



**REPORT**

# 2025 Annual CCR Groundwater Report

*Nebraska Public Power District, Sheldon Station*

Submitted to:

**Nebraska Public Power District**

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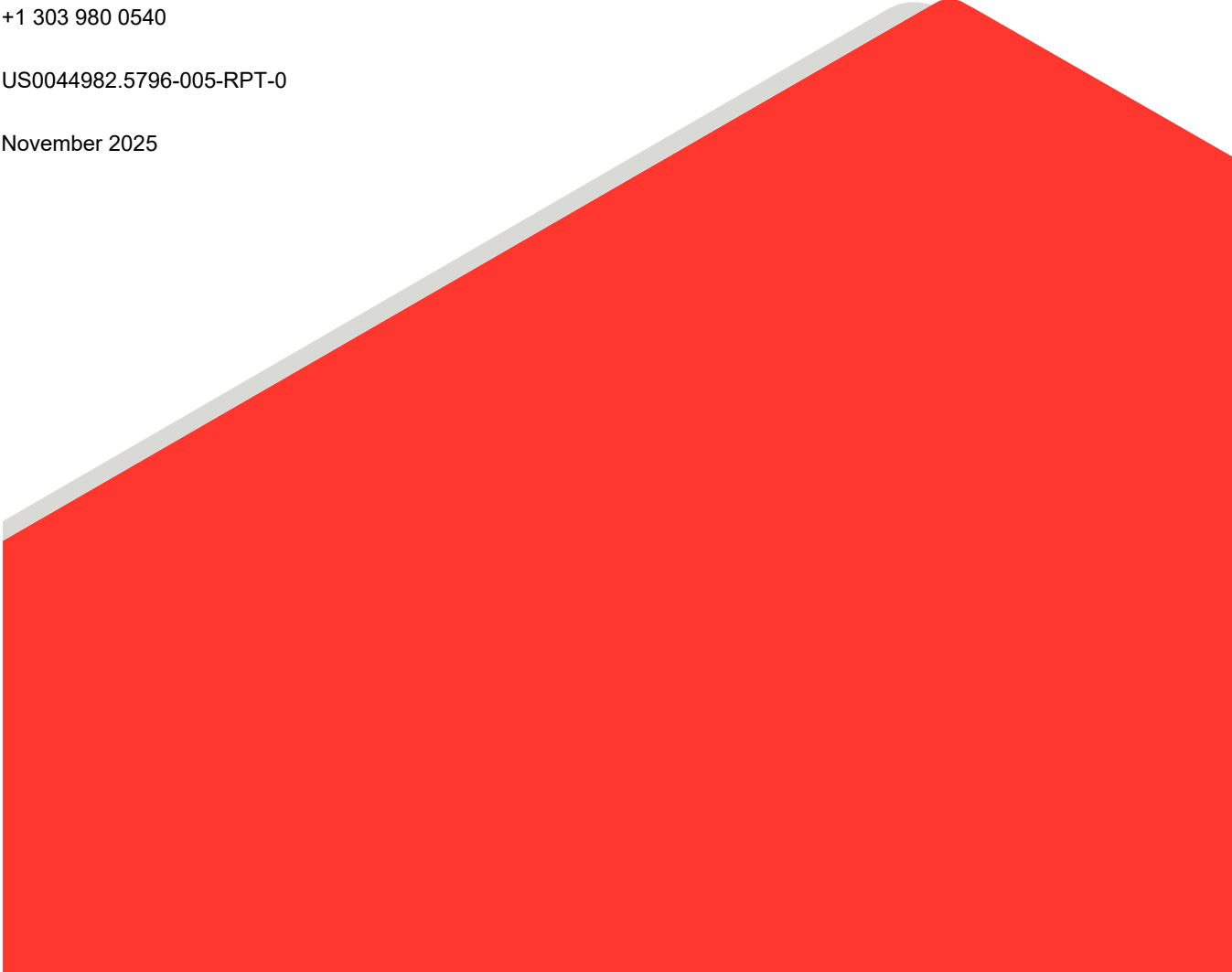
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A large, solid red graphic element that starts as a thin line on the left, rises to a peak, and then descends to the right, forming a triangular shape. The rest of the area below the peak is a solid red rectangle.

## Executive Summary

This report presents results from the 2025 Coal Combustion Residuals (CCR) groundwater monitoring program events at Nebraska Public Power District's Sheldon Station Ash Landfill 4. The facility entered 2025 under a detection monitoring program and remains in detection monitoring based on the results of the first (Q1) and third (Q3) quarter 2025 detection monitoring sampling and analysis events.

The following items of statistical significance were identified as a result of the 2025 sampling events:

- Field pH at AP4-MW3 was reported as a potential exceedance for Q3 2024 within the 2024 annual report (WSP 2024) and was determined to be a false-positive following confirmatory sampling in Q1 2025.
- Field pH at AP4-MW4 was reported as a potential exceedance for Q3 2024 within the 2024 annual report (WSP 2024) and was determined to be a false-positive following confirmatory sampling in Q1 2025.
- Field pH at AP4-MW7 was identified as a potential exceedance for Q3 2024 and determined to be a verified SSI following the confirmatory re-sampling in Q1 2025. An alternative source demonstration (ASD) was prepared within 90 days of identification of the SSI. This ASD was also submitted to and accepted by the Nebraska Department of Water, Environment, and Energy as part of the state permit program (WSP USA Inc., 2025a).
- Field pH at AP4-MW5 was identified as a potential exceedance for Q1 2025 and determined to be a false-positive following confirmatory sampling in Q3 2025.
- Field pH at AP4-MW6 was identified as a potential exceedance for Q1 2025 and determined to be a false-positive following confirmatory sampling in Q3 2025.

Following completion of the ASD for AP4-MW7, a statistical baseline update was conducted prior to analysis of comparative statistics for the Q3 2025 monitoring event. No items of statistical significance were identified for the Q3 2025 monitoring event.

The monitoring program for Ash Landfill 4 remains in detection monitoring entering 2026.

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## 1.0 INTRODUCTION

WSP USA Inc. (WSP) prepared this report describing the 2025 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 Water, Energy and Environment (NDWEE) (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 NDWEE 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 NDWEE. The annual report serves as a combined version of the two semi-annual reports. Copies of the semi-annual reports are included as Appendix A (Q1 2025) and Appendix B (Q3 2025).

## 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. At the beginning of 2025, the seven monitoring wells were split between two upgradient locations and five downgradient locations. The two upgradient monitoring wells are AP4-MW1 and AP4-MW2, which are marked by (U) throughout the text. The five downgradient monitoring wells were AP4-MW3, AP4-MW4, AP4-MW5, AP4-MW6, and AP4-MW7.

Following discussion with the NDWEE associated with the alternative source demonstration for AP4-MW7 (Appendix C; WSP 2025a), AP4-MW7 has been reclassified as an upgradient location (WSP 2025b). AP4-MW7 will be marked by (U) throughout the remainder of the text.

### 2.1 Completed Key Actions in 2025

A detection monitoring sampling event was completed during the first quarter (Q1) of 2025, with an associated semi-annual report provided to the NDWEE within 30 days of the end of the quarter. Results of the Q1 2025 sampling event have been placed in the facility operating record and are discussed in this annual report.

Following the Q1 2025 monitoring event, an ASD was written and accepted by the NDWEE for pH at AP4-MW7 (WSP 2025a). Findings of the ASD are discussed in Section 3.5.2 and included as Appendix C.

Following review of the ASD, a baseline update was completed prior to the Q3 2025 semi-annual report. Information regarding the baseline update is included in Section 3.3 and Appendix D. Additionally, a review of the monitoring well network at Ash Landfill No. 4 was conducted as a result of the ASD investigation (WSP 2025b).

A detection monitoring sampling event was completed during the third quarter (Q3) of 2025, with an associated semi-annual report provided to the NDWEE within 30 days of the end of the quarter. Results of the Q3 2025 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 Ash Landfill No. 4 in 2025.

## 2.3 Problems and Resolutions

During both the Q1 2025 and Q3 2025 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): AP4-MW3, AP4-MW4, and AP4-MW6
- Fluoride, 5x dilution factor, elevated reporting limit equals 1.00 mg/L: AP4-MW1, AP4-MW2, AP4-MW4 (Q1 2025 only), AP4-MW5, and AP4-MW7
- Boron, 4x dilution factor, elevated reporting limit equals 0.4 mg/L: AP4-MW5 (Q1 2025 only)

The reported values are consistent with previously observed concentrations and reporting limits from recent sampling events.

Additionally, there were differences between the Q3 2025 sample collected for AP4-MW5 and a blind duplicate collected from the same well for boron, calcium and sulfate. The contracted laboratory (Eurofins Environment Testing Cedar Falls) was contacted, and the lab confirmed that no data or sample label errors were found. As part of the confirmation, the lab took the following actions:

- Tested the conductivity of the parent sample and the duplicate. The conductivity values were quite different between the parent sample and the duplicate but were consistent with the reported Total Dissolved Solids concentrations for the two samples.
- Results for sulfate for both samples were re-analyzed and confirmed to be accurate.
- Tested the undiluted samples directly from the collected metals bottles for both samples. The results for boron and calcium were consistent with the originally reported data.

No other problems were encountered as part of the field and laboratory sampling in Q1 2025 and Q3 2025.

## 2.4 Proposed Key Activities for 2026

Detection monitoring sampling events are planned for the first and third quarters (Q1 and Q3) of 2026. 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 NDWEE and

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

A review and update of the site monitoring well network certification is planned for 2026. The ASD completed for field pH at AP4-MW7 included an evaluation of the local groundwater flow patterns at the site. Based on this evaluation, it was concluded that AP4-MW7 is locally upgradient of AP4. The comparative statistics used for this monitoring program use intra-well tests, which are not impacted by this change in classification of AP4-MW7. Additional comments will be provided in the updated monitoring well network certification.

## 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 events that occurred in March and August 2025. 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 March 2025 (Q1 2025) detection monitoring sampling event and the August 2025 (Q3 2025) 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 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 foot (ft/ft), calculated based on groundwater elevations during each monitoring event.
- $n_e$  is the effective porosity, a unitless parameter, estimated to be 0.2 for site soils.

The average groundwater flow rate for March 2025 was estimated to be  $6.7 \times 10^{-4}$  ft/day, based on the calculated hydraulic gradient for March 2025 of 0.03 ft/ft.

The average groundwater flow rate for August 2025 was estimated to be  $7.9 \times 10^{-4}$  ft/day, based on the calculated hydraulic gradient for August 2025 of 0.03 ft/ft.

### 3.2 Monitoring Data (Analytical Results)

Analytical results for the detection monitoring results for the March 2025 and August 2025 monitoring events are shown in Table 1 through Table 7.

### 3.3 Baseline Statistical Analysis

The baseline (or background) period for each well-constituent pair within the Sheldon Station program with a minimum of eight samples collected through the Q1 2025 sampling event was reviewed for the potential to update the baseline period. Baseline periods for the program wells under the current monitoring program were originally established with data collected between September 2015 and May 2017. The United States Environmental Protection Agency (USEPA) recommends updating the baseline period every two to three years when sampling is conducted on a semi-annual basis, or after every four to eight collected samples (USEPA 2009). Baseline periods were previously updated at the site with data collected between September 2017 and August 2021 (GAUSA 2022b). For the well-constituent pairs within the program, data collected between August 2021 and March 2025 were reviewed for potential inclusion in the updated statistical baseline periods for the current baseline update.

The baseline update described in this document, as well as any future baseline update, included a review of any revisions to federal and state regulations and USEPA statistical guidance documents that may have been promulgated since the initial baseline was established, or the previous baseline statistical update was conducted. The baseline period for a specific well-constituent pair was not reviewed for the potential to update if either an unresolved potential exceedance or a verified statistically significant increase (SSI) was identified that was not attributable to an alternative source separate from the facility. Compliance results that were previously determined to be false positives during comparative statistical analysis were reviewed for potential inclusion in the updated baseline periods. If a successful ASD has been conducted for a verified SSI that determined that the SSI was not related to a release from Ash Landfill No. 4, the recent compliance data were reviewed for potential inclusion in the updated baseline.

#### 3.3.1 Updated Statistical Limits

Either a parametric or non-parametric method was used to generate the updated baseline statistical limit for each eligible well-constituent pair. The statistical method varied between constituents and was selected based on the percentage of ND values in the baseline period and the baseline data distribution for each constituent at each well, in accordance with the Unified Guidance (USEPA 2009). For those well-constituent pairs where concentrations of a given analyte were normally or transform-normally distributed and had greater than 50% detections, Shewhart-CUSUM (cumulative summation) control charts were used. The Unified Guidance notes that Shewhart-CUSUM control charts use two separate evaluation procedures. The Shewhart portion is similar to a parametric prediction limit, comparing compliance measurements to a baseline limit. The CUSUM portion of the test analyzes new measurements against prior compliance measurements. The mean ( $\bar{x}$ ) and standard deviation ( $s$ ) of the baseline (i.e., background,  $BG$ ) dataset are used to calculate the statistical limit ( $SL$ ), by the following equation:

$$SL = \bar{x}_{BG} + h s_{BG}$$

Per the Unified Guidance,  $h$  is the standardized control limit, set at 4.5 for datasets with less than 12 points, and 4.0 for datasets with 12 points or more.

Where concentrations of a given well-constituent pair were not normally or transform-normally distributed, or contained less than or equal to 50% detections, a non-parametric prediction limit was used. The non-parametric prediction limit was assigned as either the highest detected value, excluding outliers, or the highest PQL, whichever was greater.

### 3.3.2 Results of the Baseline Update

Information pertaining to the updated statistical baselines are provided in Appendix D. Baseline periods were updated through inclusion of available data collected between September 2015 and March 2025, notwithstanding removal of outliers as appropriate, per the methodology described in the Groundwater Monitoring Statistical Methods Certification (GAI 2017a), for the majority of well-constituent pairs, with exceptions noted in the following sections.

#### 3.3.2.1 Field-Measured pH

Across the upgradient and downgradient locations, field-measured pH has recently displayed a shift in measurements. Figure 1 provides time series data across the seven network wells. As a result of the site-wide shift in measurements, the two-tailed Wilcoxon Rank Sum test at each of the seven network wells displayed statistical significance across each of the tested confidence levels (95%, 98%, and 99% based on the two-tailed analysis for field-measured pH). Changes in field-measured pH at AP4-MW7 were previously discussed with NDWEE within the associated ASD (Section 3.5.2; Appendix C; WSP 2025a) and determined to not be a consequence of the unit (NDWEE 2025). Based on that discussion, review for the potential to update the baseline periods proceeded through the potential to include the compliance data, with baseline periods updated through inclusion of data for each of the locations.

#### 3.3.2.2 Excluded Outliers

The following outliers were identified and excluded from the updated baseline periods. Reasoning for the removal of the outliers is provided below. Excluded outliers are retained with the dataset and will be reviewed as appropriate for inclusion in future baseline updates.

- AP4-MW1 (Upgradient), Chloride, 9/15/2015: Unusually high measurement; removal allows for a more conservative statistical limit to be established.
- AP4-MW1 (Upgradient), Sulfate, 9/17/2019: Unusually low measurement; removal allows for a more conservative statistical limit to be established by reducing the standard deviation of the data set.
- AP4-MW2 (Upgradient), Boron, 11/23/2015: Non-detect value with an elevated reporting limit equal to five times the current reporting limit; removal allows for a more conservative statistical limit to be established.
- AP4-MW2 (Upgradient), Boron, 3/2/2022: Non-detect value with an elevated reporting limit equal to four times the current reporting limit; removal allows for a more conservative statistical limit to be established.
- AP4-MW2 (Upgradient), Fluoride, 11/23/2015: Unusually high measurement; removal allows for a more conservative statistical limit to be established.
- AP4-MW2 (Upgradient), Total Dissolved Solids, 8/29/2023: Unusually high measurement inconsistent with the remainder of the dataset that was previously identified as a false positive; removal allows for a more conservative statistical limit to be established.
- AP4-MW3, Fluoride, 9/15/2015: Non-detect value inconsistent with the remainder of the dataset; removal allows establishment of a parametric statistical limit.
- AP4-MW4, Sulfate, 9/11/2018: Non-detect value inconsistent with TDS value collected on same date and other sulfate values at AP4-MW4.

### 3.3.2.3 *Baseline Periods Not Updated*

The following well-constituent pairs had baseline periods that were not updated. The previous baseline periods with dates from September 2015 to August 2021 will be retained for use in comparative statistical analysis until further comparative data is collected.

- AP4-MW1 (Upgradient), Total Dissolved Solids: A statistically significant decreasing trend was identified at 95% and 99%.
- AP4-MW2 (Upgradient), Chloride: A statistically significant increasing trend was identified at 95% and 99%, in addition to the Wilcoxon Rank Sum displaying statistical significance at each of the tested confidence levels (95%, 97.5%, and 99%).
- AP4-MW7 (Upgradient), Total Dissolved Solids: A statistically significant decreasing trend was identified at 95% and 99%.
- AP4-MW3, Sulfate: A statistically significant decreasing trend was identified at 95% and 99%.
- AP4-MW3, Total Dissolved Solids: A statistically significant decreasing trend was identified at 95% and 99%.
- AP4-MW6, Total Dissolved Solids: A statistically significant decreasing trend was identified at 95% and 99%.

## 3.4 *Comparative Statistical Analysis*

Comparative statistical analysis was conducted for the Q1 2025 monitoring event using the 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 for the Q1 2025 monitoring event are summarized below and presented in tables included in Appendix E. A full description of the steps taken for the comparative statistical analysis can be found in the Groundwater Monitoring Statistical Methods Certification (GAI 2017a).

As described above in Section 3.3, a baseline update was conducted prior to the Q3 2025 monitoring event. Comparative statistical analysis for the Q3 2025 monitoring event was conducted with the results of the baseline update conducted with data through Q1 2025. The results of the comparative statistical analysis for the Q3 2025 monitoring event are summarized below and presented in tables included in Appendix E

### 3.4.1 *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.

### 3.4.2 Potential Exceedances – Q1 2025

The following potential exceedances were identified for the Q1 2025 sampling event:

- AP4-MW5, Field pH low elevated CUSUM
- AP4-MW6, Field pH low 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 associated results were reviewed in context of the baseline update, based on the site-wide observed shift in field pH (Section 3.3.2.1).

### 3.4.3 False-Positives – Q1 2025

The following results that were identified as potential exceedances for the Q3 2024 sampling event within the 2024 annual report (WSP 2024) were determined to be false positives following confirmatory re-sampling:

- AP4-MW3, Field pH
- AP4-MW4, Field pH

The following results that were identified as potential exceedances for the Q1 2025 sampling event were determined to be false positives prior to confirmatory re-sampling, based on the review of the site-wide field pH behavior for the alternative source demonstration for AP4-MW7 (Section 3.5.2) and information identified in the baseline update review process (Section 3.3.2.1):

- AP4-MW5, Field pH
- AP4-MW6, Field pH

### 3.4.4 Verified Exceedances – Q1 2025

The following result was identified as a potential exceedance for the Q3 2024 sampling event and was determined to be a verified SSI following the confirmatory re-sampling in Q1 2025:

- AP4-MW7, Field pH low elevated CUSUM

Following a successful ASD (Section 3.5.2), the baseline period for field pH at AP4-MW7 was updated prior to the Q3 2025 detection monitoring event.



### **3.4.5 Potential Exceedances – Q3 2025**

No potential exceedances were identified for the Q3 2025 detection monitoring sampling event.

### **3.4.6 False Positives – Q3 2025**

No false positives were identified for the Q2 2025 detection monitoring sampling event.

### **3.4.7 Verified Exceedances – Q3 2025**

No verified SSIs were identified for the Q3 2025 detection monitoring sampling event.

## **3.5 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).

### **3.5.1 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 2026.

### **3.5.2 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.

Resulting from the verified SSI for field pH at AP4-MW7 verified during the Q1 2025 detection monitoring event, NPPD and WSP pursued an alternative source demonstration (WSP 2025a). The SSI for field pH was attributed to natural variability within the groundwater system and instrument variability within the pH probe. As such, AP4 is not considered the source of the verified SSI at AP4-MW7. 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 NDWEE (NDWEE 2025), Sheldon Station's AP4 remains in detection monitoring. As part of the concurrence of the NDWEE, AP4-MW7 was reclassified as an upgradient well. A memo was provided to the NDWEE detailing the site conditions and reclassification of AP4-MW7 at the request of the NDWEE (WSP 2025b). A review and update of the monitoring well network certification is planned for 2026 (Section 2.4).

### **3.5.3 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).



### **3.5.4 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 March 3, 2025 and August 26, 2025, 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 sampling program is not recommended at this time. A review of the monitoring well network certification report is planned for 2026.

## Signature Page

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[https://wsponline.sharepoint.com/sites/global-nppd2023gwqualityrep/project files/5 technical work/sheldon/2025 - q3/ccr report/\\_formatted/admin working/us0044982.5796-xxx-rpt-0-sheldon-ccr-2025.docx](https://wsponline.sharepoint.com/sites/global-nppd2023gwqualityrep/project%20files/5%20technical%20work/sheldon/2025%20-%20q3/ccr%20report/_formatted/admin%20working/us0044982.5796-xxx-rpt-0-sheldon-ccr-2025.docx)

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## Tables

Table 1. Data Summary Table - AP4-MW1 (U)

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	3/3/2025	8/26/2025
	Units	Background Collection									Detection Monitoring <sup>1</sup>															
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	0.106	< 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	90.4	77.1
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	10.4	9.07
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	< 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	7.12	7.06
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	21.1	25.9
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	426	398
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 (U)

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	3/3/2025	8/26/2025
	Units	Background Collection									Detection Monitoring <sup>1</sup>															
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	0.121	< 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	310	270
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	95.7	103
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	< 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	7.08	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	957	996
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	1700	1720
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-MW7 (U)

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	3/3/2025	8/26/2025
	Units	Background Collection									Detection Monitoring <sup>1</sup>															
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	< 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	78.8	61.3
Chloride	mg/L	16.1	11.8	11.4	11.2	13	11.7	10.6	12.9	13.3	12.5	12.1	12.9	11.3	11.8	9.89	11.4	9.65	11.4	13.3	13.9	16.8	16.0	14.7	13.8	17.2
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	< 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	7.08	7.22
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	34.4	30.8
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	472	460
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	< 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 4. 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	3/3/2025	8/26/2025
	Units	Background Collection									Detection Monitoring <sup>1</sup>															
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	< 0.102	< 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	82	72.8
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	< 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	1.11	1.47
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	7.18	7.13
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	21.3	20.2
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	374	366
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 5. 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	3/3/2025	8/26/2025
	Units		Background Collection								Detection Monitoring <sup>1</sup>																
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	< 0.200	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	< 0.100	0.104	< 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	103	101	
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	< 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	<1.00	1.26	
Field pH	pH units	7.02	7.17	7.40	7.25	7.15	7.22	7.23	7.31	7.23	7.32	7.32	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	7.10	7.02
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	79.5	118	
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	486	520	
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 ± 0.100	0.451 ± 0.124	0.362 ± 0.104	0.471 ± 0.099	0.36 ± 0.097	0.481 U ± 0.132	0.327 ± 0.111	0.185 ± 0.090	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Radium-228	pCi/L	2.78 ± 0.488	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 ± 0.502	2.041 ± 0.390	2.23 ± 0.378	3.09 ± 0.478	2.41 ± 0.462	1.56 ± 0.472	2.25 ± 0.412	2.08 ± 0.398	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
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 6. 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	3/3/2025	8/26/2025
	Units	Background Collection									Detection Monitoring <sup>1</sup>															
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	< 0.400	0.145
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	473	427
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	5.52	6.91
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	< 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	6.54	6.65
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	1470	1650
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	2630	2590
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 7. 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	3/3/2025	8/26/2025
	Units	Background Collection									Detection Monitoring <sup>1</sup>															
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	0.11	< 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	103	89.7
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	< 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	1.15	1.68
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	6.94	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	73.5	61.9
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	470	442
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 8 - Sheldon Station Ash Landfill No. 4**  
**Groundwater Levels (ft amsl)**

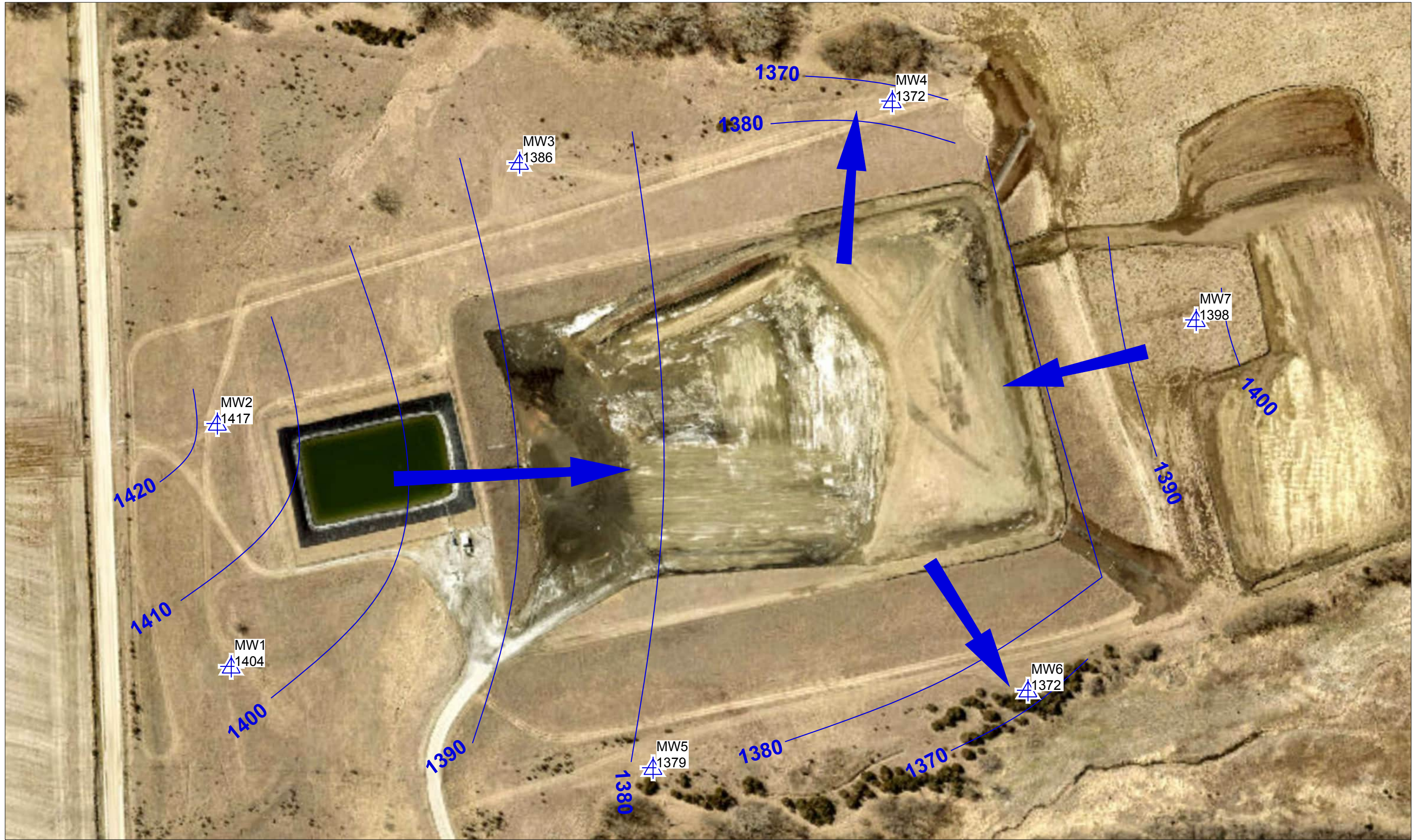
Sample Period	Upgradient Wells			Downgradient Wells			
	AP4-MW1	AP4-MW2	AP4-MW7	AP4-MW3	AP4-MW4	AP4-MW5	AP4-MW6
MP Elev.	1425.95	1445.03	1424.29	1411.72	1396.10	1403.10	1386.61
QTR-2002-4	1410.90	1422.78	1401.53	1392.14	1375.99	1385.78	1374.15
QTR-2003-1	1409.36	1421.35	1399.28	1390.20	1374.01	1383.07	1374.06
QTR-2003-2	1412.99	1421.11	1398.78	1396.11	1376.52	1387.68	1376.90
QTR-2003-3	1411.22	1421.87	1401.34	1390.91	1372.66	1382.35	1369.46
QTR-2003-4	1410.02	1422.24	1401.38	1390.31	1373.48	1382.30	1369.10
QTR-2004-1	1411.81	1420.78	1398.98	1393.01	1377.92	1384.12	1377.59
QTR-2004-2	1412.04	1420.72	1400.70	1394.77	1375.64	1383.75	1374.83
QTR-2004-3	1411.24	1421.22	1408.14	1393.89	1375.55	1384.18	1373.85
QTR-2004-4	1409.40	1421.39	1407.23	1391.65	1373.40	1381.88	1374.65
QTR-2005-1	1409.32	1420.12	1401.20	1390.66	1372.78	1381.29	1374.62
QTR-2005-2	1410.36	1419.77	1399.82	1388.86	1372.63	1381.27	1374.55
QTR-2005-3							
QTR-2005-4	1407.83	1419.58	1399.32	1387.67	1372.52	1380.80	1369.44
QTR-2006-1	1406.35	1418.91	1397.99	1387.02	1372.42	1380.15	1371.76
QTR-2006-2	1408.37	1418.43	1397.48	1387.52	1372.42	1383.05	1372.36
QTR-2006-3	1403.26	1417.13	1399.99	1386.38	1372.30	1379.83	1370.22
QTR-2006-4	1404.91	1419.42	1399.89	1386.32	1372.25	1380.51	1369.90
QTR-2007-1	1407.21	1417.13	1397.74	1390.63	1372.89	1382.85	1374.67
QTR-2007-3	1409.61	1417.42	1409.74	1391.60	1373.85	1382.19	1370.84
QTR-2008-2	1415.33	1417.33	1414.16	1406.98	1385.69	1395.04	1379.15
QTR-2008-3	1412.64	1418.64	1413.10	1393.61	1376.05	1385.14	1373.43
QTR-2009-2	1409.86	1417.98	1403.78	1390.72	1374.15	1381.58	1374.49
QTR-2009-3	1408.87	1417.88	1407.03	1389.01	1372.47	1380.60	1370.31
QTR-2010-2	1413.98	1418.11	1414.59	1405.12	1381.85	1390.80	1375.51
QTR-2010-3	1411.22	1419.23	1413.39	1392.72	1374.81	1383.50	1374.39
QTR-2011-2	1409.32	1418.12	1403.83	1389.92	1374.80	1382.48	1374.55
QTR-2011-3	1411.24	1418.58	1411.18	1391.87	1373.60	1382.88	1373.56
QTR-2012-2	1412.85	1418.13	1413.29	1399.77	1377.74	1388.74	1375.41
QTR-2012-3	1408.70	1418.58	1410.77	1390.03	1372.72	1381.35	1369.47
QTR-2013-2	1411.47	1416.93	1402.57	1391.01	1375.34	1388.23	1375.31
QTR-2013-4	1410.46	1417.32	1407.27	1391.21	1373.05	1382.79	1370.11
QTR-2014-2	1407.80	1416.98	1400.05	1387.42	1372.03	1383.19	1374.23
QTR-2014-4	1407.74	1417.08	1404.99	1387.30	1372.10	1381.27	1371.75
QTR-2015-2	1412.00	1415.13	1409.78	1405.17	1379.63	1394.50	1375.75
QTR-2015-3	1412.05	1418.38	1412.67	1393.87	1376.77	1386.49	1371.86
QTR-2015-4	1410.50	1418.89	1408.79	1391.46	1374.49	1383.76	1372.41
QTR-2016-1	1412.60	1420.38	1405.38	1394.97	1377.65	1387.59	1374.66
QTR-2016-2	1414.94	1418.83	1410.62	1406.92	1384.72	1395.85	1376.79
QTR-2016-3	1412.06	1419.51	1414.29	1393.22	1375.65	1386.20	1373.11
QTR-2016-4	1410.10	1419.93	1408.39	1390.81	1373.60	1382.98	1372.41
QTR-2017-1	1408.24	1419.54	1403.49	1389.29	1372.83	1381.40	1373.83
QTR-2017-2	1410.15	1419.00	1402.41	1389.52	1373.35	1386.96	1373.96
QTR-2017-3	1410.40	1419.35	1409.31	1392.04	1372.70	1383.00	1372.12
QTR-2018-1	1408.01	1418.76	1402.92	1389.65	1372.37	1381.38	1374.21
QTR-2018-3	1410.46	1417.88	1410.27	1397.84	1375.90	1389.87	1374.85
QTR-2019-1	1413.80	1418.53	1411.27	1400.72	1383.19	1391.10	1377.89
QTR-2019-3	1412.07	1422.34	1415.12	1399.14	1377.58	1390.40	1374.46
QTR-2020-1	1414.38	1424.75	1411.49	1399.62	1378.73	1390.27	1374.60
QTR-2020-2	1414.67	1427.03	1415.83	1403.73	1380.90	1394.55	1375.70
QTR-2020-3	1411.10	1428.23	1414.78	1394.10	1375.29	1387.19	1373.30
QTR-2021-1	1410.62	1425.54	1405.72	1390.69	1375.14	1386.42	1374.19
QTR-2021-3	1410.46	1426.36	1412.38	1392.03	1373.93	1384.00	1371.92
QTR-2022-1	1408.46	1424.04	1404.24	1389.13	1372.69	1381.70	1373.66
QTR-2022-3	1408.65	1421.92	1408.57	1390.69	1371.45	1379.75	1370.26
QTR-2023-1	1405.85	1419.93	1400.39	1386.32	1370.00	1378.27	1369.80
QTR-2023-3	1405.35	1418.68	1398.38	1386.93	1370.75	1379.99	1370.86
QTR-2024-1	1405.43	1418.98	1397.63	1387.26	1372.18	1379.84	1370.80
QTR-2024-3	1405.25	1417.86	1398.27	1385.97	1371.45	1379.25	1369.31
QTR-2025-1	1404.17	1417.33	1397.82	1385.72	1371.62	1379.20	1371.86
QTR-2025-3	1403.80	1416.18	1395.70	1384.48	1371.22	1378.45	1370.71
Mean	1409.89	1419.75	1405.53	1392.33	1374.77	1384.32	1373.22
SD	2.85	2.69	5.90	5.43	3.37	4.36	2.38
Maximum	1415.33	1428.23	1415.83	1406.98	1385.69	1395.85	1379.15
Minimum	1403.26	1415.13	1395.70	1384.48	1370.00	1378.27	1369.10
Range	12.07	13.10	20.13	22.50	15.69	17.58	10.05
Hydraulic Gradient			0.03				

MP = Measuring Point

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

Figures





**LEGEND**  
MW1 1405  
MONITORING WELL  
GROUNDWATER ELEVATION (ft AMSL)

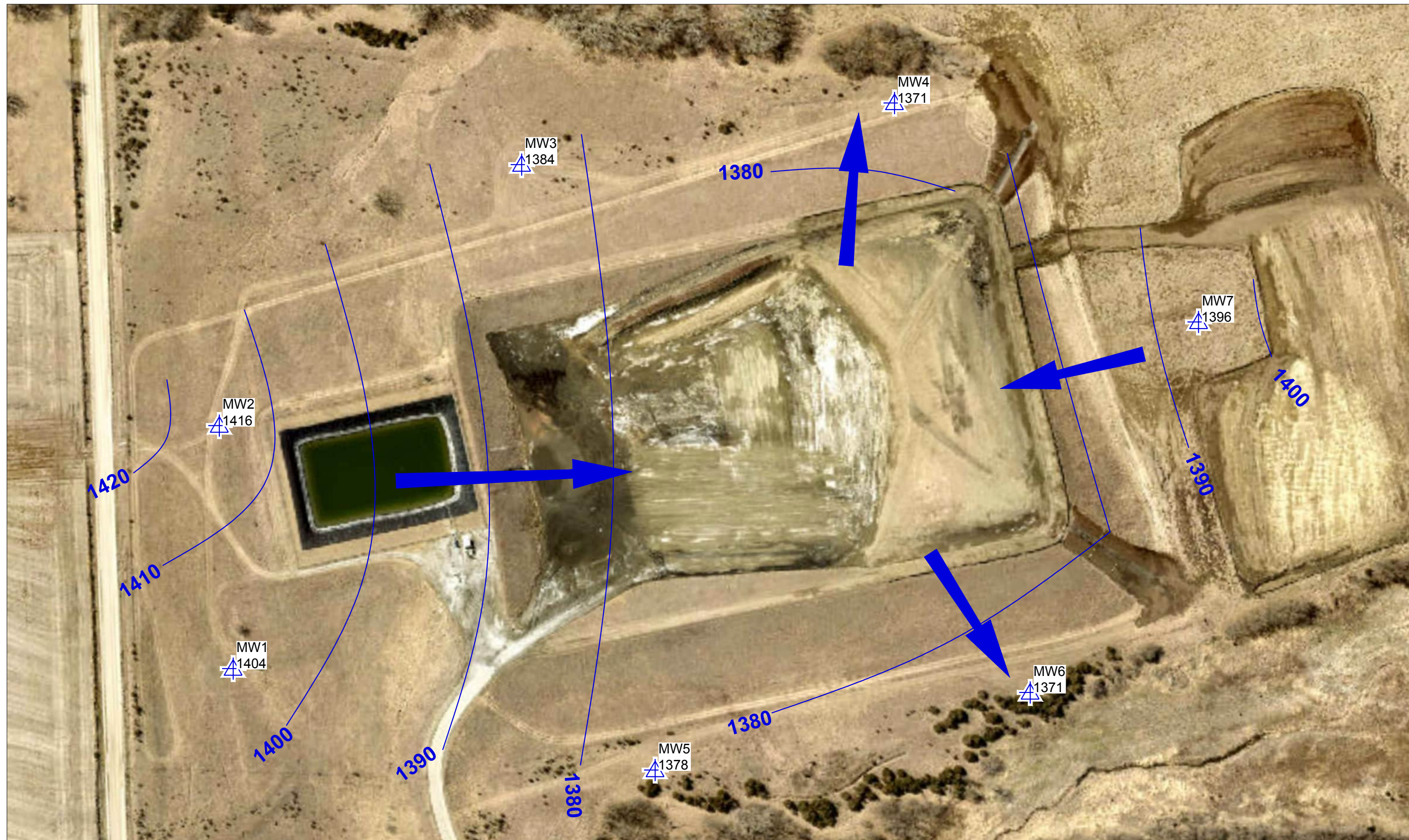


0 75 150  
1" = 150'  
FEET

**FIGURE 1**  
ASH LANDFILL NO. 4  
GROUNDWATER CONTOURS  
MARCH 2025



Path: \\wsp-pblwan-net\USCentralData\USL\K100\ascan\NPDP\Sheldent09\_PROJECT\SNPPD\_SS\_2025\_GW\_1\_Files\Maps\_SS\_GW\_Maps\_2025\_03.dwg



**LEGEND**  
MW1 1405  
MONITORING WELL  
GROUNDWATER ELEVATION (ft AMSL)

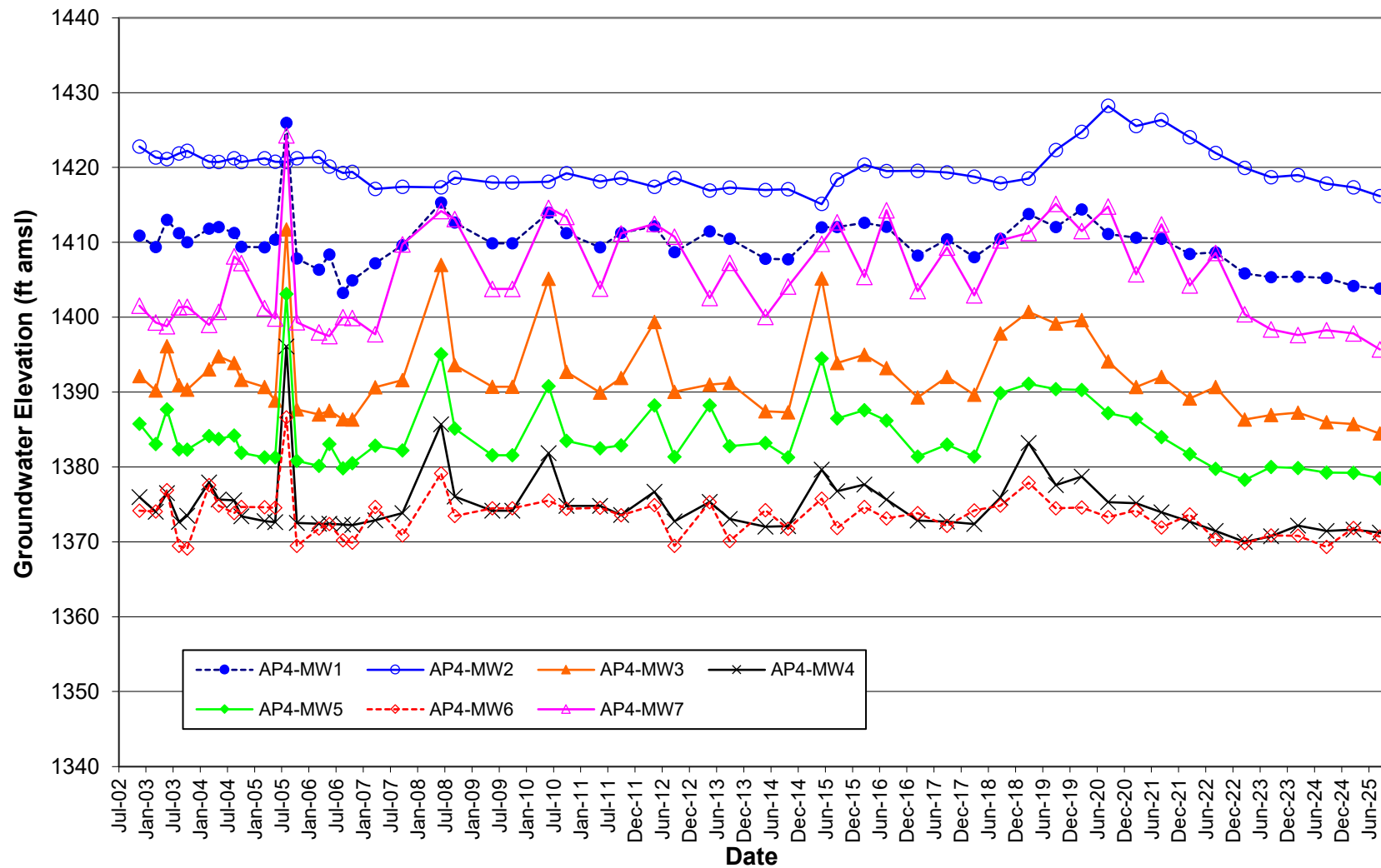


0 75 150  
1" = 150'  
FEET

**FIGURE 2**  
ASH LANDFILL NO. 4  
GROUNDWATER CONTOURS  
AUGUST 2025



**FIGURE 3**  
**Sheldon Station Ash Landfill No. 4**  
**Groundwater Elevations**





**APPENDIX A**

# Q1 2025 Semi-Annual Report



## REPORT

# Q1 2025 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

Prepared by:

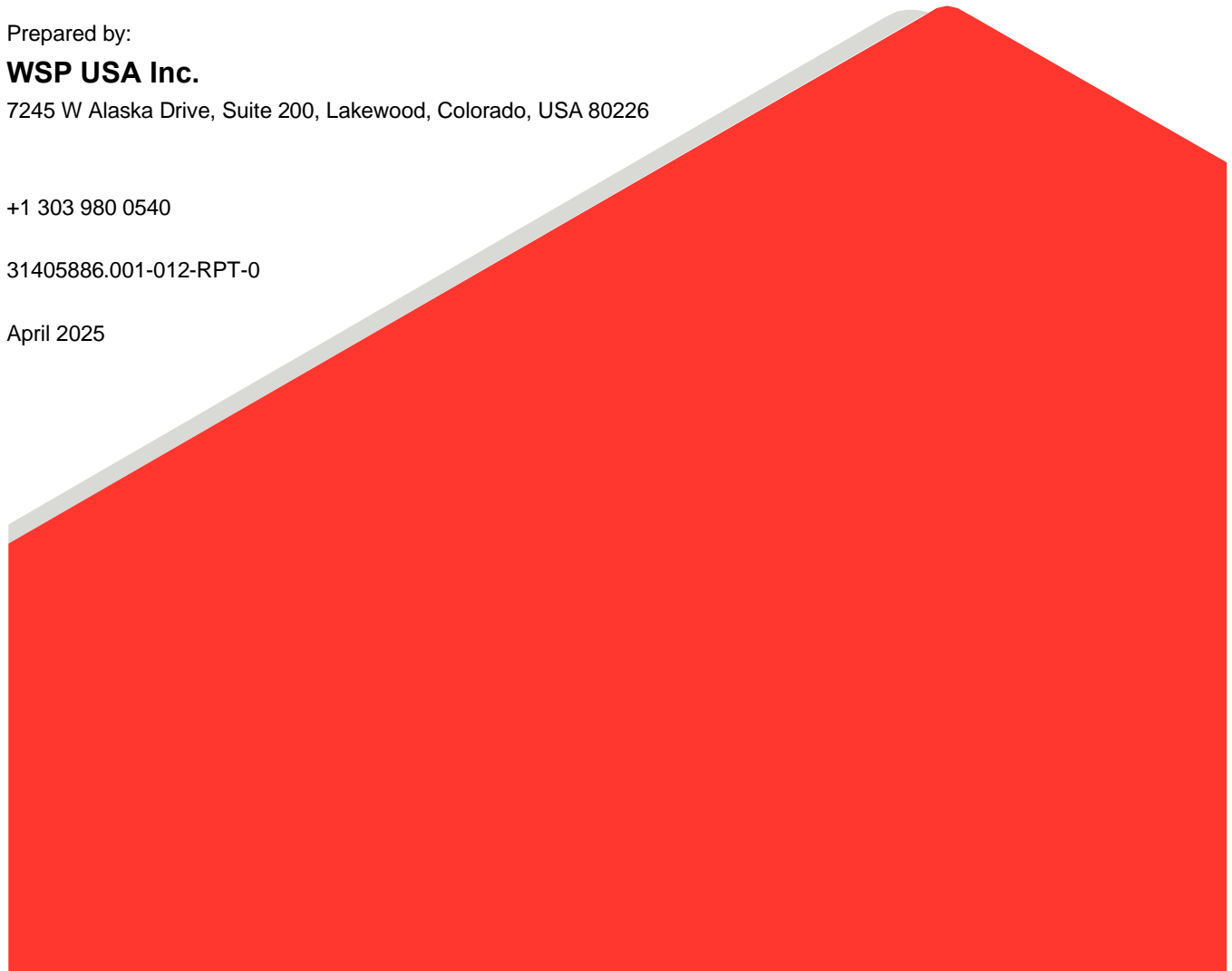
**WSP USA Inc.**

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31405886.001-012-RPT-0

April 2025



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Figure 1: Ash Landfill No. 4, Groundwater Contours, February 2024  
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## APPENDICES

Appendix A – Analytical Report and Chain-of-Custody Documentation  
Appendix B – Field Notes  
Appendix C – Time Series Data  
Appendix D – Comparative Statistical Analysis

## 1.0 INTRODUCTION

WSP USA Inc. (WSP) has prepared this report describing the first 2025 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 2025

A detection monitoring sampling event was completed during the first quarter of 2025.

### 2.2 Installation and Decommissioning of Monitoring Wells

No monitoring wells were installed or decommissioned at Sheldon Station during the first quarter of 2025.

### 2.3 Problems and Resolutions

During the first quarter 2025 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-MW4, AP4-MW5 and AP4-MW7

- Boron, 4x dilution factor, elevated reporting limit equals 0.4 mg/L: AP4-MW5

No other problems were encountered as part of the field sampling or analysis in the first quarter of 2025.

## 2.4 Proposed Key Activities for 2025

A detection monitoring sampling event is scheduled to occur in the third quarter of 2025 and will consist of sampling, data review, and comparative statistics. Following the detection monitoring sampling event, the second semi-annual report for 2025 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 March 3, 2025. Specific dates for each sample collected as part of the program are provided in Table 1 through Table 7. The analytical report for the results of samples collected March 3, 2025, 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 March 2025 (First Quarter [Q1] 2025) 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 foot (ft/ft), calculated based on groundwater elevations during each monitoring event.
- $n_e$  is the effective porosity, a unitless parameter, estimated to be 0.2 for site soils.

The average groundwater flow rate for March 2025 was estimated to be  $6.7 \times 10^{-4}$  ft/day, based on the calculated hydraulic gradient for March 2025 of 0.03 ft/ft.

### 3.2 Monitoring Data (Analytical Results)

Analytical results for the detection monitoring results for the March 2025 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 (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. 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 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 2025 sampling event:

- AP4-MW5, Field pH low elevated CUSUM
- AP4-MW6, 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 Q3 2024 sampling event were determined to be false-positives following confirmatory re-sampling:

- AP4-MW3, Field pH
- AP4-MW4, Field pH

### 3.3.4 Verified Exceedances

The following result that was identified as a potential exceedance for the Q3 2024 sampling event was determined to be a verified SSI following confirmatory re-sampling:

- AP4-MW7, Field pH low elevated CUSUM

Next steps with the identification of the verified SSI are discussed below.

## 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 2025.

Based on identification of the SSI for field pH at AP4-MW7, NPPD will place a notification of the SSI identification in the site operating record within 14 days and notify the NDEE of the notice. This report serves to notify NDEE of the notice.

### 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.

Based on the identified verified SSI for field pH at AP4-MW7 in Q1 2025, an ASD will be pursued within 90 days of identification of the verified SSI.

### 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).

If the ASD following the Q1 2025 event is not successful within the 90-day deadline, assessment monitoring program will be implemented, as described within the permitted SAP (GAUSA 2022).

### 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 March 3, 2025, 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.

Based on identification of the SSI for field pH at AP4-MW7, NPPD will place a notification of the SSI identification in the site operating record within 14 days and notify the NDEE of the notice. This report serves to notify NDEE of the notice. In lieu of establishing an assessment monitoring program, NPPD may demonstrate that a source other than Ash Landfill No. 4 caused the SSI. A report documenting this demonstration shall be certified by a Professional Engineer registered in Nebraska, approved by the NDEE, and placed in the site's Operating Record within 90 days of the SSI determination. If a successful demonstration is made and documented, NPPD will continue detection monitoring. If, after 90 days, a successful demonstration is not made, NPPD shall initiate an assessment monitoring program as outlined within the current SAP (GAUSA 2022a).

## Signature Page

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[https://wsonline.sharepoint.com/:f:/r/Sites/Global-NPPD2023GWQualityRep/Project%20Files/6%20Deliverables/012-RPT-NPPD\\_SS\\_Q1\\_2025\\_Semi-Ann\\_GW/Rev0](https://wsonline.sharepoint.com/:f:/r/Sites/Global-NPPD2023GWQualityRep/Project%20Files/6%20Deliverables/012-RPT-NPPD_SS_Q1_2025_Semi-Ann_GW/Rev0)

## 5.0 REFERENCES

- GAI (Golder Associates, Inc.). 2017a. Groundwater Monitoring Statistical Methods Certification, Sheldon Station Ash Landfill No. 4. October 11, 2017.
- GAI. 2017b. Coal Combustion Residuals Landfill Groundwater Monitoring System Certification. October 11, 2017.
- 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	3/3/2025
	Units	Background Collection								Detection Monitoring <sup>1</sup>															
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	0.106
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	90.4
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	10.4
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	< 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	7.12
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	21.1
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	426
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	3/3/2025
	Units	Background Collection								Detection Monitoring <sup>1</sup>															
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	0.121
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	310
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	95.7
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	< 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	7.08
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	957
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	1700
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	3/3/2025
	Units	Background Collection									Detection Monitoring <sup>1</sup>														
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	0.102
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	82
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	< 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	1.11
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	7.18
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	21.3
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	374
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	3/3/2025
	Units	Background Collection								Detection Monitoring <sup>1</sup>															
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	0.104
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	103
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	<1.00
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	7.10
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	79.5
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	486
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 ± 0.10	0.451 ± 0.124	0.362 ± 0.104	0.471 ± 0.099	0.36 ± 0.097	0.481 U ± 0.141	0.327 ± 0.111	0.185 ± 0.090	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Radium-228	pCi/L	2.78 ± 0.488	1.59 ± 0.370	1.86 ± 0.360	2.62 ± 0.462	2.05 ± 0.454	1.39 ± 0.384	1.93 ± 0.397	1.9 ± 0.388	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Radium-226 + Radium-228	pCi/L	3.23 ± 0.50	2.041 ± 0.390	2.23 ± 0.375	3.09 ± 0.472	2.41 ± 0.461	1.56 ± 0.472	2.25 ± 0.412	2.08 ± 0.395	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
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	3/3/2025
	Units	Background Collection								Detection Monitoring <sup>1</sup>															
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	< 0.400
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	473
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	5.52
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	< 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	6.54
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	1470
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	2630
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	3/3/2025
	Units	Background Collection									Detection Monitoring <sup>1</sup>														
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	0.11
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	103
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	< 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	1.15
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	6.94
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	73.5
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	470
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	3/3/2025
	Units	Background Collection								Detection Monitoring <sup>1</sup>															
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	< 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	78.8
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	13.8
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	< 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	7.08
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	34.4
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	472
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
QTR-2025-1	1404.17	1417.33	1385.72	1371.62	1379.20	1371.86	1397.82
Mean	1409.99	1419.82	1392.47	1374.83	1384.42	1373.26	1405.70
SD	2.76	2.67	5.38	3.36	4.33	2.38	5.80
Maximum	1415.33	1428.23	1406.98	1385.69	1395.85	1379.15	1415.83
Minimum	1403.26	1415.13	1385.72	1370.00	1378.27	1369.10	1397.48
Range	12.07	13.10	21.26	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 2025 Detection Monitoring Result	Q1 2025 CUSUM Value	Q1 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			3/3/2025		
Boron, Total	mg/L	NP-PL	0.200	0.106	--	Yes
Calcium, Total	mg/L	CUSUM	115.1	90.4	93.2	Yes
Chloride	mg/L	NP-PL	11.0	10.4	--	Yes
Fluoride	mg/L	CUSUM	1.95	< 1.00	0.73	Yes
pH, Field	pH units	CUSUM	6.49, 8.00	7.12	7.11, 7.25	Yes
Sulfate	mg/L	CUSUM	31.6	21.1	23.6	Yes
Total Dissolved Solids	mg/L	CUSUM	584	426	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 2025 Detection Monitoring Result	Q1 2025 CUSUM Value	Q1 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			3/3/2025		
Boron, Total	mg/L	NP-PL	0.200	0.121	--	Yes
Calcium, Total	mg/L	CUSUM	402	310	297	Yes
Chloride	mg/L	NP-PL	113.0	95.7	--	Yes
Fluoride	mg/L	NP-PL	0.94	< 1.00	--	Yes - See Text
pH, Field	pH units	CUSUM	6.55, 7.85	7.08	6.88, 7.20	Yes
Sulfate	mg/L	CUSUM	1027	957	960	Yes
Total Dissolved Solids	mg/L	NP-PL	2360	1700	--	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 2025 Detection Monitoring Result	Q1 2025 CUSUM Value	Q1 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			3/3/2025		
Boron, Total	mg/L	NP-PL	0.200	0.102	--	Yes
Calcium, Total	mg/L	CUSUM	105.2	82.0	86.5	Yes
Chloride	mg/L	NP-PL	12.40	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	2.48	1.11	1.09	Yes
pH, Field	pH units	CUSUM	6.81, 7.99	7.18	6.91, 7.40	Yes - Prior Result Was a False Positive
Sulfate	mg/L	CUSUM	48.2	21.3	28.3	Yes
Total Dissolved Solids	mg/L	CUSUM	567	374	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 2025 Detection Monitoring Result	Q1 2025 CUSUM Value	Q1 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			3/3/2025		
Boron, Total	mg/L	NP-PL	0.200	0.104	--	Yes
Calcium, Total	mg/L	CUSUM	153	103	109	Yes
Chloride	mg/L	NP-PL	8.99	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	1.67	< 1.00	0.97	Yes
pH, Field	pH units	CUSUM	6.73, 7.79	7.10	6.79, 7.26	Yes - Prior Result Was a False Positive
Sulfate	mg/L	CUSUM	179.8	79.5	93.5	Yes
Total Dissolved Solids	mg/L	CUSUM	746	486	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 2025 Detection Monitoring Result	Q1 2025 CUSUM Value	Q1 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			3/3/2025		
Boron, Total	mg/L	NP-PL	0.200	< 0.400	--	Yes - See Text
Calcium, Total	mg/L	CUSUM	798	473	450	Yes
Chloride	mg/L	CUSUM	15.58	5.52	6.37	Yes
Fluoride	mg/L	NP-PL	0.664	< 1.00	--	Yes - See Text
pH, Field	pH units	CUSUM	6.32, 7.63	6.54	6.22, 6.98	No - Potential Exceedance
Sulfate	mg/L	NP-PL	1630	1470	--	Yes
Total Dissolved Solids	mg/L	CUSUM	4040	2630	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 2025 Detection Monitoring Result	Q1 2025 CUSUM Value	Q1 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			3/3/2025		
Boron, Total	mg/L	NP-PL	0.200	0.11	--	Yes
Calcium, Total	mg/L	CUSUM	127	103	102	Yes
Chloride	mg/L	NP-PL	5.28	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	2.90	1.15	1.47	Yes
pH, Field	pH units	CUSUM	6.71, 7.83	6.94	6.48, 7.27	No - Potential Exceedance
Sulfate	mg/L	CUSUM	114.9	73.5	61.4	Yes
Total Dissolved Solids	mg/L	CUSUM	687	470	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 2025 Detection Monitoring Result	Q1 2025 CUSUM Value	Q1 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			3/3/2025		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	NP-PL	79.0	70.8	--	Yes
Chloride	mg/L	CUSUM	17.9	13.8	17.3	Yes
Fluoride	mg/L	NP-PL	1.02	< 1.00	--	Yes
pH, Field	pH units	CUSUM	6.86, 8.10	7.08	6.61, 7.48	No - Verified SSI
Sulfate	mg/L	CUSUM	63.2	34.4	43.0	Yes
Total Dissolved Solids	mg/L	CUSUM	732	472	525	Yes

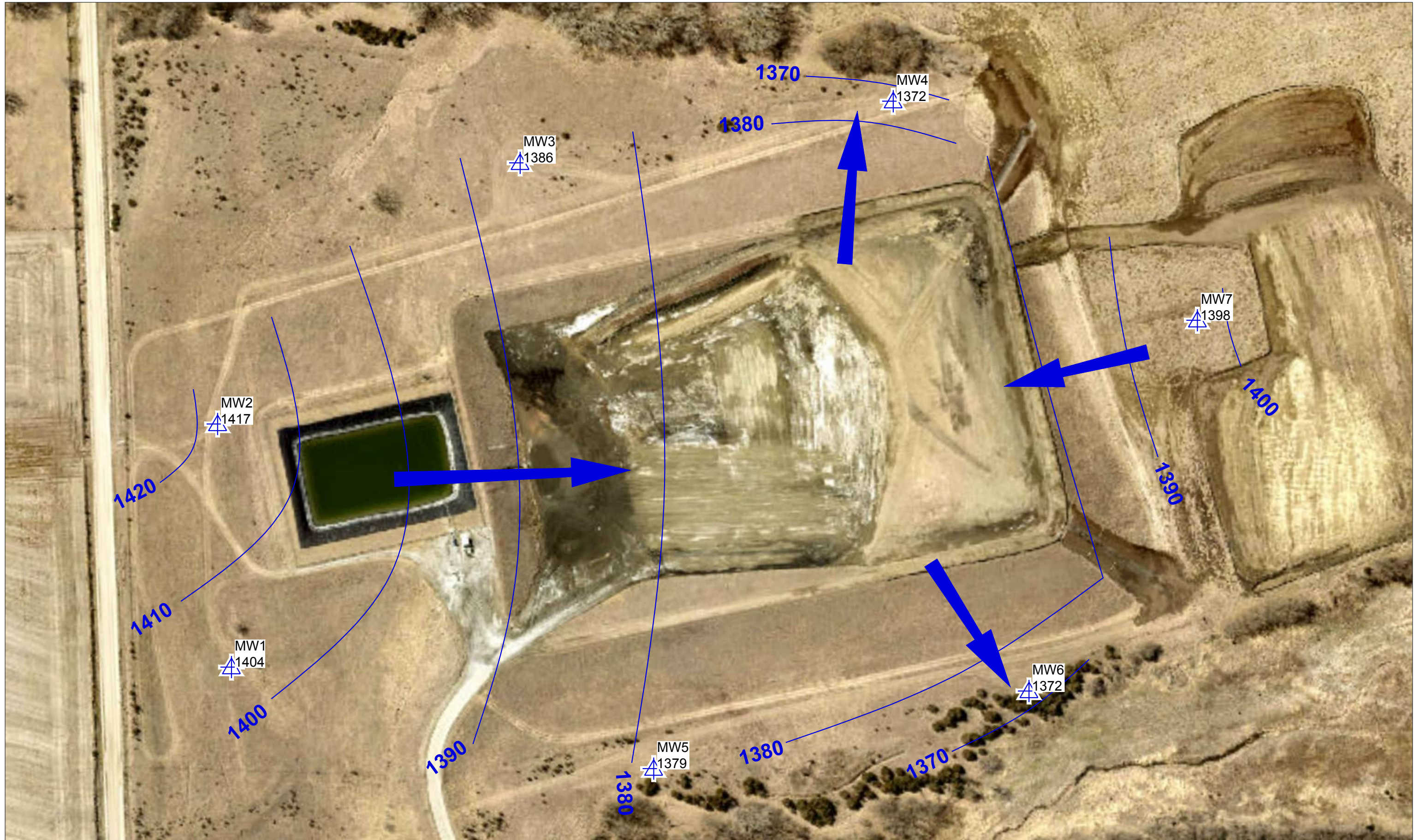
## NOTES:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

## Figures





**LEGEND**  
MW1 1405  
MONITORING WELL  
GROUNDWATER ELEVATION (ft AMSL)

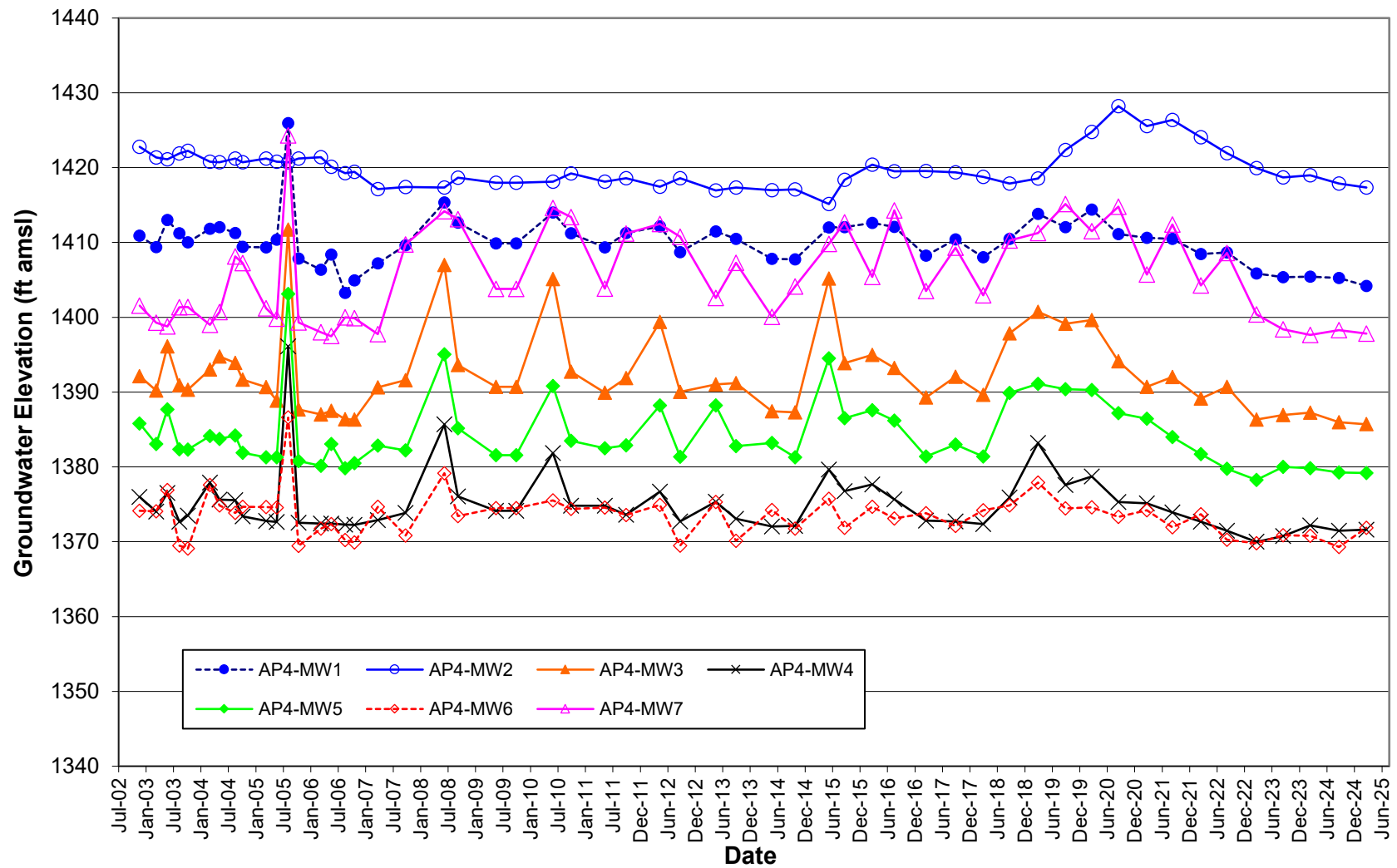


0 75 150  
1" = 150'  
FEET

**FIGURE 1**  
ASH LANDFILL NO. 4  
GROUNDWATER CONTOURS  
MARCH 2025



**FIGURE 2**  
**Sheldon Station Ash Landfill No. 4**  
**Groundwater Elevations**



**APPENDIX A**

# Analytical Report and Chain-of-Custody Documentation



# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 3/19/2025 4:13:44 PM

## JOB DESCRIPTION

Sheldon Station Ash Landfill #4 CCR New

## JOB NUMBER

310-301453-1



# Eurofins Cedar Falls

## Job Notes

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

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

## Authorization



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Authorized for release by  
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## Case Narrative

Client: Nebraska Public Power District  
Project: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

**Job ID: 310-301453-1**

**Eurofins Cedar Falls**

### **Job Narrative 310-301453-1**

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 3/6/2025 8:50 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 0.6°C.

#### **HPLC/IC**

Method 9056A\_ORGFM\_28D: The following samples were diluted due to the nature of the sample matrix: AP-4-MV1 (310-301453-1), AP-4-MV2 (310-301453-2) and AP-4-MV3 (310-301453-3). Elevated reporting limits (RLs) are provided.

Method 9056A\_ORGFM\_28D: The following samples were diluted due to the nature of the sample matrix: AP-4-MV4 (310-301453-4), AP-4-MV5 (310-301453-5) and AP-4-MV7 (310-301453-7). 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.

Eurofins Cedar Falls

## Sample Summary

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-301453-1	AP-4-MV1	Water	03/03/25 08:47	03/06/25 08:50
310-301453-2	AP-4-MV2	Water	03/03/25 09:22	03/06/25 08:50
310-301453-3	AP-4-MV3	Water	03/03/25 10:17	03/06/25 08:50
310-301453-4	AP-4-MV4	Water	03/03/25 11:30	03/06/25 08:50
310-301453-5	AP-4-MV5	Water	03/03/25 15:06	03/06/25 08:50
310-301453-6	AP-4-MV6	Water	03/03/25 14:20	03/06/25 08:50
310-301453-7	AP-4-MV7	Water	03/03/25 12:58	03/06/25 08:50
310-301453-8	AP-4-MV Blind Duplicate	Water	03/03/25 00:00	03/06/25 08:50

## Detection Summary

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

### Client Sample ID: AP-4-MV1

### Lab Sample ID: 310-301453-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10.4		5.00		mg/L	5		9056A	Total/NA
Sulfate	21.1		5.00		mg/L	5		9056A	Total/NA
Boron	0.106		0.100		mg/L	1		6020B	Total/NA
Calcium	90.4		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	426		50.0		mg/L	1		SM 2540C	Total/NA
pH	6.4	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

### Client Sample ID: AP-4-MV2

### Lab Sample ID: 310-301453-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	95.7		5.00		mg/L	5		9056A	Total/NA
Sulfate	957		20.0		mg/L	20		9056A	Total/NA
Boron	0.121		0.100		mg/L	1		6020B	Total/NA
Calcium	310		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	1700		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: AP-4-MV3

### Lab Sample ID: 310-301453-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	21.3		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.11		1.00		mg/L	5		9056A	Total/NA
Boron	0.102		0.100		mg/L	1		6020B	Total/NA
Calcium	82.0		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	374		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.1	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

### Client Sample ID: AP-4-MV4

### Lab Sample ID: 310-301453-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	79.5		5.00		mg/L	5		9056A	Total/NA
Boron	0.104		0.100		mg/L	1		6020B	Total/NA
Calcium	103		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	486		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: AP-4-MV5

### Lab Sample ID: 310-301453-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.52		5.00		mg/L	5		9056A	Total/NA
Sulfate	1470		20.0		mg/L	20		9056A	Total/NA
Calcium	473		2.00		mg/L	4		6020B	Total/NA
Total Dissolved Solids	2630		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: AP-4-MV6

### Lab Sample ID: 310-301453-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	73.5		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.15		1.00		mg/L	5		9056A	Total/NA
Boron	0.110		0.100		mg/L	1		6020B	Total/NA
Calcium	103		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	470		50.0		mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls



## Detection Summary

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

### Client Sample ID: AP-4-MV6 (Continued)

Lab Sample ID: 310-301453-6

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.0	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

### Client Sample ID: AP-4-MV7

Lab Sample ID: 310-301453-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13.8		5.00		mg/L	5		9056A	Total/NA
Sulfate	34.4		5.00		mg/L	5		9056A	Total/NA
Calcium	70.8		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	472		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: AP-4-MV Blind Duplicate

Lab Sample ID: 310-301453-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	20.4		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.24		1.00		mg/L	5		9056A	Total/NA
Calcium	91.0		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	370		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.

Eurofins Cedar Falls

# Client Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

Client Sample ID: AP-4-MV1

Lab Sample ID: 310-301453-1

Date Collected: 03/03/25 08:47

Matrix: Water

Date Received: 03/06/25 08:50

## Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.4		5.00		mg/L			03/12/25 13:35	5
Sulfate	21.1		5.00		mg/L			03/12/25 13:35	5
Fluoride	<1.00		1.00		mg/L			03/12/25 13:35	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.106		0.100		mg/L		03/11/25 09:00	03/12/25 19:50	1
Calcium	90.4		0.500		mg/L		03/11/25 09:00	03/12/25 19:50	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	426		50.0		mg/L			03/06/25 19:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	6.4	HF	1.0		SU			03/06/25 11:38	1

# Client Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

Client Sample ID: AP-4-MV2

Lab Sample ID: 310-301453-2

Date Collected: 03/03/25 09:22

Matrix: Water

Date Received: 03/06/25 08:50

## Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	95.7		5.00		mg/L			03/12/25 13:50	5
Sulfate	957		20.0		mg/L			03/13/25 11:09	20
Fluoride	<1.00		1.00		mg/L			03/12/25 13:50	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.121		0.100		mg/L		03/11/25 09:00	03/12/25 19:52	1
Calcium	310		0.500		mg/L		03/11/25 09:00	03/12/25 19:52	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1700		50.0		mg/L			03/06/25 19:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.3	HF	1.0		SU			03/06/25 11:39	1

# Client Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

Client Sample ID: AP-4-MV3

Lab Sample ID: 310-301453-3

Date Collected: 03/03/25 10:17

Matrix: Water

Date Received: 03/06/25 08:50

## Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			03/12/25 14:06	5
Sulfate	21.3		5.00		mg/L			03/12/25 14:06	5
Fluoride	1.11		1.00		mg/L			03/12/25 14:06	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.102		0.100		mg/L		03/11/25 09:00	03/12/25 19:54	1
Calcium	82.0		0.500		mg/L		03/11/25 09:00	03/12/25 19:54	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	374		50.0		mg/L			03/06/25 19:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.1	HF	1.0		SU			03/06/25 11:40	1

# Client Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

Client Sample ID: AP-4-MV4

Lab Sample ID: 310-301453-4

Date Collected: 03/03/25 11:30

Matrix: Water

Date Received: 03/06/25 08:50

## Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			03/18/25 19:31	5
Sulfate	79.5		5.00		mg/L			03/18/25 19:31	5
Fluoride	<1.00		1.00		mg/L			03/18/25 19:31	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.104		0.100		mg/L		03/11/25 09:00	03/12/25 20:04	1
Calcium	103		0.500		mg/L		03/11/25 09:00	03/12/25 20:04	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	486		50.0		mg/L			03/06/25 19:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.5	HF	1.0		SU			03/06/25 11:41	1



# Client Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

Client Sample ID: AP-4-MV5

Lab Sample ID: 310-301453-5

Date Collected: 03/03/25 15:06

Matrix: Water

Date Received: 03/06/25 08:50

## Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.52		5.00		mg/L			03/18/25 19:47	5
Sulfate	1470		20.0		mg/L			03/15/25 09:52	20
Fluoride	<1.00		1.00		mg/L			03/18/25 19:47	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.400		0.400		mg/L		03/11/25 09:00	03/13/25 15:16	4
Calcium	473		2.00		mg/L		03/11/25 09:00	03/13/25 15:16	4

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	2630		50.0		mg/L			03/06/25 19:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.3	HF	1.0		SU			03/06/25 11:42	1

# Client Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

Client Sample ID: AP-4-MV6

Lab Sample ID: 310-301453-6

Date Collected: 03/03/25 14:20

Matrix: Water

Date Received: 03/06/25 08:50

## Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			03/18/25 20:02	5
Sulfate	73.5		5.00		mg/L			03/18/25 20:02	5
Fluoride	1.15		1.00		mg/L			03/18/25 20:02	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.110		0.100		mg/L		03/11/25 09:00	03/12/25 20:09	1
Calcium	103		0.500		mg/L		03/11/25 09:00	03/12/25 20:09	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	470		50.0		mg/L			03/06/25 19:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.0	HF	1.0		SU			03/06/25 11:43	1

# Client Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

Client Sample ID: AP-4-MV7

Lab Sample ID: 310-301453-7

Date Collected: 03/03/25 12:58

Matrix: Water

Date Received: 03/06/25 08:50

## Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13.8		5.00		mg/L			03/18/25 20:18	5
Sulfate	34.4		5.00		mg/L			03/18/25 20:18	5
Fluoride	<1.00		1.00		mg/L			03/18/25 20:18	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		03/12/25 10:00	03/13/25 13:16	1
Calcium	70.8		0.500		mg/L		03/12/25 10:00	03/12/25 18:45	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	472		50.0		mg/L			03/06/25 19:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.5	HF	1.0		SU			03/06/25 11:47	1

# Client Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

Client Sample ID: AP-4-MV Blind Duplicate

Lab Sample ID: 310-301453-8

Date Collected: 03/03/25 00:00

Matrix: Water

Date Received: 03/06/25 08:50

## Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			03/18/25 20:33	5
Sulfate	20.4		5.00		mg/L			03/18/25 20:33	5
Fluoride	1.24		1.00		mg/L			03/18/25 20:33	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		03/12/25 10:00	03/13/25 13:13	1
Calcium	91.0		0.500		mg/L		03/12/25 10:00	03/12/25 18:42	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	370		50.0		mg/L			03/06/25 19:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.4	HF	1.0		SU			03/06/25 11:49	1

## Definitions/Glossary

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

### 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

# QC Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

## Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-448967/3

Matrix: Water

Analysis Batch: 448967

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			03/12/25 12:01	1
Sulfate	<1.00		1.00		mg/L			03/12/25 12:01	1
Fluoride	<0.200		0.200		mg/L			03/12/25 12:01	1

Lab Sample ID: LCS 310-448967/4

Matrix: Water

Analysis Batch: 448967

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	9.693		mg/L		97	90 - 110
Sulfate	10.0	9.788		mg/L		98	90 - 110
Fluoride	2.00	1.868		mg/L		93	90 - 110

Lab Sample ID: MB 310-449187/29

Matrix: Water

Analysis Batch: 449187

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			03/18/25 19:00	1
Sulfate	<1.00		1.00		mg/L			03/18/25 19:00	1
Fluoride	<0.200		0.200		mg/L			03/18/25 19:00	1

Lab Sample ID: LCS 310-449187/30

Matrix: Water

Analysis Batch: 449187

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	9.632		mg/L		96	90 - 110
Sulfate	10.0	9.711		mg/L		97	90 - 110
Fluoride	2.00	1.872		mg/L		94	90 - 110

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

Lab Sample ID: MB 310-448523/1-A

Matrix: Water

Analysis Batch: 448774

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 448523

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.500		0.500		mg/L		03/11/25 09:00	03/12/25 18:50	1

Lab Sample ID: MB 310-448523/1-A

Matrix: Water

Analysis Batch: 448920

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 448523

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		03/11/25 09:00	03/13/25 14:34	1

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# QC Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

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

Lab Sample ID: LCS 310-448523/2-A  
Matrix: Water  
Analysis Batch: 448774

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 448523

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	2.00	2.051		mg/L		103	80 - 120

Lab Sample ID: LCS 310-448523/2-A  
Matrix: Water  
Analysis Batch: 448920

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 448523

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.200	0.2109		mg/L		105	80 - 120

Lab Sample ID: MB 310-448684/1-A  
Matrix: Water  
Analysis Batch: 448774

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 448684

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100	^+	0.100		mg/L		03/12/25 10:00	03/12/25 17:33	1
Calcium	<0.500		0.500		mg/L		03/12/25 10:00	03/12/25 17:33	1

Lab Sample ID: MB 310-448684/1-A  
Matrix: Water  
Analysis Batch: 448865

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 448684

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		03/12/25 10:00	03/13/25 12:33	1

Lab Sample ID: LCS 310-448684/2-A  
Matrix: Water  
Analysis Batch: 448774

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 448684

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	2.00	2.128		mg/L		106	80 - 120

Lab Sample ID: LCS 310-448684/2-A  
Matrix: Water  
Analysis Batch: 448865

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 448684

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.200	0.1916		mg/L		96	80 - 120

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

Lab Sample ID: MB 310-448305/1  
Matrix: Water  
Analysis Batch: 448305

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			03/06/25 19:02	1

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# QC Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

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

Lab Sample ID: LCS 310-448305/2

Matrix: Water

Analysis Batch: 448305

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	990.0		mg/L		99	88 - 110

## Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-448185/1

Matrix: Water

Analysis Batch: 448185

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: LCS 310-448185/17

Matrix: Water

Analysis Batch: 448185

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: 310-301453-7 DU

Matrix: Water

Analysis Batch: 448185

Client Sample ID: AP-4-MV7

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.5	HF	7.5		SU		0.1	20

## QC Association Summary

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

### HPLC/IC

#### Analysis Batch: 448967

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-301453-1	AP-4-MV1	Total/NA	Water	9056A	
310-301453-2	AP-4-MV2	Total/NA	Water	9056A	
310-301453-2	AP-4-MV2	Total/NA	Water	9056A	
310-301453-3	AP-4-MV3	Total/NA	Water	9056A	
MB 310-448967/3	Method Blank	Total/NA	Water	9056A	
LCS 310-448967/4	Lab Control Sample	Total/NA	Water	9056A	

#### Analysis Batch: 449187

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-301453-4	AP-4-MV4	Total/NA	Water	9056A	
310-301453-5	AP-4-MV5	Total/NA	Water	9056A	
310-301453-5	AP-4-MV5	Total/NA	Water	9056A	
310-301453-6	AP-4-MV6	Total/NA	Water	9056A	
310-301453-7	AP-4-MV7	Total/NA	Water	9056A	
310-301453-8	AP-4-MV Blind Duplicate	Total/NA	Water	9056A	
MB 310-449187/29	Method Blank	Total/NA	Water	9056A	
LCS 310-449187/30	Lab Control Sample	Total/NA	Water	9056A	

### Metals

#### Prep Batch: 448523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-301453-1	AP-4-MV1	Total/NA	Water	3005A	
310-301453-2	AP-4-MV2	Total/NA	Water	3005A	
310-301453-3	AP-4-MV3	Total/NA	Water	3005A	
310-301453-4	AP-4-MV4	Total/NA	Water	3005A	
310-301453-5	AP-4-MV5	Total/NA	Water	3005A	
310-301453-6	AP-4-MV6	Total/NA	Water	3005A	
MB 310-448523/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-448523/2-A	Lab Control Sample	Total/NA	Water	3005A	

#### Prep Batch: 448684

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-301453-7	AP-4-MV7	Total/NA	Water	3005A	
310-301453-8	AP-4-MV Blind Duplicate	Total/NA	Water	3005A	
MB 310-448684/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-448684/2-A	Lab Control Sample	Total/NA	Water	3005A	

#### Analysis Batch: 448774

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-301453-1	AP-4-MV1	Total/NA	Water	6020B	448523
310-301453-2	AP-4-MV2	Total/NA	Water	6020B	448523
310-301453-3	AP-4-MV3	Total/NA	Water	6020B	448523
310-301453-4	AP-4-MV4	Total/NA	Water	6020B	448523
310-301453-6	AP-4-MV6	Total/NA	Water	6020B	448523
310-301453-7	AP-4-MV7	Total/NA	Water	6020B	448684
310-301453-8	AP-4-MV Blind Duplicate	Total/NA	Water	6020B	448684
MB 310-448523/1-A	Method Blank	Total/NA	Water	6020B	448523
MB 310-448684/1-A	Method Blank	Total/NA	Water	6020B	448684
LCS 310-448523/2-A	Lab Control Sample	Total/NA	Water	6020B	448523
LCS 310-448684/2-A	Lab Control Sample	Total/NA	Water	6020B	448684

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## QC Association Summary

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

### Metals

#### Analysis Batch: 448865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-301453-7	AP-4-MV7	Total/NA	Water	6020B	448684
310-301453-8	AP-4-MV Blind Duplicate	Total/NA	Water	6020B	448684
MB 310-448684/1-A	Method Blank	Total/NA	Water	6020B	448684
LCS 310-448684/2-A	Lab Control Sample	Total/NA	Water	6020B	448684

#### Analysis Batch: 448920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-301453-5	AP-4-MV5	Total/NA	Water	6020B	448523
MB 310-448523/1-A	Method Blank	Total/NA	Water	6020B	448523
LCS 310-448523/2-A	Lab Control Sample	Total/NA	Water	6020B	448523

### General Chemistry

#### Analysis Batch: 448185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-301453-1	AP-4-MV1	Total/NA	Water	SM 4500 H+ B	
310-301453-2	AP-4-MV2	Total/NA	Water	SM 4500 H+ B	
310-301453-3	AP-4-MV3	Total/NA	Water	SM 4500 H+ B	
310-301453-4	AP-4-MV4	Total/NA	Water	SM 4500 H+ B	
310-301453-5	AP-4-MV5	Total/NA	Water	SM 4500 H+ B	
310-301453-6	AP-4-MV6	Total/NA	Water	SM 4500 H+ B	
310-301453-7	AP-4-MV7	Total/NA	Water	SM 4500 H+ B	
310-301453-8	AP-4-MV Blind Duplicate	Total/NA	Water	SM 4500 H+ B	
LCS 310-448185/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
LCS 310-448185/17	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-301453-7 DU	AP-4-MV7	Total/NA	Water	SM 4500 H+ B	

#### Analysis Batch: 448305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-301453-1	AP-4-MV1	Total/NA	Water	SM 2540C	
310-301453-2	AP-4-MV2	Total/NA	Water	SM 2540C	
310-301453-3	AP-4-MV3	Total/NA	Water	SM 2540C	
310-301453-4	AP-4-MV4	Total/NA	Water	SM 2540C	
310-301453-5	AP-4-MV5	Total/NA	Water	SM 2540C	
310-301453-6	AP-4-MV6	Total/NA	Water	SM 2540C	
310-301453-7	AP-4-MV7	Total/NA	Water	SM 2540C	
310-301453-8	AP-4-MV Blind Duplicate	Total/NA	Water	SM 2540C	
MB 310-448305/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-448305/2	Lab Control Sample	Total/NA	Water	SM 2540C	

# Lab Chronicle

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

**Client Sample ID: AP-4-MV1**

**Lab Sample ID: 310-301453-1**

**Date Collected: 03/03/25 08:47**

**Matrix: Water**

**Date Received: 03/06/25 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	448967	WZC8	EET CF	03/12/25 13:35
Total/NA	Prep	3005A			448523	F5MW	EET CF	03/11/25 09:00
Total/NA	Analysis	6020B		1	448774	NFT2	EET CF	03/12/25 19:50
Total/NA	Analysis	SM 2540C		1	448305	XJ7V	EET CF	03/06/25 19:02
Total/NA	Analysis	SM 4500 H+ B		1	448185	W9YR	EET CF	03/06/25 11:38

**Client Sample ID: AP-4-MV2**

**Lab Sample ID: 310-301453-2**

**Date Collected: 03/03/25 09:22**

**Matrix: Water**

**Date Received: 03/06/25 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	448967	WZC8	EET CF	03/12/25 13:50
Total/NA	Analysis	9056A		20	448967	WZC8	EET CF	03/13/25 11:09
Total/NA	Prep	3005A			448523	F5MW	EET CF	03/11/25 09:00
Total/NA	Analysis	6020B		1	448774	NFT2	EET CF	03/12/25 19:52
Total/NA	Analysis	SM 2540C		1	448305	XJ7V	EET CF	03/06/25 19:02
Total/NA	Analysis	SM 4500 H+ B		1	448185	W9YR	EET CF	03/06/25 11:39

**Client Sample ID: AP-4-MV3**

**Lab Sample ID: 310-301453-3**

**Date Collected: 03/03/25 10:17**

**Matrix: Water**

**Date Received: 03/06/25 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	448967	WZC8	EET CF	03/12/25 14:06
Total/NA	Prep	3005A			448523	F5MW	EET CF	03/11/25 09:00
Total/NA	Analysis	6020B		1	448774	NFT2	EET CF	03/12/25 19:54
Total/NA	Analysis	SM 2540C		1	448305	XJ7V	EET CF	03/06/25 19:02
Total/NA	Analysis	SM 4500 H+ B		1	448185	W9YR	EET CF	03/06/25 11:40

**Client Sample ID: AP-4-MV4**

**Lab Sample ID: 310-301453-4**

**Date Collected: 03/03/25 11:30**

**Matrix: Water**

**Date Received: 03/06/25 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	449187	WZC8	EET CF	03/18/25 19:31
Total/NA	Prep	3005A			448523	F5MW	EET CF	03/11/25 09:00
Total/NA	Analysis	6020B		1	448774	NFT2	EET CF	03/12/25 20:04
Total/NA	Analysis	SM 2540C		1	448305	XJ7V	EET CF	03/06/25 19:02
Total/NA	Analysis	SM 4500 H+ B		1	448185	W9YR	EET CF	03/06/25 11:41

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# Lab Chronicle

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

**Client Sample ID: AP-4-MV5**

**Lab Sample ID: 310-301453-5**

**Date Collected: 03/03/25 15:06**

**Matrix: Water**

**Date Received: 03/06/25 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		20	449187	WZC8	EET CF	03/15/25 09:52
Total/NA	Analysis	9056A		5	449187	WZC8	EET CF	03/18/25 19:47
Total/NA	Prep	3005A			448523	F5MW	EET CF	03/11/25 09:00
Total/NA	Analysis	6020B		4	448920	ZRI4	EET CF	03/13/25 15:16
Total/NA	Analysis	SM 2540C		1	448305	XJ7V	EET CF	03/06/25 19:02
Total/NA	Analysis	SM 4500 H+ B		1	448185	W9YR	EET CF	03/06/25 11:42

**Client Sample ID: AP-4-MV6**

**Lab Sample ID: 310-301453-6**

**Date Collected: 03/03/25 14:20**

**Matrix: Water**

**Date Received: 03/06/25 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	449187	WZC8	EET CF	03/18/25 20:02
Total/NA	Prep	3005A			448523	F5MW	EET CF	03/11/25 09:00
Total/NA	Analysis	6020B		1	448774	NFT2	EET CF	03/12/25 20:09
Total/NA	Analysis	SM 2540C		1	448305	XJ7V	EET CF	03/06/25 19:02
Total/NA	Analysis	SM 4500 H+ B		1	448185	W9YR	EET CF	03/06/25 11:43

**Client Sample ID: AP-4-MV7**

**Lab Sample ID: 310-301453-7**

**Date Collected: 03/03/25 12:58**

**Matrix: Water**

**Date Received: 03/06/25 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	449187	WZC8	EET CF	03/18/25 20:18
Total/NA	Prep	3005A			448684	Y3EC	EET CF	03/12/25 10:00
Total/NA	Analysis	6020B		1	448774	NFT2	EET CF	03/12/25 18:45
Total/NA	Prep	3005A			448684	Y3EC	EET CF	03/12/25 10:00
Total/NA	Analysis	6020B		1	448865	NFT2	EET CF	03/13/25 13:16
Total/NA	Analysis	SM 2540C		1	448305	XJ7V	EET CF	03/06/25 19:02
Total/NA	Analysis	SM 4500 H+ B		1	448185	W9YR	EET CF	03/06/25 11:47

**Client Sample ID: AP-4-MV Blind Duplicate**

**Lab Sample ID: 310-301453-8**

**Date Collected: 03/03/25 00:00**

**Matrix: Water**

**Date Received: 03/06/25 08:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	449187	WZC8	EET CF	03/18/25 20:33
Total/NA	Prep	3005A			448684	Y3EC	EET CF	03/12/25 10:00
Total/NA	Analysis	6020B		1	448774	NFT2	EET CF	03/12/25 18:42
Total/NA	Prep	3005A			448684	Y3EC	EET CF	03/12/25 10:00
Total/NA	Analysis	6020B		1	448865	NFT2	EET CF	03/13/25 13:13
Total/NA	Analysis	SM 2540C		1	448305	XJ7V	EET CF	03/06/25 19:02
Total/NA	Analysis	SM 4500 H+ B		1	448185	W9YR	EET CF	03/06/25 11:49

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Lab Chronicle

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

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

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Accreditation/Certification Summary

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	IA100001	09-29-25

- 1
- 2
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- 12
- 13
- 14

## Method Summary

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-301453-1

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



Environment Testing  
America



### Cooler/Sample Receipt and Temperature Log form

<b>Client Information</b>			
Client: <u>NE Public Power</u>			
City/State:	CITY <u>Hallam</u>	STATE <u>NE</u>	Project:
<b>Receipt Information</b>			
Date/Time Received:	DATE <u>3-6-25</u>	TIME <u>850</u>	Received By: <u>PH</u>
Delivery Type: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
<b>Condition of Cooler/Containers</b>			
Sample(s) received in Cooler?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: _____
Multiple Coolers?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____
Cooler Custody Seals Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.6</u>		Corrected Temp (°C): <u>0.6</u>	
• Sample Container Temperature			
Container(s) used:	<u>CONTAINER 1</u>		<u>CONTAINER 2</u>
Uncorrected Temp (°C):			
Corrected Temp (°C):			
<b>Exceptions Noted</b>			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> 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?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE If yes, contact PM before proceeding. If no, proceed with login			
<b>Additional Comments</b>			

## Chain of Custody Record

<b>Client Information</b>		Sampler: <u>Todd A. Chinn</u>		Lab PM: <u>Calhoun</u>	Carrier Tracking No(s):	COC No: <u>310-103946-27710 1</u>
Client Contact: <u>Todd A. Chinn</u>		Phone: <u>402 787-5256</u>		E-Mail: <u>Conner Calhoun@et.eurofins.com</u>	State of Origin:	Page: <u>Page 1 of 1</u>
Company: <u>Nebraska Public Power District</u>		PWSID: <u>Normal TFI</u>		Analysis Requested		
Address: <u>4500 West Pella Road</u>		Due Date Requested: <u>Normal TFI</u>		Preservation Codes: <u>N=None</u> <u>D=HNO3</u>		
City: <u>Hallam</u>		TAT Requested (days): <u>Normal</u>		Total Number of Containers: <u>1</u>		
State Zip: <u>NE 68368</u>		Compliance Project: <u>Yes</u> <input type="checkbox"/> <u>No</u> <input type="checkbox"/>		Other:		
Phone: <u>402 787-5256</u>		PO #: <u>4500166705</u>		Special Instructions/Note		
Email: <u>tachinn@nppd.com</u>		WO #: <u>NA</u>				
Project Name: <u>Sheldon Station Ash Landfill #4 CCR New</u>		Project #: <u>31006953</u>				
Site: <u>NPPD Ash Landfill #4</u>		SSOW#: <u>NA</u>				
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Trace, Anal)	
AP 4-MV1	3-3-2025	0847	Water			
AP 4-MV2	3-3-2025	0922	Water			
AP 4-MV3	3-3-2025	1617	Water			
AP 4-MV4	3-3-2025	1130	Water			
AP 4-MV5	3-3-2025	1506	Water			
AP 4-MV6	3-3-2025	1420	Water			
AP 4-MV7	3-3-2025	1258	Water			
AP 4-MV Blind Duplicate	3-3-2025	NA	Water			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						
Deliverable Requested I II III IV Other (specify)						
Empty Kit Relinquished by						
Relinquished by: <u>Todd A. Chinn</u>		Date: <u>3-4-2025/1630</u>		Company: <u>NPPD</u>		
Relinquished by:		Date/Time:		Company:		
Relinquished by:		Date/Time:		Company:		
Custody Seals Intact: <u>Yes</u> <input type="checkbox"/> <u>No</u> <input type="checkbox"/>		Custody Seal No		Cooler Temperature(s) °C and Other Remarks: <u>3/4/25 850</u>		

## Login Sample Receipt Checklist

Client: Nebraska Public Power District

Job Number: 310-301453-1

**Login Number: 301453**

**List Source: Eurofins Cedar Falls**

**List Number: 1**

**Creator: Bunker, Xavier M**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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 $<6\text{mm}$ (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**



## Page 1 of 1

[illegible]

## Page 1 of 1

[illegible]

## Page 1 of 1

[illegible]





## Page 1 of 1

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 3800 mL

56°, Cloudy, 10 mph from the South

[illegible]



## Page 1 of 1

Well Conditions/ Field Observations: 56° Cloudy, 16 mph out of South

[illegible]

# WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) NPPD SS Ash Landfill #4 Depth to 10.5 / 35.3 of screen  
Well Number AP4-MW7 Date 3-3-2025 Top Bottom  
Field Personnel Todd A. Churn Patricia A. Novak Pump Intake at (ft. below MP) 33.5  
Sampling Organization NPPD Purging Device; (pump type) Micro Purge  
Identify MP Top of casing Total Volume Purged 3500 mL

Well Conditions/ Field Observations:

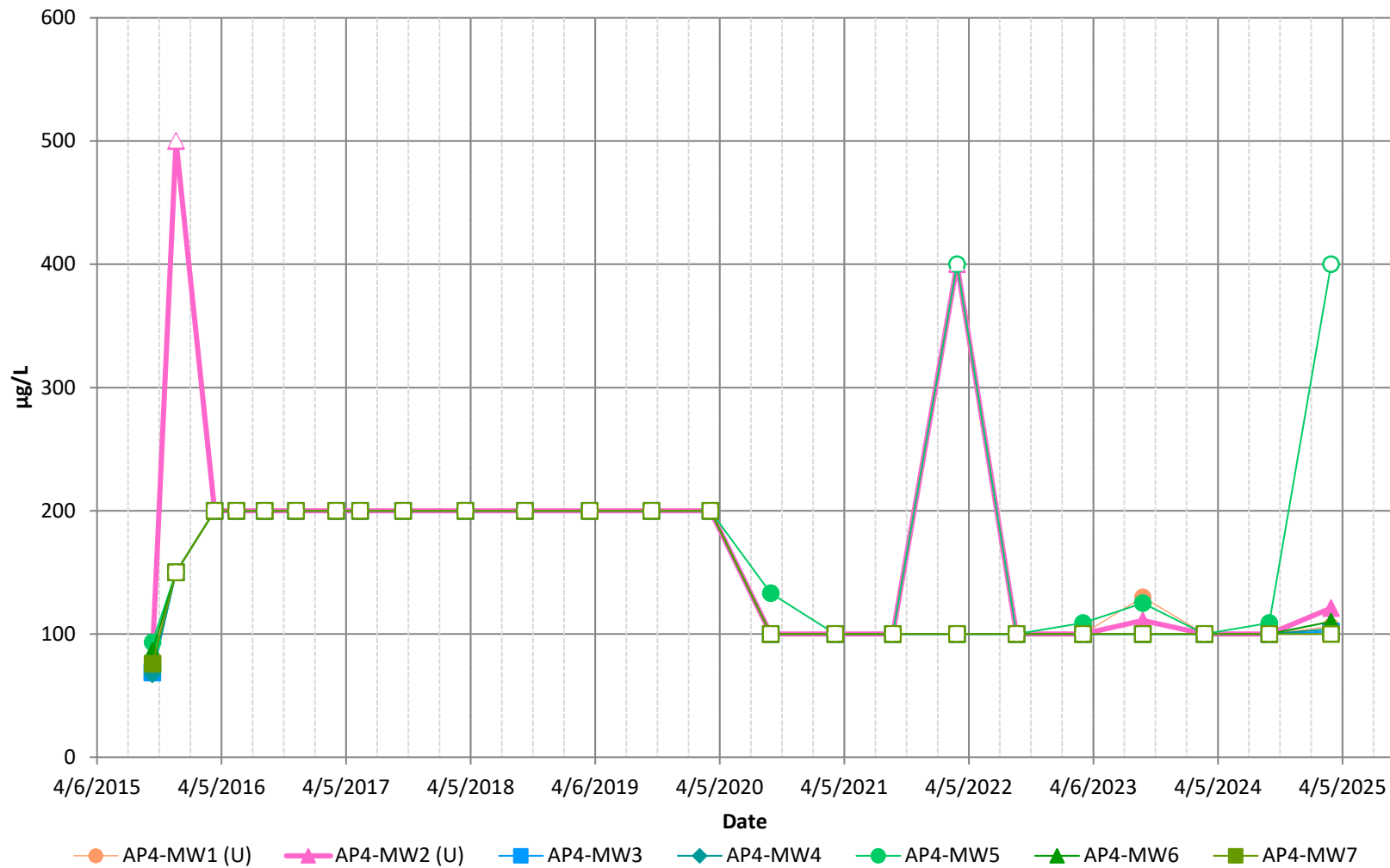
54° Cloudy 15mph out of the South

[illegible]



**APPENDIX C**

# Time Series Data



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

**Figure C-1**  
**Boron**

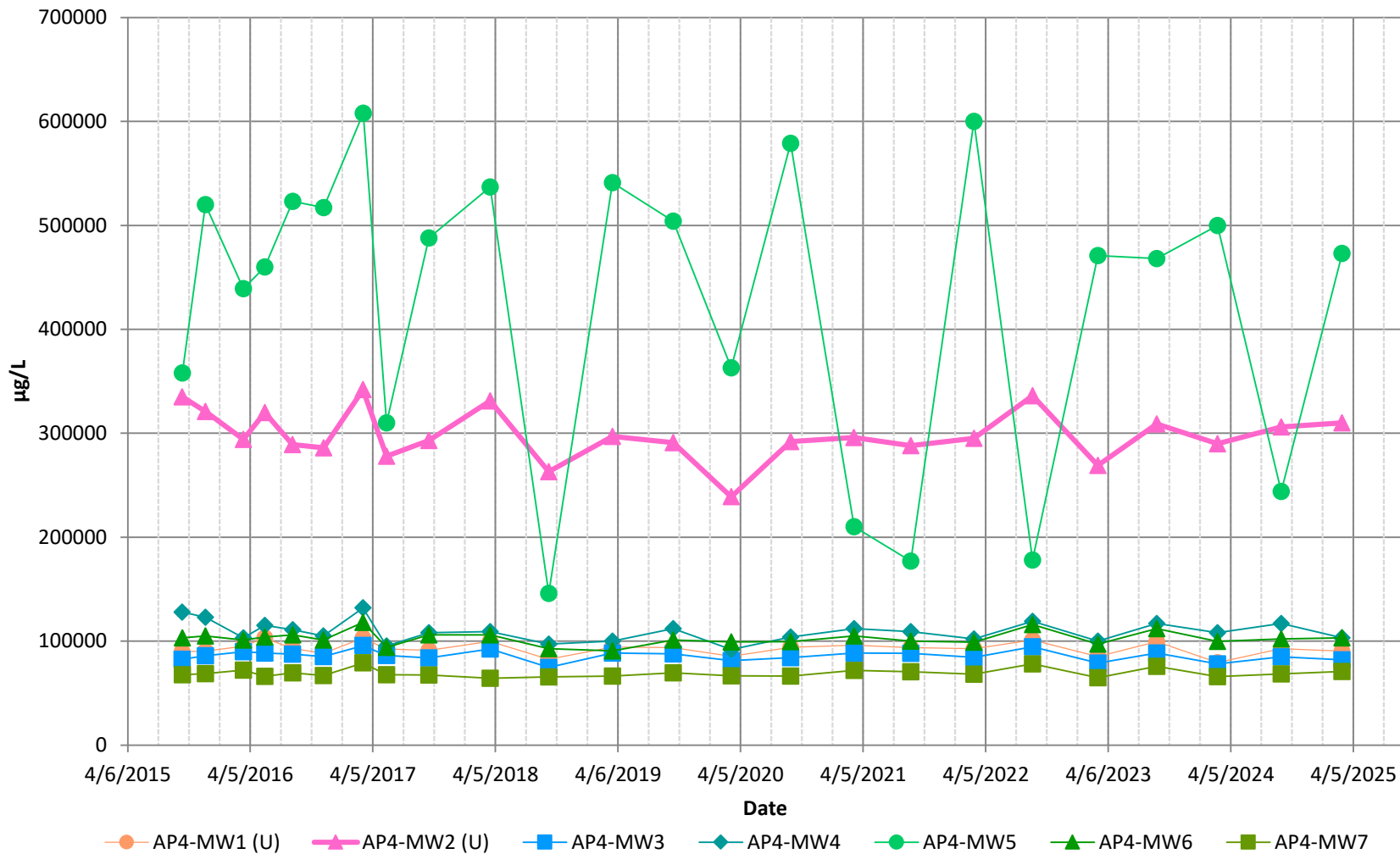
Nebraska Public Power District  
Sheldon Station

Denver, Colorado, USA

4/22/2025

31405886.001

**WSP USA Inc.**



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

**Figure C-2**  
**Calcium**

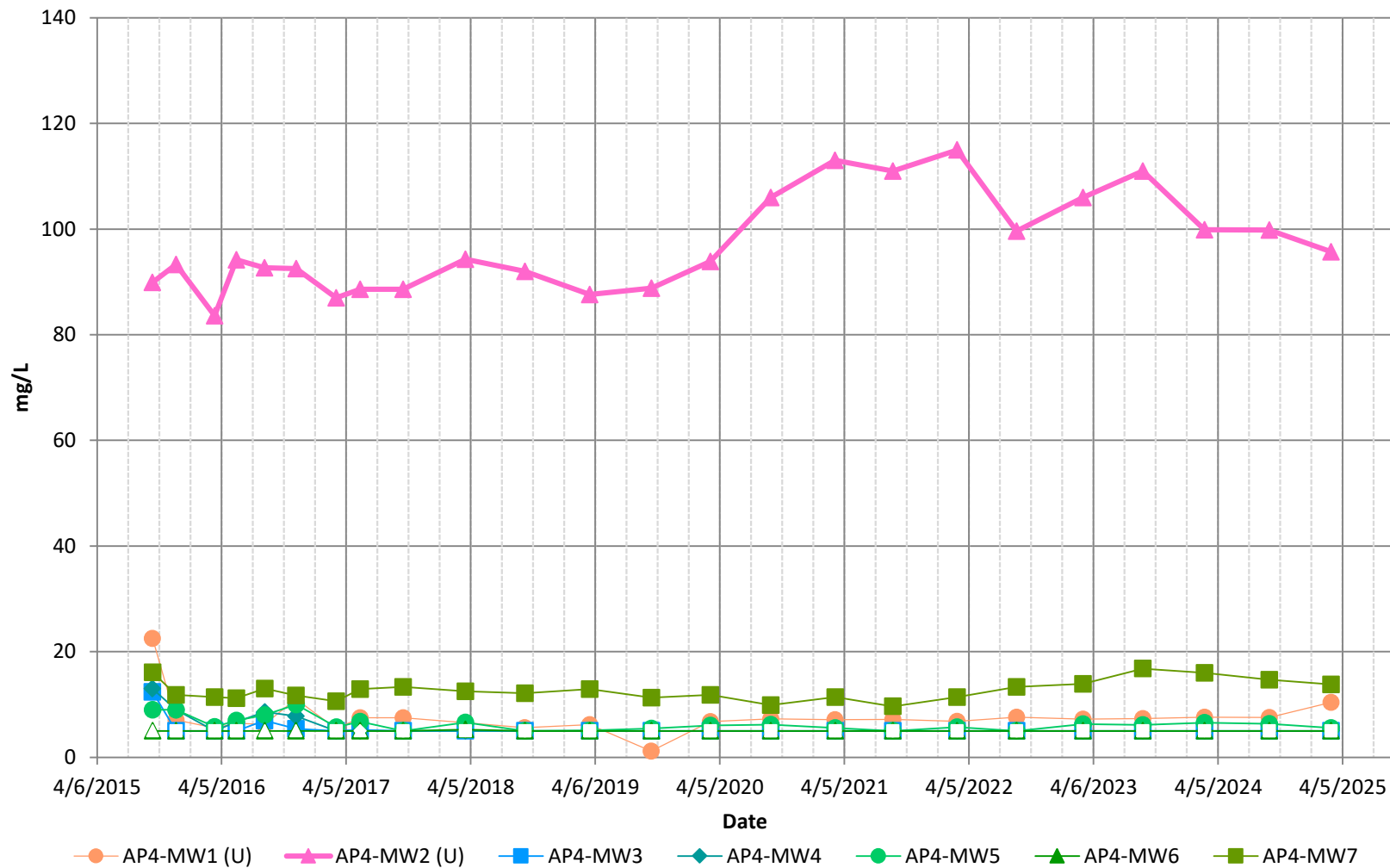
Nebraska Public Power District  
Sheldon Station

Denver, Colorado, USA

4/15/2025

31405886.001

**WSP USA Inc.**



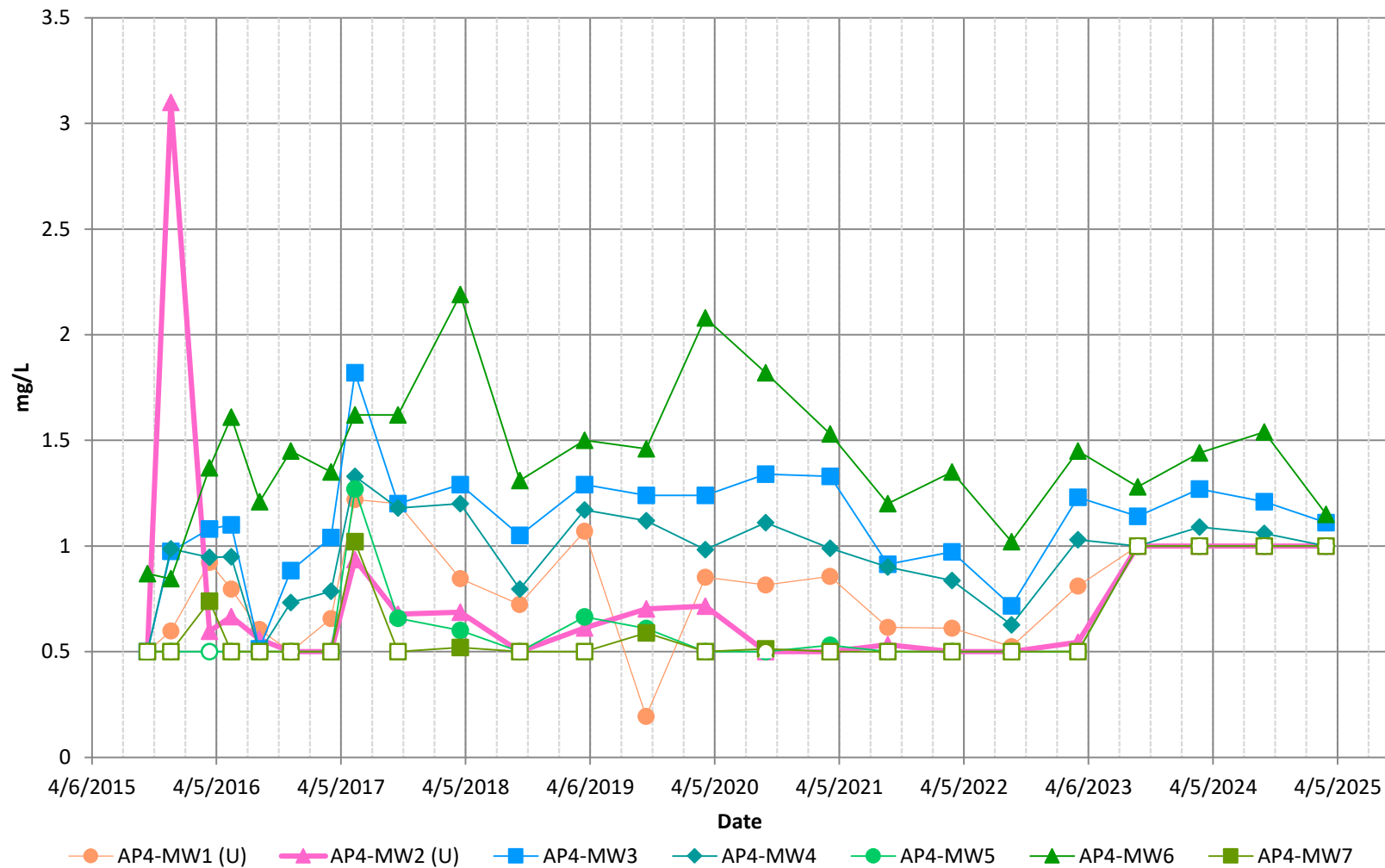
Non-detects plotted at the practical quantitation limit with an open symbol

**Figure C-3**  
**Chloride**

Nebraska Public Power District  
Sheldon Station

Denver, Colorado, USA  
31405886.001

**WSP USA Inc.**



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

**Figure C-4**  
**Fluoride**

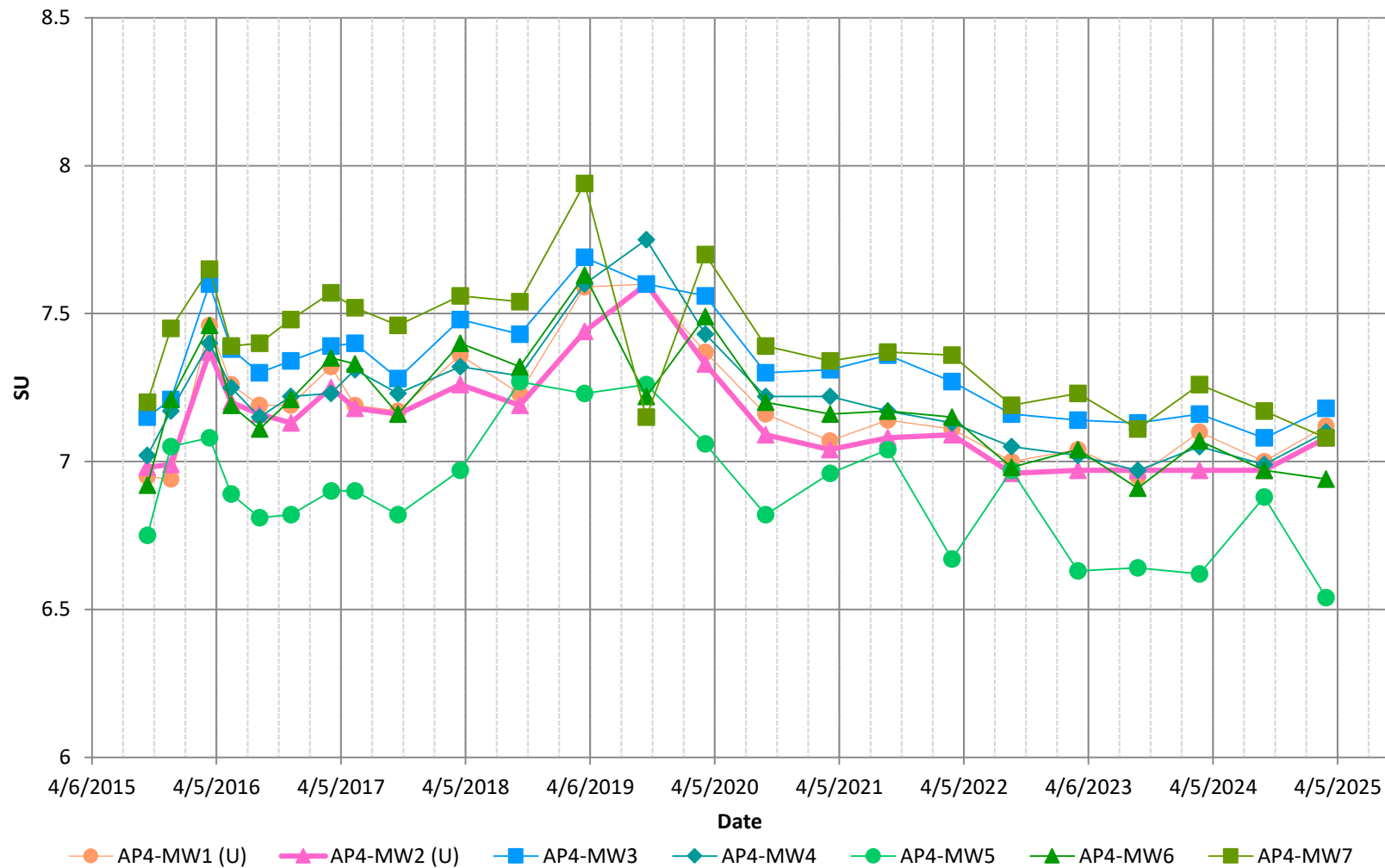
Nebraska Public Power District  
Sheldon Station

**WSP USA Inc.**

Denver, Colorado, USA

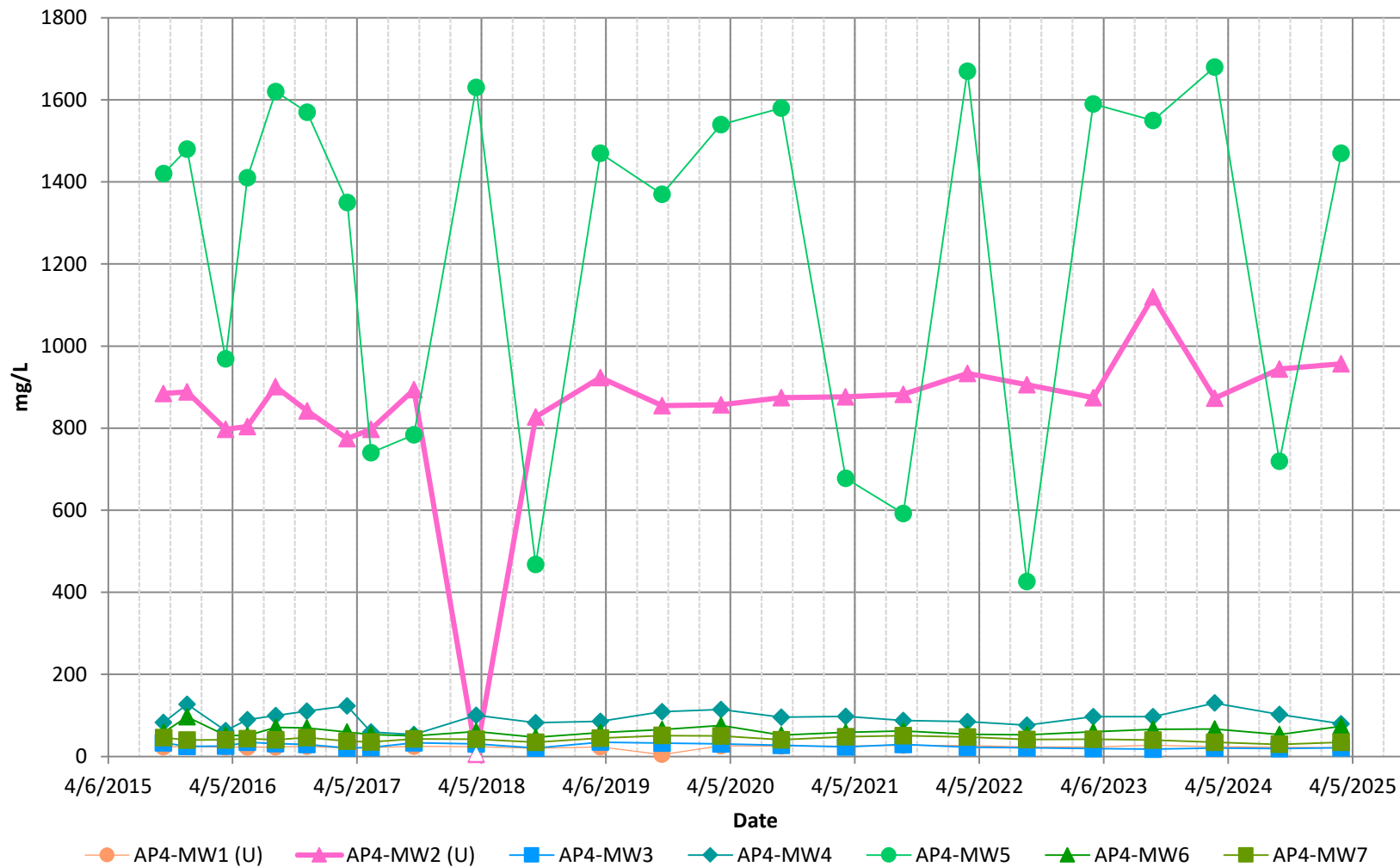
4/15/2025

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



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

**Figure C-6**  
**Sulfate**

Nebraska Public Power District  
Sheldon Station

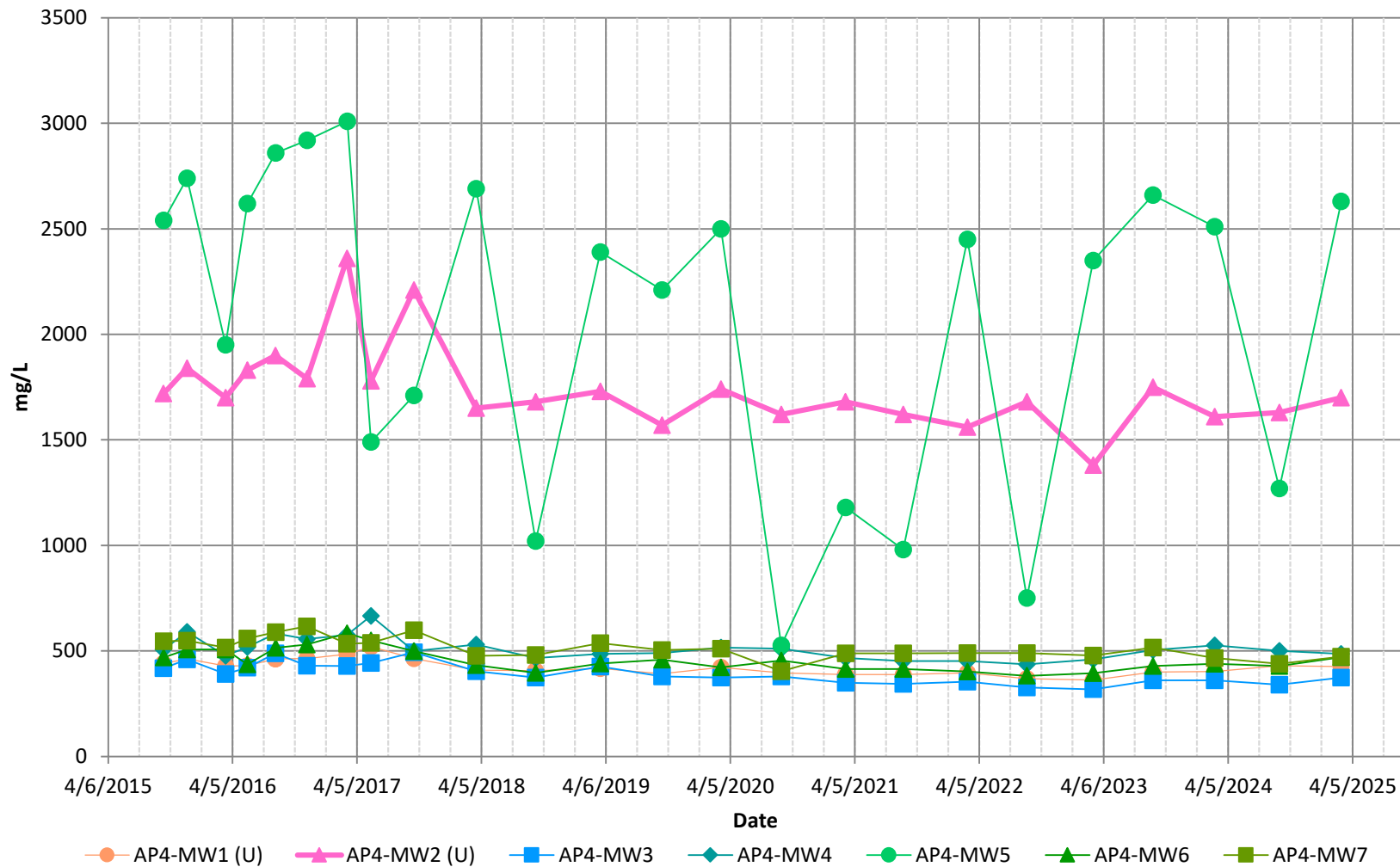
Denver, Colorado, USA

4/15/2025

31405886.001

**WSP USA Inc.**





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

**Figure C-7**  
**Total Dissolved Solids**  
 Nebraska Public Power District  
 Sheldon Station

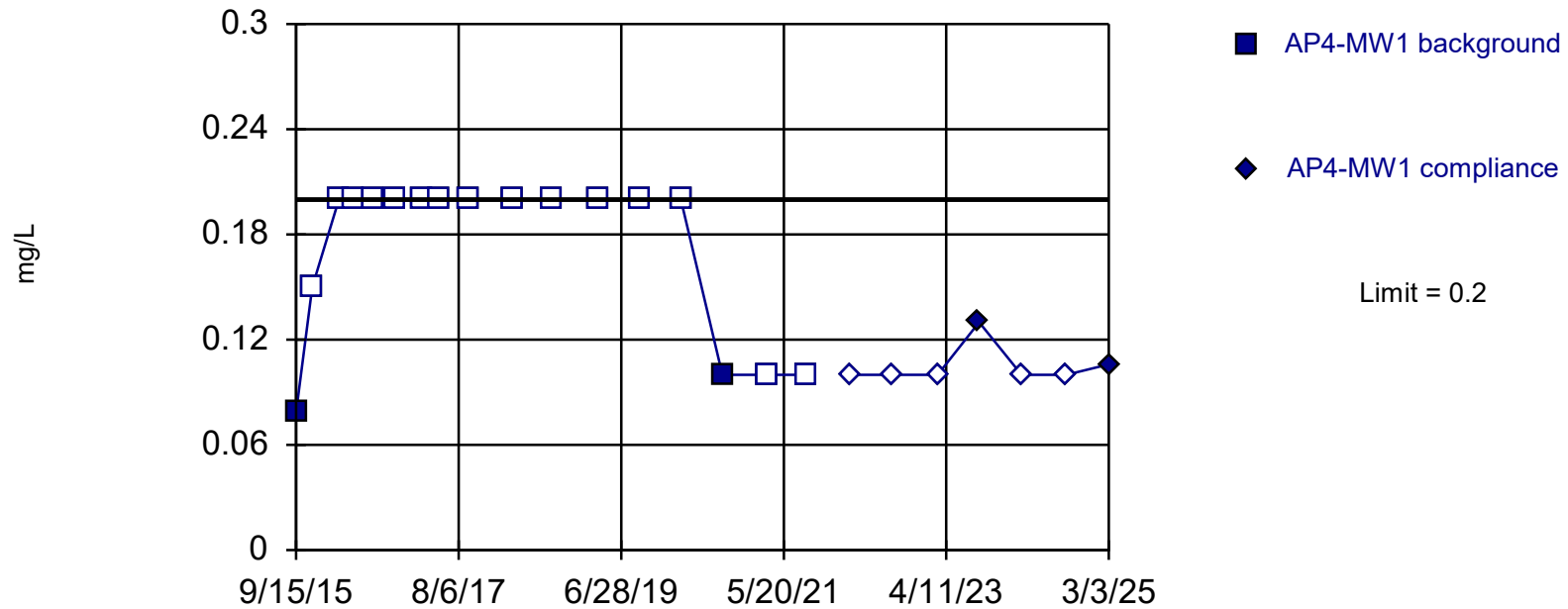
**APPENDIX D**

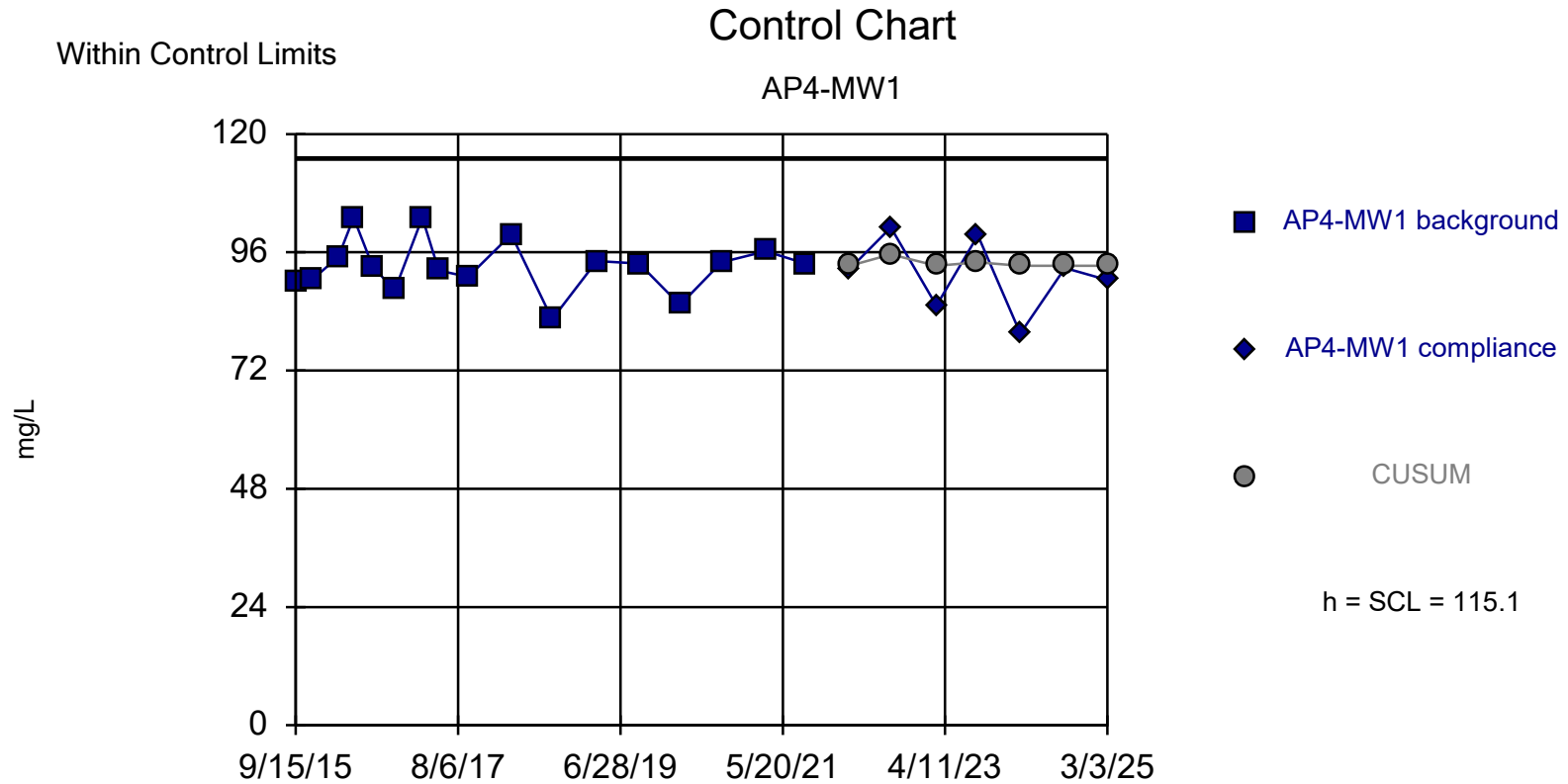
# Comparative Statistical Analysis

Within Limit

## Prediction Limit

Intrawell Non-parametric





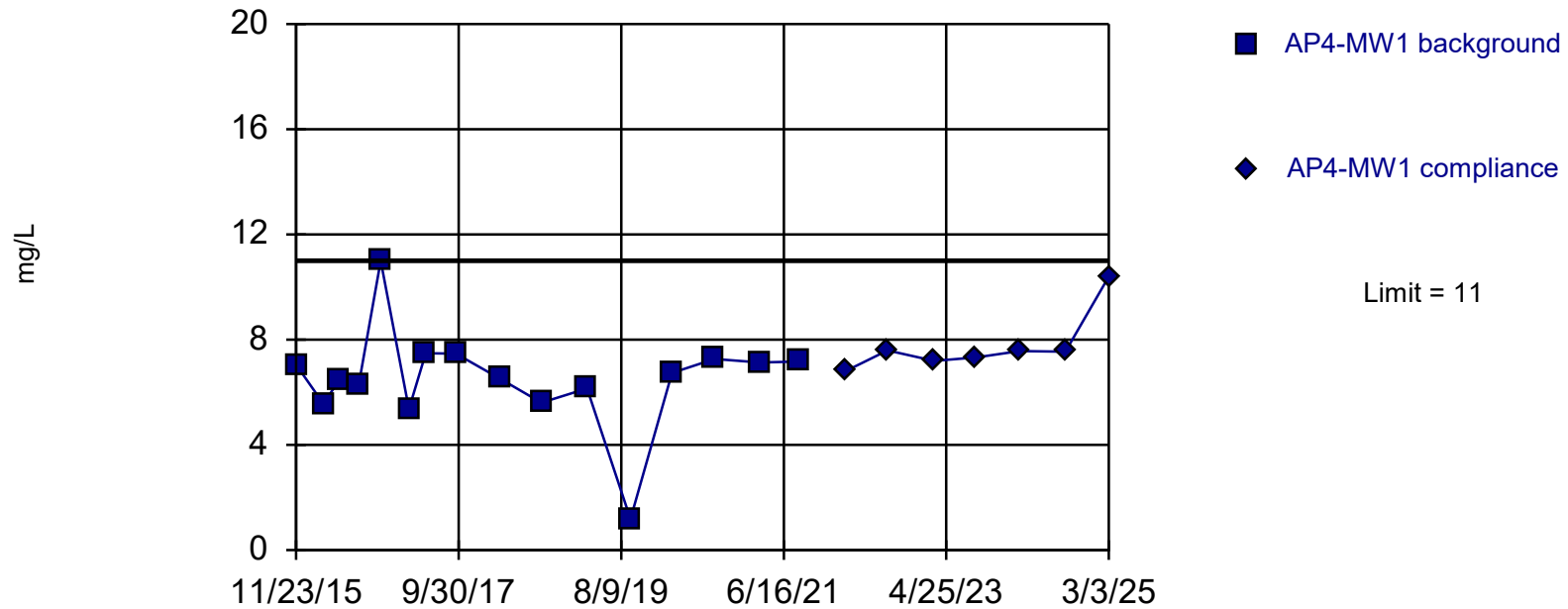
Background Data Summary: Mean=93.24, Std. Dev.=5.454, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9613, critical = 0.892. Report alpha = 0.002584. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

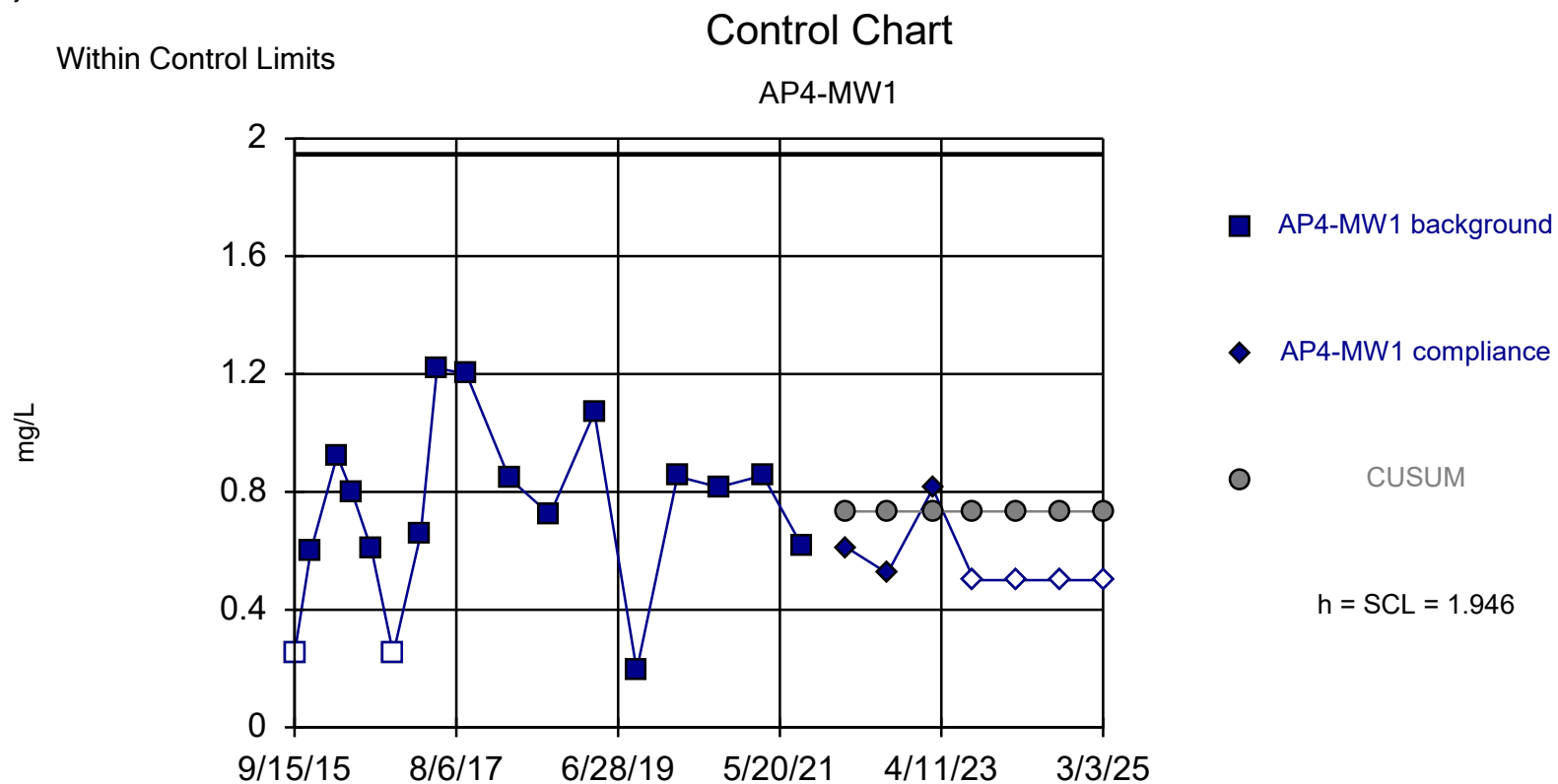
Constituent: Calcium Analysis Run 4/3/2025 12:41 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025

Within Limit

## Prediction Limit

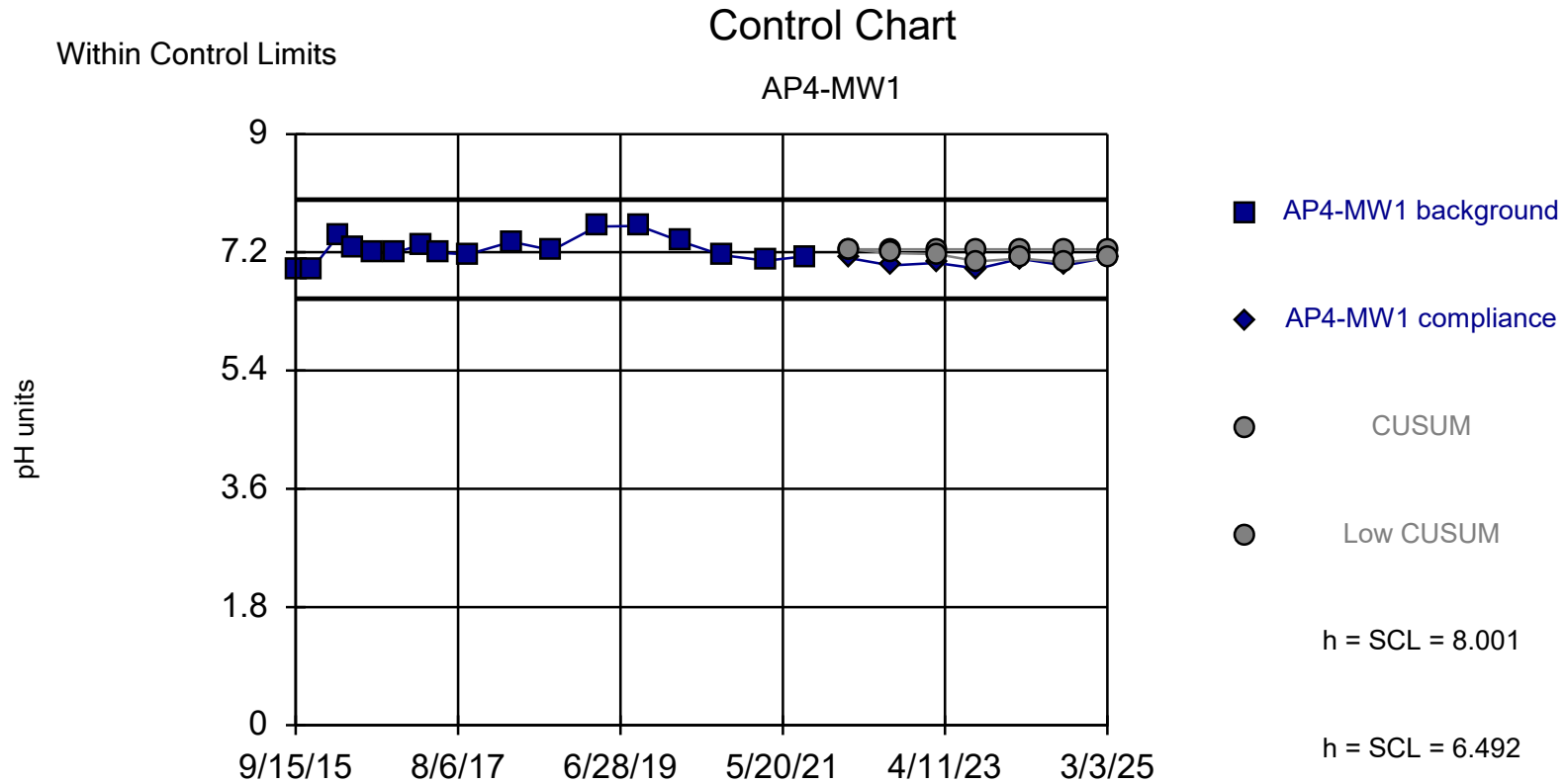
Intrawell Non-parametric



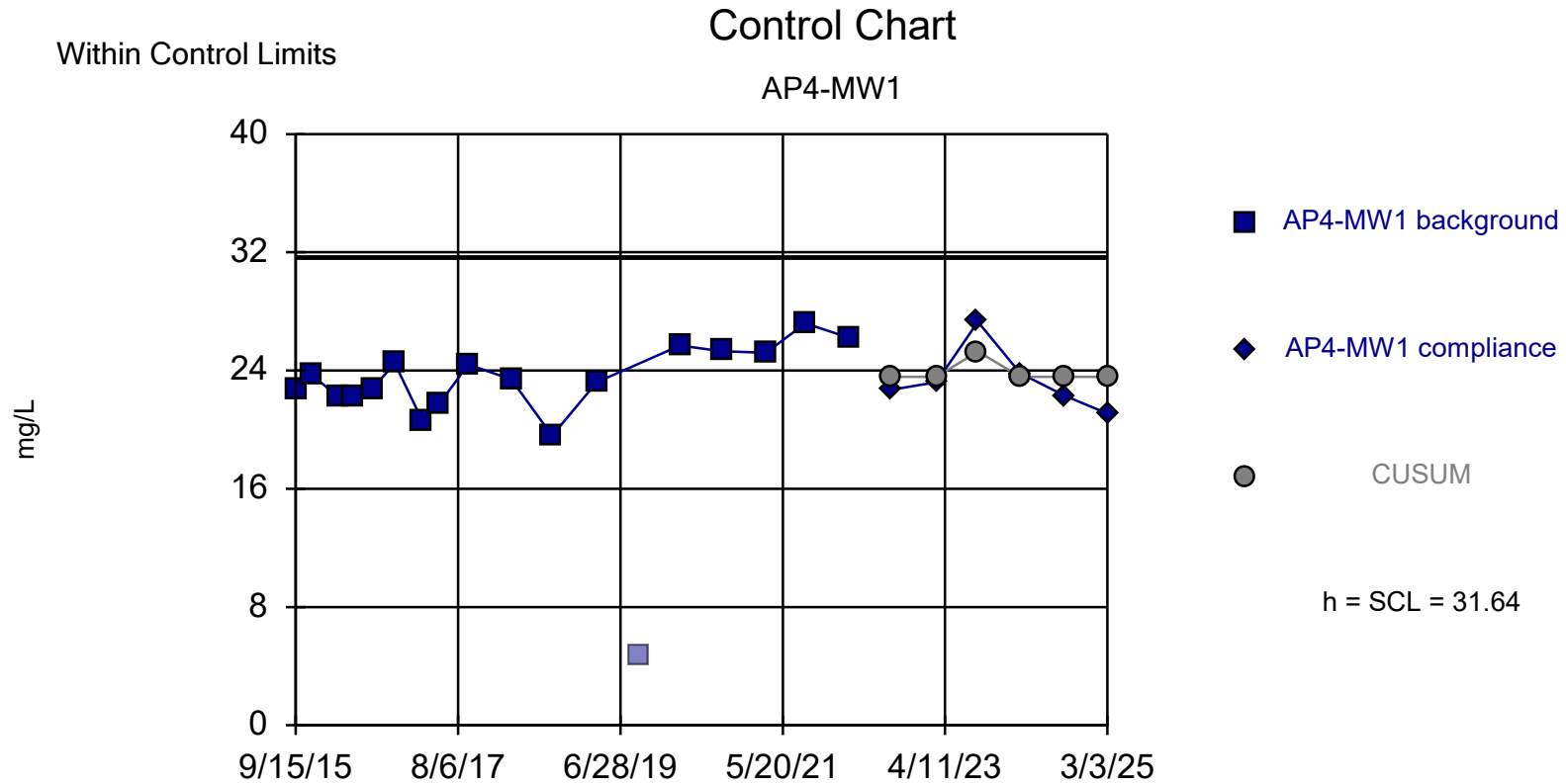


Background Data Summary: Mean=0.7335, Std. Dev.=0.3031, n=17, 11.76% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9399, critical = 0.892. Report alpha = 0.002556. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Fluoride Analysis Run 4/3/2025 1:12 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025

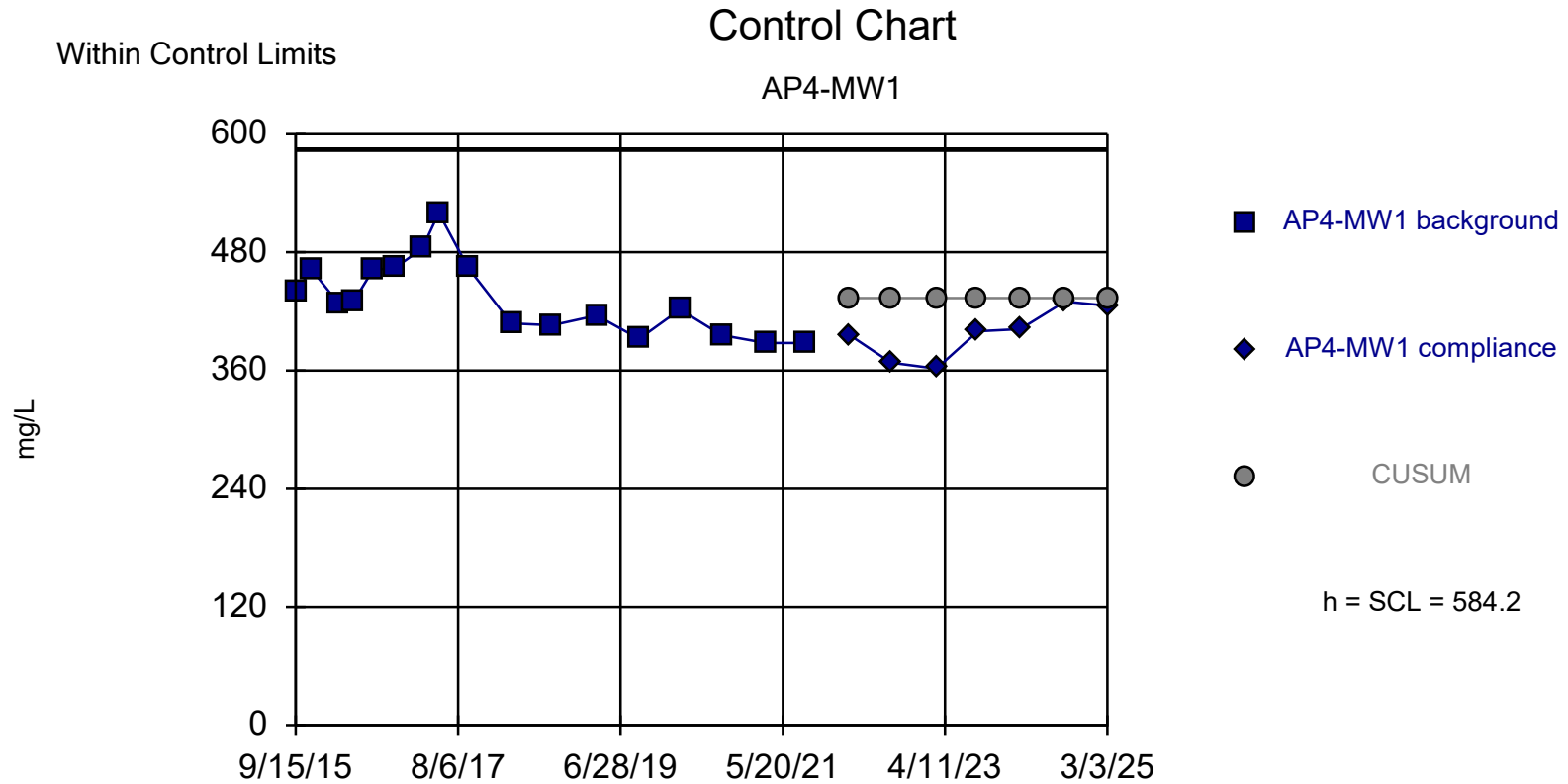






Background Data Summary: Mean=23.57, Std. Dev.=2.016, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9891, critical = 0.892. Report alpha = 0.002266. Dates ending 3/2/2022 used for control stats. Standardized h=4, SCL=4.

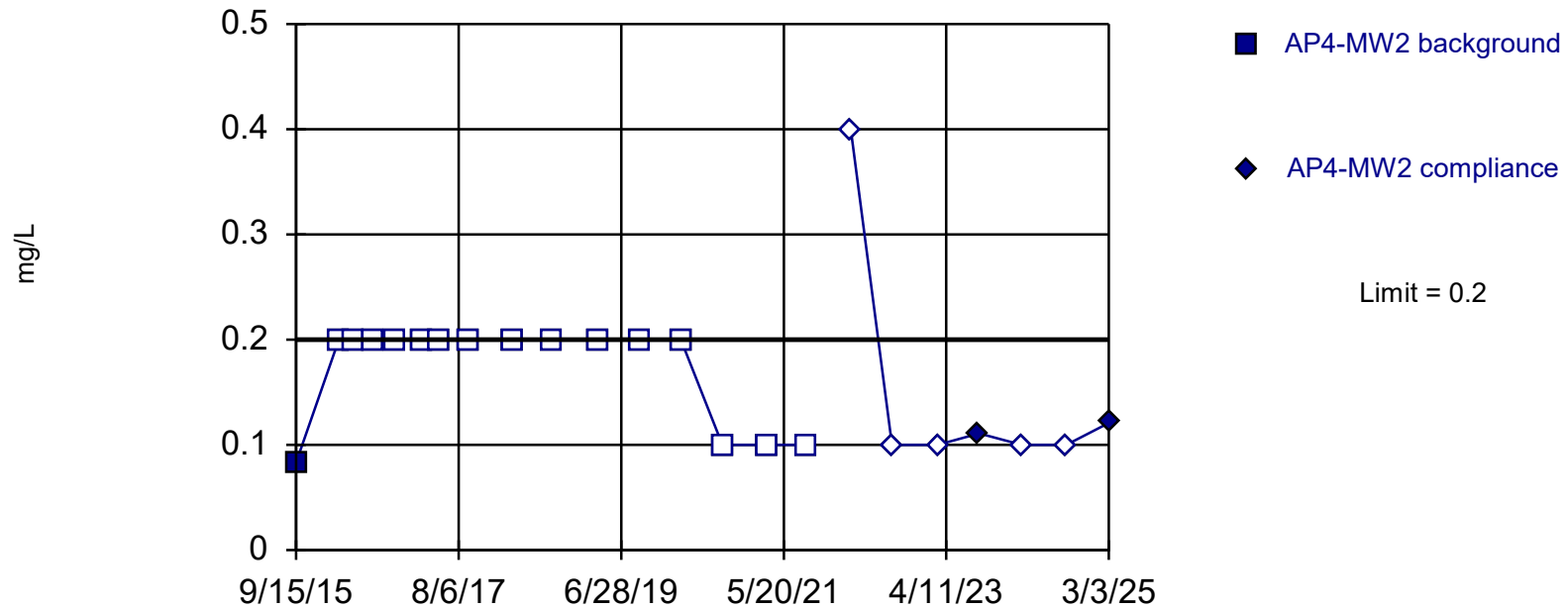
Constituent: Sulfate Analysis Run 4/3/2025 12:56 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025



Within Limit

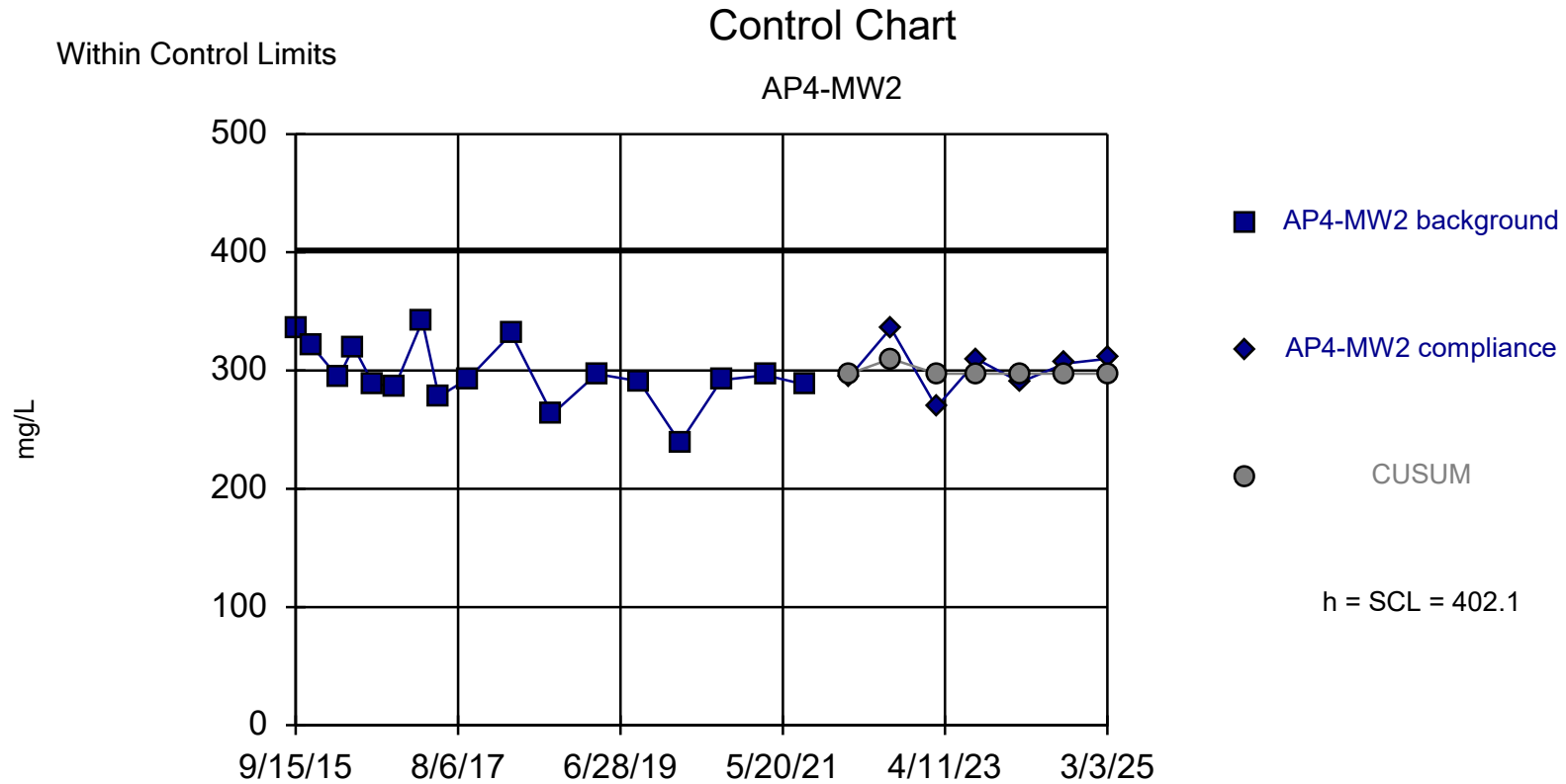
## Prediction Limit

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 4/3/2025 1:02 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025



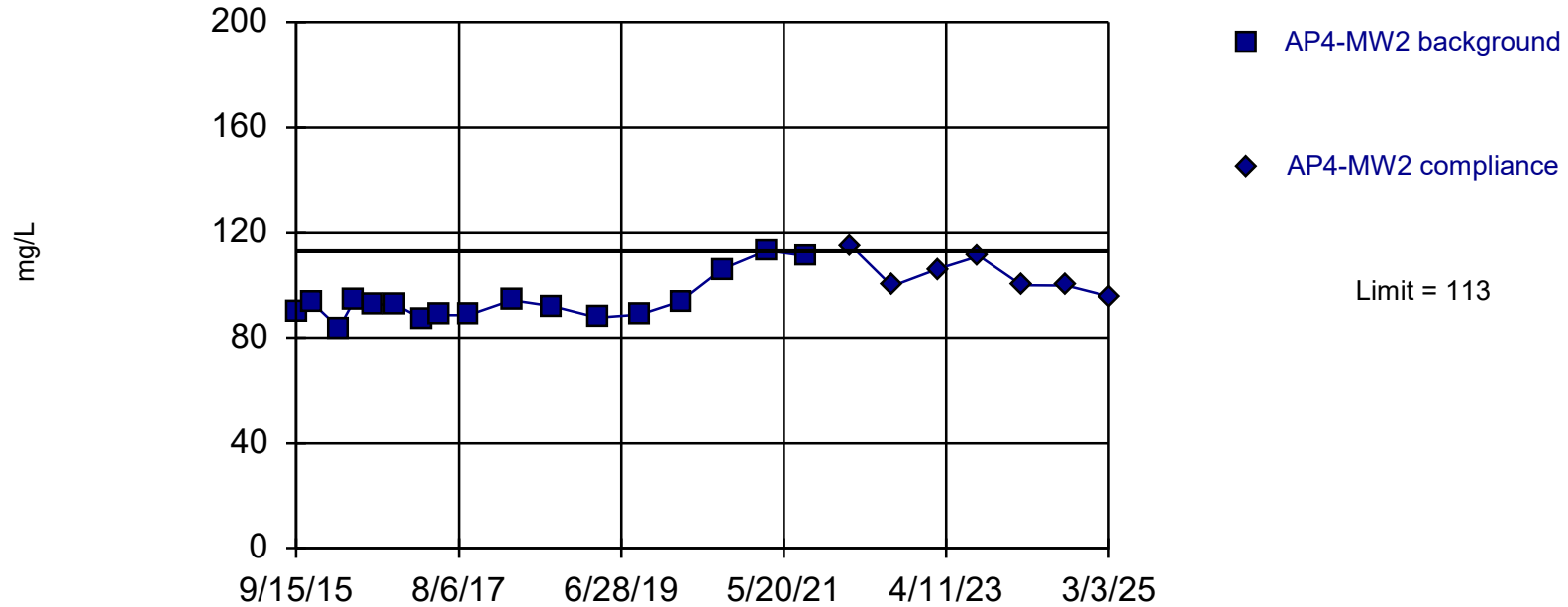
Background Data Summary: Mean=297.4, Std. Dev.=26.17, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9371, critical = 0.892. Report alpha = 0.002556. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium Analysis Run 4/3/2025 1:08 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025

Within Limit

## Prediction Limit

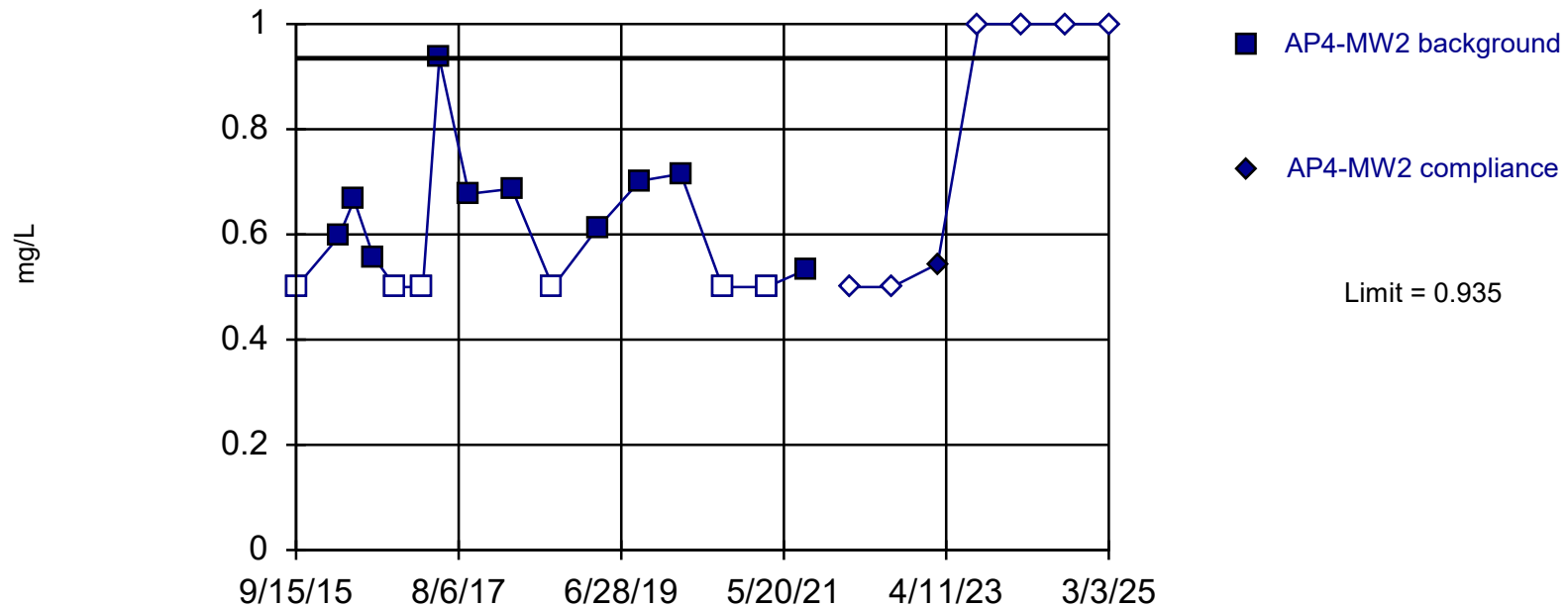
Intrawell Non-parametric



Within Limit

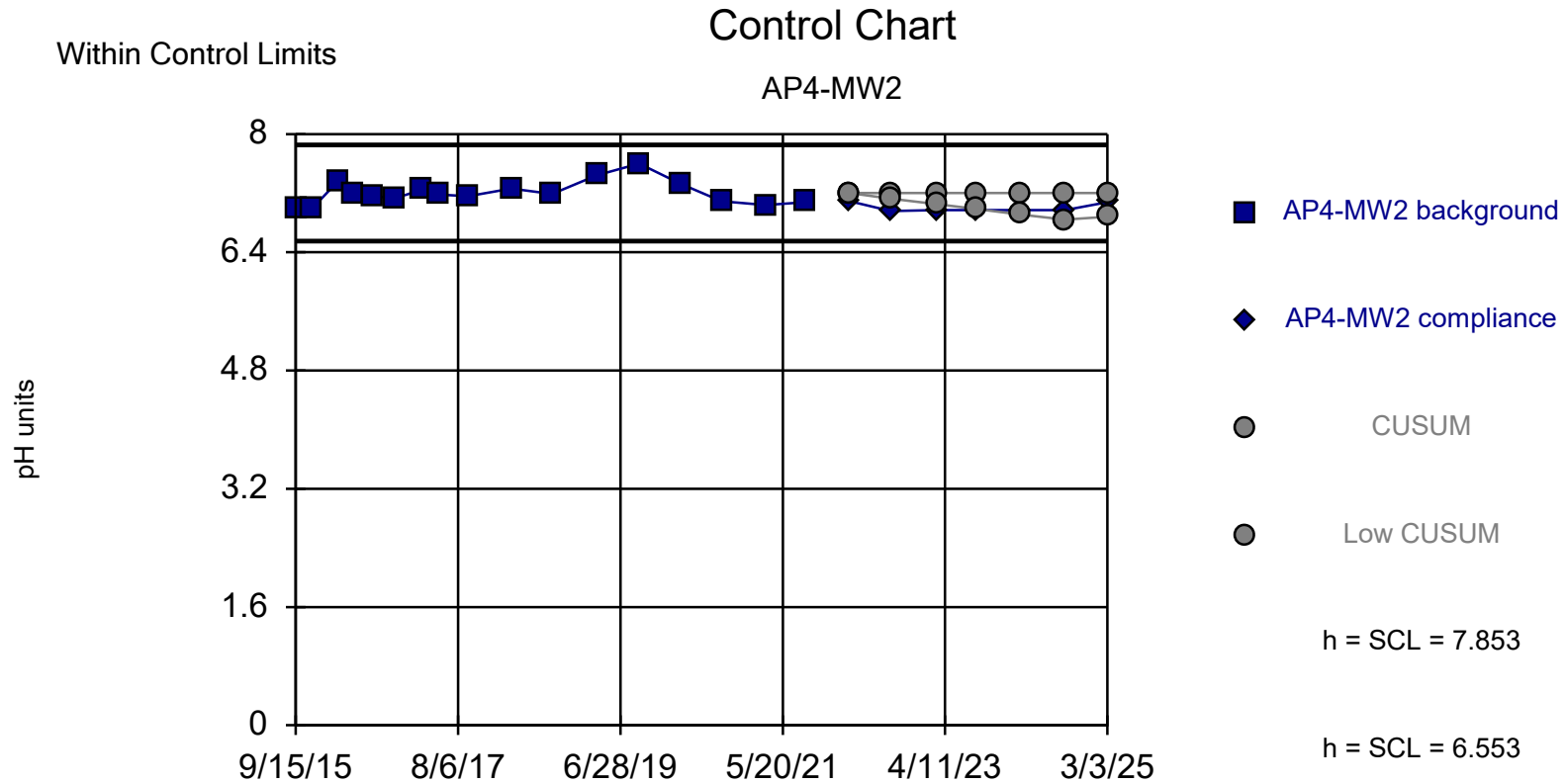
## Prediction Limit

Intrawell Non-parametric

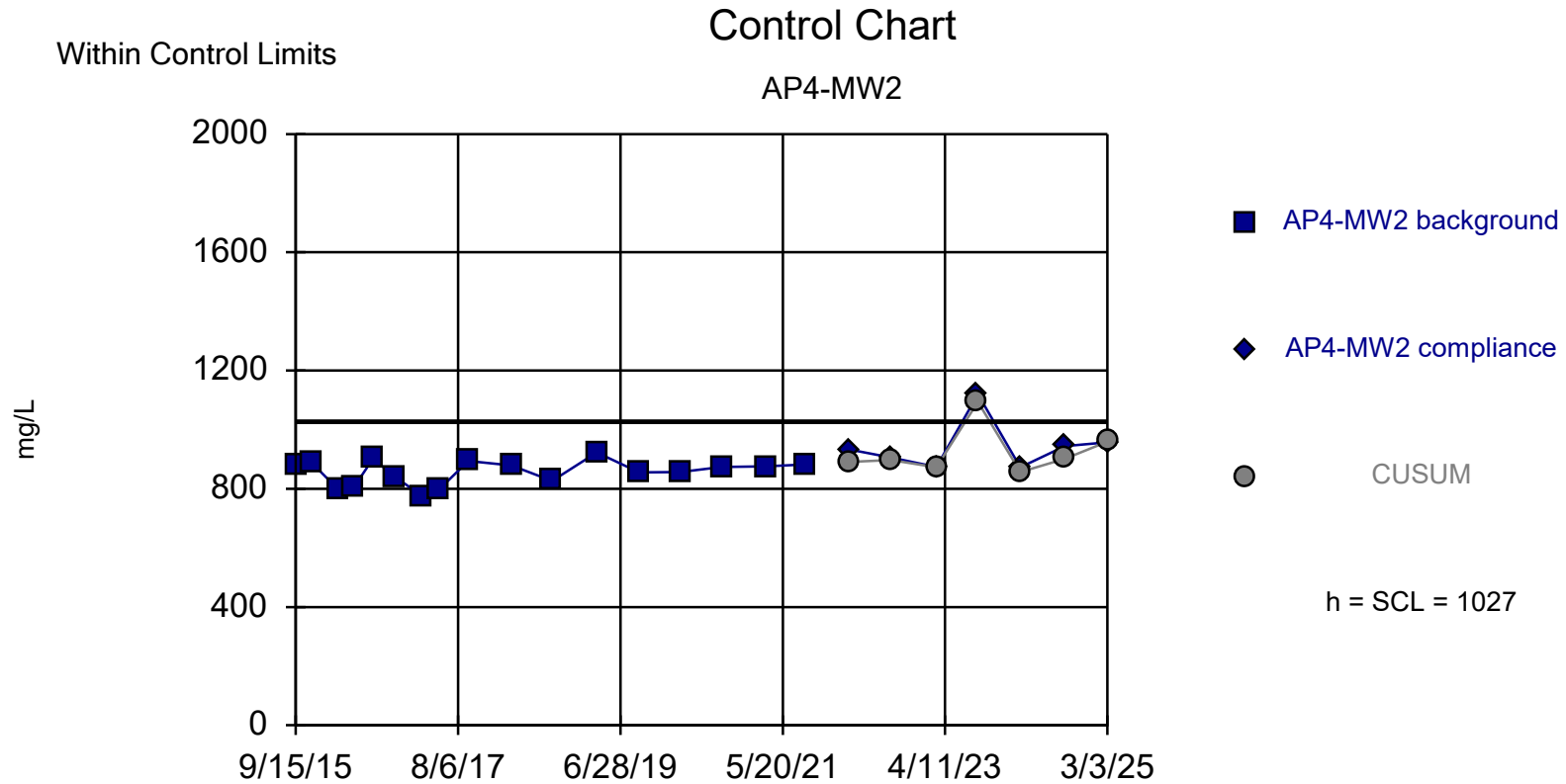


Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 16 background values. 37.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Most recent point compared to limit. Seasonality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

Constituent: Fluoride Analysis Run 4/3/2025 1:10 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025







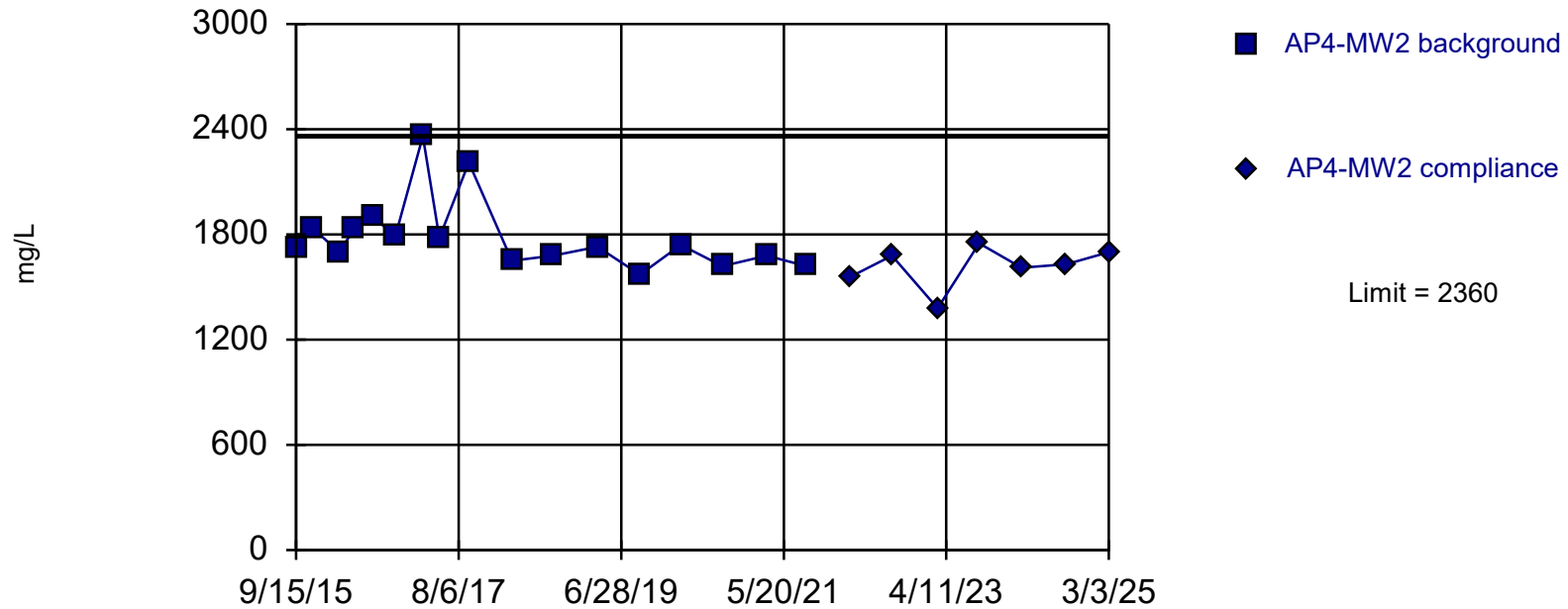
Background Data Summary: Mean=856.1, Std. Dev.=42.66, n=17. Exceedance nullified by following point per option settings. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9342, critical = 0.892. Report alpha = 0.00266. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate Analysis Run 4/3/2025 1:18 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025

Within Limit

## Prediction Limit

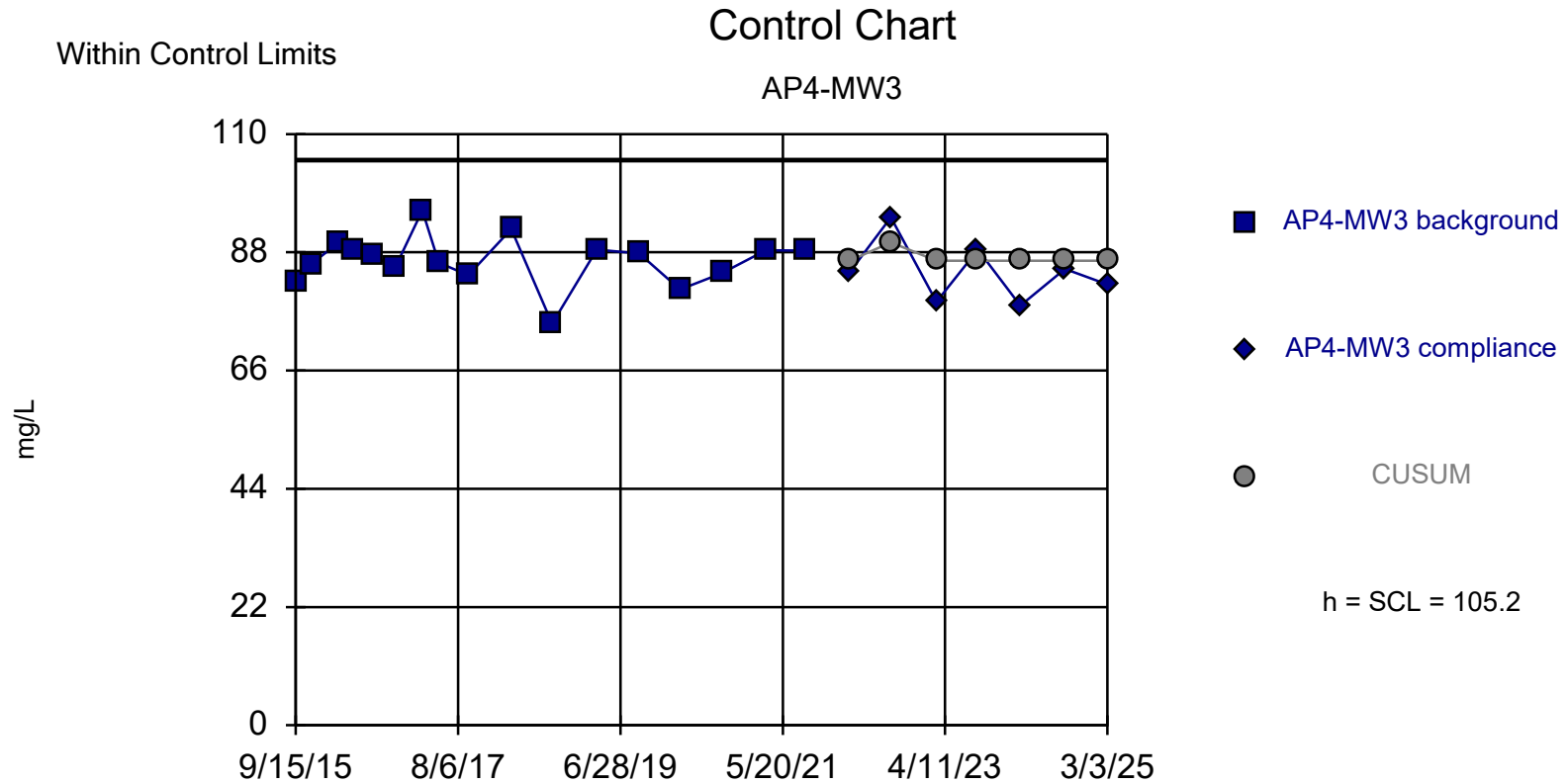
Intrawell Non-parametric



### Intrawell Non-parametric



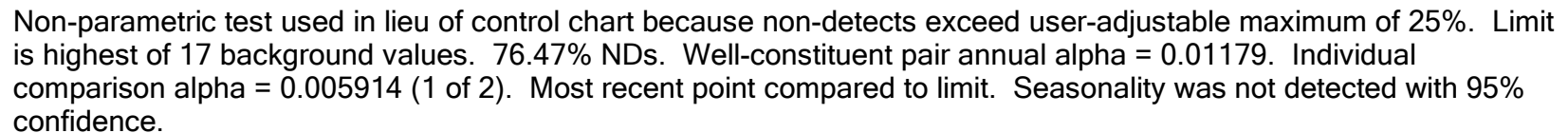
Constituent: Boron    Analysis Run 4/3/2025 1:31 PM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q1-2025



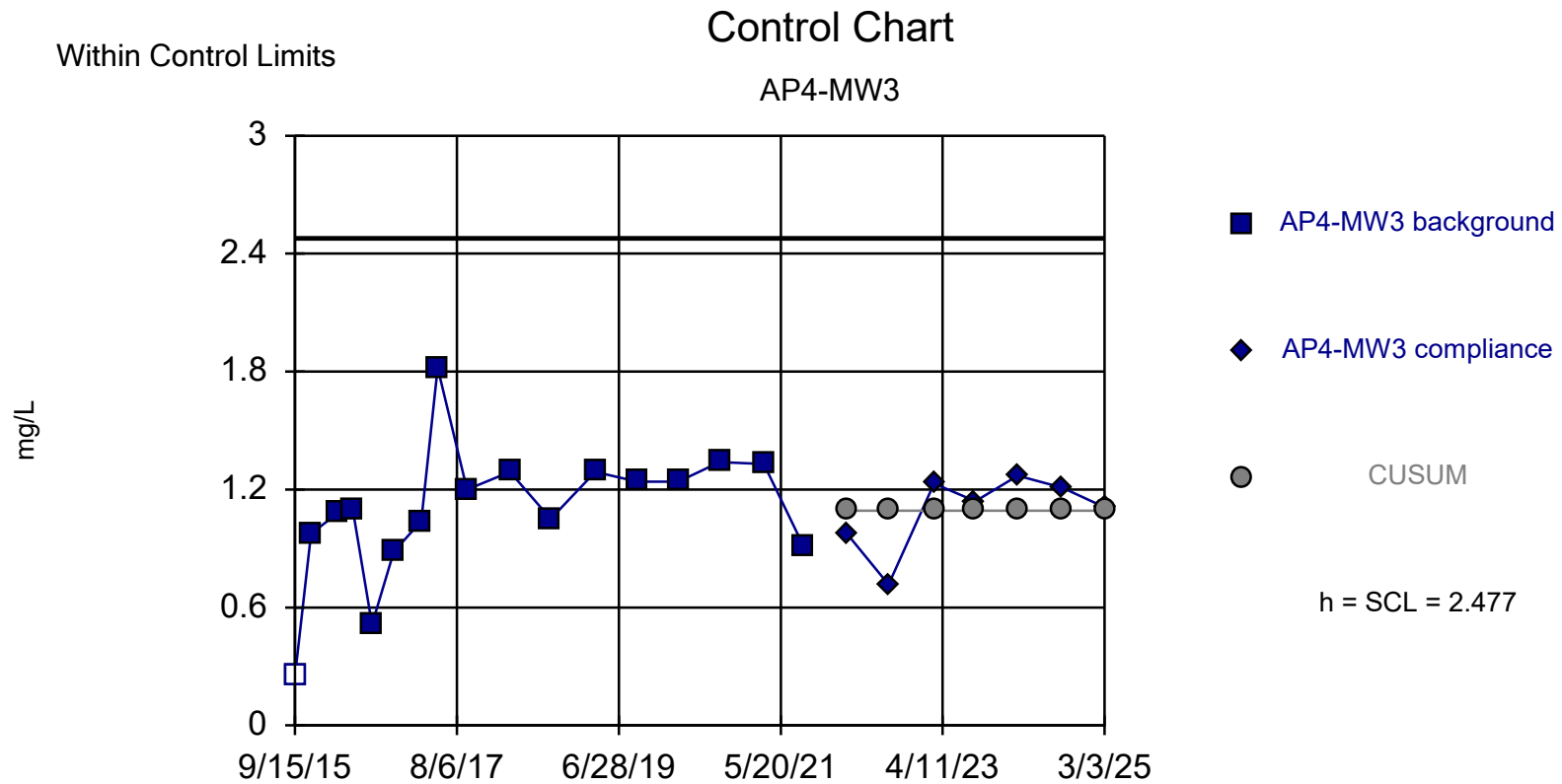
Background Data Summary: Mean=86.46, Std. Dev.=4.678, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9528, critical = 0.892. Report alpha = 0.00266. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium Analysis Run 4/3/2025 1:32 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025

### Intrawell Non-parametric

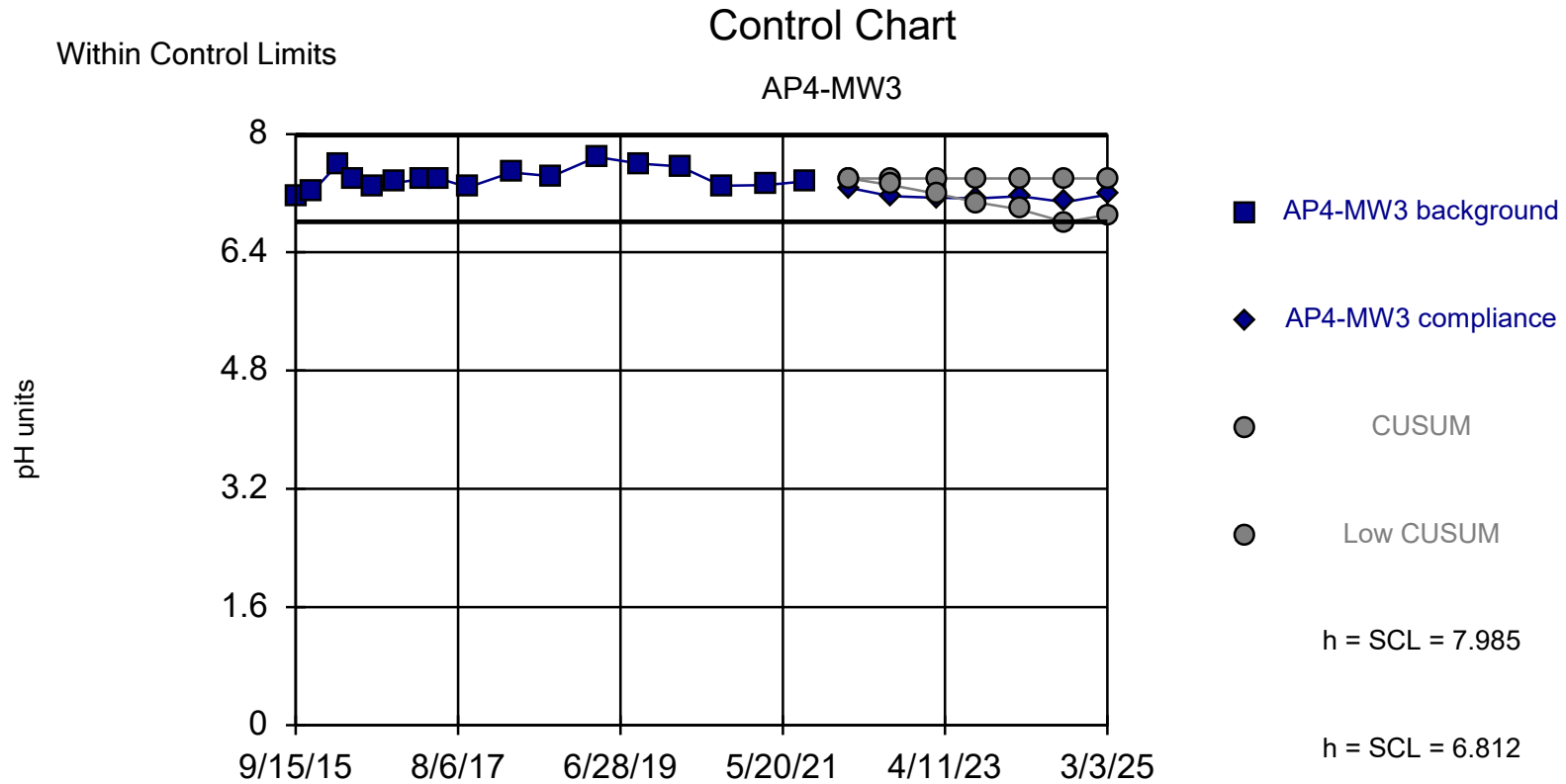


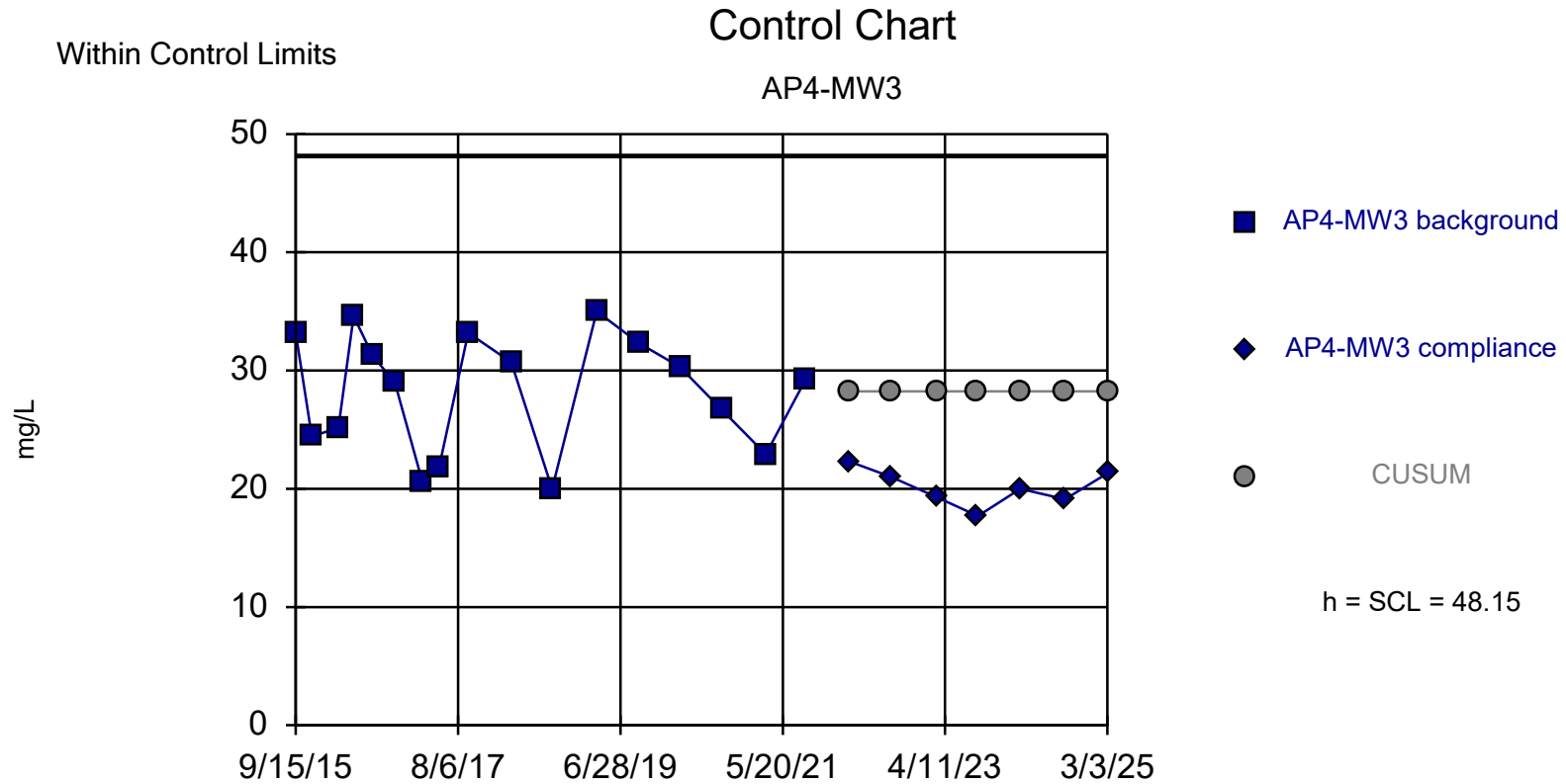
Constituent: Chloride    Analysis Run 4/3/2025 1:33 PM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q1-2025



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 = 0.00266. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Fluoride Analysis Run 4/3/2025 1:35 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025

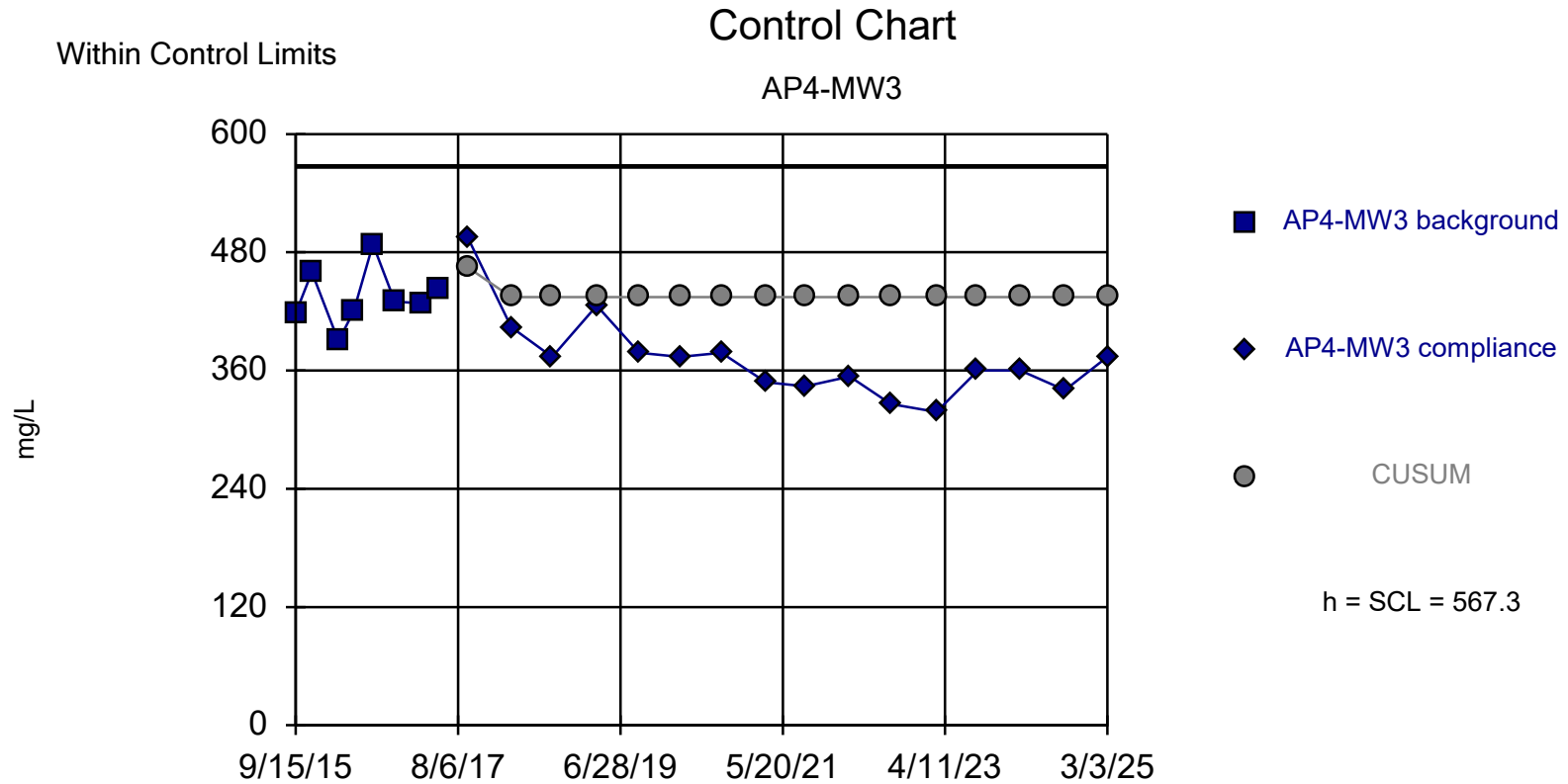




Background Data Summary: Mean=28.25, Std. Dev.=4.977, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9311, critical = 0.892. Report alpha = 0.00266. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate Analysis Run 4/3/2025 1:35 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025





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 = 0.01639. Dates ending 5/16/2017 used for control stats. Standardized h=4.5, SCL=4.5.

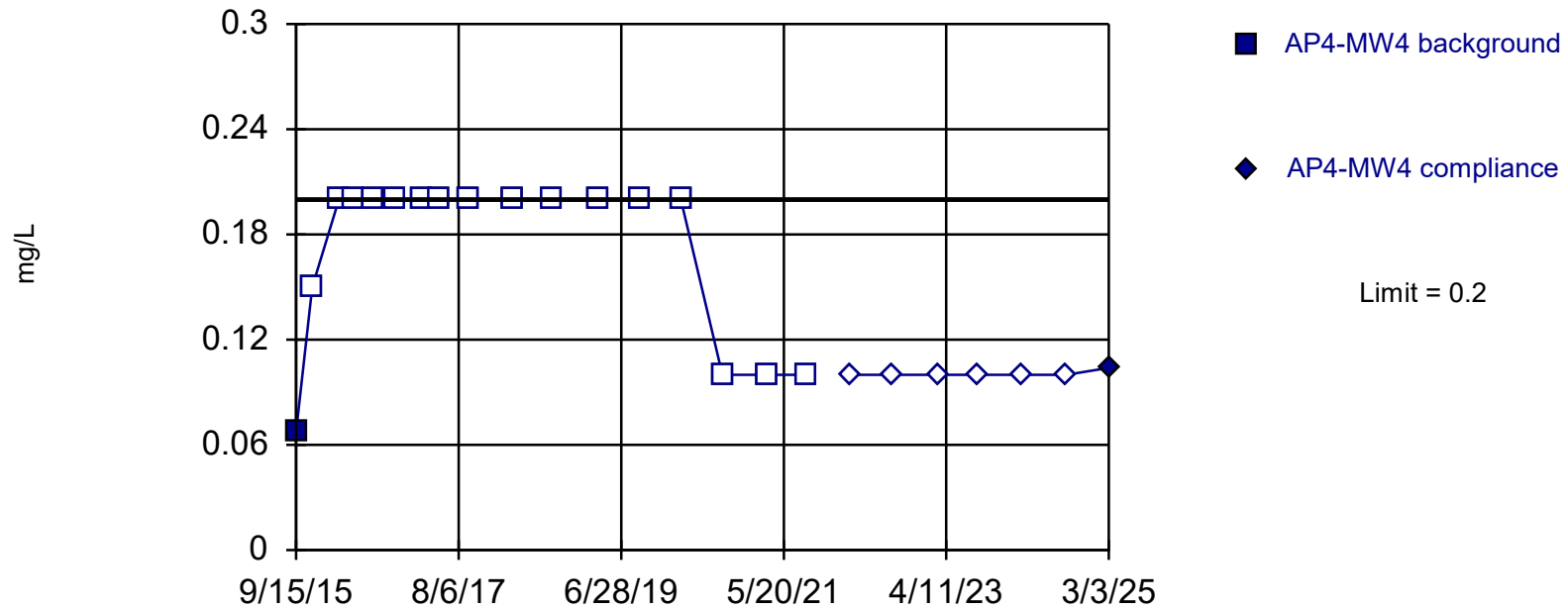
Constituent: Total Dissolved Solids Analysis Run 4/3/2025 1:36 PM

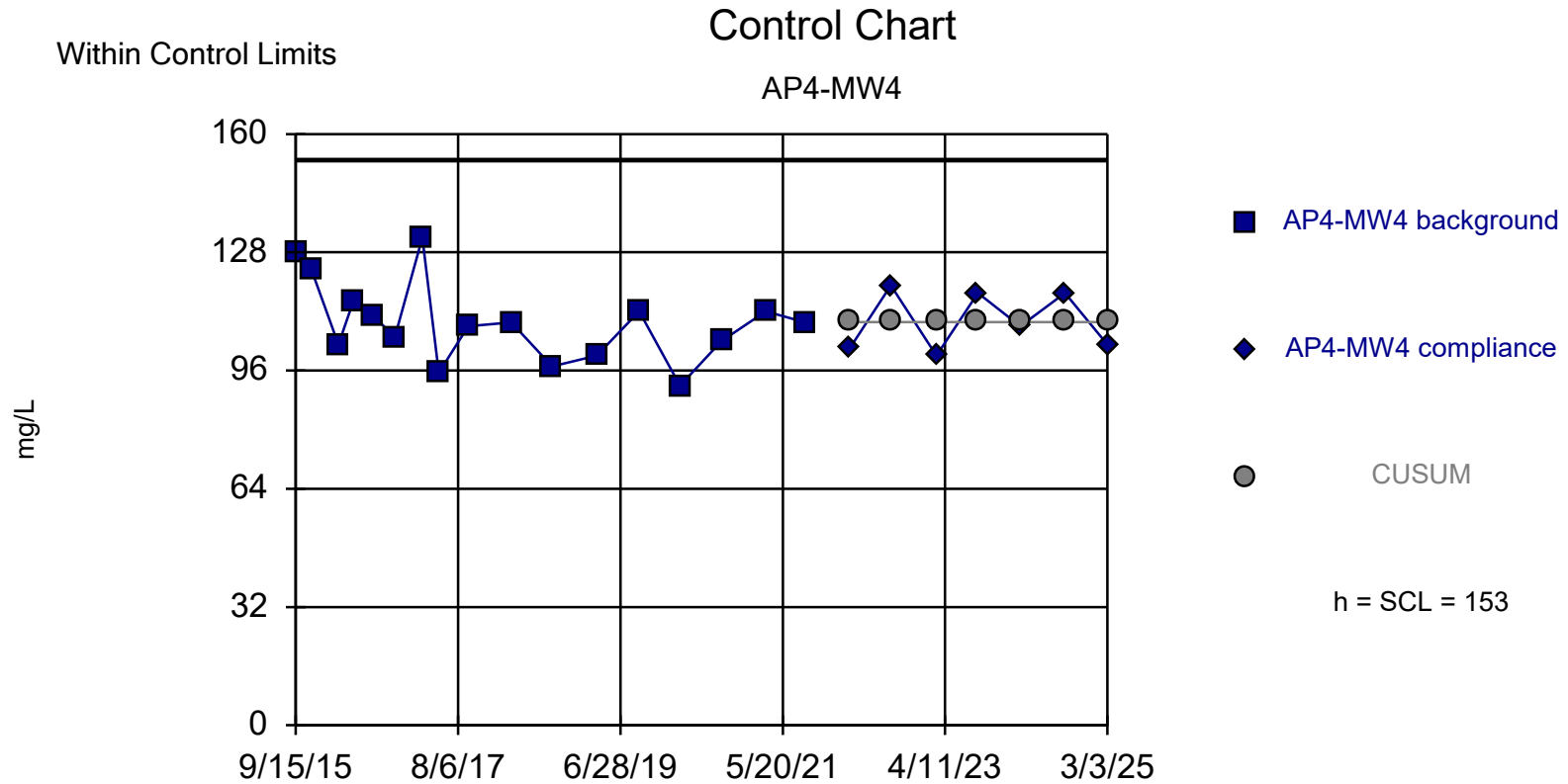
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025

Within Limit

## Prediction Limit

Intrawell Non-parametric





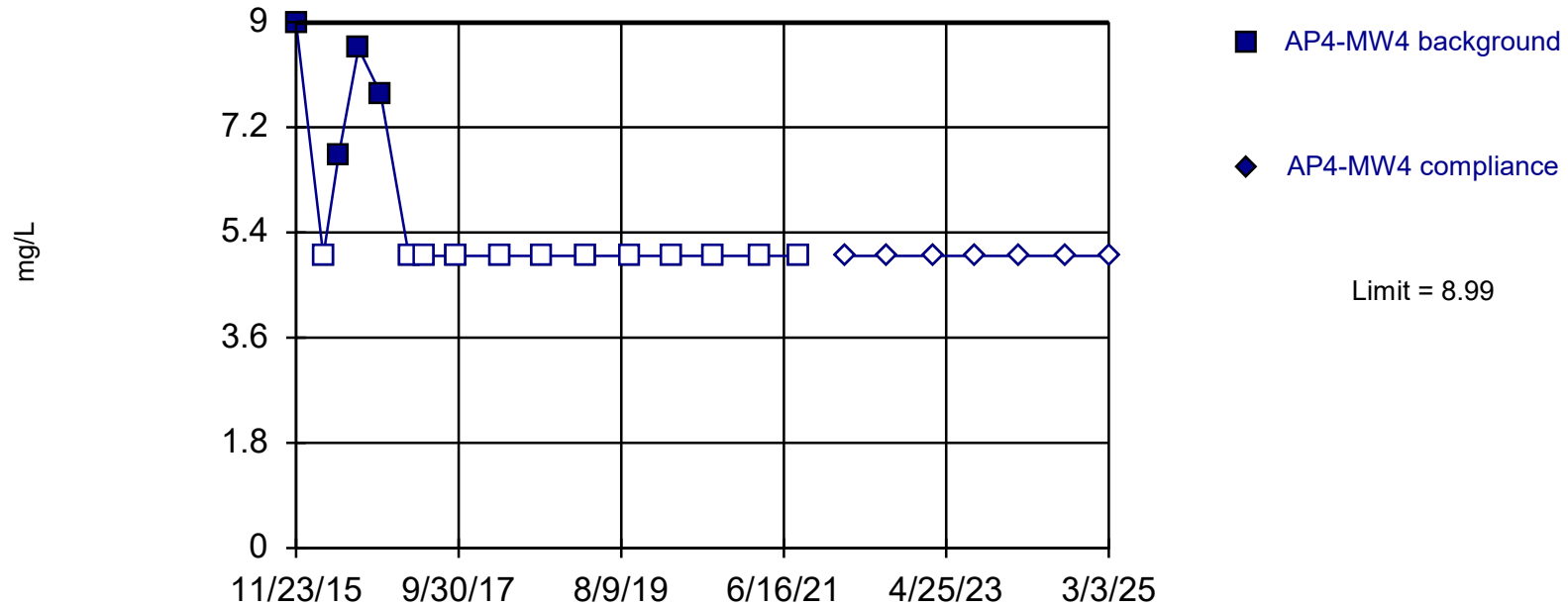
Background Data Summary: Mean=109.1, Std. Dev.=10.96, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9569, critical = 0.892. Report alpha = 0.002556. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium Analysis Run 4/3/2025 1:40 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025

Within Limit

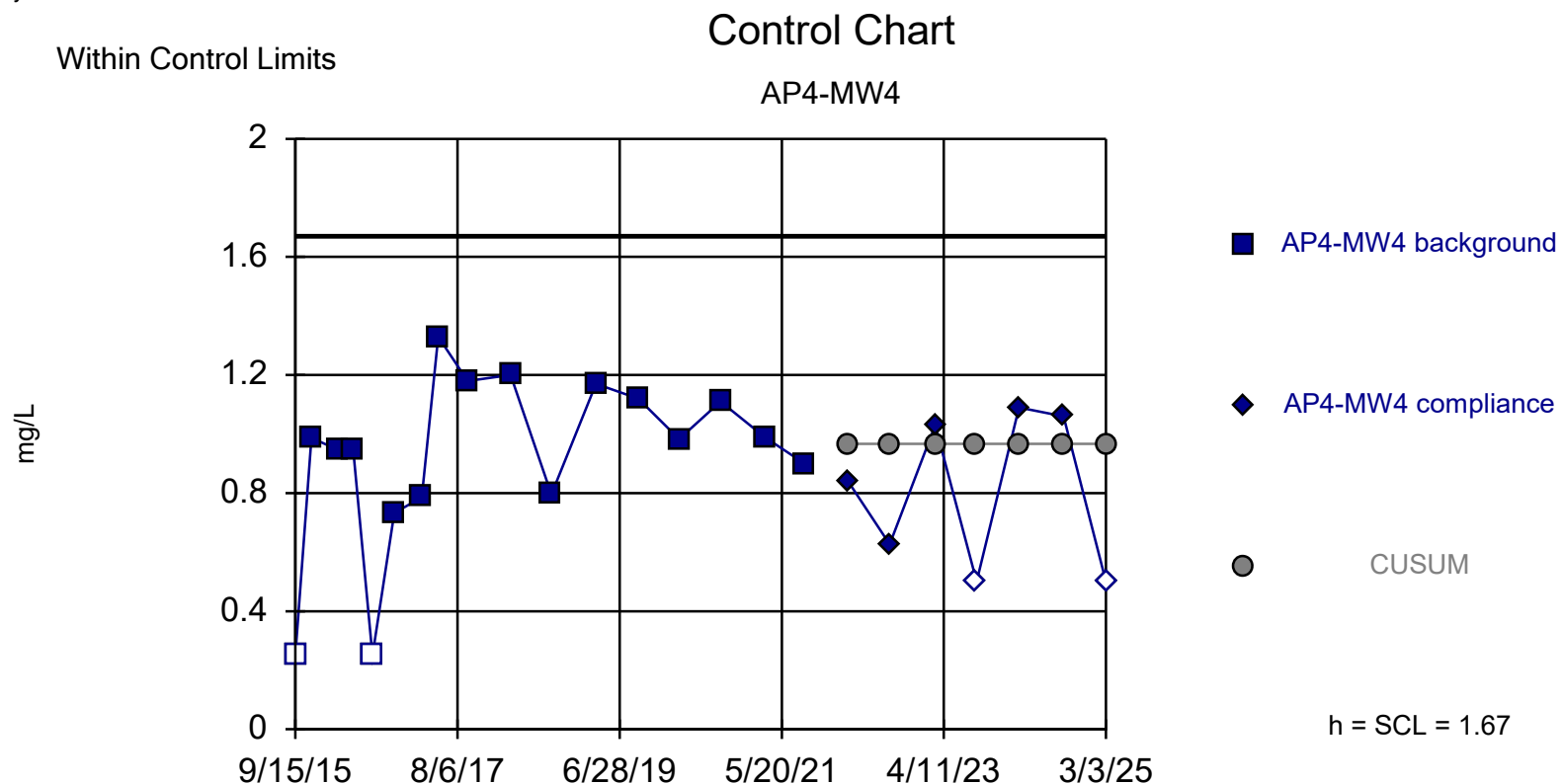
## Prediction Limit

Intrawell Non-parametric



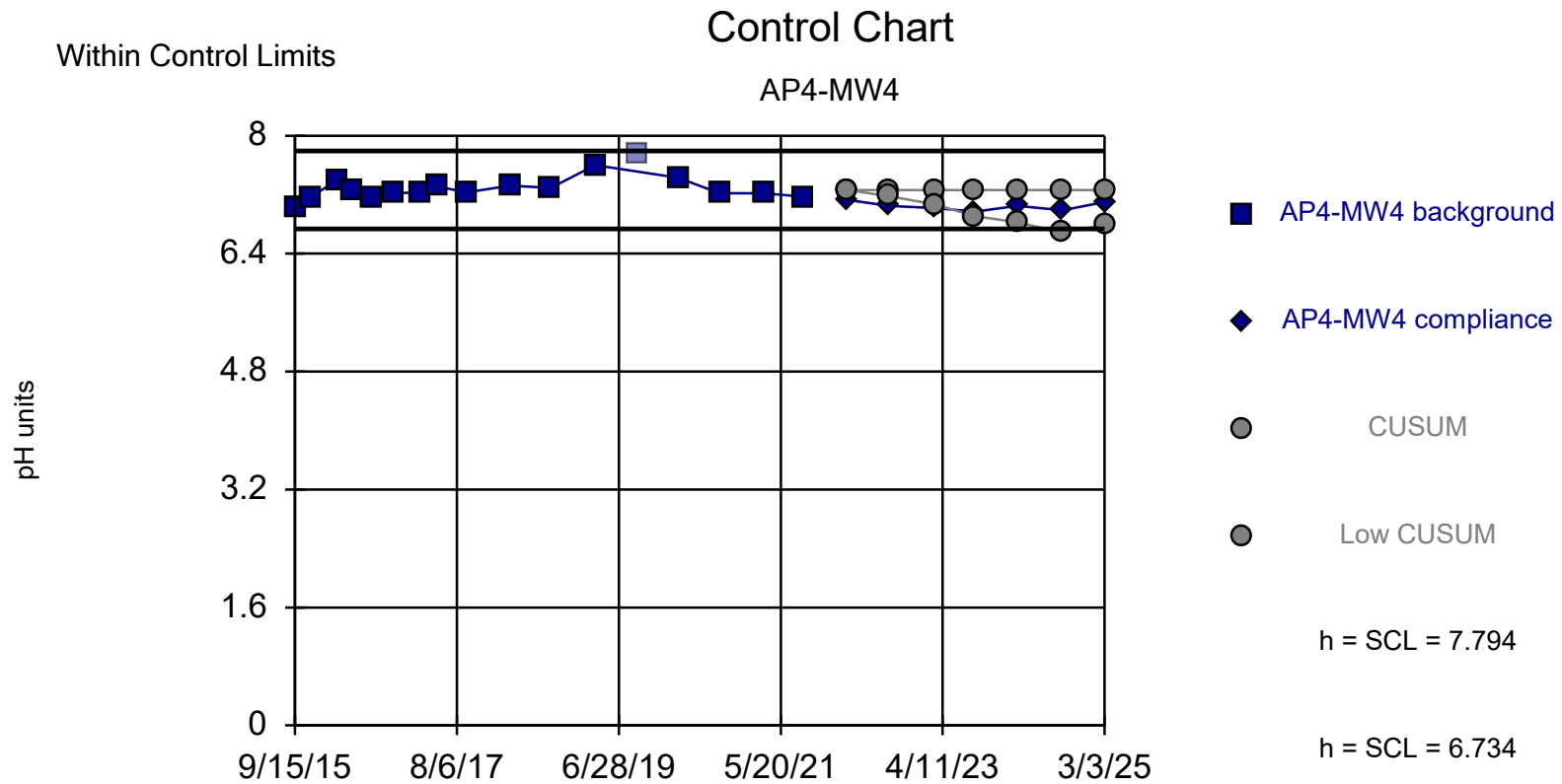
Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 16 background values. 75% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2). Most recent point compared to limit. Seasonality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

Constituent: Chloride Analysis Run 4/3/2025 1:41 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025



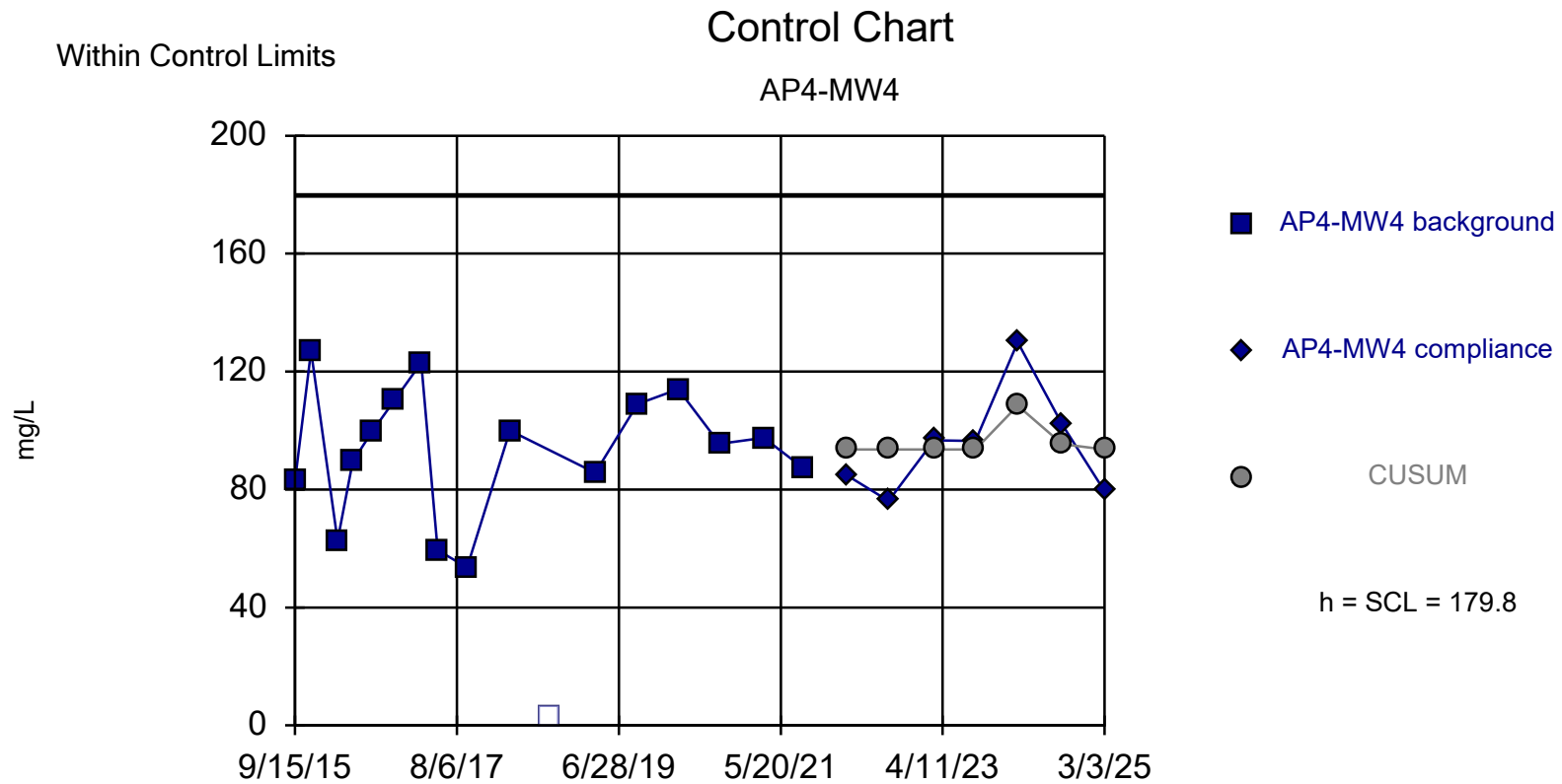
Background Data Summary (based on square transformation): Mean=0.9349, Std. Dev.=0.4633, n=17, 11.76% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9598, critical = 0.892. Report alpha = 0.002556. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Fluoride Analysis Run 4/3/2025 1:42 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025



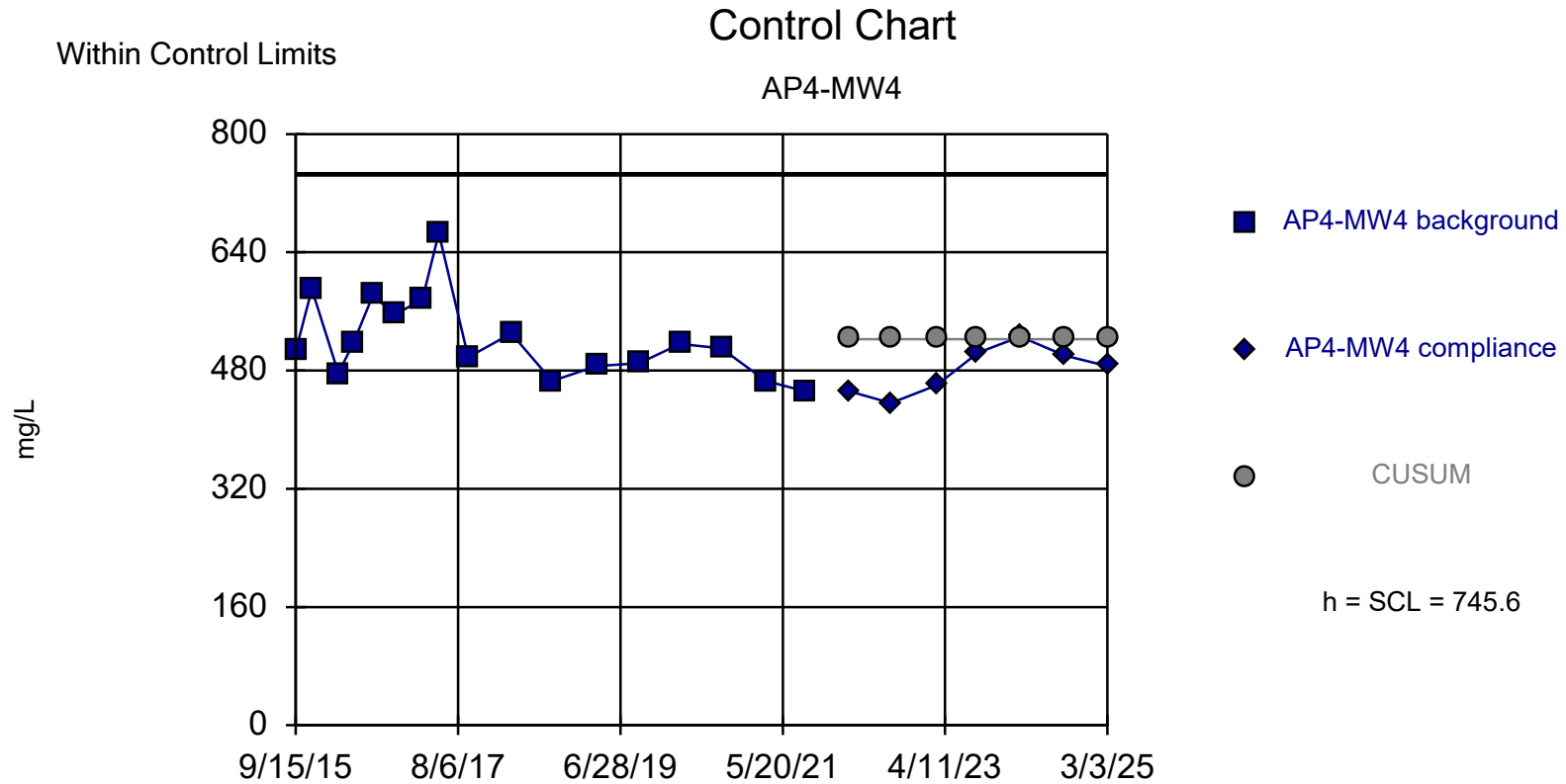
Background Data Summary: Mean=7.264, Std. Dev.=0.1325, n=16. Exceedance nullified by following point per option settings. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9275, critical = 0.887. Report alpha = 0.003016. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured    Analysis Run 4/14/2025 11:29 AM  
 Sheldon Station    Client: NPPD    Data: SheldonStation\_Q1-2025



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 = 0.003034. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate Analysis Run 4/3/2025 1:43 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025

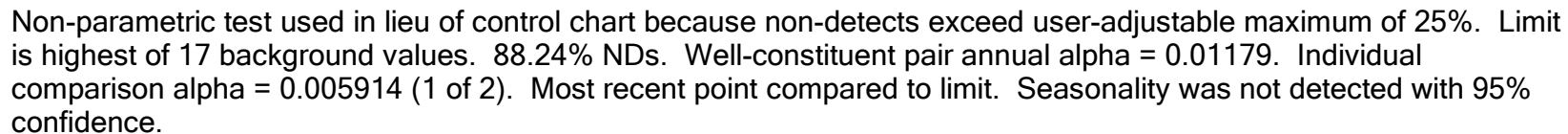


Background Data Summary: Mean=522.6, Std. Dev.=55.75, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9137, critical = 0.892. Report alpha = 0.002628. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

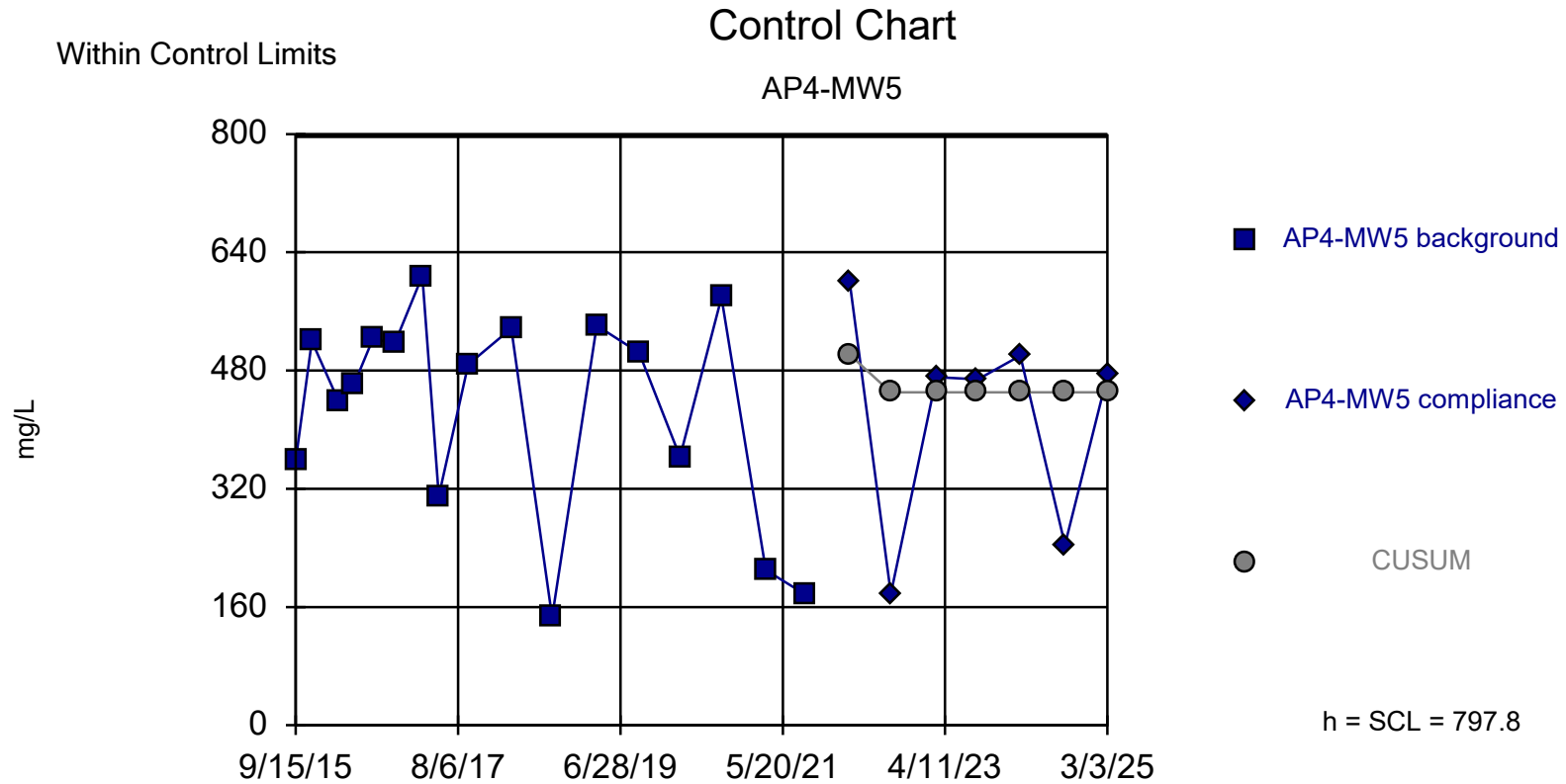
Constituent: Total Dissolved Solids    Analysis Run 4/3/2025 1:43 PM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q1-2025



### Intrawell Non-parametric

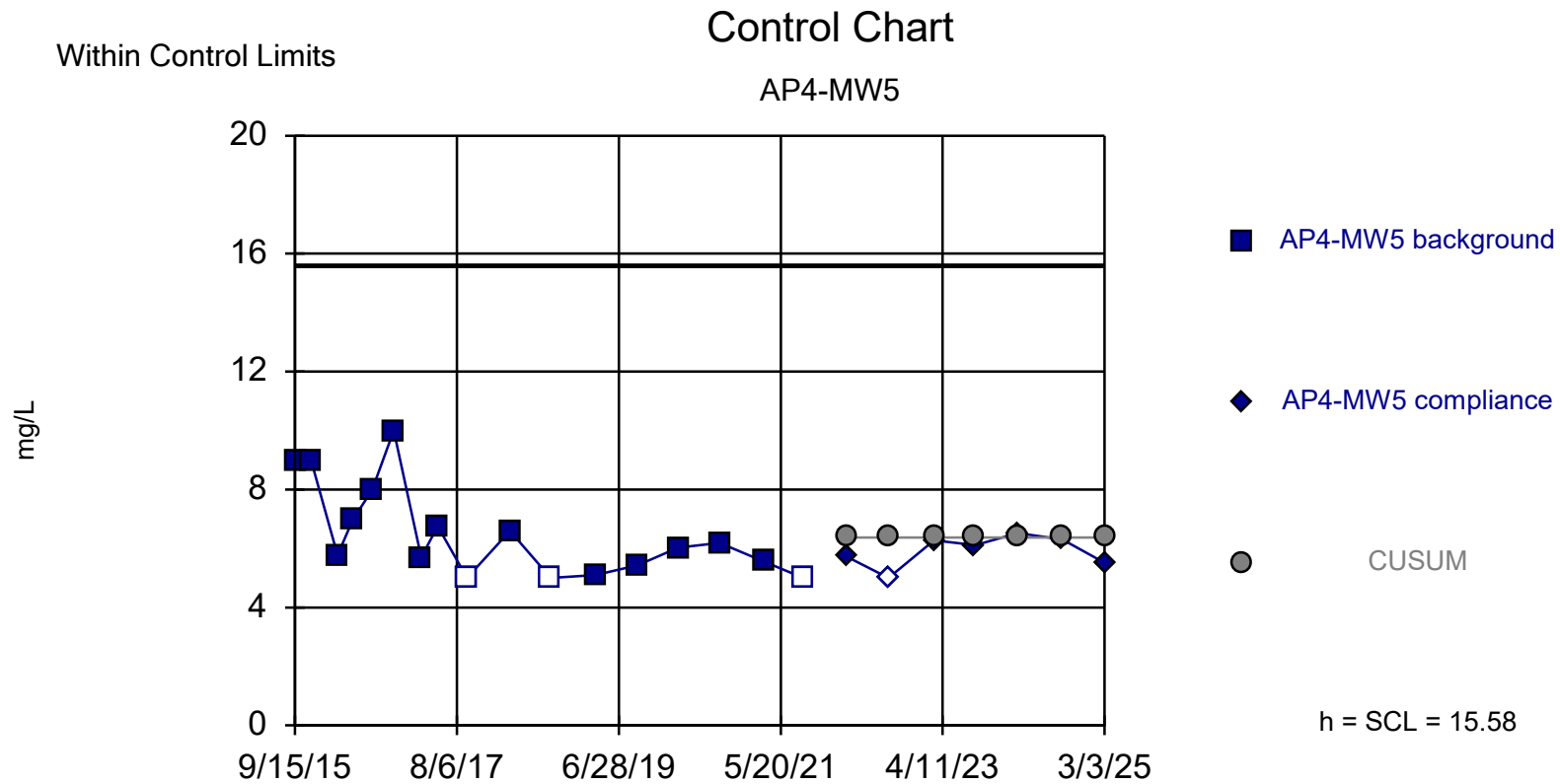


Constituent: Boron    Analysis Run 4/3/2025 1:53 PM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q1-2025



Background Data Summary (based on square transformation): Mean=202731, Std. Dev.=108424, n=17. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9305, critical = 0.892. Report alpha = 0.002628. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium Analysis Run 4/3/2025 1:55 PM  
 Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025



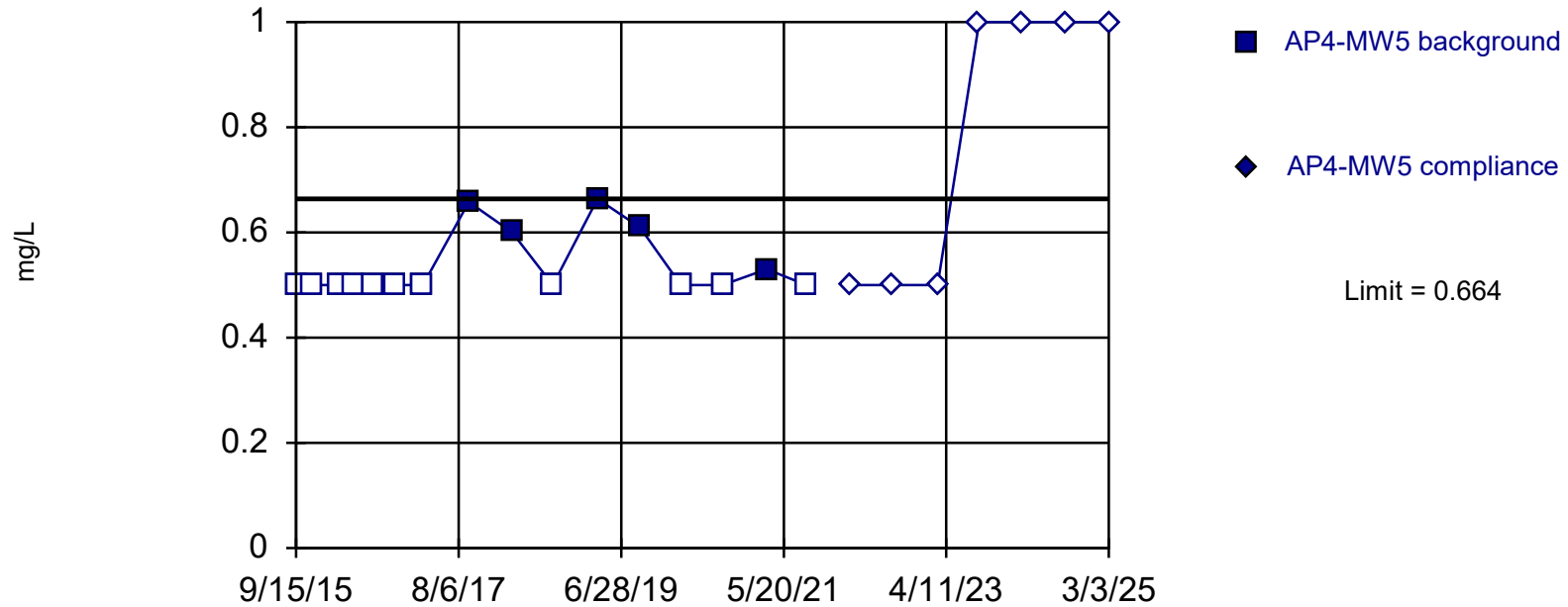
Background Data Summary (based on natural log transformation): Mean=1.852, Std. Dev.=0.2235, n=17, 17.65% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.8976, critical = 0.892. Report alpha = 0.002642. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Chloride Analysis Run 4/7/2025 9:35 AM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025

Within Limit

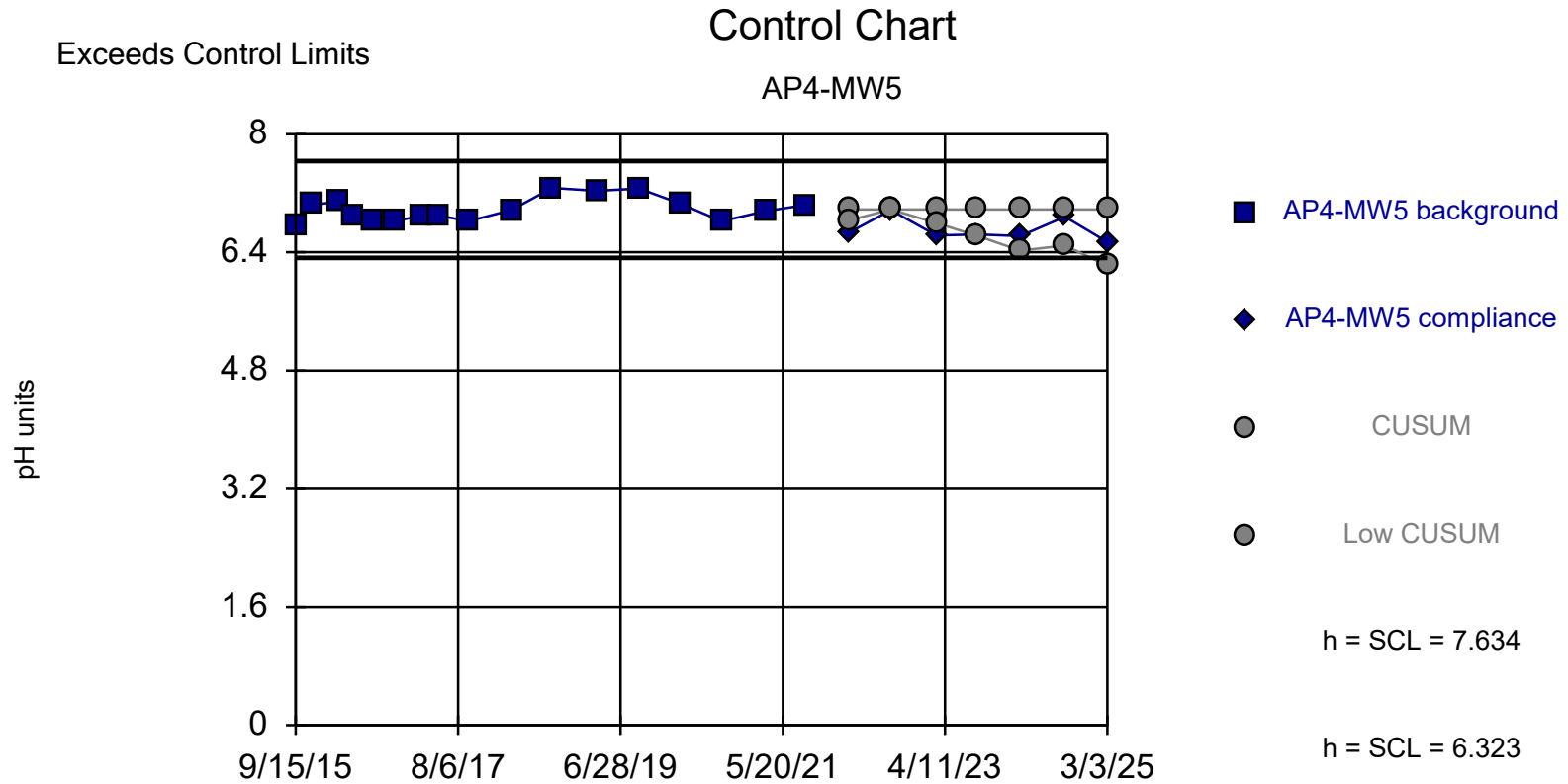
## Prediction Limit

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.

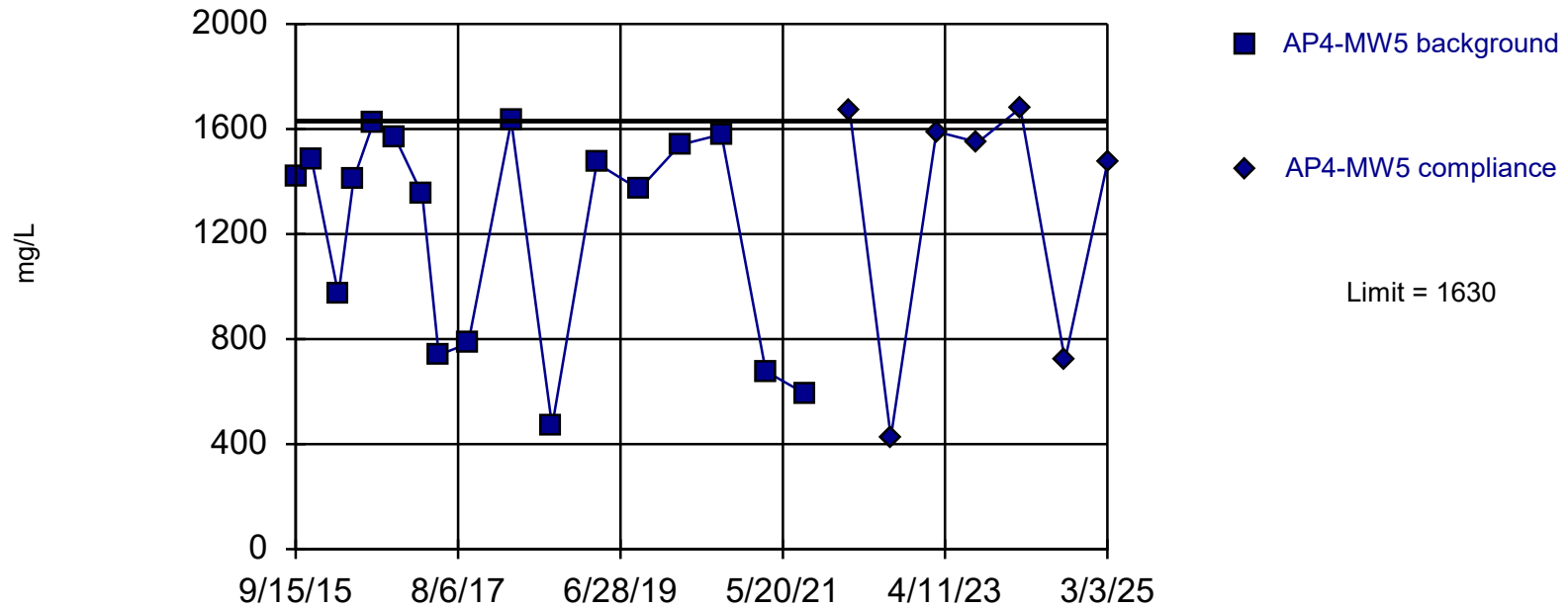
Constituent: Fluoride Analysis Run 4/22/2025 1:28 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2024

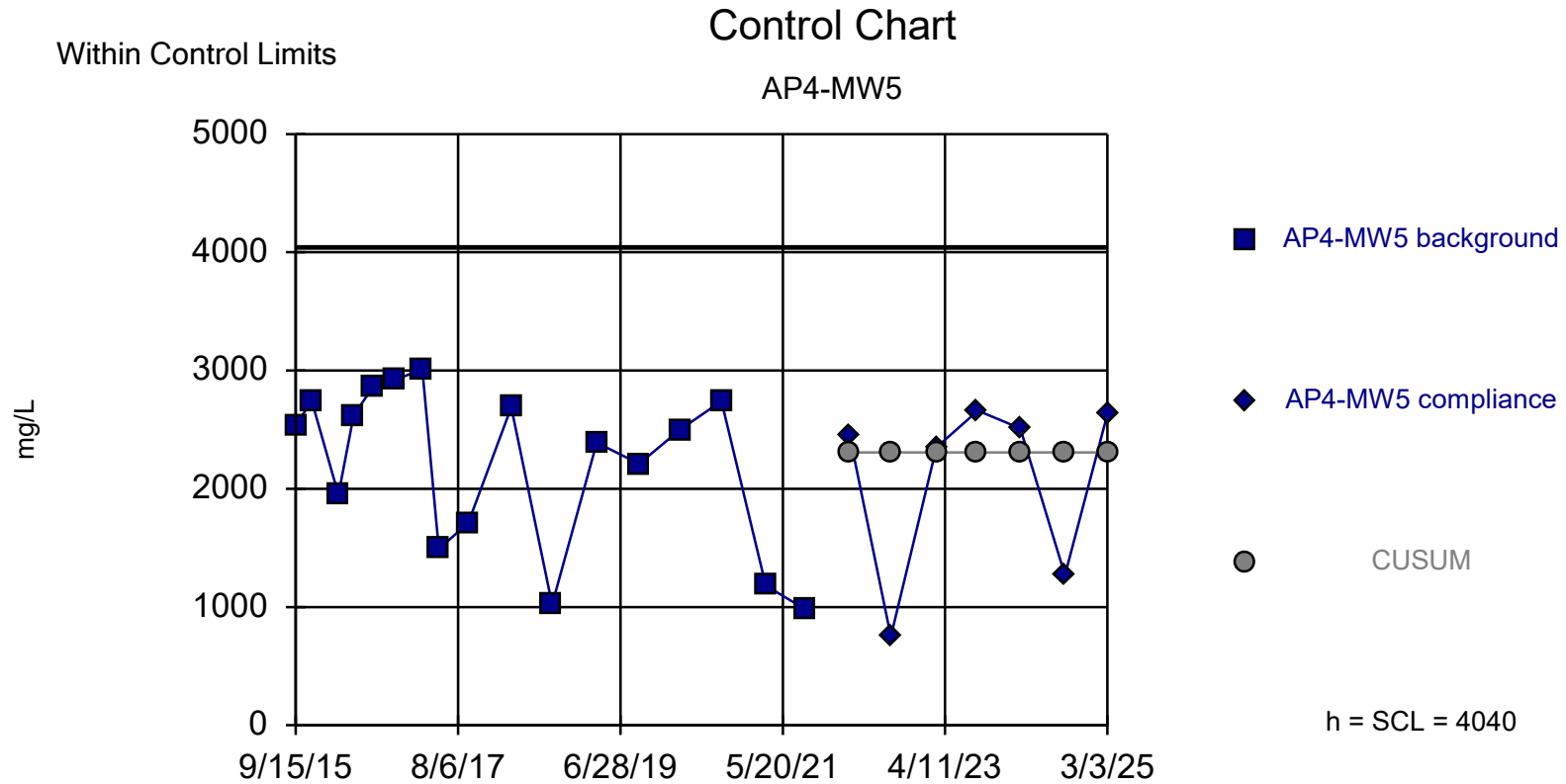


Within Limit

## Prediction Limit

Intrawell Non-parametric





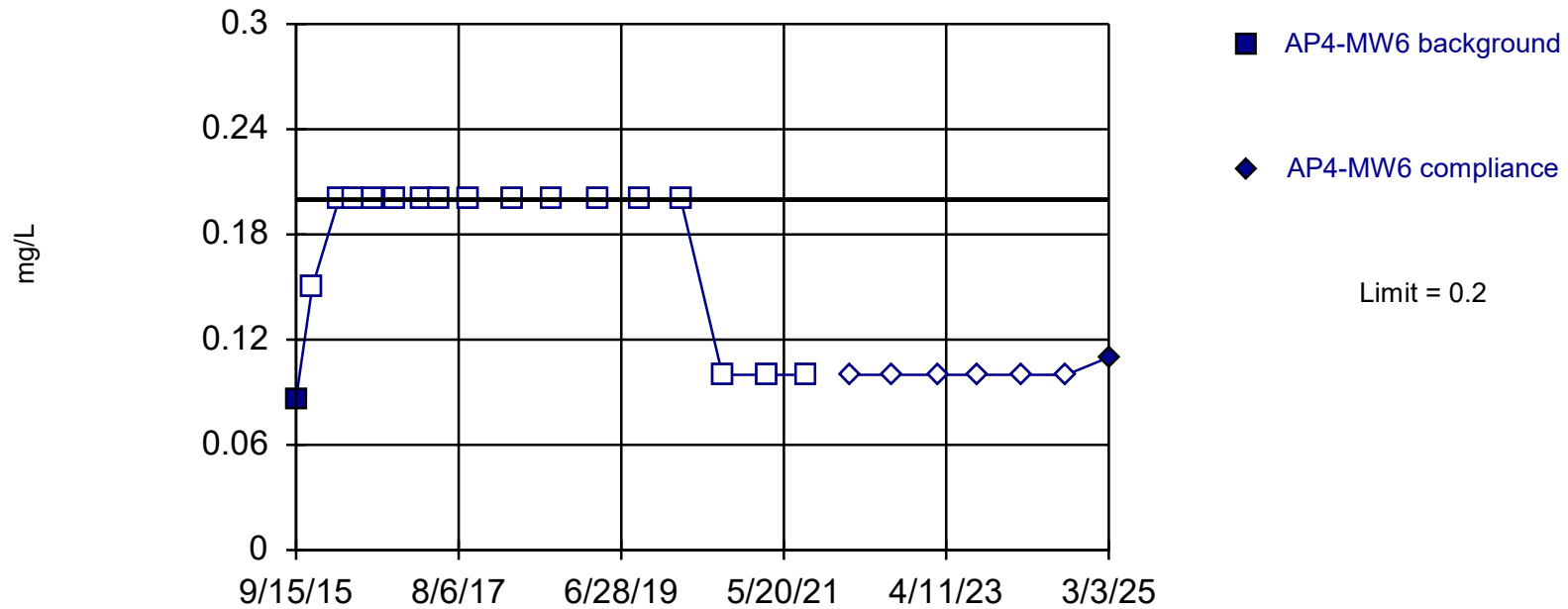
Background Data Summary (based on square transformation): Mean=5324676, Std. Dev.=2749578, n=17.  
Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9112, critical = 0.892. Report alpha = 0.002628. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Total Dissolved Solids    Analysis Run 4/7/2025 8:18 AM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q1-2025

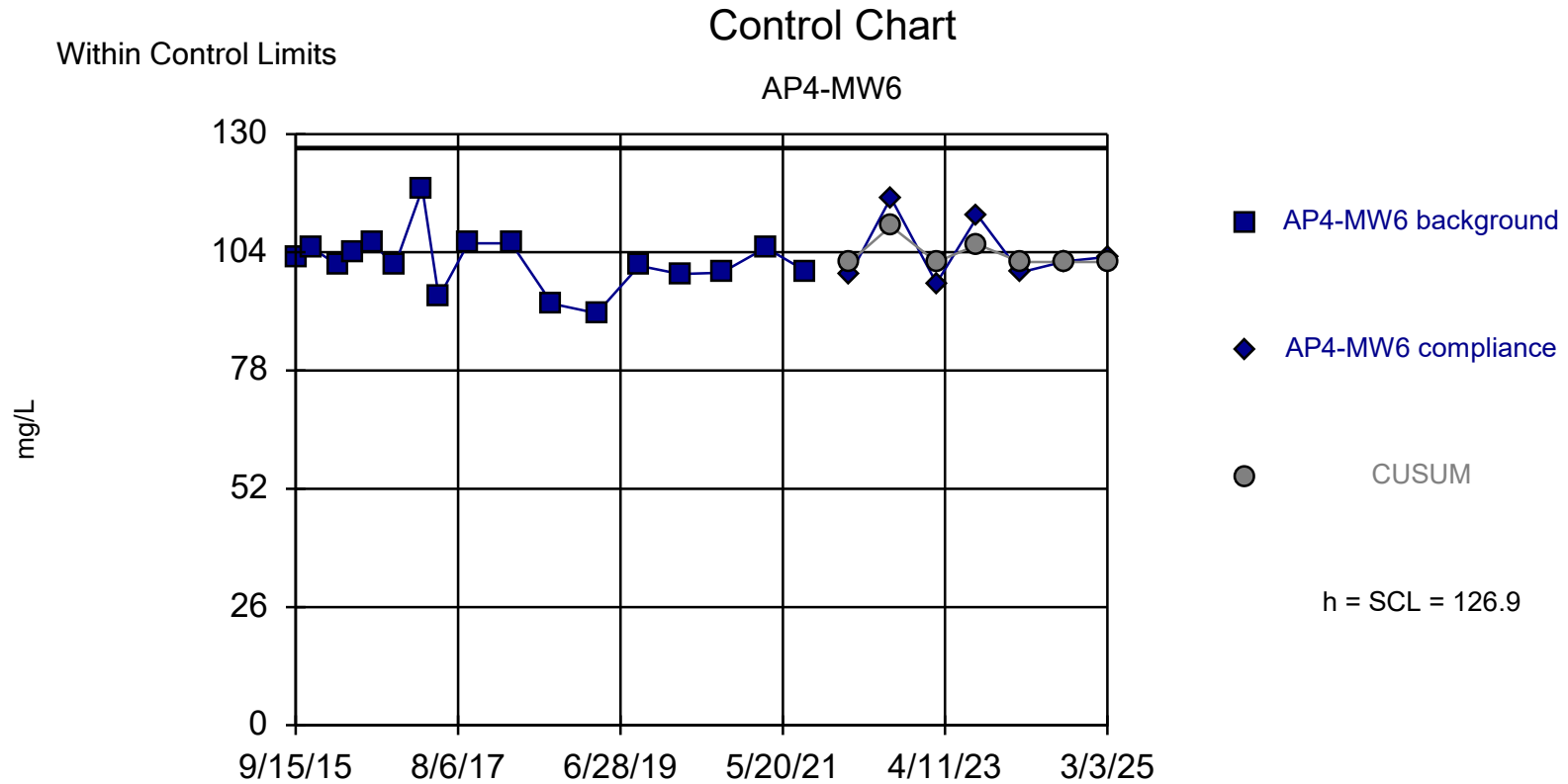
Within Limit

## Prediction Limit

Intrawell Non-parametric







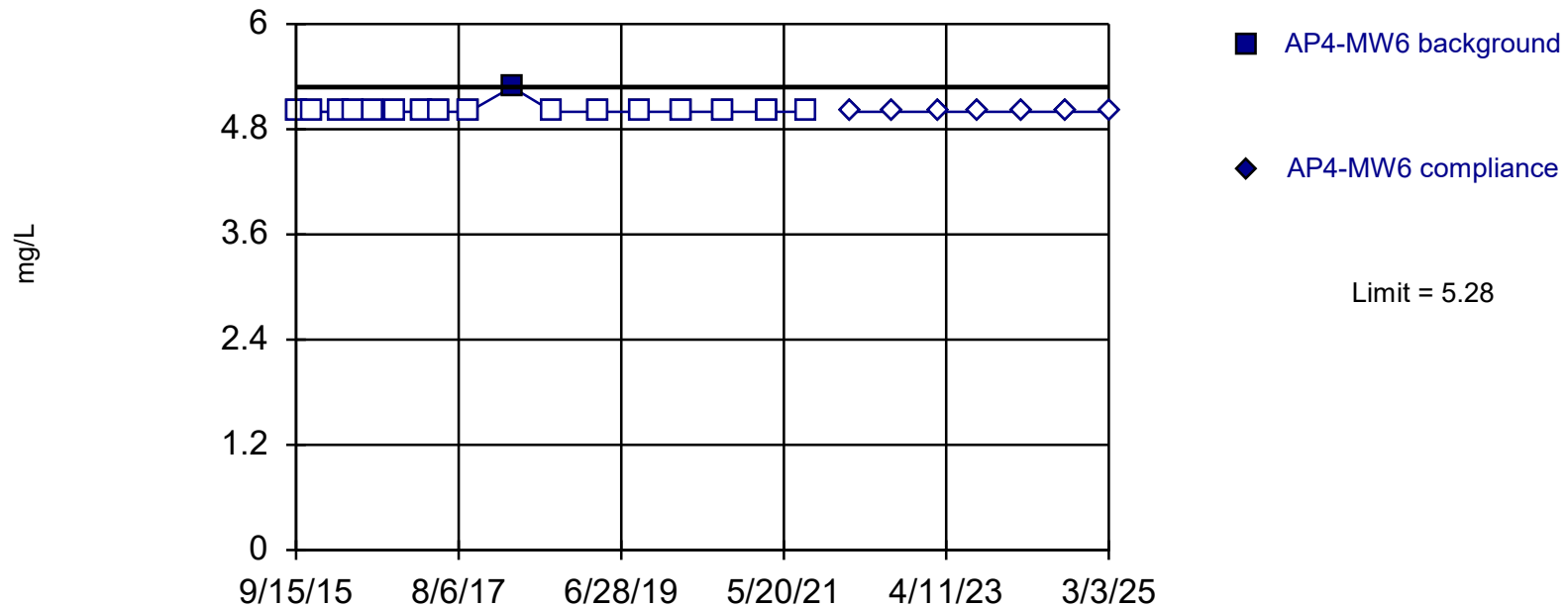
Background Data Summary: Mean=101.9, Std. Dev.=6.261, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.921, critical = 0.892. Report alpha = 0.002628. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium Analysis Run 4/7/2025 8:21 AM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025

Within Limit

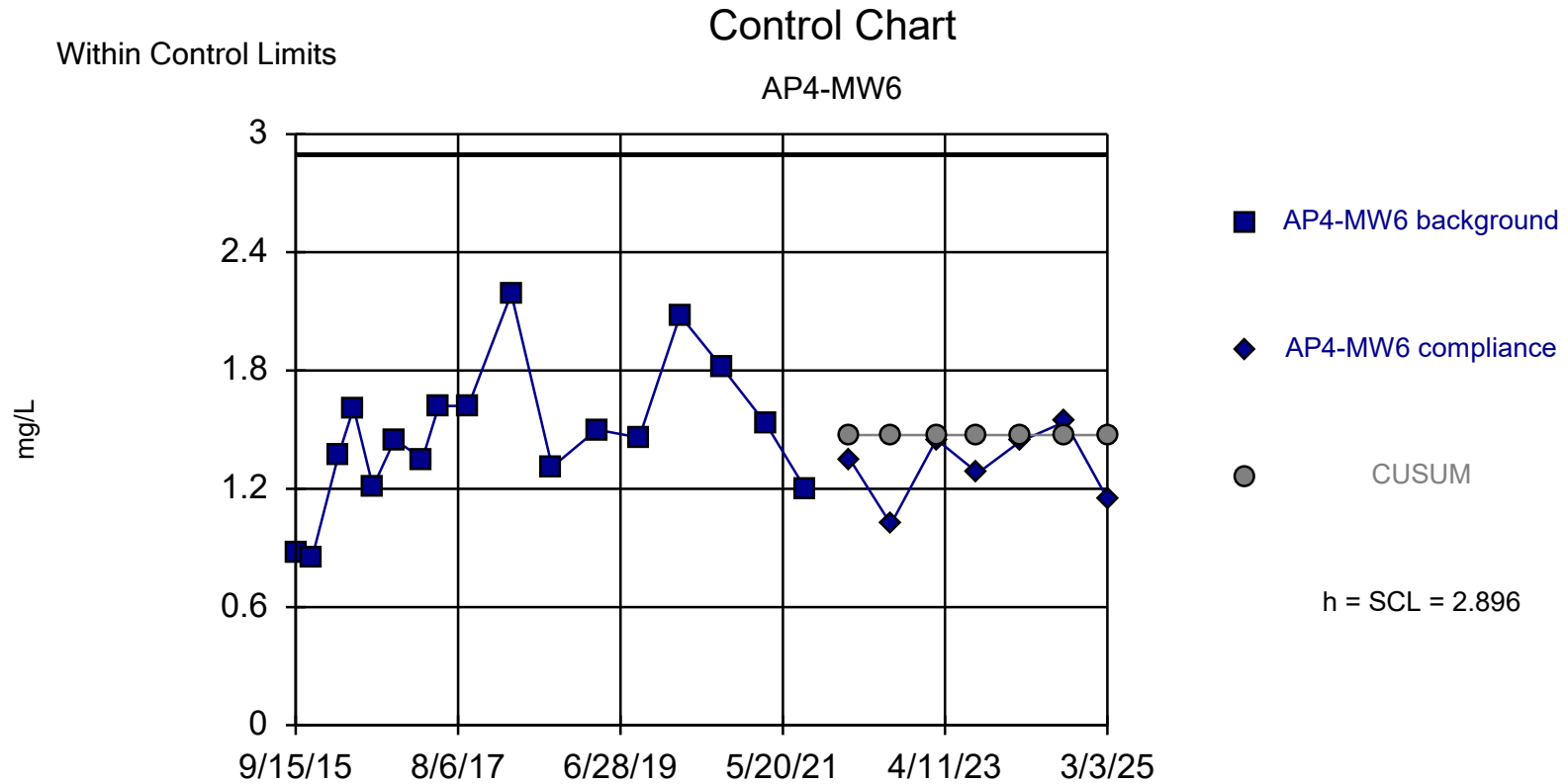
## Prediction Limit

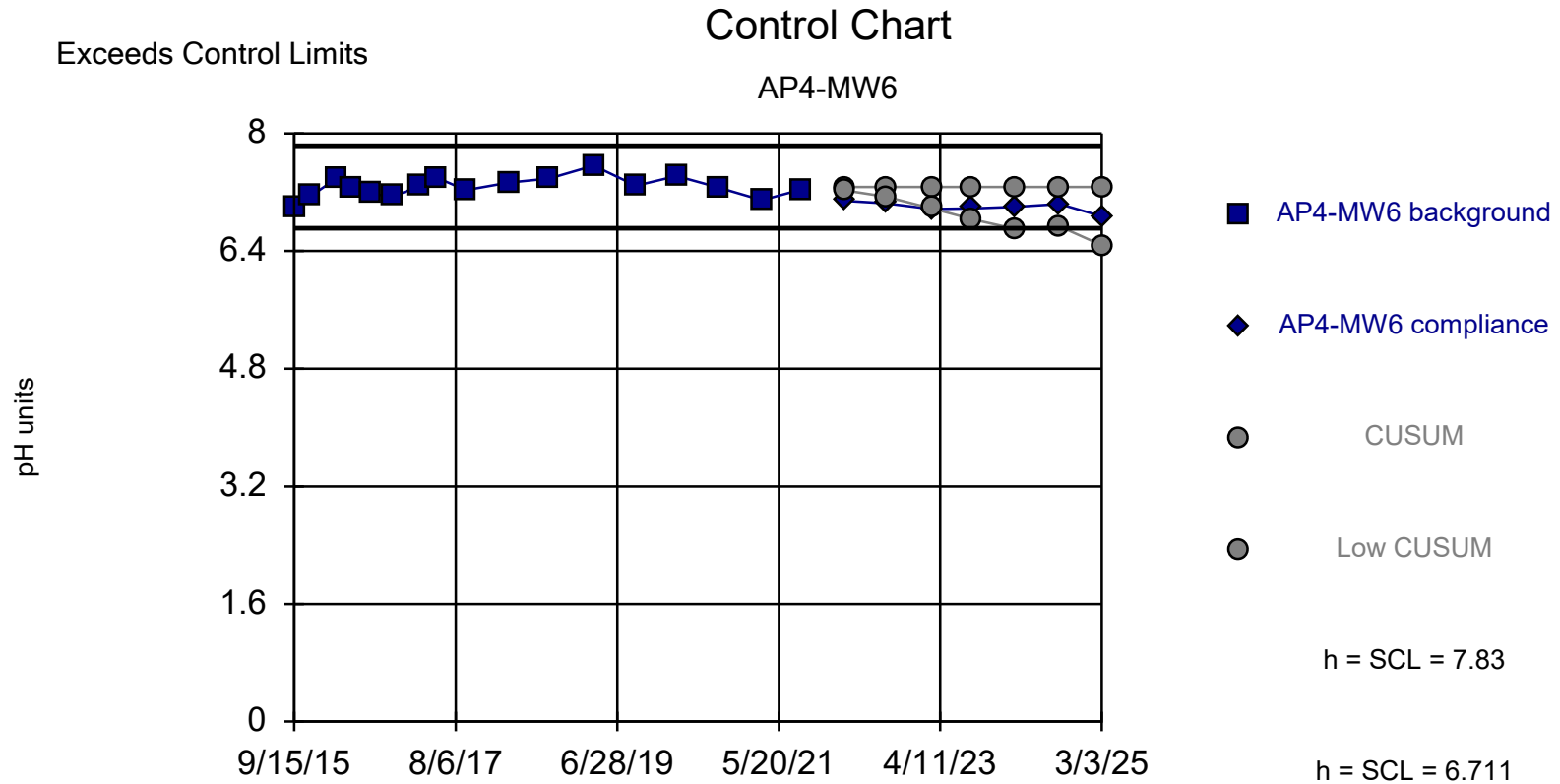
Intrawell Non-parametric



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 4/22/2025 1:30 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2024

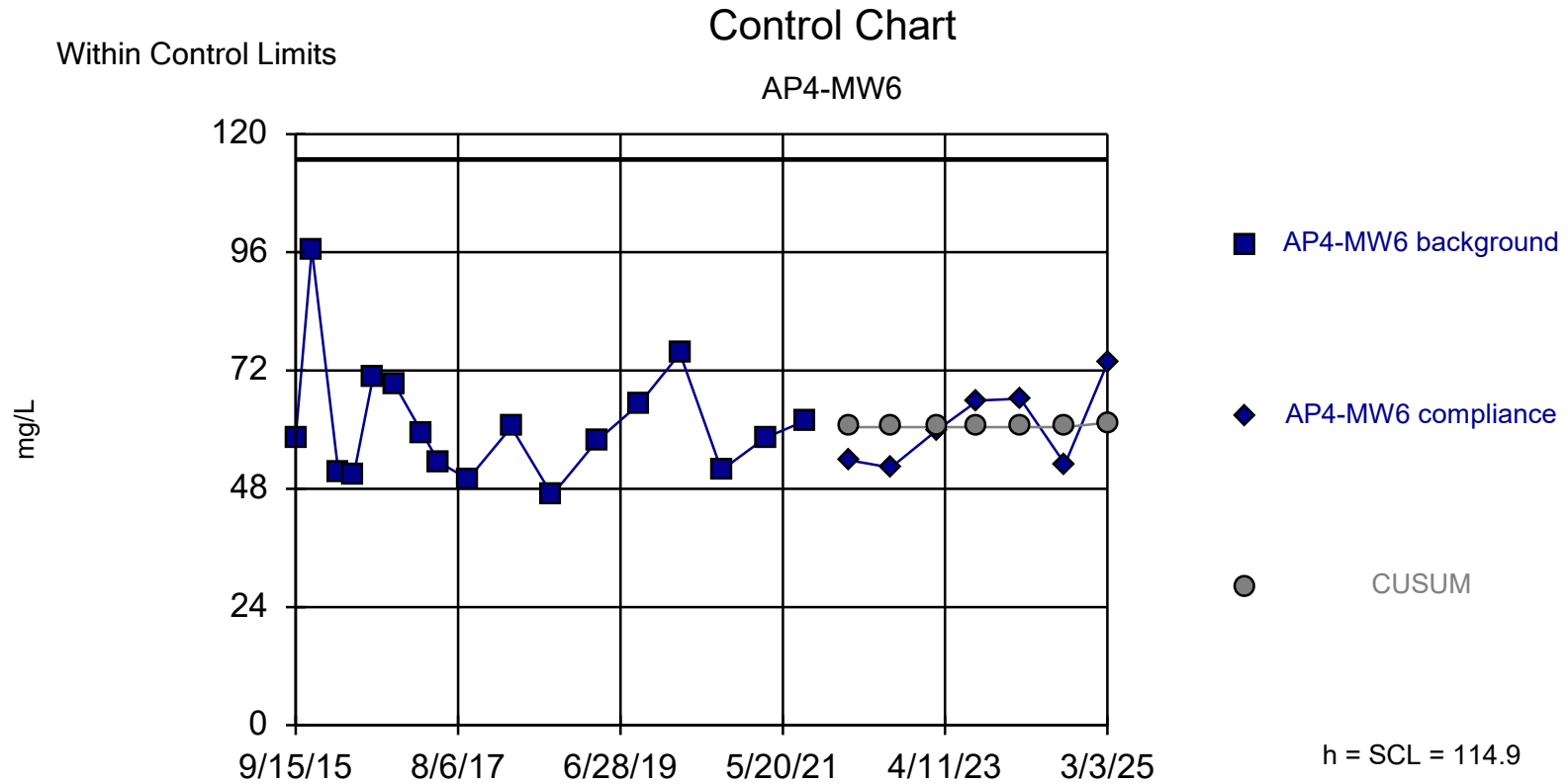


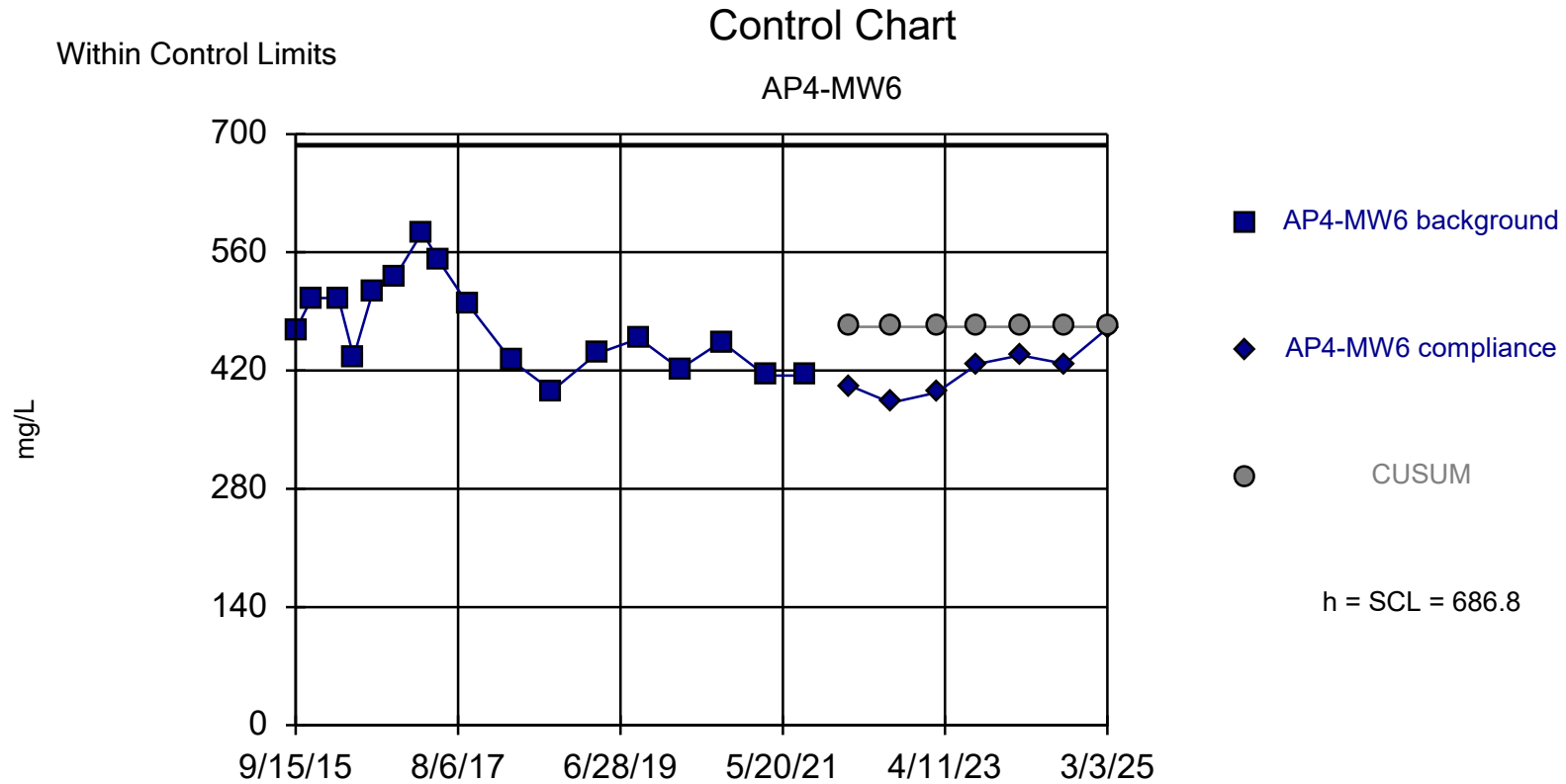


Background Data Summary: Mean=7.27, Std. Dev.=0.1399, n=17. Data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9866, critical = 0.892. Report alpha = 0.002584. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 4/14/2025 11:35 AM

Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025





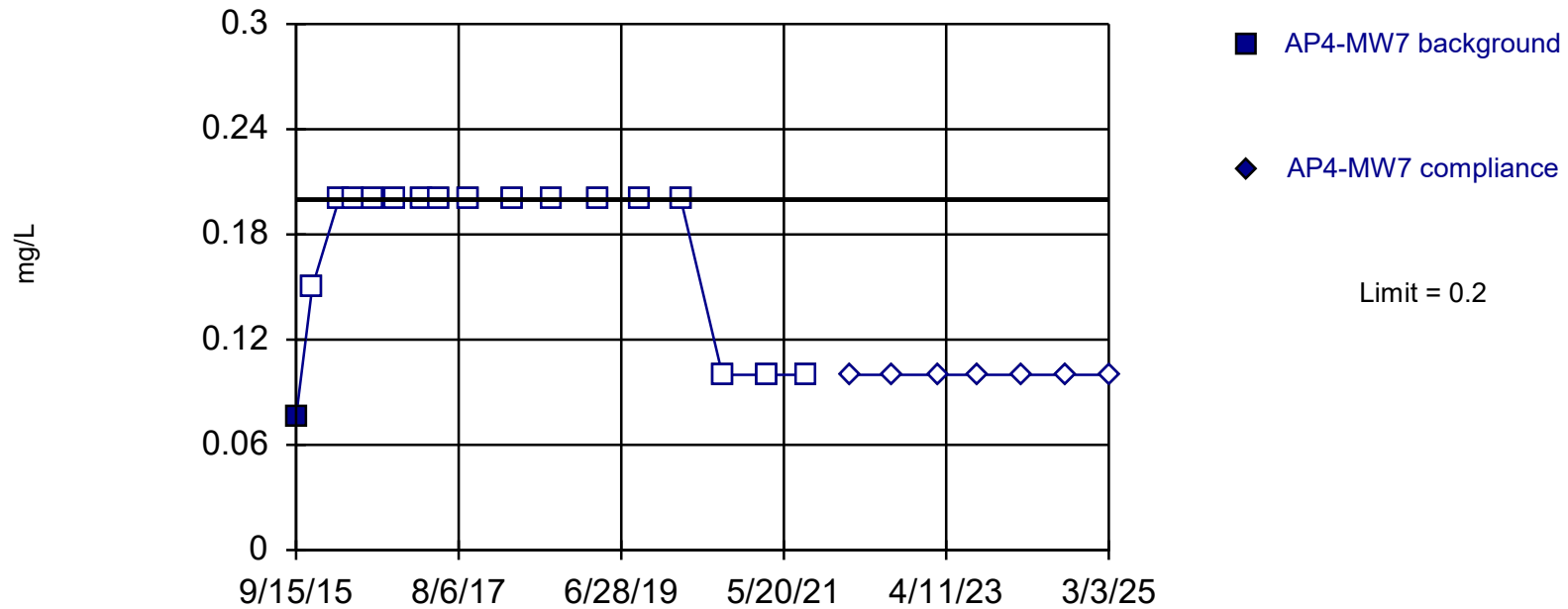
Background Data Summary: Mean=471.9, Std. Dev.=53.74, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9491, critical = 0.892. Report alpha = 0.002628. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Total Dissolved Solids    Analysis Run 4/7/2025 8:43 AM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q1-2025

Within Limit

## Prediction Limit

Intrawell Non-parametric



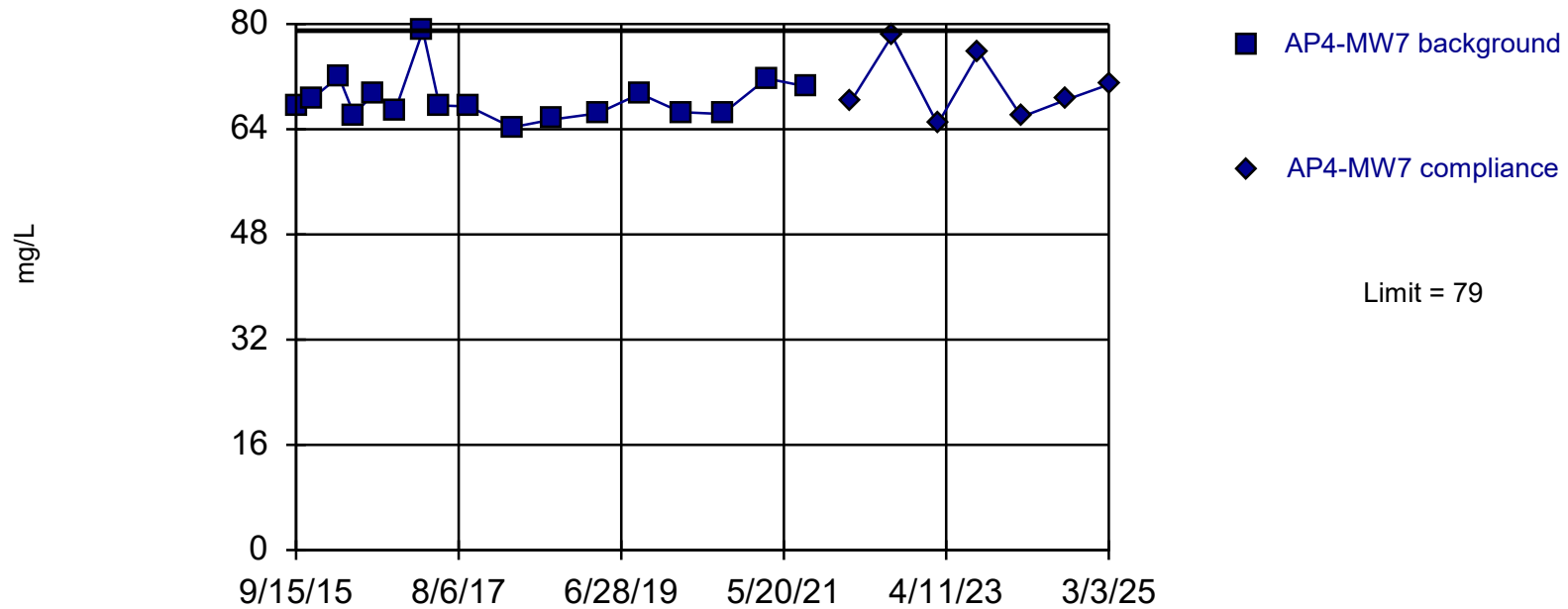
Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 17 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2). Most recent point compared to limit. Seasonality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

Constituent: Boron Analysis Run 4/7/2025 9:09 AM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025

Within Limit

## Prediction Limit

Intrawell Non-parametric

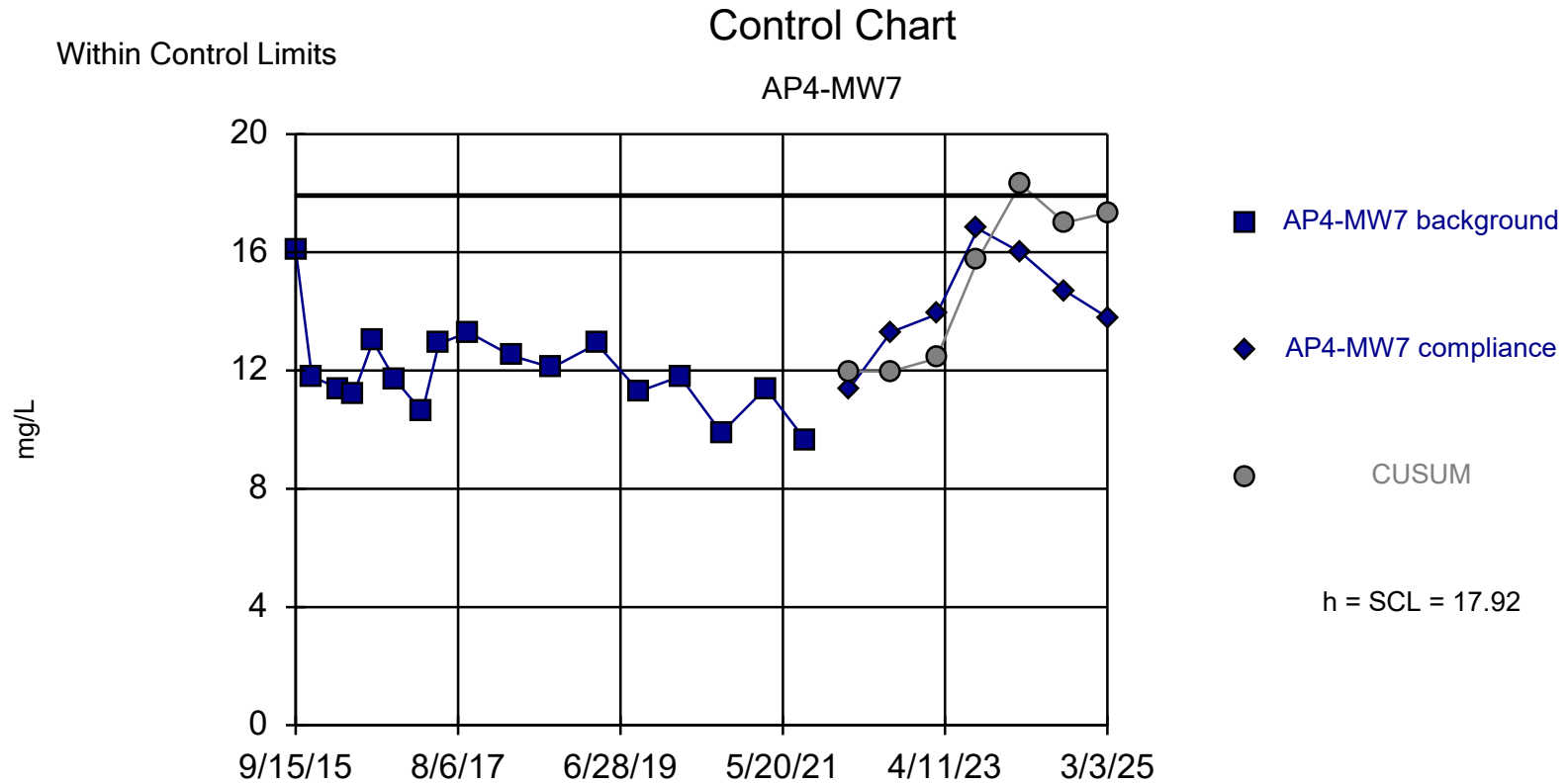


Limit = 79

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 4/7/2025 9:10 AM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025





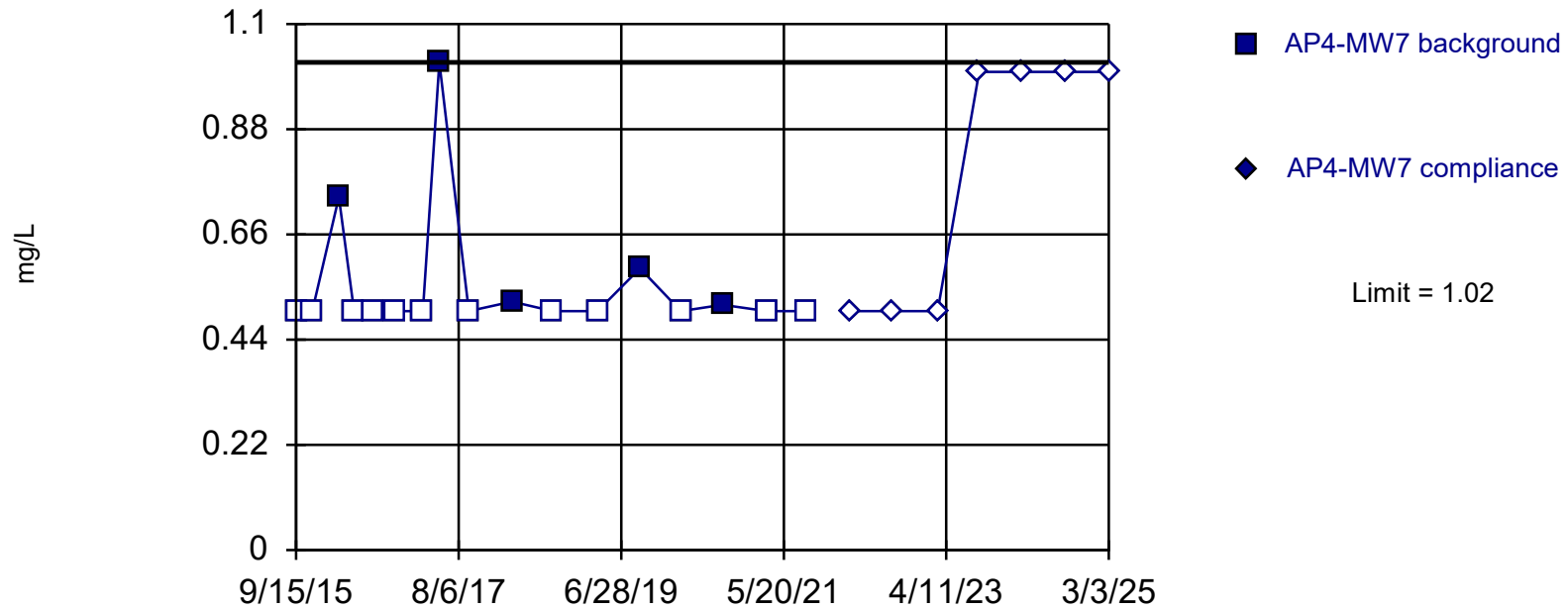
Background Data Summary: Mean=11.97, Std. Dev.=1.486, n=17. Exceedance nullified by following point per option settings. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.916, critical = 0.892. Report alpha = 0.002628. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Chloride Analysis Run 4/7/2025 9:11 AM  
 Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025

Within Limit

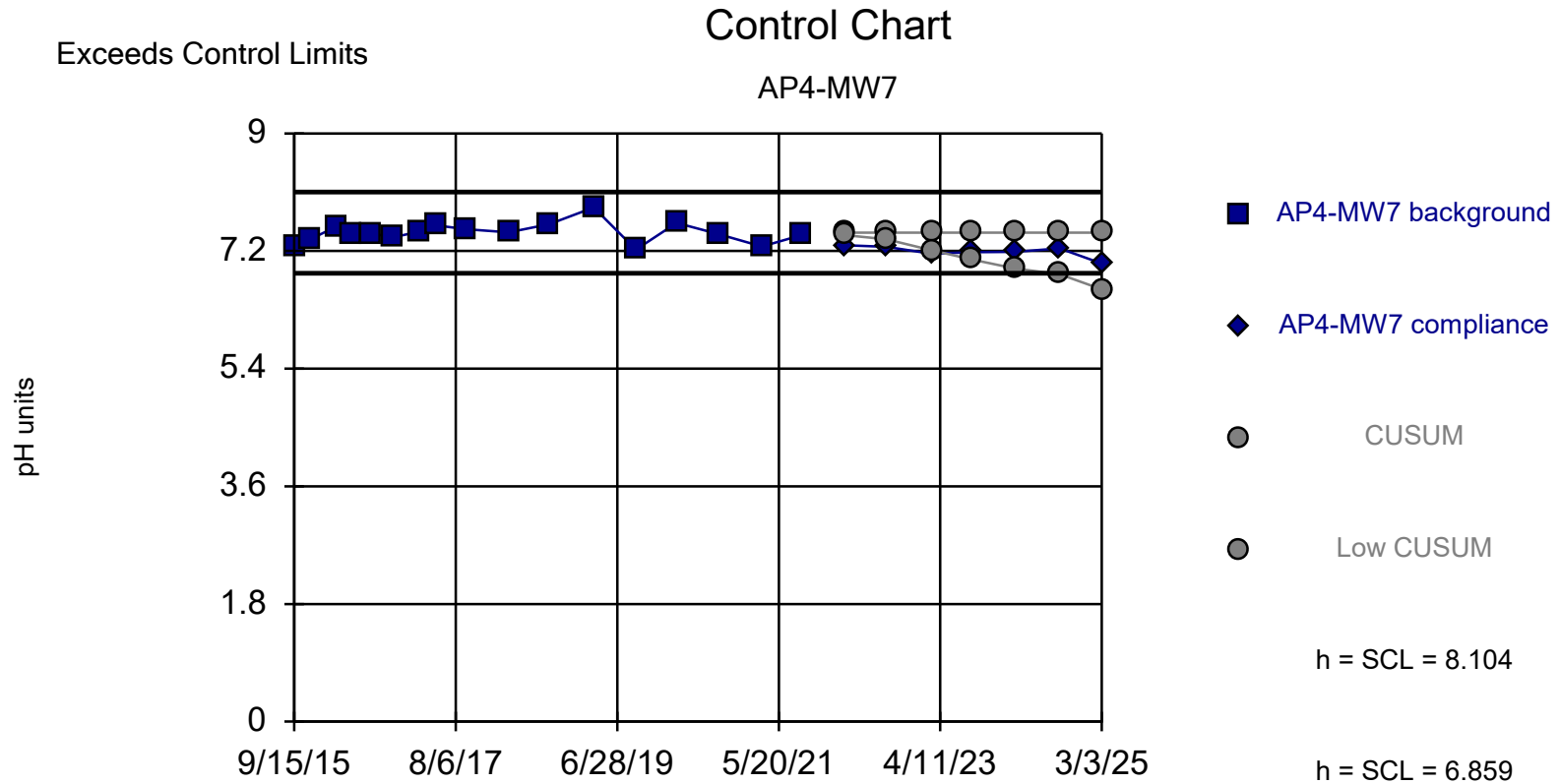
## Prediction Limit

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.

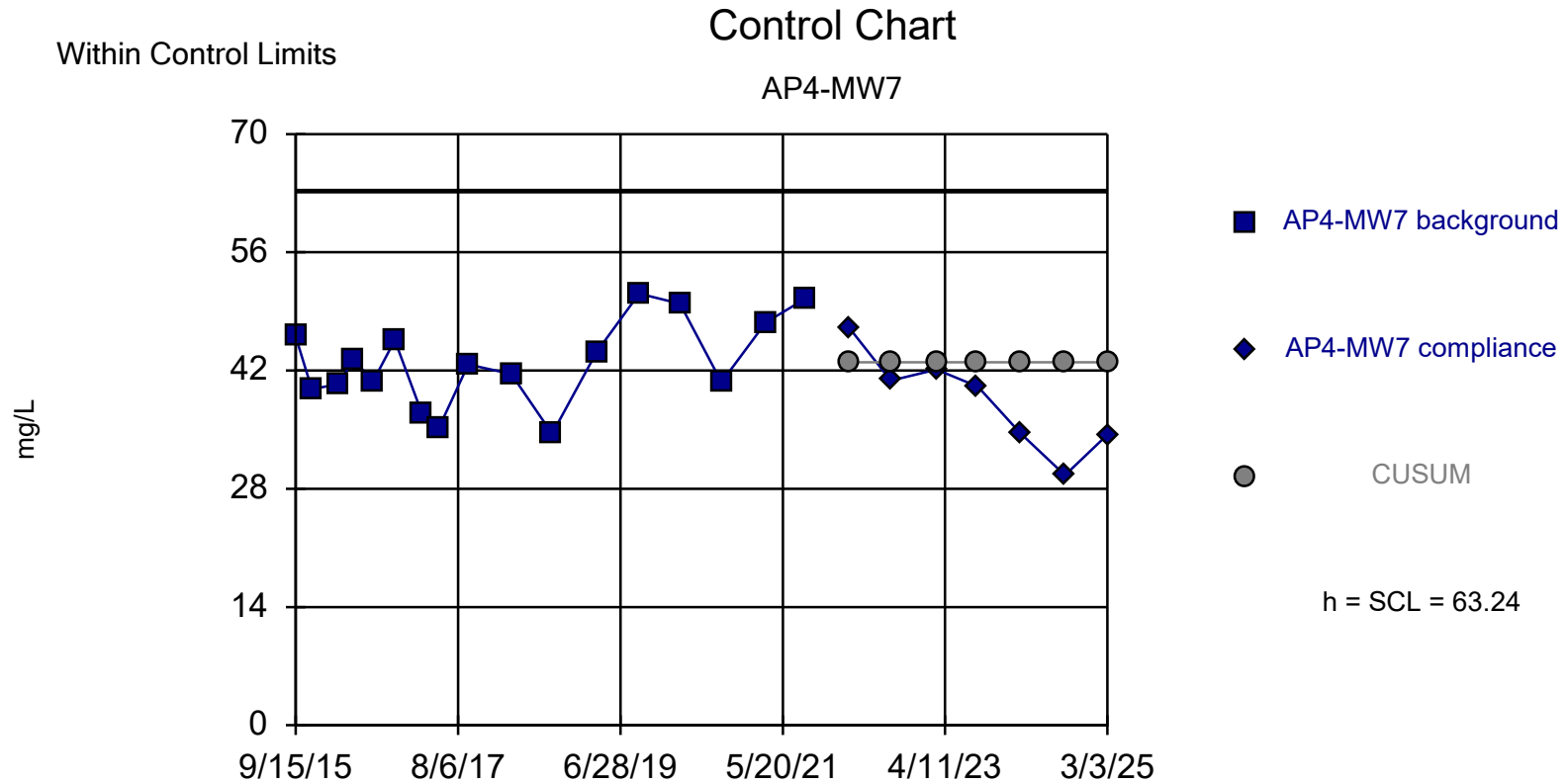
Constituent: Fluoride Analysis Run 4/22/2025 1:32 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2024

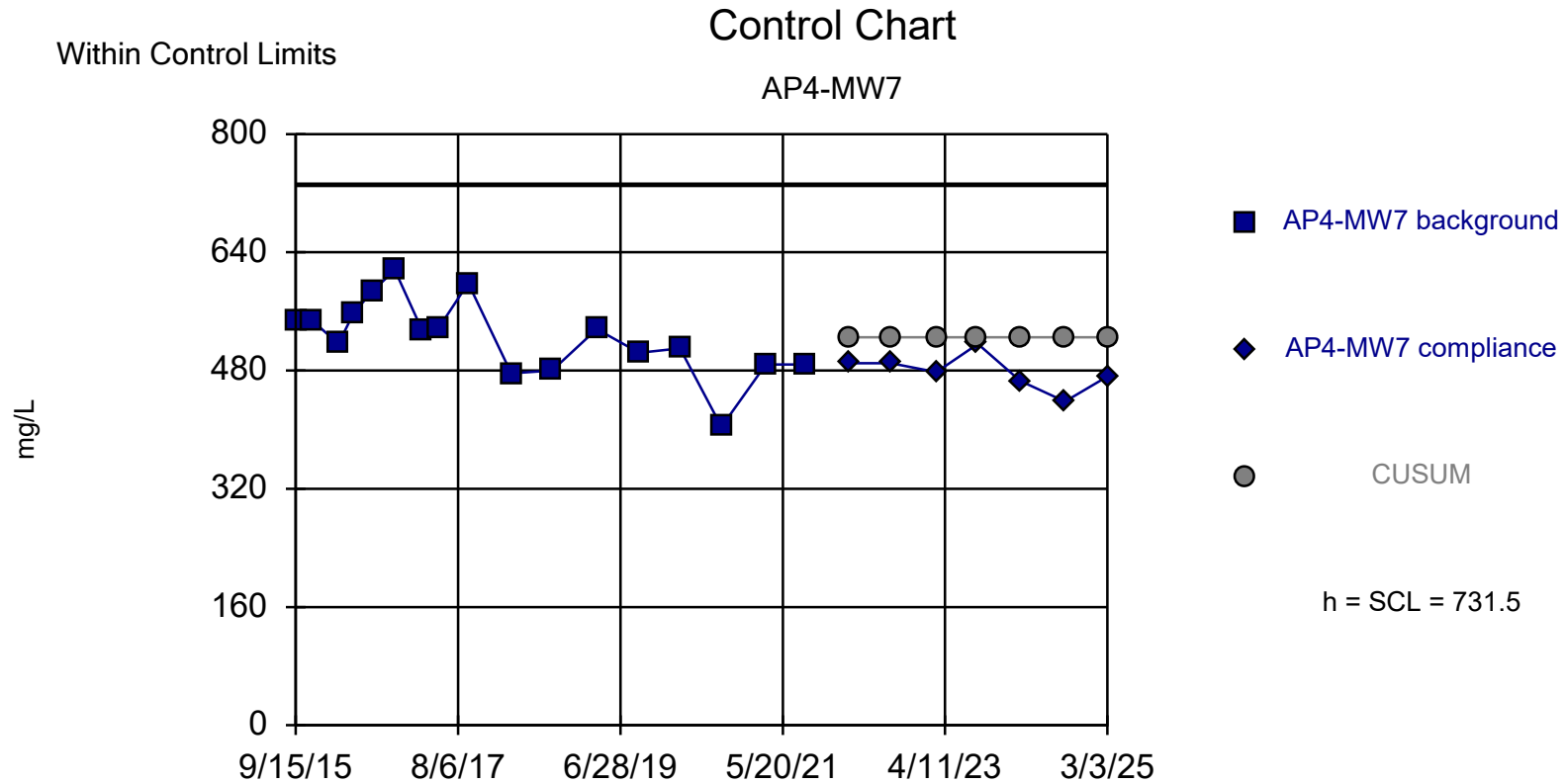


Background Data Summary: Mean=7.481, Std. Dev.=0.1556, n=17. Data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9509, critical = 0.892. Report alpha = 0.002584. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 4/14/2025 11:38 AM

Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025





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 = 0.00252. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Total Dissolved Solids Analysis Run 4/7/2025 12:57 PM

Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2025



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**APPENDIX B**

# Q3 2025 Semi-Annual Report



## REPORT

# Third Quarter 2025 Semi-Annual Groundwater Report

## *Nebraska Public Power District - Sheldon Station*

Submitted to:

### **Nebraska Public Power District**

Compliance Sector Supervisor, Land Management Division  
PO Box 98922, Lincoln, Nebraska, USA 68509-8922

Submitted by:

### **Nebraska Public Power District**

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

Prepared by:

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US0044982.5796-004-RPT-0

October 24, 2025





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**Appendix B:** Field Notes

**Appendix C:** Time Series Data

**Appendix D:** Comparative Statistical Analysis

## 1.0 INTRODUCTION

WSP USA Inc. (WSP) has prepared this report describing the second 2025 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 Water, Energy, and Environment (NDWEE), 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 NDWEE requirements (GAUSA 2022a). Under the NDWEE 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 three upgradient monitoring wells are AP4-MW1, AP4-MW2 and AP4-MW7, which are marked by (U) throughout the text. The four downgradient monitoring wells are AP4-MW3, AP4-MW4, AP4-MW5, and AP4-MW6.

Prior to the current event, AP4-MW7 was previously classified as a downgradient well. Following discussion with the NDWEE, AP4-MW7 has been reclassified as an upgradient location (WSP 2025a).

### 2.1 Completed Key Actions in Third Quarter 2025

The following activities occurred during the third quarter (Q3) of 2025:

- An alternative source demonstration was completed (WSP 2025b) and approved by the NDWEE (NDWEE 2025).
- Following review of the alternative source demonstration, a baseline update was conducted based on the comments provided by the NDWEE and submitted to the NDWEE for approval (WSP 2025c).
- A memo was submitted to NDWEE detailing a review of the monitoring well network at Ash Landfill No. 4. (WSP 2025a).
- A detection monitoring sampling event was completed during Q3 of 2025.

## 2.2 Installation and Decommissioning of Monitoring Wells

No monitoring wells were installed or decommissioned at Sheldon Station during Q3 of 2025.

## 2.3 Problems and Resolutions

During the Q3 2025 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

The reported values are consistent with observed concentrations and reporting limits from recent sampling events.

Additionally, there were differences between the duplicate concentrations and the parent (AP4-MW5) for boron, calcium and sulfate. The lab was contacted, and the lab confirmed that no data or sample label errors were found. As part of the confirmation, the lab took the following actions:

- Tested the conductivity of the parent sample and the duplicate. The conductivity values were quite different between the parent sample and the duplicate, but were consistent with the reported Total Dissolved Solids concentrations for the two samples.
- Results for sulfate for both samples were re-analyzed and confirmed to be accurate.
- Tested the undiluted samples directly from the metals bottles for both samples. The results for boron and calcium were consistent with the originally reported data.

No changes were made to the analytical reporting as a result of the review. No other problems were encountered as part of the field sampling or analysis in Q3 of 2025.

## 2.4 Proposed Key Activities for 2026

Detection monitoring sampling events are scheduled to occur in the first quarter (Q1) and Q3 of 2026 and will consist of sampling, data review, and comparative statistics. Following each detection monitoring sampling event, a semi-annual report will be provided to the NDWEE.

## 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 August 26, 2025. Specific dates for each sample

collected as part of the program are provided in Table 1 through Table 7. The analytical report for the results of samples collected August 26, 2025, 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 August 2025 (Q3 2025) 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 foot (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 August 2025 from AP4-MW1 and AP4-MW2 towards the three downgradient wells was estimated to be  $7.9 \times 10^{-4}$  ft/day, based on the calculated hydraulic gradient for August 2025 of 0.03 ft/ft.

## 3.2 Monitoring Data (Analytical Results)

Analytical results for the detection monitoring results for the August 2025 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 baseline update conducted using data collected through the Q1 2025 detection monitoring event and provided to the NDWEE (WSP 2025b) following guidance provided by the USEPA (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. 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 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**

No potential exceedances were identified for the Q3 2025 detection monitoring sampling event.

### **3.3.3 False-Positives**

No false-positives were identified for the Q3 2025 detection monitoring sampling event.

### **3.3.4 Verified Exceedances**

No verified SSIs were identified for the Q3 2025 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 quarter of 2026.

### **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 2022b). 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 NDWEE (formerly the NDEE; NDEE 2022), Sheldon Station's AP4 remains in detection monitoring.

Resulting from the verified SSI for field pH at AP4-MW7 (U) verified during the Q1 2025 detection monitoring event, NPPD and WSP pursued an alternative source demonstration (WSP 2025c). The SSI for field pH was attributed to natural variability within the groundwater system and instrument variability within the pH probe. As such, AP4 is not considered the source of the verified SSI at AP4-MW7. 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 NDWEE (NDWEE 2025), Sheldon Station's AP4 remains in detection monitoring. As part of the concurrence of the NDWEE, AP4-MW7 was reclassified as an upgradient well. A memo was provided to the NDWEE detailing the site conditions and reclassification of AP4-MW7 at the request of the NDWEE (WSP 2025a).

### **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 August 26, 2025, 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.

## Signature Page

### WSP USA Inc.



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## 5.0 REFERENCES

- GAI (Golder Associates, Inc.). 2017a. Groundwater Monitoring Statistical Methods Certification, Sheldon Station Ash Landfill No. 4. October 11, 2017.
- GAI. 2017b. Coal Combustion Residuals Landfill Groundwater Monitoring System Certification. October 11, 2017.
- GAUSA (Golder Associates USA Inc.). 2022a. Sampling and Analysis Plan Permit No. NE0204285, Sheldon Station Ash Landfill No. 4. March 1, 2022.
- GAUSA. 2022b. 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.
- NDWEE (Nebraska Department of Water, Energy, and Environment). 2025. DWEE's Review Comments and Approval for NPPD Sheldon Station Fossil Fuel Combustion Ash Landfill #4 Alternative Source Demonstration for Field pH at Monitoring Well AP4-MW7. August 7, 2025.
- 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.
- WSP (WSP USA Inc.). 2025a. Sheldon Station – Ash Landfill No. 4 Groundwater Monitoring Network Review. October 2, 2025.
- WSP. 2025b. Baseline Update for Groundwater Quality Monitoring at Nebraska Public Power District's Sheldon Station Ash Landfill No. 4. October 1, 2025.
- WSP. 2025c. Alternative Source Demonstration for Field pH at AP4-MW7, Sheldon Station Ash Landfill No 4. Revision 2. September 5, 2025.

## 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	3/3/2025	8/26/2025
	Units	Background Collection									Detection Monitoring <sup>1</sup>															
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	0.106	< 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	90.4	77.1
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	10.4	9.07
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	< 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	7.12	7.06
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	21.1	25.9
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	426	398
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	3/3/2025	8/26/2025
	Units	Background Collection									Detection Monitoring <sup>1</sup>															
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	0.121	< 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	310	270
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	95.7	103
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	< 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	7.08	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	957	996
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	1700	1720
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 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	3/3/2025	8/26/2025
	Units	Background Collection								Detection Monitoring <sup>1</sup>																
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	< 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	78.8	61.3
Chloride	mg/L	16.1	11.8	11.4	11.2	13	11.7	10.6	12.9	13.3	12.5	12.1	12.9	11.3	11.8	9.89	11.4	9.65	11.4	13.3	13.9	16.8	16.0	14.7	13.8	17.2
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	< 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	7.08	7.22
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	34.4	30.8
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	472	460
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 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	3/3/2025	8/26/2025
	Units	Background Collection									Detection Monitoring <sup>1</sup>															
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	< 0.102	< 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	82	72.8
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	< 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	1.11	1.47
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	7.18	7.13
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	21.3	20.2
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	374	366
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	3/3/2025	8/26/2025
	Units	Background Collection								Detection Monitoring <sup>1</sup>																
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	0.104	< 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	103	101
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	<1.00	1.26
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	7.10	7.02
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	79.5	118
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	486	520
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 ± 0.10	0.451 ± 0.124	0.362 ± 0.104	0.471 ± 0.099	0.36 ± 0.097	0.481 U ± 0.132	0.327 ± 0.111	0.185 ± 0.090	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Radium-228	pCi/L	2.78 ± 0.484	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 ± 0.502	2.041 ± 0.390	2.23 ± 0.375	3.09 ± 0.472	2.41 ± 0.462	1.56 ± 0.472	2.25 ± 0.412	2.08 ± 0.395	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
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	3/3/2025	8/26/2025
	Units	Background Collection								Detection Monitoring <sup>1</sup>																
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	< 0.400	0.145
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	473	427
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	5.52	6.91
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	< 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	6.54	6.65
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	1470	1650
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	2630	2590
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	3/3/2025	8/26/2025
	Units	Background Collection								Detection Monitoring <sup>1</sup>																
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	0.11	< 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	103	89.7
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	< 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	1.15	1.68
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	6.94	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	73.5	61.9
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	470	442
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 8 - Sheldon Station Ash Landfill No. 4**  
**Groundwater Levels (ft amsl)**

Sample Period	Upgradient Wells			Downgradient Wells			
	AP4-MW1	AP4-MW2	AP4-MW7	AP4-MW3	AP4-MW4	AP4-MW5	AP4-MW6
<b>MP Elev.</b>	<b>1425.95</b>	<b>1445.03</b>	<b>1424.29</b>	<b>1411.72</b>	<b>1396.10</b>	<b>1403.10</b>	<b>1386.61</b>
QTR-2002-4	1410.90	1422.78	1401.53	1392.14	1375.99	1385.78	1374.15
QTR-2003-1	1409.36	1421.35	1399.28	1390.20	1374.01	1383.07	1374.06
QTR-2003-2	1412.99	1421.11	1398.78	1396.11	1376.52	1387.68	1376.90
QTR-2003-3	1411.22	1421.87	1401.34	1390.91	1372.66	1382.35	1369.46
QTR-2003-4	1410.02	1422.24	1401.38	1390.31	1373.48	1382.30	1369.10
QTR-2004-1	1411.81	1420.78	1398.98	1393.01	1377.92	1384.12	1377.59
QTR-2004-2	1412.04	1420.72	1400.70	1394.77	1375.64	1383.75	1374.83
QTR-2004-3	1411.24	1421.22	1408.14	1393.89	1375.55	1384.18	1373.85
QTR-2004-4	1409.40	1421.39	1407.23	1391.65	1373.40	1381.88	1374.65
QTR-2005-1	1409.32	1420.12	1401.20	1390.66	1372.78	1381.29	1374.62
QTR-2005-2	1410.36	1419.77	1399.82	1388.86	1372.63	1381.27	1374.55
QTR-2005-3							
QTR-2005-4	1407.83	1419.58	1399.32	1387.67	1372.52	1380.80	1369.44
QTR-2006-1	1406.35	1418.91	1397.99	1387.02	1372.42	1380.15	1371.76
QTR-2006-2	1408.37	1418.43	1397.48	1387.52	1372.42	1383.05	1372.36
QTR-2006-3	1403.26	1417.13	1399.99	1386.38	1372.30	1379.83	1370.22
QTR-2006-4	1404.91	1419.42	1399.89	1386.32	1372.25	1380.51	1369.90
QTR-2007-1	1407.21	1417.13	1397.74	1390.63	1372.89	1382.85	1374.67
QTR-2007-3	1409.61	1417.42	1409.74	1391.60	1373.85	1382.19	1370.84
QTR-2008-2	1415.33	1417.33	1414.16	1406.98	1385.69	1395.04	1379.15
QTR-2008-3	1412.64	1418.64	1413.10	1393.61	1376.05	1385.14	1373.43
QTR-2009-2	1409.86	1417.98	1403.78	1390.72	1374.15	1381.58	1374.49
QTR-2009-3	1408.87	1417.88	1407.03	1389.01	1372.47	1380.60	1370.31
QTR-2010-2	1413.98	1418.11	1414.59	1405.12	1381.85	1390.80	1375.51
QTR-2010-3	1411.22	1419.23	1413.39	1392.72	1374.81	1383.50	1374.39
QTR-2011-2	1409.32	1418.12	1403.83	1389.92	1374.80	1382.48	1374.55
QTR-2011-3	1411.24	1418.58	1411.18	1391.87	1373.60	1382.88	1373.56
QTR-2012-2	1412.85	1418.13	1413.29	1399.77	1377.74	1388.74	1375.41
QTR-2012-3	1408.70	1418.58	1410.77	1390.03	1372.72	1381.35	1369.47
QTR-2013-2	1411.47	1416.93	1402.57	1391.01	1375.34	1388.23	1375.31
QTR-2013-4	1410.46	1417.32	1407.27	1391.21	1373.05	1382.79	1370.11
QTR-2014-2	1407.80	1416.98	1400.05	1387.42	1372.03	1383.19	1374.23
QTR-2014-4	1407.74	1417.08	1404.99	1387.30	1372.10	1381.27	1371.75
QTR-2015-2	1412.00	1415.13	1409.78	1405.17	1379.63	1394.50	1375.75
QTR-2015-3	1412.05	1418.38	1412.67	1393.87	1376.77	1386.49	1371.86
QTR-2015-4	1410.50	1418.89	1408.79	1391.46	1374.49	1383.76	1372.41
QTR-2016-1	1412.60	1420.38	1405.38	1394.97	1377.65	1387.59	1374.66
QTR-2016-2	1414.94	1418.83	1410.62	1406.92	1384.72	1395.85	1376.79
QTR-2016-3	1412.06	1419.51	1414.29	1393.22	1375.65	1386.20	1373.11
QTR-2016-4	1410.10	1419.93	1408.39	1390.81	1373.60	1382.98	1372.41
QTR-2017-1	1408.24	1419.54	1403.49	1389.29	1372.83	1381.40	1373.83
QTR-2017-2	1410.15	1419.00	1402.41	1389.52	1373.35	1386.96	1373.96
QTR-2017-3	1410.40	1419.35	1409.31	1392.04	1372.70	1383.00	1372.12
QTR-2018-1	1408.01	1418.76	1402.92	1389.65	1372.37	1381.38	1374.21
QTR-2018-3	1410.46	1417.88	1410.27	1397.84	1375.90	1389.87	1374.85
QTR-2019-1	1413.80	1418.53	1411.27	1400.72	1383.19	1391.10	1377.89
QTR-2019-3	1412.07	1422.34	1415.12	1399.14	1377.58	1390.40	1374.46
QTR-2020-1	1414.38	1424.75	1411.49	1399.62	1378.73	1390.27	1374.60
QTR-2020-2	1414.67	1427.03	1415.83	1403.73	1380.90	1394.55	1375.70
QTR-2020-3	1411.10	1428.23	1414.78	1394.10	1375.29	1387.19	1373.30
QTR-2021-1	1410.62	1425.54	1405.72	1390.69	1375.14	1386.42	1374.19
QTR-2021-3	1410.46	1426.36	1412.38	1392.03	1373.93	1384.00	1371.92
QTR-2022-1	1408.46	1424.04	1404.24	1389.13	1372.69	1381.70	1373.66
QTR-2022-3	1408.65	1421.92	1408.57	1390.69	1371.45	1379.75	1370.26
QTR-2023-1	1405.85	1419.93	1400.39	1386.32	1370.00	1378.27	1369.80
QTR-2023-3	1405.35	1418.68	1398.38	1386.93	1370.75	1379.99	1370.86
QTR-2024-1	1405.43	1418.98	1397.63	1387.26	1372.18	1379.84	1370.80
QTR-2024-3	1405.25	1417.86	1398.27	1385.97	1371.45	1379.25	1369.31
QTR-2025-1	1404.17	1417.33	1397.82	1385.72	1371.62	1379.20	1371.86
QTR-2025-3	1403.80	1416.18	1395.70	1384.48	1371.22	1378.45	1370.71
<b>Mean</b>	1409.89	1419.75	1405.53	1392.33	1374.77	1384.32	1373.22
<b>SD</b>	2.85	2.69	5.90	5.43	3.37	4.36	2.38
<b>Maximum</b>	1415.33	1428.23	1415.83	1406.98	1385.69	1395.85	1379.15
<b>Minimum</b>	1403.26	1415.13	1395.70	1384.48	1370.00	1378.27	1369.10
<b>Range</b>	12.07	13.10	20.13	22.50	15.69	17.58	10.05
	<b>Hydraulic Gradient</b>			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 2025 Detection Monitoring Result	Q3 2025 CUSUM Value	Q3 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			8/26/2025		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	116.8	77.1	92.8	Yes
Chloride	mg/L	NP-PL	11.0	9.07	--	Yes
Fluoride	mg/L	CUSUM	1.82	< 1.00	0.72	Yes
pH, Field	pH units	CUSUM	6.44, 7.93	7.06	7.19, 7.19	Yes
Sulfate	mg/L	CUSUM	31.5	25.9	23.9	Yes
Total Dissolved Solids	mg/L	CUSUM	584	398	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 2025 Detection Monitoring Result	Q3 2025 CUSUM Value	Q3 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			8/26/2025		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	396	270	299	Yes
Chloride	mg/L	NP-PL	113.0	103	--	Yes
Fluoride	mg/L	NP-PL	1.00	< 1.00	--	Yes
pH, Field	pH units	CUSUM	6.56, 7.68	6.97	7.11, 7.12	Yes
Sulfate	mg/L	CUSUM	1063	996	948	Yes
Total Dissolved Solids	mg/L	NP-PL	2360	1720	--	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-MW7**

		Statistical Method	Statistical Limit	Q3 2025 Detection Monitoring Result	Q3 2025 CUSUM Value	Q3 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			8/26/2025		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	NP-PL	79.0	61.3	--	Yes
Chloride	mg/L	CUSUM	20.13	17.2	15.3	Yes
Fluoride	mg/L	NP-PL	1.02	< 1.00	--	Yes
pH, Field	pH units	CUSUM	6.57, 8.22	7.22	7.40, 7.40	Yes
Sulfate	mg/L	CUSUM	64.0	30.8	41.6	Yes
Total Dissolved Solids	mg/L	CUSUM	732	460	525	Yes

## NOTES:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

**Table 12: Comparative Statistics - AP4-MW3**

		Statistical Method	Statistical Limit	Q3 2025 Detection Monitoring Result	Q3 2025 CUSUM Value	Q3 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			8/26/2025		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	105.7	72.8	85.9	Yes
Chloride	mg/L	NP-PL	12.40	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	2.14	1.47	1.22	Yes
pH, Field	pH units	CUSUM	6.66, 8.00	7.13	7.30, 7.33	Yes
Sulfate	mg/L	CUSUM	48.2	20.2	28.3	Yes
Total Dissolved Solids	mg/L	CUSUM	567	366	435	Yes

## NOTES:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

**Table 13: Comparative Statistics - AP4-MW4**

		Statistical Method	Statistical Limit	Q3 2025 Detection Monitoring Result	Q3 2025 CUSUM Value	Q3 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			8/26/2025		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	149	101	109	Yes
Chloride	mg/L	NP-PL	13.00	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	1.80	1.26	1.05	Yes
pH, Field	pH units	CUSUM	6.49, 7.99	7.02	7.20, 7.22	Yes
Sulfate	mg/L	CUSUM	175	118	98	Yes
Total Dissolved Solids	mg/L	CUSUM	737	520	509	Yes

## NOTES:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

**Table 14: Comparative Statistics - AP4-MW5**

		Statistical Method	Statistical Limit	Q3 2025 Detection Monitoring Result	Q3 2025 CUSUM Value	Q3 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			8/26/2025		
Boron, Total	mg/L	NP-PL	0.400	0.145	--	Yes
Calcium, Total *	mg/L	CUSUM	944	427	423	Yes
Chloride	mg/L	NP-PL	10	6.91	--	Yes
Fluoride	mg/L	NP-PL	1.27	< 1.00	--	Yes
pH, Field	pH units	CUSUM	6.09, 7.71	6.55	6.85, 6.90	Yes
Sulfate *	mg/L	CUSUM	2785	1805	1417	Yes
Total Dissolved Solids	mg/L	CUSUM	3597	2590	2351	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.

\* Calcium and sulfate were determined to display seasonality baseline establishment. Data will be deseasonalized during comparative statistics, which may result in slightly different statistical limits from event to event.



**Table 15: Comparative Statistics - AP4-MW6**

		Statistical Method	Statistical Limit	Q3 2025 Detection Monitoring Result	Q3 2025 CUSUM Value	Q3 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			8/26/2025		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	128.3	89.7	102.5	Yes
Chloride	mg/L	NP-PL	5.28	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	2.70	1.68	1.43	Yes
pH, Field	pH units	CUSUM	6.44, 7.95	6.97	7.16, 7.19	Yes
Sulfate *	mg/L	CUSUM	111.2	61.9	60.3	Yes
Total Dissolved Solids	mg/L	CUSUM	687	442	472	Yes

## NOTES:

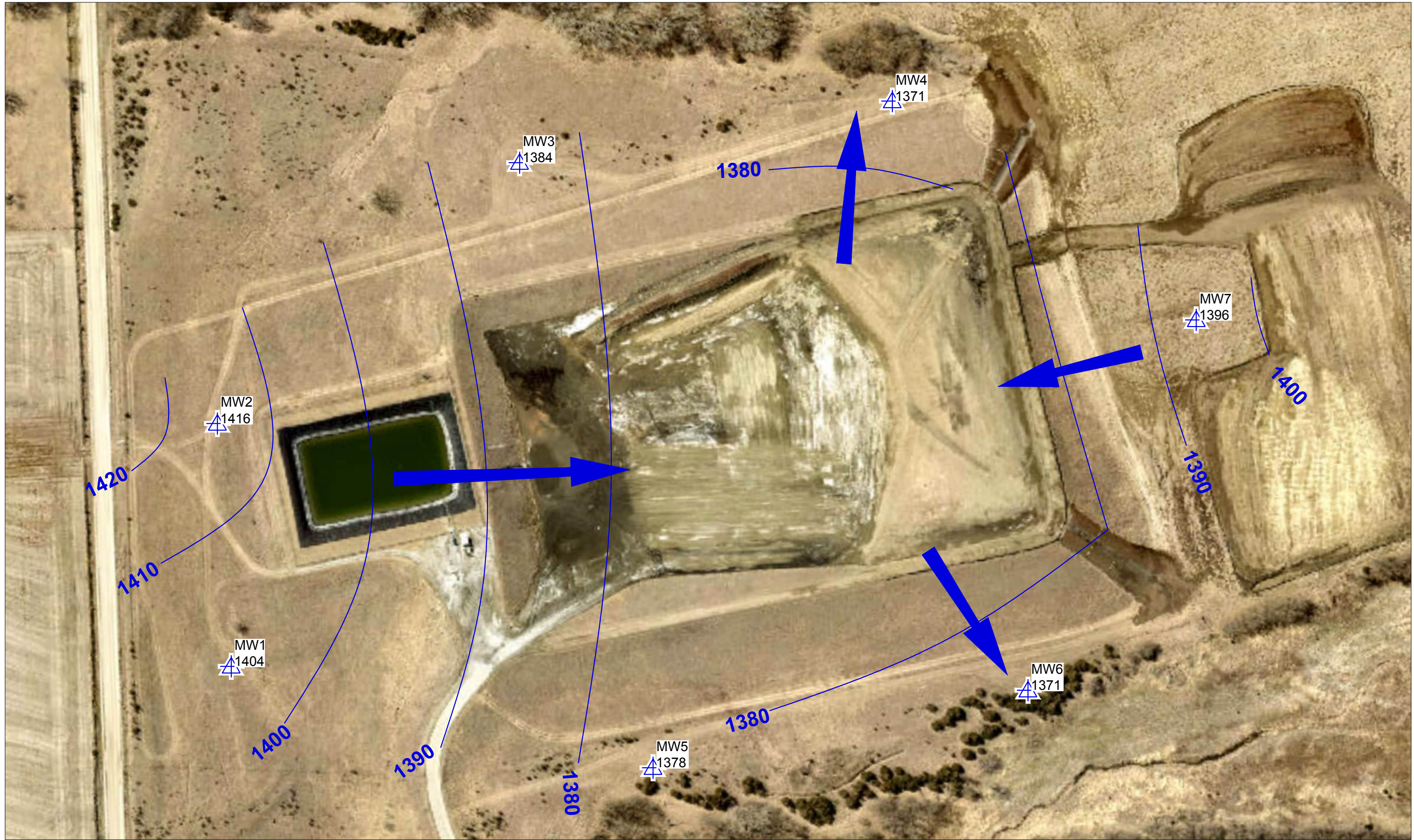
NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

\* Sulfate was determined to display seasonality baseline establishment. Data will be deseasonalized during comparative statistics, which may result in slightly different statistical limits from event to event.

## Figures





Path: \\wsp-jbwan-net\USCentralData\USL\K100\aslan\PPD\Sheldont09\_PROJECT\SNPPD\_SS\_2025\_GW\_1\_Files\Maps\_SS\_GW\_Maps\_2025\_03.dwg



**LEGEND**  
MW1 1405  
MONITORING WELL  
GROUNDWATER ELEVATION (ft AMSL)

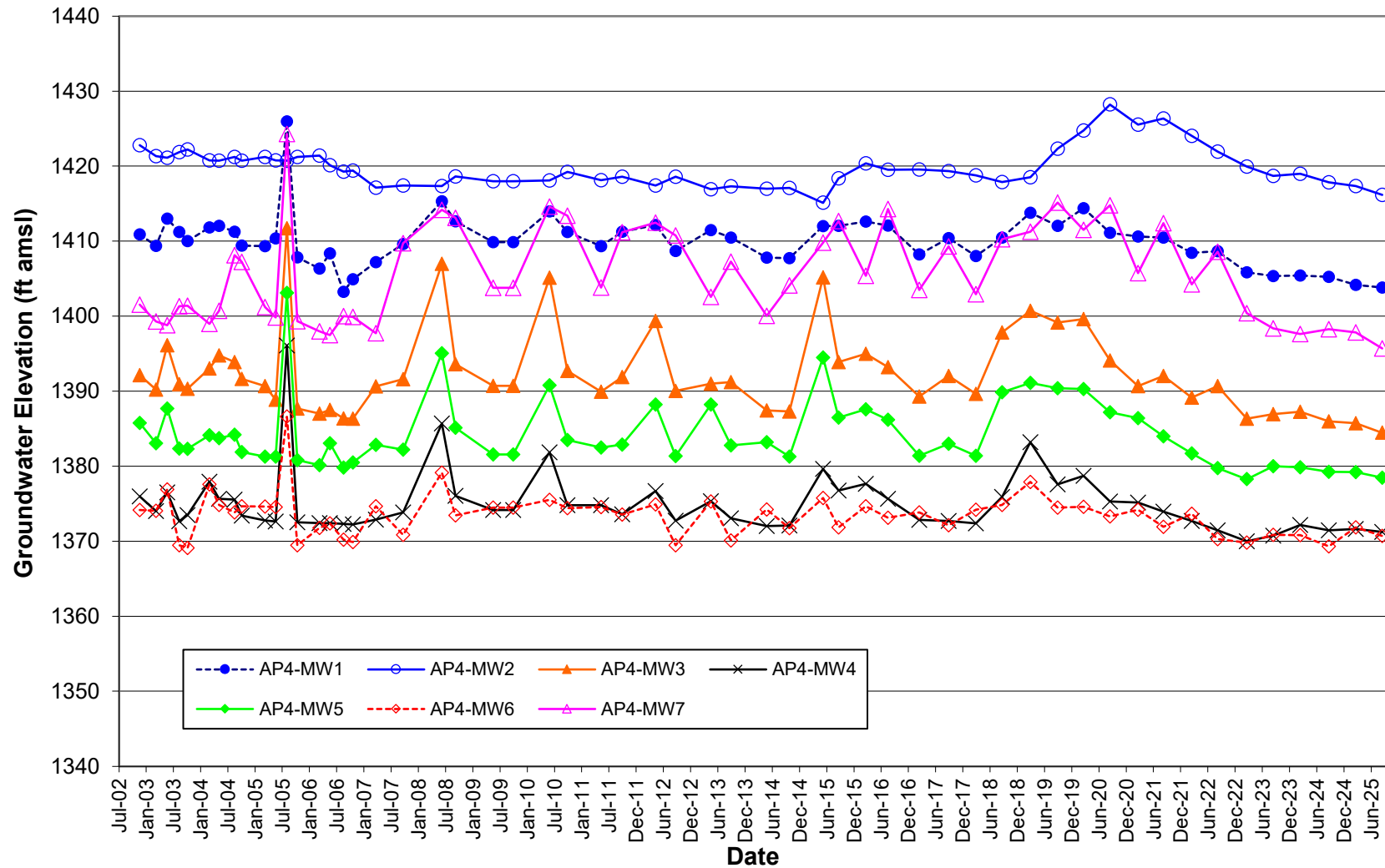


0 75 150  
1" = 150'  
FEET

**FIGURE 1**  
ASH LANDFILL NO. 4  
GROUNDWATER CONTOURS  
AUGUST 2025



**FIGURE 2**  
**Sheldon Station Ash Landfill No. 4**  
**Groundwater Elevations**



**APPENDIX A**

**Analytical Report and Chain-of-  
Custody Documentation**

# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 9/4/2025 3:53:17 PM

## JOB DESCRIPTION

Sheldon Station Ash Landfill #4 CCR New

## JOB NUMBER

310-314310-1

# Eurofins Cedar Falls

## Job Notes

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

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

## Authorization



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Authorized for release by  
Conner Calhoun, Client Service Manager  
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(319)277-2401



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## Case Narrative

Client: Nebraska Public Power District  
Project: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

**Job ID: 310-314310-1**

**Eurofins Cedar Falls**

### Job Narrative 310-314310-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

### Receipt

The samples were received on 8/28/2025 7:20 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 2.5°C.

### HPLC/IC

Method 9056A\_ORGFM\_28D: The following samples were diluted due to the nature of the sample matrix: AP-4-MW1 (310-314310-1), AP-4-MW2 (310-314310-2), AP-4-MW3 (310-314310-3), AP-4-MW4 (310-314310-4), AP-4-MW5 (310-314310-5), AP-4-MW6 (310-314310-6), AP-4-MW7 (310-314310-7) and AP-4-MW Blind Duplicate (310-314310-8). 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.

Eurofins Cedar Falls

## Sample Summary

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-314310-1	AP-4-MW1	Water	08/26/25 08:30	08/28/25 07:20	Nebraska
310-314310-2	AP-4-MW2	Water	08/26/25 09:15	08/28/25 07:20	Nebraska
310-314310-3	AP-4-MW3	Water	08/26/25 10:15	08/28/25 07:20	Nebraska
310-314310-4	AP-4-MW4	Water	08/26/25 11:17	08/28/25 07:20	Nebraska
310-314310-5	AP-4-MW5	Water	08/26/25 11:41	08/28/25 07:20	Nebraska
310-314310-6	AP-4-MW6	Water	08/26/25 13:32	08/28/25 07:20	Nebraska
310-314310-7	AP-4-MW7	Water	08/26/25 12:11	08/28/25 07:20	Nebraska
310-314310-8	AP-4-MW Blind Duplicate	Water	08/26/25 00:00	08/28/25 07:20	Nebraska

## Detection Summary

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

### Client Sample ID: AP-4-MW1

### Lab Sample ID: 310-314310-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.07		5.00		mg/L	5		9056A	Total/NA
Sulfate	25.9		5.00		mg/L	5		9056A	Total/NA
Calcium	77.1		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	398		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: AP-4-MW2

### Lab Sample ID: 310-314310-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	103		5.00		mg/L	5		9056A	Total/NA
Sulfate	996		20.0		mg/L	20		9056A	Total/NA
Calcium	270		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	1720		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: AP-4-MW3

### Lab Sample ID: 310-314310-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	20.2		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.47		1.00		mg/L	5		9056A	Total/NA
Calcium	72.8		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	366		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: AP-4-MW4

### Lab Sample ID: 310-314310-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	118		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.26		1.00		mg/L	5		9056A	Total/NA
Calcium	101		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	520		50.0		mg/L	1		SM 2540C	Total/NA
pH	7.6	HF	1.0		SU	1		SM 4500 H+ B	Total/NA

### Client Sample ID: AP-4-MW5

### Lab Sample ID: 310-314310-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.91		5.00		mg/L	5		9056A	Total/NA
Sulfate	1650		50.0		mg/L	50		9056A	Total/NA
Boron	0.145		0.100		mg/L	1		6020B	Total/NA
Calcium	427		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	2590		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: AP-4-MW6

### Lab Sample ID: 310-314310-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	61.9		5.00		mg/L	5		9056A	Total/NA
Fluoride	1.68		1.00		mg/L	5		9056A	Total/NA
Calcium	89.7		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	442		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.

Eurofins Cedar Falls

## Detection Summary

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

### Client Sample ID: AP-4-MW7

Lab Sample ID: 310-314310-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	17.2		5.00		mg/L	5		9056A	Total/NA
Sulfate	30.8		5.00		mg/L	5		9056A	Total/NA
Calcium	61.3		0.500		mg/L	1		6020B	Total/NA
Total Dissolved Solids	460		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: AP-4-MW Blind Duplicate

Lab Sample ID: 310-314310-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.12		5.00		mg/L	5		9056A	Total/NA
Sulfate	864		50.0		mg/L	50		9056A	Total/NA
Boron	0.125		0.100		mg/L	1		6020B	Total/NA
Calcium	273		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.

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# Client Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

Client Sample ID: AP-4-MW1

Lab Sample ID: 310-314310-1

Date Collected: 08/26/25 08:30

Matrix: Water

Date Received: 08/28/25 07:20

## Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.07		5.00		mg/L			09/03/25 12:31	5
Sulfate	25.9		5.00		mg/L			09/03/25 12:31	5
Fluoride	<1.00		1.00		mg/L			09/03/25 12:31	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		09/02/25 09:00	09/04/25 13:18	1
Calcium	77.1		0.500		mg/L		09/02/25 09:00	09/03/25 17:03	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	398		50.0		mg/L			08/29/25 18:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.3	HF	1.0		SU			08/28/25 10:59	1

# Client Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

Client Sample ID: AP-4-MW2

Lab Sample ID: 310-314310-2

Date Collected: 08/26/25 09:15

Matrix: Water

Date Received: 08/28/25 07:20

## Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	103		5.00		mg/L			09/03/25 13:05	5
Sulfate	996		20.0		mg/L			09/03/25 16:45	20
Fluoride	<1.00		1.00		mg/L			09/03/25 13:05	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		09/02/25 09:00	09/04/25 13:20	1
Calcium	270		0.500		mg/L		09/02/25 09:00	09/03/25 17:05	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1720		50.0		mg/L			08/29/25 18:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.3	HF	1.0		SU			08/28/25 10:54	1

# Client Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

Client Sample ID: AP-4-MW3

Lab Sample ID: 310-314310-3

Date Collected: 08/26/25 10:15

Matrix: Water

Date Received: 08/28/25 07:20

## Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			09/03/25 13:17	5
Sulfate	20.2		5.00		mg/L			09/03/25 13:17	5
Fluoride	1.47		1.00		mg/L			09/03/25 13:17	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		09/02/25 09:00	09/04/25 13:23	1
Calcium	72.8		0.500		mg/L		09/02/25 09:00	09/03/25 17:08	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	366		50.0		mg/L			08/29/25 18:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.4	HF	1.0		SU			08/28/25 10:56	1

# Client Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

Client Sample ID: AP-4-MW4

Lab Sample ID: 310-314310-4

Date Collected: 08/26/25 11:17

Matrix: Water

Date Received: 08/28/25 07:20

## Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			09/03/25 13:29	5
Sulfate	118		5.00		mg/L			09/03/25 13:29	5
Fluoride	1.26		1.00		mg/L			09/03/25 13:29	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		09/02/25 09:00	09/04/25 13:25	1
Calcium	101		0.500		mg/L		09/02/25 09:00	09/03/25 17:10	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	520		50.0		mg/L			08/29/25 18:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.6	HF	1.0		SU			08/28/25 10:55	1



# Client Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

Client Sample ID: AP-4-MW5

Lab Sample ID: 310-314310-5

Date Collected: 08/26/25 11:41

Matrix: Water

Date Received: 08/28/25 07:20

## Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.91		5.00		mg/L			09/03/25 13:40	5
Sulfate	1650		50.0		mg/L			09/03/25 16:57	50
Fluoride	<1.00		1.00		mg/L			09/03/25 13:40	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.145		0.100		mg/L		09/02/25 09:00	09/04/25 13:33	1
Calcium	427		0.500		mg/L		09/02/25 09:00	09/03/25 17:13	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	2590		250		mg/L			08/29/25 18:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	6.9	HF	1.0		SU			08/28/25 10:52	1

# Client Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

Client Sample ID: AP-4-MW6

Lab Sample ID: 310-314310-6

Date Collected: 08/26/25 13:32

Matrix: Water

Date Received: 08/28/25 07:20

## Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		5.00		mg/L			09/03/25 14:15	5
Sulfate	61.9		5.00		mg/L			09/03/25 14:15	5
Fluoride	1.68		1.00		mg/L			09/03/25 14:15	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		09/02/25 09:00	09/04/25 13:36	1
Calcium	89.7		0.500		mg/L		09/02/25 09:00	09/03/25 17:15	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	442		50.0		mg/L			08/29/25 18:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.3	HF	1.0		SU			08/28/25 10:53	1

# Client Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

Client Sample ID: AP-4-MW7

Lab Sample ID: 310-314310-7

Date Collected: 08/26/25 12:11

Matrix: Water

Date Received: 08/28/25 07:20

## Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.2		5.00		mg/L			09/03/25 14:26	5
Sulfate	30.8		5.00		mg/L			09/03/25 14:26	5
Fluoride	<1.00		1.00		mg/L			09/03/25 14:26	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		09/02/25 09:00	09/04/25 13:38	1
Calcium	61.3		0.500		mg/L		09/02/25 09:00	09/03/25 17:18	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	460		50.0		mg/L			08/29/25 18:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.5	HF	1.0		SU			08/28/25 10:57	1

# Client Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

Client Sample ID: AP-4-MW Blind Duplicate

Lab Sample ID: 310-314310-8

Date Collected: 08/26/25 00:00

Matrix: Water

Date Received: 08/28/25 07:20

## Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.12		5.00		mg/L			09/03/25 14:38	5
Sulfate	864		50.0		mg/L			09/03/25 17:09	50
Fluoride	<1.00		1.00		mg/L			09/03/25 14:38	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.125		0.100		mg/L		09/02/25 09:00	09/04/25 13:41	1
Calcium	273		0.500		mg/L		09/02/25 09:00	09/03/25 17:21	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	1740		50.0		mg/L			08/29/25 18:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.2	HF	1.0		SU			08/28/25 10:50	1

## Definitions/Glossary

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

### 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

# QC Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

## Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-465650/26

Matrix: Water

Analysis Batch: 465650

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			09/03/25 16:34	1
Sulfate	<1.00		1.00		mg/L			09/03/25 16:34	1
Fluoride	<0.200		0.200		mg/L			09/03/25 16:34	1

Lab Sample ID: LCS 310-465650/4

Matrix: Water

Analysis Batch: 465650

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	10.49		mg/L		105	90 - 110
Sulfate	10.0	10.44		mg/L		104	90 - 110
Fluoride	2.00	2.139		mg/L		107	90 - 110

Lab Sample ID: 310-314310-1 MS

Matrix: Water

Analysis Batch: 465650

Client Sample ID: AP-4-MW1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	9.07		25.0	33.19		mg/L		96	80 - 120
Sulfate	25.9		25.0	52.19		mg/L		105	80 - 120
Fluoride	<1.00		5.00	6.415		mg/L		112	80 - 120

Lab Sample ID: 310-314310-1 MSD

Matrix: Water

Analysis Batch: 465650

Client Sample ID: AP-4-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	9.07		25.0	33.10		mg/L		96	80 - 120	0	15
Sulfate	25.9		25.0	51.24		mg/L		101	80 - 120	2	15
Fluoride	<1.00		5.00	6.387		mg/L		111	80 - 120	0	15

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

Lab Sample ID: MB 310-465264/1-A

Matrix: Water

Analysis Batch: 465579

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 465264

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.500		0.500		mg/L		09/02/25 09:00	09/03/25 16:37	1

Lab Sample ID: MB 310-465264/1-A

Matrix: Water

Analysis Batch: 465684

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 465264

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<0.100		0.100		mg/L		09/02/25 09:00	09/04/25 13:05	1

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# QC Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

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

Lab Sample ID: LCS 310-465264/2-A  
Matrix: Water  
Analysis Batch: 465579

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 465264

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	2.00	1.686		mg/L		84	80 - 120

Lab Sample ID: LCS 310-465264/2-A  
Matrix: Water  
Analysis Batch: 465684

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 465264

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	0.200	0.2036		mg/L		102	80 - 120

Lab Sample ID: 310-314310-8 DU  
Matrix: Water  
Analysis Batch: 465579

Client Sample ID: AP-4-MW Blind Duplicate  
Prep Type: Total/NA  
Prep Batch: 465264

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Calcium	273		264.4		mg/L		3	20

Lab Sample ID: 310-314310-8 DU  
Matrix: Water  
Analysis Batch: 465684

Client Sample ID: AP-4-MW Blind Duplicate  
Prep Type: Total/NA  
Prep Batch: 465264

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Boron	0.125		0.1140		mg/L		9	20

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

Lab Sample ID: MB 310-465266/1  
Matrix: Water  
Analysis Batch: 465266

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			08/29/25 18:02	1

Lab Sample ID: LCS 310-465266/2  
Matrix: Water  
Analysis Batch: 465266

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	994.0		mg/L		99	89 - 110

## Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-465017/1  
Matrix: Water  
Analysis Batch: 465017

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

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QC Sample Results

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

Method: SM 4500 H+ B - pH (Continued)

Lab Sample ID: 310-314310-8 DU				Client Sample ID: AP-4-MW Blind Duplicate			
Matrix: Water				Prep Type: Total/NA			
Analysis Batch: 465017							
Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD Limit
pH	7.2	HF	7.2		SU		0.1 20



# QC Association Summary

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

## HPLC/IC

### Analysis Batch: 465650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-314310-1	AP-4-MW1	Total/NA	Water	9056A	
310-314310-2	AP-4-MW2	Total/NA	Water	9056A	
310-314310-2	AP-4-MW2	Total/NA	Water	9056A	
310-314310-3	AP-4-MW3	Total/NA	Water	9056A	
310-314310-4	AP-4-MW4	Total/NA	Water	9056A	
310-314310-5	AP-4-MW5	Total/NA	Water	9056A	
310-314310-5	AP-4-MW5	Total/NA	Water	9056A	
310-314310-6	AP-4-MW6	Total/NA	Water	9056A	
310-314310-7	AP-4-MW7	Total/NA	Water	9056A	
310-314310-8	AP-4-MW Blind Duplicate	Total/NA	Water	9056A	
310-314310-8	AP-4-MW Blind Duplicate	Total/NA	Water	9056A	
MB 310-465650/26	Method Blank	Total/NA	Water	9056A	
LCS 310-465650/4	Lab Control Sample	Total/NA	Water	9056A	
310-314310-1 MS	AP-4-MW1	Total/NA	Water	9056A	
310-314310-1 MSD	AP-4-MW1	Total/NA	Water	9056A	

## Metals

### Prep Batch: 465264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-314310-1	AP-4-MW1	Total/NA	Water	3005A	
310-314310-2	AP-4-MW2	Total/NA	Water	3005A	
310-314310-3	AP-4-MW3	Total/NA	Water	3005A	
310-314310-4	AP-4-MW4	Total/NA	Water	3005A	
310-314310-5	AP-4-MW5	Total/NA	Water	3005A	
310-314310-6	AP-4-MW6	Total/NA	Water	3005A	
310-314310-7	AP-4-MW7	Total/NA	Water	3005A	
310-314310-8	AP-4-MW Blind Duplicate	Total/NA	Water	3005A	
MB 310-465264/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-465264/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-314310-8 DU	AP-4-MW Blind Duplicate	Total/NA	Water	3005A	

### Analysis Batch: 465579

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-314310-1	AP-4-MW1	Total/NA	Water	6020B	465264
310-314310-2	AP-4-MW2	Total/NA	Water	6020B	465264
310-314310-3	AP-4-MW3	Total/NA	Water	6020B	465264
310-314310-4	AP-4-MW4	Total/NA	Water	6020B	465264
310-314310-5	AP-4-MW5	Total/NA	Water	6020B	465264
310-314310-6	AP-4-MW6	Total/NA	Water	6020B	465264
310-314310-7	AP-4-MW7	Total/NA	Water	6020B	465264
310-314310-8	AP-4-MW Blind Duplicate	Total/NA	Water	6020B	465264
MB 310-465264/1-A	Method Blank	Total/NA	Water	6020B	465264
LCS 310-465264/2-A	Lab Control Sample	Total/NA	Water	6020B	465264
310-314310-8 DU	AP-4-MW Blind Duplicate	Total/NA	Water	6020B	465264

### Analysis Batch: 465684

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-314310-1	AP-4-MW1	Total/NA	Water	6020B	465264
310-314310-2	AP-4-MW2	Total/NA	Water	6020B	465264
310-314310-3	AP-4-MW3	Total/NA	Water	6020B	465264

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## QC Association Summary

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

### Metals (Continued)

#### Analysis Batch: 465684 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-314310-4	AP-4-MW4	Total/NA	Water	6020B	465264
310-314310-5	AP-4-MW5	Total/NA	Water	6020B	465264
310-314310-6	AP-4-MW6	Total/NA	Water	6020B	465264
310-314310-7	AP-4-MW7	Total/NA	Water	6020B	465264
310-314310-8	AP-4-MW Blind Duplicate	Total/NA	Water	6020B	465264
MB 310-465264/1-A	Method Blank	Total/NA	Water	6020B	465264
LCS 310-465264/2-A	Lab Control Sample	Total/NA	Water	6020B	465264
310-314310-8 DU	AP-4-MW Blind Duplicate	Total/NA	Water	6020B	465264

### General Chemistry

#### Analysis Batch: 465017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-314310-1	AP-4-MW1	Total/NA	Water	SM 4500 H+ B	
310-314310-2	AP-4-MW2	Total/NA	Water	SM 4500 H+ B	
310-314310-3	AP-4-MW3	Total/NA	Water	SM 4500 H+ B	
310-314310-4	AP-4-MW4	Total/NA	Water	SM 4500 H+ B	
310-314310-5	AP-4-MW5	Total/NA	Water	SM 4500 H+ B	
310-314310-6	AP-4-MW6	Total/NA	Water	SM 4500 H+ B	
310-314310-7	AP-4-MW7	Total/NA	Water	SM 4500 H+ B	
310-314310-8	AP-4-MW Blind Duplicate	Total/NA	Water	SM 4500 H+ B	
LCS 310-465017/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-314310-8 DU	AP-4-MW Blind Duplicate	Total/NA	Water	SM 4500 H+ B	

#### Analysis Batch: 465266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-314310-1	AP-4-MW1	Total/NA	Water	SM 2540C	
310-314310-2	AP-4-MW2	Total/NA	Water	SM 2540C	
310-314310-3	AP-4-MW3	Total/NA	Water	SM 2540C	
310-314310-4	AP-4-MW4	Total/NA	Water	SM 2540C	
310-314310-5	AP-4-MW5	Total/NA	Water	SM 2540C	
310-314310-6	AP-4-MW6	Total/NA	Water	SM 2540C	
310-314310-7	AP-4-MW7	Total/NA	Water	SM 2540C	
310-314310-8	AP-4-MW Blind Duplicate	Total/NA	Water	SM 2540C	
MB 310-465266/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-465266/2	Lab Control Sample	Total/NA	Water	SM 2540C	

# Lab Chronicle

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

**Client Sample ID: AP-4-MW1**

**Lab Sample ID: 310-314310-1**

**Date Collected: 08/26/25 08:30**

**Matrix: Water**

**Date Received: 08/28/25 07:20**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	465650	QTZ5	EET CF	09/03/25 12:31
Total/NA	Prep	3005A			465264	QTZ5	EET CF	09/02/25 09:00
Total/NA	Analysis	6020B		1	465579	NFT2	EET CF	09/03/25 17:03
Total/NA	Prep	3005A			465264	QTZ5	EET CF	09/02/25 09:00
Total/NA	Analysis	6020B		1	465684	NFT2	EET CF	09/04/25 13:18
Total/NA	Analysis	SM 2540C		1	465266	ENB7	EET CF	08/29/25 18:02
Total/NA	Analysis	SM 4500 H+ B		1	465017	W9YR	EET CF	08/28/25 10:59

**Client Sample ID: AP-4-MW2**

**Lab Sample ID: 310-314310-2**

**Date Collected: 08/26/25 09:15**

**Matrix: Water**

**Date Received: 08/28/25 07:20**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	465650	QTZ5	EET CF	09/03/25 13:05
Total/NA	Analysis	9056A		20	465650	QTZ5	EET CF	09/03/25 16:45
Total/NA	Prep	3005A			465264	QTZ5	EET CF	09/02/25 09:00
Total/NA	Analysis	6020B		1	465579	NFT2	EET CF	09/03/25 17:05
Total/NA	Prep	3005A			465264	QTZ5	EET CF	09/02/25 09:00
Total/NA	Analysis	6020B		1	465684	NFT2	EET CF	09/04/25 13:20
Total/NA	Analysis	SM 2540C		1	465266	ENB7	EET CF	08/29/25 18:02
Total/NA	Analysis	SM 4500 H+ B		1	465017	W9YR	EET CF	08/28/25 10:54

**Client Sample ID: AP-4-MW3**

**Lab Sample ID: 310-314310-3**

**Date Collected: 08/26/25 10:15**

**Matrix: Water**

**Date Received: 08/28/25 07:20**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	465650	QTZ5	EET CF	09/03/25 13:17
Total/NA	Prep	3005A			465264	QTZ5	EET CF	09/02/25 09:00
Total/NA	Analysis	6020B		1	465579	NFT2	EET CF	09/03/25 17:08
Total/NA	Prep	3005A			465264	QTZ5	EET CF	09/02/25 09:00
Total/NA	Analysis	6020B		1	465684	NFT2	EET CF	09/04/25 13:23
Total/NA	Analysis	SM 2540C		1	465266	ENB7	EET CF	08/29/25 18:02
Total/NA	Analysis	SM 4500 H+ B		1	465017	W9YR	EET CF	08/28/25 10:56

**Client Sample ID: AP-4-MW4**

**Lab Sample ID: 310-314310-4**

**Date Collected: 08/26/25 11:17**

**Matrix: Water**

**Date Received: 08/28/25 07:20**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	465650	QTZ5	EET CF	09/03/25 13:29
Total/NA	Prep	3005A			465264	QTZ5	EET CF	09/02/25 09:00
Total/NA	Analysis	6020B		1	465579	NFT2	EET CF	09/03/25 17:10

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## Lab Chronicle

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

**Client Sample ID: AP-4-MW4**

**Lab Sample ID: 310-314310-4**

Date Collected: 08/26/25 11:17

Matrix: Water

Date Received: 08/28/25 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			465264	QTZ5	EET CF	09/02/25 09:00
Total/NA	Analysis	6020B		1	465684	NFT2	EET CF	09/04/25 13:25
Total/NA	Analysis	SM 2540C		1	465266	ENB7	EET CF	08/29/25 18:02
Total/NA	Analysis	SM 4500 H+ B		1	465017	W9YR	EET CF	08/28/25 10:55

**Client Sample ID: AP-4-MW5**

**Lab Sample ID: 310-314310-5**

Date Collected: 08/26/25 11:41

Matrix: Water

Date Received: 08/28/25 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	465650	QTZ5	EET CF	09/03/25 13:40
Total/NA	Analysis	9056A		50	465650	QTZ5	EET CF	09/03/25 16:57
Total/NA	Prep	3005A			465264	QTZ5	EET CF	09/02/25 09:00
Total/NA	Analysis	6020B		1	465579	NFT2	EET CF	09/03/25 17:13
Total/NA	Prep	3005A			465264	QTZ5	EET CF	09/02/25 09:00
Total/NA	Analysis	6020B		1	465684	NFT2	EET CF	09/04/25 13:33
Total/NA	Analysis	SM 2540C		1	465266	ENB7	EET CF	08/29/25 18:02
Total/NA	Analysis	SM 4500 H+ B		1	465017	W9YR	EET CF	08/28/25 10:52

**Client Sample ID: AP-4-MW6**

**Lab Sample ID: 310-314310-6**

Date Collected: 08/26/25 13:32

Matrix: Water

Date Received: 08/28/25 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	465650	QTZ5	EET CF	09/03/25 14:15
Total/NA	Prep	3005A			465264	QTZ5	EET CF	09/02/25 09:00
Total/NA	Analysis	6020B		1	465579	NFT2	EET CF	09/03/25 17:15
Total/NA	Prep	3005A			465264	QTZ5	EET CF	09/02/25 09:00
Total/NA	Analysis	6020B		1	465684	NFT2	EET CF	09/04/25 13:36
Total/NA	Analysis	SM 2540C		1	465266	ENB7	EET CF	08/29/25 18:02
Total/NA	Analysis	SM 4500 H+ B		1	465017	W9YR	EET CF	08/28/25 10:53

**Client Sample ID: AP-4-MW7**

**Lab Sample ID: 310-314310-7**

Date Collected: 08/26/25 12:11

Matrix: Water

Date Received: 08/28/25 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	465650	QTZ5	EET CF	09/03/25 14:26
Total/NA	Prep	3005A			465264	QTZ5	EET CF	09/02/25 09:00
Total/NA	Analysis	6020B		1	465579	NFT2	EET CF	09/03/25 17:18
Total/NA	Prep	3005A			465264	QTZ5	EET CF	09/02/25 09:00
Total/NA	Analysis	6020B		1	465684	NFT2	EET CF	09/04/25 13:38
Total/NA	Analysis	SM 2540C		1	465266	ENB7	EET CF	08/29/25 18:02
Total/NA	Analysis	SM 4500 H+ B		1	465017	W9YR	EET CF	08/28/25 10:57

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Lab Chronicle

Client: Nebraska Public Power District

Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

Client Sample ID: AP-4-MW Blind Duplicate

Lab Sample ID: 310-314310-8

Date Collected: 08/26/25 00:00

Matrix: Water

Date Received: 08/28/25 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	465650	QTZ5	EET CF	09/03/25 14:38
Total/NA	Analysis	9056A		50	465650	QTZ5	EET CF	09/03/25 17:09
Total/NA	Prep	3005A			465264	QTZ5	EET CF	09/02/25 09:00
Total/NA	Analysis	6020B		1	465579	NFT2	EET CF	09/03/25 17:21
Total/NA	Prep	3005A			465264	QTZ5	EET CF	09/02/25 09:00
Total/NA	Analysis	6020B		1	465684	NFT2	EET CF	09/04/25 13:41
Total/NA	Analysis	SM 2540C		1	465266	ENB7	EET CF	08/29/25 18:02
Total/NA	Analysis	SM 4500 H+ B		1	465017	W9YR	EET CF	08/28/25 10:50

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  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	IA100001	09-29-25

1
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## Method Summary

Client: Nebraska Public Power District  
Project/Site: Sheldon Station Ash Landfill #4 CCR New

Job ID: 310-314310-1

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



### Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>			
Client <u>Neb Public Power</u>			
City/State:	CITY	STATE	Project
		<u>NE</u>	
<b>Receipt Information</b>			
Date/Time Received:	DATE	TIME	Received By.
	<u>8/28/25</u>	<u>0720</u>	<u>n</u>
Delivery Type: <input checked="" type="checkbox"/> UPS <u>daily</u> <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee			
<input type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other. _____			
<b>Condition of Cooler/Containers</b>			
Sample(s) received in Cooler?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID
Multiple Coolers?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____
Cooler Custody Seals Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
<b>Temperature Record</b>			
Coolant. <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other. _____ <input type="checkbox"/> NONE			
Thermometer ID		Correction Factor (°C):	
<u>R</u>		<u>+0.0</u>	
• <b>Temp Blank Temperature</b> -- If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C)		Corrected Temp (°C)	
<u>2.5</u>		<u>2.5</u>	
• <b>Sample Container Temperature</b>			
Container(s) used.	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C).			
Corrected Temp (°C).			
<b>Exceptions Noted</b>			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> 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?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
<b>Additional Comments</b>			



## Chain of Custody Record

Client Information		Sampler		Lab PM:		Carrier Tracking No(s)		COC No:			
Client Contact:		Phone:		E-Mail:		State of Origin:		Page:			
Company:		PWSID:						Job #:			
Address:		Due Date Requested:		Analysis Requested				Preservation Codes:			
City:		TAT Requested (days):						N - None			
State, Zip:		Compliance Project: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						D - HNO3			
Phone:		PO #:									
Email:		WO #:									
Project Name:		Project #:									
Sheldon Station Ash Landfill #4 CCR New		31006953									
Site:		SSOW#:									
NPPD Ash Landfill #4											
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air, DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C Calcd, SM4500.H+	9056A ORGF.M.28D - (MOD) Chloride and Sulfate	6020B - (MOD) Boron and Calcium	Total Number of containers	Special Instructions/Note:
AP-4-MW1	8-26-25	0830	G	Water	N	N				3	
AP-4-MW2	8-26-25	0915	G	Water	N	N				3	
AP-4-MW3	8-26-25	1015	G	Water	N	N				3	
AP-4-MW4	8-26-25	1117	G	Water	N	N				3	
AP-4-MW5	8-26-25	1416	G	Water	N	N				3	
AP-4-MW6	8-26-25	1332	G	Water	N	N				3	
AP-4-MW7	8-26-25	1211	G	Water	N	N				3	
AP-4-MW Blind Duplicate	8-26-25	N/A	G	Water	N	N				3	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological											
Deliverable Requested I II, III IV Other (specify)											
Empty Kit Relinquished by											
Relinquished by											
Relinquished by											
Relinquished by											
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No											
Custody Seal No											

Special Instructions/QC Requirements.		Method of Shipment:	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Received by	
		Date/Time:	
		Company	
		Received by	
		Date/Time:	
		Company	
		Received by	
		Date/Time:	
		Company	
Cooler Temperature(s) °C and Other Remarks.			

## Login Sample Receipt Checklist

Client: Nebraska Public Power District

Job Number: 310-314310-1

SDG Number:

**Login Number: 314310**

**List Number: 1**

**Creator: Homolar, Dana J**

**List Source: Eurofins Cedar Falls**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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 $<6\text{mm}$ (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) <u>NPPD SS Ash Landfill #4</u>	Depth to <u>10.9</u> / <u>31.9</u> of screen
Well Number <u>AP4-MW1</u> Date <u>8-26-2025</u>	Top Bottom
Field Personnel <u>Todd A. Chien</u> <u>Patrice Novak</u>	Pump Intake at (ft. below MP) <u>29.9</u>
Sampling Organization <u>NPPD</u>	Purging Device; (pump type) <u>MicroPurge</u>
Identify MP <u>Top of Casing</u>	Total Volume Purged <u>3600 mL</u>

Well Conditions/ Field Observations:

58°, Clear, 6 mph from the South

[illegible]

## WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name)	NPPD SS Ash Landfill #4	Depth to	10.9	/	314	of screen
Well Number	AP4-MW2	Date	8-26-2025			
Field Personnel	Teod A. Chinn Patricia Novak	Top			Bottom	
Sampling Organization	NPPD	Pump Intake at (ft. below MP)	29.9			
Identify MP	Top of Casing	Purging Device; (pump type)	Micro Purge			
		Total Volume Purged	3300 ml			

Well Conditions/ Field Observations:

61°, partly Cloudy, 5 mph from the South

[illegible]



## Page 1 of 1

Well Conditions/ Field Observations: 63°, partly cloudy. Wind out of South at 5 mph

[illegible]

## Page 1 of 1

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 4600ml

66°F, Partly Cloudy, Wind from the SW at 16 mph

[illegible]

## Page 1 of 1

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 5000ml

7<sup>00</sup>: mostly cloudy, Wind from the SW at 7 mph

[illegible]



## Page 1 of 1

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 5800 mL

73° partly cloudy, Wind from the SW at 5 mph

[illegible]

## WELL PURGING-FIELD QUALITY MEASUREMENTS FORM

Location (Site/Facility Name) NPPD SS Ash Landfill #4 Depth to 10.5 / 35.5 of screen  
Well Number AP4-MW7 Date 8-26-2025 Top Bottom  
Field Personnel Todd A. Chinn Patricia A. Norak Pump Intake at (ft. below MP) 33.5  
Sampling Organization NPPD Purging Device; (pump type) MicroPurge  
Identify MP Top of casing Total Volume Purged 4000 mL

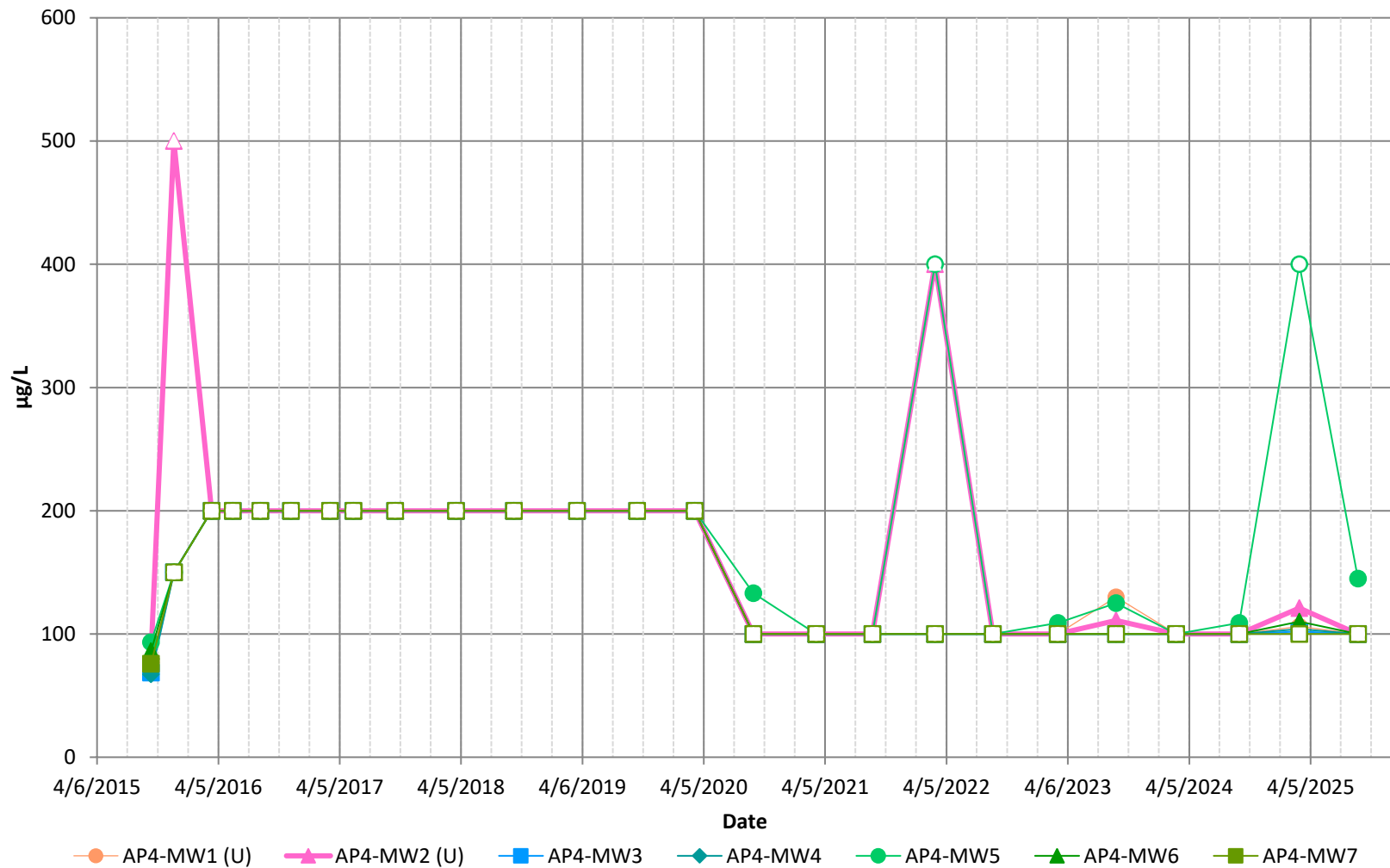
Well Conditions/ Field Observations:

70°, mostly clear, Wind from the South at 6 mph

[illegible]

**APPENDIX C**

# Time Series Data

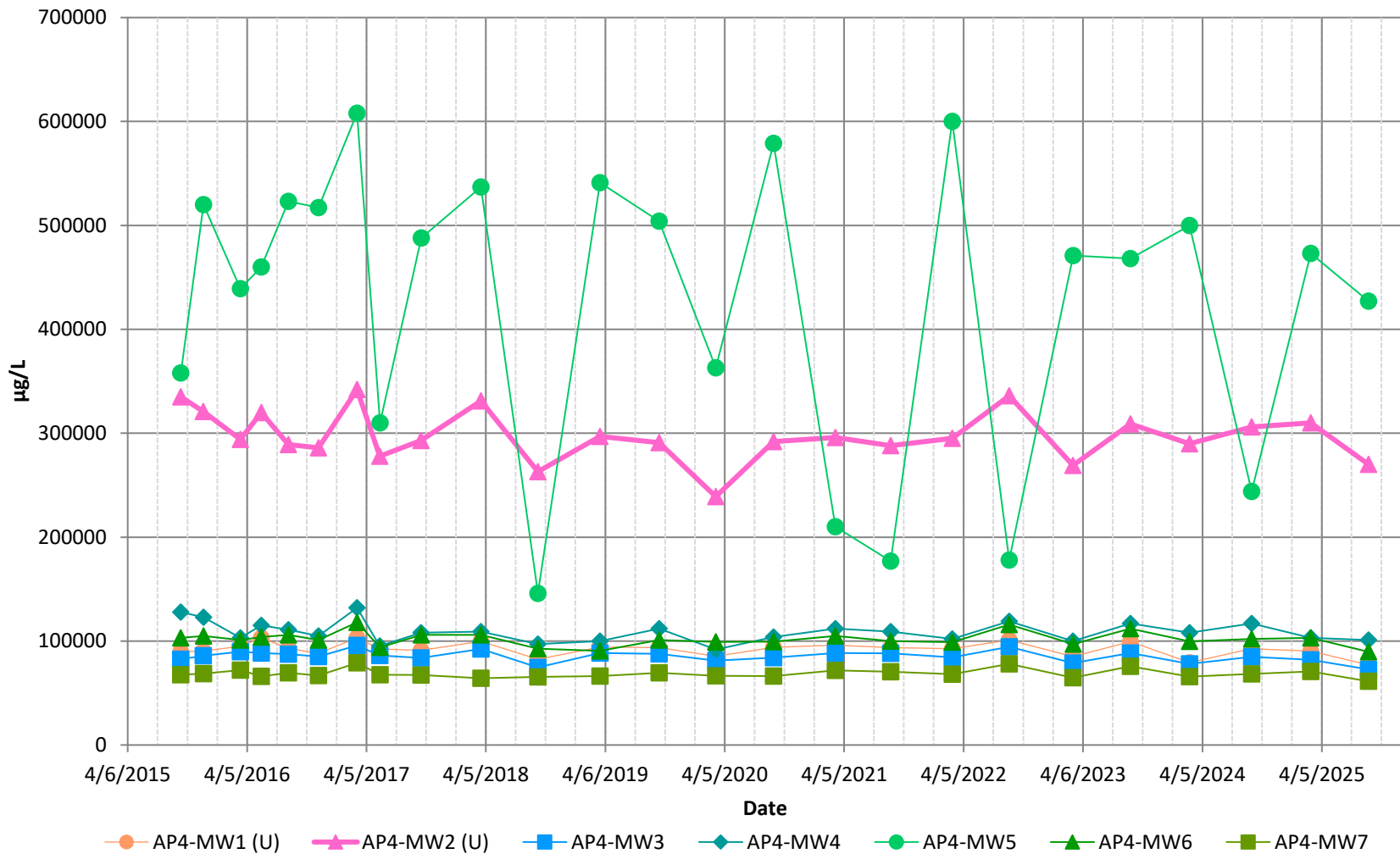


Non-detects plotted at the practical quantitation limit with an open symbol

**Figure C-1**  
**Boron**

Nebraska Public Power District  
Sheldon Station

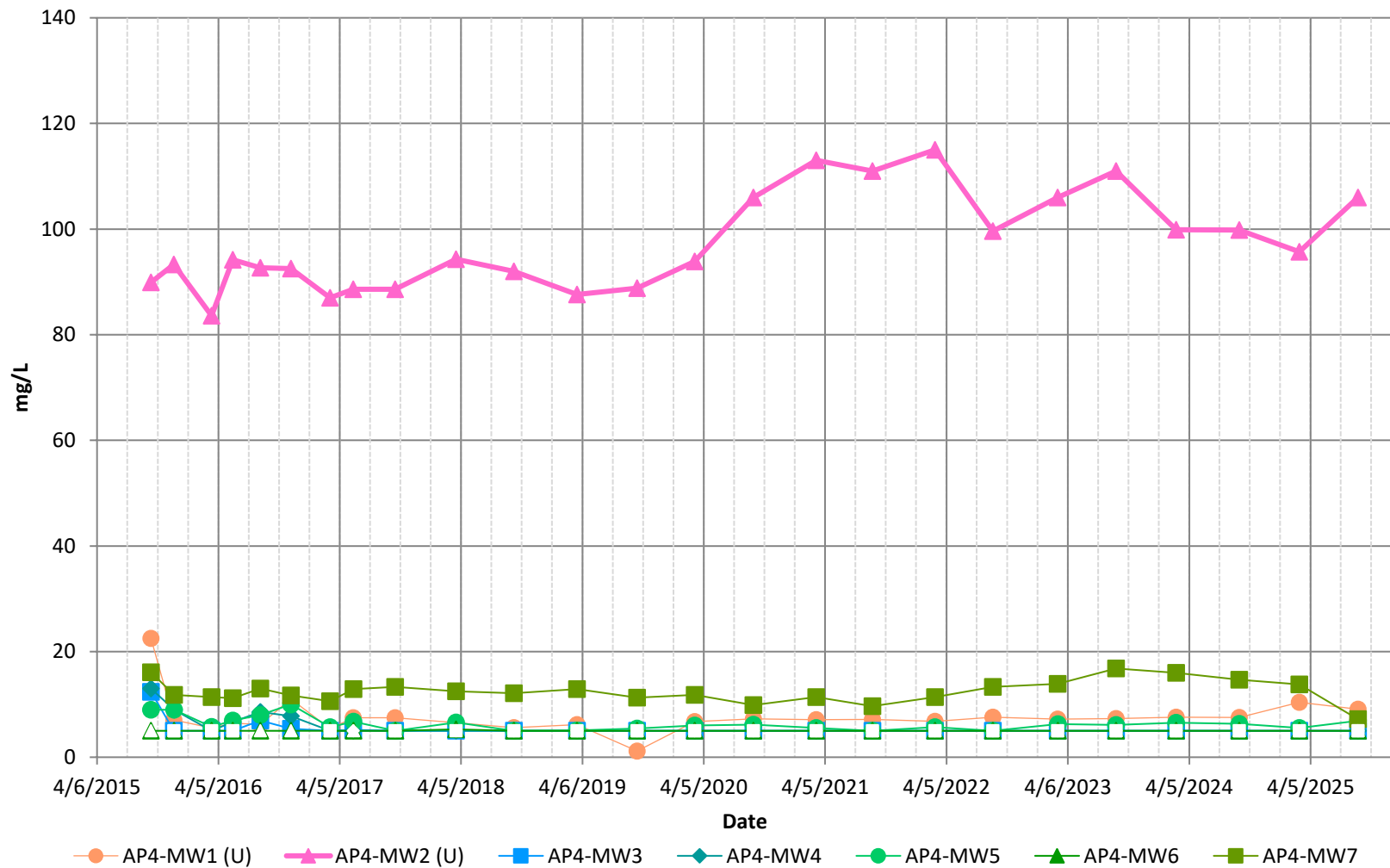
**WSP USA Inc.**



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

**Figure C-2**  
**Calcium**

Nebraska Public Power District  
Sheldon Station



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

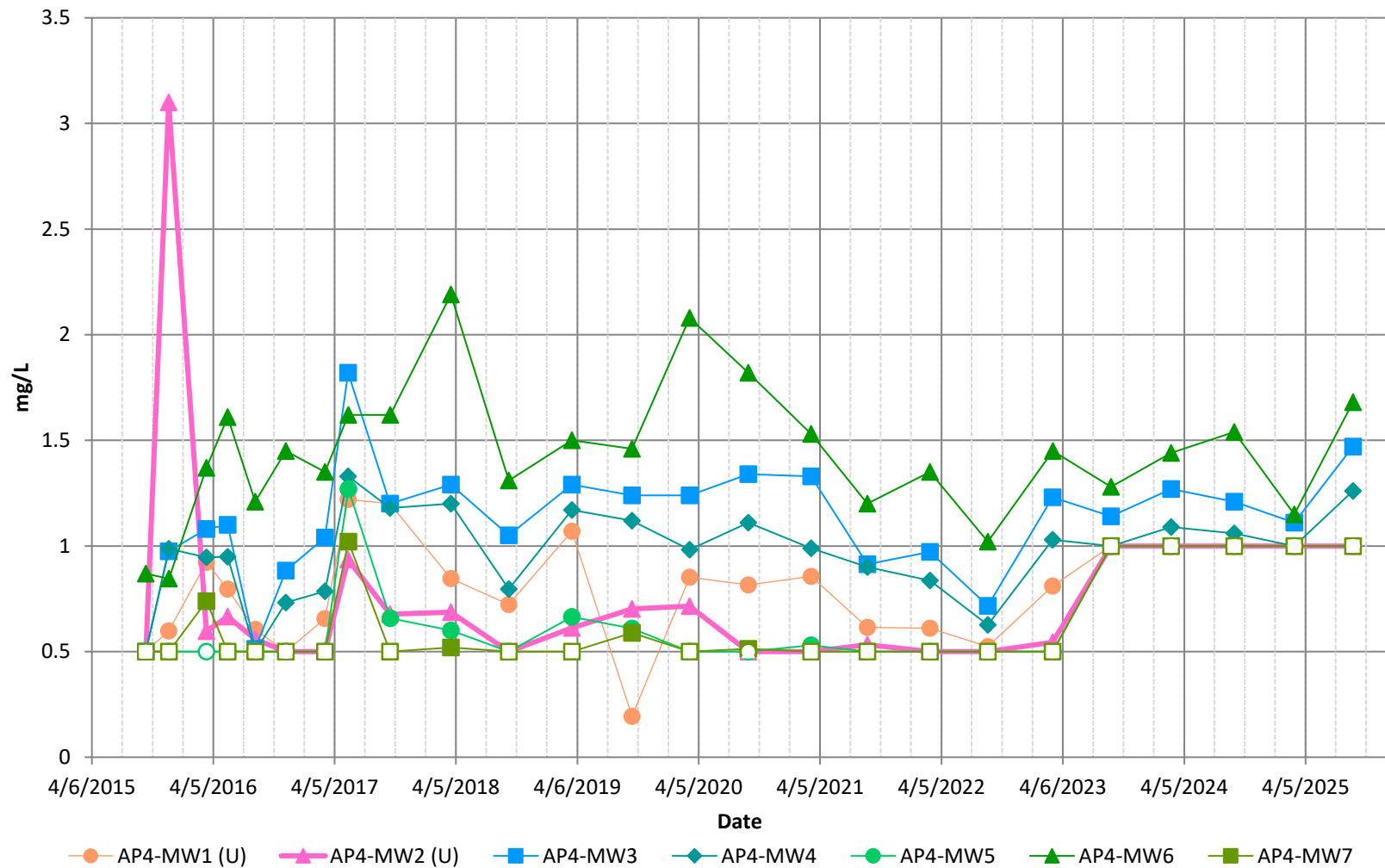
**Figure C-3**  
**Chloride**

Nebraska Public Power District  
Sheldon Station

Denver, Colorado, USA  
US0044982.5796

**WSP USA Inc.**





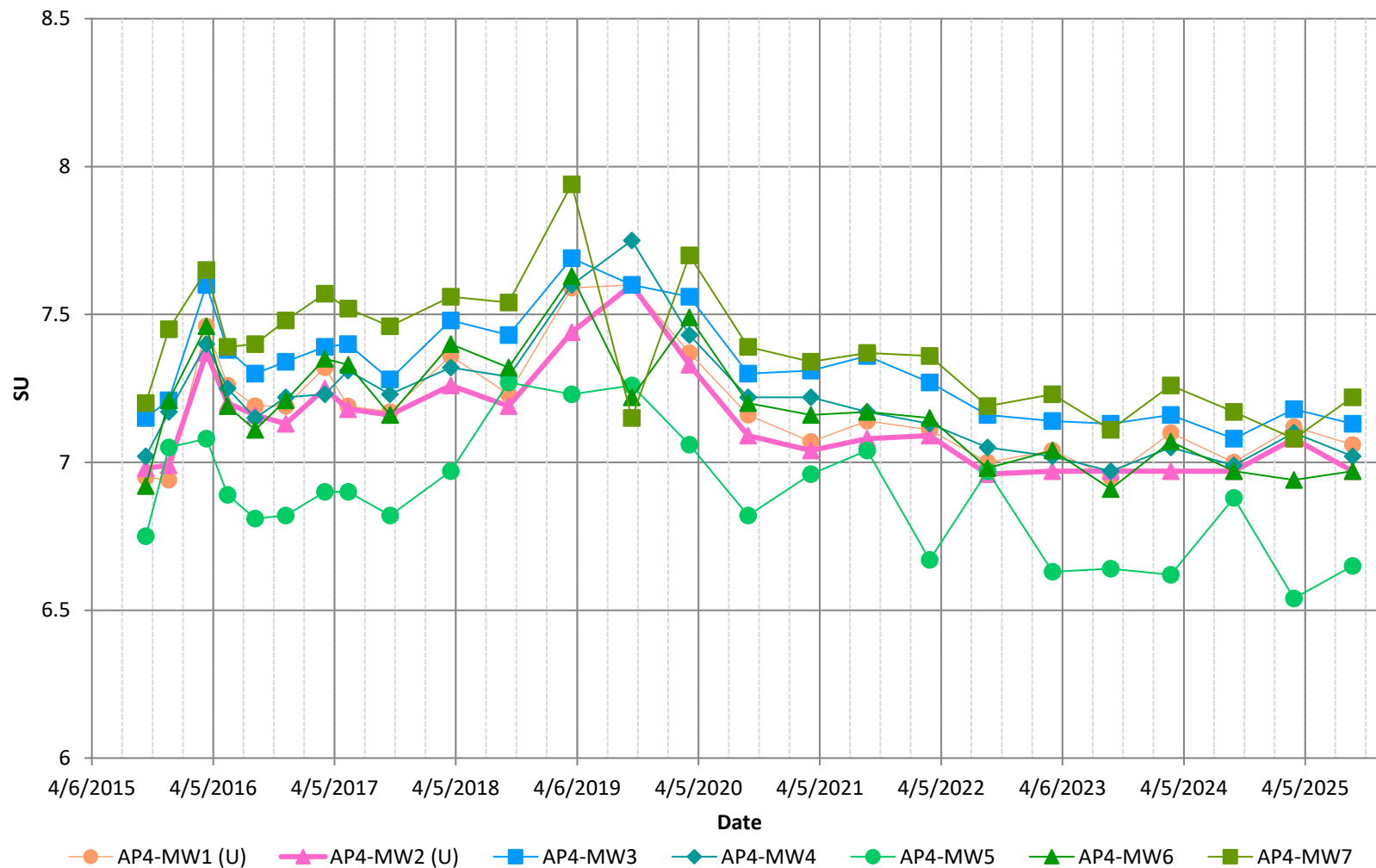
Non-detects plotted at the practical quantitation limit with an open symbol

**Figure C-4**  
**Fluoride**

Nebraska Public Power District  
Sheldon Station

Denver, Colorado, USA  
US0044982.5796

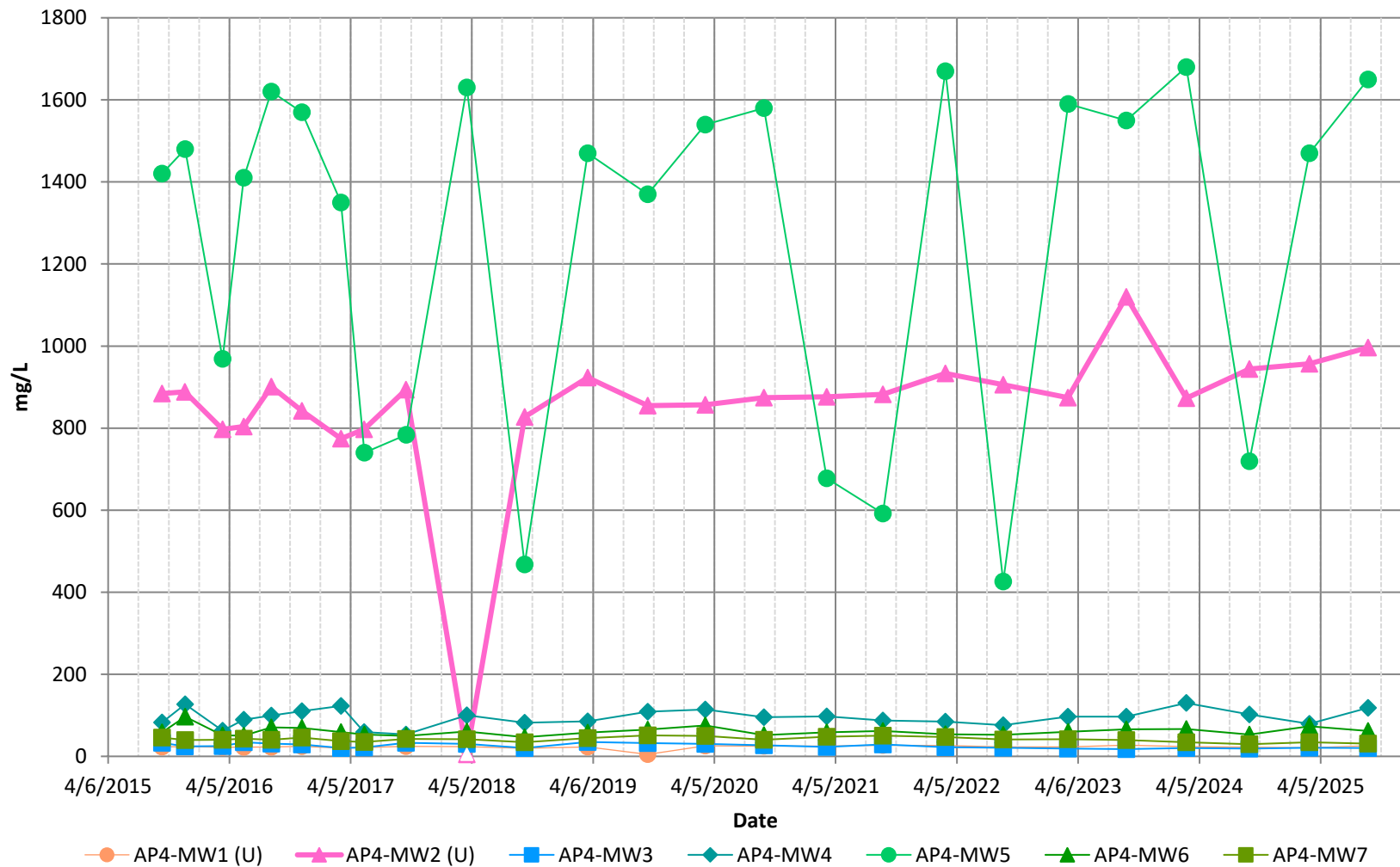
**WSP USA Inc.**



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

**Figure C-5**  
**pH, Field-Measured**  
 Nebraska Public Power District  
 Sheldon Station



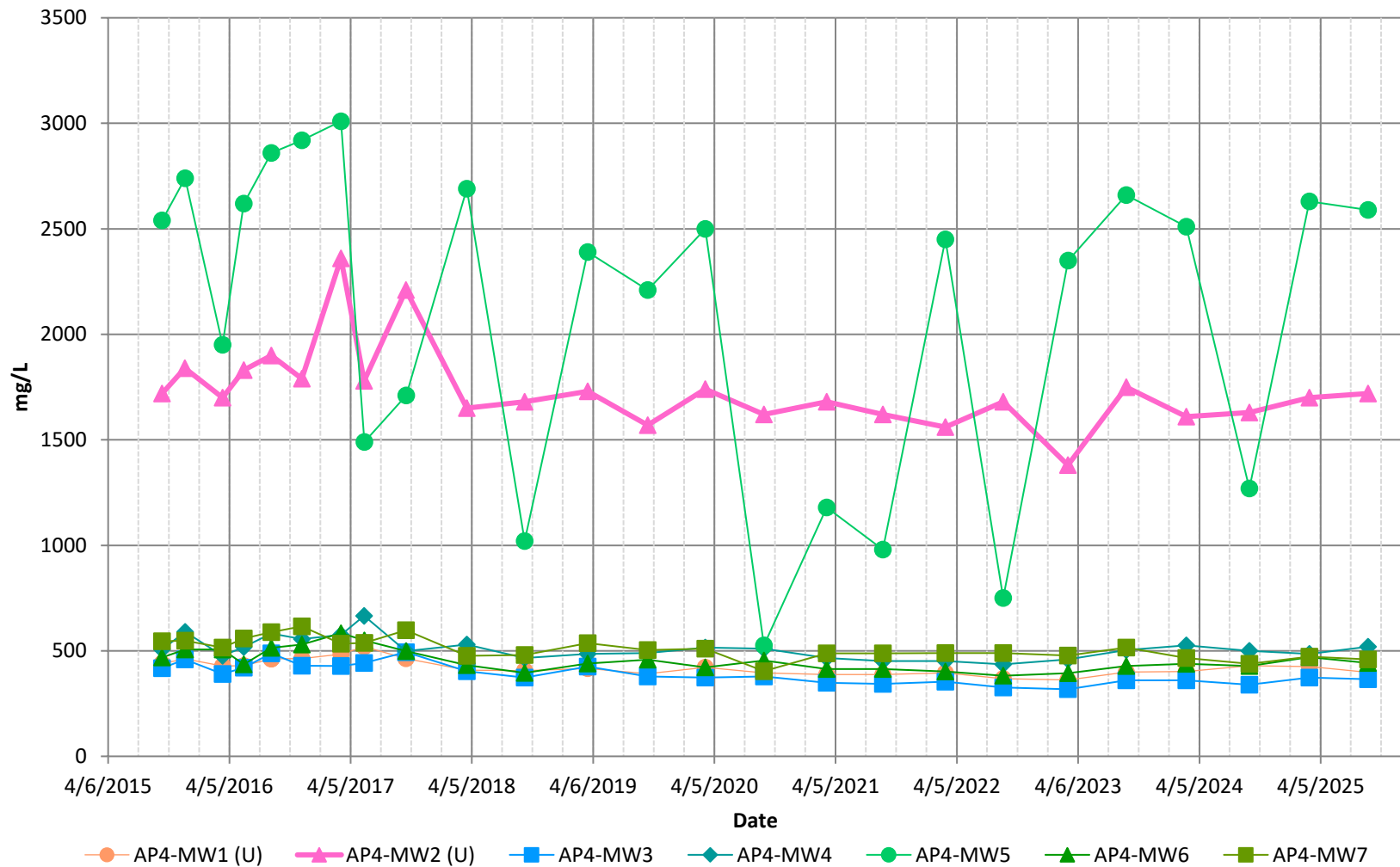


Non-detects plotted at the practical quantitation limit with an open symbol

**Figure C-6**  
**Sulfate**

Nebraska Public Power District  
Sheldon Station

**WSP USA Inc.**



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

**Figure C-7**  
**Total Dissolved Solids**  
Nebraska Public Power District  
Sheldon Station

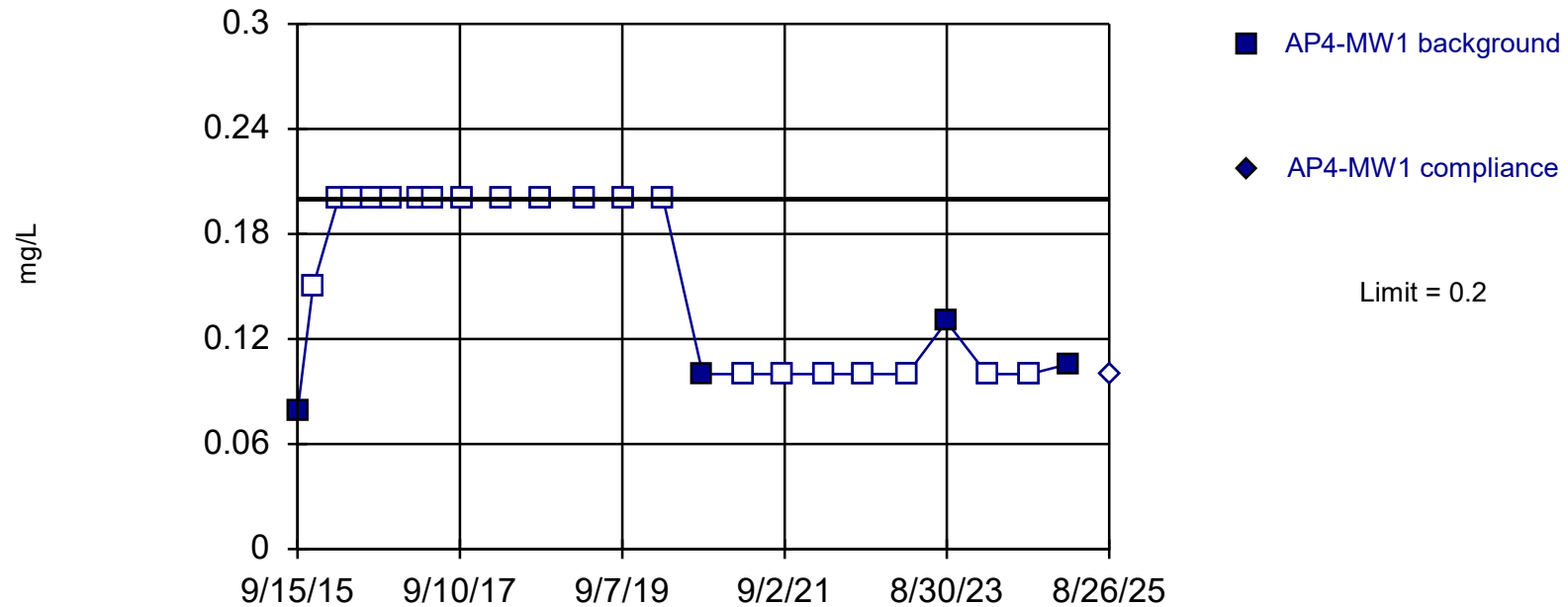
**APPENDIX D**

# Comparative Statistical Analysis

Within Limit

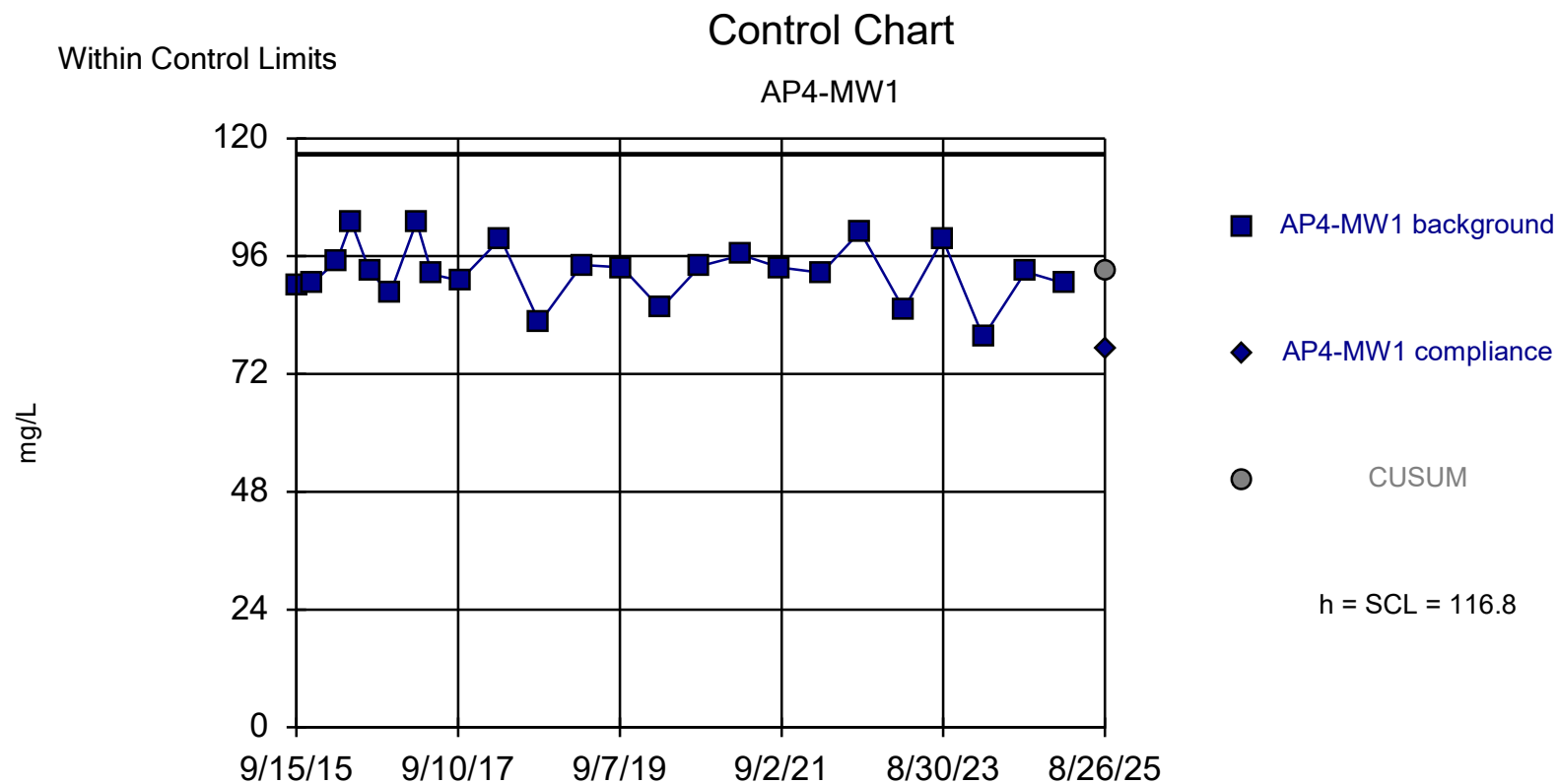
## Prediction Limit

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 24 background values. 83.33% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 9/15/2025 1:32 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025



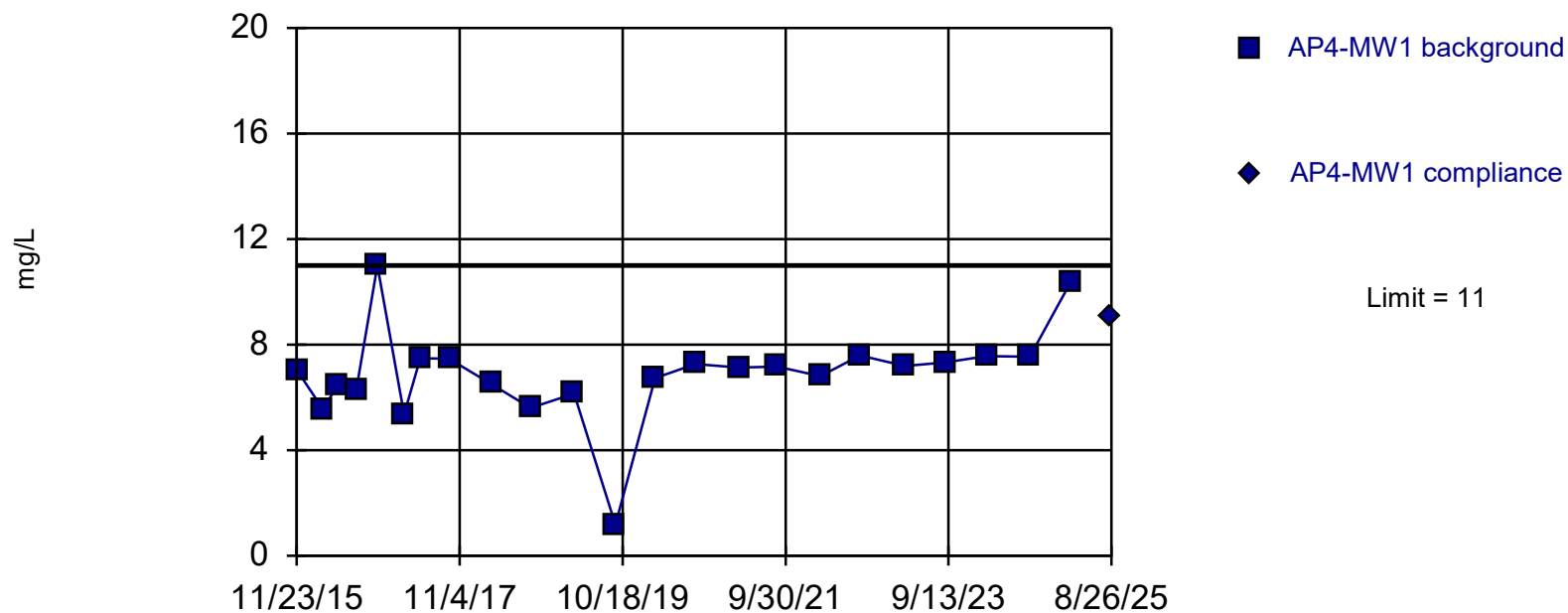
Background Data Summary: Mean=92.75, Std. Dev.=6.008, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9661, critical = 0.916. Report alpha = 0.00032. Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

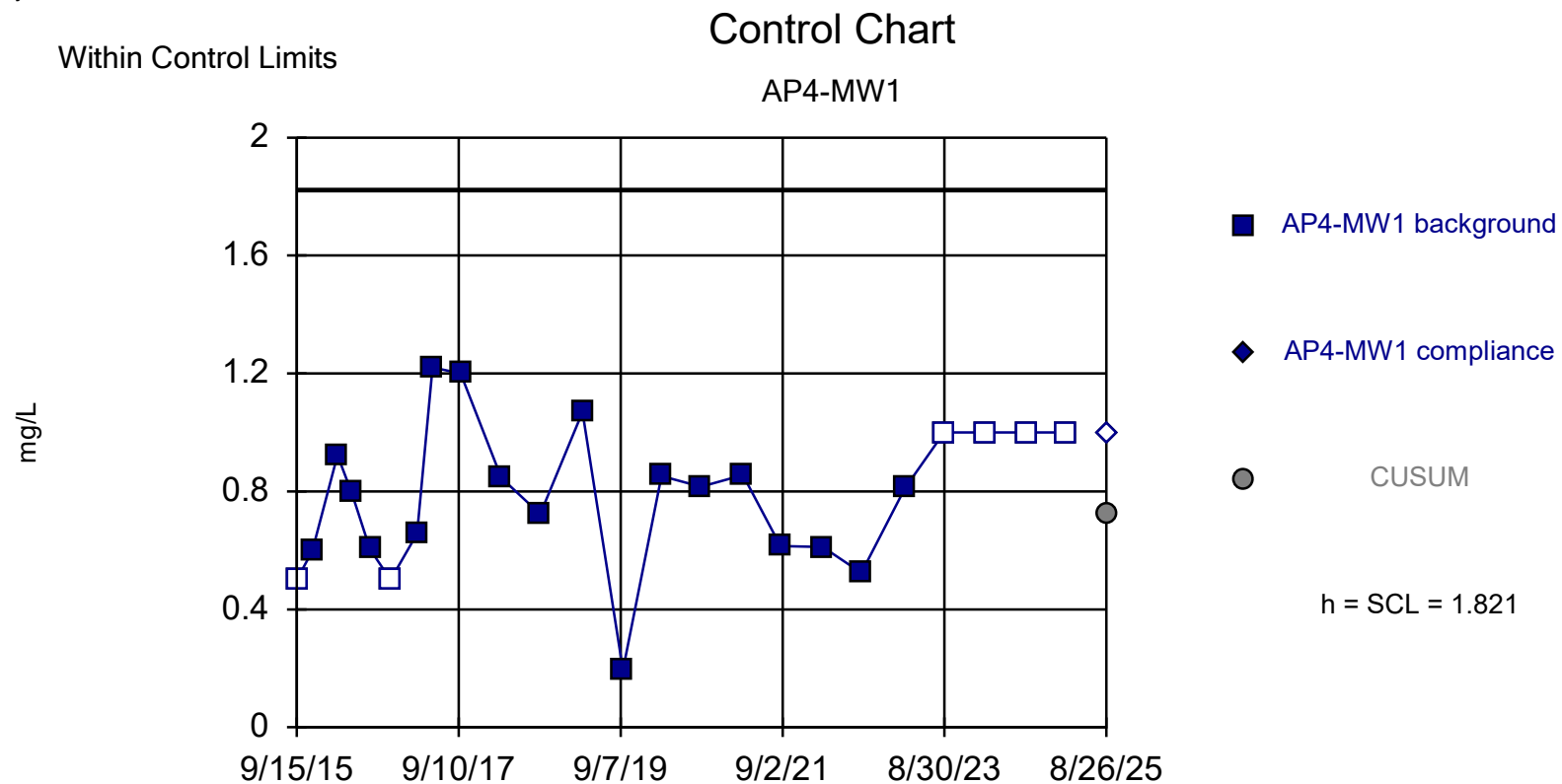
Constituent: Calcium Analysis Run 9/15/2025 1:35 PM  
 Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025

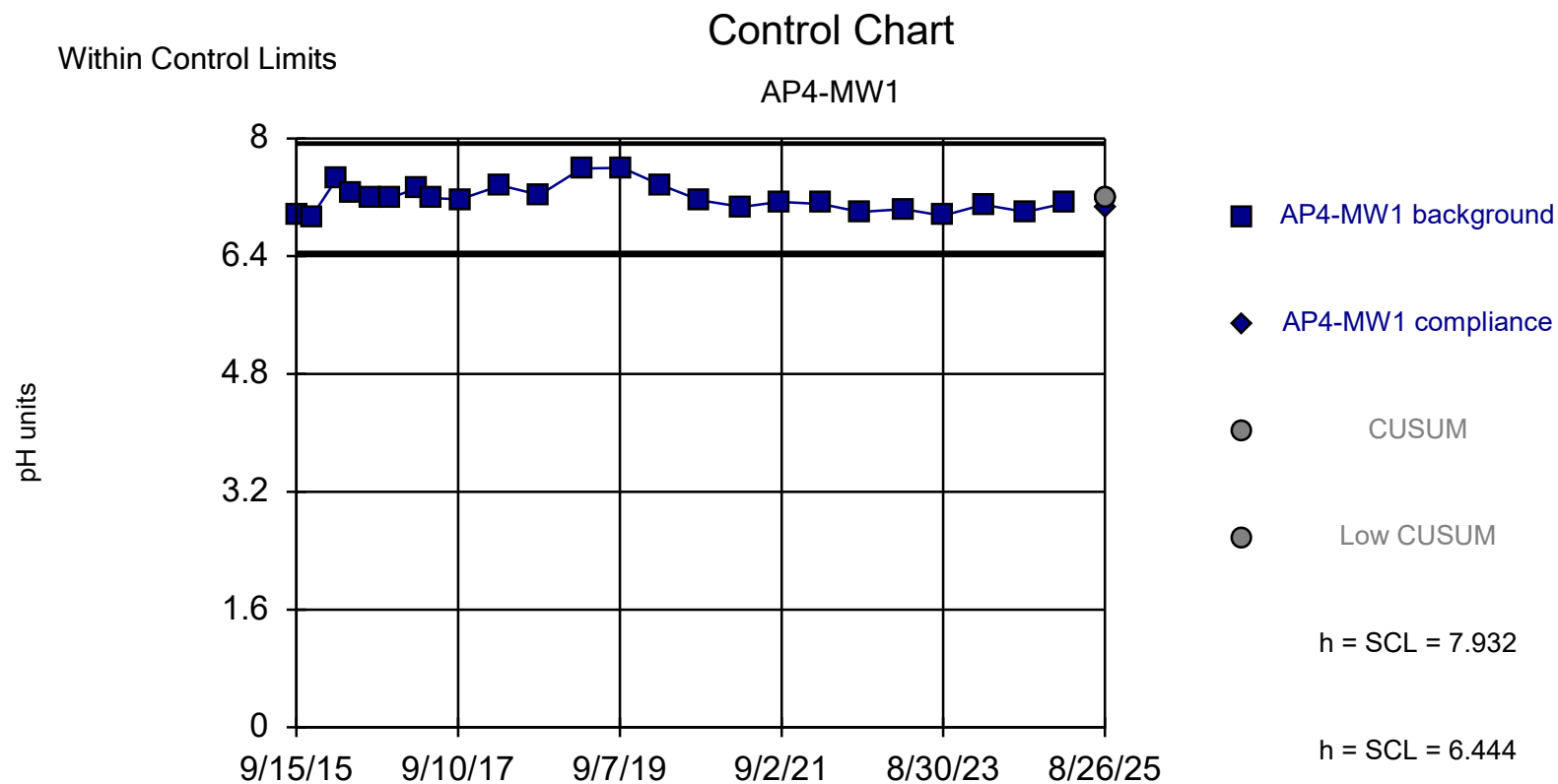
Within Limit

## Prediction Limit

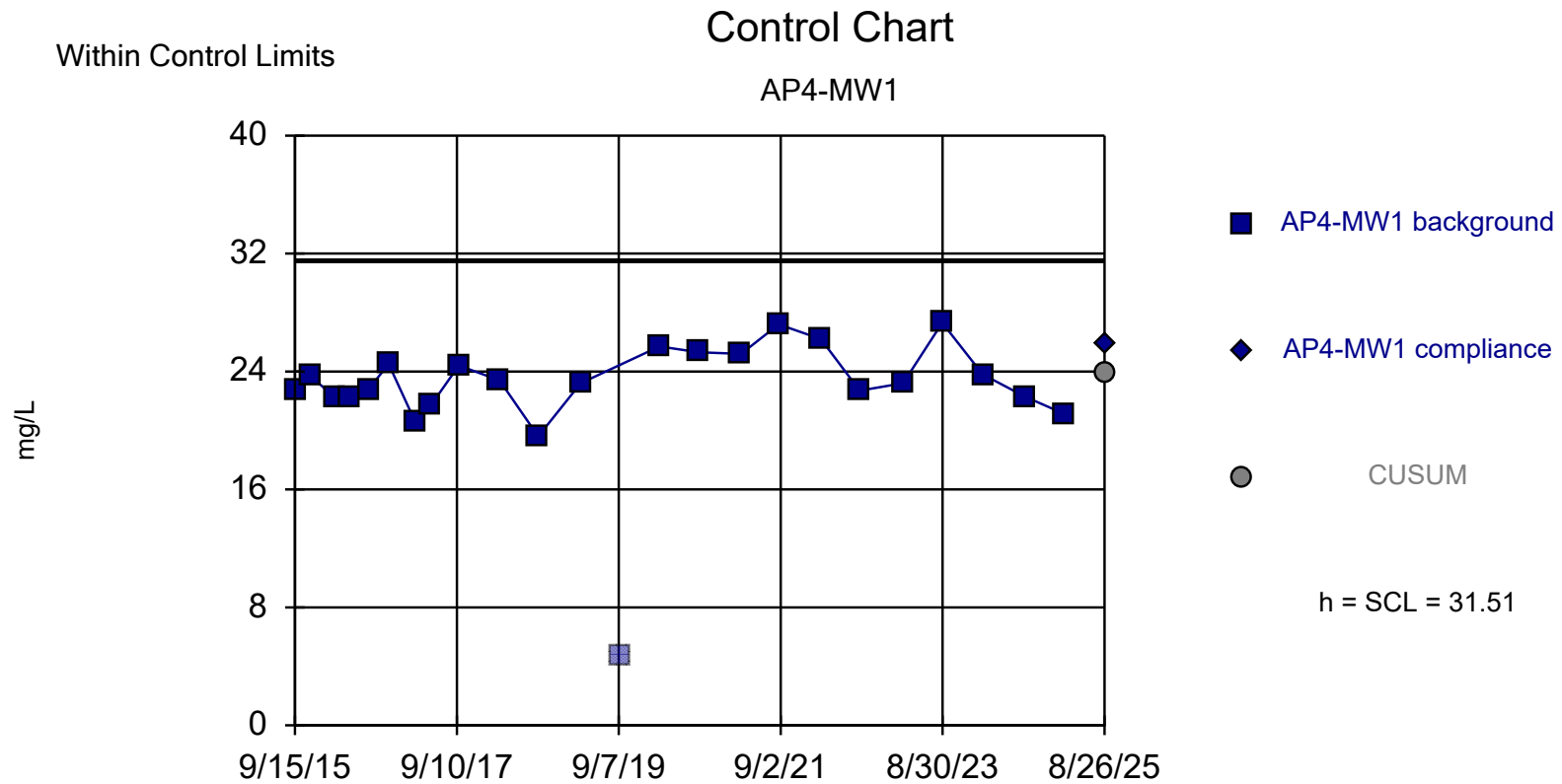
Intrawell Non-parametric

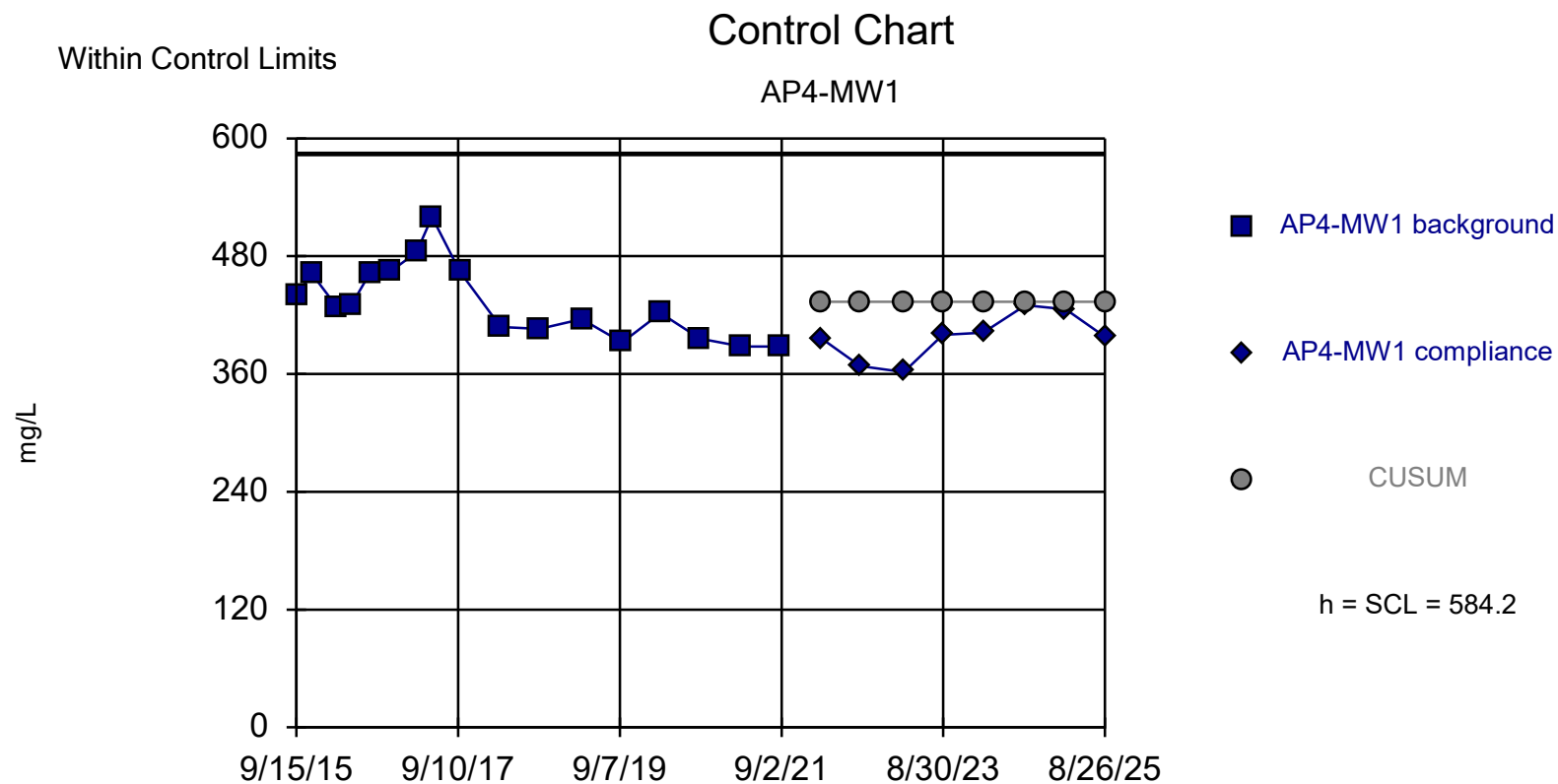












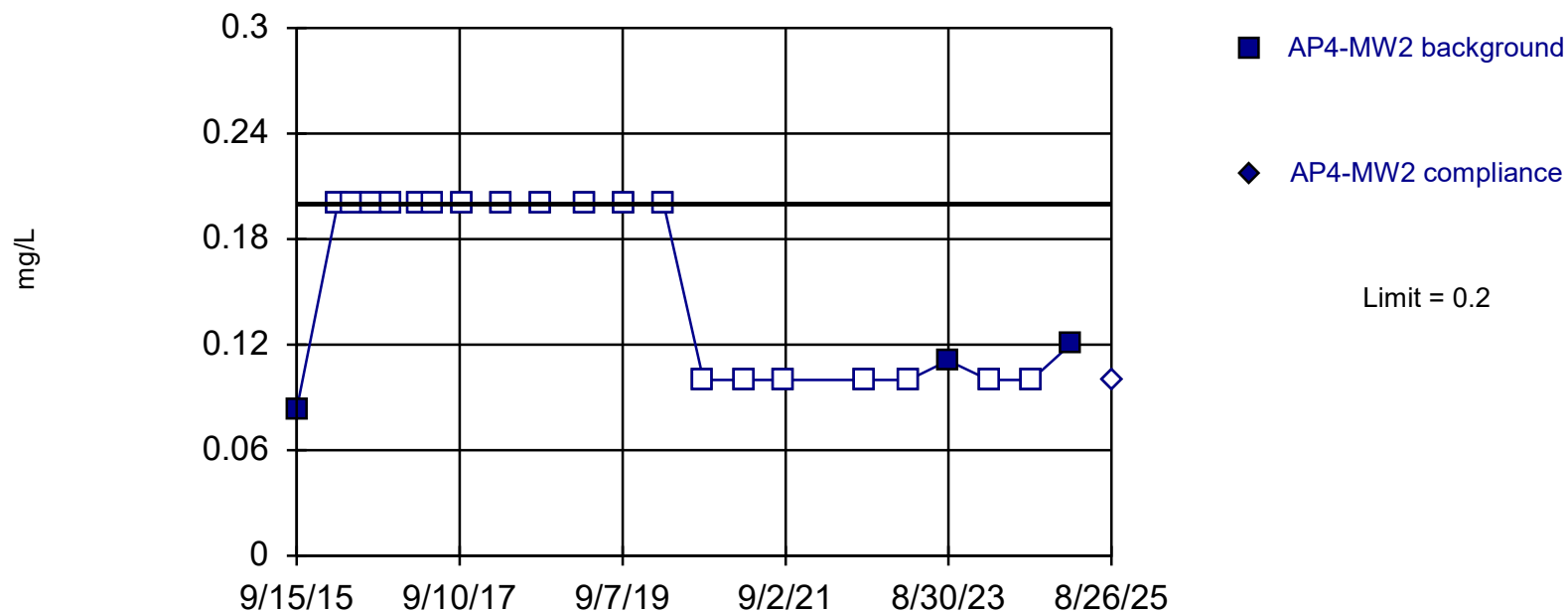
Background Data Summary: Mean=433.5, Std. Dev.=37.68, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9301, critical = 0.892. Report alpha = 0.002732. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Total Dissolved Solids Analysis Run 9/15/2025 1:39 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025

Within Limit

## Prediction Limit

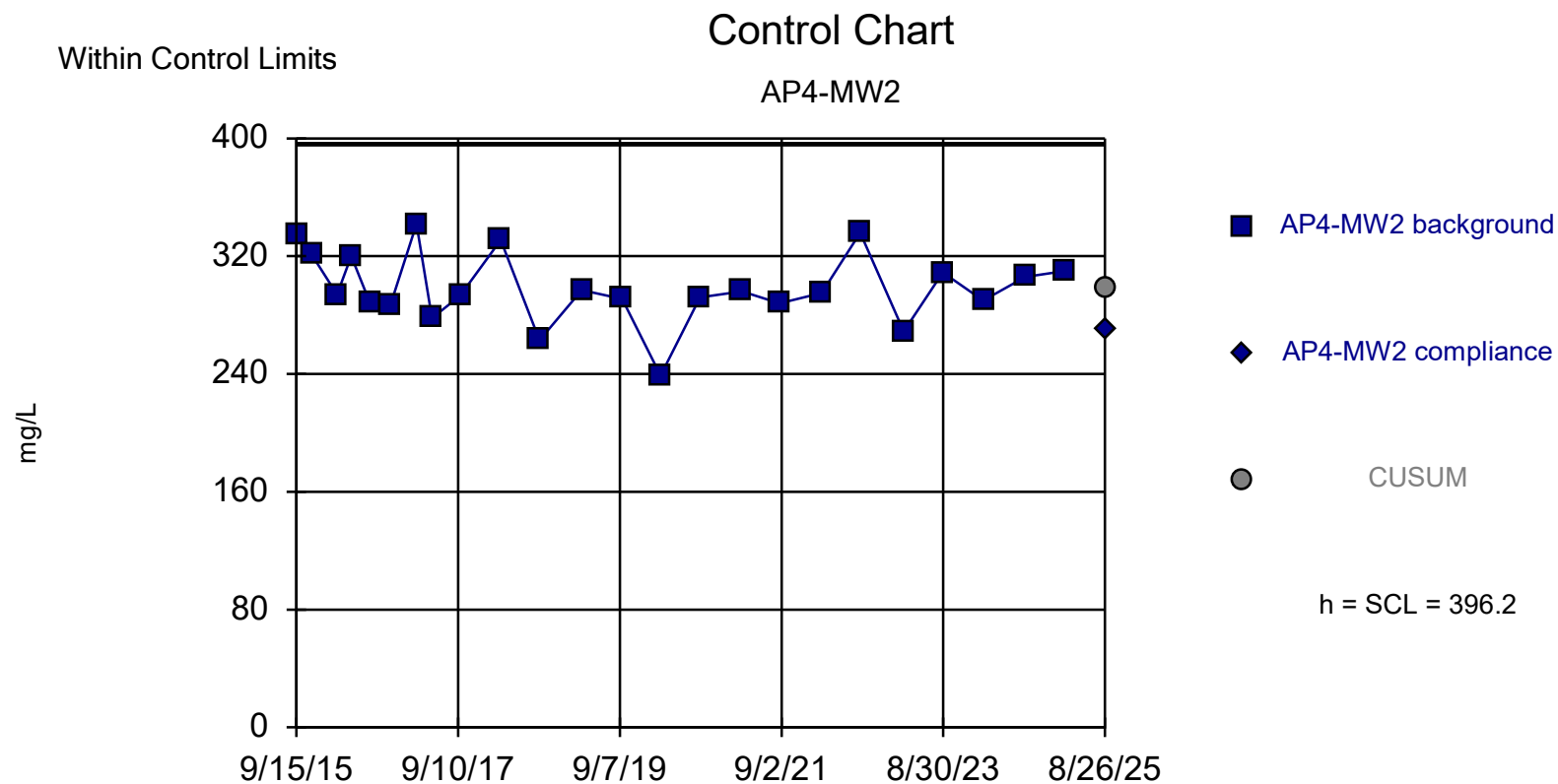
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 22 background values. 86.36% NDs. Well-constituent pair annual alpha = 0.007401. Individual comparison alpha = 0.003707 (1 of 2). Seasonality was not detected with 95% confidence.

Constituent: Boron, Alt. Values Analysis Run 9/15/2025 3:23 PM

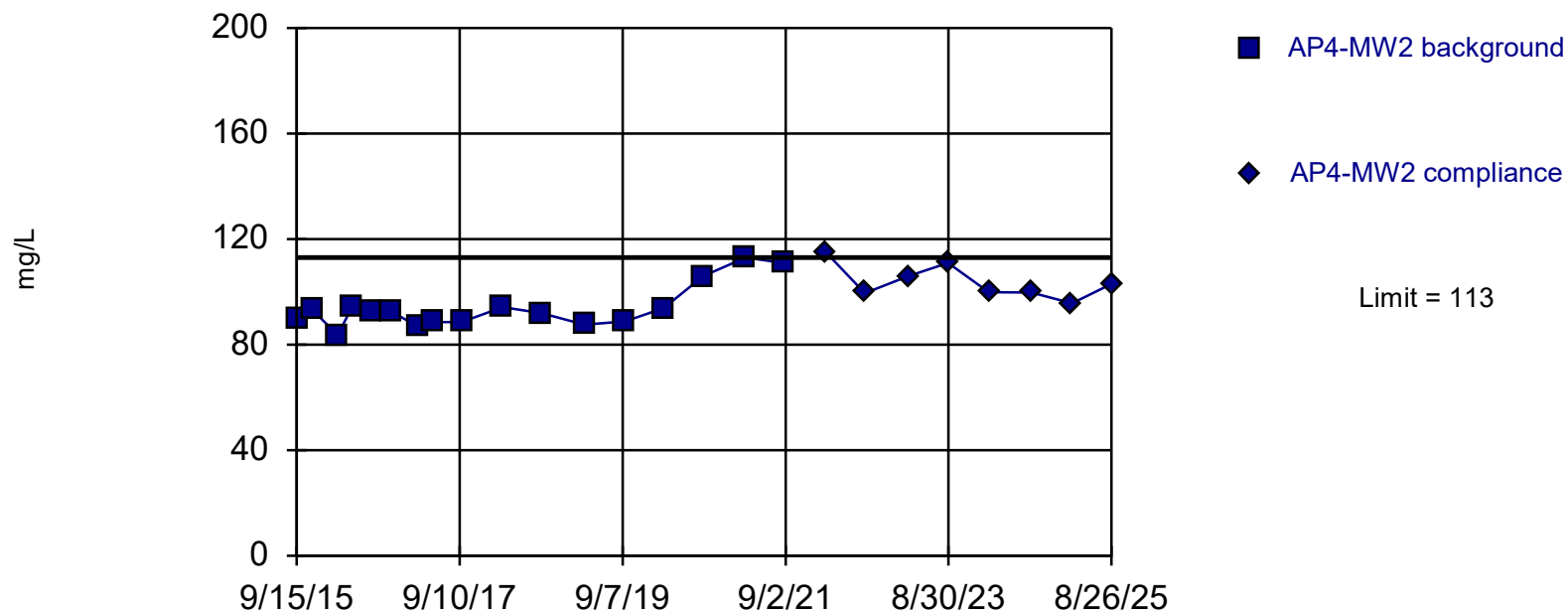
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025



Within Limit

## Prediction Limit

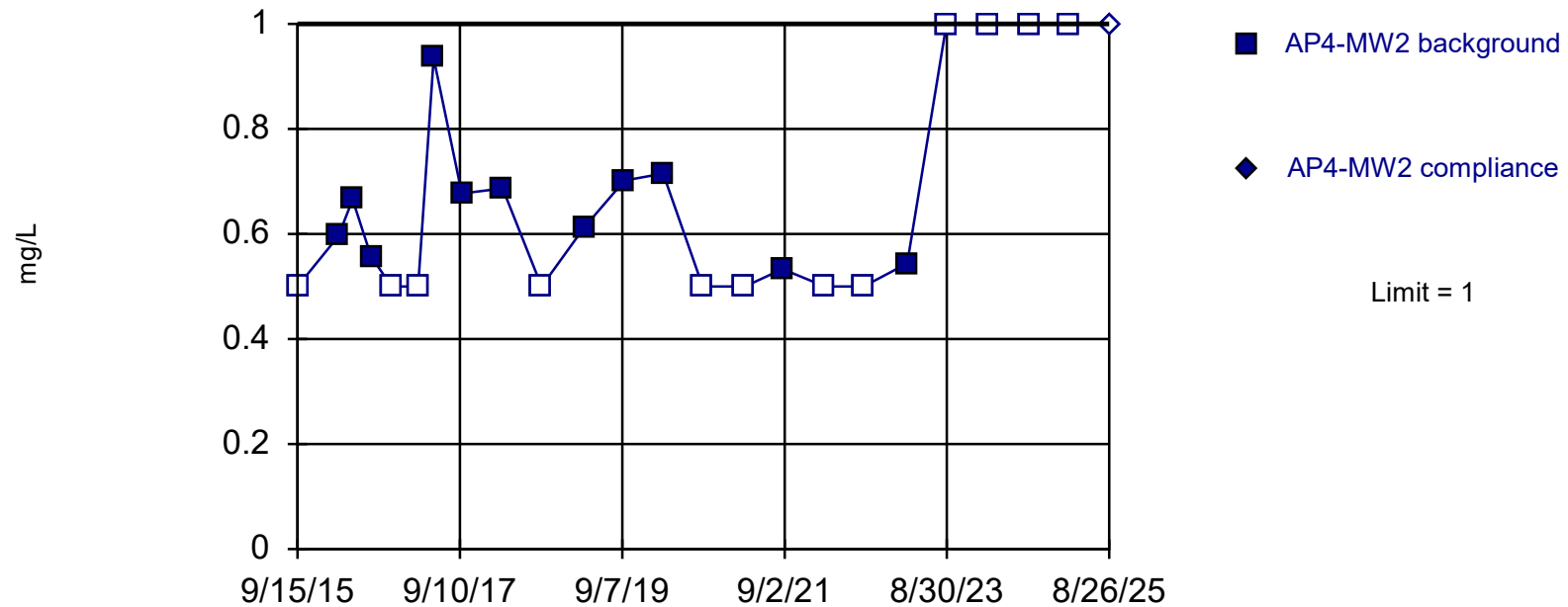
Intrawell Non-parametric



Within Limit

## Prediction Limit

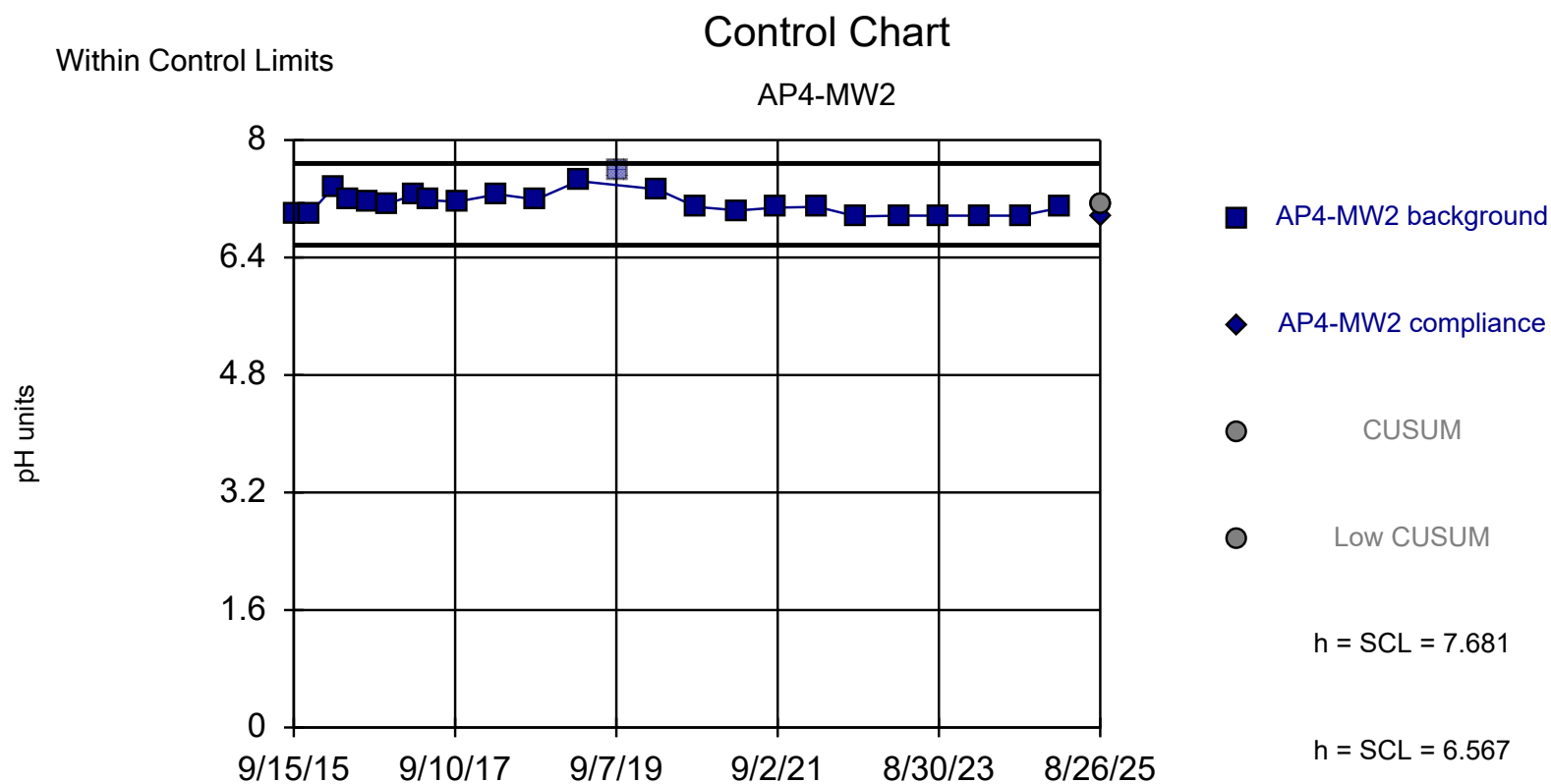
Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 23 background values. 52.17% NDs. Well-constituent pair annual alpha = 0.006819. Individual comparison alpha = 0.003415 (1 of 2). Seasonality was not detected with 95% confidence.

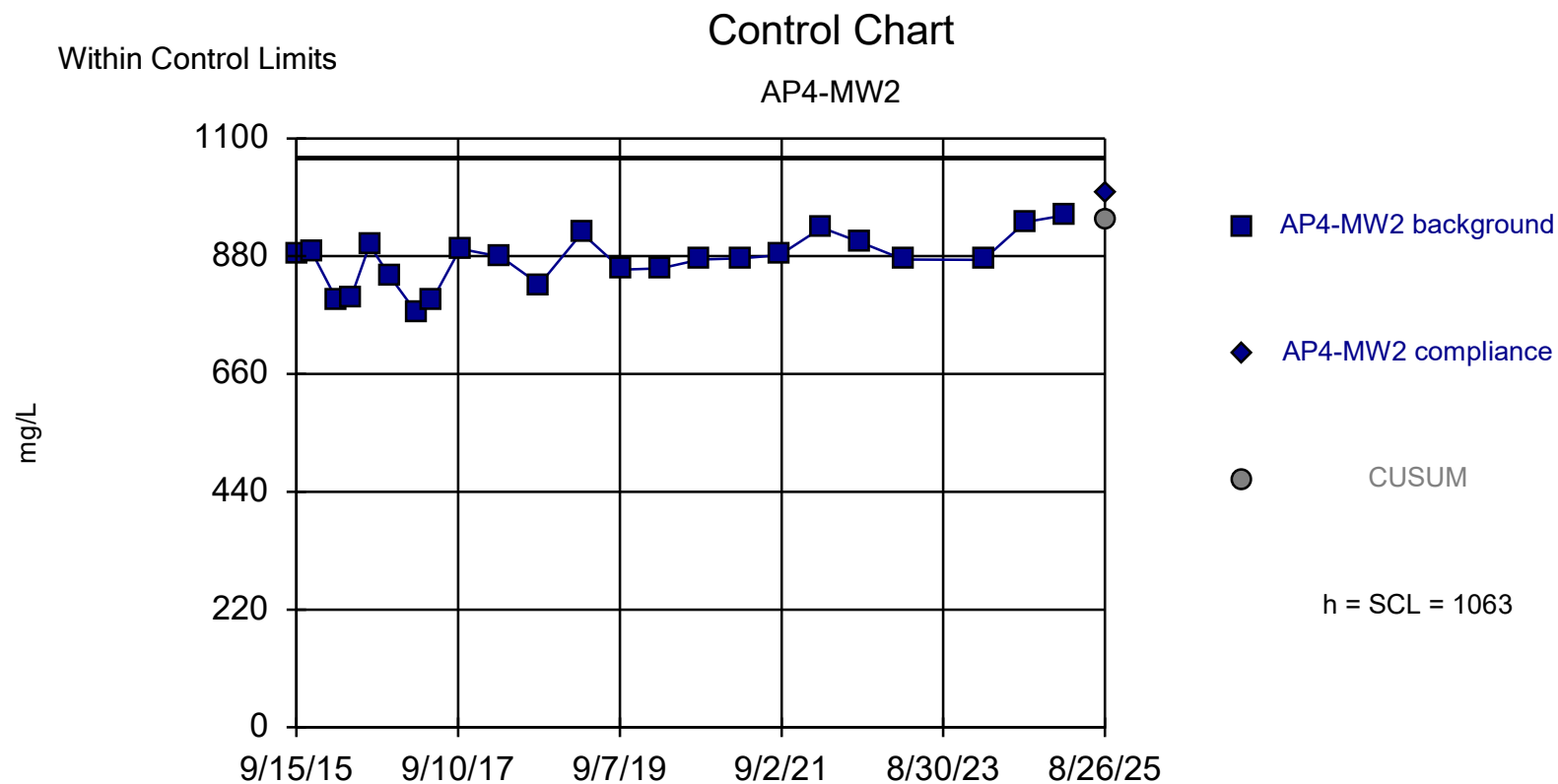
Constituent: Fluoride, Alt. Values Analysis Run 9/15/2025 3:25 PM

Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025



Background Data Summary: Mean=7.124, Std. Dev.=0.1393, n=23. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9221, critical = 0.914. Report alpha = 0.000362. Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured    Analysis Run 10/20/2025 6:08 PM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025



Background Data Summary: Mean=871.3, Std. Dev.=48, n=23. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9641, critical = 0.914. Report alpha = 0.000362. Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

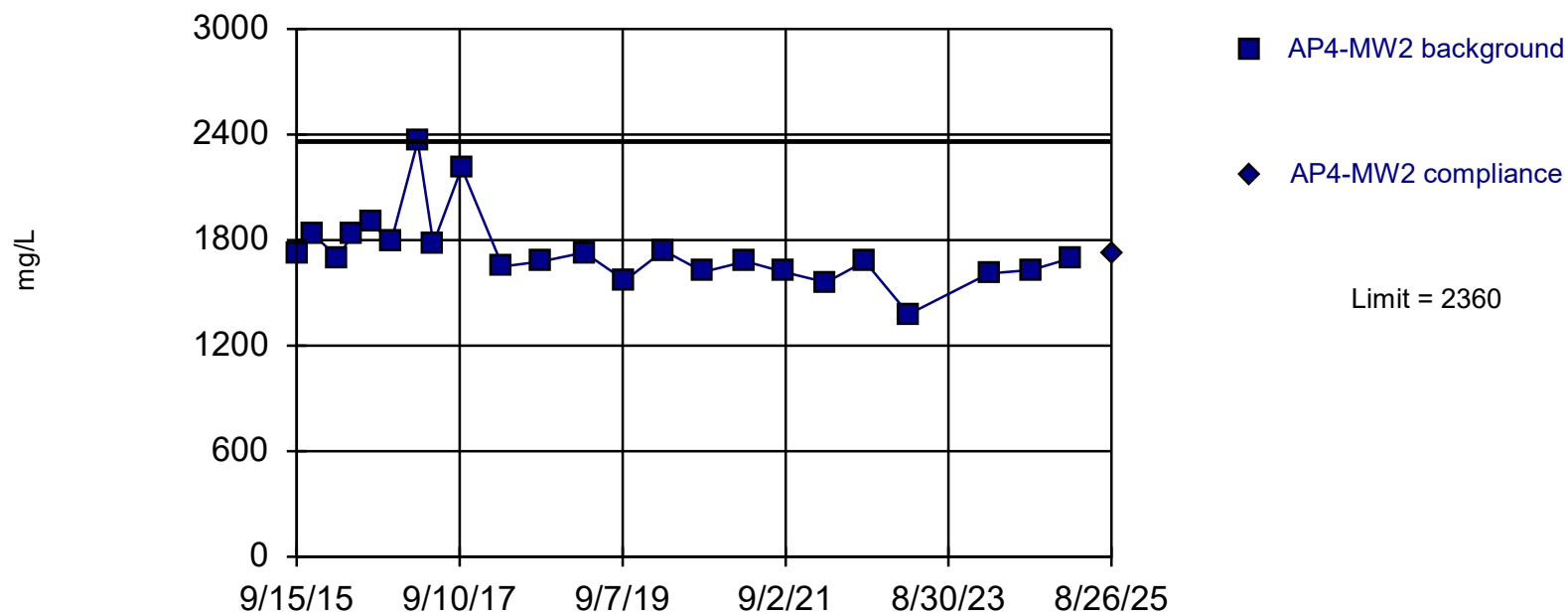
Constituent: Sulfate, Alt. Values Analysis Run 9/15/2025 3:29 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025



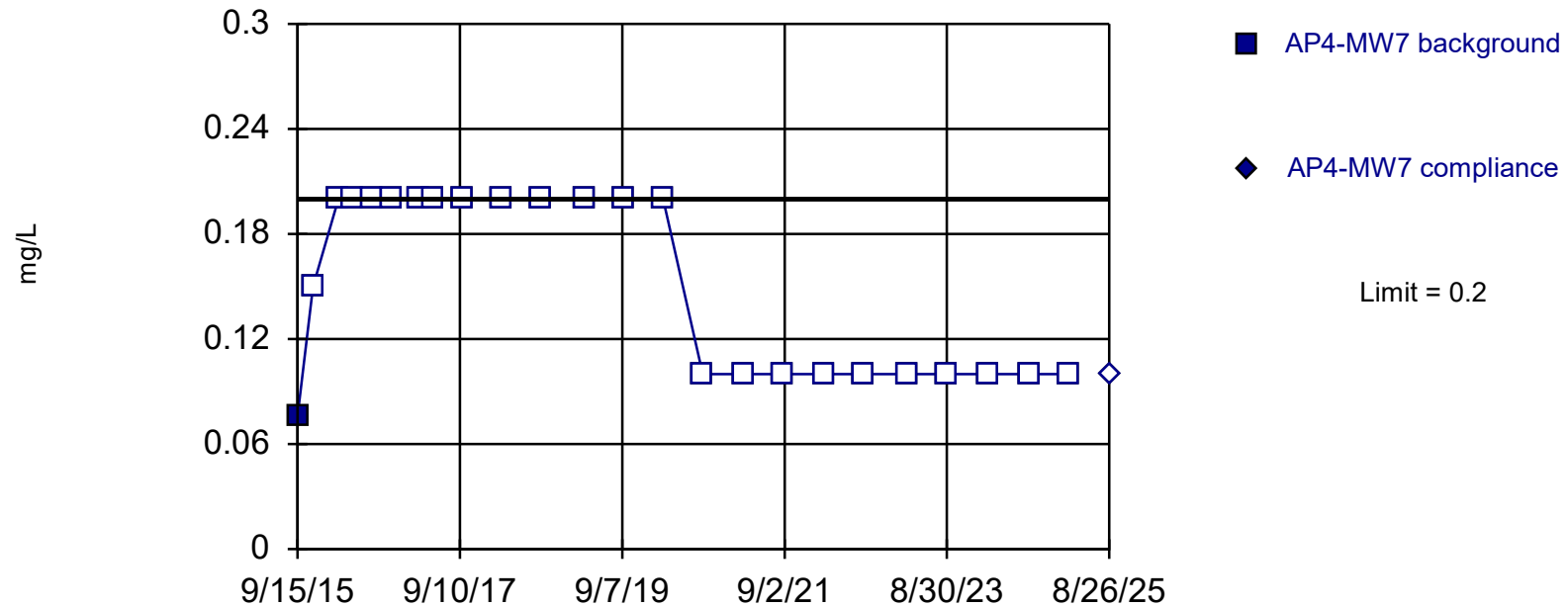
Within Limit

## Prediction Limit

Intrawell Non-parametric



## Intrawell Non-parametric



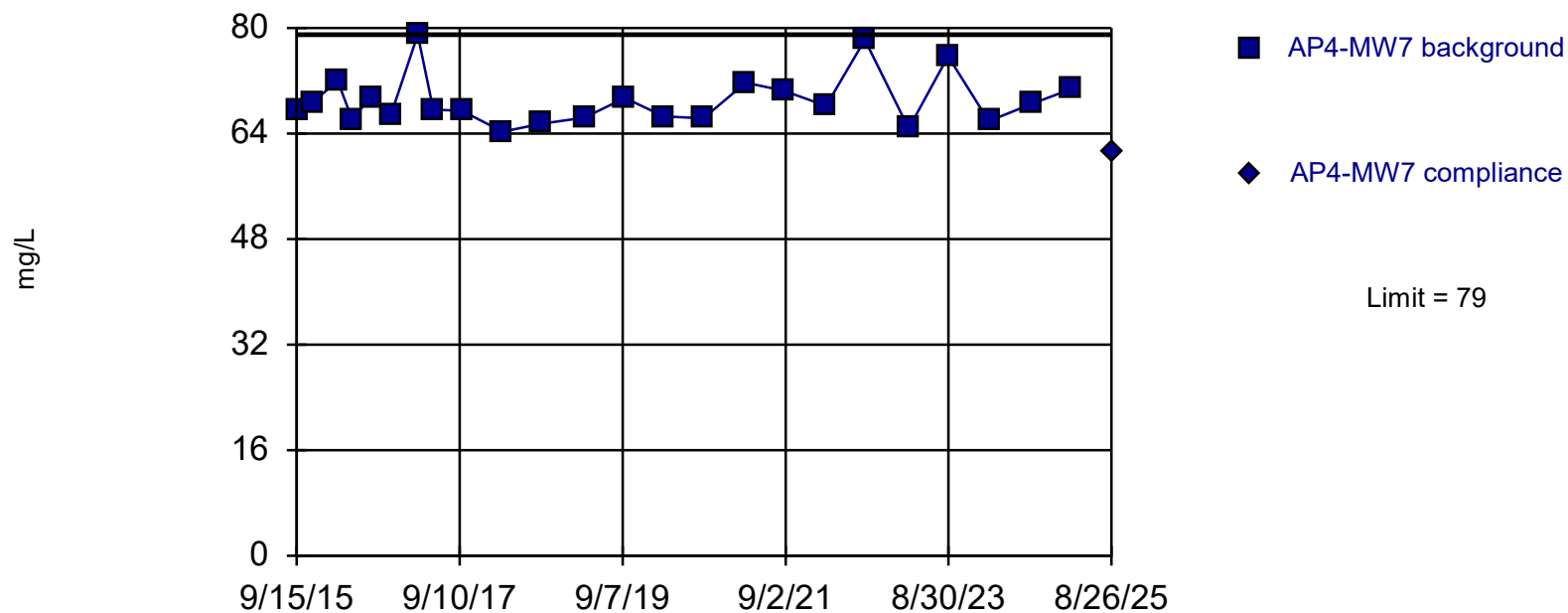
Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 24 background values. 95.83% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Seasonality was not detected with 95% confidence.

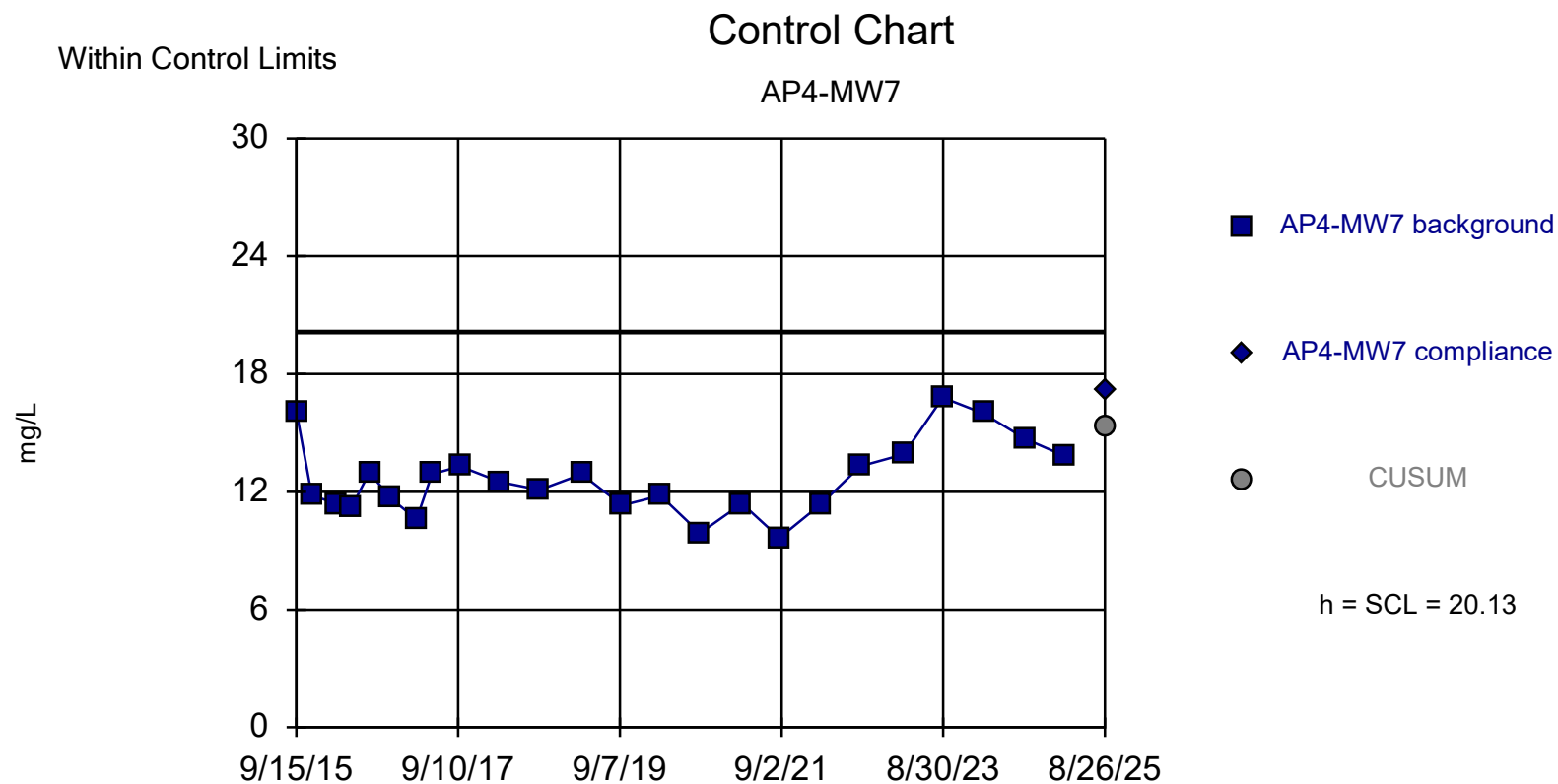
Constituent: Boron, Alt. Values      Analysis Run 9/15/2025 3:14 PM  
Sheldon Station      Client: NPPD      Data: SheldonStation\_Q3-2025

Within Limit

## Prediction Limit

Intrawell Non-parametric

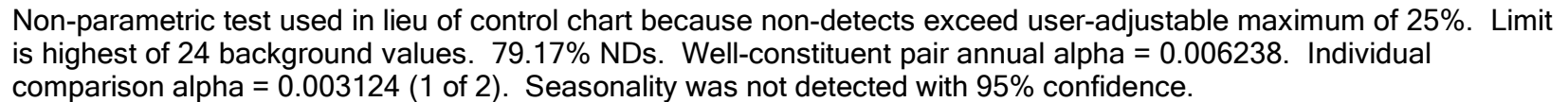




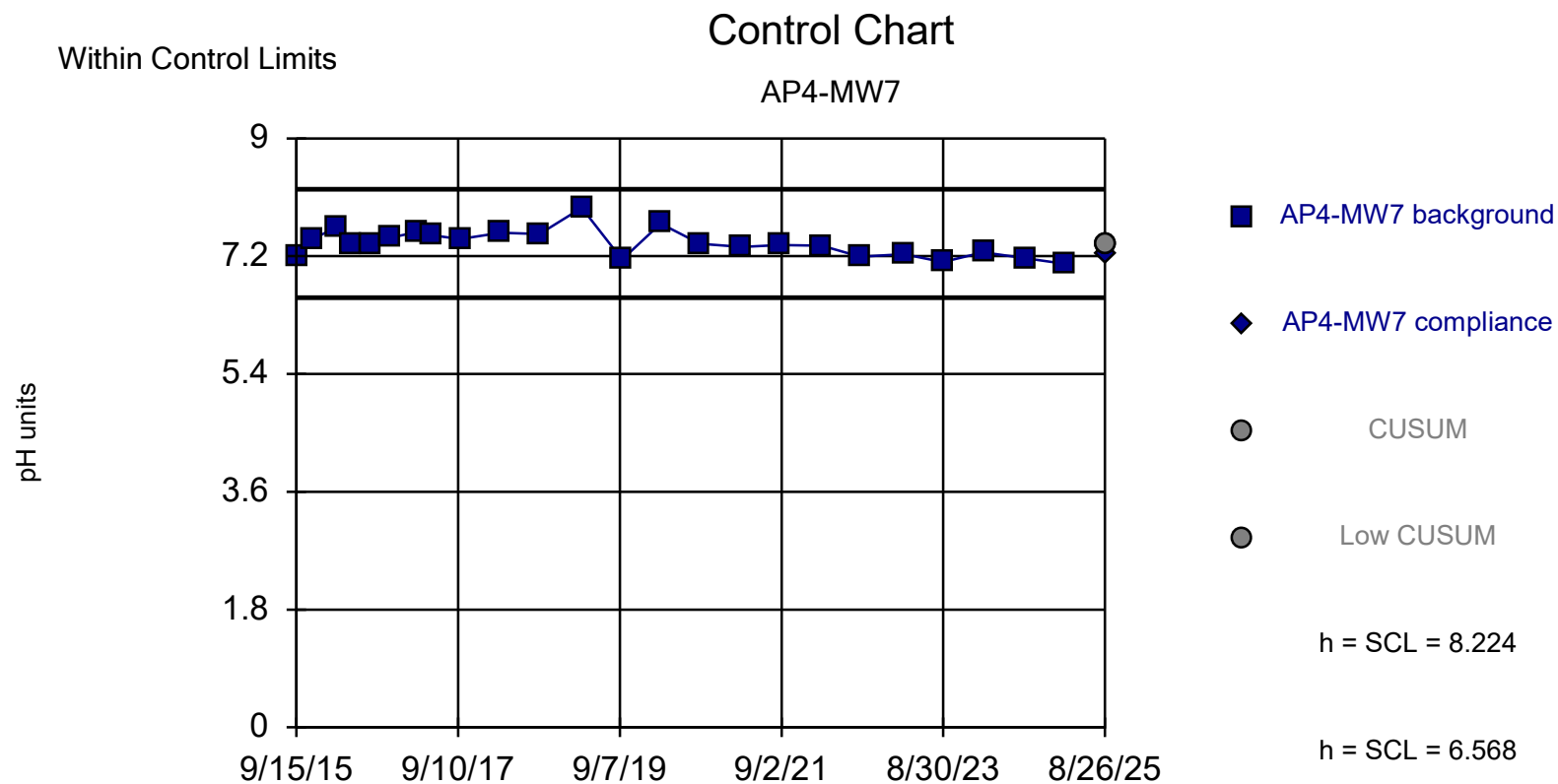
Background Data Summary: Mean=12.64, Std. Dev.=1.872, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9437, critical = 0.916. Report alpha = 0.000342. Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

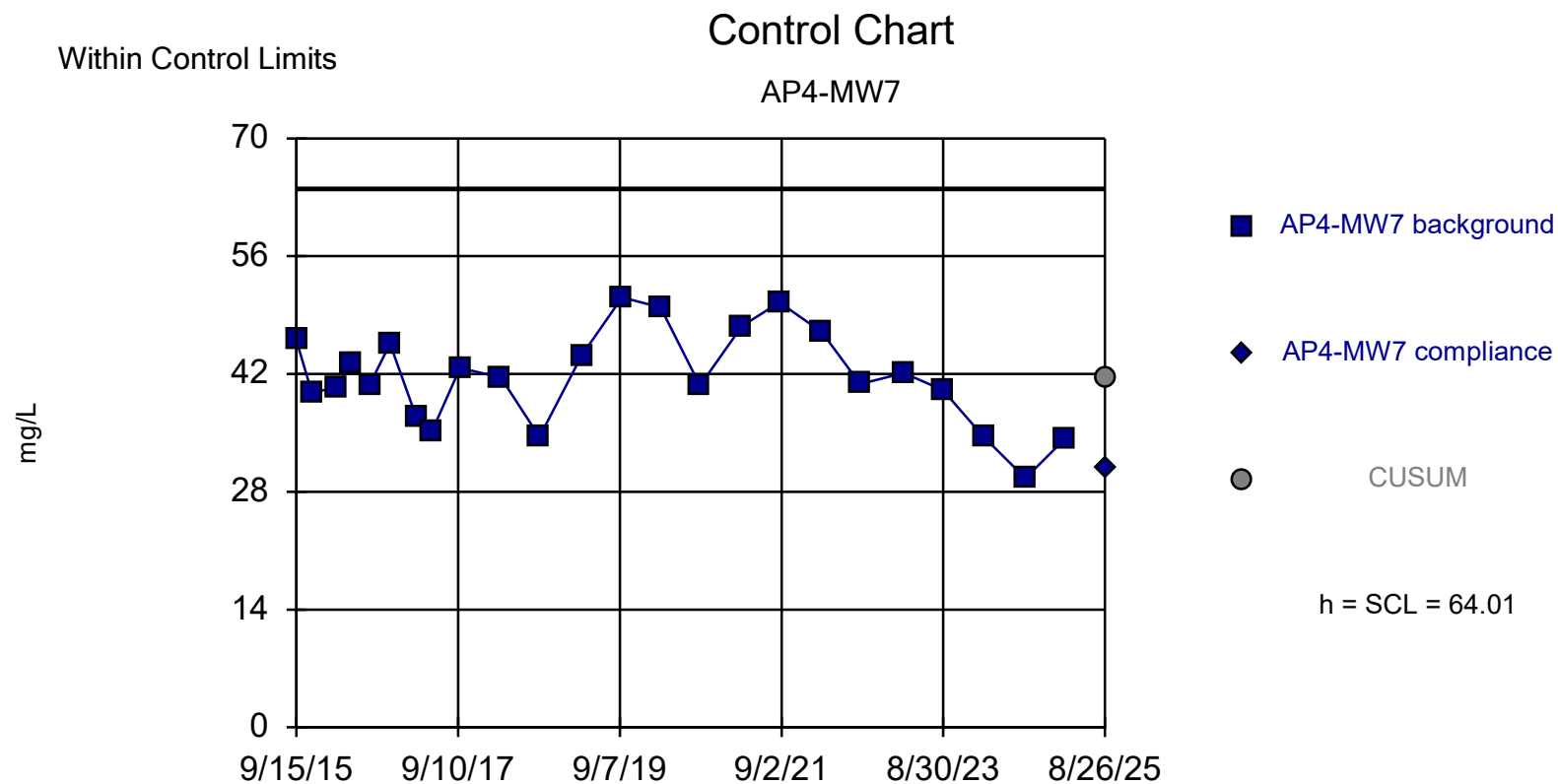
Constituent: Chloride, Alt. Values    Analysis Run 9/15/2025 3:16 PM  
 Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

### Intrawell Non-parametric



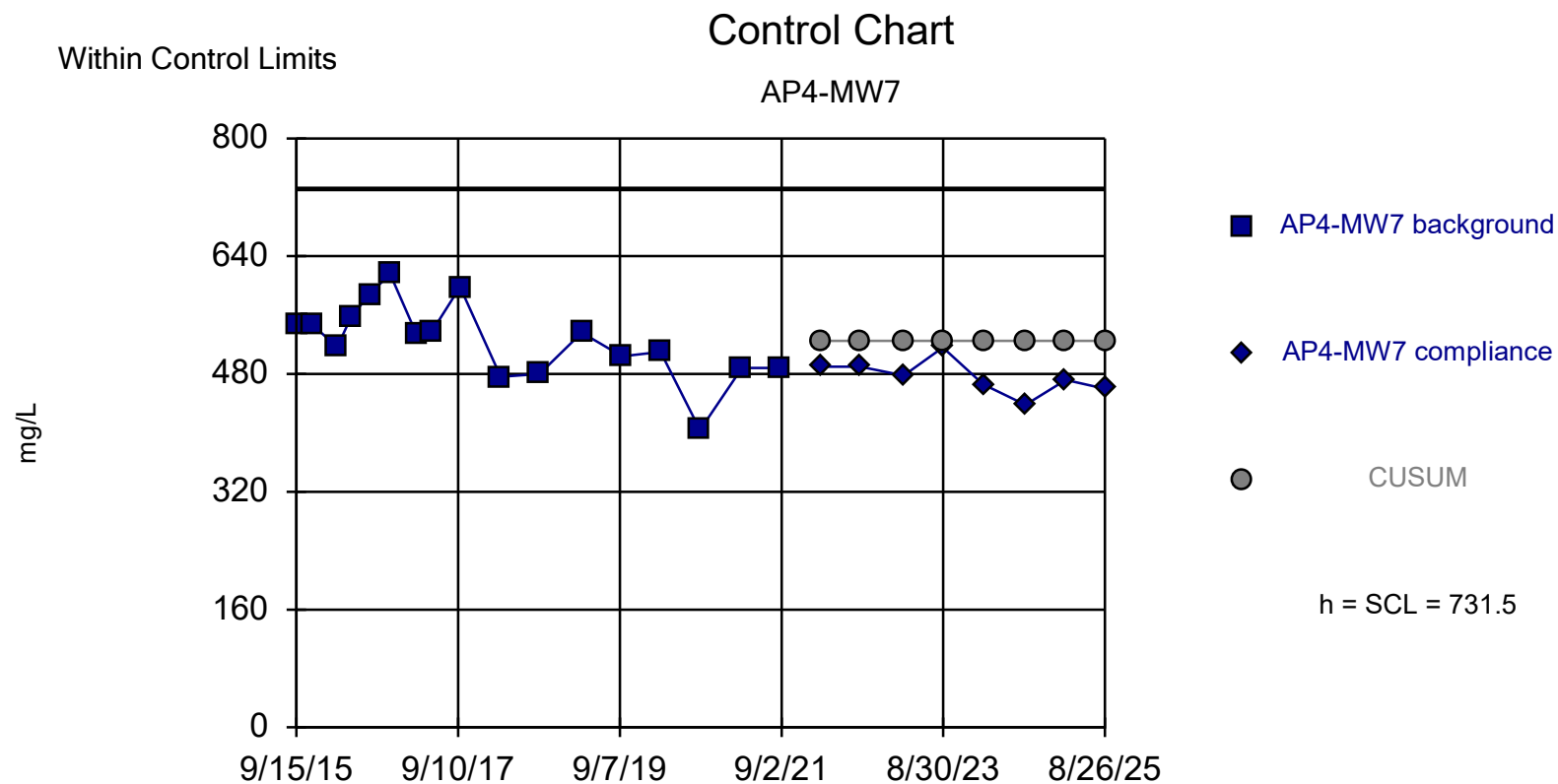
Constituent: Fluoride, Alt. Values      Analysis Run 9/15/2025 3:17 PM  
Sheldon Station      Client: NPPD      Data: SheldonStation\_Q3-2025





Background Data Summary: Mean=41.63, Std. Dev.=5.594, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9707, critical = 0.916. Report alpha = 0.000342. Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate, Alt. Values    Analysis Run 9/15/2025 3:18 PM  
 Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

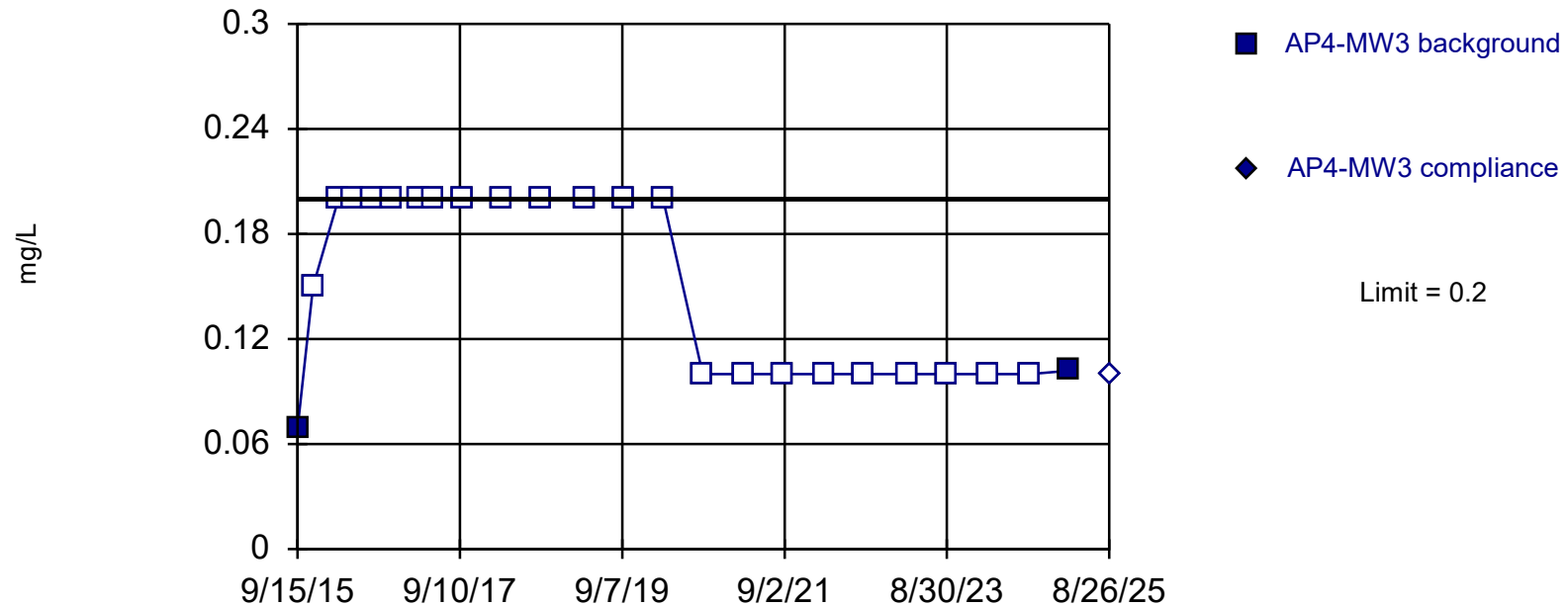




Within Limit

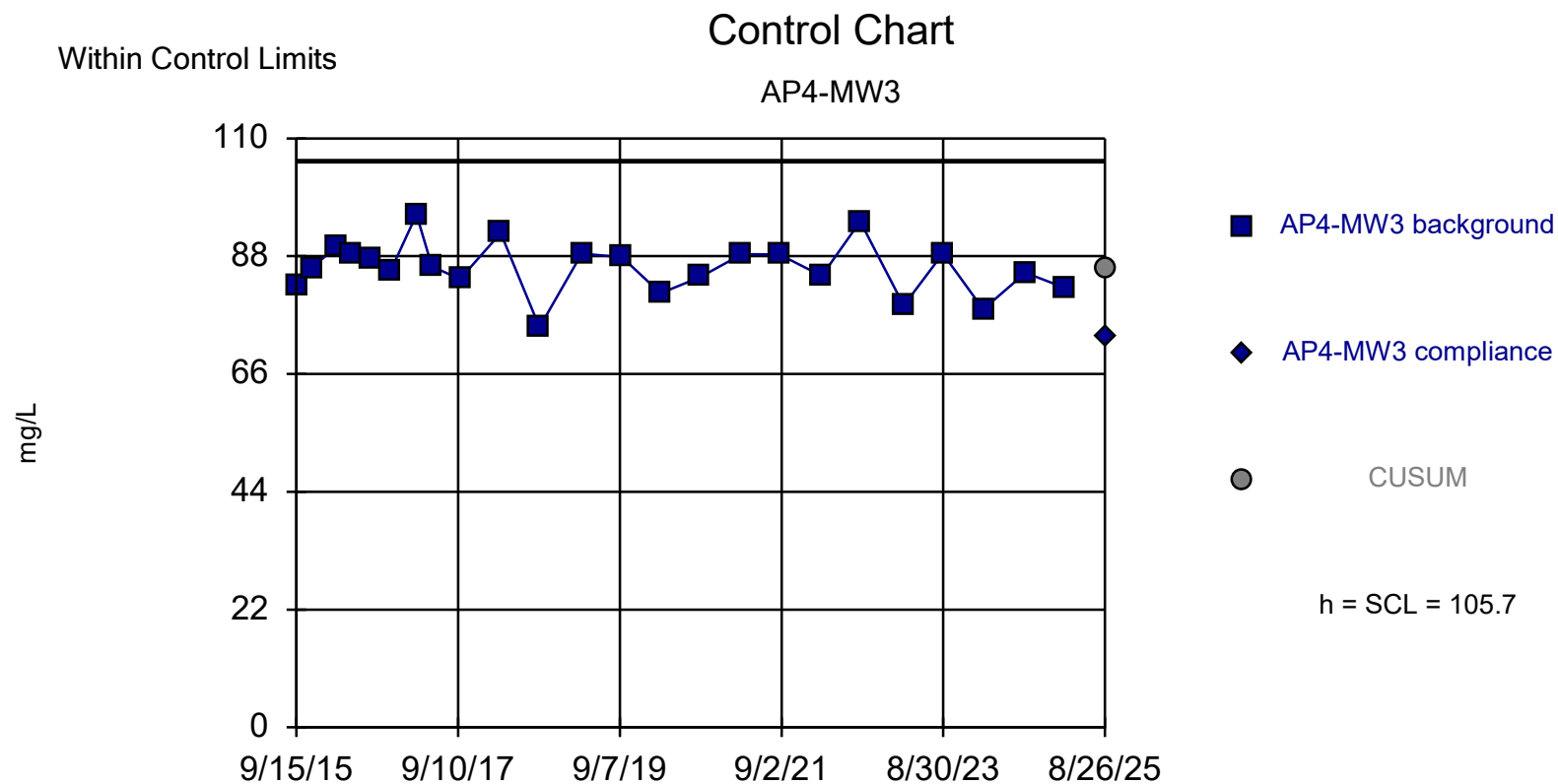
## Prediction Limit

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 24 background values. 91.67% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Seasonality was not detected with 95% confidence.

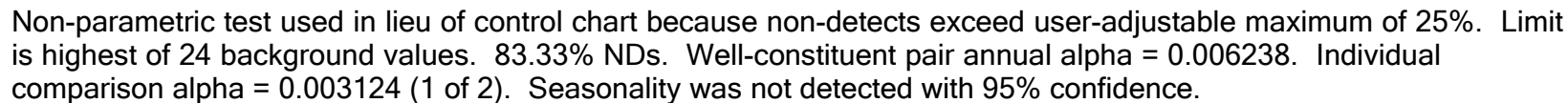
Constituent: Boron Analysis Run 9/22/2025 11:19 AM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025



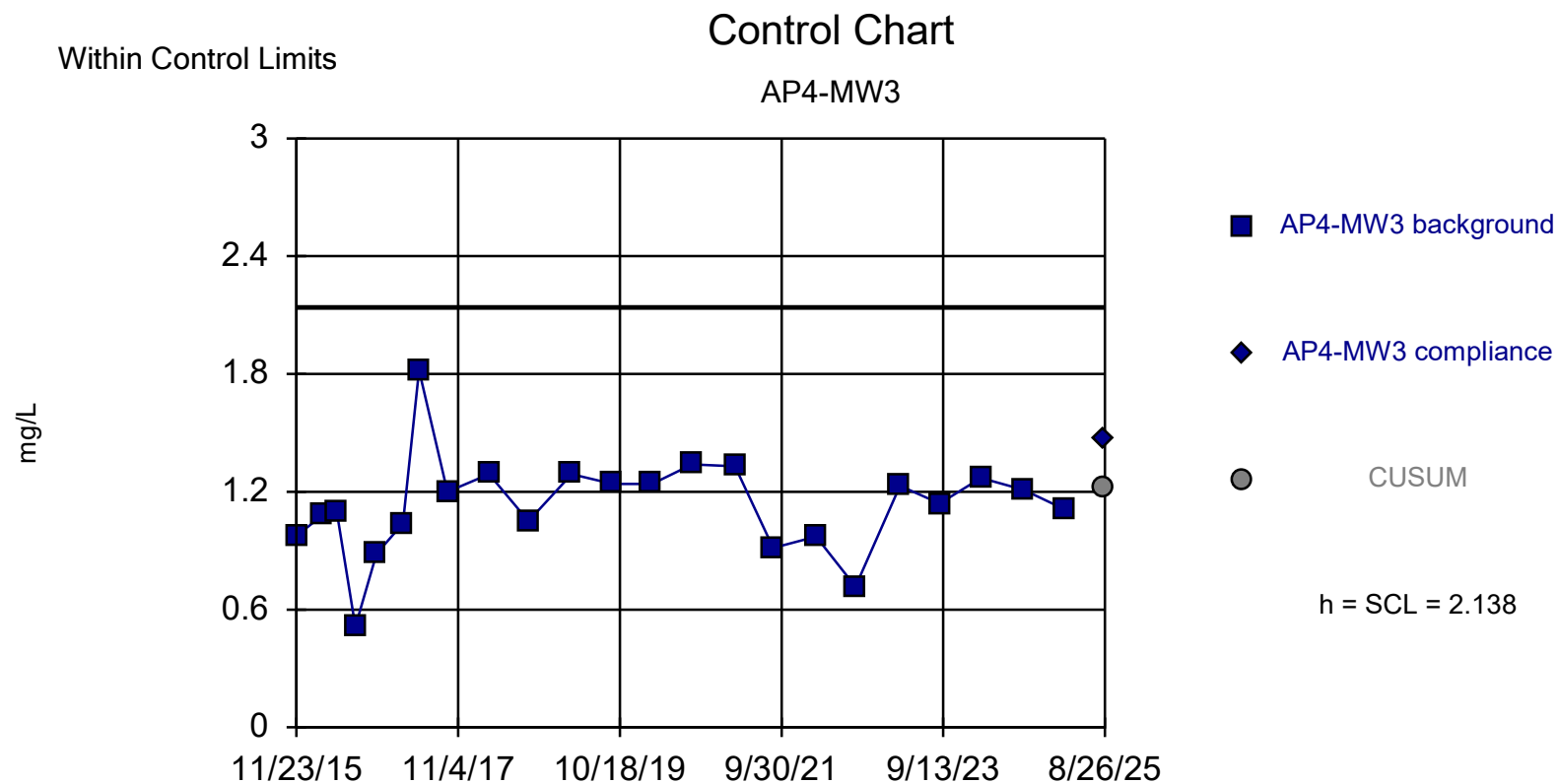
Background Data Summary: Mean=85.88, Std. Dev.=4.962, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9788, critical = 0.916. Report alpha = 0.000352. Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

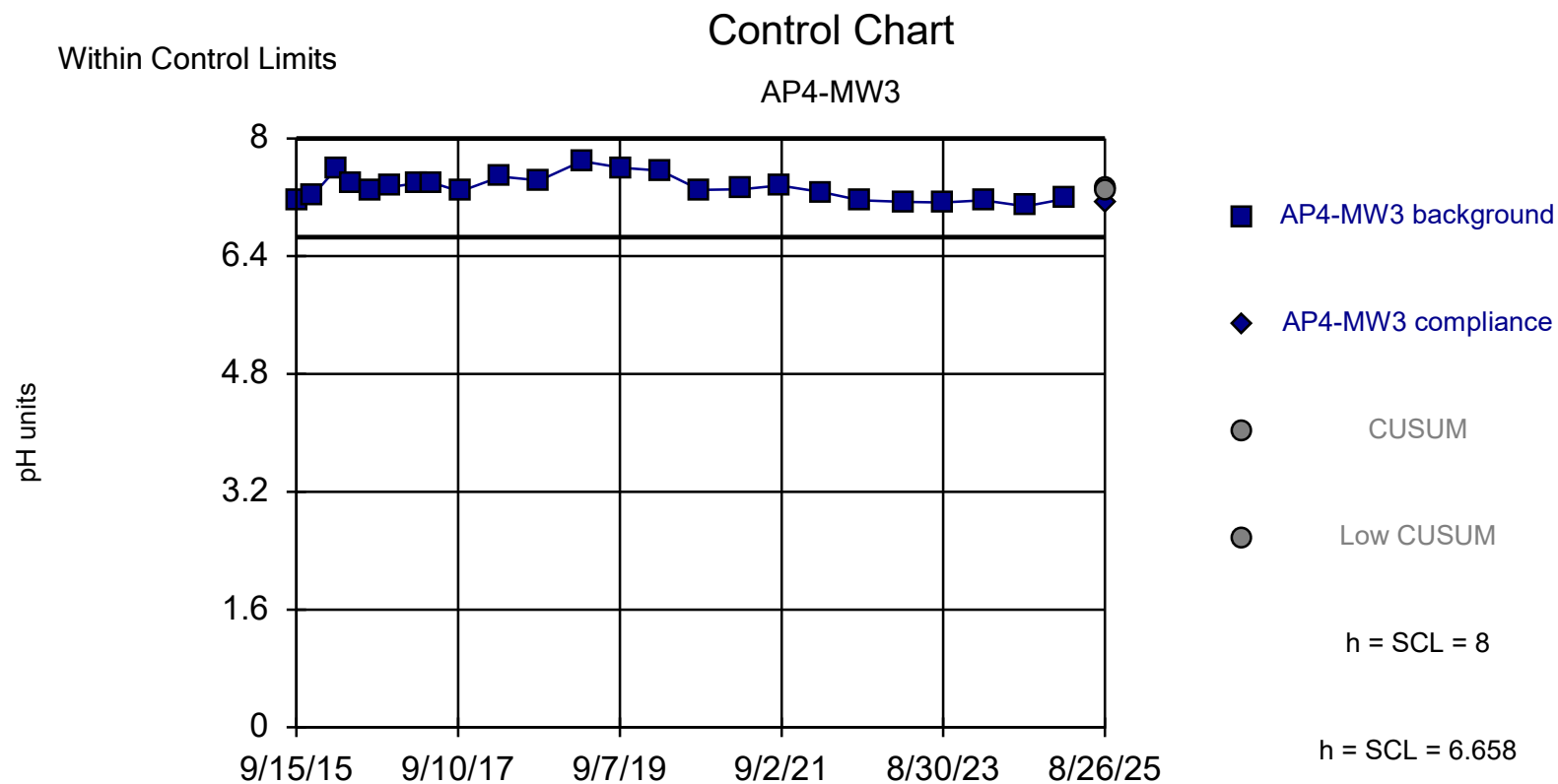
Constituent: Calcium, Alt. Values    Analysis Run 9/15/2025 3:06 PM  
 Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

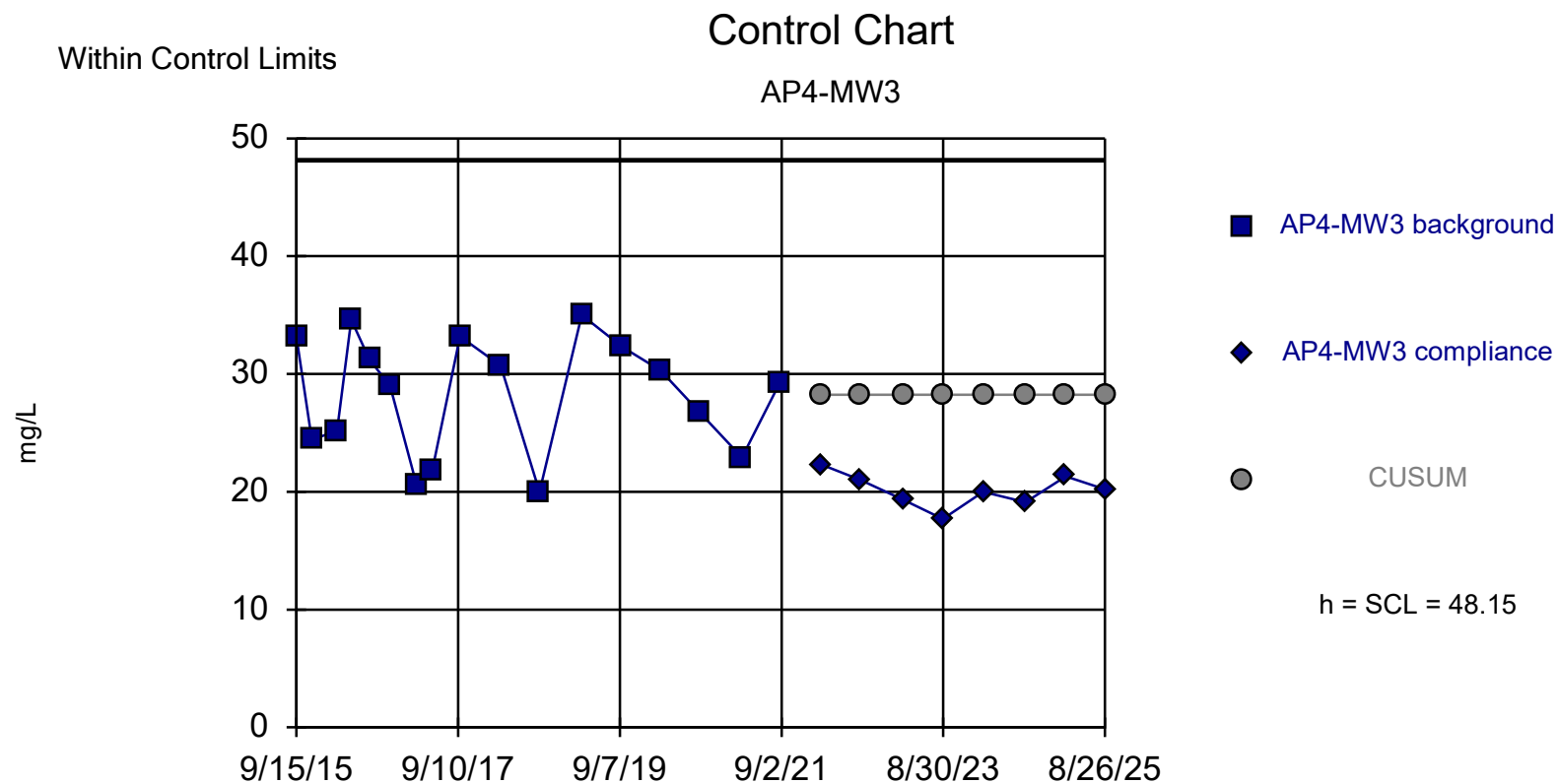
### Intrawell Non-parametric



Constituent: Chloride    Analysis Run 10/20/2025 10:08 PM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

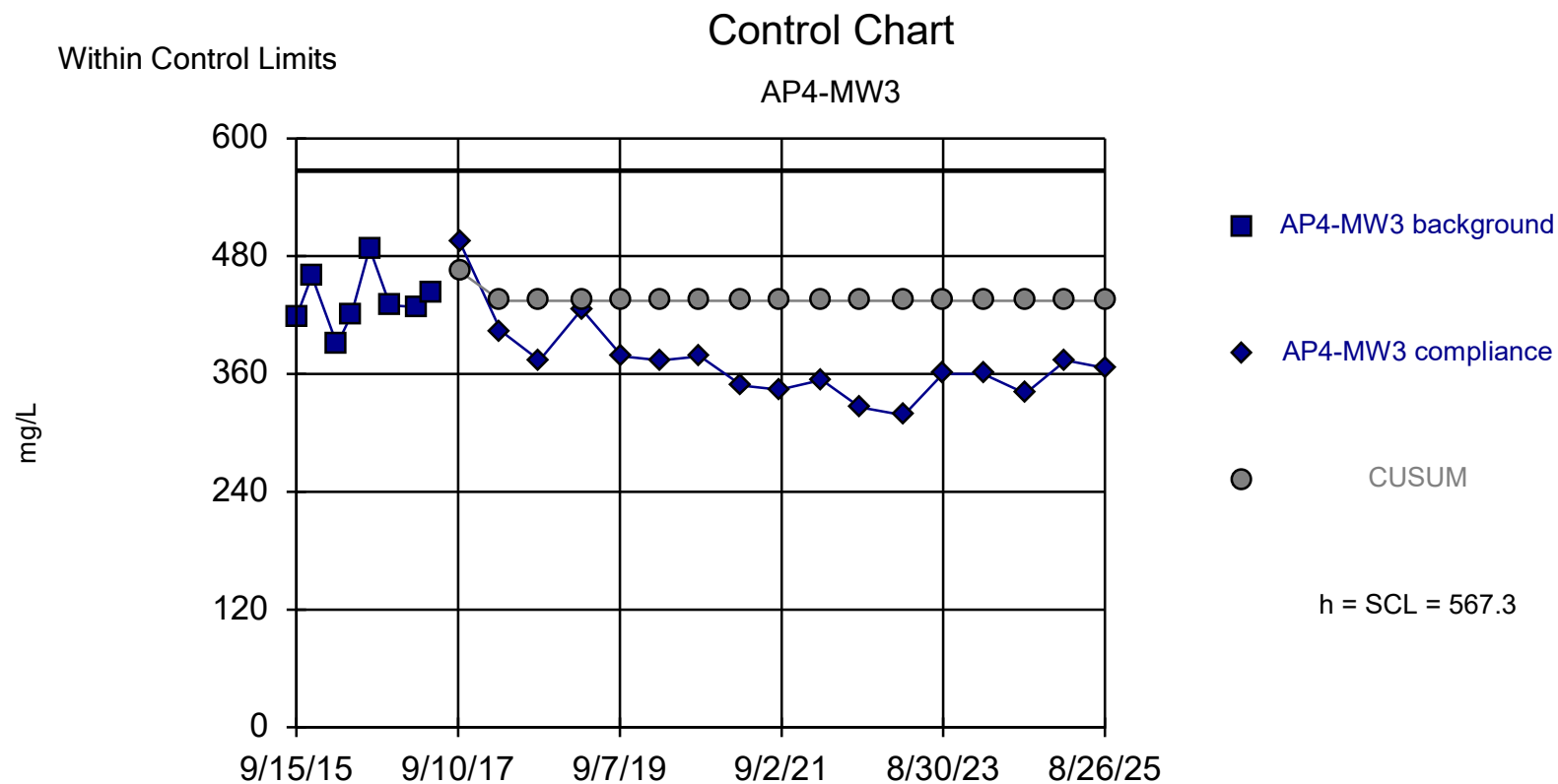




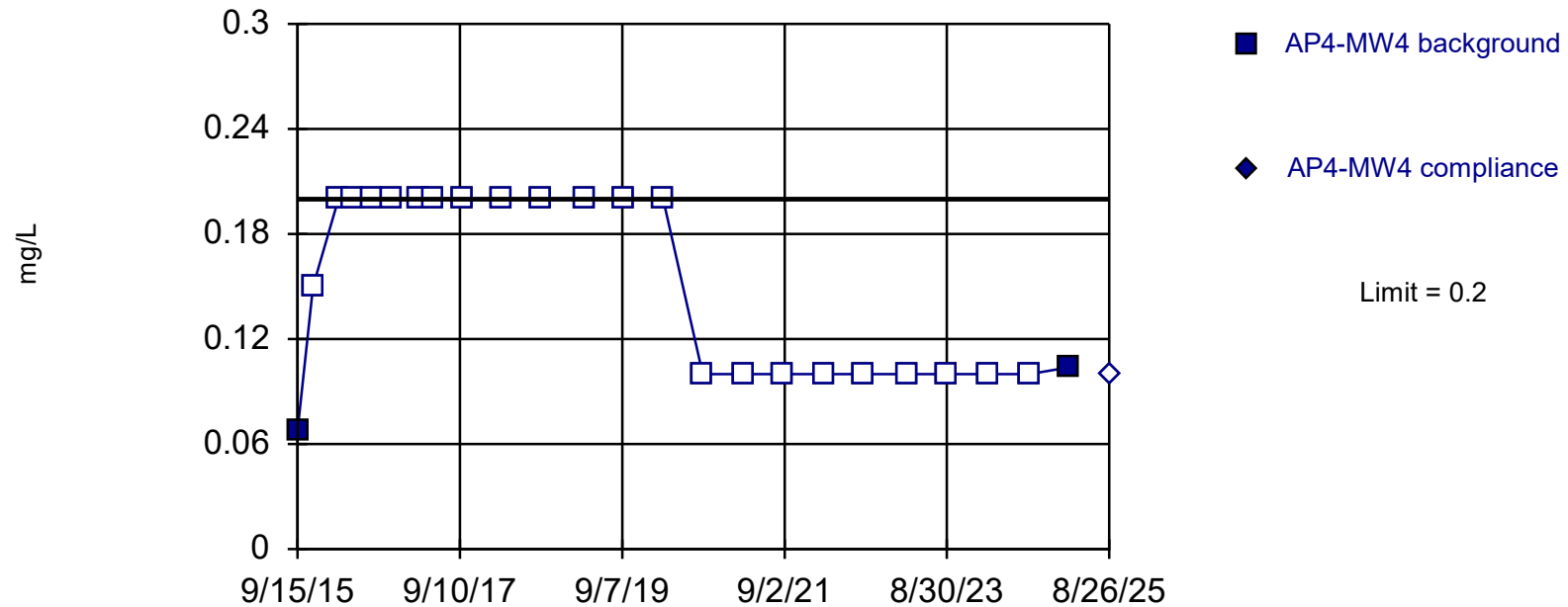


Background Data Summary: Mean=28.25, Std. Dev.=4.977, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9311, critical = 0.892. Report alpha = 0.002868. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate, Alt. Values    Analysis Run 9/15/2025 3:10 PM  
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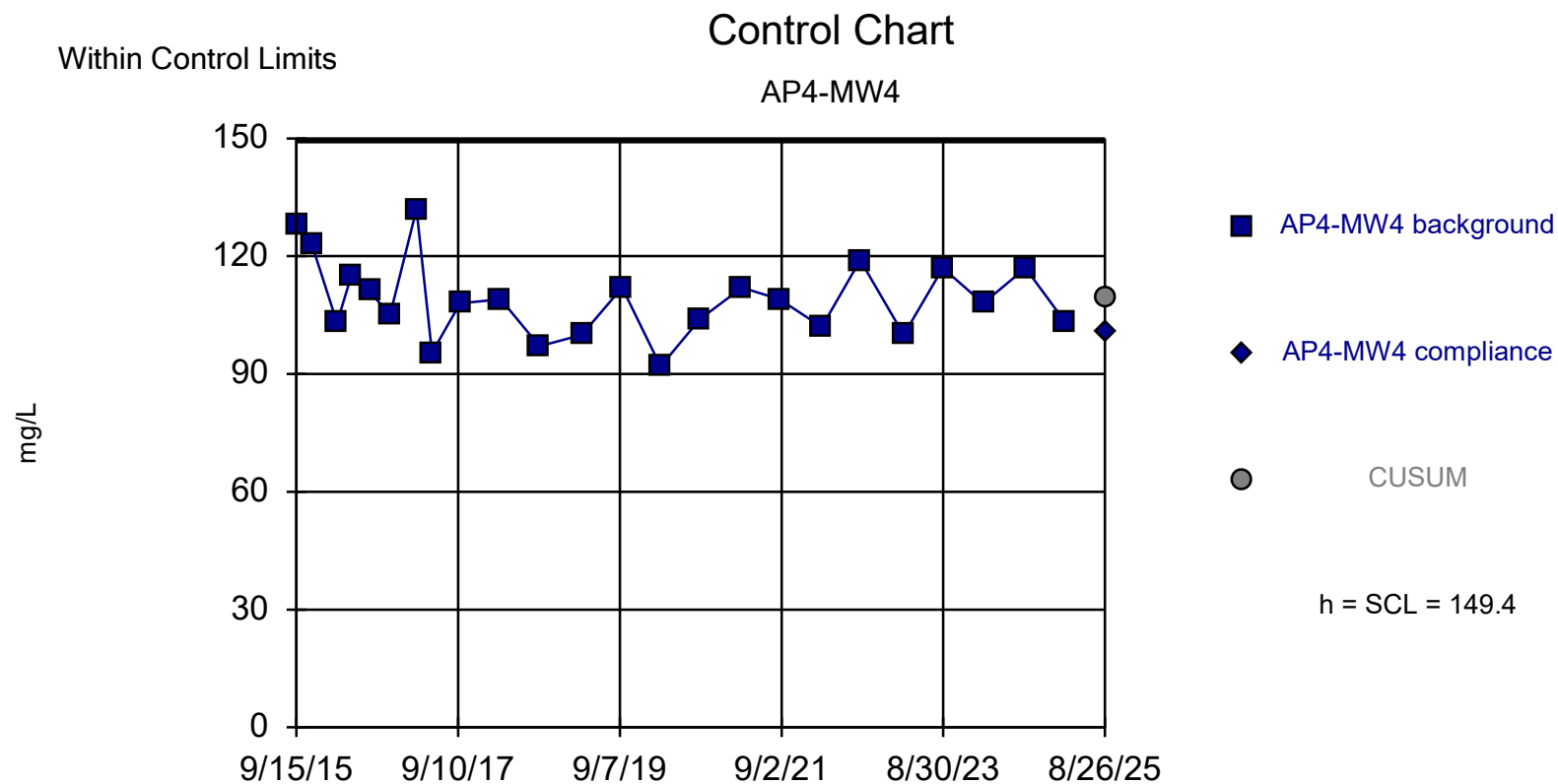
## Intrawell Non-parametric



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 24 background values. 91.67% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Seasonality was not detected with 95% confidence.

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Sheldon Station      Client: NPPD      Data: SheldonStation\_Q3-2025

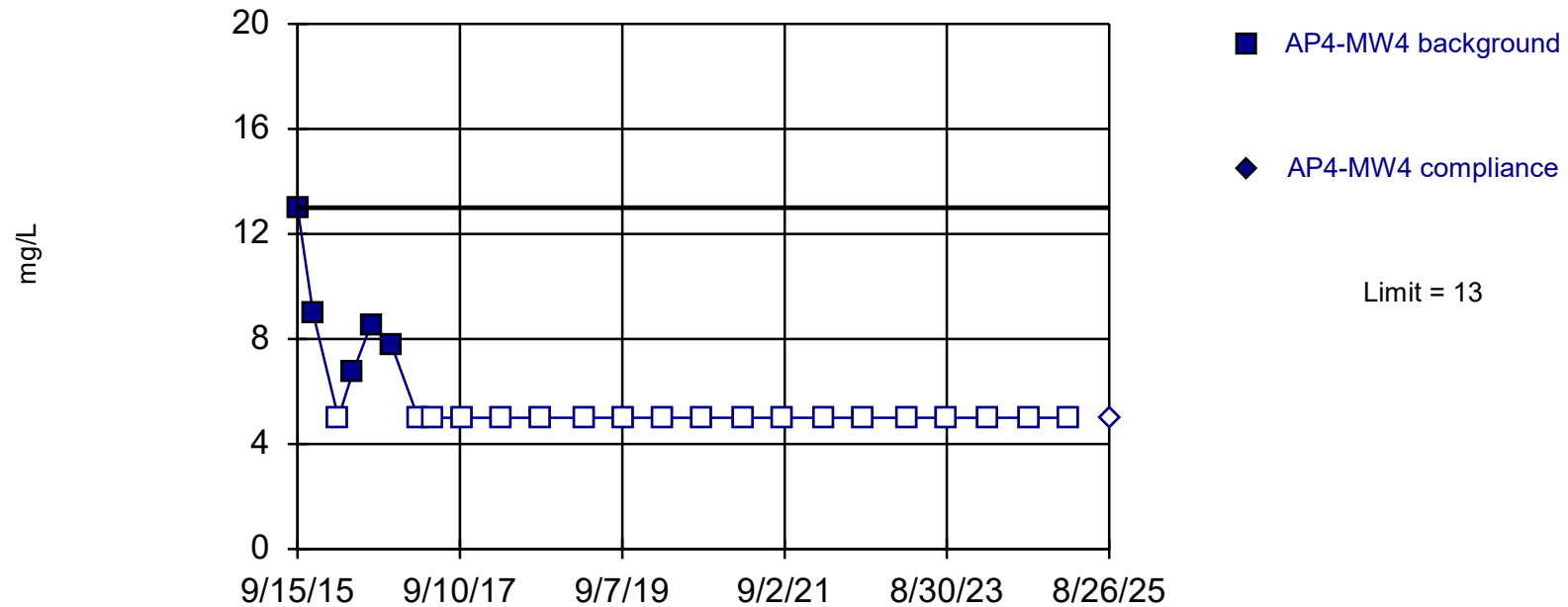


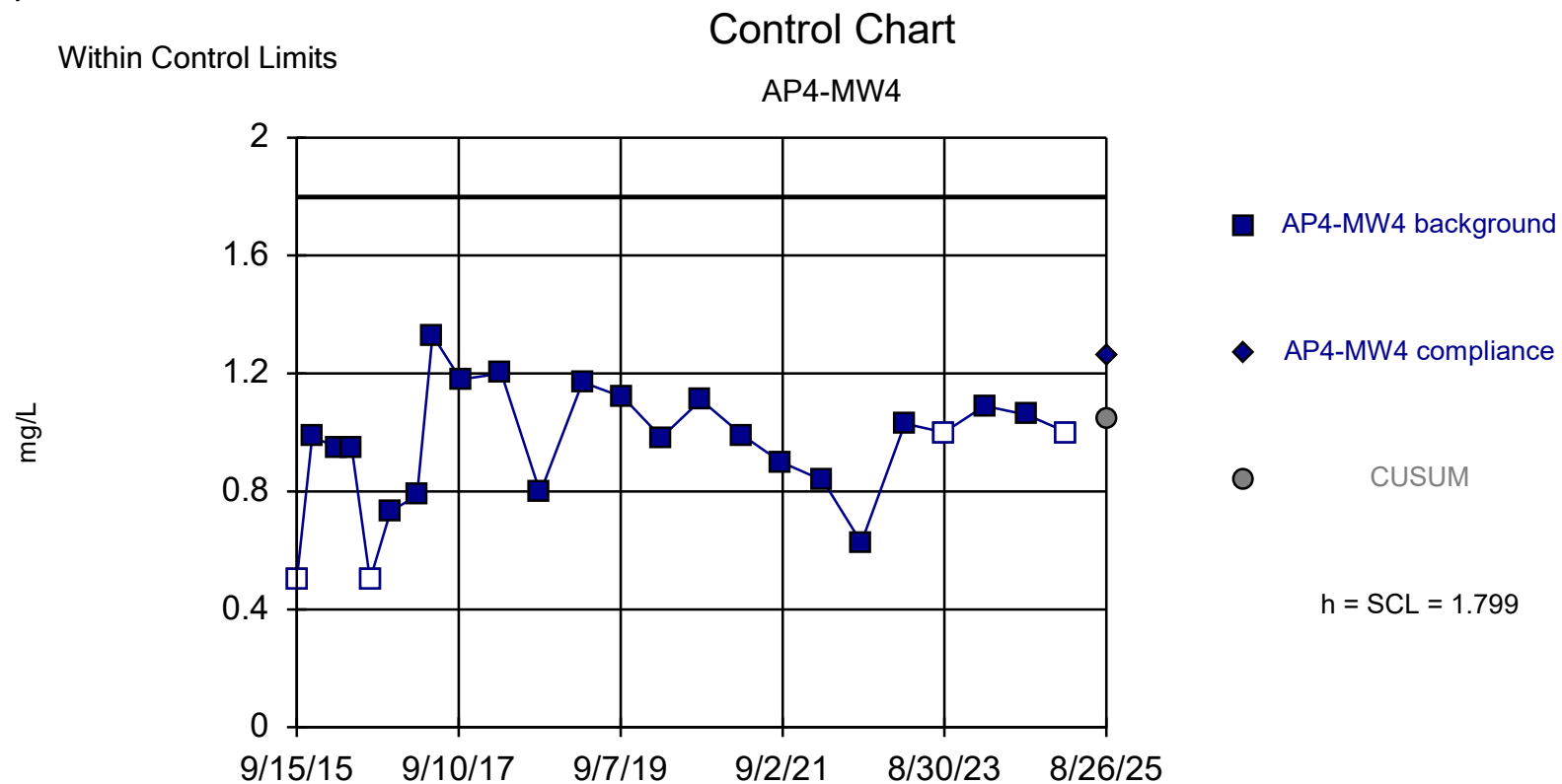


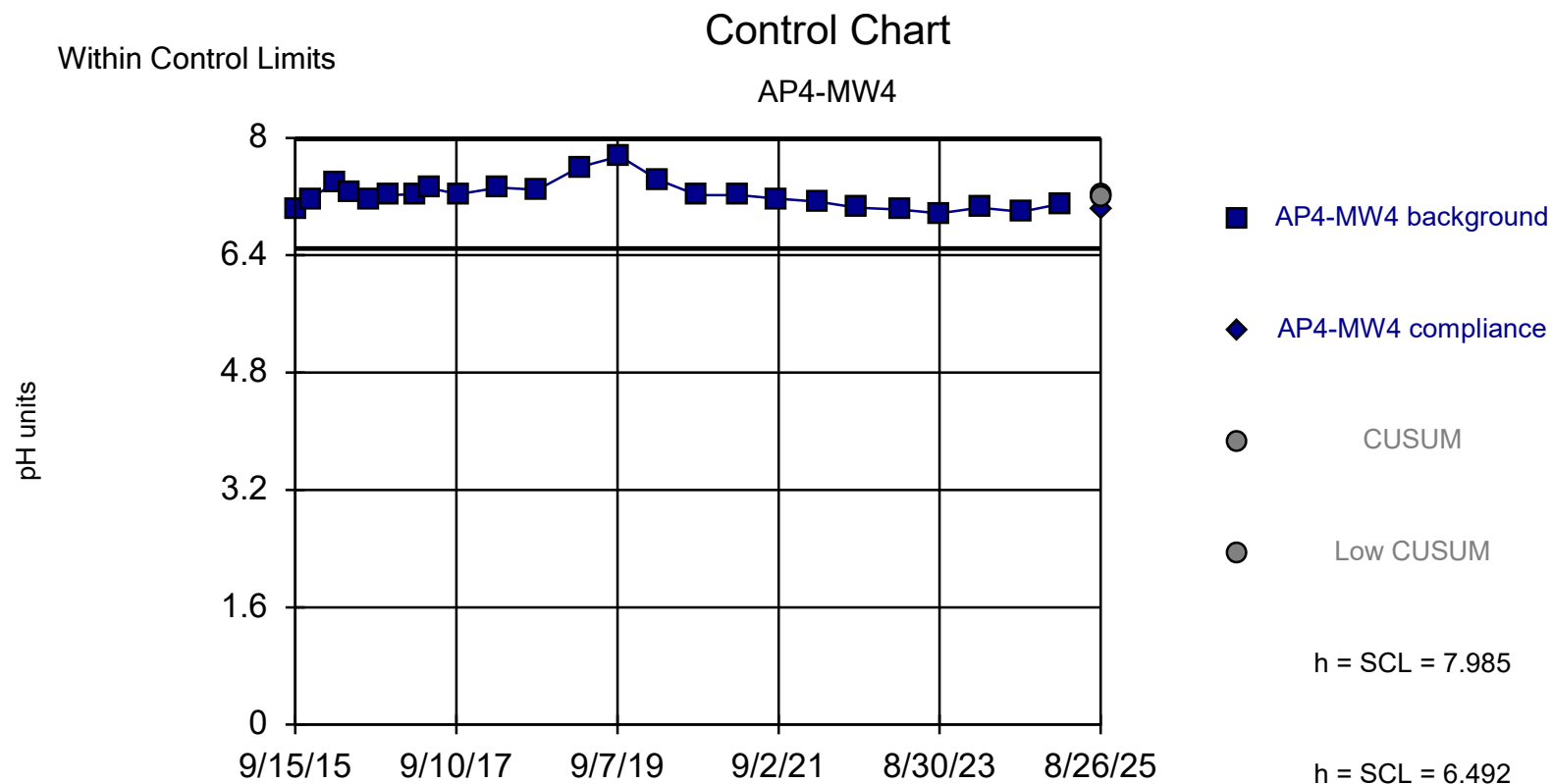
Within Limit

## Prediction Limit

Intrawell Non-parametric

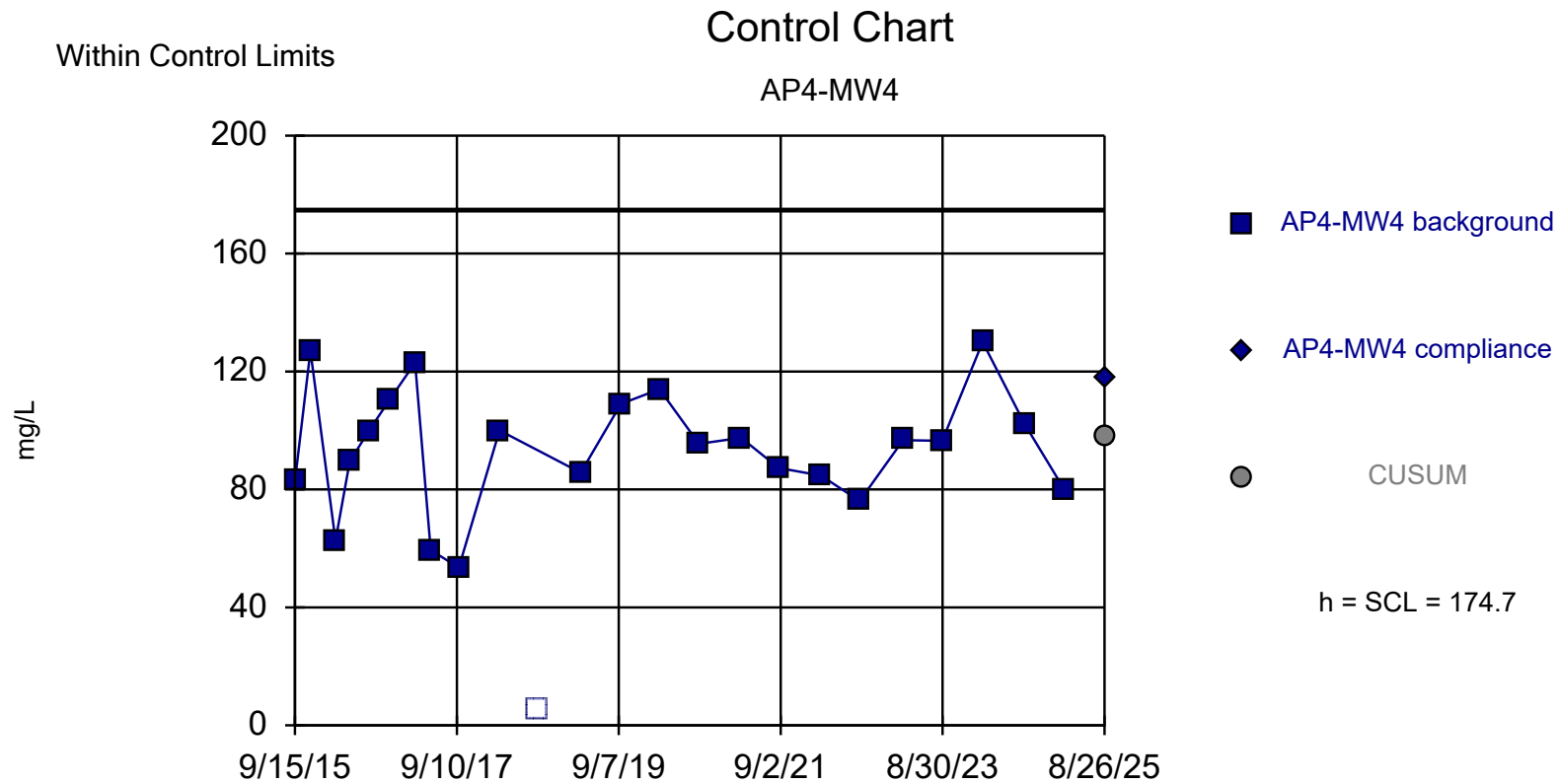






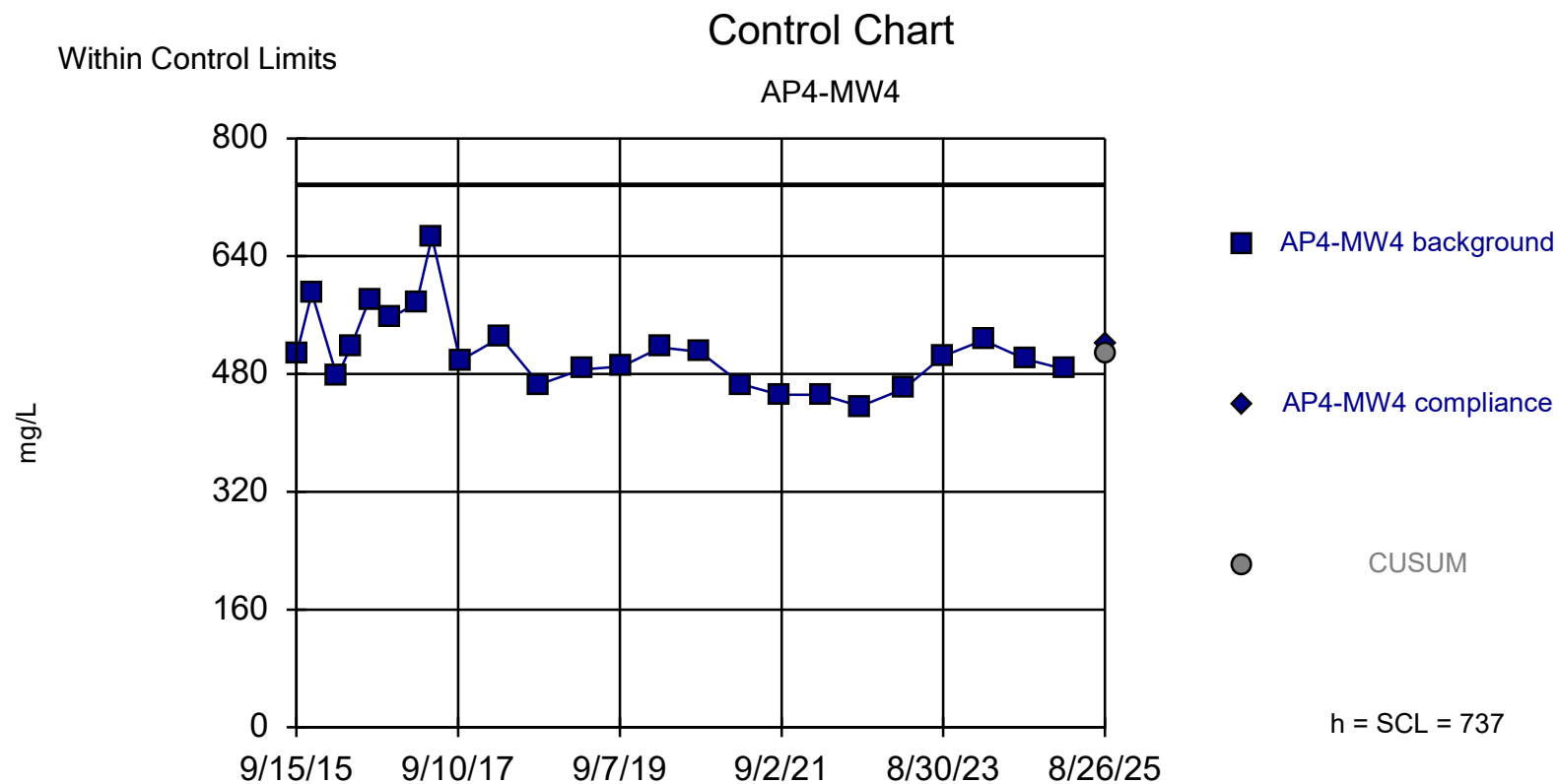
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Constituent: pH, field measured    Analysis Run 9/22/2025 9:48 AM  
 Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025



Background Data Summary: Mean=94, Std. Dev.=20.19, n=23. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9743, critical = 0.914. Report alpha = 0.000374. Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate Analysis Run 10/20/2025 10:21 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025



Background Data Summary (based on square root transformation): Mean=22.56, Std. Dev.=1.146, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9296, critical = 0.916. Report alpha = 0.000352. Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

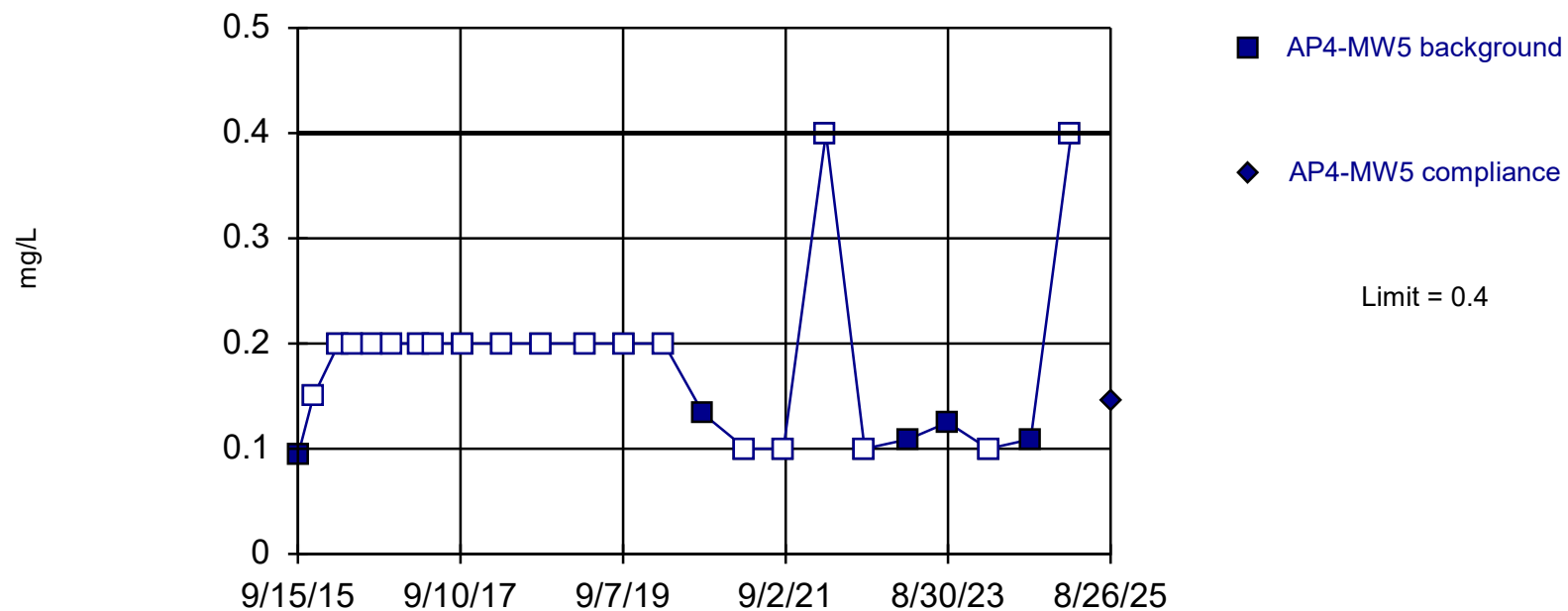
Constituent: Total Dissolved Solids, Alt. Values Analysis Run 9/15/2025 3:03 PM

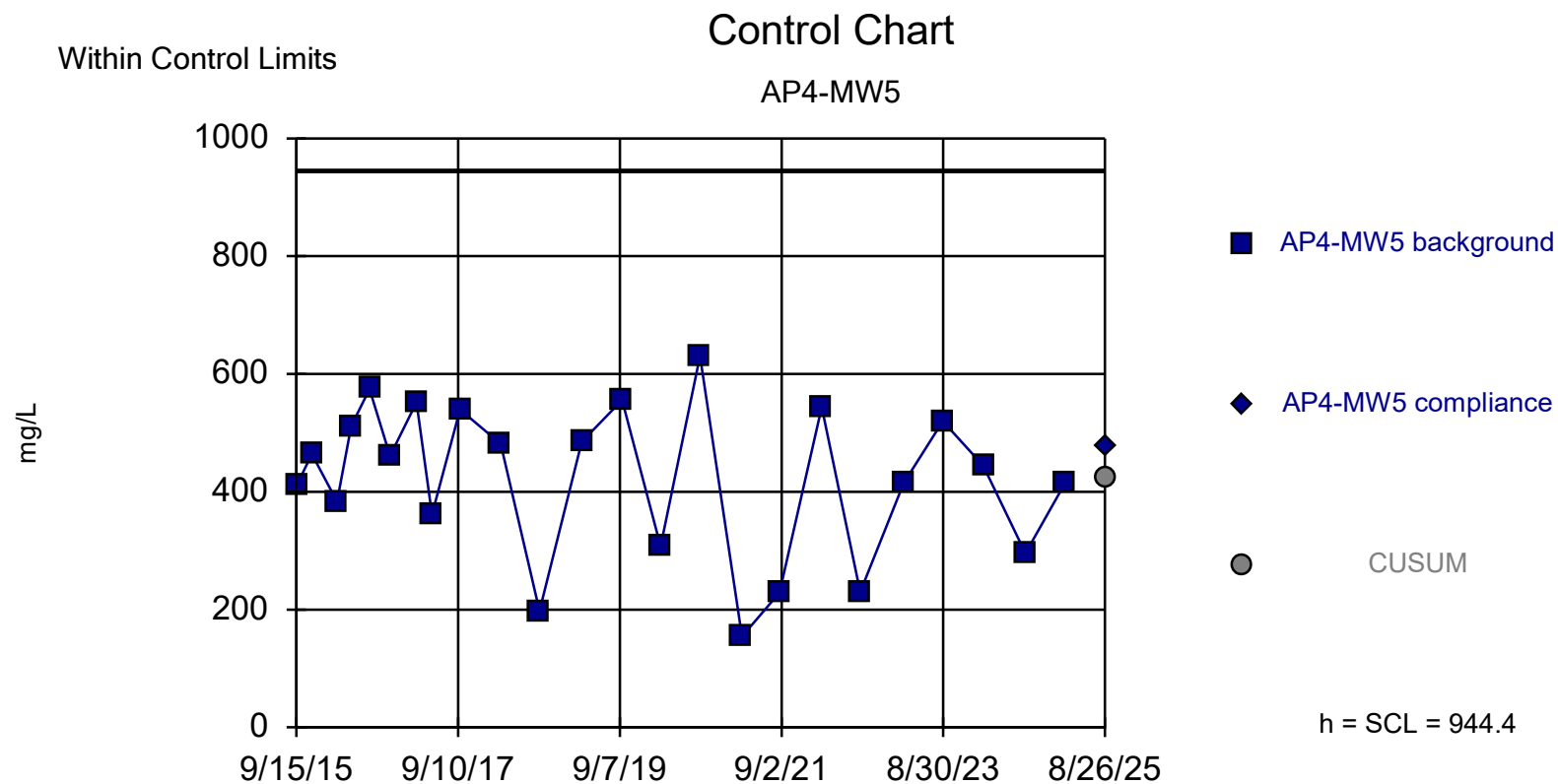
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025

Within Limit

## Prediction Limit

Intrawell Non-parametric





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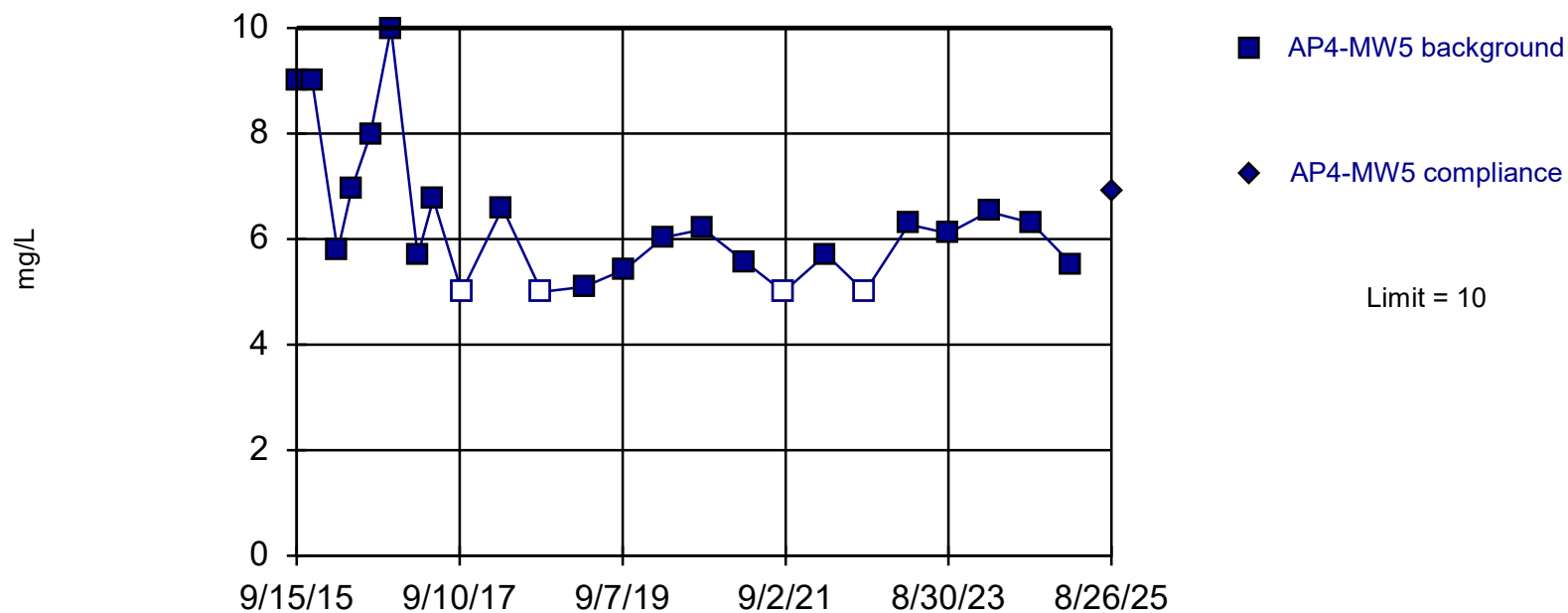
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Within Limit

## Prediction Limit

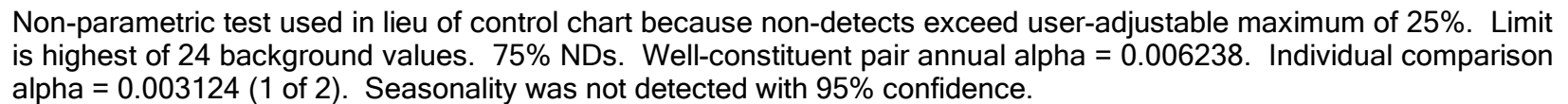
Intrawell Non-parametric



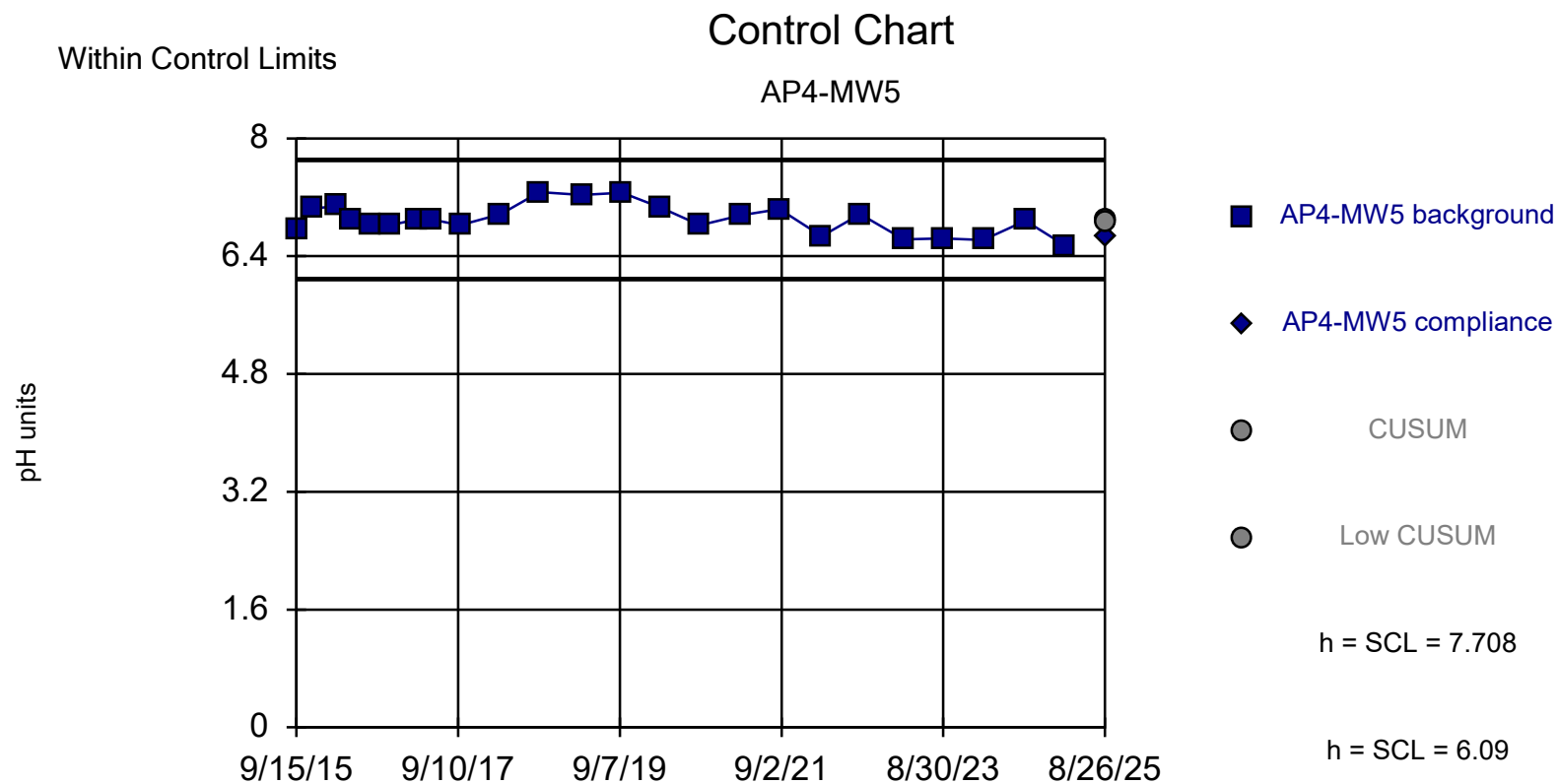
Non-parametric test used in lieu of control chart because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 24 background values. 16.67% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 9/15/2025 1:57 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025

### Intrawell Non-parametric

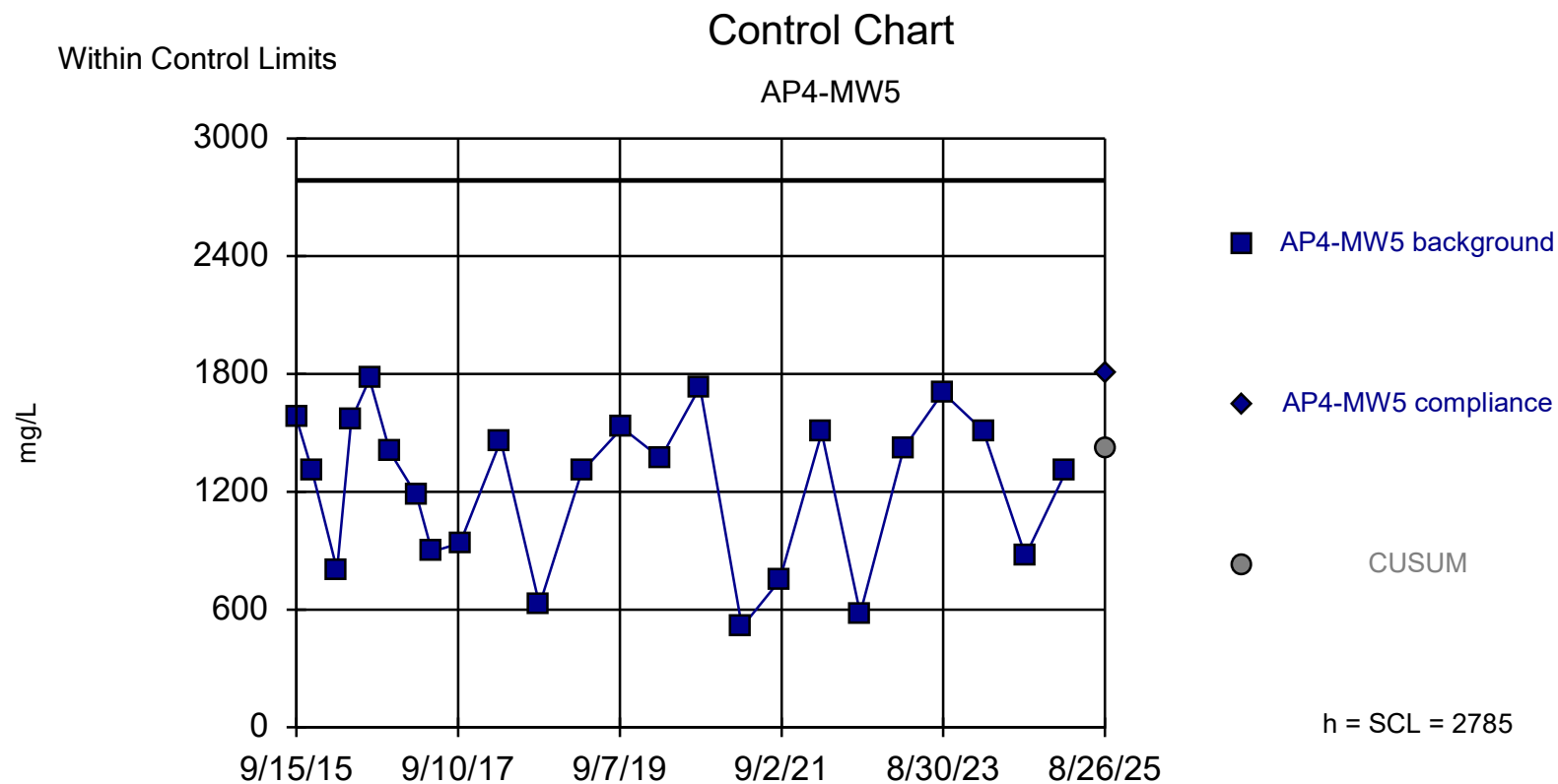


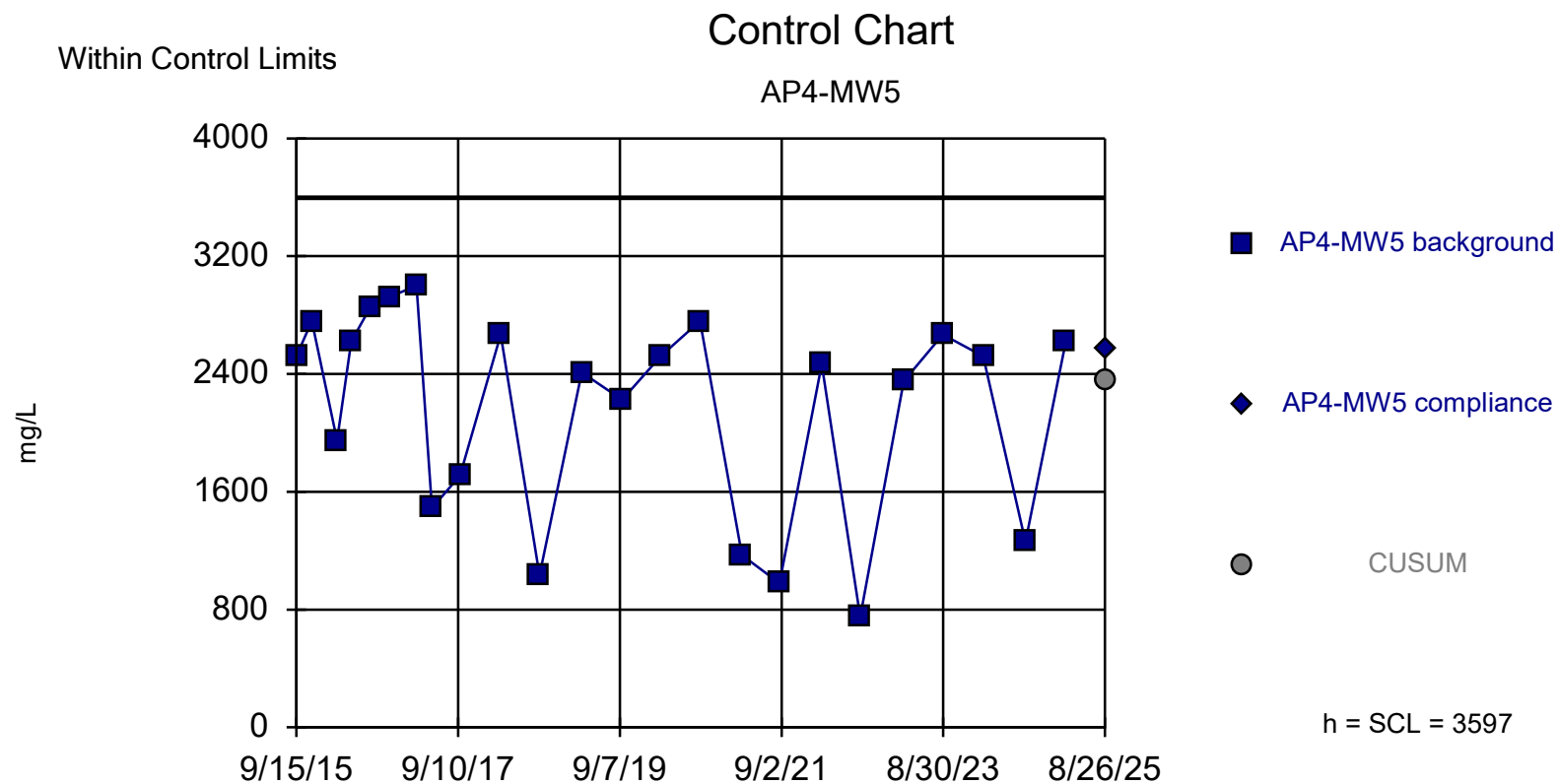
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Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025



Background Data Summary: Mean=6.899, Std. Dev.=0.2022, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9657, critical = 0.916. Report alpha = 0.000324. Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured    Analysis Run 9/22/2025 9:57 AM  
 Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

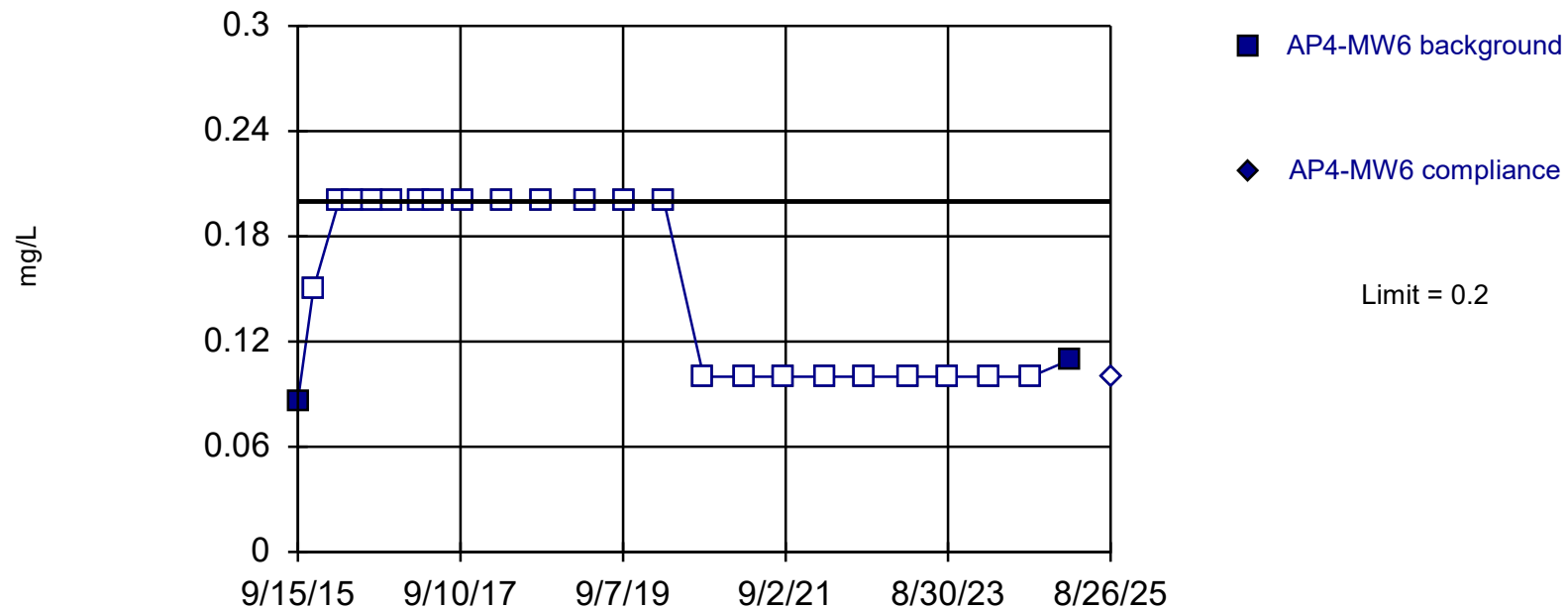




Within Limit

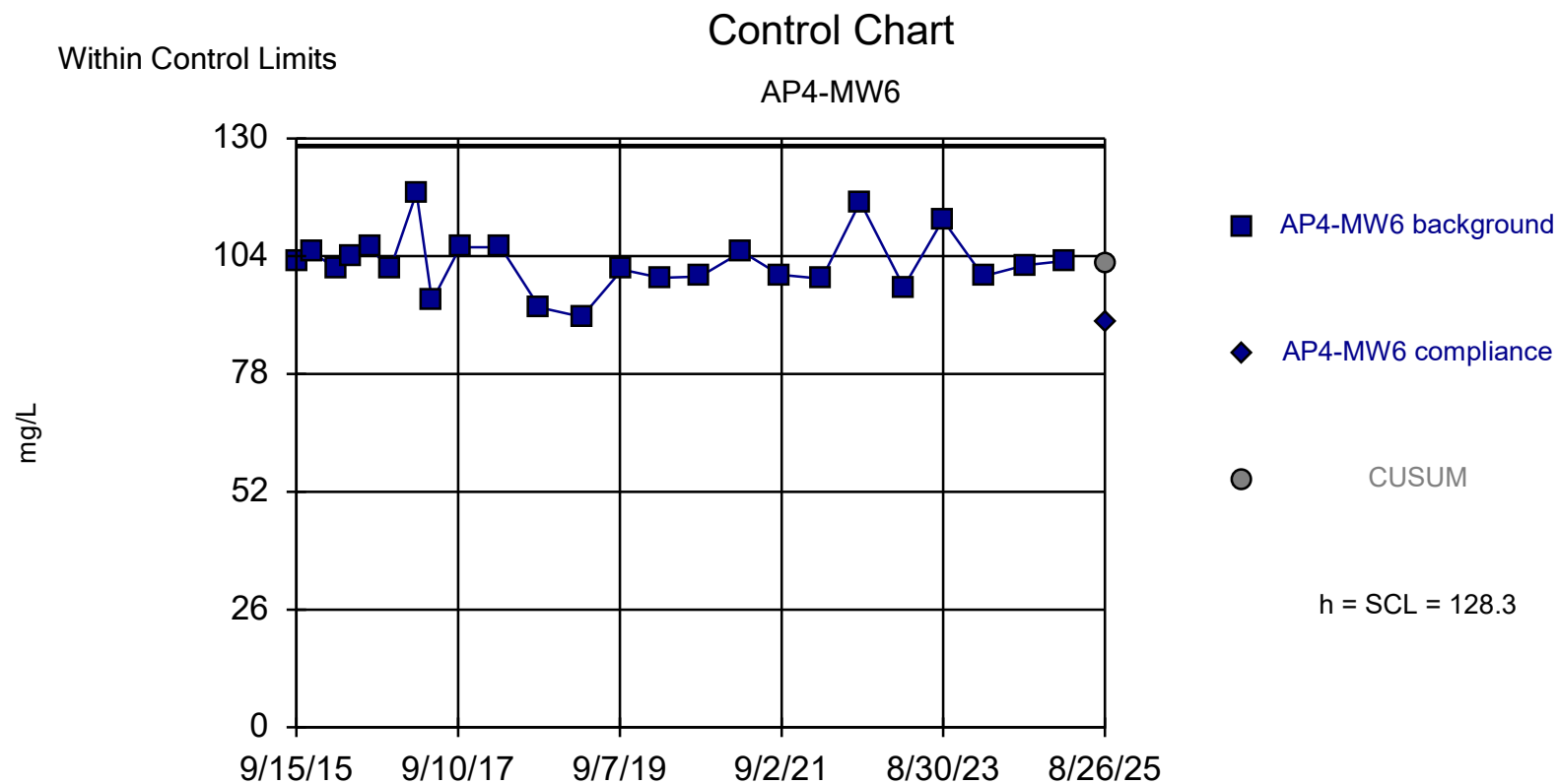
## Prediction Limit

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 24 background values. 91.67% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Seasonality was not detected with 95% confidence.

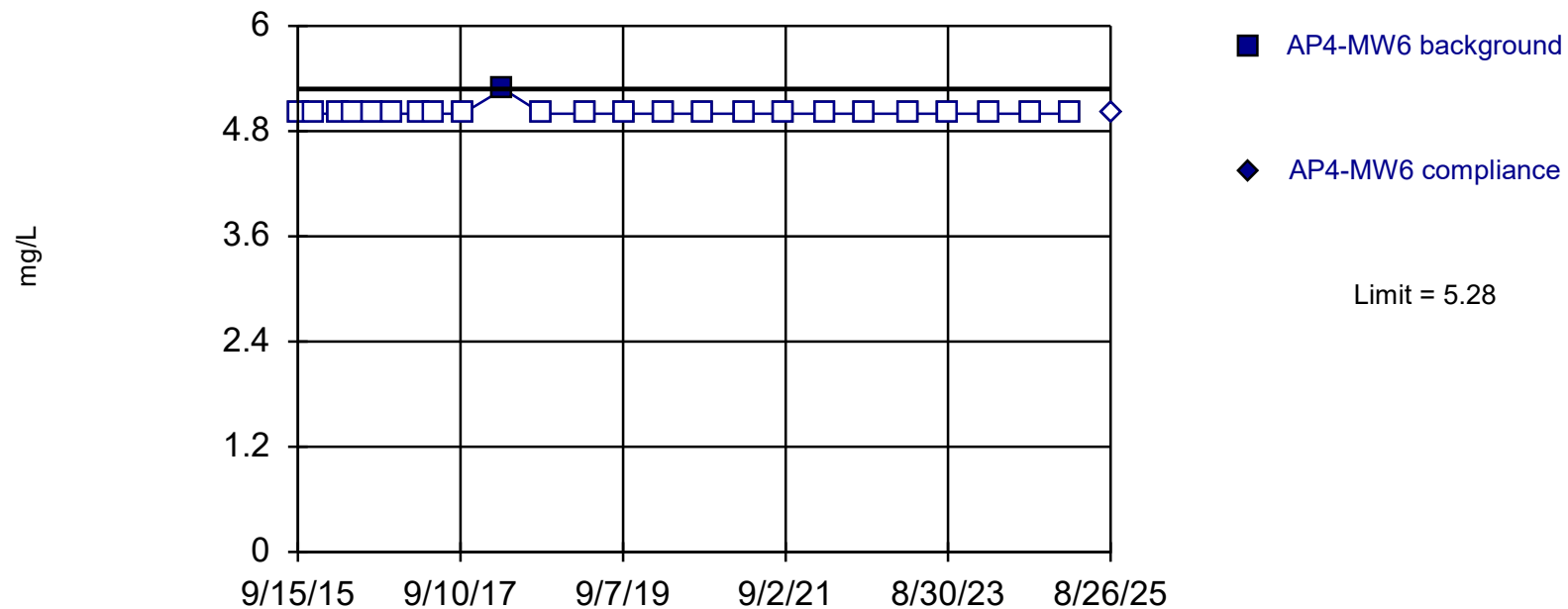
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Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025



Within Limit

## Prediction Limit

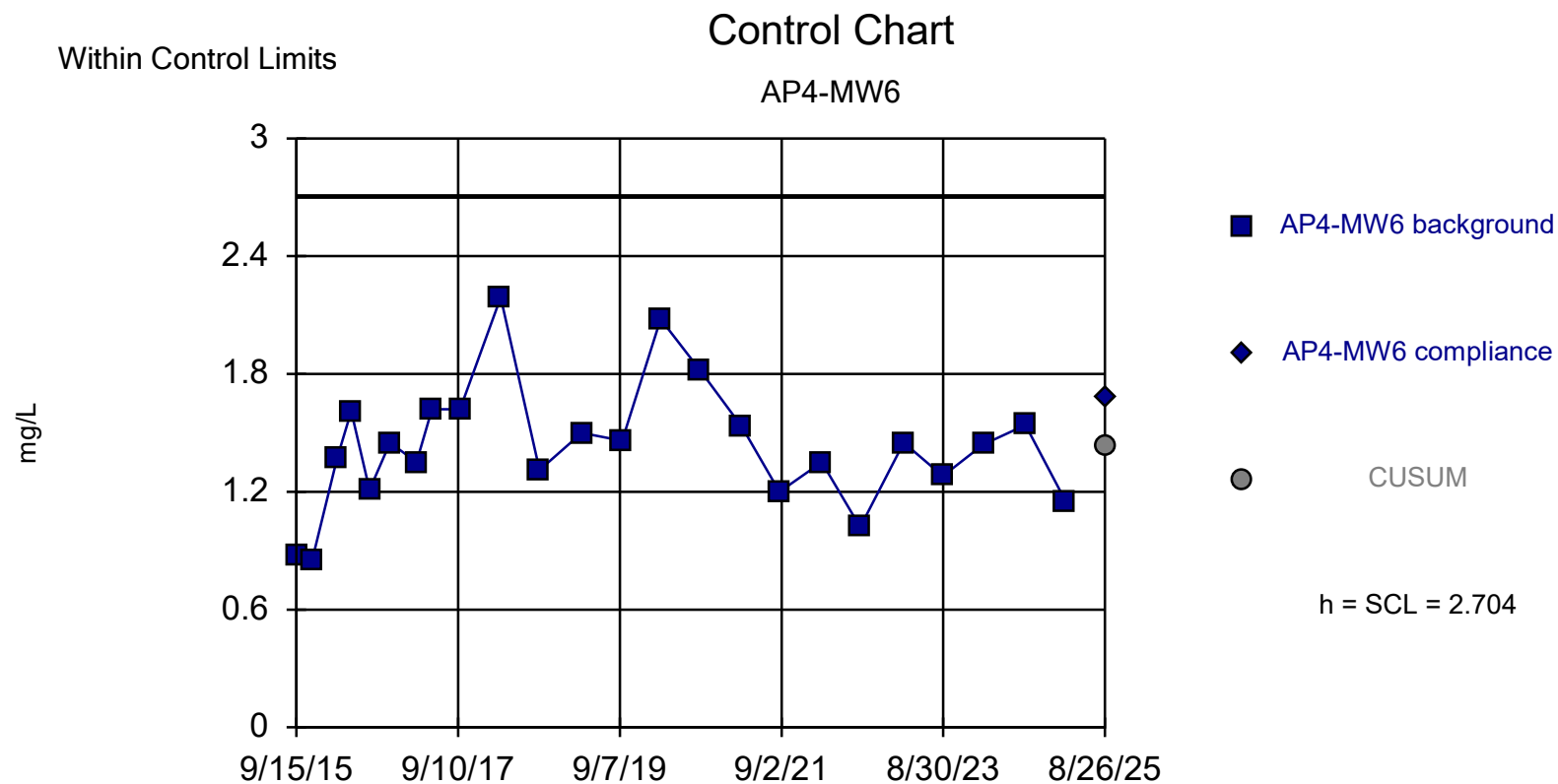
Intrawell Non-parametric

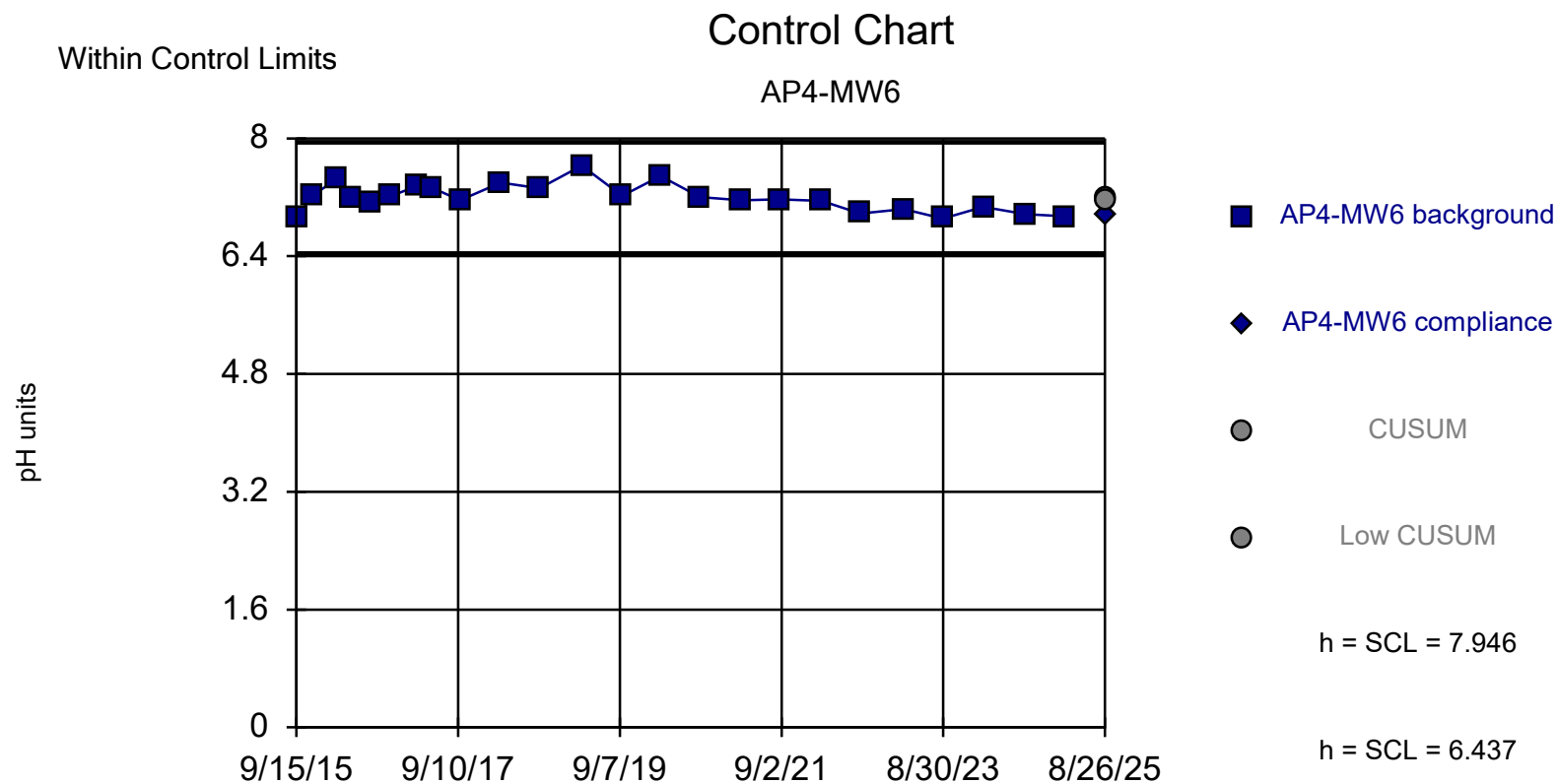


Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 25%. Limit is highest of 24 background values. 95.83% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 9/15/2025 1:44 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025



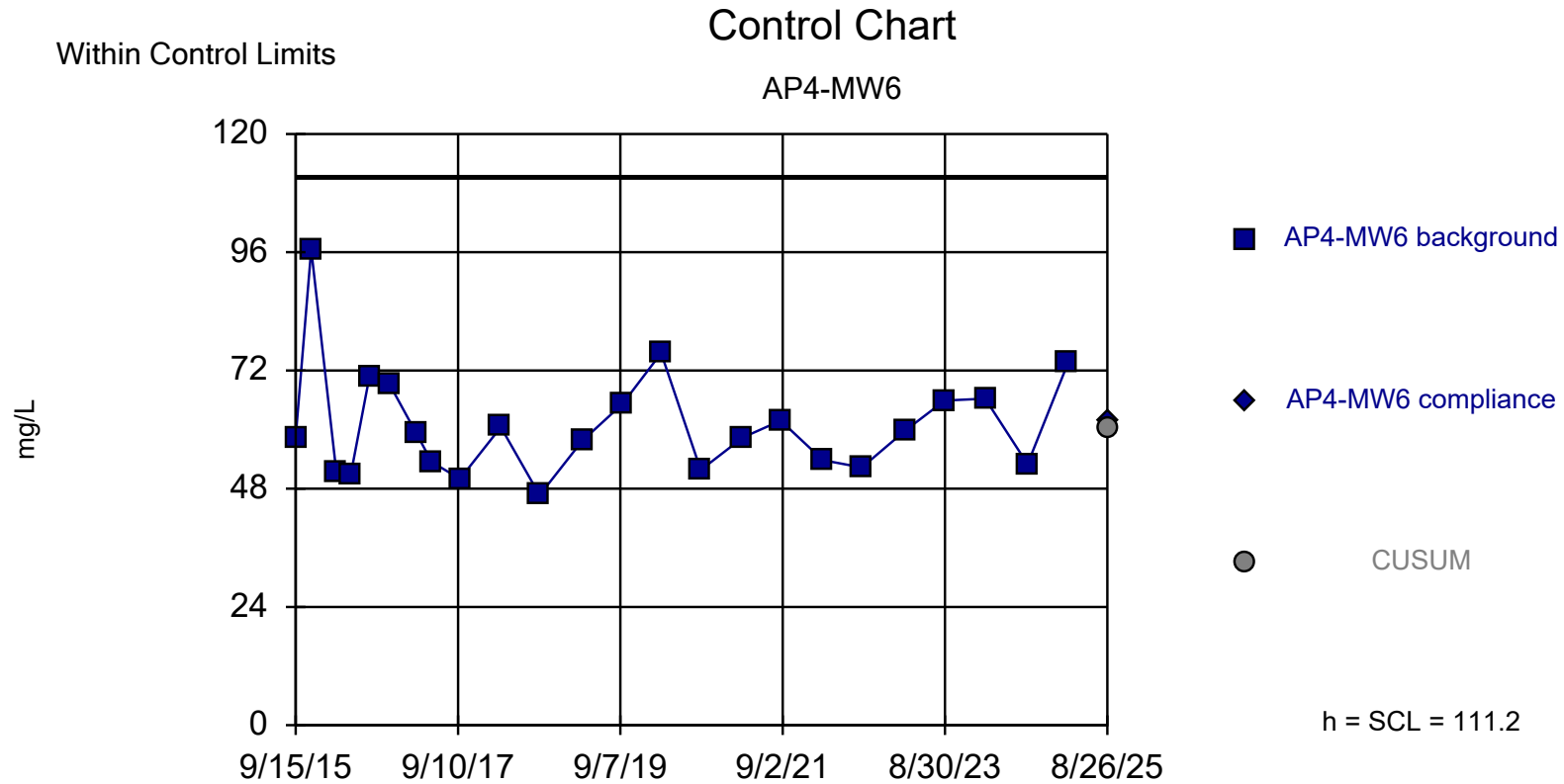


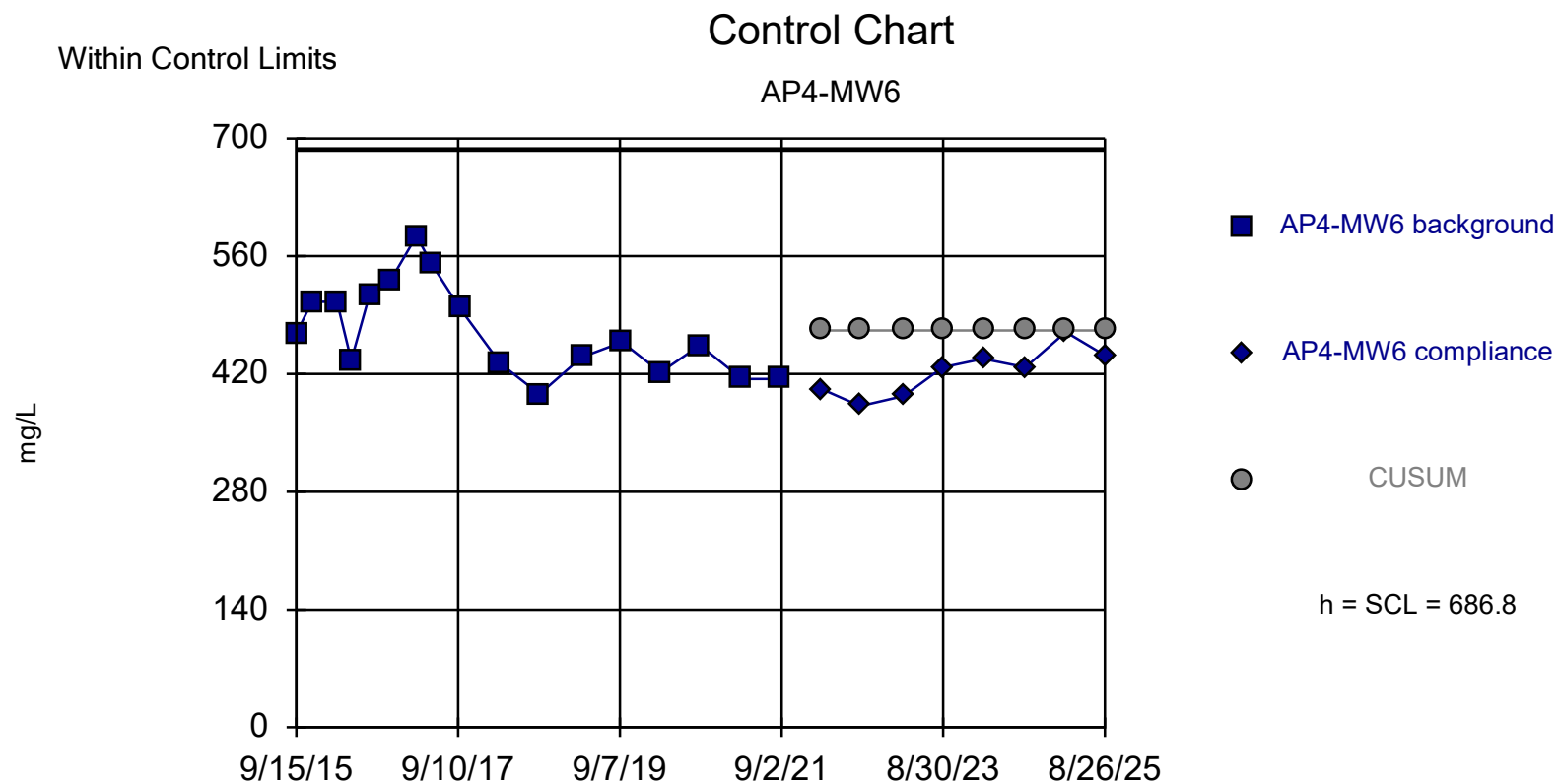


Background Data Summary: Mean=7.191, Std. Dev.=0.1886, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9613, critical = 0.916. Report alpha = 0.000324. Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 9/22/2025 10:02 AM

Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025







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**APPENDIX C**

**Alternate Source Demonstration for  
Field pH at AP4-MW7**



**REPORT**

# Alternate Source Demonstration for Field pH at AP4-MW7

*Nebraska Public Power District*

Submitted to:

**Nebraska Public Power District**

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

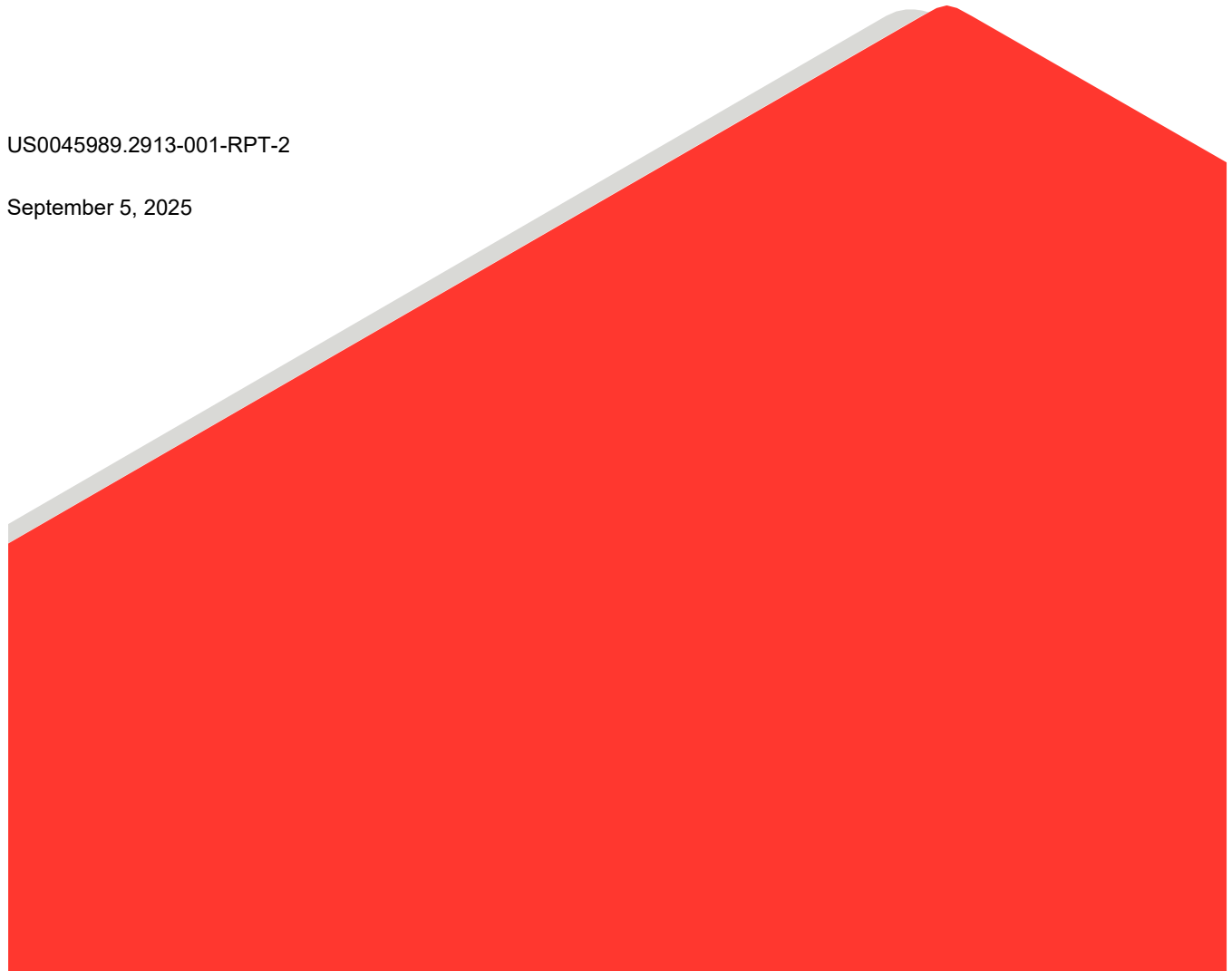
Submitted by:

**WSP USA Inc.**

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

US0045989.2913-001-RPT-2

September 5, 2025



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## **FIGURES**

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Figure 2 – Sheldon Station Ash Landfill No. 4 Time Series of Groundwater Elevation

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Figure 4 – Field-Measured pH Time Series

Figure 5 – AP4-MW7 Statistics (Not De-Seasonalized)

## 1.0 INTRODUCTION

On Behalf of Nebraska Public Power District (NPPD), WSP USA Inc. (WSP) performed a statistical evaluation of groundwater quality from the first quarter groundwater detection monitoring event of 2025 (Q1 2025) at Sheldon Station (SS or Site) Ash Landfill No. 4 (the Landfill or CCR Unit), located at 4500 W Pella Road, Hallam, Lancaster County, Nebraska (Figure 1). The statistical evaluation was performed in accordance with applicable provisions of 40 Code of Federal Regulations (CFR) Part 257, “Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals (CCR) from Electric Utilities; Final Rule” (CCR Final Rule), as amended, and corresponding regulations under Nebraska Administrative Code (NAC) Title 132, Chapter 7 (Integrated Solid Waste Management Regulations, Groundwater Monitoring and Remedial Action).

Statistical analysis of the Appendix III detection monitoring data for field pH groundwater at downgradient monitoring well AP4-MW7 indicated a potential exceedance below the lower statistical limit based on the parametric Cumulative Sum analysis (CUSUM) in the Q3 2024 sampling results, which was subsequently verified as evidence of a statistically significant increase (SSI) following the Q1 2025 event. Although determination of an SSI generally indicates that the groundwater monitoring program should transition from detection monitoring to assessment monitoring, 40 CFR §257.94(e)(2) and NAC Title 132 Chapter 7 004.03C allows the owner or operator (i.e., NPPD) 90 days from the date of determination (SSI verified on April 18, 2025; 90 days from the date of determination: July 28, 2025) to demonstrate a source other than the CCR Unit, or another condition, caused the SSI for field pH at AP4-MW7.

WSP’s review of hydrological and geologic conditions as well as field notes at the Site indicated the potential for the SSI to have resulted from a source other than the CCR Unit. In accordance with provisions of the CCR Final Rule and NAC Title 132 Chapter 7, WSP prepared this Alternative Source Demonstration (ASD) for the CCR Unit. This ASD includes an evaluation of field pH as measured in groundwater obtained from monitoring wells installed adjacent to the CCR Unit and ash contact waters obtained from within the CCR Unit.

This ASD conforms to the requirements of 40 CFR §257.94(e)(2) and NAC Title 132 Chapter 7 004.03C and provides the basis for concluding that the apparent SSI for field pH in groundwater at AP4-MW7 is not a release from the CCR Unit.

## 2.0 BACKGROUND

### 2.1 Site Background

Ash Landfill No. 4 at SS was constructed in 2002 and is located in the southwest quarter of Section 19, Township 7N, Range 6E, near Hallam, Lancaster County, Nebraska (Figure 1). The ash disposal facility consists of an 11.3-acre single cell and contains both fly ash and bottom ash. The configuration of the liner and contact water collection system (CWCS) at Ash Landfill No. 4 is described below in Section 3.1.

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

2.2 Site Geology and Hydrogeology

A well drilling program was initiated at Sheldon Station for Ash Landfill No. 4 between 1998 and 1999. The borings were used to characterize the nature of the Pleistocene Age sediments and glacial till present in the area. In the area of the CCR facility, the thickness of the till ranges from approximately 180 to 200 feet, thinning toward the north. The composition of the till varies throughout the formation, generally consisting of predominately clay to silty clay with sand lenses. The uppermost water-bearing zone is typically encountered between 15 and 25 feet below the ground surface in the area, well above the principal groundwater reservoir for the area (typically found approximately 300 feet below ground surface).

Regional groundwater in the upper water-bearing zone near Ash Landfill No. 4 flows from the southeast to the northwest. However, Sheldon Station is located in a geologic area dominated by glacial drift, and groundwater flow in the glacial deposits observed at Sheldon Station mimic local surface topography. The local groundwater flow system at Ash Landfill No. 4 varies from the regional groundwater flow pattern due to surface topography, which consists of a hill to the north and surface water drainages to the east and west of Ash Landfill No. 4. Thus, groundwater generally flows towards the Landfill from the north and south, and away from the Landfill to the east and west (see Figure 1).

2.3 Groundwater Monitoring Network

Design of the groundwater monitoring program for Ash Landfill No. 4 considered the size, disposal and operational history, anticipated groundwater flow direction, and saturated thickness of the uppermost aquifer. Based on these factors, a monitoring well network that consists of two background monitoring wells and five downgradient monitoring wells was installed around the Landfill. The monitoring wells are listed in Table 1 and presented in Figure 1.

Table 1: Monitoring Well Network

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

The two upgradient monitoring wells included in the groundwater monitoring program are used to represent the background groundwater quality and capture potential variability, and are located to the south of the Landfill. The five downgradient wells were installed along the western, northern, and eastern boundaries of the active Landfill. The depths of the monitoring wells were selected such that the monitoring wells are screened 10 to 37 feet below the ground surface to yield groundwater samples that are representative of water quality in the uppermost water-bearing zone. While AP4-MW7 is designated as a downgradient well for the Landfill based on the regional groundwater flow direction, water levels in AP4-MW7 indicate that on a localized scale AP4-MW7 is not downgradient of the Landfill; this is discussed further in Section 3.2.

Figure 2 (attached) presents the groundwater levels in the monitoring wells between Q4 2002 and Q1 2025. Water levels in all monitoring wells have been generally stable since the beginning of monitoring in 2002. However, slightly lower water levels have been observed the last two years (2023 to 2025) and less seasonal variability has been observed the last five years (2020 to 2025).

## 2.4 Summary of Field pH in AP4-MW7

Field pH values in groundwater at AP4-MW7 during the current baseline monitoring period (September 2015 to October 2021) ranged between 7.15 S.U. to 7.94 S.U. During baseline development, the period of interest was found to exhibit seasonality based on a one-way ANOVA test (the Kruskal-Wallis test) for intrawell seasonality at the  $\alpha = 0.05$  significance level, and the baseline data were deseasonalized following the procedure described in Section 14.3.3.1 of the Unified Guidance (USEPA 2009) to establish the baseline statistical limit. The Shewhart CUSUM statistical limits for field pH using the deseasonalized data were set with a lower bound of 6.86 S.U. and an upper bound of 8.10 S.U. Field pH at AP4-MW7 was below the lower statistical limit of 6.86 S.U. in September 2024 with a CUSUM value of 6.82 S.U. and a measured value of 7.17 S.U., and during the confirmatory sampling event in March 2025 with a CUSUM value of 6.61 S.U. and a measured value of 7.08 S.U., indicating an SSI below the lower statistical limit. A time series of the field readings for AP4-MW7, along with values for the other network wells, are presented in Figure 4.

## 3.0 EVALUATION OF POTENTIAL SOURCES

### 3.1 Facility Construction and Dry Placement

The configuration of the liner and leachate collection system (LCS) at Ash Landfill No. 4 is as follows, from top to bottom:

- at least 3 feet of select fill or fly ash, serving as a protective layer to prevent trafficking damage to the liner
- 8-ounce geotextile (Trevira 011/280)
- 1 foot of leachate collection material and 4-inch perforated piping to reduce drainage lengths
- 3 feet of low permeability soil (LPS) liner with a maximum hydraulic conductivity of  $1 \times 10^{-7}$  centimeters per second (cm/sec)
- subdrain system consisting of gravel and 4-inch perforated pipe trenches

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

- protective layer of 0.67 feet of revegetated soil (to be covered during fly ash deposition)
- 3 feet of LPS liner with a maximum hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec

The LCS is designed to prevent the buildup of hydrostatic head of more than 1 foot on the liner outside the sump area. In conjunction with the Leachate Evaporation Pond, the LCS is designed to remove leachate from the Landfill. This is accomplished by grading the ash to the south to promote drainage toward the sump.

Beneath the LPS liner of the Landfill is an underdrain system, which consists of a series of trenches and drains that surround the base of the Landfill to collect groundwater. Groundwater within the underdrain system flows to the southern end of the Leachate Evaporation Pond to a sump within an interceptor trench. The underdrain consists of perforated pipe within a gravel trench. The intent of this underdrain system is to keep groundwater at least 5 feet below the base of the Landfill liner. Water from the sump is pumped to the Leachate Evaporation Pond or, under the facility's NPDES permit (NE0111490), can be discharged to a tributary of Olive Branch according to Outfall 003.

Fly ash in the Landfill is deposited either dry or slightly moist, depending upon whether the fly ash comes from a precipitator or baghouse. Fly ash is moisture conditioned by mixing water with the fly ash to a pre-set moisture content using a batch style rotary pan mixer. Service water from on-site wells at Sheldon Station is used for the moisture-conditioning process. Bottom ash is removed from a dewatering bin and may contain some moisture when it is deposited in the Facility.

At the beginning of ash placement operations in 2002, an initial layer of ash at least 3 feet thick was placed over the entire Landfill to protect the liner and LCS from trafficking damage. During current operations, lifts are placed approximately 3 to 6 feet thick beginning at the north end of the Facility. In general, one entire lift is placed before another lift begins. The lifts are placed to promote drainage toward the sump located in the southern end of the Facility.

With minimal interstitial water available to be transmitted as leachate there is little possibility of a release from the Landfill. Additionally, the presence of the engineered liner system at Ash Landfill No. 4 further reduces the likelihood of seepage occurring from the unit.

### 3.2 Hydrogeological Flow Regime

Well AP4-MW7 has been designated as a downgradient well based on the regional groundwater flow direction. However, as depicted in Figure 1, on localized scale AP4-MW7 is upgradient of the Landfill; with a localized groundwater flow direction flowing south from AP4-MW7 towards the Landfill. Therefore, although AP4-MW7 is designated as a downgradient well, it is highly unlikely that groundwater impacted by seepage (if occurring) from the Landfill could impact the water quality monitored at AP4-MW7.

The lack of apparent flow path from the Landfill towards AP4-MW7 is further depicted in cross-section in Figure 3. The water levels at AP4-MW7 have historically been above the highest point of the liner on the north side of the Landfill. This indicates that seepage from the Landfill, if occurring, would be unlikely to impact the water quality monitored at AP4-MW7. Additionally, as described in Section 3.1, the construction of the liner system and placement of ash within the Landfill is designed to promote drainage toward the sump located in the southern end of the Landfill away from AP4-MW7, and the sump is at a lower elevation than the screen interval and water levels observed in AP4-MW7.

NPPD will review the groundwater monitoring well network associated with Ash Landfill No. 4 and revise the site Sampling and Analysis Plan and submit to the NDWEE for approval as necessary.

### 3.3 Uncaptured Natural Variability

The upgradient and downgradient monitoring wells have shown a range of field pH values during baseline and compliance monitoring. Summary statistics are useful for evaluating variability within AP4-MW7 and amongst the other monitoring wells, and are presented in Table 2 for both the baseline and compliance monitoring periods. A time series chart is presented in Figure 3.

AP4-MW7 generally has a higher field pH value than other upgradient and downgradient wells, with AP4-MW7 values ranging between 7.15 to 7.94 S.U. during baseline monitoring and 7.08 to 7.20 S.U. during compliance monitoring. While the September 2024 and March 2025 values in AP4-MW7 are considered SSIs per the selected statistical methodology based on the associated calculated CUSUM values, the measured pH value for September 2024 (7.17 SU) was slightly above the minimum observed during the baseline period for AP4-MW7 and the value for March 2025 (7.07 SU) was slightly below the minimum value measured in the baseline period

for AP4-MW7. Additionally, both the September 2024 and March 2025 values in AP4-MW7 are within the range of the naturally observed and unimpacted field pH values in the area based on the values from upgradient locations.

**Table 2: Field-Measured pH Summary Statistics**

	Monitoring Well	Baseline			Compliance		
		Minimum (S.U.)	Mean (S.U.)	Maximum (S.U.)	Minimum (S.U.)	Mean (S.U.)	Maximum (S.U.)
Upgradient	AP4-MW1	6.94	7.24	7.60	6.95	7.05	7.12
	AP4-MW2	6.98	7.20	7.60	6.96	7.00	7.09
Downgradient	AP4-MW3	7.15	7.40	7.69	7.08	7.16	7.27
	AP4-MW4	7.02	7.29	7.75	6.97	7.04	7.13
	AP4-MW5	6.75	6.98	7.27	6.54	6.71	6.97
	AP4-MW6	6.92	7.27	7.63	6.91	7.01	7.15
	AP4-MW7	7.15	7.48	7.94	7.08	7.20	7.36

Within Table 2, mean values for each of the wells within the monitoring program have been lower during the compliance period than the mean values for the current baseline periods for the respective locations. As such, the shift in pH may be reflective of an area-wide change, rather than a change specific to AP4-MW7. With the identified shift across the well network, an update to the baseline periods for each well and parameter is recommended. Any baseline update would be conducted in accordance with the site Sampling and Analysis Plan, and subject to approval by the NDWEE.

### 3.4 Instrument Variability, Maintenance, and Calibration

The primary goal in a groundwater detection monitoring program is to identify real changes to groundwater quality if they occur. While field pH limits are two-tailed, meaning they have an upper and lower bound, the focus of this section is on the lower limit and identifying decreases in pH as the identified SSI at AP4-MW7 consists of values below the lower statistical limit.

A Shewhart CUSUM methodology was selected for field pH at AP4-MW7 because the baseline data were found to be normally distributed. With the Shewhart CUSUM methodology, compliance data is evaluated two ways. First, the sample result is compared to the baseline statistical limit. Second, the cumulative sum (CUSUM) of the sample results calculated from new compliance measurements and prior compliance measurements is compared to the statistical limit. If either the numeric value or CUSUM is above the statistical limit, the result is considered statistically significant. The mean ( $\bar{x}_{BG}$ ) and standard deviation ( $s_{BG}$ ) of the baseline dataset are used to calculate the statistical limit ( $SL$ ), by the following equation:

$$SL = \bar{x}_{BG} + h s_{BG}$$

Per the Unified Guidance,  $h$  is the standardized control limit.

For well AP4-MW7, the minimum field pH value observed in the baseline period was 7.15 S.U. and the lower statistical limit following deseasonalization of the data was set at 6.86 S.U. While the SSI at AP4-MW7 was identified due to CUSUM values less than the lower statistical limit in September 2024 (6.82 S.U.) and in March 2025 (6.61 S.U.), the field measurements were between the lower and upper statistical limits, with measured field

pH values of 7.17 S.U. and 7.08 S.U., respectively (deasonalized as 7.24 S.U. and 7.01 S.U. for the September 2024 and March 2025 events). Therefore, the two field pH values that identified the SSI at AP4-MW7 were 0.02 S.U. greater than (September 2024) and 0.12 S.U. less than (March 2025) the minimum value that was measured in the baseline period for AP4-MW7 (7.15 S.U.).

While the September 2024 and March 2025 values in AP4-MW7 are considered SSIs per the selected statistical methodology, the values for September 2024 and March 2025 were less than 0.12 S.U. below the minimum value measured in the baseline period, a minor difference when considering the potential sources of variability inherent in field pH measurements.

Well AP4-MW7 is sampled with low-flow methodology as outlined by Puls and Barcelona (1996). One of the key aspects of this method is to monitor stabilization parameters during well purging, with a minimum of three successive readings meeting stabilization criteria. For field pH, the stabilization criteria is  $\pm 0.1$  S.U. This recommended stabilization criteria for the difference between individual measurements is roughly comparable to the observed difference at AP4-MW7 in March 2025, suggesting the observed difference may be related to measurement variability.

Between the start of the CCR monitoring program and present, a number of changes have occurred related to the field instrumentation at Sheldon Station. From 2015 through Q1 2021, a QED Environmental Systems MicroPurge® MP-20 was used at the site as the primary field probe. Issues with the MP-20 were documented within an alternative source demonstration in 2020 (Golder 2020). Beginning with the Q3 2021 sampling event, the field probe was changed to a QED Environmental Systems MicroPurge® MP25T. The MP25T was sent to the manufacturer (QED Environmental Systems, Inc.; QED) for repair and replacement of the associated flow sensor following the Q1 2024 sampling event. Although using the same sampling methods, there is a potential for minor differences in instrument calibration and instrument operation when switching between sampling equipment, including differences that occur based on routine maintenance (such as the flow sensor replacement in 2024).

Field staff calibrate the field pH meter at the start of each sampling day. During the March 2025 sampling event the pH meter was re-calibrated about halfway through the sampling activities, based on issues observed during the September 2024 sampling event. During calibration, the pH probe readings of the calibration buffer solutions immediately following calibration are documented. Table 3 presents the pH probe readings following calibration for the September 2024 and March 2025 sampling events, which ranged from 0.02 S.U. below the calibration standard to 0.03 S.U. above the calibration standard. Given that pH measurements can exhibit minor deviation from the known standard based on temperature and other atmospheric factors, pH measurements for groundwater samples have the potential to exhibit similar variability to that of the calibration standards. While the differences in meter readings versus standard solutions are relatively small, the differences are similar to the 0.03 S.U. decreases at AP4-MW7 associated with the potential exceedance in September 2024. Further, the manufacturer-specified accuracy for the field pH probe is  $\pm 0.20$  S.U., which is greater than the observed decrease in field pH values at AP4-MW7. This further suggests that the observed minor increases in field pH may be related to measurement variability.



**Table 3: Field Meter pH Readings Post-Calibration (September 2024 and March 2025)**

Event/Date	Calibration Standard (S.U.)	Meter Reading	
		Probe Reading (S.U.)	Difference (S.U.)
9/3/2024 (Morning)	7.00	6.98	-0.02
	10.01	10.01	0.00
3/3/2025 (Morning)	7.00	7.03	0.03
	10.01	10.01	0.00
3/3/2025 (Mid-day)	7.00	7.02	0.02
	10.01	10.04	0.03

**Notes:**

According to the manufacturer, the accuracy of the field pH measurements for the meter currently use is  $\pm 0.2$  S.U., assuming proper calibration.

pH values are corrected for temperature by the field instrument.

### 3.5 Data Handling

As noted in Section 2.4, seasonality was identified during establishment of the current baseline period for field pH at AP4-MW7. However, seasonality has not been identified for the period consisting of the baseline and compliance data through March 2025. In practice, where seasonality has been identified in the baseline period, compliance statistics have been conducted using data deseasonalized using the process described in Section 2.4 for consistency with the original baseline statistics. For field pH at AP4-MW7, since seasonality was not detected while running compliance statistics, an option to automatically deseasonalize the data whether or not seasonality was identified was used. Seasonality was not identified during baseline establishment for the other program parameters at AP4MW7.

As part of the ASD process, the alternative option of allowing the statistical software to determine whether or not seasonality was present was evaluated. Figure 5 presents an alternative statistical chart where seasonality has not been identified. Using the same baseline dates identified in Section 2.4, baseline limits were set at 6.74 S.U. and 8.22 S.U. The September 2024 measured value of 7.17 S.U. returned a CUSUM value of 6.98 S.U., while the March 2025 measured value of 7.08 S.U. returned a CUSUM value of 6.77 S.U., both within the statistical limit where seasonality has not been identified. This difference in data handling suggests that the identified SSI may in part be driven by the handling of the previously identified seasonality within the data set.

### 4.0 EVIDENCE OF AN ALTERNATIVE SOURCE

Primary lines of evidence and conclusions drawn from the evidence used to support this ASD are provided in Table 4. In summary, the SSIs identified for field pH in samples collected from AP4-MW7 are not considered to be an indication of a release from the Landfill. The SSI for field pH at AP4-MW7 is attributed to natural variability within the groundwater system and instrument variability within the pH probe.



**Table 4: Alternate Source Lines of Evidence**

Key Line of Evidence	Supporting Evidence	Description
Water Quality	Uncaptured natural variability	Field pH values in samples collected from AP4-MW7 are within the range of the naturally observed and unimpacted field pH values in the area based on the values from upgradient locations, indicating that the slight decrease in field pH values could be due to natural variability.
Hydrological Flow Regime	On localized scale AP4-MW7 is upgradient of the Landfill	Groundwater flows south from AP4-MW7 towards the Landfill; therefore, it is highly unlikely that groundwater impacted by seepage (if occurring) from the Landfill could impact the water quality monitored at AP4-MW7. Additionally, the construction of the liner system and placement of ash within the Landfill is designed to promote drainage toward the sump located in the southern end of the Landfill away from AP4-MW7.
Sampling Instrumentation	Inherent variability in field pH measurements	There is inherent variability in field pH measurements, as demonstrated by the post-sampling checks against calibration buffers and the manufacture specified accuracy which suggests that the small decrease below the baseline values in field pH at AP4-MW7 could be due instrument variability.
Data Handling	Use of deseasonalized data when establishing the statical limit for pH and AP4-MW7	Seasonality was not detected while running compliance statistics and the recent pH values are within statical limits if an alternate limit using values that are not deseasonalized is used.

## 5.0 CONCLUSIONS

In accordance with 40 CFR 257.94(e)(2) and NAC Title 132 Chapter 7, this ASD has been prepared in response to the identification of an SSI for field-measured pH at AP4-MW7 following the Q1 2025 sampling event for Ash Landfill No. 4 at Sheldon Station.

A review of the collected information indicates that the low SSI for field pH in groundwater at AP4-MW7 was not the result of seepage from the Landfill. The SSI for field pH is attributed to natural variability within the groundwater system and instrument variability within the pH probe. Therefore, no further action (i.e., a transition to Assessment Monitoring) is warranted, and Ash Landfill No. 4 will remain in detection monitoring, pending approval by the NDWEE. Following approval by the NDWEE, a baseline update is recommended for the detection monitoring parameters at the Site wells with data collected through Q1 2025. The baseline update will include data collected between Q1 2022 and Q1 2025 (seven available events) and will be conducted in accordance with the approved Sampling and Analysis Plan. Results of the baseline update will be presented to the NDWEE for approval.

## Signature Page

### WSP USA Inc.



Erin L. Hunter, PhD, PE  
*Senior Lead Consultant*



Jacob J. Sauer, PE  
*Vice President*

ELH/JJS/rm

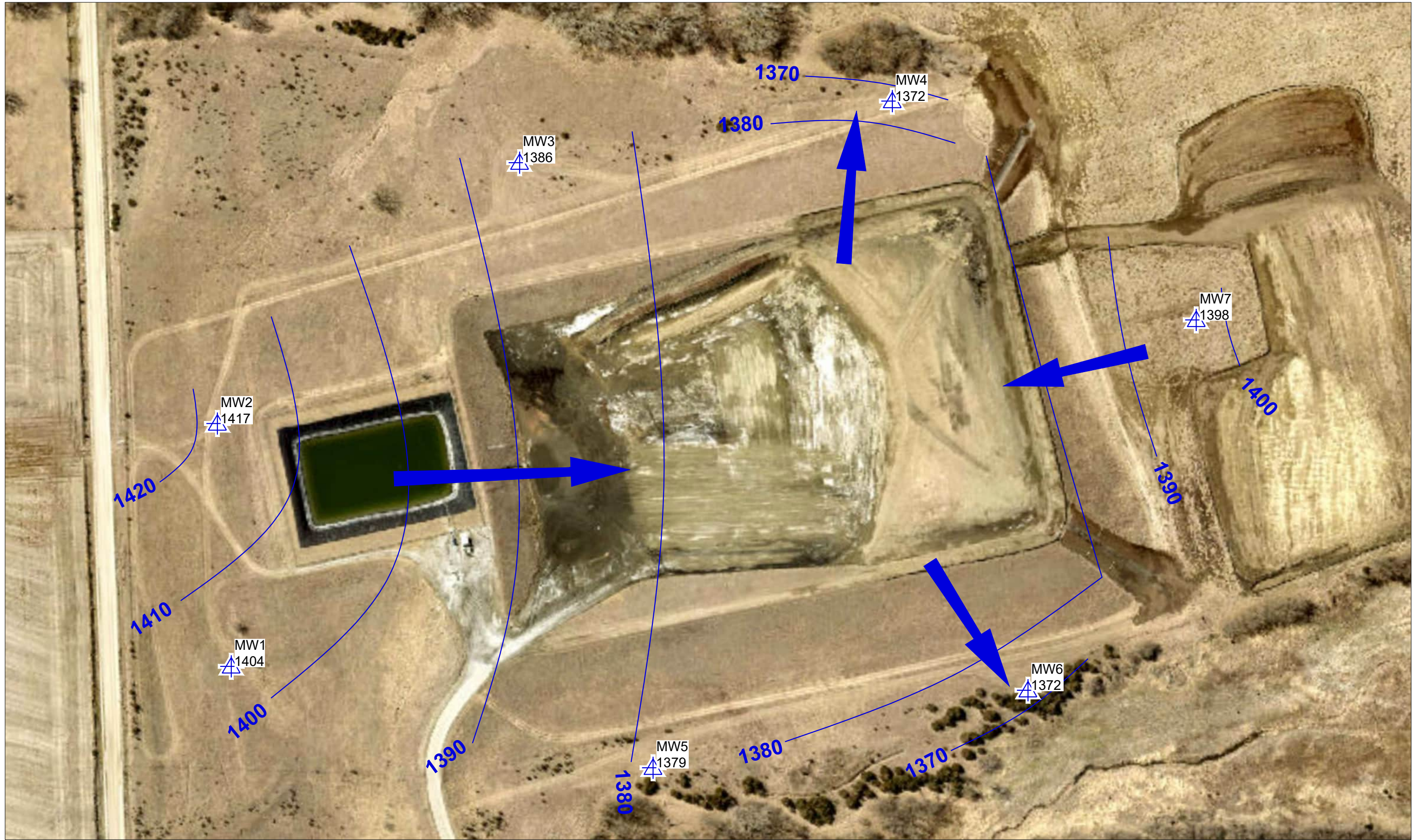
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## 6.0 REFERENCES

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- Golder (Golder Associates Inc.). 2020. Alternate Source Demonstration, Nebraska Public Power District. July 22, 2020.
- Puls RW, and Barcelona MJ. 1996. Ground Water Issue: Low-flow (Minimal Drawdown) Ground-water Sampling Procedures. EPA/540/S-95/504. April.
- Sanchez F, Cosson D, Keeney R, Delapp R, Turner L, Karcher P and Thorneloe S. 2008. *Characterization of coal combustion residues from electric utilities using wet scrubbers for multi-pollutant control*. EPA-600/R-08/077.

Figures





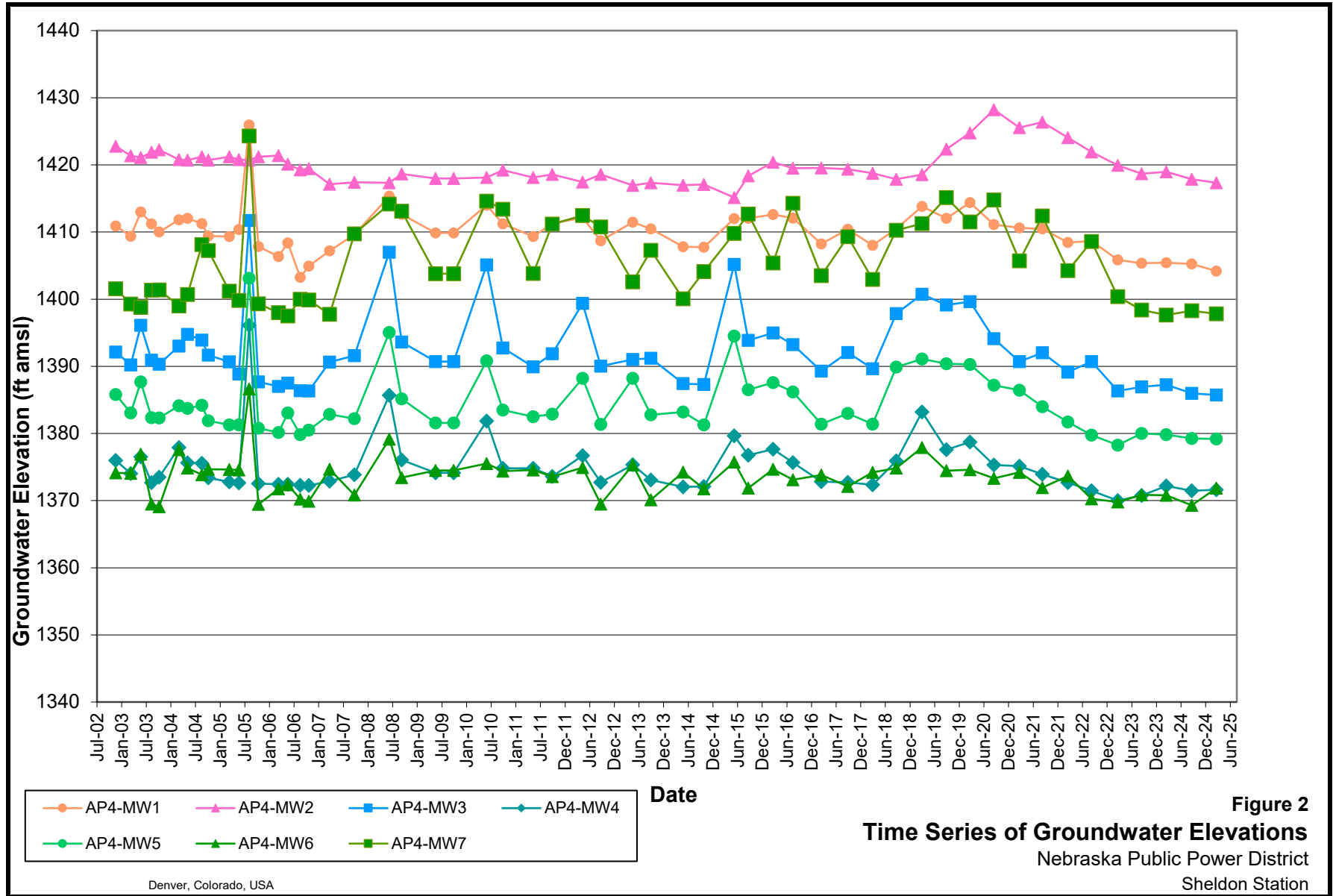
**LEGEND**  
MW1 1405  
MONITORING WELL  
GROUNDWATER ELEVATION (ft AMSL)



0 75 150  
1" = 150'  
FEET

**FIGURE 1**  
ASH LANDFILL NO. 4  
GROUNDWATER CONTOURS  
MARCH 2025

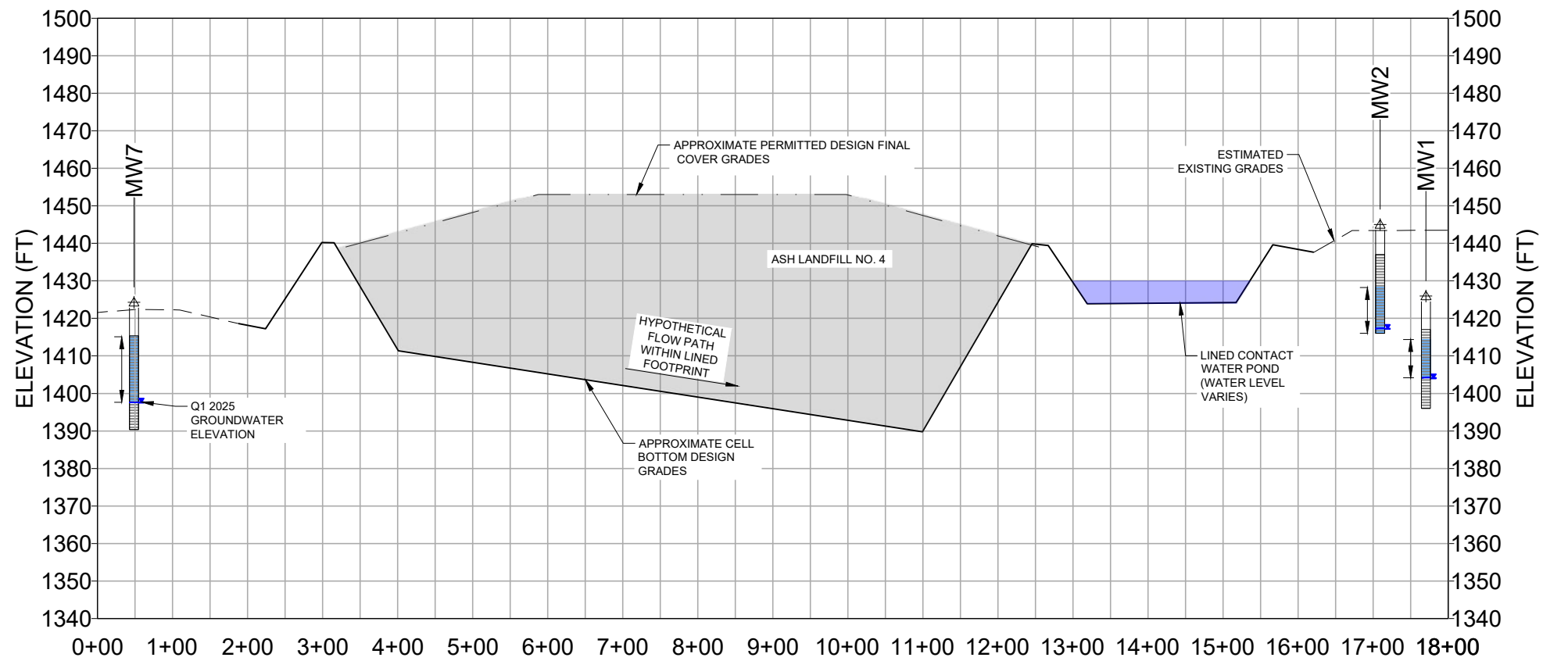
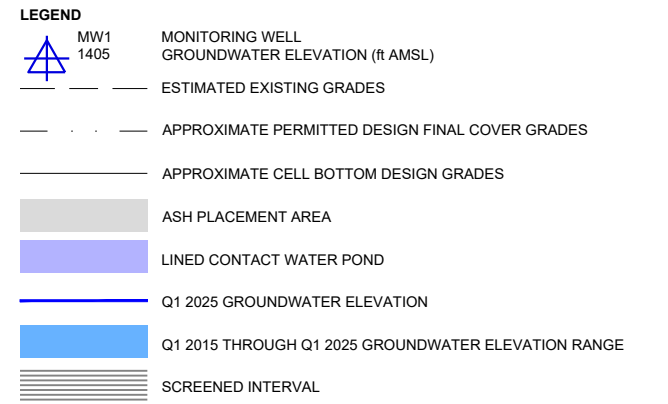
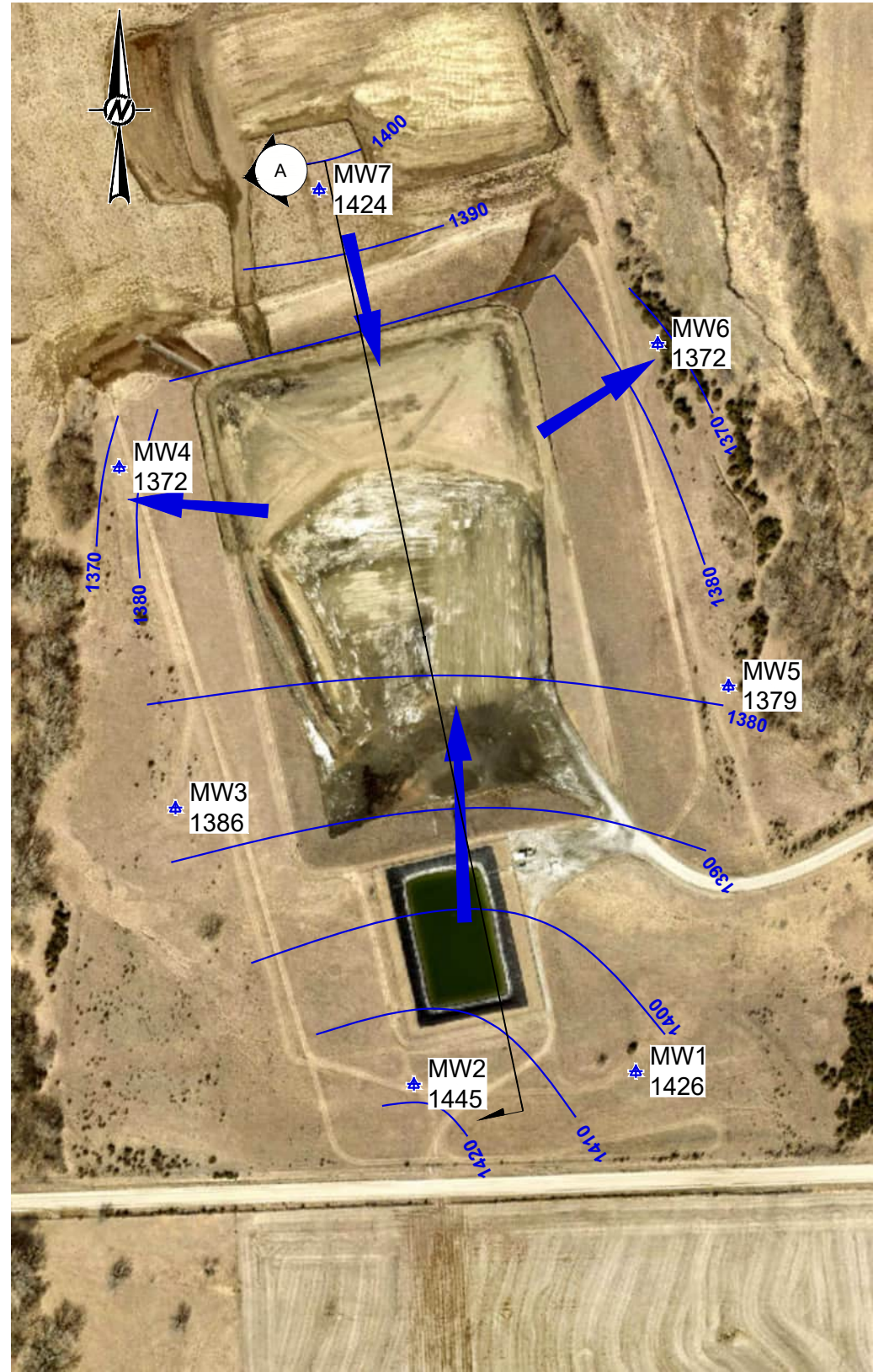




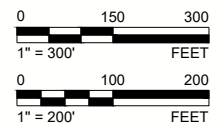
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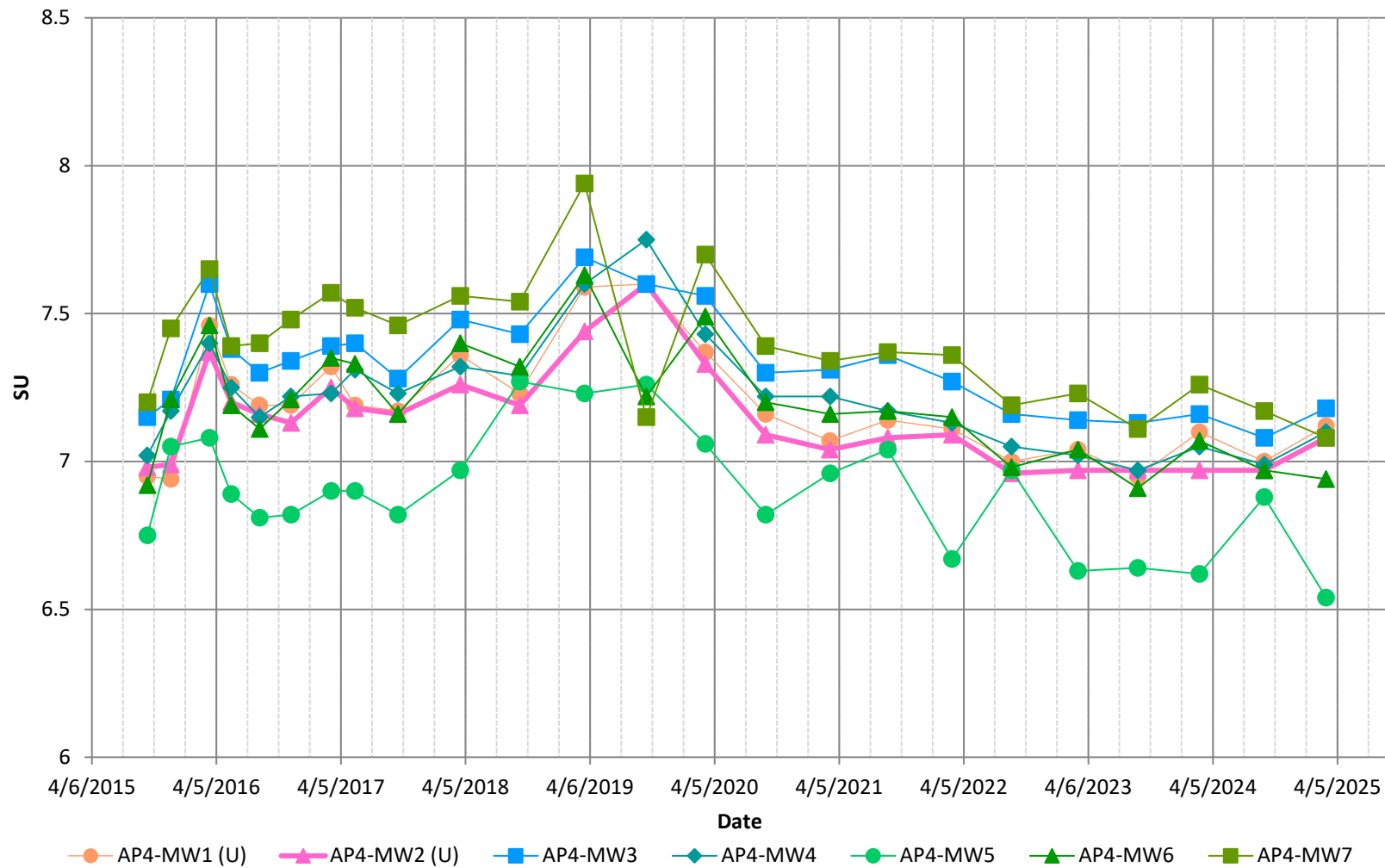
**Figure 2**  
**Time Series of Groundwater Elevations**  
Nebraska Public Power District  
Sheldon Station  
**WSP USA Inc.**



SCALE 1" = 200'  
VERT. SCALE 1:5



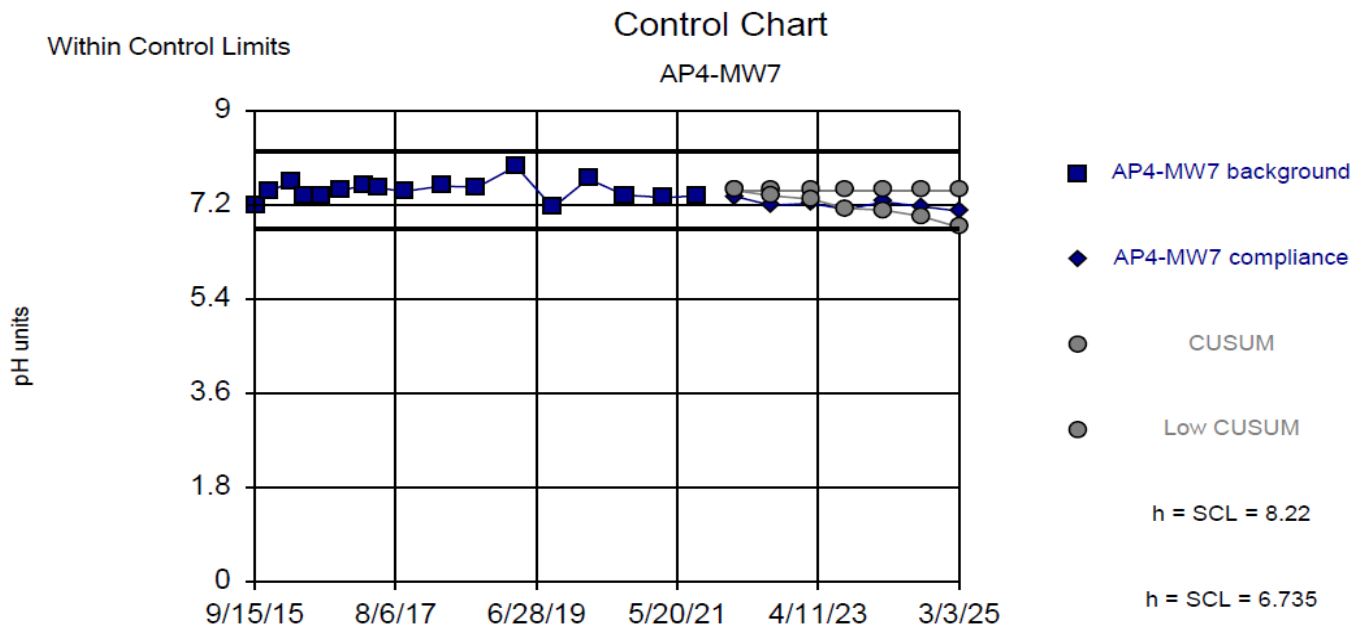
**FIGURE 3**  
ASH LANDFILL NO. 4  
GROUNDWATER CONTOURS  
MARCH 2025



**Figure 4**  
**pH, Field-Measured**  
 Nebraska Public Power District  
 Sheldon Station



Sanitas™ v.10.0.27 Sanitas software licensed to Golder Associates. UG



Background Data Summary: Mean=7.477, Std. Dev.=0.1856, n=17. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9585, critical = 0.892. Report alpha = 0.002632. Dates ending 8/25/2021 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 7/18/2025 12:51 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q1-2024 (1)

**Figure 5**  
**AP4-MW7 Statistics (Not De-Seasonalized)**

Nebraska Public Power District  
Sheldon Station

Denver, Colorado, USA

7/24/2025

31405886.001

**WSP USA Inc.**



**APPENDIX D**

**Baseline Update for Groundwater  
Quality Monitoring at Nebraska  
Public Power District's Sheldon  
Station Ash Landfill No. 4**



## TECHNICAL MEMORANDUM

**DATE** October 1, 2025

**Reference No.** US0044982.5796-003-TM-0

**TO** Wade Gregson  
Nebraska Department of Water, Energy, and Environment

**CC** Abbey Wilbur, Brian Kozisek, Todd Chinn - Nebraska Public Power District; Jacob Sauer - WSP

**FROM** Brittany Bradley and Erin Hunter

**EMAIL** [erin.hunter@wsp.com](mailto:erin.hunter@wsp.com)

### **BASELINE UPDATE FOR GROUNDWATER QUALITY MONITORING AT NEBRASKA PUBLIC POWER DISTRICT'S SHELDON STATION ASH LANDFILL NO. 4**

## **1.0 INTRODUCTION**

WSP USA Inc. (WSP) has prepared this memorandum to provide documentation regarding the methodology used and the results of the baseline statistical update conducted for Nebraska Public Power District's (NPPD) Sheldon Station Ash Landfill Number 4 (Ash Landfill No. 4) following statistics conducted for the first quarter (Q1) 2025 detection monitoring event (WSP 2025a) and associated alternative source demonstration (ASD; WSP 2025b) and approval by the Nebraska Department of Water, Energy and Environment (NDWEE 2025).

## **2.0 BASELINE STATISTICAL UPDATE**

The baseline (or background) period for each well-constituent pair within the Sheldon Station program with a minimum of eight samples collected through the Q1 2025 sampling event was reviewed for the potential to update the baseline period. Baseline periods for the program wells under the current monitoring program were originally established with data collected between September 2015 and May 2017. The United States Environmental Protection Agency (USEPA) recommends updating the baseline period every two to three years when sampling is conducted on a semi-annual basis, or after every four to eight collected samples (USEPA 2009). Baseline periods were previously updated at the site with data collected between September 2017 and August 2021 (Golder 2022). For the well-constituent pairs within the program, data collected between August 2021 and March 2025 were reviewed for potential inclusion in the updated statistical baseline periods for the current baseline update.

The baseline update described in this document, as well as any future baseline update, included a review of any revisions to federal and state regulations and USEPA statistical guidance documents that may have been promulgated since the initial baseline was established, or the previous baseline statistical update was conducted. The baseline period for a specific well-constituent pair was not reviewed for the potential to update if either an unresolved potential exceedance or a verified statistically significant increase (SSI) was identified that was not attributable to an alternative source separate from the facility. Compliance results that were previously determined to be false positives during comparative statistical analysis were reviewed for potential inclusion in the updated baseline periods. If a successful ASD has been conducted for a verified SSI that determined that the SSI was not related to a release from Ash Landfill No. 4, the recent compliance data were reviewed for potential inclusion in the updated baseline.

## 2.1 Baseline Data

Data used to represent the updated baseline period for each well-constituent pair were selected from laboratory results for the samples collected through the Q1 2025 detection monitoring sampling event. Each updated baseline period contains a minimum of 6 points significance.

To investigate the data collected at the site wells, time-series graphs were reviewed in conjunction with the statistical procedures used for updating the baseline periods.

## 2.2 Updating the Baseline Period

Prior to inclusion of more recent comparative data in an updated baseline period, a Wilcoxon Rank-Sum test was conducted for the eligible well-constituent pairs. The Wilcoxon Rank-Sum test, also referred to as the Mann-Whitney test, determines if measurements from one population are statistically significantly higher or lower than those of another population. The test is non-parametric; therefore, the data being tested are not assumed to fit a specific data distribution, such as a normal distribution. The Wilcoxon Rank-Sum test was used to compare data from the existing baseline periods with more recent data that were intended to be assessed for reclassification and inclusion in the updated baseline period. Data from the test were initially reviewed at a 95% confidence level. If the two datasets are drawn from the same population, then the results of the test support updating the prior baseline data set with inclusion of the recent data. After the newer data were incorporated into the dataset, the baseline diagnostic tests outlined in the following sections were conducted.

If the Wilcoxon Rank-Sum test detected a significant difference between the two sample populations at a 95% confidence level, additional data review was necessary, including reviewing data from the test for significance at 97.5% and 99% confidence levels. Data was reviewed to determine whether a gradual trend or other change not stemming from a release from the facility had occurred that was not detected during prior comparative statistical analysis. Additionally, previously identified outliers (if present) were re-incorporated into the dataset and re-evaluated as potential outliers during the baseline update, unless the outlier(s) were previously removed due to sampling, laboratory, or other determinant errors.

## 2.3 Initial Data Review and Non-Detect Handling

Data were plotted on time-series graphs to assess the temporal variability of the data and to visually screen for potential outliers. Temporal variability can be caused by seasonality, changes to the monitored system, changes to the analytical method, recalibration or other instrumental changes and anomalies in the sampling method (USEPA 2009).

Non-detect value (ND) are results where the constituent is not detected at a concentration above the Practical Quantitation Limit (PQL). The PQL is the lowest concentration that can be reliably measured within the specified limits of precision and accuracy during routine laboratory operating conditions. ND values were managed in setting statistical limits following the approach recommended by the Unified Guidance (USEPA 2009):

- For sample populations with < 15% ND, NDs were directly substituted with  $\frac{1}{2}$  the PQL if a parametric statistical limit was established.
- For sample populations with  $15\% < ND \leq 50\%$ , the Kaplan-Meier approach was used to estimate the mean and standard deviation of the population if a parametric statistical limit was established.

- For sample populations with > 50% ND, non-parametric approaches were used to assess the data, with direct substitution of the NDs with the PQL.
- For sample populations with ≤ 50% ND that were found to be non-normal, non-parametric statistical limits were established with direct substitution of the NDs with the PQL.

## 2.4 Trend Analysis

Most statistical tests assume concentrations do not demonstrate temporal correlation. The Sen's Slope method is an intra-well statistical analysis of increases or decreases in measured concentrations over time measured by calculating the slope of the linear relationship of concentration levels and time. The Sen's Slope method is paired with the Mann-Kendall test to determine the statistical significance of the calculated Sen's Slope. The Mann-Kendall test involves examining all possible pairs of measurements in the dataset and scoring each pair to determine if a trend exists. The combined Sen's Slope and Mann-Kendall method was first conducted using a target confidence level of 95%. If temporal trends were identified within the dataset at the 95% target confidence level, the data were also reviewed using an alternate target confidence level of 99%. In the case of decreasing trends, it may not be appropriate to adjust the current baseline period or consider a well-constituent pair for a baseline update until further data is collected, and the decreasing trend is no longer statistically significant.

## 2.5 Outlier Analysis

In accordance with the Unified Guidance, a data point was identified as an outlier if the value was an "extreme, unusual-looking measurement" and "inconsistent with the distribution of the remaining measurements." The Unified Guidance recommends testing for outliers within baseline data, but cautions against removal of outliers, unless a likely error or specific discrepancy can be identified, such as recordkeeping errors, unusual procedures or conditions during sampling or at the laboratory, inconsistent sample turbidity, or values significantly outside the range of other results. In accordance with the Unified Guidance, apparent outliers are periodically revisited at the time of baseline update review even if initially removed, due to the propensity of groundwater chemistry to change over time. Outliers were evaluated and identified through visual inspection and the USEPA-recommended Dixon's Test for statistical outliers. Dixon's Test assumes that all data values, except the suspected outliers, are normally distributed or can be transformed to fit a normal distribution. Consequently, visual inspection of concentrations over time is important in screening for outliers. The effect of removing outliers from the baseline data will usually be to lower the statistical limit (due to a reduction in the standard deviation of the dataset), resulting in a more conservative statistical limit. Outliers were managed as follows:

- Any suspected outliers identified through statistical analysis or visual methods were reviewed (i.e., through evaluation of the associated analytical report, laboratory narrative, associated laboratory quality assurance/quality control information, and/or field notes) before removal from the dataset to determine if any systematic or systemic errors were responsible for the noted anomalous readings. Rejected data points were not included in the updated baseline dataset.
- The rationale for the removal of any outliers was documented. Most outliers were isolated values that could be attributed to inconsistent sampling or analytical chemistry methodology resulting in laboratory contamination or other anomalies.

- If an outlier was removed, the normality test (Section 2.7) was run both with and without the outlier to determine if the dataset was normally distributed or transform-normally distributed following exclusion of the outlier.

## 2.6 Seasonality

Seasonal temporal variability can mask changes in groundwater chemistry. Time-series plots were reviewed for visual signs of seasonality and the data were evaluated for seasonal variations using the Kruskal-Wallis test. The Kruskal-Wallis test for seasonality was performed as an intra-well evaluation individually for each well-constituent pair and requires at least three occurrences of each prospective season with results to calculate the statistical significance. Datasets were analyzed for seasonality with two seasons assumed per calendar year, with seasonal start dates set on April 1 and October 1. If a dataset was found to have seasonality, the dataset was deseasonalized for subsequent statistical analysis.

## 2.7 Data Distribution

Parametric statistical methods assume that the data fit a normal distribution or can be transformed to fit a normal distribution. The distribution of the data was tested for normality using the Shapiro-Wilk normality test with a 95% confidence level. Each constituent from each well was assessed separately. Datasets found to not fit the normal distribution were tested for other distributions using the 'Ladder of Powers' described by the Unified Guidance and transformed accordingly. Following transformation, parametric statistical methods were performed on the normally or transform-normally distributed data. Non-parametric statistics were used for datasets that did not show normal or transform-normal distributions and for populations with greater than 50% ND.

## 2.8 Statistical Limits

Either a parametric or non-parametric method was used to generate the updated baseline statistical limit for each eligible well-constituent pair. The statistical method varied between constituents and was selected based on the percentage of ND values in the baseline period and the baseline data distribution for each constituent at each well, in accordance with the Unified Guidance (USEPA 2009). For those well-constituent pairs where concentrations of a given analyte were normally or transform-normally distributed and had greater than 50% detections, Shewhart-CUSUM (cumulative summation) control charts were used. The Unified Guidance notes that Shewhart-CUSUM control charts use two separate evaluation procedures. The Shewhart portion is similar to a parametric prediction limit, comparing compliance measurements to a baseline limit. The CUSUM portion of the test analyzes new measurements against prior compliance measurements. The mean ( $\bar{x}$ ) and standard deviation ( $s$ ) of the baseline (i.e., background,  $BG$ ) dataset are used to calculate the statistical limit ( $SL$ ), by the following equation:

$$SL = \bar{x}_{BG} + h s_{BG}$$

Per the Unified Guidance,  $h$  is the standardized control limit, set at 4.5 for datasets with less than 12 points, and 4.0 for datasets with 12 points or more.

Where concentrations of a given well-constituent pair were not normally or transform-normally distributed, or contained less than or equal to 50% detections, a non-parametric prediction limit was used. The non-parametric prediction limit was assigned as either the highest detected value, excluding outliers, or the highest PQL, whichever was greater.

## 2.9 Results of the Baseline Update

Results of the baseline update are shown in the tables included as Attachment A and the charts included as Attachment B.

Baseline period were updated through inclusion of available data collected between September 2015 and March 2025, notwithstanding removal of outliers as appropriate, per the methodology described in Section 2.2 to Section 2.8 above, for the majority of well-constituent pairs, with exceptions noted in Section 2.9.3.

### 2.9.1 Field-Measured pH

Across the upgradient and downgradient locations, field-measured pH has recently displayed a shift in measurements. Figure 1 provides time series data across the seven network wells. As a result of the site-wide shift in measurements, the two-tailed Wilcoxon Rank Sum test at each of the seven network wells displayed statistical significance across each of the tested confidence levels (95%, 98%, and 99% based on the two-tailed analysis for field-measured pH). Changes in field-measured pH at AP4-MW7 have previously been discussed with NDWEE (WSP 2025a) and determined to not be a consequence of the unit (NDWEE 2025). Based on that discussion, review for the potential to update the baseline periods proceeded through the potential to include the compliance data, with baseline periods updated through inclusion of data for each of the locations.

### 2.9.2 Excluded Outliers

The following outliers were identified and excluded from the updated baseline periods. Reasoning for the removal of the outliers is provided below. Excluded outliers are retained with the dataset and will be reviewed as appropriate for inclusion in future baseline updates.

- AP4-MW1 (Upgradient), Chloride, 9/15/2015: Unusually high measurement; removal allows for a more conservative statistical limit to be established.
- AP4-MW1 (Upgradient), Sulfate, 9/17/2019: Unusually low measurement; removal allows for a more conservative statistical limit to be established by reducing the standard deviation of the data set.
- AP4-MW2 (Upgradient), Boron, 11/23/2015: Non-detect value with an elevated reporting limit equal to five times the current reporting limit; removal allows for a more conservative statistical limit to be established.
- AP4-MW2 (Upgradient), Boron, 3/2/2022: Non-detect value with an elevated reporting limit equal to four times the current reporting limit; removal allows for a more conservative statistical limit to be established.
- AP4-MW2 (Upgradient), Fluoride, 11/23/2015: Unusually high measurement; removal allows for a more conservative statistical limit to be established.
- AP4-MW2 (Upgradient), Total Dissolved Solids, 8/29/2023: Unusually high measurement inconsistent with the remainder of the dataset that was previously identified as a false positive; removal allows for a more conservative statistical limit to be established.
- AP4-MW3, Fluoride, 9/15/2015: Non-detect value inconsistent with the remainder of the dataset; removal allows establishment of a parametric statistical limit.
- AP4-MW4, Sulfate, 9/11/2018: Non-detect value inconsistent with TDS value collected on same date and other sulfate values at AP4-MW4.



### 2.9.3 Baseline Periods Not Updated

The following well-constituent pairs had baseline periods that were not updated. The previous baseline periods with dates from September 2015 to August 2021 will be retained for use in comparative statistical analysis until further comparative data is collected.

- AP4-MW1 (Upgradient), Total Dissolved Solids: A statistically significant decreasing trend was identified at 95% and 99%.
- AP4-MW2 (Upgradient), Chloride: A statistically significant increasing trend was identified at 95% and 99%, in addition to the Wilcoxon Rank Sum displaying statistical significance at each of the tested confidence levels (95%, 97.5%, and 99%).
- AP4-MW7 (Upgradient), Total Dissolved Solids: A statistically significant decreasing trend was identified at 95% and 99%.
- AP4-MW3, Sulfate: A statistically significant decreasing trend was identified at 95% and 99%.
- AP4-MW3, Total Dissolved Solids: A statistically significant decreasing trend was identified at 95% and 99%.
- AP4-MW6, Total Dissolved Solids: A statistically significant decreasing trend was identified at 95% and 99%.

## 3.0 NEXT STEPS

The baseline periods described in this document are planned for use for comparative statistical analysis for the third quarter (Q3) 2025 monitoring period, to be presented in the Q3 2025 semi-annual report, pending review by the NDWEE. If there are questions concerning the approaches presented in this document or the outcomes of the baseline updates, please let us know.

**WSP USA Inc.**

Attachments: Figure 1 – pH, Field Measured  
Attachment A – Baseline Statistics Tables  
Attachment B – Baseline Statistics Charts

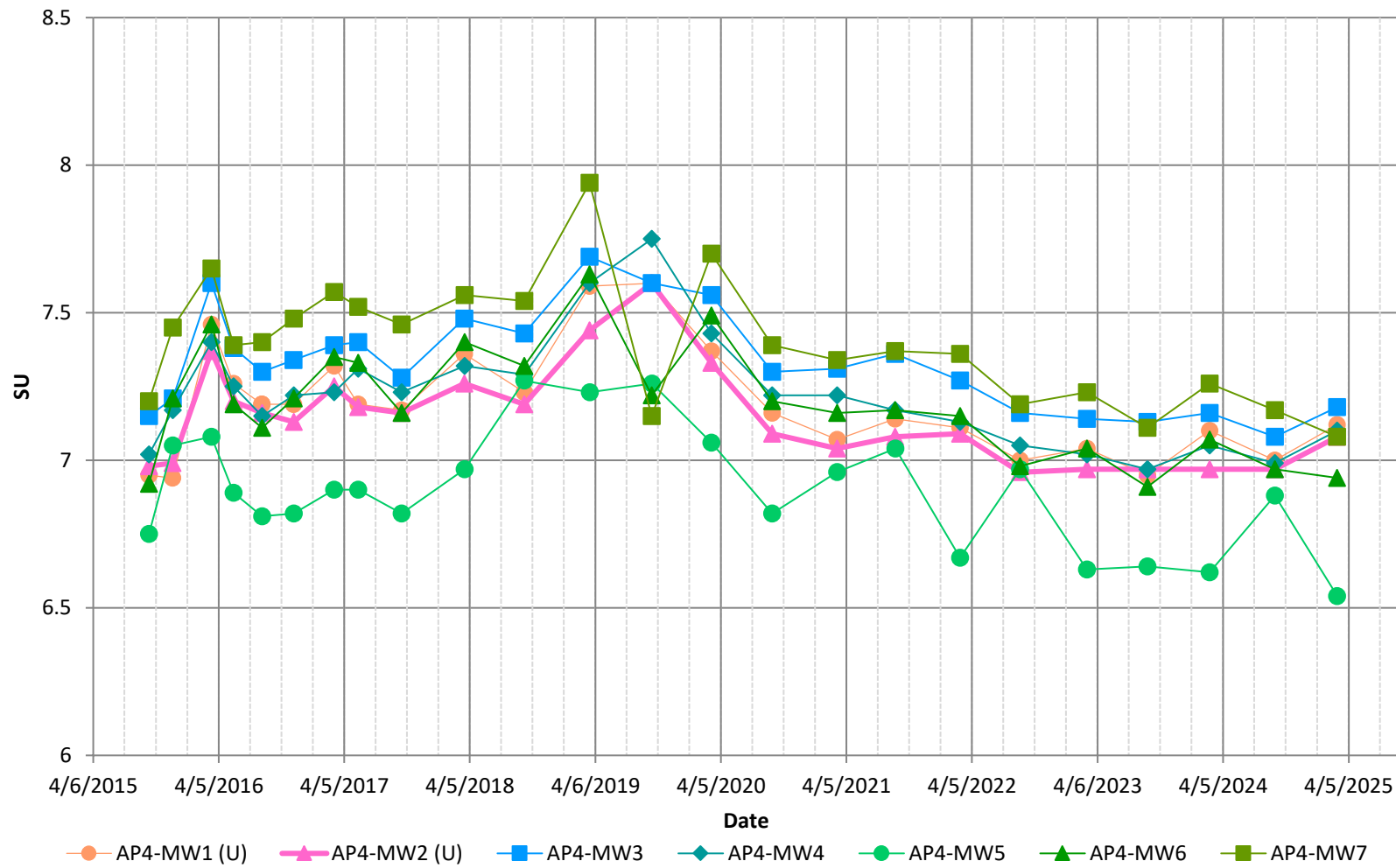
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## 4.0 REFERENCES

- Golder (Golder Associates USA Inc.). Golder. 2022. Baseline Update for Groundwater Quality Monitoring at Nebraska Public Power District's Sheldon Station. April 6, 2022. Golder Reference No.: 201412315-18-TM-0.
- NDWEE (Nebraska Department of Water, Energy, and Environment). 2025. DWEE's Review Comments and Approval for NPPD Sheldon Station Fossil Fuel Combustion Ash Landfill #4 Alternative Source Demonstration for Field pH at Monitoring Well AP4-MW7.
- 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.
- WSP (WSP USA Inc.). 2025a. Q1 2025 Semi-Annual Groundwater Report, Nebraska Public Power District – Sheldon Station. April 2025. WSP Reference No.: 31405886.001-012-RPT-0.
- WSP. 2025b. Alternate Source Demonstration for Field pH at AP4-MW7, Nebraska Public Power District. August 27, 2025. WSP Reference No.: US0045989.2913-001-RPT-1. Updated September 4, 2025.

**FIGURE**

**Figure 1 – pH, Field Measured**



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

**Figure 1**  
**pH, Field-Measured**  
Nebraska Public Power District  
Sheldon Station

**ATTACHMENT A**

# Baseline Statistics Tables

Table 1: APM4-MW1 (Upgradient) Baseline Update

Analyte	Unit	Current Start of Baseline Period	Current End of Baseline Period	Current Statistical Method	Current Statistical Limit	Available Number of Samples in Current Baseline	Current Number of Baseline Samples	Removed Outliers	Number of Samples Collected Since End of Current Baseline	WRS Significant at 95%?	Proceeding with Baseline Update?	Updated Start of Baseline Period	Updated End of Baseline Period	Total Number of Samples	Number of Samples in Updated Baseline	# ND in Updated Baseline	% ND in Updated Baseline	Temporal Trends Identified in Updated Baseline	Outliers Identified in Baseline Period	Removed Outliers	Seasonal Trend Identified	Baseline Data Distribution	Selected Statistical Method	Updated Statistical Limit
Boron, Total	mg/L	9/15/2015	8/25/2021	NP-PL	0.200	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	20	83%	NA	None	None	NA	NA	NP-PL	0.2
Calcium, Total	mg/L	9/15/2015	8/25/2021	CUSUM	115.1	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	0	0%	No	None	None	None	Normal	CUSUM	116.8
Chloride	mg/L	9/15/2015	8/25/2021	NP-PL	11.00	17	16	9/15/2015	7	Yes	Yes - See Notes	9/15/2015	3/3/2025	24	23	0	0%	Increasing trend at 95%. Not significant at 99%.	9/15/15, 11/9/16, 9/17/19, 3/3/25	9/15/2015	None	Non-Normal	NP-PL	11.00
Fluoride	mg/L	9/15/2015	8/25/2021	CUSUM	1.946	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	6	25%	No	None	None	None	Normal	CUSUM	1.821
pH, Field-Measured	pH units	9/15/2015	8/25/2021	CUSUM	6.49, 8.00	17	17	None	7	Yes	Yes - See Notes	9/15/2015	NA	24	24	0	0%	No	None	None	None	Normal	CUSUM	6.44, 7.93
Sulfate	mg/L	9/15/2015	3/2/2022	CUSUM	31.6	17	16	9/17/2019	6	No	Yes	9/15/2015	3/3/2025	24	23	0	0%	No	9/17/2019	9/17/2019	None	Normal	CUSUM	31.51
Total Dissolved Solids	mg/L	9/15/2015	8/25/2021	CUSUM	584	17	17	None	7	No	No - See Notes	---	---	---	---	---	---	Yes, decreasing at 95% and 99%.	---	-	-	-	-	-

Notes:  
mg/L - Milligrams per Liter  
NA: Not Analyzed  
CUSUM: Shewhart-CUSUM (cumulative summation) limit for parametric statistical analysis  
NP-PL: Non-parametric prediction limit  
Wilcoxon Rank Sum (WRS) analysis was first checked at  $\alpha = 95\%$  for significance. Tests where the WRS was significant at  $\alpha = 95\%$  were also evaluated at  $\alpha = 97.5\%$  and  $\alpha = 99\%$  regarding the potential to update the baseline period.  
Datasets with a baseline non-detect percentage of 50% or more were not tested for trends using the Sen's Slope/Mann-Kendall analysis or for data distribution, and are marked as NA for the associated tests.  
Sen's Slope/Mann-Kendall analyses for temporal trends were performed at  $\alpha = 95\%$ . Kruskal-Wallis analysis for seasonal trends was performed at  $\alpha = 95\%$ .  
Where seasonal trends have been identified, data have been deseasonalized in setting the updated statistical limit.  
WRS analysis for Chloride was significant at 95% and 97.5%, but not at 99%. Opting to proceed with reviewing for potential to update the statistical baseline.  
The WRS for field-measured pH was found to be statistically significant at 95%, 98%, and 99%. Review for updating the baseline period proceeded based on identified site-wide behavior not attributed to the Landfill.  
A statistically significant decreasing trend was identified for Total Dissolved Solids at both 95% and 99%. The current baseline limit will be retained.

Table 2: AP4-MW2 (Upgradient) Baseline Update

Analyte	Unit	Current Start of Baseline Period	Current End of Baseline Period	Current Statistical Method	Current Statistical Limit	Available Number of Samples in Current Baseline	Current Number of Baseline Samples	Removed Outliers	Number of Samples Collected Since End of Current Baseline	WRS Significant at 95%?	Proceeding with Baseline Update?	Updated Start of Baseline Period	Updated End of Baseline Period	Total Number of Samples	Number of Samples in Updated Baseline	# ND in Updated Baseline	% ND in Updated Baseline	Temporal Trends Identified in Updated Baseline	Outliers Identified in Baseline Period	Removed Outliers	Seasonal Trend Identified	Baseline Data Distribution	Selected Statistical Method	Updated Statistical Limit
Boron, Total	mg/L	9/15/2015	8/25/2021	NP-PL	0.200	17	16	11/23/2015	7	No	Yes	9/15/2015	3/3/2025	24	22	19	86%	NA	11/23/2015, 3/2/2022	11/23/2015, 3/2/2022	NA	NA	NP-PL	0.2
Calcium, Total	mg/L	9/15/2015	8/25/2021	CUSUM	402	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	0	0%	No	None	None	None	Normal	CUSUM	396
Chloride	mg/L	9/15/2015	8/25/2021	NP-PL	113	17	17	None	7	Yes	No - See Notes	---	---	---	---	---	---	Increasing at 95% and 99%.	---	---	---	---	---	---
Fluoride	mg/L	9/15/2015	8/25/2021	NP-PL	0.935	17	16	11/23/2015	7	No	Yes	9/15/2015	3/3/2025	24	23	12	52%	NA	11/23/2015	11/23/2015	NA	NA	NP-PL	1.000
pH, Field-Measured	pH units	9/15/2015	8/25/2021	CUSUM	6.55, 7.85	17	17	None	7	Yes	Yes - See Notes	9/15/2015	3/3/2025	24	23	0	0%	Decreasing trend at 95%. Not significant at 99%.	9/17/2019	9/17/2019	None	Normal	CUSUM	6.567, 7.681
Sulfate	mg/L	9/15/2015	8/25/2021	CUSUM	1027	17	17	None	7	Yes	Yes - See Notes	9/15/2015	3/3/2025	24	23	0	0%	Increasing trend at 95%. Not significant at 99%.	8/29/2023	8/29/2023	None	Normal	CUSUM	1063
Total Dissolved Solids	mg/L	9/15/2015	8/25/2021	NP-PL	2360	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	23	0	0%	Decreasing trend at 95%. Not significant at 99%.	3/7/2017, 9/19/2017, 8/29/2023	8/29/2023	None	Non-Normal	NP-PL	2360

Notes:  
mg/L - Milligrams per Liter  
NA: Not Analyzed  
CUSUM: Shewhart-CUSUM (cumulative summation) limit for parametric statistical analysis  
NP-PL: Non-parametric prediction limit  
Wilcoxon Rank Sum (WRS) analysis was first checked at  $\alpha = 95\%$  for significance. Tests where the WRS was significant at  $\alpha = 95\%$  were also evaluated at  $\alpha = 97.5\%$  and  $\alpha = 99\%$  regarding the potential to update the baseline period.  
Datasets with a baseline non-detect percentage of 50% or more were not tested for trends using the Sen's Slope/Mann-Kendall analysis or for data distribution, and are marked as NA for the associated tests.  
Sen's Slope/Mann-Kendall analyses for temporal trends were performed at  $\alpha = 95\%$ . Kruskal-Wallis analysis for seasonal trends was performed at  $\alpha = 95\%$ .  
Where seasonal trends have been identified, data have been deseasonalized in setting the updated statistical limit.  
The WRS for chloride was found to be statistically significant at 95%, 97.5%, and 99%, with an increasing trend identified at 95% and 99%. The current baseline statistical limit will be retained.  
The WRS for field-measured pH was found to be statistically significant at 95%, 98%, and 99%. Review for updating the baseline period proceeded based on identified site-wide behavior not attributed to the Landfill.  
The WRS for sulfate was found to be statistically significant at 95% and 97.5%, but not at 99%. An increasing trend was identified at 95% but not at 99%. Opting to proceed with updating the statistical baseline.  
A statistically significant decreasing trend was identified for Total Dissolved Solids at 95%, but was found to not be significant at 99%. The baseline was updated.

Table 3: AP4-MW7 Baseline Update

Analyte	Unit	Current Start of Baseline Period	Current End of Baseline Period	Current Statistical Method	Current Statistical Limti	Available Number of Samples in Current Baseline	Current Number of Baseline Samples	Removed Outliers	Number of Samples Collected Since End of Current Baseline	WRS Significant at 95%?	Proceeding with Baseline Update?	Updated Start of Baseline Period	Updated End of Baseline Period	Total Number of Samples	Number of Samples in Updated Baseline	# ND in Updated Baseline	% ND in Updated Baseline	Temporal Trends Identified in Updated Baseline	Outliers Idenitifed in Baseline Period	Removed Outliers	Seasonal Trend Identified	Baseline Data Distribution	Selected Statistical Method	Updated Statistical Limit
Boron, Total	mg/L	9/15/2015	8/25/2021	NP-PL	0.200	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	23	95%	NA	None	None	NA	NA	NP-PL	0.2
Calcium, Total	mg/L	9/15/2015	8/25/2021	NP-PL	79.0	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	0	0%	No	None	None	None	Non-Normal	NP-PL	79.0
Chloride	mg/L	9/15/2015	8/25/2021	CUSUM	17.9	17	17	None	7	Yes	Yes - See Notes	9/15/2015	3/3/2025	24	24	0	0%	No	None	None	None	Normal	CUSUM	20.13
Fluoride	mg/L	9/15/2015	8/25/2021	NP-PL	1.020	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	19	79%	NA	None	None	NA	NA	NP-PL	1.02
pH, Field-Measured	pH units	9/15/2015	8/25/2021	CUSUM	6.87, 8.09	17	17	None	7	Yes	Yes - See Notes	9/15/2015	3/3/2025	24	24	0	0%	Yes, decreasing at 95% and 99%.	None	None	None	Normal	CUSUM	6.568, 8.224
Sulfate	mg/L	9/15/2015	8/25/2021	CUSUM	63.2	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	0	0%	No	None	None	None	Normal	CUSUM	64.0
Total Dissolved Solids	mg/L	9/15/2015	8/25/2021	CUSUM	732	17	17	None	7	No	No - See Notes	---	---	---	---	---	---	Yes, decreasing at 95% and 99%.	---	-	-	-	-	-

Notes:  
mg/L - Milligrams per Liter  
NA: Not Analyzed  
CUSUM: Shewhart-CUSUM (cumulative summation) limit for parametric statistical analysis  
NP-PL: Non-parametric prediction limit  
Wilcoxon Rank Sum (WRS) analysis was first checked at  $\alpha = 95\%$  for significance. Tests where the WRS was significant at  $\alpha = 95\%$  were also evaluated at  $\alpha = 97.5\%$  and  $\alpha = 99\%$  regarding the potential to update the baseline period.  
Datasets with a baseline non-detect percentage of 50% or more were not tested for trends using the Sen's Slope/Mann-Kendall analysis or for data distribution, and are marked as NA for the associated tests.  
Sen's Slope/Mann-Kendall analyses for temporal trends were performed at  $\alpha = 95\%$ . Kruskal-Wallis analysis for seasonal trends was performed at  $\alpha = 95\%$ .  
Where seasonal trends have been identified, data have been deseasonalized in setting the updated statistical limit.  
The WRS for chloride was found to be statistically signifiacnt at 95%, 97.5%, and 99%, without a statistically significant trend at 95%. Opting to proceed with updating the baseline.  
The WRS for field-measured pH was found to be statistically significant at 95%, 98%, and 99%. Review for updating the baseline period proceeded based on identified site-wide behavior not attributed to the Landfill.  
A statistically significant decreasing trend was identified Field-Measured pH at both 95% and 99%. Based on the identified site-wide trend, the more recent data was still incorporated into an updated baseline period.  
A statistically significant decreasing trend was identified for Total Dissolved Solids at both 95% and 99%. The current baseline limit will be retained.



Table 4: AP4-MW3 Baseline Update

Analyte	Unit	Current Start of Baseline Period	Current End of Baseline Period	Current Statistical Method	Current Statistical Limit	Available Number of Samples in Current Baseline	Current Number of Baseline Samples	Removed Outliers	Number of Samples Collected Since End of Current Baseline	WRS Significant at 95%?	Proceeding with Baseline Update?	Updated Start of Baseline Period	Updated End of Baseline Period	Total Number of Samples	Number of Samples in Updated Baseline	# ND in Updated Baseline	% ND in Updated Baseline	Temporal Trends Identified in Updated Baseline	Outliers Identified in Baseline Period	Removed Outliers	Seasonal Trend Identified	Baseline Data Distribution	Selected Statistical Method	Updated Statistical Limit
Boron, Total	mg/L	9/15/2015	8/25/2021	NP-PL	0.200	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	22	91%	NA	None	None	NA	NA	NP-PL	0.2
Calcium, Total	mg/L	9/15/2015	8/25/2021	CUSUM	105.2	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	0	0%	No	None	None	None	Normal	CUSUM	105.700
Chloride	mg/L	9/15/2015	8/25/2021	NP-PL	12.40	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	20	83%	NA	None	None	NA	NA	NP-PL	12.4
Fluoride	mg/L	9/15/2015	8/25/2021	CUSUM	2.477	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	23	0	0%	No	9/15/2015	9/15/2015	None	Normal	CUSUM	2.14
pH, Field-Measured	pH units	9/15/2015	8/25/2021	CUSUM	6.81, 7.99	17	17	None	7	Yes	Yes - See Notes	9/15/2015	3/3/2025	24	24	0	0%	No	None	None	None	Normal	CUSUM	6.658, 8.000
Sulfate	mg/L	9/15/2015	8/25/2021	CUSUM	48.2	17	17	None	7	No	No - See Notes	---	---	---	---	---	---	Yes, decreasing at 95% and 99%.	---	-	-	-	-	-
Total Dissolved Solids	mg/L	9/15/2015	5/16/2017	CUSUM	567	17	8	---	16	No	No - See Notes	---	---	---	---	---	---	Yes, decreasing at 95% and 99%.	---	-	-	-	-	-

Notes:  
mg/L - Milligrams per Liter  
NA: Not Analyzed  
CUSUM: Shewhart-CUSUM (cumulative summation) limit for parametric statistical analysis  
NP-PL: Non-parametric prediction limit  
Wilcoxon Rank Sum (WRS) analysis was first checked at  $\alpha = 95\%$  for significance. Tests where the WRS was significant at  $\alpha = 95\%$  were also evaluated at  $\alpha = 97.5\%$  and  $\alpha = 99\%$  regarding the potential to update the baseline period.  
Datasets with a baseline non-detect percentage of 50% or more were not tested for trends using the Sen's Slope/Mann-Kendall analysis or for data distribution, and are marked as NA for the associated tests.  
Sen's Slope/Mann-Kendall analyses for temporal trends were performed at  $\alpha = 95\%$ . Kruskal-Wallis analysis for seasonal trends was performed at  $\alpha = 95\%$ .  
Where seasonal trends have been identified, data have been deseasonalized in setting the updated statistical limit.  
The WRS for field-measured pH was found to be statistically significant at 95%, 98%, and 99%. Review for updating the baseline period proceeded based on identified site-wide behavior not attributed to the Landfill.  
A statistically significant increasing trend was identified for Fluoride at 95%, but was found to not be significant at 99%. The baseline was updated.  
A statistically significant decreasing trend was identified for Sulfate and Total Dissolved Solids at 95% and at 99%. The baseline was not updated.

Table 5: AP4-MW4 Baseline Update

Analyte	Unit	Current Start of Baseline Period	Current End of Baseline Period	Current Statistical Method	Current Statistical Limti	Available Number of Samples in Current Baseline	Current Number of Baseline Samples	Removed Outliers	Number of Samples Collected Since End of Current Baseline	WRS Significant at 95%?	Proceeding with Baseline Update?	Updated Start of Baseline Period	Updated End of Baseline Period	Total Number of Samples	Number of Samples in Updated Baseline	# ND in Updated Baseline	% ND in Updated Baseline	Temporal Trends Identified in Updated Baseline	Outliers Idenitified in Baseline Period	Removed Outliers	Seasonal Trend Identified	Baseline Data Distribution	Selected Statistical Method	Updated Statistical Limit
Boron, Total	mg/L	9/15/2015	8/25/2021	NP-PL	0.200	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	22	91%	NA	None	None	NA	NA	NP-PL	0.2
Calcium, Total	mg/L	9/15/2015	8/25/2021	CUSUM	153	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	0	0%	No	None	None	None	Normal	CUSUM	149
Chloride	mg/L	9/15/2015	8/25/2021	NP-PL	8.99	17	16	9/15/2015	7	No	Yes	9/15/2015	3/3/2025	24	24	19	79%	NA	None	None	NA	NA	NP-PL	13.00
Fluoride	mg/L	9/15/2015	8/25/2021	CUSUM	1.670	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	4	17%	No	None	None	None	Normal	CUSUM	1.799
pH, Field-Measured	pH units	9/15/2015	8/25/2021	CUSUM	6.73, 7.79	17	16	9/17/2019	7	Yes	Yes - See Notes	9/15/2015	3/3/2025	24	24	0	0%	Decreasing trend at 95%. Not significant at 99%.	9/17/2019	None	None	Square Root	CUSUM	6.492, 7.985
Sulfate	mg/L	9/15/2015	8/25/2021	CUSUM	179.8	17	16	9/11/2018	7	No	Yes	9/15/2015	3/3/2025	24	23	1	4%	No	9/11/2018	9/11/2018	None	Normal	CUSUM	175
Total Dissolved Solids	mg/L	9/15/2015	8/25/2021	CUSUM	745.6	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	0	0%	Decreasing trend at 95%. Not significant at 99%.	5/16/2017	None	None	Square Root	CUSUM	737

Notes:  
mg/L - Milligrams per Liter  
NA: Not Analyzed  
CUSUM: Shewhart-CUSUM (cumulative summation) limit for parametric statistical analysis  
NP-PL: Non-parametric prediction limit  
Wilcoxon Rank Sum (WRS) analysis was first checked at  $\alpha = 95\%$  for significance. Tests where the WRS was significant at  $\alpha = 95\%$  were also evaluated at  $\alpha = 97.5\%$  and  $\alpha = 99\%$  regarding the potential to update the baseline period.  
Datasets with a baseline non-detect percentage of 50% or more were not tested for trends using the Sen's Slope/Mann-Kendall analysis or for data distribution, and are marked as NA for the associated tests.  
Sen's Slope/Mann-Kendall analyses for temporal trends were performed at  $\alpha = 95\%$ . Kruskal-Wallis analysis for seasonal trends was performed at  $\alpha = 95\%$ .  
Where seasonal trends have been identified, data have been deseasonalized in setting the updated statistical limit.  
The WRS for field-measured pH was found to be statistically significant at 95%, 98%, and 99%. Review for updating the baseline period proceeded based on identified site-wide behavior not attributed to the Landfill.  
A statistically significant decreasing trend was identified for Field-Measured pH at 95%, but was found to not be significant at 99%. The baseline was updated.  
A statistically significant decreasing trend was identified for Total Dissolved Solids at 95%, but was found to not be significant at 99%. The baseline was updated.

Table 6: AP4-MW5 Baseline Update

Analyte	Unit	Current Start of Baseline Period	Current End of Baseline Period	Current Statistical Method	Current Statistical Limit	Available Number of Samples in Current Baseline	Current Number of Baseline Samples	Removed Outliers	Number of Samples Collected Since End of Current Baseline	WRS Significant at 95%?	Proceeding with Baseline Update?	Updated Start of Baseline Period	Updated End of Baseline Period	Total Number of Samples	Number of Samples in Updated Baseline	# ND in Updated Baseline	% ND in Updated Baseline	Temporal Trends Identified in Updated Baseline	Outliers Identified in Baseline Period	Removed Outliers	Seasonal Trend Identified	Baseline Data Distribution	Selected Statistical Method	Updated Statistical Limit
Boron, Total	mg/L	9/15/2015	8/25/2021	NP-PL	0.200	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	19	79%	NA	None	None	NA	NA	NP-PL	0.400
Calcium, Total	mg/L	9/15/2015	8/25/2021	CUSUM	797.8	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	0	0%	No	None	None	Yes - Data Will Be Deseasonalized	Normal	CUSUM	946.5
Chloride	mg/L	9/15/2015	8/25/2021	CUSUM	15.58	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	4	16%	No	None	None	None	Non-normal	NP-PL	10
Fluoride	mg/L	9/15/2015	8/25/2021	NP-PL	0.664	17	16	5/16/2017	7	No	Yes	9/15/2015	3/3/2025	24	24	18	75%	NA	None	None	NA	NA	NP-PL	1.27
pH, Field-Measured	pH units	9/15/2015	8/25/2021	CUSUM	6.32, 7.63	17	17	None	7	Yes	Yes - See Notes	9/15/2015	3/3/2025	24	24	0	0%	No	None	None	None	Normal	CUSUM	6.09, 7.708
Sulfate	mg/L	9/15/2015	8/25/2021	NP-PL	1630	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	0	0%	No	None	None	Yes - Data Will Be Deseasonalized	Normal	CUSUM	2789
Total Dissolved Solids	mg/L	9/15/2015	8/25/2021	CUSUM	4040	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	0	0%	No	None	None	None	Cube	CUSUM	3597

Notes:  
mg/L - Milligrams per Liter  
NA: Not Analyzed  
CUSUM: Shewhart-CUSUM (cumulative summation) limit for parametric statistical analysis  
NP-PL: Non-parametric prediction limit  
Wilcoxon Rank Sum (WRS) analysis was first checked at  $\alpha = 95\%$  for significance. Tests where the WRS was significant at  $\alpha = 95\%$  were also evaluated at  $\alpha = 97.5\%$  and  $\alpha = 99\%$  regarding the potential to update the baseline period.  
Datasets with a baseline non-detect percentage of 50% or more were not tested for trends using the Sen's Slope/Mann-Kendall analysis or for data distribution, and are marked as NA for the associated tests.  
Sen's Slope/Mann-Kendall analyses for temporal trends were performed at  $\alpha = 95\%$ . Kruskal-Wallis analysis for seasonal trends was performed at  $\alpha = 95\%$ .  
Where seasonal trends have been identified, data have been deseasonalized in setting the updated statistical limit.  
The WRS for field-measured pH was found to be statistically significant at 95%, 98%, and 99%. Review for updating the baseline period proceeded based on identified site-wide behavior not attributed to the Landfill.

Table 7: AP4-MW6 Baseline Update

Analyte	Unit	Current Start of Baseline Period	Current End of Baseline Period	Current Statistical Method	Current Statistical Limti	Available Number of Samples in Current Baseline	Current Number of Baseline Samples	Removed Outliers	Number of Samples Collected Since End of Current Baseline	WRS Significant at 95%?	Proceeding with Baseline Update?	Updated Start of Baseline Period	Updated End of Baseline Period	Total Number of Samples	Number of Samples in Updated Baseline	# ND in Updated Baseline	% ND in Updated Baseline	Temporal Trends Identified in Updated Baseline	Outliers Identitified in Baseline Period	Removed Outliers	Seasonal Trend Identified	Baseline Data Distribution	Selected Statistical Method	Updated Statistical Limit
Boron, Total	mg/L	9/15/2015	8/25/2021	NP-PL	0.200	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	22	92%	NA	None	None	NA	NA	NP-PL	0.200
Calcium, Total	mg/L	9/15/2015	8/25/2021	CUSUM	126.9	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	0	0%	No	None	None	None	Normal	CUSUM	128.3
Chloride	mg/L	9/15/2015	8/25/2021	NP-PL	5.28	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	23	95%	NA	None	None	NA	NA	NP-PL	5.28
Fluoride	mg/L	9/15/2015	8/25/2021	CUSUM	2.90	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	24	0	0%	No	None	None	None	Normal	CUSUM	2.70
pH, Field-Measured	pH units	9/15/2015	8/25/2021	CUSUM	6.72, 7.82	17	17	None	7	Yes	Yes - See Notes	9/15/2015	3/3/2025	24	24	0	0%	Decreasing trend at 95%. Not significant at 99%.	None	None	None	Normal	CUSUM	6.437, 7.946
Sulfate	mg/L	9/15/2015	8/25/2021	CUSUM	114.9	17	17	None	7	No	Yes	9/15/2015	3/3/2025	24	23	0	0%	No	11/23/2015	None	Yes - Data Will Be Deseasonalized	Cube Root	CUSUM	111.2
Total Dissolved Solids	mg/L	9/15/2015	8/25/2021	CUSUM	686.8	17	17	None	7	No	No - See Notes	---	---	---	---	---	---	Yes, decreasing at 95% and 99%.	---	---	---	---	---	---

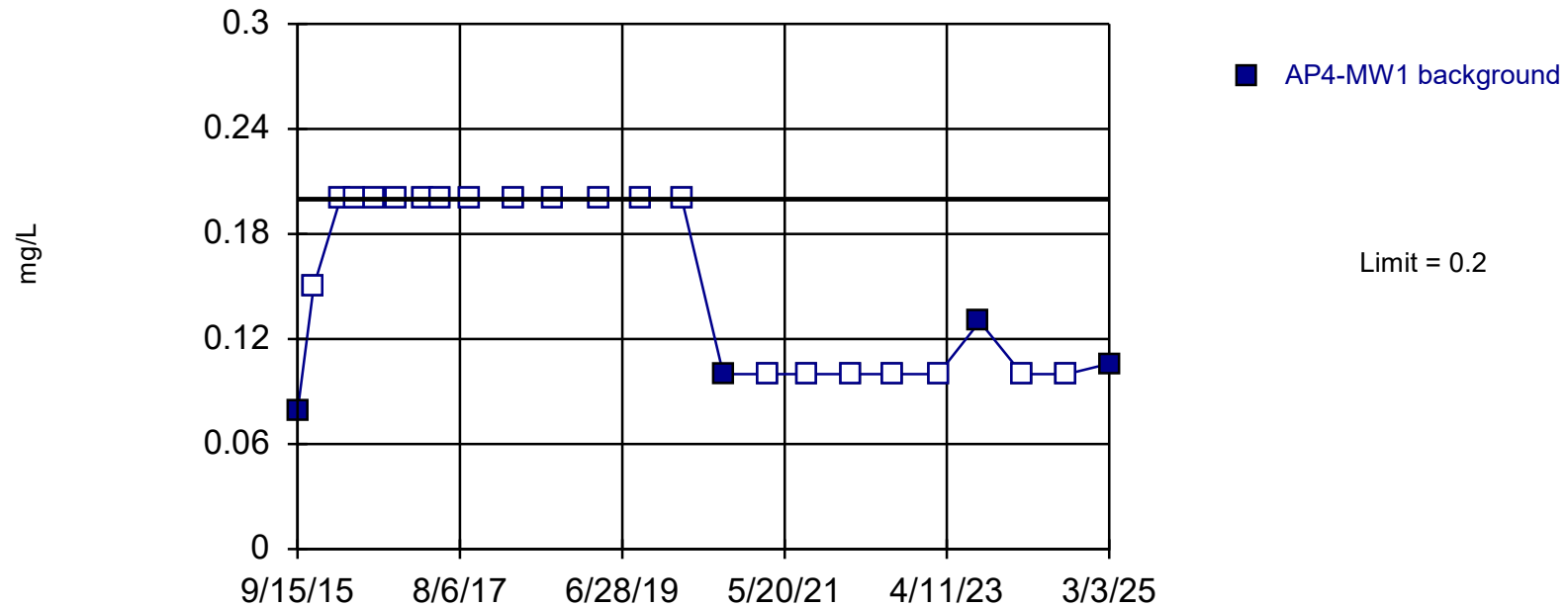
Notes:  
mg/L - Milligrams per Liter  
NA: Not Analyzed  
CUSUM: Shewhart-CUSUM (cumulative summation) limit for parametric statistical analysis  
NP-PL: Non-parametric prediction limit  
Wilcoxon Rank Sum (WRS) analysis was first checked at  $\alpha = 95\%$  for significance. Tests where the WRS was significant at  $\alpha = 95\%$  were also evaluated at  $\alpha = 97.5\%$  and  $\alpha = 99\%$  regarding the potential to update the baseline period.  
Datasets with a baseline non-detect percentage of 50% or more were not tested for trends using the Sen's Slope/Mann-Kendall analysis or for data distribution, and are marked as NA for the associated tests.  
Sen's Slope/Mann-Kendall analyses for temporal trends were performed at  $\alpha = 95\%$ . Kruskal-Wallis analysis for seasonal trends was performed at  $\alpha = 95\%$ .  
Where seasonal trends have been identified, data have been deseasonalized in setting the updated statistical limit.  
The WRS for field-measured pH was found to be statistically significant at 95%, 98%, and 99%. Review for updating the baseline period proceeded based on identified site-wide behavior not attributed to the Landfill.  
A statistically significant decreasing trend was identified for Total Dissolved Solids at both 95% and 99%. The current baseline limit will be retained.

**ATTACHMENT B**

# Baseline Statistics Charts

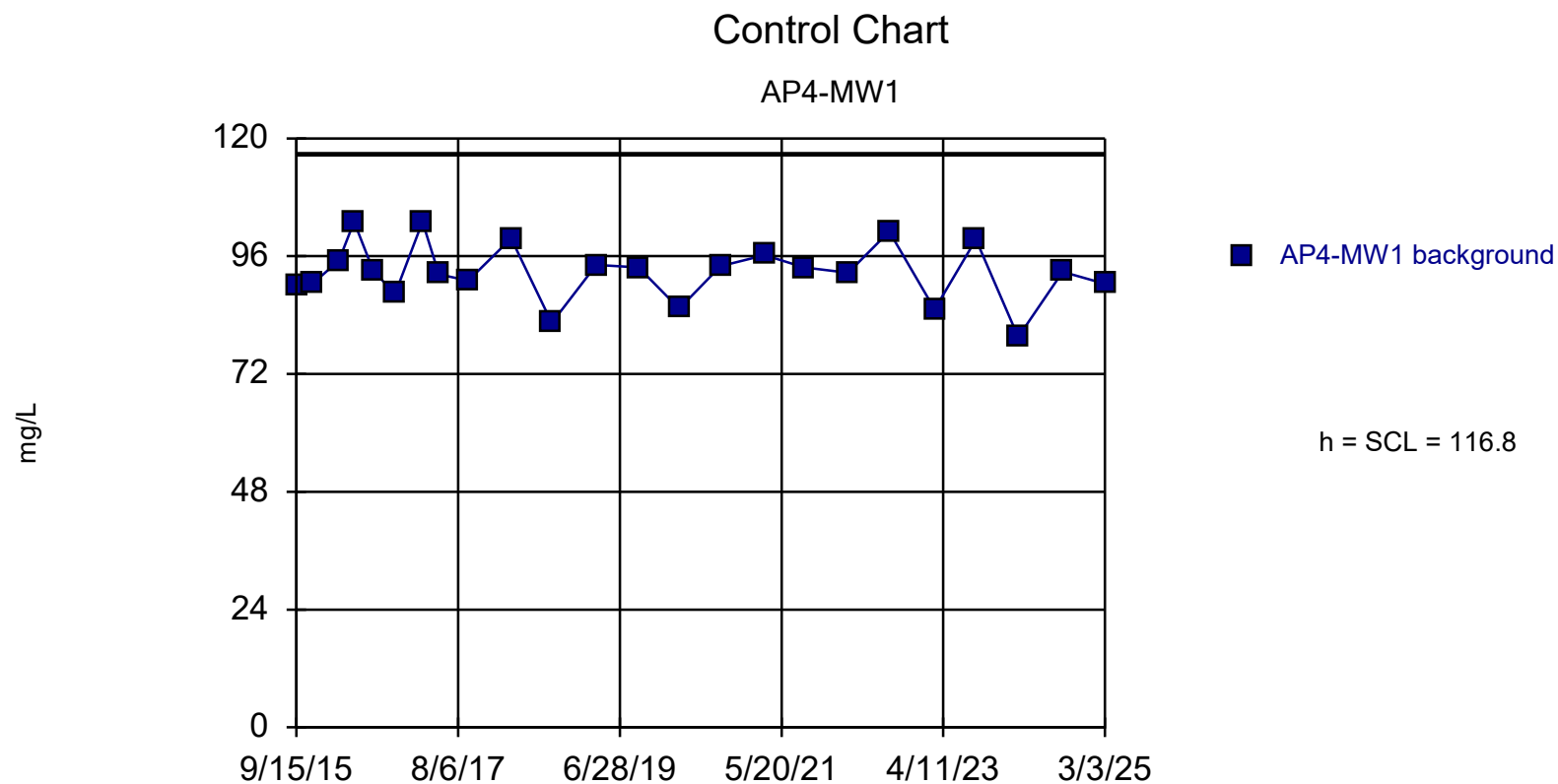
## Prediction Limit

Intrawell Non-parametric, AP4-MW1 (bg)



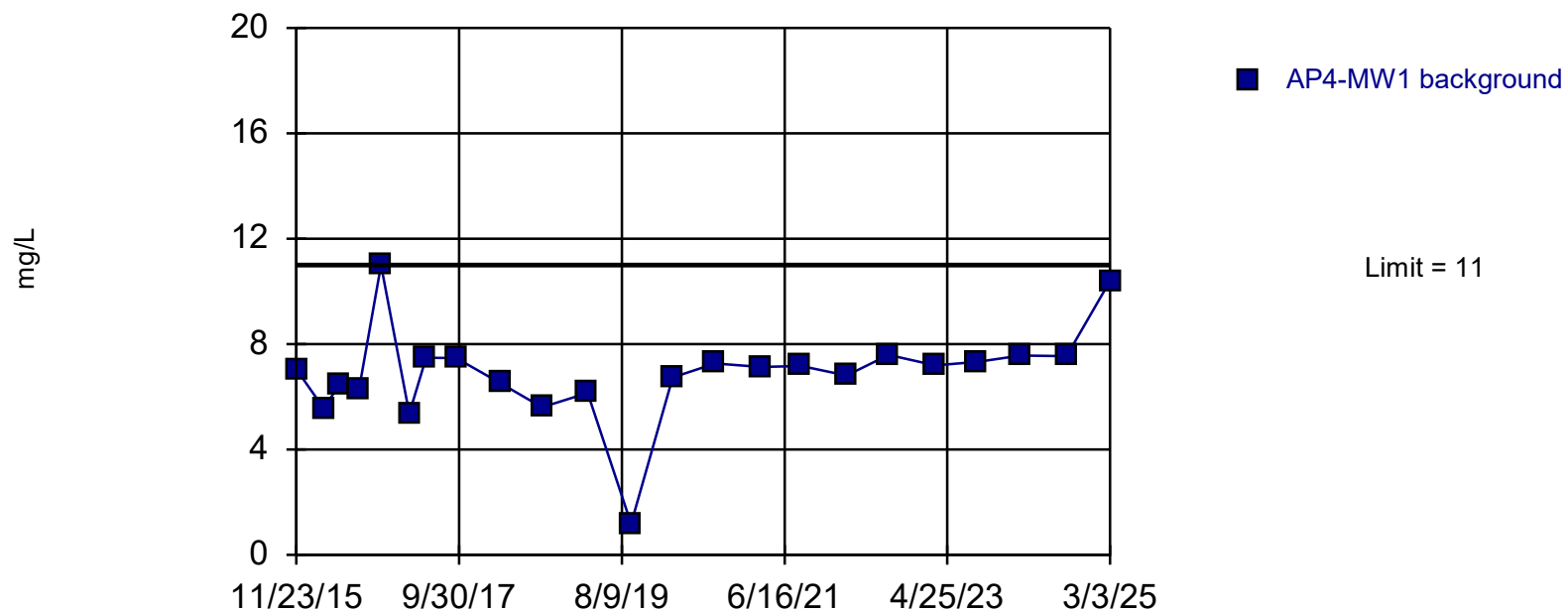
Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 24 background values. 83.33% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Boron    Analysis Run 9/9/2025 11:40 AM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025



## Prediction Limit

Intrawell Non-parametric, AP4-MW1 (bg)

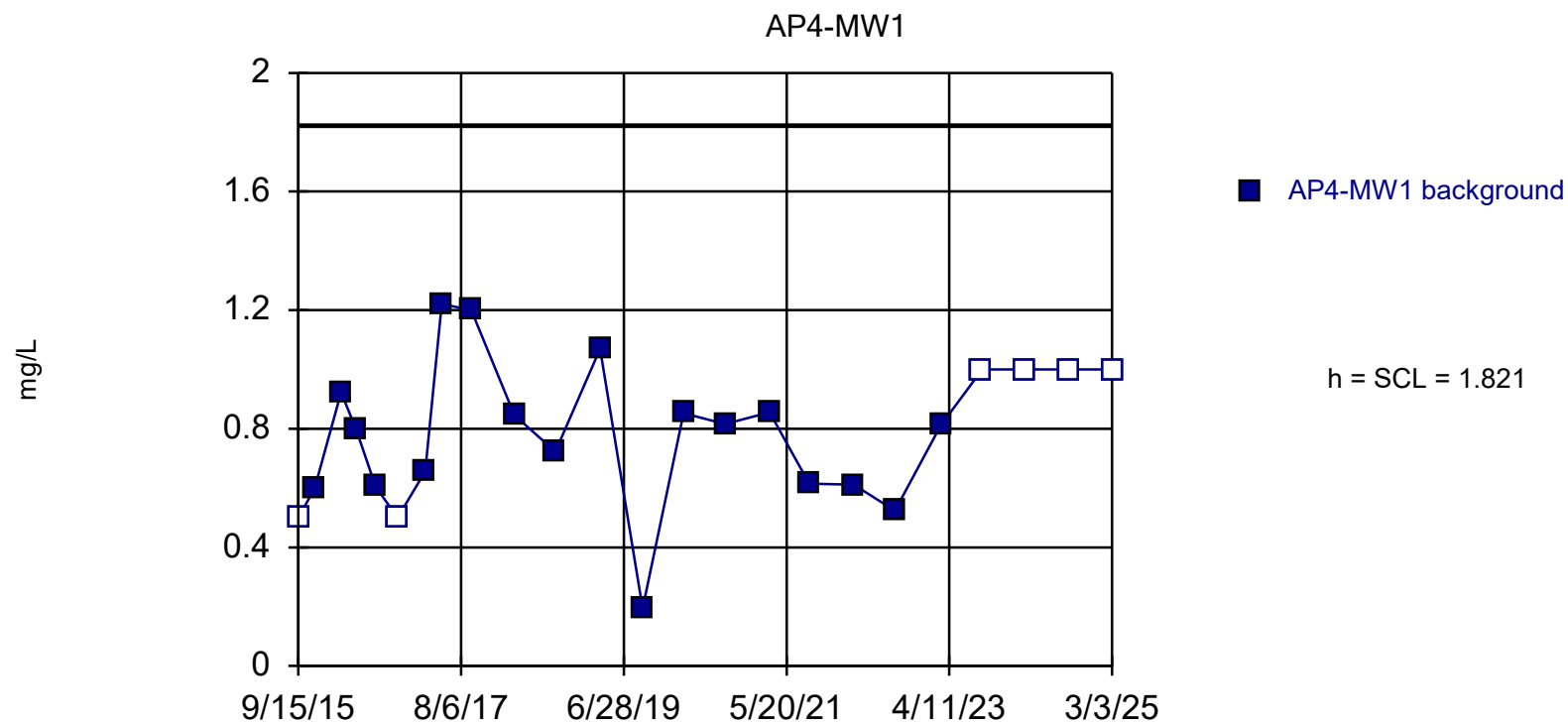


Non-parametric test used in lieu of control chart because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 23 background values. Well-constituent pair annual alpha = 0.006819. Individual comparison alpha = 0.003415 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 9/9/2025 1:49 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025

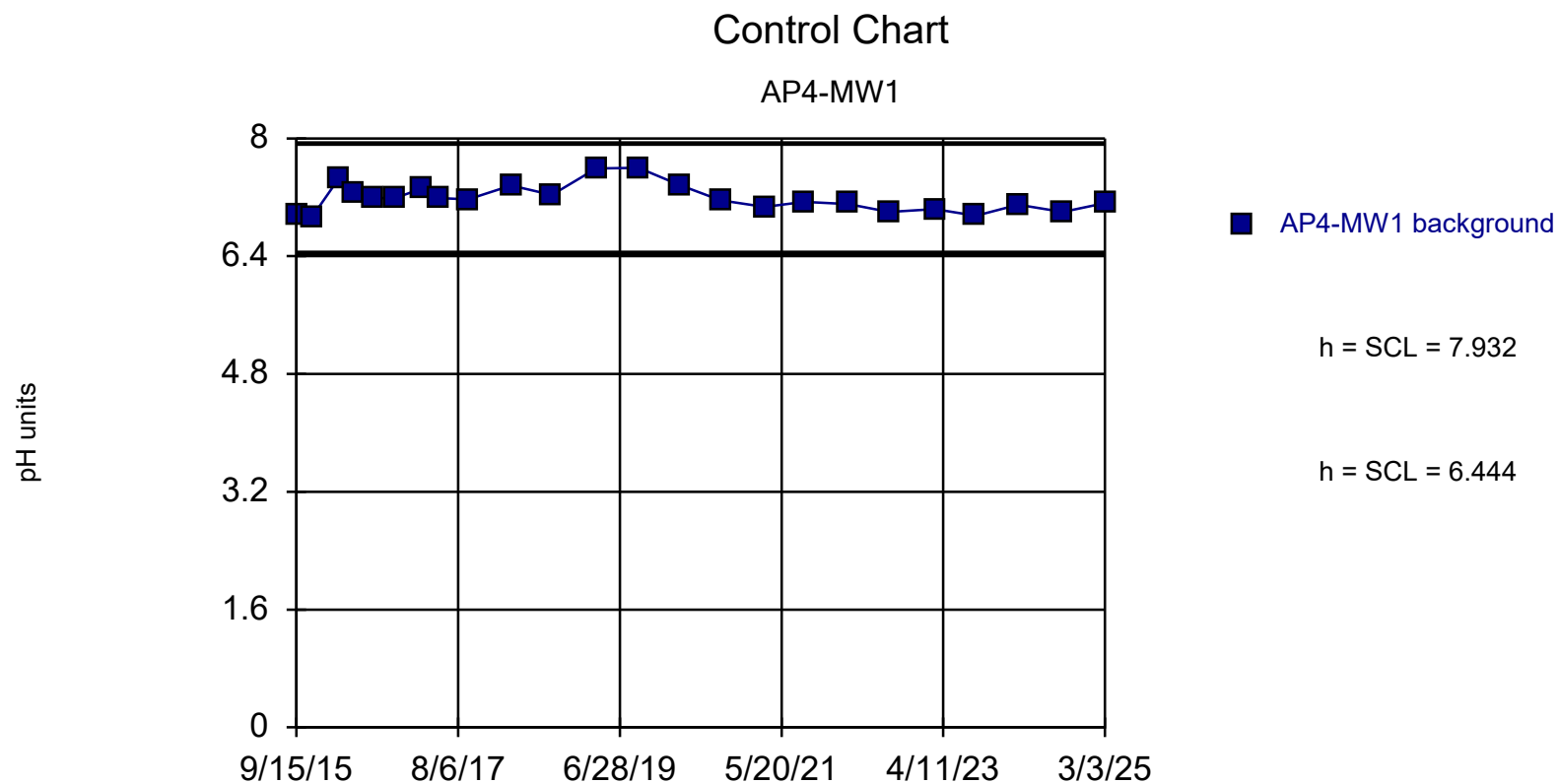


## Control Chart



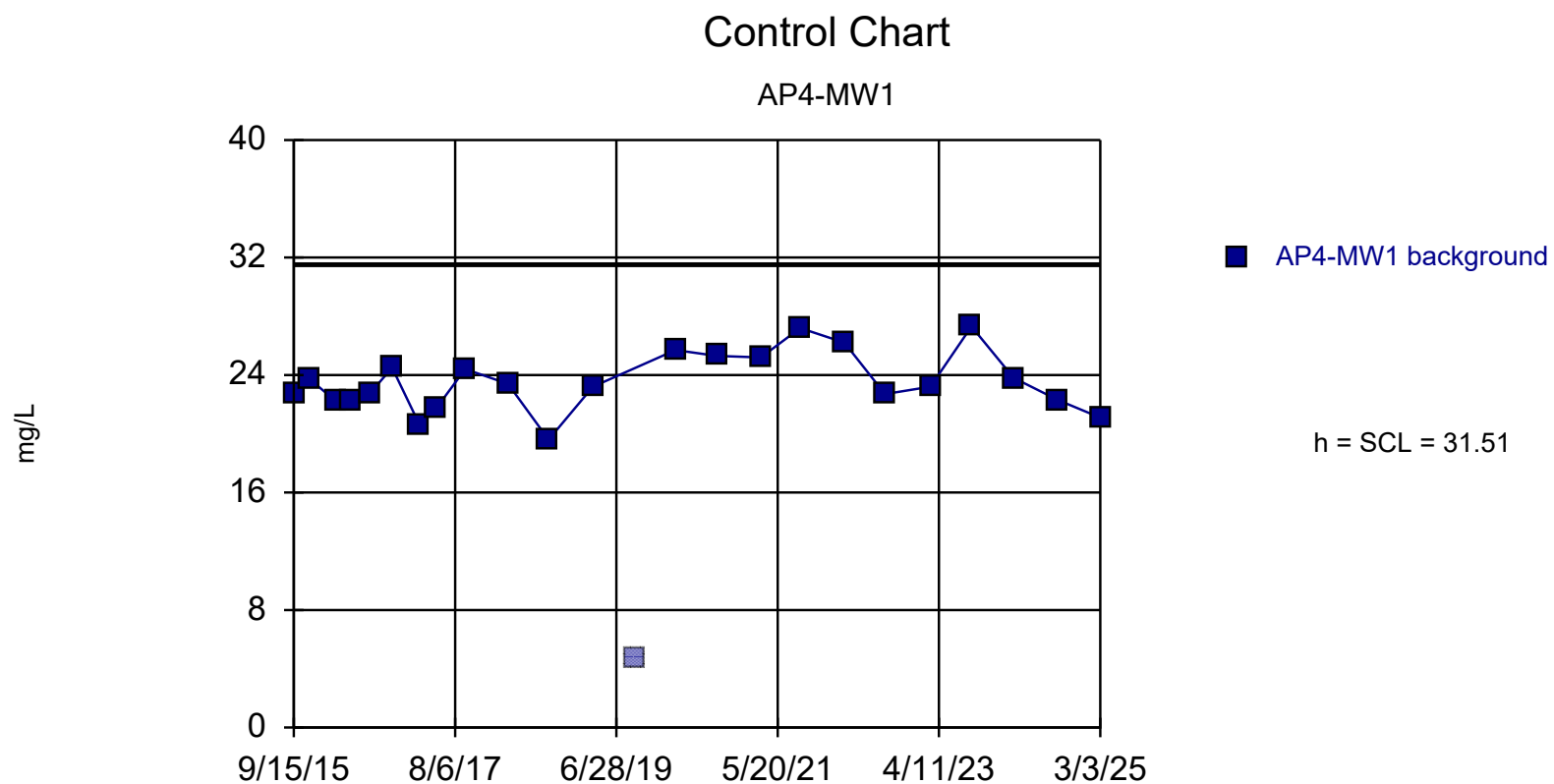
Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.702, Std. Dev.=0.2799, n=24, 25% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9708, critical = 0.916. Report alpha = 0.000368 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Fluoride Analysis Run 9/9/2025 12:38 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025



Background Data Summary: Mean=7.188, Std. Dev.=0.186, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9297, critical = 0.916. Report alpha = 0.000368 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured    Analysis Run 9/9/2025 12:39 PM  
 Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

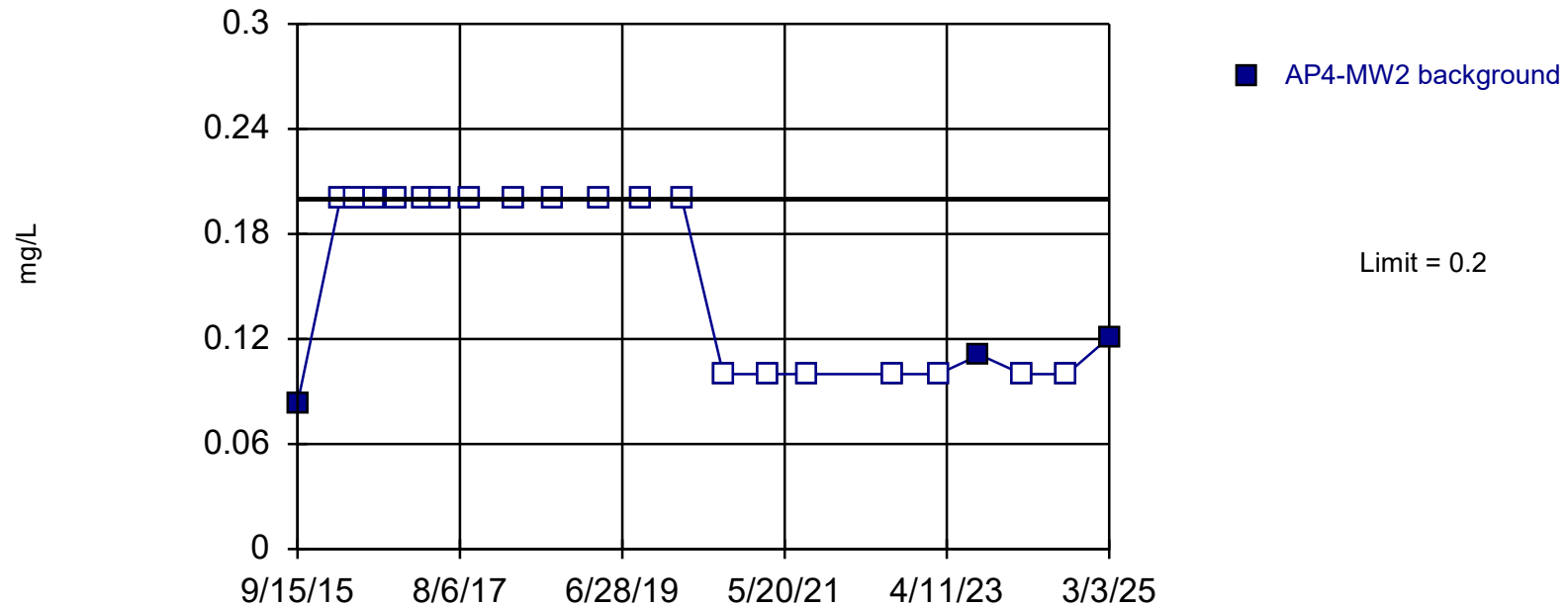


Background Data Summary: Mean=23.53, Std. Dev.=1.995, n=23. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9794, critical = 0.914. Report alpha = 0.000442 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate    Analysis Run 9/16/2025 2:44 PM  
 Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

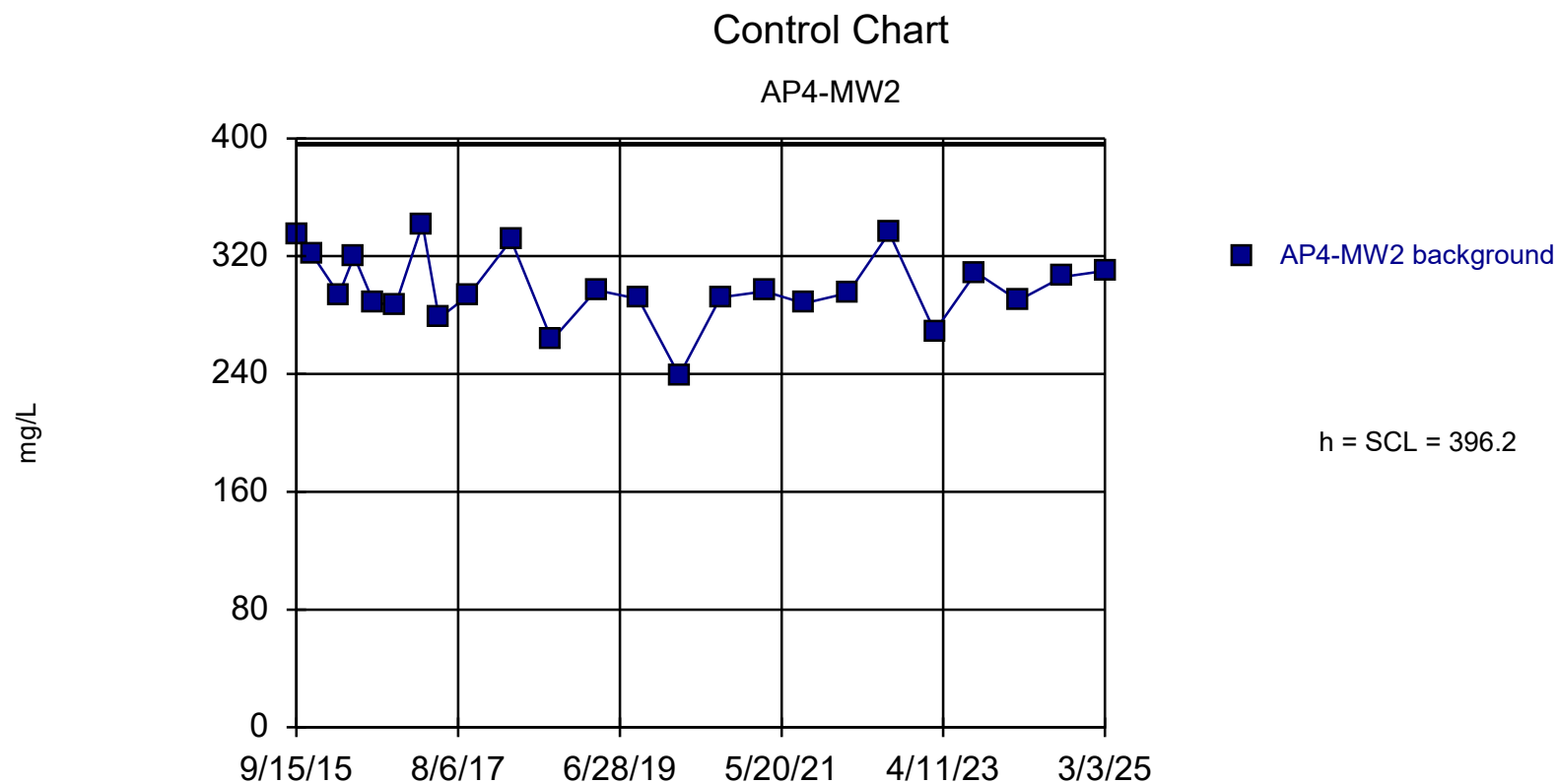
## Prediction Limit

Intrawell Non-parametric, AP4-MW2 (bg)



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 22 background values. 86.36% NDs. Well-constituent pair annual alpha = 0.007401. Individual comparison alpha = 0.003707 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Boron    Analysis Run 9/15/2025 11:44 AM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

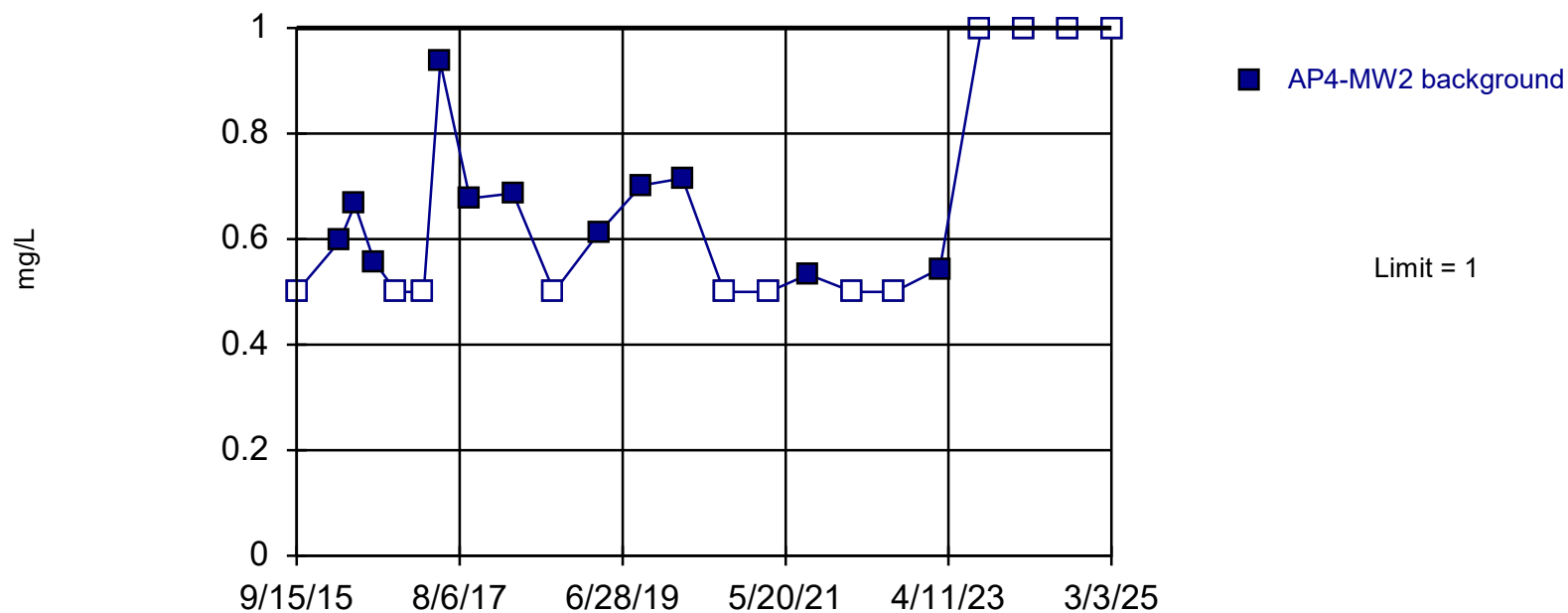


Background Data Summary: Mean=298.8, Std. Dev.=24.35, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9578, critical = 0.916. Report alpha = 0.000298 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium Analysis Run 9/10/2025 1:42 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025

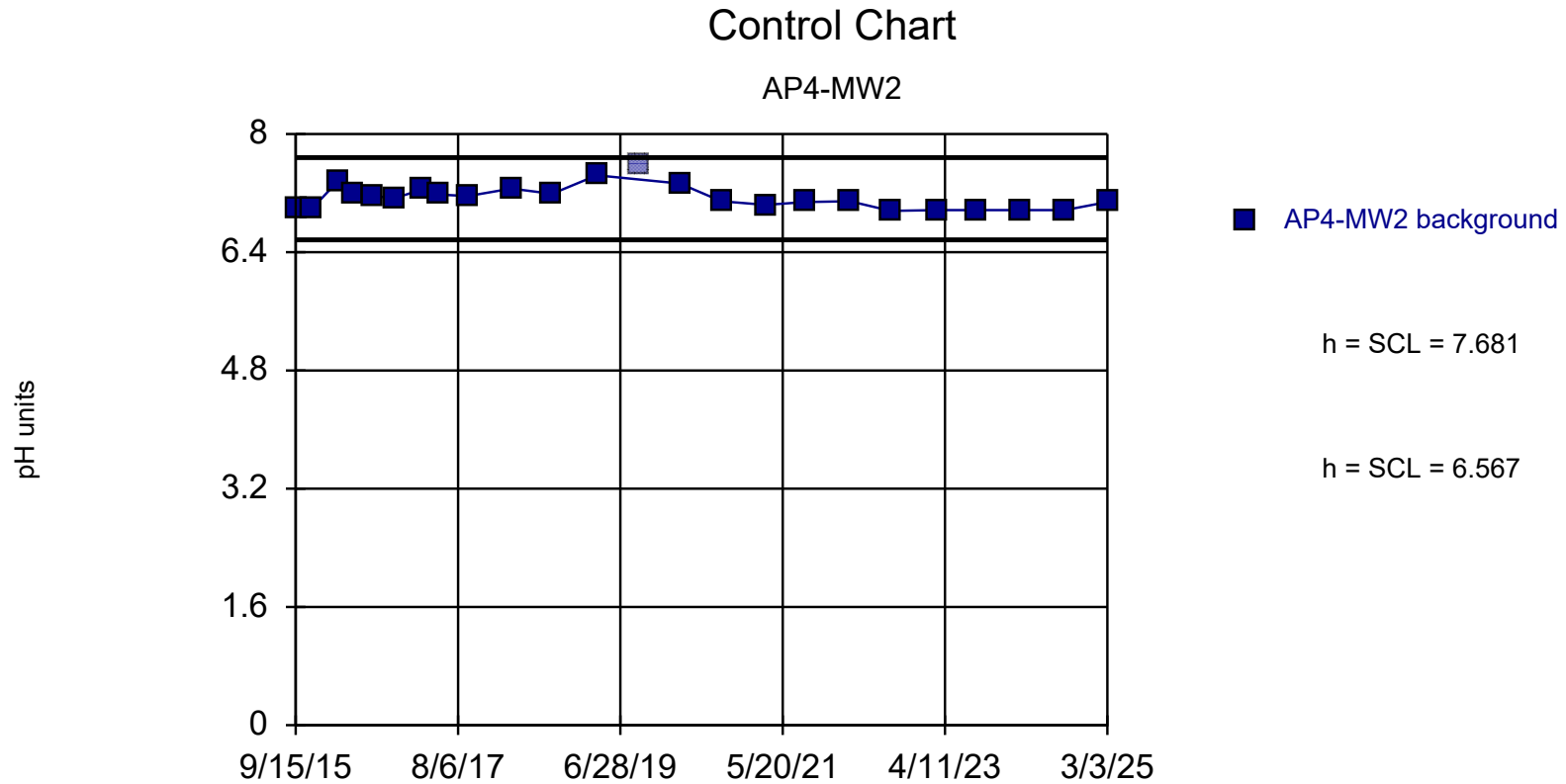
## Prediction Limit

Intrawell Non-parametric, AP4-MW2 (bg)



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 23 background values. 52.17% NDs. Well-constituent pair annual  $\alpha = 0.006819$ . Individual comparison  $\alpha = 0.003415$  (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Fluoride Analysis Run 9/9/2025 2:46 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025



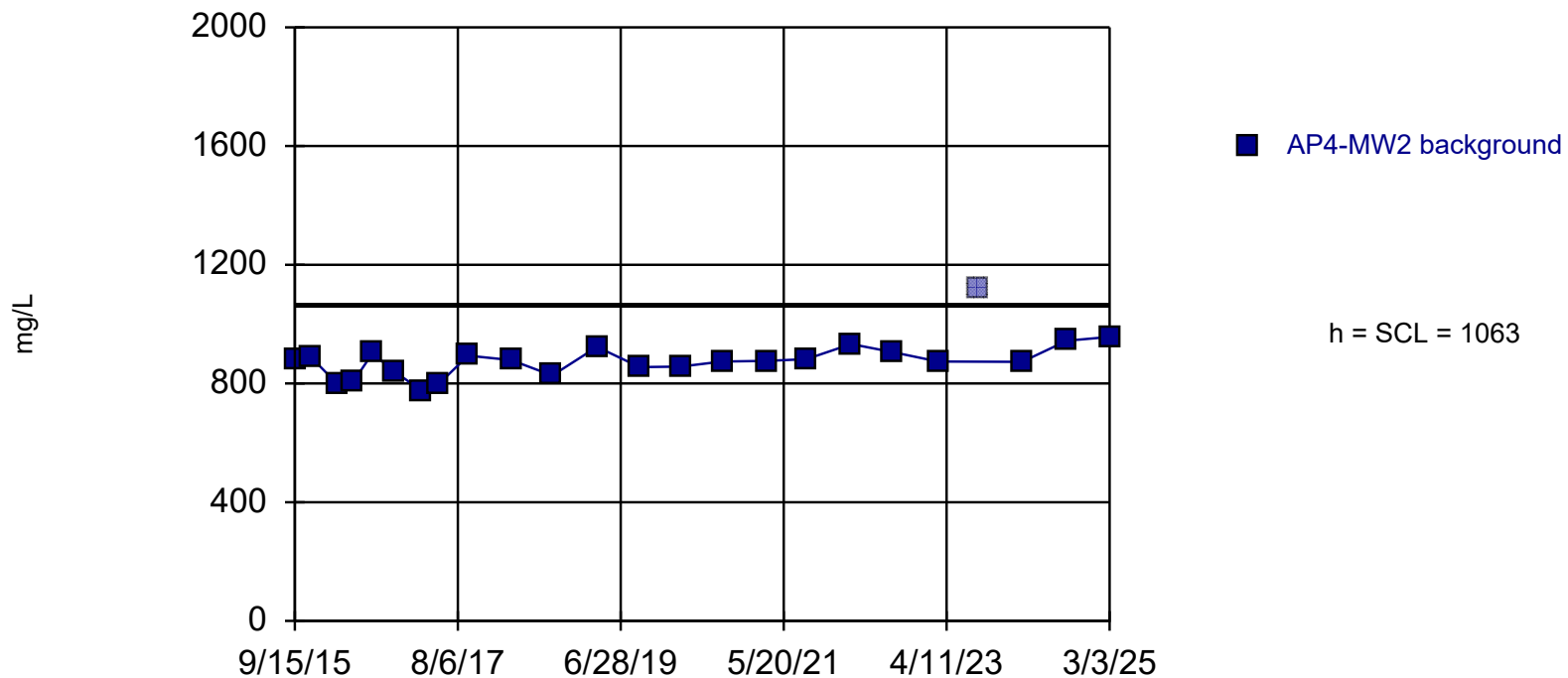
Background Data Summary: Mean=7.124, Std. Dev.=0.1393, n=23. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9221, critical = 0.914. Report alpha = 0.000442 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured    Analysis Run 9/16/2025 2:43 PM

Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

## Control Chart

AP4-MW2



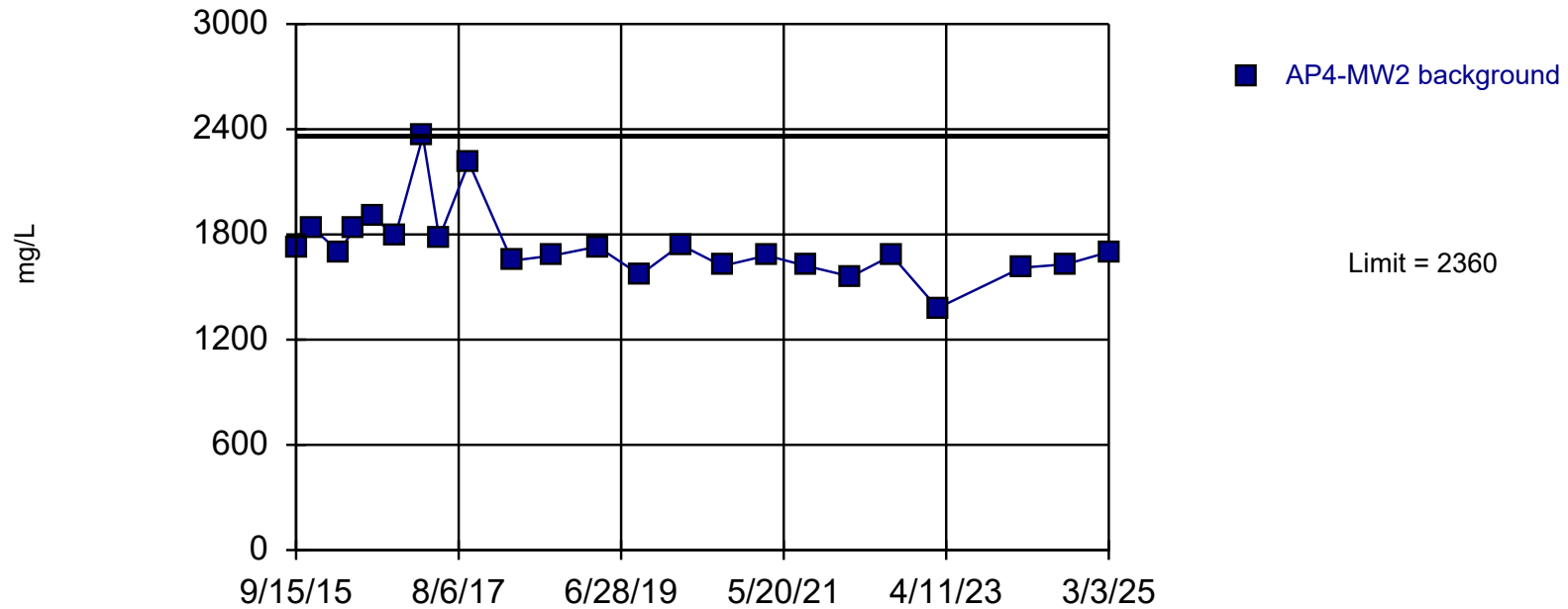
Background Data Summary: Mean=871.3, Std. Dev.=48, n=23. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9641, critical = 0.914. Report alpha = 0.000442 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate    Analysis Run 9/16/2025 2:57 PM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025



## Prediction Limit

Intrawell Non-parametric, AP4-MW2 (bg)



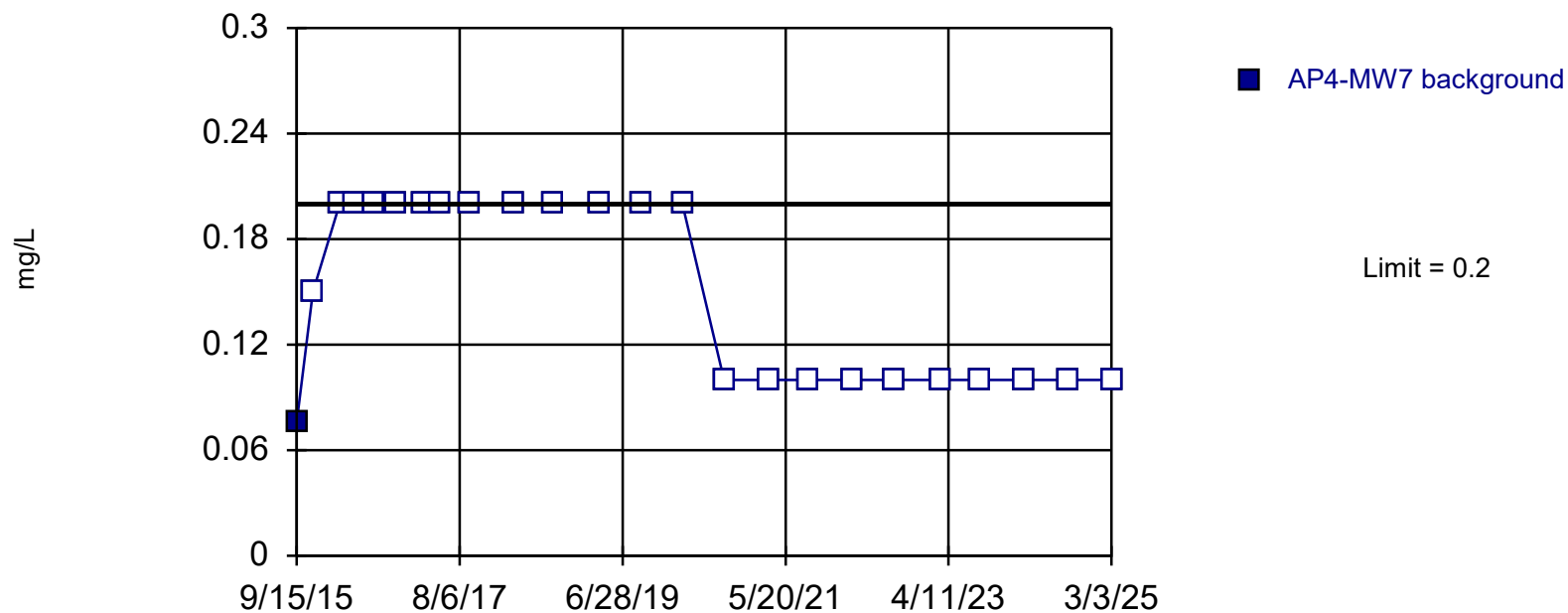
Non-parametric test used in lieu of control chart because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 23 background values. Well-constituent pair annual alpha = 0.006819. Individual comparison alpha = 0.003415 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Total Dissolved Solids Analysis Run 9/16/2025 2:59 PM

Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025

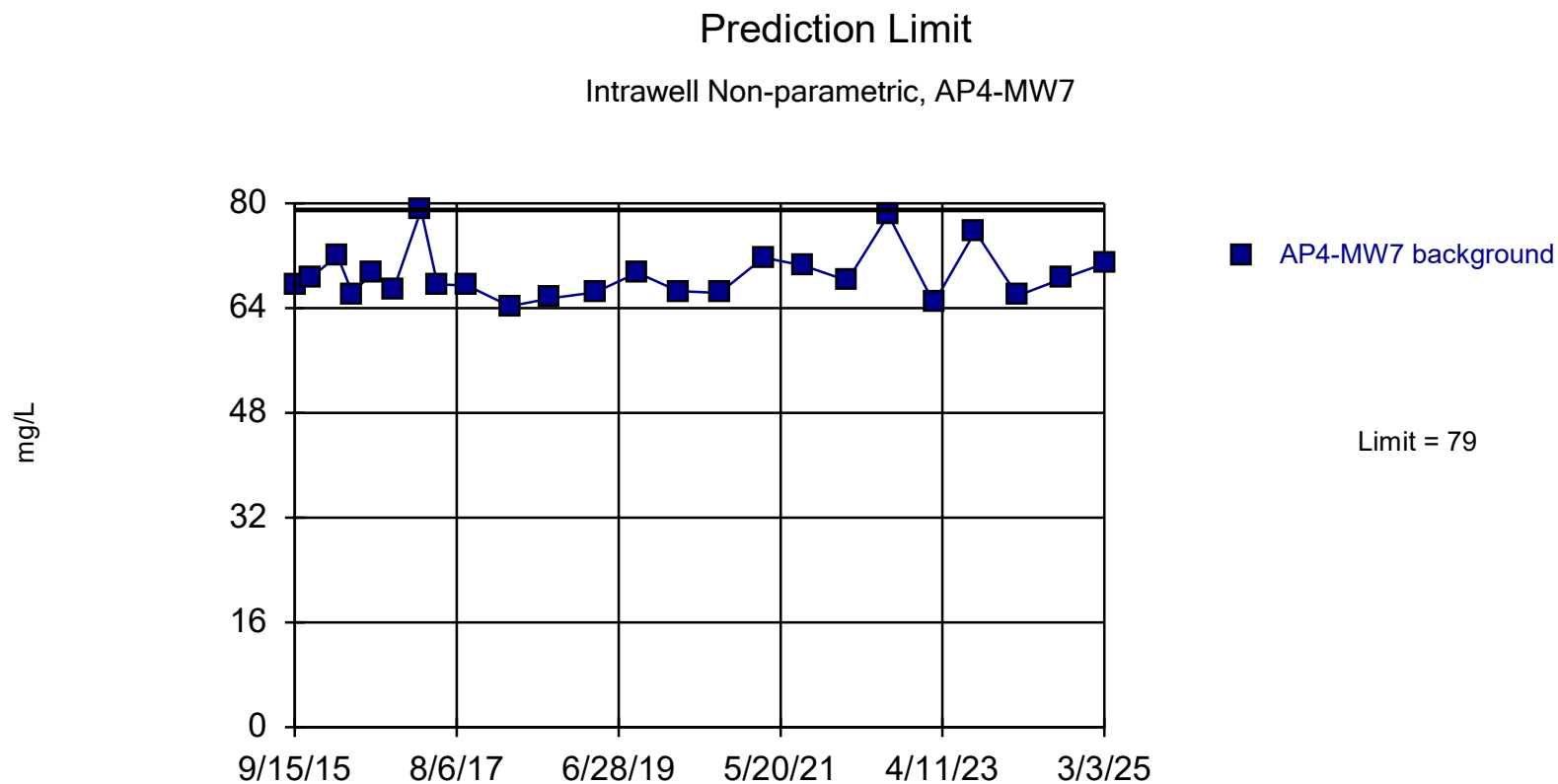
## Prediction Limit

Intrawell Non-parametric, AP4-MW7



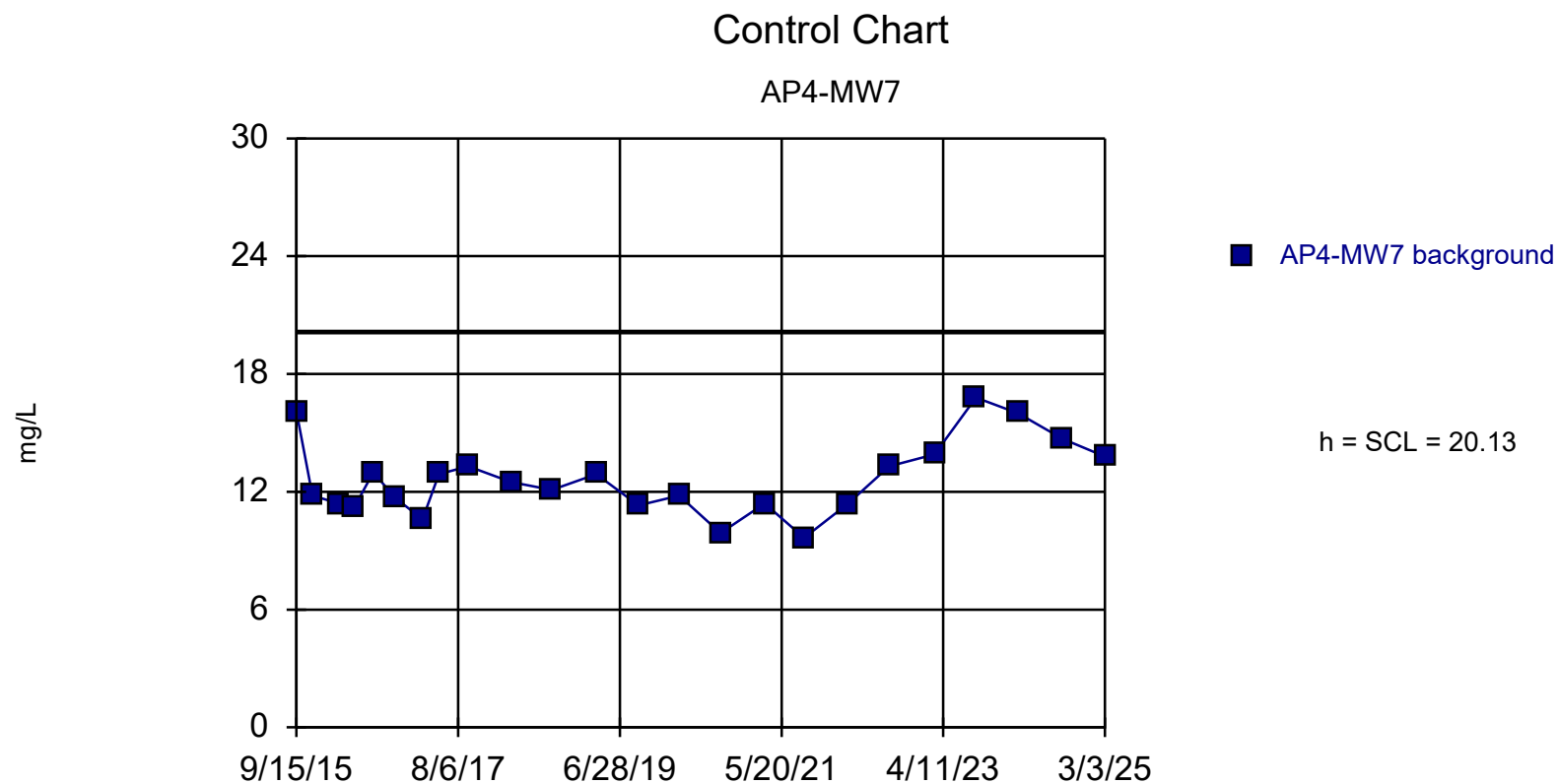
Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 24 background values. 95.83% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Boron Analysis Run 9/9/2025 11:44 AM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025



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 24 background values. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Calcium    Analysis Run 9/12/2025 12:38 PM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

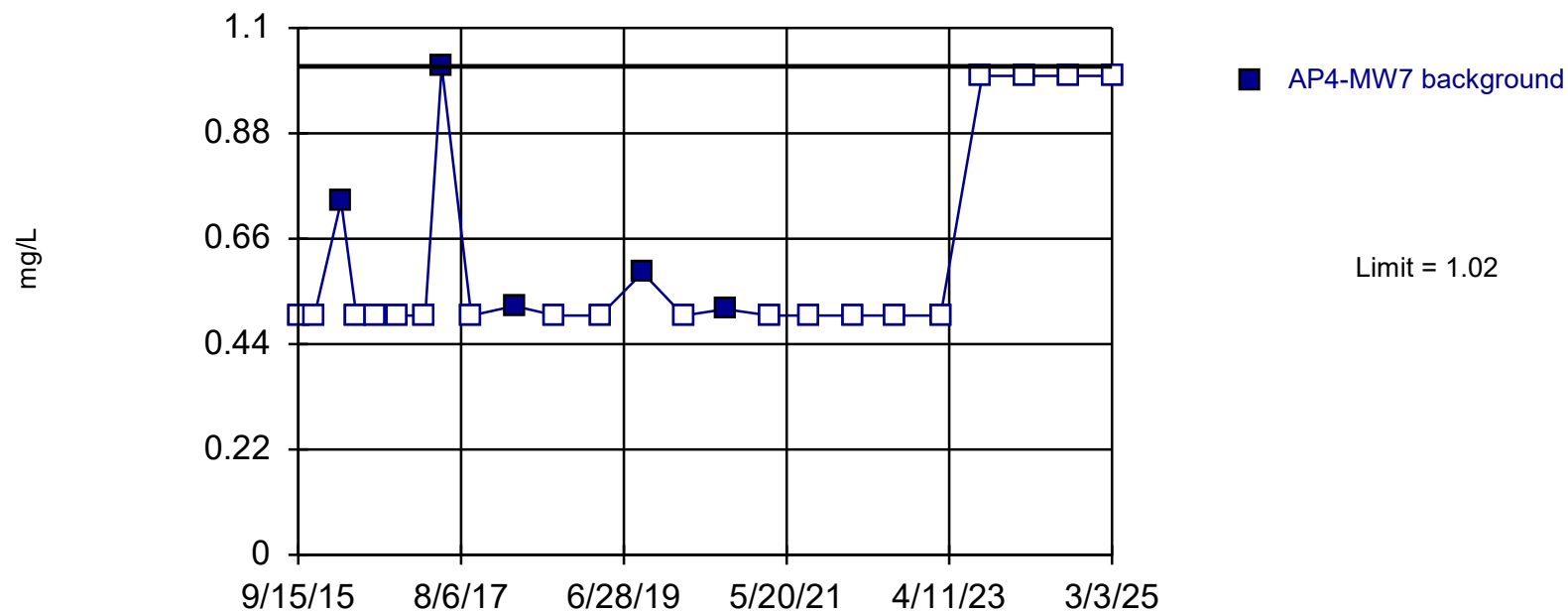


Background Data Summary: Mean=12.64, Std. Dev.=1.872, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9437, critical = 0.916. Report alpha = 0.000338 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Chloride    Analysis Run 9/12/2025 12:53 PM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

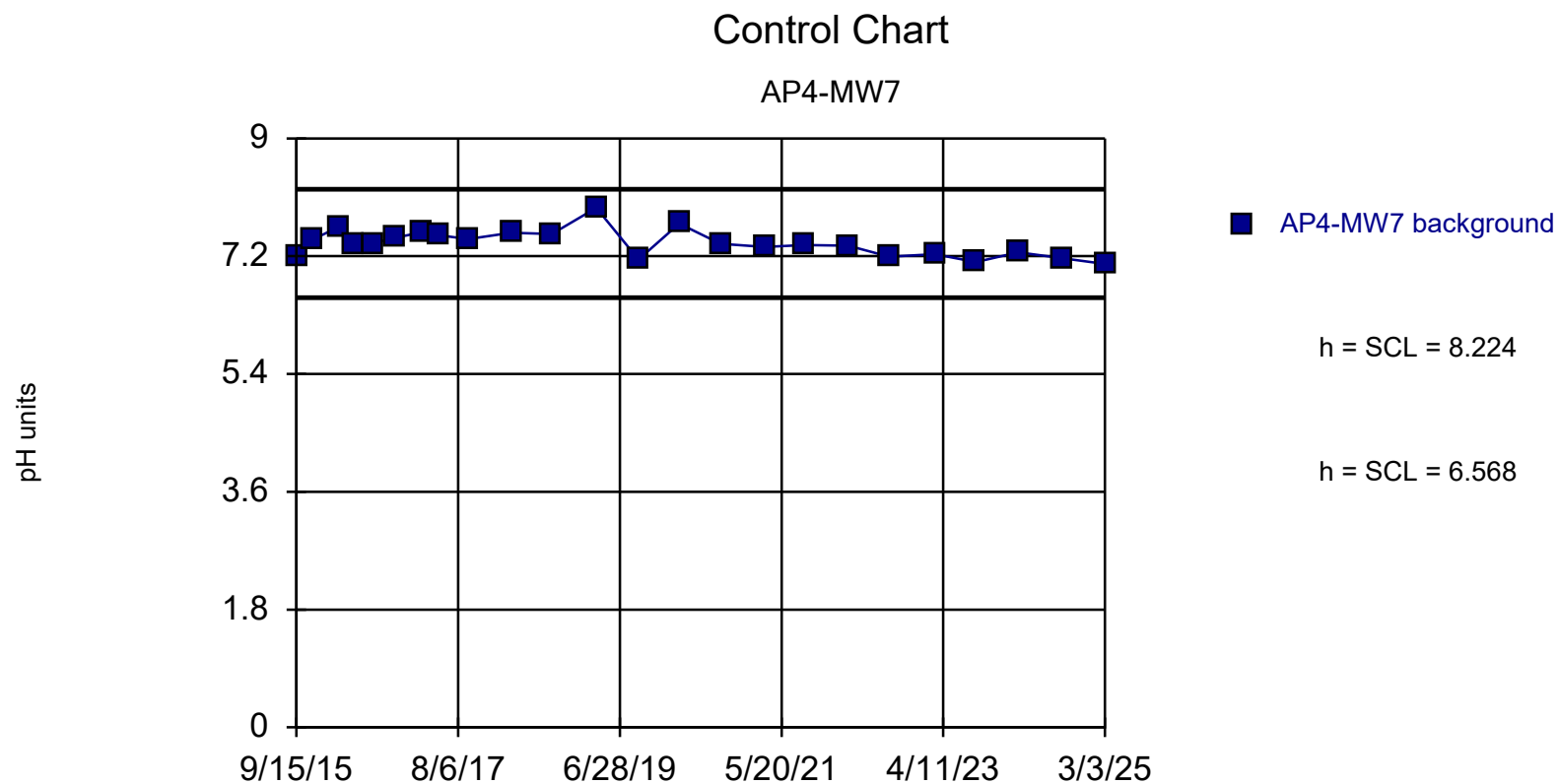
## Prediction Limit

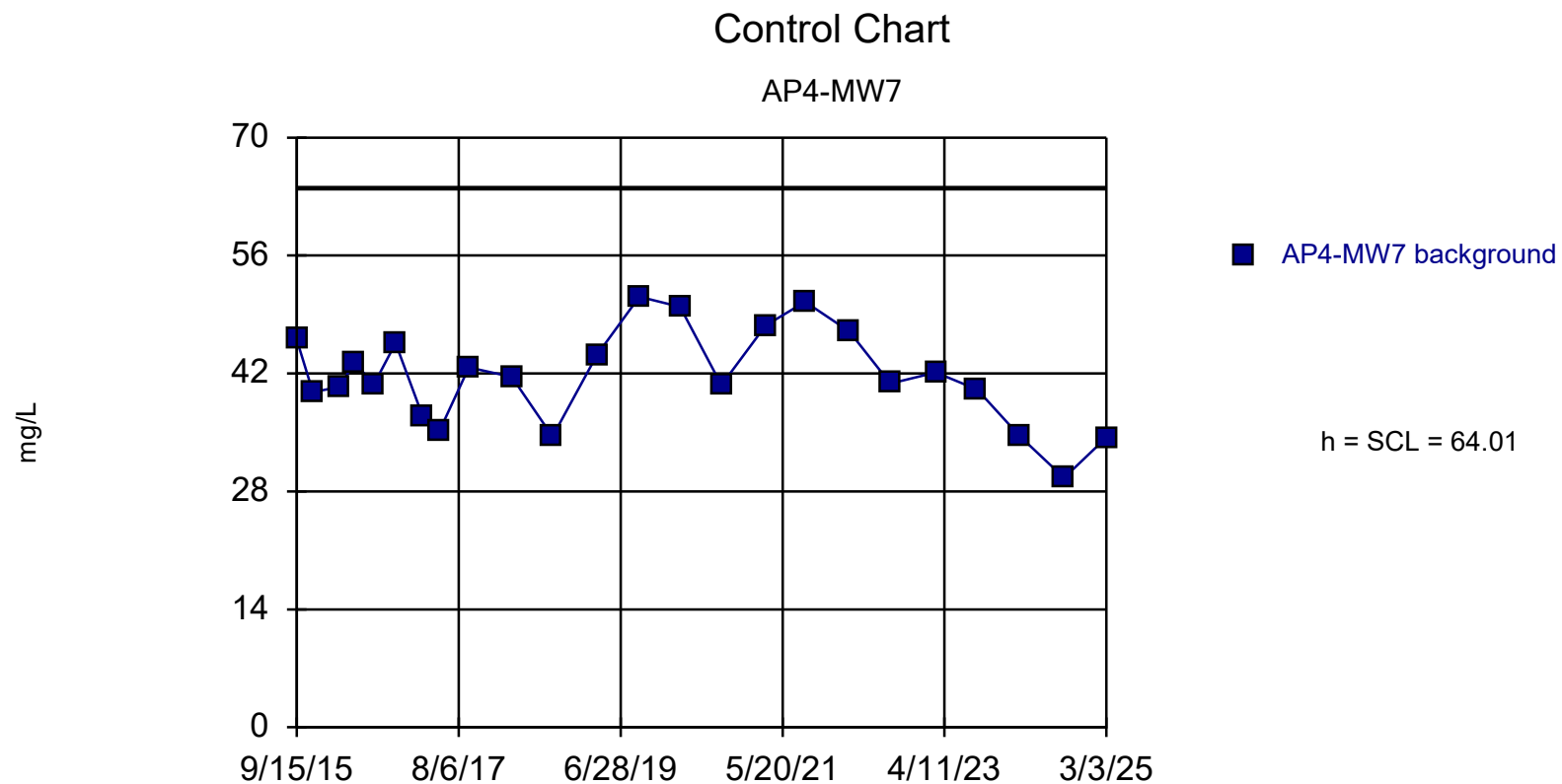
Intrawell Non-parametric, AP4-MW7



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 24 background values. 79.17% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Fluoride Analysis Run 9/10/2025 12:57 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025



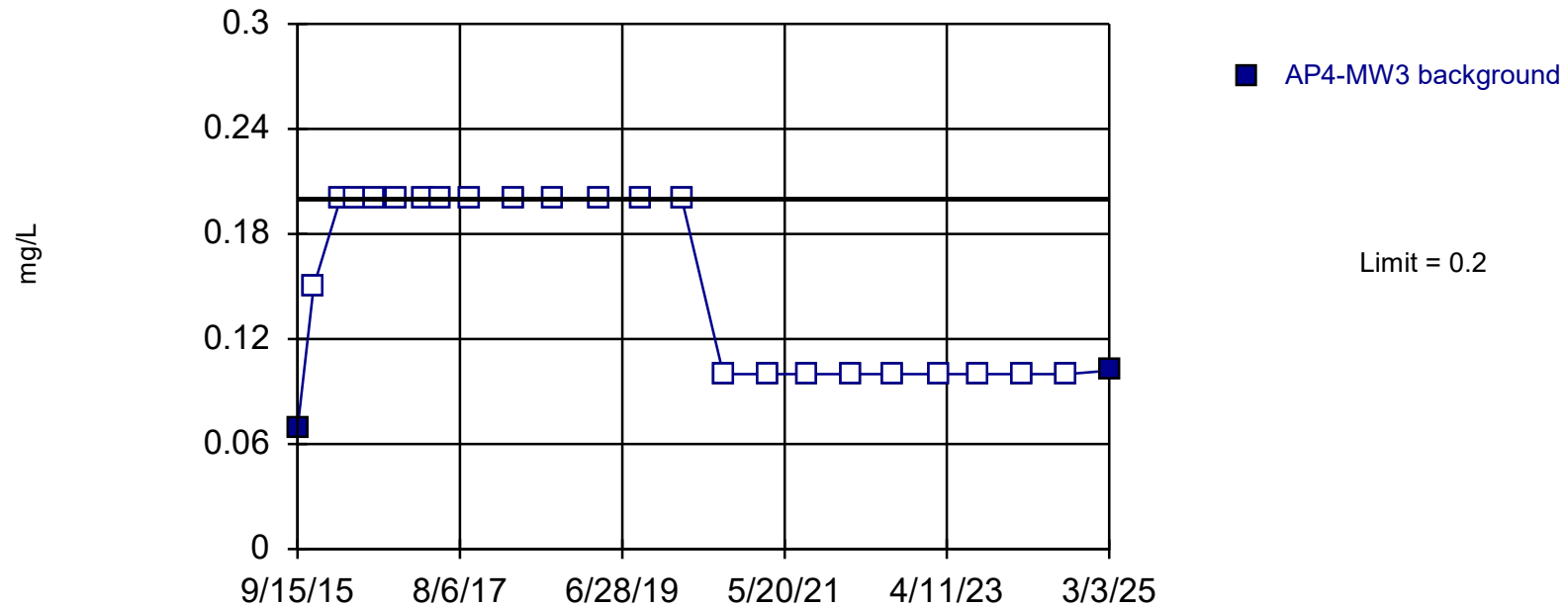


Background Data Summary: Mean=41.63, Std. Dev.=5.594, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9707, critical = 0.916. Report alpha = 0.000344 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate   Analysis Run 9/10/2025 12:57 PM  
Sheldon Station   Client: NPPD   Data: SheldonStation\_Q3-2025

## Prediction Limit

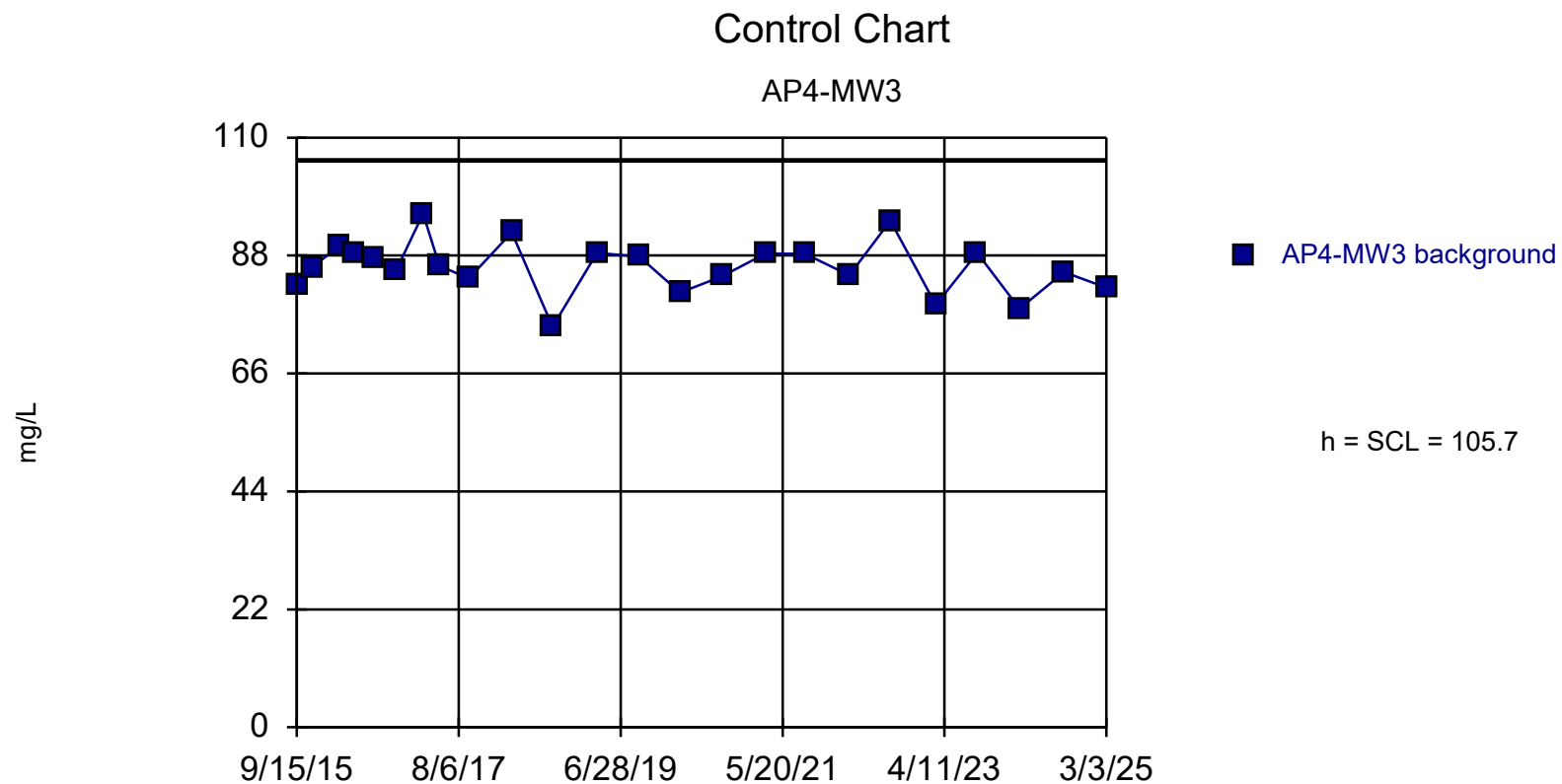
Intrawell Non-parametric, AP4-MW3



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 24 background values. 91.67% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Boron    Analysis Run 9/9/2025 12:04 PM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025



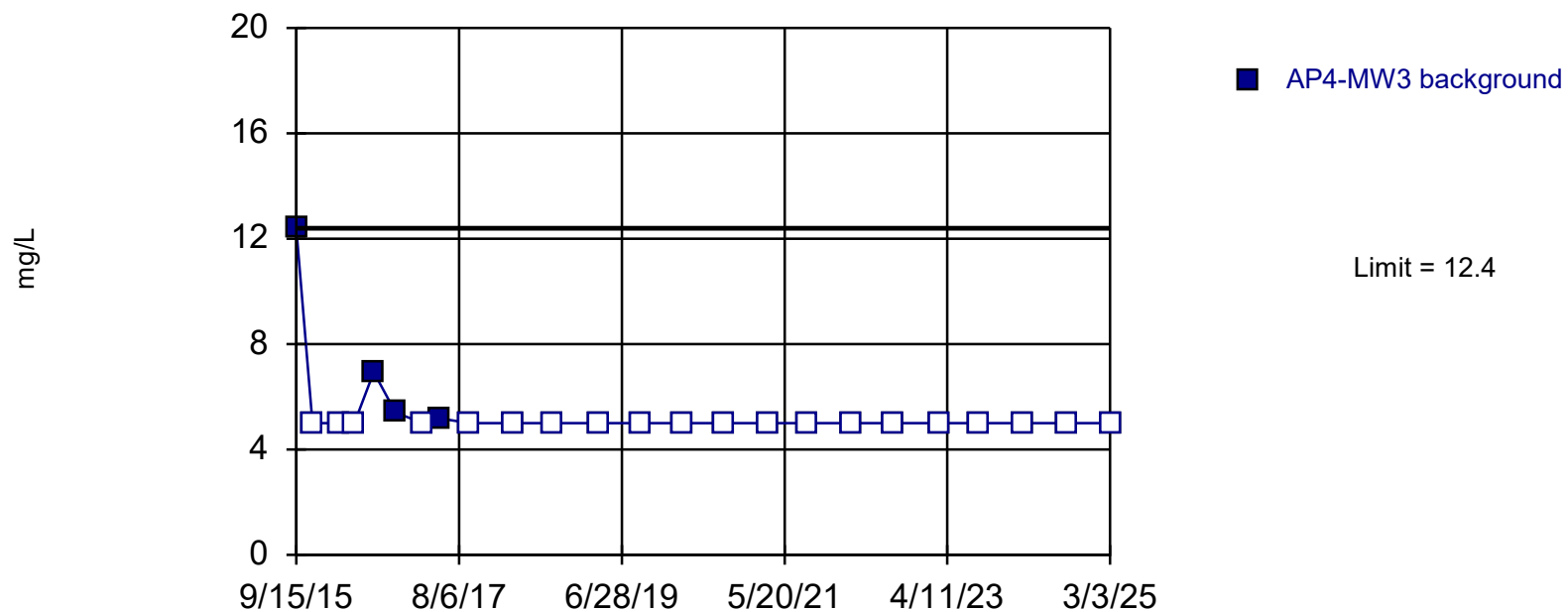


Background Data Summary: Mean=85.88, Std. Dev.=4.962, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9788, critical = 0.916. Report alpha = 0.000334 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium   Analysis Run 9/9/2025 3:21 PM  
Sheldon Station   Client: NPPD   Data: SheldonStation\_Q3-2025

## Prediction Limit

Intrawell Non-parametric, AP4-MW3

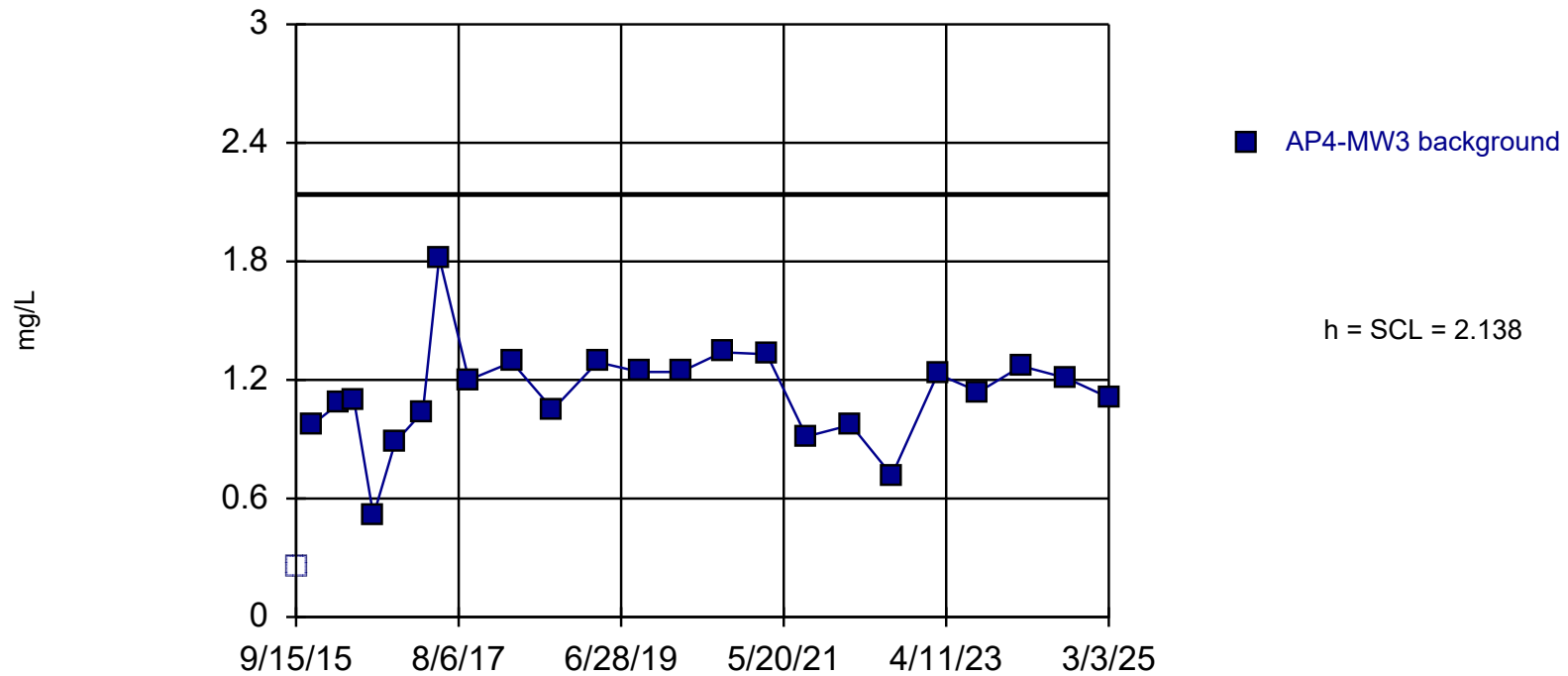


Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 24 background values. 83.33% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 9/9/2025 12:06 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025

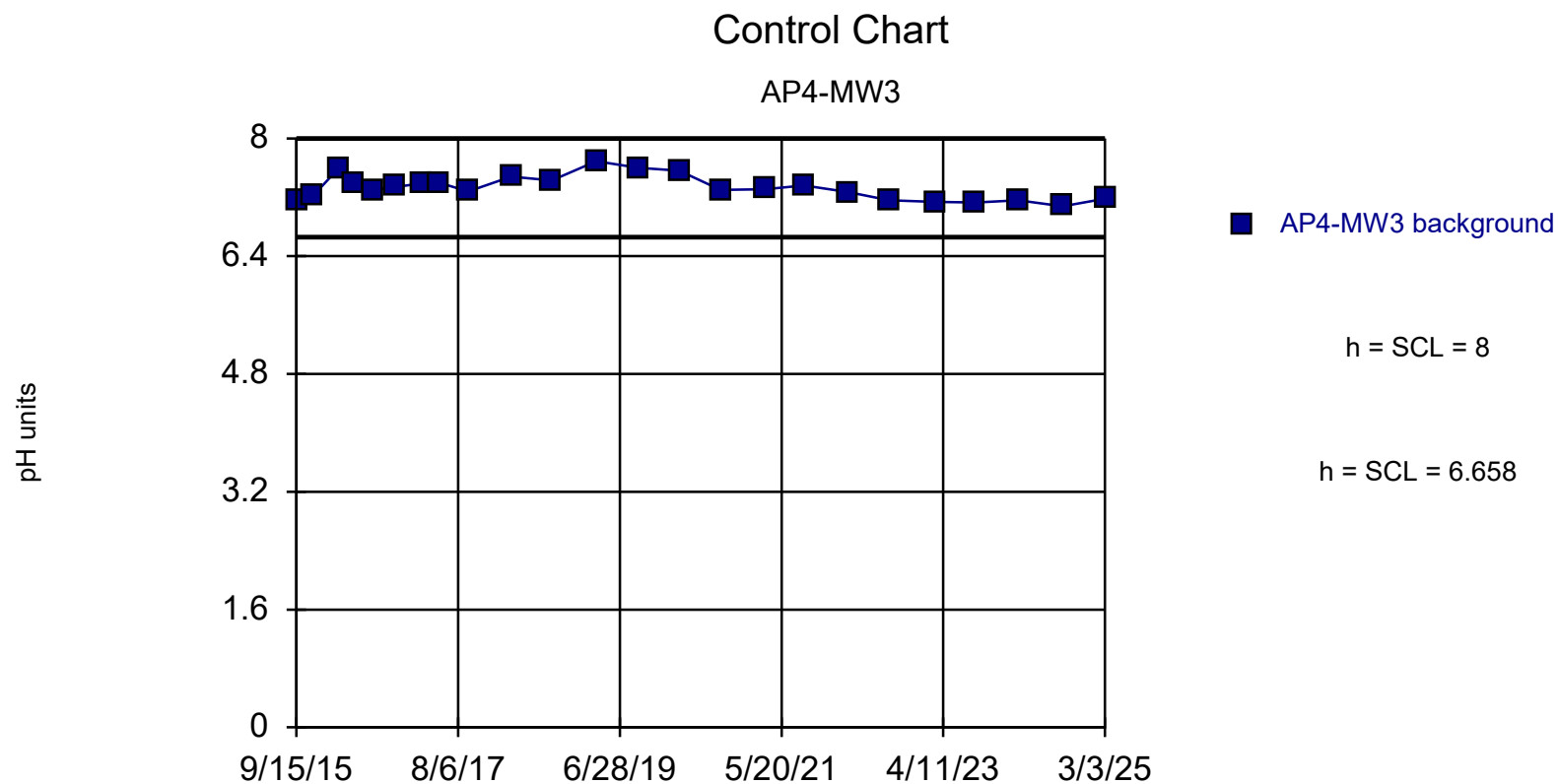
## Control Chart

AP4-MW3



Background Data Summary: Mean=1.128, Std. Dev.=0.2525, n=23. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9318, critical = 0.914. Report alpha = 0.000442 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Fluoride Analysis Run 9/16/2025 3:51 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025

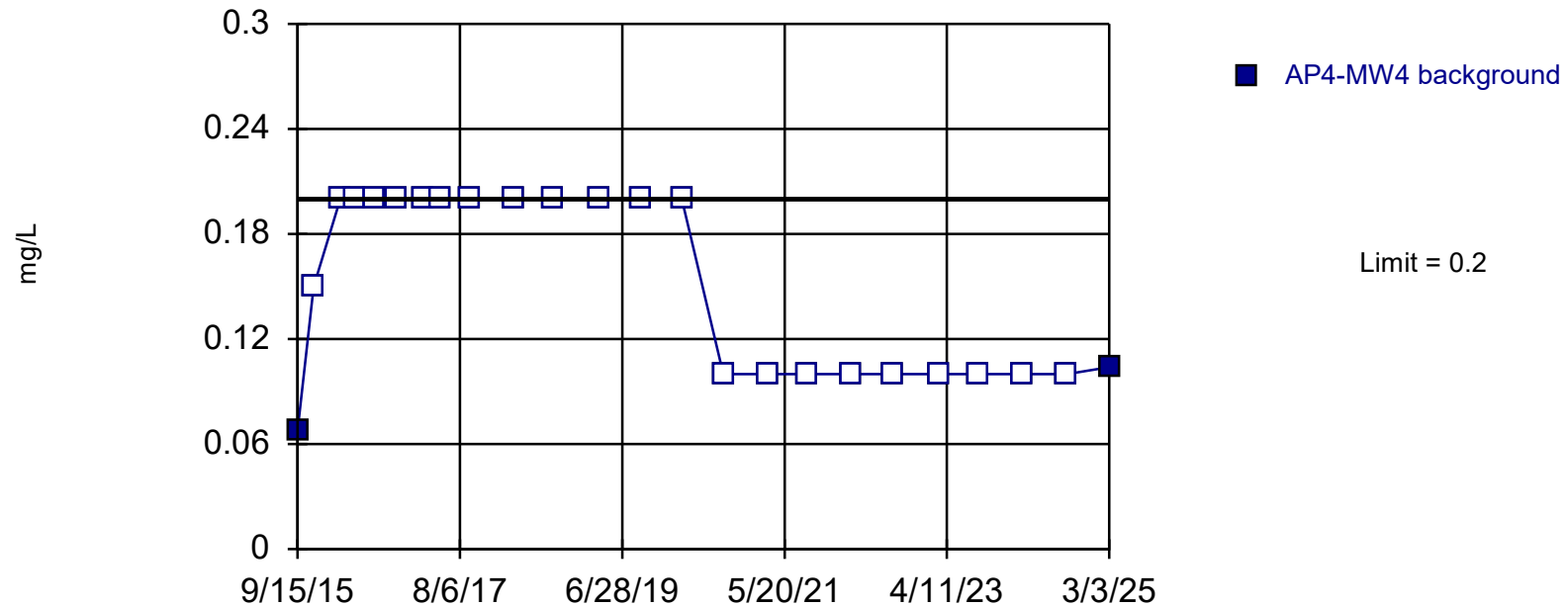


Background Data Summary: Mean=7.329, Std. Dev.=0.1677, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9484, critical = 0.916. Report alpha = 0.000338 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured    Analysis Run 9/12/2025 1:40 PM  
 Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

## Prediction Limit

Intrawell Non-parametric, AP4-MW4

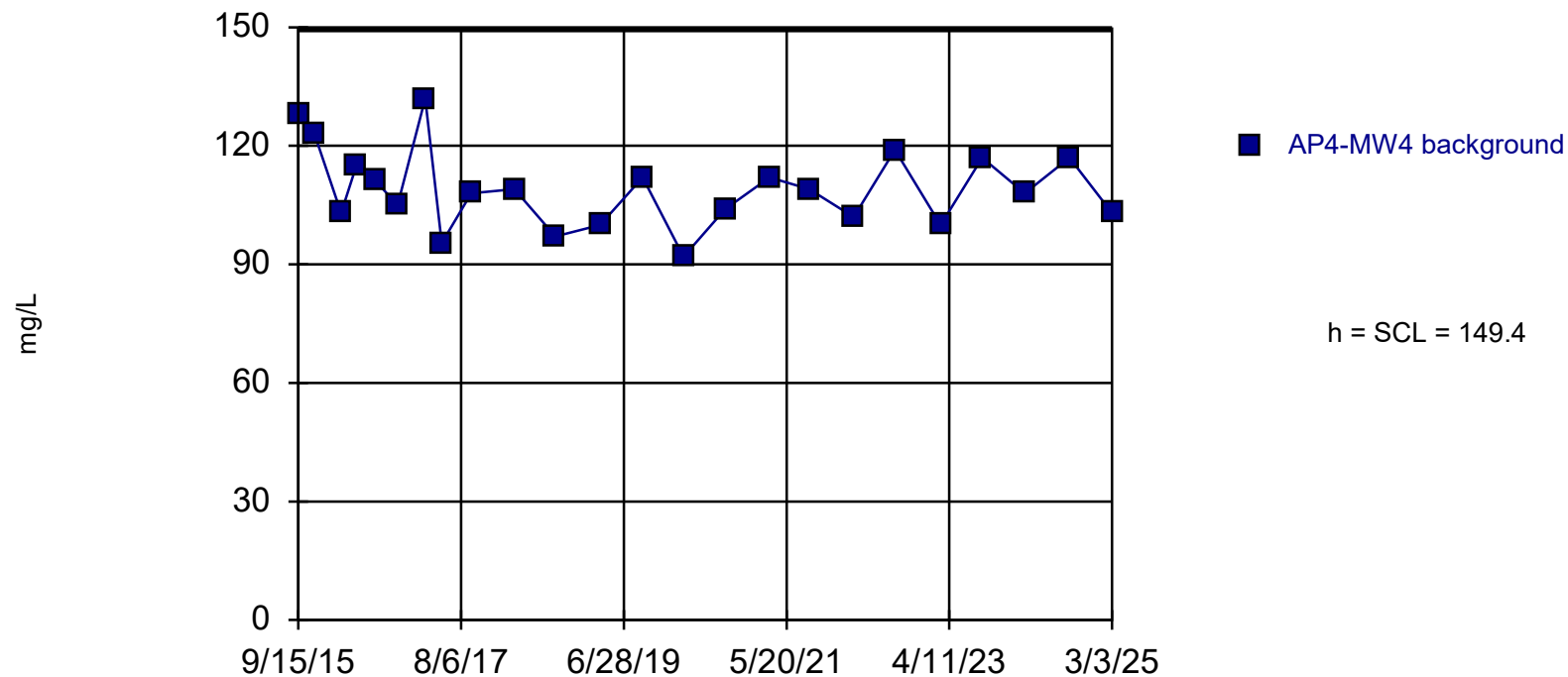


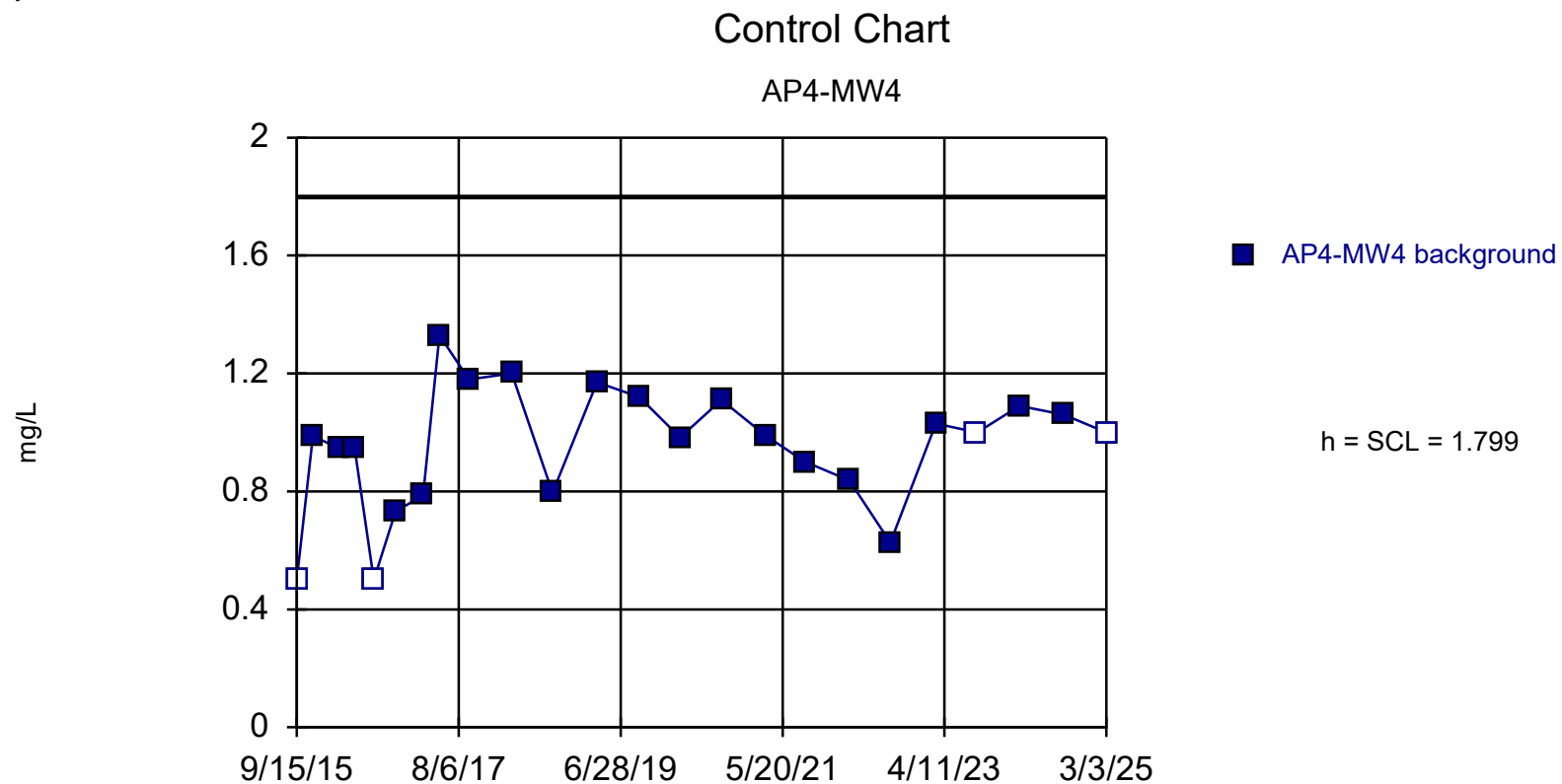
Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 24 background values. 91.67% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Boron    Analysis Run 9/9/2025 12:08 PM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

## Control Chart

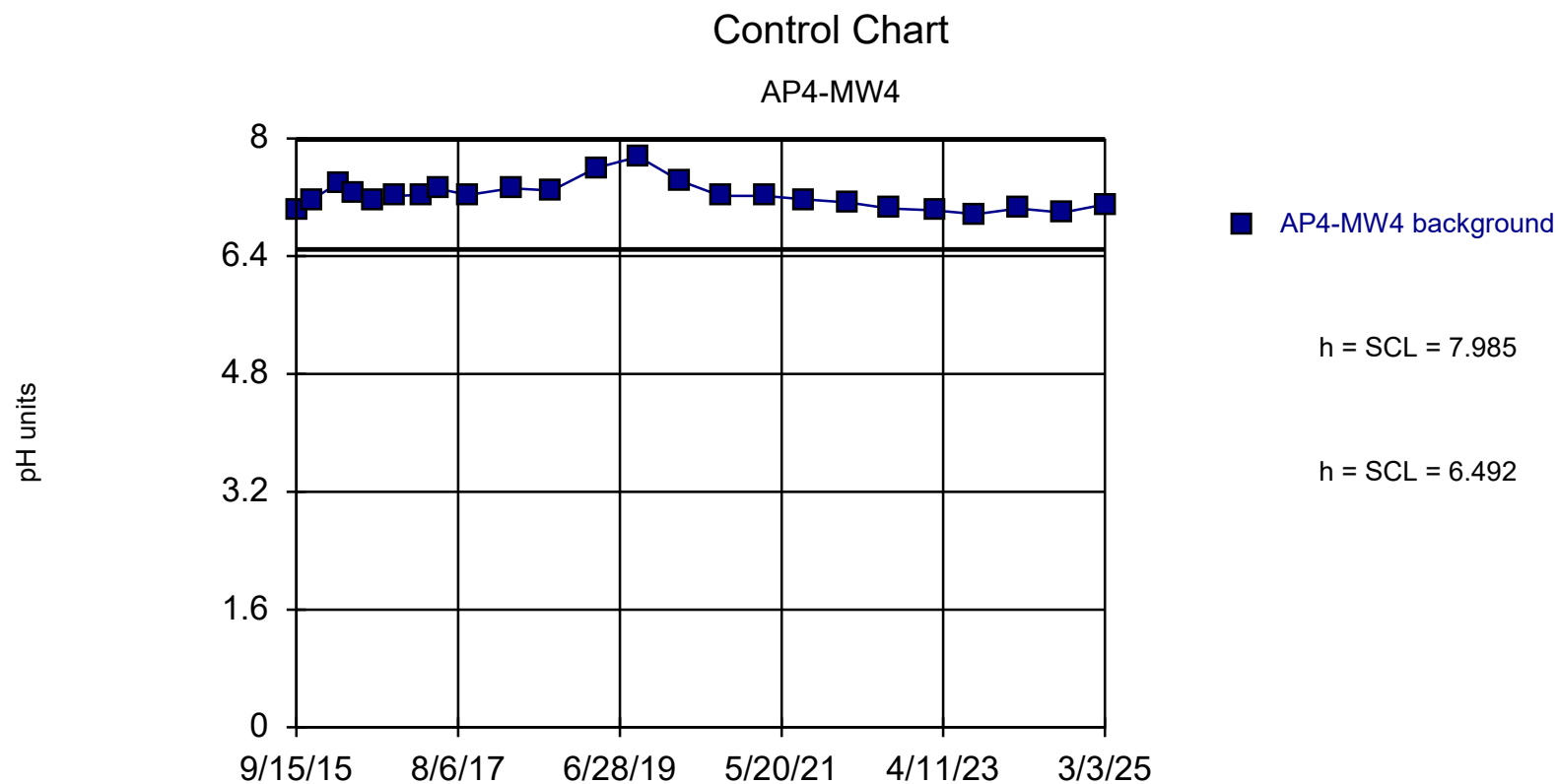
AP4-MW4



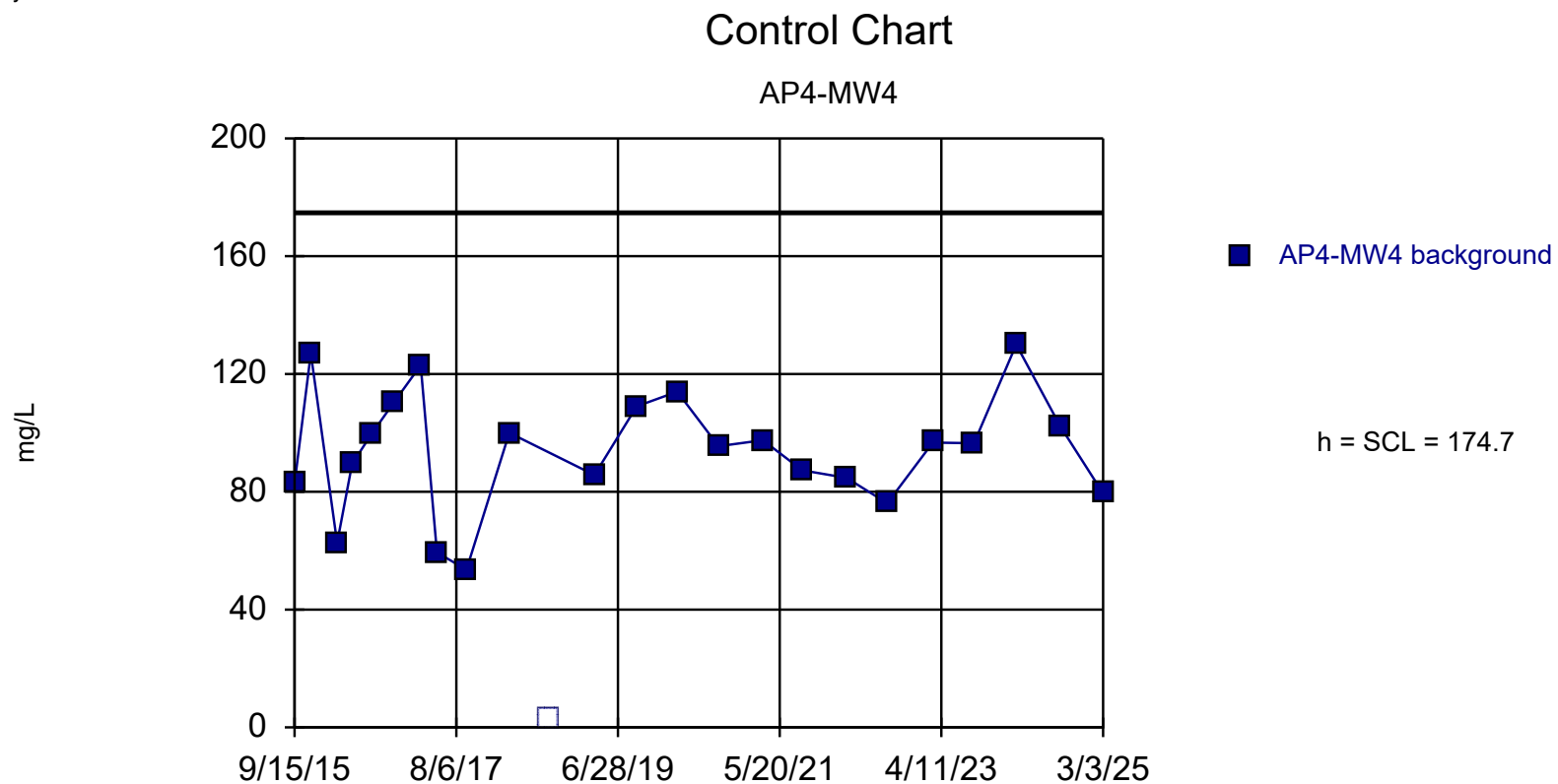


Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.935, Std. Dev.=0.216, n=24, 16.67% NDs. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9491, critical = 0.916. Report alpha = 0.000334 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Fluoride   Analysis Run 9/9/2025 3:36 PM  
Sheldon Station   Client: NPPD   Data: SheldonStation\_Q3-2025

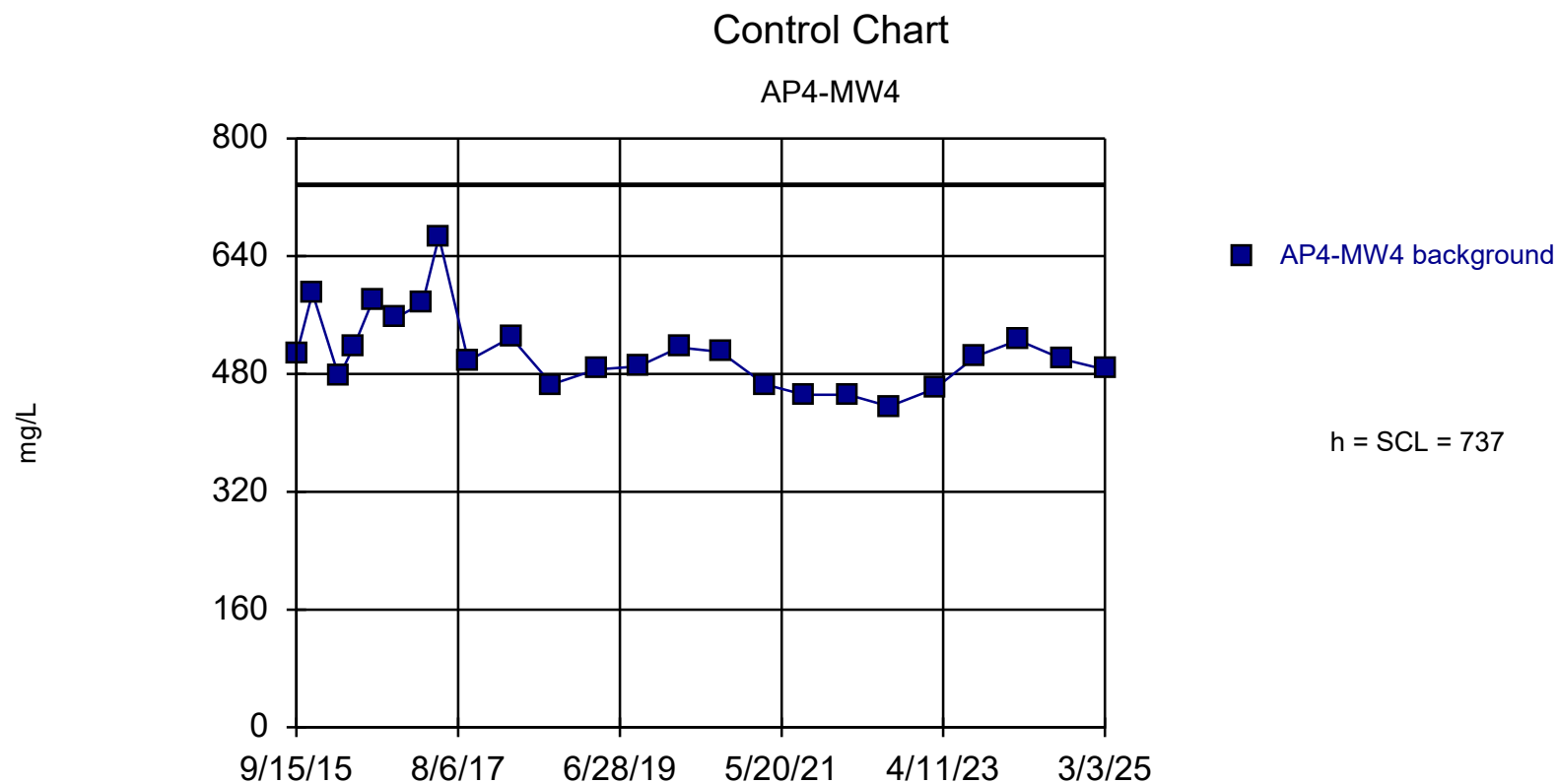






Background Data Summary: Mean=94, Std. Dev.=20.19, n=23. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9743, critical = 0.914. Report alpha = 0.000442 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate    Analysis Run 9/16/2025 4:07 PM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

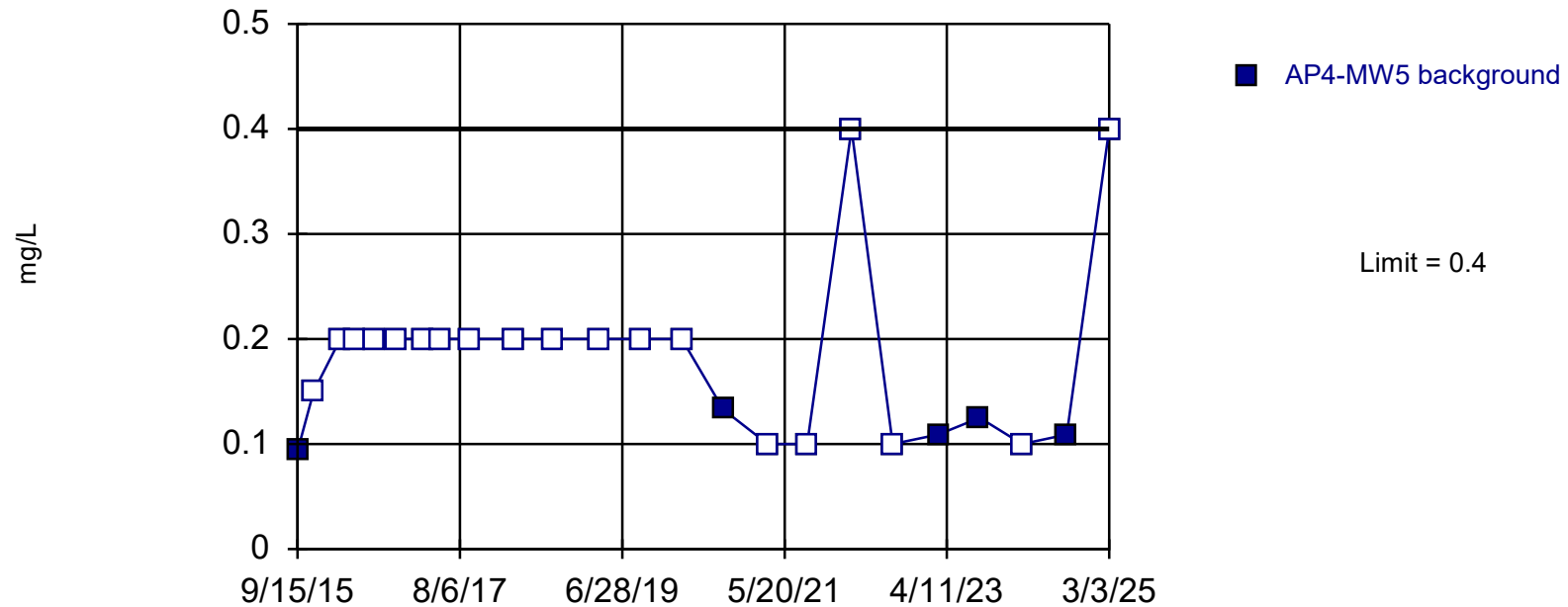


Background Data Summary (based on square root transformation): Mean=22.56, Std. Dev.=1.146, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9296, critical = 0.916. Report alpha = 0.000378 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Total Dissolved Solids    Analysis Run 9/10/2025 1:50 PM  
 Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

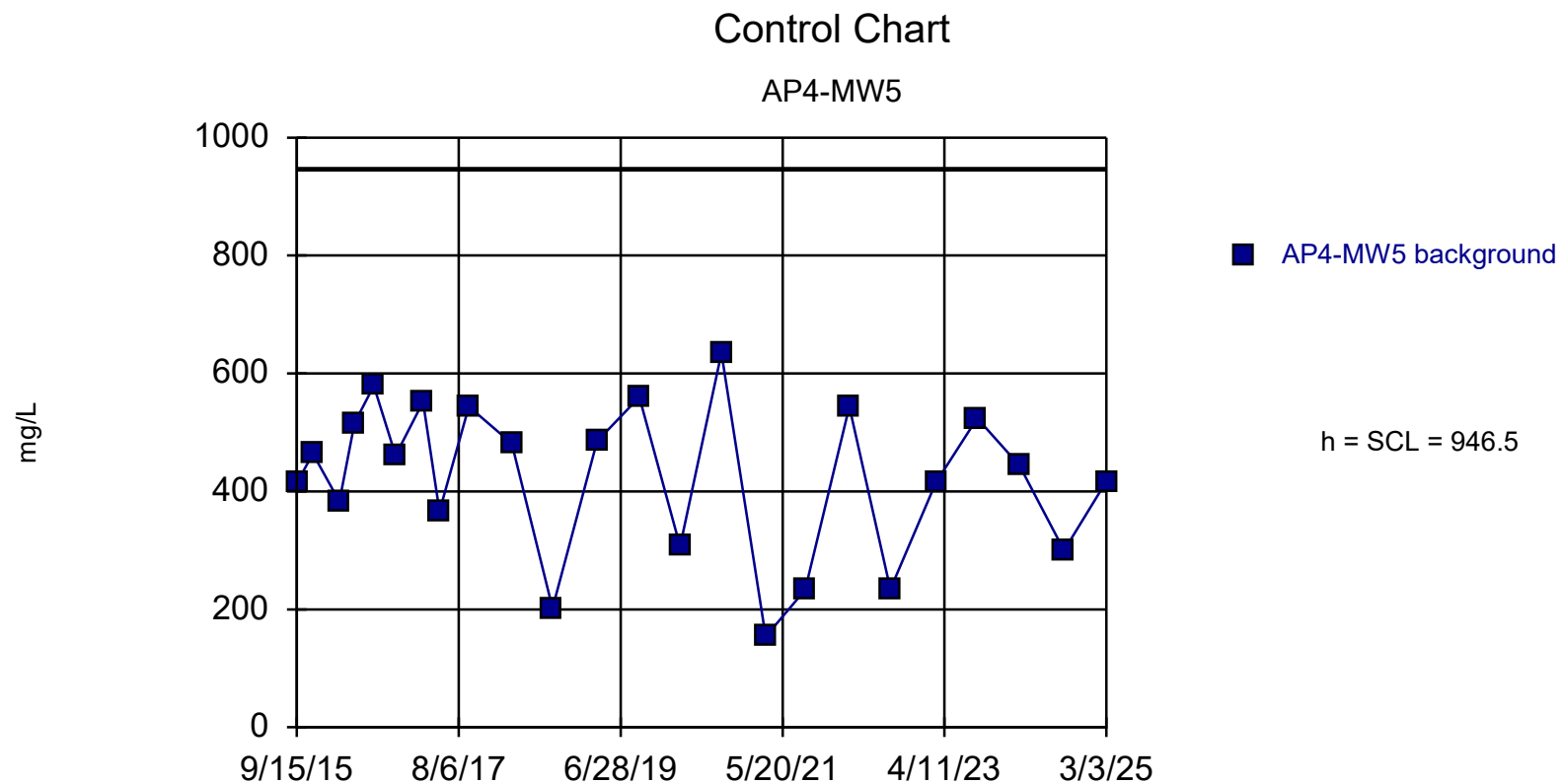
## Prediction Limit

Intrawell Non-parametric, AP4-MW5



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 24 background values. 79.17% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Boron    Analysis Run 9/9/2025 12:12 PM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

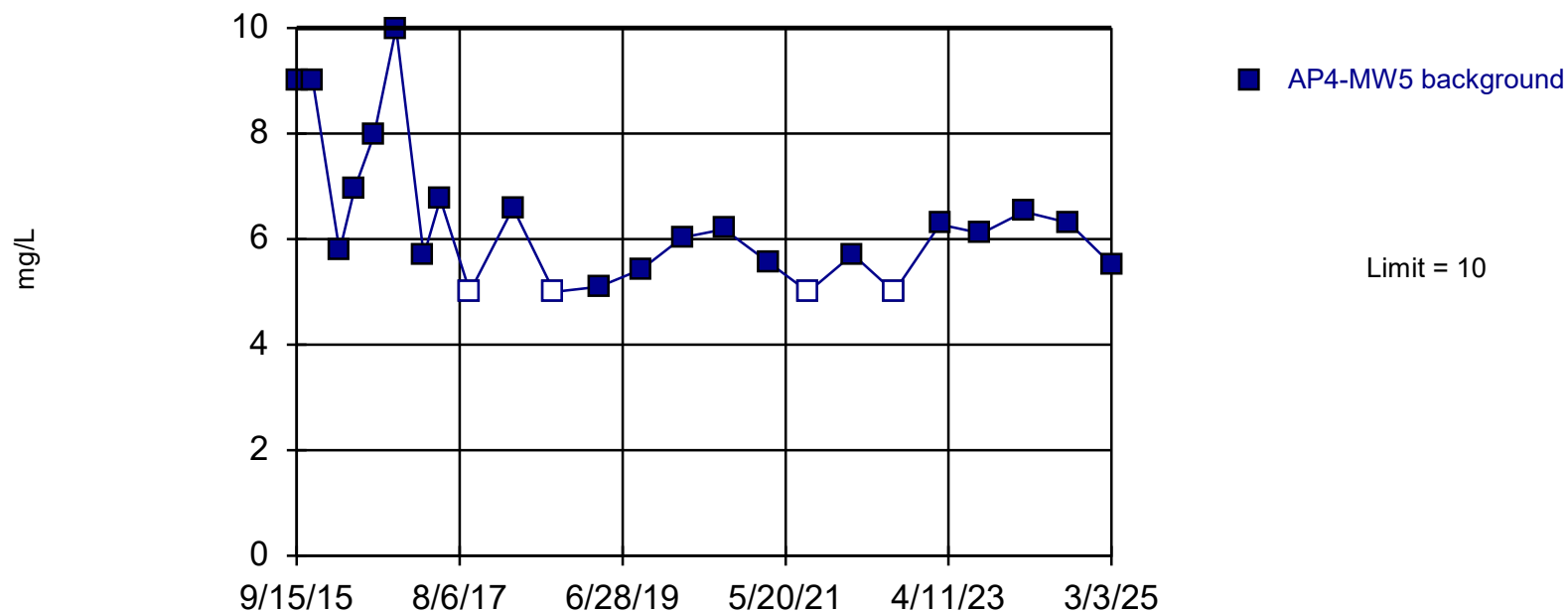


Background Data Summary: Mean=425.6, Std. Dev.=130.2, n=24. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9482, critical = 0.916. Report alpha = 0.000348 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium    Analysis Run 9/9/2025 3:47 PM  
 Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

## Prediction Limit

Intrawell Non-parametric, AP4-MW5

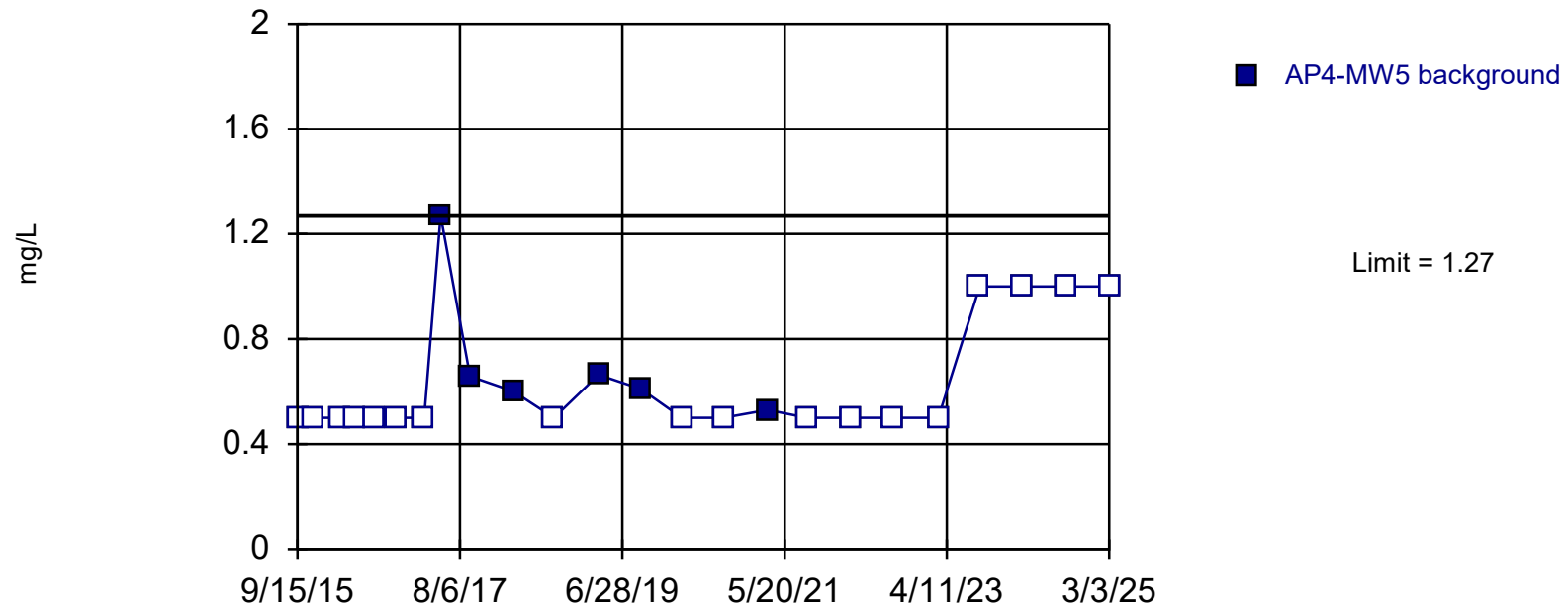


Non-parametric test used in lieu of control chart because the Shapiro Wilk normality test showed the data to be non-normal at the 0.05 alpha level. Limit is highest of 24 background values. 16.67% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 9/9/2025 3:47 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025

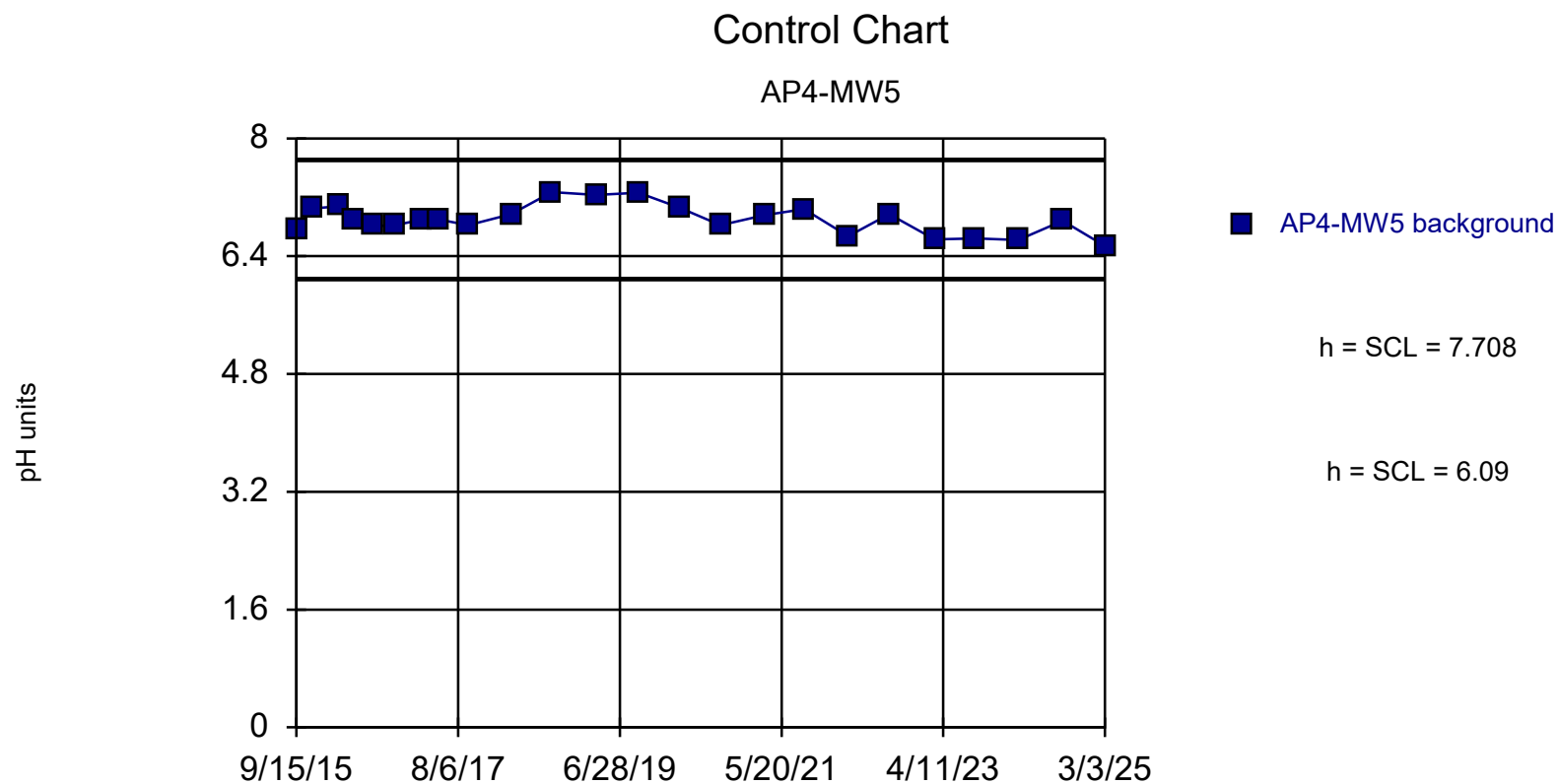
## Prediction Limit

Intrawell Non-parametric, AP4-MW5



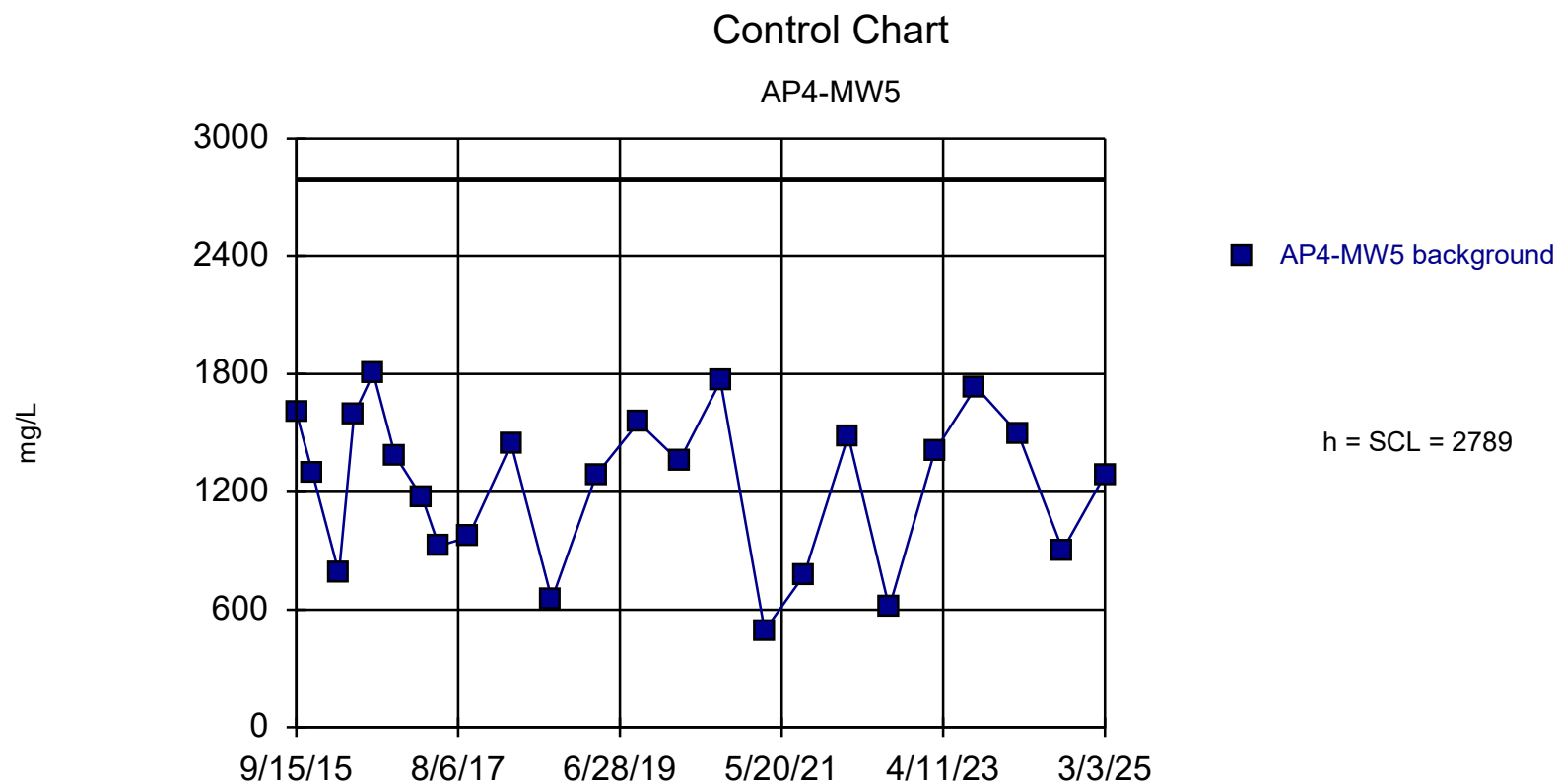
Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 24 background values. 75% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Fluoride Analysis Run 9/9/2025 12:13 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025



Background Data Summary: Mean=6.899, Std. Dev.=0.2022, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9657, critical = 0.916. Report alpha = 0.00035 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

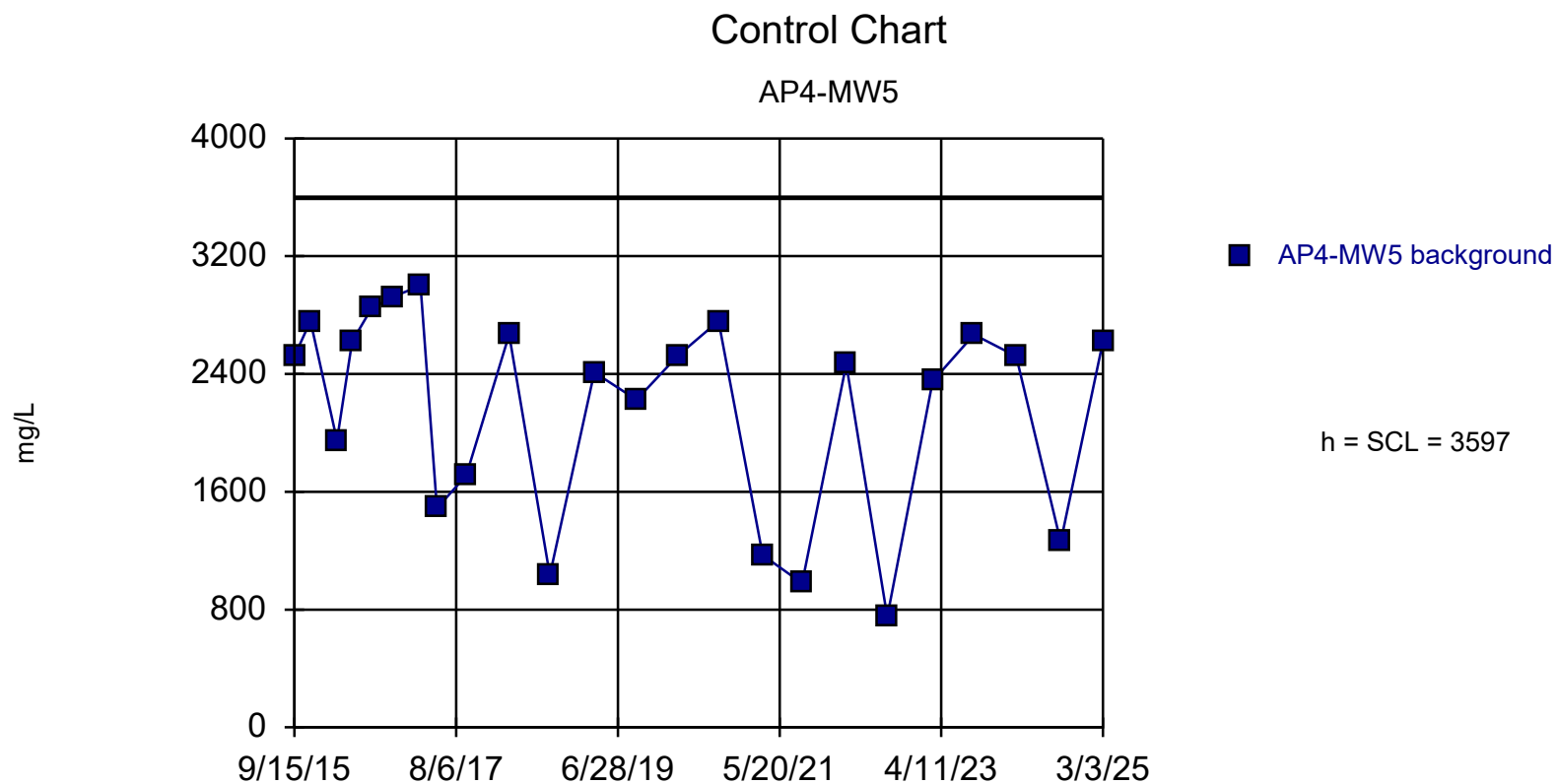
Constituent: pH, field measured    Analysis Run 9/12/2025 3:11 PM  
 Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025



Background Data Summary: Mean=1241, Std. Dev.=387.1, n=24. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9396, critical = 0.916. Report alpha = 0.000348 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate    Analysis Run 9/9/2025 3:47 PM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025





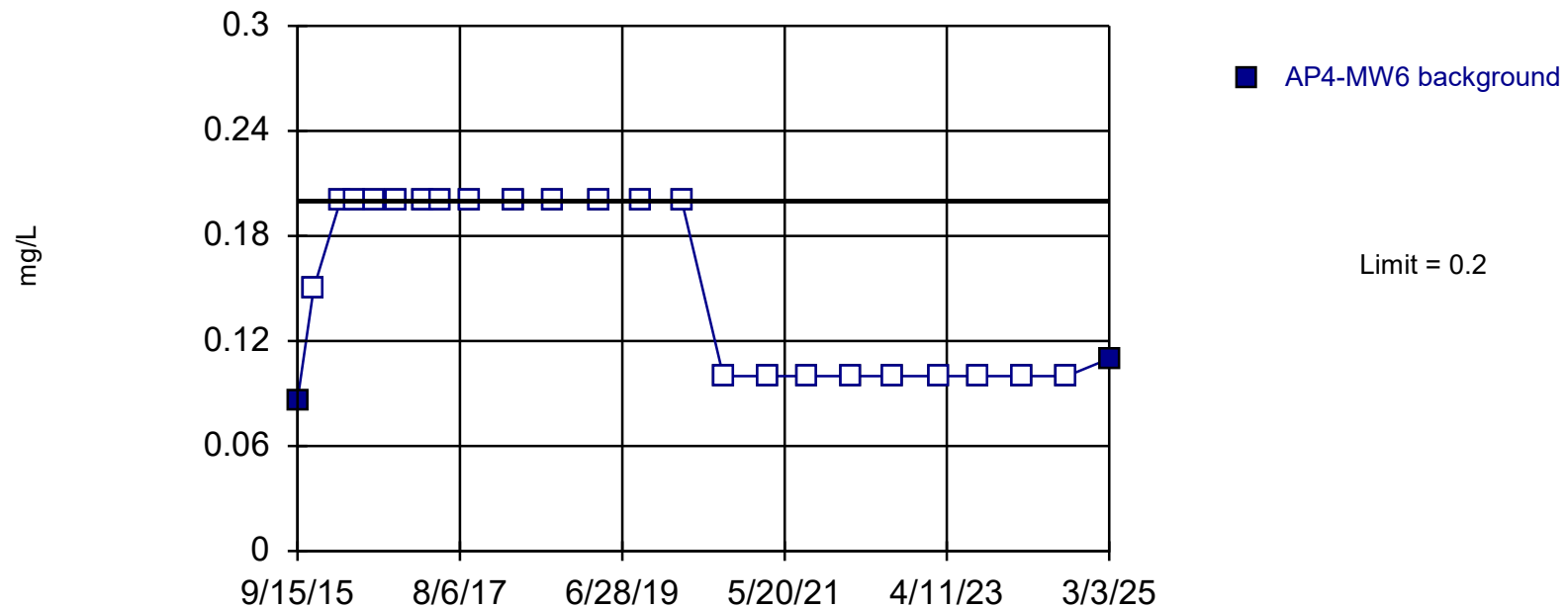
Background Data Summary (based on cube transformation): Mean=1.3e10, Std. Dev.=8.4e9, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9254, critical = 0.916. Report alpha = 0.000348 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Total Dissolved Solids Analysis Run 9/9/2025 3:47 PM

Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025

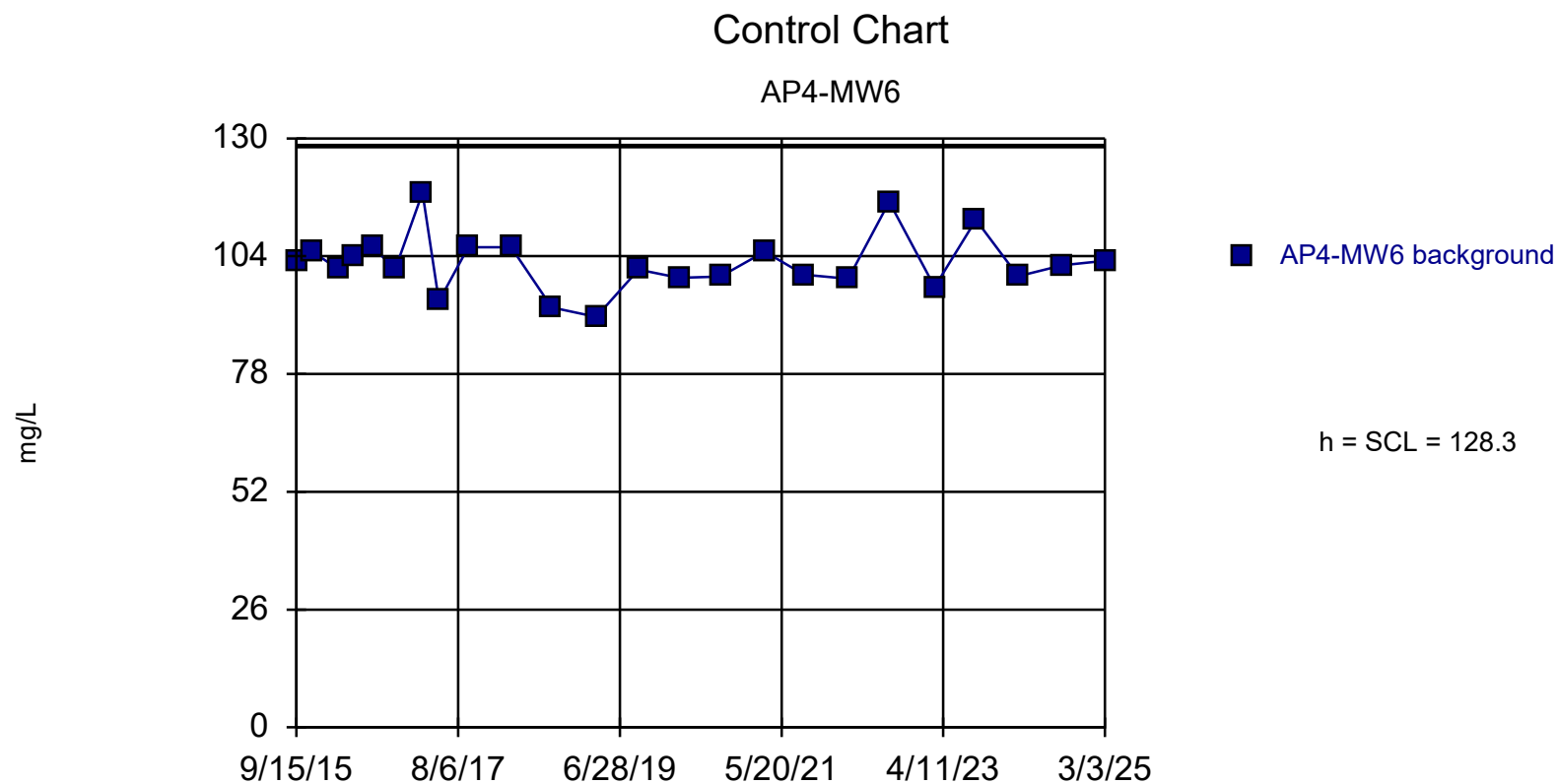
## Prediction Limit

Intrawell Non-parametric, AP4-MW6



Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 24 background values. 91.67% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Boron    Analysis Run 9/9/2025 12:26 PM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

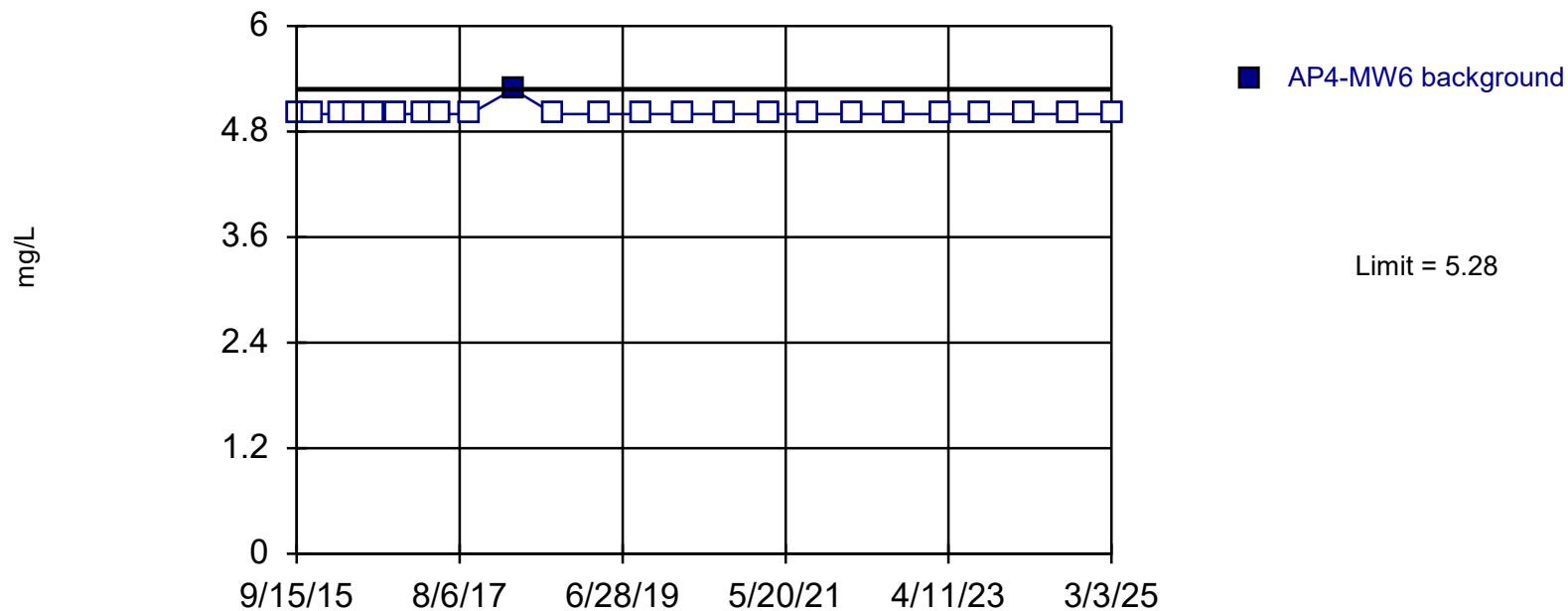


Background Data Summary: Mean=102.5, Std. Dev.=6.445, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9421, critical = 0.916. Report alpha = 0.000344 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Calcium    Analysis Run 9/10/2025 12:38 PM  
 Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

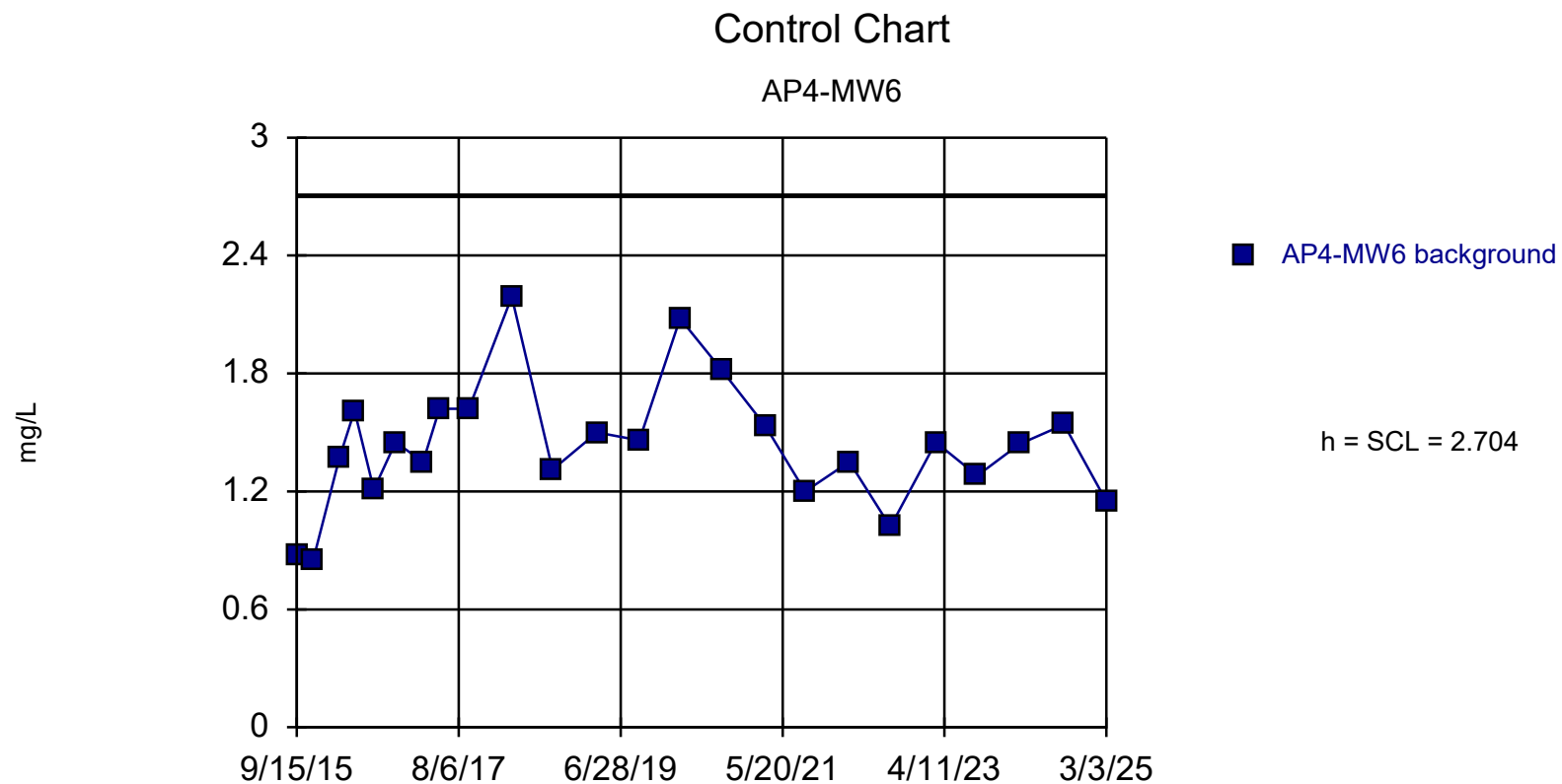
## Prediction Limit

Intrawell Non-parametric, AP4-MW6



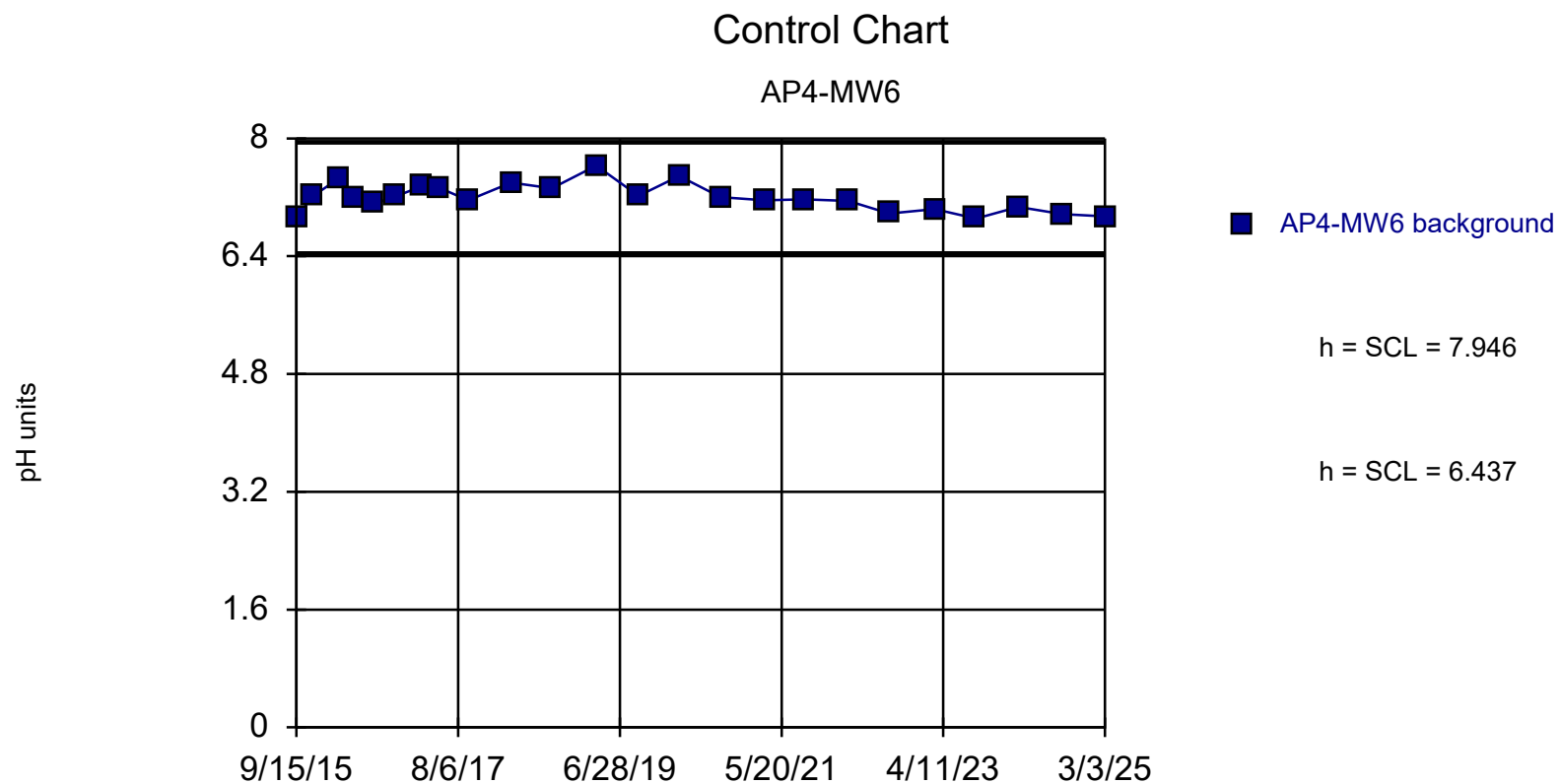
Non-parametric test used in lieu of control chart because non-detects exceed user-adjustable maximum of 50%. Limit is highest of 24 background values. 95.83% NDs. Well-constituent pair annual alpha = 0.006238. Individual comparison alpha = 0.003124 (1 of 2). Assumes 1 future value. Seasonality was not detected with 95% confidence.

Constituent: Chloride Analysis Run 9/9/2025 12:27 PM  
Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025



Background Data Summary: Mean=1.428, Std. Dev.=0.3192, n=24. Seasonality was not detected with 95% confidence. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9542, critical = 0.916. Report alpha = 0.000344 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

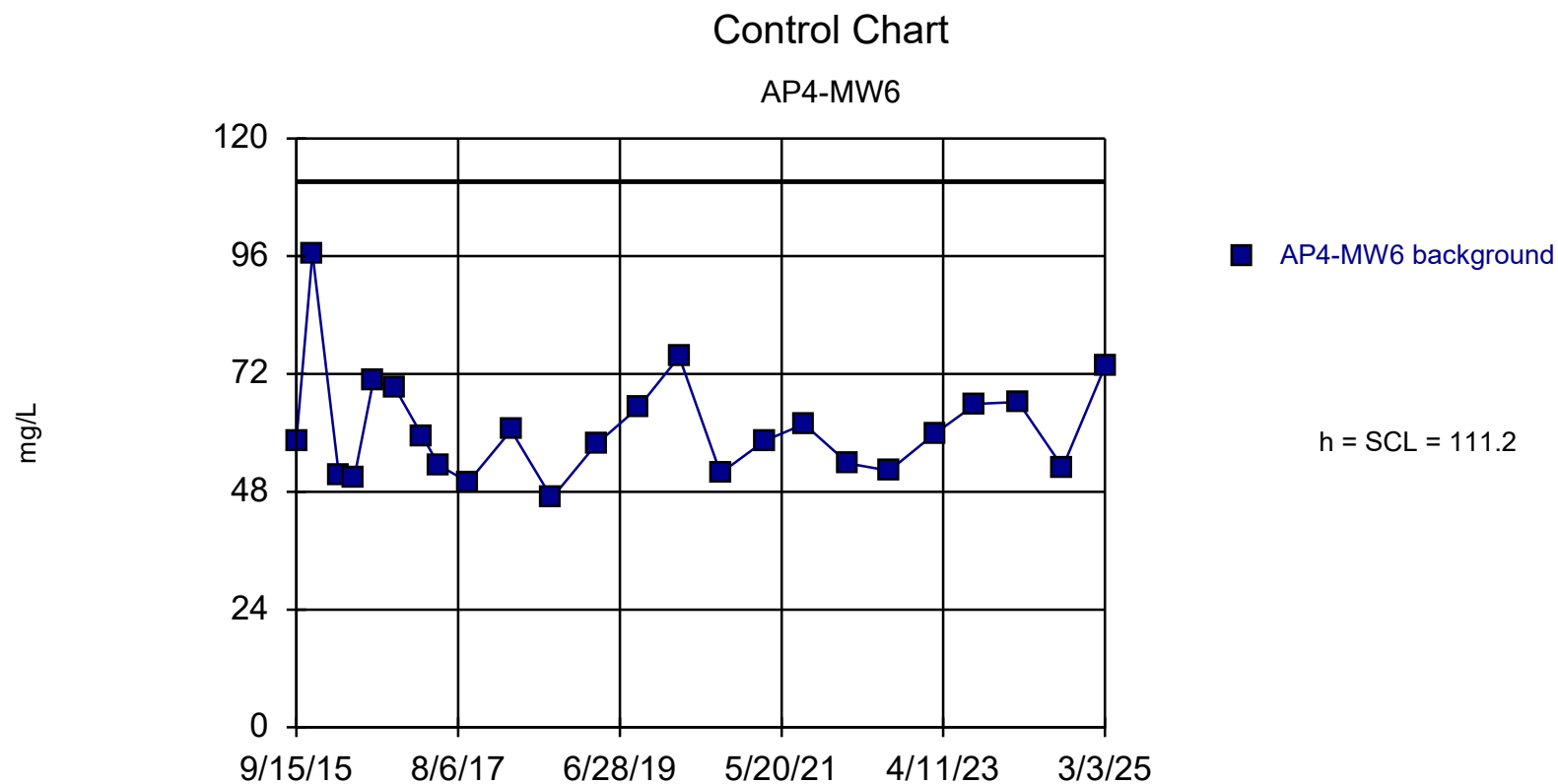
Constituent: Fluoride    Analysis Run 9/10/2025 12:38 PM  
Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025



Background Data Summary: Mean=7.191, Std. Dev.=0.1886, n=24. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.9613, critical = 0.916. Report alpha = 0.00035 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: pH, field measured Analysis Run 9/15/2025 10:42 AM

Sheldon Station Client: NPPD Data: SheldonStation\_Q3-2025



Background Data Summary (based on cube root transformation): Mean=3.922, Std. Dev.=0.2216, n=24. Seasonality was detected with 95% confidence and data were deseasonalized. Normality test: Shapiro Wilk @alpha = 0.05, calculated = 0.919, critical = 0.916. Report alpha = 0.000344 (assuming 1 future value). Dates ending 3/3/2025 used for control stats. Standardized h=4, SCL=4.

Constituent: Sulfate    Analysis Run 9/10/2025 12:38 PM  
 Sheldon Station    Client: NPPD    Data: SheldonStation\_Q3-2025

**APPENDIX E**

# Comparative Statistics Tables



**Table 9: Comparative Statistics - AP4-MW1 (Upgradient), Q1 2025**

		Statistical Method	Statistical Limit	Q1 2025 Detection Monitoring Result	Q1 2025 CUSUM Value	Q1 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			3/3/2025		
Boron, Total	mg/L	NP-PL	0.200	0.106	--	Yes
Calcium, Total	mg/L	CUSUM	115.1	90.4	93.2	Yes
Chloride	mg/L	NP-PL	11.0	10.4	--	Yes
Fluoride	mg/L	CUSUM	1.95	< 1.00	0.73	Yes
pH, Field	pH units	CUSUM	6.49, 8.00	7.12	7.11, 7.25	Yes
Sulfate	mg/L	CUSUM	31.6	21.1	23.6	Yes
Total Dissolved Solids	mg/L	CUSUM	584	426	434	Yes

## NOTES:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

**Table 10: Comparative Statistics - AP4-MW2 (Upgradient), Q1 2025**

		Statistical Method	Statistical Limit	Q1 2025 Detection Monitoring Result	Q1 2025 CUSUM Value	Q1 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			3/3/2025		
Boron, Total	mg/L	NP-PL	0.200	0.121	--	Yes
Calcium, Total	mg/L	CUSUM	402	310	297	Yes
Chloride	mg/L	NP-PL	113.0	95.7	--	Yes
Fluoride	mg/L	NP-PL	0.94	< 1.00	--	Yes - See Text
pH, Field	pH units	CUSUM	6.55, 7.85	7.08	6.88, 7.20	Yes
Sulfate	mg/L	CUSUM	1027	957	960	Yes
Total Dissolved Solids	mg/L	NP-PL	2360	1700	--	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, Q1 2025**

		Statistical Method	Statistical Limit	Q1 2025 Detection Monitoring Result	Q1 2025 CUSUM Value	Q1 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			3/3/2025		
Boron, Total	mg/L	NP-PL	0.200	0.102	--	Yes
Calcium, Total	mg/L	CUSUM	105.2	82.0	86.5	Yes
Chloride	mg/L	NP-PL	12.40	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	2.48	1.11	1.09	Yes
pH, Field	pH units	CUSUM	6.81, 7.99	7.18	6.91, 7.40	Yes - Prior Result Was a False Positive
Sulfate	mg/L	CUSUM	48.2	21.3	28.3	Yes
Total Dissolved Solids	mg/L	CUSUM	567	374	435	Yes

## NOTES:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

**Table 12: Comparative Statistics - AP4-MW4, Q1 2025**

		Statistical Method	Statistical Limit	Q1 2025 Detection Monitoring Result	Q1 2025 CUSUM Value	Q1 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			3/3/2025		
Boron, Total	mg/L	NP-PL	0.200	0.104	--	Yes
Calcium, Total	mg/L	CUSUM	153	103	109	Yes
Chloride	mg/L	NP-PL	8.99	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	1.67	< 1.00	0.97	Yes
pH, Field	pH units	CUSUM	6.73, 7.79	7.10	6.79, 7.26	Yes - Prior Result Was a False Positive
Sulfate	mg/L	CUSUM	179.8	79.5	93.5	Yes
Total Dissolved Solids	mg/L	CUSUM	746	486	523	Yes

## NOTES:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

**Table 13: Comparative Statistics - AP4-MW5, Q1 2025**

		Statistical Method	Statistical Limit	Q1 2025 Detection Monitoring Result	Q1 2025 CUSUM Value	Q1 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			3/3/2025		
Boron, Total	mg/L	NP-PL	0.200	< 0.400	--	Yes - See Text
Calcium, Total	mg/L	CUSUM	798	473	450	Yes
Chloride	mg/L	CUSUM	15.58	5.52	6.37	Yes
Fluoride	mg/L	NP-PL	0.664	< 1.00	--	Yes - See Text
pH, Field	pH units	CUSUM	6.32, 7.63	6.54	6.22, 6.98	No - Potential Exceedance
Sulfate	mg/L	NP-PL	1630	1470	--	Yes
Total Dissolved Solids	mg/L	CUSUM	4040	2630	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, Q1 2025**

		Statistical Method	Statistical Limit	Q1 2025 Detection Monitoring Result	Q1 2025 CUSUM Value	Q1 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			3/3/2025		
Boron, Total	mg/L	NP-PL	0.200	0.11	--	Yes
Calcium, Total	mg/L	CUSUM	127	103	102	Yes
Chloride	mg/L	NP-PL	5.28	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	2.90	1.15	1.47	Yes
pH, Field	pH units	CUSUM	6.71, 7.83	6.94	6.48, 7.27	No - Potential Exceedance
Sulfate	mg/L	CUSUM	114.9	73.5	61.4	Yes
Total Dissolved Solids	mg/L	CUSUM	687	470	472	Yes

## NOTES:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

**Table 15: Comparative Statistics - AP4-MW7, Q1 2025**

		Statistical Method	Pre-2022 Statistical Limit	Q1 2025 Detection Monitoring Result	Q1 2025 CUSUM Value	Q1 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			3/3/2025		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	NP-PL	79.0	70.8	--	Yes
Chloride	mg/L	CUSUM	20.09	13.8	17.3	Yes
Fluoride	mg/L	NP-PL	1.020	< 1.00	--	Yes
pH, Field	pH units	CUSUM	6.85, 8.07	7.08	6.61, 7.48	No - Verified SSI
Sulfate	mg/L	CUSUM	58.4	34.4	43.0	Yes
Total Dissolved Solids	mg/L	CUSUM	700	472	525	Yes

## NOTES:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

**Table 9: Comparative Statistics - AP4-MW1 (Upgradient), Q3 2025**

		Statistical Method	Statistical Limit	Q3 2025 Detection Monitoring Result	Q3 2025 CUSUM Value	Q3 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			8/26/2025		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	116.8	77.1	92.8	Yes
Chloride	mg/L	NP-PL	11.0	9.07	--	Yes
Fluoride	mg/L	CUSUM	1.82	< 1.00	0.72	Yes
pH, Field	pH units	CUSUM	6.44, 7.93	7.06	7.19, 7.19	Yes
Sulfate	mg/L	CUSUM	31.5	25.9	23.9	Yes
Total Dissolved Solids	mg/L	CUSUM	584	398	434	Yes

## NOTES:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart



**Table 10: Comparative Statistics - AP4-MW2 (Upgradient), Q3 2025**

		Statistical Method	Statistical Limit	Q3 2025 Detection Monitoring Result	Q3 2025 CUSUM Value	Q3 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			8/26/2025		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	396	270	299	Yes
Chloride	mg/L	NP-PL	113.0	103	--	Yes
Fluoride	mg/L	NP-PL	1.00	< 1.00	--	Yes
pH, Field	pH units	CUSUM	6.56, 7.68	6.97	7.11, 7.12	Yes
Sulfate	mg/L	CUSUM	1063	996	948	Yes
Total Dissolved Solids	mg/L	NP-PL	2360	1720	--	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-MW7, Q3 2025**

		Statistical Method	Statistical Limit	Q3 2025 Detection Monitoring Result	Q3 2025 CUSUM Value	Q3 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			8/26/2025		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	NP-PL	79.0	61.3	--	Yes
Chloride	mg/L	CUSUM	20.13	17.2	15.3	Yes
Fluoride	mg/L	NP-PL	1.02	< 1.00	--	Yes
pH, Field	pH units	CUSUM	6.57, 8.22	7.22	7.40, 7.40	Yes
Sulfate	mg/L	CUSUM	64.0	30.8	41.6	Yes
Total Dissolved Solids	mg/L	CUSUM	732	460	525	Yes

## NOTES:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

**Table 12: Comparative Statistics - AP4-MW3, Q3 2025**

		Statistical Method	Statistical Limit	Q3 2025 Detection Monitoring Result	Q3 2025 CUSUM Value	Q3 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			8/26/2025		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	105.7	72.8	85.9	Yes
Chloride	mg/L	NP-PL	12.40	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	2.14	1.47	1.22	Yes
pH, Field	pH units	CUSUM	6.66, 8.00	7.13	7.30, 7.33	Yes
Sulfate	mg/L	CUSUM	48.2	20.2	28.3	Yes
Total Dissolved Solids	mg/L	CUSUM	567	366	435	Yes

## NOTES:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

**Table 13: Comparative Statistics - AP4-MW4, Q3 2025**

		Statistical Method	Statistical Limit	Q3 2025 Detection Monitoring Result	Q3 2025 CUSUM Value	Q3 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			8/26/2025		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	149	101	109	Yes
Chloride	mg/L	NP-PL	13.00	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	1.80	1.26	1.05	Yes
pH, Field	pH units	CUSUM	6.49, 7.99	7.02	7.20, 7.22	Yes
Sulfate	mg/L	CUSUM	175	118	98	Yes
Total Dissolved Solids	mg/L	CUSUM	737	520	509	Yes

## NOTES:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

**Table 14: Comparative Statistics - AP4-MW5, Q3 2025**

		Statistical Method	Statistical Limit	Q3 2025 Detection Monitoring Result	Q3 2025 CUSUM Value	Q3 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			8/26/2025		
Boron, Total	mg/L	NP-PL	0.400	0.145	--	Yes
Calcium, Total *	mg/L	CUSUM	944	427	423	Yes
Chloride	mg/L	NP-PL	10	6.91	--	Yes
Fluoride	mg/L	NP-PL	1.27	< 1.00	--	Yes
pH, Field	pH units	CUSUM	6.09, 7.71	6.55	6.85, 6.90	Yes
Sulfate *	mg/L	CUSUM	2785	1805	1417	Yes
Total Dissolved Solids	mg/L	CUSUM	3597	2590	2351	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.

\* Calcium and sulfate were determined to display seasonality baseline establishment. Data will be deseasonalized during comparative statistics, which may result in slightly different statistical limits from event to event.

**Table 15: Comparative Statistics - AP4-MW6, Q3 2025**

		Statistical Method	Statistical Limit	Q3 2025 Detection Monitoring Result	Q3 2025 CUSUM Value	Q3 2025 - Within Limit?
<b>Appendix III Analytes</b>	<b>Unit</b>			8/26/2025		
Boron, Total	mg/L	NP-PL	0.200	< 0.100	--	Yes
Calcium, Total	mg/L	CUSUM	128.3	89.7	102.5	Yes
Chloride	mg/L	NP-PL	5.28	< 5.00	--	Yes
Fluoride	mg/L	CUSUM	2.70	1.68	1.43	Yes
pH, Field	pH units	CUSUM	6.44, 7.95	6.97	7.16, 7.19	Yes
Sulfate *	mg/L	CUSUM	111.2	61.9	60.3	Yes
Total Dissolved Solids	mg/L	CUSUM	687	442	472	Yes

## NOTES:

NP-PL: Non-Parametric Prediction Limit

CUSUM: Parametric Shewhart-CUSUM Control Chart

\* Sulfate was determined to display seasonality baseline establishment. Data will be deseasonalized during comparative statistics, which may result in slightly different statistical limits from event to event.

wsp