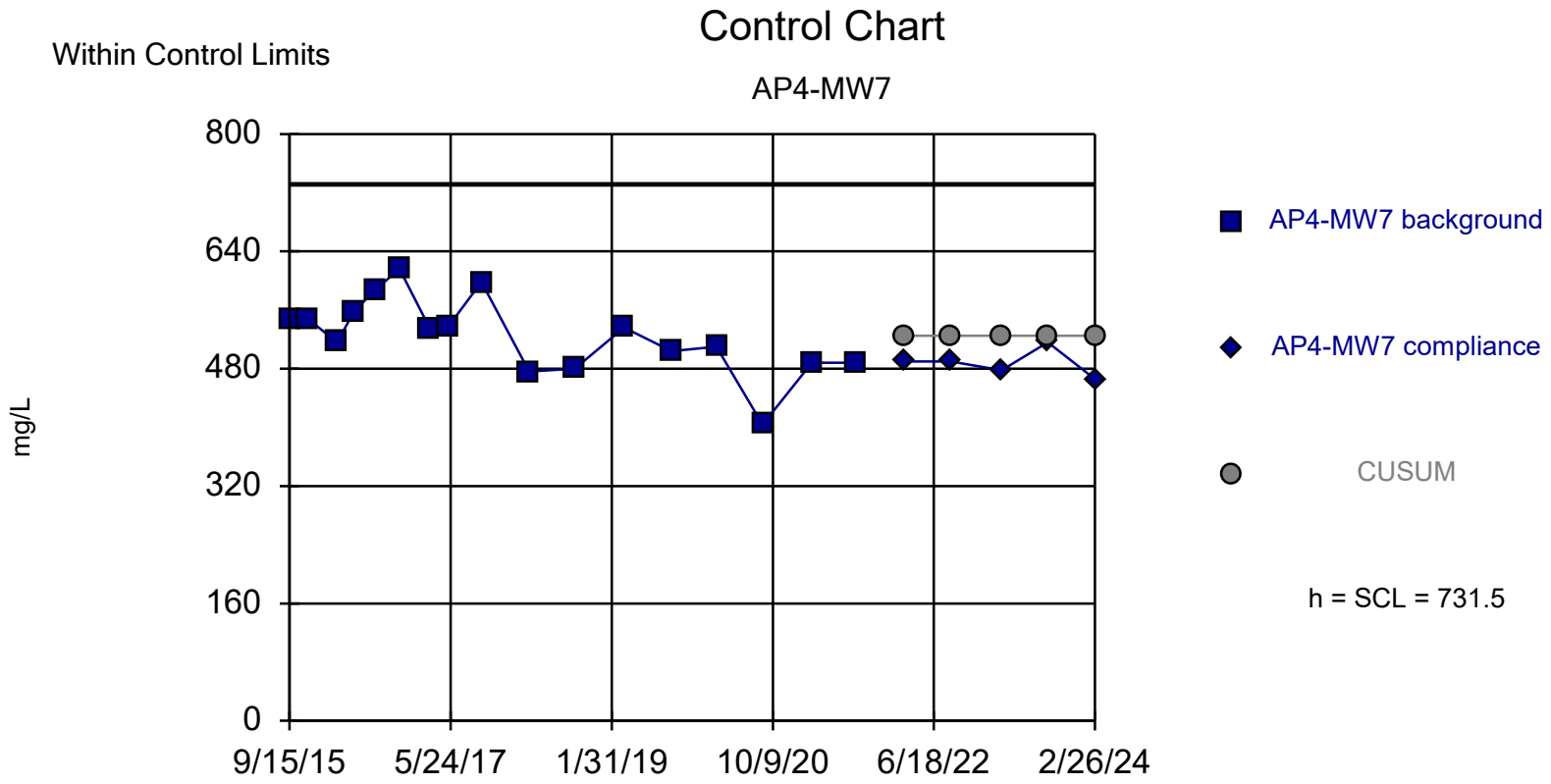
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=42.98, Std. Dev.=5.065, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9624, critical = 0.892. Report alpha = 0.002172. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate Analysis Run 4/15/2024 4:02 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=525.2, Std. Dev.=51.58, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9697, critical = 0.892. Report alpha = 0.002172. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Total Dissolved Solids Analysis Run 4/15/2024 4:04 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

wsp.com

APPENDIX B

Q3 2024 Semi-annual Report

REPORT

Third Quarter 2024 Semi-annual Groundwater Report

Nebraska Public Power District – Sheldon Station

Submitted to:

Nebraska Department of Environment and Energy

Compliance Sector Supervisor, Land Management Division
P.O. Box 98922, Lincoln, Nebraska, USA 68509-8922

Submitted by:

Nebraska Public Power District

Sheldon Station, 4500 West Pella Road
Hallam, Nebraska 68368

Prepared by:

WSP USA Inc.

7245 W. Alaska Drive, Ste. 200 Lakewood, CO 80226

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GLA21457062.5798-002-RPT-0

October 25, 2024

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TABLES

FIGURES

APPENDICES

1.0 INTRODUCTION

WSP USA Inc. (WSP) prepared this report describing the second 2024 semi-annual groundwater sampling event 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; GAUSA 2022a), as approved by the Nebraska Department of Environment and Energy (NDEE) and the federal Coal Combustion Residuals (CCR) Rule's sections on groundwater monitoring and corrective action, 40 Code of Federal Regulations (CFR) 257.90-98 and applicable revisions to the Rule.

1.1 Facility Information

Sheldon Station is owned and operated by NPPD and can generate 225 megawatts (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's (USEPA) CCR Rule established specific requirements for reporting of groundwater monitoring and corrective action at CCR facilities in 40 CFR 257.90 to 40 CFR 257.98 (USEPA 2015). The permitted SAP for AP4 was developed to comply with both the federal CCR regulations and NDEE requirements (GAUSA 2022a). Under the NDEE reporting requirements, 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 in Figure 1. The two upgradient monitoring wells are AP4-MW1 and AP4-MW2, which are marked by (U) throughout the text. The five downgradient monitoring wells are AP4-MW3, AP4-MW4, AP4-MW5, AP4-MW6, and AP4-MW7.

2.1 Completed Key Actions in Third Quarter 2024

A detection monitoring sampling event was completed during the third quarter (Q3) of 2024.

2.2 Installation and Decommissioning of Monitoring Wells

No monitoring wells were installed or decommissioned at Sheldon Station during the Q3 of 2024.

2.3 Problems and Resolutions

During the Q3 2024 monitoring event, analysis by Method 9056A required dilution due to the sample matrix, resulting in non-detects with elevated reporting limits for several well-parameter pairs. Results are consistent with past results and required dilutions. The following well-parameter pairs were reported as non-detects with elevated reporting limits:

- chloride, 5x dilution factor, elevated reporting limit equals 5.0 milligrams per liter (mg/L): AP4-MW3, AP4-MW4, and AP4-MW6
- fluoride, 5x dilution factor, elevated reporting limit equals 1.00 mg/L: AP4-MW1, AP4-MW2, AP4-MW5, and AP4-MW7

During review of the Q3 2024 analytical report, a request was made to Eurofins as the contracted analytical laboratory to confirm the reported results for calcium, sulfate, and total dissolved solids, due to differences in the results of the Q3 2024 event when compared to the Q1 2024 event. Eurofins confirmed that no issues were identified with the analysis or quality control associated with the results. Additionally, Eurofins noted that sulfate at AP4-MW5 had been analyzed twice using two different dilution factors, with the results of the two separate analyses found to be internally consistent. While the Q3 2024 results for calcium, sulfate, and total dissolved solids at AP4-MW5 vary from the Q1 2024 results, they are consistent with past results at the well. No changes were made to the analytical report as a result of the sample confirmation.

No other problems were encountered as part of the field and laboratory sampling in Q3 of 2024.

2.4 Proposed Key Activities for 2025

Detection monitoring sampling events are scheduled to occur in Q1 and Q3 of 2025 and will consist of sampling, data review, and comparative statistics. Following each detection monitoring sampling event, a semi-annual report will be provided to NDEE.

3.0 GROUNDWATER MONITORING ANALYTICAL PROGRAM STATUS

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

3.1 Samples Collected

NPPD 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 3, 2024. Specific dates for each sample collected as part of the program are provided in Table 1 through Table 7. The analytical report for the September 3, 2024, samples is included as Appendix A and associated field notes are included as Appendix B.

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 September 2024 (Q3 2024) detection monitoring sampling event are shown in Figure 1. Figure 2 shows groundwater elevations over time at the site.

The groundwater flow rate across Ash Landfill 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 September 2024 was estimated to be 7 x 10^{-4} ft/day, based on the calculated hydraulic gradient for September 2024 of 0.028 ft/ft.

3.2 Monitoring Data (Analytical Results)

Analytical results for the detection monitoring results for the September 2024 monitoring event are shown in Table 1 through Table 7. Time series of the parameters are included as Appendix C.

3.3 Comparative Statistical Analysis

Comparative statistical analysis was conducted using the previously approved results of the baseline update conducted prior to the Q1 2022 detection monitoring event (GAUSA 2022b) following guidance provided by the USEPA (2009). The results of the comparative statistical analysis are summarized below and 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 (GAI 2017a). Charts for the comparative statistical analysis are included as Appendix D.

3.3.1 Definitions

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

- **Statistically significant increase (SSI)**—defined as a result that exceeds the statistical limit established by the baseline statistical analysis, which has been verified by confirmatory re-sampling and analysis.
- **Elevated cumulative summation (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 changing and that analytical results may exceed the Shewhart-CUSUM limit in the future. In the case of two-tailed analysis for field pH, an elevated CUSUM can also occur below the lower Shewhart-CUSUM statistical limit.
- **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 re-sampling 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 exceed 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 exceedances (verified SSIs)**—interpreted as two consecutive samples exceeding the statistical limit (the original sample and the confirmatory re-sample, or two consecutive elevated CUSUMs, or a combination of a sample result and an elevated CUSUM in either order) for the same parameter at the same well.

3.3.2 Potential Exceedances

The following potential exceedances were identified for the Q3 2024 sampling event:

- AP4-MW3, field pH low elevated CUSUM
- AP4-MW4, field pH low elevated CUSUM
- AP4-MW7, field pH low elevated CUSUM

Confirmatory re-samples will be collected to determine whether the results are false-positives or verified SSIs.

3.3.3 False Positives

The following results that were identified as potential exceedances for the Q1 2024 sampling event were determined to be false positives following confirmatory re-sampling:

- AP4-MW5, sulfate
- AP4-MW7, chloride

Additionally, during review of the Q3 2024 statistics, an oversight was found in the tables for the Q1 2024 event where field pH at AP4-MW6 should have been identified as a potential exceedance with a low elevated CUSUM. This result was also found to be a false positive through confirmatory re-sampling. Both the Q1 and Q3 results are shown in Table 14 for AP4-MW6 for comparative purposes.

3.3.4 Verified Exceedances

No verified SSIs were identified for the Q3 2024 detection monitoring sampling event.

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 federal CCR 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 the first and third quarters of 2025.

3.4.2 Alternative Source Demonstrations

Resulting from the verified SSI for sulfate at AP4-MW1 (U) verified during the Q1 2022 detection monitoring event, NPPD and Golder pursued an alternative source demonstration (ASD; GAUSA 2022c). As an upgradient background location, groundwater from AP4-MW1 flows north towards the landfill, as shown in Figure 1. As such, AP4 is not considered the source of the verified SSI at AP4-MW1. A review of the relevant site conditions and associated information was completed within 90 days of identification of the verified SSI and presented as an ASD. Following completion of the successful ASD and concurrence of NDEE (NDEE 2022), Sheldon Station's AP4 remains in detection monitoring.

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 the permitted SAP (GAUSA 2022a).

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 has not been required. No alternative source demonstration stemming from statistically significant levels of assessment monitoring Appendix IV parameters 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 detection monitoring sampling event that occurred September 3, 2024, along with the associated comparative statistical analysis.

As described in the Groundwater Monitoring System Certification (GAI 2017b) and the Groundwater Monitoring Statistical Methods Certification (GAI 2017a), the groundwater monitoring and analytical procedures meet the general requirements of the CCR Rule and the permitted SAP (GAUSA 2022a), and modification to the monitoring network and sampling program are not recommended at this time.

Signature Page

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https://wsponline.sharepoint.com/:w:/r/Sites/Global-NPPD2023GWQualityRep/Project%20Files/6%20Deliverables/GLA21457062.5798/002-RPT-Q3_2024_Semi-Ann_GW_Rpt/Rev0/GLA21457062.5798-002-RPT-0-Q3_2024_Semi-Ann_GW_Rpt_25OCT24.docx

5.0 REFERENCES

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

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GAUSA (Golder Associates USA Inc.). 2022a. Sampling and Analysis Plan Permit No. NE0204285, Sheldon Station Ash Landfill No. 4. March 1, 2022.

GAUSA. 2022b. Baseline Update for Groundwater Quality Monitoring at Nebraska Public Power District's Sheldon Station. April 6, 2022.

GAUSA. 2022c. Alternate Source Demonstration for Sulfate at Upgradient Location AP4-MW1. July 20, 2022.

NDEE (Nebraska Department of Environment and Energy). 2022. Response to MW-1 Sulfate Alternate Source Demonstration (ASD). Letter from Wade Gregson (NDEE) to Brian J. Kozisek (NPPD). August 19, 2022.

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

USEPA. 2015. Code of Federal Regulations Title 40 Part 257: Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities. April 17, 2015.

Tables

Table 1: Data Summary Table - AP4-MW1

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024	9/3/2024
	Units	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	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	0.130	< 0.100	< 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	96.2	93.7	92.6	101	85.2	99.4	79.5	92.8
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	7.13	7.17	6.81	7.59	7.19	7.33	7.57	7.54
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	0.856	0.615	0.611	0.524	0.811	< 1.00	< 1.00	< 1.00
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	6.8	7.14	7.11	7.20	7.04	6.95	7.10	7.00
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	25.2	27.2	26.2	22.7	23.2	27.3	23.8	22.3
Total Dissolved Solids	mg/L	440	462	428	430	462	464	484	520	464	408	406	416	392	422	396	388	388	396	368	362	400	402	430
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

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

Table 2: Data Summary Table - AP4-MW2

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024	9/3/2024
	Units	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	< 0.100	< 0.100	< 0.400	< 0.100	< 0.100	0.111	< 0.100	< 0.100
Calcium, Total	mg/L	335	321	294	320	289	286	342	278	293	331	263	297	291	239	292	296	288	295	336	269	309	290	306
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	113.0	111	115	99.6	106	111	99.9	99.8
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	< 0.500	0.533	< 0.500	< 0.500	0.544	< 1.00	< 1.00	< 1.00
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	7.05	7.08	7.09	7.1	6.97	6.97	6.97	6.97
Sulfate	mg/L	884	888	797	804	901	842	774	797	894	879 E	827	923	855	857	874	876	882	933	906	874	1120	873	944
Total Dissolved Solids	mg/L	1720	1840	1700	1830	1900	1790	2360	1780	2210	1650	1680	1730	1570	1740	1620	1680	1620	1560	1680	1380	1750	1610	1630
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
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.

Table 3: Data Summary Table - AP4-MW3

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024	9/3/2024
	Units	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	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 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	88.4	88.3	84.3	94.5	78.8	88.5	78.1	84.9
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	< 5.00	< 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	1.33	0.914	0.972	0.717	1.23	1.14	1.27	1.21
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	6.55	7.36	7.27	7.40	7.14	7.13	7.16	7.08
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	22.9	29.2	22.3	21	19.3	17.7	20.0	19.1
Total Dissolved Solids	mg/L	418	460	390	420	488	430	428	442	494	404	374	426	378	374	378	348	344	354	326	318	360	360	340
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

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

Table 4: Data Summary Table - AP4-MW4

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024	9/3/2024
	Units	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	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100
Calcium, Total	mg/L	128	123	103	115	111	105	132	95.4	108	109	97.1	100	112	91.9	104	112	109	102	119	100	117	108	117
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	< 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	0.989	0.900	0.837	0.626	1.03	< 1.00	1.09	1.06
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	7.23	7.17	7.13	7.3	7.02	6.97	7.05	6.99
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	97.5	87.3	84.7	76.1	96.7	96.5	130	102
Total Dissolved Solids	mg/L	506	590	476	518	582	556	576	666	498	530	466	486	490	516	510	466	452	452	436	460	504	526	500
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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024	9/3/2024
	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	< 0.100	< 0.100	< 0.400	< 0.100	0.109	0.125	< 0.100	0.109
Calcium, Total	mg/L	358	520	439	460	523	517	608	310	488	537	146	541	504	363	579	210	177	600	178	471	468	500	244
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	5.56	< 5.00	5.71	< 5.00	6.28	6.11	6.52	6.31
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	0.53	< 0.500	< 0.500	< 0.500	< 0.500	< 1.00	< 1.00	< 1.00
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	6.94	7.04	6.67	7.1	6.63	6.64	6.62	6.88
Sulfate	mg/L	1420	1480	969	1410	1620	1570	1350	740	784	1630	468	1470	1370	1540	1580	678	592	1670	426	1590	1550	1680	719
Total Dissolved Solids	mg/L	2540	2740	1950	2620	2860	2920	3010	1490	1710	2690	1020	2390	2210	2500	2740 H	1180	980	2450	750	2350	2660	2510	1270
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.

Table 6: Data Summary Table - AP4-MW6

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024	9/3/2024
	Units	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	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 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	105	99.9	99	116	97.2	112	99.6	102
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	< 5.00	< 5.00	< 5.00	< 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	1.53	1.20	1.35	102	1.45	1.28	1.44	1.54
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	7.16	7.17	7.15	7.20	7.04	6.91	7.07	6.97
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	58.4	61.8	53.8	52.3	59.8	65.9	66.3	53
Total Dissolved Solids	mg/L	468	506	506	436	514	530	584	550	498	432	396	440	458	422	454	414	414	402	382	394	428	438	428
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

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

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	3/9/2021	8/25/2021	3/2/2022	8/23/2022	3/6/2023	8/29/2023	2/26/2024	9/3/2024
	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	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 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	71.7	70.5	68.2	78.2	64.8	75.7	65.9	68.5
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	11.4	9.65	11.4	13.3	13.9	16.8	16.0	14.7
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	< 0.500	< 0.500	< 0.500	< 0.500	< 0.500	< 1.00	< 1.00	< 1.00
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	7.34	7.37	7.36	7.30	7.23	7.11	7.26	7.17
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	47.7	50.5	47	40.8	42.1	40.1	34.6	29.6
Total Dissolved Solids	mg/L	546	548	516	558	588	616	534	538	598	476	480	536	504	510	404	488	488	490	490	478	516	466	438
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							
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
QTR-2021-1	1410.62	1425.54	1390.69	1375.14	1386.42	1374.19	1405.72
QTR-2021-3	1410.46	1426.36	1392.03	1373.93	1384.00	1371.92	1412.38
QTR-2022-1	1408.46	1424.04	1389.13	1372.69	1381.70	1373.66	1404.24
QTR-2022-3	1408.65	1421.92	1390.69	1371.45	1379.75	1370.26	1408.57
QTR-2023-1	1405.85	1419.93	1386.32	1370.00	1378.27	1369.80	1400.39
QTR-2023-3	1405.35	1418.68	1386.93	1370.75	1379.99	1370.86	1398.38
QTR-2024-1	1405.43	1418.98	1387.26	1372.18	1379.84	1370.80	1397.63
QTR-2024-3	1405.25	1417.86	1385.97	1371.45	1379.25	1369.31	1398.27
Mean	1410.09	1419.86	1392.59	1374.89	1384.51	1373.29	1405.84
SD	2.67	2.67	5.35	3.36	4.31	2.39	5.75
Maximum	1415.33	1428.23	1406.98	1385.69	1395.85	1379.15	1415.83
Minimum	1403.26	1415.13	1385.97	1370.00	1378.27	1369.10	1397.48
Range	12.07	13.10	21.01	15.69	17.58	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 (Upgradient)

		Statistical Method	Statistical Limit	Q3 2024 Detection Monitoring Result	Q3 2024 CUSUM Value	Q3 2024 - Within Limit?
Appendix III Analytes	**Unit**			9/3/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	115.1	92.8	93.2	Yes
Chloride	mg/L	NP-PL	11.00	7.54	--	Yes
Fluoride	mg/L	CUSUM	1.95	< 1.00	0.73	Yes
pH, Field	pH units	CUSUM	6.49, 8.00	7.00	7.05, 7.25	Yes
Sulfate	mg/L	CUSUM	31.6	22.3	23.6	Yes
Total Dissolved Solids	mg/L	CUSUM	584	430	434	Yes

NOTES:
NP-PL: Non-Parametric Prediction Limit
CUSUM: Parametric Shewhart-CUSUM Control Chart

Table 10: Comparative Statistics - AP4-MW2 (Upgradient)

		Statistical Method	Statistical Limit	Q3 2024 Detection Monitoring Result	Q3 2024 CUSUM Value	Q3 2024 - Within Limit?
Appendix III Analytes	**Unit**			9/3/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	402	306	297	Yes
Chloride	mg/L	NP-PL	113	99.8	--	Yes
Fluoride	mg/L	NP-PL	0.94	< 1.00	--	Yes - See Text
pH, Field	pH units	CUSUM	6.55, 7.85	6.97	6.84, 7.20	Yes
Sulfate	mg/L	CUSUM	1027	944	901	Yes
Total Dissolved Solids	mg/L	NP-PL	2360	1630	--	Yes

NOTES:
NP-PL: Non-Parametric Prediction Limit
CUSUM: Parametric Shewhart-CUSUM Control Chart
See discussion of non-detect reporting for compliance results in the text.

Table 11: Comparative Statistics - AP4-MW3

		Statistical Method	Statistical Limit	Q3 2024 Detection Monitoring Result	Q3 2024 CUSUM Value	Q3 2024 - Within Limit?
Appendix III Analytes	**Unit**			9/3/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	105.2	84.9	86.5	Yes
Chloride	mg/L	NP-PL	12.40	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	2.48	1.21	1.09	Yes
pH, Field	pH units	CUSUM	6.81, 7.99	7.08	6.81, 7.40	No - Potential Exceedance
Sulfate	mg/L	CUSUM	48.2	19.1	28.3	Yes
Total Dissolved Solids	mg/L	CUSUM	567	340	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	Q3 2024 Detection Monitoring Result	Q3 2024 CUSUM Value	Q3 2024 - Within Limit?
Appendix III Analytes	**Unit**			9/3/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	153	117	109	Yes
Chloride	mg/L	NP-PL	8.99	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	1.67	1.06	0.97	Yes
pH, Field	pH units	CUSUM	6.73, 7.79	6.99	6.68, 7.26	No - Potential Exceedance
Sulfate	mg/L	CUSUM	180	102	95	Yes
Total Dissolved Solids	mg/L	CUSUM	746	500	523	Yes

NOTES:
NP-PL: Non-Parametric Prediction Limit
CUSUM: Parametric Shewhart-CUSUM Control Chart

Table 13: Comparative Statistics - AP4-MW5

		Statistical Method	Statistical Limit	Q3 2024 Detection Monitoring Result	Q3 2024 CUSUM Value	Q3 2024 - Within Limit?
Appendix III Analytes	**Unit**			9/3/2024		
Boron, Total	mg/L	NP-PL	0.200	0.109	--	Yes
Calcium, Total	mg/L	CUSUM	798	244	450	Yes
Chloride	mg/L	CUSUM	15.58	6.31	6.37	Yes
Fluoride	mg/L	NP-PL	0.664	< 1.00	--	Yes - See Text
pH, Field	pH units	CUSUM	6.32, 7.63	6.88	6.49, 6.98	Yes
Sulfate	mg/L	NP-PL	1630	719	--	Yes - Prior Result was a False Positive
Total Dissolved Solids	mg/L	CUSUM	4040	1270	2308	Yes

NOTES:
NP-PL: Non-Parametric Prediction Limit
CUSUM: Parametric Shewhart-CUSUM Control Chart
See discussion of non-detect reporting for compliance results in the text.

Table 14: Comparative Statistics - AP4-MW6

		Statistical Method	Statistical Limit	Q1 2024 Detection Monitoring Result	Q1 2024 CUSUM Value	Q1 2024 - Within Limit?	Q3 2024 Detection Monitoring Result	Q3 2024 CUSUM Value	Q3 2024 - Within Limit?
Appendix III Analytes	**Unit**			2/26/2024			9/3/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	127	99.6	101.9	Yes	102	102	Yes
Chloride	mg/L	NP-PL	5.28	< 5.00	--	Yes	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	2.90	1.44	1.47	Yes	1.54	1.47	Yes
pH, Field	pH units	CUSUM	6.72, 7.82	7.07	6.69, 7.27	No - Potential Exceedance	6.97	3.73, 7.27	Yes - Prior Result was a False-Positive
Sulfate	mg/L	CUSUM	114.9	66.3	60.5	Yes	53	60.5	Yes
Total Dissolved Solids	mg/L	CUSUM	687	438	472	Yes	428	472	Yes

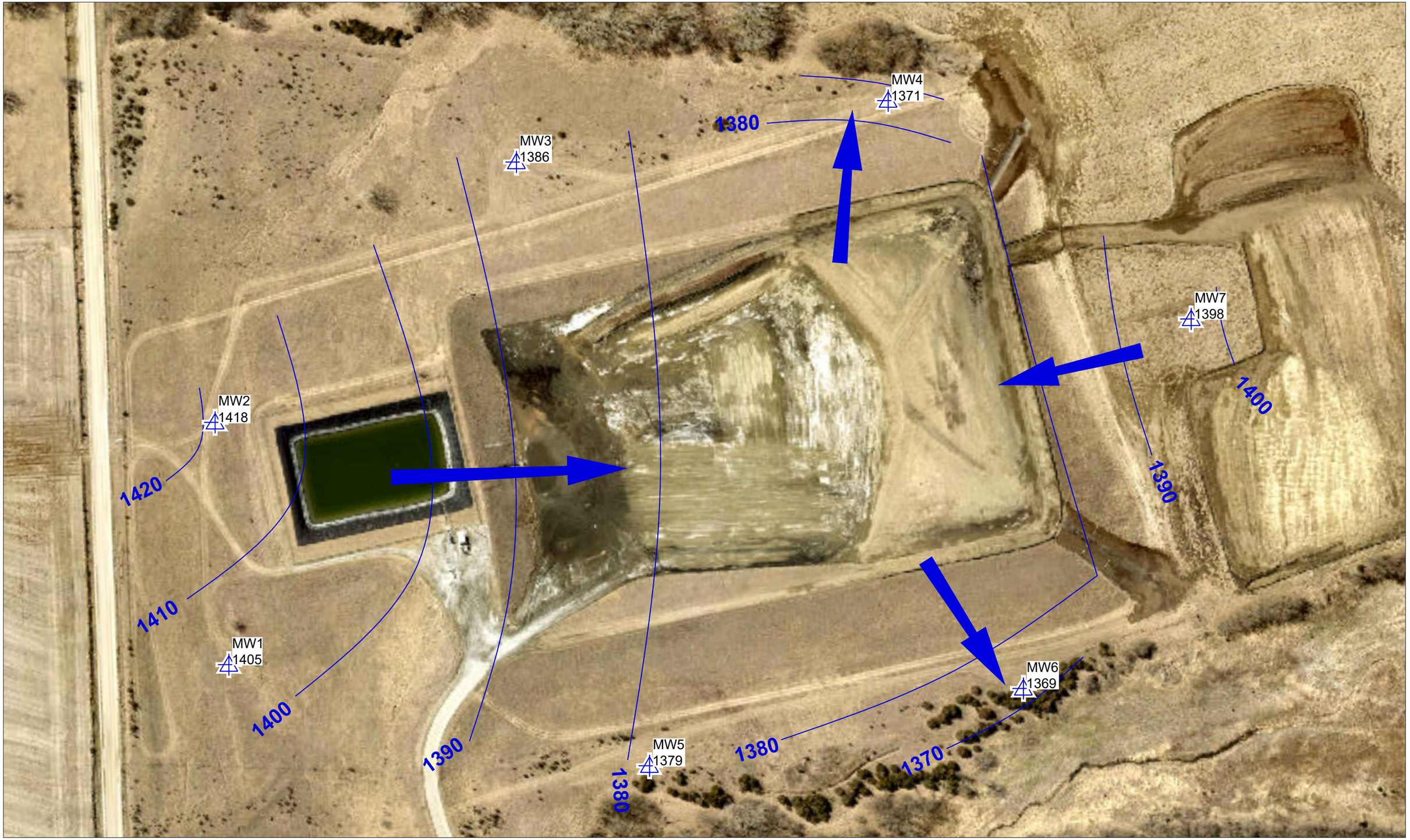
NOTES:
NP-PL: Non-Parametric Prediction Limit
CUSUM: Parametric Shewhart-CUSUM Control Chart

Table 15: Comparative Statistics - AP4-MW7

		Statistical Method	Statistical Limit	Q3 2024 Detection Monitoring Result	Q3 2024 CUSUM Value	Q3 2024 - Within Limit?
Appendix III Analytes	**Unit**			9/3/2024		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	NP-PL	79.0	68.5	--	Yes
Chloride	mg/L	CUSUM	17.9	14.7	17.0	Yes - Prior Result was a False Positive
Fluoride	mg/L	NP-PL	1.02	< 1.00	--	Yes
pH, Field	pH units	CUSUM	6.87, 8.09	7.17	6.82, 7.17	No - Potential Exceedance
Sulfate	mg/L	CUSUM	63.2	29.6	43.0	Yes
Total Dissolved Solids	mg/L	CUSUM	732	438	525	Yes

NOTES:
NP-PL: Non-Parametric Prediction Limit
CUSUM: Parametric Shewhart-CUSUM Control Chart

Figures



wsp

LEGEND

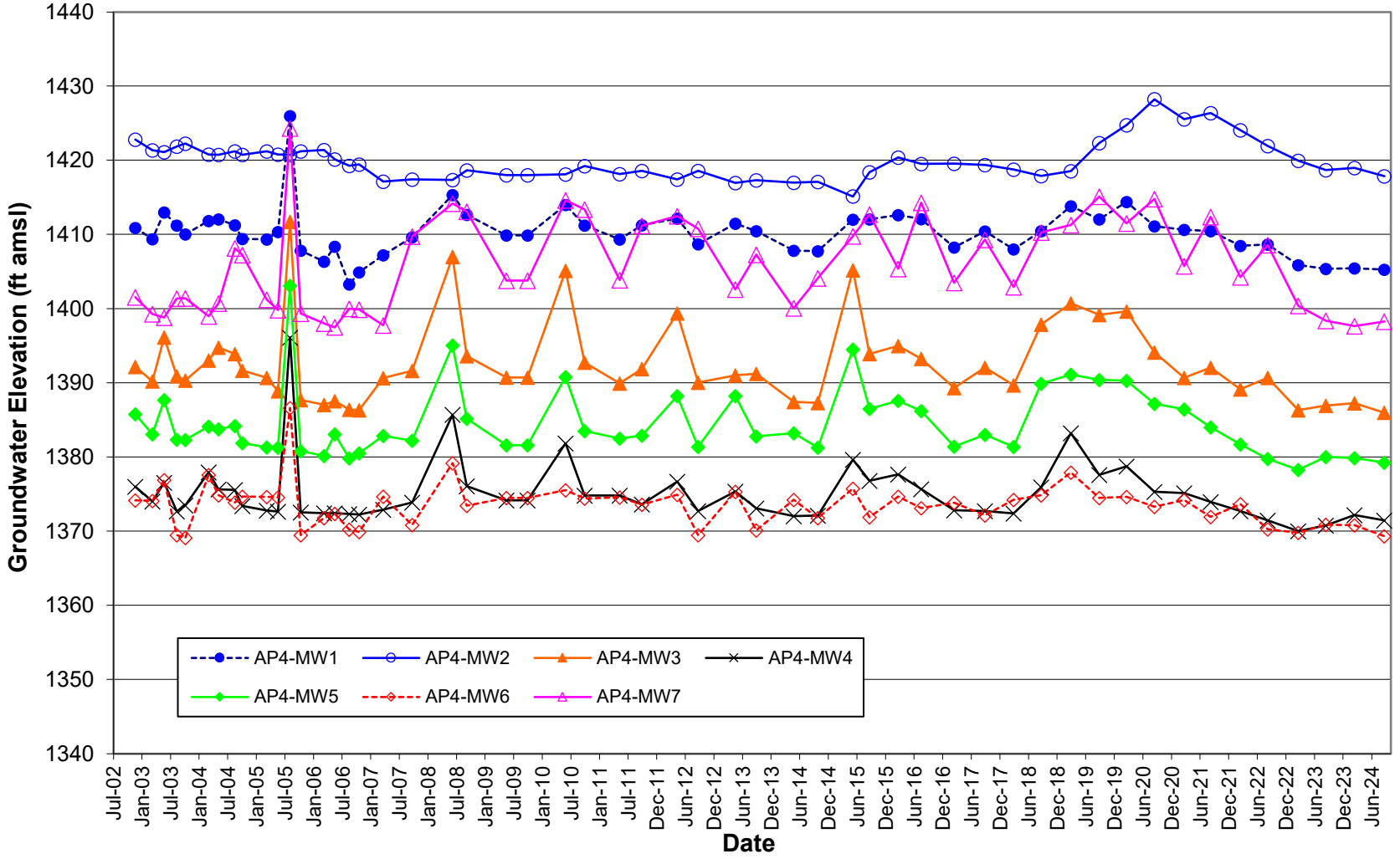
MW1
1405
MONITORING WELL
GROUNDWATER ELEVATION (ft AMSL)

0 75 150
1" = 150' FEET

FIGURE 1
ASH LANDFILL NO. 4
GROUNDWATER CONTOURS
SEPTEMBER 2024

Path: \\corp.ptwan.net\US\Central\Data\US_JK200\CAD\NPPD\Sheldon\99_PROJECTS\NPPD SS 2024 GW\ | File Name: SS GW Maps 2024 Q3.dwg

FIGURE 2
Sheldon Station Ash Landfill No. 4
Groundwater Elevations



APPENDIX A

Analytical Report and Chain-of-Custody Documentation

eurofins | Environment Testing

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

ANALYTICAL REPORT

PREPARED FOR

Attn: Todd A. Chinn
Nebraska Public Power District
4500 West Pella Road
Hallam, Nebraska 68368

Generated 9/13/2024 9:45:32 AM

JOB DESCRIPTION

Sheldon Station Ash Landfill #4 CCR New Permit

JOB NUMBER

310-289701-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

myEOL

Job Notes

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

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

Authorization

Generated
9/13/2024 9:45:32 AM

Authorized for release by
Conner Calhoun, Project Management Assistant I
Conner.Calhoun@et.eurofinsus.com
(319)277-2401

Table of Contents

Job Narrative
310-289701-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 9/5/2024 7:45 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.8°C.

HPLC/IC
Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: AP4-MW1 (310-289701-1), AP4-MW2 (310-289701-2), AP4-MW3 (310-289701-3), AP4-MW4 (310-289701-4), AP4-MW5 (310-289701-5), AP4-MW6 (310-289701-6), AP4-MW7 (310-289701-7) and AP4-MW Blind Duplicate (310-289701-8). Elevated reporting limits (RLs) are provided.

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

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

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

Sample Summary

Client: Nebraska Public Power District
Job ID: 310-289701-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-289701-1	AP4-MW1	Ground Water	09/03/24 08:55	09/05/24 07:45
310-289701-2	AP4-MW2	Ground Water	09/03/24 09:32	09/05/24 07:45
310-289701-3	AP4-MW3	Ground Water	09/03/24 10:10	09/05/24 07:45
310-289701-4	AP4-MW4	Ground Water	09/03/24 11:00	09/05/24 07:45
310-289701-5	AP4-MW5	Ground Water	09/03/24 14:08	09/05/24 07:45
310-289701-6	AP4-MW6	Ground Water	09/03/24 13:01	09/05/24 07:45
310-289701-7	AP4-MW7	Ground Water	09/03/24 11:38	09/05/24 07:45
310-289701-8	AP4-MW Blind Duplicate	Ground Water	09/03/24 00:00	09/05/24 07:45

Detection Summary

Client: Nebraska Public Power District
Job ID: 310-289701-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW1 — Lab Sample ID: 310-289701-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.54		5.00		mg/L	5		9056A	Total/NA
Sulfate	22.3		5.00		mg/L	5		9056A	Total/NA
Calcium	92.8		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	430		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: AP4-MW2 — Lab Sample ID: 310-289701-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	99.8		5.00		mg/L	5		9056A	Total/NA
Sulfate	944		20.0		mg/L	20		9056A	Total/NA
Calcium	306		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	1630		250		mg/L	1		SM 2540C	Total/NA
pH	7.1	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: AP4-MW3 — Lab Sample ID: 310-289701-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	19.1		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.21		1.00		mg/L	5		9056A	Total/NA
Calcium	84.9		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	340		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.3	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: AP4-MW4 — Lab Sample ID: 310-289701-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	102		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.06		1.00		mg/L	5		9056A	Total/NA
Calcium	117		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	500		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.2	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: AP4-MW5 — Lab Sample ID: 310-289701-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.31		5.00		mg/L	5		9056A	Total/NA
Sulfate	719		20.0		mg/L	20		9056A	Total/NA
Boron	0.109		0.100		mg/L	1		6020B	Total/NA
Calcium	244		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	1270		250		mg/L	1		SM 2540C	Total/NA
pH	7.1	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: AP4-MW6 — Lab Sample ID: 310-289701-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	53.0		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.54		1.00		mg/L	5		9056A	Total/NA
Calcium	102		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	428		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.3	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Nebraska Public Power District
Job ID: 310-289701-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW7
Lab Sample ID: 310-289701-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14.7		5.00		mg/L	5		9056A	Total/NA
Sulfate	29.6		5.00		mg/L	5		9056A	Total/NA
Calcium	68.5		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	438		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.4	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: AP4-MW Blind Duplicate
Lab Sample ID: 310-289701-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	15.3		5.00		mg/L	5		9056A	Total/NA
Sulfate	30.0		5.00		mg/L	5		9056A	Total/NA
Calcium	69.7		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	438		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.4	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Nebraska Public Power District
Job ID: 310-289701-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW1
Lab Sample ID: 310-289701-1
Date Collected: 09/03/24 08:55
Matrix: Ground Water
Date Received: 09/05/24 07:45

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.54		5.00		mg/L			09/11/24 15:44	5
Sulfate	22.3		5.00		mg/L			09/11/24 15:44	5
Fluoride	<1.00		1.00		mg/L			09/11/24 15:44	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		09/06/24 09:00	09/09/24 13:26	1
Calcium	92.8		0.500		mg/L		09/06/24 09:00	09/09/24 13:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	430		50.0		mg/L			09/05/24 19:56	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.2	HF	1.0		SU			09/05/24 10:28	1

Client Sample Results

Client: Nebraska Public Power District
Job ID: 310-289701-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW2
Lab Sample ID: 310-289701-2
Date Collected: 09/03/24 09:32
Matrix: Ground Water
Date Received: 09/05/24 07:45

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**99.8**		5.00		mg/L			09/11/24 16:19	5
Sulfate	**944**		20.0		mg/L			09/12/24 08:58	20
Fluoride	<1.00		1.00		mg/L			09/11/24 16:19	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		09/06/24 09:00	09/09/24 13:49	1
Calcium	**306**		0.500		mg/L		09/06/24 09:00	09/09/24 13:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**1630**		250		mg/L			09/06/24 15:57	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.1**	**HF**	1.0		SU			09/05/24 10:35	1

Client Sample Results

Client: Nebraska Public Power District
Job ID: 310-289701-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW3
Lab Sample ID: 310-289701-3
Date Collected: 09/03/24 10:10
Matrix: Ground Water
Date Received: 09/05/24 07:45

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			09/11/24 16:31	5
Sulfate	**19.1**		5.00		mg/L			09/11/24 16:31	5
Fluoride	**1.21**		1.00		mg/L			09/11/24 16:31	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		09/06/24 09:00	09/09/24 13:51	1
Calcium	**84.9**		0.500		mg/L		09/06/24 09:00	09/09/24 13:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**340**		50.0		mg/L			09/06/24 15:57	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.3**	**HF**	1.0		SU			09/05/24 10:30	1

Client Sample Results

Client: Nebraska Public Power District
Job ID: 310-289701-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW4
Lab Sample ID: 310-289701-4

Date Collected: 09/03/24 11:00
Matrix: Ground Water
Date Received: 09/05/24 07:45

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			09/11/24 16:42	5
Sulfate	**102**		5.00		mg/L			09/11/24 16:42	5
Fluoride	**1.06**		1.00		mg/L			09/11/24 16:42	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		09/06/24 09:00	09/09/24 13:53	1
Calcium	**117**		0.500		mg/L		09/06/24 09:00	09/09/24 13:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**500**		50.0		mg/L			09/06/24 15:57	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.2**	**HF**	1.0		SU			09/05/24 10:32	1

Client Sample Results

Client: Nebraska Public Power District
Job ID: 310-289701-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW5
Lab Sample ID: 310-289701-5
Date Collected: 09/03/24 14:08
Matrix: Ground Water
Date Received: 09/05/24 07:45

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.31		5.00		mg/L			09/11/24 16:54	5
Sulfate	719		20.0		mg/L			09/12/24 09:09	20
Fluoride	<1.00		1.00		mg/L			09/11/24 16:54	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.109		0.100		mg/L		09/06/24 09:00	09/09/24 13:56	1
Calcium	244		0.500		mg/L		09/06/24 09:00	09/09/24 13:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1270		250		mg/L			09/06/24 15:57	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.1	HF	1.0		SU			09/05/24 10:36	1

Client Sample Results

Client: Nebraska Public Power District
Job ID: 310-289701-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW6
Lab Sample ID: 310-289701-6
Date Collected: 09/03/24 13:01
Matrix: Ground Water
Date Received: 09/05/24 07:45

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			09/11/24 17:05	5
Sulfate	**53.0**		5.00		mg/L			09/11/24 17:05	5
Fluoride	**1.54**		1.00		mg/L			09/11/24 17:05	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		09/06/24 09:00	09/09/24 13:58	1
Calcium	**102**		0.500		mg/L		09/06/24 09:00	09/09/24 13:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**428**		50.0		mg/L			09/06/24 15:57	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.3**	**HF**	1.0		SU			09/05/24 10:33	1

Client Sample Results

Client: Nebraska Public Power District
Job ID: 310-289701-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW7
Lab Sample ID: 310-289701-7

Date Collected: 09/03/24 11:38
Matrix: Ground Water

Date Received: 09/05/24 07:45

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14.7**		5.00		mg/L			09/11/24 17:17	5
Sulfate	**29.6**		5.00		mg/L			09/11/24 17:17	5
Fluoride	<1.00		1.00		mg/L			09/11/24 17:17	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		09/06/24 09:00	09/09/24 14:00	1
Calcium	**68.5**		0.500		mg/L		09/06/24 09:00	09/09/24 14:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**438**		50.0		mg/L			09/06/24 15:57	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.4**	**HF**	1.0		SU			09/05/24 10:34	1

Client Sample Results

Client: Nebraska Public Power District
Job ID: 310-289701-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW Blind Duplicate
Lab Sample ID: 310-289701-8

Date Collected: 09/03/24 00:00
Matrix: Ground Water
Date Received: 09/05/24 07:45

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**15.3**		5.00		mg/L			09/11/24 17:29	5
Sulfate	**30.0**		5.00		mg/L			09/11/24 17:29	5
Fluoride	<1.00		1.00		mg/L			09/11/24 17:29	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		09/06/24 09:00	09/09/24 14:03	1
Calcium	**69.7**		0.500		mg/L		09/06/24 09:00	09/09/24 14:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	**438**		50.0		mg/L			09/06/24 15:57	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**7.4**	**HF**	1.0		SU			09/05/24 10:31	1

Definitions/Glossary

Client: Nebraska Public Power District
Job ID: 310-289701-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Qualifiers

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Glossary

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

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-432992/3
Matrix: Water
Analysis Batch: 432992

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			09/11/24 14:12	1
Sulfate	<1.00		1.00		mg/L			09/11/24 14:12	1
Fluoride	<0.200		0.200		mg/L			09/11/24 14:12	1

Lab Sample ID: LCS 310-432992/4
Matrix: Water
Analysis Batch: 432992

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chloride			10.0	9.801		mg/L		98	90 - 110		
Sulfate			10.0	9.975		mg/L		100	90 - 110		
Fluoride			2.00	1.925		mg/L		96	90 - 110		

Lab Sample ID: 310-289701-1 MS
Matrix: Ground Water
Analysis Batch: 432992

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	7.54		25.0	31.20		mg/L		95	80 - 120		
Sulfate	22.3		25.0	47.31		mg/L		100	80 - 120		
Fluoride	<1.00		5.00	5.787		mg/L		97	80 - 120		

Lab Sample ID: 310-289701-1 MSD
Matrix: Ground Water
Analysis Batch: 432992

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	7.54		25.0	31.81		mg/L		97	80 - 120	2	15
Sulfate	22.3		25.0	48.18		mg/L		103	80 - 120	2	15
Fluoride	<1.00		5.00	5.899		mg/L		100	80 - 120	2	15

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-432376/1-A
Matrix: Water
Analysis Batch: 432666

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 432376

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		09/06/24 09:00	09/09/24 13:22	1
Calcium	<0.500		0.500		mg/L		09/06/24 09:00	09/09/24 13:22	1

Lab Sample ID: LCS 310-432376/2-A
Matrix: Water
Analysis Batch: 432666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 432376

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Boron			0.200	0.2221		mg/L		111	80 - 120		
Calcium			2.00	1.875		mg/L		94	80 - 120		

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

Lab Sample ID: 310-289701-1 DU
Matrix: Ground Water
Analysis Batch: 432666

Client Sample ID: AP4-MW1
Prep Type: Total/NA
Prep Batch: 432376

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	<0.100		<0.100		mg/L		NC	20
Calcium	92.8		94.00		mg/L		1	20

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

Lab Sample ID: MB 310-432387/1
Matrix: Water
Analysis Batch: 432387

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	<50.0		50.0		mg/L			09/05/24 19:56	1

Lab Sample ID: LCS 310-432387/2
Matrix: Water
Analysis Batch: 432387

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	986.0		mg/L		99	88 - 110

Lab Sample ID: MB 310-432506/1
Matrix: Water
Analysis Batch: 432506

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	<50.0		50.0		mg/L			09/06/24 15:57	1

Lab Sample ID: LCS 310-432506/2
Matrix: Water
Analysis Batch: 432506

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	978.0		mg/L		98	88 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-432308/1
Matrix: Water
Analysis Batch: 432308

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

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

Lab Sample ID: 310-289701-1 DU
Matrix: Ground Water
Analysis Batch: 432308

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.2	HF	7.2		SU		0.1	20

HPLC/IC

Analysis Batch: 432992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-289701-1	AP4-MW1	Total/NA	Ground Water	9056A	
310-289701-2	AP4-MW2	Total/NA	Ground Water	9056A	
310-289701-2	AP4-MW2	Total/NA	Ground Water	9056A	
310-289701-3	AP4-MW3	Total/NA	Ground Water	9056A	
310-289701-4	AP4-MW4	Total/NA	Ground Water	9056A	
310-289701-5	AP4-MW5	Total/NA	Ground Water	9056A	
310-289701-5	AP4-MW5	Total/NA	Ground Water	9056A	
310-289701-6	AP4-MW6	Total/NA	Ground Water	9056A	
310-289701-7	AP4-MW7	Total/NA	Ground Water	9056A	
310-289701-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	9056A	
MB 310-432992/3	Method Blank	Total/NA	Water	9056A	
LCS 310-432992/4	Lab Control Sample	Total/NA	Water	9056A	
310-289701-1 MS	AP4-MW1	Total/NA	Ground Water	9056A	
310-289701-1 MSD	AP4-MW1	Total/NA	Ground Water	9056A	

Metals

Prep Batch: 432376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-289701-1	AP4-MW1	Total/NA	Ground Water	3005A	
310-289701-2	AP4-MW2	Total/NA	Ground Water	3005A	
310-289701-3	AP4-MW3	Total/NA	Ground Water	3005A	
310-289701-4	AP4-MW4	Total/NA	Ground Water	3005A	
310-289701-5	AP4-MW5	Total/NA	Ground Water	3005A	
310-289701-6	AP4-MW6	Total/NA	Ground Water	3005A	
310-289701-7	AP4-MW7	Total/NA	Ground Water	3005A	
310-289701-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	3005A	
MB 310-432376/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-432376/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-289701-1 DU	AP4-MW1	Total/NA	Ground Water	3005A	

Analysis Batch: 432666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-289701-1	AP4-MW1	Total/NA	Ground Water	6020B	432376
310-289701-2	AP4-MW2	Total/NA	Ground Water	6020B	432376
310-289701-3	AP4-MW3	Total/NA	Ground Water	6020B	432376
310-289701-4	AP4-MW4	Total/NA	Ground Water	6020B	432376
310-289701-5	AP4-MW5	Total/NA	Ground Water	6020B	432376
310-289701-6	AP4-MW6	Total/NA	Ground Water	6020B	432376
310-289701-7	AP4-MW7	Total/NA	Ground Water	6020B	432376
310-289701-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	6020B	432376
MB 310-432376/1-A	Method Blank	Total/NA	Water	6020B	432376
LCS 310-432376/2-A	Lab Control Sample	Total/NA	Water	6020B	432376
310-289701-1 DU	AP4-MW1	Total/NA	Ground Water	6020B	432376

General Chemistry

Analysis Batch: 432308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-289701-1	AP4-MW1	Total/NA	Ground Water	SM 4500 H+ B	
310-289701-2	AP4-MW2	Total/NA	Ground Water	SM 4500 H+ B	
310-289701-3	AP4-MW3	Total/NA	Ground Water	SM 4500 H+ B	

General Chemistry (Continued)

Analysis Batch: 432308 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-289701-4	AP4-MW4	Total/NA	Ground Water	SM 4500 H+ B	
310-289701-5	AP4-MW5	Total/NA	Ground Water	SM 4500 H+ B	
310-289701-6	AP4-MW6	Total/NA	Ground Water	SM 4500 H+ B	
310-289701-7	AP4-MW7	Total/NA	Ground Water	SM 4500 H+ B	
310-289701-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	SM 4500 H+ B	
LCS 310-432308/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-289701-1 DU	AP4-MW1	Total/NA	Ground Water	SM 4500 H+ B	

Analysis Batch: 432387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-289701-1	AP4-MW1	Total/NA	Ground Water	SM 2540C	
MB 310-432387/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-432387/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 432506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-289701-2	AP4-MW2	Total/NA	Ground Water	SM 2540C	
310-289701-3	AP4-MW3	Total/NA	Ground Water	SM 2540C	
310-289701-4	AP4-MW4	Total/NA	Ground Water	SM 2540C	
310-289701-5	AP4-MW5	Total/NA	Ground Water	SM 2540C	
310-289701-6	AP4-MW6	Total/NA	Ground Water	SM 2540C	
310-289701-7	AP4-MW7	Total/NA	Ground Water	SM 2540C	
310-289701-8	AP4-MW Blind Duplicate	Total/NA	Ground Water	SM 2540C	
MB 310-432506/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-432506/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: Nebraska Public Power District
Job ID: 310-289701-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW1
Lab Sample ID: 310-289701-1
Date Collected: 09/03/24 08:55
Matrix: Ground Water
Date Received: 09/05/24 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	432992	HE7K	EET CF	09/11/24 15:44
Total/NA	Prep	3005A			432376	QTZ5	EET CF	09/06/24 09:00
Total/NA	Analysis	6020B		1	432666	NFT2	EET CF	09/09/24 13:26
Total/NA	Analysis	SM 2540C		1	432387	MDU9	EET CF	09/05/24 19:56
Total/NA	Analysis	SM 4500 H+ B		1	432308	W9YR	EET CF	09/05/24 10:28

Client Sample ID: AP4-MW2
Lab Sample ID: 310-289701-2
Date Collected: 09/03/24 09:32
Matrix: Ground Water
Date Received: 09/05/24 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	432992	HE7K	EET CF	09/11/24 16:19
Total/NA	Analysis	9056A		20	432992	HE7K	EET CF	09/12/24 08:58
Total/NA	Prep	3005A			432376	QTZ5	EET CF	09/06/24 09:00
Total/NA	Analysis	6020B		1	432666	NFT2	EET CF	09/09/24 13:49
Total/NA	Analysis	SM 2540C		1	432506	MDU9	EET CF	09/06/24 15:57
Total/NA	Analysis	SM 4500 H+ B		1	432308	W9YR	EET CF	09/05/24 10:35

Client Sample ID: AP4-MW3
Lab Sample ID: 310-289701-3
Date Collected: 09/03/24 10:10
Matrix: Ground Water
Date Received: 09/05/24 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	432992	HE7K	EET CF	09/11/24 16:31
Total/NA	Prep	3005A			432376	QTZ5	EET CF	09/06/24 09:00
Total/NA	Analysis	6020B		1	432666	NFT2	EET CF	09/09/24 13:51
Total/NA	Analysis	SM 2540C		1	432506	MDU9	EET CF	09/06/24 15:57
Total/NA	Analysis	SM 4500 H+ B		1	432308	W9YR	EET CF	09/05/24 10:30

Client Sample ID: AP4-MW4
Lab Sample ID: 310-289701-4
Date Collected: 09/03/24 11:00
Matrix: Ground Water
Date Received: 09/05/24 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	432992	HE7K	EET CF	09/11/24 16:42
Total/NA	Prep	3005A			432376	QTZ5	EET CF	09/06/24 09:00
Total/NA	Analysis	6020B		1	432666	NFT2	EET CF	09/09/24 13:53
Total/NA	Analysis	SM 2540C		1	432506	MDU9	EET CF	09/06/24 15:57
Total/NA	Analysis	SM 4500 H+ B		1	432308	W9YR	EET CF	09/05/24 10:32

Lab Chronicle

Client: Nebraska Public Power District
Job ID: 310-289701-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Client Sample ID: AP4-MW5
Lab Sample ID: 310-289701-5
Date Collected: 09/03/24 14:08
Matrix: Ground Water
Date Received: 09/05/24 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	432992	HE7K	EET CF	09/11/24 16:54
Total/NA	Analysis	9056A		20	432992	HE7K	EET CF	09/12/24 09:09
Total/NA	Prep	3005A			432376	QTZ5	EET CF	09/06/24 09:00
Total/NA	Analysis	6020B		1	432666	NFT2	EET CF	09/09/24 13:56
Total/NA	Analysis	SM 2540C		1	432506	MDU9	EET CF	09/06/24 15:57
Total/NA	Analysis	SM 4500 H+ B		1	432308	W9YR	EET CF	09/05/24 10:36

Client Sample ID: AP4-MW6
Lab Sample ID: 310-289701-6
Date Collected: 09/03/24 13:01
Matrix: Ground Water
Date Received: 09/05/24 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	432992	HE7K	EET CF	09/11/24 17:05
Total/NA	Prep	3005A			432376	QTZ5	EET CF	09/06/24 09:00
Total/NA	Analysis	6020B		1	432666	NFT2	EET CF	09/09/24 13:58
Total/NA	Analysis	SM 2540C		1	432506	MDU9	EET CF	09/06/24 15:57
Total/NA	Analysis	SM 4500 H+ B		1	432308	W9YR	EET CF	09/05/24 10:33

Client Sample ID: AP4-MW7
Lab Sample ID: 310-289701-7
Date Collected: 09/03/24 11:38
Matrix: Ground Water
Date Received: 09/05/24 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	432992	HE7K	EET CF	09/11/24 17:17
Total/NA	Prep	3005A			432376	QTZ5	EET CF	09/06/24 09:00
Total/NA	Analysis	6020B		1	432666	NFT2	EET CF	09/09/24 14:00
Total/NA	Analysis	SM 2540C		1	432506	MDU9	EET CF	09/06/24 15:57
Total/NA	Analysis	SM 4500 H+ B		1	432308	W9YR	EET CF	09/05/24 10:34

Client Sample ID: AP4-MW Blind Duplicate
Lab Sample ID: 310-289701-8
Date Collected: 09/03/24 00:00
Matrix: Ground Water
Date Received: 09/05/24 07:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	432992	HE7K	EET CF	09/11/24 17:29
Total/NA	Prep	3005A			432376	QTZ5	EET CF	09/06/24 09:00
Total/NA	Analysis	6020B		1	432666	NFT2	EET CF	09/09/24 14:03
Total/NA	Analysis	SM 2540C		1	432506	MDU9	EET CF	09/06/24 15:57
Total/NA	Analysis	SM 4500 H+ B		1	432308	W9YR	EET CF	09/05/24 10:31

Laboratory References:

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

Accreditation/Certification Summary

Client: Nebraska Public Power District
Job ID: 310-289701-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	IA100001	09-29-24

Method Summary

Client: Nebraska Public Power District
Job ID: 310-289701-1
Project/Site: Sheldon Station Ash Landfill #4 CCR New Permit

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

Protocol References:

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

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

Laboratory References:

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

eurofins | Environment Testing America

310-289701 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Nebraska

City/State: CITY | STATE NE | Project:

Receipt Information

Date/Time Received: DATE 9/5/24 | TIME 0745 | Received By: N

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

Condition of Cooler/Containers

Sample(s) received in Cooler?	☒ Yes	☐ No	*If yes:* Cooler ID.
Multiple Coolers?	☐ Yes	☒ No	*If yes:* Cooler # _____ of _____
Cooler Custody Seals Present? No	☒ Yes	☐ No	*If yes:* Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present? No	☐ 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: R | Correction Factor (°C): +0.0

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

Uncorrected Temp (°C): 1.8 | Corrected Temp (°C): 1.8

• **Sample Container Temperature**

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

Exceptions Noted

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

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

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

Additional Comments

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

Chain of Custody Record

es America Omaha SC
268

Client Information	Sampler: Todd A. Chinn	Lab PM.	Carrier Tracking No(s).	COC No:
Client Contact: Todd A. Chinn	Phone: 402-787-5256	E-Mail:		Page:
Company: Nebraska Public Power District		Analysis Requested		Job #:
Address: 4500 West Pella Road	Due Date Requested: Normal TAT			Preservation Codes:
City: Hallam	TAT Requested (days): Normal			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)
State, Zip: NE, 68368				
Phone: 402-787-5256	PO #: Purchase Order not required			Other:
Email: tachinn@nppd.com	WO #:			
Project Name: Sheldon Station Ash Landfill #4 CCR New Permit	TestAmerica Project #: 31005953			
Site: Nebraska				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 A Boron and Calcium	9056A Chloride, Fluoride, Sulfate	SM4500 H+ pH Short Holding Time	2540C TDS	Total Number of containers	Special Instructions/Note:
			Preservation Code.				D	N	N	N		
AP4-MW1	9-3-24	0855	G	GW			X	X	X	X		
AP4-MW2	9-3-24	0932	G	GW			X	X	X	X		
AP4-MW3	9-3-24	1010	G	GW			X	X	X	X		
AP4-MW4	9-3-24	1100	G	GW			X	X	X	X		
AP4-MW5	9-3-24	1408	G	GW			X	X	X	X		
AP4-MW6	9-3-24	1301	G	GW			X	X	X	X		
AP4-MW7	9-3-24	1138	G	GW			X	X	X	X		
AP4-MW Blind Duplicate	9-3-24	N/A	G	GW			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
Todd A. Chinn	9-4-24 1600				
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: N	Date/Time: 9/5/24 0745	Company

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

9/13/2024

Login Sample Receipt Checklist

Client: Nebraska Public Power District

Job Number: 310-289701-1
SDG Number:

Login Number: 289701
List Number: 1
Creator: Homolar, Dana J

List Source: Eurofins Cedar Falls

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

APPENDIX B

Field Notes

WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) NPPD SS Ash Landfill #4
Well Number AP4-MW1 Date 9-3-2024
Field Personnel Todd A. Chyng Patricia A. Novak
Sampling Organization NPPD
Identify MP Top of Casing

Depth to 10.9 / 31.9 of screen
Top Bottom
Pump Intake at (ft. below MP) 29.9
Purging Device; (pump type) Micro Purge
Total Volume Purged 2530 mL

Well Conditions/ Field Observations: 56°, Sunny, 5 mph from the South

Clock Time 24hr	Water Depth below MP ft	Pump Dial Setting	Purge Rate mL/min	Cum. Volume Purged in milliliters	Temp C°	Specific Conductivity µmhos	pH MP-20	pH Lab Accumet	%DO	ORP mv	Comments
0833	20.7	CPM4 10/5	94								Start Pump
0835		CPM4 10/5	94								Cell is full
0840		CPM4 10/5	94		14.68	717.3	6.97		35.1	91.5	
0845		CPM4 10/5	94		14.60	718.8	6.97		30.9	82.4	
0850		CPM4 10/5	94		14.53	718.2	6.99		30.1	75.5	
0855		CPM4 10/5	94		14.55	716.4	7.00		29.5	70.8	Sample #1 500mL
				1780							Sample #2 250mL
0900	21.8										Done

WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) NPPD SS Ash Landfill #4
Well Number AP4-MW02 Date 9-3-2024
Field Personnel Todd A. Chinn Patricia A. Novak
Sampling Organization NPPD
Identify MP Top of Casing

Depth to 0.9 / 31.4 of screen (Top / Bottom)
Pump Intake at (ft. below MP) 29.9
Purging Device; (pump type) Micro Purge
Total Volume Purged 3760mL

Well Conditions/ Field Observations: 60°, Sunny, 7mph from the South

Clock Time 24hr	Water Depth below MP ft	Pump Dial Setting	Purge Rate mL/min	Cum. Volume Purged in milliliters	Temp C°	Specific Conductivity µmhos	pH MP-20	pH Lab Accumet	%DO	ORP mv	Comments
0909	27.17	CPM4 10/5	125								Start Pump
0911		CPM4 10/5	125								Cell is full
0912		CPM4 10/5	125		16.21	1962	7.07		85.1	62.2	
0916		CPM4 10/5	125		14.52	2072	6.97		73.5	68.8	
0922		CPM4 10/5	125		14.33	2080	6.99		79.7	76.6	
0926		CPM4 10/5	125	2000	14.32	2082	6.98	80.2	~~79.7~~	79.7	
0932		CPM4 10/5	125		14.32	2083	6.97		78.4	82.4	Sample #1 500mL
	28.8			1000							Sample # 2 250mL
0939											Done

WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) NPPD SS Ash Landfill #4
Well Number AP4-MW3 Date 9-3-2024
Field Personnel Todd A. Chinn Patricia A. Novak
Sampling Organization NPPD
Identify MP Top of Casing

Depth to 10.5 / 35.5 of screen (Top / Bottom)
Pump Intake at (ft. below MP) 33.5
Purging Device; (pump type) Micro Purge
Total Volume Purged 3460mL

Well Conditions/ Field Observations: 65°, Sunny, 9mph from the South

Clock Time 24hr	Water Depth below MP ft	Pump Dial Setting	Purge Rate mL/min	Cum. Volume Purged in milliliters	Temp C°	Specific Conductivity µmhos	pH MP-20	pH Lab Accumet	%DO	ORP mv	Comments
0948	25.75	CPM4 10/5	128								Start Pump
0950		CPM4 10/5	128		17.09	687.4	7.19		87.8	62.0	Cell is full
0955		CPM4 10/5	128		15.94	634.7	7.09		17.3	18.3	
1000		CPM4 10/5	128		16.28	634.7	7.07		5.1	1.5	
1005		CPM4 10/5	128	2000	16.37	633.4	7.08		4.4	2.2	
1010		CPM4 10/5	128		16.54	632.6	7.08		5.3	4.6	Sample #1 500mL
				710							Sample #2 250mL
1015	26.9										Done

WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) NPPD- SS Ash Landfill #4
Well Number AP4 - MW4 Date 9-3-2024
Field Personnel Todd A. Chinn + Patricia A. Novak
Sampling Organization NPPD
Identify MP Top of Casing

Depth to 11.0 / 37.0 of screen (Top / Bottom)
Pump Intake at (ft. below MP) 35.0
Purging Device; (pump type) Micro Purge
Total Volume Purged 5710mL

Well Conditions/ Field Observations: 69°, Sunny, 10mph from the South

Clock Time 24hr	Water Depth below MP ft	Pump Dial Setting	Purge Rate mL/min	Cum. Volume Purged in milliliters	Temp C°	Specific Conductivity µmhos	pH MP-20	pH Lab Accumet	%DO	ORP mv	Comments
1022	24.65	CPM4 10/5	133								Start Pump
1025		CPM4 10/5	133		18.69	1182	6.93		70.4	50.1	Cell is full
1030		CPM4 10/5	133		16.12	1050	6.95		16.9	46.0	
1035		CPM4 10/5	133	2000	16.13	862	7.02		14.2	39.8	
1040		CPM4 10/5	133		16.14	803.3	7.00		17.5	38.3	
1045		CPM4 10/5	133		10.25	788.0	7.00		18.5	37.2	
1050		CPM4 10/5	133	2000	17.98	787.0	6.99		18.5	35.3	
1055		CPM4 10/5	133		17.74	786.6	6.99		19.4	34.5	
1100		CPM4 10/5	133	960	17.91	791.4	6.99		19.7	36.8	Sample #1 500mL
	26.5										Sample #2 250mL
1105											Done

WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) NPPD SS Ash Land fill #4
Well Number AP4-MW5 Date 9-3-2024
Field Personnel Todd A. Chinn Patricia A. Noval
Sampling Organization NPPD
Identify MP Top of Casing

Depth to 10.2 / 36.2 of screen
Top Bottom
Pump Intake at (ft. below MP) 34.2
Purging Device; (pump type) Micro Purge
Total Volume Purged 7750 mL

Well Conditions/ Field Observations: 99°, Sunny, 12 mph wind from the South

Clock Time 24hr	Water Depth below MP ft	Pump Dial Setting	Purge Rate mL/min	Cum. Volume Purged in milliliters	Temp C°	Specific Conductivity µmhos	pH MP-20	pH Lab Accumet	%DO	ORP mv	Comments
1315	23.85	CPM4 10/5	129								Start Pump
1317		CPM4 10/5	129								Cell is full
1318		CPM4 10/5	129		18.89	2836	6.75		79.5	69.5	
1323		CPM4 10/5	129		16.75	2854	6.62		15.1	72.8	
1328		CPM4 10/5	129		16.52	2850	6.61		5.2	74.5	
1333		CPM4 10/5	129	2000	16.15	2850	6.63		5.6	76.4	
1338		CPM4 10/5	129		16.65	2844	6.65		6.6	78.2	
1343		CPM4 10/5	129	2000	16.63	2635	6.69		6.8	78.9	
1348		CPM4 10/5	129		16.46	2077	6.79		8.2	77.1	
1353		CPM4 10/5	129		16.41	1745	6.86		9.4	74.8	
1358		CPM4 10/5	129	2000	16.47	1652	6.88		9.0	73.1	
1403		CPM4 10/5	129		16.54	1640	6.90		7.9	71.1	
1408		CPM4 10/5	129		16.48	1646	6.88		6.9	70.0	Sample #1 500mL
				1000							Sample #2 250mL
1415	26.4										Done

WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) NPPD SS Ash Landfill #4
Well Number AP4 - MW6 Date 9-3-2024
Field Personnel Todd A. Chinn Patricia A. Narak
Sampling Organization NPPD
Identify MP Top of Casing

Depth to 10.1 / 36.1 of screen (Top / Bottom)
Pump Intake at (ft. below MP) 34.1
Purging Device; (pump type) Micro Purge
Total Volume Purged 7000mL

Well Conditions/ Field Observations: 77°, Sunny, 11mph from the South

Clock Time 24hr	Water Depth below MP ft	Pump Dial Setting	Purge Rate mL/min	Cum. Volume Purged in milliliters	Temp C°	Specific Conductivity µmhos	pH MP-20	pH Lab Accumet	%DO	ORP mv	Comments
1159	17.3	CPM4 10/5	101								Start Pump
1201		CPM4 10/5	101		20.38	830.8	6.92		68.1	67.6	Cell is full
1206		CPM4 10/5	101		18.70	988.3	6.86		13.7	84.5	
1211		CPM4 10/5	101		18.92	949.7	6.86		6.8	31.1	
1216		CPM4 10/5	101		19.39	904.3	6.87		6.2	33.3	
1221		CPM4 10/5	101		19.83	867.2	6.88		6.4	36.0	
1226		CPM4 10/5	101	2000	20.31	841.2	6.88		6.8	38.1	
1231		CPM4 10/5	101		20.52	820.1	6.88		7.3	39.4	
1236		CPM4 10/5	101		20.77	802.2	6.90		7.9	40.0	
1241		CPM4 10/5	101		21.15	788.5	6.90		8.6	40.1	
1246		CPM4 10/5	101		16.47	758.4	6.97		10.7	40.7	
1251		CPM4 10/5	101	2000	15.97	730.3	6.98		19.0	42.6	
1256		CPM4 10/5	101		16.33	723.6	6.98		22.8	45.3	
1301		CPM4 10/5	101	2000	16.24	720.6	6.97		23.0	48.3	Sample #1 500mL
				250							Sample #2 250mL
1308	18.8										Done

WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) NPPD SS Ash Landfill #4
Well Number AP4 - MW 7 Date 9-3-2024
Field Personnel Todd A. Chinn Patricia A. Nowak
Sampling Organization NPPD
Identify MP Top of Casing

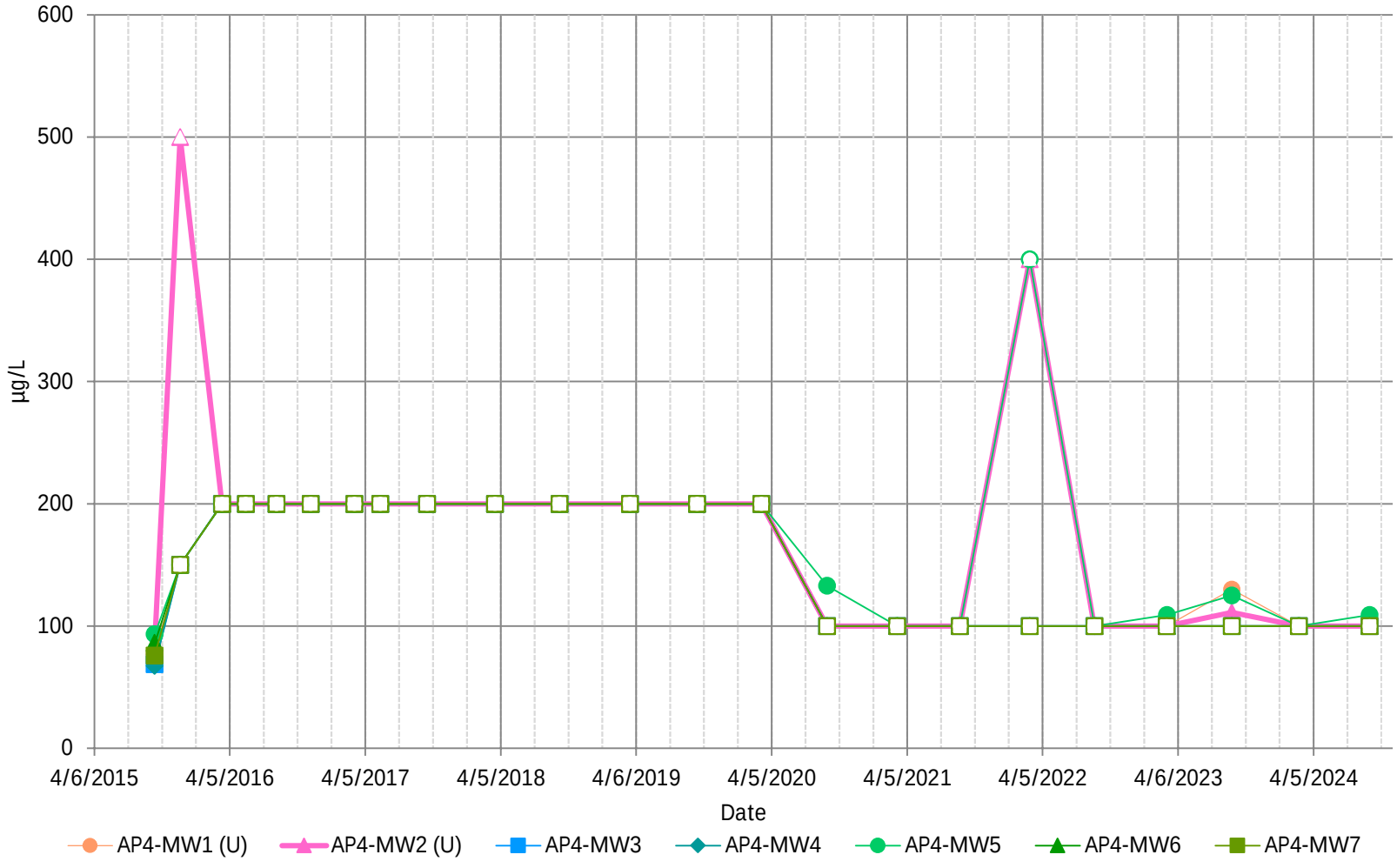
Depth to 10.5 / 35.5 of screen (Top / Bottom)
Pump Intake at (ft. below MP) 33.5
Purging Device; (pump type) Micro Purge
Total Volume Purged 3710 mL

Well Conditions/ Field Observations: 73°, Sunny, 12mph from the South

Clock Time 24hr	Water Depth below MP ft	Pump Dial Setting	Purge Rate mL/min	Cum. Volume Purged in milliliters	Temp C°	Specific Conductivity µmhos	pH MP-20	pH Lab Accumet	%DO	ORP mv	Comments
1112	26.02	CPM4 10/5	103								Start Pump
1118		CPM4 10/5	103	22.62-2542		765.3	7.27		109	62.7	Cell is full
1123		CPM4 10/5	103		17.98	769.5	7.14		88.2	67.6	
1128		CPM4 10/5	103		17.59	767.0	7.14		87.1	68.8	
1133		CPM4 10/5	103	2000	17.34	765.7	7.15		86.2	69.0	
1138		CPM4 10/5	103		17.26	766.0	7.17		85.9	69.4	Sample #1 500 mL
			103								Sample #2 250mL
										Dup	Sample #1 500mL
										Dup	Sample #2 250mL
1148	27.43			210							Done

APPENDIX C

Time Series Data



Non-detects plotted at the practical quantitation limit with an open symbol

Figure C-1

Boron

Nebraska Public Power District

Sheldon Station

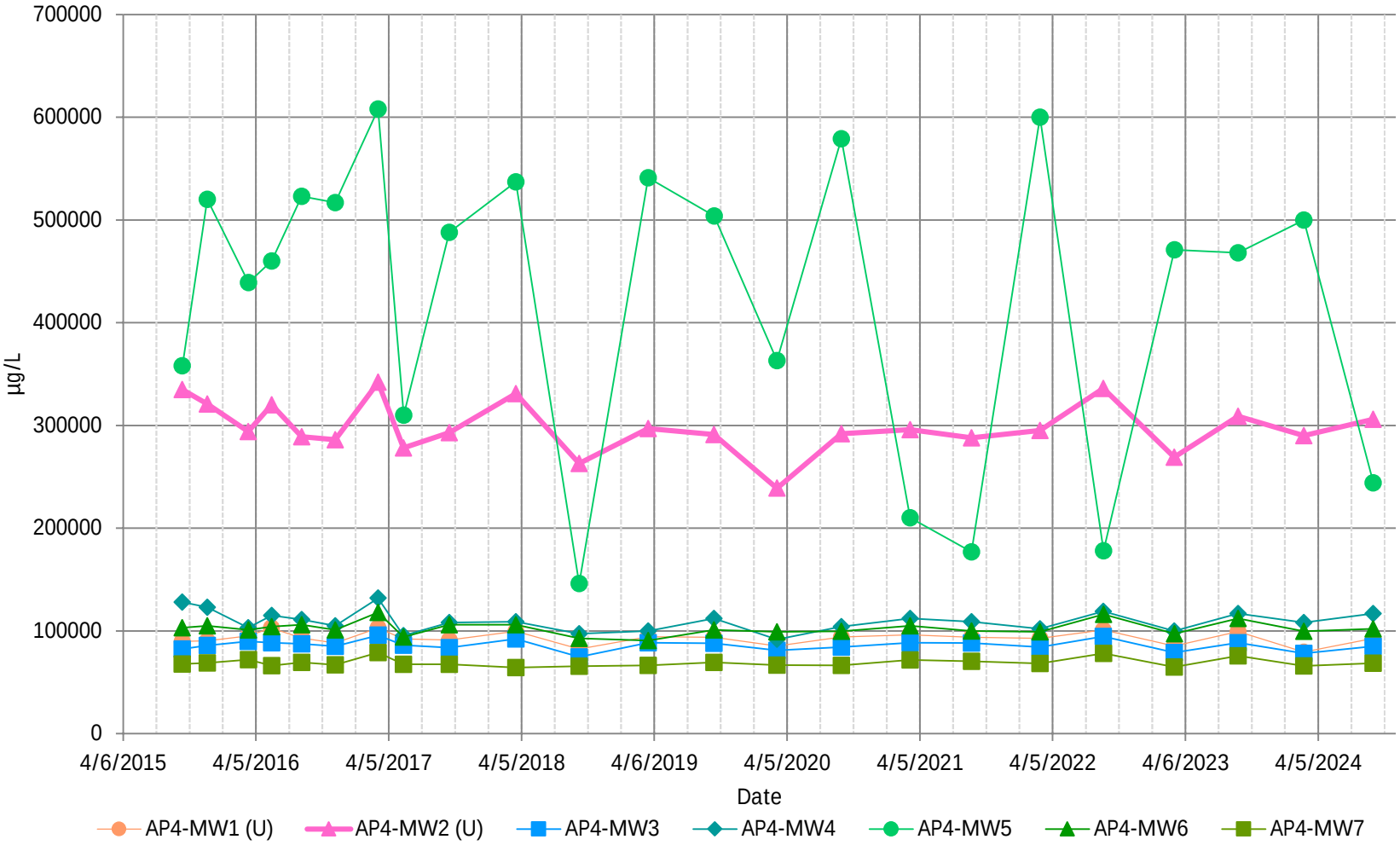
WSP USA Inc.

FINAL

10/24/2024

Denver, Colorado, USA

GLA21457062.5798



Non-detects plotted at the practical quantitation limit with an open symbol

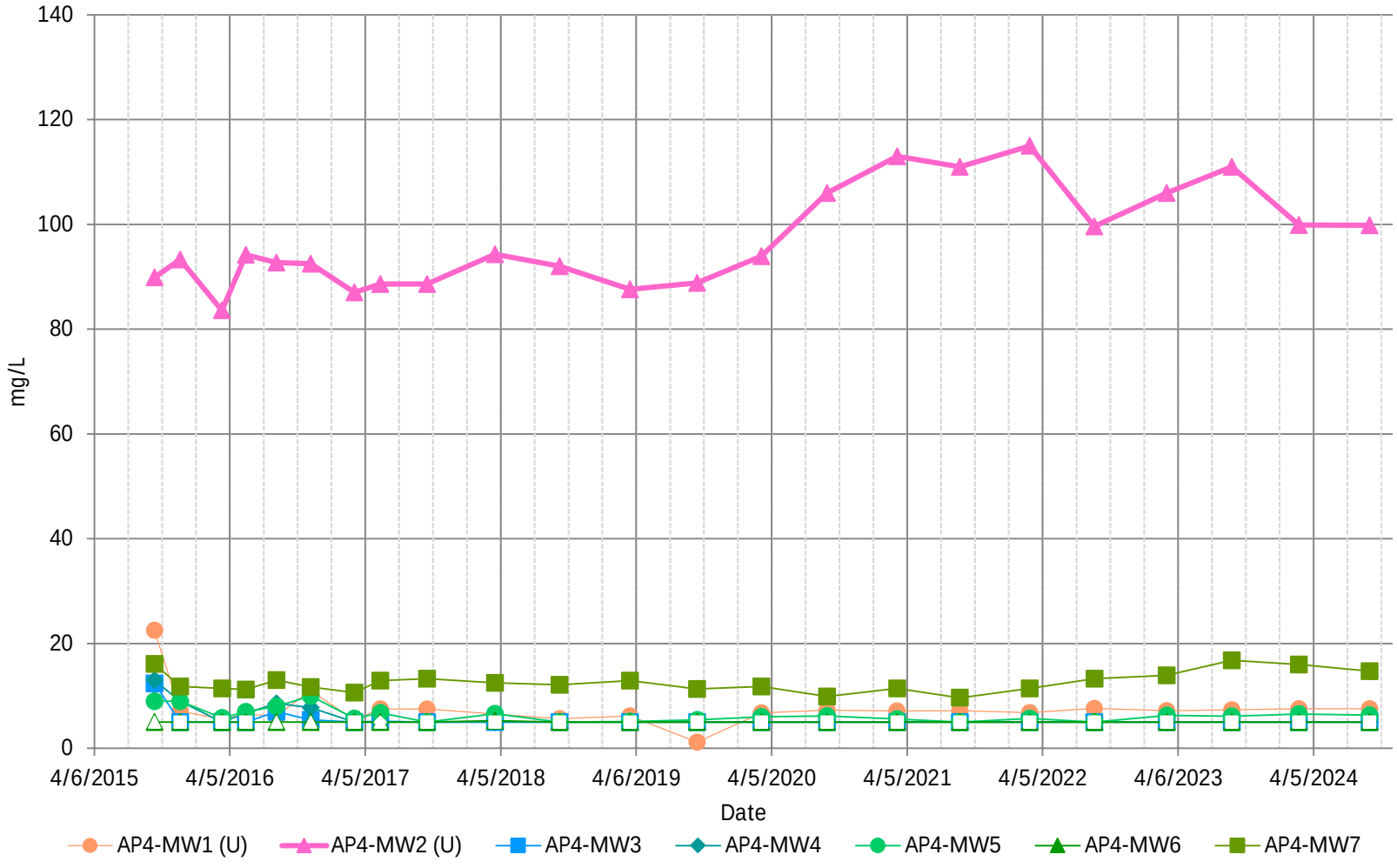
Figure C-2

Calcium

Nebraska Public Power District

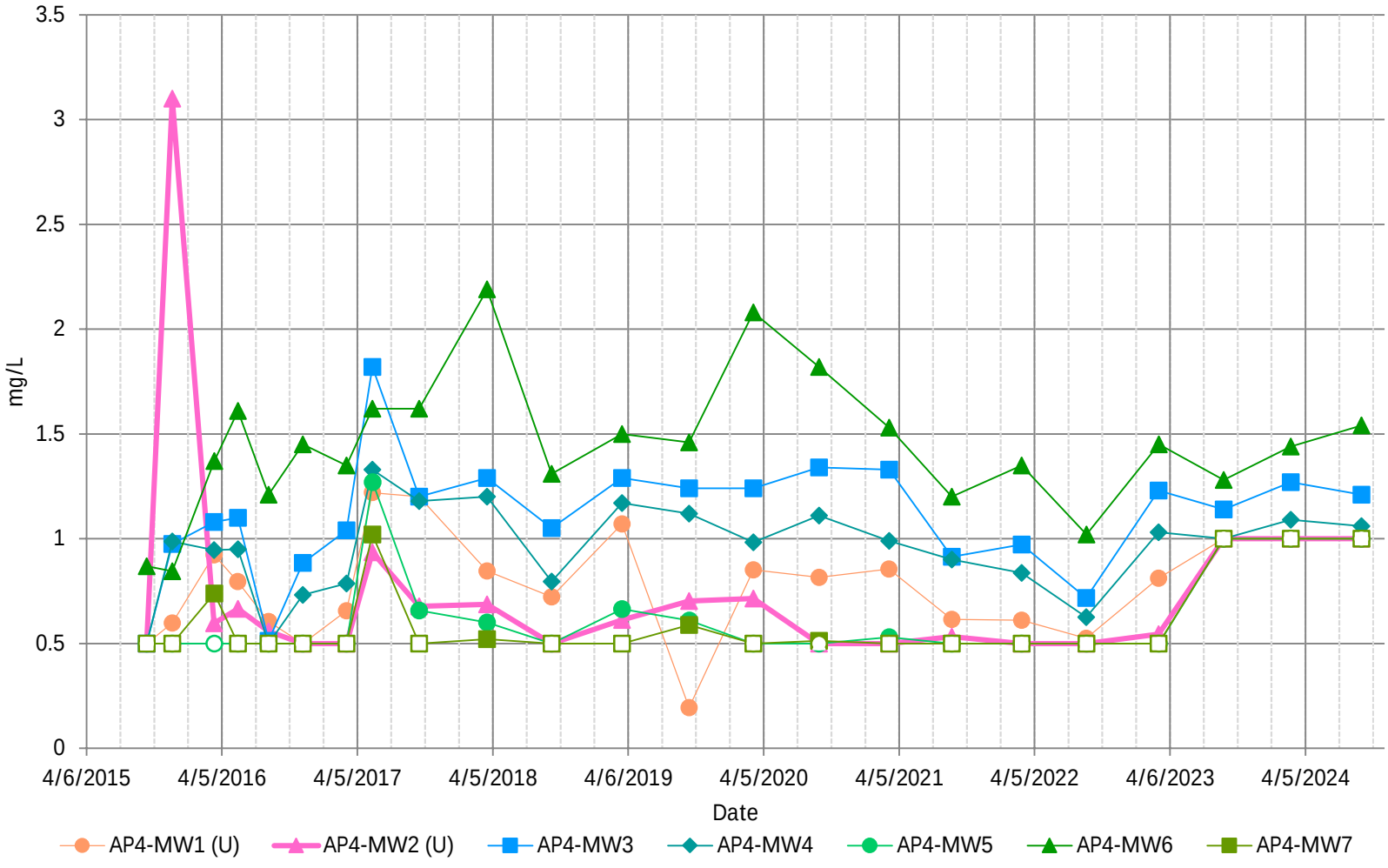
Sheldon Station

WSP USA Inc.



Non-detects plotted at the practical quantitation limit with an open symbol

Figure C-3
Chloride
Nebraska Public Power District
Sheldon Station



Non-detects plotted at the practical quantitation limit with an open symbol

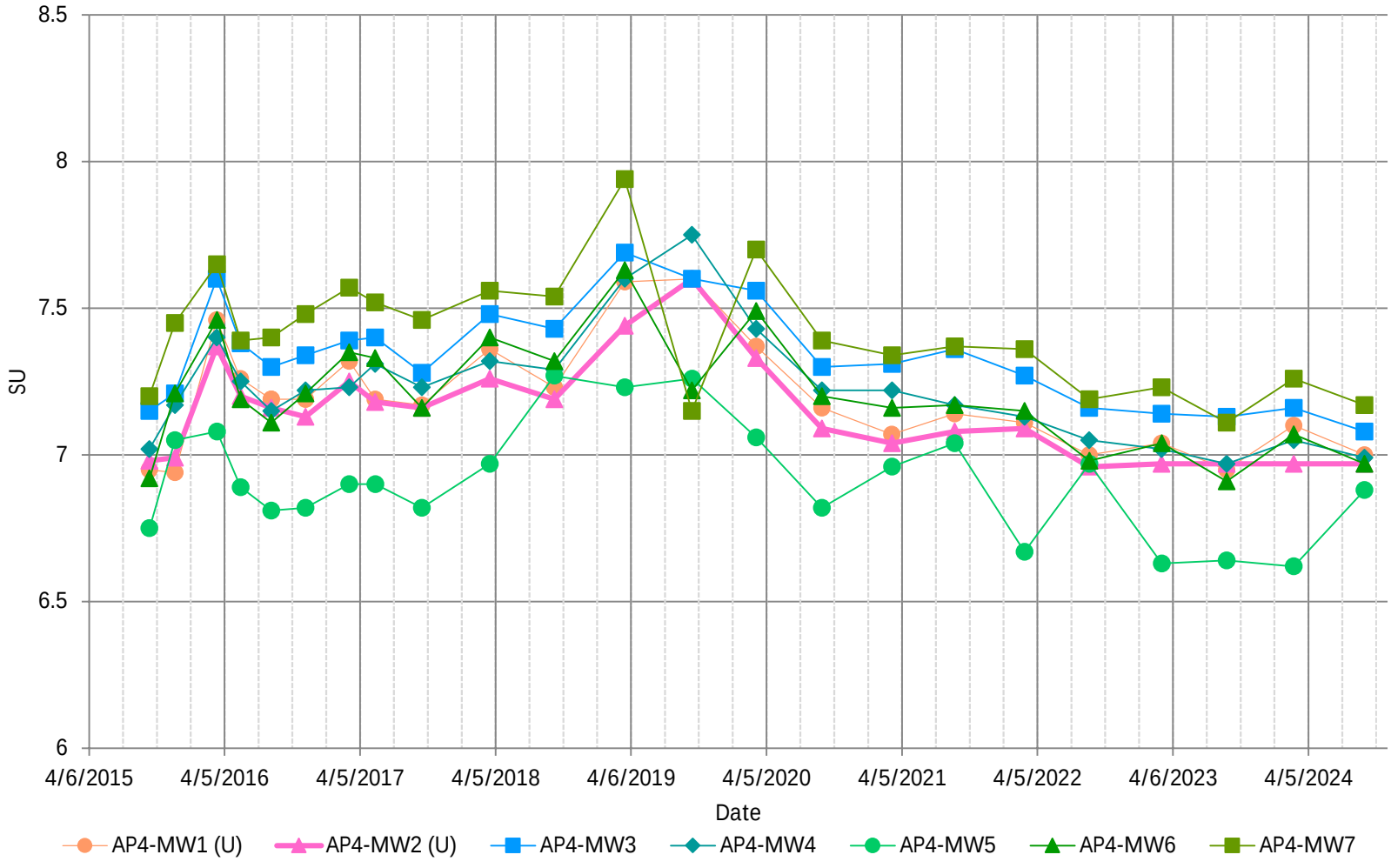
Figure C-4

Fluoride

Nebraska Public Power District

Sheldon Station

WSP USA Inc.



Non-detects plotted at the practical quantitation limit with an open symbol

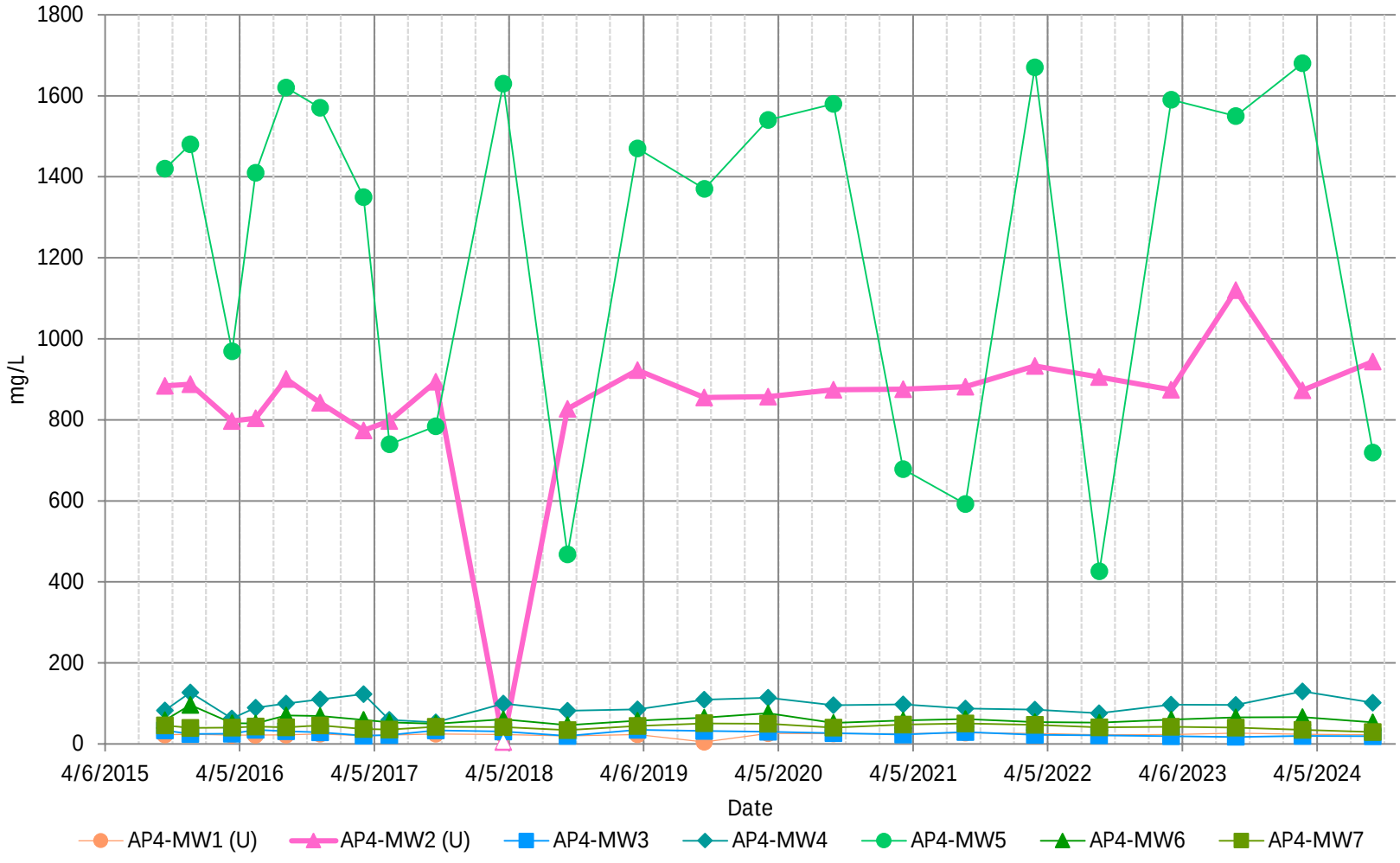
Figure C-5

pH, Field-Measured

Nebraska Public Power District

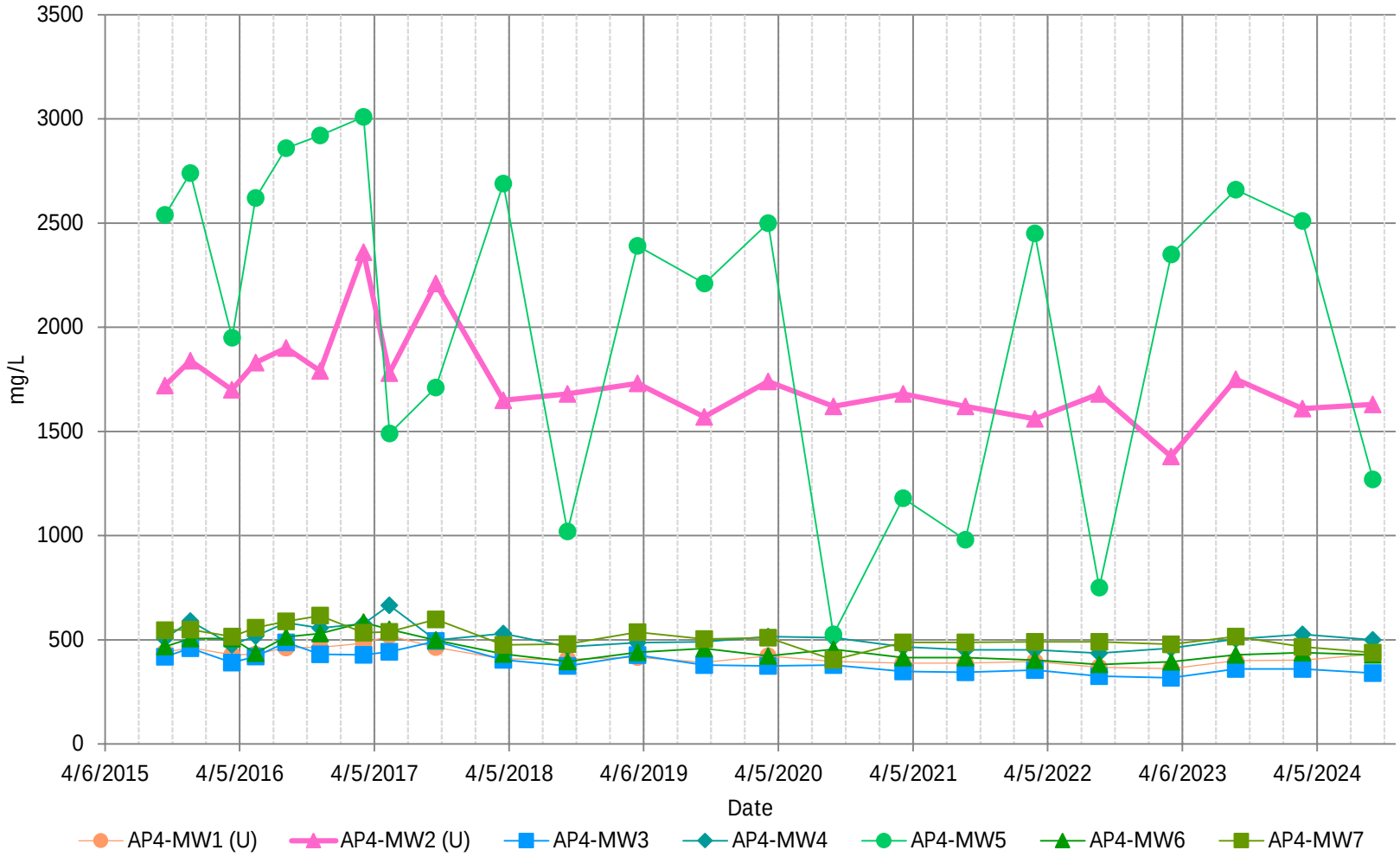
Sheldon Station

WSP USA Inc.



Non-detects plotted at the practical quantitation limit with an open symbol

Figure C-6
Sulfate
Nebraska Public Power District
Sheldon Station



Non-detects plotted at the practical quantitation limit with an open symbol

Figure C-7

Total Dissolved Solids

Nebraska Public Power District

Sheldon Station

WSP USA Inc.

APPENDIX D

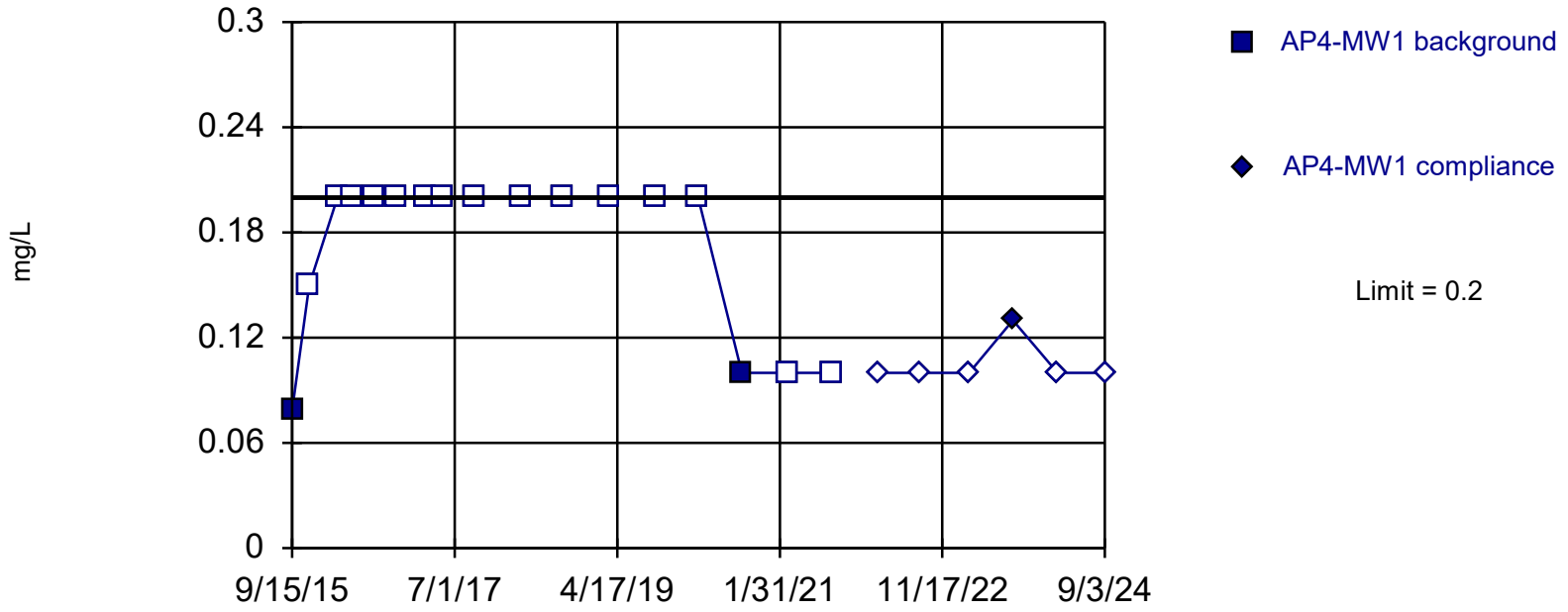
Comparative Statistical Analysis

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

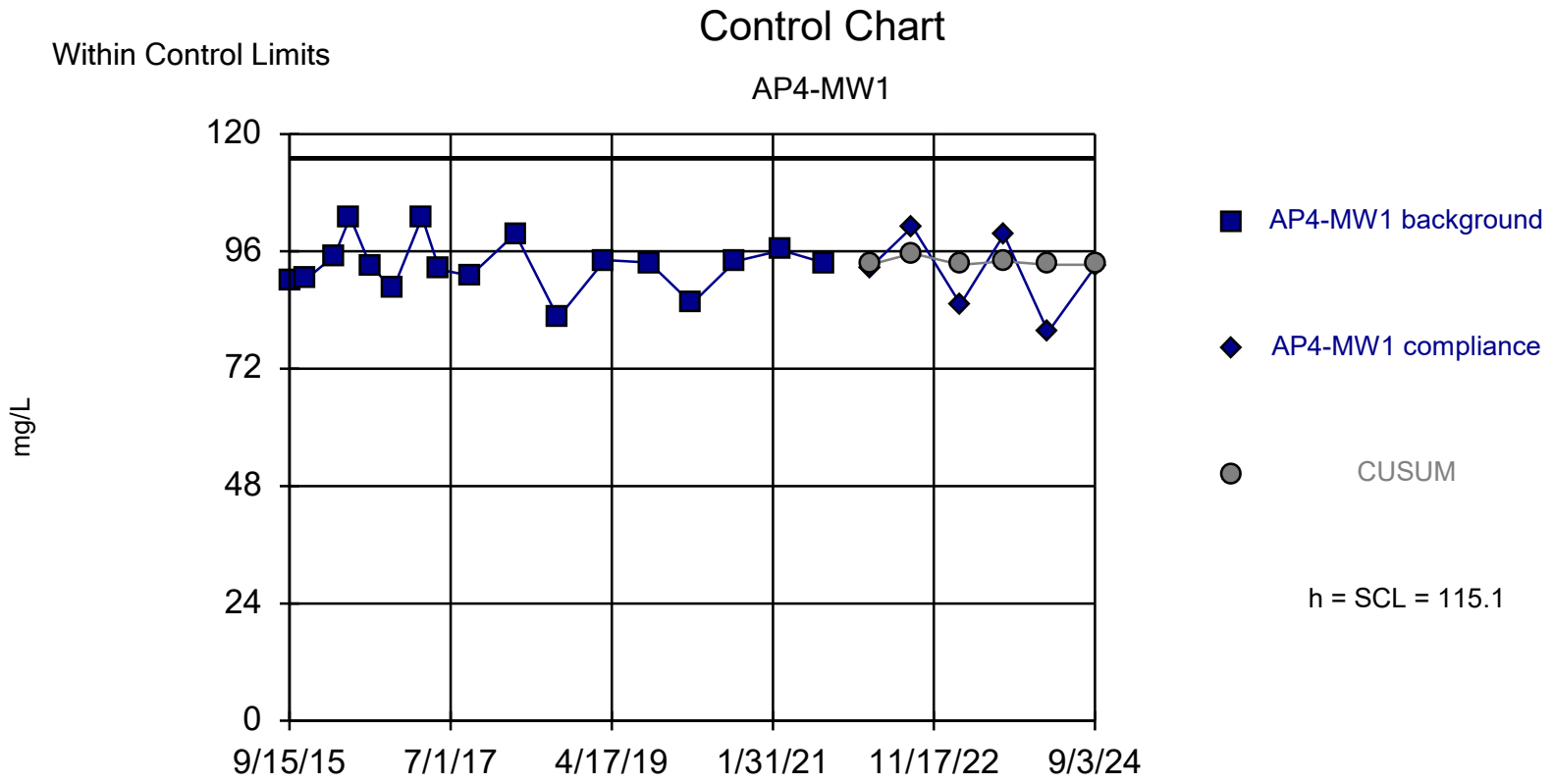
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 88.24% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 10/11/2024 1:28 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=93.24, Std. Dev.=5.454, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9613, critical = 0.892. Report alpha = 0.002326. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

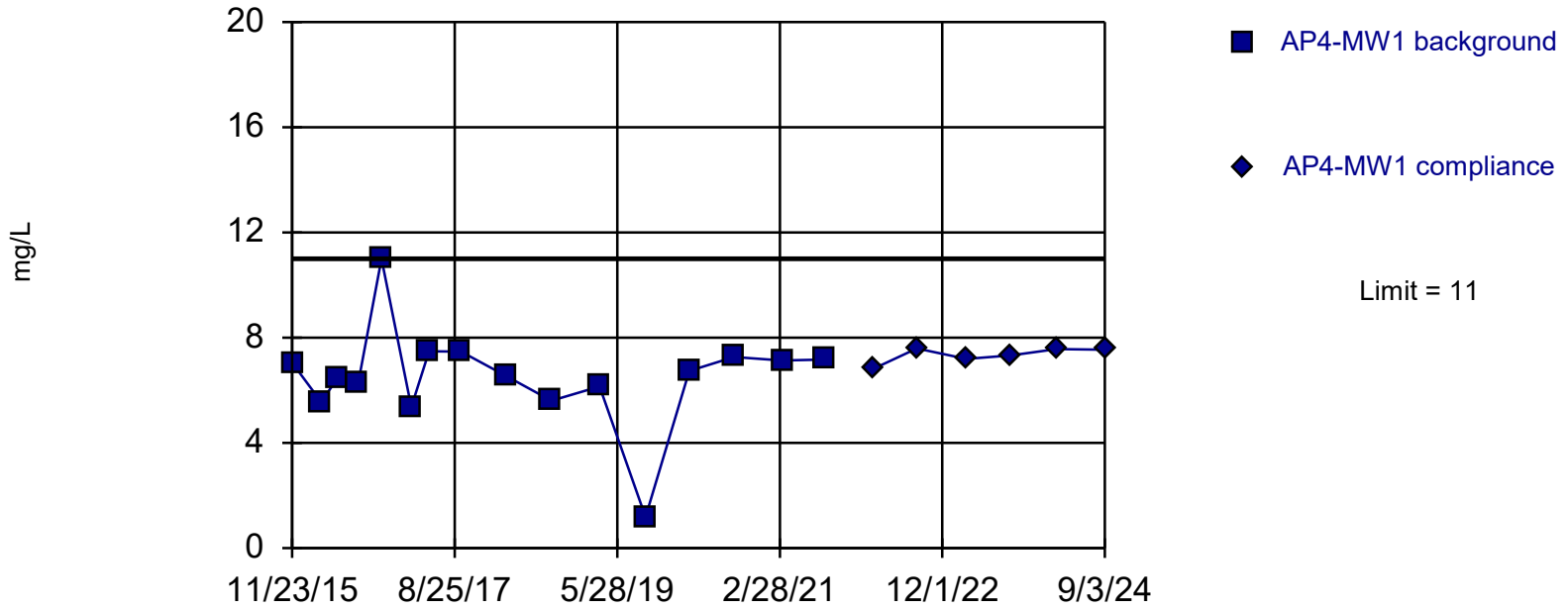
Constituent: Calcium Analysis Run 10/11/2024 1:17 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Within Limit

Prediction Limit

Intrawell Non-parametric

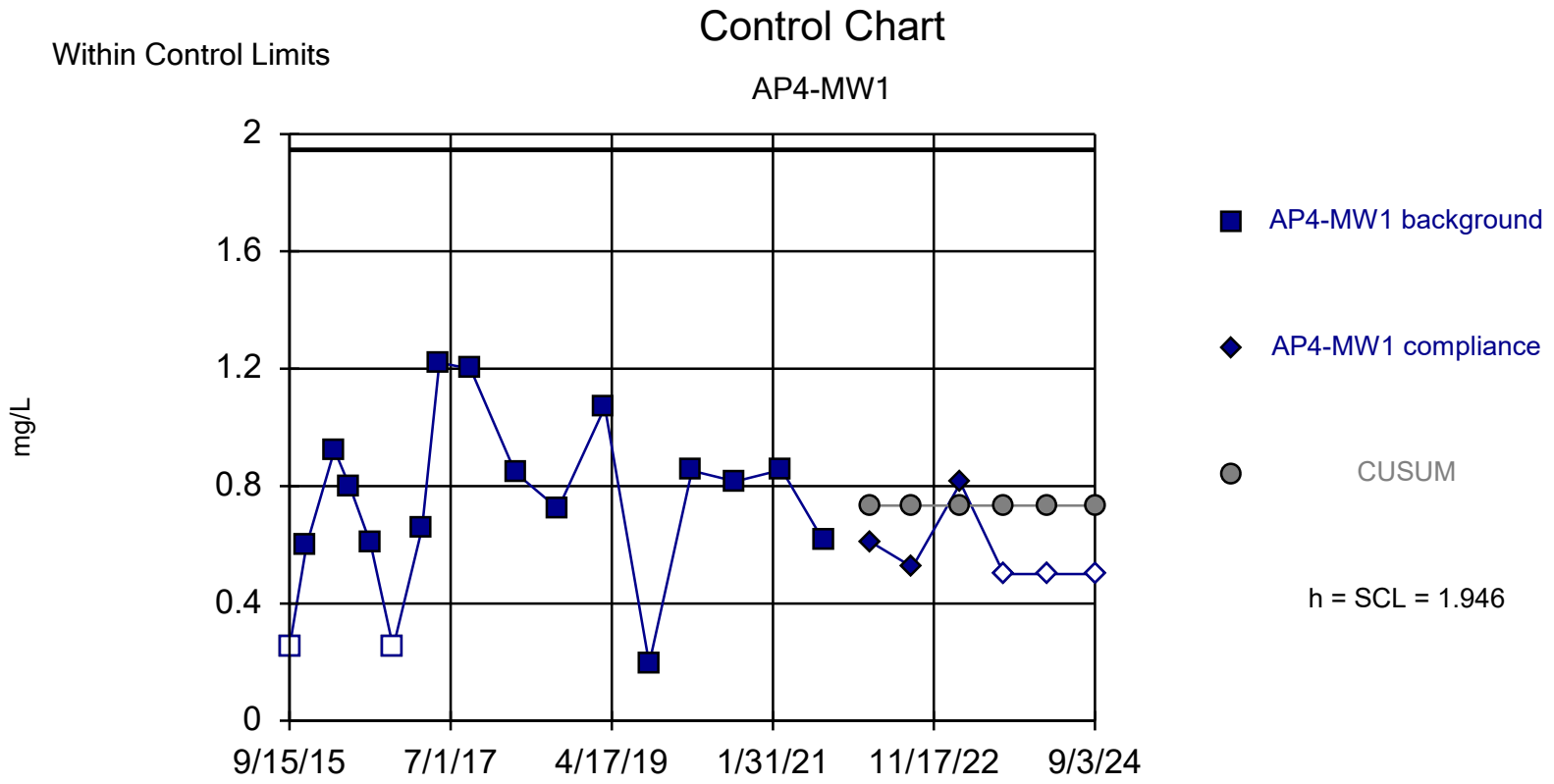


Non-parametric test used in lieu of control chart because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 16 background values. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 10/11/2024 1:18 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

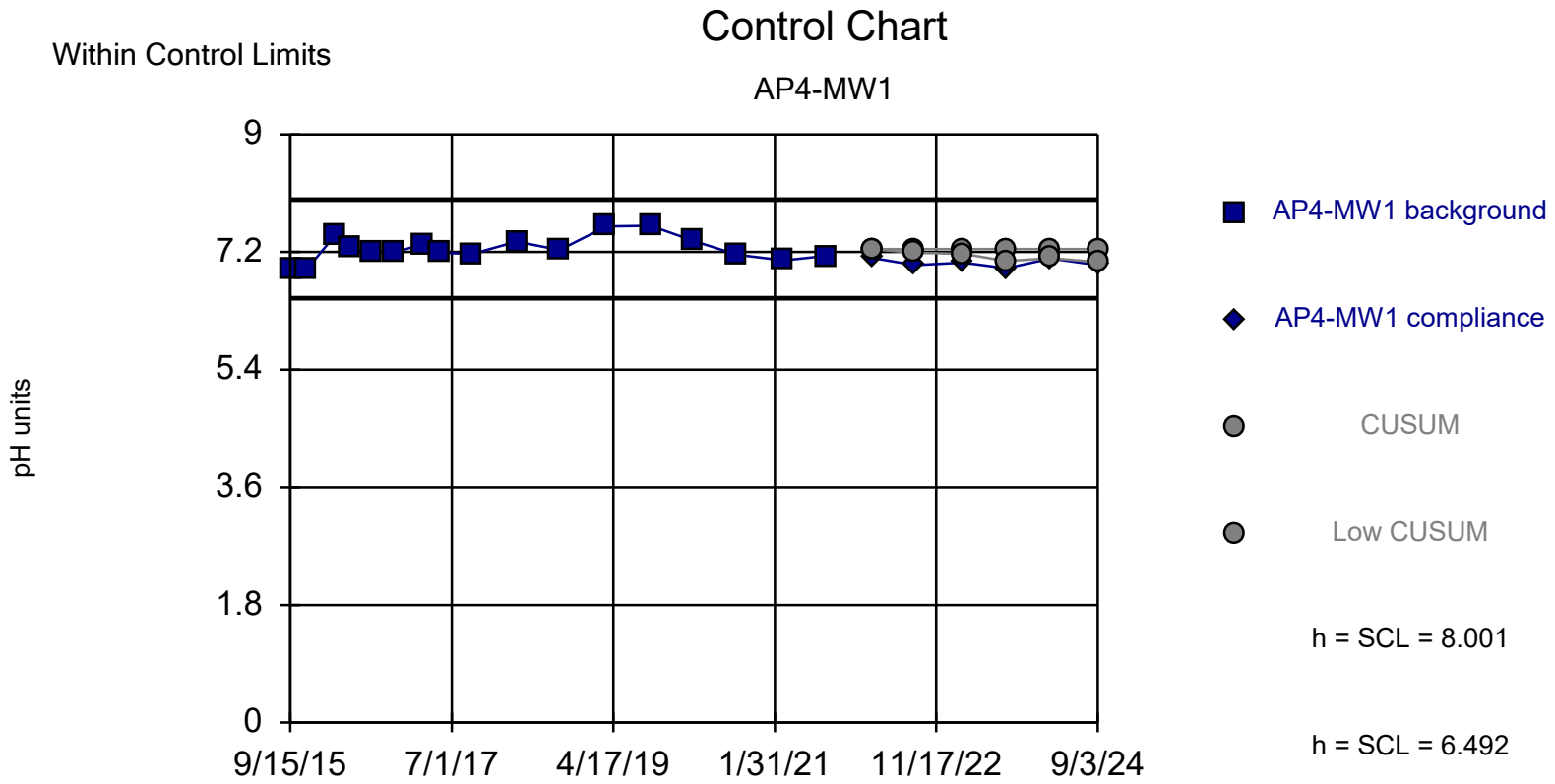
Hollow symbols indicate censored values.



Background Data Summary: Mean=0.7335, Std. Dev.=0.3031, n=17, 11.76% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9399, critical = 0.892. Report alpha = 0.002326. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Fluoride Analysis Run 10/11/2024 1:20 PM

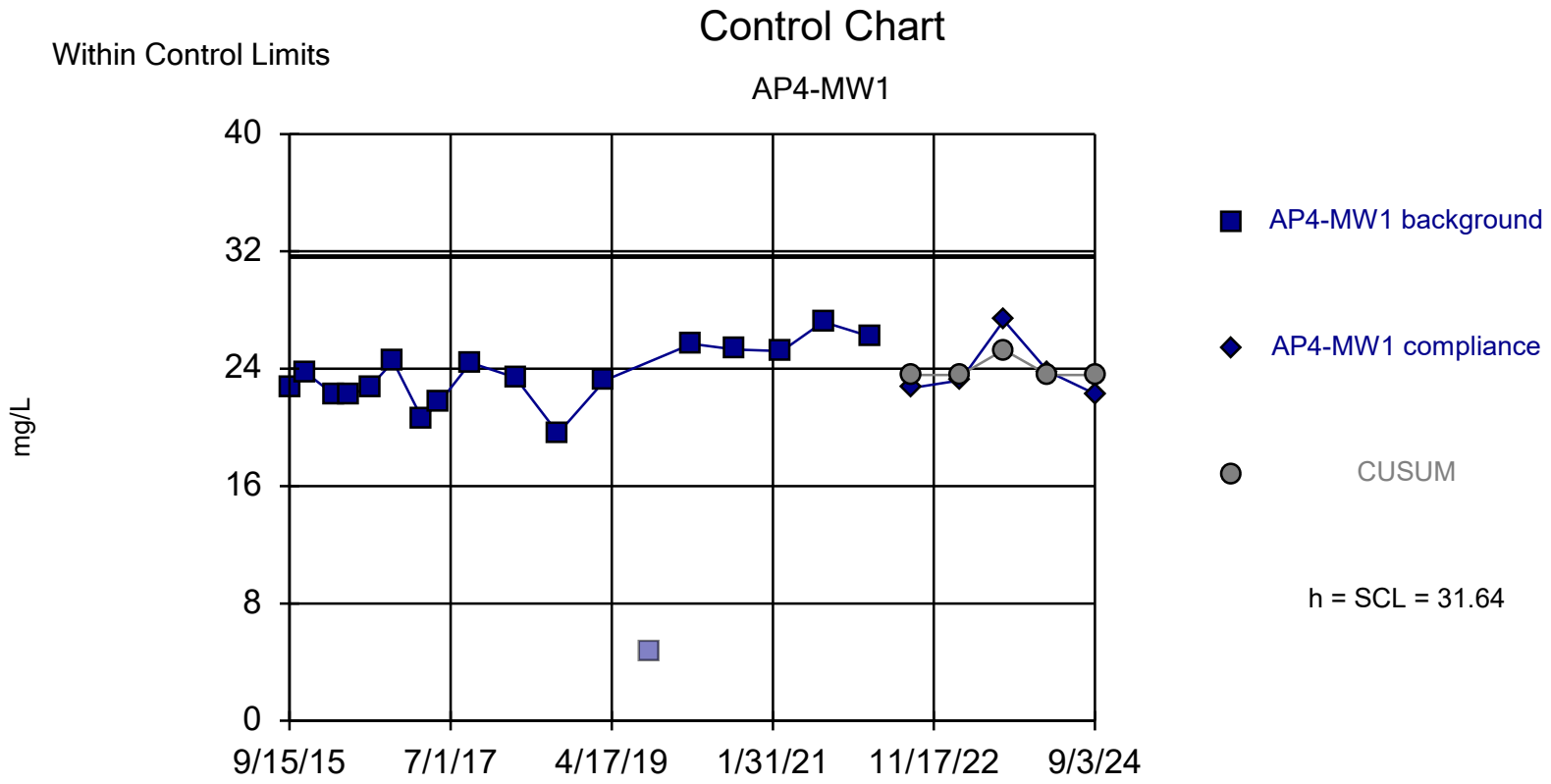
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=7.246, Std. Dev.=0.1887, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9501, critical = 0.892. Report alpha = 0.002306. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 10/11/2024 1:24 PM

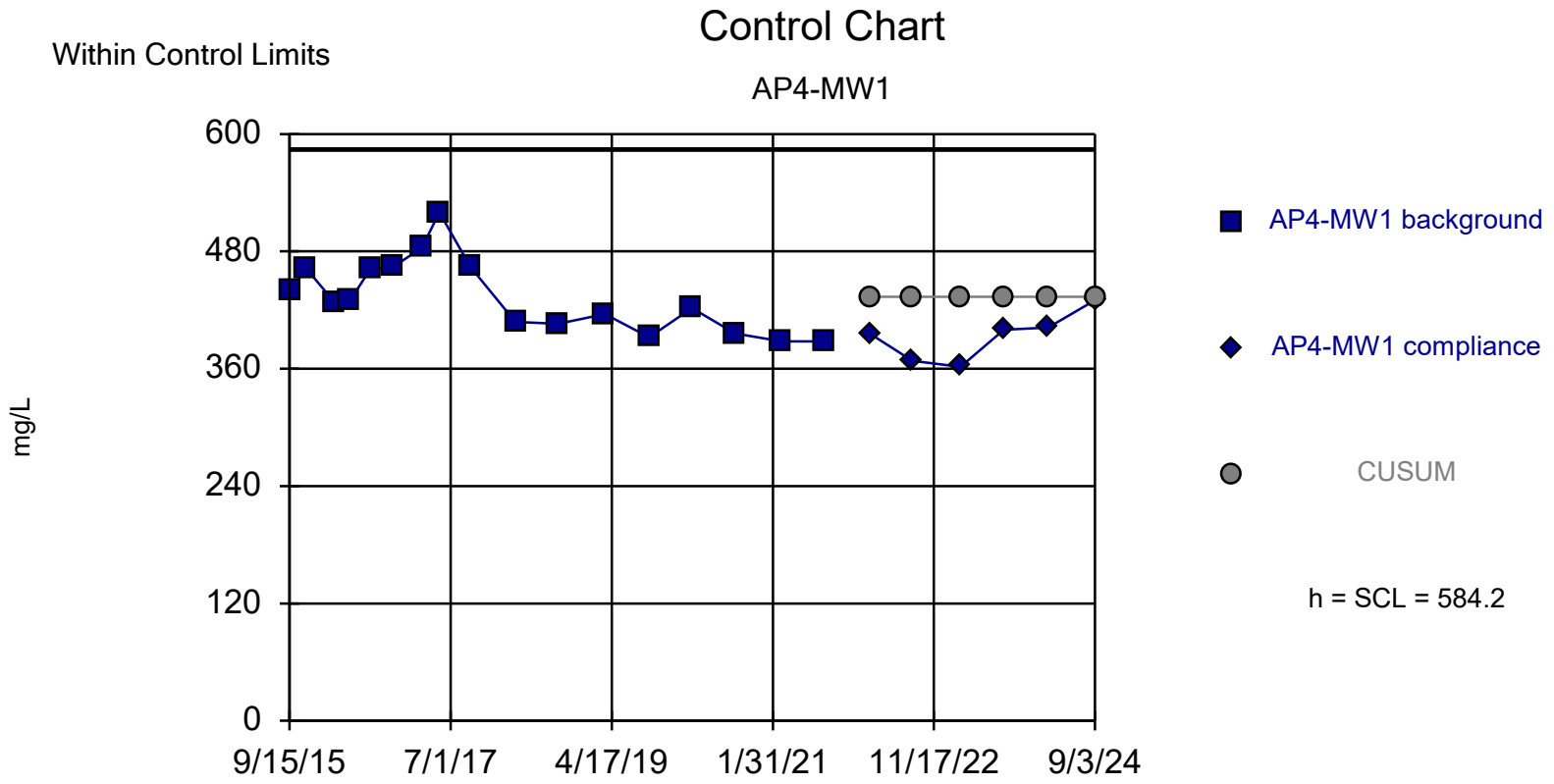
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=23.57, Std. Dev.=2.016, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9891, critical = 0.892. Report alpha = 0.00197. Dates ending 3/2/2022 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate Analysis Run 10/11/2024 1:22 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=433.5, Std. Dev.=37.68, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9301, critical = 0.892. Report alpha = 0.002306. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Total Dissolved Solids Analysis Run 10/11/2024 1:25 PM

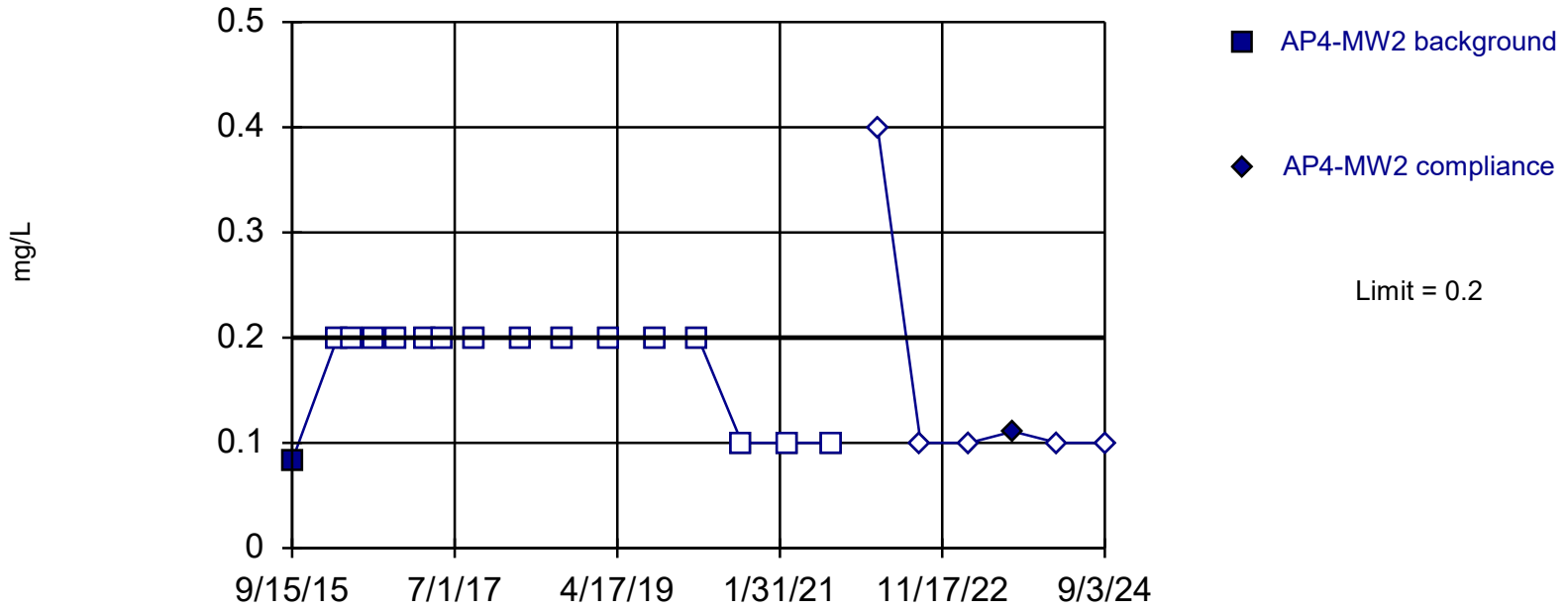
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

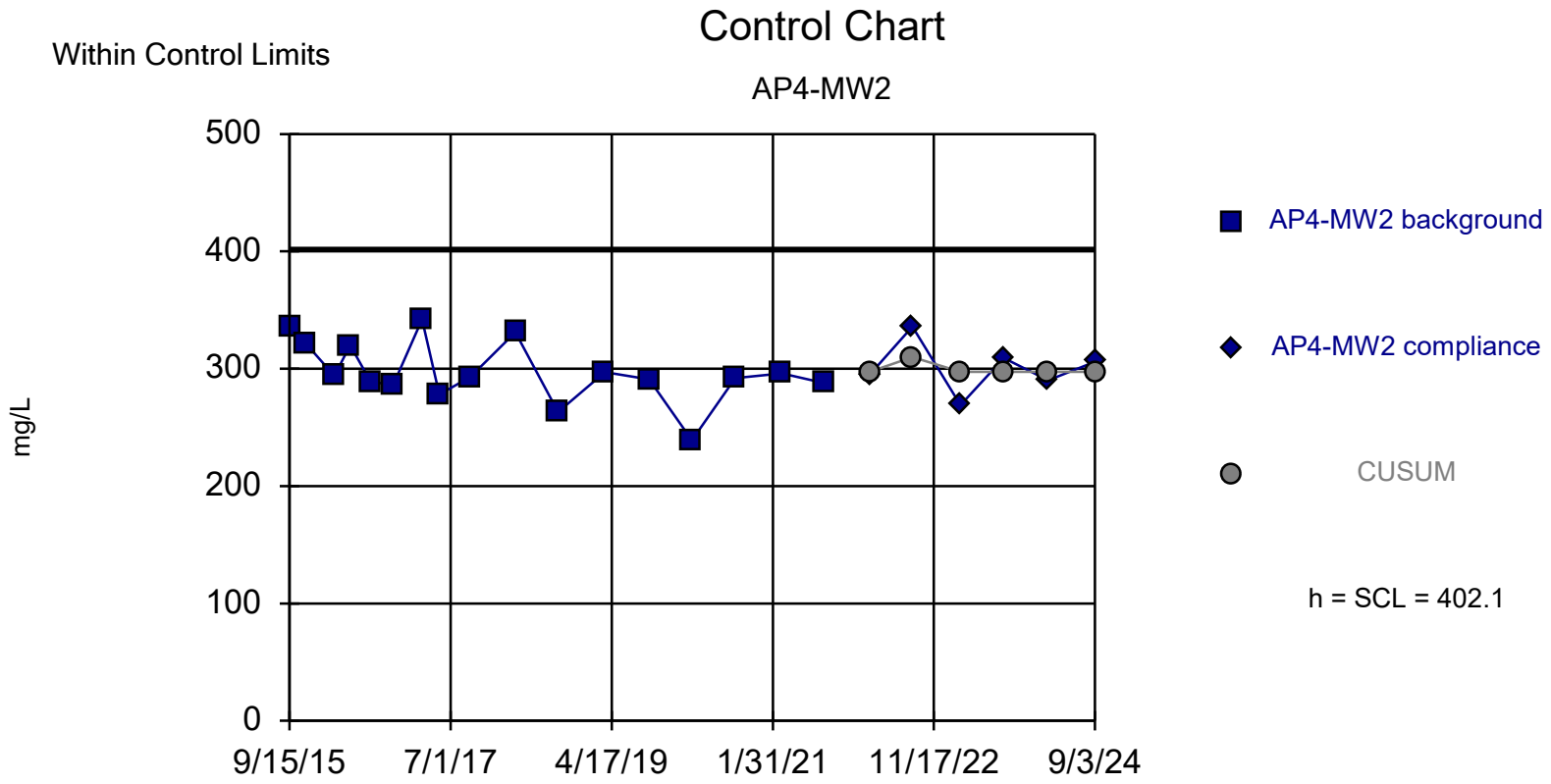
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 16 background values. 93.75% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 10/11/2024 1:27 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=297.4, Std. Dev.=26.17, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9371, critical = 0.892. Report alpha = 0.002306. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

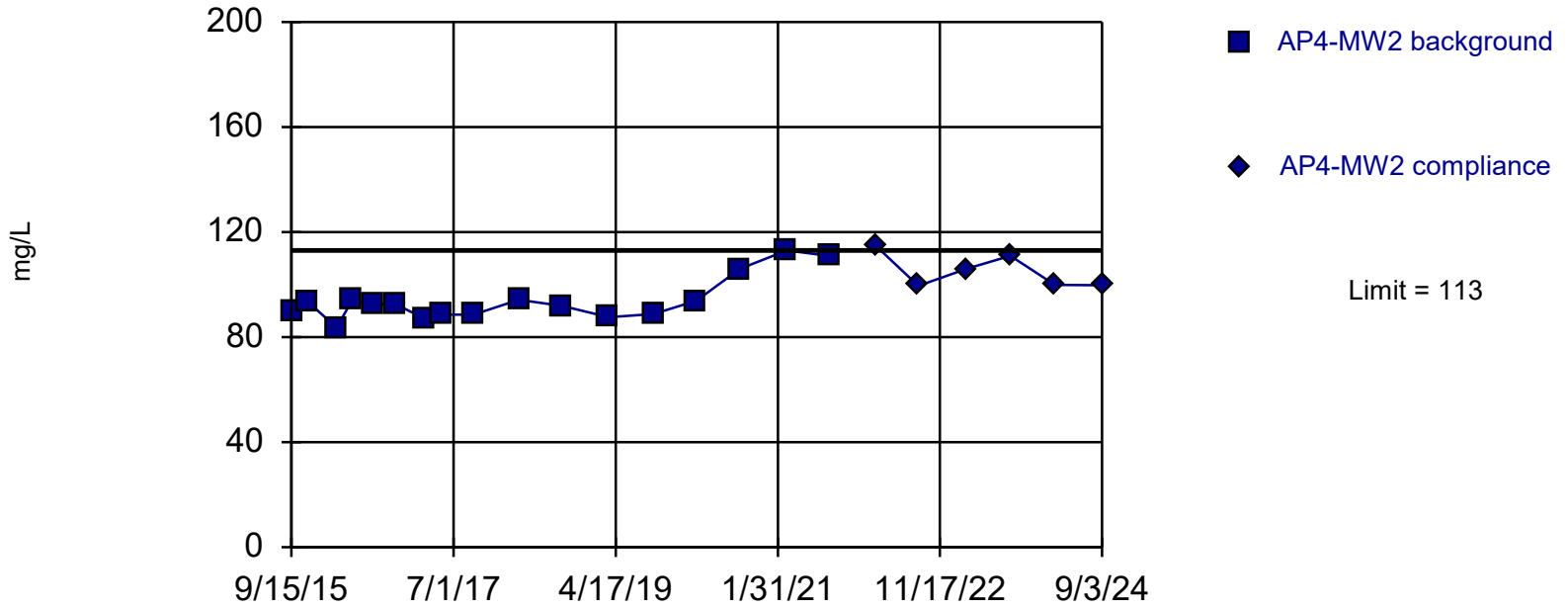
Constituent: Calcium Analysis Run 10/11/2024 1:29 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of control chart because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 17 background values. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 10/11/2024 1:29 PM

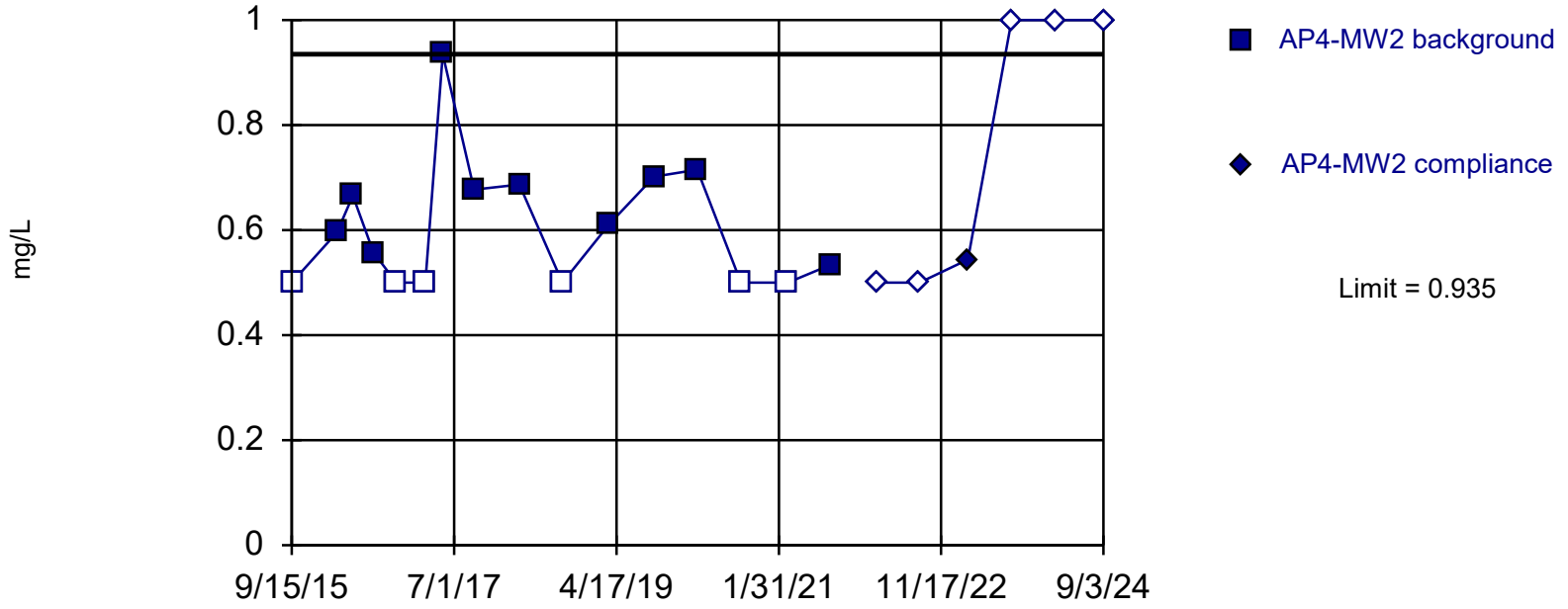
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

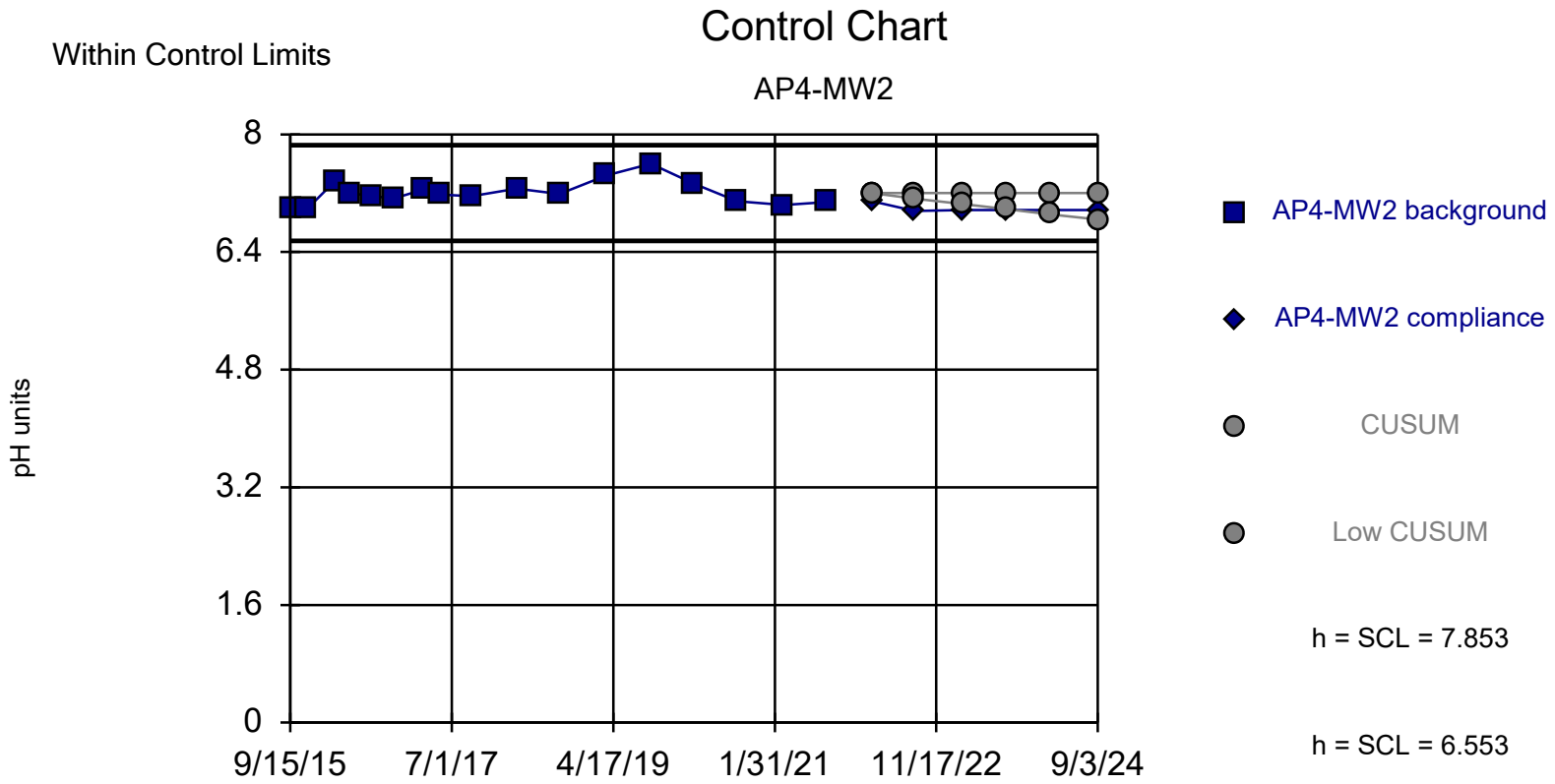
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 16 background values. 37.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Fluoride Analysis Run 10/11/2024 1:30 PM

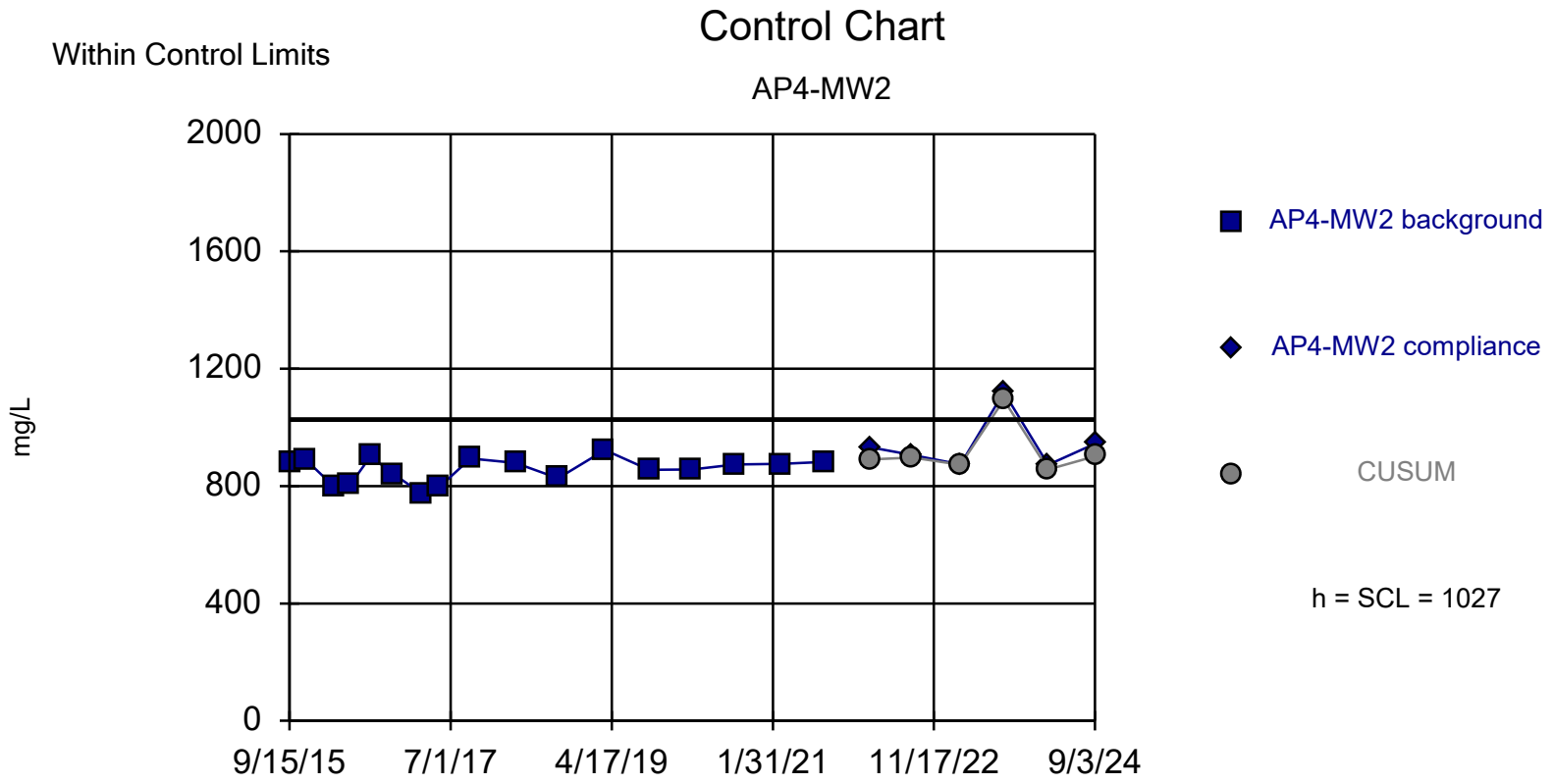
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=7.203, Std. Dev.=0.1625, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9453, critical = 0.892. Report alpha = 0.002306. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 10/11/2024 1:31 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=856.1, Std. Dev.=42.66, n=17. Exceedance nullified by following point per option settings. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9342, critical = 0.892. Report alpha = 0.002306. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

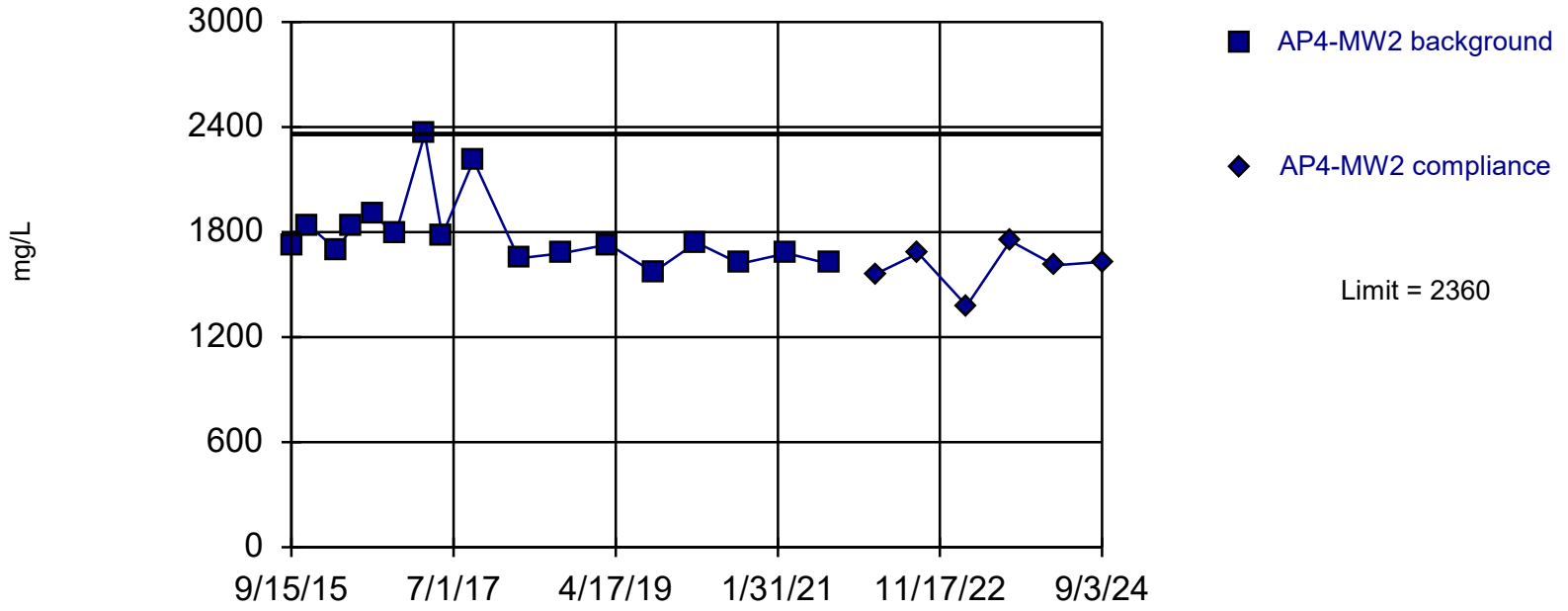
Constituent: Sulfate Analysis Run 10/11/2024 1:32 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of control chart because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 17 background values. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Total Dissolved Solids Analysis Run 10/11/2024 1:33 PM

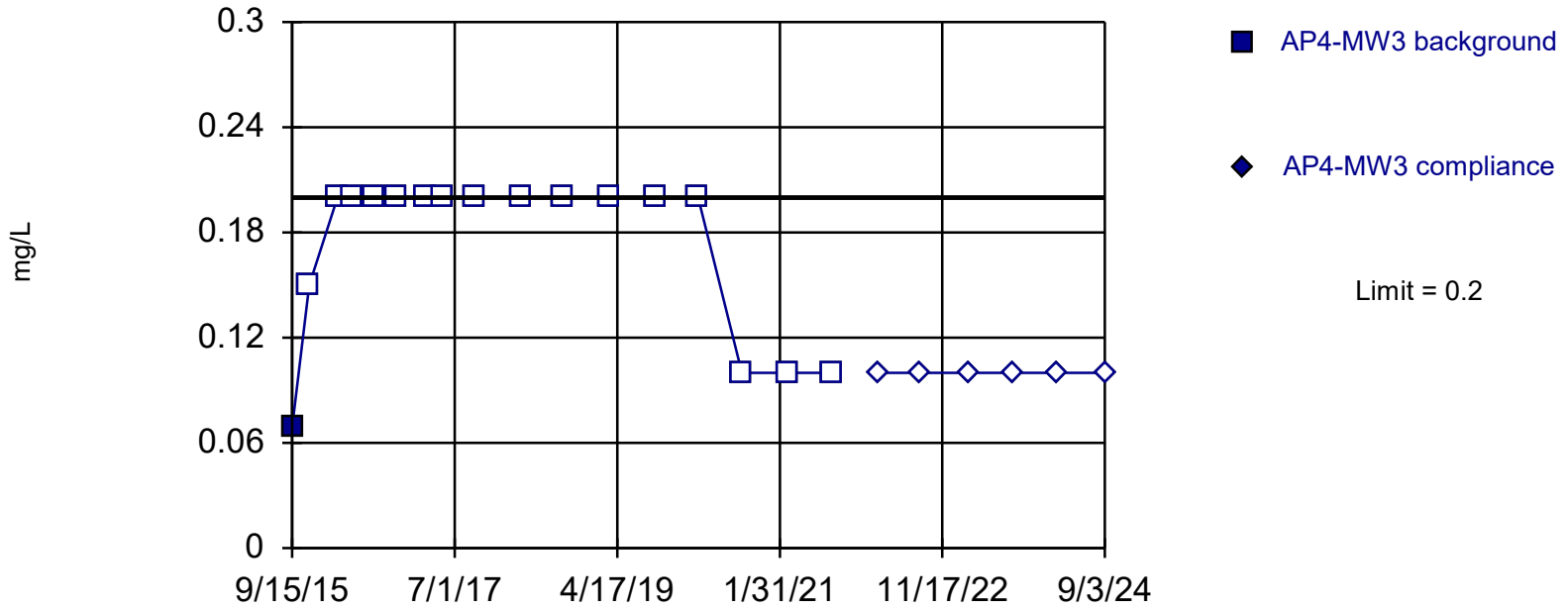
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

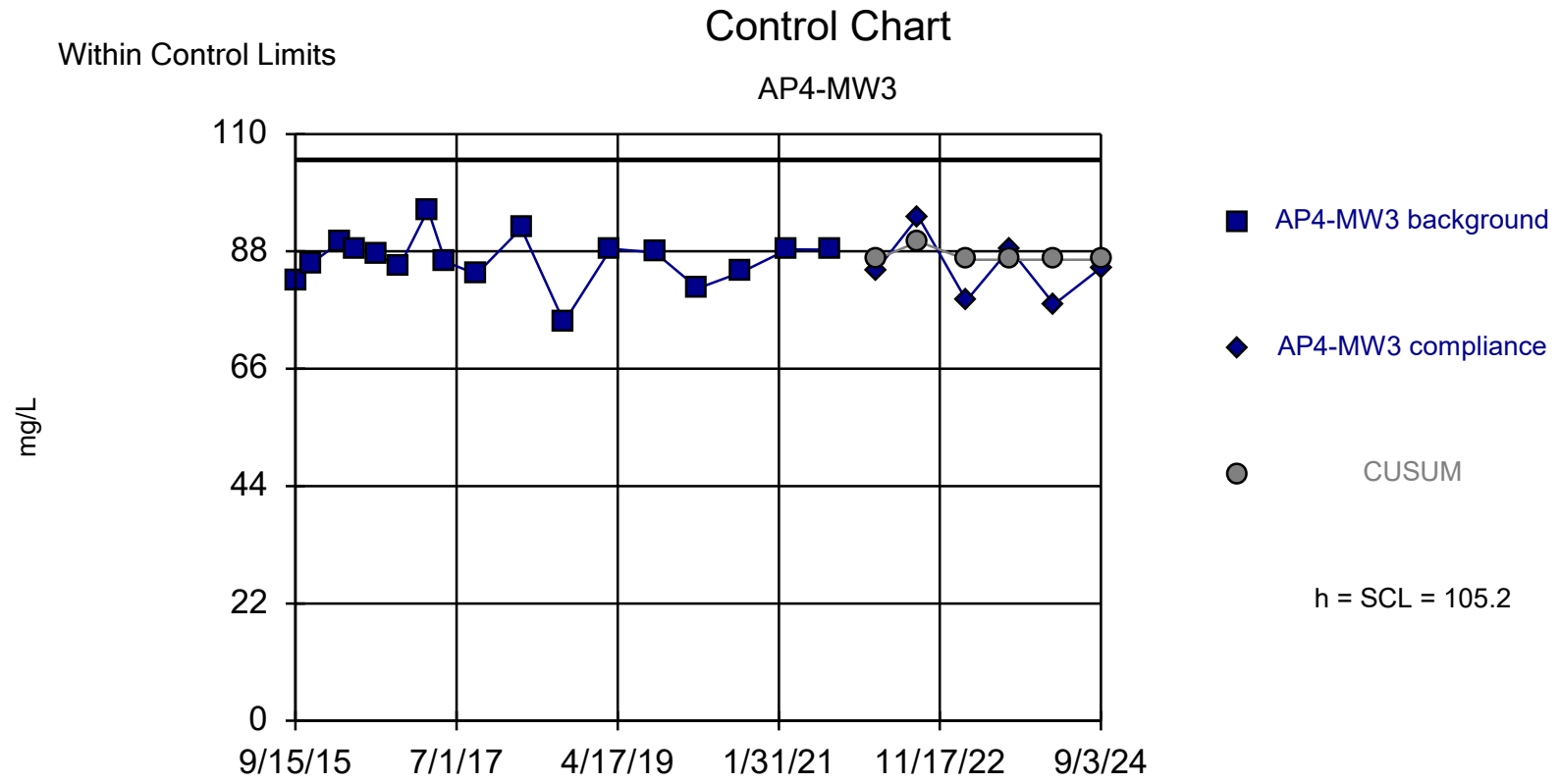
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 10/11/2024 1:35 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=86.46, Std. Dev.=4.678, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9528, critical = 0.892. Report alpha = 0.002306. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium Analysis Run 10/11/2024 1:35 PM

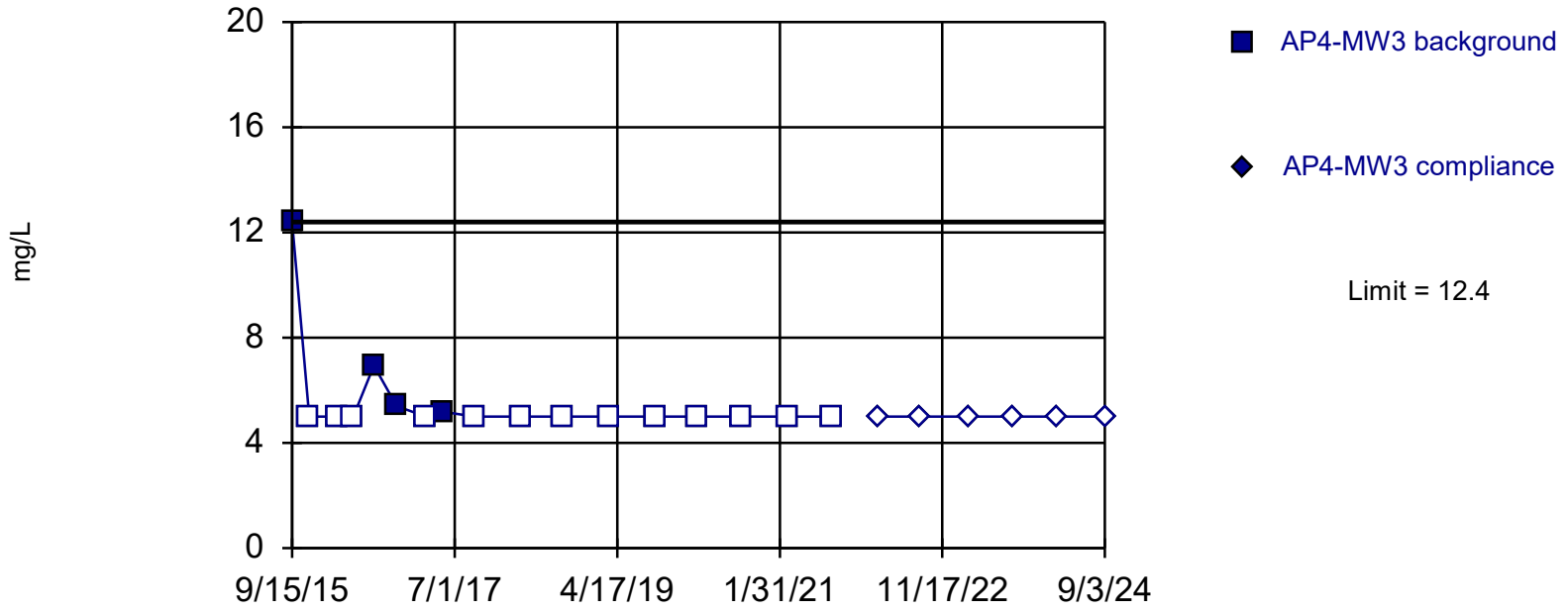
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric

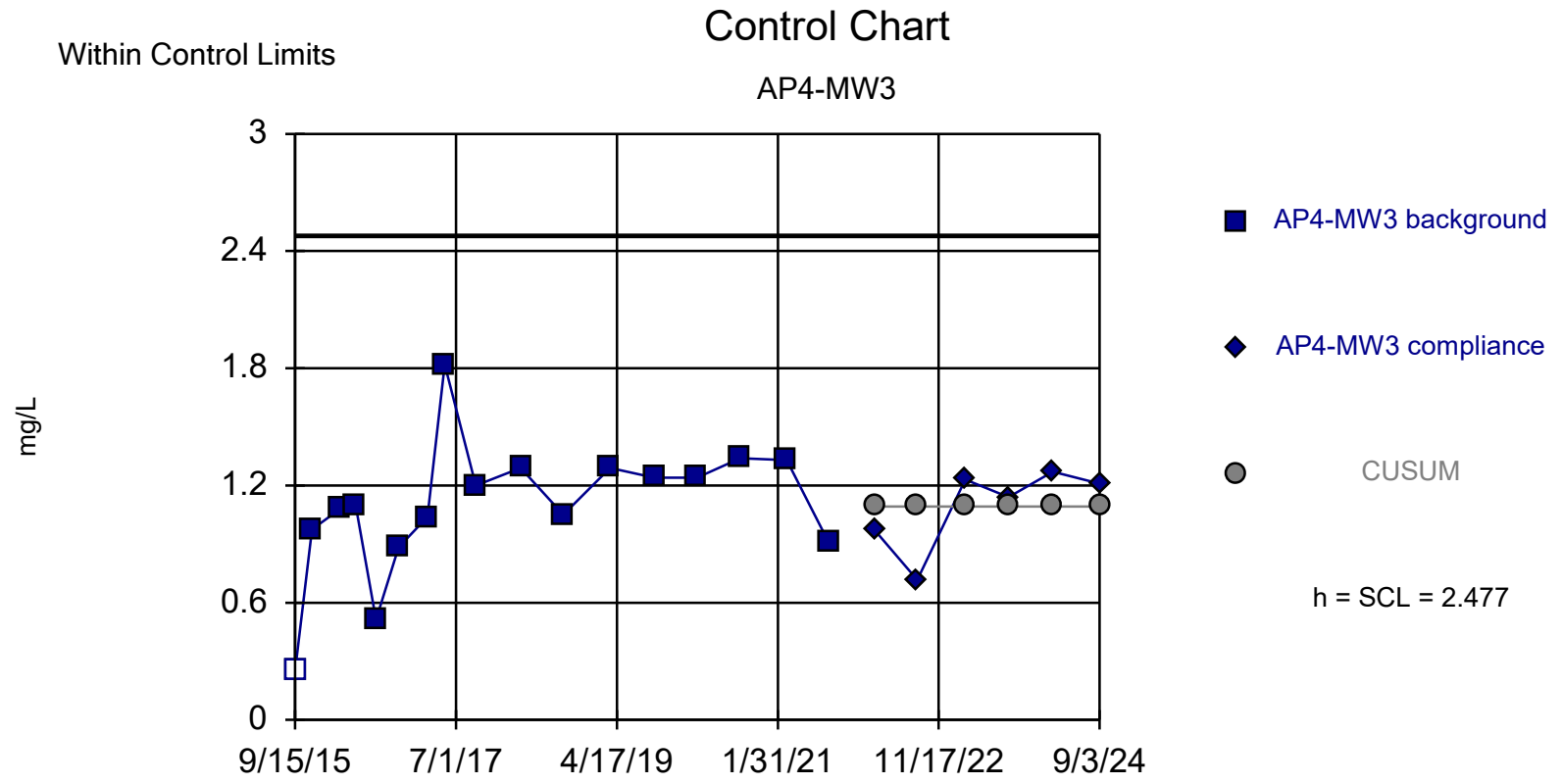


Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 76.47% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 10/11/2024 1:36 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

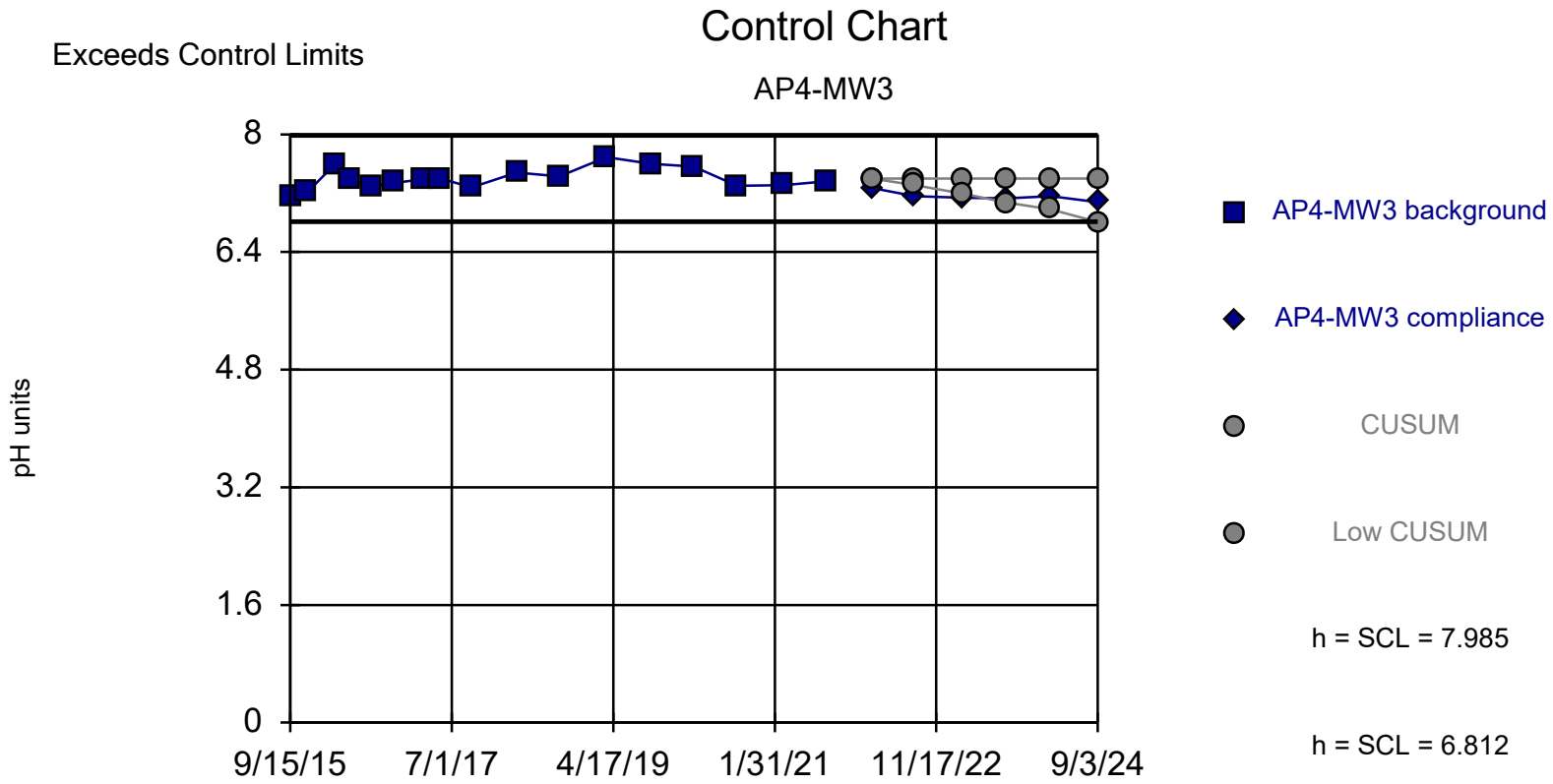
Hollow symbols indicate censored values.



Background Data Summary: Mean=1.092, Std. Dev.=0.3464, n=17, 5.882% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9173, critical = 0.892. Report alpha = 0.002306. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Fluoride Analysis Run 10/11/2024 1:37 PM

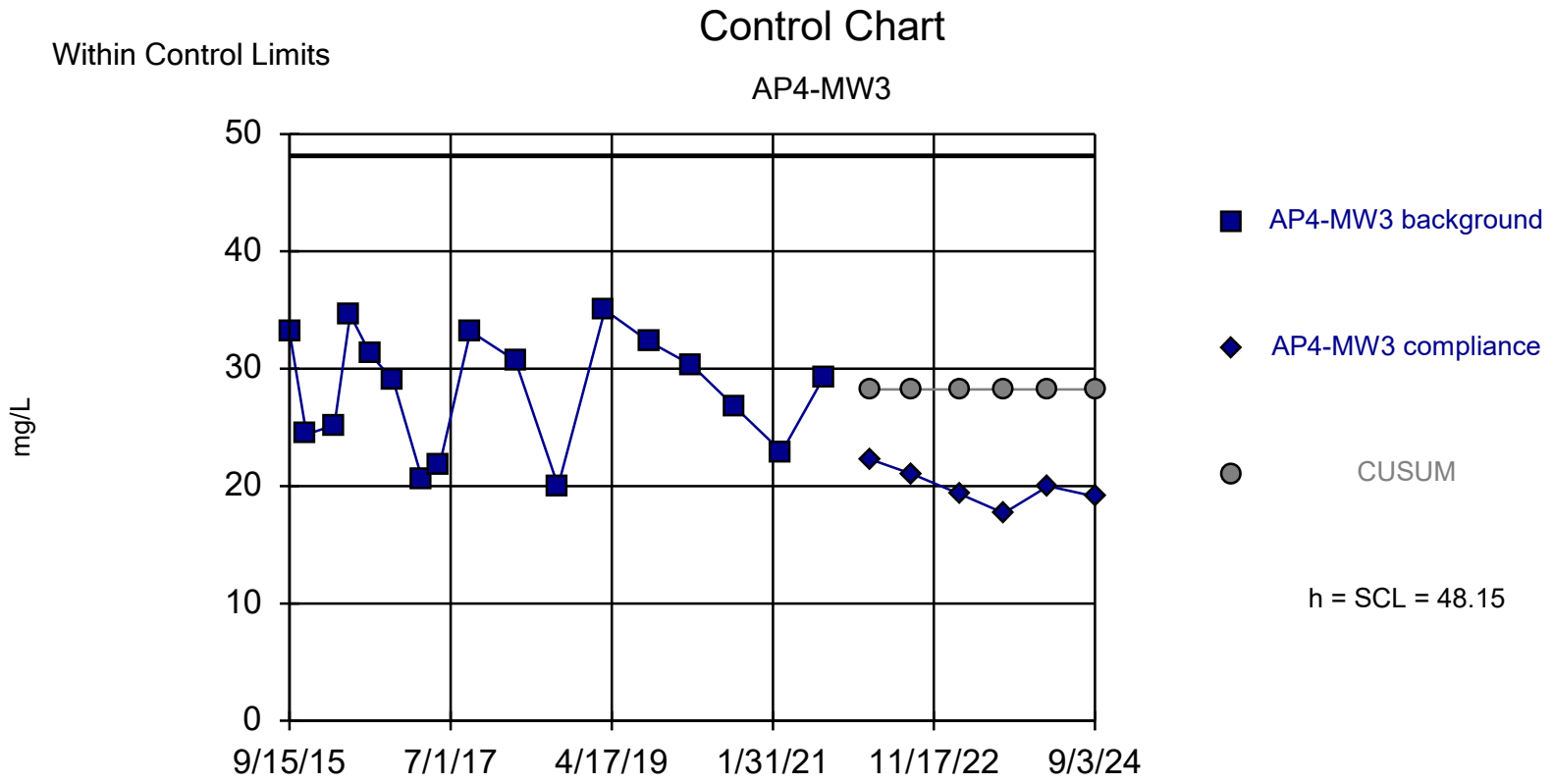
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=7.399, Std. Dev.=0.1466, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9619, critical = 0.892. Report alpha = 0.002306. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 10/11/2024 1:39 PM

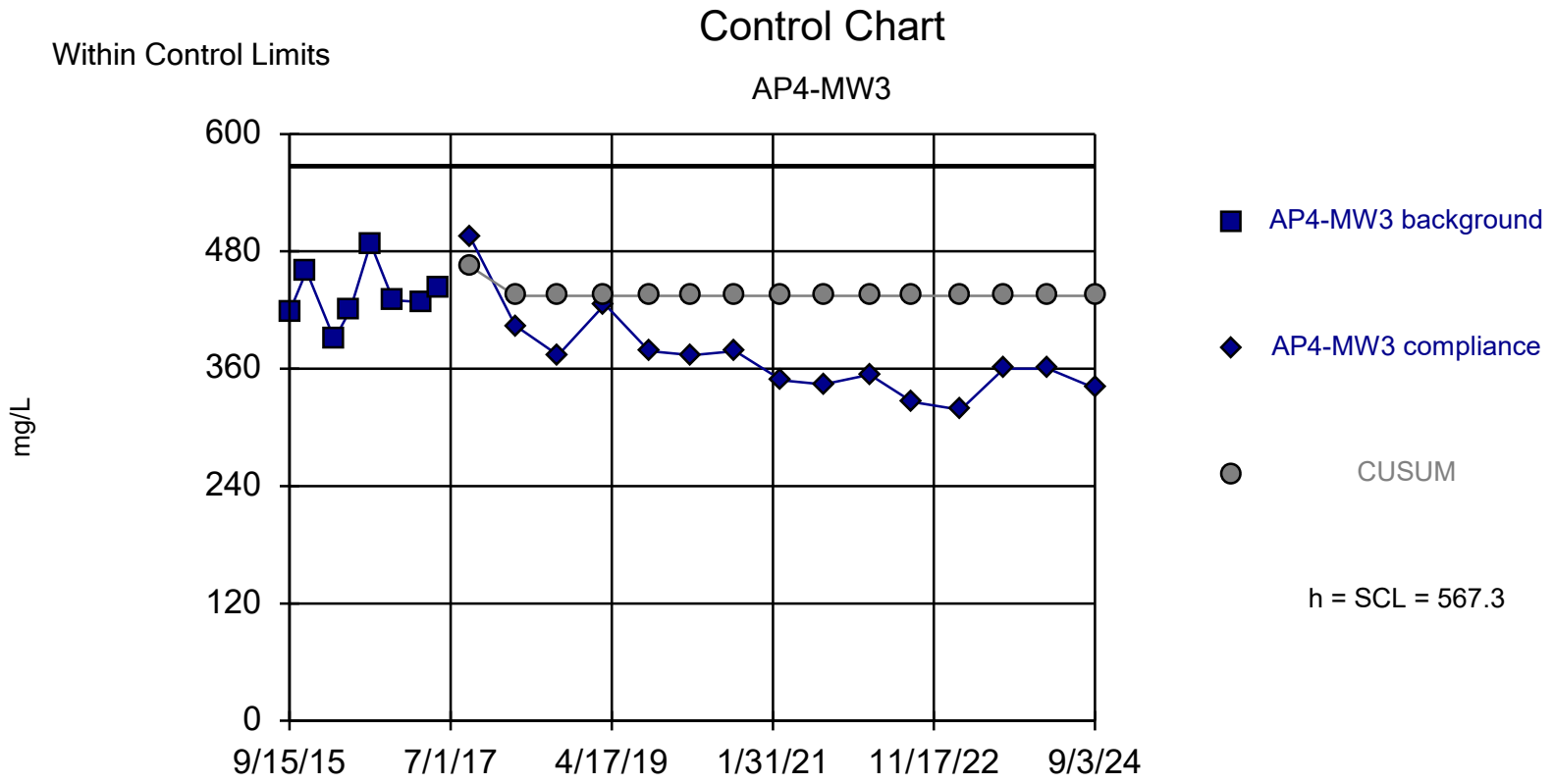
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=28.25, Std. Dev.=4.977, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9311, critical = 0.892. Report alpha = 0.002306. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate Analysis Run 10/11/2024 1:39 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=434.5, Std. Dev.=29.51, n=8. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9615, critical = 0.818. Report alpha = 0.01624. Dates ending 5/16/2017 used for control stats. Standardized h=4.5, SCL=4.5.

Constituent: Total Dissolved Solids Analysis Run 10/11/2024 1:41 PM

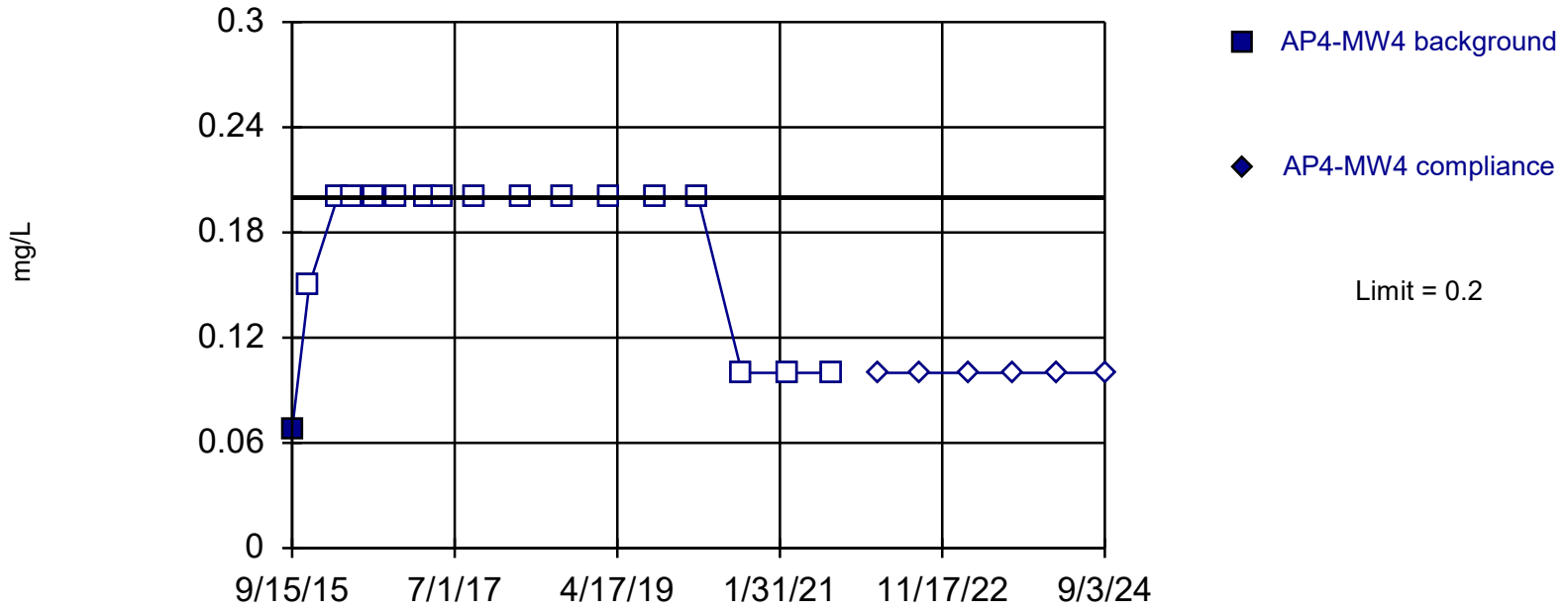
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

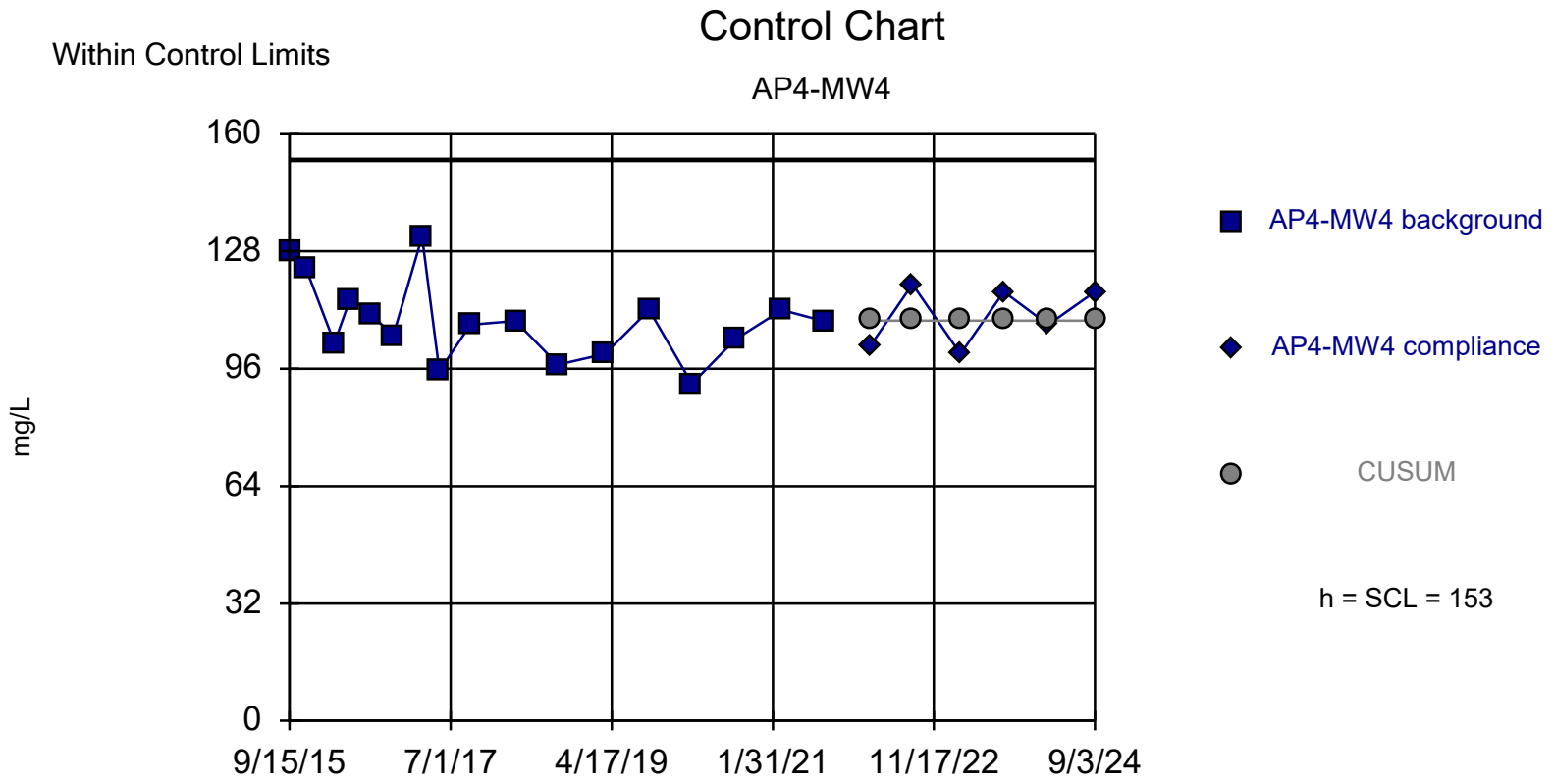
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 10/11/2024 1:43 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=109.1, Std. Dev.=10.96, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9569, critical = 0.892. Report alpha = 0.00227. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium Analysis Run 10/11/2024 1:44 PM

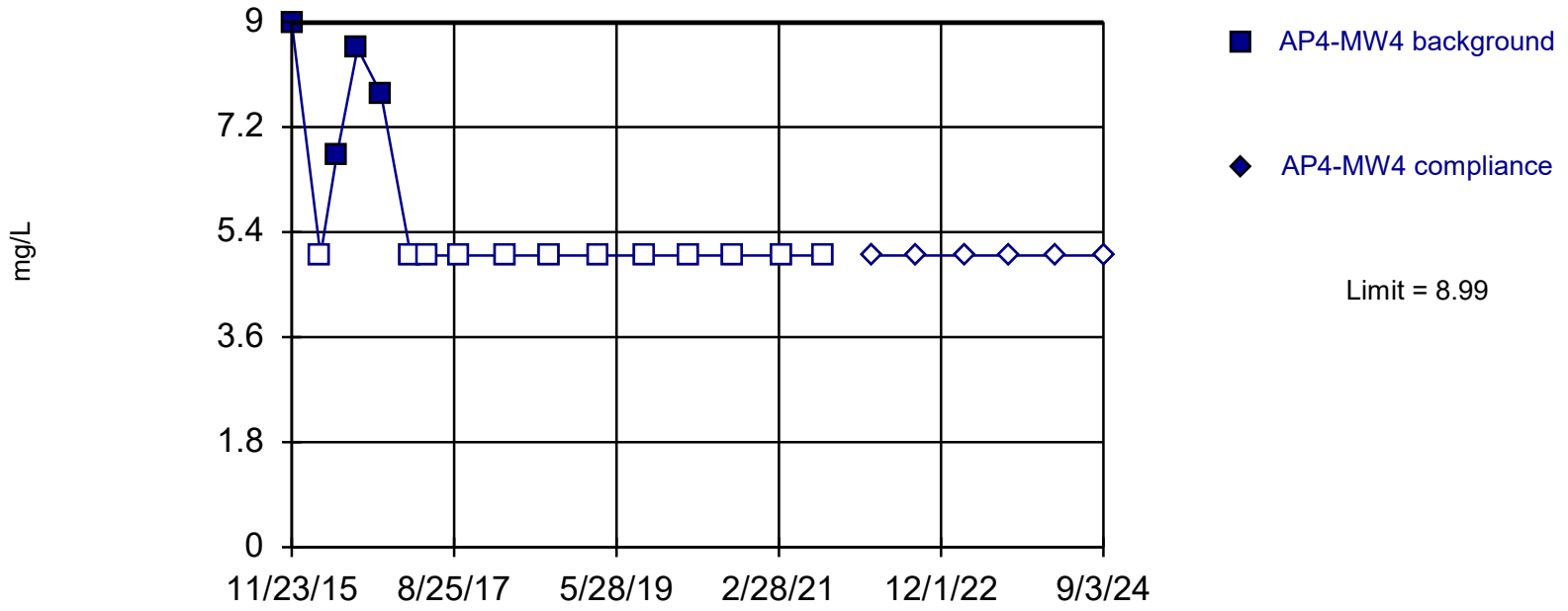
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric

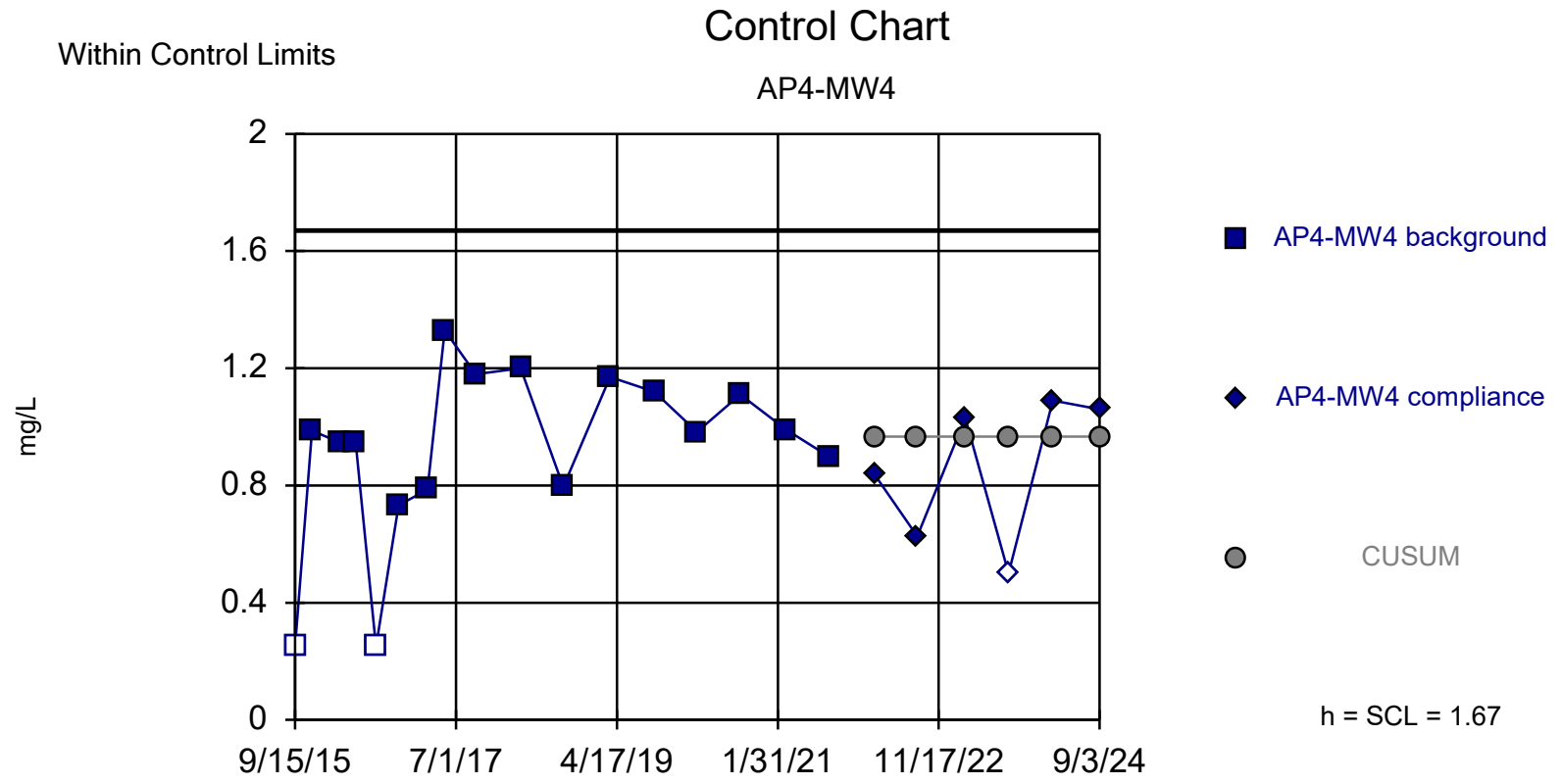


Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 16 background values. 75% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 10/11/2024 1:45 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

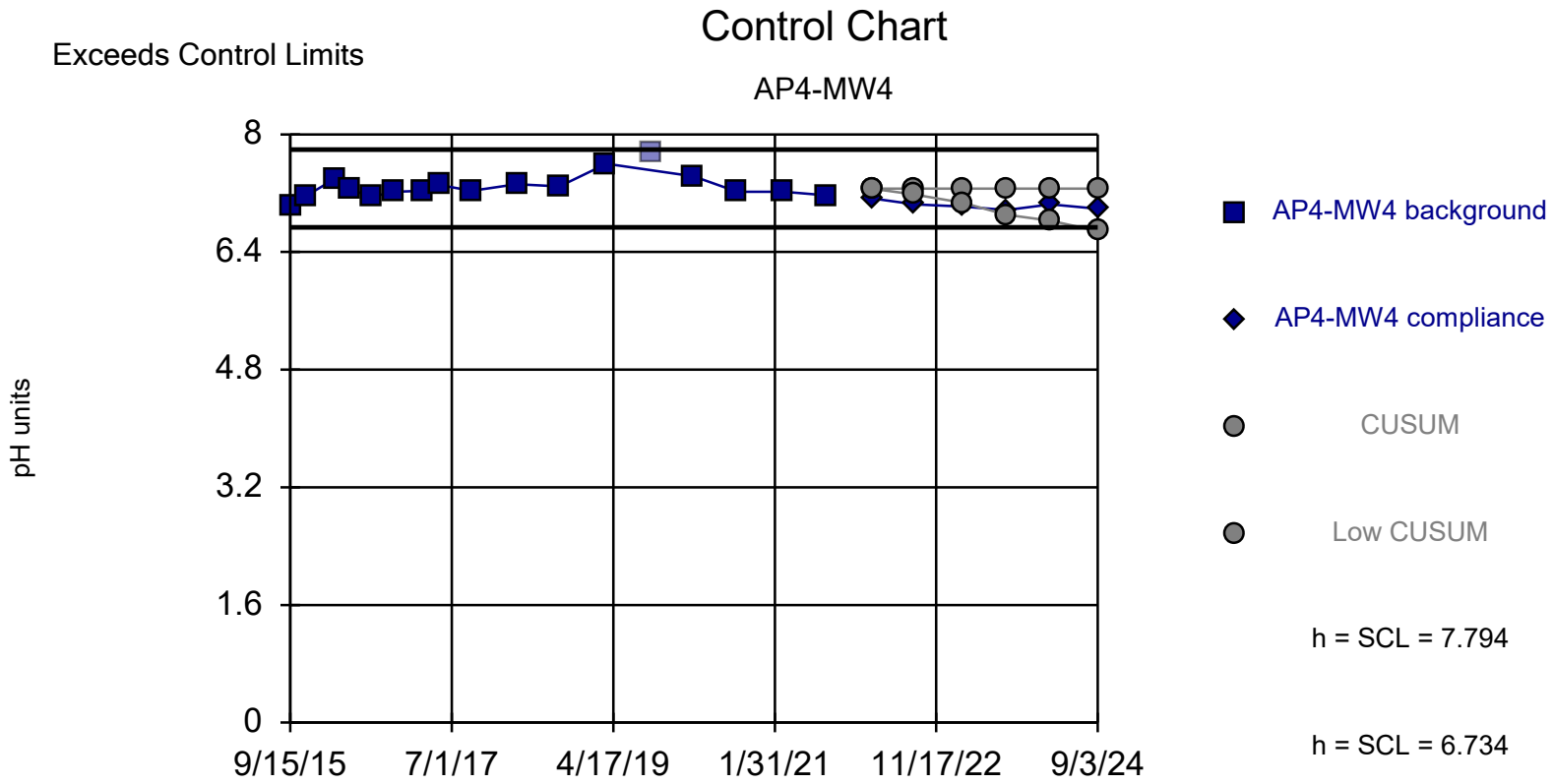
Hollow symbols indicate censored values.



Background Data Summary (based on square transformation): Mean=0.9349, Std. Dev.=0.4633, n=17, 11.76% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9598, critical = 0.892. Report alpha = 0.002372. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Fluoride Analysis Run 10/11/2024 1:47 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

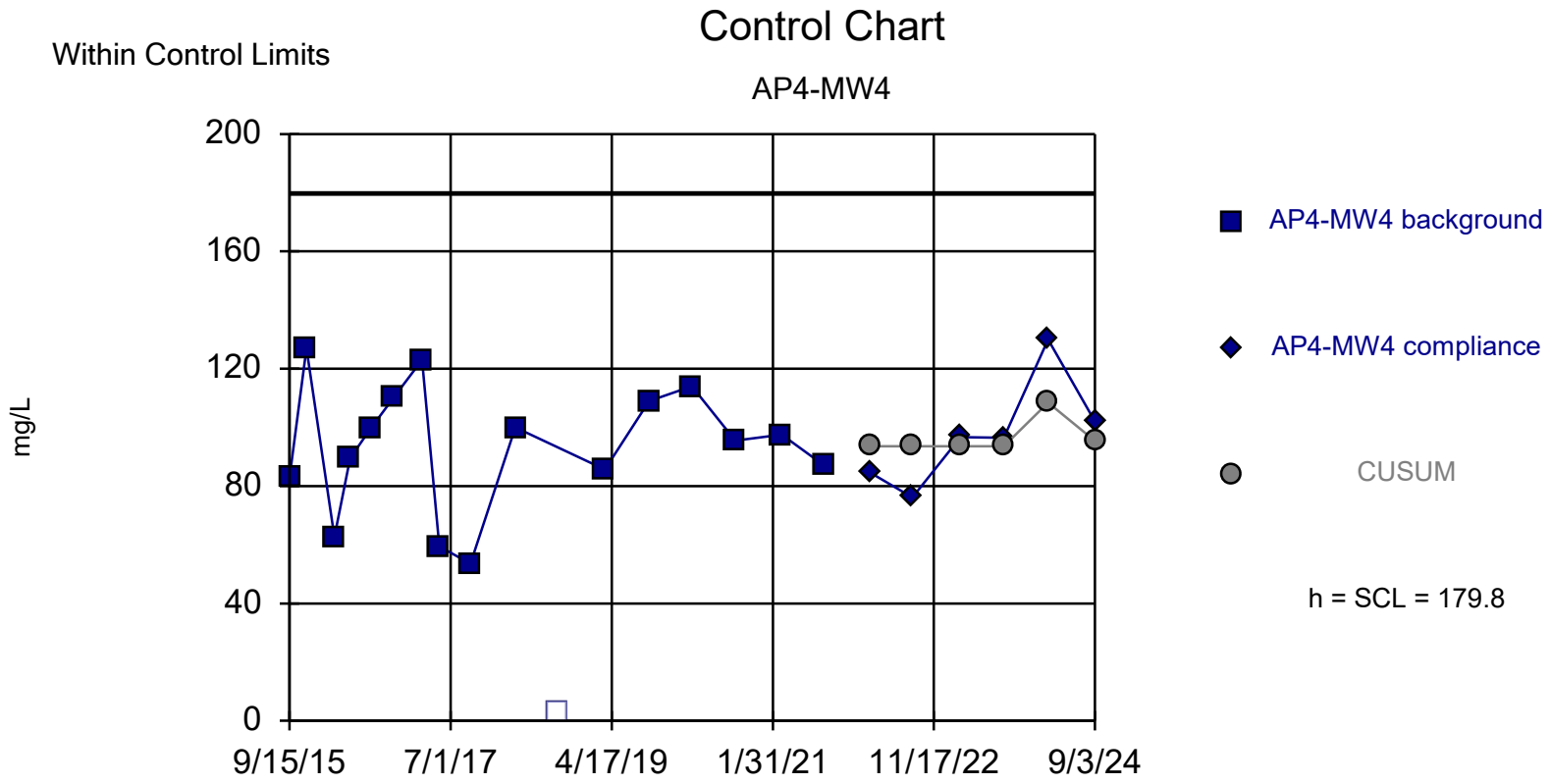


Background Data Summary: Mean=7.264, Std. Dev.=0.1325, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9275, critical = 0.887. Report alpha = 0.002492. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 10/11/2024 1:49 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

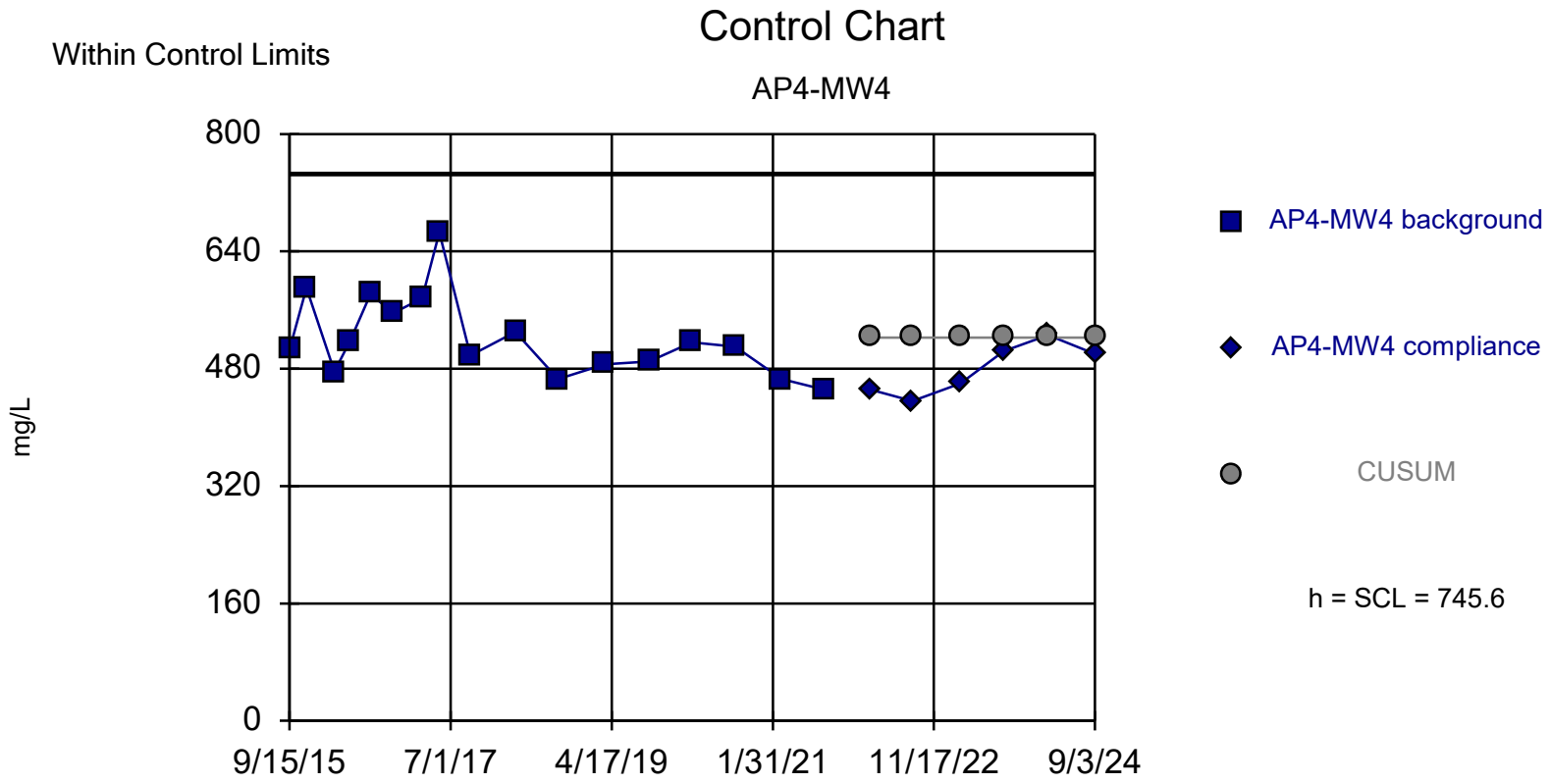
Hollow symbols indicate censored values.



Background Data Summary: Mean=93.53, Std. Dev.=21.56, n=16. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9551, critical = 0.887. Report alpha = 0.002546. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate Analysis Run 10/11/2024 1:53 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=522.6, Std. Dev.=55.75, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9137, critical = 0.892. Report alpha = 0.002296. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Total Dissolved Solids Analysis Run 10/11/2024 1:52 PM

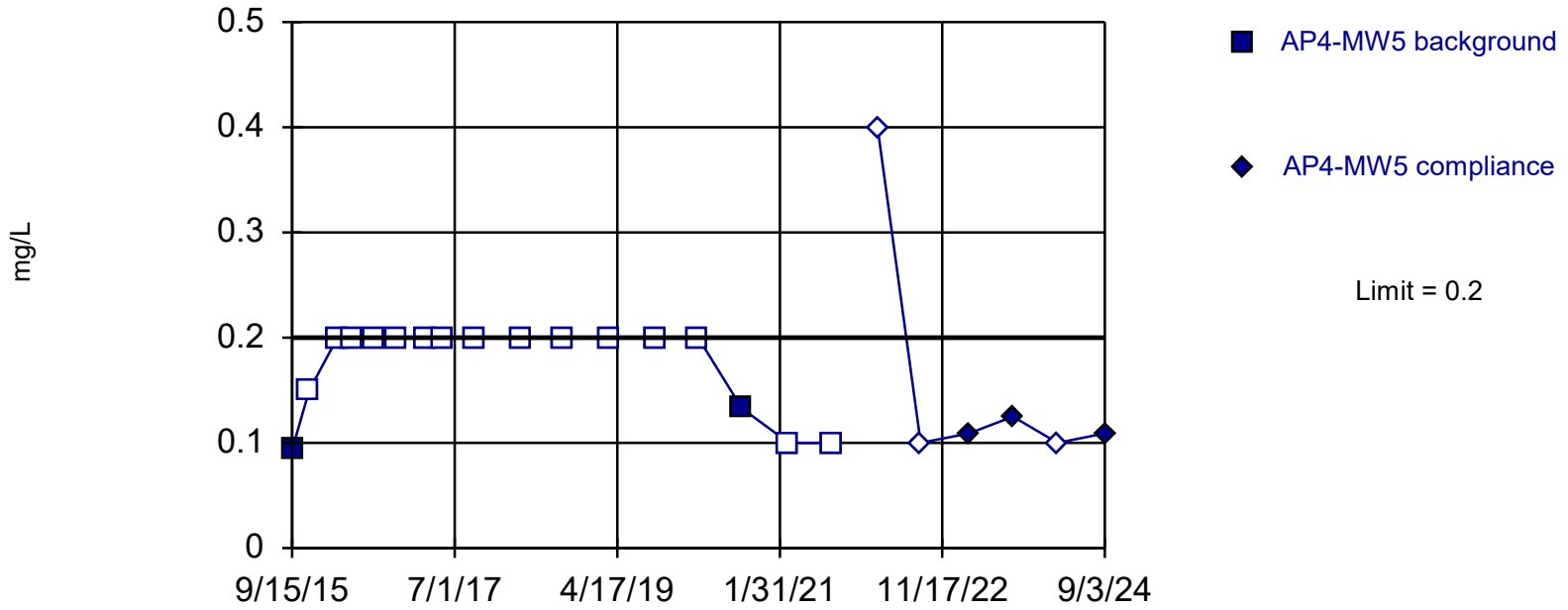
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

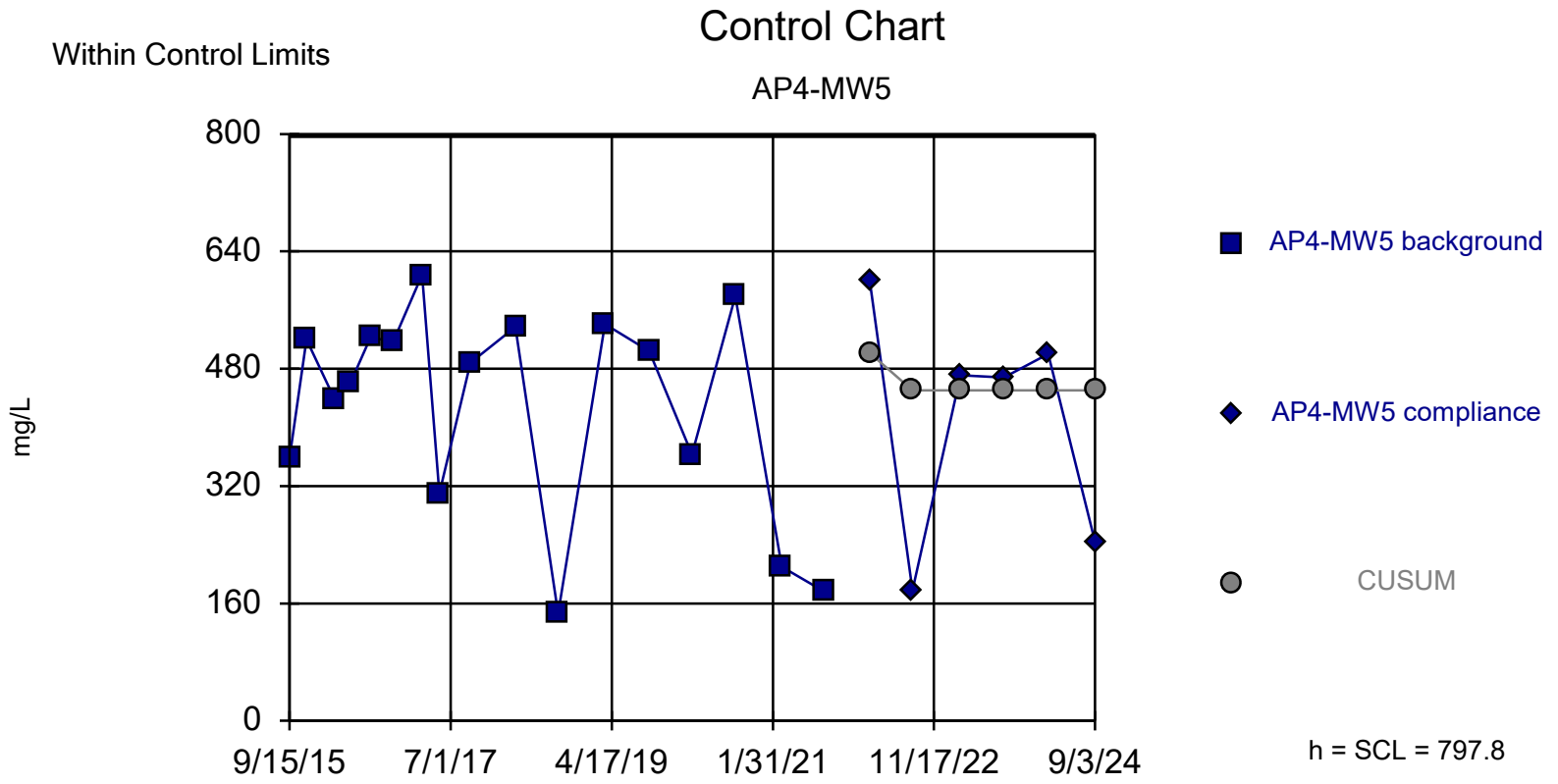
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 88.24% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 10/11/2024 1:54 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

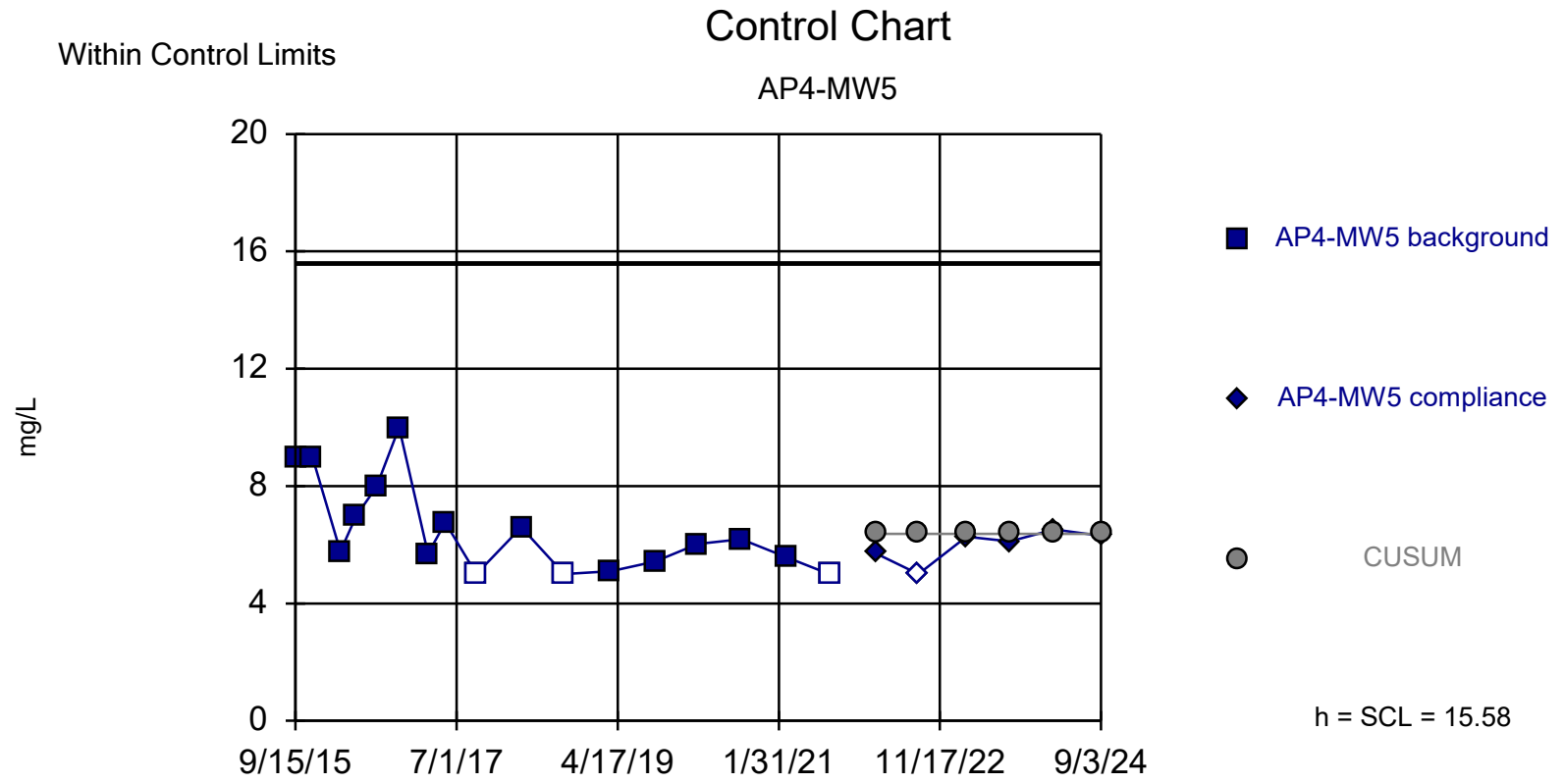


Background Data Summary (based on square transformation): Mean=202731, Std. Dev.=108424, n=17. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9688, critical = 0.892. Report alpha = 0.00236. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium Analysis Run 10/11/2024 1:55 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.



Background Data Summary (based on natural log transformation): Mean=1.852, Std. Dev.=0.2235, n=17, 17.65% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8976, critical = 0.892. Report alpha = 0.00236. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Chloride Analysis Run 10/11/2024 1:56 PM

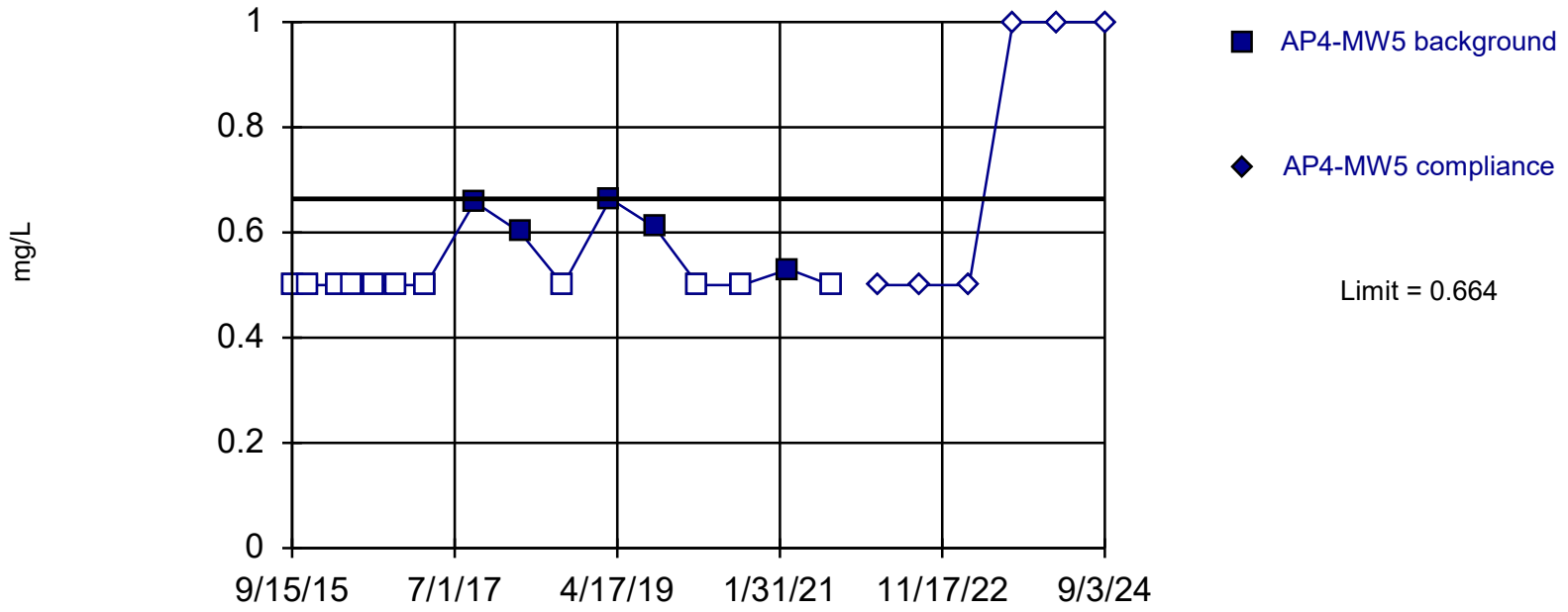
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

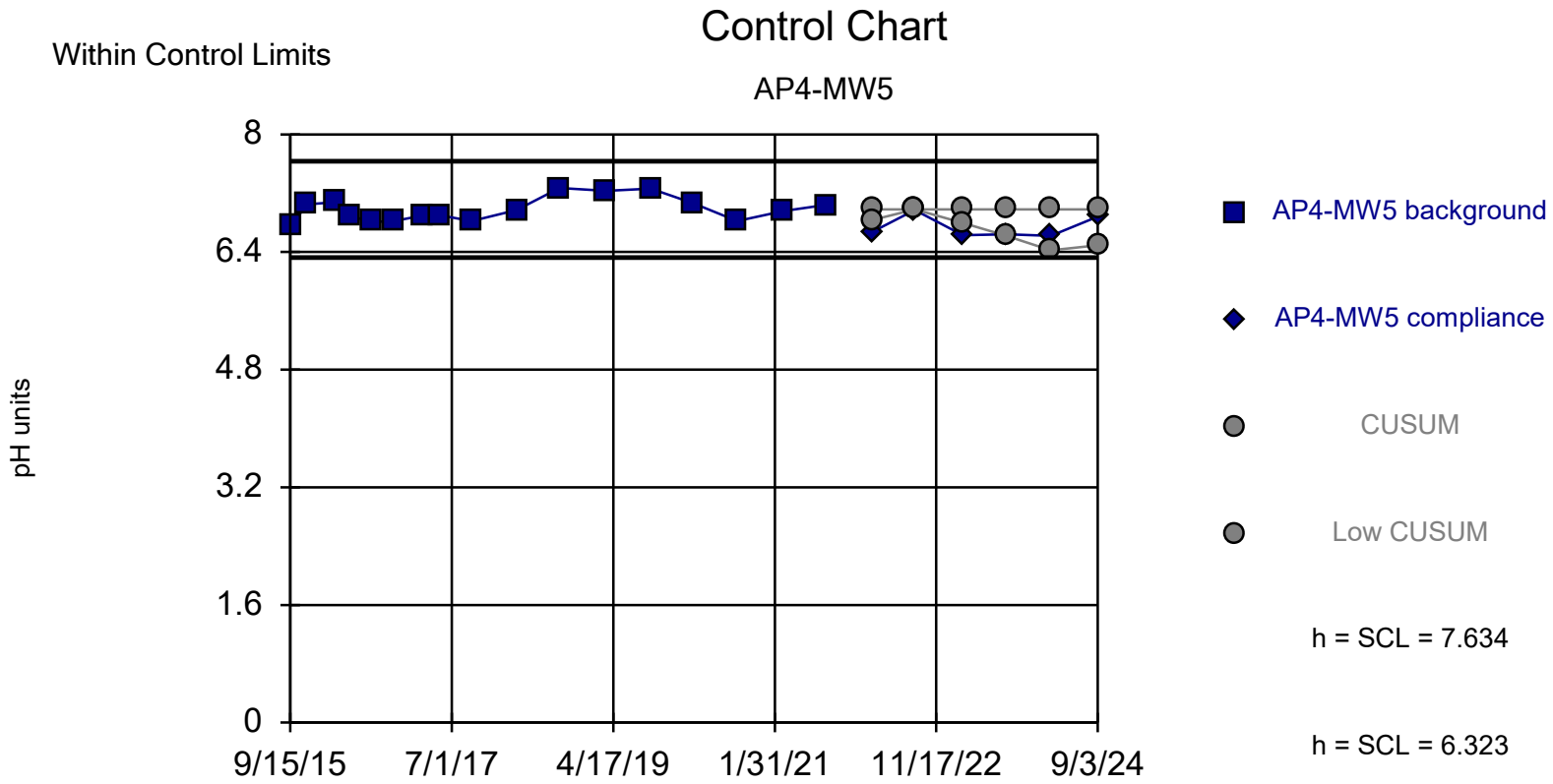
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 16 background values. 68.75% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Fluoride Analysis Run 10/11/2024 1:57 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=6.978, Std. Dev.=0.1639, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9188, critical = 0.892. Report alpha = 0.00236. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

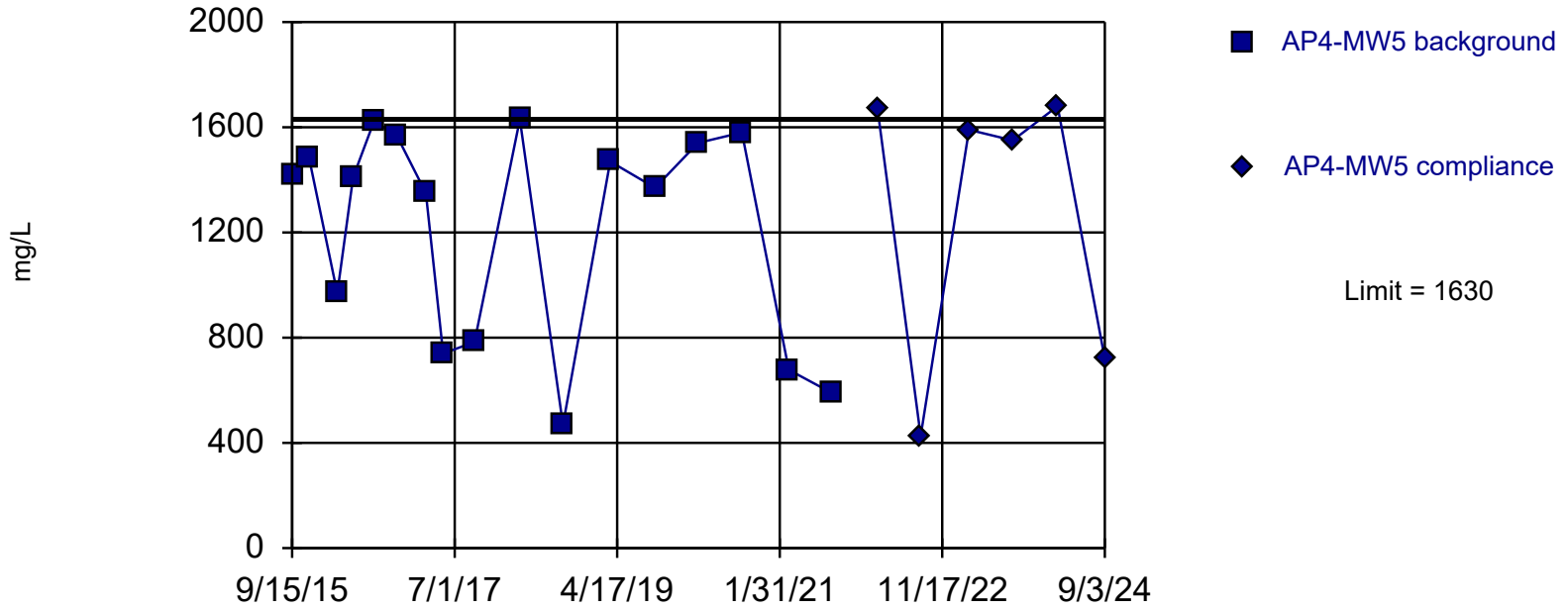
Constituent: pH, field measured Analysis Run 10/11/2024 1:58 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Within Limit

Prediction Limit

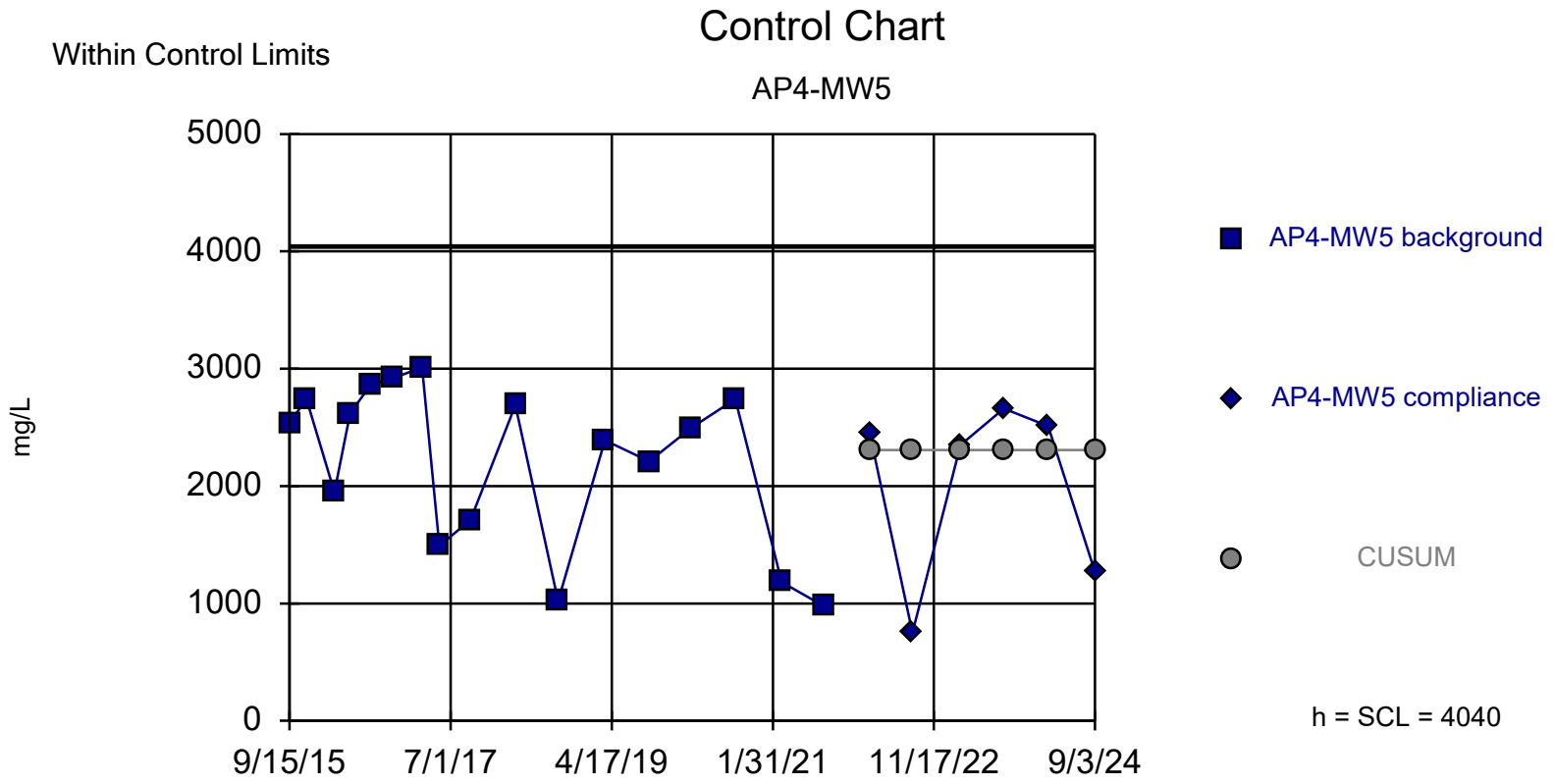
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 17 background values. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit.

Constituent: Sulfate Analysis Run 10/16/2024 3:27 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q3-2024



Background Data Summary (based on square transformation): Mean=5324676, Std. Dev.=2749578, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9112, critical = 0.892. Report alpha = 0.00236. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Total Dissolved Solids Analysis Run 10/11/2024 2:00 PM

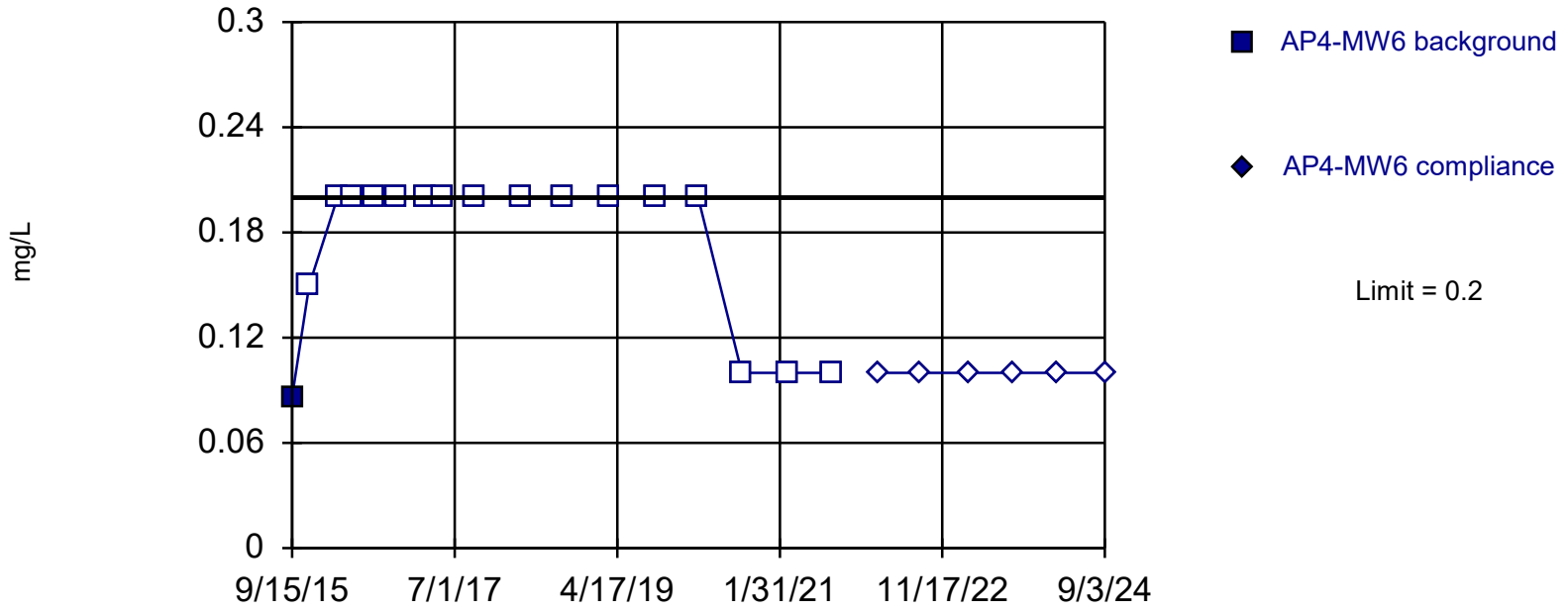
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

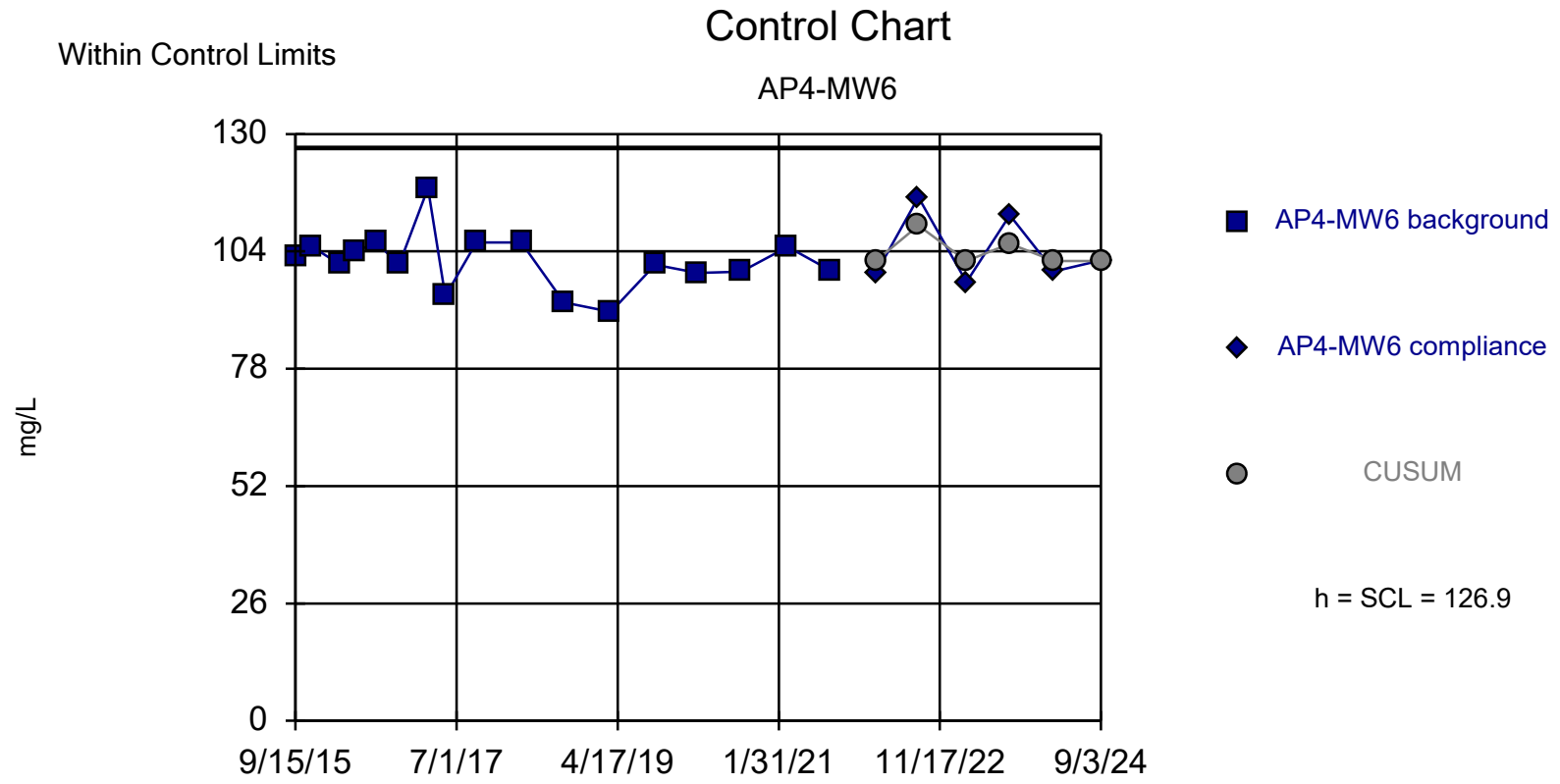
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 10/11/2024 2:02 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=101.9, Std. Dev.=6.261, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.921, critical = 0.892. Report alpha = 0.00236. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium Analysis Run 10/11/2024 2:02 PM

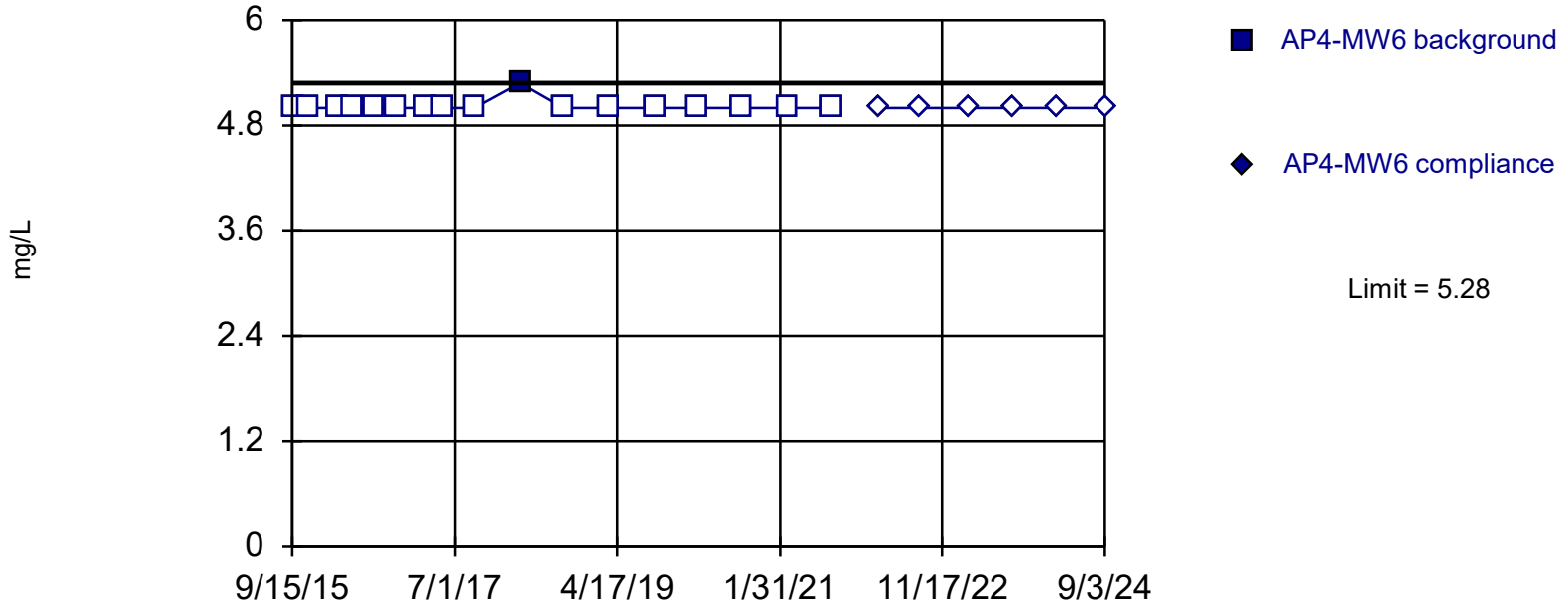
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

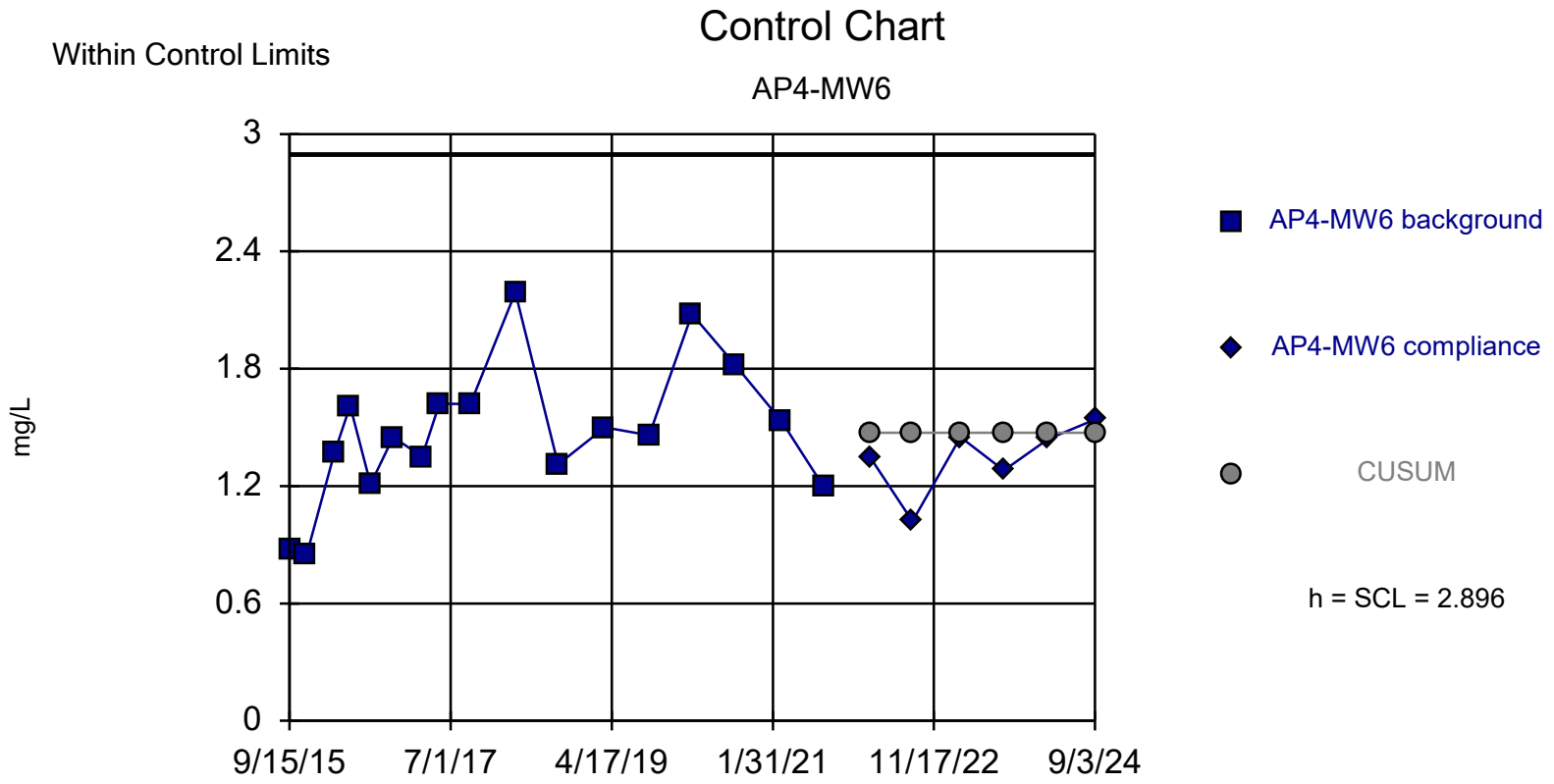
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 10/11/2024 2:03 PM

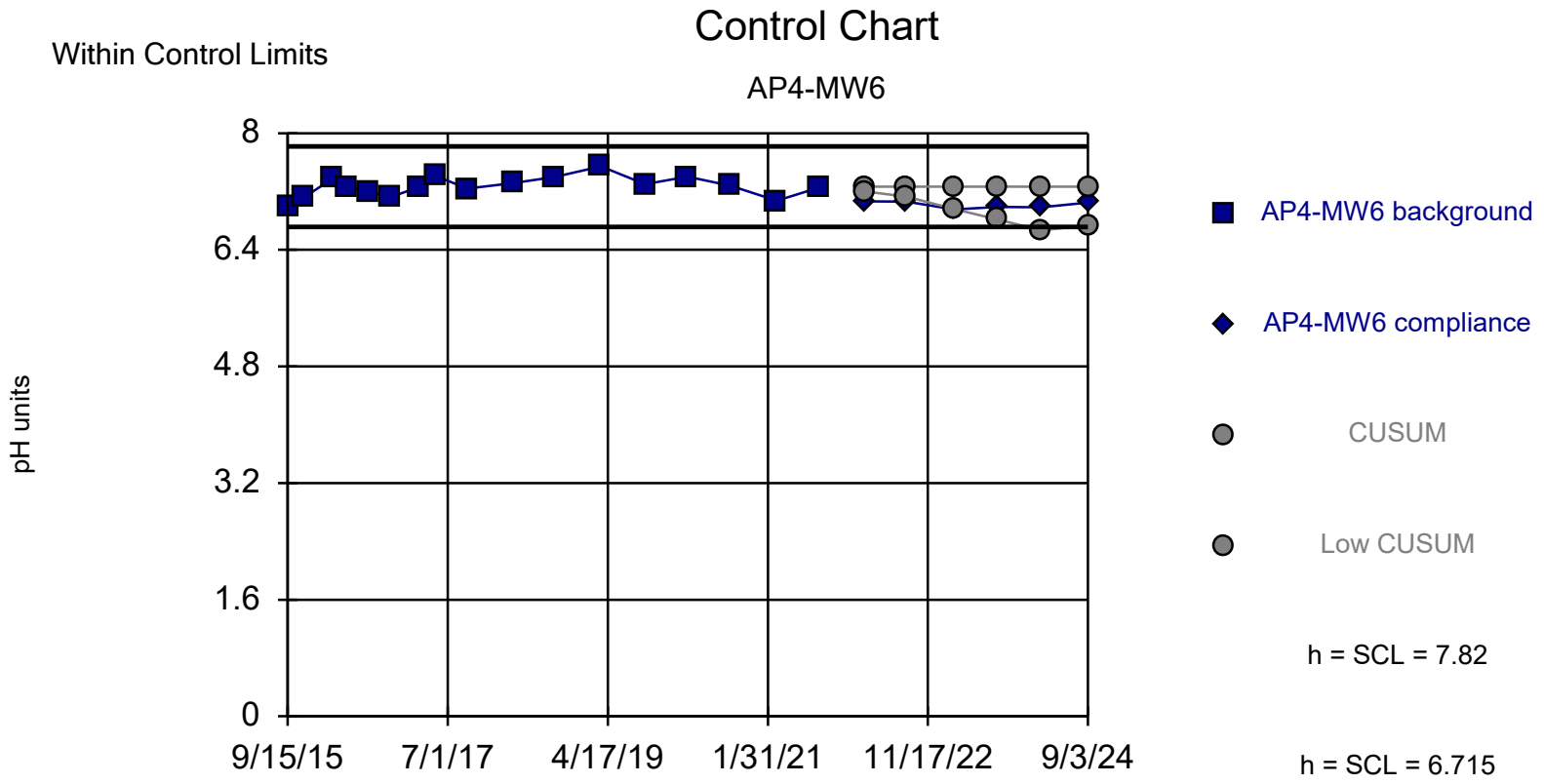
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=1.473, Std. Dev.=0.3557, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9584, critical = 0.892. Report alpha = 0.00236. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Fluoride Analysis Run 10/11/2024 2:03 PM

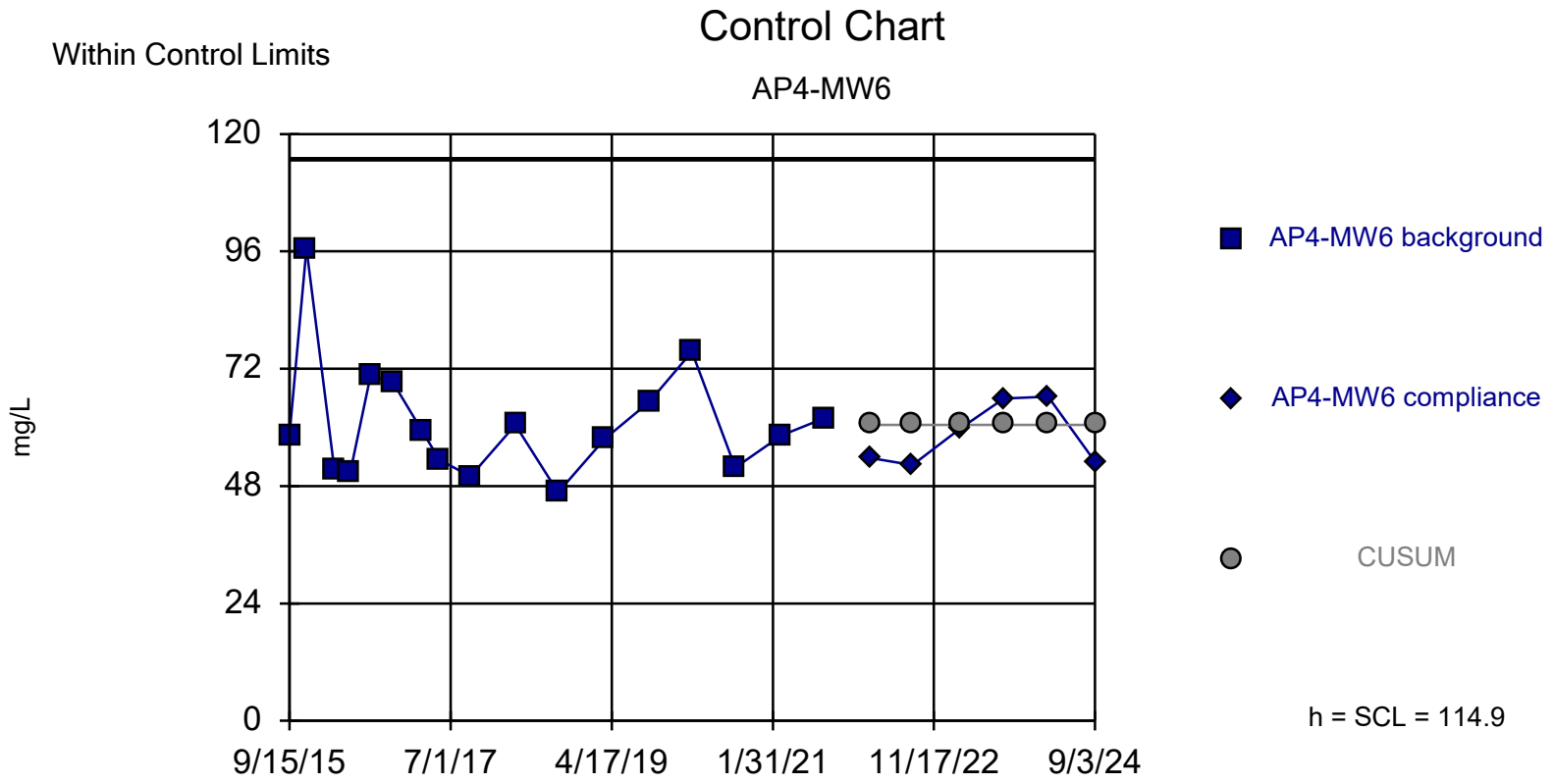
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=7.268, Std. Dev.=0.1381, n=17. Exceedance nullified by following point per option settings. Data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9803, critical = 0.892. Report alpha = 0.00236. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 10/11/2024 2:04 PM

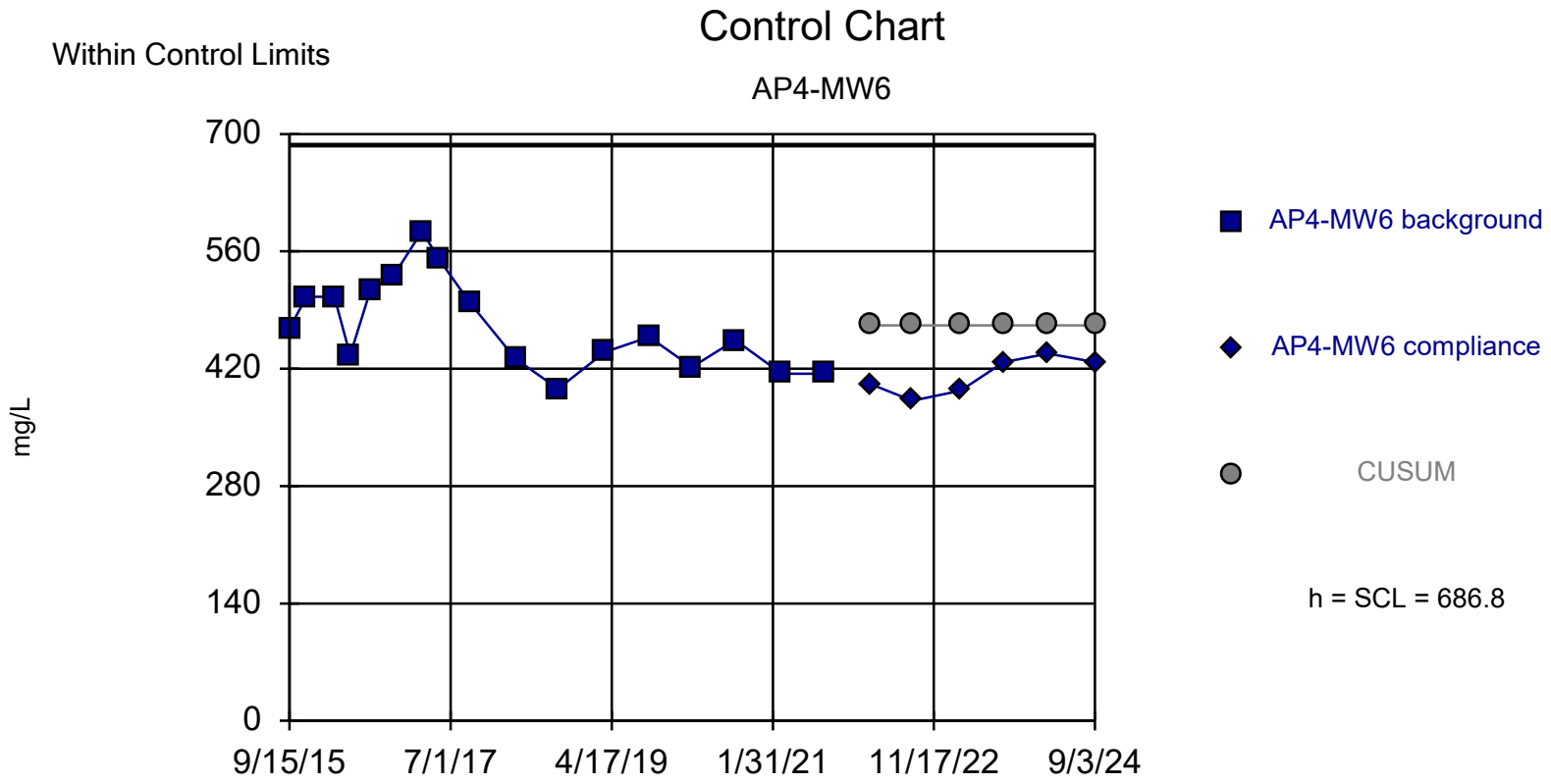
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary (based on square root transformation): Mean=7.778, Std. Dev.=0.7349, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8957, critical = 0.892. Report alpha = 0.00236. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate Analysis Run 10/11/2024 2:05 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=471.9, Std. Dev.=53.74, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9491, critical = 0.892. Report alpha = 0.00236. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Total Dissolved Solids Analysis Run 10/11/2024 2:06 PM

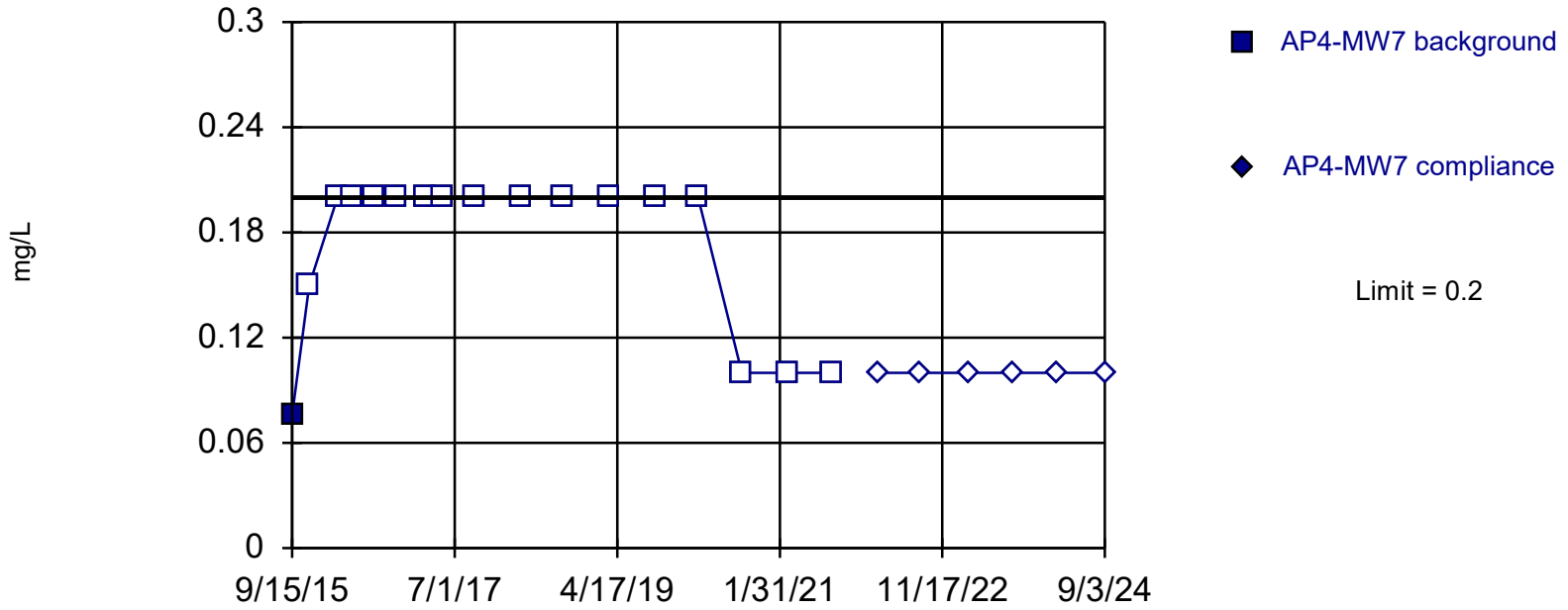
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

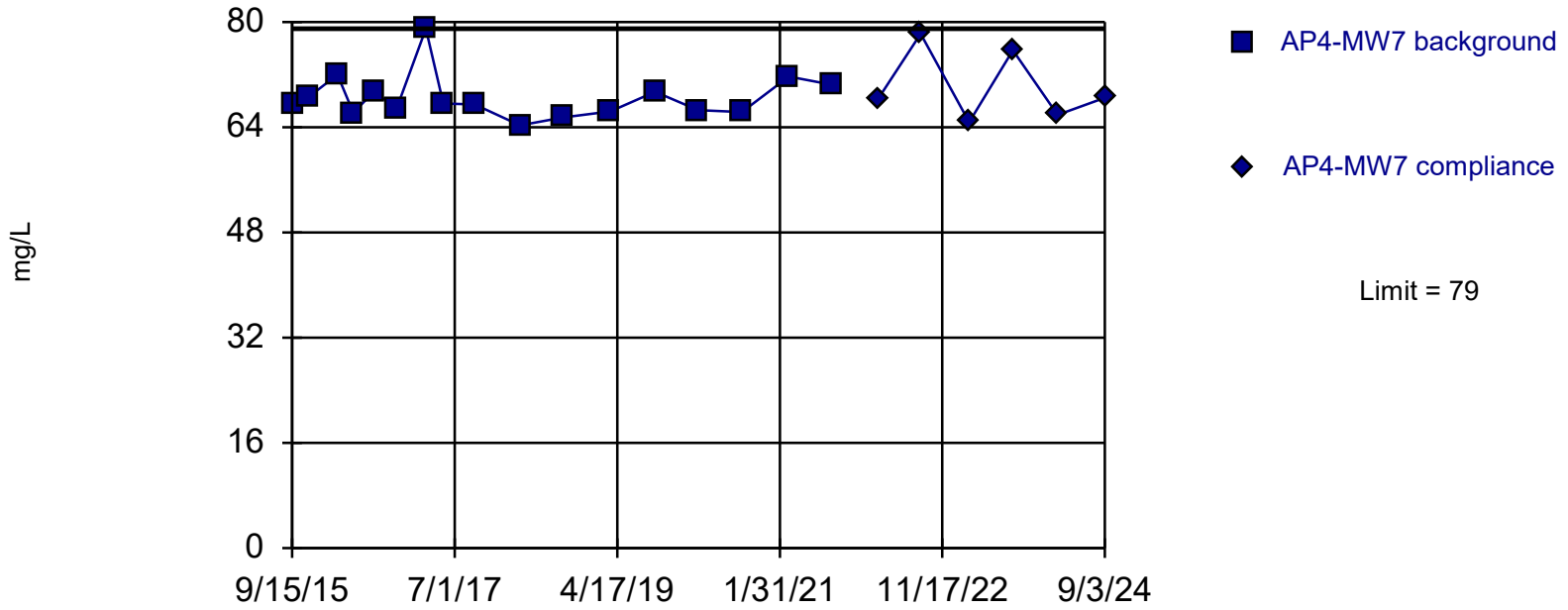
Constituent: Boron Analysis Run 10/11/2024 2:06 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Within Limit

Prediction Limit

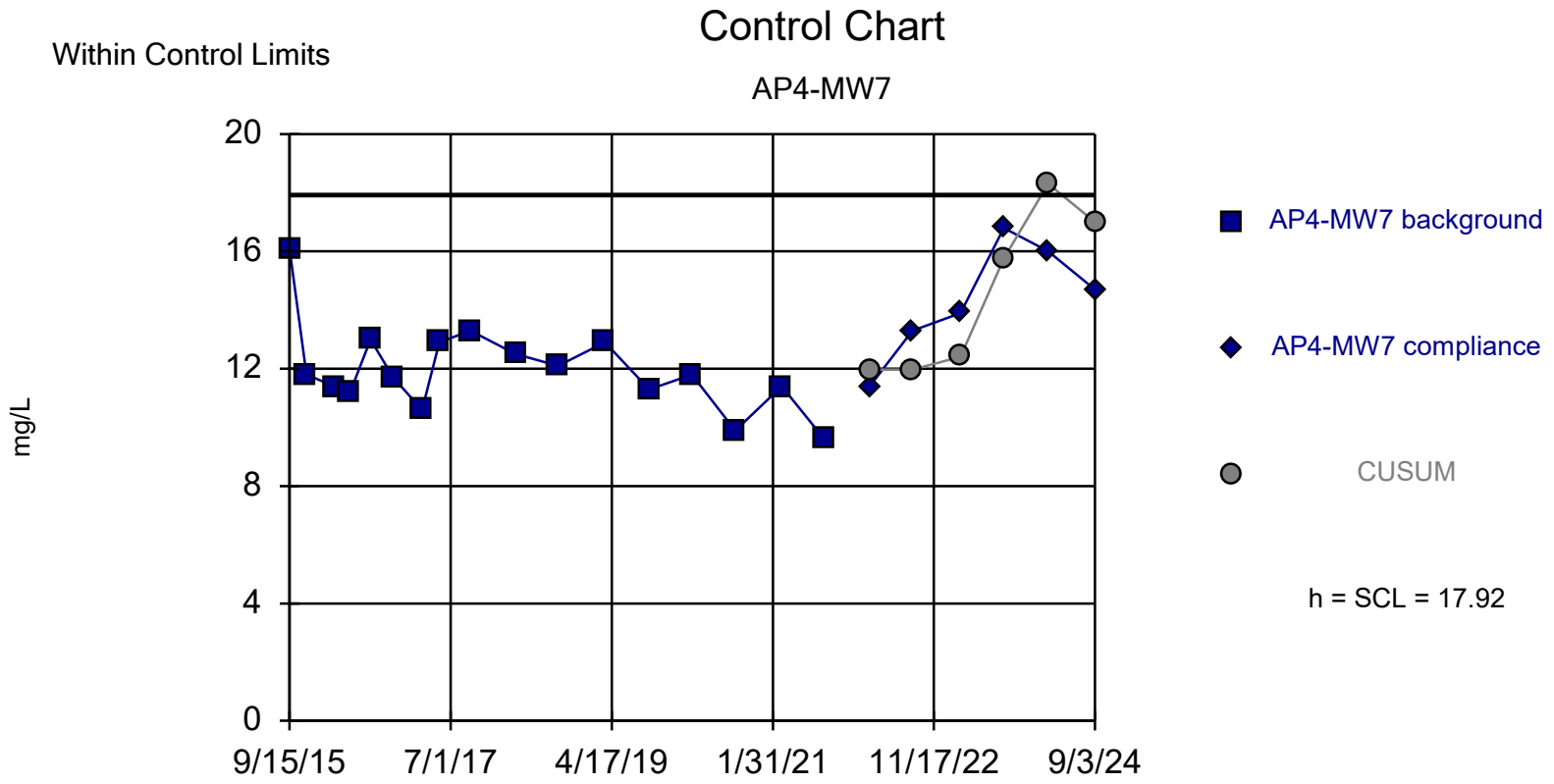
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 17 background values. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Calcium Analysis Run 10/11/2024 2:07 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=11.97, Std. Dev.=1.486, n=17. Exceedance nullified by following point per option settings. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.916, critical = 0.892. Report alpha = 0.00236. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Chloride Analysis Run 10/11/2024 2:07 PM

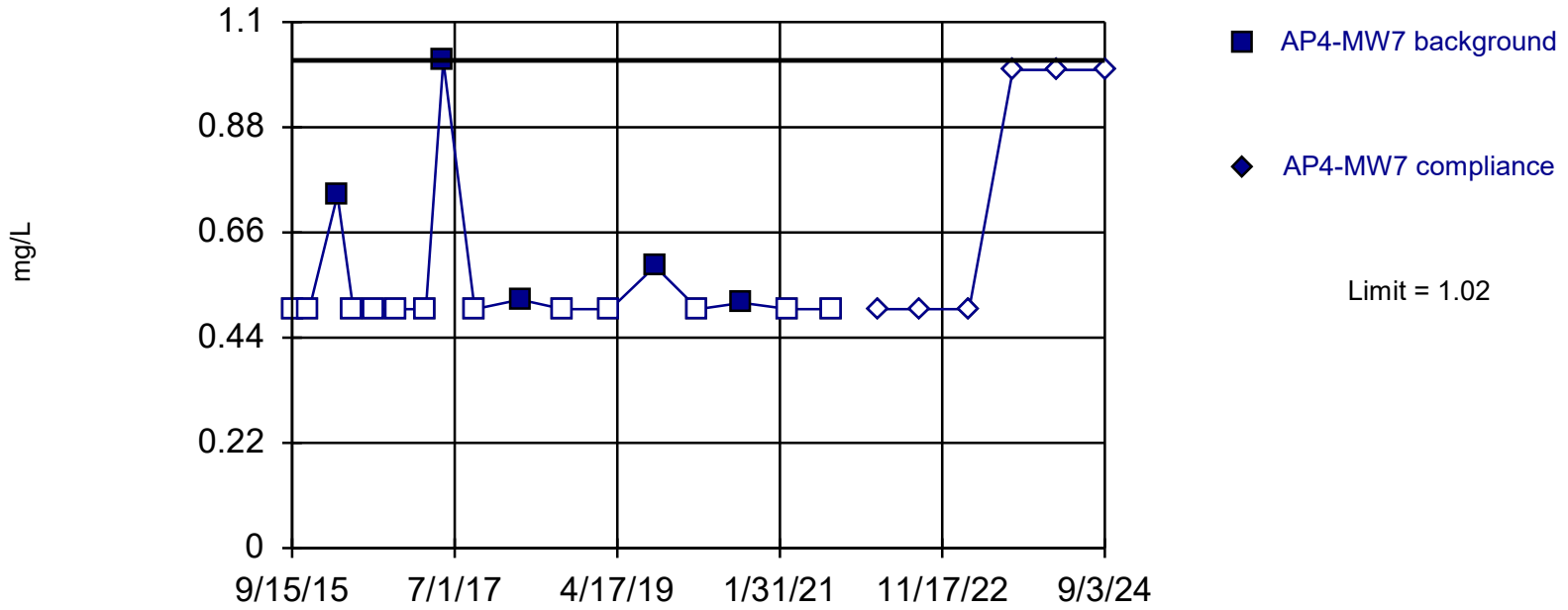
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

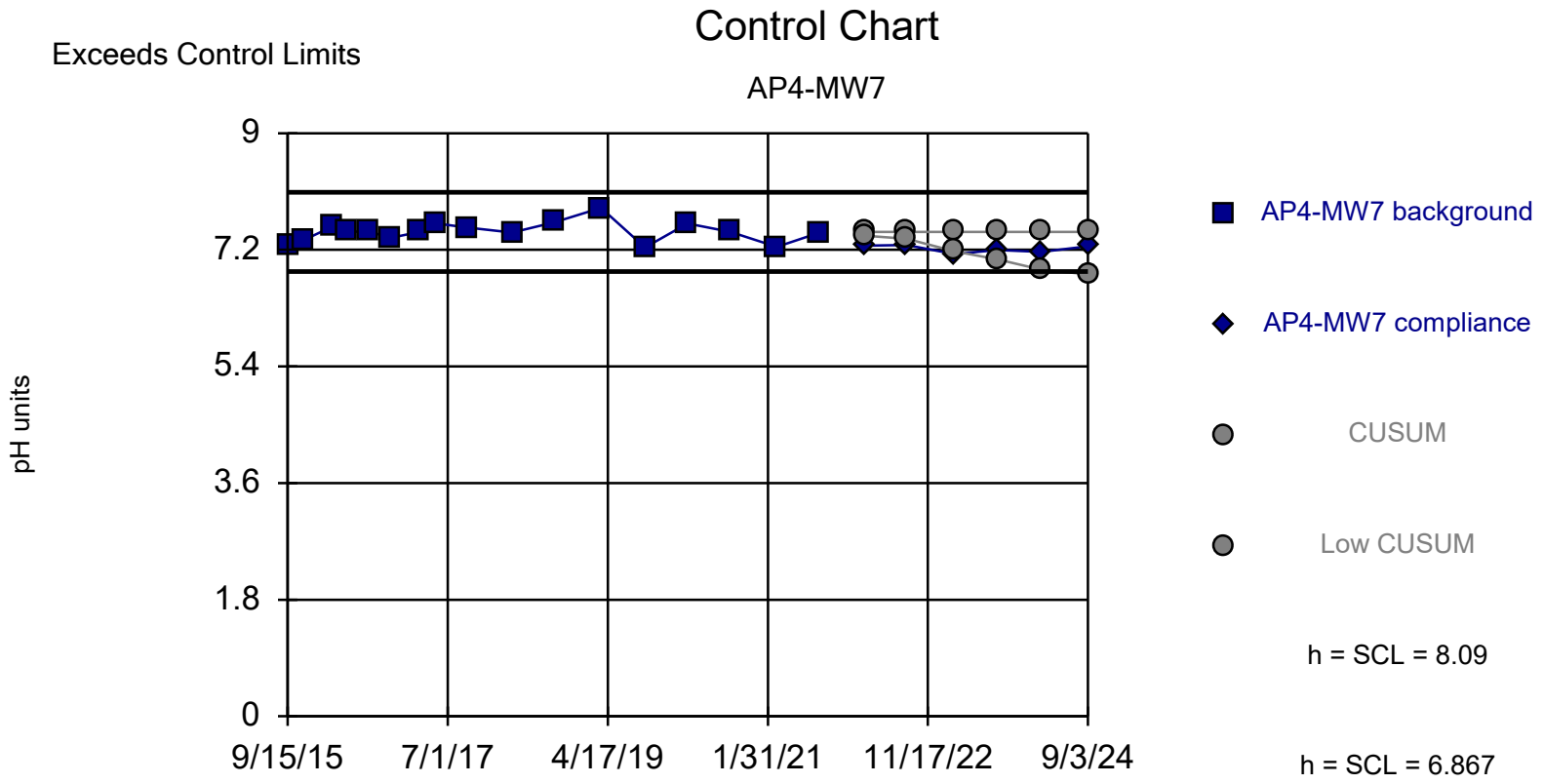
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 70.59% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality was not detected with 95% confidence.

Constituent: Fluoride Analysis Run 10/11/2024 2:08 PM

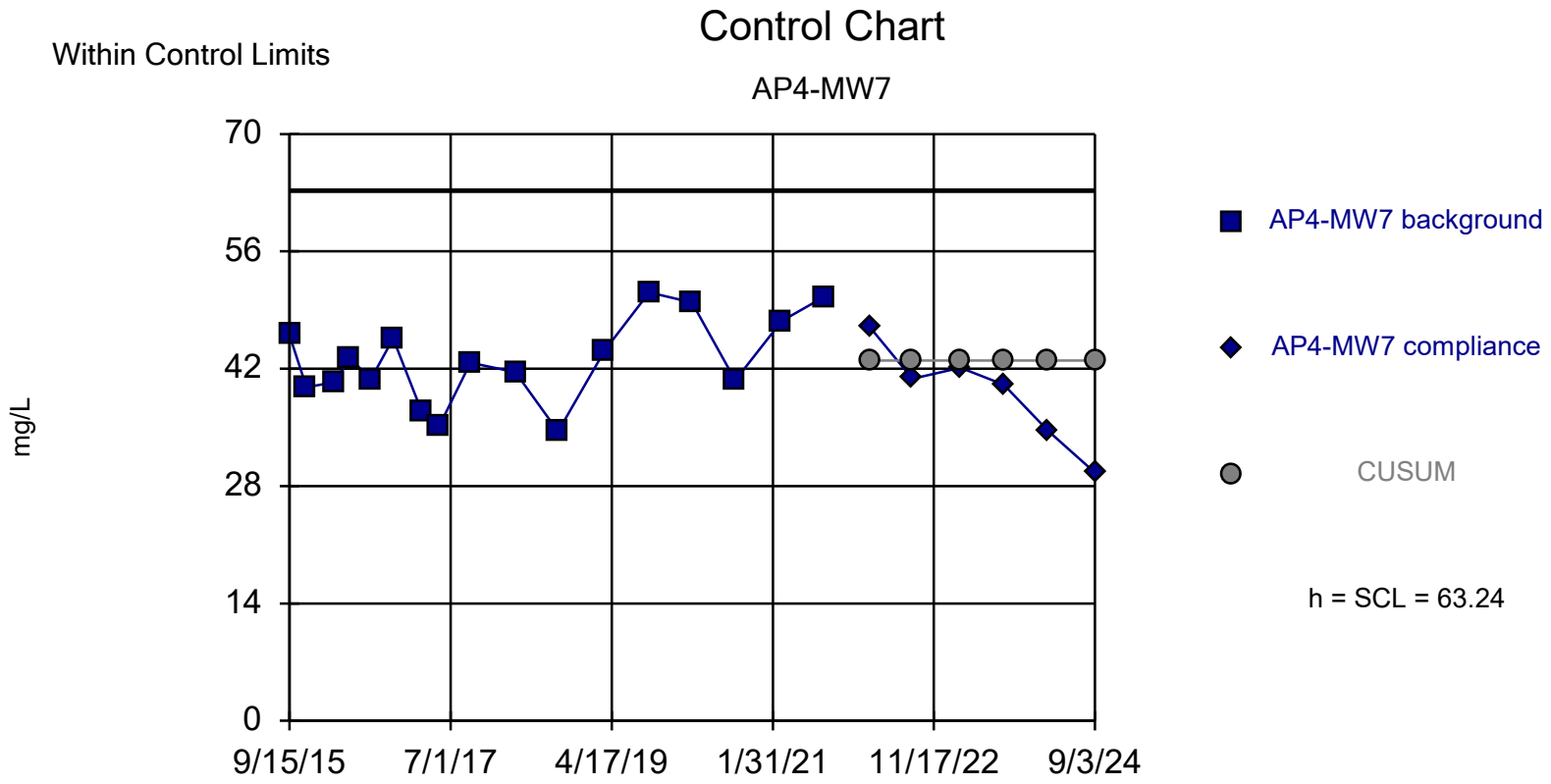
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=7.478, Std. Dev.=0.1529, n=17. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9487, critical = 0.892. Report alpha = 0.00236. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 10/11/2024 2:09 PM

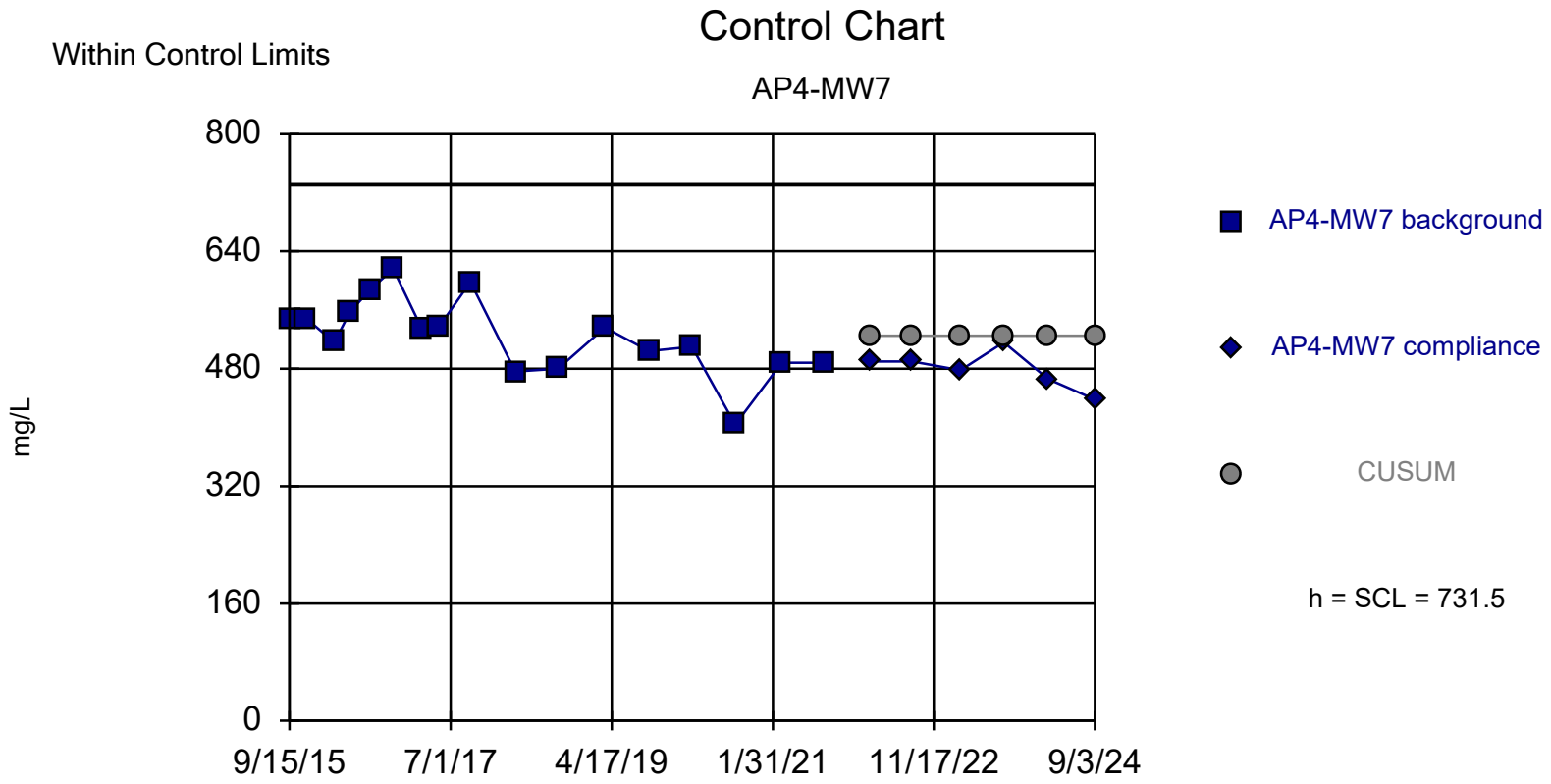
Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=42.98, Std. Dev.=5.065, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9624, critical = 0.892. Report alpha = 0.00236. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate Analysis Run 10/11/2024 2:10 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)



Background Data Summary: Mean=525.2, Std. Dev.=51.58, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9697, critical = 0.892. Report alpha = 0.00236. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Total Dissolved Solids Analysis Run 10/11/2024 2:12 PM

Sheldon Station Client: NPPD Data: SheldonStation_Q1-2024 (1)

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