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November 30, 2023

Mr. Brian Rath  
Land Quality Bureau  
Iowa Department of Natural Resources  
502 East 9th Street  
Des Moines, IA 50319-0034

**Subject: 2023 Annual Water Quality Report  
Interstate Power and Light Company – Stoney Point Closed Landfill  
Permit #57-SDP-11-90C**

Dear Mr. Rath:

On behalf of Interstate Power and Light Company (IPL), Alliant Energy is providing the enclosed 2023 Annual Water Quality Report for the Stoney Point closed landfill, as required by Permit #57-SDP-11-90C and associated amendments.

Please call me at (515) 558-9704 or email me at [jennycoughlin@alliantenergy.com](mailto:jennycoughlin@alliantenergy.com) with any questions regarding the enclosed report.

Sincerely,

A handwritten signature in black ink, appearing to read "Jenny Coughlin", written over a light gray rectangular background.

Jenny Coughlin  
Sr. Environmental Specialist  
Alliant Energy Corporate Services, Inc.

Enclosures

Cc: IDNR Field Office #1  
Meghan Blodgett, Thomas Karwoski – SCS Engineers

# 2023 Annual Water Quality Report

## Interstate Power and Light Company Stoney Point Closed Landfill Permit #57-SDP-11-90C

Interstate Power and Light, Alliant Energy Company  
1200 First Street SE  
Cedar Rapids, Iowa 52401


**SCS ENGINEERS**

25223065.00 | November 30, 2023

2830 Dairy Drive  
Madison, WI 53718  
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## CERTIFICATION

I, Thomas J. Karwoski, hereby certify that this report was prepared by me, or under my direct supervision, and that I am a qualified ground water scientist as defined in Iowa Administrative Code (IAC) 567-113.10(1)d.



---

Signature

November 30, 2023

Date

**Pages or Sheets Covered by this Certification:**

2023 Annual Water Quality Report – November 2023, Interstate Power and Light Company, Stoney Point Closed Landfill

# EXECUTIVE SUMMARY

## Period of Report Coverage

The period of coverage for this report is from November 2022 through October 2023. The report includes the April 2023 water level measurement event and the September 2023 groundwater sampling event conducted at the Interstate Power and Light Company Stoney Point Closed Landfill (Site). The Site is a coal combustion residual (CCR) landfill located near Cedar Rapids, Iowa (**Figure 1**).

## Report Priority

Compared to results since the sampling program was changed to unfiltered metals samples in 2016, no new Groundwater Protection Standard (GWPS) exceedances were identified in 2023 for parameters that have previously been included in the sampling program. Lithium and molybdenum were added to the sampling program in 2023, and GWPS exceedances were detected at several wells. GWPS exceedances in 2023 were:

- Shallow Hydrogeologic Unit:
  - Arsenic: MW-21
  - Boron: MW-15, MW-16
  - Lithium: MW-15, MW-16
  - Manganese: MW-12
  - Molybdenum: MW-16
  
- Deep Hydrogeologic Unit:
  - Boron: MW-10, MW-13
  - Lithium: MW-9, MW-11, MW-13, MW-17, MW-18
  - Manganese: MW-17
  - Molybdenum: MW-11, MW-13

The September 2023 sampling event was the first time samples were tested for lithium and molybdenum at the Site, so the GWPS exceedances for lithium and molybdenum have not been confirmed and cannot be compared to historical data.

Comparison of the 2023 monitoring results to background Upper Prediction Limits (UPLs) indicated approximately the same number of Statistically Significant Increases (SSIs) as in 2022, but with some differences in the wells and constituents for which SSIs were identified.

The parameters most commonly detected above the UPLs were parameters without health-based standards, including chloride, iron, magnesium, and sulfate. Metals with health-based standards were also detected above background concentrations in some wells, but the SSIs were not as widespread. Metals with an SSI for at least one monitoring well in 2023 included arsenic, barium, boron, iron, lead, magnesium, and manganese.

Calcium, fluoride, lithium, molybdenum, total dissolved solids (TDS), and total suspended solids (TSS) were added to the monitoring program for 2023. Per email communication received from Iowa Department of Natural Resources (IDNR) on March 29, 2023, newly detected parameters will be added to the monitoring program at the site. Calcium, lithium, and molybdenum were all detected at



multiple wells in September 2023. Fluoride was detected at only one well, at a concentration below the method reporting limit.

MW-14 was abandoned in December 2022. Abandonment documentation was submitted to the Department in January 2023. Wells on site were resurveyed in September 2023 to address a discrepancy in elevations at some wells identified in the 2022 Annual Water Quality Report (AWQR).

Groundwater samples collected in 2023 were unfiltered, in accordance with the variance to 567-103.1(2)f granted in a December 23, 2016 permit amendment. The 2023 sampling event was the eighth round of unfiltered samples collected at the Site, and 2023 was the fourth reporting period for which the new statistical approach was applied at the Site.

SCS Engineers (SCS) recommends that the current monitoring program be continued during 2024, with updates to the analytical parameter list as described in **Section 8.0**.

## Site Status and Applicable Rules

The following summarizes the Site status and applicable rules associated with groundwater sampling at the Stoney Point CCR Landfill:

- **Landfill Status:** Closed
- **Types of Wastes Accepted:** CCR
- **Applicable IAC Rules:** 567-103 current version, certain provisions of 567-115.26(6), and 567-115.21 (referenced for monitoring well maintenance and evaluation requirements, in place of the rescinded 567-110.9)

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## ACRONYMS/ABBREVIATIONS

AWQR = Annual Water Quality Report  
CCR = Coal Combustion Residual  
COC = Chain of Custody  
DO = Dissolved Oxygen  
GWPS = Groundwater Protection Standard  
IDNR = Iowa Department of Natural Resources  
LCS = Laboratory Control Sample  
mg/L = milligrams per liter  
MS = Matrix Spike  
MSD = Matrix Spike Duplicate  
MCL = EPA Maximum Contaminant Level  
ORP = Oxidation-Reduction Potential  
QA/QC = Quality Assurance/Quality Control  
RCRA = Resource Conservation and Recovery Act  
RPD = Relative Percent Difference  
SCS = SCS Engineers  
Site = Interstate Power and Light Company Stoney Point Closed Landfill  
SMCLs = Secondary Maximum Contaminant Levels  
SWS = IDNR Statewide Standard for a protected groundwater source  
SSI = Statistically Significant Increase above background  
TDS = Total Dissolved Solids  
TSS = Total Suspended Solids  
UPLs = Upper Prediction Limits  
U.S.EPA = U.S. Environmental Protection Agency  
Unified Guidance = U.S. EPA Unified Guidance for Statistical Analysis of Groundwater Monitoring Data at Resource Conservation and Recovery Act Facilities

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## 1.0 SITE BACKGROUND

### 1.1 SITE HISTORY

The Stoney Point Landfill is a closed coal combustion residuals (CCR) landfill located near Cedar Rapids, Iowa (**Figure 1**). The Stoney Point Landfill stopped accepting CCR in 1986, and placement of the final cover occurred in 1992. A site plan is shown on **Figure 2**. Facility Inspection Reports for April and September 2023 are included in **Appendix A**. In April and September 2023, fencing and landfill cover areas were noted as being in good condition. One groundwater monitoring well, MW-1, was noted as needing repairs during the April inspection. Repairs were completed prior to the September sampling event and inspection.

### 1.2 SITE HYDROGEOLOGY

#### 1.2.1 Geology

A detailed description of the regional and local geology is provided in the November 2005 Water Quality Assessment Report (Document ID #60409) prepared by RMT, Inc. (RMT, Inc., 2005). A summary of the Site geology, as described in the 2005 report, is presented here.

The unconsolidated geology at the Site generally consists of glacial till and alluvium (silty, sandy lean clay with variable amounts of gravel). The unconsolidated material is thin (approximately 2 feet) at the southern end of the Site and thicker (approximately 60 feet) at the northern end of the Site. Approximately 7 feet of clay and clayey sand till underlies the surficial till at the northern end of the Site. An east-west trending bedrock high is present near the southern end of the Site, between monitoring wells MW-2A and MW-3.

The uppermost bedrock at the Site is Devonian limestone and dolomite, consisting of the Solon Member of the Little Cedar Formation and the Spring Grove Member of the Pinicon Ridge Formation. These two units are part of the Devonian aquifer at the Site. The Devonian aquifer is separated from the underlying Silurian aquifer by the Kenwood Member of the Pinicon Ridge Formation and the Otis Formation, which consist of shaley limestone and fine-grained dense limestone, and are considered to be local confining units.

Regionally, groundwater chemistry is similar in the Silurian and Devonian aquifers. Near Cedar Rapids, sulfate concentrations in these aquifers are generally below 50 milligrams per liter (mg/L) but range from 10 mg/L to 200 mg/L. Iron concentrations are generally high, and the groundwater generally has “objectionable sulfur” concentrations (Wahl and Bunker, 1986).

#### 1.2.2 Hydrogeology/Groundwater Flow Conditions

Groundwater, surface water, and leachate levels were measured during April and September 2023. The groundwater levels during the September event were measured prior to purging the wells for sampling. The groundwater and surface water elevation data are presented in **Table 4A**. Vertical gradients calculated for well pairs at the monitoring well nests are summarized in **Table 4B**. The 2023 water level data were used to create water table and potentiometric surface maps from the shallow water table wells and intermediate and deep piezometers. Three sets of maps were created for each of the two measurement events (**Figures 3 through 8**).

Flow directions were generally consistent with historical data. Shallow groundwater flow is generally to the north across the Site. In 2023, shallow groundwater flow at the Site was toward the

intermittent creek that runs east-west across the Site. Groundwater flow within the intermediate-deep unit is also toward the intermittent creek. This represents a change in interpretation compared to recent Annual Groundwater Quality Reports (AWQRs), which showed groundwater flow to the north across the entire site in the intermediate-deep unit, but this is attributable to the re-survey of MW-26 and not to an apparent real change in flow directions. Groundwater flow within the deep hydrogeologic unit is generally to the south on the southern part of the Site and to the north or northeast on the northern part of the Site. The southern flow on the southern portion of the Site may be attributable to dewatering activities at the nearby quarry.

Vertical groundwater flow at the Site in 2023 was generally consistent with historical data. A reversal of the calculated vertical flow direction was observed at some well pairs between April and September 2023, possibly due to unusually low groundwater levels in September 2023.

## 2.0 SAMPLING STATUS SUMMARY

The Iowa Department of Natural Resources (IDNR) has requested that sampling data be summarized in a series of tables to consistently convey information related to groundwater monitoring at CCR landfills throughout Iowa. These tables are discussed within the text in appropriate sections as noted and included in the Tables section at the end of the text. **Table 1** provides an overview of the sampling status for the Site, including the monitoring points in the program, current monitoring program, comparative statistics findings, and the number of samples collected. **Figure 2** summarizes the monitoring network for Stoney Point.

Field sheets from the September 2023 sampling event are included in **Appendix B**. Sampling completed in 2018 through 2023, and anticipated sampling for 2024, are summarized in **Table 2**. The laboratory analytical report for the September 2023 sampling event is included in **Appendix C**. Groundwater chemistry summary tables for historic data collected before 2019 are included in **Appendix D**. Groundwater chemistry tables for all data collected since the transition to unfiltered sampling in 2016 are included in the statistical analysis in **Appendix E**.

2023 was the first year in which parameters calcium, fluoride, lithium, molybdenum, total dissolved solids (TDS), and total suspended solids (TSS) were reported for all monitoring wells, surface water monitoring points, and leachate sampling points in the AWQR, as requested by IDNR. Because of the low number of samples for the parameters listed above, upper prediction limits (UPLs) cannot be calculated at this time. UPL calculations for these parameters will be included in the report when a minimum of four samples have been collected at background wells.

Additionally, field parameters dissolved oxygen (DO) and oxidation-reduction potential (ORP) are included in the tables of this AWQR for the first time for evaluation of the potential influences on groundwater chemistry due to reducing groundwater conditions. DO and ORP are required parameters for stability during low-flow sampling and have been included in previous AWQR's on field sheets.

As approved by IDNR in an email response to a June 15, 2023 Recommended Assessment Steps letter, copper and zinc were removed from the monitoring program in 2023.



### 3.0 MONITORING WELL MAINTENANCE AND PERFORMANCE SUMMARY

IAC 567-115.21 was referenced for monitoring well maintenance and evaluation, in place of the rescinded 567-110.9. Each requirement is listed below in italics, followed by text describing how the requirement was addressed.

- a. *A biennial examination of high and low water levels accompanied by a discussion of the acceptability of well location (vertically and horizontally) and exposure of the screened interval to the atmosphere.*

Water levels are measured twice annually, in April and September. The screens at several shallow monitoring wells were submerged during both events in 2023. This is consistent with historical conditions. Monitoring well MW-20 was not sampled in September 2023 because the well did not have a sufficient amount of water for sample collection. Groundwater conditions at the Site in 2023 were consistent with historical conditions, and the horizontal and vertical well locations remain acceptable.

- b. *A biennial evaluation of water level conditions in the monitoring wells to ensure that the effects of waste disposal or well operation have not resulted in changes in the hydrologic setting and resultant flow paths.*

An evaluation of groundwater flow conditions in 2023 is included in **Section 1.2.2**.

- c. *Annual measurement of well depths to ensure that wells are physically intact and not filling with sediment.*

Measured well depths are summarized in **Table 4A**. The difference between the previously recorded total depths and the 2023 measurements were less than 1 foot in all wells except those noted below.

MW-1 is monitored for groundwater elevation only, and depth measurements from 2022 and 2023 indicate that approximately 2/3 of the well screen is open. It does not appear siltation is affecting the ability of this monitoring well to produce representative groundwater elevation data; however, redevelopment of MW-1 is recommended to remove accumulated sediment.

Measured total depths of several monitoring wells were 1 or more feet different from as-built total depths when measured in either April or September 2023; however, most were within 1 foot of the recorded as-built total depth during the other 2023 event, indicating that measurement imprecision is likely the cause of the greater difference during one event. Total depths are measured with a flexible water level tape and it can be difficult to obtain accurate total depth readings, particularly in deeper wells. The total depth measured at MW-17 was consistent between April and September 2023 and is more than 1 foot less than the recorded as-built total depth; however, the measured total depth indicates that at least 80 percent of the screen is open and siltation is not affecting the ability of this well to produce representative samples.

Dedicated pumps were installed in August 2023 at monitoring wells MW-12, MW-15, MW-17, MW-24, and MW-27, which prevented total depth measurements in September 2023 with the

exception of MW-17. MW-17 is occasionally artesian, so the pump was removed for the winter following sample collection and a total depth measurement was collected.

- d. *Every five years conduct in-situ permeability tests on monitoring wells to compare test data with those collected originally to determine if well deterioration is occurring.*

A variance to IAC 567-110.9(2)(d) for in-situ permeability tests every 5 years was granted by IDNR in a letter dated May 4, 1999 (Document ID #52813). Although IAC 567-110 has been rescinded since the variance was granted, the same permeability test requirements are now in IAC 567-115.21(2), and our understanding is that the conditions of the variance still apply. The conditions of the variance state that, if a well cannot be sampled or purged because of plugging, the well will be replaced within 6 months of reporting this condition to IDNR in the annual report. The monitoring wells at this Site are performing adequately as noted above.

**Table 3** provides the years in which each requirement was last met and for which it is next scheduled.

### **3.1 COMPLETED WELL MAINTENANCE ACTIVITIES AND NETWORK CHANGES**

Dedicated bladder pumps were installed at monitoring wells MW-12, MW-15, MW-17, MW-24, and MW-27 in August 2023, in an effort to reduce turbidity in samples and assess whether lower-turbidity samples may affect detected metals concentrations.

The 2022 AWQR included a recommendation to resurvey all site monitoring wells due to an apparent error in the reported top of casing elevations at MW-25, MW-26, and MW-27. All site wells were resurveyed in September 2023 by Mohn Surveying of Lansing, IA. Updated top-of-casing elevations are included in **Table 4A**. Most top-of-casing elevations surveyed in 2023 were similar to the previously-recorded elevations, with the exception of MW-25, MW-26, and MW-27 where there was a difference of several feet.

Monitoring well MW-20 could not be sampled despite multiple attempts in 2021-2022 because the well did not recover sufficiently after purging for sample collection. A letter submitted to IDNR on September 12, 2022, included a recommendation that an attempt be made to sample MW-20 only if at least 5 feet of water are present in the well during a scheduled sampling event. IDNR concurred with this recommendation in an email dated October 21, 2022. Based on this recommendation, an attempt was not made to sample MW-20 during the September 2023 sampling events because there was less than 5 feet of water in the well.

A recommendation to abandon MW-14 without replacement was submitted to IDNR in a letter dated September 12, 2022, because the well was broken at a depth of approximately 12.5 feet. IDNR approved the request, and abandonment of MW-14 was completed in December 2022. Abandonment documentation was submitted to IDNR on January 20, 2023.

The PVC well casing of monitoring well MW-1 was obstructing the protective casing lid from opening during the April 2023 monitoring event. MW-1 was repaired in August 2023 by removing 5 inches of PVC from the well casing. The modified casing was re-surveyed in September 2023 as reported above.

## **3.2 WELL MAINTENANCE RECOMMENDATIONS**

No well maintenance or repairs are recommended at this time.

## **4.0 QUALITY ASSURANCE/QUALITY CONTROL SUMMARY**

Data validation quality assurance/quality control (QA/QC) procedures are performed on analytical results for laboratory QC samples, and a QA assessment of the data is conducted as the data are generated. The QA/QC review procedure provides documentation of the accuracy and precision of the analytical data and confirms that the analyses are sufficiently sensitive to detect constituents at levels below regulatory standards, where such standards exist. QA/QC data validation includes review of sample handling, analytical sensitivity, blanks, accuracy, and precision. An explanation of the laboratory QA/QC and data validation procedures, along with the review findings, are described in more detail below.

### **4.1 SAMPLE COLLECTION AND HANDLING**

Groundwater samples are collected using dedicated tubing and either a non-dedicated, low-flow bladder pump or a dedicated low-flow bladder pump. Dedicated pumps were used to sample MW-12, MW-15, MW-17, MW-24, and MW-27 in 2023. For wells sampled with non-dedicated pumps, a new bladder is used at each well. Samples are not field filtered. The sampling pump and water level measurement tape are decontaminated between wells. All samples are placed on ice after collection and are transported to the laboratory in sealed coolers under Chain of Custody (COC).

Sample receipt forms were reviewed and checked to verify that samples were received in good condition and within the acceptable temperature range. COC records for each sampling event were reviewed and confirmed that information was complete, custody was not breached, and samples were analyzed within the acceptable holding times.

### **4.2 ANALYTICAL SENSITIVITY AND BLANKS**

Laboratory QA/QC procedures and post-analysis data validation assist in producing data of acceptable quality and reliability. Eurofins - Cedar Falls is a certified laboratory in Iowa and performed QA/QC procedures, including analyzing laboratory method blanks in association with samples collected for the project to check for contributions to the analytical results possibly attributable to laboratory-based contamination.

A field blank was submitted with each set of groundwater samples to assess whether cross-contamination occurred during sample handling and transport. Boron and calcium were detected in the September 2023 field blank at concentrations below the method reporting limits. No other detections in the field blank or method blanks were noted in the September 2023 lab report.

### **4.3 ACCURACY**

Laboratory analytical accuracy can be assessed by evaluating the constituent recoveries from the following laboratory QA/QC samples: laboratory control sample (LCS) and matrix spike/matrix spike duplicate (MS/MSD). LCS samples assess the accuracy of analytical procedures by checking the ability to recover constituents added to clean aqueous matrices. MS/MSD samples assess the accuracy of analytical procedures by checking the ability to recover constituents added to submitted samples. LCS and MS/MSD results reported in the 2023 analytical laboratory reports were within applicable control limits. An additional laboratory duplicate analysis was performed with the sample

from MW-17. The relative percent difference (RPD) between the original and duplicate results for boron and molybdenum were outside control limits.

The September 2023 laboratory report narrative included a note that many samples were diluted due to the nature of the sample matrix, which caused elevated method reporting limits. This practice is used when the sample matrix contains a concentration of a given parameter at a significantly higher level than the limit of quantification, as determined by the laboratory. This practice does not influence the reliability of the data.

## 4.4 DATA QUALITY SUMMARY

Based on the above QA/QC procedures and the field sampling standard operating procedures, the samples collected during this reporting period are considered to be representative of Site conditions at the locations and times they were obtained. Based on the QA/QC review, no samples were rejected as unusable due to QC failures.

## 5.0 COMPARISON TO STANDARDS

### 5.1 STATISTICAL ANALYSIS

Statistical analysis is completed for the Site on an annual basis. The 2023 Annual Statistical Summary Report is included in **Appendix E**, including a summary table of data used for the statistical analysis for each parameter. **Table 5** provides the background and groundwater protection standard (GWPS) summary for the Site.

Groundwater samples collected in 2023 were unfiltered, in accordance with the variance to 567-103.1(2)f granted in a December 23, 2016 permit amendment. The September 2023 sampling event was the eighth round of unfiltered samples collected at the Site, and 2023 was the fifth reporting period during which the new statistical approach was applied at the Site.

The selected statistical analysis method uses a prediction interval approach as recommended for detection monitoring in the March 2009 U.S. Environmental Protection Agency (U.S. EPA) Unified Guidance for Statistical Analysis of Groundwater Monitoring Data at Resource Conservation and Recovery Act (RCRA) Facilities (Unified Guidance).

Interwell testing was selected for the prediction interval evaluation. Monitoring results from the downgradient wells were compared to the UPLs to evaluate whether a Statistically Significant Increase (SSI) over background has occurred. UPLs were calculated separately for the shallow and deep hydrogeologic units. Consistent with previous sampling events, monitoring well MW-2A was used as the background well for the shallow hydrogeologic unit, and MW-8 was used as the background well for the deep hydrogeologic unit. UPLs cannot yet be calculated for parameters added to the sampling program in 2023.

Monitoring results from the downgradient wells were compared to the UPLs to evaluate whether an SSI over background has occurred. UPL calculations were completed in 2023 using the eight rounds of unfiltered sample results for metals and a longer data record for anions that are not typically affected by filtration (e.g., chloride, sulfate).

Detection of an SSI at a compliance well indicates that the groundwater quality is different than the background groundwater quality, but does not necessarily indicate an impact to public health or the environment.

To evaluate potential health impacts, the monitoring results were compared to health-based GWPS values. The GWPS values were set at the drinking water Maximum Contaminant Level (MCL) if one exists, otherwise the Iowa Statewide Standard (SWS) for protected groundwater was used. If the UPL established based on background monitoring was higher than the MCL or SWS, then the GWPS was set at the UPL. Secondary Maximum Contaminant Levels (SMCLs) were not used to establish GWPS values because SMCLs are not health-based standards, but they are shown in **Table 5** for comparison with the UPL and GWPS values.

## 5.2 2023 RESULTS

**Table 6** is a summary of monitoring points/detected constituents from the September 2023 sampling event that did not exceed a UPL. **Table 7** provides a summary of ongoing and newly identified SSIs and compares these concentrations to the GWPS values.

**Table 8** provides a visualization of the historic SSIs and regulatory standard exceedances since 2016, the first year during which unfiltered samples were collected at the Site. **Table 8** does not identify UPL exceedances prior to 2019, as this was the first year UPLs were calculated.

## 5.3 STANDARDS HISTORY

The standards for 2019 through 2023 are summarized in **Table 9**. Graphs of standards history are included in **Appendix F**.

## 6.0 SUMMARY OF FINDINGS FOR GROUNDWATER

### 6.1 COMPARISON TO STANDARDS

Compared to results since the sampling program was changed to unfiltered metals samples in 2016, no new GWPS exceedances were identified in 2023 for parameters that have previously been included in the sampling program. Lithium and molybdenum were added to the sampling program in 2023, and GWPS exceedances were detected at several wells. GWPS exceedances in 2023 were:

- Shallow Hydrogeologic Unit:
  - Arsenic: MW-21
  - Boron: MW-15, MW-16
  - Lithium: MW-15, MW-16
  - Manganese: MW-12
  - Molybdenum: MW-16
  
- Deep Hydrogeologic Unit:
  - Boron: MW-10, MW-13
  - Lithium: MW-9, MW-11, MW-13, MW-17, MW-18
  - Manganese: MW-17
  - Molybdenum: MW-11, MW-13

Two well/constituent pairs had a GWPS exceedance in 2022 but did not exceed the GWPS in 2023:

- Shallow Hydrogeologic Unit:
  - none
- Deep Hydrogeologic Unit:
  - Boron: MW-11
  - Manganese: MW-24

The September 2023 sampling event was the first time samples were tested for lithium and molybdenum at the Site, so the GWPS exceedances for lithium and molybdenum have not been confirmed and cannot be compared to historical data.

Comparison of the 2023 monitoring results to background UPLs indicated approximately the same number of SSIs as in 2022, but with some differences in the wells and constituents for which SSIs were identified.

The parameters most commonly detected above the UPLs were parameters without health-based standards, including chloride, iron, magnesium, and sulfate. Metals with health-based standards were also detected above background concentrations in some wells, but the SSIs were not as widespread. Metals with an SSI for at least one monitoring well in 2023 included arsenic, barium, boron, iron, lead, magnesium, and manganese.

Calcium, fluoride, lithium, molybdenum, TDS, and TSS were added to the monitoring program for 2023. Per email communication received from IDNR on March 29, 2023, newly-detected parameters will be added to the monitoring program at the site. Calcium, lithium, and molybdenum were all detected at multiple wells in September 2023. There is no applicable GWPS for calcium. Lithium and molybdenum concentrations are discussed above. Fluoride was detected at only one well, at a concentration below the method reporting limit.

## 6.2 TREND ANALYSIS

The September 2023 sampling event was the eighth sampling event for the site since transitioning to unfiltered sampling and therefore the first event for which trend analyses for wells and parameters with regulatory standard exceedances were produced. Trend analyses are included in **Appendix G** and are summarized in **Table 10**. Trends to date can also be visually evaluated by inspection of the time series plots in **Appendix E**. The trend analysis indicates the following significant trends for well/constituent pairs with GWPS exceedances in September 2023. Lithium and molybdenum are not included because only one round of results is available for these constituents.

- Increasing trend
  - Boron at MW-16
- Decreasing trend
  - Manganese at MW-24



### 6.3 TOTAL SUSPENDED SOLIDS EVALUATION

TSS was added to the parameter list in 2023. Elevated TSS (over 5 mg/L) was detected at nearly all monitoring wells, including most wells with dedicated low-flow pumps. TSS values over 100 mg/L were detected at MW-17 and MW-25. Elevated TSS does not appear to be correlated with higher metals concentrations when comparing results between wells, and not enough data are available to assess whether TSS and metals concentrations are related over time at individual wells. The highest TSS concentrations (over 100 mg/L) were detected at MW-17 and MW-25. MW-17 has a dedicated pump, so the high TSS at this well indicates that installation of dedicated pumps had a limited effect on TSS.

### 7.0 LEACHATE AND SURFACE WATER MONITORING

Leachate well samples are analyzed for arsenic, boron, calcium, lithium, manganese, molybdenum, fluoride, sulfate, TDS, and TSS. Only LW-2 and LW-3 contained sufficient volume for sample collection in September 2023. LW-3 only contained sufficient volume for collection of a sample for metals analysis and not enough volume for anions, general chemistry parameters, or field parameters.

The arsenic concentrations at LW-2 and LW-3 were higher than arsenic concentrations detected at Site monitoring wells. The lithium concentration detected at LW-2 was similar to the highest concentrations detected at Site monitoring wells, and the molybdenum concentration at LW-2 was approximately half of the highest concentration detected in groundwater. The boron, calcium, lithium, manganese, molybdenum, and sulfate concentrations at LW-2 and LW-3 are within the range of concentrations observed at Site monitoring wells. A summary of detected parameters for the leachate monitoring points in 2023 is included in **Table 11**.

During the April and September monitoring events, leachate levels were measured at leachate head wells LW-1, LW-2, and LW-3. The leachate head wells intersect the water table within the landfill footprint. Historically, LW-1 has often been dry or nearly dry. Leachate depths measured during 2023 are summarized in **Table 12**.

Surface water sample collection was attempted at surface water monitoring points SW-1 and SW-2. Both surface water sampling points were dry during the September 2023 monitoring event. The surface water monitoring results are summarized in **Table 11**.

### 8.0 RECOMMENDATIONS

SCS recommends that the current monitoring program be continued during 2024, with the inclusion of calcium, lithium, molybdenum, TDS, TSS, field dissolved oxygen, and field redox potential. Fluoride was only detected at one well at a concentration below the method detection limit, so annual testing for fluoride is not recommended. Based on communication with IDNR in 2023, fluoride should be included in the sampling program in five years and reevaluated. As was the case in 2023, an attempt to sample MW-20 will only be made during future sampling events if at least 5 feet of water is present in the well prior to purging. In addition, SCS recommends redeveloping MW-1 in 2024 to remove accumulated sediment. The planned monitoring schedule for 2024 is summarized in **Table 2**.

## 9.0 REFERENCES

RMT, Inc., 2005, Groundwater Quality Assessment Report and 2005 Annual Water Quality Report for the Stoney Point Landfill, Cedar Rapids, Iowa. Prepared for Interstate Power and Light Company, November 2005.

SCS Engineers, 2018, 2018 Annual Water Quality Report, Interstate Power and Light Company – Stoney Point Closed Landfill, November 28, 2018.

Wahl, K. and B.J. Bunker, 1986, Hydrogeology of Carbonate Aquifers in southwestern Linn County and Adjacent Parts of Benton, Iowa, and Johnson Counties, Iowa, Iowa Geological Survey Water Supply Bulletin Number 15, 1986.



## Tables

- 1 Monitoring Program Summary
- 2 Monitoring Program Implementation Schedule
- 3 Monitoring Well Maintenance and Performance Reevaluation Schedule
- 4A Monitoring Well Maintenance and Performance Summary
- 4B Vertical Gradients
- 5 Background Summary
- 6 Summary of Well/Detected Constituent Pairs with No Immediately Preceding SSIs
- 7 Summary of Ongoing and Newly Identified SSIs
- 8 Historic UPL & Action Level Exceedances
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**Table 1**  
**Monitoring Program Summary**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

Monitoring Point	Formation*	Current Monitoring Program	Change for Next Sampling Event	UPL Exceedances	Total # of Samples in Each Monitoring Program Since January 1, 2018
					Routine
<b>Sampled Monitoring Wells</b>					
MW-2A	Shallow	Routine	NC	None	6
MW-3	Shallow	Routine	NC	Chloride, sulfate	6
MW-8	Intermediate Deep	Routine	NC	None	6
MW-9	Intermediate Deep	Routine	NC	Boron, chloride	6
MW-10	Deep	Routine	NC	Boron, chloride, magnesium, sulfate	6
MW-11	Intermediate Deep	Routine	NC	Boron, chloride, iron, magnesium, manganese, sulfate	6
MW-12	Shallow	Routine	NC	Arsenic, boron, manganese, sulfate	6
MW-13	Deep	Routine	NC	Boron, chloride, magnesium, sulfate	6
MW-14	Intermediate Deep	Routine	NC	Abandoned in December 2022.	3
MW-15	Shallow	Routine	NC	Boron, chloride, magnesium, sulfate	6
MW-16	Shallow	Routine	NC	Arsenic, boron, chloride, magnesium, sulfate	6
MW-17	Intermediate Deep	Routine	NC	Boron, chloride, iron, lead, magnesium, manganese, sulfate	6
MW-18	Deep	Routine	NC	Boron, chloride, magnesium, sulfate	6
MW-20	Deep	Routine	NC	Not sampled in September 2023**	3
MW-21	Shallow	Routine	NC	Arsenic, barium, boron, chloride	6
MW-22	Intermediate Deep	Routine	NC	Barium, chloride, iron, magnesium, manganese, sulfate	6
MW-23	Deep	Routine	NC	Barium, iron, magnesium	6
MW-24	Deep	Routine	NC	Barium, chloride, iron, magnesium, manganese	6
MW-25	Shallow	Routine	NC	Barium	5
MW-26	Intermediate Deep	Routine	NC	Barium, chloride	6
MW-27	Deep	Routine	NC	Iron, magnesium	6
DPW-1				Abandoned in September 2021	
DPW-2				Abandoned in September 2021	

**Table 1  
Monitoring Program Summary  
2023 Annual Water Quality Report  
Stoney Point Landfill  
Permit No. 57-SDP-11-90C**

Monitoring Point	Formation*	Current Monitoring Program	Change for Next Sampling Event	UPL Exceedances	Total # of Samples in Each Monitoring Program Since January 1, 2018
					Routine
<b>Water Level Only Monitoring Wells</b>					
MW-1	Shallow	Routine	NC	N/A	Water levels only
MW-7	Intermediate Deep	Routine	NC	N/A	Water levels only
MW-19	Intermediate Deep	Routine	NC	N/A	Water levels only
<b>Leachate Monitoring Points</b>					
LW-1	N/A	Routine	NC	N/A	Leachate level only
LW-2	N/A	Routine (Voluntary^)	NC	N/A	5
LW-3	N/A	Routine (Voluntary^)	NC	N/A	4
<b>Surface Water Points</b>					
SW-1	N/A	Routine	NC	N/A	4
SW-2	N/A	Routine	NC	N/A	4

NC = No Change

N/A = Not Applicable

\*: Shallow wells are completed in shallow bedrock in the southern portion of the site, saturated fill, and shallow unconsolidated deposits near the creek. Intermediate Deep wells are completed in the Spring Grove limestone (southern portion of the site) and in the alluvium/bedrock contact near the creek (northern portion of the site). Deep wells are completed in the Kenwood Member of the Pinicon Ridge formation.

^: Samples are collected at LW-2 and LW-3 on a voluntary basis if these points are not dry during the September sampling event.

\*\* : MW-20 was not sampled in September 2023 due to insufficient water.

Updated By: RM, 10/17/2023  
Checked By: NLB, 10/23/2023

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**Table 2**  
**Monitoring Program Implementation Schedule**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

Monitoring Point	Recent Sampling Event Dates and Constituents											Upcoming Sampling Dates and Constituents																																																																																																						
	4/24-25/2018	9/21-24/2018	4/24/2019	9/18-19/2019	4/20/2020	9/8-15/2020	4/28/2021	9/14-22/2021	4/29/2022	9/13-15/2022	4/17/2023	9/6-7/2023	April 2024	September 2024																																																																																																				
<b>Sampled Monitoring Wells</b>																																																																																																																		
MW-2A	Groundwater Elevation	List A	Groundwater Elevation	List A	Groundwater Elevation	List A	Groundwater Elevation (plus List B at MW-13)	List A	Groundwater Elevation (plus List A at MW-20^^ and MW-25)	List A^^	Groundwater Elevation	List A	Groundwater Elevation	List A																																																																																																				
MW-8												Abandoned^		Abandoned^																																																																																																				
MW-11												List A		List A	List A	List A	List A	List A	List A	List A	List A	List A	List A	List A	List A																																																																																									
MW-12																										List A	List A	List A	List A	List A	List A	List A	List A	List A	List A	List A	List A																																																																													
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MW-20																																																																																		List A	List A	List A	List A	List A	List A	List A	List A	List A	List A	List A																						
MW-21																																																																																													List A	List A	List A	List A	List A	List A	List A	List A	List A	List A	List A											
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MW-23																																																																																																																		
MW-24												List A		List A	List A	List A	List A	List A	List A	List A	List A	List A	List A																																																																																											
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DPW-2																																																																				List A	List A	List A	List A	List A	List A	List A	List A	List A	List A	List A																																				
MW-3	List A	List A	List A	List A	List A	List A	List A	List A	List A	List A	List A																																																																																																							
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MW-13																																																																																																				List A	List A	List A	List A	List A	List A	List A	List A	List A	List A	List A				
MW-18												List A		List A	List A	List A	List A	List A	List A	List A	List A	List A	List A																																																																																											
MW-1																								Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation																																																																													Groundwater Elevation	Groundwater Elevation		
MW-7																																			Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation																																																																				Groundwater Elevation	
MW-19																																														Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation	Groundwater Elevation																																																										
<b>Surface Water Monitoring Points</b>																																																																																																																		
SW-1																								Surface Water Depth	List A	Surface Water Depth	List A	Surface Water Depth	List A**	Surface Water Depth	List A	Surface Water Depth	List A	Surface Water Depth	List A	Surface Water Depth	List A																																																																													
SW-2	Surface Water Depth	List A	Surface Water Depth	List A	Surface Water Depth	List A**	Surface Water Depth	List A	Surface Water Depth	List A	Surface Water Depth																											List A	Surface Water Depth	List A																																																																										

**Table 2  
Monitoring Program Implementation Schedule  
2023 Annual Water Quality Report  
Stoney Point Landfill  
Permit No. 57-SDP-11-90C**

Monitoring Point	Recent Sampling Event Dates and Constituents												Upcoming Sampling Dates and Constituents			
	4/24-25/2018	9/21-24/2018	4/24/2019	9/18-19/2019	4/20/2020	9/8-15/2020	4/28/2021	9/14-22/2021	4/29/2022	9/13-15/2022	4/17/2023	9/6-7/2023	April 2024	September 2024		
<b>Leachate Monitoring Points</b>																
LW-1	Leachate Elevation	Leachate Elevation	Leachate Elevation	Leachate Elevation	Leachate Elevation	Leachate Elevation	Leachate Elevation	Leachate Elevation	Leachate Elevation	Leachate Elevation	Leachate Elevation	Leachate Elevation	Leachate Elevation	Leachate Elevation	List C	
LW-2		List C***		List C		List C***		List C***		List C***		List C***				List C***
LW-3																

Notes:

List A: arsenic, barium, beryllium, boron, cobalt, iron, lead, magnesium, manganese, selenium, chloride, sulfate, field pH, field specific conductance, field temperature, and groundwater elevation. Metals are reported as total starting in 2016 (previously reported as dissolved). Copper and zinc removed from List A beginning in 2023.

List B: boron, magnesium, chloride, sulfate, TDS, TSS, field pH, field specific conductance, field temperature, groundwater elevation, and well depth.

List C: arsenic, boron, manganese, sulfate, field pH, field temperature, field specific conductance, leachate elevation, and well depth.

(1): Lists A, B, and C were revised in 2023 to include calcium, fluoride, lithium, molybdenum, TDS, TSS, field dissolved oxygen, and field oxidation potential. Recommendations for inclusion of additional parameters in 2024 are summarized in the report text.

^: DPW-1 and DPW-2 were abandoned in September 2021. MW-14 was abandoned in December 2022.

^^: MW-20 could not be sampled in April 2022, August 2022, and September 2022 because the well did not recover sufficiently after purging. MW-14 could not be sampled in September 2022 as the well packer was stuck in the well and could not be removed.

\*: MW-13, DPW-1, and DPW-2 were inaccessible in September 2020.

\*\* : SW-1 and SW-2 surface water depth was not measured in September 2020 due to safety issues associated with high water levels

\*\*\*: LW-3 did not have sufficient volume present for field parameter collection in September 2018, 2020, or 2022. LW-1 did not have sufficient volume present for sample collection in September 2022 or September 2023.

Updated By: RM, 10/20/2023  
Checked By: NLB, 10/23/2023

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**Table 3**  
**Monitoring Well Maintenance and Performance Reevaluation Schedule**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

Compliance with:	Monitoring Calendar Years					
	2019	2020	2021	2022	2023	2024
567 IAC 115.21(2)a. high and low water levels (biennial)	Completed		Completed		Completed	
567 IAC 115.21(2)b. changes in the hydrologic setting and flow paths (biennial)	Completed		Completed		Completed	
567 IAC 115.21(2)c. well depths (annual)*	Completed	Completed	Completed	Completed	Completed	Scheduled
567 IAC 115.21(2)d. in-situ permeability tests (every 5 years)**	Not Applicable - Variance granted by IDNR (see comment below)					

Comments:

\*: To avoid the potential for cross-contamination and increased sample turbidity associated with removing and re-installing dedicated pumps, well depths are not measured annually at wells with dedicated pumps.

\*\* : A variance to IAC 567-110.9(2)(d) for in situ permeability tests every 5 years was granted by IDNR in a letter dated May 4, 1999. Although IAC 567-110 has been rescinded since the variance was granted, the same permeability test requirements are now in IAC 567-115.21(2), and our understanding is that the conditions of the variance still apply.

**Table 4A**  
**Monitoring Well Maintenance and Performance Summary**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
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	Well	Top of Casing (ft MSL)	Screen Length (ft)	Top of Screen (ft MSL)	Total Depth (ft)		Date of Measurements		Maximum Depth
							4/17/2023	9/5-7/2023	Discrepancy (ft)
Shallow Hydrogeologic Unit Wells	MW-1	842.87	10	810.69	42.18	Groundwater Level (ft)	NM	23.84	3.51
						Groundwater Elevation (Ft MSL)	--	819.03	
						Measured Well Depth (ft)	NM	38.67	
						Submerged screen	Y	Y	
	MW-2A	838.74	10	816.23	32.51	Groundwater Level (ft)	15.20	17.60	-0.89
						Groundwater Elevation (Ft MSL)	823.54	821.14	
						Measured Well Depth (ft)	33.40	32.03	
						Submerged screen	Y	Y	
	MW-3	827.00	10	808.86	28.14	Groundwater Level (ft)	11.89	15.54	0.54
						Groundwater Elevation (Ft MSL)	815.11	811.46	
						Measured Well Depth (ft)	27.90	27.60	
						Submerged screen	Y	Y	
	MW-12	801.51	10	783.32	28.19	Groundwater Level (ft)	12.55	14.02	0.29
						Groundwater Elevation (Ft MSL)	788.96	787.49	
						Measured Well Depth (ft)	27.90	--	
						Submerged screen	Y	Y	
	MW-15	799.63	10	786.48	23.15	Groundwater Level (ft)	7.90	9.68	0.65
						Groundwater Elevation (Ft MSL)	791.73	789.95	
						Measured Well Depth (ft)	22.50	--	
						Submerged screen	Y	Y	
	MW-16	805.10	10	791.85	23.25	Groundwater Level (ft)	9.59	11.86	0.78
						Groundwater Elevation (Ft MSL)	795.51	793.24	
						Measured Well Depth (ft)	22.47	22.69	
						Submerged screen	Y	Y	
MW-21	800.59	15	789.95	25.64	Groundwater Level (ft)	5.90	13.93	-0.12	
					Groundwater Elevation (Ft MSL)	794.69	786.66		
					Measured Well Depth (ft)	25.60	25.76		
					Submerged screen	Y	N		
MW-25	814.25	15	796.17	33.08	Groundwater Level (ft)	11.09	16.38	0.16	
					Groundwater Elevation (Ft MSL)	803.16	797.87		
					Measured Well Depth (ft)	32.92	33.20		
					Submerged screen	Y	Y		
Intermediate and Deep Hydrogeologic Unit Wells	MW-7	839.35	5	782.07	62.28	Groundwater Level (ft)	14.75	15.79	0.50
						Groundwater Elevation (Ft MSL)	824.60	823.56	
						Measured Well Depth (ft)	62.50	61.78	
						Submerged screen	Y	Y	
	MW-8	827.50	10	780.23	57.27	Groundwater Level (ft)	17.40	32.10	1.07
						Groundwater Elevation (Ft MSL)	810.10	795.40	
						Measured Well Depth (ft)	57.14	56.20	
						Submerged screen	Y	Y	
	MW-9	826.09	10	774.07	62.02	Groundwater Level (ft)	18.27	31.55	0.4
						Groundwater Elevation (Ft MSL)	807.82	794.54	
						Measured Well Depth (ft)	62.30	61.62	
						Submerged screen	Y	Y	
	MW-10	800.67	10	736.82	73.85	Groundwater Level (ft)	2.10	10.02	1.74
						Groundwater Elevation (Ft MSL)	798.57	790.65	
						Measured Well Depth (ft)	74.35	72.11	
						Submerged screen	Y	Y	

**Table 4A**  
**Monitoring Well Maintenance and Performance Summary**  
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**Stoney Point Landfill**  
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	Well	Top of Casing (ft MSL)	Screen Length (ft)	Top of Screen (ft MSL)	Total Depth (ft)		Date of Measurements		Maximum Depth
							4/17/2023	9/5-7/2023	Discrepancy (ft)
Intermediate and Deep Hydrogeologic Unit Wells	MW-11	801.00	5	760.77	45.23	Groundwater Level (ft)	3.92	11.04	0.43
						Groundwater Elevation (Ft MSL)	797.08	789.96	
						Measured Well Depth (ft)	45.30	44.80	
						Submerged screen	Y	Y	
	MW-13	799.86	10	735.90	73.96	Groundwater Level (ft)	1.15	11.59	-0.99
						Groundwater Elevation (Ft MSL)	798.71	788.27	
						Measured Well Depth (ft)	74.95	73.98	
						Submerged screen	Y	Y	
	MW-17	804.99	10	761.42	53.57	Groundwater Level (ft)	1.49	14.39	1.67
						Groundwater Elevation (Ft MSL)	803.50	790.60	
						Measured Well Depth (ft)	51.90	51.91	
						Submerged screen	Y	Y	
MW-18	804.94	10	740.68	74.26	Groundwater Level (ft)	2.71	13.78	-0.74	
					Groundwater Elevation (Ft MSL)	802.23	791.16		
					Measured Well Depth (ft)	75.00	73.85		
					Submerged screen	Y	Y		
MW-19	824.05	10	768.89	65.16	Groundwater Level (ft)	18.80	31.36	12.36	
					Groundwater Elevation (Ft MSL)	805.25	792.69		
					Measured Well Depth (ft)	52.80	64.85		
					Submerged screen	Y	Y		
MW-20	828.09	5	740.87	92.22	Groundwater Level (ft)	88.49	87.27	-1.64	
					Groundwater Elevation (Ft MSL)	739.60	740.82		
					Measured Well Depth (ft)	93.86	92.24		
					Submerged screen	N	N		
MW-22	800.49	5	758.89	46.60	Groundwater Level (ft)	TOC	9.78	0.35	
					Groundwater Elevation (Ft MSL)	>800.86	790.71		
					Measured Well Depth (ft)	46.68	46.25		
					Submerged screen	Y	Y		
MW-23	800.34	5	734.65	70.69	Groundwater Level (ft)	8.98	18.50	-1.21	
					Groundwater Elevation (Ft MSL)	791.36	781.84		
					Measured Well Depth (ft)	71.90	71.45		
					Submerged screen	Y	Y		
MW-24	826.96	5	740.62	91.34	Groundwater Level (ft)	19.40	34.49	-1.06	
					Groundwater Elevation (Ft MSL)	807.56	792.47		
					Measured Well Depth (ft)	92.40	--		
					Submerged screen	Y	Y		
MW-26	814.71	5	763.86	55.85	Groundwater Level (ft)	15.15	23.90	-1.98	
					Groundwater Elevation (Ft MSL)	799.56	790.81		
					Measured Well Depth (ft)	56.67	57.83		
					Submerged screen	Y	Y		
MW-27	814.50	5	731.57	87.93	Groundwater Level (ft)	26.20	22.89	-0.99	
					Groundwater Elevation (Ft MSL)	788.30	791.61		
					Measured Well Depth (ft)	88.92	--		
					Submerged screen	Y	Y		



**Table 4A**  
**Monitoring Well Maintenance and Performance Summary**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

	Well	Top of Casing (ft MSL)	Screen Length (ft)	Top of Screen (ft MSL)	Total Depth (ft)		Date of Measurements		Maximum Depth
							4/17/2023	9/5-7/2023	Discrepancy (ft)
Leachate Monitoring Points	LW-01	834.18	5	821.13	18.05	Groundwater Level (ft)	17.30	DRY	-0.25
						Leachate Elevation (Ft MSL)	816.88	DRY	
						Measured Well Depth (ft)	18.30	DRY	
						Submerged screen	N	--	
	LW-02	835.74	5	801.78	38.96	Groundwater Level (ft)	32.90	36.00	0.44
						Leachate Elevation (Ft MSL)	802.84	799.74	
						Measured Well Depth (ft)	39.00	38.52	
						Submerged screen	Y	N	
	LW-03	838.46	5	823.71	19.75	Groundwater Level (ft)	18.25	18.90	-0.48
						Leachate Elevation (Ft MSL)	820.21	819.56	
						Measured Well Depth (ft)	19.80	20.23	
						Submerged screen	N	N	
Surface Water Monitoring Points	SW-1	N/A	N/A	N/A	N/A	Surface Water Depth (ft)	0.33	DRY	N/A
	SW-2	N/A	N/A	N/A	N/A	Surface Water Depth (ft)	0.25	DRY	N/A

Notes:

TOC: Top of Casing . For water levels indicates that well was artesian and flowing during the sampling event.

\*: MW-14 was obstructed during the April and September 2022 sampling events therefore a groundwater sample was not collected.

\*\* : New dedicated pumps installed in the following wells in August 2023, which prohibited total depth measurements in September 2023: MW-12, MW-15, MW-17, MW-24, MW-27. Total depth at MW-17 was measured after removing dedicated pump and before replacing packer.

Updated by: RM            Date: 10/17/2023  
Checked by: NLB          Date: 10/23/2023

I:\25223065.00\Deliverables\2023 AWQR\Tables\[2023\_awqreport\_Stoney Point.xlsx]4A - MW Main & Perform Summary

**Table 4B**  
**Vertical Gradients**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

Well Pair			Vertical Hydraulic Gradient (feet/foot) <sup>(1)</sup>	
Shallow Well	Intermediate- Deep Well	Deep Well	4/17/2023	9/5-7/2023
MW-2A	--	MW-7	0.030	0.071
MW-3	MW-8	--	-0.158	-0.537
MW-3	--	MW-20	-1.100	-1.058
--	MW-8	MW-20	-1.913	-1.481
MW-12	MW-11	--	-0.355	-0.112
MW-12	--	MW-10	0.195	0.065
--	MW-11	MW-10	0.056	0.026
MW-15	--	MW-13	0.131	-0.032
MW-16	MW-17	--	0.248	-0.085
MW-16	--	MW-18	0.127	-0.040
--	MW-17	MW-18	-0.061	0.027
MW-21	MW-22 <sup>(2)</sup>	--	0.204	0.166
MW-21	--	MW-23	-0.063	-0.099
--	MW-22 <sup>(2)</sup>	MW-23	-0.392	-0.366
MW-25	MW-26	--	-0.117	-0.251
MW-25	--	MW-27	-0.236	-0.104
--	MW-26	MW-27	-0.349	0.025

Notes:

NC: Not Calculated

(1) A negative value indicates a downward gradient; a positive value indicates an upward gradient.

(2) MW-22 was artesian (flowing) in April 2023. If one well in a pair was artesian, the vertical gradient was calculated using the top of casing elevation for the artesian well. If both wells were artesian, the gradient was not calculated.

(3) Well elevations were revised following re-surveying of wells in September 2023.

Updated: RM Date: 10/23/2023  
Checked: NLB Date: 10/23/2023

I:\25223065.00\Deliverables\2023 AWQR\Tables\[2023\_awqreport\_Stoney Point.xlsx]4B - Vertical Gradients

**Table 5**  
**Background Summary**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

Interwell Background								
Constituent	Units	Samples**	Detections**	UPL	Statistical Test	Action Level	Source	Other Standards
<b>Shallow Hydrogeologic Unit - MW-2A</b>								
Arsenic	µg/L	8	4	1.20	PL(NP)	10	MCL	--
Barium	µg/L	8	8	281	PL(P)	2,000	MCL	--
Beryllium	µg/L	8	2	0.430	PL(NP)	4	MCL	--
Boron	µg/L	8	8	295	PL(P)	6,000	SWS	--
Calcium	mg/L	1	1	N/A	N/A	none	--	--
Chloride	mg/L	27	27	10.1	PL(P)	none	--	SMCL 250
Cobalt	µg/L	8	6	8.59	PL(P)	8.59	Background	SWS 2.1
Field pH	SU	8	8	N/A	N/A	none	--	SMCL <6.5 or >8.5
Field Oxidation Potential	mV	1	1	N/A	N/A	none	--	--
Field Specific Conductance	µmhos/ cm	8	8	N/A	N/A	none	--	--
Field Temperature	deg C	8	8	N/A	N/A	none	--	--
Fluoride	mg/L	1	1	N/A	N/A	4.00	MCL	SMCL 2
Dissolved Oxygen	mg/L	1	1	N/A	N/A	none	--	--
Iron	µg/L	8	8	20,900	PL(P)	none	SMCL	SMCL 300
Lead	µg/L	8	8	26.2	PL(P)	15	SWS	--
Lithium	µg/L	1	1	N/A	N/A	14	SWS	--
Magnesium	µg/L	8	8	35,000	PL(P)	none	--	--
Manganese	µg/L	8	8	1,370	PL(P)	1,370	Background	SWS 300, SMCL 50
Molybdenum	µg/L	1	1	N/A	N/A	40	SWS	--
Selenium	µg/L	8	7	3.64	PL(P)	50	MCL	--
Sulfate	mg/L	25	25	53.3	PL(P)	none	--	SMCL 250
Total Dissolved Solids	mg/L	1	1	N/A	N/A	none	--	SMCL 500
Total Suspended Solids	mg/L	1	1	N/A	N/A	none	--	--

**Table 5  
Background Summary  
2023 Annual Water Quality Report  
Stoney Point Landfill  
Permit No. 57-SDP-11-90C**

Interwell Background								
Constituent	Units	Samples**	Detections**	UPL	Statistical Test	Action Level	Source	Other Standards
<b>Deep Hydrogeologic Unit - MW-8</b>								
Arsenic	µg/L	8	3	0.880	PL(NP)	10	MCL	--
Barium	µg/L	8	8	98.5	PL(P)	2,000	MCL	--
Beryllium	µg/L	8	0	DQ	DQ	4	MCL	--
Boron	µg/L	8	8	1,880	PL(P)	6,000	SWS	--
Calcium	mg/L	1	1	N/A	N/A	none	--	--
Chloride	mg/L	37	24	13.0	PL(NP)	none	--	SMCL 250
Cobalt	µg/L	8	7	0.756	PL(P)	2.1	SWS	--
Field pH	SU	8	8	N/A	N/A	none	--	SMCL <6.5 or >8.5
Field Oxidation Potential	mV	1	1	N/A	N/A	none	--	--
Field Specific Conductance	µmhos/cm	8	8	N/A	N/A	none	--	--
Field Temperature	deg C	8	8	N/A	N/A	none	--	--
Fluoride	mg/L	1	1	N/A	N/A	4.00	MCL	SMCL 2
Dissolved Oxygen	mg/L	1	1	N/A	N/A	none	--	--
Iron	µg/L	8	8	113	PL(P)	none	SMCL	SMCL 300
Lead	µg/L	8	5	0.794	PL(P)	15	SWS	--
Lithium	µg/L	1	1	N/A	N/A	14	SWS	--
Magnesium	µg/L	8	8	23,000	PL(P)	none	--	--
Manganese	µg/L	8	8	139	PL(P)	300	SWS	SWS 300, SMCL 50
Molybdenum	µg/L	1	1	N/A	N/A	40	SWS	--
Selenium	µg/L	8	0	DQ	DQ	50	MCL	--
Sulfate	mg/L	25	25	91.9	PL(P)	none	--	SMCL 250
Total Dissolved Solids	mg/L	1	1	N/A	N/A	none	--	SMCL 500
Total Suspended Solids	mg/L	1	1	N/A	N/A	none	--	--

PL(NP) = Prediction Limit (Non-Parametric)

PL(P) = Prediction Limit (Parametric)

SMCL = Secondary Maximum Contaminant Level

SWS = Iowa Statewide Standard for a Protected Groundwater Source (Health-Based)

µg/L = micrograms per liter

UPL = Upper Prediction Limit

DQ = Double Quantification Rule

MCL = Maximum Contaminant Level

mg/L = milligrams per liter

\*\* For all parameters except chloride and sulfate, these columns reflect the number of samples since unfiltered sample collection for metals began in 2016. Additional historical data are included for chloride and sulfate, which were reported as totals prior to 2016.

Updated by: RM

Date: 10/20/2023

Checked by: NLB

Date: 10/23/2023

I:\25223065.00\Deliverables\2023 AWQR\Tables\[2023\_awqreport\_Stoney Point.xlsx]5 - Background & GWPS summary

**Table 6**  
**Summary of Well/Detected Constituent Pairs With No Immediately Preceding SSIs**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

	Well	Constituent	Units	Most Recent Result	UPL	
Shallow Hydrogeologic Unit	MW-2A*	Arsenic	µg/L	0.88 J	1.2	
		Barium	µg/L	89	281	
		Beryllium	µg/L	0.43 J	0.43	
		Boron	µg/L	100	295	
		Calcium	mg/L	81	N/A	
		Chloride	mg/L	8.6	10.1	
		Cobalt	µg/L	0.50	8.59	
		Field pH	SU	7.28	N/A	
		Field Oxidation Potential	µg/L	43.5	N/A	
		Field Specific Conductance	µmhos/ cm	535	N/A	
		Field Temperature	deg C	17.9	N/A	
		Dissolved Oxygen	µg/L	9.18	N/A	
		Iron	µg/L	36 J	20900	
		Lead	µg/L	0.78	26.2	
		Lithium	µg/L	6.0 J	N/A	
		Magnesium	µg/L	13,000	35000	
		Manganese	µg/L	11	1370	
		Molybdenum	µg/L	2.9	N/A	
		Selenium	µg/L	2.6 J	3.64	
		Sulfate	mg/L	28	53.3	
		Total Dissolved Solids	mg/L	300	N/A	
		Total Suspended Solids	mg/L	2.4	N/A	
		MW-3	Calcium	mg/L	170	N/A
			Field pH	SU	7.13	N/A
			Field Oxidation Potential	µg/L	196.0	N/A
	Field Specific Conductance		µmhos/ cm	814	N/A	
	Field Temperature		deg C	13.2	N/A	
	Dissolved Oxygen		µg/L	8.48	N/A	
	Lithium		µg/L	3.4 J	N/A	
	Magnesium		µg/L	6900	35000	
	Molybdenum		µg/L	1.4 J	N/A	
	Total Dissolved Solids		mg/L	520	N/A	
	Total Suspended Solids	mg/L	5.5	N/A		

**Table 6**  
**Summary of Well/Detected Constituent Pairs With No Immediately Preceding SSIs**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

	Well	Constituent	Units	Most Recent Result	UPL
Shallow Hydrogeologic Unit	MW-12	Barium	µg/L	280	281
		Calcium	mg/L	120	N/A
		Chloride	mg/L	6.8	10.1
		Cobalt	µg/L	4.3	8.59
		Field pH	SU	7.20	N/A
		Field Oxidation Potential	µg/L	-64.2	N/A
		Field Specific Conductance	µmhos/ cm	717	N/A
		Field Temperature	deg C	13.9	N/A
		Fluoride	mg/L	0.44 J	N/A
		Dissolved Oxygen	µg/L	0.49	N/A
		Iron	µg/L	1,500	20900
		Lithium	µg/L	2.9 J	N/A
		Magnesium	µg/L	18000	35000
		Molybdenum	µg/L	3.1	N/A
		Total Dissolved Solids	mg/L	440	N/A
		Total Suspended Solids	mg/L	6.3	N/A
		MW-15	Barium	µg/L	21
	Calcium		mg/L	490	N/A
	Cobalt		µg/L	2.4	8.59
	Field pH		SU	6.96	N/A
	Field Oxidation Potential		µg/L	62.3	N/A
	Field Specific Conductance		µmhos/ cm	2,391	N/A
	Field Temperature		deg C	13.9	N/A
	Dissolved Oxygen		µg/L	6.25	N/A
	Iron		µg/L	310	20900
	Lithium		µg/L	50	N/A
	Manganese		µg/L	780	1370
	Molybdenum		µg/L	5.5	N/A
	Total Dissolved Solids		mg/L	2300	N/A
	Total Suspended Solids		mg/L	2.0	N/A
	MW-16	Barium	µg/L	39	281
		Calcium	mg/L	650	N/A
		Cobalt	µg/L	4.1	8.59
		Field pH	SU	7.10	N/A
		Field Oxidation Potential	µg/L	19.2	N/A
		Field Specific Conductance	µmhos/ cm	4006	N/A
		Field Temperature	deg C	13.1	N/A
		Dissolved Oxygen	µg/L	6.62	N/A
		Iron	µg/L	450	20900
		Lead	µg/L	0.25 J	26.2
		Lithium	µg/L	680	N/A
		Manganese	µg/L	1000	1370
		Molybdenum	µg/L	240	N/A
		Total Dissolved Solids	mg/L	3700	N/A
	Total Suspended Solids	mg/L	3.8	N/A	

**Table 6**  
**Summary of Well/Detected Constituent Pairs With No Immediately Preceding SSIs**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

	Well	Constituent	Units	Most Recent Result	UPL
Shallow Hydrogeologic Unit	MW-21	Calcium	mg/L	120	N/A
		Cobalt	µg/L	0.26 J	8.59
		Field pH	SU	7.15	N/A
		Field Oxidation Potential	µg/L	-50.9	N/A
		Field Specific Conductance	µmhos/ cm	786	N/A
		Field Temperature	deg C	15.2	N/A
		Dissolved Oxygen	µg/L	4.79	N/A
		Iron	µg/L	3100	20900
		Lead	µg/L	1.0	26.2
		Lithium	µg/L	2.9 J	N/A
		Magnesium	µg/L	28000	35000
		Manganese	µg/L	210	1370
		Molybdenum	µg/L	1.1 J	N/A
		Sulfate	mg/L	33	53.3
		Total Dissolved Solids	mg/L	440	N/A
		Total Suspended Solids	mg/L	46	N/A
		MW-25	Arsenic	µg/L	0.68 J
	Boron		µg/L	170	295
	Calcium		mg/L	110	N/A
	Chloride		mg/L	4.2 J	10.1
	Cobalt		µg/L	0.91	8.59
	Field pH		SU	7.05	N/A
	Field Oxidation Potential		µg/L	35.8	N/A
	Field Specific Conductance		µmhos/ cm	662	N/A
	Field Temperature		deg C	12.3	N/A
	Dissolved Oxygen		µg/L	7.13	N/A
	Iron		µg/L	580	20900
	Lead		µg/L	1.6	26.2
	Lithium		µg/L	2.8 J	N/A
	Magnesium		µg/L	22000	35000
	Manganese		µg/L	210	1370
	Sulfate		mg/L	27	53.3
	Total Dissolved Solids	mg/L	380	N/A	
Total Suspended Solids	mg/L	130	N/A		

**Table 6**  
**Summary of Well/Detected Constituent Pairs With No Immediately Preceding SSIs**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

	Well	Constituent	Units	Most Recent Result	UPL
Deep Hydrogeologic Unit	MW-8*	Barium	µg/L	94	98.50
		Boron	µg/L	830	1,880
		Calcium	mg/L	73	N/A
		Chloride	mg/L	3.7 J	13
		Cobalt	µg/L	0.32 J	0.76
		Field pH	SU	7.20	N/A
		Field Oxidation Potential	µg/L	36.5	N/A
		Field Temperature	deg C	15.5	N/A
		Field Specific Conductance	µmhos/ cm	498.3	N/A
		Dissolved Oxygen	µg/L	4.91	N/A
		Iron	µg/L	50 J	113
		Lead	µg/L	0.28 J	0.79
		Lithium	µg/L	7.2 J	N/A
		Magnesium	µg/L	19000	23,000
		Manganese	µg/L	64	139
		Molybdenum	µg/L	4.9	N/A
		Sulfate	mg/L	27	91.90
		Total Dissolved Solids	mg/L	52	N/A
	Total Suspended Solids	mg/L	7.2	N/A	
	MW-9	Calcium	mg/L	85	N/A
		Field pH	SU	7.47	N/A
		Field Oxidation Potential	µg/L	-27.8	N/A
		Field Specific Conductance	µmhos/ cm	780	N/A
		Field Temperature	deg C	13.3	N/A
		Dissolved Oxygen	µg/L	7.83	N/A
		Lithium	µg/L	17	N/A
		Magnesium	µg/L	21000	23,000
		Molybdenum	µg/L	28	N/A
		Sulfate	mg/L	68	91.90
		Total Dissolved Solids	mg/L	460	N/A
		Total Suspended Solids	mg/L	69	N/A
	MW-10	Calcium	mg/L	280	N/A
		Field pH	SU	6.80	N/A
		Field Oxidation Potential	µg/L	-111	N/A
		Field Specific Conductance	µmhos/ cm	2,418	N/A
		Field Temperature	deg C	18.2	N/A
Dissolved Oxygen		µg/L	0.37	N/A	
Lithium		µg/L	640	N/A	
Molybdenum		µg/L	36	N/A	
Total Dissolved Solids		mg/L	1800	N/A	
Total Suspended Solids	mg/L	59	N/A		



**Table 6**  
**Summary of Well/Detected Constituent Pairs With No Immediately Preceding SSIs**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

	Well	Constituent	Units	Most Recent Result	UPL
Deep Hydrogeologic Unit	MW-11	Arsenic	µg/L	0.93 J	0.88
		Barium	µg/L	45	98.50
		Calcium	mg/L	260	N/A
		Field pH	SU	7.17	N/A
		Field Oxidation Potential	µg/L	-65.7	N/A
		Field Specific Conductance	µmhos/ cm	1740.0	N/A
		Field Temperature	deg C	13.5	N/A
		Dissolved Oxygen	µg/L	1.65	N/A
		Lead	µg/L	0.47 J	0.79
		Lithium	µg/L	200	N/A
		Molybdenum	µg/L	44	N/A
		Total Dissolved Solids	mg/L	1400	N/A
		Total Suspended Solids	mg/L	17	N/A
		MW-13	Calcium	mg/L	280
	Field pH		SU	6.96	N/A
	Field Oxidation Potential		µg/L	-9.4	N/A
	Field Specific Conductance		µmhos/ cm	1987.0	N/A
	Field Temperature		deg C	15.5	N/A
	Dissolved Oxygen		µg/L	0.75	N/A
	Lithium		µg/L	460	N/A
	Molybdenum		µg/L	140	N/A
	Total Dissolved Solids		mg/L	1600	N/A
	Total Suspended Solids	mg/L	26	N/A	
	MW-17	Arsenic	µg/L	0.67 J	0.88
		Barium	µg/L	52	98.50
		Calcium	mg/L	260	N/A
		Cobalt	µg/L	0.66	0.76
		Field pH	SU	7.32	N/A
		Field Oxidation Potential	µg/L	-95.3	N/A
		Field Specific Conductance	µmhos/ cm	1622	N/A
		Field Temperature	deg C	12.1	N/A
		Dissolved Oxygen	µg/L	0.47	N/A
		Lithium	µg/L	55	N/A
		Molybdenum	µg/L	6.0	N/A
		Total Dissolved Solids	mg/L	1,200	N/A
		Total Suspended Solids	mg/L	110	N/A

**Table 6**  
**Summary of Well/Detected Constituent Pairs With No Immediately Preceding SSIs**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

	Well	Constituent	Units	Most Recent Result	UPL
Deep Hydrogeologic Unit	MW-18	Calcium	mg/L	250	N/A
		Field pH	SU	7.16	N/A
		Field Oxidation Potential	µg/L	-92.3	N/A
		Field Specific Conductance	µmhos/ cm	1,717.0	N/A
		Field Temperature	deg C	20.4	N/A
		Dissolved Oxygen	µg/L	3.05	N/A
		Lithium	µg/L	140	N/A
		Molybdenum	µg/L	13	N/A
		Total Dissolved Solids	mg/L	1,300	N/A
		Total Suspended Solids	mg/L	14	N/A
	MW-22	Boron	µg/L	130	1,880
		Calcium	mg/L	160	N/A
		Field pH	SU	7.05	N/A
		Field Oxidation Potential	µg/L	-162.9	N/A
		Field Specific Conductance	µmhos/ cm	1,094	N/A
		Field Temperature	deg C	18.7	N/A
		Dissolved Oxygen	µg/L	0.75	N/A
		Lead	µg/L	0.31 J	0.79
		Lithium	µg/L	7.7 J	N/A
		Molybdenum	µg/L	1.0 J	N/A
		Total Dissolved Solids	mg/L	660	N/A
		Total Suspended Solids	mg/L	54	N/A
	MW-23	Arsenic	µg/L	0.63 J	0.88
		Boron	µg/L	150	1,880
		Calcium	mg/L	100	N/A
		Chloride	mg/L	7.7	13
		Cobalt	µg/L	0.17 J	0.76
		Field pH	SU	7.18	N/A
		Field Oxidation Potential	µg/L	-30.2	N/A
		Field Specific Conductance	µmhos/ cm	670.0	N/A
		Field Temperature	deg C	16.9	N/A
		Dissolved Oxygen	µg/L	3.65	N/A
		Lead	µg/L	0.66	0.79
		Lithium	µg/L	9.9 J	N/A
		Manganese	µg/L	30	139
		Sulfate	mg/L	50	91.90
Total Dissolved Solids	mg/L	380	N/A		
Total Suspended Solids	mg/L	31	N/A		

**Table 6**  
**Summary of Well/Detected Constituent Pairs With No Immediately Preceding SSIs**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

	Well	Constituent	Units	Most Recent Result	UPL
Deep Hydrogeologic Unit	MW-24	Arsenic	µg/L	1.7 J	0.88
		Boron	µg/L	130	1,880
		Calcium	mg/L	77	N/A
		Field pH	SU	7.38	N/A
		Field Oxidation Potential	µg/L	-104.6	N/A
		Field Specific Conductance	µmhos/ cm	572.6	N/A
		Field Temperature	deg C	15.8	N/A
		Dissolved Oxygen	µg/L	0.70	N/A
		Sulfate	mg/L	16	91.90
		Total Dissolved Solids	mg/L	320	N/A
		Total Suspended Solids	mg/L	6.0	N/A
	MW-26	Calcium	mg/L	180	N/A
		Field pH	SU	6.65	N/A
		Field Oxidation Potential	µg/L	108.7	N/A
		Field Specific Conductance	µmhos/ cm	1501	N/A
		Field Temperature	deg C	14.7	N/A
		Dissolved Oxygen	µg/L	3.81	N/A
		Iron	µg/L	76 J	113
		Lead	µg/L	0.30 J	0.79
		Lithium	µg/L	9.1 J	N/A
		Magnesium	µg/L	12000	23,000
		Manganese	µg/L	4.7 J	139
		Sulfate	mg/L	49	91.90
		Total Dissolved Solids	mg/L	770	N/A
		Total Suspended Solids	mg/L	3.1	N/A

**Table 6**  
**Summary of Well/Detected Constituent Pairs With No Immediately Preceding SSIs**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

	Well	Constituent	Units	Most Recent Result	UPL
Deep Hydrogeologic Unit	MW-27	Arsenic	µg/L	0.85 J	0.88
		Barium	µg/L	80	98.50
		Boron	µg/L	160	1,880
		Calcium	mg/L	100	N/A
		Chloride	mg/L	7.7	13
		Field pH	SU	6.45	N/A
		Field Oxidation Potential	µg/L	-279.1	N/A
		Field Specific Conductance	µmhos/ cm	794	N/A
		Field Temperature	deg C	11.7	N/A
		Dissolved Oxygen	µg/L	0.64	N/A
		Lead	µg/L	0.30 J	0.79
		Lithium	µg/L	12	N/A
		Manganese	µg/L	49	139
		Sulfate	mg/L	25	91.90
		Total Dissolved Solids	mg/L	430	N/A
		Total Suspended Solids	mg/L	7.2	N/A

µg/L = micrograms per liter  
mg/L = milligrams per liter

Comments:

1. This table includes results for wells/constituents that did not exceed a UPL in 2023.
  2. Results below the limit of quantitation (J flags) are estimated values and are not compared to the UPL or GWPS. They are included in this table regardless of whether the estimated value is higher or lower than the UPL.
  3. Field parameters, except pH, do not have UPLs.
  4. Calcium, fluoride, lithium, molybdenum, TDS, and TSS were added in 2023, so UPLs have not been calculated.
- \*: MW-2A and MW-8 are the background wells, so UPLs do not apply

Updated by: RM  
Checked by: NLB

Date: 10/16/2023  
Date: 10/23/2023

I:\25223065.00\Deliverables\2023 AWQR\Tables\[2023\_awqreport\_Stoney Point.xlsx]6- Detection Summary - No SSIs

**Table 7**  
**Summary of Ongoing and Newly Identified SSIs**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

	Well	Constituent	Units	Most Recent Result	UPL	GWPS
Shallow Hydrogeologic Unit	MW-3	Chloride	mg/L	13	10.1	none
		Sulfate	mg/L	200	53.3	none
	MW-12	Arsenic	µg/L	5.1	1.2	10
		Boron	µg/L	1100	295	6000
		Manganese	µg/L	2800	1370	1370
		Sulfate	mg/L	54	53.3	none
	MW-15	Boron	µg/L	15000	295	6000
		Chloride	mg/L	27	10.1	none
		Lithium	µg/L	50	N/A	14
		Magnesium	µg/L	61,000	35000	none
		Sulfate	mg/L	1,400	53.3	none
	MW-16	Arsenic	µg/L	2.2	1.2	10
		Boron	µg/L	81,000	295	6000
		Chloride	mg/L	13.0	10.1	none
		Lithium	µg/L	680	N/A	14
		Magnesium	µg/L	90,000	35000	none
		Molybdenum	µg/L	240	N/A	40
		Sulfate	mg/L	2,500	53.3	none
	MW-21	Arsenic	µg/L	16	1.2	10
		Barium	µg/L	380	281	2000
Boron		µg/L	300	295	6,000	
Chloride		mg/L	13	10.1	none	
MW-25	Barium	µg/L	360	281	2,000	
Deep Hydrogeologic Unit	MW-9	Boron	µg/L	4300	1880	6000
		Chloride	mg/L	41	13	none
		Lithium	µg/L	17	N/A	14
	MW-10	Boron	µg/L	8,900	1880	6000
		Chloride	mg/L	26	13	none
		Lithium	µg/L	640	N/A	14
		Magnesium	µg/L	67,000	23000	none
		Sulfate	mg/L	1,200	91.9	none
	MW-11	Boron	µg/L	4,100	1880	6000
		Chloride	mg/L	23	13	none
		Iron	µg/L	3,700	113	none
		Lithium	µg/L	200	N/A	14
		Magnesium	µg/L	60,000	23000	none
		Manganese	µg/L	200	139	300
		Molybdenum	µg/L	44	N/A	40
Sulfate		mg/L	700	91.9	none	

**Table 7**  
**Summary of Ongoing and Newly Identified SSIs**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

	Well	Constituent	Units	Most Recent Result	UPL	GWPS
Deep Hydrogeologic Unit	MW-13	Boron	µg/L	7600	1880	6000
		Chloride	mg/L	28	13	none
		Lithium	µg/L	460	N/A	14
		Magnesium	µg/L	68,000	23000	none
		Molybdenum	µg/L	140	N/A	40
		Sulfate	mg/L	860	91.9	none
	MW-17	Boron	µg/L	2600	1880	6000
		Chloride	mg/L	26	13	none
		Iron	µg/L	3,900	113	none
		Lead	µg/L	1.4	0.794	15
		Lithium	µg/L	55	N/A	14
		Magnesium	µg/L	60,000	23000	none
		Manganese	µg/L	320	139	300
		Sulfate	mg/L	600	91.9	none
	MW-18	Boron	µg/L	2,900	1880	6000
		Chloride	mg/L	26	13	none
		Lithium	µg/L	140	N/A	14
		Magnesium	µg/L	57,000	23000	none
		Sulfate	mg/L	660	91.9	none
	MW-22	Barium	µg/L	160	98.5	2000
		Chloride	mg/L	31	13	none
		Iron	µg/L	1,500	113	none
		Magnesium	µg/L	33,000	23000	none
		Manganese	µg/L	150	139	300
		Sulfate	mg/L	210	91.9	none
	MW-23	Barium	µg/L	170	98.5	2,000
		Iron	µg/L	260	113	none
		Magnesium	µg/L	28,000	23000	none
	MW-24	Barium	µg/L	290	98.5	2000
		Chloride	mg/L	28	13	none
Iron		µg/L	1900	113	none	
Magnesium		µg/L	25000	23000	none	
Manganese		µg/L	360	139	300	
MW-26	Barium	µg/L	160	98.5	2000	
	Chloride	mg/L	240	13	none	
MW-27	Iron	µg/L	660	113	none	
	Magnesium	µg/L	25,000	23000	none	

µg/L - micrograms per liter  
UPL - Upper Prediction Limit

mg/L - milligrams per liter  
GWPS - Groundwater Protection Standard

Updated by: MDB  
Checked by: RM

Date: 11/1/2023  
Date: 11/2/2023

**Table 8**  
**Historic UPL & Action Level Exceedances**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

Key: gray =UPL; black =action level (GWPS)		2016	2017	2018	2019 <sup>(1)</sup>	2020	2021	2022	2023	
Well	Constituent									
Shallow Hydrogeologic Unit	MW-3	Chloride								
		Sulfate								
	MW-12	Arsenic								
		Boron								
		Cobalt								
		Iron								
		Manganese								
		Sulfate								
	MW-15	Arsenic								
		Boron								
		Chloride								
		Cobalt								
		Iron								
		Lithium <sup>(4)</sup>								
		Magnesium								
		Sulfate								
	MW-16	Arsenic								
		Boron								
		Chloride								
		Cobalt								
		Lithium <sup>(4)</sup>								
		Magnesium								
		Manganese								
		Molybdenum <sup>(4)</sup>								
	MW-21	Sulfate								
		Arsenic								
		Barium								
		Boron								
		Chloride								
		Iron								
MW-25	Sulfate									
	Arsenic						Sampled			
	Barium						April			
	Manganese						2022* <sup>^</sup>			

**Table 8**  
**Historic UPL & Action Level Exceedances**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

Key: gray =UPL; black =action level (GWPS)		2016	2017	2018	2019 <sup>(1)</sup>	2020	2021	2022	2023	
Well	Constituent									
Deep Hydrogeologic Unit	MW-9	Boron								
		Chloride								
		Lithium <sup>(4)</sup>								
		Magnesium								
	MW-10	Boron								
		Chloride								
		Lithium <sup>(4)</sup>								
		Magnesium								
		Sulfate								
	MW-11	Arsenic								
		Boron								
		Chloride								
		Iron								
		Lithium <sup>(4)</sup>								
		Magnesium								
		Manganese								
		Molybdenum <sup>(4)</sup>								
	Sulfate									
	MW-13	Boron					(2)			
		Chloride					(2)			
		Lithium <sup>(4)</sup>								
		Magnesium					(2)			
		Molybdenum <sup>(4)</sup>								
		Sulfate					(2)			
	MW-14*	Boron								
		Chloride								
		Iron								
		Magnesium								
Manganese										
Sulfate										
								No Sample ***	Abandoned ***	



**Table 8**  
**Historic UPL & Action Level Exceedances**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

Key: gray =UPL; black =action level (GWPS)		2016	2017	2018	2019 <sup>(1)</sup>	2020	2021	2022	2023	
Well	Constituent									
Deep Hydrogeologic Unit (continued)	MW-17	Boron								
		Chloride								
		Cobalt								
		Iron								
		Lead								
		Lithium <sup>(4)</sup>								
		Magnesium								
		Manganese								
		Sulfate								
	MW-18	Boron								
		Chloride								
		Lithium <sup>(4)</sup>								
		Magnesium								
		Sulfate								
	MW-20	Arsenic								
		Barium								
		Boron								
		Chloride								
		Cobalt								
		Copper								
		Iron								
		Lead								
		Magnesium								
		Manganese								
		Sulfate								
		Zinc								
									No Sample *	No Sample **

**Table 8**  
**Historic UPL & Action Level Exceedances**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

Key: gray =UPL; black =action level (GWPS)		2016	2017	2018	2019 <sup>(1)</sup>	2020	2021	2022	2023
Well	Constituent								
MW-22	Arsenic								
	Barium								
	Beryllium								
	Chloride								
	Cobalt								
	Copper								(3)
	Iron								
	Lead								
	Magnesium								
	Manganese								
	Sulfate								
	Zinc								
	MW-23	Barium							
Chloride									
Iron									
Lead									
Magnesium									
Sulfate									
MW-24	Barium								
	Chloride								
	Cobalt								
	Iron								
	Lead								
	Magnesium								
	Manganese								
MW-26	Barium								
	Iron								
	Chloride								
MW-27	Arsenic								
	Barium								
	Cobalt								
	Iron								
	Lead								
	Magnesium								
	Manganese								

Deep Hydrogeologic Unit

**Table 9**  
**Historic Prediction Limits and Groundwater Protection Standards**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

	Constituent	Units	UPL					GWPS				
			2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
Shallow Hydrogeologic Unit	Arsenic	µg/L	3.56	2.52	1.2	1.2	1.2	10	10	10	10	10
	Barium	µg/L	556	432	340	311	281	2,000	2,000	2,000	2,000	2,000
	Beryllium	µg/L	DQ	DQ	DQ	DQ	0.43	4	4	4	4	4
	Boron	µg/L	421	390	322	316	295	6,000	6,000	6,000	6,000	6,000
	Chloride	mg/L	10.4	10.2	10.2	10.1	10.1	none	none	none	none	none
	Cobalt	µg/L	3.7	3.7	53.5	23.5	8.59	3.7	3.7	53.5	8.59	8.6
	Copper*	µg/L	23.1	17.5	13.3	11.6	N/A	1,300	1,300	1,300	1,300	1,300
	Iron	µg/L	5,330	5,330	5,330	5,330	20,900	none	none	none	none	none
	Lead	µg/L	8.5	8.5	8.50	8.50	26.20	15	15	15	15	15
	Magnesium	µg/L	64,800	52,100	41,600	38,200	35,000	none	none	none	none	none
	Manganese	µg/L	464	464	6,580	2,720	1,370	464	464	6,580	1,370	1,370
	Selenium	µg/L	DQ	3.02	2.72	2.97	3.64	50	50	50	50	50
	Sulfate	mg/L	55	53.8	53.3	53.5	53.3	none	none	none	none	none
Zinc*	µg/L	50.3	37.3	29.3	26.2	N/A	2,000	2,000	2,000	2,000	2,000	
Deep Hydrogeologic Unit	Arsenic	µg/L	0.75	2.17	0.88	0.88	0.880	10	10	10	10	10
	Barium	µg/L	99.5	97.0	92.7	91.3	98.5	2,000	2,000	2,000	2,000	2,000
	Beryllium	µg/L	DQ	DQ	DQ	DQ	DQ	4	4	4	4	4
	Boron	µg/L	4,010	2,960	2,350	2,050	1,880	6,000	6,000	6,000	6,000	6,000
	Chloride	µg/L	13	13.0	13.0	13.0	13.0	none	none	none	none	none
	Cobalt	mg/L	1.38	1.03	0.991	0.897	0.756	2.1	2.1	2.1	2.1	2.1
	Copper*	µg/L	12.6	10.0	7.46	6.51	N/A	1,300	1,300	1,300	1,300	1,300
	Iron	µg/L	208	172	138	124	113	none	none	none	none	none
	Lead	µg/L	1.62	1.35	1.02	0.894	0.794	15	15	15	15	15
	Magnesium	µg/L	27,300	26,600	24,600	23,700	23,000	none	none	none	none	none
	Manganese	µg/L	77.4	182	166	152	139	300	300	300	300	300
	Selenium	µg/L	DQ	DQ	DQ	DQ	DQ	50	50	50	50	50
	Sulfate	µg/L	96.3	94.2	94.1	93.3	91.9	none	none	none	none	none
Zinc*	mg/L	99.3	76.8	57.9	50.6	N/A	2,000	2,000	2,000	2,000	2,000	

DQ = Double Quantification

UPL = Upper Prediction Limit

GWPS = Groundwater Protection Standard

\* = Copper and zinc were removed from the sampling program in 2023.

Updated by: RM, 10/26/2023

Checked by: NLB, 10/23/2023

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**Table 10**  
**Groundwater Quality Trend Summary**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

Well	Current GWPS Exceedances	Trend
MW-10	Boron	No Significant Trend
MW-12	Manganese	No Significant Trend
MW-13	Boron	No Significant Trend
MW-15	Boron	No Significant Trend
MW-16	Boron	Increasing
MW-17	Manganese	No Significant Trend
MW-21	Arsenic	No Significant Trend
MW-24	Manganese	Decreasing

Comments:

Only well/constituent pairs with GWPS exceedances and sufficient historical data for trend analysis (8 rounds) are included in this summary.

GWPS = Groundwater Protection Standard

Updated by: MDB, 11/2/2023

Checked by: RM, 11/2/2023

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**Table 11**  
**Surface Water and Leachate Well/Detected Constituent Pairs**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

Monitoring Point	Constituent	Units	Most recent result
<b>Leachate Well Samples</b>			
LW-02	Arsenic	µg/l	180
	Boron	µg/l	17000
	Sulfate	mg/l	880
	Lithium	µg/l	600
	Manganese	µg/l	290
	Molybdenum	µg/l	120
	Field pH	SU	7.71
	Field Specific Conductance	µmhos/cm	2,286
	Field Dissolved Oxygen	mg/l	5.18
	Field Temperature	deg C	15.3
	Total Dissolved Solids	mg/l	1,700
	Total Suspended Solids	mg/l	4,500
LW-03	Arsenic	µg/l	59
	Boron	µg/l	2,600
	Lithium	µg/l	79
	Manganese	µg/l	160
	Molybdenum	µg/l	24

Notes:

In 2023 SW-1, SW-2, and LW-01 had insufficient amount of liquid for all parameters. LW-03 only had enough liquid to sample for metals constituents.

µg/l = micrograms per liter  
mg/l = milligrams per liter

SU = standard units  
µmhos/cm = micromhos per centimeter

Updated by: RM, 10/16/2023  
Checked by: NLB, 10/23/2023

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**Table 12**  
**Leachate Management Summary**  
**2023 Annual Water Quality Report**  
**Stoney Point Landfill**  
**Permit No. 57-SDP-11-90C**

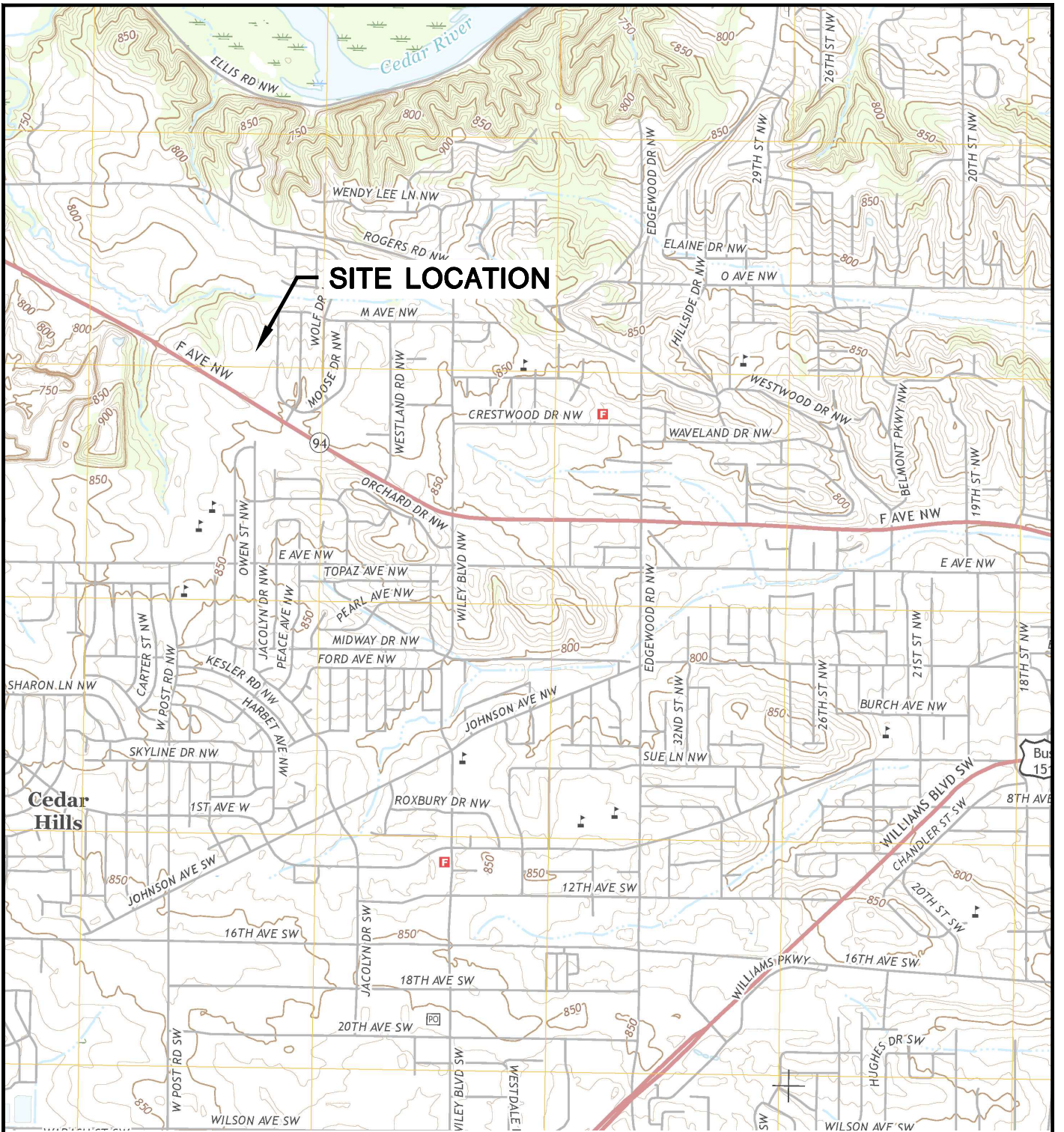
Month	Measured Leachate Depth (ft)			Leachate Elevation (ft amsl)		
	LW-1	LW-2	LW-3	LW-1	LW-2	LW-3
Apr-23	1.00	6.10	1.55	816.88	802.84	820.21
Sep-23	DRY	3.00	0.90	DRY	799.74	819.56

Updated by: RM, 10/16/2023  
Checked by: NLB, 10/23/2023

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## Figures

- 1 Site Location Map
- 2 Monitoring Well Locations
- 3 Shallow Groundwater Conditions Map (April 17, 2023)
- 4 Shallow Groundwater Conditions Map (September 5-7, 2023)
- 5 Intermediate Groundwater Conditions Map (April 17, 2023)
- 6 Intermediate Groundwater Conditions Map (September 5-7, 2023)
- 7 Deep Groundwater Conditions Map (April 17, 2023)
- 8 Deep Groundwater Conditions Map (September 5-7, 2023)

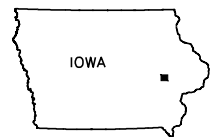


**SITE LOCATION**

**Cedar Hills**



CEDAR RAPIDS SOUTH QUADRANGLE  
 IOWA-LINN CO.  
 7.5 MINUTE SERIES (TOPOGRAPHIC)  
 2015  
 SCALE: 1" = 2,000'



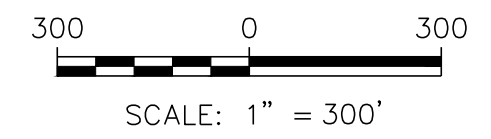
CLIENT	ALLIANT ENERGY	INTERSTATE POWER AND LIGHT	SITE	STONEY POINT LANDFILL CEDAR RAPIDS, IOWA	ENGINEER	<b>SCS ENGINEERS</b> 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830	SITE LOCATION MAP	FIGURE	1
	PROJECT NO.	25216065.00		DRAWN BY:					
	DRAWN:	10/28/16	CHECKED BY:	MDB					
	REVISED:	10/28/16	APPROVED BY:	TK 11/20/2017					





LEGEND

---	APPROXIMATE LIMITS OF ASH DISPOSAL
⊕	MONITORING WELL
⊕	DEEP MONITORING WELL
×	LEACHATE HEAD WELL
⓪	SURFACE WATER MONITORING STAFF GAUGE
■	DRIVE POINT WELL (ABANDONED)
⊕	DEEP MONITORING WELL (ABANDONED)



PROJECT NO.	25222065.00	DRAWN BY:	AHB
DRAWN:	09/23/2022	CHECKED BY:	MDB
REVISED:	10/24/2023	APPROVED BY:	MDB 11/30/2023

**ENGINEER**

**SCS ENGINEERS**  
 2830 DAIRY DRIVE MADISON, WI 53718-6751  
 PHONE: (608) 224-2830

**CLIENT**

**ALLIANT ENERGY** INTERSTATE POWER AND LIGHT

**SITE**

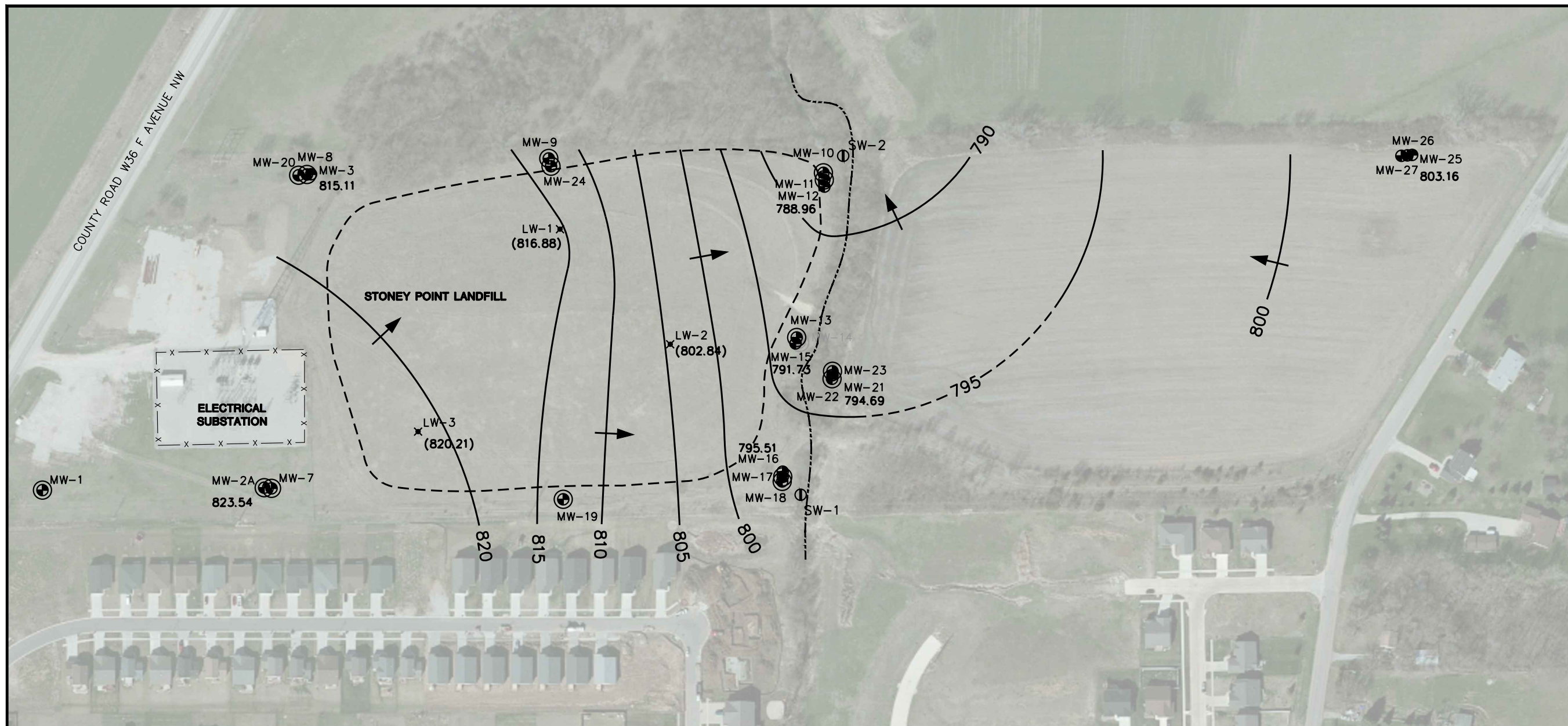
STONEY POINT LANDFILL  
 CEDAR RAPIDS, IOWA

MONITORING WELL LOCATIONS

FIGURE  
 2

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LEGEND

- APPROXIMATE LIMITS OF ASH DISPOSAL
- ⊕ MONITORING WELL
- ⊕ (with dot) PIEZOMETER
- ✕ LEACHATE HEAD WELL
- ⓪ SURFACE WATER MONITORING STAFF GAUGE
- 827.29** WATER TABLE ELEVATION
- NM** NOT MEASURED
- WATER TABLE CONTOUR (DASHED WHERE INFERRED)
- ➔ APPROXIMATE GROUNDWATER FLOW DIRECTION
- - - - UNNAMED INTERMITTENT STREAM

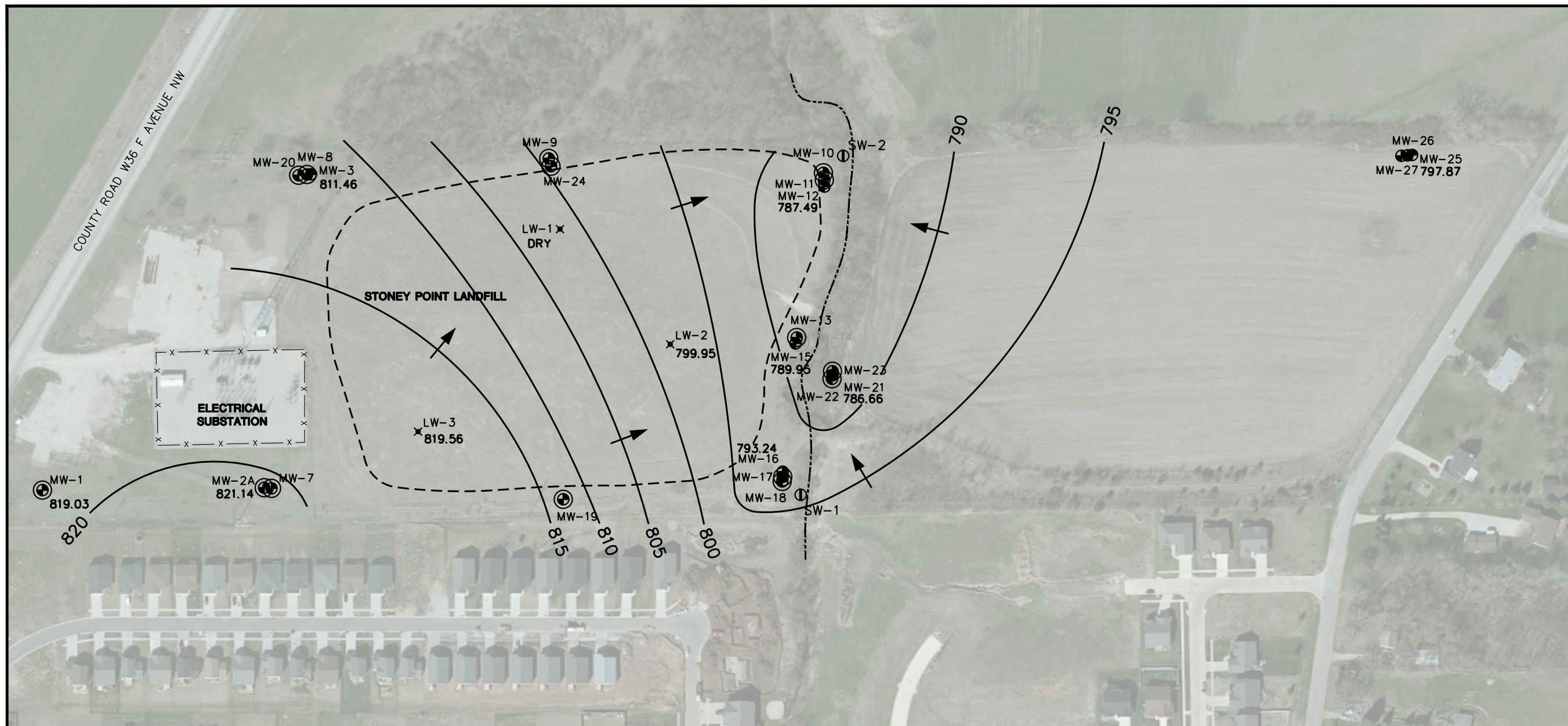
NOTES:

1. MONITORING WELL LOCATIONS ARE APPROXIMATE.
2. WATER LEVELS MEASURED ON APRIL 17, 2023.



SCALE: 1" = 200'

PROJECT NO.	25223065.00	DRAWN BY:	KP	<b>ENGINEER</b>	<b>SCS ENGINEERS</b> 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830	<b>CLIENT</b>	<b>ALLIANT ENERGY</b> INTERSTATE POWER AND LIGHT	<b>SITE</b>	STONEY POINT LANDFILL CEDAR RAPIDS, IOWA	SHALLOW GROUNDWATER CONDITIONS MAP APRIL 2023	FIGURE 3
DRAWN:	10/17/2023	CHECKED BY:	NLB								
REVISED:	11/02/2023	APPROVED BY:	MLB 11/28/2023								

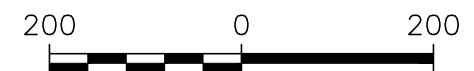


LEGEND

- APPROXIMATE LIMITS OF ASH DISPOSAL
- ⊕ MONITORING WELL
- ⊕ PIEZOMETER
- × LEACHATE HEAD WELL
- ⓪ SURFACE WATER MONITORING STAFF GAUGE
- 827.29 WATER TABLE ELEVATION (DASHED WHERE INFERRED)
- WATER TABLE CONTOUR
- ➔ APPROXIMATE GROUNDWATER FLOW DIRECTION
- UNNAMED INTERMITTENT STREAM

NOTES:

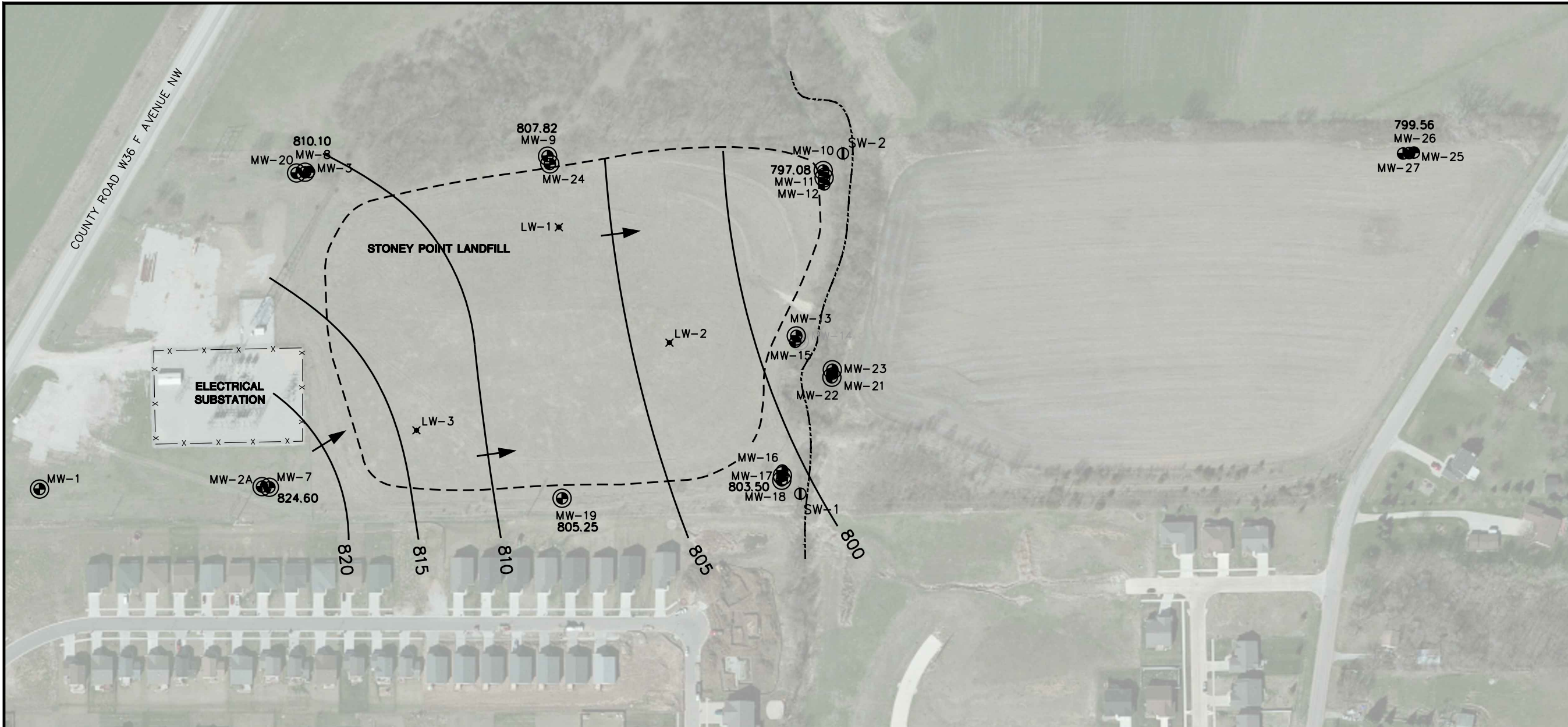
1. MONITORING WELL LOCATIONS ARE APPROXIMATE.
2. WATER LEVELS MEASURED BETWEEN SEPTEMBER 5-7, 2023.



SCALE: 1" = 200'

PROJECT NO.	25223065.00	DRAWN BY:	KP	<b>ENGINEER</b>	<b>SCS ENGINEERS</b> 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830	<b>CLIENT</b>	<b>ALLIANT ENERGY</b> INTERSTATE POWER AND LIGHT	<b>SITE</b>	STONEY POINT LANDFILL CEDAR RAPIDS, IOWA	SHALLOW GROUNDWATER CONDITIONS MAP SEPTEMBER 2023	FIGURE 4
DRAWN:	10/17/2023	CHECKED BY:	NLB								
REVISED:	11/02/2023	APPROVED BY:	MLB 11/28/2023								



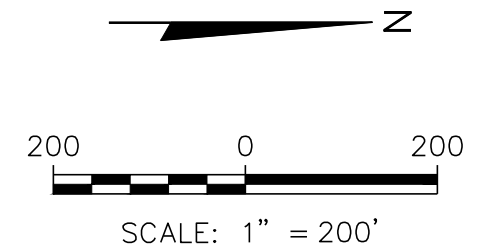


LEGEND

- APPROXIMATE LIMITS OF ASH DISPOSAL
- MONITORING WELL
- ⊕ PIEZOMETER
- ✕ LEACHATE HEAD WELL
- Ⓢ SURFACE WATER MONITORING STAFF GAUGE
- 823.94** POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR (DASHED WHERE INFERRED)
- ➔ APPROXIMATE GROUNDWATER FLOW DIRECTION
- - - - UNNAMED INTERMITTENT STREAM

NOTES:

1. MONITORING WELL LOCATIONS ARE APPROXIMATE.
2. WATER LEVELS MEASURED ON APRIL 17, 2023.



PROJECT NO.	25223065.00	DRAWN BY:	KP
DRAWN:	10/17/2023	CHECKED BY:	NLB
REVISED:	11/02/2023	APPROVED BY:	MLB 11/28/2023

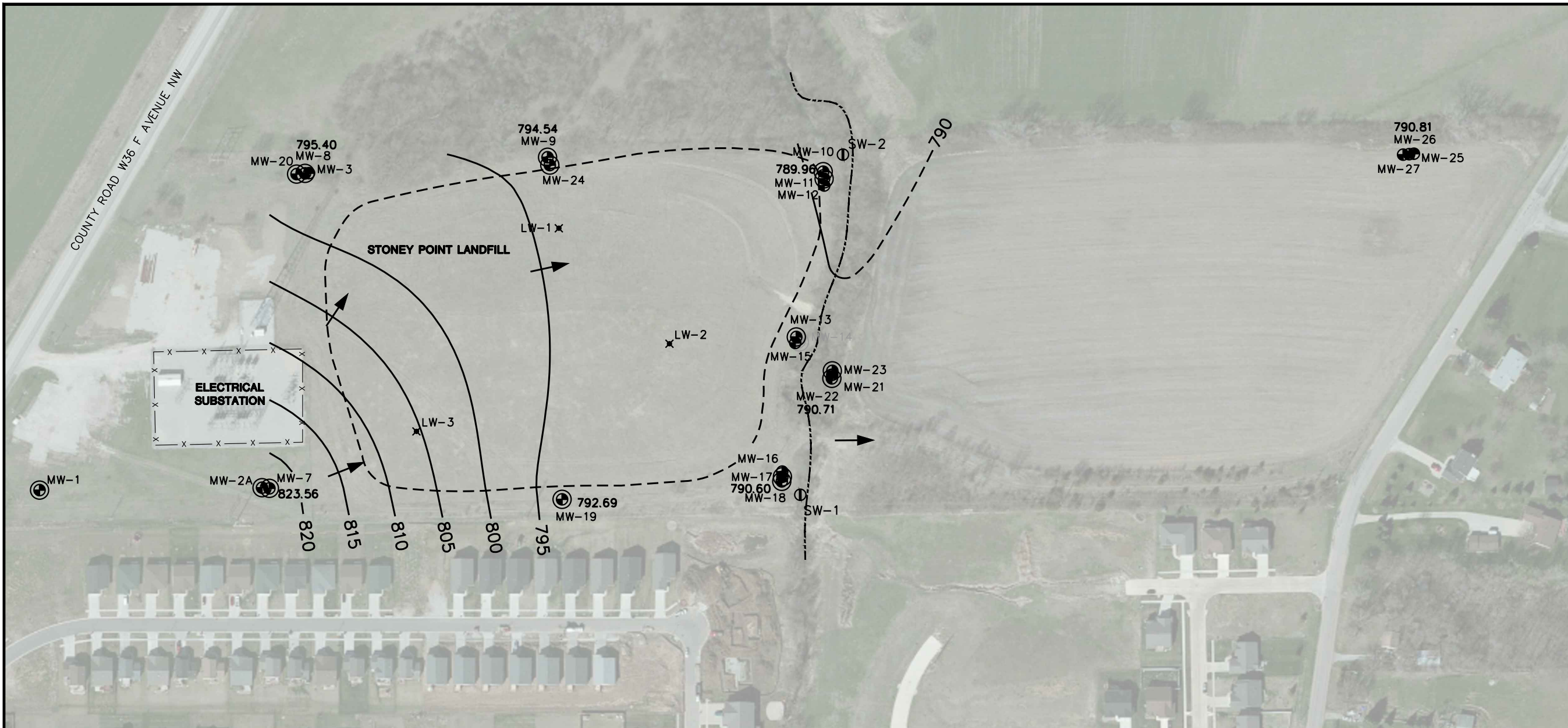
**SCS ENGINEERS**  
 2830 DAIRY DRIVE MADISON, WI 53718-6751  
 PHONE: (608) 224-2830

CLIENT **ALLIANT ENERGY** INTERSTATE POWER AND LIGHT

SITE **STONEY POINT LANDFILL**  
 CEDAR RAPIDS, IOWA

INTERMEDIATE GROUNDWATER  
 CONDITIONS MAP  
 APRIL 2023

FIGURE  
 5

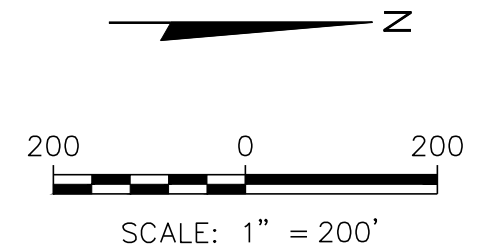


LEGEND

- APPROXIMATE LIMITS OF ASH DISPOSAL
- MONITORING WELL
- ⊕ PIEZOMETER
- ✕ LEACHATE HEAD WELL
- ⓪ SURFACE WATER MONITORING STAFF GAUGE
- 823.94** POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR (DASHED WHERE INFERRED)
- ➔ APPROXIMATE GROUNDWATER FLOW DIRECTION
- - - - UNNAMED INTERMITTENT STREAM

NOTES:

1. MONITORING WELL LOCATIONS ARE APPROXIMATE.
2. WATER LEVELS MEASURED BETWEEN SEPTEMBER 5-7, 2023.



PROJECT NO.	25223065.00	DRAWN BY:	KP
DRAWN:	10/17/2023	CHECKED BY:	NLB
REVISED:	11/02/2023	APPROVED BY:	MLB 11/28/2023

**SCS ENGINEERS**  
 2830 DAIRY DRIVE MADISON, WI 53718-6751  
 PHONE: (608) 224-2830

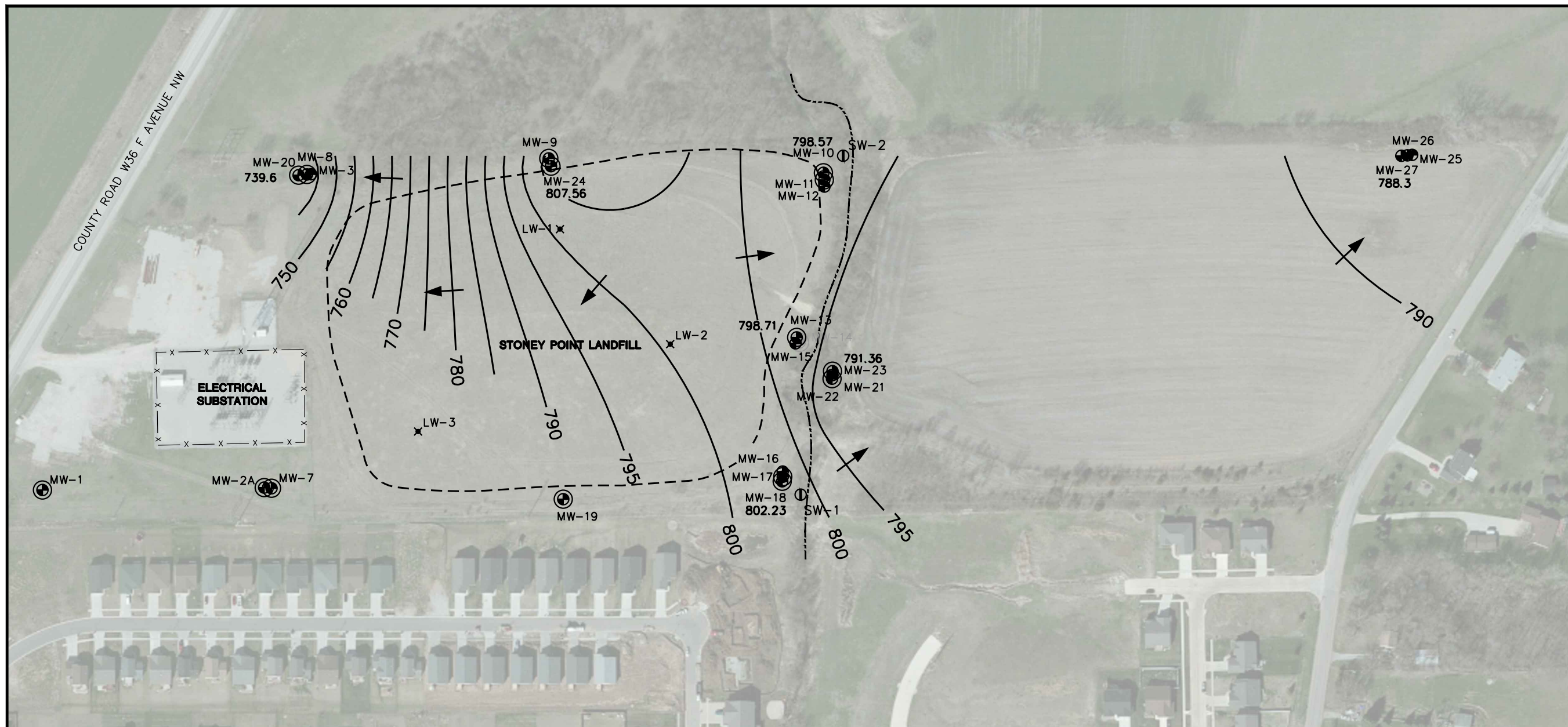
CLIENT **ALLIANT ENERGY** INTERSTATE POWER AND LIGHT

SITE STONEY POINT LANDFILL  
 CEDAR RAPIDS, IOWA

INTERMEDIATE GROUNDWATER  
 CONDITIONS MAP  
 SEPTEMBER 2023

FIGURE  
 6





LEGEND

- APPROXIMATE LIMITS OF ASH DISPOSAL
- ⊕ MONITORING WELL
- ⊕ PIEZOMETER
- × LEACHATE HEAD WELL
- ⓪ SURFACE WATER MONITORING STAFF GAUGE
- 739.83** POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR (DASHED WHERE INFERRED)
- ➔ APPROXIMATE GROUNDWATER FLOW DIRECTION
- UNNAMED INTERMITTENT STREAM

NOTES:

1. MONITORING WELL LOCATIONS ARE APPROXIMATE.
2. WATER LEVELS MEASURED ON APRIL 17, 2023.
3. NM INDICATES NO MEASUREMENT WAS TAKEN.



SCALE: 1" = 200'

PROJECT NO.	25223065.00	DRAWN BY:	KP
DRAWN:	10/17/2023	CHECKED BY:	NLB
REVISED:	10/30/2023	APPROVED BY:	MLB 11/28/2023

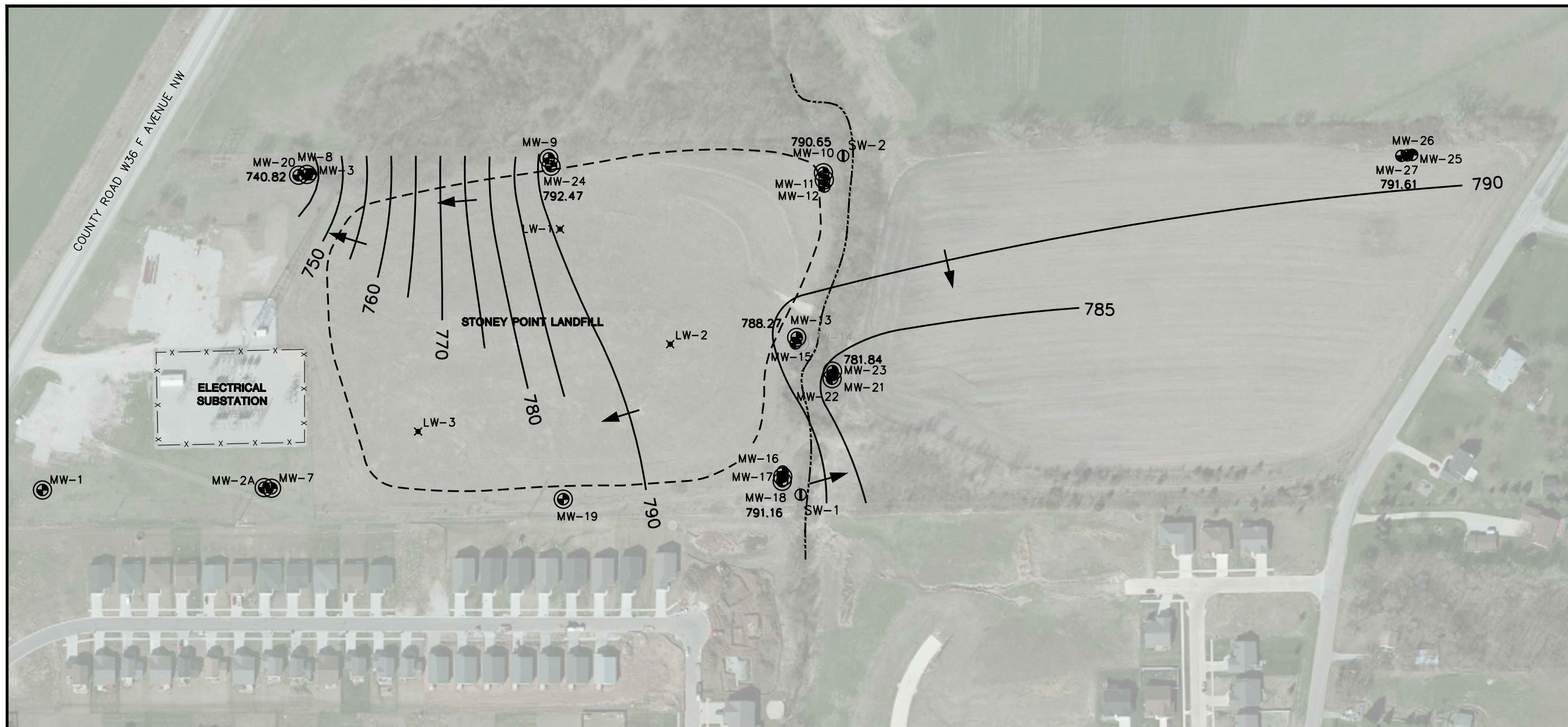
**SCS ENGINEERS**  
 2830 DAIRY DRIVE MADISON, WI 53718-6751  
 PHONE: (608) 224-2830

CLIENT **ALLIANT ENERGY** INTERSTATE POWER AND LIGHT

SITE STONEY POINT LANDFILL  
 CEDAR RAPIDS, IOWA

DEEP GROUNDWATER CONDITIONS MAP  
 APRIL 2023

FIGURE  
 7

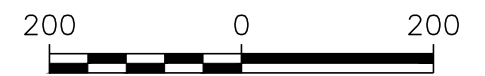


LEGEND

- APPROXIMATE LIMITS OF ASH DISPOSAL
- ⊕ MONITORING WELL
- ⊙ PIEZOMETER
- ✕ LEACHATE HEAD WELL
- ⓪ SURFACE WATER MONITORING STAFF GAUGE
- 739.83** POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR (DASHED WHERE INFERRED)
- ➔ APPROXIMATE GROUNDWATER FLOW DIRECTION
- UNNAMED INTERMITTENT STREAM

NOTES:

1. MONITORING WELL LOCATIONS ARE APPROXIMATE.
2. WATER LEVELS MEASURED BETWEEN SEPTEMBER 5-7, 2023.
3. NM INDICATES NO MEASUREMENT WAS TAKEN.



SCALE: 1" = 200'

PROJECT NO.	25223065.00	DRAWN BY:	KP
DRAWN:	10/17/2023	CHECKED BY:	NLB
REVISED:	11/02/2023	APPROVED BY:	MLB 11/28/2023

**SCS ENGINEERS**  
 2830 DAIRY DRIVE MADISON, WI 53718-6751  
 PHONE: (608) 224-2830


CLIENT **ALLIANT ENERGY** INTERSTATE POWER AND LIGHT

SITE STONEY POINT LANDFILL CEDAR RAPIDS, IOWA

DEEP GROUNDWATER CONDITIONS MAP SEPTEMBER 2023

FIGURE 8

I:\25223065.00\Drawings\WTBL-2023.dwg, 11/2/2023 3:42:06 PM



Appendix A  
Annual Inspection



# **SEMIANNUAL ANNUAL FACILITY INSPECTION REPORT 2023 INTERSTATE POWER AND LIGHT COMPANY STONEY POINT CLOSED LANDFILL PERMIT NO. 57-SDP-11-90C**

The semiannual inspections of the Interstate Power and Light Company (IPL) Stoney Point Closed Landfill were conducted on April 14 and September 7, 2023. As required in the general provisions of the permit (Sanitary Disposal Permit No. 57-SDP-11-90C), inspections must be performed by, or under the direct supervision of, an Iowa registered engineer, and a brief report must be submitted to the Iowa Department of Natural Resources (IDNR).

## **SITE CONDITIONS**

The Stoney Point Landfill stopped accepting coal combustion residuals (CCR) in 1986, and placement of the final cover occurred in 1992. The site is in generally good condition, and Facility Inspection Reports for 2023 are included in **Attachment A**.

## **SITE INSPECTION**

Staff from SCS Engineers (SCS) conducted the site inspections under the supervision of Licensed Professional Engineer Eric Nelson, PE, of SCS Engineers. This inspection report discusses the items observed during the inspections.

### Access Road and Perimeter Fencing

The access road at the entrance of the property and perimeter fencing were inspected. The access road and perimeter fencing were observed to be in good condition.

### Erosion Control


The property was well vegetated, and the grass appeared to have been recently mowed during the September 2023 inspection.

### Groundwater Wells

Groundwater well conditions were observed to be in good condition during the 2023 sampling events, with the exception that MW-1 could not be opened during the April monitoring event. This was resolved prior to the September 2023 monitoring event.

### IDNR Inspections

The most recent IDNR inspection of the facility was performed on April 7, 1998. In addition, IDNR visited the site in October 1998.



Attachment A  
Site Inspection Report Forms

**SITE INSPECTION REPORT**

**Project:** IPL – Stoney Point Closed Landfill **Project #:** 25216065  
**Site:** Stoney Point Closed Ash Landfill **Permit number:** 57-SDP-11-60C  
**Date:** 4/14/23 **Prepared by:** Tyler Stirling  
**Weather:** Sunny 55°F **On site/Off site:** 1:00 p.m. 4:30 p.m.  
**Personnel:** Tyler Stirling  
**Equipment:** Water tape

**Landfill Cover and Erosion Control** (Provide description of cover condition, whether grass appears mowed, and any erosional features or other observed issues)  
Photos Taken  (check)  
**Notes:** Good condition

**Primary Access Roads and Perimeter Fencing** (Provide description of current road and perimeter fencing condition and if improvements are necessary) Photos Taken  (check)  
Draw/Note location of necessary improvements on the attached figure.  
**Notes:** Good condition

**Groundwater and surface Water** (Provide description of current monitoring points in need of improvements if necessary) Photos Taken  (check)  
**Notes:** MW-1 needs lock cut to open  
↳ pvc is pushed up (in video)  
↳ well lid/cover is detached

**Miscellaneous Notes:** none



## SITE INSPECTION REPORT

**Communications with Onsite Personnel:** Text to Jenny Coughlin

**Signature:** \_\_\_\_\_

C:\Users\3510med\Desktop\Site Inspection Form.doc

**SITE INSPECTION REPORT**

**Project:** IPL – Stoney Point Closed Landfill **Project #:** 25223065

**Site:** Stoney Point Closed Ash Landfill **Permit number:** 57-SDP-11-60C

**Date:** 9/7/2023 **Prepared by:** Ryan Matzuk

**Weather:** Cloudy, 64° **On site/Off site:** 720 a.m. 1600 p.m.

**Personnel:** Ryan Matzuk, Tyler Stirling

**Equipment:** Low-Flow GW sampling

**Landfill Cover and Erosion Control** (Provide description of cover condition, whether grass appears mowed, and any erosional features or other observed issues)  
 Photos Taken  (check)  
 Notes: Grass has been mowed. Good condition

**Primary Access Roads and Perimeter Fencing** (Provide description of current road and perimeter fencing condition and if improvements are necessary) Photos Taken  (check)  
Draw/Note location of necessary improvements on the attached figure.  
 Notes: No repairs needed

**Groundwater and surface Water** (Provide description of current monitoring points in need of improvements if necessary) Photos Taken  (check)  
 Notes: No repairs required.

**Miscellaneous Notes:**



## SITE INSPECTION REPORT


**Communications with Onsite Personnel:**

None. Contacted Alliant contact via text when entering/  
leaving site.

**Signature:**



C:\Users\3510med\Desktop\Site Inspection Form.doc



Appendix B  
Groundwater Sampling Field Sheets

**Stoney Point Closed Landfill / SCS Engineers Project #25223065.00  
April 2023**

<b>Well</b>	<b>Depth to Water (ft)</b>	<b>Groundwater Elevation (ft amsl)</b>	<b>Total Depth (ft)</b>	<b>Date of Measurement</b>
MW1	NM	NM	NM	4/17/2023
MW2A	15.2	823.54	33.40	4/17/2023
MW3	11.89	815.11	27.90	4/17/2023
MW7	14.75	824.6	62.50	4/17/2023
MW8	17.4	810.1	57.14	4/17/2023
MW9	18.27	807.82	62.30	4/17/2023
MW10	2.1	798.57	74.35	4/17/2023
MW11	3.92	797.08	45.30	4/17/2023
MW12	12.55	788.96	27.90	4/17/2023
MW13	1.15	798.71	74.95	4/17/2023
MW15	7.9	791.73	22.50	4/17/2023
MW16	9.59	795.51	22.47	4/17/2023
MW17	1.49	803.5	51.90	4/17/2023
MW18	2.71	802.23	75.00	4/17/2023
MW19	18.8	805.25	52.80	4/17/2023
MW20	88.49	739.6	93.86	4/17/2023
MW21	5.9	794.69	25.60	4/17/2023
MW22	TOC	>800.49	46.68	4/17/2023
MW23	8.98	791.36	71.90	4/17/2023
MW24	19.4	807.56	92.40	4/17/2023
MW25	11.09	803.16	32.92	4/17/2023
MW26	15.15	799.56	56.67	4/17/2023
MW27	26.2	788.3	88.92	4/17/2023
LW01	17.3	816.88	18.30	4/17/2023
LW02	32.9	802.84	39.00	4/17/2023
LW03	18.25	820.21	19.80	4/17/2023





# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: LW-02 Weather: \_\_\_\_\_

Date: 9/7/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 33.96

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 835.74 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	36.00	36.00	36.00
Water Elevation (ft. MSL):	799.74	799.74	799.74

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time		

Well Conditions Commentary: --

#### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: \_\_\_\_\_

#### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

#### Method (check one)

Low Flow  No Purge  Purge

#### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated bailer.

#### Field Analysis

	Final Reading
Date/Time	9/7, 10:15
Depth to Water (ft)	36.00
Volume Purged ( L )	
Temp (°C)	15.3
Sp. Cond (umhos/cm)	2286
pH	7.71
DO (mg/l)	5.18
ORP (mV)	99.9
Turbidity (NTU)	--

Equipment Depth: \_\_\_\_\_ Flow Rate: -- Volume Removed: \_\_\_\_\_ Volume Sampled: 1 L

Odor?  Yes  No Color?  Yes  No

Comments: Initial water color for 250ml metals (nitric acid pres.) was grey to light black. More black and solid toward well bottom.



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: LW-03 Weather: 70°F, Wind Direction: S, Cloudy, No precipitation

Date: 9/7/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 14.75

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 838.46 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	18.90	DRY	DRY
Water Elevation (ft. MSL):	819.56	--	--

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/7	9/7

Well Conditions Commentary: --

#### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: \_\_\_\_\_

#### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

#### Method (check one)

Low Flow  No Purge  Purge

#### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated bailer.

#### Field Analysis

							Final Reading
Date/Time							--
Depth to Water (ft)							--
Volume Purged ( )							--
Temp (°C)							--
Sp. Cond (umhos/cm)							--
pH							--
DO (mg/l)							--
ORP (mV)							--
Turbidity (NTU)							--

Equipment Depth: \_\_\_\_\_ Flow Rate: -- Volume Removed: 0.25 L Volume Sampled: 0.25 L

Odor?  Yes  No Color?  Yes  No

Comments: Well dry after filling 250ml metals bottle.



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-1 Weather: 88°F, Wind Direction: S, Sunny, No precipitation

Date: 9/5/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 32.18

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 842.87 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	23.84	--	--
Water Elevation (ft. MSL):	819.03	--	--

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	--	--

Well Conditions Commentary: --

#### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: --

#### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

#### Method (check one)

Low Flow  No Purge  Purge

#### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: --

#### Field Analysis

							Final Reading
Date/Time							--
Depth to Water (ft)							--
Volume Purged ( )							--
Temp (°C)							--
Sp. Cond (umhos/cm)							--
pH							--
DO (mg/l)							--
ORP (mV)							--
Turbidity (NTU)							--

Equipment Depth: \_\_\_\_\_ Flow Rate: -- Volume Removed: -- Volume Sampled: --

Odor?  Yes  No Color?  Yes  No

Comments: No purge, just DTW/TD



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Marshalltown E/W Closed LF Permit No.: 64-SDP-5-91C, -3-90C

Well/Piezometer: MW-2A Weather: 70°F, Wind Direction: S, Cloudy, No precipitation

Date: 9/7/2023 Sampler Name: Tyler Stirling

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 22.51

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 838.74 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	17.60	19.98	19.98
Water Elevation (ft. MSL):	821.14	818.76	818.76

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/5, 14:27	9/5, 15:25

Well Conditions Commentary: --

### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

### Method (check one)

Low Flow  No Purge  Purge

### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

### Field Analysis

	Final Reading
Date/Time	9/5, 14:30
Depth to Water (ft)	19.98
Volume Purged ( )	--
Temp (°C)	17.9
Sp. Cond (umhos/cm)	535
pH	7.28
DO (mg/l)	9.18
ORP (mV)	43.5
Turbidity (NTU)	3.41

Equipment Depth: \_\_\_\_\_ Flow Rate: 250mL/min Volume Removed: \_\_\_\_\_ Volume Sampled: \_\_\_\_\_

Odor?  Yes  No Color?  Yes  No

Comments: Purged 9/5



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Marshalltown E/W Closed LF Permit No.: 64-SDP-5-91C, -3-90C

Well/Piezometer: MW-3 Weather: 63°F, Wind Direction: W, Cloudy, No precipitation

Date: 9/6/2023 Sampler Name: Tyler Stirling

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 18.14

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 827.00 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	15.54	15.47	15.47
Water Elevation (ft. MSL):	811.46	811.53	811.53

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/6, 8:05	9/6, 9:12

Well Conditions Commentary: --

### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

### Method (check one)

Low Flow  No Purge  Purge

### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

### Field Analysis

							Final Reading
Date/Time	9/6, 8:30	9/6, 8:35	9/6, 8:40	9/6, 8:45	9/6, 8:50	9/6, 8:55	9/6, 9:00
Depth to Water (ft)	15.44	15.44	15.44	15.44	15.44	15.44	15.44
Volume Purged ( L )	5	6	7	8	9	10	11
Temp (°C)	13.2	13.2	13.2	13.2	13.2	13.2	13.2
Sp. Cond (umhos/cm)	815	813	813	813	813	814	814
pH	7.09	7.10	7.10	7.11	7.12	7.13	7.13
DO (mg/l)	7.83	7.99	8.20	8.40	8.43	8.48	8.48
ORP (mV)	199.1	198.9	198.9	197.9	197.1	196.1	196.0
Turbidity (NTU)	12.39	8.31	5.23	5.24	3.43	3.68	1.99

Equipment Depth: \_\_\_\_\_ Flow Rate: 200mL/min Volume Removed: 13.4 L Volume Sampled: 1 L

Odor?  Yes  No Color?  Yes  No

Comments: --



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-7 Weather: 88°F, Wind Direction: S, Sunny, No precipitation

Date: 9/5/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 57.28

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 839.35 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	15.79	--	--
Water Elevation (ft. MSL):	823.56	--	--

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	15.79	NA

Well Conditions Commentary: --

#### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

#### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

#### Method (check one)

Low Flow  No Purge  Purge

#### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

#### Field Analysis

							Final Reading
Date/Time							--
Depth to Water (ft)							--
Volume Purged ( )							--
Temp (°C)							--
Sp. Cond (umhos/cm)							--
pH							--
DO (mg/l)							--
ORP (mV)							--
Turbidity (NTU)							--

Equipment Depth: \_\_\_\_\_ Flow Rate: -- Volume Removed: -- Volume Sampled: --

Odor?  Yes  No Color?  Yes  No

Comments: WL/TD only.



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-8 Weather: 88°F, Wind Direction: S, Partly, No precipitation

Date: 9/5/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 47.27

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 827.5 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	32.10	32.98	32.98
Water Elevation (ft. MSL):	795.40	794.52	794.52

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/7, 13:27	9/7, 13:40

Well Conditions Commentary: --

### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

### Method (check one)

Low Flow  No Purge  Purge

### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

### Field Analysis

	Final Reading
Date/Time	9/5, 13:40
Depth to Water (ft)	32.98
Volume Purged ( )	--
Temp (°C)	15.5
Sp. Cond (umhos/cm)	498.3
pH	7.20
DO (mg/l)	4.91
ORP (mV)	36.5
Turbidity (NTU)	5.26

Equipment Depth: \_\_\_\_\_ Flow Rate: 300mL/min Volume Removed: -- Volume Sampled: 1 L

Odor?  Yes  No Color?  Yes  No

Comments: Purged 9/5/23 Dry. Sampled 9/7 at 13:40.



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-9 Weather: 71°F, Wind Direction: S, Cloudy, No precipitation

Date: 9/7/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 52.02

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 826.09 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	31.55	35.60	35.60
Water Elevation (ft. MSL):	794.54	790.49	790.49

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/7, 12:45	9/7, 14:00

Well Conditions Commentary: --

### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

### Method (check one)

Low Flow  No Purge  Purge

### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

### Field Analysis

	Final Reading						
Date/Time	9/7, 13:05	9/7, 13:10	9/7, 13:15	9/7, 13:20	9/7, 13:25	9/7, 13:30	9/7, 13:35
Depth to Water (ft)	33.50	33.65	34.33	34.76	35.09	35.42	35.60
Volume Purged ( L )	1.5	1.875	2.25	2.625	3	3.375	3.75
Temp (°C)	13.7	13.5	13.4	13.5	13.4	13.3	13.3
Sp. Cond (umhos/cm)	784	783	783	779	781	781	780
pH	7.47	7.47	7.48	7.50	7.48	7.47	7.47
DO (mg/l)	7.80	8.18	8.44	8.16	8.15	8.02	7.83
ORP (mV)	-26.7	-29.2	-29.0	-26.6	-26.8	-26.6	-27.8
Turbidity (NTU)	44.08	39.31	41.53	44.16	25.19	23.99	23.93

Equipment Depth: \_\_\_\_\_ Flow Rate: 75mL/min Volume Removed: 5.625 L Volume Sampled: 1 L

Odor?  Yes  No Color?  Yes  No

Comments: --





# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-10 Weather: 77°F, Wind Direction: E, Cloudy, No precipitation

Date: 9/7/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 63.85

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 800.67 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	10.02	10.12	10.12
Water Elevation (ft. MSL):	790.65	790.55	790.55

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/7, 14:50	16:10

Well Conditions Commentary: --

#### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

#### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

#### Method (check one)

Low Flow  No Purge  Purge

#### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

#### Field Analysis

							Final Reading
Date/Time	9/7, 15:15	9/7, 15:20	9/7, 15:25	9/7, 15:30	9/7, 15:35	9/7, 15:40	9/7, 15:45
Depth to Water (ft)	10.12	10.12	10.12	10.12	10.12	10.12	10.12
Volume Purged ( L )	2.5	3	3.5	4	4.5	5	5.5
Temp (°C)	18.2	18.7	18.8	18.6	18.0	18.1	18.2
Sp. Cond (umhos/cm)	2437	2423	2424	2414	2422	2419	2418
pH	6.81	6.81	6.81	6.81	6.81	6.81	6.80
DO (mg/l)	1.05	0.95	0.79	0.69	0.48	0.40	0.37
ORP (mV)	-134	-130	-127.3	-118.3	-114.0	-112.2	-111
Turbidity (NTU)	13.49	14.44	15.20	18.73	18.22	18.05	17.43

Equipment Depth: \_\_\_\_\_ Flow Rate: 100mL/min Volume Removed: 8 L Volume Sampled: 1 L

Odor?  Yes  No Color?  Yes  No

Comments: --



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-11 Weather: 77°F, Wind Direction: E, Cloudy, No precipitation

Date: 9/7/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 40.23

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 801.00 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	11.04	12.58	12.58
Water Elevation (ft. MSL):	789.96	788.42	788.42

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/7, 8:05	9/7, 9:10

Well Conditions Commentary: --

### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

### Method (check one)

Low Flow  No Purge  Purge

### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

### Field Analysis

Date/Time		8/7, 8:20	8/7, 8:25	9/7, 8:30	9/7, 8:35	9/7, 8:40	Final Reading 9/7, 8:45
Depth to Water (ft)		11.86	12.14	12.23	12.38	12.42	12.58
Volume Purged ( L )		1.125	1.5	1.875	2.25	2.625	3
Temp (°C)		13.7	14.0	13.8	13.7	13.6	13.5
Sp. Cond (umhos/cm)		1727	1729	1737	1740	1738	1740
pH		7.21	7.23	7.19	7.18	7.17	7.17
DO (mg/l)		1.66	1.70	1.77	1.76	1.70	1.65
ORP (mV)		-44.2	-51.9	-63.0	-65.2	-65.1	-65.7
Turbidity (NTU)		23.53	22.46	16.71	13.37	13.38	12.46

Equipment Depth: \_\_\_\_\_ Flow Rate: 75mL/min Volume Removed: 4.875 L Volume Sampled: 1 L

Odor?  Yes  No Color?  Yes  No

Comments: --



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-12 Weather: 72°F, Wind Direction: NW, Sunny, No precipitation

Date: 9/6/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 18.19

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 801.51 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	14.02	18.33	18.33
Water Elevation (ft. MSL):	787.49	783.18	783.18

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/6, 15:15	9/6, 16:40

Well Conditions Commentary: --

### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

### Method (check one)

Low Flow  No Purge  Purge

### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

### Field Analysis

	Final Reading						
Date/Time	9/6, 15:45	9/6, 15:50	9/6, 15:55	9/6, 16:00	9/6, 16:05	9/6, 16:10	9/6, 16:15
Depth to Water (ft)	17.34	17.62	17.96	18.20	18.22	18.27	18.33
Volume Purged ( L )	1.5	1.75	2	2.25	2.5	2.75	3
Temp (°C)	14.5	14.5	14.3	14.2	14.0	13.9	13.9
Sp. Cond (umhos/cm)	727	726	723	721	716	717	717
pH	7.24	7.23	7.22	7.22	7.21	7.21	7.20
DO (mg/l)	0.29	0.28	0.27	0.29	0.42	0.47	0.49
ORP (mV)	-106.3	-100.7	-94.9	-88.4	-71.0	-68.7	-64.2
Turbidity (NTU)	10.61	5.60	5.41	4.21	1.62	1.85	1.33

Equipment Depth: \_\_\_\_\_ Flow Rate: 50mL/min Volume Removed: 4.25 L Volume Sampled: 1 L

Odor?  Yes  No Color?  Yes  No

Comments: --



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C  
 Well/Piezometer: MW-13 Weather: 61°F, Wind Direction: NW, Cloudy, No precipitation  
 Date: 9/7/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 63.96  
 Casing Diameter (in): 2.01 Casing Material: PVC  
 Top of Casing Elevation (ft. MSL): 799.86 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	11.59	13.10	13.10
Water Elevation (ft. MSL):	788.27	786.76	786.76

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/7, 9:45	9/7, 11:40

Well Conditions Commentary: --

#### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

#### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

#### Method (check one)

Low Flow  No Purge  Purge

#### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

#### Field Analysis

							Final Reading
Date/Time	9/7, 10:25	9/7, 10:30	9/7, 10:35	9/7, 10:40	9/7, 10:45	9/7, 10:50	9/7, 10:55
Depth to Water (ft)	12.50	12.74	12.72	12.87	12.90	12.96	13.10
Volume Purged ( L )	3.0	3.375	3.75	4.125	4.5	4.875	5.25
Temp (°C)	15.8	15.9	15.8	15.8	15.9	15.8	15.5
Sp. Cond (umhos/cm)	1970	1968	1971	1970	1968	1980	1987
pH	6.96	6.96	6.96	6.96	6.97	6.96	6.96
DO (mg/l)	1.12	0.97	0.99	0.90	0.80	0.75	0.75
ORP (mV)	1.7	1.0	-0.3	-1.7	-3.7	-6.0	-9.4
Turbidity (NTU)	5.43	5.35	5.99	5.83	12.68	13.59	13.93

Equipment Depth: \_\_\_\_\_ Flow Rate: 75mL/min Volume Removed: 8.625 L Volume Sampled: 1 L

Odor?  Yes  No Color?  Yes  No

Comments: --



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-15 Weather: 61°F, Wind Direction: NW, Cloudy, No precipitation

Date: 9/7/2023 (purged 9/5) Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 13.15

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 799.63 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	9.68	9.66	9.66
Water Elevation (ft. MSL):	789.95	789.93	789.93

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/5	9/5, 11:55

Well Conditions Commentary: --

### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

### Method (check one)

Low Flow  No Purge  Purge

### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

### Field Analysis

	Final Reading
Date/Time	9/7, 11:40
Depth to Water (ft)	9.66
Volume Purged ( )	--
Temp (°C)	13.9
Sp. Cond (umhos/cm)	2391
pH	6.96
DO (mg/l)	6.25
ORP (mV)	62.3
Turbidity (NTU)	3.49

Equipment Depth: \_\_\_\_\_ Flow Rate: 100mL/min Volume Removed: \_\_\_\_\_ Volume Sampled: 1 L

Odor?  Yes  No Color?  Yes  No

Comments: \_\_\_\_\_



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C  
 Well/Piezometer: MW-16 Weather: 64°F, Wind Direction: NW, Cloudy, No precipitation  
 Date: 9/6/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 13.25  
 Casing Diameter (in): 2.01 Casing Material: PVC  
 Top of Casing Elevation (ft. MSL): 805.10 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	11.86	12.87	12.87
Water Elevation (ft. MSL):	793.24	792.23	792.23

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/6, 9:45	9/6, 10:35

Well Conditions Commentary: --

#### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

#### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

#### Method (check one)

Low Flow  No Purge  Purge

#### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

#### Field Analysis

								Final Reading
Date/Time	9/6, 9:55	9/6, 10:00	9/6, 10:05	9/6, 10:10	9/6, 10:15	9/6, 10:20	9/6, 10:25	
Depth to Water (ft)	12.87	12.87	12.87	12.87	12.87	12.87	12.87	
Volume Purged ( )								
Temp (°C)	13.0	13.1	13.1	13.1	13.0	13.0	13.1	
Sp. Cond (umhos/cm)	3949	3891	3930	3995	3971	3980	4006	
pH	6.95	6.98	7.02	7.03	7.07	7.09	7.10	
DO (mg/l)	3.11	3.79	4.70	5.14	6.04	6.35	6.62	
ORP (mV)	-5.1	-0.5	6.2	-3.2	9.4	14.9	19.2	
Turbidity (NTU)	4.87	4.55	3.47	1.49	0.33	0.41	0.00	

Equipment Depth: \_\_\_\_\_ Flow Rate: 200mL/min Volume Removed: \_\_\_\_\_ Volume Sampled: \_\_\_\_\_

Odor?  Yes  No Color?  Yes  No

Comments: --



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-17 Weather: 64°F, Wind Direction: W, cloudy, No precipitation

Date: 9/6/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 43.57

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 804.99 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	14.39	14.39	14.39
Water Elevation (ft. MSL):	790.60	790.60	790.60

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/6, 10:45	9/6, 11:30

Well Conditions Commentary: --

### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

### Method (check one)

Low Flow  No Purge  Purge

### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

### Field Analysis

Date/Time				Final Reading			
				9/6, 11:00	9/6, 11:05	9/6, 11:10	9/6, 11:15
Depth to Water (ft)				14.39	14.39	14.39	14.39
Volume Purged ( )				3	4	5	6
Temp (°C)				12.1	12.1	12.0	12.1
Sp. Cond (umhos/cm)				1620	1621	1623	1622
pH				7.33	7.33	7.32	7.32
DO (mg/l)				0.17	0.48	0.17	0.47
ORP (mV)				-85.9	-89.9	-93.3	-95.3
Turbidity (NTU)				80.34	72.60	66.48	67.01

Equipment Depth: \_\_\_\_\_ Flow Rate: 200mL/min Volume Removed: 9L Volume Sampled: \_\_\_\_\_

Odor?  Yes  No Color?  Yes  No

Comments: --



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-18 Weather: 64°F, Wind Direction: W, Cloudy, No precipitation

Date: 9/6/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 64.26

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 804.94 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	13.78	14.13	14.13
Water Elevation (ft. MSL):	791.16	790.81	790.81

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/6, 11:35	9/6, 13:10

Well Conditions Commentary: --

### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

### Method (check one)

Low Flow  No Purge  Purge

### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

### Field Analysis

Date/Time							Final Reading
	9/6, 12:10	9/6, 12:15	9/6, 12:20	9/6, 12:25	9/6, 12:30	9/6, 12:35	
Depth to Water (ft)	14.13	14.13	14.13	14.13	14.13	14.13	
Volume Purged ( L )	3.5	4.0	4.5	5	5.5	6	
Temp (°C)	20.0	19.7	20.1	20.4	20.4	20.4	
Sp. Cond (umhos/cm)	1701	1716	1716	1718	1719	1717	
pH	7.34	7.18	7.17	7.16	7.16	7.16	
DO (mg/l)	4.59	2.97	3.04	3.00	2.95	3.05	
ORP (mV)	-177.9	-138.5	-115.2	-101.3	-97.9	-92.3	
Turbidity (NTU)	27.84	11.94	2.69	0.74	3.05	0.90	

Equipment Depth: \_\_\_\_\_ Flow Rate: 100mL/min Volume Removed: 9.5 L Volume Sampled: 1 L

Odor?  Yes  No Color?  Yes  No

Comments: --





# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-19 Weather: 63°F, Wind Direction: NW, Cloudy, No precipitation

Date: 9/6/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 55.16

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 824.05 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	31.36	--	--
Water Elevation (ft. MSL):	792.69	--	--

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time		

Well Conditions Commentary: --

#### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

#### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

#### Method (check one)

Low Flow  No Purge  Purge

#### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

#### Field Analysis

							Final Reading
Date/Time							--
Depth to Water (ft)							--
Volume Purged ( )							--
Temp (°C)							--
Sp. Cond (umhos/cm)							--
pH							--
DO (mg/l)							--
ORP (mV)							--
Turbidity (NTU)							--

Equipment Depth: \_\_\_\_\_ Flow Rate: -- Volume Removed: -- Volume Sampled: --

Odor?  Yes  No Color?  Yes  No

Comments: \_\_\_\_\_



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-20 Weather: \_\_\_\_\_

Date: 9/5/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 87.22

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 828.09 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	87.27	--	--
Water Elevation (ft. MSL):	740.82	--	--

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time		

Well Conditions Commentary: --

#### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

#### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

#### Method (check one)

Low Flow  No Purge  Purge

#### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

#### Field Analysis

							Final Reading
Date/Time							--
Depth to Water (ft)							--
Volume Purged ( )							--
Temp (°C)							--
Sp. Cond (umhos/cm)							--
pH							--
DO (mg/l)							--
ORP (mV)							--
Turbidity (NTU)							--

Equipment Depth: \_\_\_\_\_ Flow Rate: -- Volume Removed: -- Volume Sampled: --

Odor?  Yes  No Color?  Yes  No

Comments: <5 feet of water, no sample collected.



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-21 Weather: 77°F, Wind Direction: E, Cloudy, No precipitation

Date: 9/7/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 10.64

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 800.59 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	13.93	15.65	15.65
Water Elevation (ft. MSL):	786.66	784.94	784.94

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/7, 11:30	9/7, 12:35

Well Conditions Commentary: --

### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

### Method (check one)

Low Flow  No Purge  Purge

### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

### Field Analysis

	Final Reading						
Date/Time	9/7, 11:45	9/7, 11:50	9/7, 11:55	9/7, 12:00	9/7, 12:05	9/7, 12:10	9/7, 12:15
Depth to Water (ft)	14.46	14.55	14.74	15.10	15.31	15.40	15.65
Volume Purged ( L )	1.5	2	2.5	3	3.5	4	4.5
Temp (°C)	14.4	14.4	14.5	14.8	15.0	15.1	15.2
Sp. Cond (umhos/cm)	794	791	788	784	786	785	786
pH	7.06	7.09	7.11	7.13	7.14	7.15	7.15
DO (mg/l)	7.06	7.14	6.54	5.23	4.98	4.87	4.79
ORP (mV)	-80.0	-74.6	-67.9	-60.3	-57.3	-53.4	-50.9
Turbidity (NTU)	230	234.5	150	101.4	78.87	74.51	70.80

Equipment Depth: \_\_\_\_\_ Flow Rate: 100mL/min Volume Removed: 6.5 L Volume Sampled: 1 L

Odor?  Yes  No Color?  Yes  No

Comments: --



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-22 Weather: 70°F, Wind Direction: S, Cloudy, No precipitation

Date: 9/7/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 41.60

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 800.49 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	9.78	9.78	9.78
Water Elevation (ft. MSL):	790.71	790.71	790.71

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/7, 11:00	9/7, 12:15

Well Conditions Commentary: --

### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

### Method (check one)

Low Flow  No Purge  Purge

### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

### Field Analysis

	Final Reading						
Date/Time	9/7, 11:20	9/7, 11:25	9/7, 11:30	9/7, 11:35	9/7, 11:40	9/7, 11:45	9/7, 11:50
Depth to Water (ft)	9.78	9.78	9.78	9.78	9.78	9.78	9.78
Volume Purged ( )	2	2.5	3	3.5	4	4.5	5
Temp (°C)	18.6	19.6	19.5	19.0	18.7	18.7	18.7
Sp. Cond (umhos/cm)	1084	1084	1087	1089	1092	1093	1094
pH	7.06	7.06	7.06	7.06	7.06	7.05	7.05
DO (mg/l)	1.19	1.07	0.98	0.91	0.81	0.78	0.75
ORP (mV)	-176.0	-174	-170.3	-167.1	-164	-163.5	-162.9
Turbidity (NTU)	7.49	7.65	7.88	7.74	7.16	7.60	7.24

Equipment Depth: \_\_\_\_\_ Flow Rate: 100mL/min Volume Removed: 7.5 Volume Sampled: 1 L

Odor?  Yes  No Color?  Yes  No

Comments: --



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-23 Weather: °F, Wind Direction: , No precipitation

Date: 9/6/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 65.69

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 800.34 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	18.50	45.87	45.87
Water Elevation (ft. MSL):	781.84	754.47	754.47

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/6, 12:30	9/6, 13:00

Well Conditions Commentary: --

#### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

#### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

#### Method (check one)

Low Flow  No Purge  Purge

#### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

#### Field Analysis

	Final Reading
Date/Time	9/6, 13:00
Depth to Water (ft)	45.87
Volume Purged ( )	
Temp (°C)	16.9
Sp. Cond (umhos/cm)	670
pH	7.18
DO (mg/l)	3.65
ORP (mV)	-30.2
Turbidity (NTU)	11.72

Equipment Depth: \_\_\_\_\_ Flow Rate: 100mL/min Volume Removed: \_\_\_\_\_ Volume Sampled: 1 L

Odor?  Yes  No Color?  Yes  No

Comments: Purged dry 9/6/23



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-24 Weather: 70°F, Wind Direction: W, Cloudy, light precipitation

Date: 9/6/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 86.34

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 826.96 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	34.49	35.32	35.32
Water Elevation (ft. MSL):	792.47	791.64	791.64

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/6, 13:30	9/6, 15:00

Well Conditions Commentary: --

#### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

#### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

#### Method (check one)

Low Flow  No Purge  Purge

#### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

#### Field Analysis

	Final Reading						
Date/Time	9/6, 13:45	9/6, 13:50	9/6, 13:55	9/6, 14:00	9/6, 14:05	9/6, 14:10	9/6, 14:15
Depth to Water (ft)	34.26	34.59	34.85	34.90	35.05	35.15	35.32
Volume Purged ( L )	0.75	1	1.25	1.5	1.75	2	2.25
Temp (°C)	16.0	16.0	15.9	16.0	15.9	15.8	15.8
Sp. Cond (umhos/cm)	582.5	578.7	575.4	574.1	573.0	573.2	572.6
pH	7.40	7.40	7.38	7.37	7.37	7.38	7.38
DO (mg/l)	2.02	1.31	0.85	0.81	0.77	0.73	0.70
ORP (mV)	-55.4	-84.0	-96.6	-97.0	-99.5	-101.4	-104.6
Turbidity (NTU)	2.58	14.71	11.87	6.89	3.74	2.42	2.74

Equipment Depth: \_\_\_\_\_ Flow Rate: 50mL/min Volume Removed: 4.5 Volume Sampled: 1 L

Odor?  Yes  No Color?  Yes  No

Comments: --



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-25 Weather: °F, Wind Direction: NW, Cloudy, No precipitation

Date: 9/7/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 18.08

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 814.25 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	16.38	24.19	24.19
Water Elevation (ft. MSL):	797.87	790.06	790.06

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/5	9/7, 14:20

Well Conditions Commentary: --

#### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: \_\_\_\_\_

#### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

#### Method (check one)

Low Flow  No Purge  Purge

#### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

#### Field Analysis

							Final Reading
Date/Time							9/7, 14:20
Depth to Water (ft)							24.19
Volume Purged ( )							--
Temp (°C)							12.3
Sp. Cond (umhos/cm)							662
pH							7.05
DO (mg/l)							7.13
ORP (mV)							35.8
Turbidity (NTU)							328.4

Equipment Depth: \_\_\_\_\_ Flow Rate: -- Volume Removed: ~3 gallons Volume Sampled: 1L

Odor?  Yes  No Color?  Yes  No

Comments: Bailed dry 9/5/23. Tubing too short for well. Sampled 9/7 14:20.



# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-26 Weather: 70°F, Wind Direction: S, Cloudy, No precipitation

Date: 9/7/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 50.85

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): 814.71 Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	23.90	23.90	23.90
Water Elevation (ft. MSL):	790.81	790.81	790.81

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/7, 8:40	9/7, 9:45

Well Conditions Commentary: --

### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

### Method (check one)

Low Flow  No Purge  Purge

### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.

### Field Analysis

							Final Reading
Date/Time	9/7, 8:55	9/7, 9:00	9/7, 9:05	9/7, 9:10	9/7, 9:15	9/7, 9:20	9/7, 9:25
Depth to Water (ft)	23.90	23.90	23.90	23.90	23.90	23.90	23.90
Volume Purged ( L )	1.5	2	2.5	3.0	3.5	4.0	4.5
Temp (°C)	14.0	13.8	14.2	14.4	14.6	14.7	14.7
Sp. Cond (umhos/cm)	1155	1184	1418	1445	1486	1500	1501
pH	6.99	6.78	6.68	6.67	6.66	6.66	6.65
DO (mg/l)	4.77	4.30	3.82	3.82	3.82	3.84	3.81
ORP (mV)	149.4	139.0	131.5	125.3	117.4	111.5	108.7
Turbidity (NTU)	4.48	3.91	2.58	2.14	3.17	2.55	2.88

Equipment Depth: \_\_\_\_\_ Flow Rate: 100mL/min Volume Removed: 6.5 L Volume Sampled: 1L

Odor?  Yes  No Color?  Yes  No

Comments: --





# Groundwater Sampling Field Sheet

Disposal Site Name: IPL - Stoney Point LF Permit No.: 57-SDP-11-90C

Well/Piezometer: MW-27 Weather: 77°F, Wind Direction: E, Cloudy, No precipitation

Date: 9/7/2023 Sampler Name: Tyler Stirling and Ryan Matzuk

### Monitoring Well Details

#### Construction Data

Borehole Diameter (in): \_\_\_\_\_ Depth to Top of Screen (ft): 82.93

Casing Diameter (in): 2.01 Casing Material: PVC

Top of Casing Elevation (ft. MSL): \_\_\_\_\_ Ground Surface Elevation (ft. MSL): \_\_\_\_\_

#### Field Observations

Locked:  Yes  No

	Before Purging	After Purging	Before Sampling
Depth to Water Level (ft.):	22.89	51.79	51.79
Water Elevation (ft. MSL):	791.61	762.71	762.71

Screen Submerged? (Depth to Water Level < Depth to Top of Screen)  Yes  No

	Start	End
Purge Date/Time	9/7, 12:55	9/7, 13:40

Well Conditions Commentary: --

### Sampling Equipment (check one)

Pump  Interval Sampler  
 Bailer  Other (specify): \_\_\_\_\_

Equipment Name & Description: Well Wizard

### Pump Types (check one)

Submersible  Peristaltic  Bladder  Inertial Lift Pump  Other (specify): \_\_\_\_\_

### Method (check one)

Low Flow  No Purge  Purge

### Options (check one)

Dedicated  Disposable  Portable

Decontamination Method: N/A. Dedicated pump.


### Field Analysis

							Final Reading
Date/Time	9/7, 13:10	9/7, 13:15	9/7, 13:20	9/7, 13:25	9/7, 13:30	9/7, 13:35	9/7, 13:40
Depth to Water (ft)	35.74	38.24	40.40	43.50	47.41	49.51	51.79
Volume Purged ( L )	1.5	2	2.5	3	3.5	4	4.5
Temp (°C)	11.8	11.8	11.7	11.7	11.7	11.7	11.7
Sp. Cond (umhos/cm)	798	797	794	794	794	794	794
pH	6.43	6.44	6.44	6.45	6.45	6.45	6.45
DO (mg/l)	0.10	0.08	0.44	0.51	0.60	0.63	0.64
ORP (mV)	-203.8	-230	-239	-256.1	-273.4	-276.5	-279.1
Turbidity (NTU)	4.49	4.68	4.25	3.34	3.68	2.78	3.87

Equipment Depth: \_\_\_\_\_ Flow Rate: 100mL/min Volume Removed: 5.5 L Volume Sampled: 1L

Odor?  Yes  No Color?  Yes  No

Comments: --



Appendix C  
Laboratory Analytical Report



# ANALYTICAL REPORT

## PREPARED FOR

Attn: Meghan Blodgett  
SCS Engineers  
2830 Dairy Drive  
Madison, Wisconsin 53718

Generated 9/26/2023 1:24:32 PM

## JOB DESCRIPTION

Stoney Point Closed Landfill - 25223065

## JOB NUMBER

310-264400-1

# 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: SCS Engineers  
Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

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## Job ID: 310-264400-1

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### Laboratory: Eurofins Cedar Falls

#### Narrative

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#### Job Narrative 310-264400-1

#### Receipt

The samples were received on 9/8/2023 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.0° C, 2.6° C and 5.6° C.

#### HPLC/IC

Methods 300.0, 9056A: The following samples were diluted due to the nature of the sample matrix: MW-03 (310-264400-2), MW-10 (310-264400-5) and MW-16 (310-264400-10). Elevated reporting limits (RLs) are provided.

Method 9056A: The following samples were diluted due to the nature of the sample matrix: MW-02A (310-264400-1), MW-08 (310-264400-3), MW-09 (310-264400-4), MW-11 (310-264400-6), MW-13 (310-264400-8), MW-15 (310-264400-9), MW-17 (310-264400-11), MW-18 (310-264400-12), MW-21 (310-264400-13), MW-22 (310-264400-14), MW-23 (310-264400-15), MW-24 (310-264400-16), MW-25 (310-264400-17), MW-26 (310-264400-18), MW-27 (310-264400-19) and LW-02 (310-264400-20). 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 analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### General Chemistry

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



# Sample Summary

Client: SCS Engineers  
Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-264400-1	MW-02A	Water	09/07/23 14:30	09/08/23 16:20
310-264400-2	MW-03	Water	09/06/23 09:00	09/08/23 16:20
310-264400-3	MW-08	Water	09/07/23 13:40	09/08/23 16:20
310-264400-4	MW-09	Water	09/07/23 13:35	09/08/23 16:20
310-264400-5	MW-10	Water	09/06/23 15:45	09/08/23 16:20
310-264400-6	MW-11	Water	09/07/23 08:45	09/08/23 16:20
310-264400-7	MW-12	Water	09/06/23 16:15	09/08/23 16:20
310-264400-8	MW-13	Water	09/07/23 10:55	09/08/23 16:20
310-264400-9	MW-15	Water	09/07/23 11:40	09/08/23 16:20
310-264400-10	MW-16	Water	09/06/23 10:25	09/08/23 16:20
310-264400-11	MW-17	Water	09/06/23 11:15	09/08/23 16:20
310-264400-12	MW-18	Water	09/06/23 12:35	09/08/23 16:20
310-264400-13	MW-21	Water	09/07/23 12:15	09/08/23 16:20
310-264400-14	MW-22	Water	09/07/23 11:50	09/08/23 16:20
310-264400-15	MW-23	Water	09/07/23 12:30	09/08/23 16:20
310-264400-16	MW-24	Water	09/06/23 14:15	09/08/23 16:20
310-264400-17	MW-25	Water	09/07/23 14:20	09/08/23 16:20
310-264400-18	MW-26	Water	09/07/23 09:25	09/08/23 16:20
310-264400-19	MW-27	Water	09/06/23 13:40	09/08/23 16:20
310-264400-20	LW-02	Water	09/07/23 10:15	09/08/23 16:20
310-264400-21	LW-03	Water	09/07/23 08:00	09/08/23 16:20
310-264400-22	Field Blank	Water	09/07/23 13:45	09/08/23 16:20

# Detection Summary

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Client Sample ID: MW-02A

## Lab Sample ID: 310-264400-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.6		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	28		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	0.88	J	2.0	0.53	ug/L	1		6020B	Total/NA
Barium	89		2.0	0.64	ug/L	1		6020B	Total/NA
Beryllium	0.43	J	1.0	0.33	ug/L	1		6020B	Total/NA
Boron	100		100	76	ug/L	1		6020B	Total/NA
Calcium	81		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.50		0.50	0.17	ug/L	1		6020B	Total/NA
Iron	36	J	100	36	ug/L	1		6020B	Total/NA
Lead	0.78		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	6.0	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	13000		500	150	ug/L	1		6020B	Total/NA
Manganese	11		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	2.9		2.0	0.91	ug/L	1		6020B	Total/NA
Selenium	2.6	J	5.0	1.4	ug/L	1		6020B	Total/NA
Total Suspended Solids	2.4		1.9	0.64	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	300		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	821.63				ft	1		Field Sampling	Total/NA
Field pH	7.28				SU	1		Field Sampling	Total/NA
Field Conductivity	535				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	17.9				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: MW-03

## Lab Sample ID: 310-264400-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	200		5.0	2.1	mg/L	5		9056A	Total/NA
Calcium	170		0.50	0.19	mg/L	1		6020B	Total/NA
Lithium	3.4	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	6900		500	150	ug/L	1		6020B	Total/NA
Molybdenum	1.4	J	2.0	0.91	ug/L	1		6020B	Total/NA
Total Suspended Solids	5.5		1.9	0.64	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	520		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	811.93				ft	1		Field Sampling	Total/NA
Field pH	7.13				SU	1		Field Sampling	Total/NA
Field Conductivity	814				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	13.2				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: MW-08

## Lab Sample ID: 310-264400-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.7	J	5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	27		5.0	2.1	mg/L	5		9056A	Total/NA
Barium	94		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	830		100	76	ug/L	1		6020B	Total/NA
Calcium	73		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.32	J	0.50	0.17	ug/L	1		6020B	Total/NA
Iron	50	J	100	36	ug/L	1		6020B	Total/NA
Lead	0.28	J	0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	7.2	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	19000		500	150	ug/L	1		6020B	Total/NA
Manganese	64		10	3.6	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls



# Detection Summary

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Client Sample ID: MW-08 (Continued)

## Lab Sample ID: 310-264400-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	4.9		2.0	0.91	ug/L	1		6020B	Total/NA
Total Suspended Solids	7.2		1.9	0.64	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	52		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	795.86				ft	1		Field Sampling	Total/NA
Field pH	7.20				SU	1		Field Sampling	Total/NA
Field Conductivity	498.3				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	15.5				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: MW-09

## Lab Sample ID: 310-264400-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	41		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	68		5.0	2.1	mg/L	5		9056A	Total/NA
Boron	4300		100	76	ug/L	1		6020B	Total/NA
Calcium	85		0.50	0.19	mg/L	1		6020B	Total/NA
Lithium	17		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	21000		500	150	ug/L	1		6020B	Total/NA
Molybdenum	28		2.0	0.91	ug/L	1		6020B	Total/NA
Total Suspended Solids	69		3.8	1.3	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	460		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	795.01				ft	1		Field Sampling	Total/NA
Field pH	7.47				SU	1		Field Sampling	Total/NA
Field Conductivity	780				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	13.3				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: MW-10

## Lab Sample ID: 310-264400-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	26		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	1200		50	21	mg/L	50		9056A	Total/NA
Boron	8900		1000	760	ug/L	10		6020B	Total/NA
Calcium	280		0.50	0.19	mg/L	1		6020B	Total/NA
Lithium	640		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	67000		500	150	ug/L	1		6020B	Total/NA
Molybdenum	36		2.0	0.91	ug/L	1		6020B	Total/NA
Total Suspended Solids	59		15	5.1	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	1800		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	791.31				ft	1		Field Sampling	Total/NA
Field pH	6.80				SU	1		Field Sampling	Total/NA
Field Conductivity	2418				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	18.2				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: MW-11

## Lab Sample ID: 310-264400-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	23		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	700		50	21	mg/L	50		9056A	Total/NA
Arsenic	0.93	J	2.0	0.53	ug/L	1		6020B	Total/NA
Barium	45		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	4100		100	76	ug/L	1		6020B	Total/NA
Calcium	260		0.50	0.19	mg/L	1		6020B	Total/NA
Iron	3700		100	36	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

# Detection Summary

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Client Sample ID: MW-11 (Continued)

## Lab Sample ID: 310-264400-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.47	J	0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	200		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	60000		500	150	ug/L	1		6020B	Total/NA
Manganese	200		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	44		2.0	0.91	ug/L	1		6020B	Total/NA
Total Suspended Solids	17		7.5	2.6	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	1400		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	790.64				ft	1		Field Sampling	Total/NA
Field pH	7.17				SU	1		Field Sampling	Total/NA
Field Conductivity	1740				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	13.5				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: MW-12

## Lab Sample ID: 310-264400-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.8		5.0	2.3	mg/L	5		9056A	Total/NA
Fluoride	0.44	J	1.0	0.38	mg/L	5		9056A	Total/NA
Sulfate	54		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	5.1		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	280		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	1100		100	76	ug/L	1		6020B	Total/NA
Calcium	120		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	4.3		0.50	0.17	ug/L	1		6020B	Total/NA
Iron	1500		100	36	ug/L	1		6020B	Total/NA
Lithium	2.9	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	18000		500	150	ug/L	1		6020B	Total/NA
Manganese	2800		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	3.1		2.0	0.91	ug/L	1		6020B	Total/NA
Total Suspended Solids	6.3		2.5	0.85	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	440		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	788.04				ft	1		Field Sampling	Total/NA
Field pH	7.20				SU	1		Field Sampling	Total/NA
Field Conductivity	717				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	13.9				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: MW-13

## Lab Sample ID: 310-264400-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	28		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	860		50	21	mg/L	50		9056A	Total/NA
Boron	7600		1000	760	ug/L	10		6020B	Total/NA
Calcium	280		0.50	0.19	mg/L	1		6020B	Total/NA
Lithium	460		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	68000		500	150	ug/L	1		6020B	Total/NA
Molybdenum	140		2.0	0.91	ug/L	1		6020B	Total/NA
Total Suspended Solids	26		7.5	2.6	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	1600		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	788.71				ft	1		Field Sampling	Total/NA
Field pH	6.96				SU	1		Field Sampling	Total/NA
Field Conductivity	1987				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	15.5				Degrees C	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

# Detection Summary

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Client Sample ID: MW-15

## Lab Sample ID: 310-264400-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	27		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	1400		50	21	mg/L	50		9056A	Total/NA
Barium	21		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	15000		1000	760	ug/L	10		6020B	Total/NA
Calcium	490		5.0	1.9	mg/L	10		6020B	Total/NA
Cobalt	2.4		0.50	0.17	ug/L	1		6020B	Total/NA
Iron	310		100	36	ug/L	1		6020B	Total/NA
Lithium	50		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	61000		500	150	ug/L	1		6020B	Total/NA
Manganese	780		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	5.5		2.0	0.91	ug/L	1		6020B	Total/NA
Total Suspended Solids	2.0		1.9	0.64	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	2300		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	790.39				ft	1		Field Sampling	Total/NA
Field pH	6.96				SU	1		Field Sampling	Total/NA
Field Conductivity	2391				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	13.9				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: MW-16

## Lab Sample ID: 310-264400-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	2500		100	42	mg/L	100		9056A	Total/NA
Arsenic	2.2		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	39		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	81000		5000	3800	ug/L	50		6020B	Total/NA
Calcium	650		25	9.5	mg/L	50		6020B	Total/NA
Cobalt	4.1		0.50	0.17	ug/L	1		6020B	Total/NA
Iron	450		100	36	ug/L	1		6020B	Total/NA
Lead	0.25	J	0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	680		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	90000		25000	7500	ug/L	50		6020B	Total/NA
Manganese	1000		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	240		2.0	0.91	ug/L	1		6020B	Total/NA
Total Suspended Solids	3.8		1.9	0.64	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	3700		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	793.68				ft	1		Field Sampling	Total/NA
Field pH	7.10				SU	1		Field Sampling	Total/NA
Field Conductivity	4006				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	13.1				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: MW-17

## Lab Sample ID: 310-264400-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	26		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	600		50	21	mg/L	50		9056A	Total/NA
Arsenic	0.67	J	2.0	0.53	ug/L	1		6020B	Total/NA
Barium	52		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	2600		100	76	ug/L	1		6020B	Total/NA
Calcium	260		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.66		0.50	0.17	ug/L	1		6020B	Total/NA
Iron	3900		100	36	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

# Detection Summary

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Client Sample ID: MW-17 (Continued)

## Lab Sample ID: 310-264400-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	1.4		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	55		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	60000		500	150	ug/L	1		6020B	Total/NA
Manganese	320		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	6.0		2.0	0.91	ug/L	1		6020B	Total/NA
Total Suspended Solids	110		15	5.1	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	1200		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	791.09				ft	1		Field Sampling	Total/NA
Field pH	7.32				SU	1		Field Sampling	Total/NA
Field Conductivity	1622				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	12.1				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: MW-18

## Lab Sample ID: 310-264400-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	26		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	660		50	21	mg/L	50		9056A	Total/NA
Boron	2900		100	76	ug/L	1		6020B	Total/NA
Calcium	250		0.50	0.19	mg/L	1		6020B	Total/NA
Lithium	140		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	57000		500	150	ug/L	1		6020B	Total/NA
Molybdenum	13		2.0	0.91	ug/L	1		6020B	Total/NA
Total Suspended Solids	14		2.5	0.85	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	1300		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	791.66				ft	1		Field Sampling	Total/NA
Field pH	7.16				SU	1		Field Sampling	Total/NA
Field Conductivity	1717				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	20.4				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: MW-21

## Lab Sample ID: 310-264400-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	33		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	16		2.0	0.53	ug/L	1		6020B	Total/NA
Barium	380		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	300		100	76	ug/L	1		6020B	Total/NA
Calcium	120		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.26	J	0.50	0.17	ug/L	1		6020B	Total/NA
Iron	3100		100	36	ug/L	1		6020B	Total/NA
Lead	1.0		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	2.9	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	28000		500	150	ug/L	1		6020B	Total/NA
Manganese	210		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	1.1	J	2.0	0.91	ug/L	1		6020B	Total/NA
Total Suspended Solids	46		15	5.1	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	440		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	787.07				ft	1		Field Sampling	Total/NA
Field pH	7.15				SU	1		Field Sampling	Total/NA
Field Conductivity	786				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	15.2				Degrees C	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

# Detection Summary

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Client Sample ID: MW-22

## Lab Sample ID: 310-264400-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	31		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	210		5.0	2.1	mg/L	5		9056A	Total/NA
Barium	160		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	130		100	76	ug/L	1		6020B	Total/NA
Calcium	160		0.50	0.19	mg/L	1		6020B	Total/NA
Iron	1500		100	36	ug/L	1		6020B	Total/NA
Lead	0.31	J	0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	7.7	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	33000		500	150	ug/L	1		6020B	Total/NA
Manganese	150		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	1.0	J	2.0	0.91	ug/L	1		6020B	Total/NA
Total Suspended Solids	54		2.5	0.85	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	660		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	791.08				ft	1		Field Sampling	Total/NA
Field pH	7.05				SU	1		Field Sampling	Total/NA
Field Conductivity	1094				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	18.7				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: MW-23

## Lab Sample ID: 310-264400-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.7		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	50		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	0.63	J	2.0	0.53	ug/L	1		6020B	Total/NA
Barium	170		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	150		100	76	ug/L	1		6020B	Total/NA
Calcium	100		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.17	J	0.50	0.17	ug/L	1		6020B	Total/NA
Iron	260		100	36	ug/L	1		6020B	Total/NA
Lead	0.66		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	9.9	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	28000		500	150	ug/L	1		6020B	Total/NA
Manganese	30		10	3.6	ug/L	1		6020B	Total/NA
Total Suspended Solids	31		3.8	1.3	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	380		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	782.24				ft	1		Field Sampling	Total/NA
Field pH	7.18				SU	1		Field Sampling	Total/NA
Field Conductivity	670				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	16.9				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: MW-24

## Lab Sample ID: 310-264400-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	28		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	16		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	1.7	J	2.0	0.53	ug/L	1		6020B	Total/NA
Barium	290		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	130		100	76	ug/L	1		6020B	Total/NA
Calcium	77		0.50	0.19	mg/L	1		6020B	Total/NA
Iron	1900		100	36	ug/L	1		6020B	Total/NA
Magnesium	25000		500	150	ug/L	1		6020B	Total/NA
Manganese	360		10	3.6	ug/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

# Detection Summary

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Client Sample ID: MW-24 (Continued)

## Lab Sample ID: 310-264400-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	6.0		1.9	0.64	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	320		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	794.04				ft	1		Field Sampling	Total/NA
Field pH	7.38				SU	1		Field Sampling	Total/NA
Field Conductivity	572.6				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	15.8				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: MW-25

## Lab Sample ID: 310-264400-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	4.2	J	5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	27		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	0.68	J	2.0	0.53	ug/L	1		6020B	Total/NA
Barium	360		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	170		100	76	ug/L	1		6020B	Total/NA
Calcium	110		0.50	0.19	mg/L	1		6020B	Total/NA
Cobalt	0.91		0.50	0.17	ug/L	1		6020B	Total/NA
Iron	580		100	36	ug/L	1		6020B	Total/NA
Lead	1.6		0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	2.8	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	22000		500	150	ug/L	1		6020B	Total/NA
Manganese	210		10	3.6	ug/L	1		6020B	Total/NA
Total Suspended Solids	130		15	5.1	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	380		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	784.62				ft	1		Field Sampling	Total/NA
Field pH	7.05				SU	1		Field Sampling	Total/NA
Field Conductivity	662				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	12.3				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: MW-26

## Lab Sample ID: 310-264400-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	240		5.0	2.3	mg/L	5		9056A	Total/NA
Sulfate	49		5.0	2.1	mg/L	5		9056A	Total/NA
Barium	160		2.0	0.64	ug/L	1		6020B	Total/NA
Calcium	180		0.50	0.19	mg/L	1		6020B	Total/NA
Iron	76	J	100	36	ug/L	1		6020B	Total/NA
Lead	0.30	J	0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	9.1	J	10	2.5	ug/L	1		6020B	Total/NA
Magnesium	12000		500	150	ug/L	1		6020B	Total/NA
Manganese	4.7	J	10	3.6	ug/L	1		6020B	Total/NA
Total Suspended Solids	3.1		1.9	0.64	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	770		250	170	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	776.96				ft	1		Field Sampling	Total/NA
Field pH	6.65				SU	1		Field Sampling	Total/NA
Field Conductivity	1501				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	14.7				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: MW-27

## Lab Sample ID: 310-264400-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.7		5.0	2.3	mg/L	5		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

# Detection Summary

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Client Sample ID: MW-27 (Continued)

## Lab Sample ID: 310-264400-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	25		5.0	2.1	mg/L	5		9056A	Total/NA
Arsenic	0.85	J	2.0	0.53	ug/L	1		6020B	Total/NA
Barium	80		2.0	0.64	ug/L	1		6020B	Total/NA
Boron	160		100	76	ug/L	1		6020B	Total/NA
Calcium	100		0.50	0.19	mg/L	1		6020B	Total/NA
Iron	660		100	36	ug/L	1		6020B	Total/NA
Lead	0.30	J	0.50	0.24	ug/L	1		6020B	Total/NA
Lithium	12		10	2.5	ug/L	1		6020B	Total/NA
Magnesium	25000		500	150	ug/L	1		6020B	Total/NA
Manganese	49		10	3.6	ug/L	1		6020B	Total/NA
Total Suspended Solids	7.2		1.9	0.64	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	430		50	34	mg/L	1		SM 2540C	Total/NA
Groundwater Elevation	777.85				ft	1		Field Sampling	Total/NA
Field pH	6.45				SU	1		Field Sampling	Total/NA
Field Conductivity	794				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	11.7				Degrees C	1		Field Sampling	Total/NA

## Client Sample ID: LW-02

## Lab Sample ID: 310-264400-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	880		50	21	mg/L	50		9056A	Total/NA
Arsenic	180		2.0	0.53	ug/L	1		6020B	Total/NA
Boron	17000		1000	760	ug/L	10		6020B	Total/NA
Calcium	170		0.50	0.19	mg/L	1		6020B	Total/NA
Lithium	600		10	2.5	ug/L	1		6020B	Total/NA
Manganese	290		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	120		2.0	0.91	ug/L	1		6020B	Total/NA
Total Suspended Solids	4500		30	10	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	1700		250	170	mg/L	1		SM 2540C	Total/NA
Field pH	7.71				SU	1		Field Sampling	Total/NA
Field Conductivity	2286				umhos/cm	1		Field Sampling	Total/NA
Field Temperature	15.3				Degrees C	1		Field Sampling	Total/NA
Leachate Elevation	800.20				ft	1		Field Sampling	Total/NA

## Client Sample ID: LW-03

## Lab Sample ID: 310-264400-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	59		2.0	0.53	ug/L	1		6020B	Total/NA
Boron	2600		100	76	ug/L	1		6020B	Total/NA
Calcium	180		0.50	0.19	mg/L	1		6020B	Total/NA
Lithium	79		10	2.5	ug/L	1		6020B	Total/NA
Manganese	160		10	3.6	ug/L	1		6020B	Total/NA
Molybdenum	24		2.0	0.91	ug/L	1		6020B	Total/NA
Leachate Elevation	819.99				ft	1		Field Sampling	Total/NA

## Client Sample ID: Field Blank

## Lab Sample ID: 310-264400-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	97	J	100	76	ug/L	1		6020B	Total/NA
Calcium	0.33	J	0.50	0.19	mg/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-02A**

**Lab Sample ID: 310-264400-1**

Date Collected: 09/07/23 14:30

Matrix: Water

Date Received: 09/08/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.6		5.0	2.3	mg/L			09/15/23 20:57	5
Fluoride	<0.38		1.0	0.38	mg/L			09/15/23 20:57	5
Sulfate	28		5.0	2.1	mg/L			09/15/23 20:57	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.88	J	2.0	0.53	ug/L		09/12/23 08:40	09/21/23 20:46	1
Barium	89		2.0	0.64	ug/L		09/12/23 08:40	09/21/23 20:46	1
Beryllium	0.43	J	1.0	0.33	ug/L		09/12/23 08:40	09/21/23 20:46	1
Boron	100		100	76	ug/L		09/12/23 08:40	09/21/23 20:46	1
Calcium	81		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 20:46	1
Cobalt	0.50		0.50	0.17	ug/L		09/12/23 08:40	09/21/23 20:46	1
Iron	36	J	100	36	ug/L		09/12/23 08:40	09/21/23 20:46	1
Lead	0.78		0.50	0.24	ug/L		09/12/23 08:40	09/21/23 20:46	1
Lithium	6.0	J	10	2.5	ug/L		09/12/23 08:40	09/21/23 20:46	1
Magnesium	13000		500	150	ug/L		09/12/23 08:40	09/21/23 20:46	1
Manganese	11		10	3.6	ug/L		09/12/23 08:40	09/21/23 20:46	1
Molybdenum	2.9		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 20:46	1
Selenium	2.6	J	5.0	1.4	ug/L		09/12/23 08:40	09/21/23 20:46	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	2.4		1.9	0.64	mg/L			09/11/23 12:06	1
Total Dissolved Solids (SM 2540C)	300		50	34	mg/L			09/11/23 20:17	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	821.63				ft			09/07/23 14:30	1
Field pH	7.28				SU			09/07/23 14:30	1
Field Conductivity	535				umhos/cm			09/07/23 14:30	1
Field Temperature	17.9				Degrees C			09/07/23 14:30	1



# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-03**  
 Date Collected: 09/06/23 09:00  
 Date Received: 09/08/23 16:20

**Lab Sample ID: 310-264400-2**  
 Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>13</b>		5.0	2.3	mg/L			09/14/23 18:53	5
Fluoride	<0.38		1.0	0.38	mg/L			09/14/23 18:53	5
<b>Sulfate</b>	<b>200</b>		5.0	2.1	mg/L			09/15/23 17:51	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<76		100	76	ug/L		09/12/23 08:40	09/21/23 20:58	1
<b>Calcium</b>	<b>170</b>		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 20:58	1
<b>Lithium</b>	<b>3.4</b>	<b>J</b>	10	2.5	ug/L		09/12/23 08:40	09/21/23 20:58	1
<b>Magnesium</b>	<b>6900</b>		500	150	ug/L		09/12/23 08:40	09/21/23 20:58	1
<b>Molybdenum</b>	<b>1.4</b>	<b>J</b>	2.0	0.91	ug/L		09/12/23 08:40	09/21/23 20:58	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>5.5</b>		1.9	0.64	mg/L			09/11/23 12:06	1
<b>Total Dissolved Solids (SM 2540C)</b>	<b>520</b>		50	34	mg/L			09/11/23 20:17	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Groundwater Elevation</b>	<b>811.93</b>				ft			09/06/23 09:00	1
<b>Field pH</b>	<b>7.13</b>				SU			09/06/23 09:00	1
<b>Field Conductivity</b>	<b>814</b>				umhos/cm			09/06/23 09:00	1
<b>Field Temperature</b>	<b>13.2</b>				Degrees C			09/06/23 09:00	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-08**  
 Date Collected: 09/07/23 13:40  
 Date Received: 09/08/23 16:20

**Lab Sample ID: 310-264400-3**  
 Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.7	J	5.0	2.3	mg/L			09/15/23 21:34	5
Fluoride	<0.38		1.0	0.38	mg/L			09/15/23 21:34	5
Sulfate	27		5.0	2.1	mg/L			09/15/23 21:34	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		09/12/23 08:40	09/21/23 21:00	1
Barium	94		2.0	0.64	ug/L		09/12/23 08:40	09/21/23 21:00	1
Beryllium	<0.33		1.0	0.33	ug/L		09/12/23 08:40	09/21/23 21:00	1
Boron	830		100	76	ug/L		09/12/23 08:40	09/21/23 21:00	1
Calcium	73		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 21:00	1
Cobalt	0.32	J	0.50	0.17	ug/L		09/12/23 08:40	09/21/23 21:00	1
Iron	50	J	100	36	ug/L		09/12/23 08:40	09/21/23 21:00	1
Lead	0.28	J	0.50	0.24	ug/L		09/12/23 08:40	09/21/23 21:00	1
Lithium	7.2	J	10	2.5	ug/L		09/12/23 08:40	09/21/23 21:00	1
Magnesium	19000		500	150	ug/L		09/12/23 08:40	09/21/23 21:00	1
Manganese	64		10	3.6	ug/L		09/12/23 08:40	09/21/23 21:00	1
Molybdenum	4.9		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 21:00	1
Selenium	<1.4		5.0	1.4	ug/L		09/12/23 08:40	09/21/23 21:00	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	7.2		1.9	0.64	mg/L			09/11/23 12:06	1
Total Dissolved Solids (SM 2540C)	52		50	34	mg/L			09/11/23 20:17	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	795.86				ft			09/07/23 13:40	1
Field pH	7.20				SU			09/07/23 13:40	1
Field Conductivity	498.3				umhos/cm			09/07/23 13:40	1
Field Temperature	15.5				Degrees C			09/07/23 13:40	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-09**

**Lab Sample ID: 310-264400-4**

Date Collected: 09/07/23 13:35

Matrix: Water

Date Received: 09/08/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41		5.0	2.3	mg/L			09/15/23 21:46	5
Fluoride	<0.38		1.0	0.38	mg/L			09/15/23 21:46	5
Sulfate	68		5.0	2.1	mg/L			09/15/23 21:46	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4300		100	76	ug/L		09/12/23 08:40	09/21/23 21:03	1
Calcium	85		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 21:03	1
Lithium	17		10	2.5	ug/L		09/12/23 08:40	09/21/23 21:03	1
Magnesium	21000		500	150	ug/L		09/12/23 08:40	09/21/23 21:03	1
Molybdenum	28		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 21:03	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	69		3.8	1.3	mg/L			09/11/23 12:06	1
Total Dissolved Solids (SM 2540C)	460		50	34	mg/L			09/11/23 20:17	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	795.01				ft			09/07/23 13:35	1
Field pH	7.47				SU			09/07/23 13:35	1
Field Conductivity	780				umhos/cm			09/07/23 13:35	1
Field Temperature	13.3				Degrees C			09/07/23 13:35	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-10**  
 Date Collected: 09/06/23 15:45  
 Date Received: 09/08/23 16:20

**Lab Sample ID: 310-264400-5**  
 Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26		5.0	2.3	mg/L			09/14/23 19:07	5
Fluoride	<0.38		1.0	0.38	mg/L			09/14/23 19:07	5
Sulfate	1200		50	21	mg/L			09/15/23 18:05	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	8900		1000	760	ug/L		09/12/23 08:40	09/25/23 15:23	10
Calcium	280		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 21:19	1
Lithium	640		10	2.5	ug/L		09/12/23 08:40	09/21/23 21:19	1
Magnesium	67000		500	150	ug/L		09/12/23 08:40	09/21/23 21:19	1
Molybdenum	36		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 21:19	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	59		15	5.1	mg/L			09/11/23 12:06	1
Total Dissolved Solids (SM 2540C)	1800		50	34	mg/L			09/11/23 20:17	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	791.31				ft			09/06/23 15:45	1
Field pH	6.80				SU			09/06/23 15:45	1
Field Conductivity	2418				umhos/cm			09/06/23 15:45	1
Field Temperature	18.2				Degrees C			09/06/23 15:45	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-11**

**Lab Sample ID: 310-264400-6**

Date Collected: 09/07/23 08:45

Matrix: Water

Date Received: 09/08/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23		5.0	2.3	mg/L			09/15/23 22:22	5
Fluoride	<0.38		1.0	0.38	mg/L			09/15/23 22:22	5
Sulfate	700		50	21	mg/L			09/18/23 09:11	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.93	J	2.0	0.53	ug/L		09/12/23 08:40	09/21/23 21:21	1
Barium	45		2.0	0.64	ug/L		09/12/23 08:40	09/21/23 21:21	1
Beryllium	<0.33		1.0	0.33	ug/L		09/12/23 08:40	09/21/23 21:21	1
Boron	4100		100	76	ug/L		09/12/23 08:40	09/21/23 21:21	1
Calcium	260		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 21:21	1
Cobalt	<0.17		0.50	0.17	ug/L		09/12/23 08:40	09/21/23 21:21	1
Iron	3700		100	36	ug/L		09/12/23 08:40	09/21/23 21:21	1
Lead	0.47	J	0.50	0.24	ug/L		09/12/23 08:40	09/21/23 21:21	1
Lithium	200		10	2.5	ug/L		09/12/23 08:40	09/21/23 21:21	1
Magnesium	60000		500	150	ug/L		09/12/23 08:40	09/21/23 21:21	1
Manganese	200		10	3.6	ug/L		09/12/23 08:40	09/21/23 21:21	1
Molybdenum	44		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 21:21	1
Selenium	<1.4		5.0	1.4	ug/L		09/12/23 08:40	09/21/23 21:21	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	17		7.5	2.6	mg/L			09/11/23 12:06	1
Total Dissolved Solids (SM 2540C)	1400		50	34	mg/L			09/11/23 20:17	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	790.64				ft			09/07/23 08:45	1
Field pH	7.17				SU			09/07/23 08:45	1
Field Conductivity	1740				umhos/cm			09/07/23 08:45	1
Field Temperature	13.5				Degrees C			09/07/23 08:45	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-12**  
 Date Collected: 09/06/23 16:15  
 Date Received: 09/08/23 16:20

**Lab Sample ID: 310-264400-7**  
 Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.8		5.0	2.3	mg/L			09/14/23 19:21	5
Fluoride	0.44	J	1.0	0.38	mg/L			09/14/23 19:21	5
Sulfate	54		5.0	2.1	mg/L			09/15/23 18:19	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.1		2.0	0.53	ug/L		09/12/23 08:40	09/21/23 21:23	1
Barium	280		2.0	0.64	ug/L		09/12/23 08:40	09/21/23 21:23	1
Beryllium	<0.33		1.0	0.33	ug/L		09/12/23 08:40	09/21/23 21:23	1
Boron	1100		100	76	ug/L		09/12/23 08:40	09/21/23 21:23	1
Calcium	120		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 21:23	1
Cobalt	4.3		0.50	0.17	ug/L		09/12/23 08:40	09/21/23 21:23	1
Iron	1500		100	36	ug/L		09/12/23 08:40	09/21/23 21:23	1
Lead	<0.24		0.50	0.24	ug/L		09/12/23 08:40	09/21/23 21:23	1
Lithium	2.9	J	10	2.5	ug/L		09/12/23 08:40	09/21/23 21:23	1
Magnesium	18000		500	150	ug/L		09/12/23 08:40	09/21/23 21:23	1
Manganese	2800		10	3.6	ug/L		09/12/23 08:40	09/21/23 21:23	1
Molybdenum	3.1		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 21:23	1
Selenium	<1.4		5.0	1.4	ug/L		09/12/23 08:40	09/21/23 21:23	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	6.3		2.5	0.85	mg/L			09/11/23 12:06	1
Total Dissolved Solids (SM 2540C)	440		50	34	mg/L			09/11/23 20:17	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	788.04				ft			09/06/23 16:15	1
Field pH	7.20				SU			09/06/23 16:15	1
Field Conductivity	717				umhos/cm			09/06/23 16:15	1
Field Temperature	13.9				Degrees C			09/06/23 16:15	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-13**

**Lab Sample ID: 310-264400-8**

Date Collected: 09/07/23 10:55

Matrix: Water

Date Received: 09/08/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28		5.0	2.3	mg/L			09/15/23 22:34	5
Fluoride	<0.38		1.0	0.38	mg/L			09/15/23 22:34	5
Sulfate	860		50	21	mg/L			09/18/23 09:23	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	7600		1000	760	ug/L		09/12/23 08:40	09/25/23 15:26	10
Calcium	280		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 21:26	1
Lithium	460		10	2.5	ug/L		09/12/23 08:40	09/21/23 21:26	1
Magnesium	68000		500	150	ug/L		09/12/23 08:40	09/21/23 21:26	1
Molybdenum	140		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 21:26	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	26		7.5	2.6	mg/L			09/11/23 12:06	1
Total Dissolved Solids (SM 2540C)	1600		50	34	mg/L			09/11/23 20:17	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	788.71				ft			09/07/23 10:55	1
Field pH	6.96				SU			09/07/23 10:55	1
Field Conductivity	1987				umhos/cm			09/07/23 10:55	1
Field Temperature	15.5				Degrees C			09/07/23 10:55	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-15**

**Lab Sample ID: 310-264400-9**

Date Collected: 09/07/23 11:40

Matrix: Water

Date Received: 09/08/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	27		5.0	2.3	mg/L			09/15/23 22:46	5
Fluoride	<0.38		1.0	0.38	mg/L			09/15/23 22:46	5
Sulfate	1400		50	21	mg/L			09/18/23 09:35	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		09/12/23 08:40	09/21/23 21:28	1
Barium	21		2.0	0.64	ug/L		09/12/23 08:40	09/21/23 21:28	1
Beryllium	<0.33		1.0	0.33	ug/L		09/12/23 08:40	09/21/23 21:28	1
Boron	15000		1000	760	ug/L		09/12/23 08:40	09/25/23 15:28	10
Calcium	490		5.0	1.9	mg/L		09/12/23 08:40	09/25/23 15:28	10
Cobalt	2.4		0.50	0.17	ug/L		09/12/23 08:40	09/21/23 21:28	1
Iron	310		100	36	ug/L		09/12/23 08:40	09/21/23 21:28	1
Lead	<0.24		0.50	0.24	ug/L		09/12/23 08:40	09/21/23 21:28	1
Lithium	50		10	2.5	ug/L		09/12/23 08:40	09/21/23 21:28	1
Magnesium	61000		500	150	ug/L		09/12/23 08:40	09/21/23 21:28	1
Manganese	780		10	3.6	ug/L		09/12/23 08:40	09/21/23 21:28	1
Molybdenum	5.5		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 21:28	1
Selenium	<1.4		5.0	1.4	ug/L		09/12/23 08:40	09/21/23 21:28	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	2.0		1.9	0.64	mg/L			09/11/23 12:06	1
Total Dissolved Solids (SM 2540C)	2300		50	34	mg/L			09/11/23 20:17	1

### Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	790.39				ft			09/07/23 11:40	1
Field pH	6.96				SU			09/07/23 11:40	1
Field Conductivity	2391				umhos/cm			09/07/23 11:40	1
Field Temperature	13.9				Degrees C			09/07/23 11:40	1



# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-16**

**Lab Sample ID: 310-264400-10**

Date Collected: 09/06/23 10:25

Matrix: Water

Date Received: 09/08/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		5.0	2.3	mg/L			09/14/23 19:35	5
Fluoride	<0.38		1.0	0.38	mg/L			09/14/23 19:35	5
Sulfate	2500		100	42	mg/L			09/15/23 18:33	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.2		2.0	0.53	ug/L		09/12/23 08:40	09/21/23 21:30	1
Barium	39		2.0	0.64	ug/L		09/12/23 08:40	09/21/23 21:30	1
Beryllium	<0.33		1.0	0.33	ug/L		09/12/23 08:40	09/21/23 21:30	1
Boron	81000		5000	3800	ug/L		09/12/23 08:40	09/25/23 15:30	50
Calcium	650		25	9.5	mg/L		09/12/23 08:40	09/25/23 15:30	50
Cobalt	4.1		0.50	0.17	ug/L		09/12/23 08:40	09/21/23 21:30	1
Iron	450		100	36	ug/L		09/12/23 08:40	09/21/23 21:30	1
Lead	0.25 J		0.50	0.24	ug/L		09/12/23 08:40	09/21/23 21:30	1
Lithium	680		10	2.5	ug/L		09/12/23 08:40	09/21/23 21:30	1
Magnesium	90000		25000	7500	ug/L		09/12/23 08:40	09/22/23 19:58	50
Manganese	1000		10	3.6	ug/L		09/12/23 08:40	09/21/23 21:30	1
Molybdenum	240		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 21:30	1
Selenium	<1.4		5.0	1.4	ug/L		09/12/23 08:40	09/21/23 21:30	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	3.8		1.9	0.64	mg/L			09/11/23 12:06	1
Total Dissolved Solids (SM 2540C)	3700		50	34	mg/L			09/11/23 20:17	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	793.68				ft			09/06/23 10:25	1
Field pH	7.10				SU			09/06/23 10:25	1
Field Conductivity	4006				umhos/cm			09/06/23 10:25	1
Field Temperature	13.1				Degrees C			09/06/23 10:25	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-17**

**Lab Sample ID: 310-264400-11**

Date Collected: 09/06/23 11:15

Matrix: Water

Date Received: 09/08/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26		5.0	2.3	mg/L			09/15/23 22:58	5
Fluoride	<0.38		1.0	0.38	mg/L			09/15/23 22:58	5
Sulfate	600		50	21	mg/L			09/18/23 09:48	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.67	J	2.0	0.53	ug/L		09/12/23 08:40	09/21/23 21:32	1
Barium	52		2.0	0.64	ug/L		09/12/23 08:40	09/21/23 21:32	1
Beryllium	<0.33		1.0	0.33	ug/L		09/12/23 08:40	09/21/23 21:32	1
Boron	2600		100	76	ug/L		09/12/23 08:40	09/21/23 21:32	1
Calcium	260		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 21:32	1
Cobalt	0.66		0.50	0.17	ug/L		09/12/23 08:40	09/21/23 21:32	1
Iron	3900		100	36	ug/L		09/12/23 08:40	09/21/23 21:32	1
Lead	1.4		0.50	0.24	ug/L		09/12/23 08:40	09/21/23 21:32	1
Lithium	55		10	2.5	ug/L		09/12/23 08:40	09/21/23 21:32	1
Magnesium	60000		500	150	ug/L		09/12/23 08:40	09/21/23 21:32	1
Manganese	320		10	3.6	ug/L		09/12/23 08:40	09/21/23 21:32	1
Molybdenum	6.0		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 21:32	1
Selenium	<1.4		5.0	1.4	ug/L		09/12/23 08:40	09/21/23 21:32	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	110		15	5.1	mg/L			09/11/23 12:06	1
Total Dissolved Solids (SM 2540C)	1200		50	34	mg/L			09/11/23 20:17	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	791.09				ft			09/06/23 11:15	1
Field pH	7.32				SU			09/06/23 11:15	1
Field Conductivity	1622				umhos/cm			09/06/23 11:15	1
Field Temperature	12.1				Degrees C			09/06/23 11:15	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-18**

**Lab Sample ID: 310-264400-12**

Date Collected: 09/06/23 12:35

Matrix: Water

Date Received: 09/08/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26		5.0	2.3	mg/L			09/15/23 23:10	5
Fluoride	<0.38		1.0	0.38	mg/L			09/15/23 23:10	5
Sulfate	660		50	21	mg/L			09/18/23 10:00	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2900		100	76	ug/L		09/12/23 08:40	09/21/23 21:37	1
Calcium	250		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 21:37	1
Lithium	140		10	2.5	ug/L		09/12/23 08:40	09/21/23 21:37	1
Magnesium	57000		500	150	ug/L		09/12/23 08:40	09/21/23 21:37	1
Molybdenum	13		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 21:37	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	14		2.5	0.85	mg/L			09/11/23 11:09	1
Total Dissolved Solids (SM 2540C)	1300		50	34	mg/L			09/11/23 20:17	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	791.66				ft			09/06/23 12:35	1
Field pH	7.16				SU			09/06/23 12:35	1
Field Conductivity	1717				umhos/cm			09/06/23 12:35	1
Field Temperature	20.4				Degrees C			09/06/23 12:35	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-21**

**Lab Sample ID: 310-264400-13**

Date Collected: 09/07/23 12:15

Matrix: Water

Date Received: 09/08/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		5.0	2.3	mg/L			09/15/23 23:23	5
Fluoride	<0.38		1.0	0.38	mg/L			09/15/23 23:23	5
Sulfate	33		5.0	2.1	mg/L			09/15/23 23:23	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	16		2.0	0.53	ug/L		09/12/23 08:40	09/21/23 21:39	1
Barium	380		2.0	0.64	ug/L		09/12/23 08:40	09/21/23 21:39	1
Beryllium	<0.33		1.0	0.33	ug/L		09/12/23 08:40	09/21/23 21:39	1
Boron	300		100	76	ug/L		09/12/23 08:40	09/21/23 21:39	1
Calcium	120		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 21:39	1
Cobalt	0.26	J	0.50	0.17	ug/L		09/12/23 08:40	09/21/23 21:39	1
Iron	3100		100	36	ug/L		09/12/23 08:40	09/21/23 21:39	1
Lead	1.0		0.50	0.24	ug/L		09/12/23 08:40	09/21/23 21:39	1
Lithium	2.9	J	10	2.5	ug/L		09/12/23 08:40	09/21/23 21:39	1
Magnesium	28000		500	150	ug/L		09/12/23 08:40	09/21/23 21:39	1
Manganese	210		10	3.6	ug/L		09/12/23 08:40	09/21/23 21:39	1
Molybdenum	1.1	J	2.0	0.91	ug/L		09/12/23 08:40	09/21/23 21:39	1
Selenium	<1.4		5.0	1.4	ug/L		09/12/23 08:40	09/21/23 21:39	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	46		15	5.1	mg/L			09/11/23 12:06	1
Total Dissolved Solids (SM 2540C)	440		50	34	mg/L			09/12/23 18:04	1

### Method: EPA Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	787.07				ft			09/07/23 12:15	1
Field pH	7.15				SU			09/07/23 12:15	1
Field Conductivity	786				umhos/cm			09/07/23 12:15	1
Field Temperature	15.2				Degrees C			09/07/23 12:15	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-22**  
 Date Collected: 09/07/23 11:50  
 Date Received: 09/08/23 16:20

**Lab Sample ID: 310-264400-14**  
 Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31		5.0	2.3	mg/L			09/15/23 23:35	5
Fluoride	<0.38		1.0	0.38	mg/L			09/15/23 23:35	5
Sulfate	210		5.0	2.1	mg/L			09/15/23 23:35	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		09/12/23 08:40	09/21/23 21:56	1
Barium	160		2.0	0.64	ug/L		09/12/23 08:40	09/21/23 21:56	1
Beryllium	<0.33		1.0	0.33	ug/L		09/12/23 08:40	09/21/23 21:56	1
Boron	130		100	76	ug/L		09/12/23 08:40	09/21/23 21:56	1
Calcium	160		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 21:56	1
Cobalt	<0.17		0.50	0.17	ug/L		09/12/23 08:40	09/21/23 21:56	1
Iron	1500		100	36	ug/L		09/12/23 08:40	09/21/23 21:56	1
Lead	0.31	J	0.50	0.24	ug/L		09/12/23 08:40	09/21/23 21:56	1
Lithium	7.7	J	10	2.5	ug/L		09/12/23 08:40	09/21/23 21:56	1
Magnesium	33000		500	150	ug/L		09/12/23 08:40	09/21/23 21:56	1
Manganese	150		10	3.6	ug/L		09/12/23 08:40	09/21/23 21:56	1
Molybdenum	1.0	J	2.0	0.91	ug/L		09/12/23 08:40	09/21/23 21:56	1
Selenium	<1.4		5.0	1.4	ug/L		09/12/23 08:40	09/21/23 21:56	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	54		2.5	0.85	mg/L			09/11/23 11:09	1
Total Dissolved Solids (SM 2540C)	660		50	34	mg/L			09/12/23 18:04	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	791.08				ft			09/07/23 11:50	1
Field pH	7.05				SU			09/07/23 11:50	1
Field Conductivity	1094				umhos/cm			09/07/23 11:50	1
Field Temperature	18.7				Degrees C			09/07/23 11:50	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-23**

**Lab Sample ID: 310-264400-15**

Date Collected: 09/07/23 12:30

Matrix: Water

Date Received: 09/08/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.7		5.0	2.3	mg/L			09/15/23 23:47	5
Fluoride	<0.38		1.0	0.38	mg/L			09/15/23 23:47	5
Sulfate	50		5.0	2.1	mg/L			09/15/23 23:47	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.63	J	2.0	0.53	ug/L		09/12/23 08:40	09/21/23 21:58	1
Barium	170		2.0	0.64	ug/L		09/12/23 08:40	09/21/23 21:58	1
Beryllium	<0.33		1.0	0.33	ug/L		09/12/23 08:40	09/21/23 21:58	1
Boron	150		100	76	ug/L		09/12/23 08:40	09/21/23 21:58	1
Calcium	100		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 21:58	1
Cobalt	0.17	J	0.50	0.17	ug/L		09/12/23 08:40	09/21/23 21:58	1
Iron	260		100	36	ug/L		09/12/23 08:40	09/21/23 21:58	1
Lead	0.66		0.50	0.24	ug/L		09/12/23 08:40	09/21/23 21:58	1
Lithium	9.9	J	10	2.5	ug/L		09/12/23 08:40	09/21/23 21:58	1
Magnesium	28000		500	150	ug/L		09/12/23 08:40	09/21/23 21:58	1
Manganese	30		10	3.6	ug/L		09/12/23 08:40	09/21/23 21:58	1
Molybdenum	<0.91		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 21:58	1
Selenium	<1.4		5.0	1.4	ug/L		09/12/23 08:40	09/21/23 21:58	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	31		3.8	1.3	mg/L			09/11/23 12:06	1
Total Dissolved Solids (SM 2540C)	380		50	34	mg/L			09/12/23 18:04	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	782.24				ft			09/07/23 12:30	1
Field pH	7.18				SU			09/07/23 12:30	1
Field Conductivity	670				umhos/cm			09/07/23 12:30	1
Field Temperature	16.9				Degrees C			09/07/23 12:30	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-24**

**Lab Sample ID: 310-264400-16**

Date Collected: 09/06/23 14:15

Matrix: Water

Date Received: 09/08/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>28</b>		5.0	2.3	mg/L			09/15/23 23:59	5
Fluoride	<0.38		1.0	0.38	mg/L			09/15/23 23:59	5
<b>Sulfate</b>	<b>16</b>		5.0	2.1	mg/L			09/15/23 23:59	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Arsenic</b>	<b>1.7</b>	<b>J</b>	2.0	0.53	ug/L		09/12/23 08:40	09/21/23 22:00	1
<b>Barium</b>	<b>290</b>		2.0	0.64	ug/L		09/12/23 08:40	09/21/23 22:00	1
Beryllium	<0.33		1.0	0.33	ug/L		09/12/23 08:40	09/21/23 22:00	1
<b>Boron</b>	<b>130</b>		100	76	ug/L		09/12/23 08:40	09/21/23 22:00	1
<b>Calcium</b>	<b>77</b>		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 22:00	1
Cobalt	<0.17		0.50	0.17	ug/L		09/12/23 08:40	09/21/23 22:00	1
<b>Iron</b>	<b>1900</b>		100	36	ug/L		09/12/23 08:40	09/21/23 22:00	1
Lead	<0.24		0.50	0.24	ug/L		09/12/23 08:40	09/21/23 22:00	1
Lithium	<2.5		10	2.5	ug/L		09/12/23 08:40	09/21/23 22:00	1
<b>Magnesium</b>	<b>25000</b>		500	150	ug/L		09/12/23 08:40	09/21/23 22:00	1
<b>Manganese</b>	<b>360</b>		10	3.6	ug/L		09/12/23 08:40	09/21/23 22:00	1
Molybdenum	<0.91		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 22:00	1
Selenium	<1.4		5.0	1.4	ug/L		09/12/23 08:40	09/21/23 22:00	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>6.0</b>		1.9	0.64	mg/L			09/11/23 11:09	1
<b>Total Dissolved Solids (SM 2540C)</b>	<b>320</b>		50	34	mg/L			09/11/23 20:17	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Groundwater Elevation</b>	<b>794.04</b>				ft			09/06/23 14:15	1
<b>Field pH</b>	<b>7.38</b>				SU			09/06/23 14:15	1
<b>Field Conductivity</b>	<b>572.6</b>				umhos/cm			09/06/23 14:15	1
<b>Field Temperature</b>	<b>15.8</b>				Degrees C			09/06/23 14:15	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-25**

**Lab Sample ID: 310-264400-17**

Date Collected: 09/07/23 14:20

Matrix: Water

Date Received: 09/08/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.2	J	5.0	2.3	mg/L			09/16/23 00:11	5
Fluoride	<0.38		1.0	0.38	mg/L			09/16/23 00:11	5
Sulfate	27		5.0	2.1	mg/L			09/16/23 00:11	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.68	J	2.0	0.53	ug/L		09/12/23 08:40	09/21/23 22:03	1
Barium	360		2.0	0.64	ug/L		09/12/23 08:40	09/21/23 22:03	1
Beryllium	<0.33		1.0	0.33	ug/L		09/12/23 08:40	09/21/23 22:03	1
Boron	170		100	76	ug/L		09/12/23 08:40	09/21/23 22:03	1
Calcium	110		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 22:03	1
Cobalt	0.91		0.50	0.17	ug/L		09/12/23 08:40	09/21/23 22:03	1
Iron	580		100	36	ug/L		09/12/23 08:40	09/21/23 22:03	1
Lead	1.6		0.50	0.24	ug/L		09/12/23 08:40	09/21/23 22:03	1
Lithium	2.8	J	10	2.5	ug/L		09/12/23 08:40	09/21/23 22:03	1
Magnesium	22000		500	150	ug/L		09/12/23 08:40	09/21/23 22:03	1
Manganese	210		10	3.6	ug/L		09/12/23 08:40	09/21/23 22:03	1
Molybdenum	<0.91		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 22:03	1
Selenium	<1.4		5.0	1.4	ug/L		09/12/23 08:40	09/21/23 22:03	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	130		15	5.1	mg/L			09/11/23 12:06	1
Total Dissolved Solids (SM 2540C)	380		50	34	mg/L			09/12/23 18:04	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	784.62				ft			09/07/23 14:20	1
Field pH	7.05				SU			09/07/23 14:20	1
Field Conductivity	662				umhos/cm			09/07/23 14:20	1
Field Temperature	12.3				Degrees C			09/07/23 14:20	1



# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-26**  
 Date Collected: 09/07/23 09:25  
 Date Received: 09/08/23 16:20

**Lab Sample ID: 310-264400-18**  
 Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>240</b>		5.0	2.3	mg/L			09/16/23 00:47	5
Fluoride	<0.38		1.0	0.38	mg/L			09/16/23 00:47	5
<b>Sulfate</b>	<b>49</b>		5.0	2.1	mg/L			09/16/23 00:47	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		09/12/23 08:40	09/21/23 22:05	1
<b>Barium</b>	<b>160</b>		2.0	0.64	ug/L		09/12/23 08:40	09/21/23 22:05	1
Beryllium	<0.33		1.0	0.33	ug/L		09/12/23 08:40	09/21/23 22:05	1
Boron	<76		100	76	ug/L		09/12/23 08:40	09/21/23 22:05	1
<b>Calcium</b>	<b>180</b>		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 22:05	1
Cobalt	<0.17		0.50	0.17	ug/L		09/12/23 08:40	09/21/23 22:05	1
<b>Iron</b>	<b>76 J</b>		100	36	ug/L		09/12/23 08:40	09/21/23 22:05	1
<b>Lead</b>	<b>0.30 J</b>		0.50	0.24	ug/L		09/12/23 08:40	09/21/23 22:05	1
<b>Lithium</b>	<b>9.1 J</b>		10	2.5	ug/L		09/12/23 08:40	09/21/23 22:05	1
<b>Magnesium</b>	<b>12000</b>		500	150	ug/L		09/12/23 08:40	09/21/23 22:05	1
<b>Manganese</b>	<b>4.7 J</b>		10	3.6	ug/L		09/12/23 08:40	09/21/23 22:05	1
Molybdenum	<0.91		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 22:05	1
Selenium	<1.4		5.0	1.4	ug/L		09/12/23 08:40	09/21/23 22:05	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>3.1</b>		1.9	0.64	mg/L			09/11/23 11:09	1
<b>Total Dissolved Solids (SM 2540C)</b>	<b>770</b>		250	170	mg/L			09/12/23 18:04	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Groundwater Elevation</b>	<b>776.96</b>				ft			09/07/23 09:25	1
<b>Field pH</b>	<b>6.65</b>				SU			09/07/23 09:25	1
<b>Field Conductivity</b>	<b>1501</b>				umhos/cm			09/07/23 09:25	1
<b>Field Temperature</b>	<b>14.7</b>				Degrees C			09/07/23 09:25	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-27**

**Lab Sample ID: 310-264400-19**

Date Collected: 09/06/23 13:40

Matrix: Water

Date Received: 09/08/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.7		5.0	2.3	mg/L			09/16/23 00:59	5
Fluoride	<0.38		1.0	0.38	mg/L			09/16/23 00:59	5
Sulfate	25		5.0	2.1	mg/L			09/16/23 00:59	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.85	J	2.0	0.53	ug/L		09/12/23 08:40	09/21/23 22:08	1
Barium	80		2.0	0.64	ug/L		09/12/23 08:40	09/21/23 22:08	1
Beryllium	<0.33		1.0	0.33	ug/L		09/12/23 08:40	09/21/23 22:08	1
Boron	160		100	76	ug/L		09/12/23 08:40	09/21/23 22:08	1
Calcium	100		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 22:08	1
Cobalt	<0.17		0.50	0.17	ug/L		09/12/23 08:40	09/21/23 22:08	1
Iron	660		100	36	ug/L		09/12/23 08:40	09/21/23 22:08	1
Lead	0.30	J	0.50	0.24	ug/L		09/12/23 08:40	09/21/23 22:08	1
Lithium	12		10	2.5	ug/L		09/12/23 08:40	09/21/23 22:08	1
Magnesium	25000		500	150	ug/L		09/12/23 08:40	09/21/23 22:08	1
Manganese	49		10	3.6	ug/L		09/12/23 08:40	09/21/23 22:08	1
Molybdenum	<0.91		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 22:08	1
Selenium	<1.4		5.0	1.4	ug/L		09/12/23 08:40	09/21/23 22:08	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	7.2		1.9	0.64	mg/L			09/11/23 12:06	1
Total Dissolved Solids (SM 2540C)	430		50	34	mg/L			09/11/23 20:17	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Groundwater Elevation	777.85				ft			09/06/23 13:40	1
Field pH	6.45				SU			09/06/23 13:40	1
Field Conductivity	794				umhos/cm			09/06/23 13:40	1
Field Temperature	11.7				Degrees C			09/06/23 13:40	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: LW-02**

**Lab Sample ID: 310-264400-20**

Date Collected: 09/07/23 10:15

Matrix: Water

Date Received: 09/08/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.38		1.0	0.38	mg/L			09/16/23 01:11	5
Sulfate	880		50	21	mg/L			09/18/23 13:49	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	180		2.0	0.53	ug/L		09/12/23 09:40	09/22/23 00:26	1
Boron	17000		1000	760	ug/L		09/12/23 09:40	09/22/23 15:49	10
Calcium	170		0.50	0.19	mg/L		09/12/23 09:40	09/22/23 00:26	1
Lithium	600		10	2.5	ug/L		09/12/23 09:40	09/22/23 00:26	1
Manganese	290		10	3.6	ug/L		09/12/23 09:40	09/22/23 00:26	1
Molybdenum	120		2.0	0.91	ug/L		09/12/23 09:40	09/22/23 00:26	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	4500		30	10	mg/L			09/11/23 11:09	1
Total Dissolved Solids (SM 2540C)	1700		250	170	mg/L			09/12/23 18:04	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.71				SU			09/07/23 10:15	1
Field Conductivity	2286				umhos/cm			09/07/23 10:15	1
Field Temperature	15.3				Degrees C			09/07/23 10:15	1
Leachate Elevation	800.20				ft			09/07/23 10:15	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: LW-03**

**Lab Sample ID: 310-264400-21**

Date Collected: 09/07/23 08:00

Matrix: Water

Date Received: 09/08/23 16:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	59		2.0	0.53	ug/L		09/12/23 09:40	09/22/23 00:28	1
Boron	2600		100	76	ug/L		09/12/23 09:40	09/22/23 00:28	1
Calcium	180		0.50	0.19	mg/L		09/12/23 09:40	09/22/23 00:28	1
Lithium	79		10	2.5	ug/L		09/12/23 09:40	09/22/23 00:28	1
Manganese	160		10	3.6	ug/L		09/12/23 09:40	09/22/23 00:28	1
Molybdenum	24		2.0	0.91	ug/L		09/12/23 09:40	09/22/23 00:28	1

**Method: EPA Field Sampling - Field Sampling**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Leachate Elevation	819.99				ft			09/07/23 08:00	1

- 1
- 2
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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: Field Blank**

**Lab Sample ID: 310-264400-22**

**Date Collected: 09/07/23 13:45**

**Matrix: Water**

**Date Received: 09/08/23 16:20**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.45		1.0	0.45	mg/L			09/16/23 01:23	1
Fluoride	<0.075		0.20	0.075	mg/L			09/16/23 01:23	1
Sulfate	<0.42		1.0	0.42	mg/L			09/16/23 01:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		09/12/23 09:40	09/22/23 00:31	1
Barium	<0.64		2.0	0.64	ug/L		09/12/23 09:40	09/22/23 00:31	1
Beryllium	<0.33		1.0	0.33	ug/L		09/12/23 09:40	09/22/23 00:31	1
<b>Boron</b>	<b>97</b>	<b>J</b>	100	76	ug/L		09/12/23 09:40	09/22/23 15:53	1
<b>Calcium</b>	<b>0.33</b>	<b>J</b>	0.50	0.19	mg/L		09/12/23 09:40	09/22/23 00:31	1
Cobalt	<0.17		0.50	0.17	ug/L		09/12/23 09:40	09/22/23 00:31	1
Iron	<36		100	36	ug/L		09/12/23 09:40	09/22/23 00:31	1
Lead	<0.24		0.50	0.24	ug/L		09/12/23 09:40	09/22/23 00:31	1
Lithium	<2.5		10	2.5	ug/L		09/12/23 09:40	09/22/23 00:31	1
Magnesium	<150		500	150	ug/L		09/12/23 09:40	09/22/23 00:31	1
Manganese	<3.6		10	3.6	ug/L		09/12/23 09:40	09/22/23 00:31	1
Molybdenum	<0.91		2.0	0.91	ug/L		09/12/23 09:40	09/22/23 00:31	1
Selenium	<1.4		5.0	1.4	ug/L		09/12/23 09:40	09/22/23 00:31	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<0.64		1.9	0.64	mg/L			09/11/23 11:09	1
Total Dissolved Solids (SM 2540C)	<34		50	34	mg/L			09/12/23 18:04	1

# Definitions/Glossary

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Qualifiers

### HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F3	Duplicate RPD exceeds the control limit
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL, and the absolute difference between results is < the upper reporting limits for both.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Method: 9056A - Anions, Ion Chromatography

**Lab Sample ID: MB 310-399845/3**  
**Matrix: Water**  
**Analysis Batch: 399845**

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	<0.45		1.0	0.45	mg/L			09/14/23 13:14	1
Fluoride	<0.075		0.20	0.075	mg/L			09/14/23 13:14	1
Sulfate	<0.42		1.0	0.42	mg/L			09/14/23 13:14	1

**Lab Sample ID: LCS 310-399845/4**  
**Matrix: Water**  
**Analysis Batch: 399845**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	%Rec Limits
Fluoride	2.00	1.99		mg/L		100	90 - 110	
Sulfate	10.0	9.66		mg/L		97	90 - 110	

**Lab Sample ID: MB 310-399861/3**  
**Matrix: Water**  
**Analysis Batch: 399861**

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	<0.45		1.0	0.45	mg/L			09/15/23 19:57	1
Fluoride	<0.075		0.20	0.075	mg/L			09/15/23 19:57	1
Sulfate	<0.42		1.0	0.42	mg/L			09/15/23 19:57	1

**Lab Sample ID: LCS 310-399861/4**  
**Matrix: Water**  
**Analysis Batch: 399861**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	%Rec Limits
Fluoride	2.00	2.06		mg/L		103	90 - 110	
Sulfate	10.0	10.6		mg/L		106	90 - 110	

**Lab Sample ID: 310-264400-1 MS**  
**Matrix: Water**  
**Analysis Batch: 399861**

**Client Sample ID: MW-02A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	<0.38		5.00	5.02		mg/L		100	80 - 120
Sulfate	28		25.0	53.0		mg/L		99	80 - 120

**Lab Sample ID: 310-264400-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 399861**

**Client Sample ID: MW-02A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	<0.38		5.00	5.10		mg/L		102	80 - 120	2	15
Sulfate	28		25.0	53.3		mg/L		101	80 - 120	1	15

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

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

**Lab Sample ID: MB 310-399200/1-A**  
**Matrix: Water**  
**Analysis Batch: 400337**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 399200**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		09/12/23 08:40	09/21/23 20:42	1
Barium	<0.64		2.0	0.64	ug/L		09/12/23 08:40	09/21/23 20:42	1
Beryllium	<0.33		1.0	0.33	ug/L		09/12/23 08:40	09/21/23 20:42	1
Boron	<76		100	76	ug/L		09/12/23 08:40	09/21/23 20:42	1
Calcium	<0.19		0.50	0.19	mg/L		09/12/23 08:40	09/21/23 20:42	1
Cobalt	<0.17		0.50	0.17	ug/L		09/12/23 08:40	09/21/23 20:42	1
Iron	<36		100	36	ug/L		09/12/23 08:40	09/21/23 20:42	1
Lead	<0.24		0.50	0.24	ug/L		09/12/23 08:40	09/21/23 20:42	1
Lithium	<2.5		10	2.5	ug/L		09/12/23 08:40	09/21/23 20:42	1
Magnesium	<150		500	150	ug/L		09/12/23 08:40	09/21/23 20:42	1
Manganese	<3.6		10	3.6	ug/L		09/12/23 08:40	09/21/23 20:42	1
Molybdenum	<0.91		2.0	0.91	ug/L		09/12/23 08:40	09/21/23 20:42	1
Selenium	<1.4		5.0	1.4	ug/L		09/12/23 08:40	09/21/23 20:42	1

**Lab Sample ID: LCS 310-399200/2-A**  
**Matrix: Water**  
**Analysis Batch: 400337**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 399200**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	200	196		ug/L		98	80 - 120
Barium	100	104		ug/L		104	80 - 120
Beryllium	100	94.9		ug/L		95	80 - 120
Boron	200	188		ug/L		94	80 - 120
Calcium	2.00	1.76		mg/L		88	80 - 120
Cobalt	100	105		ug/L		105	80 - 120
Iron	200	195		ug/L		97	80 - 120
Lead	200	218		ug/L		109	80 - 120
Lithium	200	195		ug/L		97	80 - 120
Magnesium	2000	1800		ug/L		90	80 - 120
Manganese	100	93.4		ug/L		93	80 - 120
Molybdenum	200	206		ug/L		103	80 - 120
Selenium	400	384		ug/L		96	80 - 120

**Lab Sample ID: 310-264400-1 MS**  
**Matrix: Water**  
**Analysis Batch: 400337**

**Client Sample ID: MW-02A**  
**Prep Type: Total/NA**  
**Prep Batch: 399200**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.88	J	200	199		ug/L		99	75 - 125
Barium	89		100	194		ug/L		105	75 - 125
Beryllium	0.43	J	100	97.2		ug/L		97	75 - 125
Boron	100		200	292		ug/L		95	75 - 125
Calcium	81		2.00	83.4	4	mg/L		116	75 - 125
Cobalt	0.50		100	102		ug/L		101	75 - 125
Iron	36	J	200	242		ug/L		103	75 - 125
Lead	0.78		200	216		ug/L		107	75 - 125
Lithium	6.0	J	200	200		ug/L		97	75 - 125
Magnesium	13000		2000	14500	4	ug/L		95	75 - 125
Manganese	11		100	104		ug/L		93	75 - 125

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# QC Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

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

**Lab Sample ID: 310-264400-1 MS**  
**Matrix: Water**  
**Analysis Batch: 400337**

**Client Sample ID: MW-02A**  
**Prep Type: Total/NA**  
**Prep Batch: 399200**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Molybdenum	2.9		200	209		ug/L		103	75 - 125
Selenium	2.6	J	400	393		ug/L		98	75 - 125

**Lab Sample ID: 310-264400-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 400337**

**Client Sample ID: MW-02A**  
**Prep Type: Total/NA**  
**Prep Batch: 399200**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	0.88	J	200	196		ug/L		97	75 - 125	2	20
Barium	89		100	191		ug/L		102	75 - 125	1	20
Beryllium	0.43	J	100	96.5		ug/L		96	75 - 125	1	20
Boron	100		200	287		ug/L		93	75 - 125	2	20
Calcium	81		2.00	84.3	4	mg/L		161	75 - 125	1	20
Cobalt	0.50		100	102		ug/L		101	75 - 125	0	20
Iron	36	J	200	241		ug/L		102	75 - 125	0	20
Lead	0.78		200	213		ug/L		106	75 - 125	1	20
Lithium	6.0	J	200	200		ug/L		97	75 - 125	0	20
Magnesium	13000		2000	14700	4	ug/L		107	75 - 125	2	20
Manganese	11		100	102		ug/L		90	75 - 125	2	20
Molybdenum	2.9		200	210		ug/L		103	75 - 125	0	20
Selenium	2.6	J	400	387		ug/L		96	75 - 125	2	20

**Lab Sample ID: 310-264400-11 DU**  
**Matrix: Water**  
**Analysis Batch: 400337**

**Client Sample ID: MW-17**  
**Prep Type: Total/NA**  
**Prep Batch: 399200**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.67	J	0.635	J	ug/L		6	20
Barium	52		50.9		ug/L		2	20
Beryllium	<0.33		<0.33		ug/L		NC	20
Boron	2600		2040	F3	ug/L		24	20
Calcium	260		250		mg/L		4	20
Cobalt	0.66		0.615		ug/L		7	20
Iron	3900		3780		ug/L		2	20
Lead	1.4		1.42		ug/L		1	20
Lithium	55		51.6		ug/L		6	20
Magnesium	60000		57800		ug/L		3	20
Manganese	320		315		ug/L		3	20
Molybdenum	6.0		4.66	F5	ug/L		25	20
Selenium	<1.4		<1.4		ug/L		NC	20

**Lab Sample ID: MB 310-399205/1-A**  
**Matrix: Water**  
**Analysis Batch: 400337**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 399205**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.53		2.0	0.53	ug/L		09/12/23 09:40	09/21/23 23:06	1
Barium	<0.64		2.0	0.64	ug/L		09/12/23 09:40	09/21/23 23:06	1
Beryllium	<0.33		1.0	0.33	ug/L		09/12/23 09:40	09/21/23 23:06	1

Eurofins Cedar Falls

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

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

**Lab Sample ID: MB 310-399205/1-A**  
**Matrix: Water**  
**Analysis Batch: 400337**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 399205**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	<76		100	76	ug/L		09/12/23 09:40	09/21/23 23:06	1
Calcium	<0.19		0.50	0.19	mg/L		09/12/23 09:40	09/21/23 23:06	1
Cobalt	<0.17		0.50	0.17	ug/L		09/12/23 09:40	09/21/23 23:06	1
Iron	<36		100	36	ug/L		09/12/23 09:40	09/21/23 23:06	1
Lead	<0.24		0.50	0.24	ug/L		09/12/23 09:40	09/21/23 23:06	1
Lithium	<2.5		10	2.5	ug/L		09/12/23 09:40	09/21/23 23:06	1
Magnesium	<150		500	150	ug/L		09/12/23 09:40	09/21/23 23:06	1
Manganese	<3.6		10	3.6	ug/L		09/12/23 09:40	09/21/23 23:06	1
Molybdenum	<0.91		2.0	0.91	ug/L		09/12/23 09:40	09/21/23 23:06	1
Selenium	<1.4		5.0	1.4	ug/L		09/12/23 09:40	09/21/23 23:06	1

**Lab Sample ID: LCS 310-399205/2-A**  
**Matrix: Water**  
**Analysis Batch: 400337**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 399205**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	200	191		ug/L		96	80 - 120
Barium	100	101		ug/L		101	80 - 120
Beryllium	100	94.1		ug/L		94	80 - 120
Boron	200	192		ug/L		96	80 - 120
Calcium	2.00	1.67		mg/L		84	80 - 120
Cobalt	100	101		ug/L		101	80 - 120
Iron	200	186		ug/L		93	80 - 120
Lead	200	207		ug/L		104	80 - 120
Lithium	200	187		ug/L		93	80 - 120
Magnesium	2000	1720		ug/L		86	80 - 120
Manganese	100	91.5		ug/L		91	80 - 120
Molybdenum	200	197		ug/L		99	80 - 120
Selenium	400	377		ug/L		94	80 - 120

## Method: I-3765-85 - Residue, Non-filterable (TSS)

**Lab Sample ID: MB 310-399152/1**  
**Matrix: Water**  
**Analysis Batch: 399152**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.7		5.0	1.7	mg/L			09/11/23 11:09	1

**Lab Sample ID: LCS 310-399152/2**  
**Matrix: Water**  
**Analysis Batch: 399152**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	92.0		mg/L		92	75 - 116

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Method: I-3765-85 - Residue, Non-filterable (TSS) (Continued)

**Lab Sample ID: 310-264400-20 DU**  
**Matrix: Water**  
**Analysis Batch: 399152**

**Client Sample ID: LW-02**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Suspended Solids	4500		4450		mg/L		0.8	35

**Lab Sample ID: MB 310-399163/1**  
**Matrix: Water**  
**Analysis Batch: 399163**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.7		5.0	1.7	mg/L			09/11/23 12:06	1

**Lab Sample ID: LCS 310-399163/2**  
**Matrix: Water**  
**Analysis Batch: 399163**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	94.0		mg/L		94	75 - 116

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

**Lab Sample ID: MB 310-399207/1**  
**Matrix: Water**  
**Analysis Batch: 399207**

**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	<34		50	34	mg/L			09/11/23 20:17	1

**Lab Sample ID: LCS 310-399207/2**  
**Matrix: Water**  
**Analysis Batch: 399207**

**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	968		mg/L		97	90 - 110

**Lab Sample ID: 310-264400-5 DU**  
**Matrix: Water**  
**Analysis Batch: 399207**

**Client Sample ID: MW-10**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	1800		1830		mg/L		4	20

**Lab Sample ID: MB 310-399346/1**  
**Matrix: Water**  
**Analysis Batch: 399346**

**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	<34		50	34	mg/L			09/12/23 18:04	1

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

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

**Lab Sample ID: LCS 310-399346/2**  
**Matrix: Water**  
**Analysis Batch: 399346**

**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	974		mg/L		97	90 - 110

**Lab Sample ID: 310-264400-18 DU**  
**Matrix: Water**  
**Analysis Batch: 399346**

**Client Sample ID: MW-26**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	770		790		mg/L		3	20

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

# QC Association Summary

Client: SCS Engineers  
Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## HPLC/IC

### Analysis Batch: 399845

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-264400-2	MW-03	Total/NA	Water	9056A	
310-264400-2	MW-03	Total/NA	Water	9056A	
310-264400-5	MW-10	Total/NA	Water	9056A	
310-264400-5	MW-10	Total/NA	Water	9056A	
310-264400-7	MW-12	Total/NA	Water	9056A	
310-264400-7	MW-12	Total/NA	Water	9056A	
310-264400-10	MW-16	Total/NA	Water	9056A	
310-264400-10	MW-16	Total/NA	Water	9056A	
MB 310-399845/3	Method Blank	Total/NA	Water	9056A	
LCS 310-399845/4	Lab Control Sample	Total/NA	Water	9056A	

### Analysis Batch: 399861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-264400-1	MW-02A	Total/NA	Water	9056A	
310-264400-3	MW-08	Total/NA	Water	9056A	
310-264400-4	MW-09	Total/NA	Water	9056A	
310-264400-6	MW-11	Total/NA	Water	9056A	
310-264400-6	MW-11	Total/NA	Water	9056A	
310-264400-8	MW-13	Total/NA	Water	9056A	
310-264400-8	MW-13	Total/NA	Water	9056A	
310-264400-9	MW-15	Total/NA	Water	9056A	
310-264400-9	MW-15	Total/NA	Water	9056A	
310-264400-11	MW-17	Total/NA	Water	9056A	
310-264400-11	MW-17	Total/NA	Water	9056A	
310-264400-12	MW-18	Total/NA	Water	9056A	
310-264400-12	MW-18	Total/NA	Water	9056A	
310-264400-13	MW-21	Total/NA	Water	9056A	
310-264400-14	MW-22	Total/NA	Water	9056A	
310-264400-15	MW-23	Total/NA	Water	9056A	
310-264400-16	MW-24	Total/NA	Water	9056A	
310-264400-17	MW-25	Total/NA	Water	9056A	
310-264400-18	MW-26	Total/NA	Water	9056A	
310-264400-19	MW-27	Total/NA	Water	9056A	
310-264400-20	LW-02	Total/NA	Water	9056A	
310-264400-20	LW-02	Total/NA	Water	9056A	
310-264400-22	Field Blank	Total/NA	Water	9056A	
MB 310-399861/3	Method Blank	Total/NA	Water	9056A	
LCS 310-399861/4	Lab Control Sample	Total/NA	Water	9056A	
310-264400-1 MS	MW-02A	Total/NA	Water	9056A	
310-264400-1 MSD	MW-02A	Total/NA	Water	9056A	

## Metals

### Prep Batch: 399200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-264400-1	MW-02A	Total/NA	Water	3005A	
310-264400-2	MW-03	Total/NA	Water	3005A	
310-264400-3	MW-08	Total/NA	Water	3005A	
310-264400-4	MW-09	Total/NA	Water	3005A	
310-264400-5	MW-10	Total/NA	Water	3005A	
310-264400-6	MW-11	Total/NA	Water	3005A	

Eurofins Cedar Falls

# QC Association Summary

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Metals (Continued)

### Prep Batch: 399200 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-264400-7	MW-12	Total/NA	Water	3005A	
310-264400-8	MW-13	Total/NA	Water	3005A	
310-264400-9	MW-15	Total/NA	Water	3005A	
310-264400-10	MW-16	Total/NA	Water	3005A	
310-264400-11	MW-17	Total/NA	Water	3005A	
310-264400-12	MW-18	Total/NA	Water	3005A	
310-264400-13	MW-21	Total/NA	Water	3005A	
310-264400-14	MW-22	Total/NA	Water	3005A	
310-264400-15	MW-23	Total/NA	Water	3005A	
310-264400-16	MW-24	Total/NA	Water	3005A	
310-264400-17	MW-25	Total/NA	Water	3005A	
310-264400-18	MW-26	Total/NA	Water	3005A	
310-264400-19	MW-27	Total/NA	Water	3005A	
MB 310-399200/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-399200/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-264400-1 MS	MW-02A	Total/NA	Water	3005A	
310-264400-1 MSD	MW-02A	Total/NA	Water	3005A	
310-264400-11 DU	MW-17	Total/NA	Water	3005A	

### Prep Batch: 399205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-264400-20	LW-02	Total/NA	Water	3005A	
310-264400-21	LW-03	Total/NA	Water	3005A	
310-264400-22	Field Blank	Total/NA	Water	3005A	
MB 310-399205/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-399205/2-A	Lab Control Sample	Total/NA	Water	3005A	

### Analysis Batch: 400337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-264400-1	MW-02A	Total/NA	Water	6020B	399200
310-264400-2	MW-03	Total/NA	Water	6020B	399200
310-264400-3	MW-08	Total/NA	Water	6020B	399200
310-264400-4	MW-09	Total/NA	Water	6020B	399200
310-264400-5	MW-10	Total/NA	Water	6020B	399200
310-264400-6	MW-11	Total/NA	Water	6020B	399200
310-264400-7	MW-12	Total/NA	Water	6020B	399200
310-264400-8	MW-13	Total/NA	Water	6020B	399200
310-264400-9	MW-15	Total/NA	Water	6020B	399200
310-264400-10	MW-16	Total/NA	Water	6020B	399200
310-264400-11	MW-17	Total/NA	Water	6020B	399200
310-264400-12	MW-18	Total/NA	Water	6020B	399200
310-264400-13	MW-21	Total/NA	Water	6020B	399200
310-264400-14	MW-22	Total/NA	Water	6020B	399200
310-264400-15	MW-23	Total/NA	Water	6020B	399200
310-264400-16	MW-24	Total/NA	Water	6020B	399200
310-264400-17	MW-25	Total/NA	Water	6020B	399200
310-264400-18	MW-26	Total/NA	Water	6020B	399200
310-264400-19	MW-27	Total/NA	Water	6020B	399200
310-264400-20	LW-02	Total/NA	Water	6020B	399205
310-264400-21	LW-03	Total/NA	Water	6020B	399205
310-264400-22	Field Blank	Total/NA	Water	6020B	399205

Eurofins Cedar Falls

# QC Association Summary

Client: SCS Engineers  
Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Metals (Continued)

### Analysis Batch: 400337 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-399200/1-A	Method Blank	Total/NA	Water	6020B	399200
MB 310-399205/1-A	Method Blank	Total/NA	Water	6020B	399205
LCS 310-399200/2-A	Lab Control Sample	Total/NA	Water	6020B	399200
LCS 310-399205/2-A	Lab Control Sample	Total/NA	Water	6020B	399205
310-264400-1 MS	MW-02A	Total/NA	Water	6020B	399200
310-264400-1 MSD	MW-02A	Total/NA	Water	6020B	399200
310-264400-11 DU	MW-17	Total/NA	Water	6020B	399200

### Analysis Batch: 400466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-264400-10	MW-16	Total/NA	Water	6020B	399200
310-264400-20	LW-02	Total/NA	Water	6020B	399205
310-264400-22	Field Blank	Total/NA	Water	6020B	399205

### Analysis Batch: 400668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-264400-5	MW-10	Total/NA	Water	6020B	399200
310-264400-8	MW-13	Total/NA	Water	6020B	399200
310-264400-9	MW-15	Total/NA	Water	6020B	399200
310-264400-10	MW-16	Total/NA	Water	6020B	399200

## General Chemistry

### Analysis Batch: 399152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-264400-12	MW-18	Total/NA	Water	I-3765-85	
310-264400-14	MW-22	Total/NA	Water	I-3765-85	
310-264400-16	MW-24	Total/NA	Water	I-3765-85	
310-264400-18	MW-26	Total/NA	Water	I-3765-85	
310-264400-20	LW-02	Total/NA	Water	I-3765-85	
310-264400-22	Field Blank	Total/NA	Water	I-3765-85	
MB 310-399152/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-399152/2	Lab Control Sample	Total/NA	Water	I-3765-85	
310-264400-20 DU	LW-02	Total/NA	Water	I-3765-85	

### Analysis Batch: 399163

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-264400-1	MW-02A	Total/NA	Water	I-3765-85	
310-264400-2	MW-03	Total/NA	Water	I-3765-85	
310-264400-3	MW-08	Total/NA	Water	I-3765-85	
310-264400-4	MW-09	Total/NA	Water	I-3765-85	
310-264400-5	MW-10	Total/NA	Water	I-3765-85	
310-264400-6	MW-11	Total/NA	Water	I-3765-85	
310-264400-7	MW-12	Total/NA	Water	I-3765-85	
310-264400-8	MW-13	Total/NA	Water	I-3765-85	
310-264400-9	MW-15	Total/NA	Water	I-3765-85	
310-264400-10	MW-16	Total/NA	Water	I-3765-85	
310-264400-11	MW-17	Total/NA	Water	I-3765-85	
310-264400-13	MW-21	Total/NA	Water	I-3765-85	
310-264400-15	MW-23	Total/NA	Water	I-3765-85	
310-264400-17	MW-25	Total/NA	Water	I-3765-85	

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# QC Association Summary

Client: SCS Engineers  
Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## General Chemistry (Continued)

### Analysis Batch: 399163 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-264400-19	MW-27	Total/NA	Water	I-3765-85	
MB 310-399163/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-399163/2	Lab Control Sample	Total/NA	Water	I-3765-85	

### Analysis Batch: 399207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-264400-1	MW-02A	Total/NA	Water	SM 2540C	
310-264400-2	MW-03	Total/NA	Water	SM 2540C	
310-264400-3	MW-08	Total/NA	Water	SM 2540C	
310-264400-4	MW-09	Total/NA	Water	SM 2540C	
310-264400-5	MW-10	Total/NA	Water	SM 2540C	
310-264400-6	MW-11	Total/NA	Water	SM 2540C	
310-264400-7	MW-12	Total/NA	Water	SM 2540C	
310-264400-8	MW-13	Total/NA	Water	SM 2540C	
310-264400-9	MW-15	Total/NA	Water	SM 2540C	
310-264400-10	MW-16	Total/NA	Water	SM 2540C	
310-264400-11	MW-17	Total/NA	Water	SM 2540C	
310-264400-12	MW-18	Total/NA	Water	SM 2540C	
310-264400-16	MW-24	Total/NA	Water	SM 2540C	
310-264400-19	MW-27	Total/NA	Water	SM 2540C	
MB 310-399207/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-399207/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-264400-5 DU	MW-10	Total/NA	Water	SM 2540C	

### Analysis Batch: 399346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-264400-13	MW-21	Total/NA	Water	SM 2540C	
310-264400-14	MW-22	Total/NA	Water	SM 2540C	
310-264400-15	MW-23	Total/NA	Water	SM 2540C	
310-264400-17	MW-25	Total/NA	Water	SM 2540C	
310-264400-18	MW-26	Total/NA	Water	SM 2540C	
310-264400-20	LW-02	Total/NA	Water	SM 2540C	
310-264400-22	Field Blank	Total/NA	Water	SM 2540C	
MB 310-399346/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-399346/2	Lab Control Sample	Total/NA	Water	SM 2540C	
310-264400-18 DU	MW-26	Total/NA	Water	SM 2540C	

## Field Service / Mobile Lab

### Analysis Batch: 399232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-264400-1	MW-02A	Total/NA	Water	Field Sampling	
310-264400-2	MW-03	Total/NA	Water	Field Sampling	
310-264400-3	MW-08	Total/NA	Water	Field Sampling	
310-264400-4	MW-09	Total/NA	Water	Field Sampling	
310-264400-5	MW-10	Total/NA	Water	Field Sampling	
310-264400-6	MW-11	Total/NA	Water	Field Sampling	
310-264400-7	MW-12	Total/NA	Water	Field Sampling	
310-264400-8	MW-13	Total/NA	Water	Field Sampling	
310-264400-9	MW-15	Total/NA	Water	Field Sampling	
310-264400-10	MW-16	Total/NA	Water	Field Sampling	

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# QC Association Summary

Client: SCS Engineers  
Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Field Service / Mobile Lab (Continued)

### Analysis Batch: 399232 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-264400-11	MW-17	Total/NA	Water	Field Sampling	
310-264400-12	MW-18	Total/NA	Water	Field Sampling	
310-264400-13	MW-21	Total/NA	Water	Field Sampling	
310-264400-14	MW-22	Total/NA	Water	Field Sampling	
310-264400-15	MW-23	Total/NA	Water	Field Sampling	
310-264400-16	MW-24	Total/NA	Water	Field Sampling	
310-264400-17	MW-25	Total/NA	Water	Field Sampling	
310-264400-18	MW-26	Total/NA	Water	Field Sampling	
310-264400-19	MW-27	Total/NA	Water	Field Sampling	
310-264400-20	LW-02	Total/NA	Water	Field Sampling	

### Analysis Batch: 400696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-264400-20	LW-02	Total/NA	Water	Field Sampling	
310-264400-21	LW-03	Total/NA	Water	Field Sampling	

# Lab Chronicle

Client: SCS Engineers  
Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Client Sample ID: MW-02A

Date Collected: 09/07/23 14:30

Date Received: 09/08/23 16:20

## Lab Sample ID: 310-264400-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399861	QTZ5	EET CF	09/15/23 20:57
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 20:46
Total/NA	Analysis	I-3765-85		1	399163	DGU1	EET CF	09/11/23 12:06
Total/NA	Analysis	SM 2540C		1	399207	D7CP	EET CF	09/11/23 20:17
Total/NA	Analysis	Field Sampling		1	399232	BJ0R	EET CF	09/07/23 14:30

## Client Sample ID: MW-03

Date Collected: 09/06/23 09:00

Date Received: 09/08/23 16:20

## Lab Sample ID: 310-264400-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399845	QTZ5	EET CF	09/14/23 18:53
Total/NA	Analysis	9056A		5	399845	QTZ5	EET CF	09/15/23 17:51
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 20:58
Total/NA	Analysis	I-3765-85		1	399163	DGU1	EET CF	09/11/23 12:06
Total/NA	Analysis	SM 2540C		1	399207	D7CP	EET CF	09/11/23 20:17
Total/NA	Analysis	Field Sampling		1	399232	BJ0R	EET CF	09/06/23 09:00

## Client Sample ID: MW-08

Date Collected: 09/07/23 13:40

Date Received: 09/08/23 16:20

## Lab Sample ID: 310-264400-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399861	QTZ5	EET CF	09/15/23 21:34
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 21:00
Total/NA	Analysis	I-3765-85		1	399163	DGU1	EET CF	09/11/23 12:06
Total/NA	Analysis	SM 2540C		1	399207	D7CP	EET CF	09/11/23 20:17
Total/NA	Analysis	Field Sampling		1	399232	BJ0R	EET CF	09/07/23 13:40

## Client Sample ID: MW-09

Date Collected: 09/07/23 13:35

Date Received: 09/08/23 16:20

## Lab Sample ID: 310-264400-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399861	QTZ5	EET CF	09/15/23 21:46
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 21:03
Total/NA	Analysis	I-3765-85		1	399163	DGU1	EET CF	09/11/23 12:06
Total/NA	Analysis	SM 2540C		1	399207	D7CP	EET CF	09/11/23 20:17
Total/NA	Analysis	Field Sampling		1	399232	BJ0R	EET CF	09/07/23 13:35

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# Lab Chronicle

Client: SCS Engineers  
Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Client Sample ID: MW-10

Date Collected: 09/06/23 15:45

Date Received: 09/08/23 16:20

## Lab Sample ID: 310-264400-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399845	QTZ5	EET CF	09/14/23 19:07
Total/NA	Analysis	9056A		50	399845	QTZ5	EET CF	09/15/23 18:05
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 21:19
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		10	400668	DHM5	EET CF	09/25/23 15:23
Total/NA	Analysis	I-3765-85		1	399163	DGU1	EET CF	09/11/23 12:06
Total/NA	Analysis	SM 2540C		1	399207	D7CP	EET CF	09/11/23 20:17
Total/NA	Analysis	Field Sampling		1	399232	BJ0R	EET CF	09/06/23 15:45

## Client Sample ID: MW-11

Date Collected: 09/07/23 08:45

Date Received: 09/08/23 16:20

## Lab Sample ID: 310-264400-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399861	QTZ5	EET CF	09/15/23 22:22
Total/NA	Analysis	9056A		50	399861	QTZ5	EET CF	09/18/23 09:11
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 21:21
Total/NA	Analysis	I-3765-85		1	399163	DGU1	EET CF	09/11/23 12:06
Total/NA	Analysis	SM 2540C		1	399207	D7CP	EET CF	09/11/23 20:17
Total/NA	Analysis	Field Sampling		1	399232	BJ0R	EET CF	09/07/23 08:45

## Client Sample ID: MW-12

Date Collected: 09/06/23 16:15

Date Received: 09/08/23 16:20

## Lab Sample ID: 310-264400-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399845	QTZ5	EET CF	09/14/23 19:21
Total/NA	Analysis	9056A		5	399845	QTZ5	EET CF	09/15/23 18:19
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 21:23
Total/NA	Analysis	I-3765-85		1	399163	DGU1	EET CF	09/11/23 12:06
Total/NA	Analysis	SM 2540C		1	399207	D7CP	EET CF	09/11/23 20:17
Total/NA	Analysis	Field Sampling		1	399232	BJ0R	EET CF	09/06/23 16:15

## Client Sample ID: MW-13

Date Collected: 09/07/23 10:55

Date Received: 09/08/23 16:20

## Lab Sample ID: 310-264400-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399861	QTZ5	EET CF	09/15/23 22:34
Total/NA	Analysis	9056A		50	399861	QTZ5	EET CF	09/18/23 09:23

# Lab Chronicle

Client: SCS Engineers  
Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-13**  
**Date Collected: 09/07/23 10:55**  
**Date Received: 09/08/23 16:20**

**Lab Sample ID: 310-264400-8**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 21:26
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		10	400668	DHM5	EET CF	09/25/23 15:26
Total/NA	Analysis	I-3765-85		1	399163	DGU1	EET CF	09/11/23 12:06
Total/NA	Analysis	SM 2540C		1	399207	D7CP	EET CF	09/11/23 20:17
Total/NA	Analysis	Field Sampling		1	399232	BJ0R	EET CF	09/07/23 10:55

**Client Sample ID: MW-15**  
**Date Collected: 09/07/23 11:40**  
**Date Received: 09/08/23 16:20**

**Lab Sample ID: 310-264400-9**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399861	QTZ5	EET CF	09/15/23 22:46
Total/NA	Analysis	9056A		50	399861	QTZ5	EET CF	09/18/23 09:35
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 21:28
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		10	400668	DHM5	EET CF	09/25/23 15:28
Total/NA	Analysis	I-3765-85		1	399163	DGU1	EET CF	09/11/23 12:06
Total/NA	Analysis	SM 2540C		1	399207	D7CP	EET CF	09/11/23 20:17
Total/NA	Analysis	Field Sampling		1	399232	BJ0R	EET CF	09/07/23 11:40

**Client Sample ID: MW-16**  
**Date Collected: 09/06/23 10:25**  
**Date Received: 09/08/23 16:20**

**Lab Sample ID: 310-264400-10**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399845	QTZ5	EET CF	09/14/23 19:35
Total/NA	Analysis	9056A		100	399845	QTZ5	EET CF	09/15/23 18:33
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		50	400466	DHM5	EET CF	09/22/23 19:58
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 21:30
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		50	400668	DHM5	EET CF	09/25/23 15:30
Total/NA	Analysis	I-3765-85		1	399163	DGU1	EET CF	09/11/23 12:06
Total/NA	Analysis	SM 2540C		1	399207	D7CP	EET CF	09/11/23 20:17
Total/NA	Analysis	Field Sampling		1	399232	BJ0R	EET CF	09/06/23 10:25

# Lab Chronicle

Client: SCS Engineers  
 Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-17**

**Date Collected: 09/06/23 11:15**

**Date Received: 09/08/23 16:20**

**Lab Sample ID: 310-264400-11**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399861	QTZ5	EET CF	09/15/23 22:58
Total/NA	Analysis	9056A		50	399861	QTZ5	EET CF	09/18/23 09:48
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 21:32
Total/NA	Analysis	I-3765-85		1	399163	DGU1	EET CF	09/11/23 12:06
Total/NA	Analysis	SM 2540C		1	399207	D7CP	EET CF	09/11/23 20:17
Total/NA	Analysis	Field Sampling		1	399232	BJ0R	EET CF	09/06/23 11:15

**Client Sample ID: MW-18**

**Date Collected: 09/06/23 12:35**

**Date Received: 09/08/23 16:20**

**Lab Sample ID: 310-264400-12**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399861	QTZ5	EET CF	09/15/23 23:10
Total/NA	Analysis	9056A		50	399861	QTZ5	EET CF	09/18/23 10:00
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 21:37
Total/NA	Analysis	I-3765-85		1	399152	DGU1	EET CF	09/11/23 11:09
Total/NA	Analysis	SM 2540C		1	399207	D7CP	EET CF	09/11/23 20:17
Total/NA	Analysis	Field Sampling		1	399232	BJ0R	EET CF	09/06/23 12:35

**Client Sample ID: MW-21**

**Date Collected: 09/07/23 12:15**

**Date Received: 09/08/23 16:20**

**Lab Sample ID: 310-264400-13**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399861	QTZ5	EET CF	09/15/23 23:23
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 21:39
Total/NA	Analysis	I-3765-85		1	399163	DGU1	EET CF	09/11/23 12:06
Total/NA	Analysis	SM 2540C		1	399346	D7CP	EET CF	09/12/23 18:04
Total/NA	Analysis	Field Sampling		1	399232	BJ0R	EET CF	09/07/23 12:15

**Client Sample ID: MW-22**

**Date Collected: 09/07/23 11:50**

**Date Received: 09/08/23 16:20**

**Lab Sample ID: 310-264400-14**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399861	QTZ5	EET CF	09/15/23 23:35
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 21:56
Total/NA	Analysis	I-3765-85		1	399152	DGU1	EET CF	09/11/23 11:09
Total/NA	Analysis	SM 2540C		1	399346	D7CP	EET CF	09/12/23 18:04

# Lab Chronicle

Client: SCS Engineers  
Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: MW-22**  
**Date Collected: 09/07/23 11:50**  
**Date Received: 09/08/23 16:20**

**Lab Sample ID: 310-264400-14**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Field Sampling		1	399232	BJOR	EET CF	09/07/23 11:50

**Client Sample ID: MW-23**  
**Date Collected: 09/07/23 12:30**  
**Date Received: 09/08/23 16:20**

**Lab Sample ID: 310-264400-15**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399861	QTZ5	EET CF	09/15/23 23:47
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 21:58
Total/NA	Analysis	I-3765-85		1	399163	DGU1	EET CF	09/11/23 12:06
Total/NA	Analysis	SM 2540C		1	399346	D7CP	EET CF	09/12/23 18:04
Total/NA	Analysis	Field Sampling		1	399232	BJOR	EET CF	09/07/23 12:30

**Client Sample ID: MW-24**  
**Date Collected: 09/06/23 14:15**  
**Date Received: 09/08/23 16:20**

**Lab Sample ID: 310-264400-16**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399861	QTZ5	EET CF	09/15/23 23:59
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 22:00
Total/NA	Analysis	I-3765-85		1	399152	DGU1	EET CF	09/11/23 11:09
Total/NA	Analysis	SM 2540C		1	399207	D7CP	EET CF	09/11/23 20:17
Total/NA	Analysis	Field Sampling		1	399232	BJOR	EET CF	09/06/23 14:15

**Client Sample ID: MW-25**  
**Date Collected: 09/07/23 14:20**  
**Date Received: 09/08/23 16:20**

**Lab Sample ID: 310-264400-17**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399861	QTZ5	EET CF	09/16/23 00:11
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 22:03
Total/NA	Analysis	I-3765-85		1	399163	DGU1	EET CF	09/11/23 12:06
Total/NA	Analysis	SM 2540C		1	399346	D7CP	EET CF	09/12/23 18:04
Total/NA	Analysis	Field Sampling		1	399232	BJOR	EET CF	09/07/23 14:20

**Client Sample ID: MW-26**  
**Date Collected: 09/07/23 09:25**  
**Date Received: 09/08/23 16:20**

**Lab Sample ID: 310-264400-18**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399861	QTZ5	EET CF	09/16/23 00:47

# Lab Chronicle

Client: SCS Engineers  
Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Client Sample ID: MW-26

Date Collected: 09/07/23 09:25

Date Received: 09/08/23 16:20

## Lab Sample ID: 310-264400-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 22:05
Total/NA	Analysis	I-3765-85		1	399152	DGU1	EET CF	09/11/23 11:09
Total/NA	Analysis	SM 2540C		1	399346	D7CP	EET CF	09/12/23 18:04
Total/NA	Analysis	Field Sampling		1	399232	BJ0R	EET CF	09/07/23 09:25

## Client Sample ID: MW-27

Date Collected: 09/06/23 13:40

Date Received: 09/08/23 16:20

## Lab Sample ID: 310-264400-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399861	QTZ5	EET CF	09/16/23 00:59
Total/NA	Prep	3005A			399200	KCK5	EET CF	09/12/23 08:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/21/23 22:08
Total/NA	Analysis	I-3765-85		1	399163	DGU1	EET CF	09/11/23 12:06
Total/NA	Analysis	SM 2540C		1	399207	D7CP	EET CF	09/11/23 20:17
Total/NA	Analysis	Field Sampling		1	399232	BJ0R	EET CF	09/06/23 13:40

## Client Sample ID: LW-02

Date Collected: 09/07/23 10:15

Date Received: 09/08/23 16:20

## Lab Sample ID: 310-264400-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	399861	QTZ5	EET CF	09/16/23 01:11
Total/NA	Analysis	9056A		50	399861	QTZ5	EET CF	09/18/23 13:49
Total/NA	Prep	3005A			399205	KCK5	EET CF	09/12/23 09:40
Total/NA	Analysis	6020B		10	400466	DHM5	EET CF	09/22/23 15:49
Total/NA	Prep	3005A			399205	KCK5	EET CF	09/12/23 09:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/22/23 00:26
Total/NA	Analysis	I-3765-85		1	399152	DGU1	EET CF	09/11/23 11:09
Total/NA	Analysis	SM 2540C		1	399346	D7CP	EET CF	09/12/23 18:04
Total/NA	Analysis	Field Sampling		1	399232	BJ0R	EET CF	09/07/23 10:15
Total/NA	Analysis	Field Sampling		1	400696	SJF	EET CF	09/07/23 10:15

## Client Sample ID: LW-03

Date Collected: 09/07/23 08:00

Date Received: 09/08/23 16:20

## Lab Sample ID: 310-264400-21

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			399205	KCK5	EET CF	09/12/23 09:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/22/23 00:28
Total/NA	Analysis	Field Sampling		1	400696	SJF	EET CF	09/07/23 08:00

# Lab Chronicle

Client: SCS Engineers  
Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

**Client Sample ID: Field Blank**

**Lab Sample ID: 310-264400-22**

**Date Collected: 09/07/23 13:45**

**Matrix: Water**

**Date Received: 09/08/23 16:20**

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Analysis	9056A		1	399861	QTZ5	EET CF	09/16/23 01:23
Total/NA	Prep	3005A			399205	KCK5	EET CF	09/12/23 09:40
Total/NA	Analysis	6020B		1	400466	DHM5	EET CF	09/22/23 15:53
Total/NA	Prep	3005A			399205	KCK5	EET CF	09/12/23 09:40
Total/NA	Analysis	6020B		1	400337	DHM5	EET CF	09/22/23 00:31
Total/NA	Analysis	I-3765-85		1	399152	DGU1	EET CF	09/11/23 11:09
Total/NA	Analysis	SM 2540C		1	399346	D7CP	EET CF	09/12/23 18:04

**Laboratory References:**

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

- 1
- 2
- 3
- 4
- 5
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- 14
- 15



# Accreditation/Certification Summary

Client: SCS Engineers  
Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

## Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-23

- 1
- 2
- 3
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- 5
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- 13
- 14
- 15

# Method Summary

Client: SCS Engineers  
Project/Site: Stoney Point Closed Landfill - 25223065

Job ID: 310-264400-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
Field Sampling	Field Sampling	EPA	EET CF
3005A	Preparation, Total Metals	SW846	EET CF

#### Protocol References:

EPA = US Environmental Protection Agency

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.

USGS = "Methods For Analysis Of Water And Fluvial Sediments", USGS, 1989

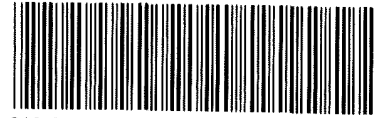
#### Laboratory References:

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





Environment Testing  
America



310-264400 Chain of Custody

**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
		<u>WI</u>	
<b>Receipt Information</b>			
Date/Time Received:	DATE	TIME	Received By:
	<u>9-8-23</u>	<u>1620</u>	<u>ML</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee			
<input checked="" 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>1</u> of <u>3</u>	
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" 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:	<u>R</u>	Correction Factor (°C):	<u>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):	<u>2.0</u>	Corrected Temp (°C):	<u>2.0</u>
<b>Sample Container Temperature</b>			
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>			





Environment Testing  
America

Place COC scanning label  
here

Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
		<u>WI</u>	
<b>Receipt Information</b>			
Date/Time Received:	DATE	TIME	Received By:
	<u>9-8-23</u>	<u>1620</u>	<u>ML</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee			
<input checked="" 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>2</u> of <u>3</u>	
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" 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: <u>R</u>		Correction Factor (°C): <u>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): <u>2.6</u>		Corrected Temp (°C): <u>2.6</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>			





Environment Testing  
America

Place COC scanning label  
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**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
		<u>WI</u>	
<b>Receipt Information</b>			
Date/Time Received:	DATE	TIME	Received By:
	<u>9-8-23</u>	<u>1620</u>	<u>ML</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee			
<input checked="" 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>3</u> of <u>3</u>	
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" 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:	<u>R</u>	Correction Factor (°C):	<u>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):	<u>5.6</u>	Corrected Temp (°C):	<u>5.6</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>			





<b>Client Information</b>		Sampler: <u>Tyler Stirling</u>		Lab PM: <u>Frederick, Sandle</u>		Carrier Tracking No(s): <u>310-84936-23685.2</u>	
Client Contact: <u>Meghan Blodgett</u>		Phone: <u>515-508-2776</u>		E-Mail: <u>Sandra.Fredrick@et.eurofins.com</u>		Page: <u>2 of 3</u>	
Company: <u>SCS Engineers</u>		PWSID:		State of Origin: <u>IA</u>		Job #: <u>25223065</u>	
Address: <u>2830 Dairy Drive</u>		Due Date Requested:		Analysis Requested		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other	
City: <u>Madison</u>		TAT Requested (days):		Form MS/MSD (Yes or No)		Total Number of Containers	
State, Zip: <u>WI, 53718</u>		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		Field Filled Sample (Yes or No)		Special Instructions/Note:	
Phone:		Purchase Order Requested		9066A_ORGM_28D - Chloride, Fluoride & Sulfate			
Email: <u>mbodgett@scsengineers.com</u>		WO #:		6020B - Metals (15)			
Project Name: <u>Stoney Point Closed Landfill</u>		Project #: <u>31011020</u>		2540C_Calcd, 1.3765_85			
Site:		SSOW#:		N D N			
<b>Sample Identification</b>		Sample Date		Sample Time		Sample Type (C=comp, G=grab)	
MW-18		9/6/23		12:36		G Water	
MW-20						G Water	
MW-21		9/7/23		12:15		G Water	
MW-22		9/7/23		11:50		G Water	
MW-23		9/7/23		12:30		G Water	
MW-24		9/6/23		14:15		G Water	
MW-25		9/7/23		14:20		G Water	
MW-26		9/7/23		9:25		G Water	
MW-27		9/6/23		13:40		G Water	
SW-01						G Water	
SM-02						G Water	
<b>Possible Hazard Identification</b>		<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		Date/Time: <u>9/6/23 @ 1:30</u>		Company: <u>SCS</u>	
Deliverable Requested I, II, III, IV, Other (specify)		Empty Kit Relinquished by: <u>Tyler</u>		Date/Time: <u>9/8/23</u>		Company: <u>ML</u>	
Relinquished by:		Relinquished by:		Date/Time:		Company:	
Relinquished by:		Relinquished by:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <u>    </u> Months	

<b>Client Information</b>		Sampler: Fredrick, Sandie	Lab PM: Fredrick, Sandie	Carrier Tracking No(s): 310-84936-23685 3	COC No: 310-84936-23685 3
Client Contact: Meghan Blodgett		Phone: Sandra.Fredrick@et.eurofins.com	E-Mail: Sandra.Fredrick@et.eurofins.com	State of Origin:	Page: Page 3 of 3
Company: SCS Engineers		PWSID:	Job #: 25223065		
Address: 2830 Dairy Drive		Due Date Requested:	Preservation Codes:		
City: Madison		TAT Requested (days):	A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other		
State Zip: WI, 53718		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)		
Phone:		PO #: Purchase Order Requested	Total Number of containers: <input checked="" type="checkbox"/>		
Email: mblodgett@scsengineers.com		WO #:	Special Instructions/Note:		
Project Name: Stoney Point Closed Landfill		Project #: 31011020	Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/>		
Site:		SSOW#:	Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>		
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Oversoil, In-Tissue, A+B)	Preservation Code:
LW-01	9/7/23	10:15	G	Water	
LW-02	9/7/23	10:15	G	Water	
LW-03	9/7/23	4:00	G	Water	
Field Blank	9/7/23	13:45	G	Water	
Special Instructions/Note: <input checked="" type="checkbox"/> Total Number of containers: <input checked="" type="checkbox"/>					
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: <input type="checkbox"/> I, <input type="checkbox"/> II, <input type="checkbox"/> III, <input type="checkbox"/> IV, Other (specify)					
Empty Kit Relinquished by: _____ Date: _____					
Relinquished by: Tyler G _____ Date/Time: 9-8-23 1020 Company: _____					
Relinquished by: _____ Date/Time: _____ Company: _____					
Relinquished by: _____ Date/Time: _____ Company: _____					
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No					
Cooler Temperature(s) °C and Other Remarks:					



Table 1 - Sampling Points and Parameters - State Sampling Program  
Groundwater Monitoring - Stoney Point Closed Landfill / SCS Engineers Project #2523065  
September 2023

Parameter*	MW-01	MW-02A	MW-03	MW-07	MW-08	MW-09	MW-10	MW-11	MW-12	MW-13	MW-14*	MW-15	MW-16	MW-17	MW-18	MW-19	MW-20**	MW-21	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27	SW-01	SW-02	LW-01	LW-02	LW-03	Field Blank	TOTAL				
Arsenic	x																																22		
Barium																																		18	
Beryllium																																		18	
Boron																																		26	
Calcium																																		26	
Cobalt																																		18	
Iron																																		18	
Lead																																		18	
Lithium																																		26	
Magnesium																																		23	
Manganese																																		21	
Molybdenum																																		26	
Selenium																																		18	
Chloride																																		23	
Fluoride																																		26	
Sulfate																																		26	
TDS																																		26	
TSS																																		26	
<b>Field Parameters</b>																																			
pH																																			25
Conductance																																			25
Dissolved Oxygen																																			
Temperature																																			25
Groundwater/Surface Water/Leachate Elevation																																			28
Surface Water Depth																																			
Well Depth																																			28
Turbidity																																			25
Color																																			25
Odor																																			25

Notes X - Monitoring point is sampled for this parameter  
 \* MW 14 has been abandoned  
 \*\* MW 20 is very slow to recharge and has not recharged sufficiently for sample collection during multiple sampling attempts in the last year. Call Meg with depth to water reading to discuss whether to attempt purging & sampling of this well

I:\2523065 00\Data and Calculations\Field Work Requests\September 2023\Stoney Point Sampling Detail\_September 2023.xlsx\Sheet1



# Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-264400-1

**Login Number: 264400**

**List Source: Eurofins Cedar Falls**

**List Number: 1**

**Creator: Costello, Mackenzie K**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**Groundwater Monitoring Results - Field Parameters**  
**Stoney Point Closed Landfill / SCS Engineers Project #25223065.00**  
**September 2023**

Sample	Sample Date	GW Elevation (feet amsl)	Leachate Elevation (ft amsl)	Temperature (Deg. C)	pH (Std. Units)	Specific Conductivity (µs/cm)
MW2A	9/7/2023	821.63	--	17.9	7.28	535
MW3	9/6/2023	811.93	--	13.2	7.13	814
MW8	9/7/2023	795.86	--	15.5	7.20	498.3
MW9	9/7/2023	795.01	--	13.3	7.47	780
MW10	9/6/2023	791.31	--	18.2	6.80	2418
MW11	9/7/2023	790.64	--	13.5	7.17	1,740
MW12	9/6/2023	788.04	--	13.9	7.20	717
MW13	9/7/2023	788.71	--	15.5	6.96	1,987
MW15	9/7/2023	790.39	--	13.9	6.96	2,391
MW16	9/6/2023	793.68	--	13.1	7.10	4,006
MW17	9/6/2023	791.09	--	12.1	7.32	1,622
MW18	9/6/2023	791.66	--	20.4	7.16	1,717
MW21	9/7/2023	787.07	--	15.2	7.15	786
MW22	9/7/2023	791.08	--	18.7	7.05	1,094
MW23	9/7/2023	782.24	--	16.9	7.18	670
MW24	9/6/2023	794.04	--	15.8	7.38	572.6
MW25	9/7/2023	784.62	--	12.3	7.05	662
MW26	9/7/2023	776.96	--	14.7	6.65	1,501
MW27	9/6/2023	777.85	--	11.7	6.45	794
LW02	9/7/2023	--	800.20	15.3	7.71	2,286
LW03	9/7/2023	--	819.99	--	--	--

Abbreviations:

mg/L = milligrams per liter

mV = millivolts

amsl = above mean sea level

Notes:

None

Created by:     MDB    

Date:     8/3/2018    

Last revision by:     RM    

Date:     9/11/2023    

Checked by:     BLR    

Date:     9/11/2023    

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## Appendix D

### Summary of Groundwater Chemistry – Pre-2019

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**ARSENIC**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-02A	MW-08	MW-11	MW-12	MW-14	MW-15	MW-16	MW-17	MW-20
ARSENIC, DISSOLVED	1994-Feb		<5		<5		<5	14	<5	
ARSENIC, DISSOLVED	1994-Apr		<5	<5	<5		<5	<5	<5	
ARSENIC, DISSOLVED	1994-Jul		<5	<5	<5		<5	150	<5	
ARSENIC, DISSOLVED	1994-Oct		11.8	<5	<5		<5	<5	17.7	
ARSENIC, DISSOLVED	1995-Apr		<5					<5	<5	
ARSENIC, DISSOLVED	1995-Oct		<5					<10	<5	
ARSENIC, DISSOLVED	1996-Apr		<1					<1	1.3	
ARSENIC, DISSOLVED	1996-Oct		<5					<5	<5	
ARSENIC, DISSOLVED	1999-Sep			<1				<20	<1	
ARSENIC, DISSOLVED	2000-Sep			1.8				4.8	<1	
ARSENIC, DISSOLVED	2001-Sep	<1	<1	<1	3.7		<1	<5	<1	
ARSENIC, DISSOLVED	2002-Sep	<1	<1	<1	10		6	<1	<1	
ARSENIC, DISSOLVED	2003-Sep	<1	<1	<1	4.9		2.6	<6	<1	
ARSENIC, DISSOLVED	2004-Sep	<1	<1	<1	3.2	<1	7.7	<4	<1	
ARSENIC, DISSOLVED	2005-Jun									<1
ARSENIC, DISSOLVED	2005-Sep	<1	<1	<1	10.6	<1	3.9	<1	1	
ARSENIC, DISSOLVED	2005-Oct									<1
ARSENIC, DISSOLVED	2006-Sep	<1	<1	<2	2.65	<1	5.05	<1	<1	<1
ARSENIC, DISSOLVED	2007-Sep	<1	<1	1.42	3.29	1.29	4.06	<1	<1	<1
ARSENIC, DISSOLVED	2008-Sep	<1	<1	<1	17.6	1.05	7.18	1.84	1.97	<1
ARSENIC, DISSOLVED	2009-Sep	<1	<1	<2	18.3	<1	3.66	<10	<1	<1
ARSENIC, DISSOLVED	2010-Aug	<1	<1	<2	27.7	<3	<2	<2	<4	<2
ARSENIC, DISSOLVED	2011-Sep	<2	<2	<6	25.9	<6	<8	<1	<8	<4
ARSENIC, DISSOLVED	2012-Sep	<1	<1	<1	17.5	<2	<2	<1	<3	<3
ARSENIC, DISSOLVED	2013-Sep	<0.05	<0.05	2.1	11.6	2.8	5.5	4.7	1.9	5.4
ARSENIC, DISSOLVED	2014-Sep	<1	<1	1.9	40.2	1.5	12.2	4	1.1	<1
ARSENIC, DISSOLVED	2015-Apr									
ARSENIC, DISSOLVED	2015-Sep	<1	<1	4.8	23.6	4.7	7.4	6.6	4.2	1.4
ARSENIC, DISSOLVED	2016-Sep	0.21	0.1		2	<0.1				
ARSENIC	2012-Sep									
ARSENIC	2013-Sep									
ARSENIC	2014-Sep									
ARSENIC	2015-Sep									
ARSENIC	2016-Sep	0.24	0.17	2.2	2.9	<0.1	5.5	1.1	<0.1	0.51
ARSENIC	2017-Sep	1.2	0.18	8	34.4	0.36	3.2	0.5	0.79	
ARSENIC	2018-Sep	0.2	0.2	0.8	16	0.51	2.8	0.94	1.8	1.1

GW Standard:  
MCL = 10

## IPL Stoney Point Closed Landfill Historic Monitoring Results

**ARSENIC**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-21	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27	DPW-01	DPW-02	SW-01	SW-02
ARSENIC, DISSOLVED	1994-Feb											
ARSENIC, DISSOLVED	1994-Apr											
ARSENIC, DISSOLVED	1994-Jul											
ARSENIC, DISSOLVED	1994-Oct											
ARSENIC, DISSOLVED	1995-Apr											
ARSENIC, DISSOLVED	1995-Oct											
ARSENIC, DISSOLVED	1996-Apr											
ARSENIC, DISSOLVED	1996-Oct											
ARSENIC, DISSOLVED	1999-Sep											
ARSENIC, DISSOLVED	2000-Sep											
ARSENIC, DISSOLVED	2001-Sep											
ARSENIC, DISSOLVED	2002-Sep											
ARSENIC, DISSOLVED	2003-Sep											
ARSENIC, DISSOLVED	2004-Sep											
ARSENIC, DISSOLVED	2005-Jun	2	<1	<1					<1	<1		
ARSENIC, DISSOLVED	2005-Sep	5.4	<1	<1								
ARSENIC, DISSOLVED	2005-Oct								<1	<1		
ARSENIC, DISSOLVED	2006-Sep	3.31	<1	<1					<1	<1		
ARSENIC, DISSOLVED	2007-Sep	16.9	<1	<1					<1	<1		
ARSENIC, DISSOLVED	2008-Sep	28.9	1.15	<1					<1	<1		
ARSENIC, DISSOLVED	2009-Sep	4.07	<1	<1					<1	<1		
ARSENIC, DISSOLVED	2010-Aug	29.6	<2	<1					<3	<1		
ARSENIC, DISSOLVED	2011-Sep	19.4	<3	<2					<4	<2		
ARSENIC, DISSOLVED	2012-Sep	39.3	<3	<2					<2	<2		
ARSENIC, DISSOLVED	2013-Sep	32.4	1	<0.05					2.6	4.6		
ARSENIC, DISSOLVED	2014-Sep	27.7	<1	<1							1.9	1.9
ARSENIC, DISSOLVED	2015-Apr				<1	<1	<1	1.9				
ARSENIC, DISSOLVED	2015-Sep	24.9	2.4	1.1	1.4	1.9	1.3	3.2				4
ARSENIC, DISSOLVED	2016-Sep											
ARSENIC	2012-Sep											
ARSENIC	2013-Sep											
ARSENIC	2014-Sep											
ARSENIC	2015-Sep											
ARSENIC	2016-Sep	31.4	<0.1	2	3.1	2.4	0.11	18.6			1.4	1.4
ARSENIC	2017-Sep	27.4	0.23	0.51	9.6	3.1	0.15	2.2	1	1.8	2	1.8
ARSENIC	2018-Sep	34.1	1.1	0.35	2.2	0.92	0.2	1.4			1.7	1.5

GW Standard:  
MCL = 10

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**ARSENIC**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	LW-02	LW-03
ARSENIC, DISSOLVED	1994-Feb		
ARSENIC, DISSOLVED	1994-Apr		
ARSENIC, DISSOLVED	1994-Jul		
ARSENIC, DISSOLVED	1994-Oct		
ARSENIC, DISSOLVED	1995-Apr		
ARSENIC, DISSOLVED	1995-Oct		
ARSENIC, DISSOLVED	1996-Apr		
ARSENIC, DISSOLVED	1996-Oct		
ARSENIC, DISSOLVED	1999-Sep		
ARSENIC, DISSOLVED	2000-Sep		
ARSENIC, DISSOLVED	2001-Sep		
ARSENIC, DISSOLVED	2002-Sep		
ARSENIC, DISSOLVED	2003-Sep		
ARSENIC, DISSOLVED	2004-Sep		
ARSENIC, DISSOLVED	2005-Jun		
ARSENIC, DISSOLVED	2005-Sep		
ARSENIC, DISSOLVED	2005-Oct		
ARSENIC, DISSOLVED	2006-Sep		
ARSENIC, DISSOLVED	2007-Sep		
ARSENIC, DISSOLVED	2008-Sep		
ARSENIC, DISSOLVED	2009-Sep		
ARSENIC, DISSOLVED	2010-Aug		
ARSENIC, DISSOLVED	2011-Sep		
ARSENIC, DISSOLVED	2012-Sep		
ARSENIC, DISSOLVED	2013-Sep		
ARSENIC, DISSOLVED	2014-Sep		
ARSENIC, DISSOLVED	2015-Apr		
ARSENIC, DISSOLVED	2015-Sep		
ARSENIC, DISSOLVED	2016-Sep		
ARSENIC	2012-Sep	201	48.3
ARSENIC	2013-Sep	255	52.3
ARSENIC	2014-Sep	405	43.2
ARSENIC	2015-Sep	14.1	48.7
ARSENIC	2016-Sep	6.6	139
ARSENIC	2017-Sep	315	97
ARSENIC	2018-Sep	374	101

GW Standard:  
MCL = 10

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**BARIUM**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-02A	MW-08	MW-11	MW-12	MW-14	MW-15	MW-16	MW-17	MW-20
BARIUM, DISSOLVED	1994-Feb		<500		<500		<500	<500	<500	
BARIUM, DISSOLVED	1994-Apr		<500	<500	<500		<500	<500	<500	
BARIUM, DISSOLVED	1994-Jul		76	144	136		<50	<50	335	
BARIUM, DISSOLVED	1994-Oct		84	140	158		42	77	455	
BARIUM, DISSOLVED	1995-Apr						242			
BARIUM, DISSOLVED	1995-Oct						41			
BARIUM, DISSOLVED	1997-Apr						38		414	
BARIUM, DISSOLVED	1997-Oct						26		312	
BARIUM, DISSOLVED	1998-Apr						<10		294	
BARIUM, DISSOLVED	1998-Oct						182		342	
BARIUM, DISSOLVED	1999-Sep	67	86	93	159		32	53	368	
BARIUM, DISSOLVED	2000-Sep	68	86	71	164		37	41	253	
BARIUM, DISSOLVED	2001-Sep	70	85	69	211		21	48	185	
BARIUM, DISSOLVED	2002-Sep	71	94	85	270		43	41	160	
BARIUM, DISSOLVED	2003-Sep	67	82	78	252		33	42	167	
BARIUM, DISSOLVED	2004-Sep	81	90	78	217		32	48	141	
BARIUM, DISSOLVED	2005-Jun									82
BARIUM, DISSOLVED	2005-Sep	67	88	73	256	54	35	49	162	
BARIUM, DISSOLVED	2005-Oct									89
BARIUM, DISSOLVED	2006-Sep	64.4	103	75.2	276	58.5	25	38.2	146	77.9
BARIUM, DISSOLVED	2007-Sep	72.8	77.2	66.1	199	53	24.5	29.7	110	51.3
BARIUM, DISSOLVED	2008-Sep	67.3	89.3	69.2	277	84.9	27.9	58.9	112	49.4
BARIUM, DISSOLVED	2009-Sep	75.9	79.7	58.7	267	63.4	22.5	<50	94.1	42.2
BARIUM, DISSOLVED	2010-Aug	76.6	86.2	51.8	269	86.6	14.3	<30	95.3	46.9
BARIUM, DISSOLVED	2011-Sep	72.3	79.5	53.8	257	76.8	15.4	39.4	103	42.3
BARIUM, DISSOLVED	2012-Sep	77.2	85.7	55.9	276	65.2	20.3	43.6	116	48.1
BARIUM, DISSOLVED	2013-Sep	83.3	89.5	51.3	271	68.2	21	34.2	116	48
BARIUM, DISSOLVED	2014-Sep	76.5	85.6	51.9	457	59.6	29.8	38.5	111	45.9
BARIUM, DISSOLVED	2015-Apr									
BARIUM, DISSOLVED	2015-Sep	78.2	84.2	47.7	212	52.8	17	28.4	83.7	35.2
BARIUM, DISSOLVED	2016-Sep	210	81		200	38				
BARIUM	2016-Sep	234	84.2	121	200	39.6	41.6	43.5	79.6	55.3
BARIUM	2017-Sep	149	81.2	252	336	65.2	41.6	47.8	119	
BARIUM	2018-Sep	101	84.1	46.9	188	57.4	33.3	42.2	203	52.5

GW Standard:  
MCL = 2000



## IPL Stoney Point Closed Landfill Historic Monitoring Results

**BARIUM**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-21	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27	DPW-01	DPW-02	SW-01	SW-02
BARIUM, DISSOLVED	1994-Feb											
BARIUM, DISSOLVED	1994-Apr											
BARIUM, DISSOLVED	1994-Jul											
BARIUM, DISSOLVED	1994-Oct											
BARIUM, DISSOLVED	1995-Apr											
BARIUM, DISSOLVED	1995-Oct											
BARIUM, DISSOLVED	1997-Apr											
BARIUM, DISSOLVED	1997-Oct											
BARIUM, DISSOLVED	1998-Apr											
BARIUM, DISSOLVED	1998-Oct											
BARIUM, DISSOLVED	1999-Sep											
BARIUM, DISSOLVED	2000-Sep											
BARIUM, DISSOLVED	2001-Sep											
BARIUM, DISSOLVED	2002-Sep											
BARIUM, DISSOLVED	2003-Sep											
BARIUM, DISSOLVED	2004-Sep											
BARIUM, DISSOLVED	2005-Jun	223	291	160					51	35		
BARIUM, DISSOLVED	2005-Sep	252	284	138								
BARIUM, DISSOLVED	2005-Oct								15	90		
BARIUM, DISSOLVED	2006-Sep	355	285	144					<60			
BARIUM, DISSOLVED	2007-Sep	376	340	132					13.2	<10		
BARIUM, DISSOLVED	2008-Sep	407	227	152					56.7	83.3		
BARIUM, DISSOLVED	2009-Sep	379	270	146					23.7	50.4		
BARIUM, DISSOLVED	2010-Aug	382	292	161					12.6	42.5		
BARIUM, DISSOLVED	2011-Sep	352	353	148					16.6	40.8		
BARIUM, DISSOLVED	2012-Sep	385	338	163					23.1	39.1		
BARIUM, DISSOLVED	2013-Sep	382	224	160					13.8	33.2		
BARIUM, DISSOLVED	2014-Sep	362	282	150							165	148
BARIUM, DISSOLVED	2015-Apr				93.1	190	160	83.6				
BARIUM, DISSOLVED	2015-Sep	390	262	155	148	264	147	67.1				187
BARIUM, DISSOLVED	2016-Sep											
BARIUM	2016-Sep	398	232	247	480	350	163	279			135	144
BARIUM	2017-Sep	342	228	186	557	353	150	98.4	11.7	98.6	164	173
BARIUM	2018-Sep	395	275	198	383	330	149	116	38.7	249	137	127

GW Standard:  
MCL = 2000

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**BERYLLIUM**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-02A	MW-08	MW-11	MW-12	MW-14	MW-15	MW-16	MW-17	MW-20
BERYLLIUM, DISSOLVED	1999-Sep	<10	<10	<10	<10		<10	<10	<10	
BERYLLIUM, DISSOLVED	2000-Sep	<10	<10	<10	<10		<10	<10	<10	
BERYLLIUM, DISSOLVED	2001-Sep	<10	<10	<10	<10		<10	<10	<10	
BERYLLIUM, DISSOLVED	2002-Sep	<10	<10	<10	<10		<10	<10	<10	
BERYLLIUM, DISSOLVED	2003-Sep	<10	<10	<10	<10		<10	<10	<10	
BERYLLIUM, DISSOLVED	2004-Sep	<10	<10	<10	<10		<10	<10	<10	
BERYLLIUM, DISSOLVED	2005-Jun									<10
BERYLLIUM, DISSOLVED	2005-Sep	<10	<10	<10	<10	<10	<10	<10	<10	
BERYLLIUM, DISSOLVED	2005-Oct									<10
BERYLLIUM, DISSOLVED	2006-Sep	<10	<10	<10	<10	<10	<10	<10	<10	<10
BERYLLIUM, DISSOLVED	2007-Sep	<10	<10	<10	<10	<10	<10	<10	<10	<10
BERYLLIUM, DISSOLVED	2008-Sep	<10	<10	<10	<10	<10	<10	<10	<10	<10
BERYLLIUM, DISSOLVED	2009-Sep	<10	<10	<10	<10	<10	<10	<50	<10	<10
BERYLLIUM, DISSOLVED	2010-Aug	<10	<10	16.6	<10	15.2	24.2	<30	<10	<10
BERYLLIUM, DISSOLVED	2011-Sep	<10	<10	<10	<10	<10	<10	<30	<10	<10
BERYLLIUM, DISSOLVED	2012-Sep	<1	<1	<1	<1	<1	<1	<2	<1	<1
BERYLLIUM, DISSOLVED	2013-Sep	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
BERYLLIUM, DISSOLVED	2014-Sep	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
BERYLLIUM, DISSOLVED	2015-Apr									
BERYLLIUM, DISSOLVED	2015-Sep	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
BERYLLIUM, DISSOLVED	2016-Sep	<0.08	<0.08		<0.08	<0.08				
BERYLLIUM	2016-Sep	<0.08	<0.08	0.14 M1	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
BERYLLIUM	2017-Sep	0.048	<0.012	0.39	0.018	0.026	<0.012	<0.012	0.1	
BERYLLIUM	2018-Sep	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	0.21	<0.12

GW Standard:  
MCL = 4

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**BERYLLIUM  
UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-21	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27
BERYLLIUM, DISSOLVED	1999-Sep							
BERYLLIUM, DISSOLVED	2000-Sep							
BERYLLIUM, DISSOLVED	2001-Sep							
BERYLLIUM, DISSOLVED	2002-Sep							
BERYLLIUM, DISSOLVED	2003-Sep							
BERYLLIUM, DISSOLVED	2004-Sep							
BERYLLIUM, DISSOLVED	2005-Jun	<10	<10	<10				
BERYLLIUM, DISSOLVED	2005-Sep	<10	<10	<10				
BERYLLIUM, DISSOLVED	2005-Oct							
BERYLLIUM, DISSOLVED	2006-Sep	<10	<10	<10				
BERYLLIUM, DISSOLVED	2007-Sep	<10	<10	<10				
BERYLLIUM, DISSOLVED	2008-Sep	<10	<10	<10				
BERYLLIUM, DISSOLVED	2009-Sep	<10	<10	<10				
BERYLLIUM, DISSOLVED	2010-Aug	<10	<10	<10				
BERYLLIUM, DISSOLVED	2011-Sep	<10	<10	<10				
BERYLLIUM, DISSOLVED	2012-Sep	<1	<1	<1				
BERYLLIUM, DISSOLVED	2013-Sep	<0.05	<0.05	<0.05				
BERYLLIUM, DISSOLVED	2014-Sep	<0.4	<0.4	<0.4				
BERYLLIUM, DISSOLVED	2015-Apr				<0.4	<0.4	<0.4	<0.4
BERYLLIUM, DISSOLVED	2015-Sep	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
BERYLLIUM, DISSOLVED	2016-Sep							
BERYLLIUM	2016-Sep	<0.08	<0.08	0.65	0.15	0.2	<0.08	1.1
BERYLLIUM	2017-Sep	<0.012	<0.012	0.11	0.22	0.11	<0.012	0.031
BERYLLIUM	2018-Sep	<0.12	0.17	<0.12	<0.12	<0.12	<0.12	<0.12

GW Standard:  
MCL = 4

## IPL Stoney Point Closed Landfill Historic Monitoring Results

**BERYLLIUM**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	DPW-01	DPW-02	SW-01	SW-02
BERYLLIUM, DISSOLVED	1999-Sep				
BERYLLIUM, DISSOLVED	2000-Sep				
BERYLLIUM, DISSOLVED	2001-Sep				
BERYLLIUM, DISSOLVED	2002-Sep				
BERYLLIUM, DISSOLVED	2003-Sep				
BERYLLIUM, DISSOLVED	2004-Sep				
BERYLLIUM, DISSOLVED	2005-Jun	<10	<10		
BERYLLIUM, DISSOLVED	2005-Sep				
BERYLLIUM, DISSOLVED	2005-Oct	<10	<10		
BERYLLIUM, DISSOLVED	2006-Sep	<60			
BERYLLIUM, DISSOLVED	2007-Sep	<10	<10		
BERYLLIUM, DISSOLVED	2008-Sep	<10	<10		
BERYLLIUM, DISSOLVED	2009-Sep	<10	<10		
BERYLLIUM, DISSOLVED	2010-Aug	13.8	<10		
BERYLLIUM, DISSOLVED	2011-Sep	<10	<10		
BERYLLIUM, DISSOLVED	2012-Sep	1.45	<1		
BERYLLIUM, DISSOLVED	2013-Sep	<0.05	<0.05		
BERYLLIUM, DISSOLVED	2014-Sep			<0.4	<0.4
BERYLLIUM, DISSOLVED	2015-Apr				
BERYLLIUM, DISSOLVED	2015-Sep				<0.4
BERYLLIUM, DISSOLVED	2016-Sep				
BERYLLIUM	2016-Sep			<0.08	<0.08
BERYLLIUM	2017-Sep	0.018	0.29	<0.012	<0.012
BERYLLIUM	2018-Sep	<0.12	1	0.19	<0.12

GW Standard:  
MCL = 4

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**BORON**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-02A	MW-03	MW-08	MW-09	MW-10	MW-11	MW-12	MW-13	MW-14
BORON, DISSOLVED	2006-Sep	185	<100	2460	119	13000	5060	955	234	7540
BORON, DISSOLVED	2007-Sep	192	<100	2000	<100	11400	5540	1120	223	4840
BORON, DISSOLVED	2008-Sep	171	<100	2870	<100	12800	6460	500	250	3860
BORON, DISSOLVED	2009-Sep	117	<100	1530	<100	16300	7930	407	225	4210
BORON, DISSOLVED	2010-Aug	129	<100	1170	<100	15700	7840	427	391	3980
BORON, DISSOLVED	2011-Sep	145	<100	642	<100	15400	7220	409	284	12600
BORON, DISSOLVED	2012-Sep	170	<100	950	<100	21300	8600	601	285	19300
BORON, DISSOLVED	2013-Sep	121	<50	1770	<50	17300	9220	522	298	21800
BORON, DISSOLVED	2014-Sep	114	<100	2000	<100	15400	11200	568	601	21600
BORON, DISSOLVED	2015-Apr									
BORON, DISSOLVED	2015-Sep	127	<100	1160	251	17200	10500	335	2880	20300
BORON, DISSOLVED	2016-Sep	160		260				1200		7200
BORON	2012-Sep									
BORON	2013-Sep									
BORON	2014-Sep									
BORON	2015-Sep									
BORON	2016-Sep	159	<50	244	<50	17400 M1	8650	1200	7470	6630
BORON	2017-Sep	222	35.5 B	339	500	19800	6630	741	13200	15900
BORON	2018-Sep	141	49.3	1220	3620	18700	10300	910	9690	18700

GW Standard:  
None

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**BORON**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-15	MW-16	MW-17	MW-18	MW-20	MW-21	MW-22	MW-23	MW-24
BORON, DISSOLVED	2006-Sep	4170	26700	790	4800	678	153	<100	1460	
BORON, DISSOLVED	2007-Sep	4130	19300	678	4170	502	112	<100	853	
BORON, DISSOLVED	2008-Sep	5470	19900	815	4910	610	104	<100	1460	
BORON, DISSOLVED	2009-Sep	5330	37100	971	3730	653	102	<100	1130	
BORON, DISSOLVED	2010-Aug	5630	12600	961	4060	879	155	<100	752	
BORON, DISSOLVED	2011-Sep	5970	15500	1690	3660	1200	102	<100	800	
BORON, DISSOLVED	2012-Sep	7130	58800	2000	7820	1520	113	132	788	
BORON, DISSOLVED	2013-Sep	7610	49200	2970	13800	1780	137	123	519	
BORON, DISSOLVED	2014-Sep	6730	49400	3310	13500	2200	116	110	478	
BORON, DISSOLVED	2015-Apr									<100
BORON, DISSOLVED	2015-Sep	7310	47600	3380	12400	3700	102	158	526	<100
BORON, DISSOLVED	2016-Sep									
BORON	2012-Sep									
BORON	2013-Sep									
BORON	2014-Sep									
BORON	2015-Sep									
BORON	2016-Sep	13300	37800	1440	9240	3790	86.8	114	66.8	<50
BORON	2017-Sep	14200	46400	1670	8020		116 B	79.2 B	53.6 B	72.7 B
BORON	2018-Sep	10000	57700	5000	9420	6590	158	108	165	65.7

GW Standard:  
None

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**BORON**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-25	MW-26	MW-27	DPW-01	DPW-02	SW-01	SW-02	LW-02	LW-03
BORON, DISSOLVED	2006-Sep				8450					
BORON, DISSOLVED	2007-Sep				7760	1320				
BORON, DISSOLVED	2008-Sep				2100	923				
BORON, DISSOLVED	2009-Sep				6140	1070				
BORON, DISSOLVED	2010-Aug				5740	1140				
BORON, DISSOLVED	2011-Sep				6780	1970				
BORON, DISSOLVED	2012-Sep				9130	2390				
BORON, DISSOLVED	2013-Sep				5510	2400				
BORON, DISSOLVED	2014-Sep						362	2690		
BORON, DISSOLVED	2015-Apr	<100	<100	169						
BORON, DISSOLVED	2015-Sep	106	<100	174				6690		
BORON, DISSOLVED	2016-Sep									
BORON	2012-Sep								15200	5700
BORON	2013-Sep								16200	5830
BORON	2014-Sep								17100	4720
BORON	2015-Sep								690	4380
BORON	2016-Sep	98	<50	237			530	1430	265	5090
BORON	2017-Sep	105	58.3 B	203 B	7460	3250	997	7280	19500	4600
BORON	2018-Sep	153	94.5	232	21700	2510	325	663	17900 M1	5780

GW Standard:  
None

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**COBALT**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-02A	MW-08	MW-11	MW-12	MW-14	MW-15	MW-16	MW-17	MW-20
COBALT, DISSOLVED	1999-Sep	<20	<20	<20	<20		<20	<20	<20	
COBALT, DISSOLVED	2000-Sep	<20	<20	<20	<20		<20	<20	<20	
COBALT, DISSOLVED	2001-Sep	<20	<20	<20	<20		<20	<20	<20	
COBALT, DISSOLVED	2002-Sep	<20	<20	<20	<20		28	<20	<20	
COBALT, DISSOLVED	2003-Sep	<20	<20	<20	<20		20	<20	<20	
COBALT, DISSOLVED	2004-Sep	<20	<20	<20	<20		<20	<20	<20	
COBALT, DISSOLVED	2005-Jun									<20
COBALT, DISSOLVED	2005-Sep	<20	<20	<20	<20	<20	26	24	<20	
COBALT, DISSOLVED	2005-Oct									<20
COBALT, DISSOLVED	2006-Sep	<20	<20	<20	<20	<20	<20	<20	<20	<20
COBALT, DISSOLVED	2007-Sep	<20	<20	<20	<20	<20	<20	<20	<20	<20
COBALT, DISSOLVED	2008-Sep	<20	<20	<20	<20	<20	<20	<20	<20	<20
COBALT, DISSOLVED	2009-Sep	<20	<20	<20	<20	<20	<20	<100	<20	<20
COBALT, DISSOLVED	2010-Aug	3.72	7.84	8.6	4.19	8.71	10.8	<4.65	3.57	5.9
COBALT, DISSOLVED	2011-Sep	2.5	<1.55	<1.55	<1.55	<1.55	8.81	<4.65	<1.55	<1.55
COBALT, DISSOLVED	2012-Sep	<1.55	<1.55	<1.55	3.87	<1.55	7.54	<3.1	<1.55	<1.55
COBALT, DISSOLVED	2013-Sep	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	52
COBALT, DISSOLVED	2014-Sep	<5	<5	<5	<5	<5	10.4	<5	<5	6.8
COBALT, DISSOLVED	2015-Apr									
COBALT, DISSOLVED	2015-Sep	<5	<5	<5	<5	<5	5.9	<5	<5	<5
COBALT, DISSOLVED	2016-Sep	<0.5	<0.5		<0.5	<0.5				
COBALT	2016-Sep	<0.5	<0.5	0.6	<0.5	<0.5	6.5	1.2	<0.5	1.7
COBALT	2017-Sep	3.7	0.28	2.3	2.9	0.38	7.2	2.8	0.91	
COBALT	2018-Sep	<0.15	0.17	<0.15	2.4	0.56	27.5	3.7	2.5	2.3

GW Standard:  
None



**IPL Stoney Point Closed Landfill  
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**COBALT**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-21	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27
COBALT, DISSOLVED	1999-Sep							
COBALT, DISSOLVED	2000-Sep							
COBALT, DISSOLVED	2001-Sep							
COBALT, DISSOLVED	2002-Sep							
COBALT, DISSOLVED	2003-Sep							
COBALT, DISSOLVED	2004-Sep							
COBALT, DISSOLVED	2005-Jun	<20	<20	<20				
COBALT, DISSOLVED	2005-Sep	<20	<20	<20				
COBALT, DISSOLVED	2005-Oct							
COBALT, DISSOLVED	2006-Sep	<20	<20	<20				
COBALT, DISSOLVED	2007-Sep	<20	<20	<20				
COBALT, DISSOLVED	2008-Sep	<20	<20	<20				
COBALT, DISSOLVED	2009-Sep	<20	<20	<20				
COBALT, DISSOLVED	2010-Aug	7.15	<1.55	5.91				
COBALT, DISSOLVED	2011-Sep	1.83	<1.55	<1.55				
COBALT, DISSOLVED	2012-Sep	<1.55	<1.55	<1.55				
COBALT, DISSOLVED	2013-Sep	<0.54	<0.54	<0.54				
COBALT, DISSOLVED	2014-Sep	<5	<5	<5				
COBALT, DISSOLVED	2015-Apr				<5	<5	<5	<5
COBALT, DISSOLVED	2015-Sep	<5	<5	<5	<5	<5	<5	<5
COBALT, DISSOLVED	2016-Sep							
COBALT	2016-Sep	<0.5	<0.5	0.55	12.2	1.4	<0.5	19
COBALT	2017-Sep	0.25	0.047	0.17	25.7	1.1	0.055	0.73
COBALT	2018-Sep	0.53	1.5	<0.15	1.2	1	<0.15	0.56

GW Standard:  
None

## IPL Stoney Point Closed Landfill Historic Monitoring Results

**COBALT**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	DPW-01	DPW-02	SW-01	SW-02
COBALT, DISSOLVED	1999-Sep				
COBALT, DISSOLVED	2000-Sep				
COBALT, DISSOLVED	2001-Sep				
COBALT, DISSOLVED	2002-Sep				
COBALT, DISSOLVED	2003-Sep				
COBALT, DISSOLVED	2004-Sep				
COBALT, DISSOLVED	2005-Jun	<20	<20		
COBALT, DISSOLVED	2005-Sep				
COBALT, DISSOLVED	2005-Oct	<20	<20		
COBALT, DISSOLVED	2006-Sep	<120			
COBALT, DISSOLVED	2007-Sep	<20	<20		
COBALT, DISSOLVED	2008-Sep	<20	<20		
COBALT, DISSOLVED	2009-Sep	<20	<20		
COBALT, DISSOLVED	2010-Aug	8.07	5.55		
COBALT, DISSOLVED	2011-Sep	7.33	<1.55		
COBALT, DISSOLVED	2012-Sep	9.11	<1.55		
COBALT, DISSOLVED	2013-Sep	<0.54	<0.54		
COBALT, DISSOLVED	2014-Sep			<5	<5
COBALT, DISSOLVED	2015-Apr				
COBALT, DISSOLVED	2015-Sep				<5
COBALT, DISSOLVED	2016-Sep				
COBALT	2016-Sep			<0.5	<0.5
COBALT	2017-Sep	2.7	3.9	0.35	0.17
COBALT	2018-Sep	7.7	14.8	0.32	0.23

GW Standard:  
None

## IPL Stoney Point Closed Landfill Historic Monitoring Results

**COPPER**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-02A	MW-08	MW-11	MW-12	MW-14	MW-15	MW-16	MW-17	MW-20	MW-21
COPPER, DISSOLVED	1994-Feb		<50		<50		<50	<50	<50		
COPPER, DISSOLVED	1994-Apr		<50	<50	<50		<50	<50	<50		
COPPER, DISSOLVED	1994-Jul		<20	<20	<20		<20	<20	<20		
COPPER, DISSOLVED	1994-Oct		<20	<20	<20		<20	<20	<20		
COPPER, DISSOLVED	1999-Sep	<20		<20							
COPPER, DISSOLVED	2000-Sep	<20									
COPPER, DISSOLVED	2001-Sep	<20									
COPPER, DISSOLVED	2002-Sep	<20									
COPPER, DISSOLVED	2003-Sep	<20									
COPPER, DISSOLVED	2004-Sep	<20	<20	<20	<20		<20	<20	<20		
COPPER, DISSOLVED	2005-Jun									<20	<20
COPPER, DISSOLVED	2005-Sep	<20	<20	<20	<20	<20	<20	<20	<20		<20
COPPER, DISSOLVED	2005-Oct									<20	
COPPER, DISSOLVED	2006-Sep	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
COPPER, DISSOLVED	2007-Sep	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
COPPER, DISSOLVED	2008-Sep	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
COPPER, DISSOLVED	2009-Sep	<20	<20	<20	<20	<20	<20	<100	<20	<20	<20
COPPER, DISSOLVED	2010-Aug	<20	<20	<20	<20	<20	<20	<60	<20	<20	<20
COPPER, DISSOLVED	2011-Sep	<20	<20	<20	<20	<20	<20	<60	<20	<20	<20
COPPER, DISSOLVED	2012-Sep	<20	<20	<20	<20	<20	<20	<40	<20	<20	<20
COPPER, DISSOLVED	2013-Sep	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7
COPPER, DISSOLVED	2014-Sep	<10	<10	<10	12.3	<10	<10	<10	<10	<10	<10
COPPER, DISSOLVED	2015-Apr										
COPPER, DISSOLVED	2015-Sep	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
COPPER, DISSOLVED	2016-Sep	2.2	1.1		1.2	<0.11					
COPPER	2016-Sep	2.8	0.5	2.5 M1	1.3	<0.11	1.7	2	0.16	5.7	1.3
COPPER	2017-Sep	8.3	0.36 B	8.9	2.8	0.97	5.9	2.9	2.7		1.9
COPPER	2018-Sep	1.6	1.6	<0.48	4.1	0.83	2.3	1.2	5.2	9	2.7

GW Standard:  
SMCL = 1000

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**COPPER**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27	DPW-01	DPW-02	SW-01	SW-02
COPPER, DISSOLVED	1994-Feb										
COPPER, DISSOLVED	1994-Apr										
COPPER, DISSOLVED	1994-Jul										
COPPER, DISSOLVED	1994-Oct										
COPPER, DISSOLVED	1999-Sep										
COPPER, DISSOLVED	2000-Sep										
COPPER, DISSOLVED	2001-Sep										
COPPER, DISSOLVED	2002-Sep										
COPPER, DISSOLVED	2003-Sep										
COPPER, DISSOLVED	2004-Sep										
COPPER, DISSOLVED	2005-Jun	<20	<20					<20	<20		
COPPER, DISSOLVED	2005-Sep	<20	<20								
COPPER, DISSOLVED	2005-Oct							<20	29		
COPPER, DISSOLVED	2006-Sep	<20	<20					<120			
COPPER, DISSOLVED	2007-Sep	<20	<20					<20	<20		
COPPER, DISSOLVED	2008-Sep	<20	<20					<20	<20		
COPPER, DISSOLVED	2009-Sep	<20	<20					<20	<20		
COPPER, DISSOLVED	2010-Aug	<20	<20					<20	<20		
COPPER, DISSOLVED	2011-Sep	<20	<20					<20	<20		
COPPER, DISSOLVED	2012-Sep	<20	<20					<20	<20		
COPPER, DISSOLVED	2013-Sep	<2.7	<2.7					<2.7	<2.7		
COPPER, DISSOLVED	2014-Sep	<10	<10							<10	<10
COPPER, DISSOLVED	2015-Apr			<10	<10	<10	<10				
COPPER, DISSOLVED	2015-Sep	<10	<10	<10	<10	<10	<10				<10
COPPER, DISSOLVED	2016-Sep										
COPPER	2016-Sep	<0.11	1.9	10.1	6.8	0.34	31.4			0.85	0.95
COPPER	2017-Sep	0.49 B	0.58 B	21.7	4.1	0.5 B	1.6	2.6	14.8	0.74	0.82
COPPER	2018-Sep	3.2	0.6	1.7	3.1	0.96	1.3	7.3	38	1.7	1.6

GW Standard:  
SMCL = 1000

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**IRON**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-02A	MW-08	MW-11	MW-12	MW-14	MW-15	MW-16	MW-17	MW-20	MW-21
IRON, DISSOLVED	1994-Feb		60		80		110	730	400		
IRON, DISSOLVED	1994-Apr		170	3160	80		90	150	950		
IRON, DISSOLVED	1994-Jul		<100	1500	<100		<100	<100	1000		
IRON, DISSOLVED	1994-Oct		<100	2800	<100		<100	<100	530		
IRON, DISSOLVED	1995-Apr		<100	3400	<100		<100	<100	1200		
IRON, DISSOLVED	1995-Oct		<100	3000	<100		<100	<100	1400		
IRON, DISSOLVED	1996-Apr		<30	884	<30		<30	<30	1020		
IRON, DISSOLVED	1996-Oct		<30	1280	<30		30	103	1110		
IRON, DISSOLVED	1997-Apr		<100	110	<100		<100	<100	990		
IRON, DISSOLVED	1997-Oct		<100	260	<100		<100	<100	910		
IRON, DISSOLVED	1998-Apr	<100	<100	3300	<100		<100	<100	1300		
IRON, DISSOLVED	1998-Oct	<100	<100	2500	150		<100	210	1800		
IRON, DISSOLVED	1999-Sep	<100	<100	2600	1900		1000	980	1600		
IRON, DISSOLVED	2000-Sep	<100	<100	2200	3700		1800	110	2100		
IRON, DISSOLVED	2001-Sep	<100	<100	2430	780		320	<100	2080		
IRON, DISSOLVED	2002-Sep	<100	<100	2000	2300		1700	400	2100		
IRON, DISSOLVED	2003-Sep	<100	<100	1980	2740		2770	130	2390		
IRON, DISSOLVED	2004-Sep	<100	<100	1840	1130		5280	570	2830		
IRON, DISSOLVED	2005-Jun									<100	<100
IRON, DISSOLVED	2005-Sep	<100	<100	960	4400	1900	990	<100	2600		230
IRON, DISSOLVED	2005-Oct									<100	
IRON, DISSOLVED	2006-Sep	<100	<100	263	600	2100	4950	<100	2790	<100	758
IRON, DISSOLVED	2007-Sep	<100	<100	<100	761	3350	4010	<100	2630	<100	1800
IRON, DISSOLVED	2008-Sep	<100	<100	2330	5560	2060	4840	<100	2550	<100	4610
IRON, DISSOLVED	2009-Sep	<100	<100	453	6300	2060	4380	<500	2390	<100	5420
IRON, DISSOLVED	2010-Aug	<100	<100	3130	6130	1950	244	<300	2090	<100	6380
IRON, DISSOLVED	2011-Sep	<100	<100	1100	6340	3070	3270	<300	2470	<100	7500
IRON, DISSOLVED	2012-Sep	<100	<100	3250	5280	3860	2560	<200	2880	<100	7400
IRON, DISSOLVED	2013-Sep	<11.6	<11.6	404	3050	4210	1940	88.6	3020	3400	6540
IRON, DISSOLVED	2014-Sep	<50	<50	3280	14700	3710	5860	237	2680	217	6120
IRON, DISSOLVED	2015-Apr										
IRON, DISSOLVED	2015-Sep	<50	<50	2960	2600	3200	152	<50	2040	77.3	5120
IRON, DISSOLVED	2016-Sep	14	<13		250	2000					
IRON	2016-Sep	240	56.6	9230 M1	695	2030	4830	180	2110	819	7450
IRON	2017-Sep	5330	27	31700	8520	3960	3090	247	4180		4950
IRON	2018-Sep	69.4	45	4040	4630	5040	6730	696	9670	4550	8800

GW Standard:  
SMCL = 300

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**IRON**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27	DPW-01	DPW-02	SW-01	SW-02
IRON, DISSOLVED	1994-Feb										
IRON, DISSOLVED	1994-Apr										
IRON, DISSOLVED	1994-Jul										
IRON, DISSOLVED	1994-Oct										
IRON, DISSOLVED	1995-Apr										
IRON, DISSOLVED	1995-Oct										
IRON, DISSOLVED	1996-Apr										
IRON, DISSOLVED	1996-Oct										
IRON, DISSOLVED	1997-Apr										
IRON, DISSOLVED	1997-Oct										
IRON, DISSOLVED	1998-Apr										
IRON, DISSOLVED	1998-Oct										
IRON, DISSOLVED	1999-Sep										
IRON, DISSOLVED	2000-Sep										
IRON, DISSOLVED	2001-Sep										
IRON, DISSOLVED	2002-Sep										
IRON, DISSOLVED	2003-Sep										
IRON, DISSOLVED	2004-Sep										
IRON, DISSOLVED	2005-Jun	3580	<100					<100	<100		
IRON, DISSOLVED	2005-Sep	1100	<100								
IRON, DISSOLVED	2005-Oct							<100	<100		
IRON, DISSOLVED	2006-Sep	917	<100					2490			
IRON, DISSOLVED	2007-Sep	1250	<100					12200	328		
IRON, DISSOLVED	2008-Sep	1420	140					3680	<100		
IRON, DISSOLVED	2009-Sep	1080	<100					73700	890		
IRON, DISSOLVED	2010-Aug	1170	<100					73800	1760		
IRON, DISSOLVED	2011-Sep	1130	<100					88500	4570		
IRON, DISSOLVED	2012-Sep	1540	<100					161000	4560		
IRON, DISSOLVED	2013-Sep	1800	<11.6					72800	3700		
IRON, DISSOLVED	2014-Sep	1480	51.3							53	<50
IRON, DISSOLVED	2015-Apr			<50	569	<50	1270				
IRON, DISSOLVED	2015-Sep	1420	<50	<50	708	<50	164				<50
IRON, DISSOLVED	2016-Sep										
IRON	2016-Sep	1250	3730	8800	6540	396	27200			126	273
IRON	2017-Sep	1380	875	16500	4630	55.4 B	3000	51900	9150	253	98.1
IRON	2018-Sep	5230	591	4950	722	124	6820	54900 M1	27800	715	325

GW Standard:  
SMCL = 300

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**LEAD**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-02A	MW-08	MW-11	MW-12	MW-14	MW-15	MW-16	MW-17	MW-20
LEAD, DISSOLVED	1994-Feb		<5		<5		<5	9	<5	
LEAD, DISSOLVED	1994-Apr		<5	<5	<5		<5	<5	<5	
LEAD, DISSOLVED	1994-Jul		<5	<5	<5		<5	<5	<5	
LEAD, DISSOLVED	1994-Oct		<5	<5	<5		<5	<5	<5	
LEAD, DISSOLVED	1999-Sep	<4		<4				<4		
LEAD, DISSOLVED	2000-Sep	<4						<4		
LEAD, DISSOLVED	2001-Sep	<4						<8		
LEAD, DISSOLVED	2002-Sep	<4						<4		
LEAD, DISSOLVED	2003-Sep	<4						<4		
LEAD, DISSOLVED	2004-Sep	<4	<4	<4	<4		<4	<4	<4	
LEAD, DISSOLVED	2005-Jun									<4
LEAD, DISSOLVED	2005-Sep	<4	<4	<4	<4	<4	<4	<4	<4	
LEAD, DISSOLVED	2005-Oct									<4
LEAD, DISSOLVED	2006-Sep	<4	<4	<4	<4	<4	<4	<4	<4	<4
LEAD, DISSOLVED	2007-Sep	<4	<4	<4	<4	<4	<4	<4	<4	<4
LEAD, DISSOLVED	2008-Sep	<4	<4	<4	<4	<4	<4	<4	<4	<4
LEAD, DISSOLVED	2009-Sep	<4	<4	<4	<4	<4	<4	<4	<4	<4
LEAD, DISSOLVED	2010-Aug	<4	<4	<4	<4	<4	<4	<4	<4	<4
LEAD, DISSOLVED	2011-Sep	<4	<4	<4	<4	<4	<4	<4	<4	<4
LEAD, DISSOLVED	2012-Sep	<4	<4	<4	<4	<4	<4	<4	<4	<4
LEAD, DISSOLVED	2013-Sep	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
LEAD, DISSOLVED	2014-Sep	<1	<1	<1	6.9	<1	<1	<1	<1	<1
LEAD, DISSOLVED	2015-Apr									
LEAD, DISSOLVED	2015-Sep	<1	<1	<1	<1	<1	<1	<1	<1	<1
LEAD, DISSOLVED	2016-Sep	<0.19	<0.19		<0.19	<0.19				
LEAD	2016-Sep	0.7	<0.19	2.6	<0.19	<0.19	0.41	0.23	<0.19	1.4
LEAD	2017-Sep	8.5	0.087 B	7	0.8	0.8	0.34	0.39	1.6	
LEAD	2018-Sep	0.17	0.17	<0.12	0.84	0.5	0.65	<0.12	3.3	2.3

GW Standard:  
MCL = 15

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**LEAD**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-21	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27	DPW-01	DPW-02	SW-01	SW-02
LEAD, DISSOLVED	1994-Feb											
LEAD, DISSOLVED	1994-Apr											
LEAD, DISSOLVED	1994-Jul											
LEAD, DISSOLVED	1994-Oct											
LEAD, DISSOLVED	1999-Sep											
LEAD, DISSOLVED	2000-Sep											
LEAD, DISSOLVED	2001-Sep											
LEAD, DISSOLVED	2002-Sep											
LEAD, DISSOLVED	2003-Sep											
LEAD, DISSOLVED	2004-Sep											
LEAD, DISSOLVED	2005-Jun	<4	<4	<4					<4	<4		
LEAD, DISSOLVED	2005-Sep	<4	<4	<4								
LEAD, DISSOLVED	2005-Oct								<4	<4		
LEAD, DISSOLVED	2006-Sep	<4	<4	<4					<4	<4		
LEAD, DISSOLVED	2007-Sep	<4	<4	<4					<4	<4		
LEAD, DISSOLVED	2008-Sep	<4	<4	<4					<4	<4		
LEAD, DISSOLVED	2009-Sep	<4	<4	<4					<4	<4		
LEAD, DISSOLVED	2010-Aug	<4	<4	<4					<4	<4		
LEAD, DISSOLVED	2011-Sep	<4	<4	<4					<4	<4		
LEAD, DISSOLVED	2012-Sep	<4	<4	<4					<4	<4		
LEAD, DISSOLVED	2013-Sep	<0.03	<0.03	<0.03					<0.03	<0.03		
LEAD, DISSOLVED	2014-Sep	<1	<1	<1							<1	<1
LEAD, DISSOLVED	2015-Apr				<1	<1	<1	<1				
LEAD, DISSOLVED	2015-Sep	<1	<1	<1	<1	<1	<1	<1				<1
LEAD, DISSOLVED	2016-Sep											
LEAD	2016-Sep	0.61	<0.19	12.2	7.2	4.1	0.2	66.7			<0.19	0.2
LEAD	2017-Sep	0.32	0.07	1.7	19.1	1.9	0.12	2.6	0.69	6.5	0.11 B	0.058 B
LEAD	2018-Sep	0.49	2	0.97	0.28	0.5	0.14	1.2	4.1	19.2	2.8	0.46

GW Standard:  
MCL = 15



**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**MAGNESIUM**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-02A	MW-03	MW-08	MW-09	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17	MW-18	MW-20
MAGNESIUM, DISSOLVED	1994-Feb			23000				24000			47000	150000	42000		
MAGNESIUM, DISSOLVED	1994-Apr			36000			150000	40000	100000		80000	130000	76000		
MAGNESIUM, DISSOLVED	1994-Jul			22000			83000	23000	35000		49000	62000	35000		
MAGNESIUM, DISSOLVED	1994-Oct			23000			87000	25000	31000		41000	110000	50000		
MAGNESIUM, DISSOLVED	1995-Apr						79000	24000	50000		40000	44000	53000		
MAGNESIUM, DISSOLVED	1995-Oct			22000			76000	25000	48000		46000	95000	41000		
MAGNESIUM, DISSOLVED	1996-Apr						56400	20000	39800		38300	48900	39000		
MAGNESIUM, DISSOLVED	1996-Oct						66800	21100	40400		46100	84200	34700		
MAGNESIUM, DISSOLVED	1997-Apr						80000		38000		66000	47000			
MAGNESIUM, DISSOLVED	1997-Oct						60000		37000		50000	85000			
MAGNESIUM, DISSOLVED	1998-Apr						66000		61000		62000	39000			
MAGNESIUM, DISSOLVED	1998-Oct						51000		67000		54000	92000			
MAGNESIUM, DISSOLVED	1999-Sep	14000		19000			50000	22000	57000		48000	99000	46000		
MAGNESIUM, DISSOLVED	2000-Sep	15000		21000			52000	24000	62000		56000	120000	59000		
MAGNESIUM, DISSOLVED	2001-Sep	14700		21000			50600	25100	57100		55200	106000	59900		
MAGNESIUM, DISSOLVED	2002-Sep	15000		22000	24000		48000	23000	57000		58000	99000	64000		
MAGNESIUM, DISSOLVED	2003-Sep	14900		21400	25100		48800	19700	57700		64800	114000	65200		
MAGNESIUM, DISSOLVED	2004-Sep	14000		22000			45000	16000	59000		57000	110000	74000		
MAGNESIUM, DISSOLVED	2005-Jun														38000
MAGNESIUM, DISSOLVED	2005-Sep	15000		23000			54000	21000	70000	42000	60000	150000	65000		
MAGNESIUM, DISSOLVED	2005-Oct														52000
MAGNESIUM, DISSOLVED	2006-Sep	14000	6850	22800	24500	81300	54600	20100	55400	49100	59300	134000	75800	68800	74500
MAGNESIUM, DISSOLVED	2007-Sep	14600	5560	20600	26000	75100	56200	13800	53800	55600	56300	108000	73400	63900	81300
MAGNESIUM, DISSOLVED	2008-Sep	13700	5350	23500	28400	89600	65700	18800	60900	51800	63300	87100	76300	69700	101000
MAGNESIUM, DISSOLVED	2009-Sep	12400	5780	21000	26900	100000	70600	18500	60500	52200	57200	107000	67900	66100	98000
MAGNESIUM, DISSOLVED	2010-Aug	13000	6170	21600	27800	91700	72600	19900	60200	49200	57000	23600	64300	67500	87900
MAGNESIUM, DISSOLVED	2011-Sep	13200	6770	20700	27300	93500	72600	17800	56200	75300	60900	111000	73700	69400	96400
MAGNESIUM, DISSOLVED	2012-Sep	14300	5930	21700	28600	105000	77400	18600	54900	85500	62800	128000	77100	79600	93500
MAGNESIUM, DISSOLVED	2013-Sep	13000	6960	22900	28100	91900	76100	16100	58400	95000	62300	106000	76100	92700	95800
MAGNESIUM, DISSOLVED	2014-Sep	11800	7350	21700	26800	80600	76900	18900	55700	85100	59200	108000	70300	83700	91300
MAGNESIUM, DISSOLVED	2015-Apr														
MAGNESIUM, DISSOLVED	2015-Sep	12400	8270	20200	26500	80600	69200	18700	53100	76700	59800	88200	57100	73300	81900
MAGNESIUM, DISSOLVED	2016-Sep	21500		19300				14300		56100					
MAGNESIUM	2012-Sep														
MAGNESIUM	2013-Sep														
MAGNESIUM	2014-Sep														
MAGNESIUM	2015-Sep														
MAGNESIUM	2016-Sep	23800	6120	18900	27300	82000 M1	71200	14000	68500	53600	67200	96000	60500	79100	89600
MAGNESIUM	2017-Sep	27700	9920	20600	27700	92100	72400	18300	81700	77400	70100	103000	62900	75500	
MAGNESIUM	2018-Sep	15500	6780	21500	28800	103000	78900	10800	71700	81600	62900	106000	71500	78900	114000

GW Standard:  
None

**IPL Stoney Point Closed Landfill  
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**MAGNESIUM**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-21	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27	DPW-01	DPW-02	SW-01	SW-02	LW-02	LW-03
MAGNESIUM, DISSOLVED	1994-Feb													
MAGNESIUM, DISSOLVED	1994-Apr													
MAGNESIUM, DISSOLVED	1994-Jul													
MAGNESIUM, DISSOLVED	1994-Oct													
MAGNESIUM, DISSOLVED	1995-Apr													
MAGNESIUM, DISSOLVED	1995-Oct													
MAGNESIUM, DISSOLVED	1996-Apr													
MAGNESIUM, DISSOLVED	1996-Oct													
MAGNESIUM, DISSOLVED	1997-Apr													
MAGNESIUM, DISSOLVED	1997-Oct													
MAGNESIUM, DISSOLVED	1998-Apr													
MAGNESIUM, DISSOLVED	1998-Oct													
MAGNESIUM, DISSOLVED	1999-Sep													
MAGNESIUM, DISSOLVED	2000-Sep													
MAGNESIUM, DISSOLVED	2001-Sep													
MAGNESIUM, DISSOLVED	2002-Sep													
MAGNESIUM, DISSOLVED	2003-Sep													
MAGNESIUM, DISSOLVED	2004-Sep													
MAGNESIUM, DISSOLVED	2005-Jun	23000	27100	26000					15000	<1000				
MAGNESIUM, DISSOLVED	2005-Sep	28000	33000	29000										
MAGNESIUM, DISSOLVED	2005-Oct								26000	<1000				
MAGNESIUM, DISSOLVED	2006-Sep	29600	30800	26200					17800					
MAGNESIUM, DISSOLVED	2007-Sep	31600	38300	25000					21500	<1000				
MAGNESIUM, DISSOLVED	2008-Sep	32700	46900	26800					9230	3330				
MAGNESIUM, DISSOLVED	2009-Sep	32600	32700	26900					26600	3950				
MAGNESIUM, DISSOLVED	2010-Aug	30200	34800	28100					22700	6630				
MAGNESIUM, DISSOLVED	2011-Sep	30900	38900	27100					32200	16000				
MAGNESIUM, DISSOLVED	2012-Sep	31600	46000	27700					35000	19600				
MAGNESIUM, DISSOLVED	2013-Sep	31900	54100	28200					24300	19600				
MAGNESIUM, DISSOLVED	2014-Sep	30100	43800	23500							32800	28700		
MAGNESIUM, DISSOLVED	2015-Apr				21100	19500	12000	43100						
MAGNESIUM, DISSOLVED	2015-Sep	30800	41100	23600	22200	20400	10200	26200				39900		
MAGNESIUM, DISSOLVED	2016-Sep													
MAGNESIUM	2012-Sep												85100	33800
MAGNESIUM	2013-Sep												127000	31900
MAGNESIUM	2014-Sep												90200	29800
MAGNESIUM	2015-Sep												4260	32100
MAGNESIUM	2016-Sep	30100	38000	29700	34200	22500	10500	99400			27300	27600		
MAGNESIUM	2017-Sep	29300	44900	30000	48100	23700	10000	38600	24800	9930	35400	39600		
MAGNESIUM	2018-Sep	32800	47200	31100	26900	21900	10600	34800	40100	24900	19800	19100		

GW Standard:  
None

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**MANGANESE**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-02A	MW-08	MW-11	MW-12	MW-14	MW-15	MW-16	MW-17	MW-20
MANGANESE, DISSOLVED	1999-Sep	<10	104	194	3300		4800	2900	215	
MANGANESE, DISSOLVED	2000-Sep	<10	<10	205	2800		5500	1600	316	
MANGANESE, DISSOLVED	2001-Sep	<10	<10	197	4980		4370	1320	335	
MANGANESE, DISSOLVED	2002-Sep	<10	54	196	4400		5100	1600	305	
MANGANESE, DISSOLVED	2003-Sep	<10	<10	193	2150		5690	1480	428	
MANGANESE, DISSOLVED	2004-Sep	<10	<10	180	690		4330	1600	329	
MANGANESE, DISSOLVED	2005-Jun									77
MANGANESE, DISSOLVED	2005-Sep	<10	57	120	1400	240	3400	1400	504	
MANGANESE, DISSOLVED	2005-Oct									54
MANGANESE, DISSOLVED	2006-Sep	<10	49.7	107	1170	286	3410	929	511	34.9
MANGANESE, DISSOLVED	2007-Sep	<10	22.4	111	470	269	2960	901	332	34.5
MANGANESE, DISSOLVED	2008-Sep	<10	67.6	248	816	245	2970	868	319	30.7
MANGANESE, DISSOLVED	2009-Sep	<10	13.5	99.2	974	248	2460	1300	284	25
MANGANESE, DISSOLVED	2010-Aug	<10	47.5	251	929	233	2560	331	274	26.2
MANGANESE, DISSOLVED	2011-Sep	<10	23	230	845	375	2150	1460	327	16.7
MANGANESE, DISSOLVED	2012-Sep	<10	<10	240	1770	427	1940	995	355	24.8
MANGANESE, DISSOLVED	2013-Sep	<0.49	8.4	215	1150	474	1670	710	352	390
MANGANESE, DISSOLVED	2014-Sep	<5	<5	244	1310	410	2850	653	325	132
MANGANESE, DISSOLVED	2015-Apr									
MANGANESE, DISSOLVED	2015-Sep	<5	<5	228	760	362	1870	442	264	39.5
MANGANESE, DISSOLVED	2016-Sep	16	28		160	230				
MANGANESE	2016-Sep	35.6	27.6	239 M1	201	231	1640	731	261	50.6
MANGANESE	2017-Sep	464	77.4	372	2010	373	1690	1510	307	
MANGANESE	2018-Sep	8.2	74.5	274	670	447	6320	2380	480	67.8

GW Standard:  
SMCL = 50

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**MANGANESE**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-21	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27
MANGANESE, DISSOLVED	1999-Sep							
MANGANESE, DISSOLVED	2000-Sep							
MANGANESE, DISSOLVED	2001-Sep							
MANGANESE, DISSOLVED	2002-Sep							
MANGANESE, DISSOLVED	2003-Sep							
MANGANESE, DISSOLVED	2004-Sep							
MANGANESE, DISSOLVED	2005-Jun	145	212	50				
MANGANESE, DISSOLVED	2005-Sep	240	131	51				
MANGANESE, DISSOLVED	2005-Oct							
MANGANESE, DISSOLVED	2006-Sep	493	115	19.4				
MANGANESE, DISSOLVED	2007-Sep	499	132	10.1				
MANGANESE, DISSOLVED	2008-Sep	488	179	27				
MANGANESE, DISSOLVED	2009-Sep	541	126	16.9				
MANGANESE, DISSOLVED	2010-Aug	286	131	23.1				
MANGANESE, DISSOLVED	2011-Sep	381	148	<10				
MANGANESE, DISSOLVED	2012-Sep	280	162	<10				
MANGANESE, DISSOLVED	2013-Sep	274	208	27.6				
MANGANESE, DISSOLVED	2014-Sep	242	173	28				
MANGANESE, DISSOLVED	2015-Apr				451	94.5	7.7	189
MANGANESE, DISSOLVED	2015-Sep	272	163	25.9	1970	179	<5	86.2
MANGANESE, DISSOLVED	2016-Sep							
MANGANESE	2016-Sep	298	148	54.1	973	248	19.1	802
MANGANESE	2017-Sep	200	162	28.8	2820	186	3.9	124
MANGANESE	2018-Sep	296	281	46.2	657	368	8.6	153

GW Standard:  
SMCL = 50

## IPL Stoney Point Closed Landfill Historic Monitoring Results

**MANGANESE**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	DPW-01	DPW-02	SW-01	SW-02	LW-02	LW-03
MANGANESE, DISSOLVED	1999-Sep						
MANGANESE, DISSOLVED	2000-Sep						
MANGANESE, DISSOLVED	2001-Sep						
MANGANESE, DISSOLVED	2002-Sep						
MANGANESE, DISSOLVED	2003-Sep						
MANGANESE, DISSOLVED	2004-Sep						
MANGANESE, DISSOLVED	2005-Jun	616	<10				
MANGANESE, DISSOLVED	2005-Sep						
MANGANESE, DISSOLVED	2005-Oct	1400	<10				
MANGANESE, DISSOLVED	2006-Sep	1110					
MANGANESE, DISSOLVED	2007-Sep	1140	70				
MANGANESE, DISSOLVED	2008-Sep	257	159				
MANGANESE, DISSOLVED	2009-Sep	1360	113				
MANGANESE, DISSOLVED	2010-Aug	1200	428				
MANGANESE, DISSOLVED	2011-Sep	1390	436				
MANGANESE, DISSOLVED	2012-Sep	1870	539				
MANGANESE, DISSOLVED	2013-Sep	1180	585				
MANGANESE, DISSOLVED	2014-Sep			297	48.7		
MANGANESE, DISSOLVED	2015-Apr						
MANGANESE, DISSOLVED	2015-Sep				121		
MANGANESE, DISSOLVED	2016-Sep						
MANGANESE	2016-Sep			106	72.2	32.3	10.6
MANGANESE	2017-Sep	543	514	298	68.9	214	486
MANGANESE	2018-Sep	1950 M1	1460	147	91.1	106	7.7

GW Standard:  
SMCL = 50

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**SELENIUM**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-02A	MW-08	MW-11	MW-12	MW-14	MW-15	MW-16	MW-17	MW-20	MW-21
SELENIUM, DISSOLVED	1994-Feb		<5		<5		<5	<5	<5		
SELENIUM, DISSOLVED	1994-Apr		<5	<5	<5		<5	63	<5		
SELENIUM, DISSOLVED	1994-Jul		<5	<5	<5		<5	<5	<5		
SELENIUM, DISSOLVED	1994-Oct		<5	<5	<5		<5	<20	<5		
SELENIUM, DISSOLVED	1995-Apr							13.7			
SELENIUM, DISSOLVED	1995-Oct							<50			
SELENIUM, DISSOLVED	1996-Apr							<50			
SELENIUM, DISSOLVED	1996-Oct							<10			
SELENIUM, DISSOLVED	1997-Apr							<5			
SELENIUM, DISSOLVED	1997-Oct							<5			
SELENIUM, DISSOLVED	1998-Apr							<5			
SELENIUM, DISSOLVED	1998-Oct							<5			
SELENIUM, DISSOLVED	1999-Sep	<5		<5				<5			
SELENIUM, DISSOLVED	2000-Sep	<5	<5	<5	<5		<5	<5	<5		
SELENIUM, DISSOLVED	2001-Sep	<5	<5	<5	<5		<5	14	<5		
SELENIUM, DISSOLVED	2002-Sep	<5	<5	<5	<5		<5	<15	<5		
SELENIUM, DISSOLVED	2003-Sep	<5	<5	<5	<5		<5	<20	<5		
SELENIUM, DISSOLVED	2004-Sep	<5	<5	<5	<5		<5	<15	<5		
SELENIUM, DISSOLVED	2005-Jun									<5	<5
SELENIUM, DISSOLVED	2005-Sep	<5	<5	<25	<5	<5	<5	<25	<5		<5
SELENIUM, DISSOLVED	2005-Oct									<5	
SELENIUM, DISSOLVED	2006-Sep	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
SELENIUM, DISSOLVED	2007-Sep	<5	<5	<7	<5	<7	<5	<20	<5	<5	<5
SELENIUM, DISSOLVED	2008-Sep	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
SELENIUM, DISSOLVED	2009-Sep	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
SELENIUM, DISSOLVED	2010-Aug	<5	<5	<5	<5	<5	<5	<5	<50	<5	<5
SELENIUM, DISSOLVED	2011-Sep	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
SELENIUM, DISSOLVED	2012-Sep	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
SELENIUM, DISSOLVED	2013-Sep	1.1	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
SELENIUM, DISSOLVED	2014-Sep	<1	<1	<1	<1	<1	<1	<1	<1	1.6	<1
SELENIUM, DISSOLVED	2015-Apr										
SELENIUM, DISSOLVED	2015-Sep	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
SELENIUM, DISSOLVED	2016-Sep	0.79	<0.18		<0.18	<0.18					
SELENIUM	2016-Sep	0.99	<0.18	0.23	<0.18	<0.18	<0.18	0.26	<0.18	2.3	<0.18
SELENIUM	2017-Sep	0.65	<0.086	0.59	0.15	<0.086	0.17	0.28	0.22		<0.086
SELENIUM	2018-Sep	1.7	<0.16	<0.16	0.58	<0.16	<0.16	0.16	0.85	4.6	<0.16

GW Standard:  
MCL = 50

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**SELENIUM**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27	DPW-01	DPW-02	SW-01	SW-02
SELENIUM, DISSOLVED	1994-Feb										
SELENIUM, DISSOLVED	1994-Apr										
SELENIUM, DISSOLVED	1994-Jul										
SELENIUM, DISSOLVED	1994-Oct										
SELENIUM, DISSOLVED	1995-Apr										
SELENIUM, DISSOLVED	1995-Oct										
SELENIUM, DISSOLVED	1996-Apr										
SELENIUM, DISSOLVED	1996-Oct										
SELENIUM, DISSOLVED	1997-Apr										
SELENIUM, DISSOLVED	1997-Oct										
SELENIUM, DISSOLVED	1998-Apr										
SELENIUM, DISSOLVED	1998-Oct										
SELENIUM, DISSOLVED	1999-Sep										
SELENIUM, DISSOLVED	2000-Sep										
SELENIUM, DISSOLVED	2001-Sep										
SELENIUM, DISSOLVED	2002-Sep										
SELENIUM, DISSOLVED	2003-Sep										
SELENIUM, DISSOLVED	2004-Sep										
SELENIUM, DISSOLVED	2005-Jun	<5	<5					<5	<5		
SELENIUM, DISSOLVED	2005-Sep	<5	<5								
SELENIUM, DISSOLVED	2005-Oct							<5	<5		
SELENIUM, DISSOLVED	2006-Sep	<5	<5					<5			
SELENIUM, DISSOLVED	2007-Sep	<5	<5					<5	<5		
SELENIUM, DISSOLVED	2008-Sep	<5	<5					<5	<5		
SELENIUM, DISSOLVED	2009-Sep	<5	<5					<5	<5		
SELENIUM, DISSOLVED	2010-Aug	<5	<5					<5	<5		
SELENIUM, DISSOLVED	2011-Sep	<5	<5					<5	<5		
SELENIUM, DISSOLVED	2012-Sep	<5	<5					<5	<5		
SELENIUM, DISSOLVED	2013-Sep	<0.14	<0.14					<0.14	<0.14		
SELENIUM, DISSOLVED	2014-Sep	<1	<1							<1	<1
SELENIUM, DISSOLVED	2015-Apr			<1	<1	<1	<1				
SELENIUM, DISSOLVED	2015-Sep	<1	<1	<1	<1	<1	<1				<1
SELENIUM, DISSOLVED	2016-Sep										
SELENIUM	2016-Sep	<0.18	1	0.34	0.26	0.27	2.8			0.65	0.74
SELENIUM	2017-Sep	<0.086	0.22	0.92	0.3	0.41	0.14	<0.086	0.36	0.25	0.21
SELENIUM	2018-Sep	0.56	0.23	<0.16	<0.16	0.38	<0.16			1	0.76

GW Standard:  
MCL = 50

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**ZINC**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-02A	MW-08	MW-11	MW-12	MW-14	MW-15	MW-16	MW-17	MW-20	MW-21
ZINC, DISSOLVED	1994-Feb		<50		<50		<50	<50	<50		
ZINC, DISSOLVED	1994-Apr		<50	<50	<50		<50	<50	<50		
ZINC, DISSOLVED	1994-Jul		<20	<20	<20		<20	<20	<20		
ZINC, DISSOLVED	1994-Oct		<20	<20	<20		<20	<20	<20		
ZINC, DISSOLVED	1999-Sep	<20		<20							
ZINC, DISSOLVED	2000-Sep	<20		<20							
ZINC, DISSOLVED	2001-Sep	<20									
ZINC, DISSOLVED	2002-Sep	<20									
ZINC, DISSOLVED	2003-Sep	<20									
ZINC, DISSOLVED	2004-Sep	<20	<20	<20	<20		<20	<20	<20		
ZINC, DISSOLVED	2005-Jun									63	<20
ZINC, DISSOLVED	2005-Sep	21	24	29	22	27	40	<100	41		23
ZINC, DISSOLVED	2005-Oct									300	
ZINC, DISSOLVED	2006-Sep	24.4	35.9	41.4	48.6	33.5	43.9	85.1	36.3	28.5	31.8
ZINC, DISSOLVED	2007-Sep	27.4	29.5	59	34.1	59.9	84.3	90.6	68	70.9	121
ZINC, DISSOLVED	2008-Sep	<20	<20	<20	22	23.9	58	<20	30.1	64.9	26
ZINC, DISSOLVED	2009-Sep	28.8	28.6	88.5	39.9	73.8	105	131	84	80.1	41.9
ZINC, DISSOLVED	2010-Aug	<20	<20	<20	<20	<20	<20	<60	29.9	<20	<20
ZINC, DISSOLVED	2011-Sep	<20	<20	<20	<20	<20	<20	<60	<20	<20	<20
ZINC, DISSOLVED	2012-Sep	<20	<20	<20	<20	<20	<20	<40	<20	22.5	<20
ZINC, DISSOLVED	2013-Sep	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3
ZINC, DISSOLVED	2014-Sep	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
ZINC, DISSOLVED	2015-Apr										
ZINC, DISSOLVED	2015-Sep	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
ZINC, DISSOLVED	2016-Sep	81	3.7 B		2.3 B	39					
ZINC	2016-Sep	12.3	32.2	7.5 B,M1	3.6 B	0.94 B	3.5 B	6 B	38.7	23.6	3.8 B
ZINC	2017-Sep	18.5	1.8 B	28.2	9.9	3.2 B	11.4	4.9 B	9.1		2.9 B
ZINC	2018-Sep	4.2	7.6	4.4	26.9	<3.7	10.6	5.8	18.4	1940	5.9

GW Standard:  
SMCL = 5000



**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**ZINC**  
**UNITS: UG/L**

CHEMICAL PARAMETER	EVENT	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27	DPW-01	DPW-02	SW-01	SW-02
ZINC, DISSOLVED	1994-Feb										
ZINC, DISSOLVED	1994-Apr										
ZINC, DISSOLVED	1994-Jul										
ZINC, DISSOLVED	1994-Oct										
ZINC, DISSOLVED	1999-Sep										
ZINC, DISSOLVED	2000-Sep										
ZINC, DISSOLVED	2001-Sep										
ZINC, DISSOLVED	2002-Sep										
ZINC, DISSOLVED	2003-Sep										
ZINC, DISSOLVED	2004-Sep										
ZINC, DISSOLVED	2005-Jun	156	<20					300000	524		
ZINC, DISSOLVED	2005-Sep	86	50								
ZINC, DISSOLVED	2005-Oct							460000	1300		
ZINC, DISSOLVED	2006-Sep	24.2	32.3					669000			
ZINC, DISSOLVED	2007-Sep	82.1	54.1					608000	453000		
ZINC, DISSOLVED	2008-Sep	37.3	32.4					43100	108000		
ZINC, DISSOLVED	2009-Sep	46.3	31.7					109000	132000		
ZINC, DISSOLVED	2010-Aug	<20	<20					50300	152000		
ZINC, DISSOLVED	2011-Sep	<20	21.9					53600	212000		
ZINC, DISSOLVED	2012-Sep	<20	<20					61600	203000		
ZINC, DISSOLVED	2013-Sep	<3.3	<3.3					36400	221000		
ZINC, DISSOLVED	2014-Sep	<50	<50							<50	<50
ZINC, DISSOLVED	2015-Apr			<50	<50	<50	<50				
ZINC, DISSOLVED	2015-Sep	<50	<50	<50	<50	<50	<50				<50
ZINC, DISSOLVED	2016-Sep										
ZINC	2016-Sep	2.5 B	24.9	8.9 B	16.1	1.4 B	56.4			3.1 B	2.4 B
ZINC	2017-Sep	1.3 B	2.6 B	18.2	9.8 B	1.6 B	5.6	17400	43600	1.5 B	3.6 B
ZINC	2018-Sep	11	<3.7	4.6	6.8	22.1	10.2	133000 M1	65200	5.4	3.7

GW Standard:  
SMCL = 5000

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**CHLORIDE**  
**UNITS: MG/L**

CHEMICAL PARAMETER	EVENT	MW-02A	MW-08	MW-11	MW-12	MW-14	MW-15	MW-16	MW-17	MW-20	MW-21
CHLORIDE	1994-Feb		7		6		26	179	13		
CHLORIDE	1994-Apr		2	50	12		38	160	12		
CHLORIDE	1994-Jul		<5	47	13		37	120	11		
CHLORIDE	1994-Oct		<5	45	11		29	40	16		
CHLORIDE	1995-Apr		<5	50	16		42	10	20		
CHLORIDE	1995-Oct		<5	42	11		30	170	13		
CHLORIDE	1996-Apr		2.8	41	15		36	110	12		
CHLORIDE	1996-Oct		13	49	24		43	113	21		
CHLORIDE	1997-Apr		<5	46	7.7		50	50	24		
CHLORIDE	1997-Oct		<5	41	32		47	99	14		
CHLORIDE	1998-Apr	9.9	<5	40.7	19.6		51.1	44.9	11.6		
CHLORIDE	1998-Oct	8.8	<5	35	14		47	84	18		
CHLORIDE	1999-Sep	8.9	<5	35	12		42	110	21		
CHLORIDE	2000-Sep	9.4	5.5	34.9	15.2		51.1	111	28.4		
CHLORIDE	2001-Sep	9.6	10.2	31.7	13.6		51.1	133	26.2		
CHLORIDE	2002-Sep	8.1	<5	29.1	8		55.9	90.7	29.9		
CHLORIDE	2003-Sep	8.5	6.4	28.8	7.6		58.6	95.7	28.9		
CHLORIDE	2004-Sep	8.1	7.3	24.2	<5		49.2	98.1	32.3		
CHLORIDE	2005-Jun									124	5.9
CHLORIDE	2005-Sep	8.4	7	27.8	5.7	23.2	52.7	135	27.1		<5
CHLORIDE	2005-Oct										
CHLORIDE	2006-Sep	7.98	<5	29.2	7.28	32.3	53.8	106	29.5	53.7	<5
CHLORIDE	2007-Sep	8.09	7.85	32.4	<5	29.8	58.4	90.9	34.4	34.2	5.47
CHLORIDE	2008-Sep	6.54	7.7	33.3	<5	24.5	52	46.3	30	30.4	<5
CHLORIDE	2009-Sep	6.97	<5	36.4	<5	24.1	47.6	56	28.8	28.1	<5
CHLORIDE	2010-Aug	7.3	3.44	32.6	1.5	24.3	36.6	47.4	26.7		3.36
CHLORIDE	2011-Sep	7.36	3.12	34.8	<5	48.7	35.4	47.5	33.5	32.2	4.5
CHLORIDE	2012-Sep	6.98	<5	8.64	<5	48.2	36.6	53.1	32	35.8	5.11
CHLORIDE	2013-Sep	7	7.5	34.2	2.5	40.6	38.5	37.7	33.7	34.9	5.6
CHLORIDE	2014-Sep	6.6	8.1	35.3	3.4	38.4	36.9	40	36.3	39	7.6
CHLORIDE	2015-Apr										
CHLORIDE	2015-Sep	6.6	4.3	30.4	2.2	31.1	34.3	28.7	32.5	44.9	8.4
CHLORIDE	2016-Sep	6.5	1.3	29.5	5.6	27.9	33.2	33.2	26.6	49.6	8.5
CHLORIDE	2017-Sep	5.4	1.8	27.4	3.8	34.4	28	24.5	26.8		7.9
CHLORIDE	2018-Sep	6.5	4.7	27.7	2.7	31.8	28.7	20.1	30.8	62	9.5

GW Standard:  
SMCL = 250

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**CHLORIDE**  
**UNITS: MG/L**

CHEMICAL PARAMETER	EVENT	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27	DPW-01	DPW-02	SW-01	SW-02	LW-02	LW-03
CHLORIDE	1994-Feb												
CHLORIDE	1994-Apr												
CHLORIDE	1994-Jul												
CHLORIDE	1994-Oct												
CHLORIDE	1995-Apr												
CHLORIDE	1995-Oct												
CHLORIDE	1996-Apr												
CHLORIDE	1996-Oct												
CHLORIDE	1997-Apr												
CHLORIDE	1997-Oct												
CHLORIDE	1998-Apr												
CHLORIDE	1998-Oct												
CHLORIDE	1999-Sep												
CHLORIDE	2000-Sep												
CHLORIDE	2001-Sep												
CHLORIDE	2002-Sep												
CHLORIDE	2003-Sep												
CHLORIDE	2004-Sep												
CHLORIDE	2005-Jun	8.1	9					115	36.8				
CHLORIDE	2005-Sep	10	7.5										
CHLORIDE	2005-Oct							108					
CHLORIDE	2006-Sep	10.1	8.23					106					
CHLORIDE	2007-Sep	11.9	6.49					41.3	29.8				
CHLORIDE	2008-Sep	11.5	7.83					38.6	46.7				
CHLORIDE	2009-Sep	11.5	6.78					44.6	11.8				
CHLORIDE	2010-Aug	14.1	<5					26.9	23				
CHLORIDE	2011-Sep	15.2	5.38					26.5	32.4				
CHLORIDE	2012-Sep	18.2	<5					35.5	32.1				
CHLORIDE	2013-Sep	19	3.2					22.9	27.2				
CHLORIDE	2014-Sep	19	3							91.6	72.2		
CHLORIDE	2015-Apr			37.9	18.4	246	69.5						
CHLORIDE	2015-Sep	18.2	3.9	21.1	9.6	156	32.9				83	1.4	5.3
CHLORIDE	2016-Sep	21.2	7.6	22.5	5.8	146	23.3			74.3	70.4		
CHLORIDE	2017-Sep	17	9.8	22.1	4.7	123	10.1	20.1	16.8	93.5	78.1		
CHLORIDE	2018-Sep	17.8	10.2	23.8	4.6	128	10.2	30.3	71.1	51.1	48.3		

GW Standard:  
SMCL = 250

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**SULFATE**  
**UNITS: MG/L**

CHEMICAL PARAMETER	EVENT	MW-02A	MW-03	MW-08	MW-09	MW-10	MW-11	MW-12	MW-13	MW-14
SULFATE	1999-Sep	32		26			700	63	350	
SULFATE	2000-Sep	47		28			1100	150	640	
SULFATE	2001-Sep	41		58			860	120	450	
SULFATE	2002-Sep	45.6		37.8	48.4		997	82.5	525	
SULFATE	2003-Sep	46		60	59		850	49	550	
SULFATE	2004-Sep	44		63		890	700	24	540	780
SULFATE	2005-Jun									
SULFATE	2005-Sep	44		95		1400	1100	34	750	720
SULFATE	2005-Oct									
SULFATE	2006-Sep	37.7	44.8	38	58.5	1550	870	81	555	1080
SULFATE	2007-Sep	36.2	42.5	64.1	74.2	1950	1160	58.3	678	947
SULFATE	2008-Sep	34.4	25.6	67.7	62.2	1570	1020	<2	605	589
SULFATE	2009-Sep	34.7	30.2	48.6	67.6	1660	1170	7.88	638	647
SULFATE	2010-Aug	30.8	40.9	47.1	64.7	1400	1030	2.14	574	593
SULFATE	2011-Sep	36	49.2	40.8	62.2	1370	1020	24.8	536	1350
SULFATE	2012-Sep	40.2	48.6	44.1	71.3	1610	1140	21.8	559	1580
SULFATE	2013-Sep	31.2	58.8	66.3	66.8	1340	1030	16.9	671	1610
SULFATE	2014-Sep	33.3	122	73.5	63.2	1290	1180	29.2	578	1560
SULFATE	2015-Apr									
SULFATE	2015-Sep	32.4	177	54.9	62.7	1180	1090	4.4	648	1330
SULFATE	2016-Sep	37.4	86.2	12.7	61.7	1340	1150	80.6	1170	818
SULFATE	2017-Sep	56.9	132	19.9	61.7	1180	914	25.7	1230 M1	1290
SULFATE	2018-Sep	43.6	129	49.2	108	1360	1110	42.8	1050	1340

GW Standard:  
SMCL = 250

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**SULFATE**  
**UNITS: MG/L**

CHEMICAL PARAMETER	EVENT	MW-15	MW-16	MW-17	MW-18	MW-20	MW-21	MW-22	MW-23	MW-24
SULFATE	1999-Sep	360	2900	340						
SULFATE	2000-Sep	720	3500	570						
SULFATE	2001-Sep	620	3200	460						
SULFATE	2002-Sep	942	3520	655						
SULFATE	2003-Sep	860	3600	650						
SULFATE	2004-Sep	890	3200	760	890					
SULFATE	2005-Jun					120	19	70	54	
SULFATE	2005-Sep	890	5300	540	820		16	220	41	
SULFATE	2005-Oct									
SULFATE	2006-Sep	930	3440	650	1080	412	26.3	97.2	28.4	
SULFATE	2007-Sep	1130	3570	953	1110	557	62.2	197	30.2	
SULFATE	2008-Sep	994	2250	804	957	632	34.8	176	21.6	
SULFATE	2009-Sep	1050	2910	701	928	633	33.9	134	19.3	
SULFATE	2010-Aug	786	2560	702	960		15.4	167	11	
SULFATE	2011-Sep	1150	2870	691	924	605	21.9	240	20.3	
SULFATE	2012-Sep	1210	3720	840	1140	627	17.8	335	26.5	
SULFATE	2013-Sep	1200	2690	831	1340	556	34.2	471	14.8	
SULFATE	2014-Sep	1260	2930	905	1410	639	79.6	386	12.7	
SULFATE	2015-Apr									41.8
SULFATE	2015-Sep	1250	2400	854	1180	578	81.6	388	12.8	2.8
SULFATE	2016-Sep	2040	2460	708	1170	661	66.7	307	47.1	33.8
SULFATE	2017-Sep	1680	2220	658	1010		10.7	352	54.5	6.4
SULFATE	2018-Sep	1140 M1	2920	973	1140	636	41.3	432	88.6	12.6

GW Standard:  
SMCL = 250

## IPL Stoney Point Closed Landfill Historic Monitoring Results

**SULFATE**  
**UNITS: MG/L**

CHEMICAL PARAMETER	EVENT	MW-25	MW-26	MW-27	DPW-01	DPW-02	SW-01	SW-02	LW-02	LW-03
SULFATE	1999-Sep									
SULFATE	2000-Sep									
SULFATE	2001-Sep									
SULFATE	2002-Sep									
SULFATE	2003-Sep									
SULFATE	2004-Sep									
SULFATE	2005-Jun				1600	290				
SULFATE	2005-Sep									
SULFATE	2005-Oct				2100					
SULFATE	2006-Sep				1910					
SULFATE	2007-Sep				1570	269				
SULFATE	2008-Sep				718	301				
SULFATE	2009-Sep				1040	129				
SULFATE	2010-Aug				608	335				
SULFATE	2011-Sep				902	592				
SULFATE	2012-Sep				1290	716			1200	315
SULFATE	2013-Sep				818	639			1390	257
SULFATE	2014-Sep						80.6	255	1230	312
SULFATE	2015-Apr	56.2	52.3	635						
SULFATE	2015-Sep	35.4	39.4	334				501	11.7	354
SULFATE	2016-Sep	25.6	37.8	260			84.5	157	84.7	323
SULFATE	2017-Sep	21.4	40.8	127	818	326	102	520	887	375
SULFATE	2018-Sep	20.3 M1	45	72.7	1830	443	62	85.2	1060	415

GW Standard:  
SMCL = 250

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

PH, FIELD  
UNITS: SU

CHEMICAL PARAMETER	EVENT	MW-02A	MW-03	MW-08	MW-09	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17
PH, FIELD	1994-Feb			7.74			7.19	7.4			7.24	7.15	7.66
PH, FIELD	1994-Apr			7.53			7.45	7.39	7.31		7.21	7.3	7.29
PH, FIELD	1994-Jul			7.7			7.46	7.43	7.48		7.48	7.28	7.73
PH, FIELD	1994-Oct			7.48			7.36	7.43	7.39		7.25	7.2	7.43
PH, FIELD	1995-Apr			7.11			6.39	7.34	7.33		7.27	7.25	7.41
PH, FIELD	1995-Oct			6.19			7.4	6.2	6.61		6.72	7.16	6.32
PH, FIELD	1996-Apr			7.73			7.3	7.39	7.44		7.25	7.15	7.56
PH, FIELD	1996-Oct			7.8			7.46	7.1	7.2		7.1	7	7.4
PH, FIELD	1997-Apr			8.2			7.5	7.7	7.7		7.3	7.4	7.7
PH, FIELD	1997-Oct			8.1			7.9	7.7	7.8		7.5	7.7	8
PH, FIELD	1998-Apr	7.12		7.41			7.16	7.07	7.03		6.99	6.83	7.01
PH, FIELD	1998-Oct	6.9		7.2			7.3	6.9	6.8		6.9	6.6	7
PH, FIELD	1999-Sep	7.1		6.9			6.9	7.1	7		6.9	6.9	6.9
PH, FIELD	2000-Sep	6.88		7.29			7.19	7.15	7.05		6.7	6.85	6.95
PH, FIELD	2001-Sep	7.5		7.14			7.11	7.28	7.1		6.9	6.76	7.1
PH, FIELD	2002-Sep	7.45		7.66	7.61		7.26	7.53	7.35		7.31	6.85	7.06
PH, FIELD	2003-Sep	7.38		7.48	7.43		7.2	7.1	7.42		7.14	6.39	7
PH, FIELD	2004-Sep	7.42		7.65		7.11	7.2	7.38	7.1	7.21	7.02	6.61	7.01
PH, FIELD	2005-Jun												
PH, FIELD	2005-Sep	7.16		7.22		7.2	6.59	6.35	6.85	7.21	7.06	7.2	7.41
PH, FIELD	2005-Oct												
PH, FIELD	2006-Sep	7.58	6.87	7.24	7.37	7.02	7.22	7.06	7.23	7.03	6.94	6.97	7.28
PH, FIELD	2007-Sep	7.56	6.88	7.12	7.25	6.93	7.04	7.14	7.61	7.29	7.11	7.19	7.38
PH, FIELD	2008-Sep	7.59	6.88	7.16	7.51	7.06	7.12	7.27	7.18	7.18	7.09	6.8	7.28
PH, FIELD	2009-Sep	6.64	6.56	6.75	7.06	6.87	6.99	6.87	6.8	7.19	7.66	6.83	7.06
PH, FIELD	2010-Aug	7.79	7.11	7.44	7.55	7.06	7.12	7.25	7.19	7.15	7.19	6.88	7.14
PH, FIELD	2011-Sep	7.94	6.92	7.55	7.82	6.99	7.09	7.48	7.63	7.31	7.81	6.75	7.12
PH, FIELD	2012-Sep	7.44	5.75	7.73	6.94	6.44	6.74	6.88	7.2	7.01	7.22	6.93	6.88
PH, FIELD	2013-Sep	7.4	7.02	7.55	7.48	6.98	7.09	7.27	7.14	6.95	7.04	7.02	7.21
PH, FIELD	2014-Sep	7.22	7.44	7.76	7.13	6.81	6.78	6.59	7.07	6.88	7.04	6.81	7.11
PH, FIELD	2015-Apr												
PH, FIELD	2015-Sep	7.82	7.05	7.23	6.31	6.41	5.53	5.55	7.33	6.78	7.08	6.98	7.02
PH, FIELD	2016-Sep	6.67	7.43	8.13	8.16	7.23	7.3	7.89	7.48	7.53	7.54	7.36	7.69
PH, FIELD	2017-Sep	8.39	7.02	9.29	7.6	7.34	7.3	8.65	7.26	7.26		6.71	7.06
PH, FIELD	2018-Sep	10.78	9.41	10.86	7.09	7.14	7.17	7.08	7.09	7.16	10.26	6.91	7.29

GW Standard:  
SMCL = 8.5

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**PH, FIELD  
UNITS: SU**

CHEMICAL PARAMETER	EVENT	MW-18	MW-20	MW-21	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27
PH, FIELD	1994-Feb									
PH, FIELD	1994-Apr									
PH, FIELD	1994-Jul									
PH, FIELD	1994-Oct									
PH, FIELD	1995-Apr									
PH, FIELD	1995-Oct									
PH, FIELD	1996-Apr									
PH, FIELD	1996-Oct									
PH, FIELD	1997-Apr									
PH, FIELD	1997-Oct									
PH, FIELD	1998-Apr									
PH, FIELD	1998-Oct									
PH, FIELD	1999-Sep									
PH, FIELD	2000-Sep									
PH, FIELD	2001-Sep									
PH, FIELD	2002-Sep									
PH, FIELD	2003-Sep									
PH, FIELD	2004-Sep	7.07								
PH, FIELD	2005-Jun		7.63	6.96	7.19	7.31				
PH, FIELD	2005-Sep	7.3		7.14	7.37	7.47				
PH, FIELD	2005-Oct		7.5							
PH, FIELD	2006-Sep	6.99	6.75	7.21	7.33	7.42				
PH, FIELD	2007-Sep	7.16	6.32	7.43	7.31	7.54				
PH, FIELD	2008-Sep	7.09	7.25	7.22	7.29	7.43				
PH, FIELD	2009-Sep	6.91	6.92	7.21	7.41	7.52				
PH, FIELD	2010-Aug	7.09		7.23	7.32	7.73				
PH, FIELD	2011-Sep	6.52	7.48	7.15	7.53	7.63				
PH, FIELD	2012-Sep	6.85		7.59	6.68	8.26				
PH, FIELD	2013-Sep	7.04	7.17	7.17	7.24	7.55				
PH, FIELD	2014-Sep	6.82	7.29	7.09	7.29	7.77				
PH, FIELD	2015-Apr						7.57	7.4	6.83	7.45
PH, FIELD	2015-Sep	6.9	7.52	7.29	7.16	7.21	5.76	7.44	7.07	7.65
PH, FIELD	2016-Sep	7.41	6.85	7.1	7.68	7.64	7.54	7.44	7.08	7.93
PH, FIELD	2017-Sep	7.19		7.05	7.18	7.21	8.37	7.34	7.02	5.49
PH, FIELD	2018-Sep	7.17	6.55	7.02	7.37	10.52	6.68	9.18	6.17	5.79

GW Standard:  
SMCL = 8.5



**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**PH, FIELD  
UNITS: SU**

CHEMICAL PARAMETER	EVENT	DPW-01	DPW-02	SW-01	SW-02	LW-02	LW-03
PH, FIELD	1994-Feb						
PH, FIELD	1994-Apr						
PH, FIELD	1994-Jul						
PH, FIELD	1994-Oct						
PH, FIELD	1995-Apr						
PH, FIELD	1995-Oct						
PH, FIELD	1996-Apr						
PH, FIELD	1996-Oct						
PH, FIELD	1997-Apr						
PH, FIELD	1997-Oct						
PH, FIELD	1998-Apr						
PH, FIELD	1998-Oct						
PH, FIELD	1999-Sep						
PH, FIELD	2000-Sep						
PH, FIELD	2001-Sep						
PH, FIELD	2002-Sep						
PH, FIELD	2003-Sep						
PH, FIELD	2004-Sep						
PH, FIELD	2005-Jun	6.69	11.12				
PH, FIELD	2005-Sep						
PH, FIELD	2005-Oct	6.7					
PH, FIELD	2006-Sep	6.54					
PH, FIELD	2007-Sep	6.55	5.95				
PH, FIELD	2008-Sep	6.74	6.68				
PH, FIELD	2009-Sep	7.05	7.6				
PH, FIELD	2010-Aug	6.78	6.99				
PH, FIELD	2011-Sep	6.84	6.83				
PH, FIELD	2012-Sep	6.46	6.44			7.39	
PH, FIELD	2013-Sep	6.8	6.45			7.9	7.62
PH, FIELD	2014-Sep			7.83	7.96	7.7	
PH, FIELD	2015-Apr						
PH, FIELD	2015-Sep				7.51	8.12	7.7
PH, FIELD	2016-Sep			8.34	8.57	9.02	8.71
PH, FIELD	2017-Sep			7.21	7.65	7.46	
PH, FIELD	2018-Sep	7.30	7.14	7.86	8.09		

GW Standard:  
SMCL = 8.5

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**TEMPERATURE  
UNITS: DEG C**

CHEMICAL PARAMETER	EVENT	MW-02A	MW-03	MW-08	MW-09	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17
TEMPERATURE	1994-Feb			12				11.7			11.5	12.1	11.4
TEMPERATURE	1994-Apr			13			12.7	13.9	12.8		13.4	14	14.8
TEMPERATURE	1994-Jul			13.1			16.4	12.7	15.2		13.2	16.4	15.5
TEMPERATURE	1994-Oct			15.4			14.6	15.5	15.9		15.3	17.3	16.6
TEMPERATURE	1995-Apr			23.7			20.4	23.5	22.2		23.3	22	20.8
TEMPERATURE	1995-Oct			4.9			7.6	6.3	5.8		6.5	7.5	4.7
TEMPERATURE	1996-Apr			9.4			8.8	8.2	9.6		7.6	8	9.6
TEMPERATURE	1996-Oct			10			10.3	10	10.6		11.4	13.3	10.6
TEMPERATURE	1997-Apr			10			7	8	10		7	8	10
TEMPERATURE	1997-Oct			11			10	11	11		12	13	11
TEMPERATURE	1998-Apr	10		9.5			10	10	10		10	10	10
TEMPERATURE	1998-Oct	12.3		14			15	14.2	13.8		14.3	14	13
TEMPERATURE	1999-Sep	11.5		12			13	13.5	12.5		13.6	12.7	11.6
TEMPERATURE	2000-Sep	13.5		15.4			15.3	17	17.1		17.1	12.9	13
TEMPERATURE	2001-Sep	11.8		15.1			14.5	13.7	13.8		14.1	12.4	12.4
TEMPERATURE	2002-Sep	14.2		15.2	14		14.9	15.7	14.6		14.6	15.4	15.7
TEMPERATURE	2003-Sep	13.6		13.7	16.2		14.3	15.7	15.9		14.6	13.9	13.8
TEMPERATURE	2004-Sep	17.1		17.7		14.3	16.8	17.8	17.1	14.9	17.6	25.4	19.8
TEMPERATURE	2005-Jun												
TEMPERATURE	2005-Sep	14		13.9		15.2	13.2	15	14.2	16.6	15.1	17	13
TEMPERATURE	2005-Oct												
TEMPERATURE	2006-Sep	11.5	14	12.8	14.2	12.7	12.6	12.9	12.5	12.2	13.3	13.4	12.3
TEMPERATURE	2007-Sep	11.9	14	13.7	13.5	11.8	12.4	12.6	13.5	12	12.8	15.1	12.9
TEMPERATURE	2008-Sep	14.2	13.9	13.8	18.3	14	14	13.2	13.8	14.8	14.2	15.4	15.9
TEMPERATURE	2009-Sep	13.2	13.4	12.8	13.2	13.1	13.8	14.1	15	13	13.8	13.3	12.8
TEMPERATURE	2010-Aug	13.3	16.8	17	17	13.2	15.8	12.8	14.1	12.5	16.8	14	14
TEMPERATURE	2011-Sep	13.4	14.4	13.6	15.7	13.5	13.8	12.5	13.2	13.2	13.9	13.2	12.2
TEMPERATURE	2012-Sep	12.38	12.12	10.52	10.85	10.95	11	10.94	11.32	11.61	12.16	12.4	11.47
TEMPERATURE	2013-Sep	15	14.8	16.6	19.2	13.8	14.5	14	16	14.2	17.9	17.3	12.4
TEMPERATURE	2014-Sep	16.41	18.55	16.17	23.43	14.14	14.4	17.36	14.27	13.94	17.94	14.88	18.1
TEMPERATURE	2015-Apr												
TEMPERATURE	2015-Sep	16.33	16.84	16.74	14.14	14.46	14.28	14.48	21.84	15.07	17.13	17.25	14.66
TEMPERATURE	2016-Sep	15.2	15.4	12.6	11.5	12	19.5	12.8	20.9	11.1	13.7	16.4	11.1
TEMPERATURE	2017-Sep	13.8	13.3	14.9	22.2	14.4	19.8	13.6	16.3	14.5		19.8	14.6
TEMPERATURE	2018-Sep	20.5	14.3	18.7	19.38	12.8	13.8	15.2	16	12.1	18	15.5	12.5

GW Standard:  
None

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**TEMPERATURE  
UNITS: DEG C**

CHEMICAL PARAMETER	EVENT	MW-18	MW-20	MW-21	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27
TEMPERATURE	1994-Feb									
TEMPERATURE	1994-Apr									
TEMPERATURE	1994-Jul									
TEMPERATURE	1994-Oct									
TEMPERATURE	1995-Apr									
TEMPERATURE	1995-Oct									
TEMPERATURE	1996-Apr									
TEMPERATURE	1996-Oct									
TEMPERATURE	1997-Apr									
TEMPERATURE	1997-Oct									
TEMPERATURE	1998-Apr									
TEMPERATURE	1998-Oct									
TEMPERATURE	1999-Sep									
TEMPERATURE	2000-Sep									
TEMPERATURE	2001-Sep									
TEMPERATURE	2002-Sep									
TEMPERATURE	2003-Sep									
TEMPERATURE	2004-Sep	17								
TEMPERATURE	2005-Jun		13.6	13	12.8					
TEMPERATURE	2005-Sep	13.2		14.6	12.8	18.5				
TEMPERATURE	2005-Oct		15.1							
TEMPERATURE	2006-Sep	12.6	12.1	13.1	12.1	12.9				
TEMPERATURE	2007-Sep	13.8	11.8	13.6	11.9	12.8				
TEMPERATURE	2008-Sep	15.4	14.8	13.6	12.2	16.1				
TEMPERATURE	2009-Sep	13.5	15.8	14.6	12.7	15.6				
TEMPERATURE	2010-Aug	14.5		15.2	13	19				
TEMPERATURE	2011-Sep	12.2	14.3	14.1	12.2	13.3				
TEMPERATURE	2012-Sep	11.09		14.57		13.02				
TEMPERATURE	2013-Sep	12.9	16.5	13.9	12.6	20.6				
TEMPERATURE	2014-Sep	21.31	16.5	18.77	17.97	18.88				
TEMPERATURE	2015-Apr						11.97	11.76	14.64	15.39
TEMPERATURE	2015-Sep	17.34	18.29	15.19	14.15	14.57	15.52	17.34	16.15	17.72
TEMPERATURE	2016-Sep	14.8	20	16	11.3	13.6	12.4	16.9	16.9	15
TEMPERATURE	2017-Sep	17.6		16.8	15.6	20	17.4	14.4	14.1	19.7
TEMPERATURE	2018-Sep	12.8	17.8	15.78	11.2	14.2	16.61	17.8	14.7	15.7

GW Standard:  
None

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**TEMPERATURE  
UNITS: DEG C**

CHEMICAL PARAMETER	EVENT	DPW-01	DPW-02	SW-01	SW-02	LW-02	LW-03
TEMPERATURE	1994-Feb						
TEMPERATURE	1994-Apr						
TEMPERATURE	1994-Jul						
TEMPERATURE	1994-Oct						
TEMPERATURE	1995-Apr						
TEMPERATURE	1995-Oct						
TEMPERATURE	1996-Apr						
TEMPERATURE	1996-Oct						
TEMPERATURE	1997-Apr						
TEMPERATURE	1997-Oct						
TEMPERATURE	1998-Apr						
TEMPERATURE	1998-Oct						
TEMPERATURE	1999-Sep						
TEMPERATURE	2000-Sep						
TEMPERATURE	2001-Sep						
TEMPERATURE	2002-Sep						
TEMPERATURE	2003-Sep						
TEMPERATURE	2004-Sep						
TEMPERATURE	2005-Jun	15	15.1				
TEMPERATURE	2005-Sep						
TEMPERATURE	2005-Oct	15.2					
TEMPERATURE	2006-Sep	15.9					
TEMPERATURE	2007-Sep	16.8	15.7				
TEMPERATURE	2008-Sep	17.9	17.5				
TEMPERATURE	2009-Sep	16	16.1				
TEMPERATURE	2010-Aug	20.7	22				
TEMPERATURE	2011-Sep	17.5	18.2				
TEMPERATURE	2012-Sep	15.4	13.05			11.44	
TEMPERATURE	2013-Sep	19.3	22.7			15.7	15.8
TEMPERATURE	2014-Sep			29.95	29.35	14.97	
TEMPERATURE	2015-Apr						
TEMPERATURE	2015-Sep				21.42	14.52	14.76
TEMPERATURE	2016-Sep			21.2	20.8	14.2	13.8
TEMPERATURE	2017-Sep			17.9	17.6	15.5	
TEMPERATURE	2018-Sep	17.4	18.0	18.2	18.2		

GW Standard:  
None

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**CONDUCTANCE, SPECIFIC**  
**UNITS: UMHOS/CM**

CHEMICAL PARAMETER	EVENT	MW-02A	MW-03	MW-08	MW-09	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	MW-16	MW-17
CONDUCTANCE, SPECIFIC	1994-Feb			539				773			1530	1370	810
CONDUCTANCE, SPECIFIC	1994-Apr			514			2830	849	1610		1660	1430	770
CONDUCTANCE, SPECIFIC	1994-Jul			561			1140	838	1160		1180	1230	797
CONDUCTANCE, SPECIFIC	1994-Oct			507			3010	842	680		1470	1520	1130
CONDUCTANCE, SPECIFIC	1995-Apr			556			2830	830	1025		1640	9100	1268
CONDUCTANCE, SPECIFIC	1995-Oct			784			4190	1150	1820		2400	1450	1630
CONDUCTANCE, SPECIFIC	1996-Apr			551			1666	814	1075		1482	3810	1020
CONDUCTANCE, SPECIFIC	1996-Oct			510			270	860	1260		1990	7700	1050
CONDUCTANCE, SPECIFIC	1997-Apr			550			280	1060	970		1800	5100	1380
CONDUCTANCE, SPECIFIC	1997-Oct			530			270	1330	1460		1800	6900	1170
CONDUCTANCE, SPECIFIC	1998-Apr	540		430			2380	840	1120		1750	4130	910
CONDUCTANCE, SPECIFIC	1998-Oct	530		430			1730	760	1340		1570	5630	1040
CONDUCTANCE, SPECIFIC	1999-Sep	550		480			2140	830	1380		1660	5880	1140
CONDUCTANCE, SPECIFIC	2000-Sep	572		518			2480	934	1972		1576	8160	1548
CONDUCTANCE, SPECIFIC	2001-Sep	535		550			2220	893	1481		1903	7680	1461
CONDUCTANCE, SPECIFIC	2002-Sep	548		510	654		2100	853	1470		2130	6510	910
CONDUCTANCE, SPECIFIC	2003-Sep	557		548	660		2060	777	1381		2010	6550	1582
CONDUCTANCE, SPECIFIC	2004-Sep	545		545		2330	1792	673	1574	1944	2060	6440	1855
CONDUCTANCE, SPECIFIC	2005-Jun												
CONDUCTANCE, SPECIFIC	2005-Sep	575		580		3120	2160	721	1793	2080	2130	8610	1583
CONDUCTANCE, SPECIFIC	2005-Oct												
CONDUCTANCE, SPECIFIC	2006-Sep	522	884	609	715	3490	2250	818	1436	2460	2170	8710	1730
CONDUCTANCE, SPECIFIC	2007-Sep	525	789	576	739	3460	2480	788	1584	1952	2320	5580	1980
CONDUCTANCE, SPECIFIC	2008-Sep	517	719	599	774	3510	2450	684	1593	1745	2310	4860	1881
CONDUCTANCE, SPECIFIC	2009-Sep	516	805	547	754	3770	2840	694	1570	1836	2360	6300	1728
CONDUCTANCE, SPECIFIC	2010-Aug	496	761	526	748	3320	2580	689	1528	1712	2210	5190	1764
CONDUCTANCE, SPECIFIC	2011-Sep	508	800	926	826	3300	2500	680	1442	3050	2410	6450	1997
CONDUCTANCE, SPECIFIC	2012-Sep	545	757	520	810	3318	2469	741	1565	3527	2507	7152	2190
CONDUCTANCE, SPECIFIC	2013-Sep	516	831	585	805	3270	2690	740	1523	3680	2650	6010	2080
CONDUCTANCE, SPECIFIC	2014-Sep	513	948	597	836	3015	2749	735	1514	3344	2561	5651	2072
CONDUCTANCE, SPECIFIC	2015-Apr												
CONDUCTANCE, SPECIFIC	2015-Sep	511	958	1679	795	2720	1326	695	1582	2864	2397	4677	1926
CONDUCTANCE, SPECIFIC	2016-Sep	2167	1383	457	1347	4847	4122	996	3920	3117	5540	8041	2706
CONDUCTANCE, SPECIFIC	2017-Sep	678	889	450.2	758	1428	2093	703	2487	2692		4437	1570
CONDUCTANCE, SPECIFIC	2018-Sep	599	813	528.8	816	2874	2408	644	2425	3024	2613	4765	1994

GW Standard:  
None

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**CONDUCTANCE, SPECIFIC**  
**UNITS: UMHOS/CM**

CHEMICAL PARAMETER	EVENT	MW-18	MW-20	MW-21	MW-22	MW-23	MW-24	MW-25	MW-26	MW-27
CONDUCTANCE, SPECIFIC	1994-Feb									
CONDUCTANCE, SPECIFIC	1994-Apr									
CONDUCTANCE, SPECIFIC	1994-Jul									
CONDUCTANCE, SPECIFIC	1994-Oct									
CONDUCTANCE, SPECIFIC	1995-Apr									
CONDUCTANCE, SPECIFIC	1995-Oct									
CONDUCTANCE, SPECIFIC	1996-Apr									
CONDUCTANCE, SPECIFIC	1996-Oct									
CONDUCTANCE, SPECIFIC	1997-Apr									
CONDUCTANCE, SPECIFIC	1997-Oct									
CONDUCTANCE, SPECIFIC	1998-Apr									
CONDUCTANCE, SPECIFIC	1998-Oct									
CONDUCTANCE, SPECIFIC	1999-Sep									
CONDUCTANCE, SPECIFIC	2000-Sep									
CONDUCTANCE, SPECIFIC	2001-Sep									
CONDUCTANCE, SPECIFIC	2002-Sep									
CONDUCTANCE, SPECIFIC	2003-Sep									
CONDUCTANCE, SPECIFIC	2004-Sep	2060								
CONDUCTANCE, SPECIFIC	2005-Jun		1041	672	748	690				
CONDUCTANCE, SPECIFIC	2005-Sep	2140		690	843	652				
CONDUCTANCE, SPECIFIC	2005-Oct		1130							
CONDUCTANCE, SPECIFIC	2006-Sep	2380	1364	748	842	628				
CONDUCTANCE, SPECIFIC	2007-Sep	2370	1454	880	933	613				
CONDUCTANCE, SPECIFIC	2008-Sep	2280	1612	837	956	618				
CONDUCTANCE, SPECIFIC	2009-Sep	2240	1628	845	891	595				
CONDUCTANCE, SPECIFIC	2010-Aug	2260		776	941	574				
CONDUCTANCE, SPECIFIC	2011-Sep	2220	1552	796	1070	617				
CONDUCTANCE, SPECIFIC	2012-Sep	2557		805	1233	635				
CONDUCTANCE, SPECIFIC	2013-Sep	3030	1567	845	1395	621				
CONDUCTANCE, SPECIFIC	2014-Sep	2978	1649	862	1257	597				
CONDUCTANCE, SPECIFIC	2015-Apr						620	705	1432	1719
CONDUCTANCE, SPECIFIC	2015-Sep	2477	1444	561	1235	886	331	662	1182	1273
CONDUCTANCE, SPECIFIC	2016-Sep	4343	2719	1397	1861	1143	961	1194	2044	2269
CONDUCTANCE, SPECIFIC	2017-Sep	2211		711	1149	646	573.7	12	1069	991
CONDUCTANCE, SPECIFIC	2018-Sep	2420	1861	821	1259	759	603	669	1182	1097


GW Standard:  
None

**IPL Stoney Point Closed Landfill  
Historic Monitoring Results**

**CONDUCTANCE, SPECIFIC**  
**UNITS: UMHOS/CM**

CHEMICAL PARAMETER	EVENT	DPW-01	DPW-02	SW-01	SW-02	LW-02	LW-03
CONDUCTANCE, SPECIFIC	1994-Feb						
CONDUCTANCE, SPECIFIC	1994-Apr						
CONDUCTANCE, SPECIFIC	1994-Jul						
CONDUCTANCE, SPECIFIC	1994-Oct						
CONDUCTANCE, SPECIFIC	1995-Apr						
CONDUCTANCE, SPECIFIC	1995-Oct						
CONDUCTANCE, SPECIFIC	1996-Apr						
CONDUCTANCE, SPECIFIC	1996-Oct						
CONDUCTANCE, SPECIFIC	1997-Apr						
CONDUCTANCE, SPECIFIC	1997-Oct						
CONDUCTANCE, SPECIFIC	1998-Apr						
CONDUCTANCE, SPECIFIC	1998-Oct						
CONDUCTANCE, SPECIFIC	1999-Sep						
CONDUCTANCE, SPECIFIC	2000-Sep						
CONDUCTANCE, SPECIFIC	2001-Sep						
CONDUCTANCE, SPECIFIC	2002-Sep						
CONDUCTANCE, SPECIFIC	2003-Sep						
CONDUCTANCE, SPECIFIC	2004-Sep						
CONDUCTANCE, SPECIFIC	2005-Jun	2720	2120				
CONDUCTANCE, SPECIFIC	2005-Sep						
CONDUCTANCE, SPECIFIC	2005-Oct	3050					
CONDUCTANCE, SPECIFIC	2006-Sep	3090					
CONDUCTANCE, SPECIFIC	2007-Sep	2480	738				
CONDUCTANCE, SPECIFIC	2008-Sep	1588	715				
CONDUCTANCE, SPECIFIC	2009-Sep	1113	380				
CONDUCTANCE, SPECIFIC	2010-Aug	1640	750				
CONDUCTANCE, SPECIFIC	2011-Sep	2020	1188				
CONDUCTANCE, SPECIFIC	2012-Sep	2500	1318			2591	
CONDUCTANCE, SPECIFIC	2013-Sep	1728	1285			3130	1117
CONDUCTANCE, SPECIFIC	2014-Sep			1018	1208	3686	
CONDUCTANCE, SPECIFIC	2015-Apr						
CONDUCTANCE, SPECIFIC	2015-Sep				1600	513	1104
CONDUCTANCE, SPECIFIC	2016-Sep			760	1638	251.9	1710
CONDUCTANCE, SPECIFIC	2017-Sep			723	1597	1677	
CONDUCTANCE, SPECIFIC	2018-Sep	3107	1080	851	748		

GW Standard:  
None



Appendix E  
Statistical Evaluation of Groundwater Monitoring Results



November 30, 2023  
File No. 25223065.00

## TECHNICAL MEMORANDUM

**SUBJECT:** Statistical Evaluation of Groundwater Monitoring Results  
Stoney Point CCR Landfill, September 2023 Sampling Event

**PREPARED BY:** Ryan Matzuk

**CHECKED BY:** Charles Hostetler

## STATISTICAL METHOD

The statistical analysis uses a prediction interval approach as recommended for detection monitoring in the March 2009 U.S. Environmental Protection Agency (U.S. EPA) Unified Guidance for Statistical Analysis of Groundwater Monitoring Data at Resource Conservation and Recovery Act (RCRA) Facilities. For the prediction interval evaluation, interwell testing was selected based on the considerations outlined in Chapter 6 of the Unified Guidance. The statistical program used to calculate the interwell prediction interval is Sanitas™ (Version 9.6.37).

The Stoney Point monitoring data are evaluated in two well groups, representing the shallow and deep groundwater systems. For the shallow groundwater system, monitoring well MW-2A is used as the background well. For the deep groundwater system, MW-8 is used as the background well.

## TIME SERIES PLOTS

Time series plots are prepared for the required monitoring parameters to show the concentration variations over time. Time series graphs are included in **Attachments E1** (shallow) and **E2** (deep). For metals, the time series plots only show monitoring results since 2016, when the monitoring program transitioned from dissolved metals to total metals analysis. For chloride and sulfate, which are not typically affected by filtering, older historical results are included in the time series plots and are used in the determination of background for the statistical evaluation.

## OUTLIER ANALYSIS

An outlier analysis is performed for background monitoring results at upgradient wells MW-2A and MW-8. A statistical outlier is a value that is extremely different from the other values in the data set. The Sanitas™ outlier tests identify data points that do not appear to fit the distribution of the rest of the data set and determine if they differ significantly from the rest of the data. The outlier analysis performed in Sanitas™ includes the following steps:

- 1) Run normality test (Shapiro Wilk/Francia).
- 2) If normally distributed, run USEPA's 1989 Outlier Test to identify suspected outliers:



- a) If number of background samples is less than or equal to 25, run Dixon's test for suspected outliers.
  - b) If number of background samples is more than 25, run Rosner's test for suspected outliers.
- 3) If not normally distributed, run Tukey's test for outliers.
- 4) Review data flagged as possible outliers to evaluate whether they should be removed from the background data set. Also review time series plots for possible outliers that were not picked up in the statistical evaluation (e.g., outlier test may not identify outliers when two values are similar to each other, but very different from all other data).

Results identified as statistical outliers are checked for possible lab instrument failure, field collection problems, or data entry errors; however, apparent outliers may exist naturally in the data if there is an extremely wide inherent or temporal variability in the data. The Unified Guidance states that unless a likely error can be identified, the outlier should not be removed.

For the 2023 data evaluation, the following background values were identified as potential outliers and handled as described:

- **Barium, Shallow (MW-2A).** One high result for barium from the September 2016 event was flagged by Sanitas™ as a statistical outlier. This result was kept in the dataset because there was no known explanation for the high result and it appeared to be within the range of potential natural variation relative to the other observed barium concentrations.
- **Cobalt, Shallow (MW-2A).** One high result for cobalt from the September 2017 event and one low results for cobalt from the September 2018 event were flagged by Sanitas™ as statistical outliers. The high result was kept in the dataset because there was no known explanation for the high concentration and it appeared to be within the range of potential natural variation relative to the other observed cobalt concentrations. The increase in cobalt for this event was consistent with increases for several other metals, including some other metals identified as possible outliers and other metals that were not. The low result was a non-detect, and was kept in the dataset because it is in the range of potential natural variation relative to other observed concentrations, multiple of which are non-detects or under the laboratory's limit of quantification. This non-detect result was likely flagged as an outlier by Sanitas™ because it had a lower limit of detection than previously observed non-detect results.
- **Iron, Shallow (MW-2A).** One high result for iron from the September 2017 event was flagged by Sanitas™ as a statistical outlier. This result was kept in the dataset because there was no known explanation for the high result and it appeared to be within the range of potential natural variation relative to the other observed iron concentrations. The increase in iron for this event was consistent with increases for several other metals, including some other metals identified as possible outliers and other metals that were not.
- **Lead, Shallow (MW-2A).** One high result for lead from the September 2017 event was flagged by Sanitas™ as a statistical outlier. This result was kept in the dataset because there was no known explanation for the high result. The increase in lead for this event

was consistent with increases for several other metals, including some other metals identified as possible outliers and other metals that were not.

- **Manganese, Shallow (MW-2A).** One high result for manganese from the September 2017 event was flagged by Sanitas™ as a statistical outlier. This result was kept in the dataset because there was no known explanation for the high result and it appeared to be within the range of potential natural variation relative to the other observed manganese concentrations. The increase in manganese for this event was consistent with increases for several other metals, including some other metals identified as possible outliers and other metals that were not.
- **Manganese, Deep (MW-8).** One low result for manganese from the September 2016 event was flagged by Sanitas™ as a statistical outlier. This result was kept in the dataset because there was no known explanation for the low result, and it appeared to be within the range of potential natural variation relative to the other observed manganese concentrations.

Outlier analysis results are included in **Attachments E3** (shallow) and **E4** (deep).

## INTERWELL PREDICTION LIMITS

Interwell upper prediction limits (UPLs) are calculated for the shallow and deep groundwater systems using data from the background wells for each monitored constituent, with outliers removed as noted above. The prediction limit analysis performed in Sanitas™ includes the following steps:

1. If 50 percent or more of results are non-detect, apply a non-parametric UPL. For small background sample sizes, the non-parametric UPL is the highest background value. For a parameter with 100 percent non-detects in the background values, the Double Quantification rule applies, which says that a statistically significant increase (SSI) occurs when two results exceeding the quantification limit are reported for a compliance well.
2. If fewer than 50 percent of the results are non-detect, run normality test (Shapiro Wilk/Francia) to assess whether the data fit a normal distribution or can be transformed to fit a normal distribution (e.g., lognormal).
3. If normal or transformed normal, calculate parametric UPL.
4. If not normal or transformed normal, calculate non-parametric UPL.

For evaluation of parameters with less than 100 percent non-detects in the background sampling, the non-detects were replaced with the detection limit, unless the non-detects represented less than 15 percent of the total samples, in which case one-half of the detection limit was used.

Consistent with the Unified Guidance, parametric prediction limits are calculated based on a 1-of-2 retesting protocol and a target 10 percent annual site-wide false positive rate. Sanitas™ establishes the per-test significance level based on user inputs of the number of events per year, the number of constituents being evaluated, and the number of compliance wells. For the 2023 event, the following values were used:

Parameter	Value	Comments
Evaluations per year	1	September event
Constituents analyzed	10	Total of 18 constituents analyzed, beryllium and selenium not counted because all deep unit background results were non-detect for both parameters. Calcium, fluoride, lithium, molybdenum, total dissolved solids (TDS), and total suspended solids (TSS) were added to the sampling program in September 2023 and have do not meet the minimum criteria of four rounds of background data required to calculate upper prediction limits. Copper and zinc were removed from the sampling program beginning in September 2023.
Compliance wells	13	5 shallow and 8 deep (wells sampled for monitoring List A)

Non-parametric prediction limits are also based on a 1-of-2 retesting protocol. The non-parametric limit is the highest value in the background dataset. Non-parametric limits were also used if the parametric analysis resulted in a transformed lognormal UPL that was more than 5 times the highest background value. Due to the small sample size, the false positive rate for the non-parametric tests is higher than for the parametric tests, but will go down as more background data are obtained.

Although the limits are based on a 1-of-2 retesting approach, retesting is not required. Because the site is closed and has been monitored for many years, retesting will typically not be performed unless a new potential SSI is identified. If retesting is not performed, a result above the UPL is presumed to represent an SSI above the interwell background level.

For results with 100 percent non-detects in the background data, evaluation under the Double Quantification Rule means that an SSI has not occurred for a compliance well unless two sample results from the well exceed the laboratory's reporting limit or quantification limit.

Interwell prediction limit analysis results for 2023 are included in **Attachments E5** (shallow) and **E6** (deep).

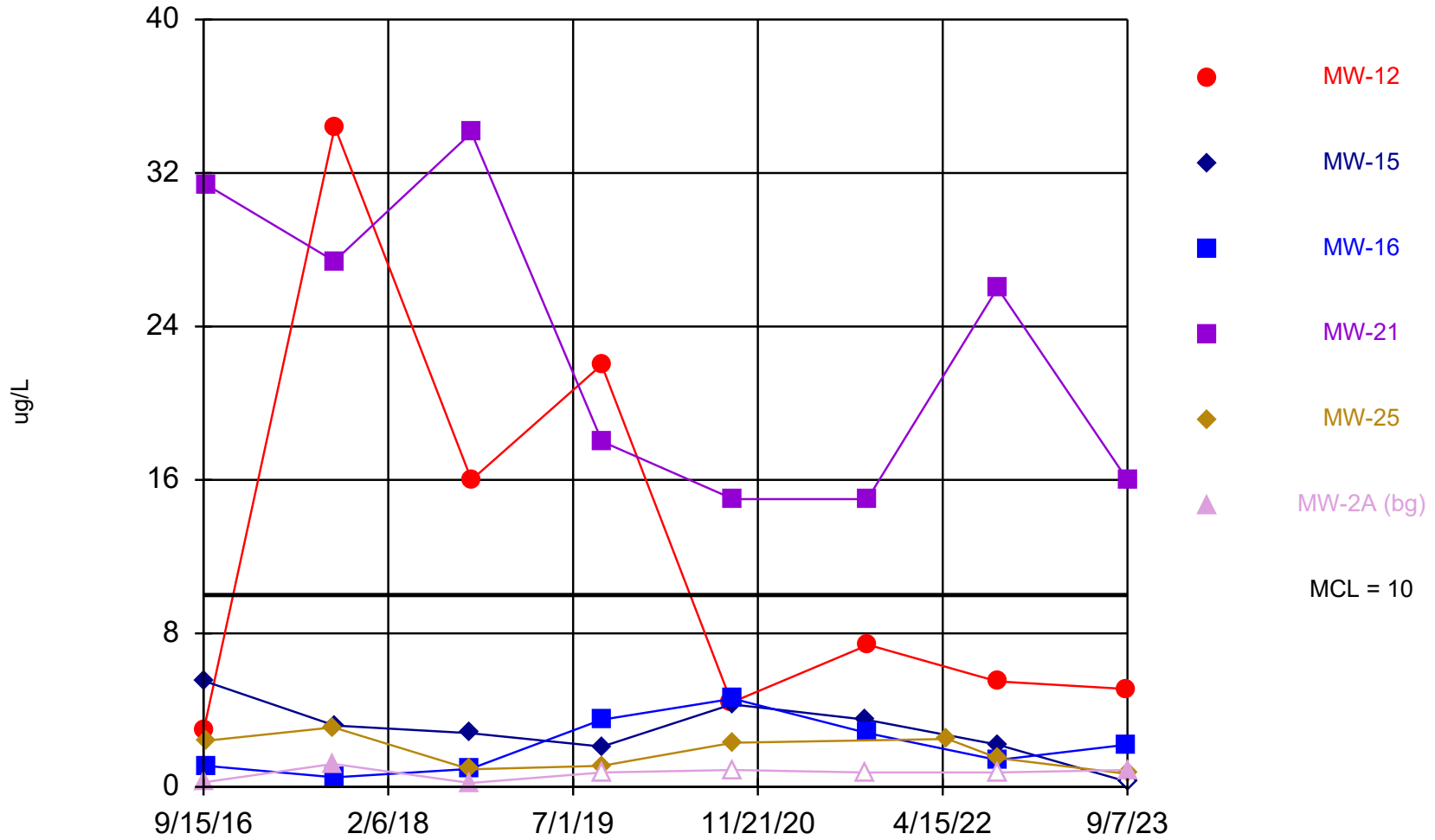
RM/lmh/CH

I:\25223065.00\Deliverables\2023 AWQR\Appendix E - Stats\231130\_Appendix E\_Memo.docx

## Attachment E1

### Times Series Graphs – Shallow Unit

### Arsenic



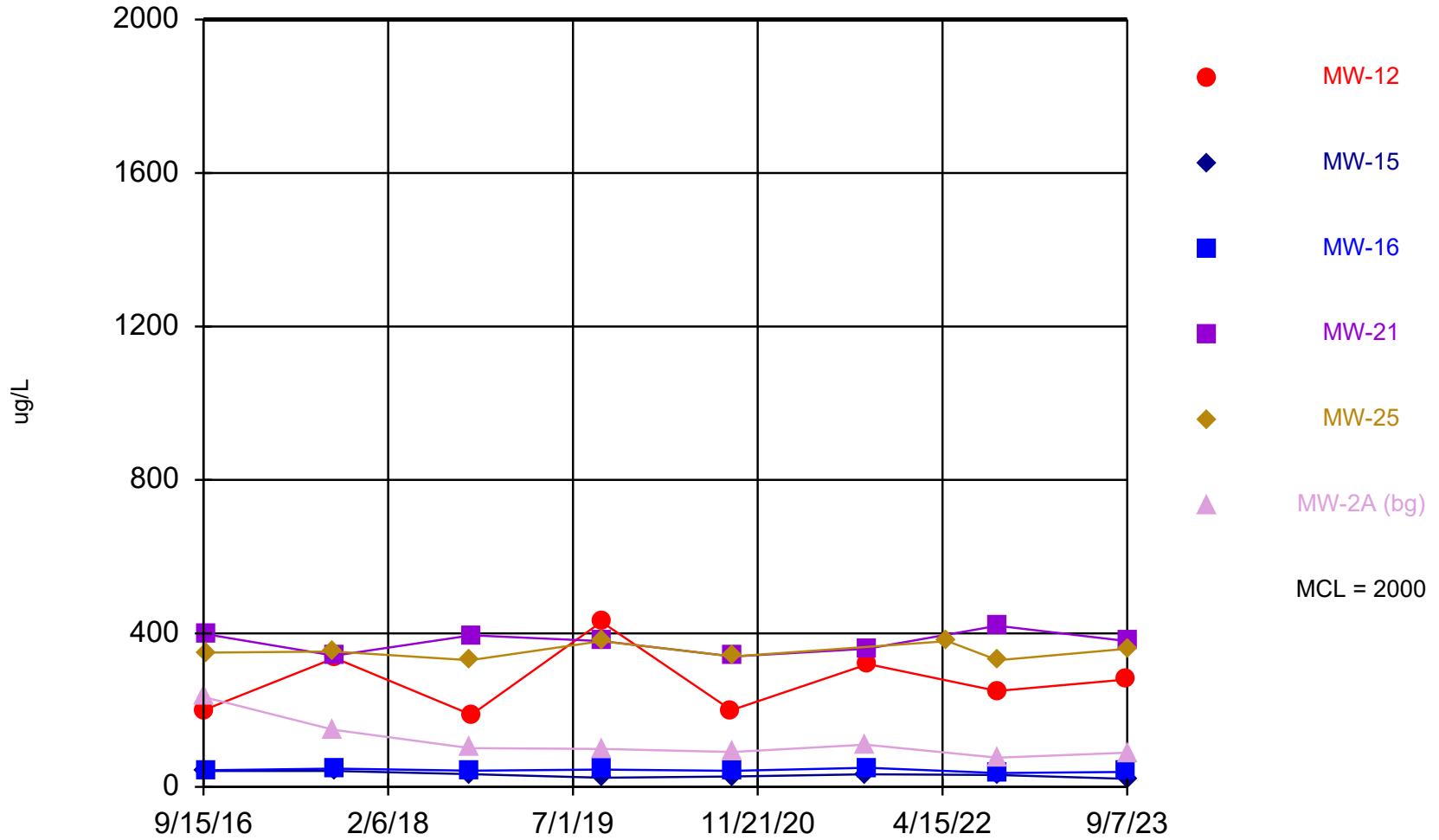
Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Arsenic (ug/L) Analysis Run 10/13/2023 8:57 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	2.9					
9/16/2016						0.24 (J)
9/20/2016		5.5				
9/21/2016					2.4	
9/22/2016			1.1	31.4		
9/8/2017					3.1	1.2
9/11/2017				27.4		
9/12/2017	34.4	3.2	0.5 (J)			
9/20/2018		2.8			0.92 (J)	0.2 (J)
9/21/2018			0.94 (J)			
9/24/2018	16			34.1		
9/18/2019	22		3.5		1.1 (J)	
9/19/2019		2.1		18		<0.75
9/10/2020	4.4					
9/11/2020		4.3				
9/14/2020			4.6		2.3	<0.88
9/15/2020				15		
9/15/2021						<0.75
9/17/2021		3.5				
9/20/2021				15		
9/21/2021			2.8			
9/22/2021	7.4					
4/29/2022					2.5	
9/13/2022	5.5					
9/14/2022		2.2	1.4 (J)	26		<0.75
9/15/2022					1.5 (J)	
9/6/2023	5.1		2.2			
9/7/2023		<0.53 (U)		16	0.68 (J)	0.88 (J)

# Barium



Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

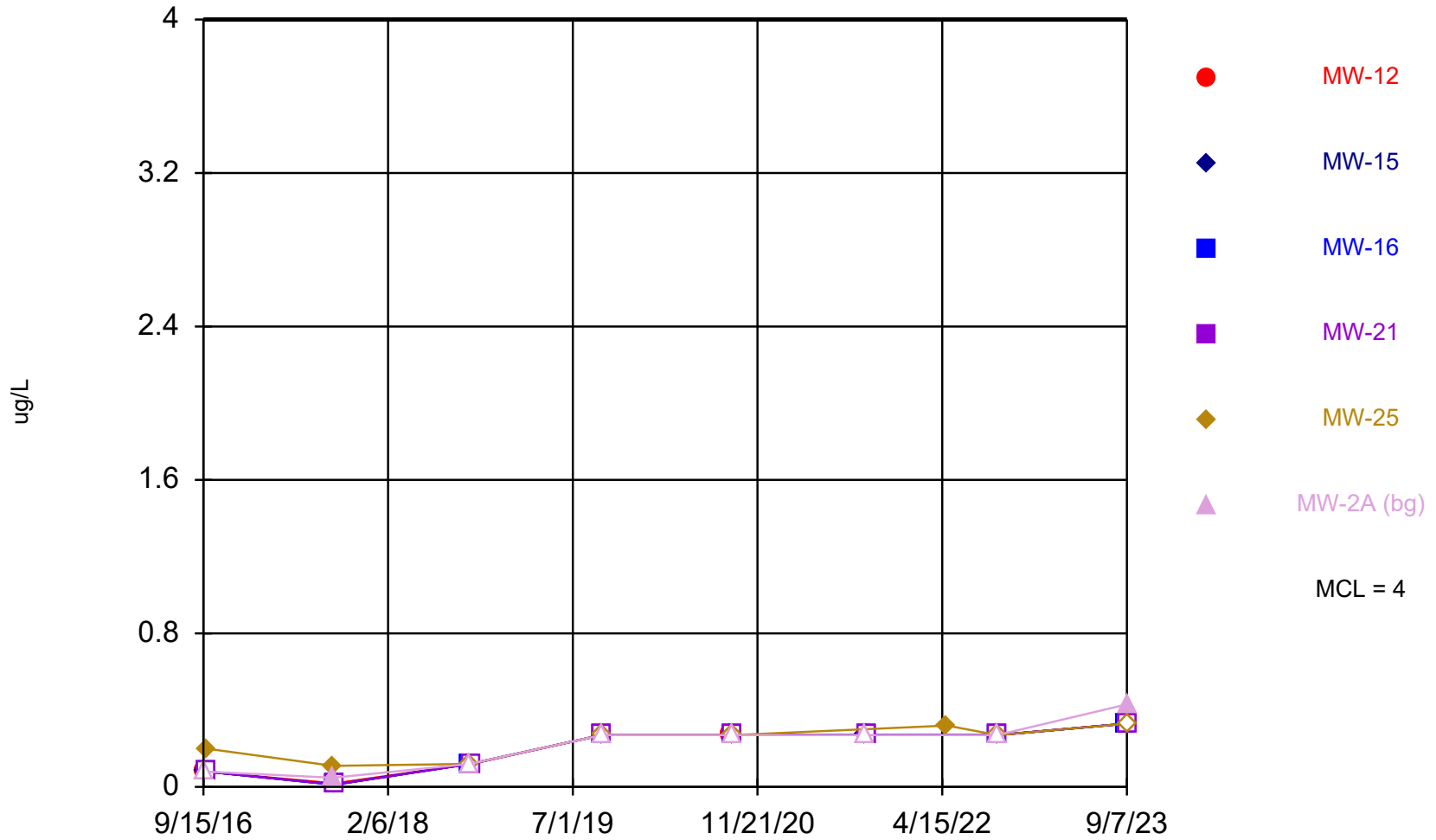


# Time Series

Constituent: Barium (ug/L) Analysis Run 10/13/2023 8:57 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	200					
9/16/2016						234
9/20/2016		41.6				
9/21/2016					350	
9/22/2016			43.5	398		
9/8/2017					353	149
9/11/2017				342		
9/12/2017	336	41.6	47.8			
9/20/2018		33.3			330	101
9/21/2018			42.2			
9/24/2018	188			395		
9/18/2019	430		45		380	
9/19/2019		24		380		99
9/10/2020	200					
9/11/2020		27				
9/14/2020			42		340	91
9/15/2020				340		
9/15/2021						110
9/17/2021		33				
9/20/2021				360		
9/21/2021			50			
9/22/2021	320					
4/29/2022					380	
9/13/2022	250 (B)					
9/14/2022		31 (B)	36 (B)	420 (B)		76 (B)
9/15/2022					330 (B)	
9/6/2023	280		39			
9/7/2023		21		380	360	89

# Beryllium



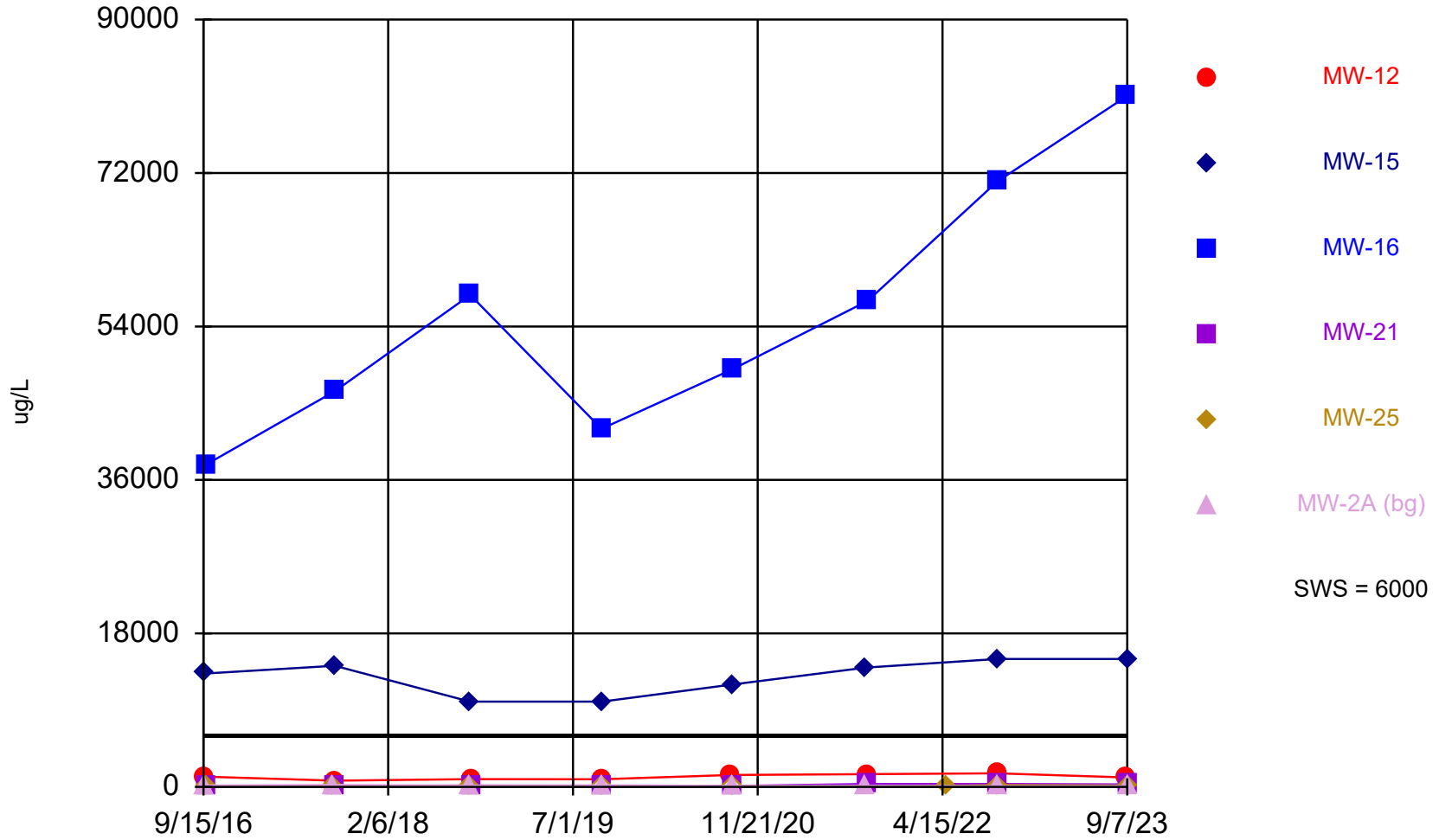
Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Beryllium (ug/L)    Analysis Run 10/13/2023 8:57 AM    View: Shallow  
 Stoney Point Closed Landfill    Client: SCS Engineers    Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	<0.08					
9/16/2016						<0.08
9/20/2016		<0.08				
9/21/2016					0.2 (J)	
9/22/2016			<0.08	<0.08		
9/8/2017					0.11 (J)	0.048 (J)
9/11/2017				<0.012		
9/12/2017	0.018 (J)	<0.012	<0.012			
9/20/2018		<0.12			<0.12	<0.12
9/21/2018			<0.12			
9/24/2018	<0.12			<0.12		
9/18/2019	<0.27		<0.27		<0.27	
9/19/2019		<0.27		<0.27		<0.27
9/10/2020	<0.27					
9/11/2020		<0.27				
9/14/2020			<0.27		<0.27	<0.27
9/15/2020				<0.27		
9/15/2021						<0.27
9/17/2021		<0.27				
9/20/2021				<0.27		
9/21/2021			<0.27			
9/22/2021	<0.27					
4/29/2022					0.32 (J)	
9/13/2022	<0.27					
9/14/2022		<0.27	<0.27	<0.27		<0.27
9/15/2022					<0.27	
9/6/2023	<0.33 (U)		<0.33 (U)			
9/7/2023		<0.33 (U)		<0.33 (U)	<0.33 (U)	0.43 (J)

# Boron



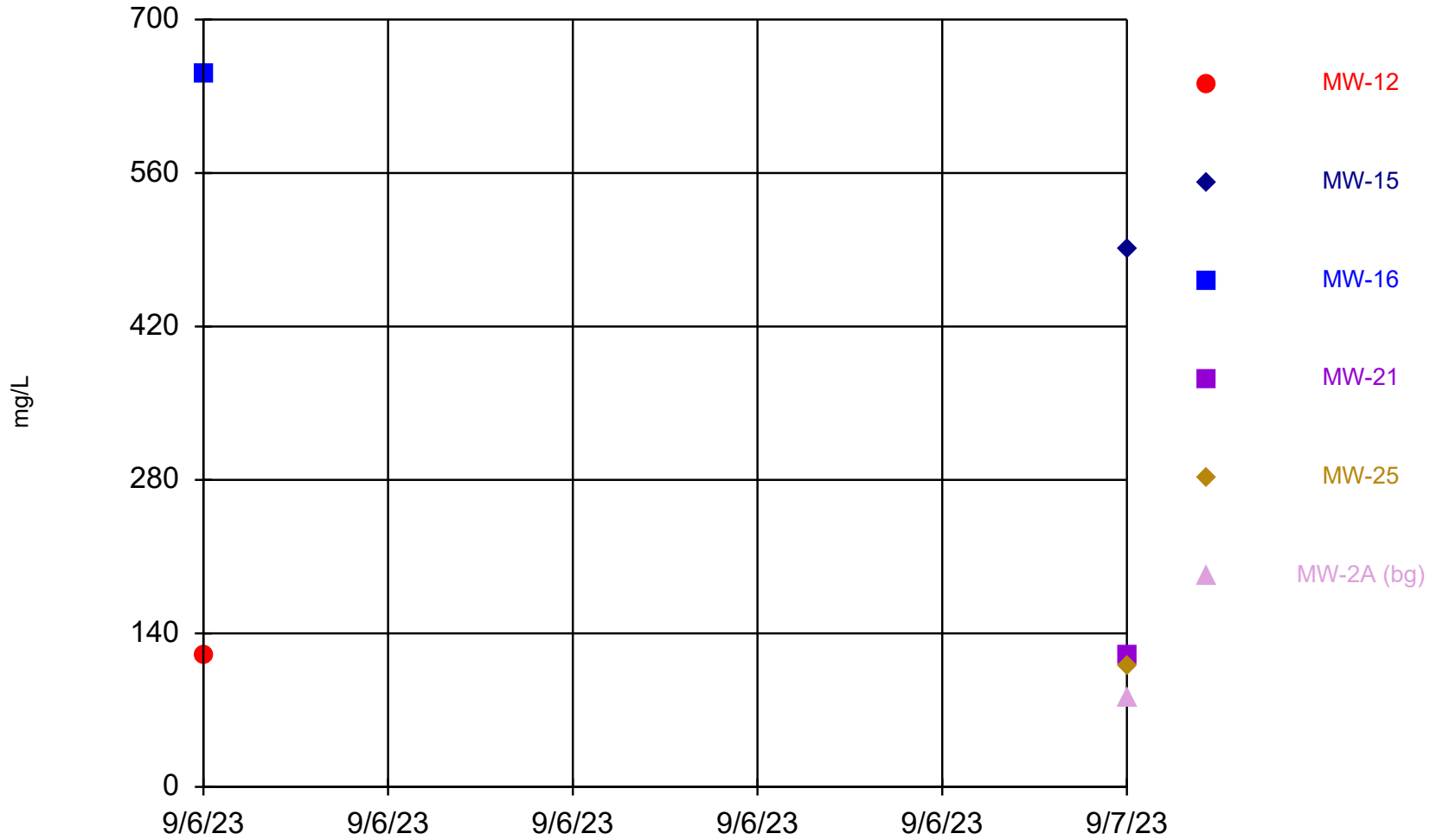
Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Boron (ug/L)    Analysis Run 10/13/2023 8:57 AM    View: Shallow  
 Stoney Point Closed Landfill    Client: SCS Engineers    Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	1200					
9/16/2016						159
9/20/2016		13300				
9/21/2016					98 (J)	
9/22/2016			37800	86.8 (J)		
9/8/2017					105	222
9/11/2017				116		
9/12/2017	741	14200	46400			
9/20/2018		10000			153	141
9/21/2018			57700			
9/24/2018	910			158		
9/18/2019	890		42000		<110	
9/19/2019		10000		140 (J)		200
9/10/2020	1400					
9/11/2020		12000				
9/14/2020			49000		<80	110
9/15/2020				110		
9/15/2021						140
9/17/2021		14000				
9/20/2021				350		
9/21/2021			57000			
9/22/2021	1500					
4/29/2022					110	
9/13/2022	1600					
9/14/2022		15000	71000	350		88 (J)
9/15/2022					210	
9/6/2023	1100		81000			
9/7/2023		15000		300	170	100

# Calcium



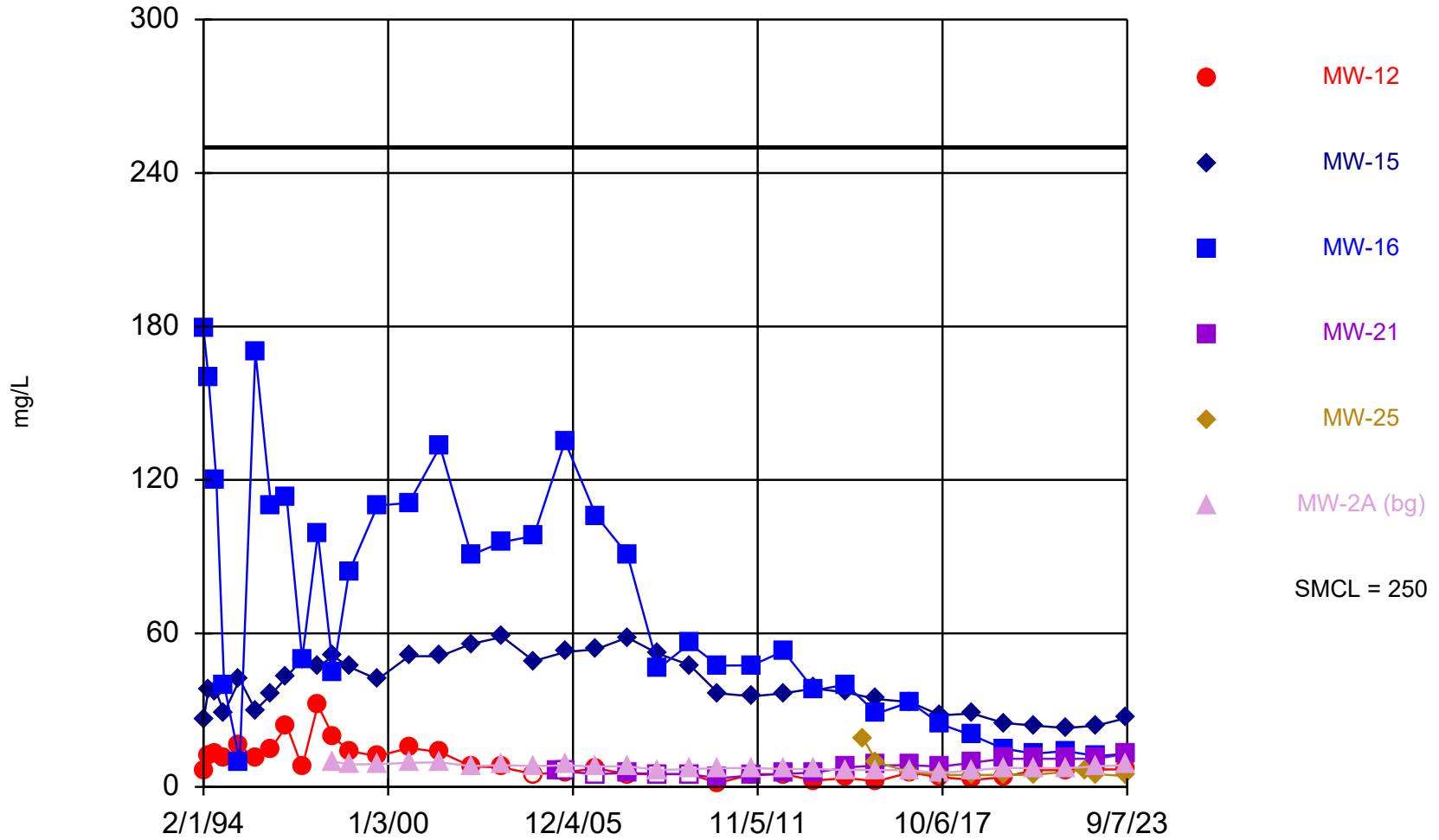
Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Calcium (mg/L) Analysis Run 10/13/2023 8:57 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/6/2023	120		650			
9/7/2023		490		120	110	81

# Chloride



Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile



# Time Series

Constituent: Chloride (mg/L) Analysis Run 10/13/2023 8:57 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

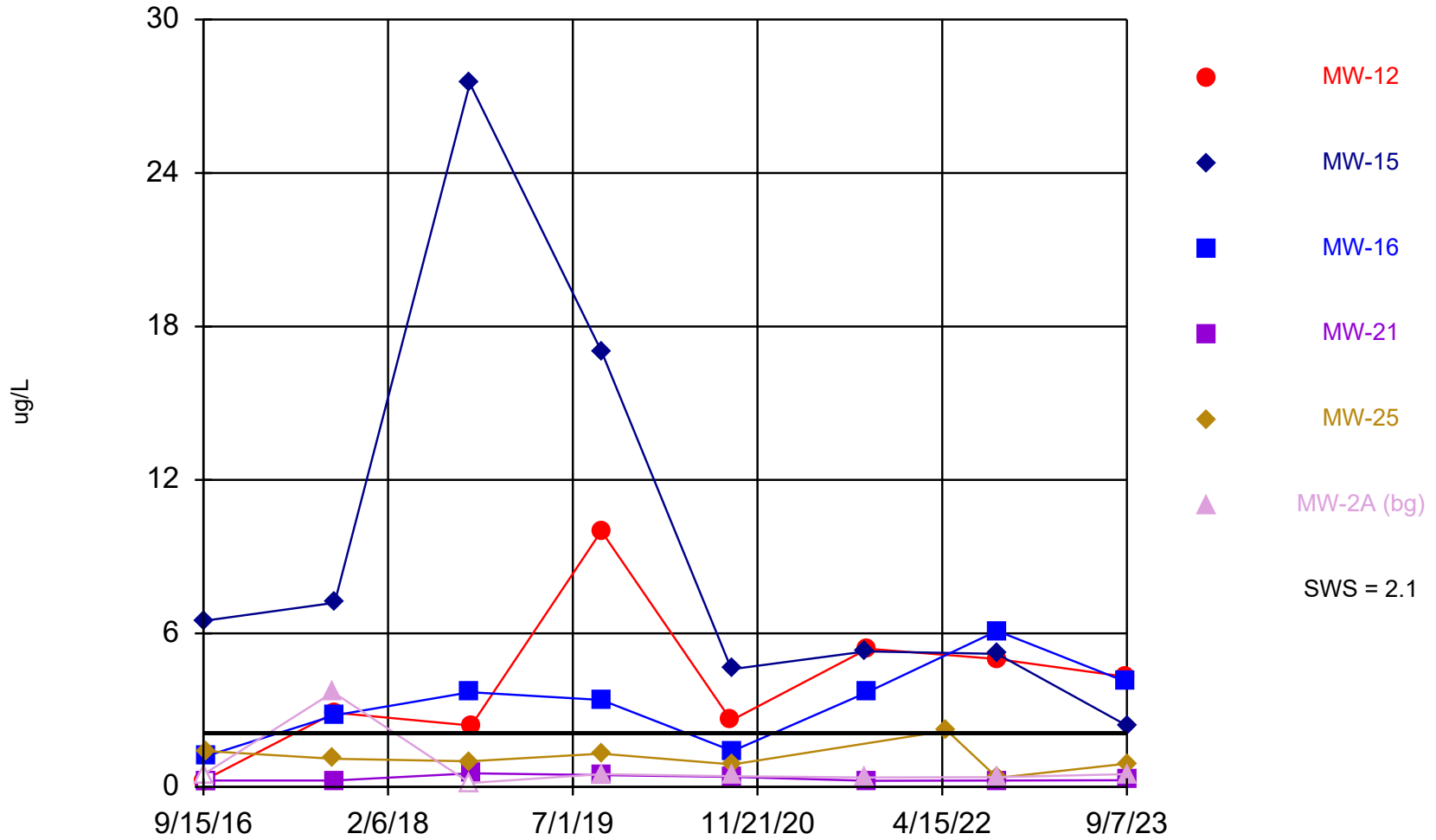
	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
2/1/1994	6	26	179			
4/1/1994	12	38	160			
7/1/1994	13	37	120			
10/1/1994	11	29	40			
4/1/1995	16	42	10			
10/1/1995	11	30	170			
4/1/1996	15	36	110			
10/1/1996	24	43	113			
4/1/1997	7.7	50	50			
10/1/1997	32	47	99			
4/1/1998	19.6	51.1	44.9			9.9
10/1/1998	14	47	84			8.8
9/1/1999	12	42	110			8.9
9/1/2000	15.2	51.1	111			9.4
9/1/2001	13.6	51.1	133			9.6
9/1/2002	8	55.9	90.7			8.1
9/1/2003	7.6	58.6	95.7			8.5
9/1/2004	<5	49.2	98.1			8.1
6/1/2005				5.9		
9/1/2005	5.7	52.7	135	<6		8.4
9/1/2006	7.28	53.8	106	<5		7.98
9/1/2007	<5	58.4	90.9	5.47		8.09
9/1/2008	<5	52	46.3	<5		6.54
9/1/2009	<5	47.6	56	<5		6.97
8/1/2010	1.5	36.6	47.4	3.36		7.3
9/1/2011	<5	35.4	47.5	4.5		7.36
9/1/2012	<5	36.6	53.1	5.11		6.98
9/1/2013	2.5	38.5	37.7	5.6		7
9/1/2014	3.4	36.9	40	7.6		6.6
4/1/2015					18.4	
9/1/2015	2.2	34.3	28.7	8.4	9.6	6.6
9/15/2016	5.6					
9/16/2016						6.5
9/20/2016		33.2				
9/21/2016					5.8	
9/22/2016			33.2	8.5		
9/8/2017					4.7	5.4
9/11/2017				7.9		
9/12/2017	3.8	28	24.5			
9/20/2018		28.7			4.6	6.5
9/21/2018			20.1			
9/24/2018	2.7			9.5		
9/18/2019	3.8 (J)		15		4.7 (J)	
9/19/2019		25		11		7.4
9/10/2020	6.5					
9/11/2020		24				
9/14/2020			13		4.7 (J)	7.3
9/15/2020				11		
9/15/2021						7.3
9/17/2021		23				
9/20/2021				11		
9/21/2021			14			

# Time Series

Constituent: Chloride (mg/L) Analysis Run 10/13/2023 8:57 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/22/2021	6.6					
4/29/2022					6.6	
9/13/2022	6.8					
9/14/2022		24	12	11		8
9/15/2022					5	
9/6/2023	6.8		13			
9/7/2023		27		13	4.2 (J)	8.6

# Cobalt



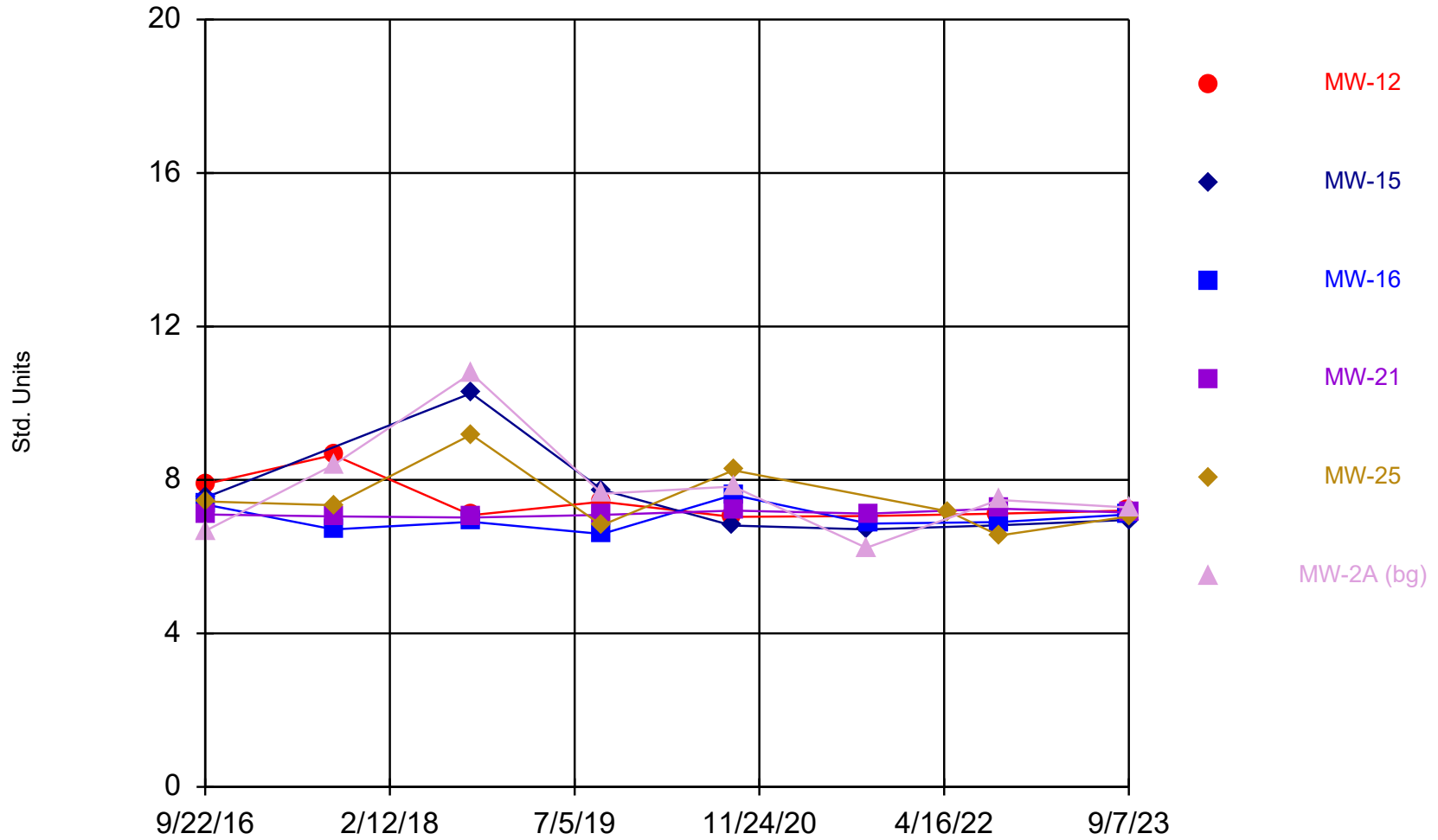
Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Cobalt (ug/L) Analysis Run 10/13/2023 8:57 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	<0.5					
9/16/2016						<0.5
9/20/2016		6.5				
9/21/2016					1.4	
9/22/2016			1.2	<0.5		
9/8/2017					1.1	3.7
9/11/2017				0.25 (J)		
9/12/2017	2.9	7.2	2.8			
9/20/2018		27.5			1	<0.15
9/21/2018			3.7			
9/24/2018	2.4			0.53 (J)		
9/18/2019	10		3.4		1.3	
9/19/2019		17		0.46 (J)		0.5
9/10/2020	2.6					
9/11/2020		4.6				
9/14/2020			1.4		0.88	0.42 (J)
9/15/2020				0.39 (J)		
9/15/2021						0.37 (J)
9/17/2021		5.3				
9/20/2021				0.24 (J)		
9/21/2021			3.7			
9/22/2021	5.4					
4/29/2022					2.2	
9/13/2022	5					
9/14/2022		5.2	6.1	0.25 (J)		0.38 (J)
9/15/2022					0.35 (J)	
9/6/2023	4.3		4.1			
9/7/2023		2.4		0.26 (J)	0.91	0.5

### Field pH



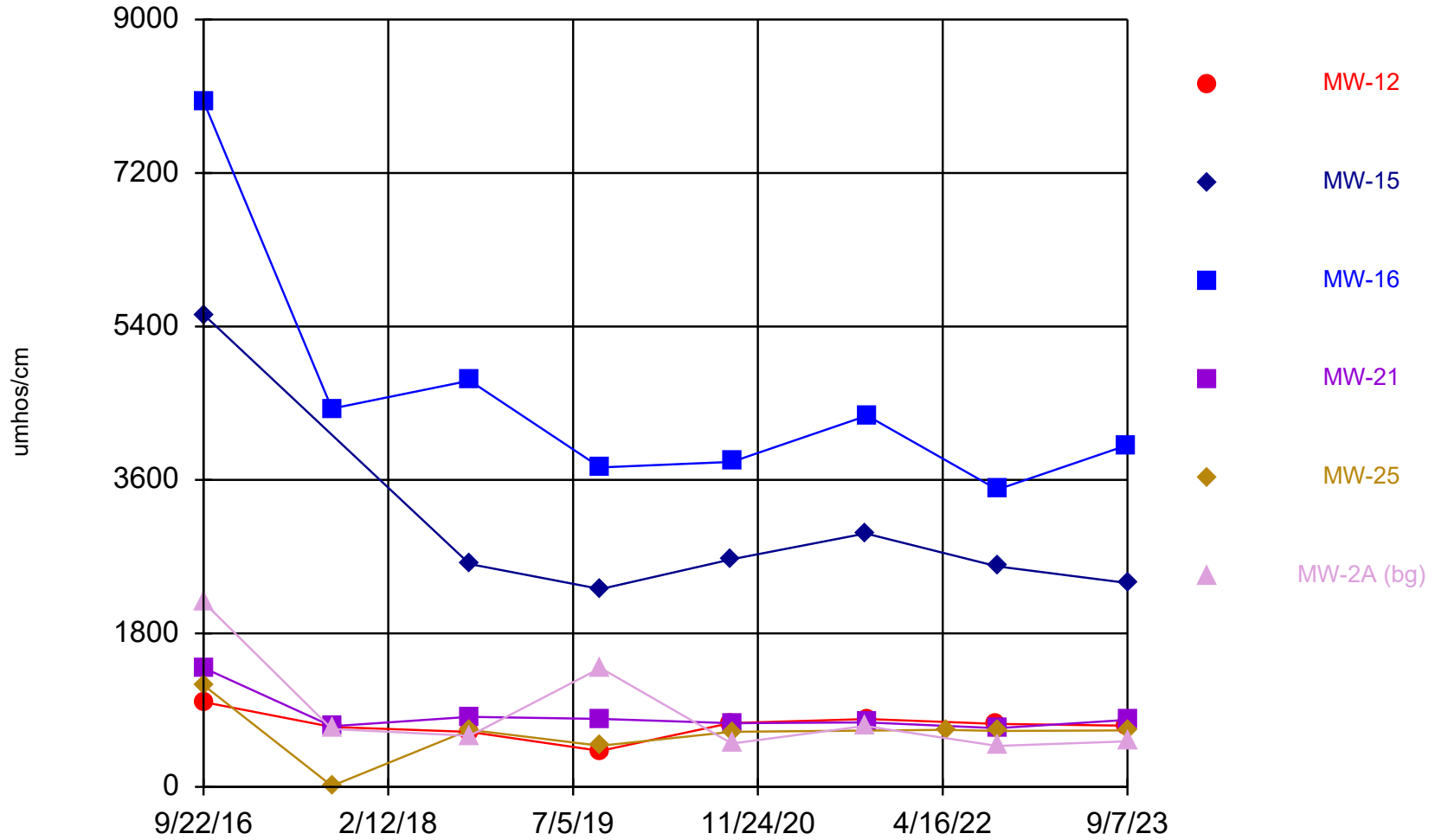
Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Field pH (Std. Units) Analysis Run 10/13/2023 8:57 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/22/2016	7.89	7.54	7.36	7.1	7.44	6.67
9/10/2017	8.65		6.71	7.05	7.34	8.39
9/24/2018	7.08	10.26	6.91	7.02	9.18	10.78
9/18/2019	7.43		6.59		6.82	
9/19/2019		7.74		7.09		7.64
9/10/2020	7.04					
9/11/2020		6.81				
9/14/2020			7.61		8.25	7.83
9/15/2020				7.2		
9/15/2021						6.23
9/17/2021		6.71				
9/20/2021				7.12		
9/21/2021			6.86			
9/22/2021	7.06					
4/29/2022					7.18	
9/13/2022	7.12					
9/14/2022		6.82	6.9	7.25		7.48
9/15/2022					6.55	
9/6/2023	7.2		7.1			
9/7/2023		6.96		7.15	7.05	7.28

### Field Specific Conductance



Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

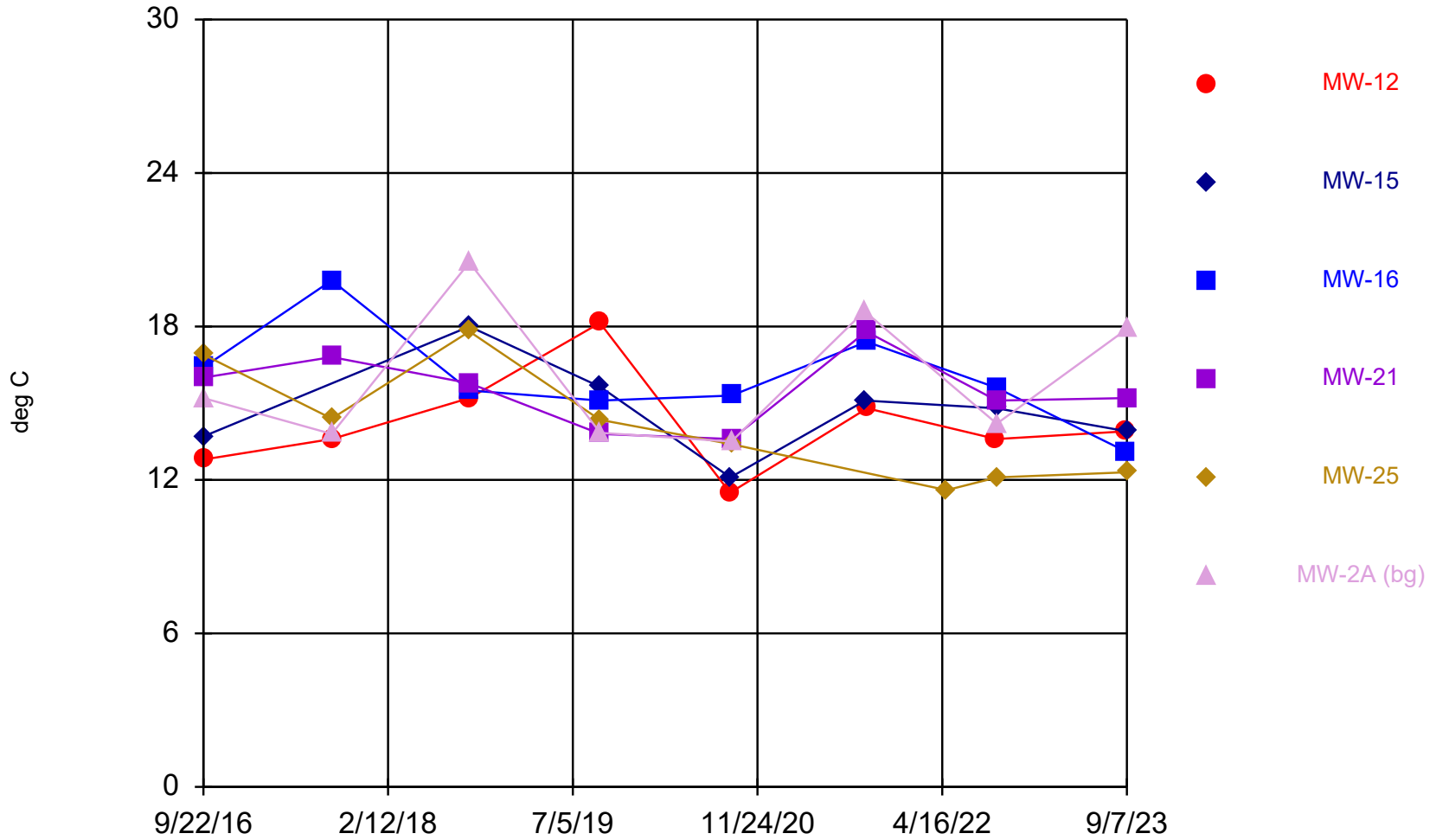
Constituent: Field Specific Conductance (umhos/cm) Analysis Run 10/13/2023 8:57 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/22/2016	996	5540	8041	1397	1194	2167
9/10/2017	703		4437	711	12	678
9/24/2018	644	2613	4765	821	669	599
9/18/2019	423		3747		482	
9/19/2019		2320		797		1395
9/10/2020	749					
9/11/2020		2668				
9/14/2020			3812		647	507.7
9/15/2020				747		
9/15/2021						715
9/17/2021		2972				
9/20/2021				756		
9/21/2021			4354			
9/22/2021	796					
4/29/2022					669.5	
9/13/2022	739					
9/14/2022		2586	3487	688		480.5
9/15/2022					656.5	
9/6/2023	717		4006			
9/7/2023		2391		786	662	535



### Field Temperature



Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

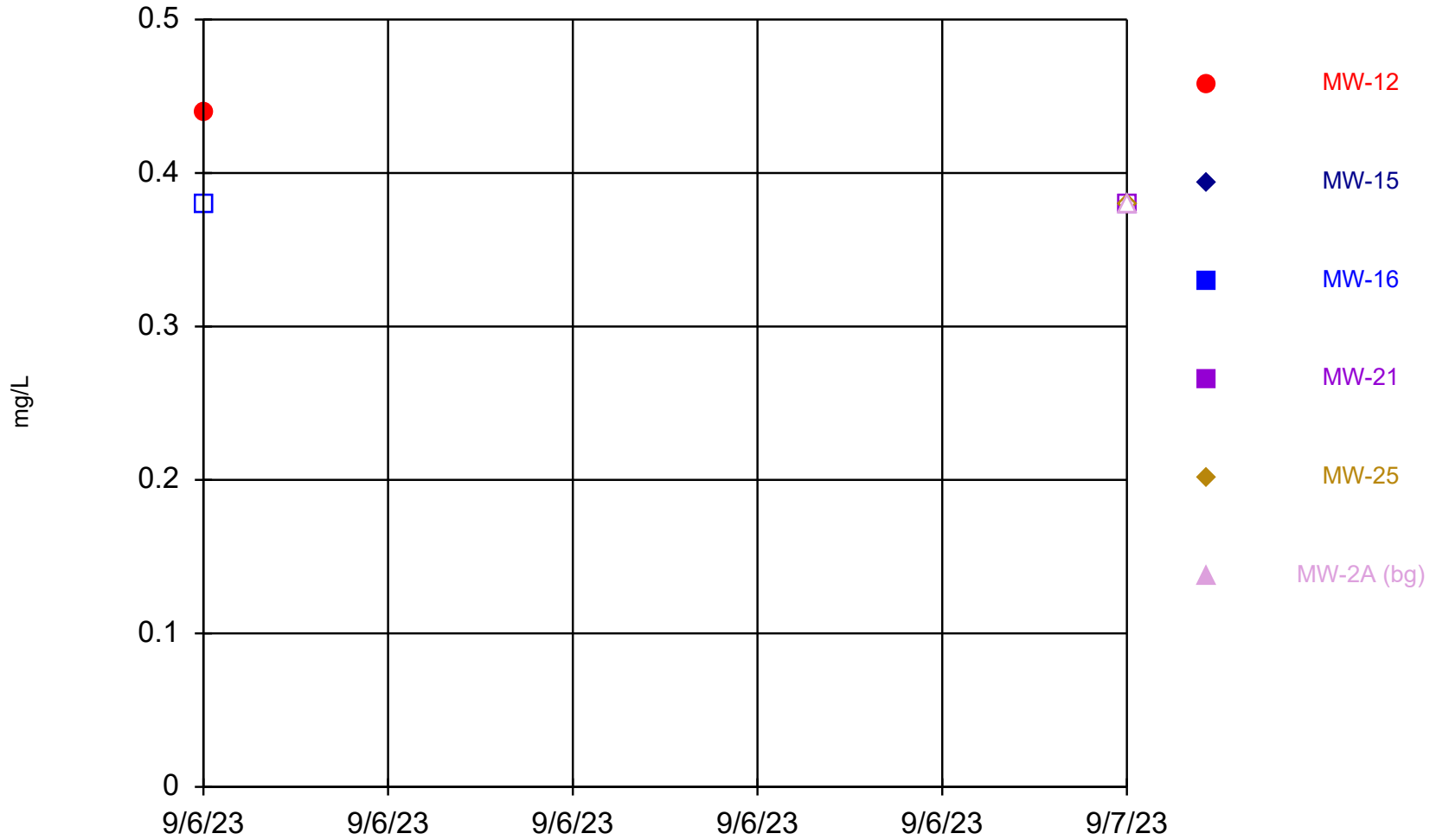
# Time Series

Constituent: Field Temperature (deg C) Analysis Run 10/13/2023 8:57 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/22/2016	12.8	13.7	16.4	16	16.9	15.2
9/10/2017	13.6		19.8	16.8	14.4	13.8
9/24/2018	15.2	18	15.5	15.78	17.8	20.5
9/18/2019	18.14		15.1		14.35	
9/19/2019		15.64		13.8		13.84
9/10/2020	11.5					
9/11/2020		12.1				
9/14/2020			15.3		13.4	13.5
9/15/2020				13.6		
9/15/2021						18.6
9/17/2021		15.1				
9/20/2021				17.8		
9/21/2021			17.4			
9/22/2021	14.8					
4/29/2022					11.6	
9/13/2022	13.6					
9/14/2022		14.8	15.6	15.1		14.2
9/15/2022					12.1	
9/6/2023	13.9		13.1			
9/7/2023		13.9		15.2	12.3	17.9

# Fluoride



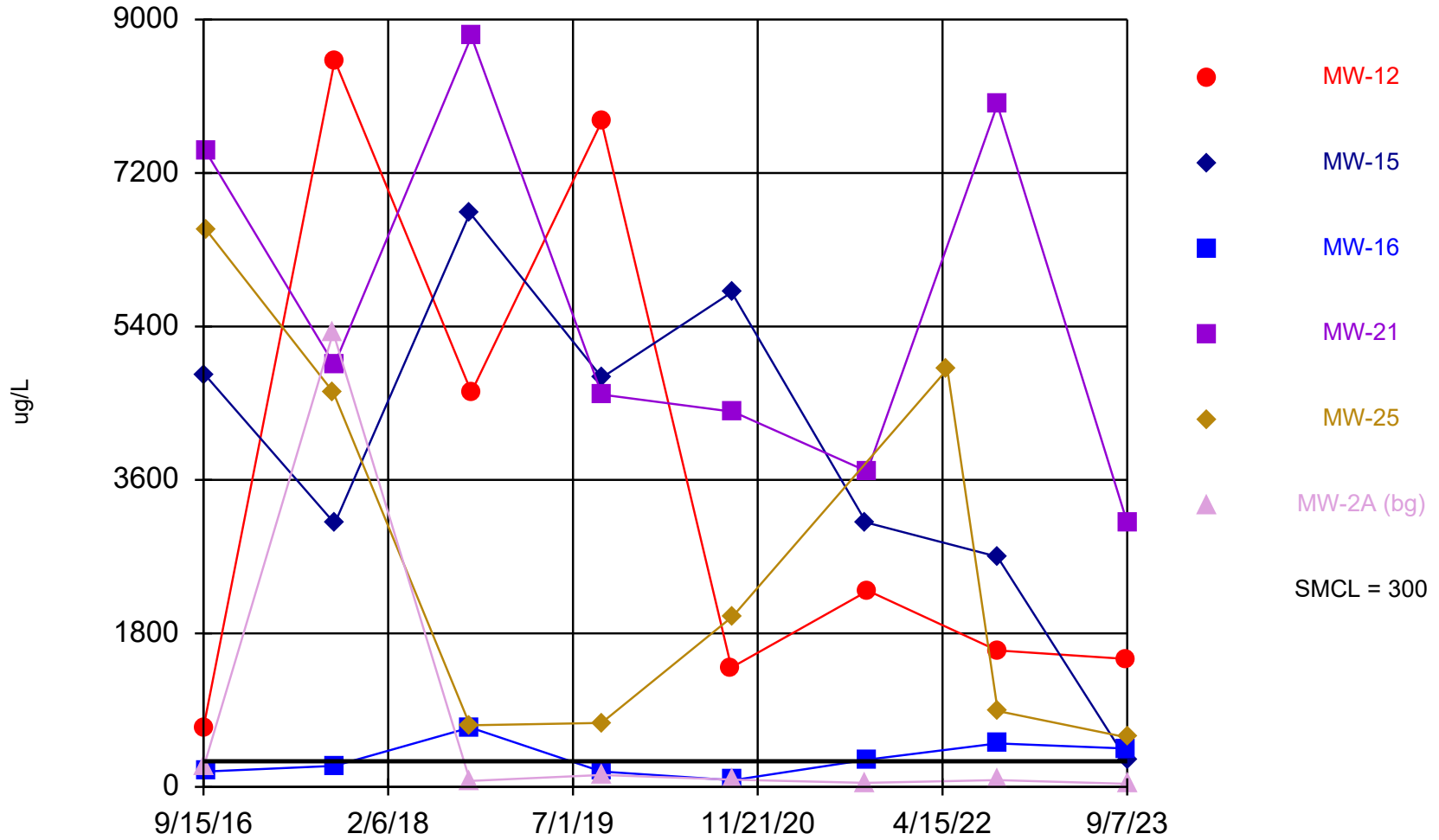
Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/13/2023 8:57 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/6/2023	0.44 (J)		<0.38 (U)			
9/7/2023		<0.38 (U)		<0.38 (U)	<0.38 (U)	<0.38 (U)

# Iron



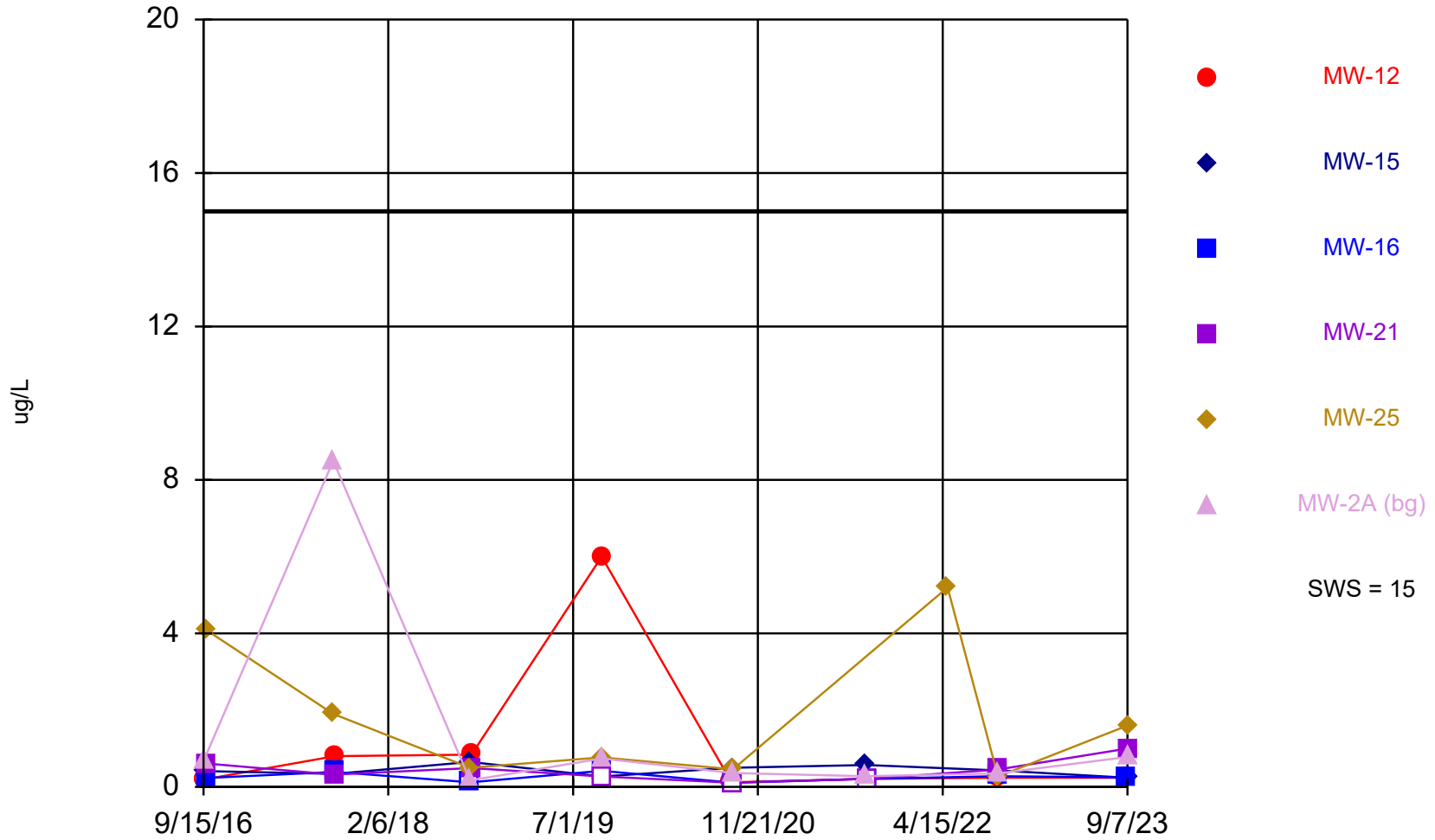
Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Iron (ug/L) Analysis Run 10/13/2023 8:57 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	695					
9/16/2016						240
9/20/2016		4830				
9/21/2016					6540	
9/22/2016			180	7450		
9/8/2017					4630	5330
9/11/2017				4950		
9/12/2017	8520	3090	247			
9/20/2018		6730			722	69.4
9/21/2018			696			
9/24/2018	4630			8800		
9/18/2019	7800		180		750	
9/19/2019		4800		4600		140
9/10/2020	1400					
9/11/2020		5800				
9/14/2020			78 (J)		2000	84 (J)
9/15/2020				4400		
9/15/2021						47 (J)
9/17/2021		3100				
9/20/2021				3700		
9/21/2021			320			
9/22/2021	2300					
4/29/2022					4900	
9/13/2022	1600					
9/14/2022		2700	510	8000		80 (J)
9/15/2022					890	
9/6/2023	1500		450			
9/7/2023		310		3100	580	36 (J)

### Lead



Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

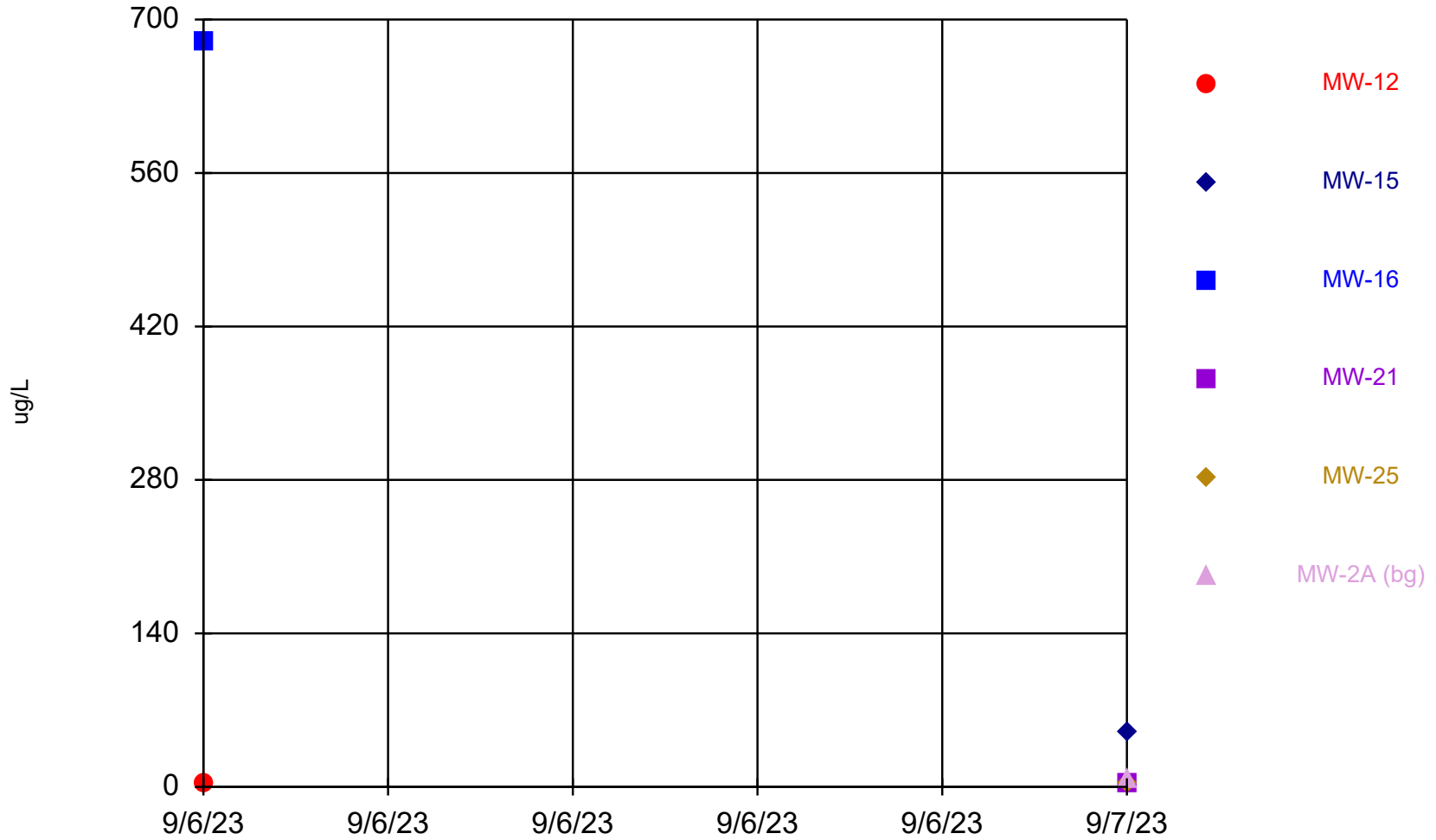
# Time Series

Constituent: Lead (ug/L)    Analysis Run 10/13/2023 8:57 AM    View: Shallow  
 Stoney Point Closed Landfill    Client: SCS Engineers    Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	<0.19					
9/16/2016						0.7 (J)
9/20/2016		0.41 (J)				
9/21/2016					4.1	
9/22/2016			0.23 (J)	0.61 (J)		
9/8/2017					1.9	8.5
9/11/2017				0.32 (J)		
9/12/2017	0.8 (J)	0.34 (J)	0.39 (J)			
9/20/2018		0.65 (J)			0.5 (J)	0.17 (J)
9/21/2018			<0.12			
9/24/2018	0.84 (J)			0.49 (J)		
9/18/2019	6		0.42 (J)		0.77	
9/19/2019		<0.27		<0.27		0.74
9/10/2020	0.12 (J)					
9/11/2020		0.5				
9/14/2020			<0.11		0.46 (J)	0.36 (J)
9/15/2020				<0.11		
9/15/2021						0.28 (J)
9/17/2021		0.57				
9/20/2021				<0.21		
9/21/2021			<0.21			
9/22/2021	<0.21					
4/29/2022					5.2	
9/13/2022	<0.24					
9/14/2022		0.43 (J)	0.28 (J)	0.45 (J)		0.35 (J)
9/15/2022					0.27 (J)	
9/6/2023	<0.24 (U)		0.25 (J)			
9/7/2023		<0.24 (U)		1	1.6	0.78



# Lithium



Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow

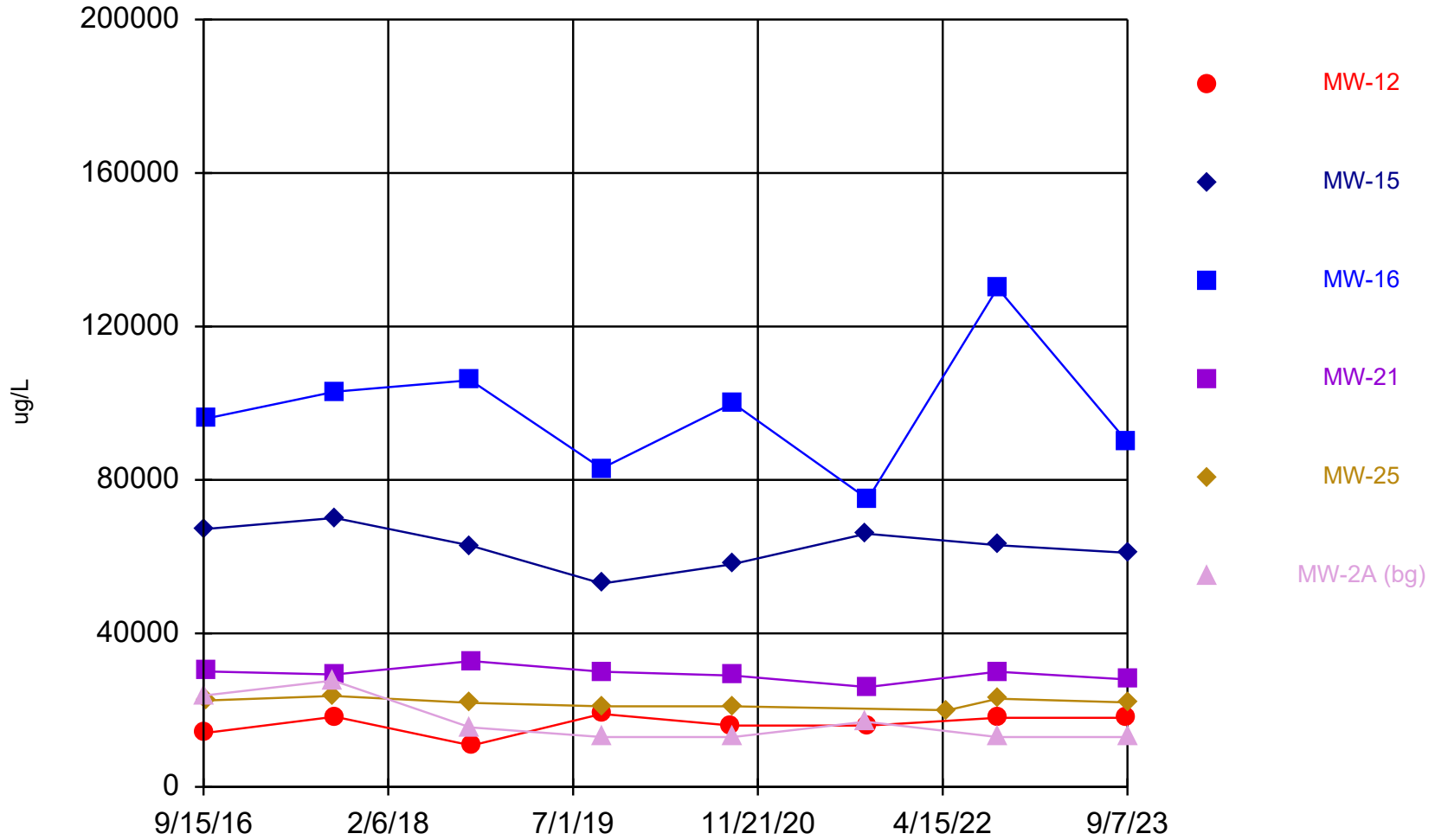
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Lithium (ug/L) Analysis Run 10/13/2023 8:57 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/6/2023	2.9 (J)		680			
9/7/2023		50		2.9 (J)	2.8 (J)	6 (J)

# Magnesium



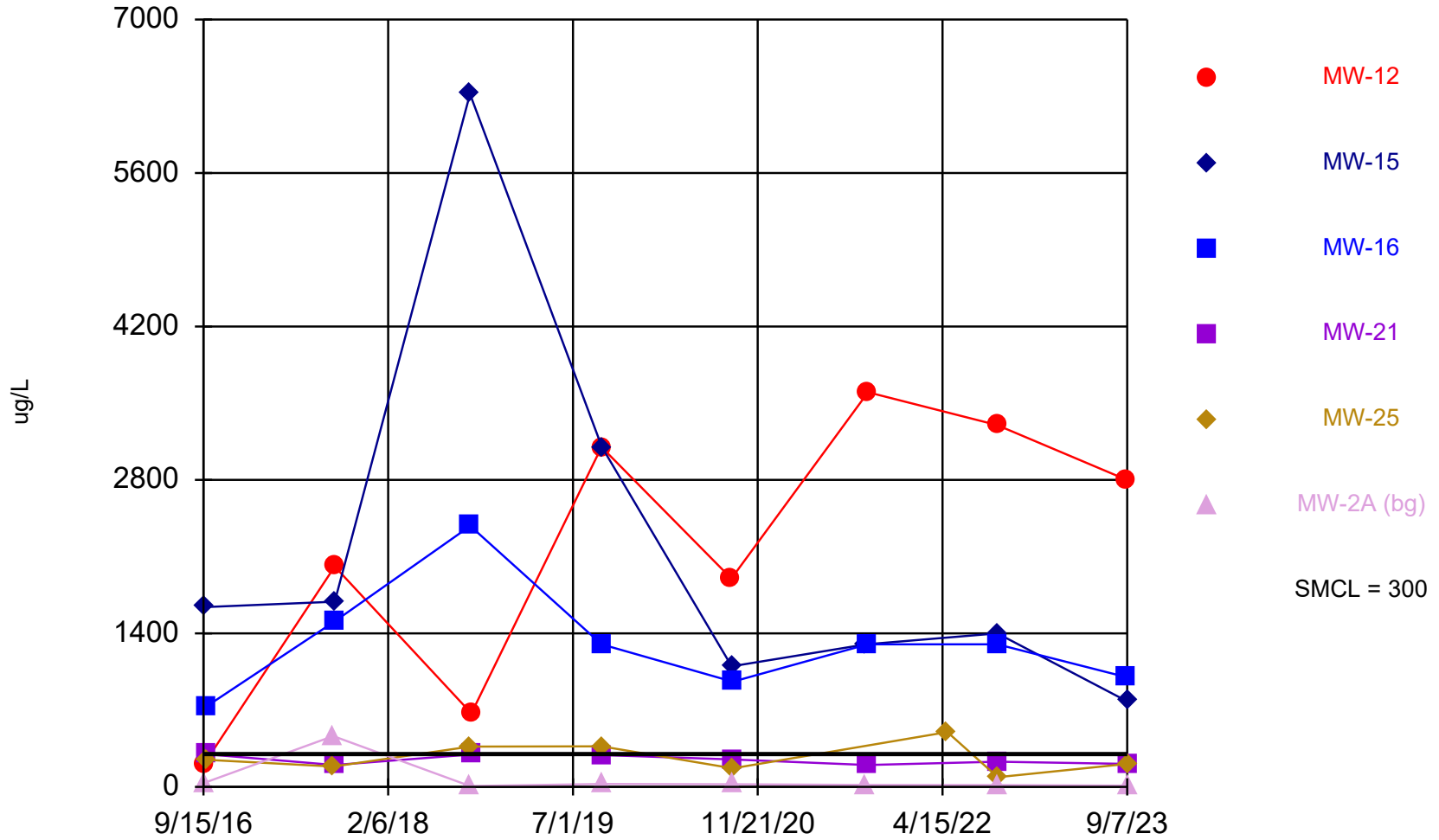
Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Magnesium (ug/L) Analysis Run 10/13/2023 8:57 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	14000					
9/16/2016						23800
9/20/2016		67200				
9/21/2016					22500	
9/22/2016			96000	30100		
9/8/2017					23700	27700
9/11/2017				29300		
9/12/2017	18300	70100	103000			
9/20/2018		62900			21900	15500
9/21/2018			106000			
9/24/2018	10800			32800		
9/18/2019	19000		83000		21000	
9/19/2019		53000		30000		13000
9/10/2020	16000					
9/11/2020		58000				
9/14/2020			100000		21000	13000
9/15/2020				29000		
9/15/2021						17000
9/17/2021		66000				
9/20/2021				26000		
9/21/2021			75000			
9/22/2021	16000					
4/29/2022					20000	
9/13/2022	18000					
9/14/2022		63000	130000	30000		13000
9/15/2022					23000	
9/6/2023	18000		90000			
9/7/2023		61000		28000	22000	13000

# Manganese



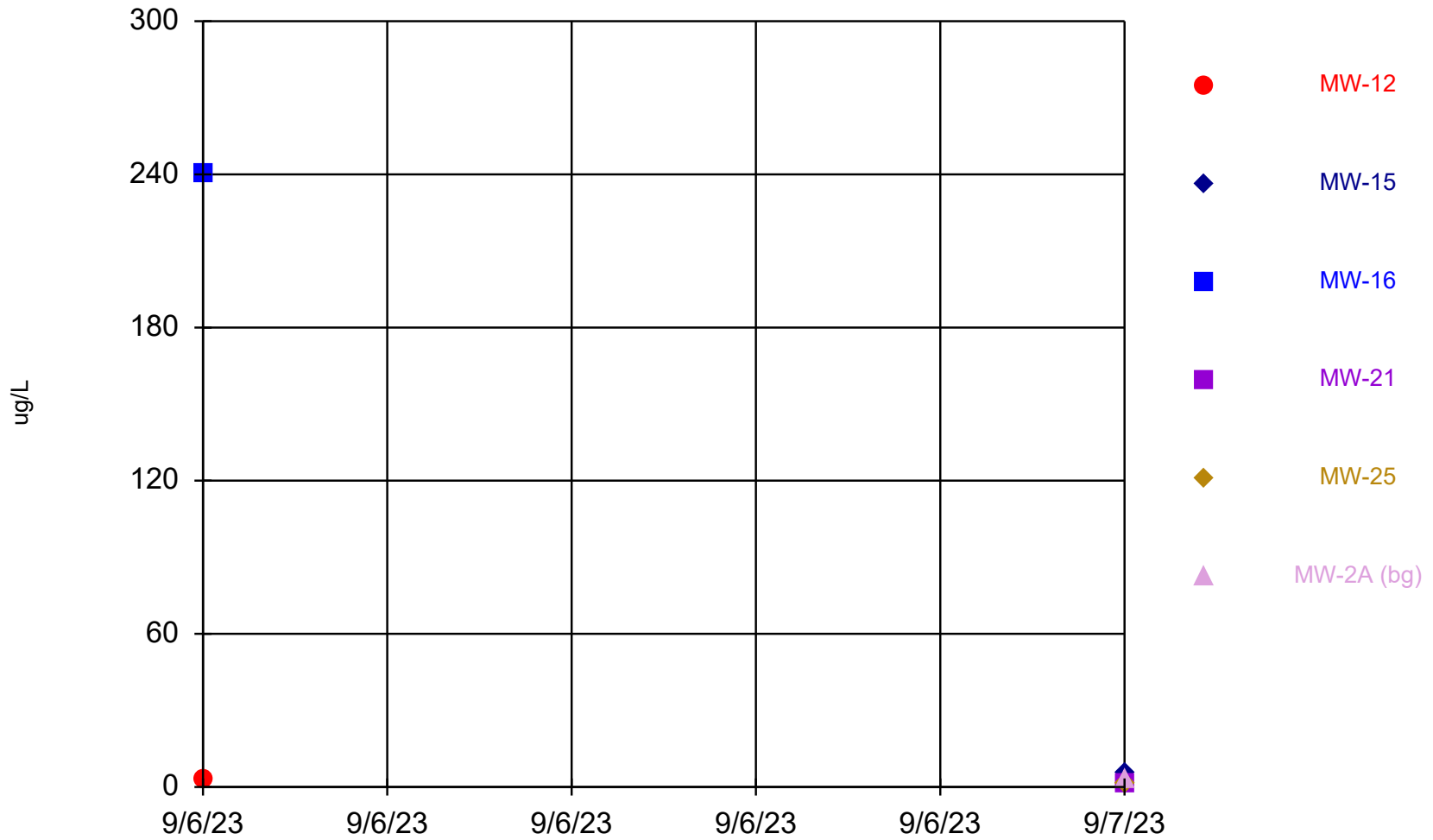
Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Manganese (ug/L) Analysis Run 10/13/2023 8:57 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	201					
9/16/2016						35.6
9/20/2016		1640				
9/21/2016					248	
9/22/2016			731	298		
9/8/2017					186	464
9/11/2017				200		
9/12/2017	2010	1690	1510			
9/20/2018		6320			368	8.2
9/21/2018			2380			
9/24/2018	670			296		
9/18/2019	3100		1300		370	
9/19/2019		3100		290		27
9/10/2020	1900					
9/11/2020		1100				
9/14/2020			960		170	24
9/15/2020				250		
9/15/2021						18
9/17/2021		1300				
9/20/2021				200		
9/21/2021			1300			
9/22/2021	3600					
4/29/2022					500	
9/13/2022	3300					
9/14/2022		1400	1300	230		17
9/15/2022					89	
9/6/2023	2800		1000			
9/7/2023		780		210	210	11

# Molybdenum



Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

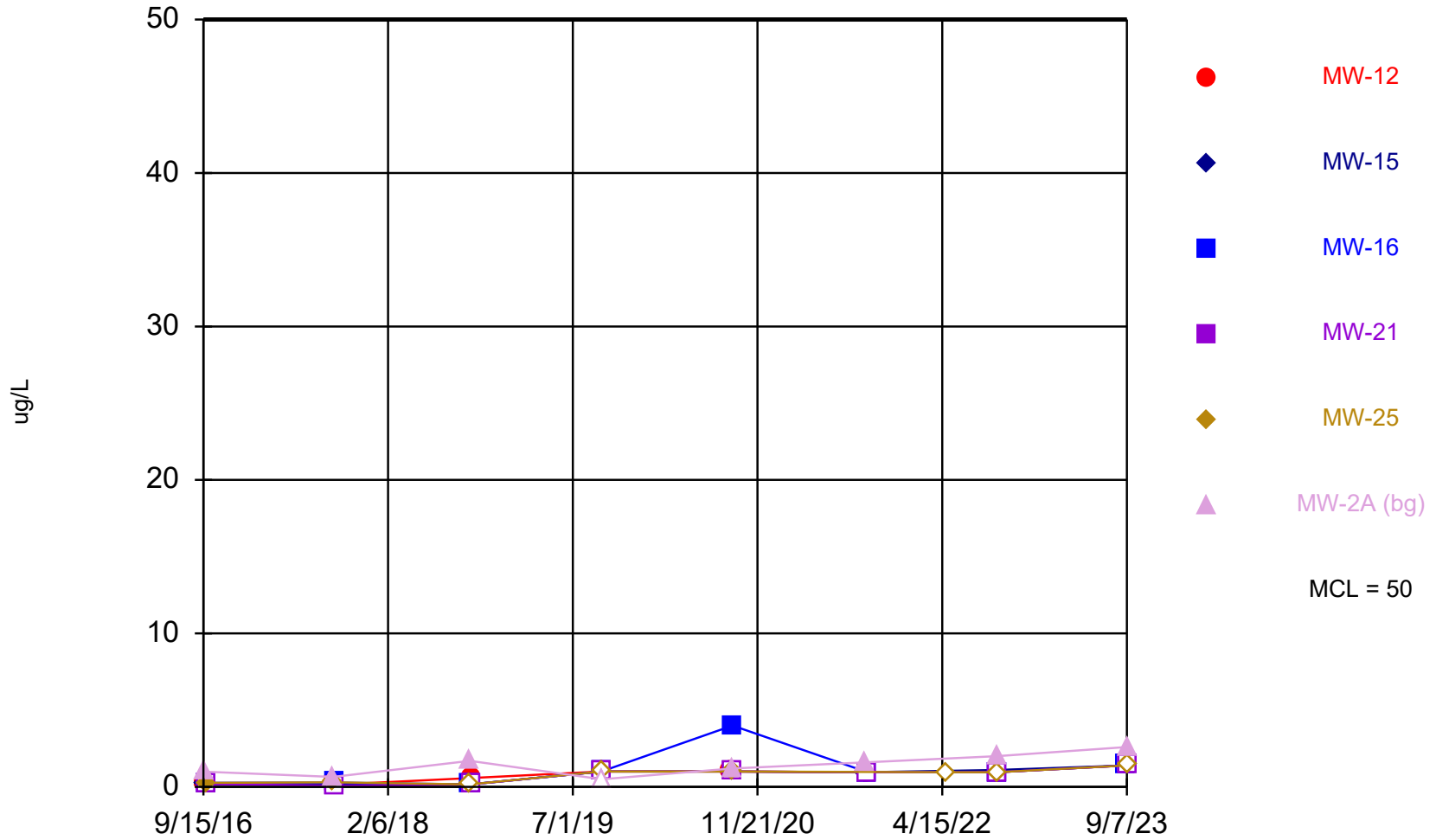
# Time Series

Constituent: Molybdenum (ug/L) Analysis Run 10/13/2023 8:57 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/6/2023	3.1		240			
9/7/2023		5.5		1.1 (J)	<0.91 (U)	2.9



# Selenium



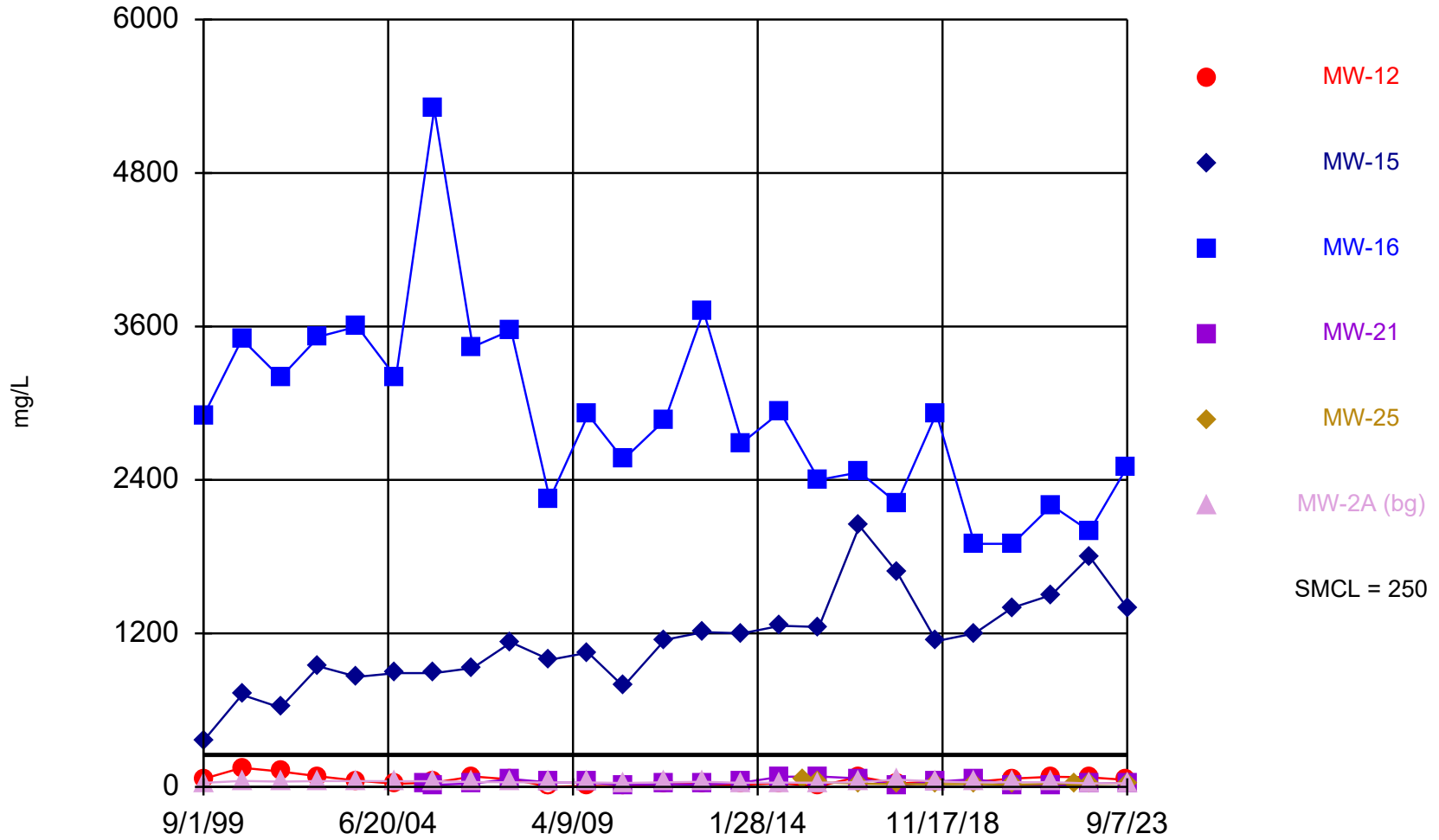
Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Selenium (ug/L) Analysis Run 10/13/2023 8:57 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	<0.18					
9/16/2016						0.99 (J)
9/20/2016		<0.18				
9/21/2016					0.26 (J)	
9/22/2016			0.26 (J)	<0.18		
9/8/2017					0.3 (J)	0.65 (J)
9/11/2017				<0.086		
9/12/2017	0.15 (J)	0.17 (J)	0.28 (J)			
9/20/2018		<0.16			<0.16	1.7
9/21/2018			0.16 (J)			
9/24/2018	0.58 (J)			<0.16		
9/18/2019	<1		<1		<1	
9/19/2019		<1		<1		<1
9/10/2020	<1					
9/11/2020		<1				
9/14/2020			4 (J)		<1	1.2 (J)
9/15/2020				<1		
9/15/2021						1.6 (J)
9/17/2021		<0.96				
9/20/2021				<0.96		
9/21/2021			<0.96			
9/22/2021	<0.96					
4/29/2022					<0.96	
9/13/2022	<0.96					
9/14/2022		1.1 (J)	<0.96	<0.96		2 (J)
9/15/2022					<0.96	
9/6/2023	<1.4 (U)		<1.4 (U)			
9/7/2023		<1.4 (U)		<1.4 (U)	<1.4 (U)	2.6 (J)

# Sulfate



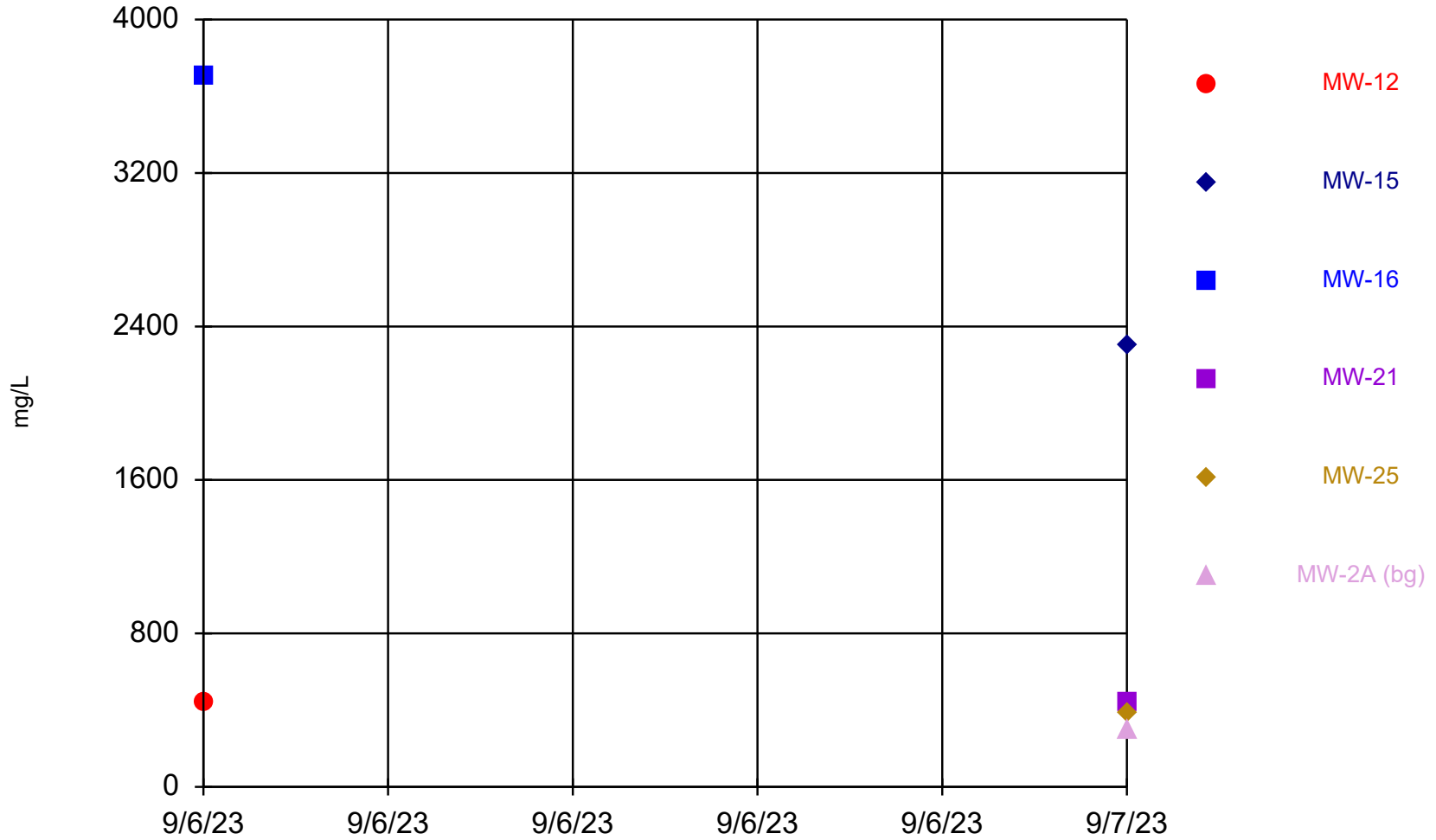
Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 10/13/2023 8:57 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/1/1999	63	360	2900			32
9/1/2000	150	720	3500			47
9/1/2001	120	620	3200			41
9/1/2002	82.5	942	3520			45.6
9/1/2003	49	860	3600			46
9/1/2004	24	890	3200			44
6/1/2005				19		
9/1/2005	34	890	5300	16		44
9/1/2006	81	930	3440	26.3		37.7
9/1/2007	58.3	1130	3570	62.2		36.2
9/1/2008	<2	994	2250	34.8		34.4
9/1/2009	7.88	1050	2910	33.9		34.7
8/1/2010	2.14	786	2560	15.4		30.8
9/1/2011	24.8	1150	2870	21.9		36
9/1/2012	21.8	1210	3720	17.8		40.2
9/1/2013	16.9	1200	2690	34.2		31.2
9/1/2014	29.2	1260	2930	79.6		33.3
4/1/2015					56.2	
9/1/2015	4.4	1250	2400	81.6	35.4	32.4
9/15/2016	80.6					
9/16/2016						37.4
9/20/2016		2040				
9/21/2016					25.6	
9/22/2016			2460	66.7		
9/8/2017					21.4	56.9
9/11/2017				10.7		
9/12/2017	25.7	1680	2220			
9/20/2018		1140			20.3	43.6
9/21/2018			2920			
9/24/2018	42.8			41.3		
9/18/2019	40		1900		23	
9/19/2019		1200		61		35
9/10/2020	65					
9/11/2020		1400				
9/14/2020			1900		17	37
9/15/2020				16		
9/15/2021						37
9/17/2021		1500				
9/20/2021				13		
9/21/2021			2200			
9/22/2021	79					
4/29/2022					28	
9/13/2022	75					
9/14/2022		1800	2000	24		27
9/15/2022					22	
9/6/2023	54		2500			
9/7/2023		1400		33	27	28

### Total Dissolved Solids



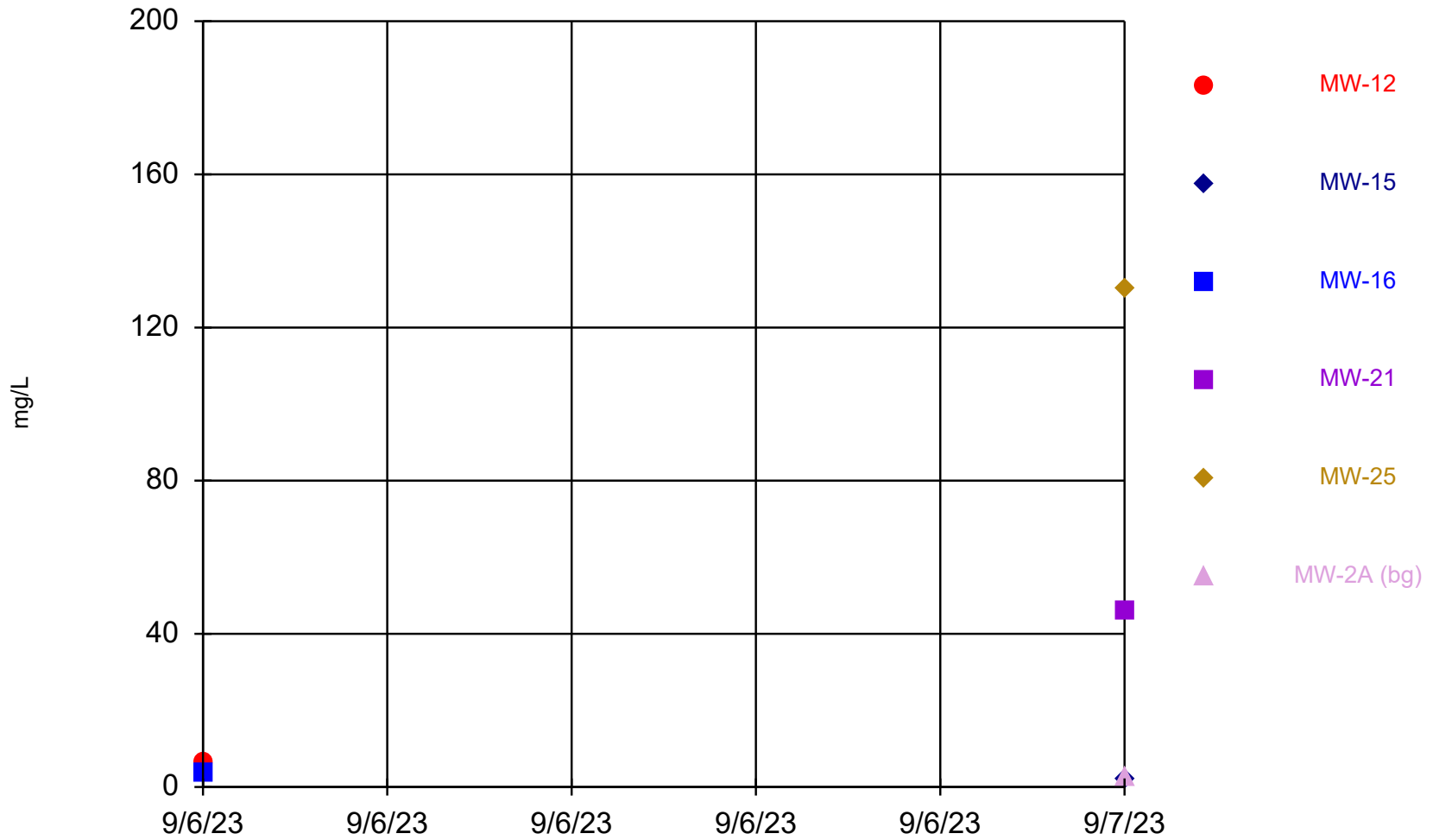
Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/13/2023 8:57 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/6/2023	440		3700			
9/7/2023		2300		440	380	300

### Total Suspended Solids



Time Series Analysis Run 10/13/2023 8:56 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Total Suspended Solids (mg/L) Analysis Run 10/13/2023 8:57 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/6/2023	6.3		3.8			
9/7/2023		2		46	130	2.4

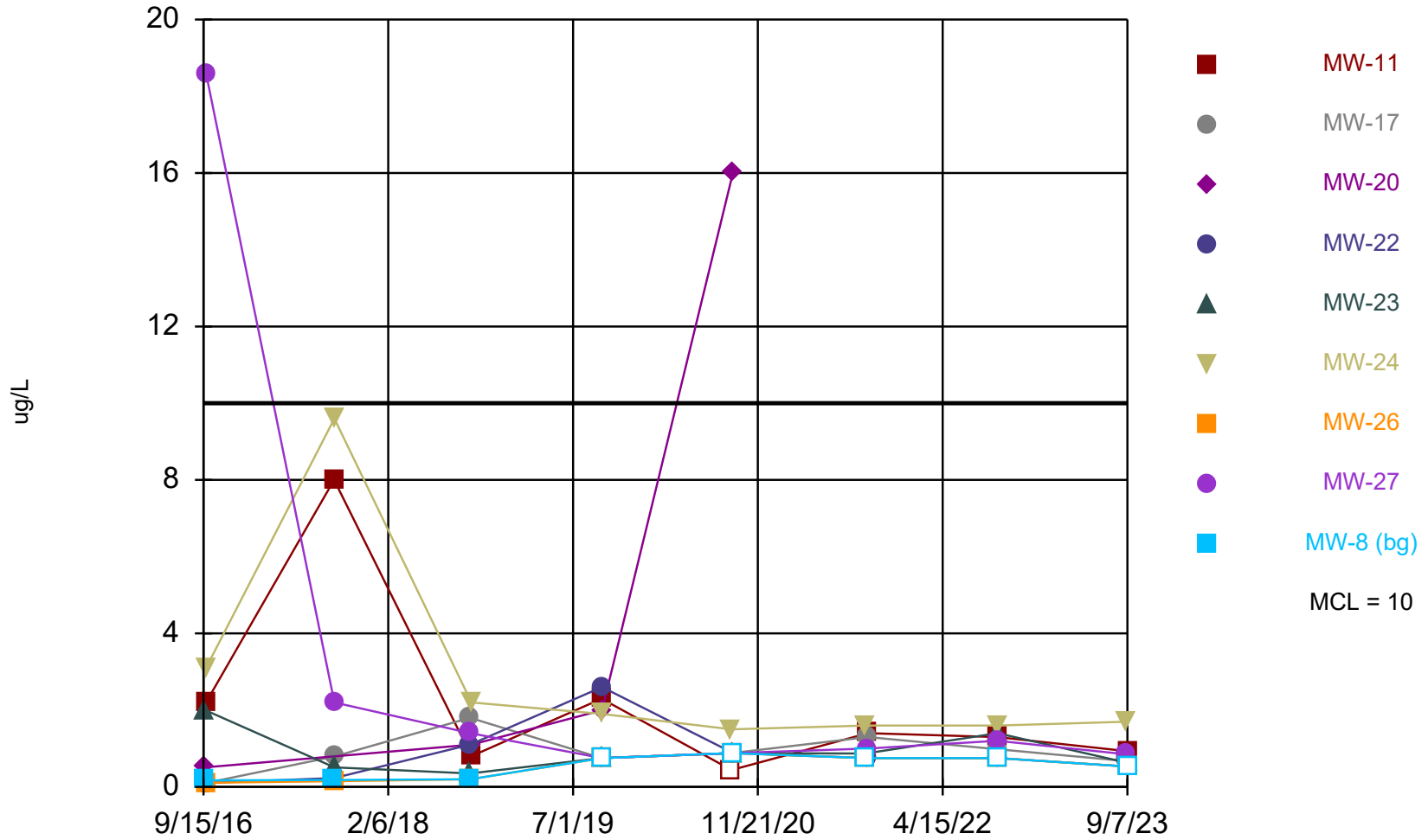




Attachment E2

Times Series Graphs – Deep Unit

### Arsenic



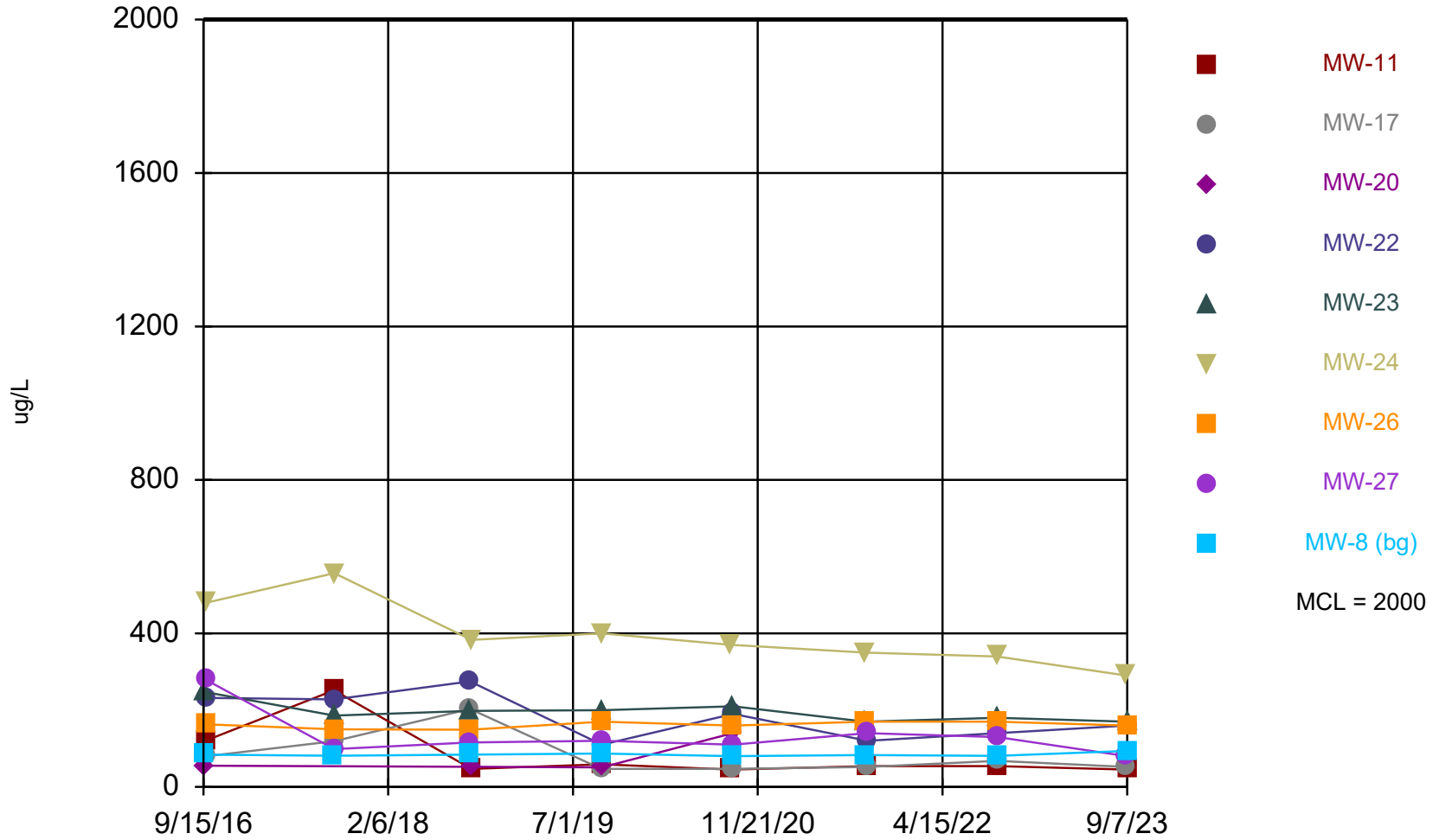
Time Series Analysis Run 10/13/2023 9:14 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Arsenic (ug/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									0.17 (J)
9/19/2016			0.51 (J)						
9/20/2016					2				
9/21/2016							0.11 (J)		
9/22/2016	2.2	<0.1		<0.1		3.1		18.6	
9/9/2017									0.18 (J)
9/10/2017	8	0.79 (J)							
9/11/2017				0.23 (J)	0.51 (J)	9.6	0.15 (J)	2.2	
9/20/2018		1.8		1.1	0.35 (J)				0.2 (J)
9/21/2018							0.2 (J)	1.4	
9/24/2018	0.8 (J)		1.1			2.2			
9/18/2019	2.3	<0.75			<0.75				
9/19/2019			2	2.6		1.9 (J)	<0.75	<0.75	<0.75
9/10/2020	<0.88					1.5 (J)			
9/11/2020		<0.88							<0.88
9/14/2020			16				<0.88	<0.88	
9/15/2020				<0.88	<0.88				
9/15/2021					0.87 (J)				
9/16/2021						1.6 (J)	<0.75		<0.75
9/20/2021								1 (J)	
9/21/2021		1.3 (J)		<0.75					
9/22/2021	1.4 (J)								
9/13/2022	1.3 (J)					1.6 (J)			
9/14/2022		0.98 (J)		<0.75	1.4 (J)		<0.75	1.2 (J)	<0.75
9/6/2023		0.67 (J)				1.7 (J)		0.85 (J)	
9/7/2023	0.93 (J)			<0.53 (U)	0.63 (J)		<0.53 (U)		<0.53 (U)

# Barium



Time Series Analysis Run 10/13/2023 9:14 AM View: Deep

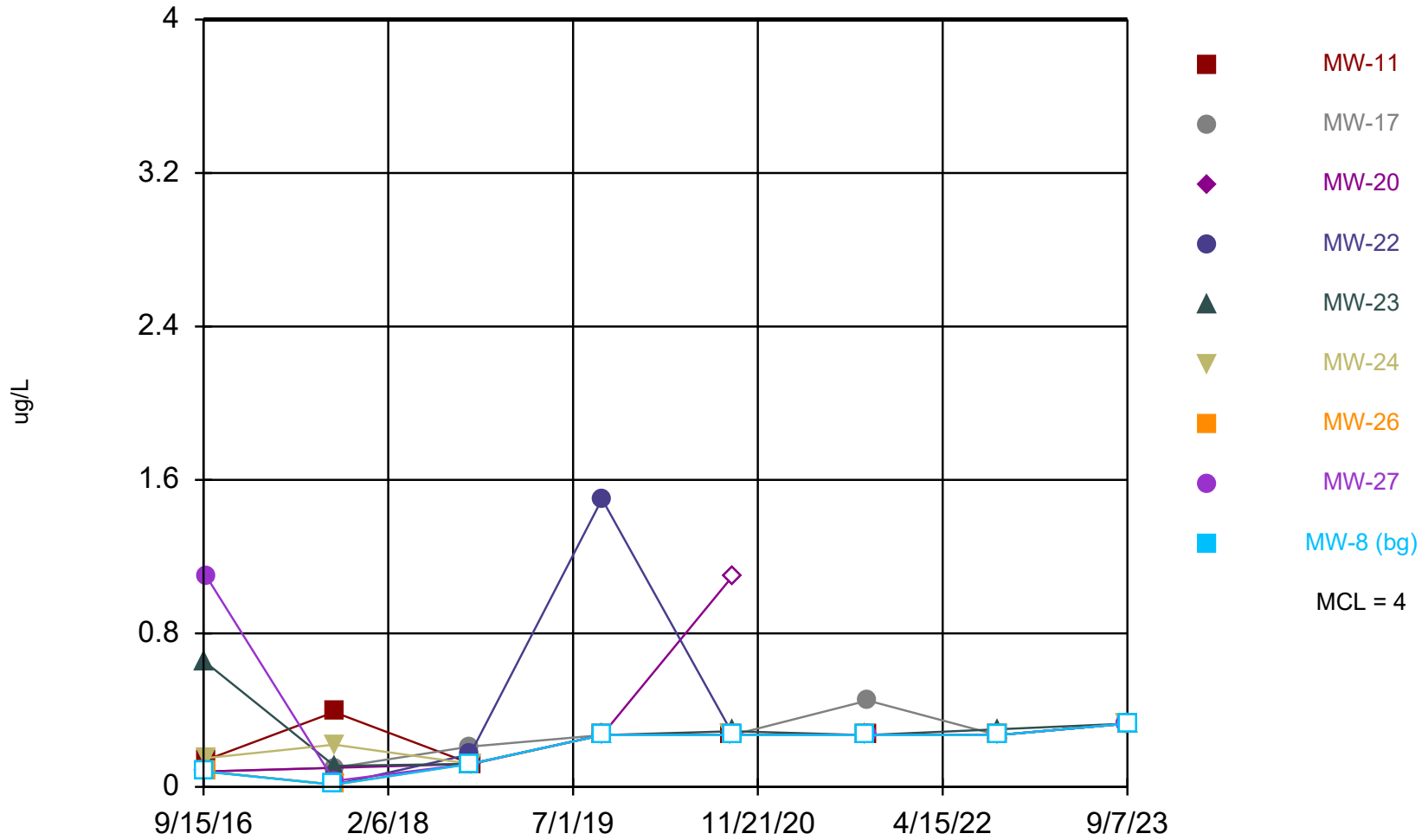
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Barium (ug/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									84.2
9/19/2016			55.3						
9/20/2016					247				
9/21/2016							163		
9/22/2016	121	79.6		232		480		279	
9/9/2017									81.2
9/10/2017	252	119							
9/11/2017				228	186	557	150	98.4	
9/20/2018		203		275	198				84.1
9/21/2018							149	116	
9/24/2018	46.9		52.5			383			
9/18/2019	59	47			200				
9/19/2019			51	110		400	170	120	87
9/10/2020	45					370			
9/11/2020		47							80
9/14/2020			140				160	110	
9/15/2020				190	210				
9/15/2021					170				
9/16/2021						350	170		83
9/20/2021								140	
9/21/2021		52		120					
9/22/2021	54								
9/13/2022	54 (B)					340 (B)			
9/14/2022		68 (B)		140 (B)	180 (B)		170 (B)	130 (B)	81 (B)
9/6/2023		52				290		80	
9/7/2023	45			160	170		160		94

# Beryllium



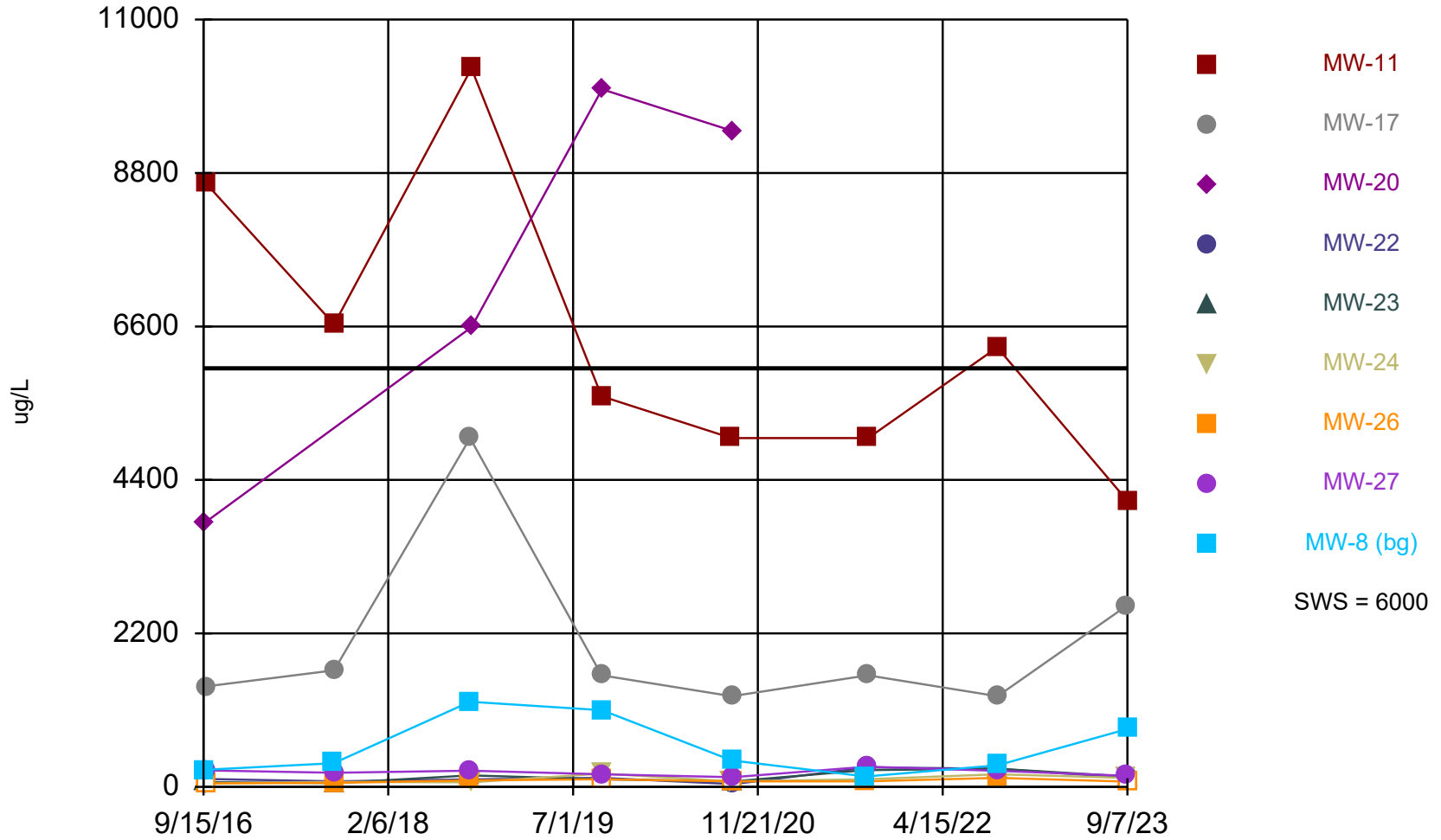
Time Series Analysis Run 10/13/2023 9:14 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Beryllium (ug/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									<0.08
9/19/2016			<0.08						
9/20/2016					0.65				
9/21/2016							<0.08		
9/22/2016	0.14 (J)	<0.08		<0.08		0.15 (J)		1.1 (J)	
9/9/2017									<0.012
9/10/2017	0.39 (J)	0.1 (J)							
9/11/2017				<0.012	0.11 (J)	0.22 (J)	<0.012	0.031 (J)	
9/20/2018		0.21 (J)		0.17 (J)	<0.12				<0.12
9/21/2018							<0.12	<0.12	
9/24/2018	<0.12		<0.12			<0.12			
9/18/2019	<0.27	<0.27			<0.27				
9/19/2019			<0.27	1.5		<0.27	<0.27	<0.27	<0.27
9/10/2020	<0.27					<0.27			
9/11/2020		<0.27							<0.27
9/14/2020			<1.1				<0.27	<0.27	
9/15/2020				<0.27	0.29 (J)				
9/15/2021					<0.27				
9/16/2021						<0.27	<0.27		<0.27
9/20/2021								<0.27	
9/21/2021		0.45 (J)		<0.27					
9/22/2021	<0.27								
9/13/2022	<0.27					<0.27			
9/14/2022		<0.27		<0.27	0.3 (J)		<0.27	<0.27	<0.27
9/6/2023		<0.33 (U)				<0.33 (U)		<0.33 (U)	
9/7/2023	<0.33 (U)			<0.33 (U)	<0.33 (U)		<0.33 (U)		<0.33 (U)

# Boron



Time Series Analysis Run 10/13/2023 9:14 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

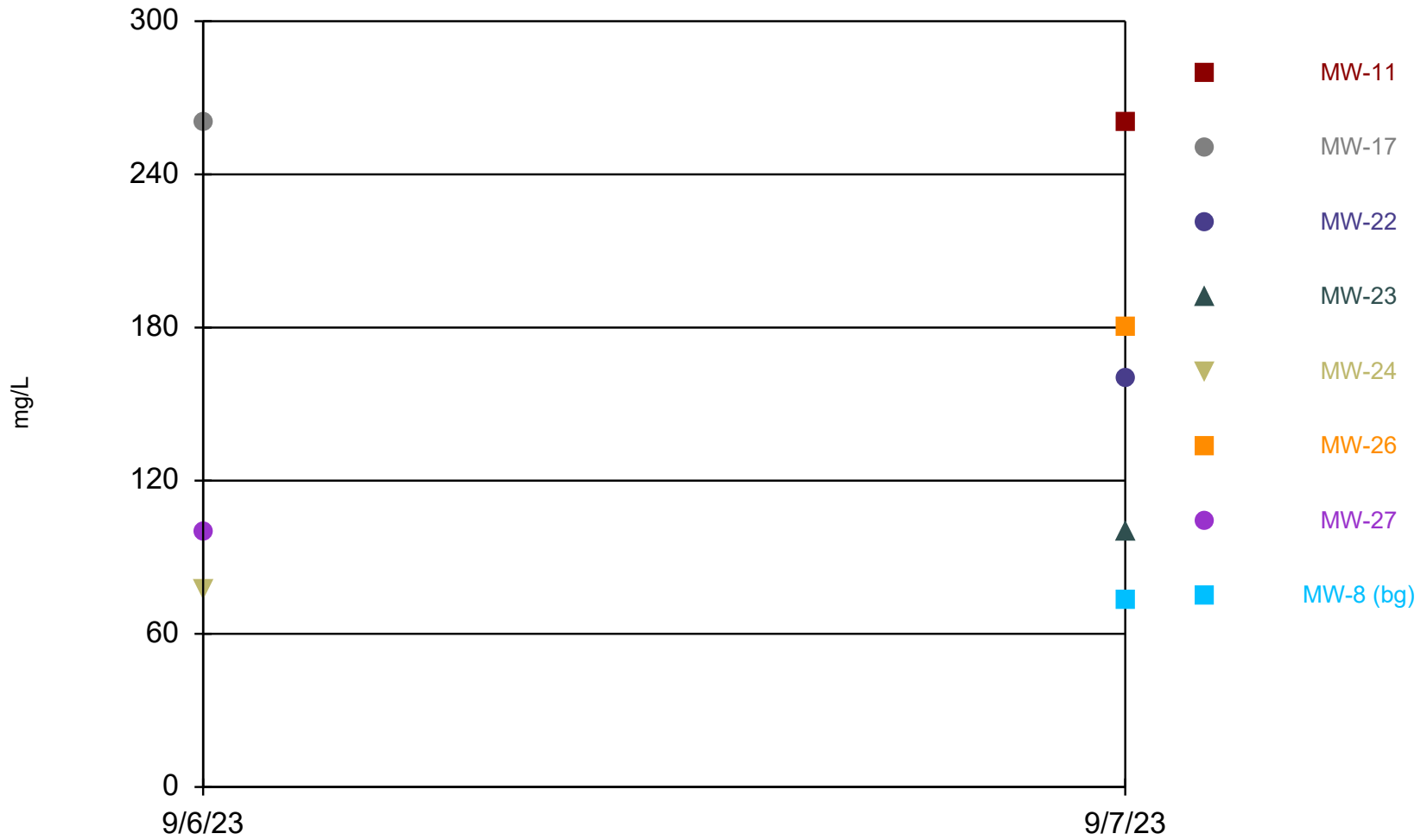


# Time Series

Constituent: Boron (ug/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									244
9/19/2016			3790						
9/20/2016					66.8 (J)				
9/21/2016							<50		
9/22/2016	8650	1440		114		<50		237	
9/9/2017									339
9/10/2017	6630	1670							
9/11/2017				79.2 (J)	53.6 (J)	72.7 (J)	58.3 (J)	203	
9/20/2018		5000		108	165				1220
9/21/2018							94.5 (J)	232	
9/24/2018	10300		6590			65.7 (J)			
9/18/2019	5600	1600			<110				
9/19/2019			10000	130 (J)		190 (J)	<110	180 (J)	1100
9/10/2020	5000					<80			
9/11/2020		1300							380
9/14/2020			9400				<80	140	
9/15/2020				<80	<80				
9/15/2021					240				
9/16/2021						110	80 (J)		150
9/20/2021								290	
9/21/2021		1600		280					
9/22/2021	5000								
9/13/2022	6300					180			
9/14/2022		1300		260	260		130	230	310
9/6/2023		2600				130		160	
9/7/2023	4100			130	150		<76 (U)		830

# Calcium



Time Series Analysis Run 10/13/2023 9:14 AM View: Deep

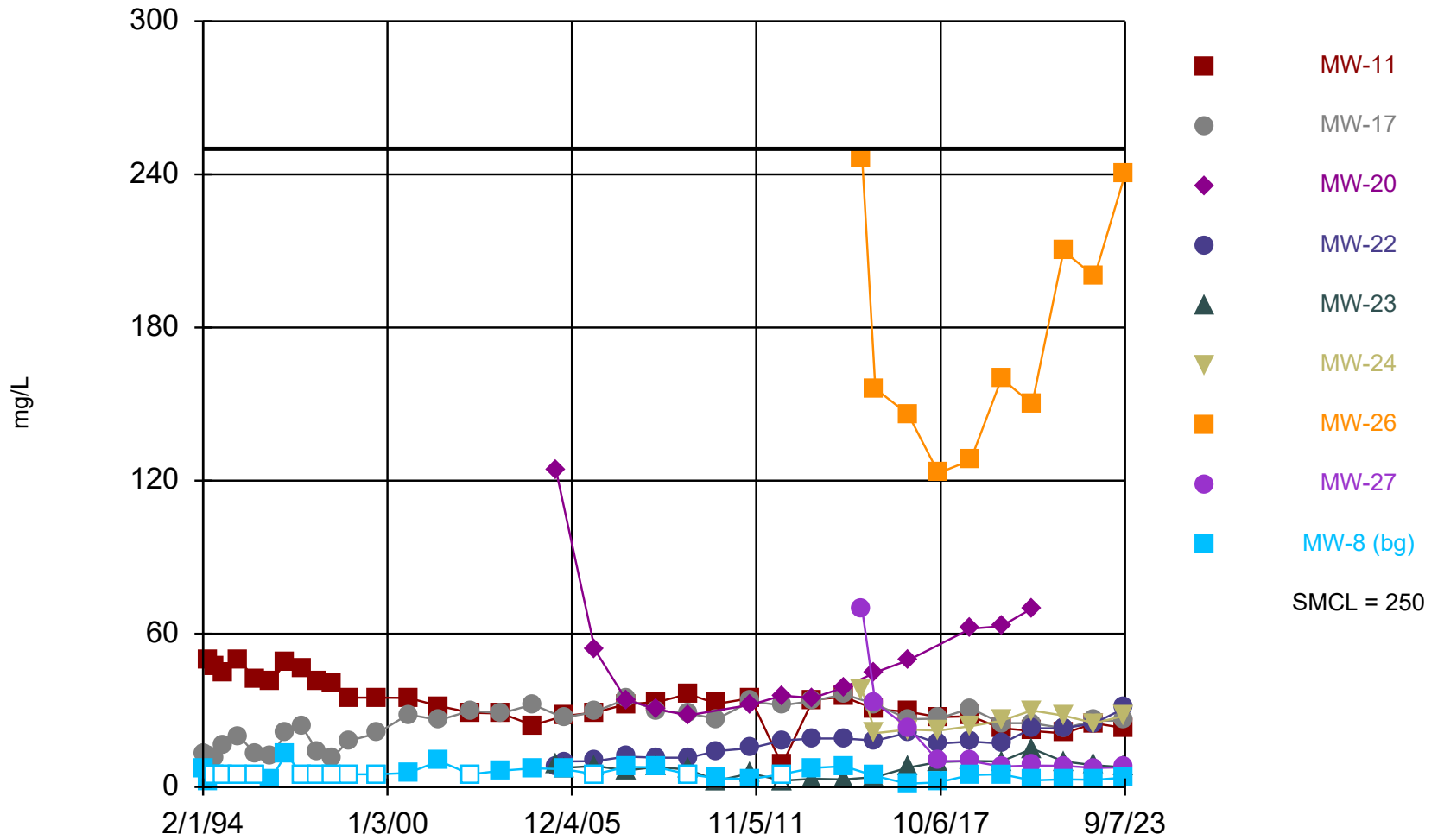
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Calcium (mg/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/6/2023		260			77		100	
9/7/2023	260		160	100		180		73

# Chloride



Time Series Analysis Run 10/13/2023 9:14 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Chloride (mg/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

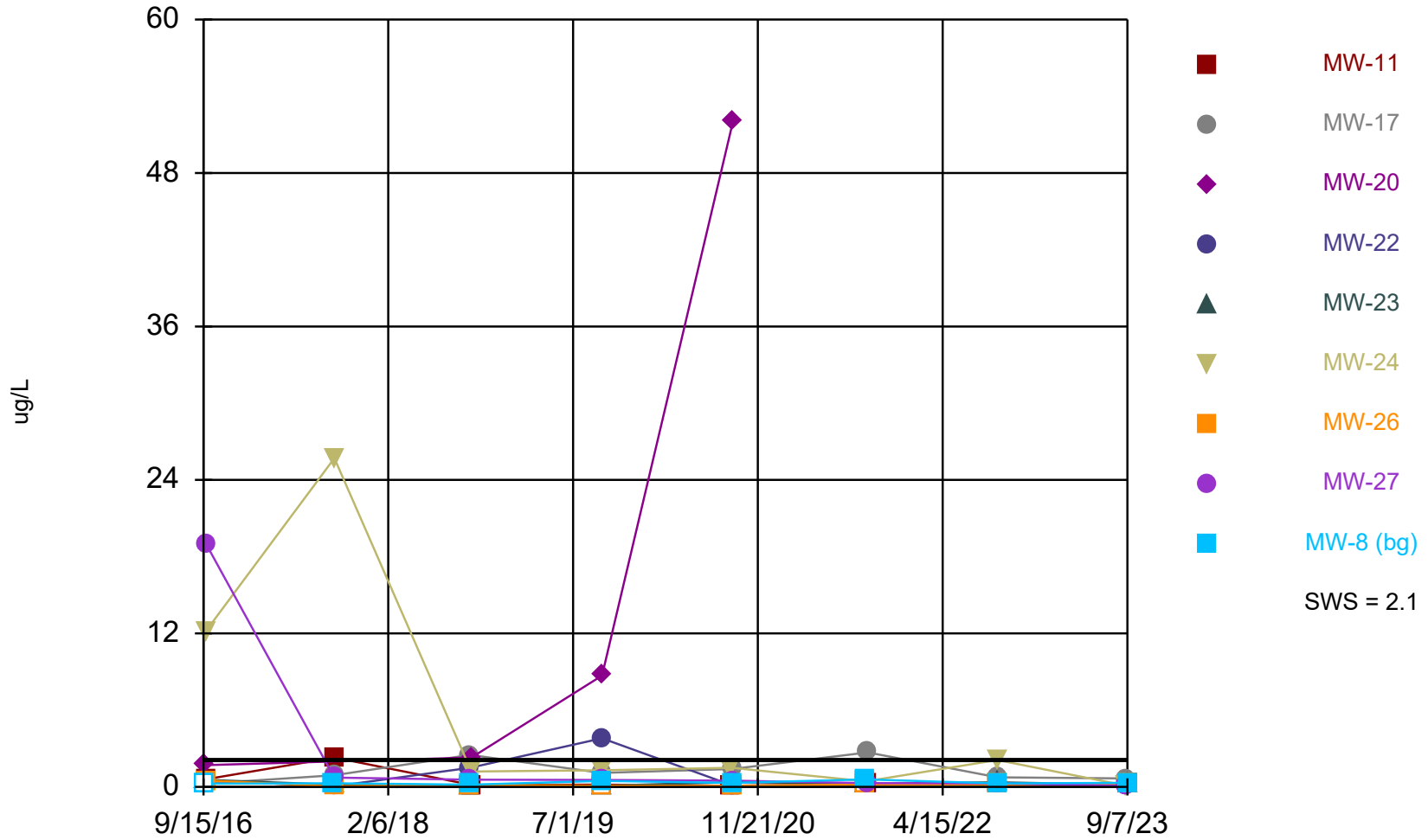
	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
2/1/1994		13							7
4/1/1994	50	12							2
7/1/1994	47	11							<5
10/1/1994	45	16							<5
4/1/1995	50	20							<5
10/1/1995	42	13							<5
4/1/1996	41	12							2.8
10/1/1996	49	21							13
4/1/1997	46	24							<5
10/1/1997	41	14							<5
4/1/1998	40.7	11.6							<5
10/1/1998	35	18							<5
9/1/1999	35	21							<5
9/1/2000	34.9	28.4							5.5
9/1/2001	31.7	26.2							10.2
9/1/2002	29.1	29.9							<5
9/1/2003	28.8	28.9							6.4
9/1/2004	24.2	32.3							7.3
6/1/2005			124	8.1	9				
9/1/2005	27.8	27.1		10	7.5				7
9/1/2006	29.2	29.5	53.7	10.1	8.23				<5
9/1/2007	32.4	34.4	34.2	11.9	6.49				7.85
9/1/2008	33.3	30	30.4	11.5	7.83				7.7
9/1/2009	36.4	28.8	28.1	11.5	6.78				<5
8/1/2010	32.6	26.7		14.1	<5				3.44
9/1/2011	34.8	33.5	32.2	15.2	5.38				3.12
9/1/2012	8.64	32	35.8	18.2	<5				<5
9/1/2013	34.2	33.7	34.9	19	3.2				7.5
9/1/2014	35.3	36.3	39	19	3				8.1
4/1/2015						37.9	246	69.5	
9/1/2015	30.4	32.5	44.9	18.2	3.9	21.1	156	32.9	4.3
9/15/2016									1.3
9/19/2016			49.6						
9/20/2016					7.6				
9/21/2016							146		
9/22/2016	29.5	26.6		21.2		22.5		23.3	
9/9/2017									1.8
9/10/2017	27.4	26.8							
9/11/2017				17	9.8	22.1	123	10.1	
9/20/2018		30.8		17.8	10.2				4.7
9/21/2018							128	10.2	
9/24/2018	27.7		62			23.8			
9/18/2019	23	25			10				
9/19/2019			63	17		26	160	8	5
9/10/2020	22					30			
9/11/2020		25							2.6 (J)
9/14/2020			70				150	8.4	
9/15/2020				23	15				
9/15/2021					10				
9/16/2021						28	210		3 (J)
9/20/2021								8.3	
9/21/2021		23		23					

# Time Series

Constituent: Chloride (mg/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/22/2021	21								
9/13/2022	25					25			
9/14/2022		26		25	8.5		200	7.5	2.8 (J)
9/6/2023		26				28		7.7	
9/7/2023	23			31	7.7		240		3.7 (J)

### Cobalt



Time Series Analysis Run 10/13/2023 9:14 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

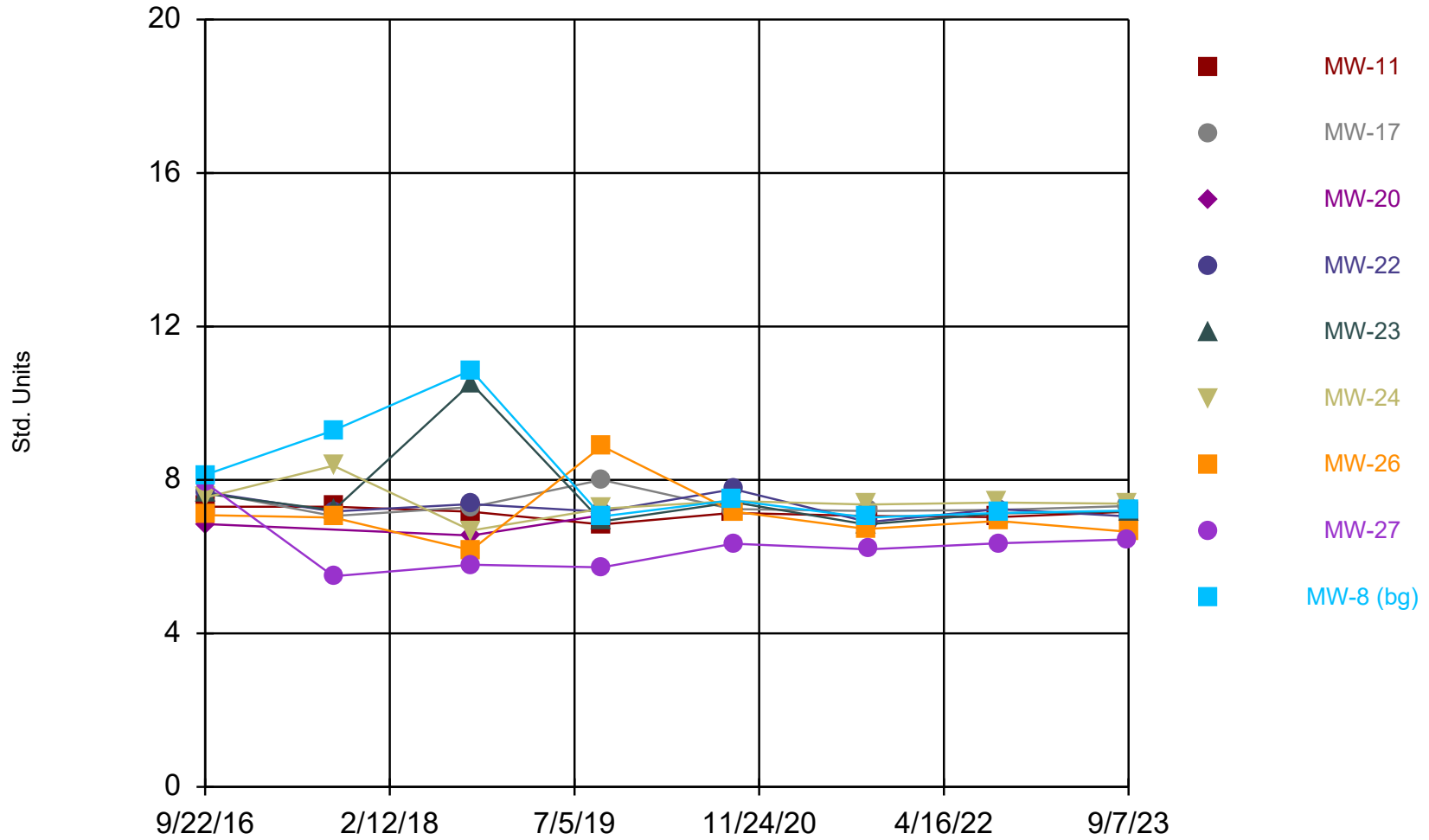
# Time Series

Constituent: Cobalt (ug/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									<0.5
9/19/2016			1.7						
9/20/2016					0.55 (J)				
9/21/2016							<0.5		
9/22/2016	0.6 (J)	<0.5		<0.5		12.2		19	
9/9/2017									0.28 (J)
9/10/2017	2.3	0.91 (J)							
9/11/2017				0.047 (J)	0.17 (J)	25.7	0.055 (J)	0.73 (J)	
9/20/2018		2.5		1.5	<0.15				0.17 (J)
9/21/2018							<0.15	0.56 (J)	
9/24/2018	<0.15		2.3			1.2			
9/18/2019	0.18 (J)	1.1			<0.091				
9/19/2019			8.7	3.8		1.3	<0.091	0.54	0.47 (J)
9/10/2020	<0.091					1.5			
9/11/2020		1.4							0.32 (J)
9/14/2020			52				<0.091	0.49 (J)	
9/15/2020				<0.091	0.37 (J)				
9/15/2021					0.26 (J)				
9/16/2021						0.43 (J)	<0.19		0.59
9/20/2021								0.29 (J)	
9/21/2021		2.7		0.2 (J)					
9/22/2021	0.2 (J)								
9/13/2022	0.23 (J)								
9/14/2022		0.75		<0.19	0.36 (J)		<0.19	0.27 (J)	0.27 (J)
9/6/2023		0.66				<0.17 (U)		<0.17 (U)	
9/7/2023	<0.17 (U)			<0.17 (U)	0.17 (J)		<0.17 (U)		0.32 (J)



# Field pH



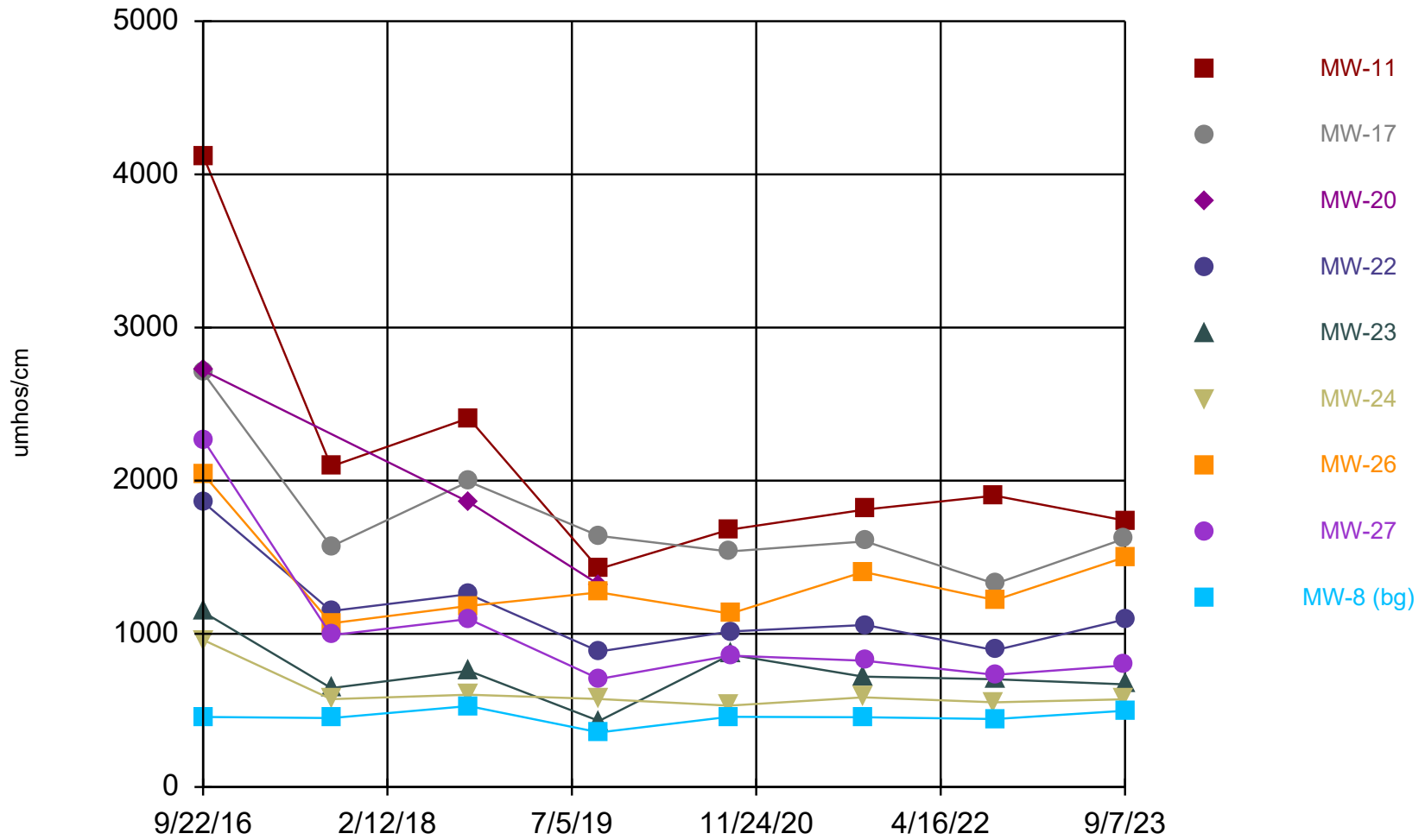
Time Series Analysis Run 10/13/2023 9:14 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Field pH (Std. Units) Analysis Run 10/13/2023 9:15 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/22/2016	7.3	7.69	6.85	7.68	7.64	7.54	7.08	7.93	8.13
9/10/2017	7.3	7.06		7.18	7.21	8.37	7.02	5.49	9.29
9/24/2018	7.17	7.29	6.55	7.37	10.52	6.68	6.17	5.79	10.86
9/18/2019	6.84	8			6.92				
9/19/2019			7.08	7.17		7.25	8.88	5.72	7.05
9/10/2020	7.14					7.45			
9/11/2020		7.24							7.47
9/14/2020							7.18	6.34	
9/15/2020				7.76	7.42				
9/15/2021					6.84				
9/16/2021						7.36	6.72		7.02
9/20/2021								6.19	
9/21/2021		7.19		6.9					
9/22/2021	7.06								
9/13/2022	7.03					7.41			
9/14/2022		7.22		7.24	7.13		6.93	6.35	7.14
9/6/2023		7.32				7.38		6.45	
9/7/2023	7.17			7.05	7.18		6.65		7.2

### Field Specific Conductance



Time Series Analysis Run 10/13/2023 9:14 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

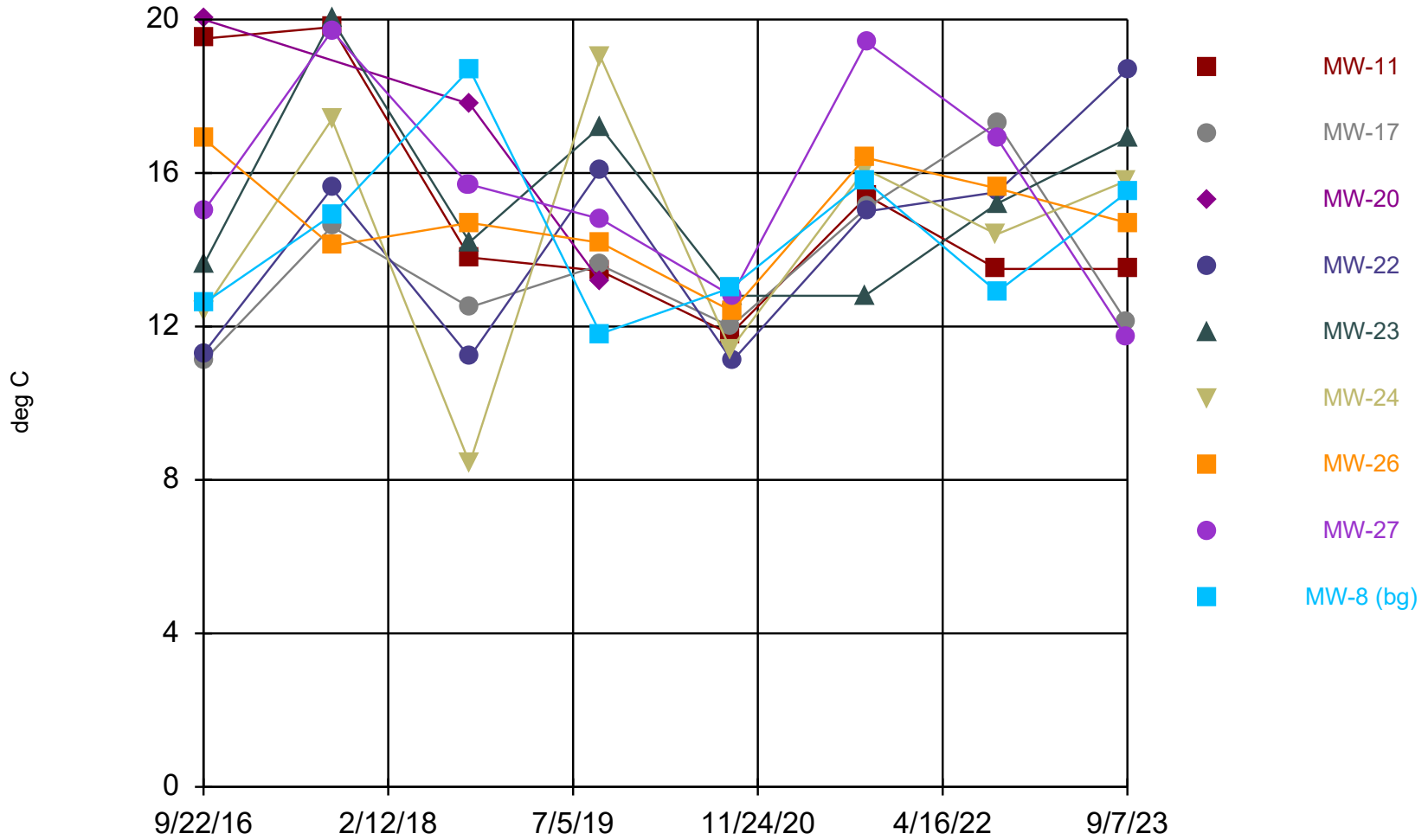
# Time Series

Constituent: Field Specific Conductance (umhos/cm) Analysis Run 10/13/2023 9:15 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/22/2016	4122	2706	2719	1861	1143	961	2044	2269	457
9/10/2017	2093	1570		1149	646	573.7	1069	991	450.2
9/24/2018	2408	1994	1861	1259	759	603	1182	1097	528.8
9/18/2019	1424	1640			431				
9/19/2019			1321	885		575	1271	705	356
9/10/2020	1679					531.3			
9/11/2020		1538							458.4
9/14/2020							1132	858	
9/15/2020				1016	864				
9/15/2021					721				
9/16/2021						585.3	1404		455.4
9/20/2021								824	
9/21/2021		1604		1058					
9/22/2021	1812								
9/13/2022	1902					553.4			
9/14/2022		1327		893	704		1220	732	444.2
9/6/2023		1622				572.6		794	
9/7/2023	1740			1094	670		1501		498.3

### Field Temperature



Time Series Analysis Run 10/13/2023 9:14 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Field Temperature (deg C) Analysis Run 10/13/2023 9:15 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/22/2016	19.5	11.1	20	11.3	13.6	12.4	16.9	15	12.6
9/10/2017	19.8	14.6		15.6	20	17.4	14.1	19.7	14.9
9/21/2018								15.7	
9/24/2018	13.8	12.5	17.8	11.2	14.2	8.43 (D)	14.7	15.7	18.7
9/18/2019	13.45	13.6			17.2				
9/19/2019			13.17	16.09		19.02	14.18	14.8	11.81
9/10/2020	11.8					11.4			
9/11/2020		12							13
9/14/2020							12.4	12.8	
9/15/2020				11.1	12.8				
9/15/2021					12.8				
9/16/2021						16.1	16.4		15.8
9/20/2021								19.4	
9/21/2021		15.1		15					
9/22/2021	15.4								
9/13/2022	13.5					14.4			
9/14/2022		17.3		15.5	15.2		15.6	16.9	12.9
9/6/2023		12.1				15.8		11.7	
9/7/2023	13.5			18.7	16.9		14.7		15.5

# Fluoride



Time Series Analysis Run 10/13/2023 9:14 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

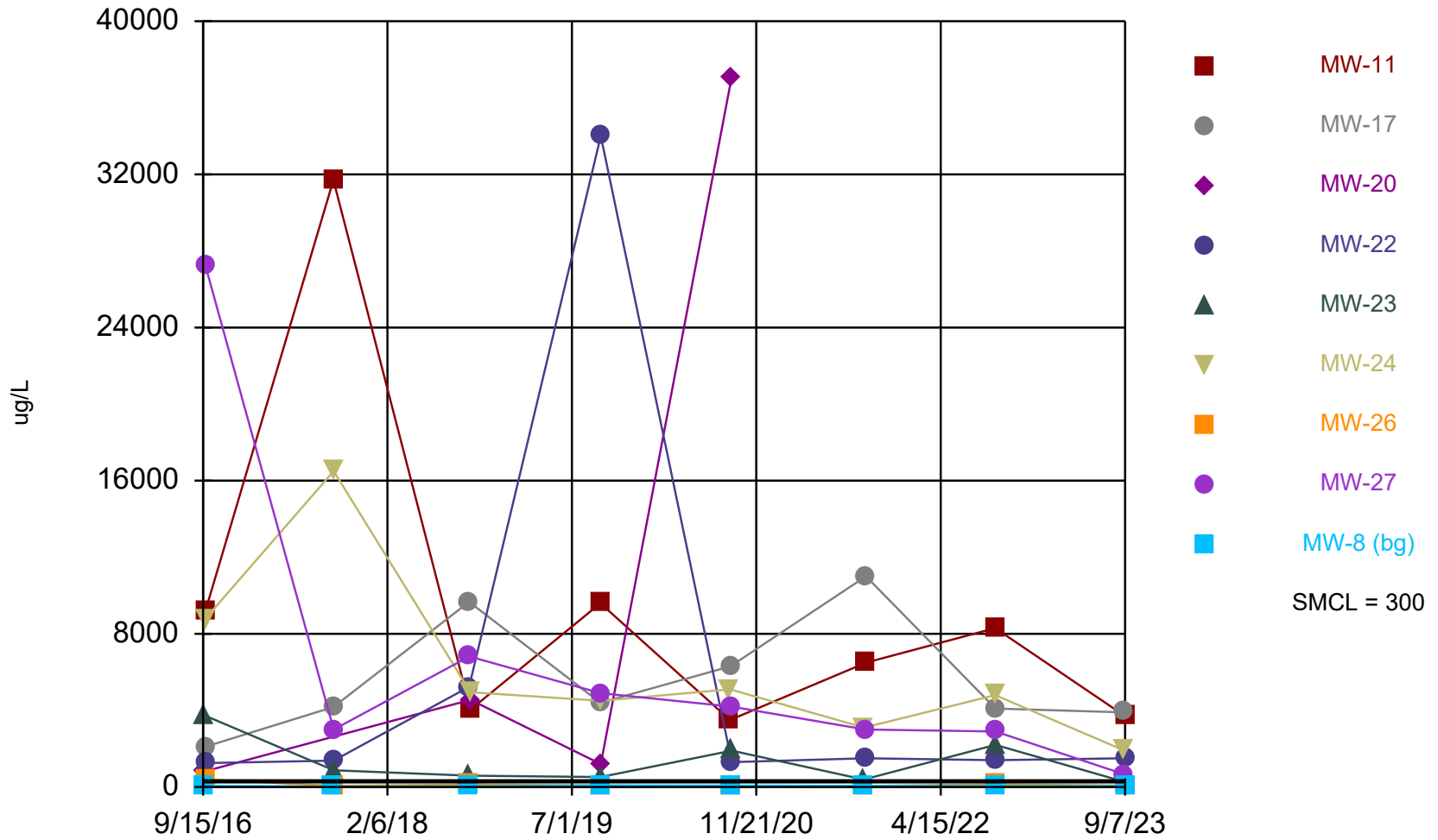
# Time Series

Constituent: Fluoride (mg/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/6/2023		<0.38 (U)			<0.38 (U)		<0.38 (U)	
9/7/2023	<0.38 (U)		<0.38 (U)	<0.38 (U)		<0.38 (U)		<0.38 (U)



# Iron



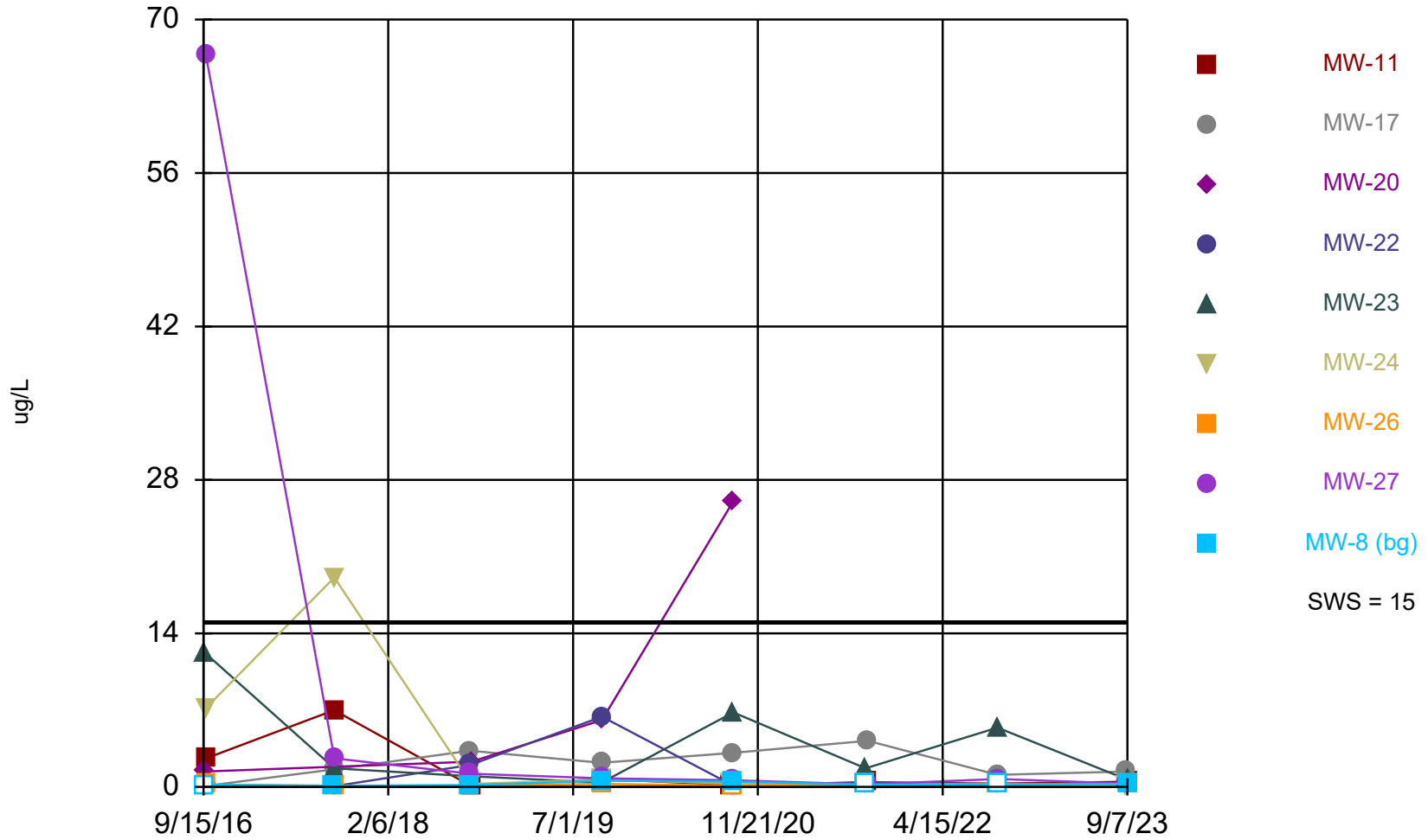
Time Series Analysis Run 10/13/2023 9:14 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Iron (ug/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									56.6
9/19/2016			819						
9/20/2016					3730				
9/21/2016							396		
9/22/2016	9230	2110		1250		8800		27200	
9/9/2017									27 (J)
9/10/2017	31700	4180							
9/11/2017				1380	875	16500	55.4	3000	
9/20/2018		9670		5230	591				45 (J)
9/21/2018							124	6820	
9/24/2018	4040		4550			4950			
9/18/2019	9600	4400			520				
9/19/2019			1200	34000		4500	78 (J)	4900	84 (J)
9/10/2020	3500					5100			
9/11/2020		6300							76 (J)
9/14/2020			37000				<50	4200	
9/15/2020				1300	1900				
9/15/2021					390				
9/16/2021						3100	53 (J)		62 (J)
9/20/2021								3000	
9/21/2021		11000		1500					
9/22/2021	6500								
9/13/2022	8300					4800			
9/14/2022		4100		1400	2200		140	2900	51 (J)
9/6/2023		3900				1900		660	
9/7/2023	3700			1500	260		76 (J)		50 (J)

### Lead



Time Series Analysis Run 10/13/2023 9:14 AM View: Deep

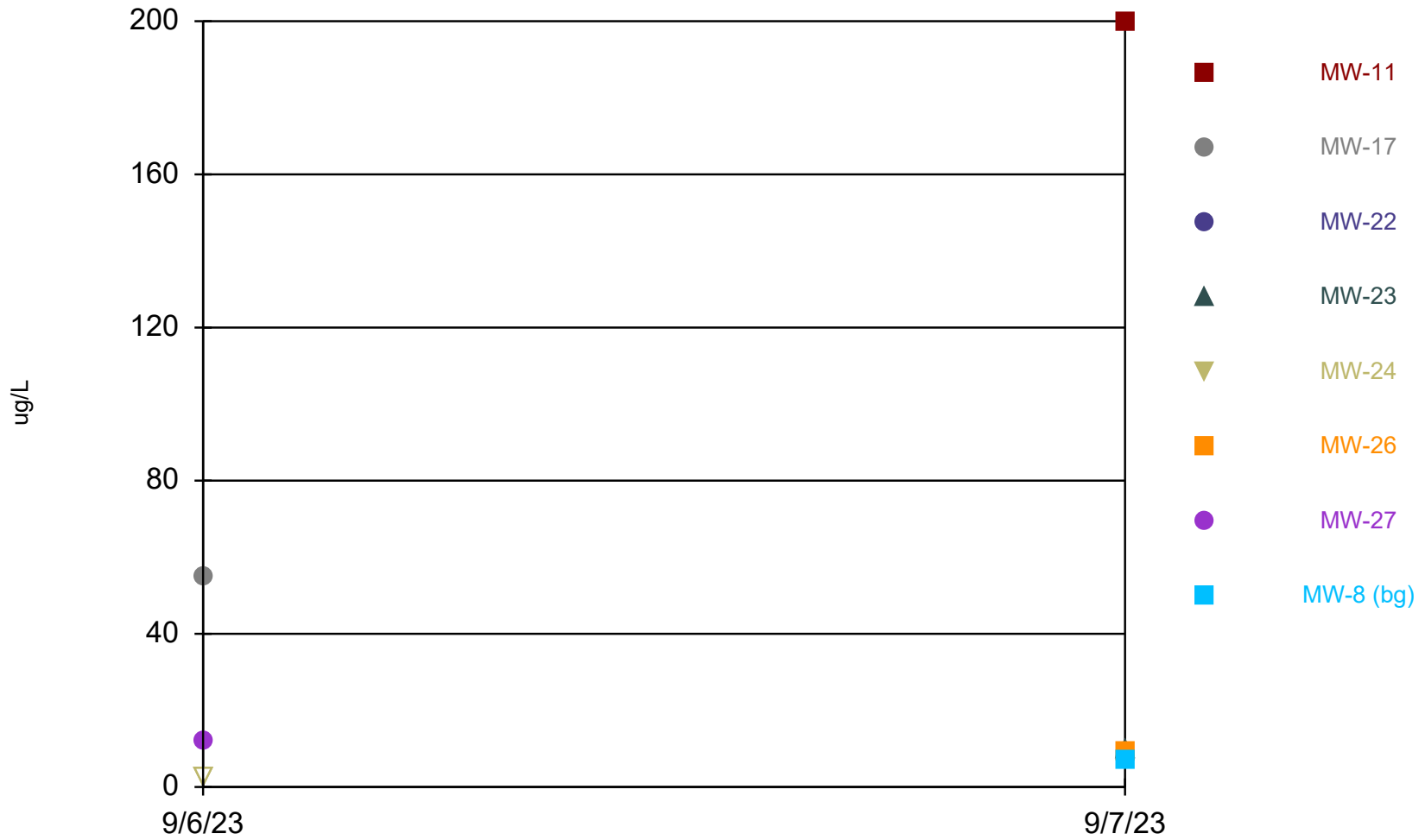
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Lead (ug/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									<0.19
9/19/2016			1.4						
9/20/2016					12.2				
9/21/2016							0.2 (J)		
9/22/2016	2.6	<0.19		<0.19		7.2		66.7	
9/9/2017									0.087 (J)
9/10/2017	7	1.6							
9/11/2017				0.07 (J)	1.7	19.1	0.12 (J)	2.6	
9/20/2018		3.3		2	0.97 (J)				0.17 (J)
9/21/2018							0.14 (J)	1.2	
9/24/2018	<0.12		2.3			0.28 (J)			
9/18/2019	0.72	2.2			0.39 (J)				
9/19/2019			6.1	6.4		0.67	<0.27	0.79	0.56
9/10/2020	0.18 (J)					0.3 (J)			
9/11/2020		3.1							0.49 (J)
9/14/2020			26				<0.11	0.61	
9/15/2020				<0.11	6.8				
9/15/2021					1.7				
9/16/2021						0.23 (J)	<0.21		<0.21
9/20/2021								0.23 (J)	
9/21/2021		4.2		0.45 (J)					
9/22/2021	0.39 (J)								
9/13/2022	0.3 (J)								
9/14/2022		1.1		<0.24	5.4		<0.24	0.72	<0.24
9/6/2023		1.4				<0.24 (U)		0.3 (J)	
9/7/2023	0.47 (J)			0.31 (J)	0.66		0.3 (J)		0.28 (J)

# Lithium



Time Series Analysis Run 10/13/2023 9:14 AM View: Deep

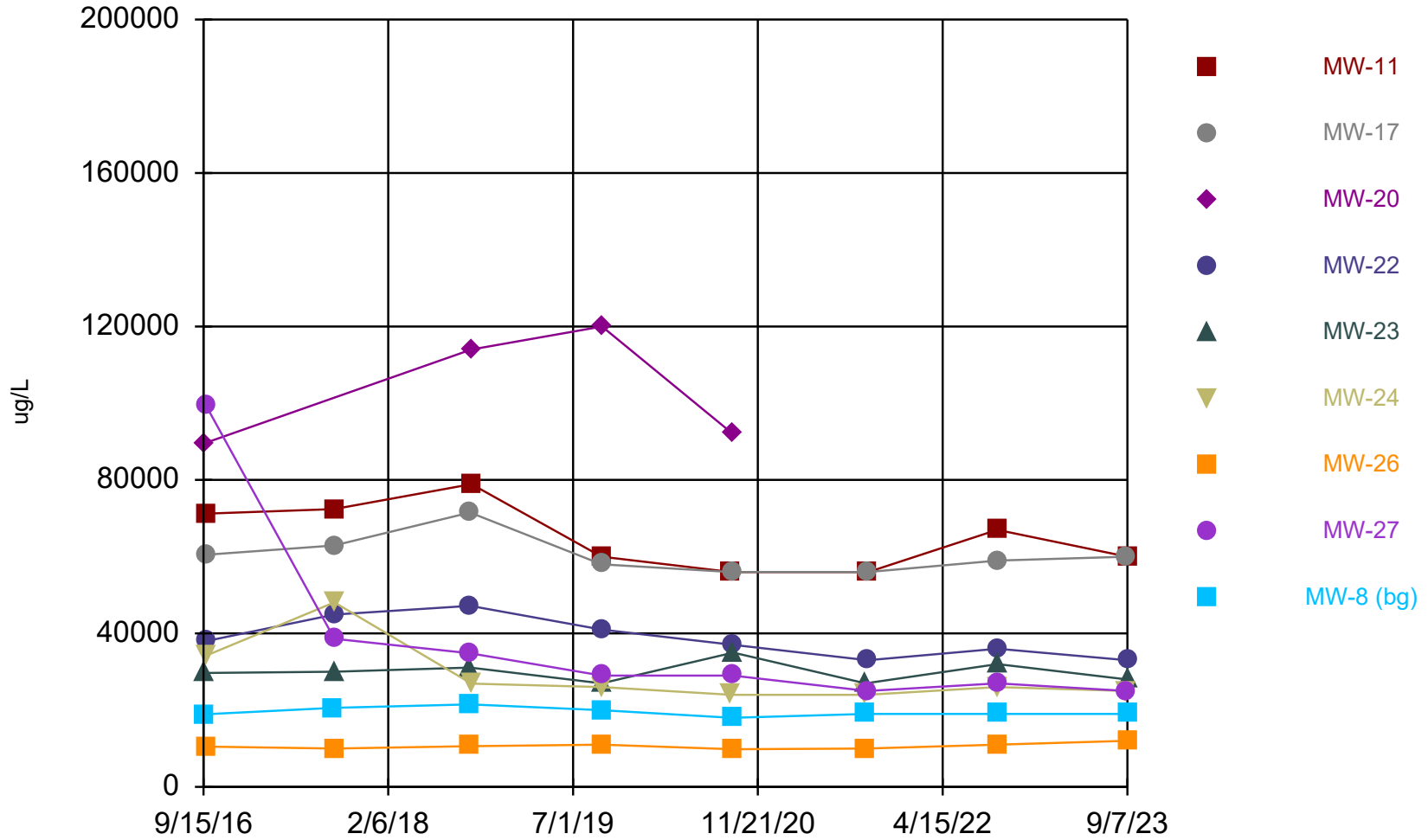
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Lithium (ug/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/6/2023		55			<2.5 (U)		12	
9/7/2023	200		7.7 (J)	9.9 (J)		9.1 (J)		7.2 (J)

# Magnesium



Time Series Analysis Run 10/13/2023 9:14 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

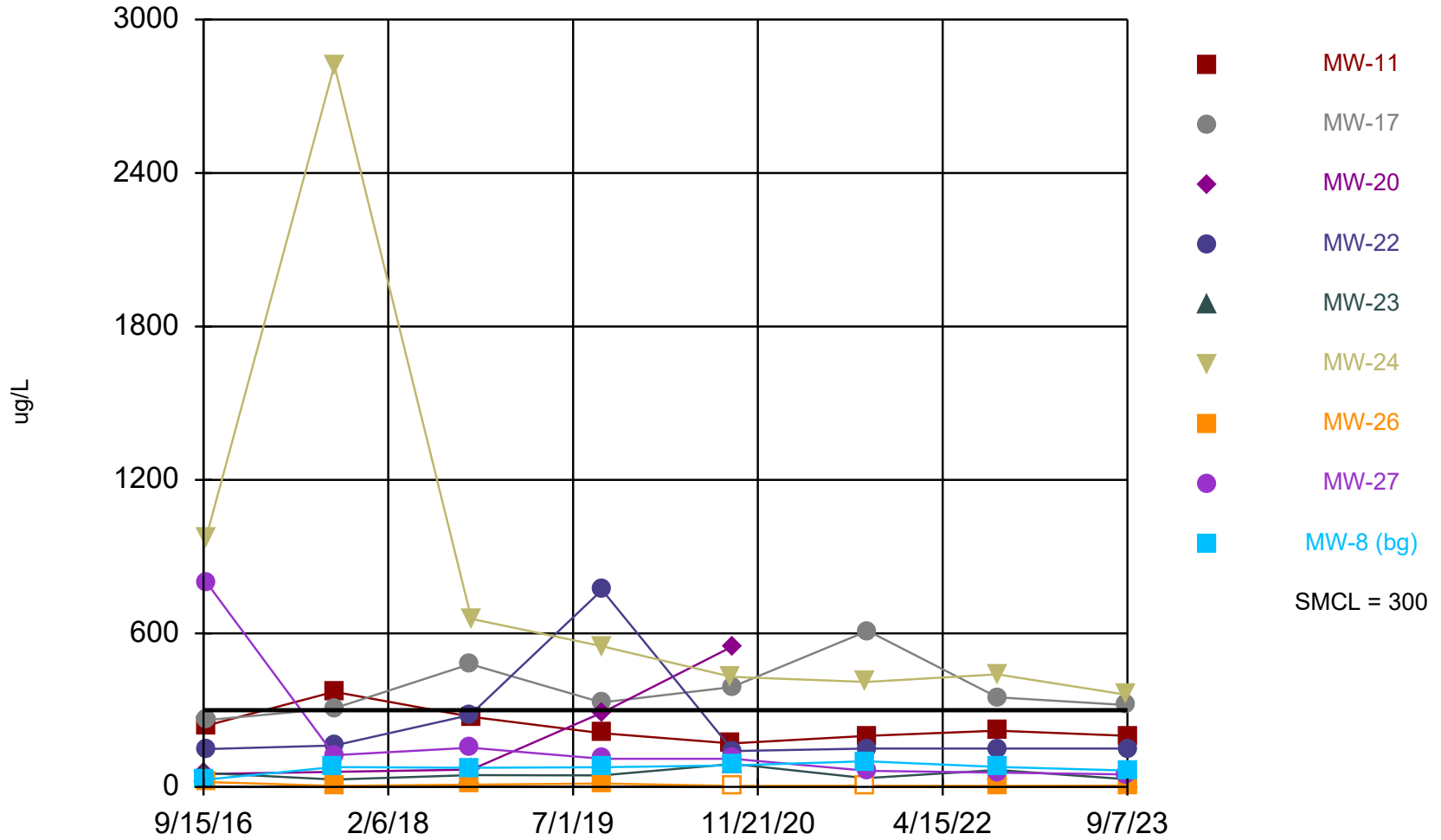
# Time Series

Constituent: Magnesium (ug/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									18900
9/19/2016			89600						
9/20/2016					29700				
9/21/2016							10500		
9/22/2016	71200	60500		38000		34200		99400	
9/9/2017									20600
9/10/2017	72400	62900							
9/11/2017				44900	30000	48100	10000	38600	
9/20/2018		71500		47200	31100				21500
9/21/2018							10600	34800	
9/24/2018	78900		114000			26900			
9/18/2019	60000	58000			27000				
9/19/2019			120000	41000		26000	11000	29000	20000
9/10/2020	56000					24000			
9/11/2020		56000							18000
9/14/2020			92000				9800	29000	
9/15/2020				37000	35000				
9/15/2021					27000				
9/16/2021						24000	10000		19000
9/20/2021								25000	
9/21/2021		56000		33000					
9/22/2021	56000								
9/13/2022	67000					26000			
9/14/2022		59000		36000	32000		11000	27000	19000
9/6/2023		60000				25000		25000	
9/7/2023	60000			33000	28000		12000		19000



# Manganese



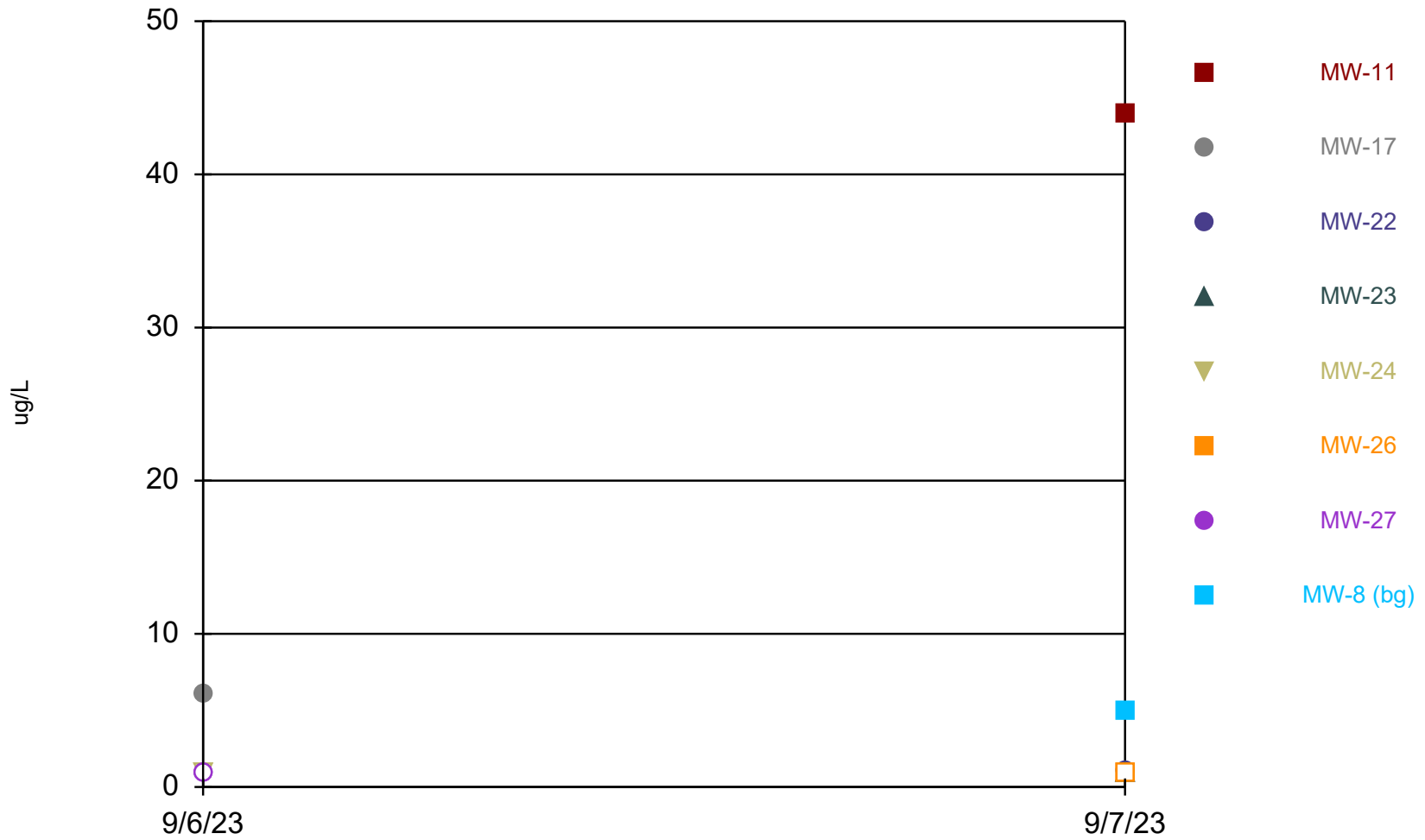
Time Series Analysis Run 10/13/2023 9:14 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Manganese (ug/L)    Analysis Run 10/13/2023 9:15 AM    View: Deep  
 Stoney Point Closed Landfill    Client: SCS Engineers    Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									27.6
9/19/2016			50.6						
9/20/2016					54.1				
9/21/2016							19.1		
9/22/2016	239	261		148		973		802	
9/9/2017									77.4
9/10/2017	372	307							
9/11/2017				162	28.8	2820	3.9	124	
9/20/2018		480		281	46.2				74.5
9/21/2018							8.6	153	
9/24/2018	274		67.8			657			
9/18/2019	210	330			45				
9/19/2019			290	770		550	13	110	77
9/10/2020	170					430			
9/11/2020		390							84
9/14/2020			550				<4	110	
9/15/2020				140	90				
9/15/2021					34				
9/16/2021						410	<4.4		100
9/20/2021								63	
9/21/2021		610		150					
9/22/2021	200								
9/13/2022	220					440			
9/14/2022		350		150	66		4 (J)	56	78
9/6/2023		320				360		49	
9/7/2023	200			150	30		4.7 (J)		64

# Molybdenum



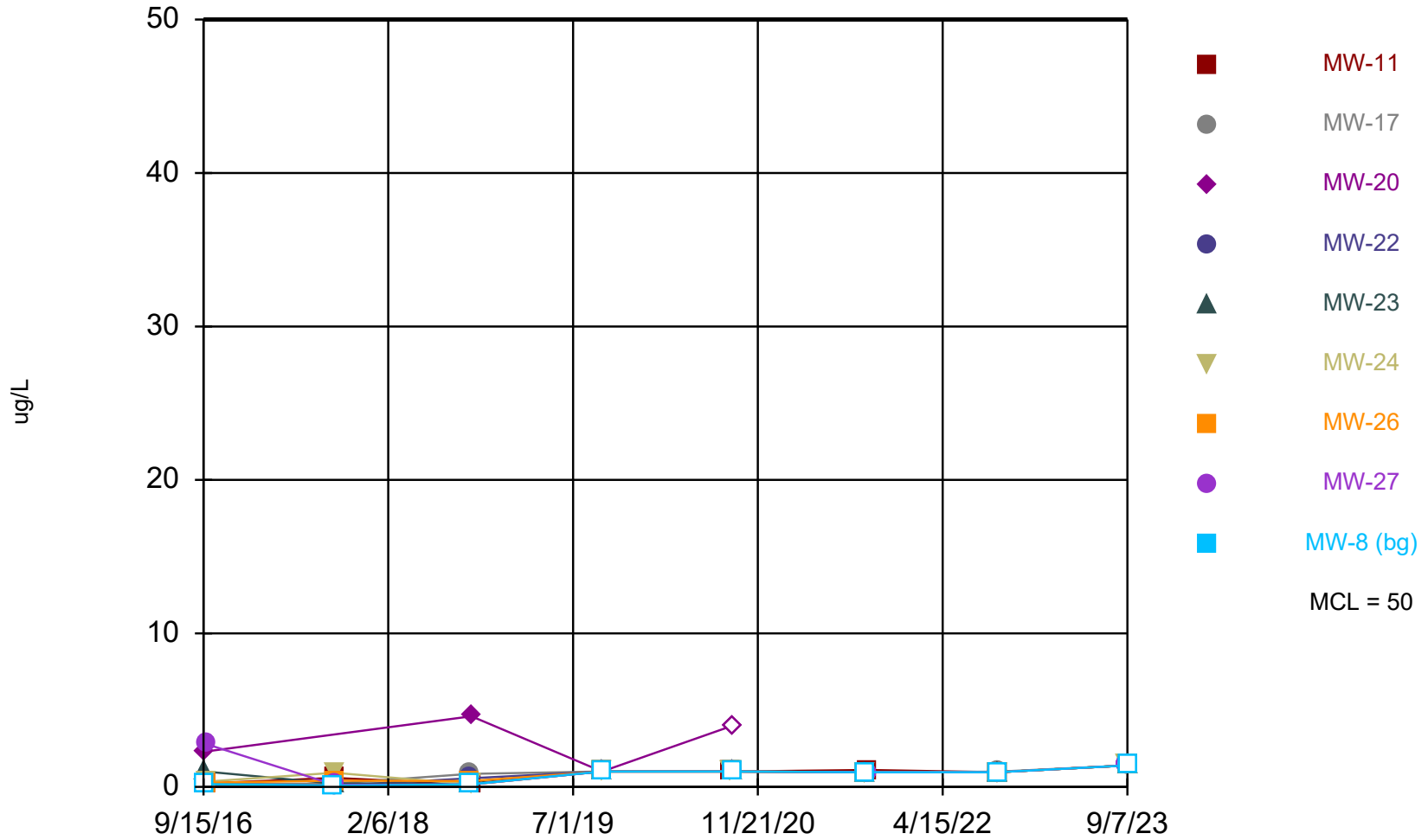
Time Series Analysis Run 10/13/2023 9:14 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Molybdenum (ug/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/6/2023		6			<0.91 (U)		<0.91 (U)	
9/7/2023	44		1 (J)	<0.91 (U)		<0.91 (U)		4.9

# Selenium



Time Series Analysis Run 10/13/2023 9:14 AM View: Deep

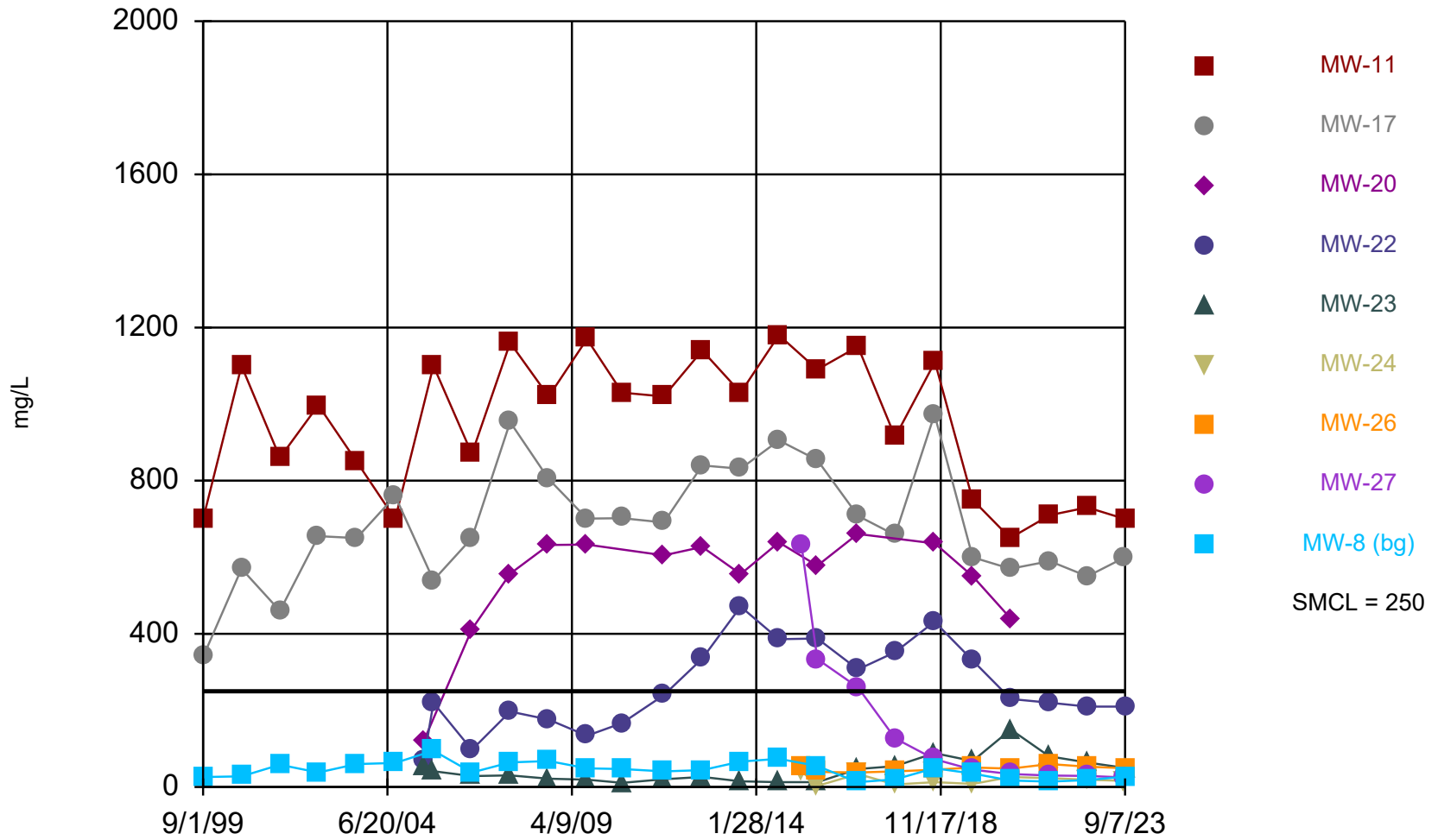
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Selenium (ug/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									<0.18
9/19/2016			2.3						
9/20/2016					1				
9/21/2016							0.27 (J)		
9/22/2016	0.23 (J)	<0.18		<0.18		0.34 (J)		2.8 (J)	
9/9/2017									<0.086
9/10/2017	0.59 (J)	0.22 (J)							
9/11/2017				<0.086	0.22 (J)	0.92 (J)	0.41 (J)	0.14 (J)	
9/20/2018		0.85 (J)		0.56 (J)	0.23 (J)				<0.16
9/21/2018							0.38 (J)	<0.16	
9/24/2018	<0.16		4.6			<0.16			
9/18/2019	<1	<1			<1				
9/19/2019			<1	<1		<1	<1	<1	<1
9/10/2020	<1					<1			
9/11/2020		<1							<1
9/14/2020			<4				<1	<1	
9/15/2020				<1	<1				
9/15/2021					<0.96				
9/16/2021						<0.96	<0.96		<0.96
9/20/2021								<0.96	
9/21/2021		<0.96		<0.96					
9/22/2021	1.1 (J)								
9/13/2022	<0.96					<0.96			
9/14/2022		0.99 (J)		<0.96	<0.96		<0.96	<0.96	<0.96
9/6/2023		<1.4 (U)				<1.4 (U)		<1.4 (U)	
9/7/2023	<1.4 (U)			<1.4 (U)	<1.4 (U)		<1.4 (U)		<1.4 (U)

# Sulfate



Time Series Analysis Run 10/13/2023 9:14 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

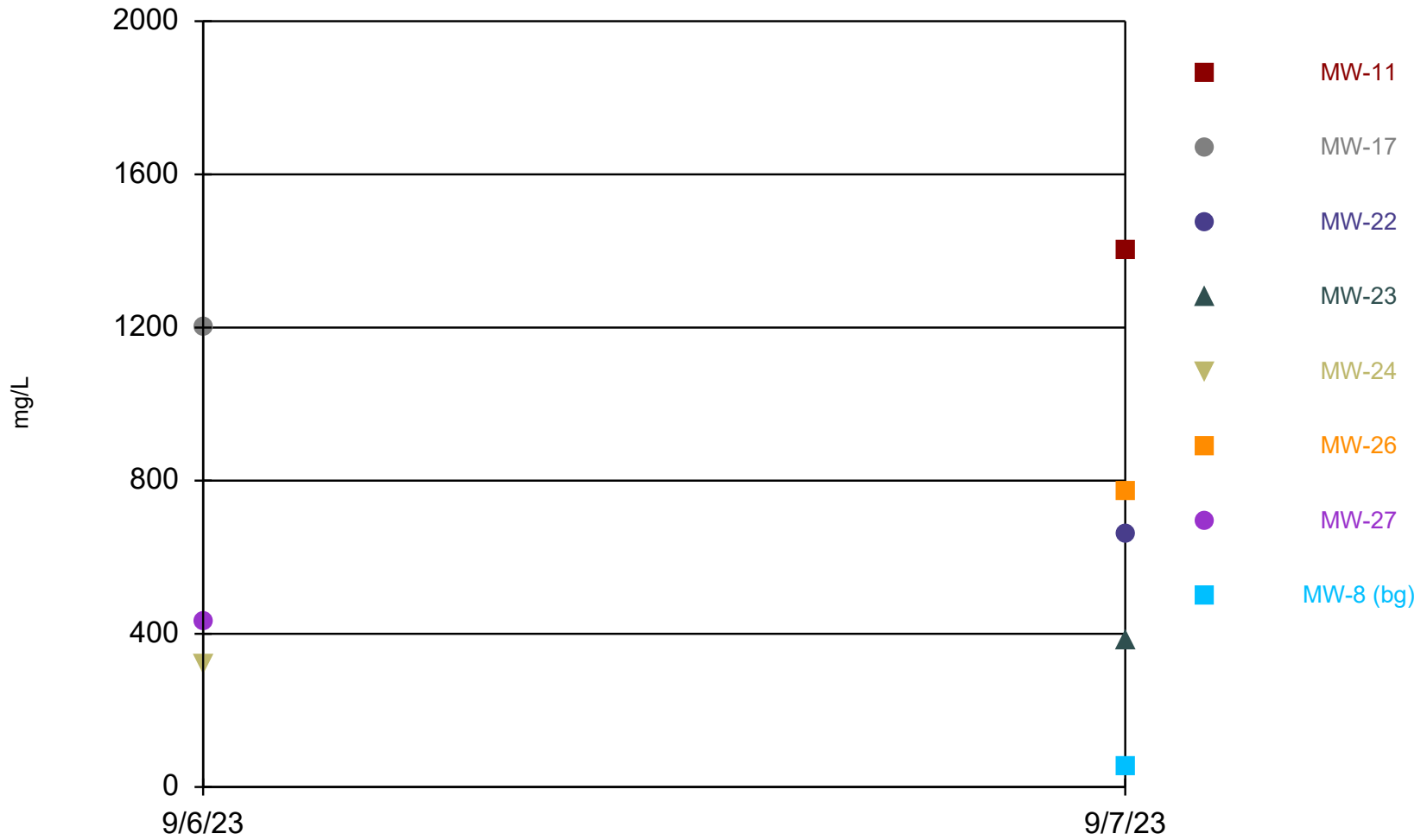
# Time Series

Constituent: Sulfate (mg/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/1/1999	700	340							26
9/1/2000	1100	570							28
9/1/2001	860	460							58
9/1/2002	997	655							37.8
9/1/2003	850	650							60
9/1/2004	700	760							63
6/1/2005			120	70	54				
9/1/2005	1100	540		220	41				95
9/1/2006	870	650	412	97.2	28.4				38
9/1/2007	1160	953	557	197	30.2				64.1
9/1/2008	1020	804	632	176	21.6				67.7
9/1/2009	1170	701	633	134	19.3				48.6
8/1/2010	1030	702		167	11				47.1
9/1/2011	1020	691	605	240	20.3				40.8
9/1/2012	1140	840	627	335	26.5				44.1
9/1/2013	1030	831	556	471	14.8				66.3
9/1/2014	1180	905	639	386	12.7				73.5
4/1/2015						41.8	52.3	635	
9/1/2015	1090	854	578	388	12.8	2.8	39.4	334	54.9
9/15/2016									12.7
9/19/2016			661						
9/20/2016					47.1				
9/21/2016							37.8		
9/22/2016	1150	708		307		33.8		260	
9/9/2017									19.9
9/10/2017	914	658							
9/11/2017				352	54.5	6.4	40.8	127	
9/20/2018		973		432	88.6				49.2
9/21/2018							45	72.7	
9/24/2018	1110		636			12.6			
9/18/2019	750	600			68				
9/19/2019			550	330		8	51	45	35
9/10/2020	650					26			
9/11/2020		570							17
9/14/2020			440				48	34	
9/15/2020				230	150				
9/15/2021					80				
9/16/2021						23	60		14
9/20/2021								30	
9/21/2021		590		220					
9/22/2021	710								
9/13/2022	730					19			
9/14/2022		550		210	64		53	29	18
9/6/2023		600				16		25	
9/7/2023	700			210	50		49		27



### Total Dissolved Solids



Time Series Analysis Run 10/13/2023 9:14 AM View: Deep

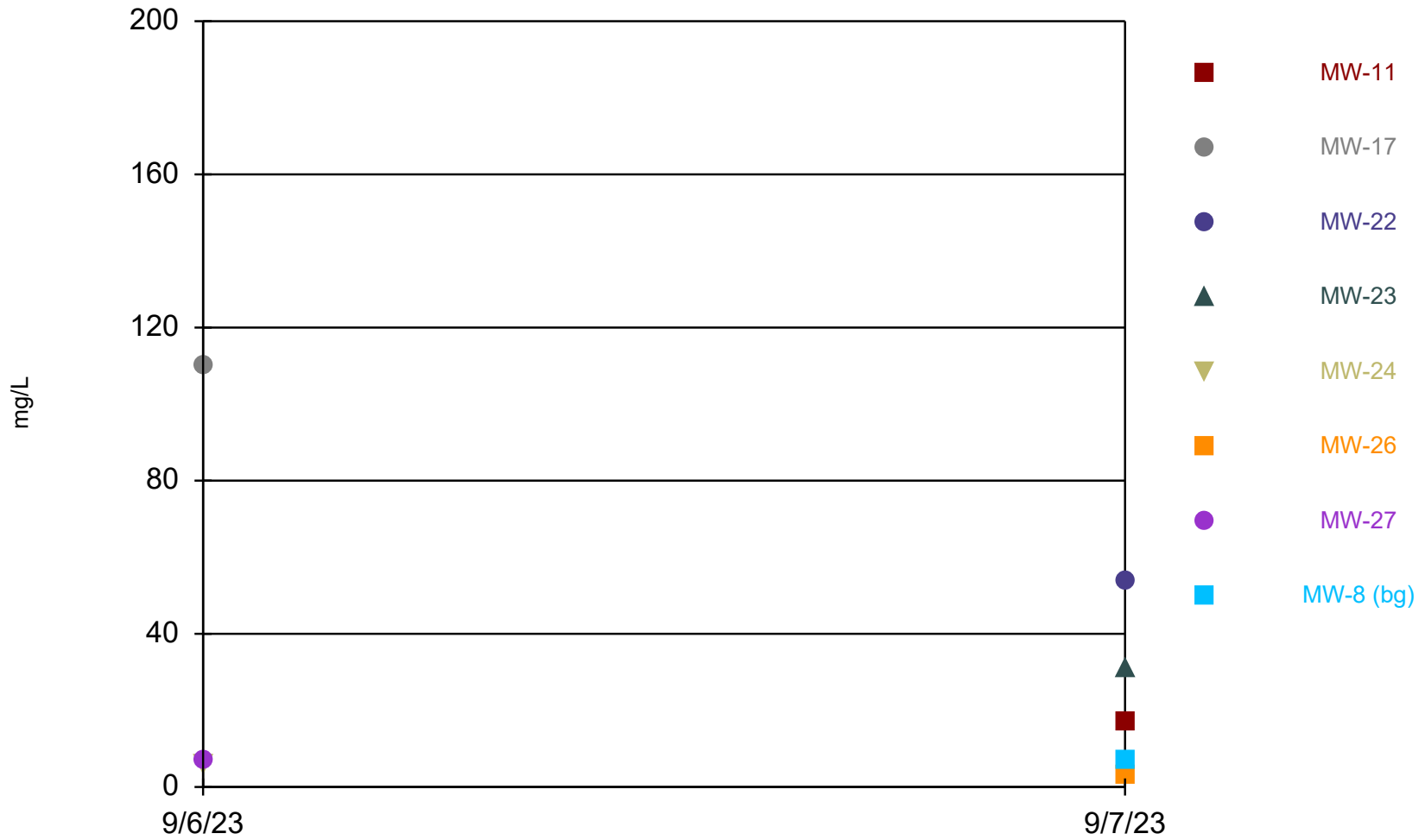
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/6/2023		1200			320		430	
9/7/2023	1400		660	380		770		52

### Total Suspended Solids



Time Series Analysis Run 10/13/2023 9:14 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Time Series

Constituent: Total Suspended Solids (mg/L) Analysis Run 10/13/2023 9:15 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/6/2023		110			6		7.2	
9/7/2023	17		54	31		3.1		7.2



Attachment E3

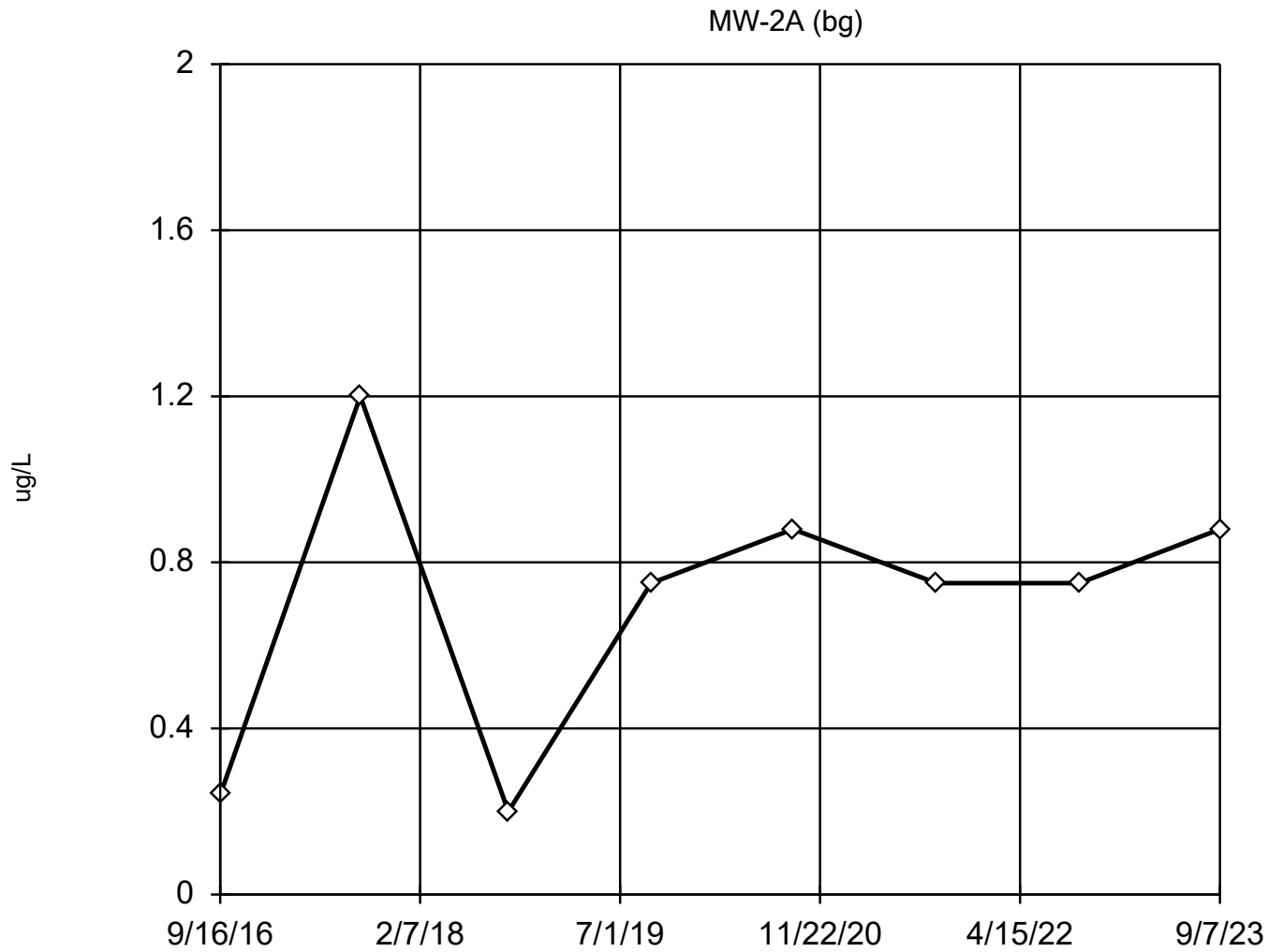
Outlier Analysis Results – Shallow Unit

# Outlier Analysis

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile Printed 10/13/2023, 9:01 AM

<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Date(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Distribution</u>	<u>Normality Test</u>
Arsenic (ug/L)	MW-2A (bg)	No	n/a	n/a	EPA 1989	0.05	8	0.7062	0.3346	normal	ShapiroWilk
<b>Barium (ug/L)</b>	<b>MW-2A (bg)</b>	<b>Yes</b>	<b>234</b>	<b>9/16/2016</b>	<b>Dixon`s</b>	<b>0.05</b>	<b>8</b>	<b>118.6</b>	<b>51.36</b>	<b>normal</b>	<b>ShapiroWilk</b>
Beryllium (ug/L)	MW-2A (bg)	No	n/a	n/a	EPA 1989	0.05	8	0.2198	0.1272	normal	ShapiroWilk
Boron (ug/L)	MW-2A (bg)	No	n/a	n/a	EPA 1989	0.05	8	145	47.34	normal	ShapiroWilk
Chloride (mg/L)	MW-2A (bg)	No	n/a	n/a	EPA 1989	0.05	27	7.708	1.087	normal	ShapiroWilk
<b>Cobalt (ug/L)</b>	<b>MW-2A (bg)</b>	<b>Yes</b>	<b>3.7,0.15</b>	<b>9/8/2017,...</b>	<b>NP (nrm)</b>	<b>NaN</b>	<b>8</b>	<b>0.815</b>	<b>1.171</b>	<b>unknown</b>	<b>ShapiroWilk</b>
<b>Iron (ug/L)</b>	<b>MW-2A (bg)</b>	<b>Yes</b>	<b>5330</b>	<b>9/8/2017</b>	<b>Dixon`s</b>	<b>0.05</b>	<b>8</b>	<b>753.3</b>	<b>1850</b>	<b>ln(x)</b>	<b>ShapiroWilk</b>
<b>Lead (ug/L)</b>	<b>MW-2A (bg)</b>	<b>Yes</b>	<b>8.5</b>	<b>9/8/2017</b>	<b>Dixon`s</b>	<b>0.05</b>	<b>8</b>	<b>1.485</b>	<b>2.844</b>	<b>normal</b>	<b>ShapiroWilk</b>
Magnesium (ug/L)	MW-2A (bg)	No	n/a	n/a	NP (nrm)	NaN	8	17000	5694	unknown	ShapiroWilk
<b>Manganese (ug/L)</b>	<b>MW-2A (bg)</b>	<b>Yes</b>	<b>464</b>	<b>9/8/2017</b>	<b>Dixon`s</b>	<b>0.05</b>	<b>8</b>	<b>75.6</b>	<b>157.2</b>	<b>normal</b>	<b>ShapiroWilk</b>
Selenium (ug/L)	MW-2A (bg)	No	n/a	n/a	EPA 1989	0.05	8	1.405	0.7082	normal	ShapiroWilk
Sulfate (mg/L)	MW-2A (bg)	No	n/a	n/a	EPA 1989	0.05	25	37.94	6.856	normal	ShapiroWilk

### EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 0.7062, std. dev. 0.3346, critical Tn 2.032

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.8799  
Critical = 0.851  
The distribution was found to be normally distributed.

Constituent: Arsenic Analysis Run 10/13/2023 8:59 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# EPA 1989 Outlier Screening

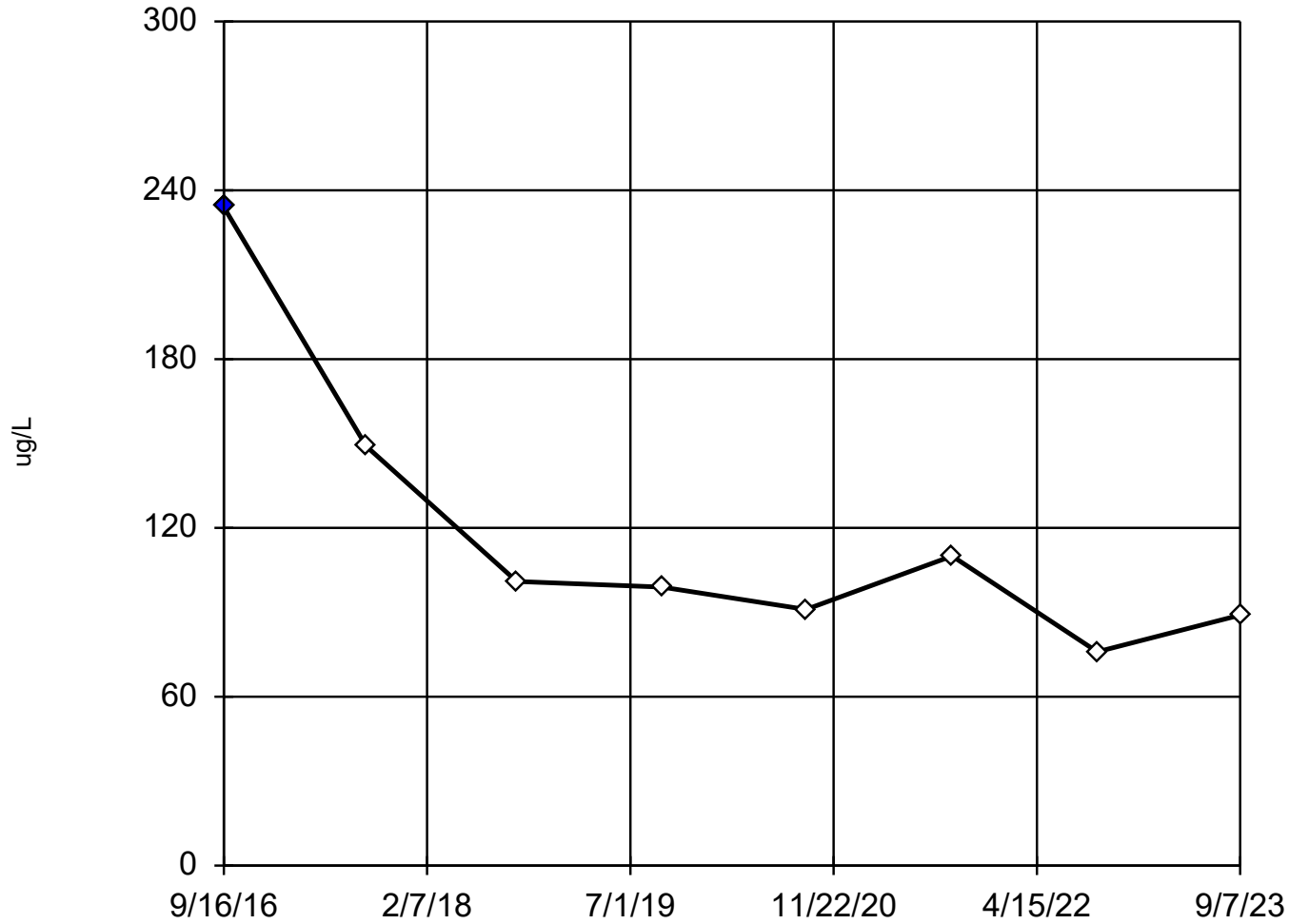
Constituent: Arsenic (ug/L) Analysis Run 10/13/2023 9:01 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-2A (bg)
9/16/2016	0.24 (J)
9/8/2017	1.2
9/20/2018	0.2 (J)
9/19/2019	<0.75
9/14/2020	<0.88
9/15/2021	<0.75
9/14/2022	<0.75
9/7/2023	0.88 (J)



# Dixon's Outlier Test

MW-2A (bg)



n = 8

Statistical outlier is drawn as solid.  
Testing for 1 high outlier.  
Mean = 118.6.  
Std. Dev. = 51.36.  
234: c = 0.5862  
tab1 = 0.554.  
Alpha = 0.05.

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.8733  
Critical = 0.838  
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Barium Analysis Run 10/13/2023 8:59 AM View: Shallow

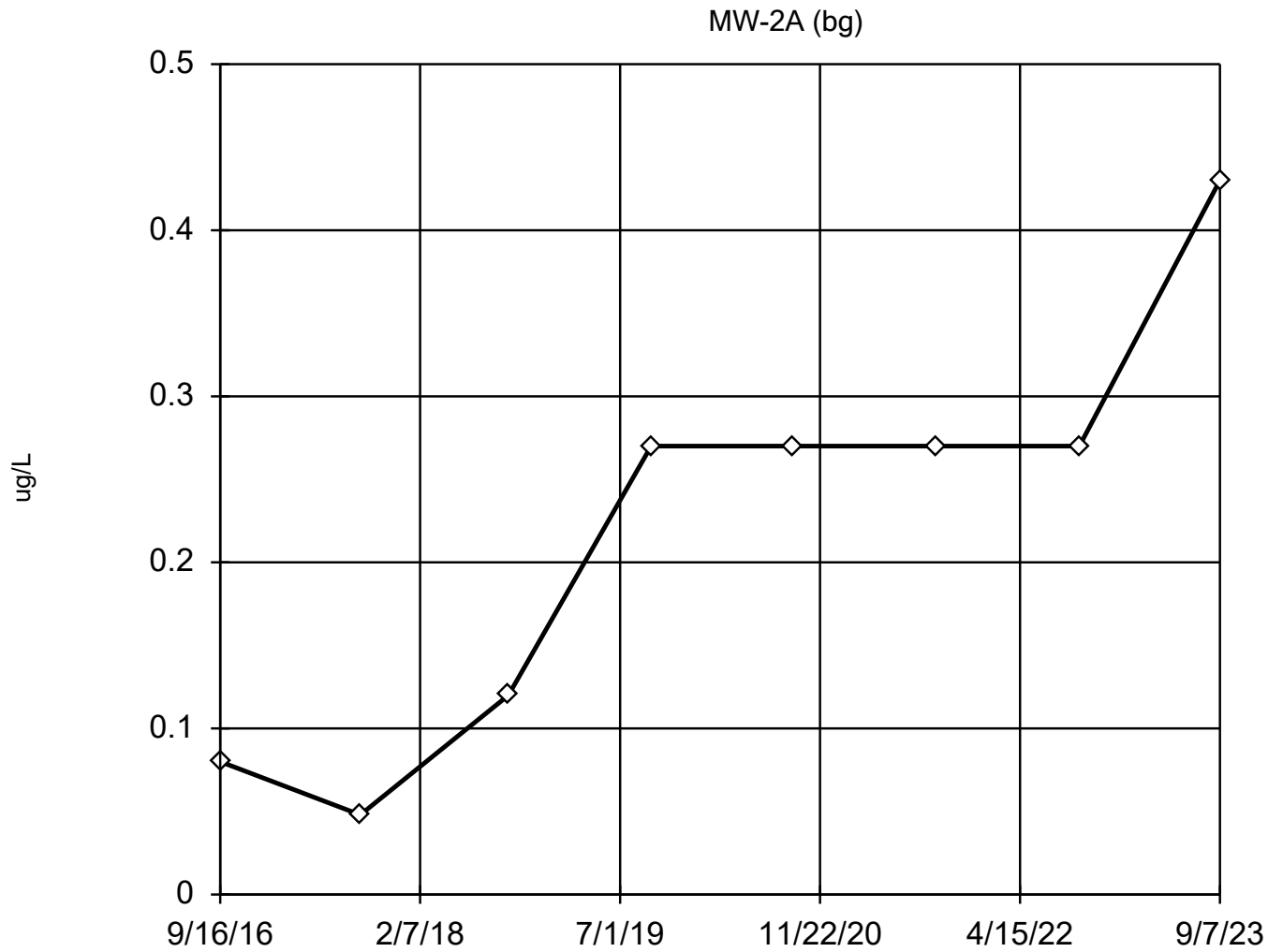
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Dixon's Outlier Test

Constituent: Barium (ug/L) Analysis Run 10/13/2023 9:01 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-2A (bg)
9/16/2016	234 (O)
9/8/2017	149
9/20/2018	101
9/19/2019	99
9/14/2020	91
9/15/2021	110
9/14/2022	76 (B)
9/7/2023	89

### EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 0.2198, std. dev. 0.1272, critical Tn 2.032

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.8896  
Critical = 0.851  
The distribution was found to be normally distributed.

Constituent: Beryllium Analysis Run 10/13/2023 9:00 AM View: Shallow

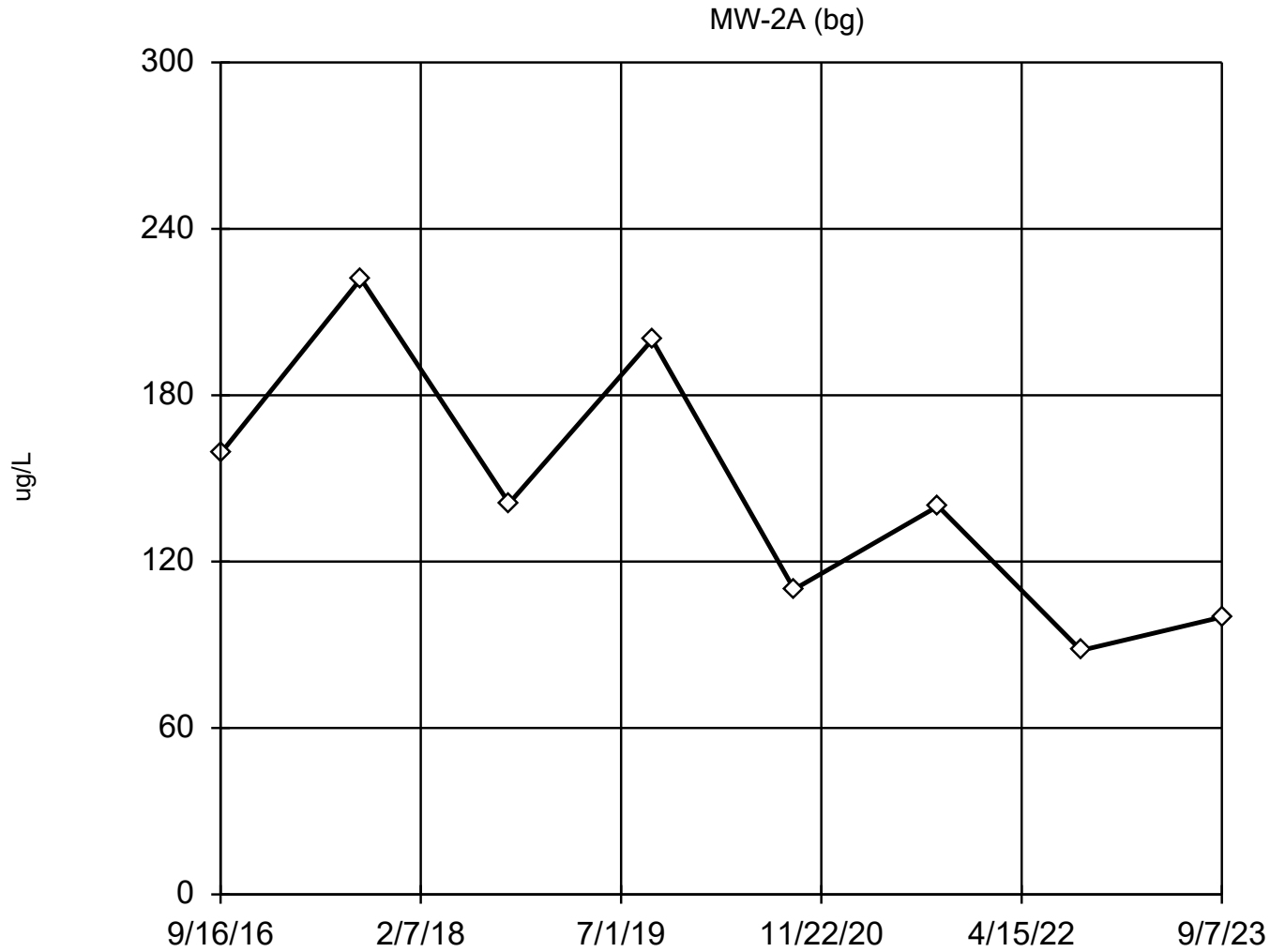
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# EPA 1989 Outlier Screening

Constituent: Beryllium (ug/L) Analysis Run 10/13/2023 9:01 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-2A (bg)
9/16/2016	<0.08
9/8/2017	0.048 (J)
9/20/2018	<0.12
9/19/2019	<0.27
9/14/2020	<0.27
9/15/2021	<0.27
9/14/2022	<0.27
9/7/2023	0.43 (J)

### EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 145, std. dev. 47.34,  
critical Tn 2.032

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9383  
Critical = 0.851  
The distribution was found to be normally distributed.

Constituent: Boron Analysis Run 10/13/2023 9:00 AM View: Shallow

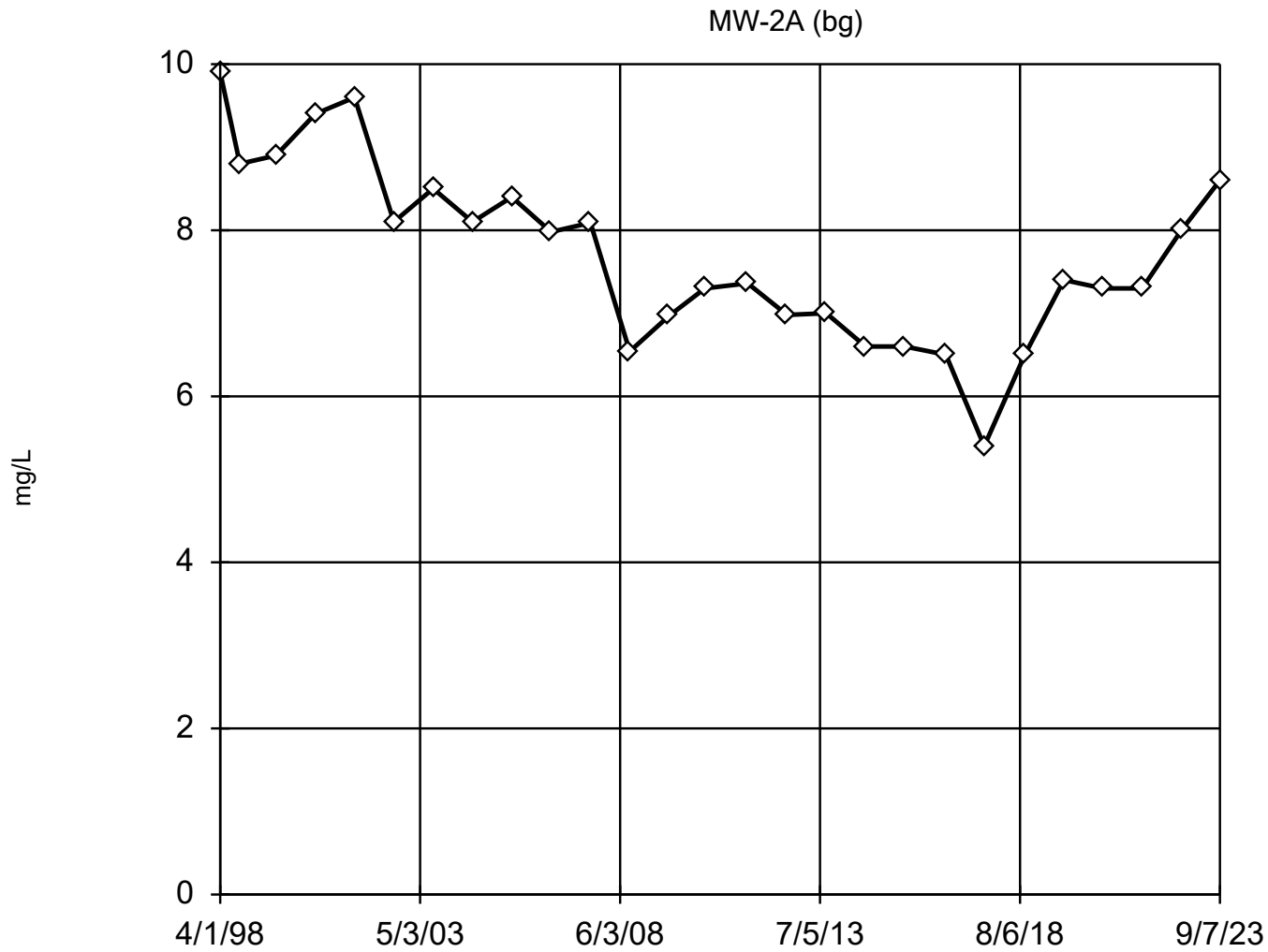
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# EPA 1989 Outlier Screening

Constituent: Boron (ug/L) Analysis Run 10/13/2023 9:01 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-2A (bg)
9/16/2016	159
9/8/2017	222
9/20/2018	141
9/19/2019	200
9/14/2020	110
9/15/2021	140
9/14/2022	88 (J)
9/7/2023	100

### EPA Screening (suspected outliers for Rosner's Test)



n = 27

Rosner's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 7.708, std. dev. 1.087, critical Tn 2.698

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9728  
Critical = 0.935  
The distribution was found to be normally distributed.

Constituent: Chloride Analysis Run 10/13/2023 9:00 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# EPA 1989 Outlier Screening

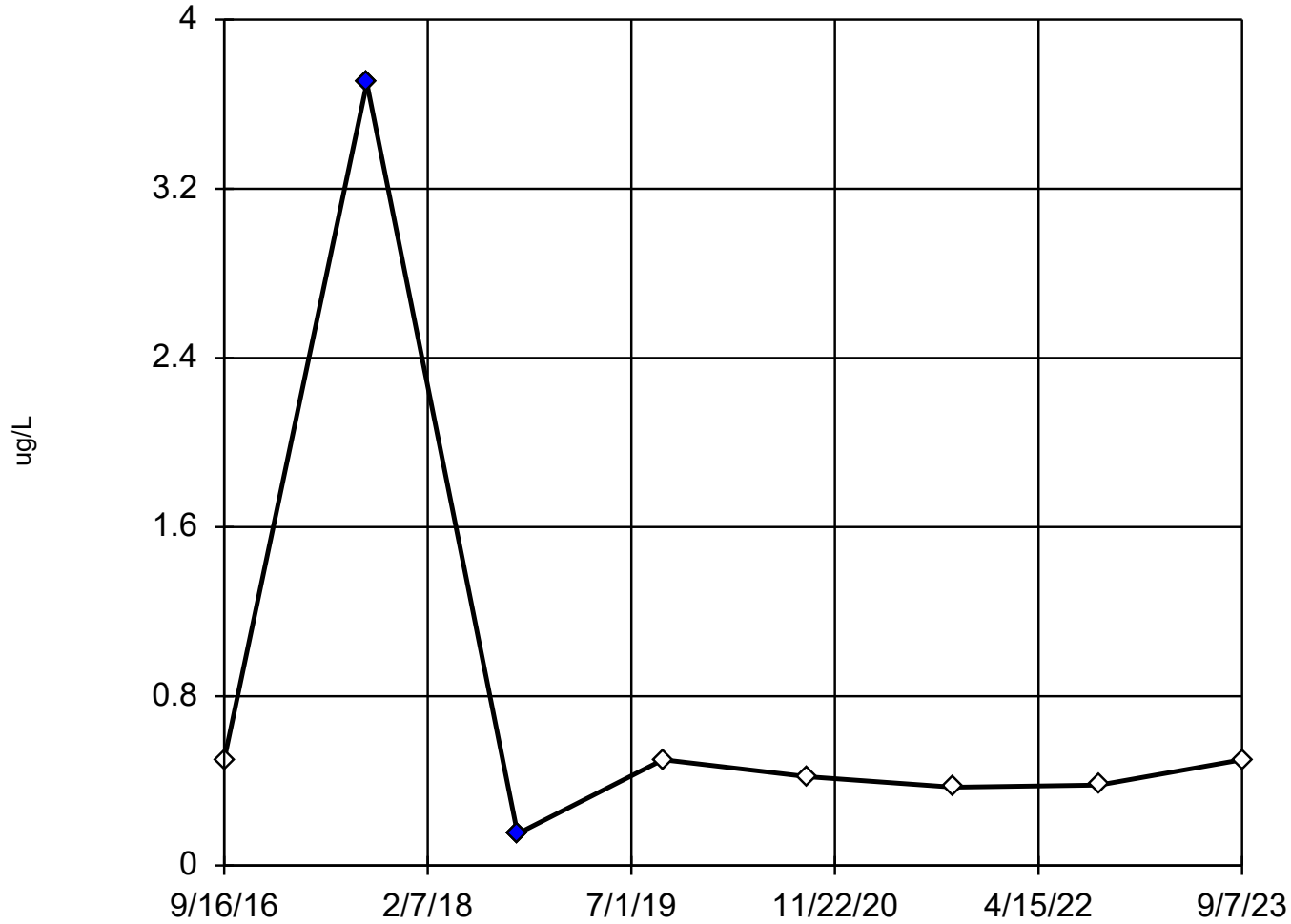
Constituent: Chloride (mg/L) Analysis Run 10/13/2023 9:01 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-2A (bg)
4/1/1998	9.9
10/1/1998	8.8
9/1/1999	8.9
9/1/2000	9.4
9/1/2001	9.6
9/1/2002	8.1
9/1/2003	8.5
9/1/2004	8.1
9/1/2005	8.4
9/1/2006	7.98
9/1/2007	8.09
9/1/2008	6.54
9/1/2009	6.97
8/1/2010	7.3
9/1/2011	7.36
9/1/2012	6.98
9/1/2013	7
9/1/2014	6.6
9/1/2015	6.6
9/16/2016	6.5
9/8/2017	5.4
9/20/2018	6.5
9/19/2019	7.4
9/14/2020	7.3
9/15/2021	7.3
9/14/2022	8
9/7/2023	8.6



# Tukey's Outlier Screening

MW-2A (bg)



n = 8

Outliers are drawn as solid.  
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 1.186, low cutoff = 0.1581, based on IQR multiplier of 3.

Constituent: Cobalt Analysis Run 10/13/2023 9:00 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

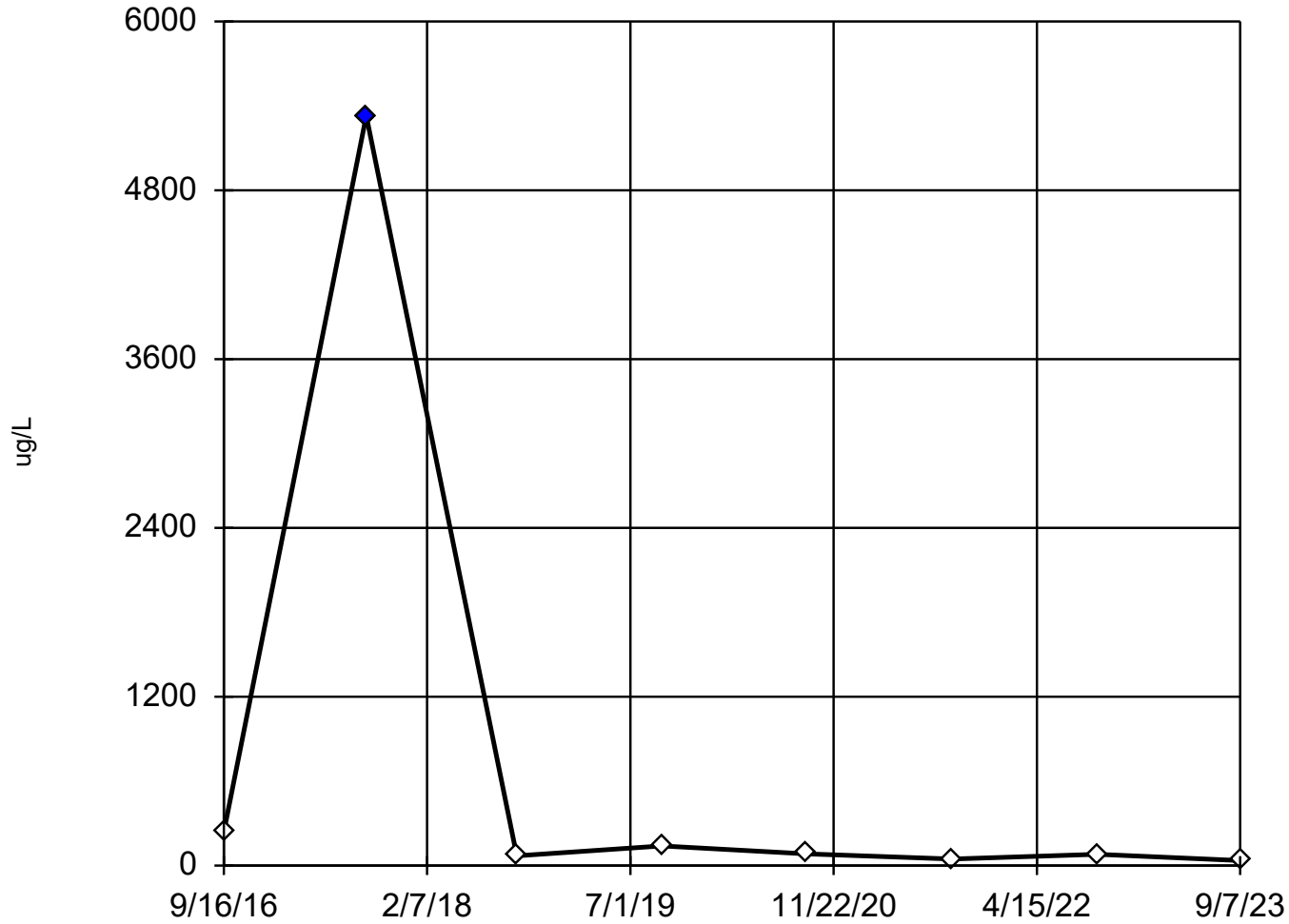
# Tukey's Outlier Screening

Constituent: Cobalt (ug/L) Analysis Run 10/13/2023 9:01 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-2A (bg)
9/16/2016	<0.5
9/8/2017	3.7 (O)
9/20/2018	<0.15 (O)
9/19/2019	0.5
9/14/2020	0.42 (J)
9/15/2021	0.37 (J)
9/14/2022	0.38 (J)
9/7/2023	0.5

# Dixon's Outlier Test

MW-2A (bg)



n = 8

Statistical outlier is drawn as solid.  
Testing for 1 high outlier.  
Mean = 753.3.  
Std. Dev. = 1850.  
5330: c = 0.6554  
tab1 = 0.554.  
Alpha = 0.05.

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.966  
Critical = 0.838 (after natural log transformation)  
The distribution, after removal of suspect value, was found to be log-normal.

Constituent: Iron Analysis Run 10/13/2023 9:00 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

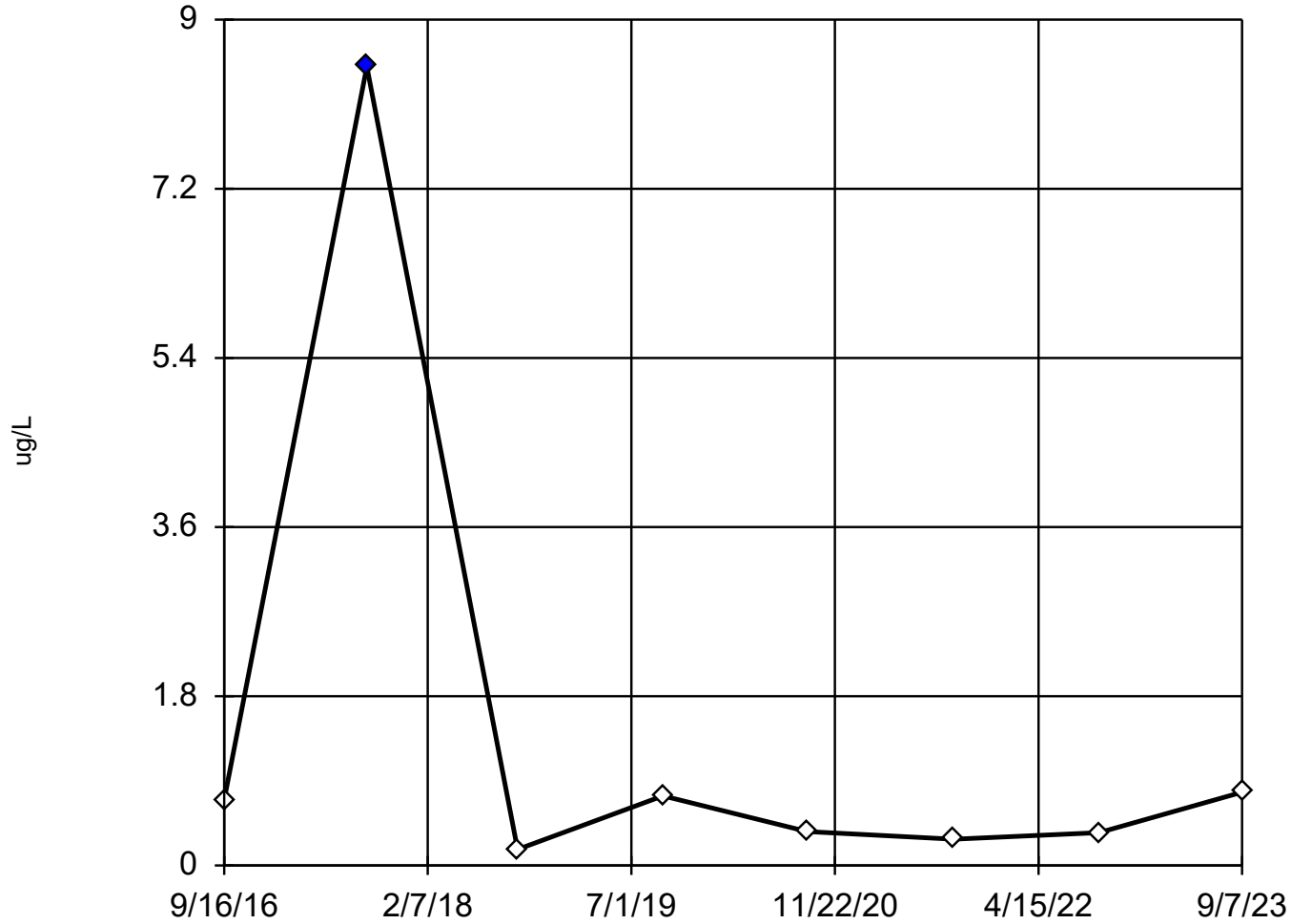
# Dixon's Outlier Test

Constituent: Iron (ug/L) Analysis Run 10/13/2023 9:01 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-2A (bg)
9/16/2016	240
9/8/2017	5330 (O)
9/20/2018	69.4
9/19/2019	140
9/14/2020	84 (J)
9/15/2021	47 (J)
9/14/2022	80 (J)
9/7/2023	36 (J)

# Dixon's Outlier Test

MW-2A (bg)



n = 8

Statistical outlier is drawn as solid.  
Testing for 1 high outlier.  
Mean = 1.485.  
Std. Dev. = 2.844.  
8.5: c = 0.9392  
tab1 = 0.554.  
Alpha = 0.05.

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.8662  
Critical = 0.838  
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Lead Analysis Run 10/13/2023 9:00 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

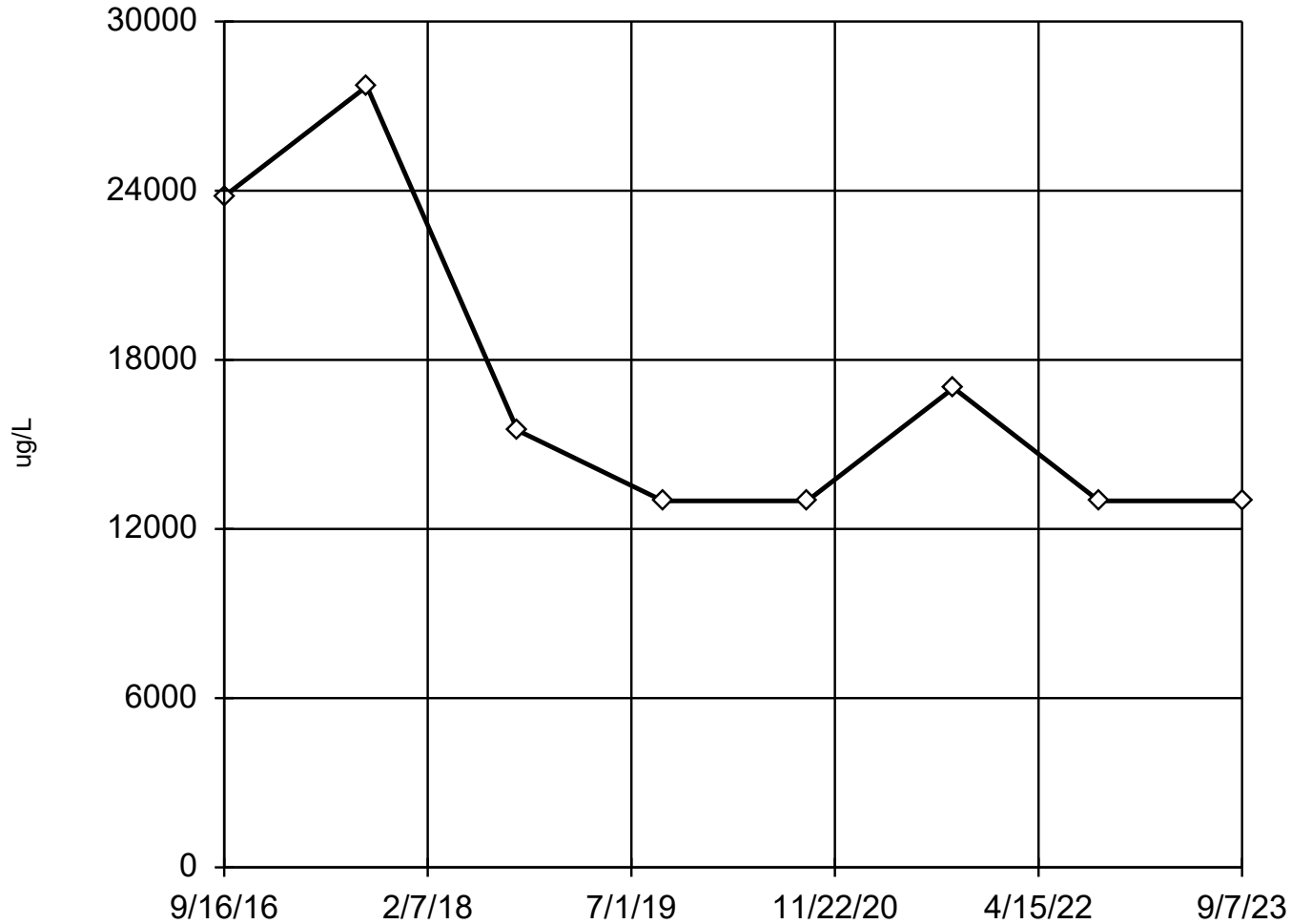
# Dixon's Outlier Test

Constituent: Lead (ug/L) Analysis Run 10/13/2023 9:01 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-2A (bg)
9/16/2016	0.7 (J)
9/8/2017	8.5 (O)
9/20/2018	0.17 (J)
9/19/2019	0.74
9/14/2020	0.36 (J)
9/15/2021	0.28 (J)
9/14/2022	0.35 (J)
9/7/2023	0.78

# Tukey's Outlier Screening

MW-2A (bg)



n = 8

No outliers found.  
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

High cutoff = 74511, low cutoff = 3509, based on IQR multiplier of 3.

Constituent: Magnesium    Analysis Run 10/13/2023 9:00 AM    View: Shallow  
Stoney Point Closed Landfill    Client: SCS Engineers    Data: StoneyPoint\_InputFile

# Tukey's Outlier Screening

Constituent: Magnesium (ug/L) Analysis Run 10/13/2023 9:01 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

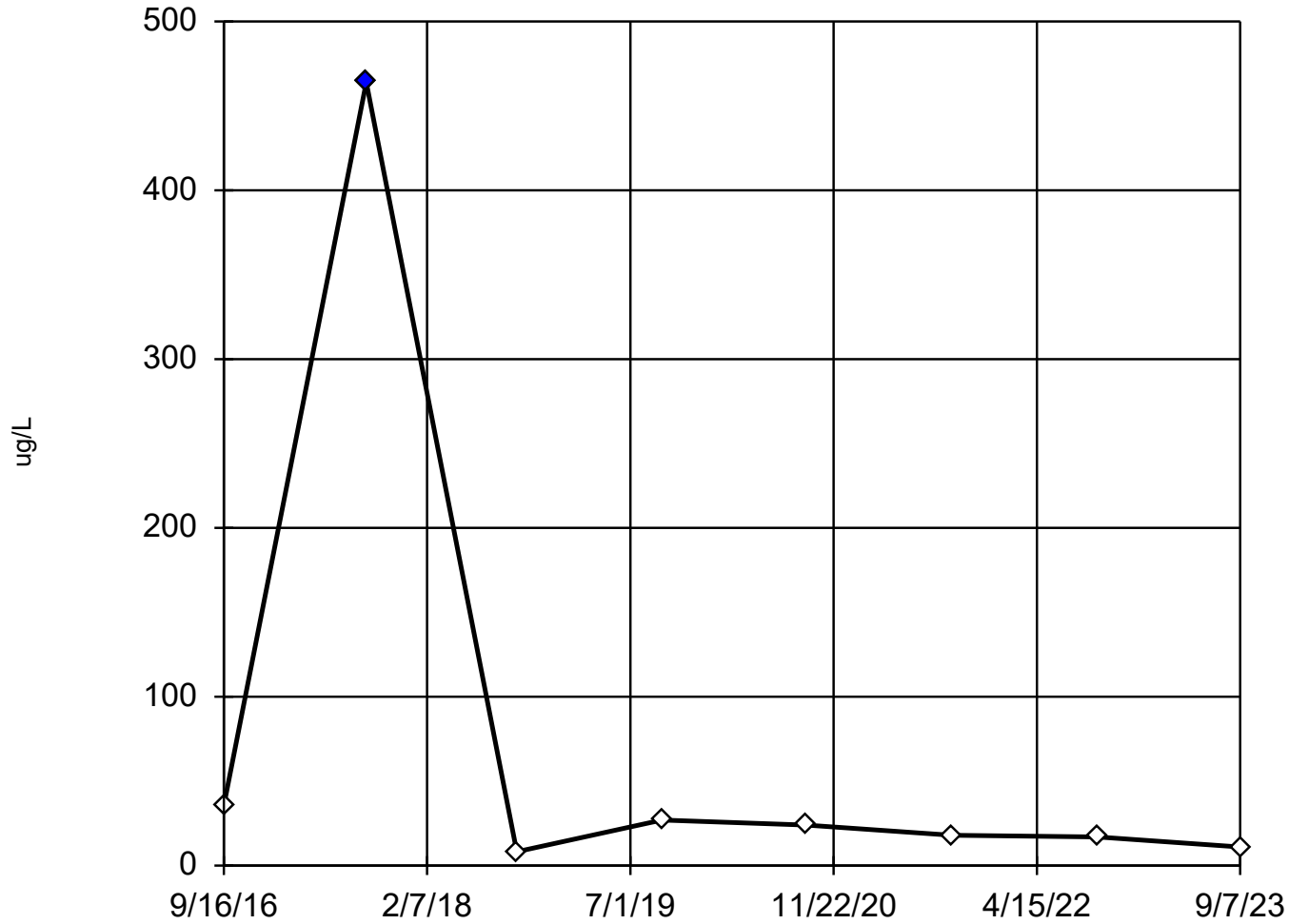
MW-2A (bg)

9/16/2016	23800
9/8/2017	27700
9/20/2018	15500
9/19/2019	13000
9/14/2020	13000
9/15/2021	17000
9/14/2022	13000
9/7/2023	13000



## Dixon's Outlier Test

MW-2A (bg)



n = 8

Statistical outlier is drawn as solid.  
Testing for 1 high outlier.  
Mean = 75.6.  
Std. Dev. = 157.2.  
464: c = 0.9457  
tab1 = 0.554.  
Alpha = 0.05.

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9692  
Critical = 0.838  
The distribution, after removal of suspect value, was found to be normally distributed.

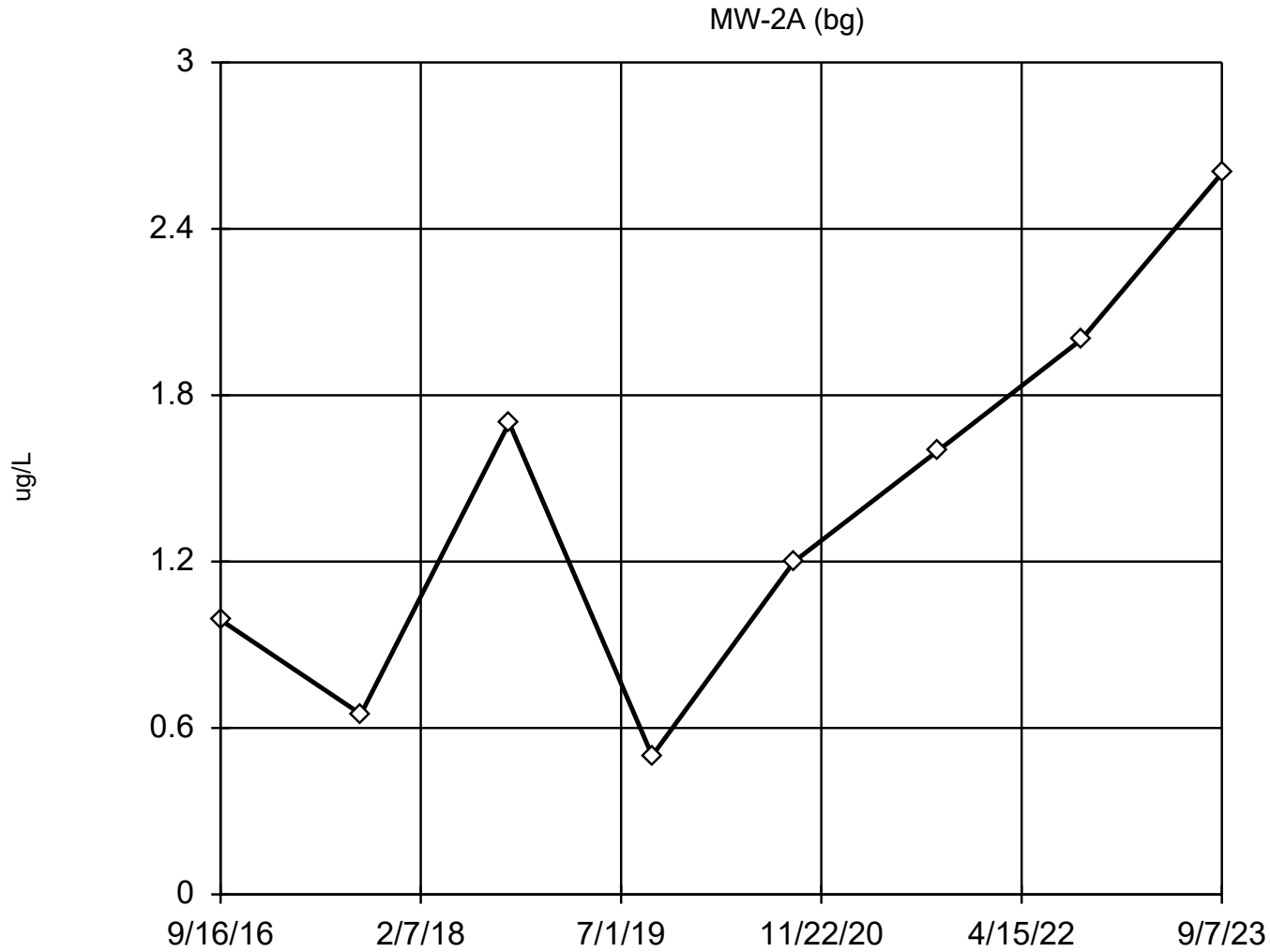
Constituent: Manganese    Analysis Run 10/13/2023 9:00 AM    View: Shallow  
Stoney Point Closed Landfill    Client: SCS Engineers    Data: StoneyPoint\_InputFile

# Dixon's Outlier Test

Constituent: Manganese (ug/L) Analysis Run 10/13/2023 9:01 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-2A (bg)
9/16/2016	35.6
9/8/2017	464 (O)
9/20/2018	8.2
9/19/2019	27
9/14/2020	24
9/15/2021	18
9/14/2022	17
9/7/2023	11

### EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 1.405, std. dev. 0.7082, critical Tn 2.032

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9689  
Critical = 0.851  
The distribution was found to be normally distributed.

Constituent: Selenium Analysis Run 10/13/2023 9:00 AM View: Shallow

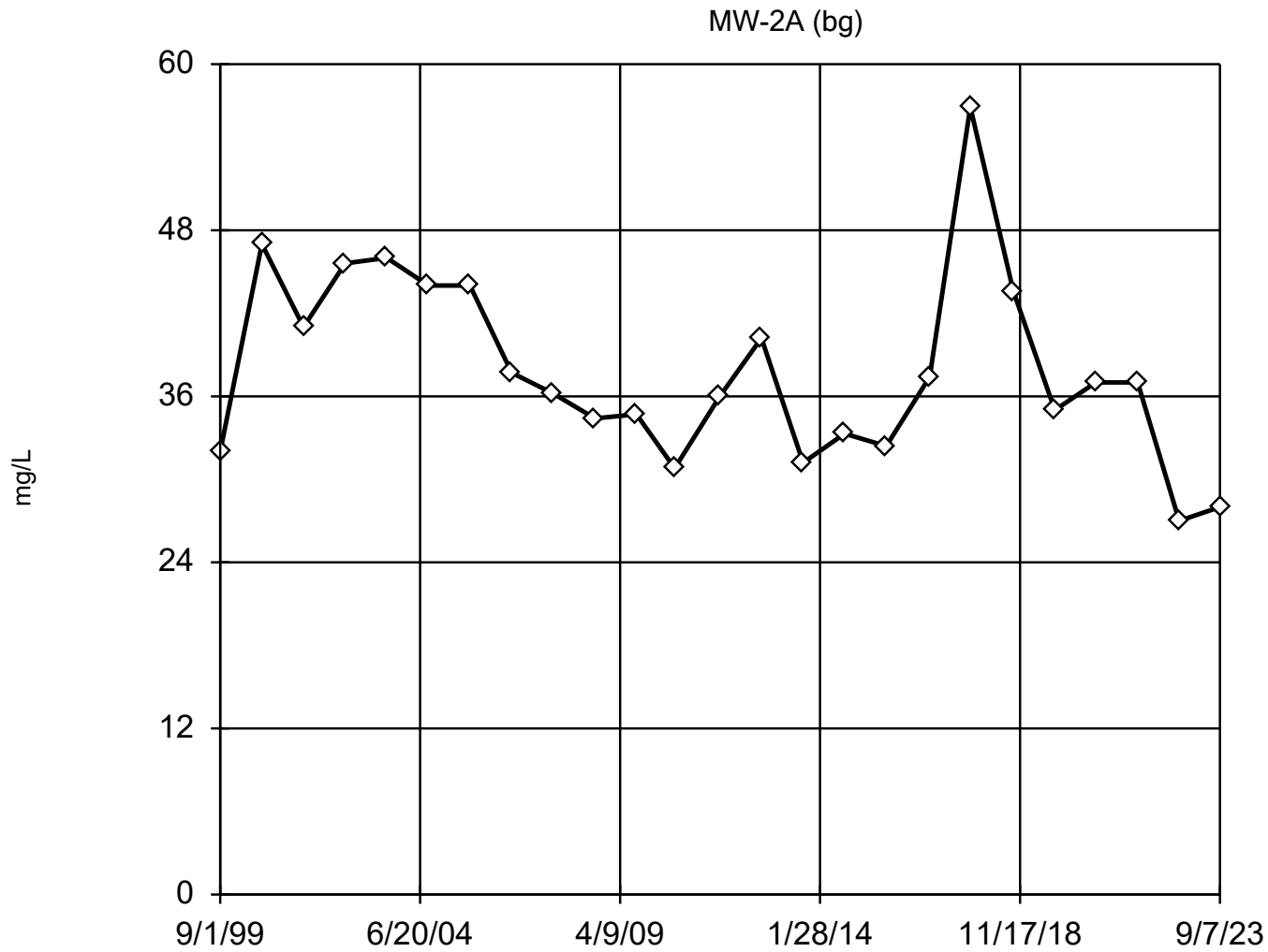
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# EPA 1989 Outlier Screening

Constituent: Selenium (ug/L) Analysis Run 10/13/2023 9:01 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-2A (bg)
9/16/2016	0.99 (J)
9/8/2017	0.65 (J)
9/20/2018	1.7
9/19/2019	<1
9/14/2020	1.2 (J)
9/15/2021	1.6 (J)
9/14/2022	2 (J)
9/7/2023	2.6 (J)

### EPA Screening (suspected outliers for Rosner's Test)



n = 25

Rosner's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 37.94, std. dev. 6.856, critical Tn 2.663

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9518  
Critical = 0.931  
The distribution was found to be normally distributed.

Constituent: Sulfate    Analysis Run 10/13/2023 9:00 AM    View: Shallow  
Stoney Point Closed Landfill    Client: SCS Engineers    Data: StoneyPoint\_InputFile

# EPA 1989 Outlier Screening

Constituent: Sulfate (mg/L) Analysis Run 10/13/2023 9:01 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-2A (bg)
9/1/1999	32
9/1/2000	47
9/1/2001	41
9/1/2002	45.6
9/1/2003	46
9/1/2004	44
9/1/2005	44
9/1/2006	37.7
9/1/2007	36.2
9/1/2008	34.4
9/1/2009	34.7
8/1/2010	30.8
9/1/2011	36
9/1/2012	40.2
9/1/2013	31.2
9/1/2014	33.3
9/1/2015	32.4
9/16/2016	37.4
9/8/2017	56.9
9/20/2018	43.6
9/19/2019	35
9/14/2020	37
9/15/2021	37
9/14/2022	27
9/7/2023	28



Attachment E4

Outlier Analysis Results – Deep Unit

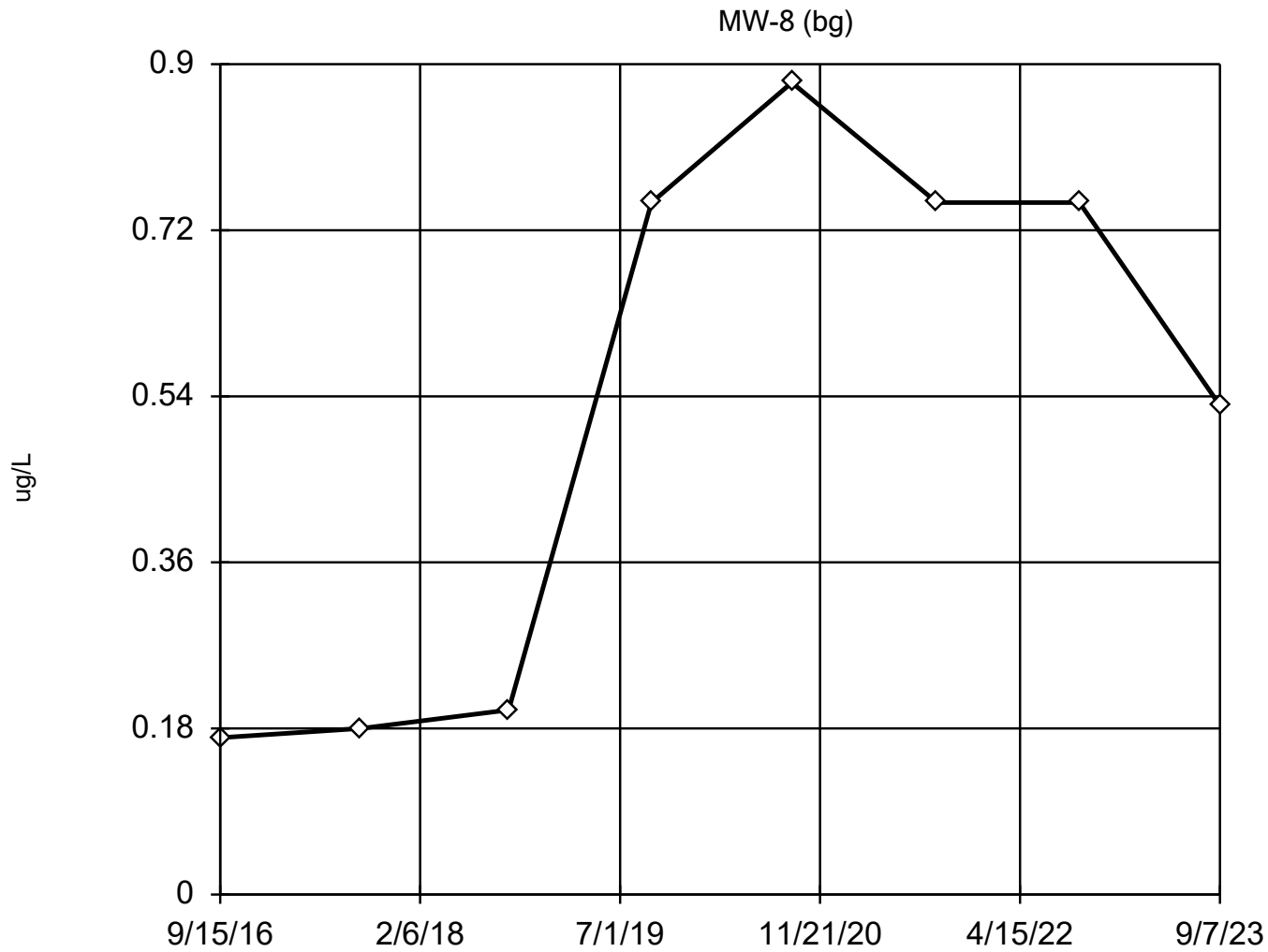
# Outlier Analysis

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile Printed 10/13/2023, 9:17 AM

<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Date(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Distribution</u>	<u>Normality Test</u>
Arsenic (ug/L)	MW-8 (bg)	No	n/a	n/a	NP (nrm)	NaN	8	0.5262	0.2997	unknown	ShapiroWilk
Barium (ug/L)	MW-8 (bg)	No	n/a	n/a	Dixon`s	0.05	8	84.31	4.506	normal	ShapiroWilk
Beryllium (ug/L)	MW-8 (bg)	No	n/a	n/a	NP (nrm)	NaN	8	0.2028	0.115	unknown	ShapiroWilk
Boron (ug/L)	MW-8 (bg)	No	n/a	n/a	EPA 1989	0.05	8	571.6	415.9	ln(x)	ShapiroWilk
Chloride (mg/L)	MW-8 (bg)	No	n/a	n/a	NP (nrm)	NaN	37	5.219	2.337	unknown	ShapiroWilk
Cobalt (ug/L)	MW-8 (bg)	No	n/a	n/a	EPA 1989	0.05	8	0.3338	0.1338	normal	ShapiroWilk
Iron (ug/L)	MW-8 (bg)	No	n/a	n/a	EPA 1989	0.05	8	56.45	17.9	normal	ShapiroWilk
Lead (ug/L)	MW-8 (bg)	No	n/a	n/a	EPA 1989	0.05	8	0.2784	0.1632	normal	ShapiroWilk
Magnesium (ug/L)	MW-8 (bg)	No	n/a	n/a	EPA 1989	0.05	8	19500	1122	normal	ShapiroWilk
<b>Manganese (ug/L)</b>	<b>MW-8 (bg)</b>	<b>Yes</b>	<b>27.6</b>	<b>9/15/2016</b>	<b>Dixon`s</b>	<b>0.05</b>	<b>8</b>	<b>72.81</b>	<b>20.89</b>	<b>normal</b>	<b>ShapiroWilk</b>
Selenium (ug/L)	MW-8 (bg)	No	n/a	n/a	NP (nrm)	NaN	8	0.7182	0.4988	unknown	ShapiroWilk
Sulfate (mg/L)	MW-8 (bg)	No	n/a	n/a	EPA 1989	0.05	25	44.23	21.24	normal	ShapiroWilk



### Tukey's Outlier Screening



n = 8

No outliers found.  
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were cube transformed to achieve best W statistic (graph shown in original units).

High cutoff = 1.186, low cutoff = -1.074, based on IQR multiplier of 3.

Constituent: Arsenic Analysis Run 10/13/2023 9:16 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

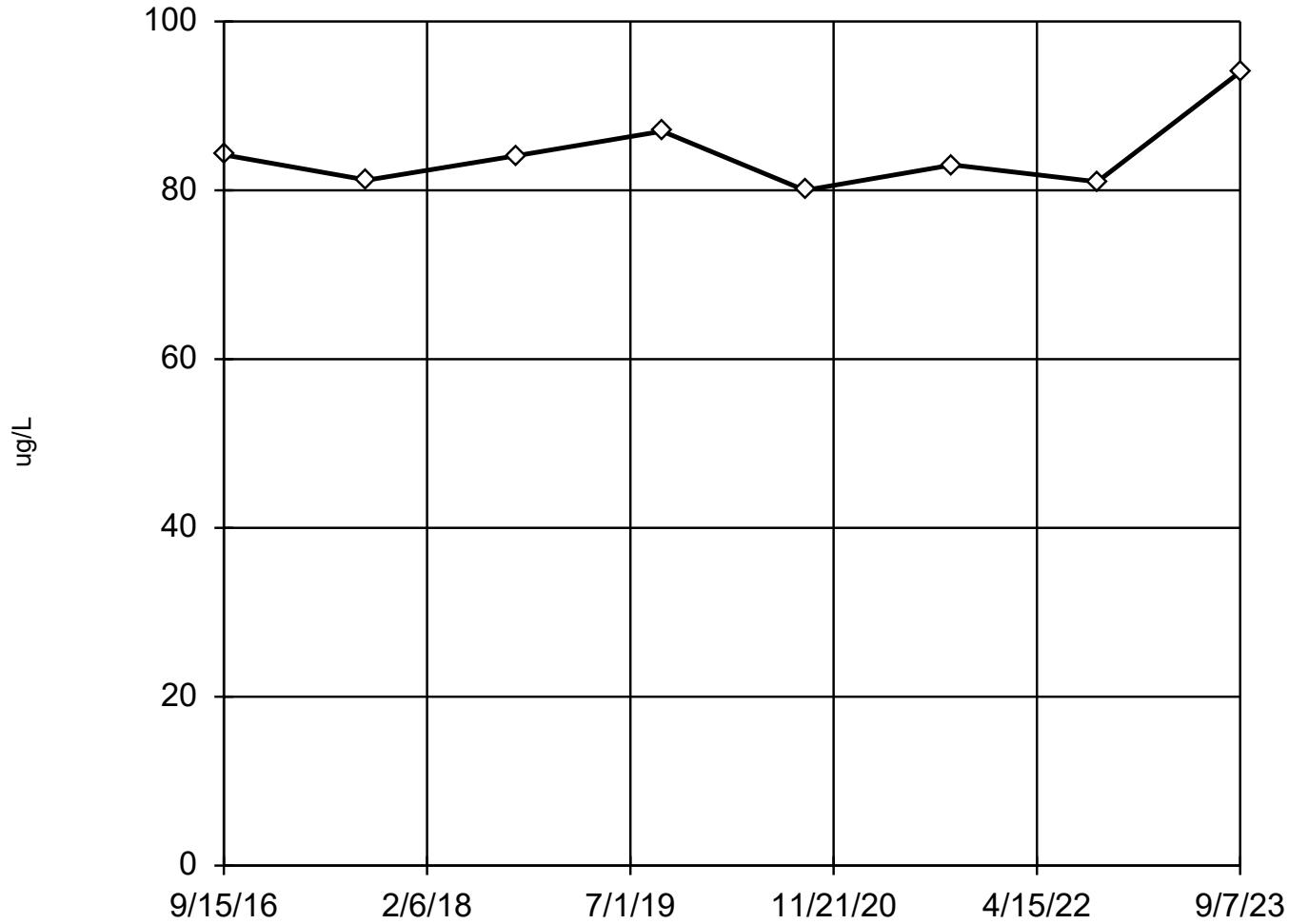
# Tukey's Outlier Screening

Constituent: Arsenic (ug/L) Analysis Run 10/13/2023 9:17 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-8 (bg)
9/15/2016	0.17 (J)
9/9/2017	0.18 (J)
9/20/2018	0.2 (J)
9/19/2019	<0.75
9/11/2020	<0.88
9/16/2021	<0.75
9/14/2022	<0.75
9/7/2023	<0.53 (U)

### Dixon's Outlier Test

MW-8 (bg)



n = 8

No statistical outliers.  
Testing for 1 high outlier.  
Mean = 84.31.  
Std. Dev. = 4.506.  
94: c = 0.5385  
tab1 = 0.554.  
Alpha = 0.05.

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9451  
Critical = 0.838  
The distribution was found  
to be normally distrib-  
uted.

Constituent: Barium Analysis Run 10/13/2023 9:16 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

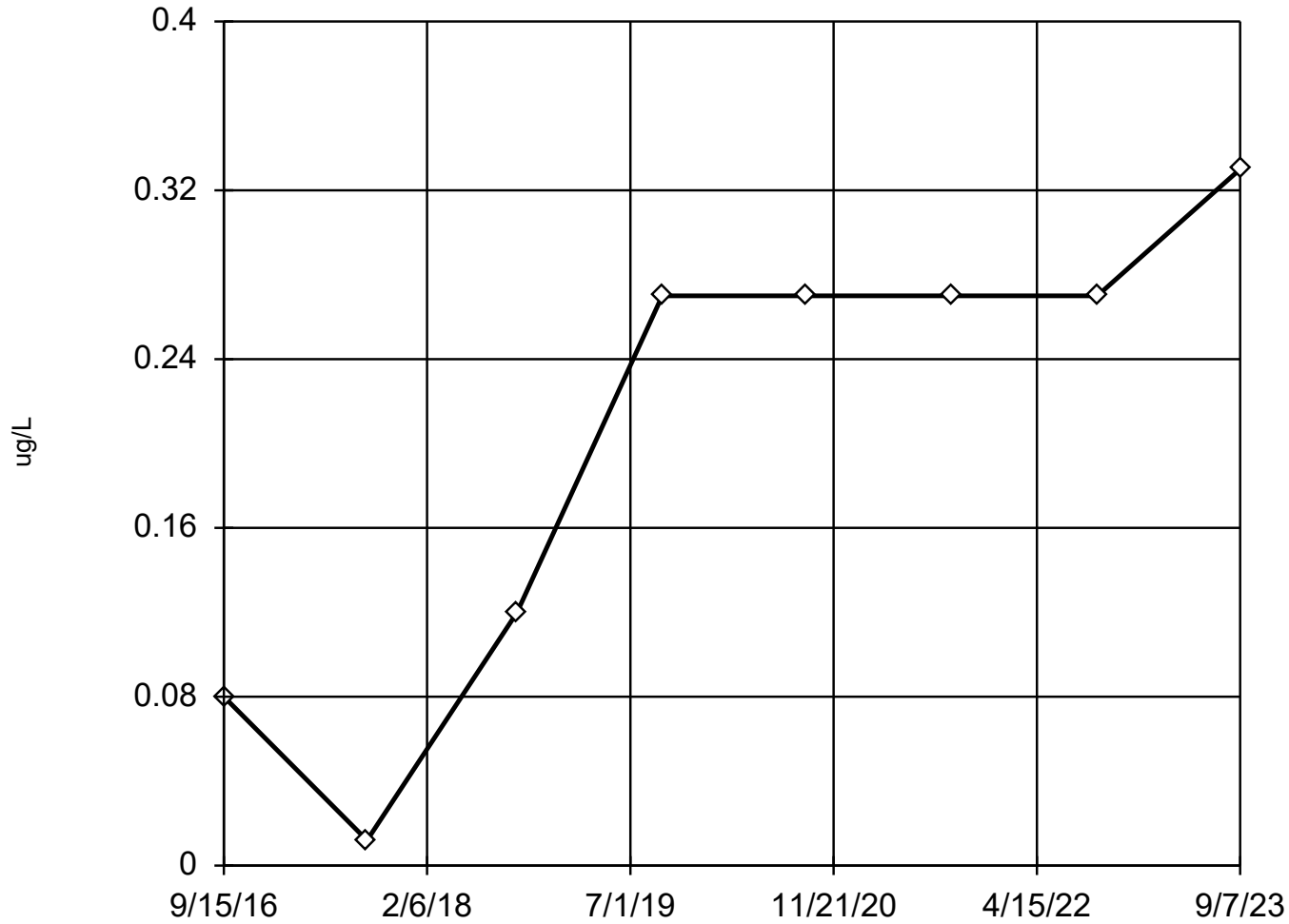
# Dixon's Outlier Test

Constituent: Barium (ug/L) Analysis Run 10/13/2023 9:17 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-8 (bg)
9/15/2016	84.2
9/9/2017	81.2
9/20/2018	84.1
9/19/2019	87
9/11/2020	80
9/16/2021	83
9/14/2022	81 (B)
9/7/2023	94

# Tukey's Outlier Screening

MW-8 (bg)



n = 8

No outliers found.  
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were square transformed to achieve best W statistic (graph shown in original units).

High cutoff = 0.5103,  
low cutoff = -0.4208,  
based on IQR multiplier of 3.

Constituent: Beryllium Analysis Run 10/13/2023 9:16 AM View: Deep

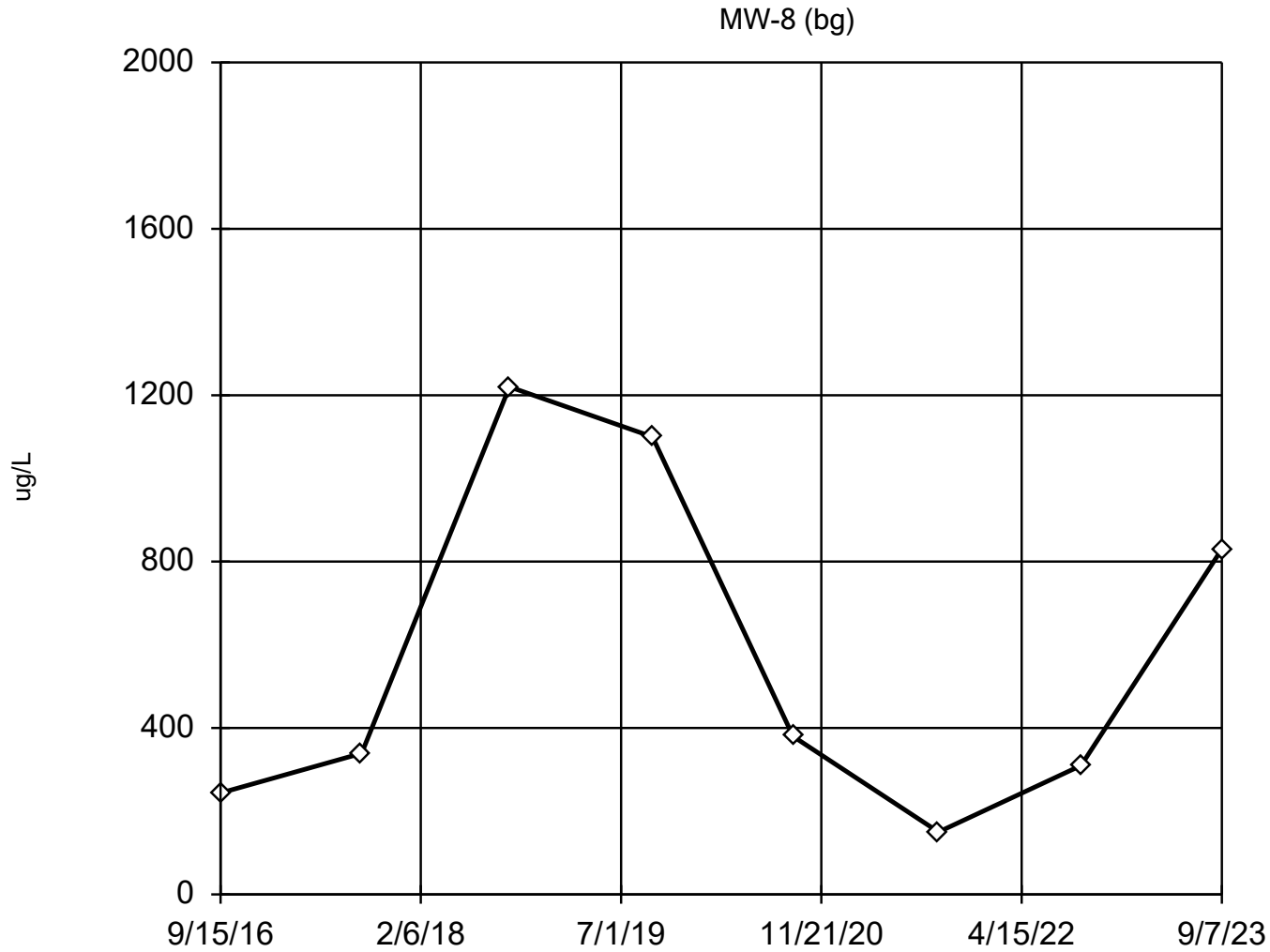
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Tukey's Outlier Screening

Constituent: Beryllium (ug/L) Analysis Run 10/13/2023 9:17 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-8 (bg)
9/15/2016	<0.08
9/9/2017	<0.012
9/20/2018	<0.12
9/19/2019	<0.27
9/11/2020	<0.27
9/16/2021	<0.27
9/14/2022	<0.27
9/7/2023	<0.33 (U)

### EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 571.6, std. dev. 415.9, critical Tn 2.032

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9251  
Critical = 0.851 (after natural log transformation)  
The distribution was found to be log-normal.

Constituent: Boron Analysis Run 10/13/2023 9:16 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# EPA 1989 Outlier Screening

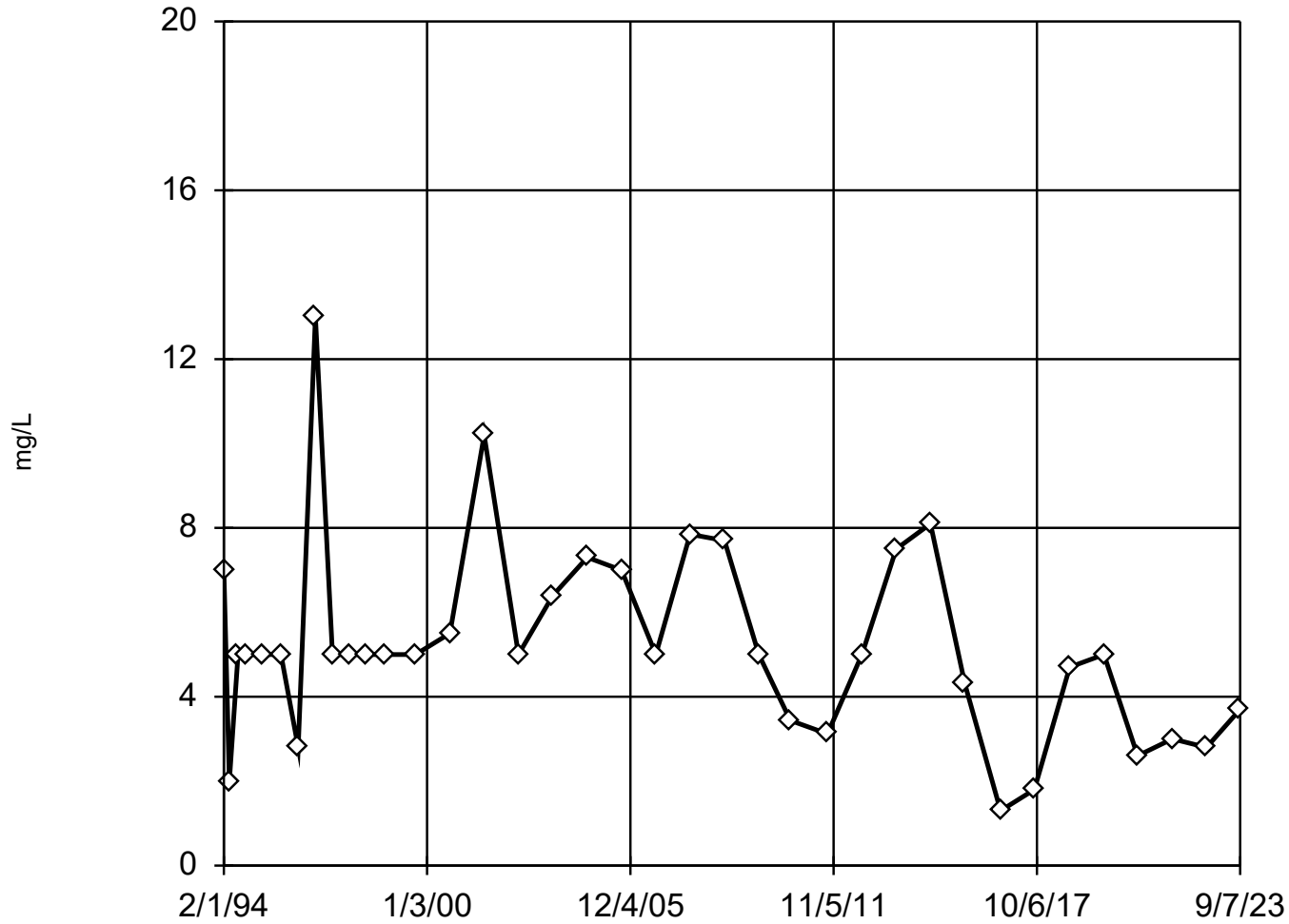
Constituent: Boron (ug/L) Analysis Run 10/13/2023 9:17 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-8 (bg)
9/15/2016	244
9/9/2017	339
9/20/2018	1220
9/19/2019	1100
9/11/2020	380
9/16/2021	150
9/14/2022	310
9/7/2023	830



# Tukey's Outlier Screening

MW-8 (bg)



n = 37

No outliers found.  
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were cube root transformed to achieve best W statistic (graph shown in original units).

High cutoff = 25.8, low cutoff = 0.09616, based on IQR multiplier of 3.

Constituent: Chloride Analysis Run 10/13/2023 9:16 AM View: Deep

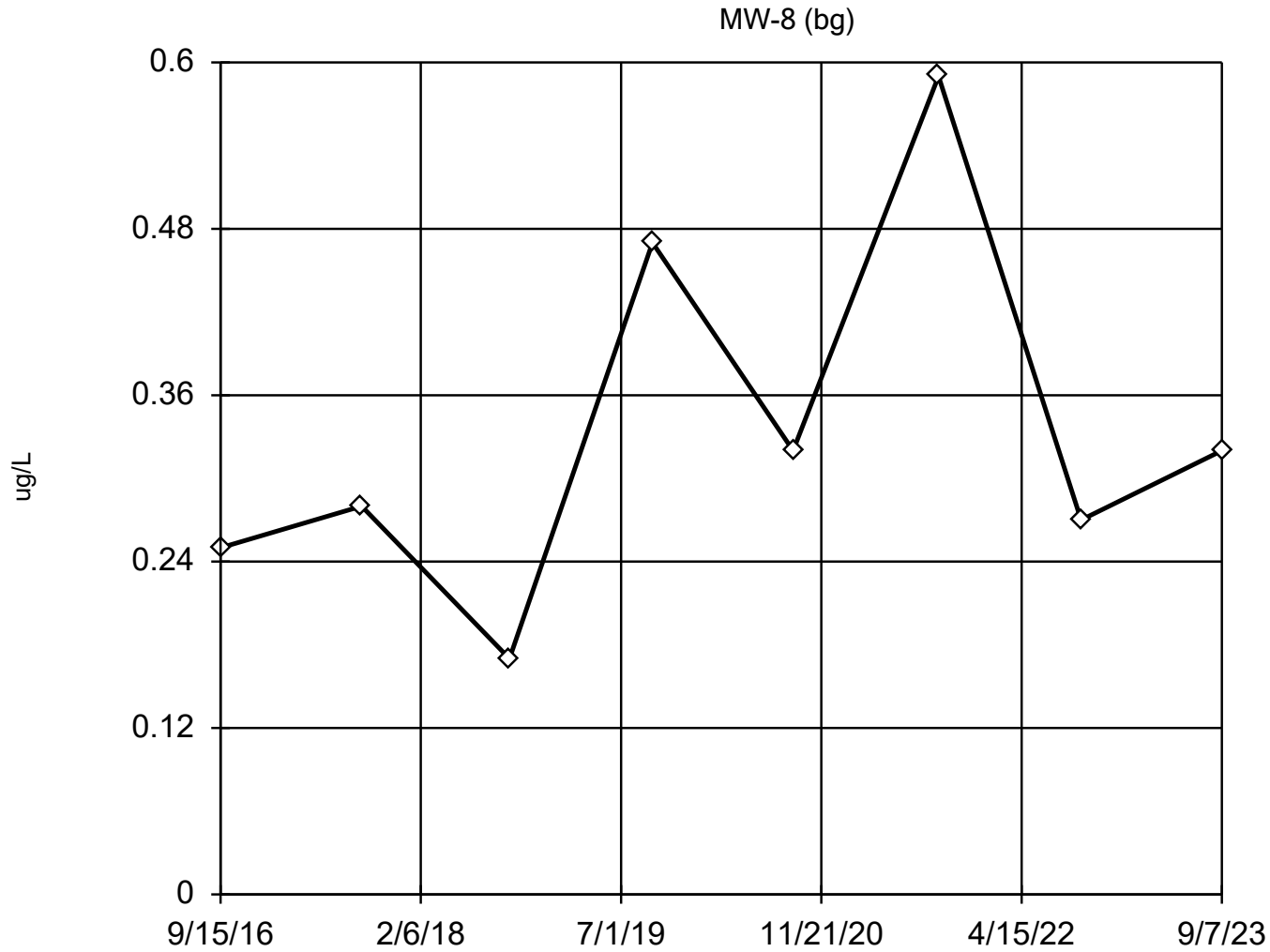
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Tukey's Outlier Screening

Constituent: Chloride (mg/L) Analysis Run 10/13/2023 9:17 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-8 (bg)
2/1/1994	7
4/1/1994	2
7/1/1994	<5
10/1/1994	<5
4/1/1995	<5
10/1/1995	<5
4/1/1996	2.8
10/1/1996	13
4/1/1997	<5
10/1/1997	<5
4/1/1998	<5
10/1/1998	<5
9/1/1999	<5
9/1/2000	5.5
9/1/2001	10.2
9/1/2002	<5
9/1/2003	6.4
9/1/2004	7.3
9/1/2005	7
9/1/2006	<5
9/1/2007	7.85
9/1/2008	7.7
9/1/2009	<5
8/1/2010	3.44
9/1/2011	3.12
9/1/2012	<5
9/1/2013	7.5
9/1/2014	8.1
9/1/2015	4.3
9/15/2016	1.3
9/9/2017	1.8
9/20/2018	4.7
9/19/2019	5
9/11/2020	2.6 (J)
9/16/2021	3 (J)
9/14/2022	2.8 (J)
9/7/2023	3.7 (J)

### EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 0.3338, std. dev. 0.1338, critical Tn 2.032

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.8937  
Critical = 0.851  
The distribution was found to be normally distributed.

Constituent: Cobalt Analysis Run 10/13/2023 9:16 AM View: Deep

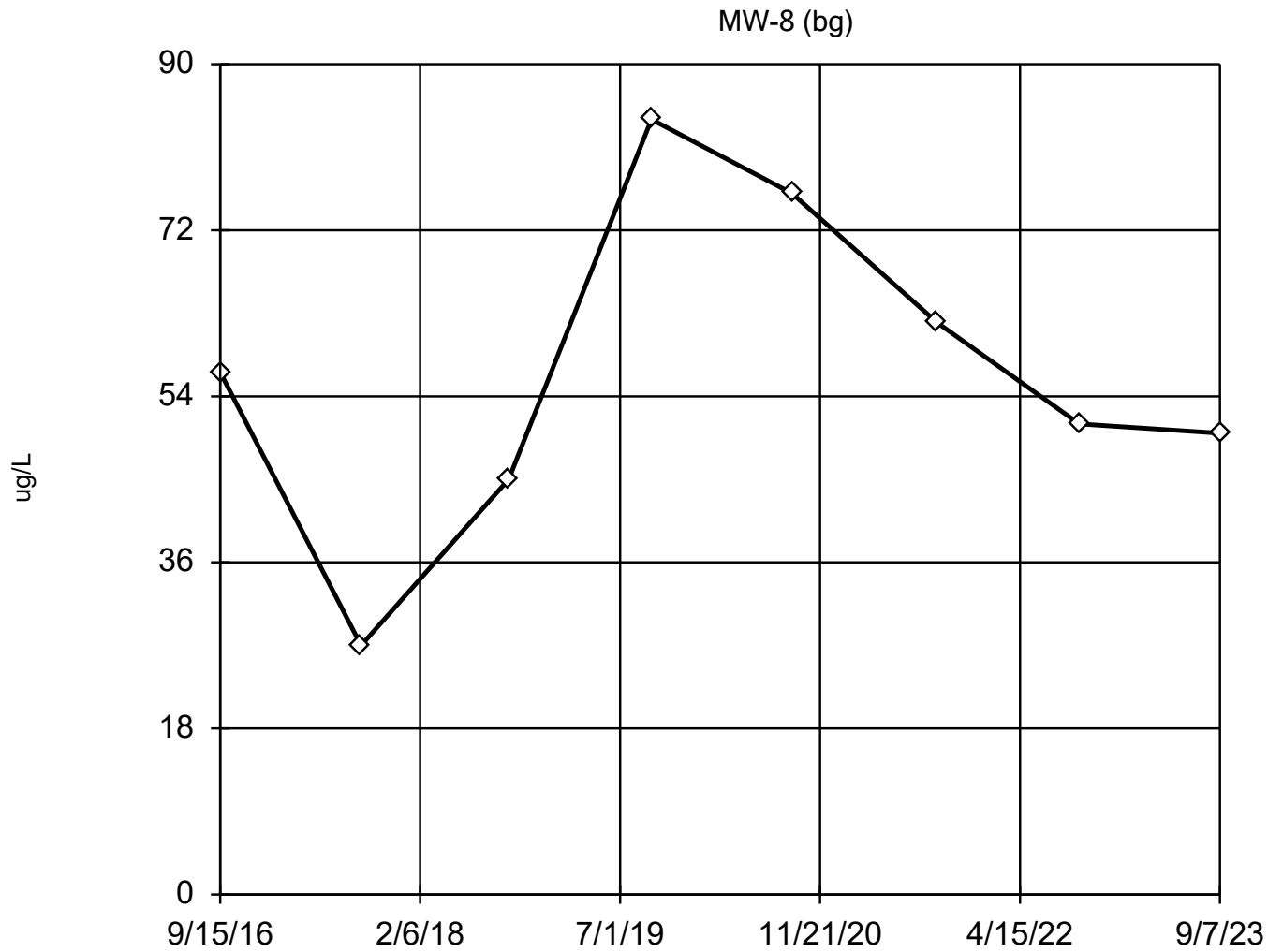
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# EPA 1989 Outlier Screening

Constituent: Cobalt (ug/L) Analysis Run 10/13/2023 9:17 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-8 (bg)
9/15/2016	<0.5
9/9/2017	0.28 (J)
9/20/2018	0.17 (J)
9/19/2019	0.47 (J)
9/11/2020	0.32 (J)
9/16/2021	0.59
9/14/2022	0.27 (J)
9/7/2023	0.32 (J)

### EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 56.45, std. dev. 17.9, critical Tn 2.032

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9733  
Critical = 0.851  
The distribution was found to be normally distributed.

Constituent: Iron Analysis Run 10/13/2023 9:16 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

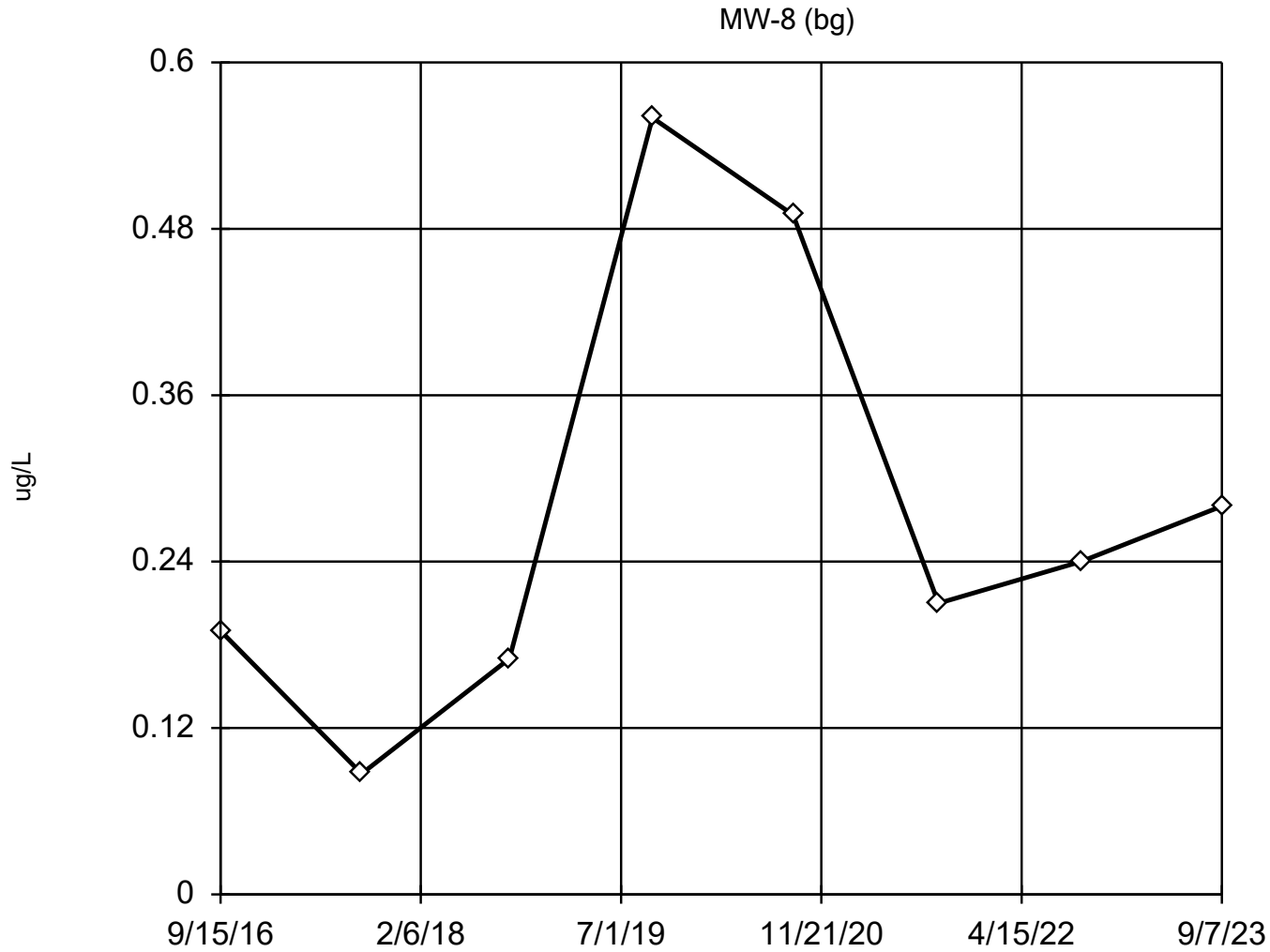
# EPA 1989 Outlier Screening

Constituent: Iron (ug/L) Analysis Run 10/13/2023 9:17 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

MW-8 (bg)

9/15/2016	56.6
9/9/2017	27 (J)
9/20/2018	45 (J)
9/19/2019	84 (J)
9/11/2020	76 (J)
9/16/2021	62 (J)
9/14/2022	51 (J)
9/7/2023	50 (J)

### EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 0.2784, std. dev. 0.1632, critical Tn 2.032

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.8793  
Critical = 0.851  
The distribution was found to be normally distributed.

Constituent: Lead Analysis Run 10/13/2023 9:16 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

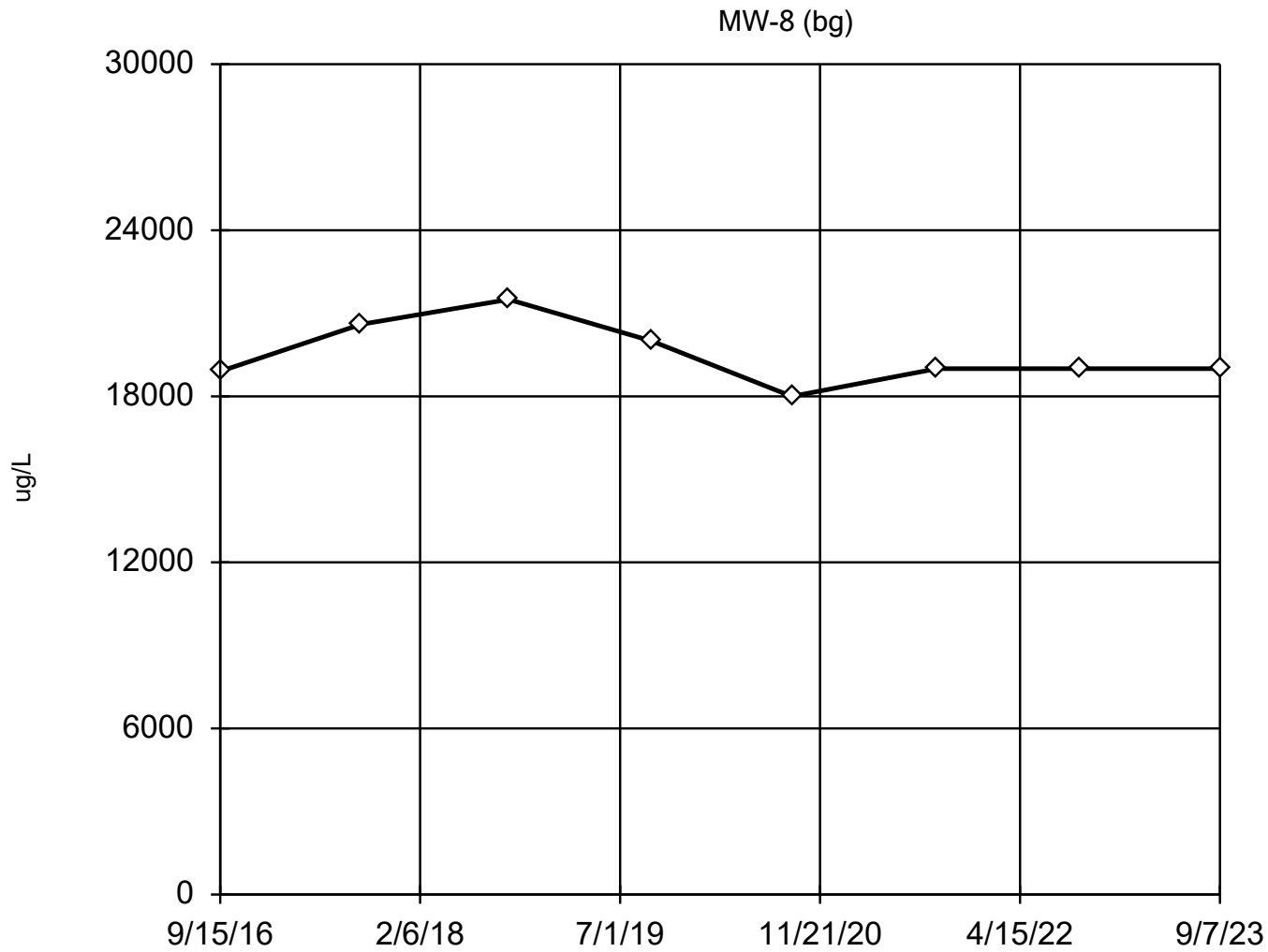
# EPA 1989 Outlier Screening

Constituent: Lead (ug/L) Analysis Run 10/13/2023 9:17 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-8 (bg)
9/15/2016	<0.19
9/9/2017	0.087 (J)
9/20/2018	0.17 (J)
9/19/2019	0.56
9/11/2020	0.49 (J)
9/16/2021	<0.21
9/14/2022	<0.24
9/7/2023	0.28 (J)



### EPA Screening (suspected outliers for Dixon's Test)



n = 8

Dixon's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 19500, std. dev. 1122, critical Tn 2.032

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9083  
Critical = 0.851  
The distribution was found to be normally distributed.

Constituent: Magnesium    Analysis Run 10/13/2023 9:16 AM    View: Deep  
Stoney Point Closed Landfill    Client: SCS Engineers    Data: StoneyPoint\_InputFile

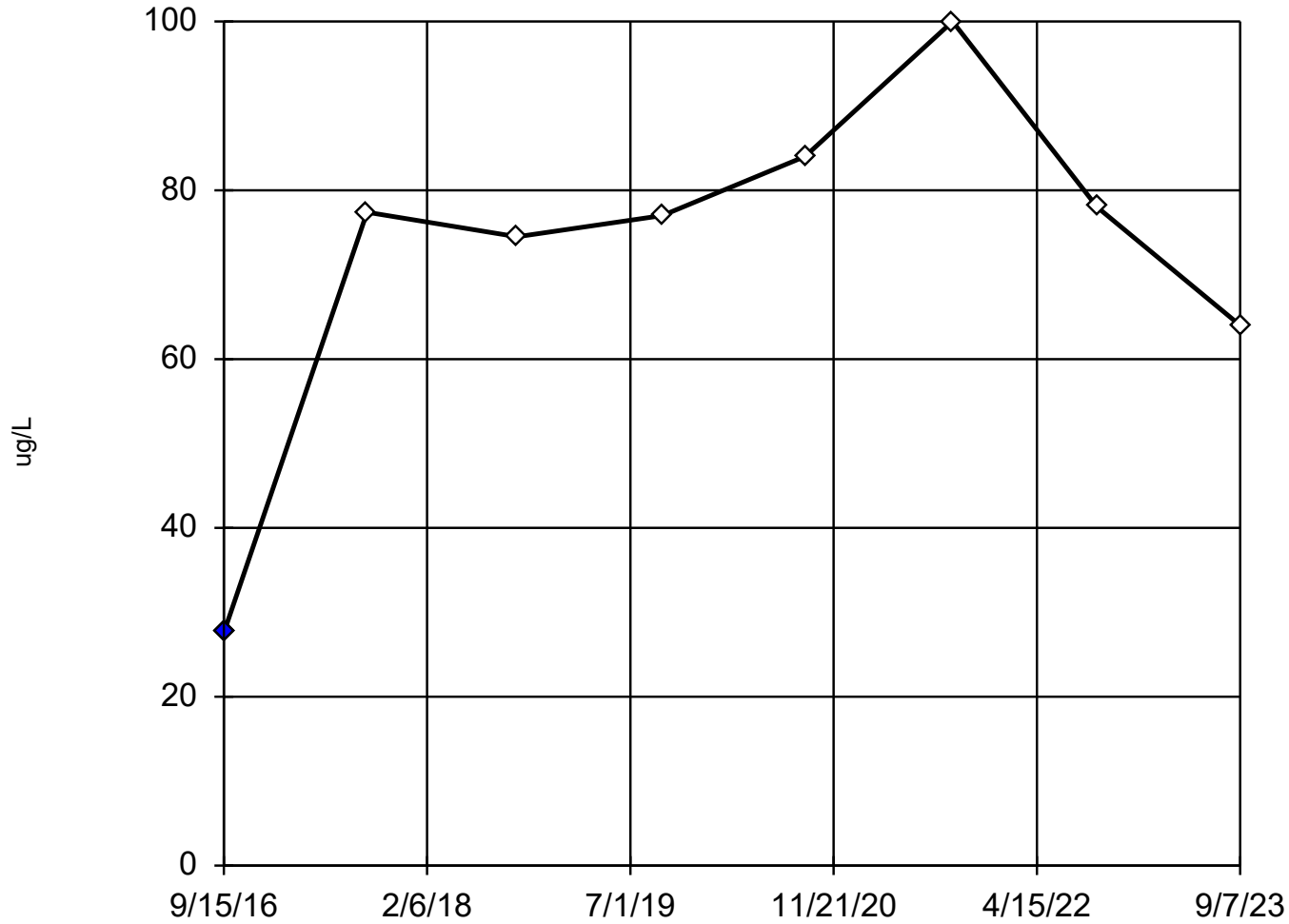
# EPA 1989 Outlier Screening

Constituent: Magnesium (ug/L) Analysis Run 10/13/2023 9:17 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-8 (bg)
9/15/2016	18900
9/9/2017	20600
9/20/2018	21500
9/19/2019	20000
9/11/2020	18000
9/16/2021	19000
9/14/2022	19000
9/7/2023	19000

### Dixon's Outlier Test

MW-8 (bg)



n = 8

Statistical outlier is drawn as solid.  
Testing for 1 low outlier.  
Mean = 72.81.  
Std. Dev. = 20.89.  
27.6: c = 0.6454  
tab1 = 0.554.  
Alpha = 0.05.

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9023  
Critical = 0.838  
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Manganese    Analysis Run 10/13/2023 9:16 AM    View: Deep  
Stoney Point Closed Landfill    Client: SCS Engineers    Data: StoneyPoint\_InputFile

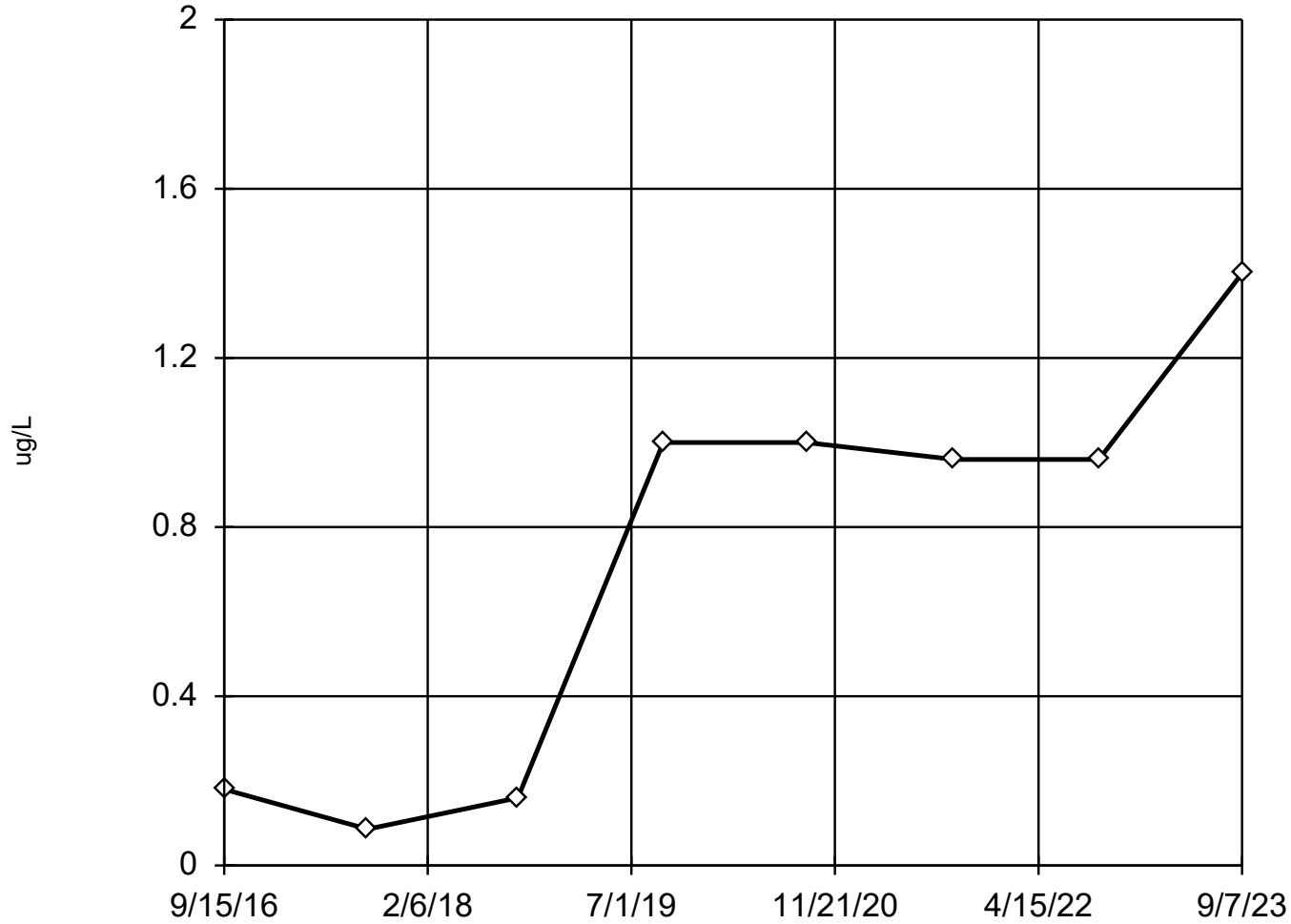
# Dixon's Outlier Test

Constituent: Manganese (ug/L) Analysis Run 10/13/2023 9:17 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-8 (bg)
9/15/2016	27.6 (O)
9/9/2017	77.4
9/20/2018	74.5
9/19/2019	77
9/11/2020	84
9/16/2021	100
9/14/2022	78
9/7/2023	64

# Tukey's Outlier Screening

MW-8 (bg)



n = 8

No outliers found.  
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.

Data were square transformed to achieve best W statistic (graph shown in original units).

High cutoff = 1.978, low cutoff = -1.698, based on IQR multiplier of 3.

Constituent: Selenium Analysis Run 10/13/2023 9:16 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

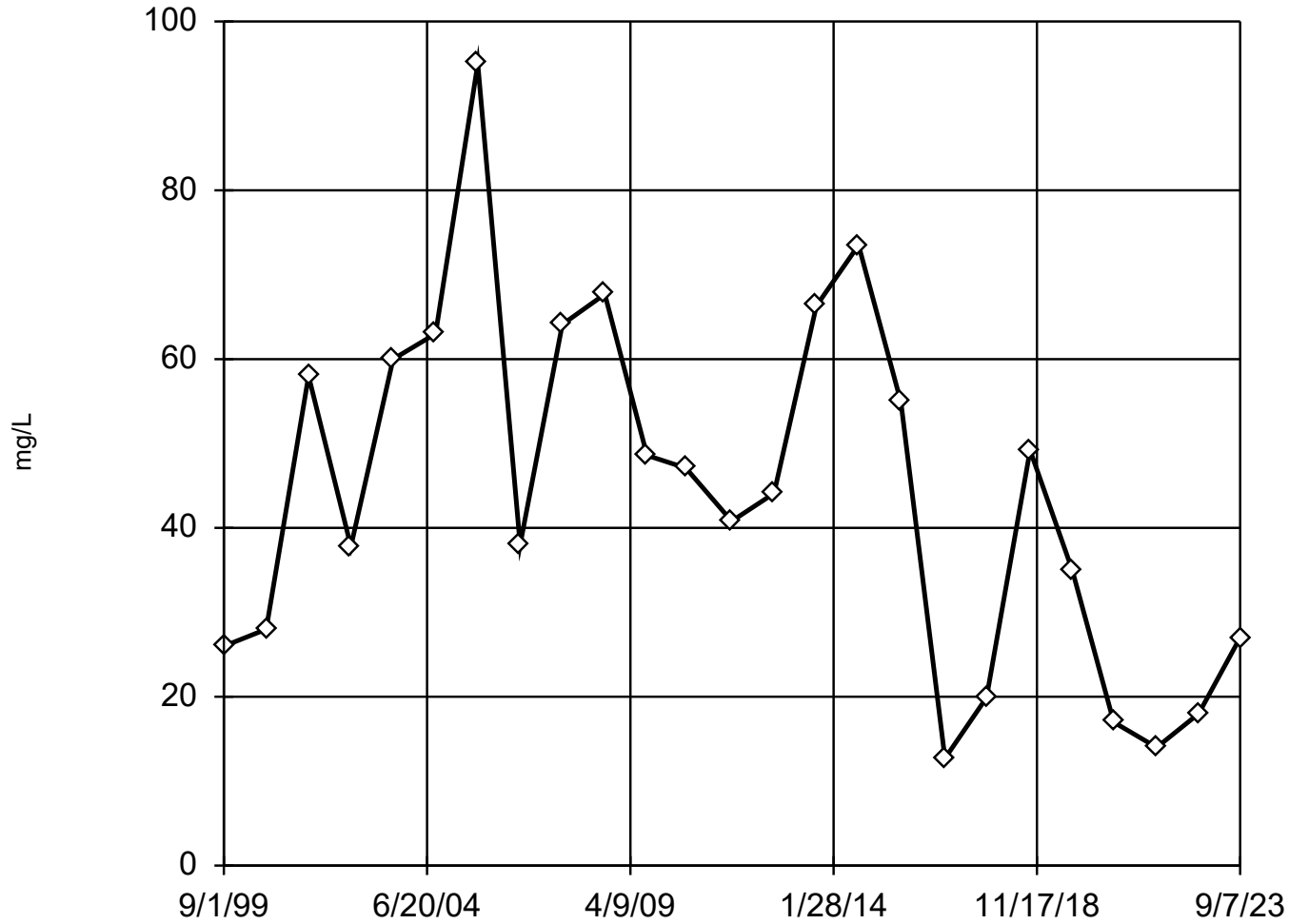
# Tukey's Outlier Screening

Constituent: Selenium (ug/L) Analysis Run 10/13/2023 9:17 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-8 (bg)
9/15/2016	<0.18
9/9/2017	<0.086
9/20/2018	<0.16
9/19/2019	<1
9/11/2020	<1
9/16/2021	<0.96
9/14/2022	<0.96
9/7/2023	<1.4 (U)

### EPA Screening (suspected outliers for Rosner's Test)

MW-8 (bg)



n = 25

Rosner's will not be run.  
No suspect values identified or unable to establish suspect values.  
Mean 44.23, std. dev. 21.24, critical Tn 2.663

Normality test used:  
Shapiro Wilk@alpha = 0.1  
Calculated = 0.9643  
Critical = 0.931  
The distribution was found to be normally distributed.

Constituent: Sulfate Analysis Run 10/13/2023 9:16 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# EPA 1989 Outlier Screening

Constituent: Sulfate (mg/L) Analysis Run 10/13/2023 9:17 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-8 (bg)
9/1/1999	26
9/1/2000	28
9/1/2001	58
9/1/2002	37.8
9/1/2003	60
9/1/2004	63
9/1/2005	95
9/1/2006	38
9/1/2007	64.1
9/1/2008	67.7
9/1/2009	48.6
8/1/2010	47.1
9/1/2011	40.8
9/1/2012	44.1
9/1/2013	66.3
9/1/2014	73.5
9/1/2015	54.9
9/15/2016	12.7
9/9/2017	19.9
9/20/2018	49.2
9/19/2019	35
9/11/2020	17
9/16/2021	14
9/14/2022	18
9/7/2023	27



## Attachment E5

### Interwell Prediction Limit Analysis Results – Shallow Unit

# Prediction Limit

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile Printed 10/13/2023, 9:08 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Wells	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
<b>Arsenic (ug/L)</b>	<b>MW-12</b>	<b>1.20</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>5.1</b>	<b>Yes</b>	<b>8</b>	<b>MW-2A</b>	<b>n/a</b>	<b>n/a</b>	<b>50</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0158</b>	<b>NP Inter (NDs) 1 of 2</b>
Arsenic (ug/L)	MW-15	1.20	n/a	9/7/2023	0.53ND	No	8	MW-2A	n/a	n/a	50	n/a	n/a	0.0158	NP Inter (NDs) 1 of 2
<b>Arsenic (ug/L)</b>	<b>MW-16</b>	<b>1.20</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>2.2</b>	<b>Yes</b>	<b>8</b>	<b>MW-2A</b>	<b>n/a</b>	<b>n/a</b>	<b>50</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0158</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Arsenic (ug/L)</b>	<b>MW-21</b>	<b>1.20</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>16</b>	<b>Yes</b>	<b>8</b>	<b>MW-2A</b>	<b>n/a</b>	<b>n/a</b>	<b>50</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0158</b>	<b>NP Inter (NDs) 1 of 2</b>
Arsenic (ug/L)	MW-25	1.20	n/a	9/7/2023	0.68J	No	8	MW-2A	n/a	n/a	50	n/a	n/a	0.0158	NP Inter (NDs) 1 of 2
Barium (ug/L)	MW-12	281	n/a	9/6/2023	280	No	8	MW-2A	118.6	51.36	0	None	No	0.0006269	Param Inter 1 of 2
Barium (ug/L)	MW-15	281	n/a	9/7/2023	21	No	8	MW-2A	118.6	51.36	0	None	No	0.0006269	Param Inter 1 of 2
Barium (ug/L)	MW-16	281	n/a	9/6/2023	39	No	8	MW-2A	118.6	51.36	0	None	No	0.0006269	Param Inter 1 of 2
<b>Barium (ug/L)</b>	<b>MW-21</b>	<b>281</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>380</b>	<b>Yes</b>	<b>8</b>	<b>MW-2A</b>	<b>118.6</b>	<b>51.36</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Barium (ug/L)</b>	<b>MW-25</b>	<b>281</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>360</b>	<b>Yes</b>	<b>8</b>	<b>MW-2A</b>	<b>118.6</b>	<b>51.36</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Beryllium (ug/L)	MW-12	0.430	n/a	9/6/2023	0.33ND	No	8	MW-2A	n/a	n/a	75	n/a	n/a	0.0158	NP Inter (NDs) 1 of 2
Beryllium (ug/L)	MW-15	0.430	n/a	9/7/2023	0.33ND	No	8	MW-2A	n/a	n/a	75	n/a	n/a	0.0158	NP Inter (NDs) 1 of 2
Beryllium (ug/L)	MW-16	0.430	n/a	9/6/2023	0.33ND	No	8	MW-2A	n/a	n/a	75	n/a	n/a	0.0158	NP Inter (NDs) 1 of 2
Beryllium (ug/L)	MW-21	0.430	n/a	9/7/2023	0.33ND	No	8	MW-2A	n/a	n/a	75	n/a	n/a	0.0158	NP Inter (NDs) 1 of 2
Beryllium (ug/L)	MW-25	0.430	n/a	9/7/2023	0.33ND	No	8	MW-2A	n/a	n/a	75	n/a	n/a	0.0158	NP Inter (NDs) 1 of 2
<b>Boron (ug/L)</b>	<b>MW-12</b>	<b>295</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>1100</b>	<b>Yes</b>	<b>8</b>	<b>MW-2A</b>	<b>145</b>	<b>47.34</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Boron (ug/L)</b>	<b>MW-15</b>	<b>295</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>15000</b>	<b>Yes</b>	<b>8</b>	<b>MW-2A</b>	<b>145</b>	<b>47.34</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Boron (ug/L)</b>	<b>MW-16</b>	<b>295</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>81000</b>	<b>Yes</b>	<b>8</b>	<b>MW-2A</b>	<b>145</b>	<b>47.34</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Boron (ug/L)</b>	<b>MW-21</b>	<b>295</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>300</b>	<b>Yes</b>	<b>8</b>	<b>MW-2A</b>	<b>145</b>	<b>47.34</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Boron (ug/L)	MW-25	295	n/a	9/7/2023	170	No	8	MW-2A	145	47.34	0	None	No	0.0006269	Param Inter 1 of 2
Chloride (mg/L)	MW-12	10.1	n/a	9/6/2023	6.8	No	27	MW-2A	7.708	1.087	0	None	No	0.0006269	Param Inter 1 of 2
<b>Chloride (mg/L)</b>	<b>MW-15</b>	<b>10.1</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>27</b>	<b>Yes</b>	<b>27</b>	<b>MW-2A</b>	<b>7.708</b>	<b>1.087</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Chloride (mg/L)</b>	<b>MW-16</b>	<b>10.1</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>13</b>	<b>Yes</b>	<b>27</b>	<b>MW-2A</b>	<b>7.708</b>	<b>1.087</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Chloride (mg/L)</b>	<b>MW-21</b>	<b>10.1</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>13</b>	<b>Yes</b>	<b>27</b>	<b>MW-2A</b>	<b>7.708</b>	<b>1.087</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Chloride (mg/L)	MW-25	10.1	n/a	9/7/2023	4.2J	No	27	MW-2A	7.708	1.087	0	None	No	0.0006269	Param Inter 1 of 2
Cobalt (ug/L)	MW-12	8.59	n/a	9/6/2023	4.3	No	8	MW-2A	-0.6872	0.8985	25	None	ln(x)	0.0006269	Param Inter 1 of 2
Cobalt (ug/L)	MW-15	8.59	n/a	9/7/2023	2.4	No	8	MW-2A	-0.6872	0.8985	25	None	ln(x)	0.0006269	Param Inter 1 of 2
Cobalt (ug/L)	MW-16	8.59	n/a	9/6/2023	4.1	No	8	MW-2A	-0.6872	0.8985	25	None	ln(x)	0.0006269	Param Inter 1 of 2
Cobalt (ug/L)	MW-21	8.59	n/a	9/7/2023	0.26J	No	8	MW-2A	-0.6872	0.8985	25	None	ln(x)	0.0006269	Param Inter 1 of 2
Cobalt (ug/L)	MW-25	8.59	n/a	9/7/2023	0.91	No	8	MW-2A	-0.6872	0.8985	25	None	ln(x)	0.0006269	Param Inter 1 of 2
Iron (ug/L)	MW-12	20900	n/a	9/6/2023	1500	No	8	MW-2A	4.936	1.587	0	None	ln(x)	0.0006269	Param Inter 1 of 2
Iron (ug/L)	MW-15	20900	n/a	9/7/2023	310	No	8	MW-2A	4.936	1.587	0	None	ln(x)	0.0006269	Param Inter 1 of 2
Iron (ug/L)	MW-16	20900	n/a	9/6/2023	450	No	8	MW-2A	4.936	1.587	0	None	ln(x)	0.0006269	Param Inter 1 of 2
Iron (ug/L)	MW-21	20900	n/a	9/7/2023	3100	No	8	MW-2A	4.936	1.587	0	None	ln(x)	0.0006269	Param Inter 1 of 2
Iron (ug/L)	MW-25	20900	n/a	9/7/2023	580	No	8	MW-2A	4.936	1.587	0	None	ln(x)	0.0006269	Param Inter 1 of 2
Lead (ug/L)	MW-12	26.2	n/a	9/6/2023	0.12ND	No	8	MW-2A	-0.4853	1.188	0	None	ln(x)	0.0006269	Param Inter 1 of 2
Lead (ug/L)	MW-15	26.2	n/a	9/7/2023	0.12ND	No	8	MW-2A	-0.4853	1.188	0	None	ln(x)	0.0006269	Param Inter 1 of 2
Lead (ug/L)	MW-16	26.2	n/a	9/6/2023	0.25J	No	8	MW-2A	-0.4853	1.188	0	None	ln(x)	0.0006269	Param Inter 1 of 2
Lead (ug/L)	MW-21	26.2	n/a	9/7/2023	1	No	8	MW-2A	-0.4853	1.188	0	None	ln(x)	0.0006269	Param Inter 1 of 2
Lead (ug/L)	MW-25	26.2	n/a	9/7/2023	1.6	No	8	MW-2A	-0.4853	1.188	0	None	ln(x)	0.0006269	Param Inter 1 of 2
Magnesium (ug/L)	MW-12	35000	n/a	9/6/2023	18000	No	8	MW-2A	17000	5694	0	None	No	0.0006269	Param Inter 1 of 2
<b>Magnesium (ug/L)</b>	<b>MW-15</b>	<b>35000</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>61000</b>	<b>Yes</b>	<b>8</b>	<b>MW-2A</b>	<b>17000</b>	<b>5694</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Magnesium (ug/L)</b>	<b>MW-16</b>	<b>35000</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>90000</b>	<b>Yes</b>	<b>8</b>	<b>MW-2A</b>	<b>17000</b>	<b>5694</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Magnesium (ug/L)	MW-21	35000	n/a	9/7/2023	28000	No	8	MW-2A	17000	5694	0	None	No	0.0006269	Param Inter 1 of 2
Magnesium (ug/L)	MW-25	35000	n/a	9/7/2023	22000	No	8	MW-2A	17000	5694	0	None	No	0.0006269	Param Inter 1 of 2
<b>Manganese (ug/L)</b>	<b>MW-12</b>	<b>1370</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>2800</b>	<b>Yes</b>	<b>8</b>	<b>MW-2A</b>	<b>3.301</b>	<b>1.241</b>	<b>0</b>	<b>None</b>	<b>ln(x)</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Manganese (ug/L)	MW-15	1370	n/a	9/7/2023	780	No	8	MW-2A	3.301	1.241	0	None	ln(x)	0.0006269	Param Inter 1 of 2
Manganese (ug/L)	MW-16	1370	n/a	9/6/2023	1000	No	8	MW-2A	3.301	1.241	0	None	ln(x)	0.0006269	Param Inter 1 of 2
Manganese (ug/L)	MW-21	1370	n/a	9/7/2023	210	No	8	MW-2A	3.301	1.241	0	None	ln(x)	0.0006269	Param Inter 1 of 2
Manganese (ug/L)	MW-25	1370	n/a	9/7/2023	210	No	8	MW-2A	3.301	1.241	0	None	ln(x)	0.0006269	Param Inter 1 of 2

# Prediction Limit

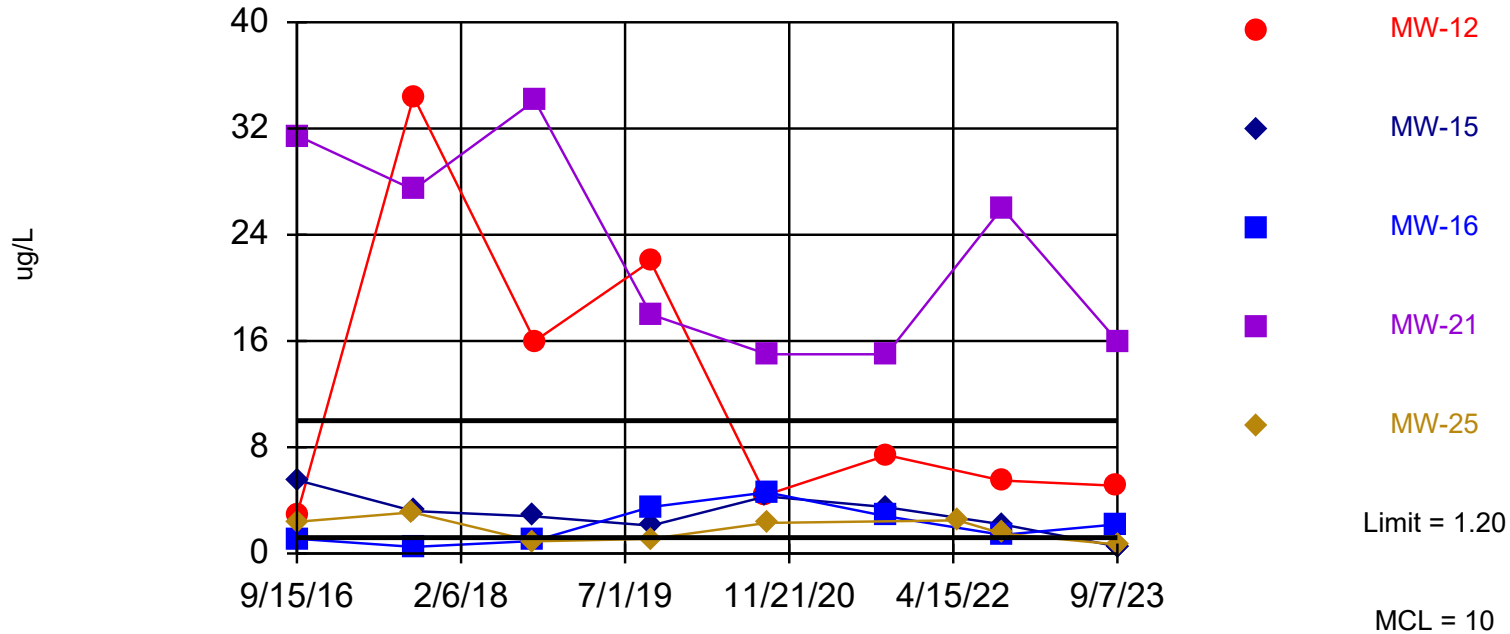
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile Printed 10/13/2023, 9:08 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>Bg Wells</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Selenium (ug/L)	MW-12	3.64	n/a	9/6/2023	0.7ND	No	8	MW-2A	1.405	0.7082	12.5	None	No	0.0006269	Param Inter 1 of 2
Selenium (ug/L)	MW-15	3.64	n/a	9/7/2023	0.7ND	No	8	MW-2A	1.405	0.7082	12.5	None	No	0.0006269	Param Inter 1 of 2
Selenium (ug/L)	MW-16	3.64	n/a	9/6/2023	0.7ND	No	8	MW-2A	1.405	0.7082	12.5	None	No	0.0006269	Param Inter 1 of 2
Selenium (ug/L)	MW-21	3.64	n/a	9/7/2023	0.7ND	No	8	MW-2A	1.405	0.7082	12.5	None	No	0.0006269	Param Inter 1 of 2
Selenium (ug/L)	MW-25	3.64	n/a	9/7/2023	0.7ND	No	8	MW-2A	1.405	0.7082	12.5	None	No	0.0006269	Param Inter 1 of 2
<b>Sulfate (mg/L)</b>	<b>MW-12</b>	<b>53.3</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>54</b>	<b>Yes</b>	<b>25</b>	<b>MW-2A</b>	<b>37.94</b>	<b>6.856</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Sulfate (mg/L)</b>	<b>MW-15</b>	<b>53.3</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>1400</b>	<b>Yes</b>	<b>25</b>	<b>MW-2A</b>	<b>37.94</b>	<b>6.856</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Sulfate (mg/L)</b>	<b>MW-16</b>	<b>53.3</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>2500</b>	<b>Yes</b>	<b>25</b>	<b>MW-2A</b>	<b>37.94</b>	<b>6.856</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Sulfate (mg/L)	MW-21	53.3	n/a	9/7/2023	33	No	25	MW-2A	37.94	6.856	0	None	No	0.0006269	Param Inter 1 of 2
Sulfate (mg/L)	MW-25	53.3	n/a	9/7/2023	27	No	25	MW-2A	37.94	6.856	0	None	No	0.0006269	Param Inter 1 of 2

Exceeds Limit: MW-12, MW-16, MW-21

## Arsenic

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 49%. Limit is highest of 8 background values. 50% NDs. Annual per-constituent alpha = 0.1999. Individual comparison alpha = 0.0158 (1 of 2). Comparing 5 points to limit. Assumes 9 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Prediction Limit Analysis Run 10/13/2023 9:02 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Prediction Limit

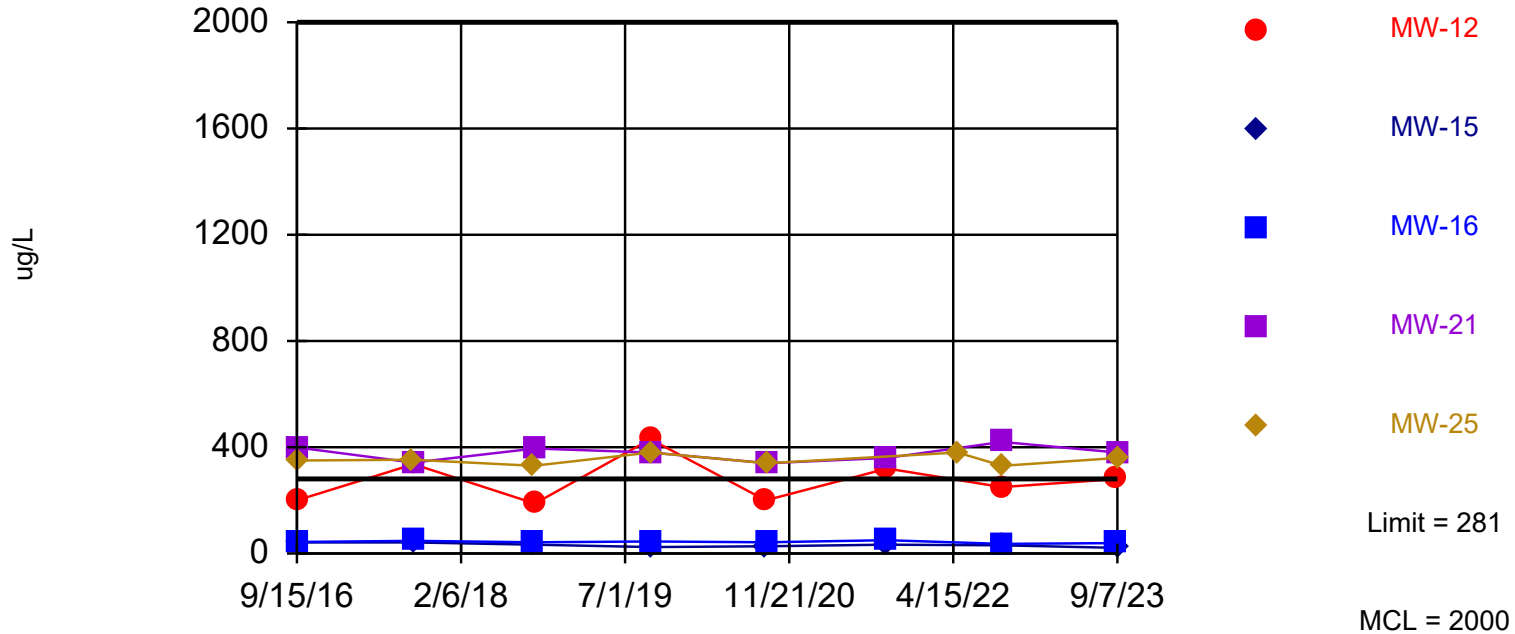
Constituent: Arsenic (ug/L) Analysis Run 10/13/2023 9:08 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-2A (bg)	MW-15	MW-25	MW-21	MW-16
9/15/2016	2.9					
9/16/2016		0.24 (J)				
9/20/2016			5.5			
9/21/2016				2.4		
9/22/2016					31.4	1.1
9/8/2017		1.2		3.1		
9/11/2017					27.4	
9/12/2017	34.4		3.2			0.5 (J)
9/20/2018		0.2 (J)	2.8	0.92 (J)		
9/21/2018						0.94 (J)
9/24/2018	16				34.1	
9/18/2019	22			1.1 (J)		3.5
9/19/2019		<0.75	2.1		18	
9/10/2020	4.4					
9/11/2020			4.3			
9/14/2020		<0.88		2.3		4.6
9/15/2020					15	
9/15/2021		<0.75				
9/17/2021			3.5			
9/20/2021					15	
9/21/2021						2.8
9/22/2021	7.4					
4/29/2022				2.5		
9/13/2022	5.5					
9/14/2022		<0.75	2.2		26	1.4 (J)
9/15/2022				1.5 (J)		
9/6/2023	5.1					2.2
9/7/2023		0.88 (J)	<0.53 (U)	0.68 (J)	16	

Exceeds Limit: MW-21, MW-25

## Barium

### Interwell Parametric



Background Data Summary: Mean=118.6, Std. Dev.=51.36, n=8. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7546, critical = 0.749. Kappa = 3.158 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 5 points to limit. Assumes 9 future values.

Prediction Limit Analysis Run 10/13/2023 9:02 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Prediction Limit

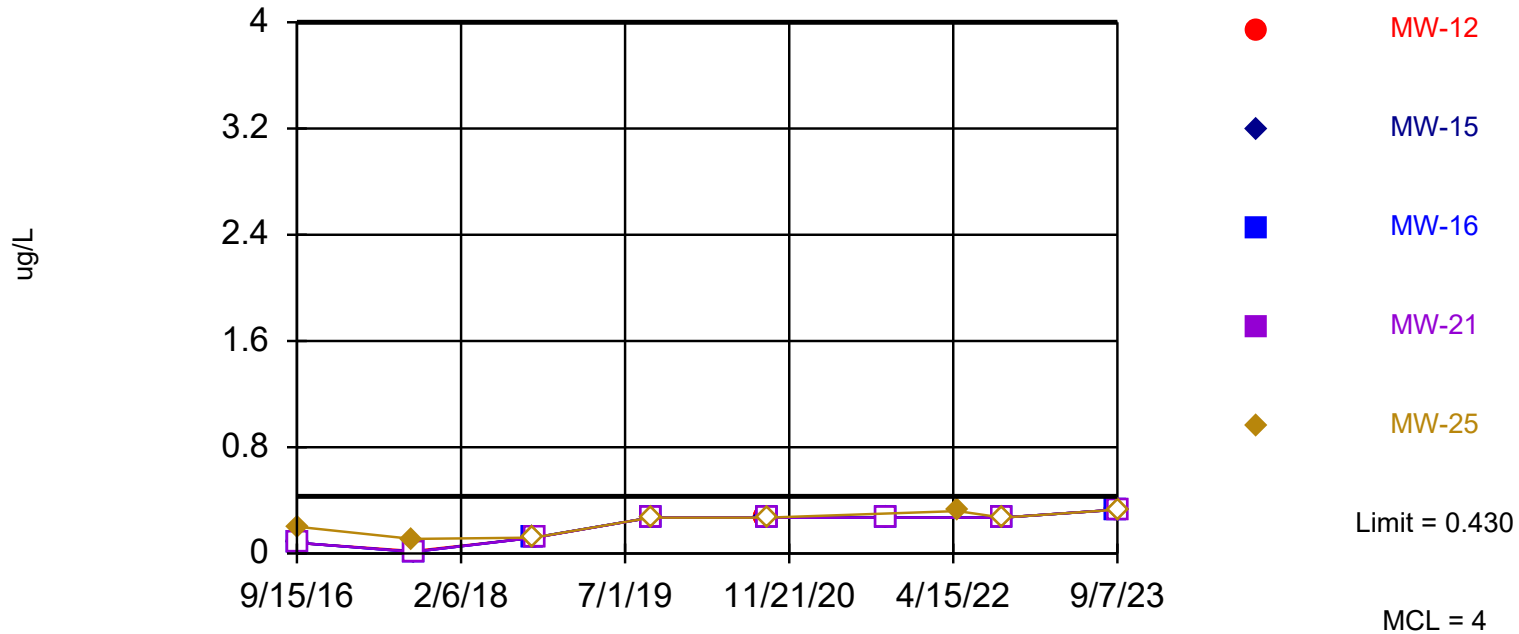
Constituent: Barium (ug/L) Analysis Run 10/13/2023 9:08 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	200					
9/16/2016						234
9/20/2016		41.6				
9/21/2016					350	
9/22/2016			43.5	398		
9/8/2017					353	149
9/11/2017				342		
9/12/2017	336	41.6	47.8			
9/20/2018		33.3			330	101
9/21/2018			42.2			
9/24/2018	188			395		
9/18/2019	430		45		380	
9/19/2019		24		380		99
9/10/2020	200					
9/11/2020		27				
9/14/2020			42		340	91
9/15/2020				340		
9/15/2021						110
9/17/2021		33				
9/20/2021				360		
9/21/2021			50			
9/22/2021	320					
4/29/2022					380	
9/13/2022	250 (B)					
9/14/2022		31 (B)	36 (B)	420 (B)		76 (B)
9/15/2022					330 (B)	
9/6/2023	280		39			
9/7/2023		21		380	360	89

Within Limit

# Beryllium

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 49%. Limit is highest of 8 background values. 75% NDs. Annual per-constituent alpha = 0.1999. Individual comparison alpha = 0.0158 (1 of 2). Comparing 5 points to limit. Assumes 9 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Prediction Limit Analysis Run 10/13/2023 9:02 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile



# Prediction Limit

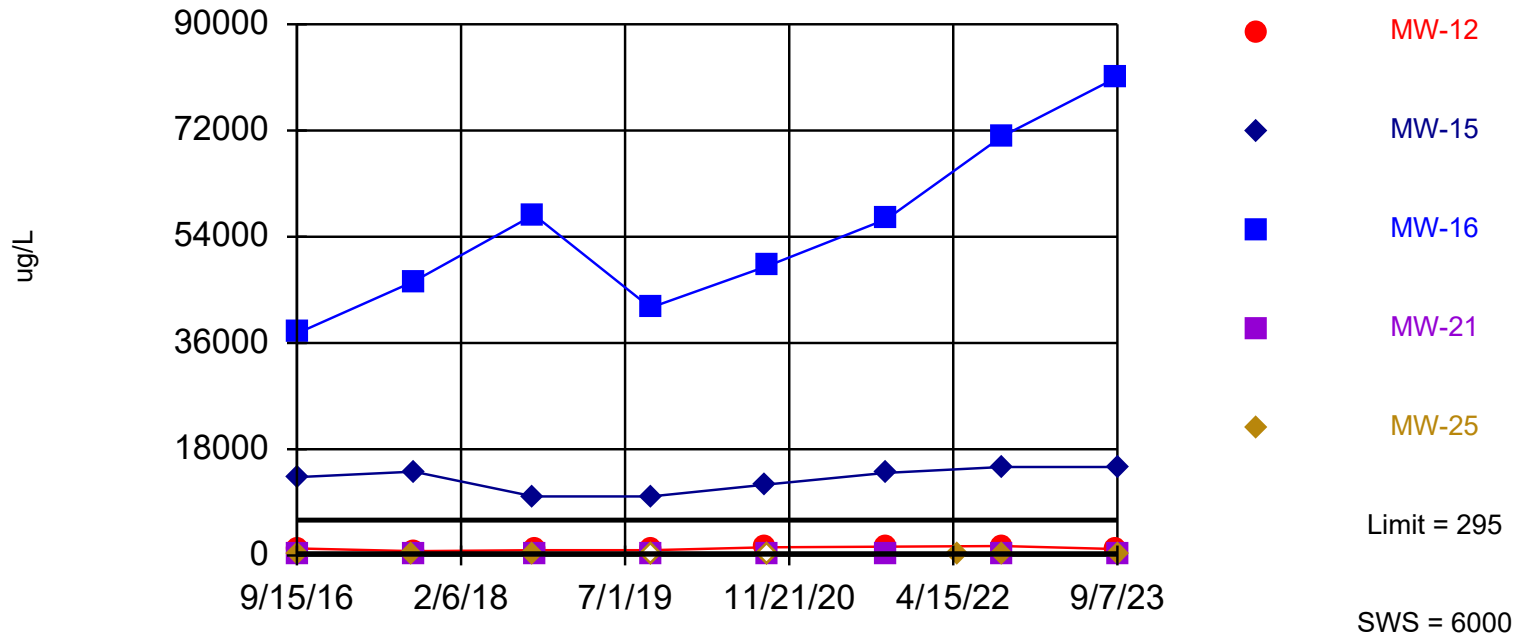
Constituent: Beryllium (ug/L) Analysis Run 10/13/2023 9:08 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-2A (bg)	MW-15	MW-25	MW-21	MW-16
9/15/2016	<0.08					
9/16/2016		<0.08				
9/20/2016			<0.08			
9/21/2016				0.2 (J)		
9/22/2016					<0.08	<0.08
9/8/2017		0.048 (J)		0.11 (J)		
9/11/2017					<0.012	
9/12/2017	0.018 (J)		<0.012			<0.012
9/20/2018		<0.12	<0.12	<0.12		
9/21/2018						<0.12
9/24/2018	<0.12				<0.12	
9/18/2019	<0.27			<0.27		<0.27
9/19/2019		<0.27	<0.27		<0.27	
9/10/2020	<0.27					
9/11/2020			<0.27			
9/14/2020		<0.27		<0.27		<0.27
9/15/2020					<0.27	
9/15/2021		<0.27				
9/17/2021			<0.27			
9/20/2021					<0.27	
9/21/2021						<0.27
9/22/2021	<0.27					
4/29/2022				0.32 (J)		
9/13/2022	<0.27					
9/14/2022		<0.27	<0.27		<0.27	<0.27
9/15/2022				<0.27		
9/6/2023	<0.33 (U)					<0.33 (U)
9/7/2023		0.43 (J)	<0.33 (U)	<0.33 (U)	<0.33 (U)	

Exceeds Limit: MW-12, MW-15, MW-16,  
MW-21

## Boron

### Interwell Parametric



Background Data Summary: Mean=145, Std. Dev.=47.34, n=8. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9383, critical = 0.749. Kappa = 3.158 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 5 points to limit. Assumes 9 future values.

# Prediction Limit

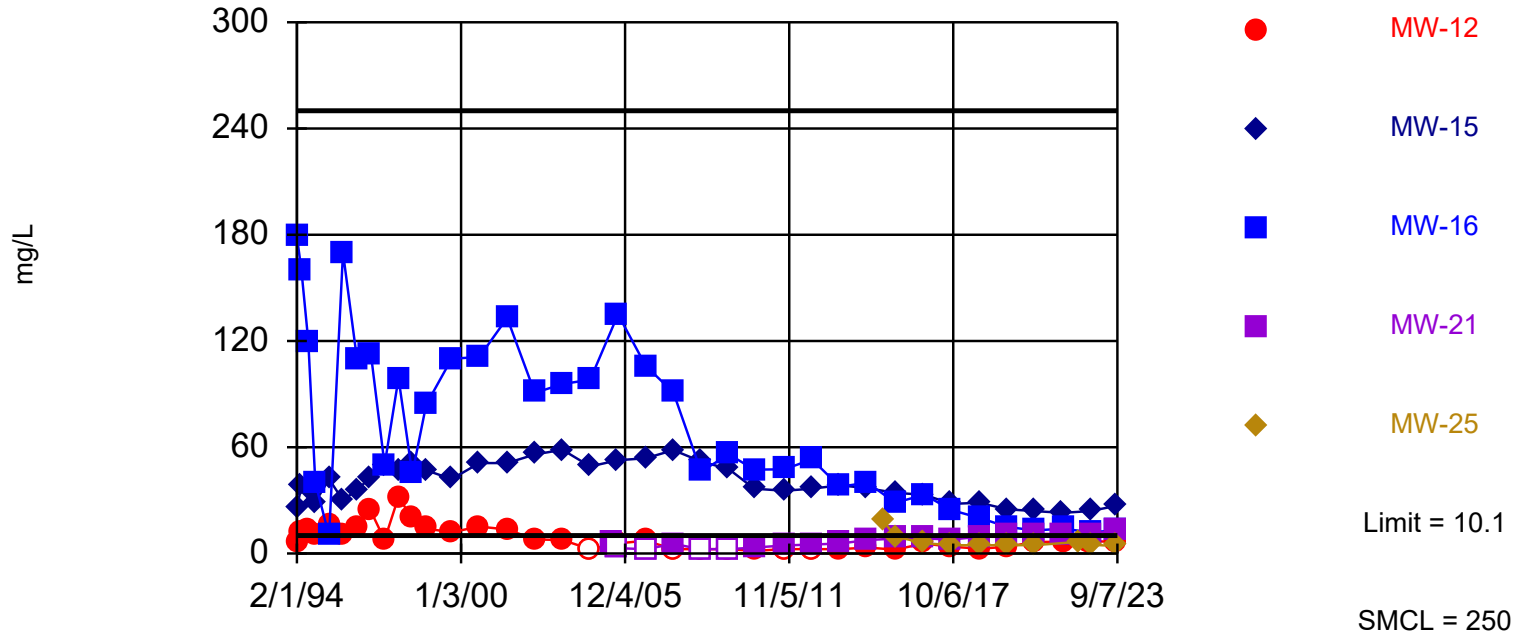
Constituent: Boron (ug/L) Analysis Run 10/13/2023 9:08 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	1200					
9/16/2016						159
9/20/2016		13300				
9/21/2016					98 (J)	
9/22/2016			37800	86.8 (J)		
9/8/2017					105	222
9/11/2017				116		
9/12/2017	741	14200	46400			
9/20/2018		10000			153	141
9/21/2018			57700			
9/24/2018	910			158		
9/18/2019	890		42000		<110	
9/19/2019		10000		140 (J)		200
9/10/2020	1400					
9/11/2020		12000				
9/14/2020			49000		<80	110
9/15/2020				110		
9/15/2021						140
9/17/2021		14000				
9/20/2021				350		
9/21/2021			57000			
9/22/2021	1500					
4/29/2022					110	
9/13/2022	1600					
9/14/2022		15000	71000	350		88 (J)
9/15/2022					210	
9/6/2023	1100		81000			
9/7/2023		15000		300	170	100

Exceeds Limit: MW-15, MW-16, MW-21

# Chloride

## Interwell Parametric



Background Data Summary: Mean=7.708, Std. Dev.=1.087, n=27. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9728, critical = 0.894. Kappa = 2.223 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 5 points to limit. Assumes 9 future values.

Prediction Limit Analysis Run 10/13/2023 9:02 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/13/2023 9:08 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
2/1/1994	6	26	179			
4/1/1994	12	38	160			
7/1/1994	13	37	120			
10/1/1994	11	29	40			
4/1/1995	16	42	10			
10/1/1995	11	30	170			
4/1/1996	15	36	110			
10/1/1996	24	43	113			
4/1/1997	7.7	50	50			
10/1/1997	32	47	99			
4/1/1998	19.6	51.1	44.9			9.9
10/1/1998	14	47	84			8.8
9/1/1999	12	42	110			8.9
9/1/2000	15.2	51.1	111			9.4
9/1/2001	13.6	51.1	133			9.6
9/1/2002	8	55.9	90.7			8.1
9/1/2003	7.6	58.6	95.7			8.5
9/1/2004	<5	49.2	98.1			8.1
6/1/2005				5.9		
9/1/2005	5.7	52.7	135	<6		8.4
9/1/2006	7.28	53.8	106	<5		7.98
9/1/2007	<5	58.4	90.9	5.47		8.09
9/1/2008	<5	52	46.3	<5		6.54
9/1/2009	<5	47.6	56	<5		6.97
8/1/2010	1.5	36.6	47.4	3.36		7.3
9/1/2011	<5	35.4	47.5	4.5		7.36
9/1/2012	<5	36.6	53.1	5.11		6.98
9/1/2013	2.5	38.5	37.7	5.6		7
9/1/2014	3.4	36.9	40	7.6		6.6
4/1/2015					18.4	
9/1/2015	2.2	34.3	28.7	8.4	9.6	6.6
9/15/2016	5.6					
9/16/2016						6.5
9/20/2016		33.2				
9/21/2016					5.8	
9/22/2016			33.2	8.5		
9/8/2017					4.7	5.4
9/11/2017				7.9		
9/12/2017	3.8	28	24.5			
9/20/2018		28.7			4.6	6.5
9/21/2018			20.1			
9/24/2018	2.7			9.5		
9/18/2019	3.8 (J)		15		4.7 (J)	
9/19/2019		25		11		7.4
9/10/2020	6.5					
9/11/2020		24				
9/14/2020			13		4.7 (J)	7.3
9/15/2020				11		
9/15/2021						7.3
9/17/2021		23				
9/20/2021				11		
9/21/2021			14			

# Prediction Limit

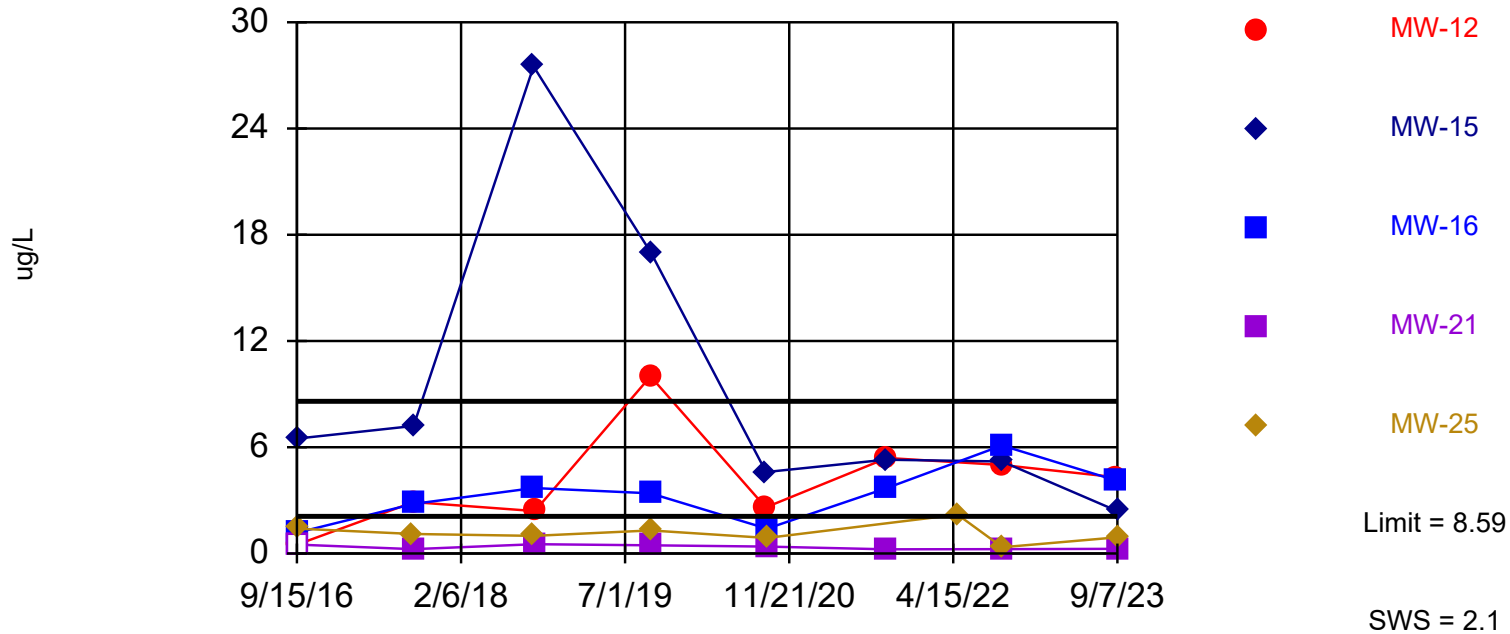
Constituent: Chloride (mg/L) Analysis Run 10/13/2023 9:08 AM View: Shallow  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/22/2021	6.6					
4/29/2022					6.6	
9/13/2022	6.8					
9/14/2022		24	12	11		8
9/15/2022					5	
9/6/2023	6.8		13			
9/7/2023		27		13	4.2 (J)	8.6

Within Limit

# Cobalt

## Interwell Parametric



Background Data Summary (based on natural log transformation): Mean=-0.6872, Std. Dev.=0.8985, n=8, 25% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.775, critical = 0.749. Kappa = 3.158 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 5 points to limit. Assumes 9 future values.

Prediction Limit Analysis Run 10/13/2023 9:02 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Prediction Limit

Constituent: Cobalt (ug/L) Analysis Run 10/13/2023 9:08 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

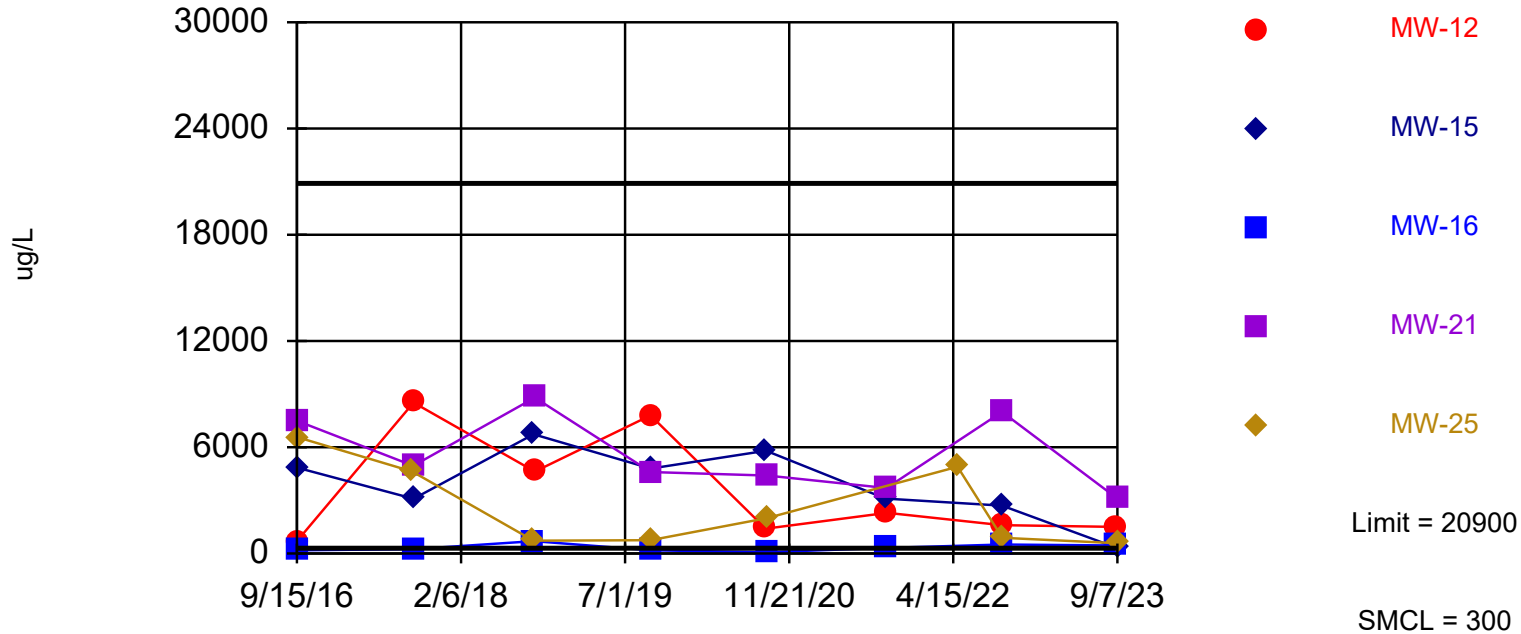
	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	<0.5					
9/16/2016						<0.5
9/20/2016		6.5				
9/21/2016					1.4	
9/22/2016			1.2	<0.5		
9/8/2017					1.1	3.7
9/11/2017				0.25 (J)		
9/12/2017	2.9	7.2	2.8			
9/20/2018		27.5			1	<0.15
9/21/2018			3.7			
9/24/2018	2.4			0.53 (J)		
9/18/2019	10		3.4		1.3	
9/19/2019		17		0.46 (J)		0.5
9/10/2020	2.6					
9/11/2020		4.6				
9/14/2020			1.4		0.88	0.42 (J)
9/15/2020				0.39 (J)		
9/15/2021						0.37 (J)
9/17/2021		5.3				
9/20/2021				0.24 (J)		
9/21/2021			3.7			
9/22/2021	5.4					
4/29/2022					2.2	
9/13/2022	5					
9/14/2022		5.2	6.1	0.25 (J)		0.38 (J)
9/15/2022					0.35 (J)	
9/6/2023	4.3		4.1			
9/7/2023		2.4		0.26 (J)	0.91	0.5



Within Limit

# Iron

## Interwell Parametric



Background Data Summary (based on natural log transformation): Mean=4.936, Std. Dev.=1.587, n=8. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7617, critical = 0.749. Kappa = 3.158 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 5 points to limit. Assumes 9 future values.

Prediction Limit Analysis Run 10/13/2023 9:02 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Prediction Limit

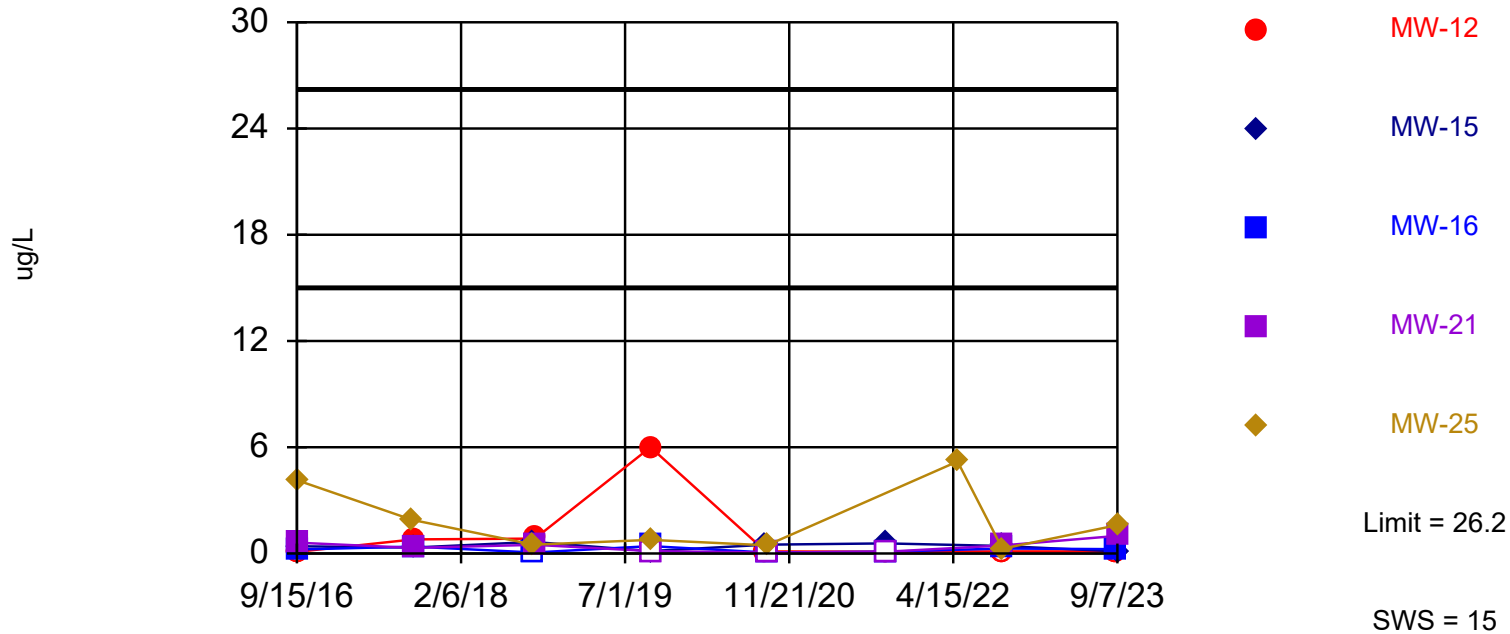
Constituent: Iron (ug/L) Analysis Run 10/13/2023 9:08 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	695					
9/16/2016						240
9/20/2016		4830				
9/21/2016					6540	
9/22/2016			180	7450		
9/8/2017					4630	5330
9/11/2017				4950		
9/12/2017	8520	3090	247			
9/20/2018		6730			722	69.4
9/21/2018			696			
9/24/2018	4630			8800		
9/18/2019	7800		180		750	
9/19/2019		4800		4600		140
9/10/2020	1400					
9/11/2020		5800				
9/14/2020			78 (J)		2000	84 (J)
9/15/2020				4400		
9/15/2021						47 (J)
9/17/2021		3100				
9/20/2021				3700		
9/21/2021			320			
9/22/2021	2300					
4/29/2022					4900	
9/13/2022	1600					
9/14/2022		2700	510	8000		80 (J)
9/15/2022					890	
9/6/2023	1500		450			
9/7/2023		310		3100	580	36 (J)

Within Limit

# Lead

## Interwell Parametric



Background Data Summary (based on natural log transformation): Mean=-0.4853, Std. Dev.=1.188, n=8. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8275, critical = 0.749. Kappa = 3.158 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 5 points to limit. Assumes 9 future values.

Prediction Limit Analysis Run 10/13/2023 9:02 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Prediction Limit

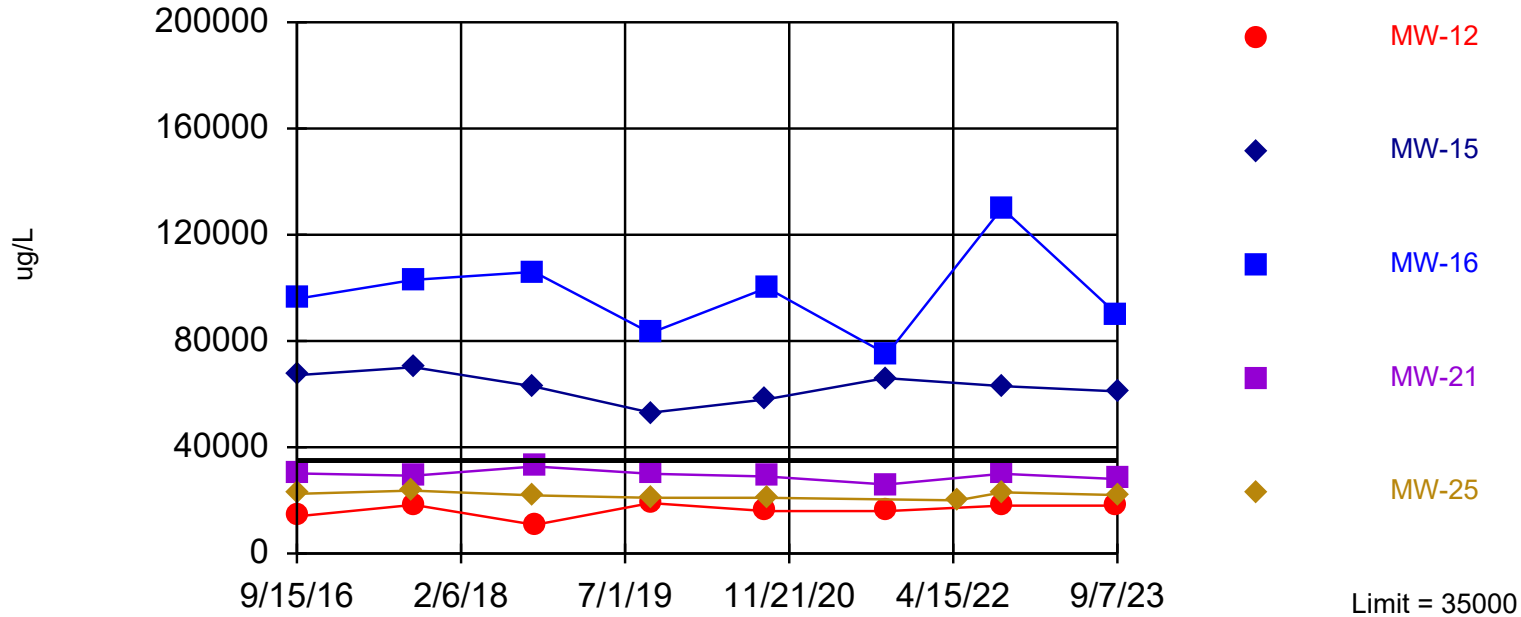
Constituent: Lead (ug/L) Analysis Run 10/13/2023 9:08 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	<0.19					
9/16/2016						0.7 (J)
9/20/2016		0.41 (J)				
9/21/2016					4.1	
9/22/2016			0.23 (J)	0.61 (J)		
9/8/2017					1.9	8.5
9/11/2017				0.32 (J)		
9/12/2017	0.8 (J)	0.34 (J)	0.39 (J)			
9/20/2018		0.65 (J)			0.5 (J)	0.17 (J)
9/21/2018			<0.12			
9/24/2018	0.84 (J)			0.49 (J)		
9/18/2019	6		0.42 (J)		0.77	
9/19/2019		<0.27		<0.27		0.74
9/10/2020	0.12 (J)					
9/11/2020		0.5				
9/14/2020			<0.11		0.46 (J)	0.36 (J)
9/15/2020				<0.11		
9/15/2021						0.28 (J)
9/17/2021		0.57				
9/20/2021				<0.21		
9/21/2021			<0.21			
9/22/2021	<0.21					
4/29/2022					5.2	
9/13/2022	<0.24					
9/14/2022		0.43 (J)	0.28 (J)	0.45 (J)		0.35 (J)
9/15/2022					0.27 (J)	
9/6/2023	<0.24 (U)		0.25 (J)			
9/7/2023		<0.24 (U)		1	1.6	0.78

Exceeds Limit: MW-15, MW-16

## Magnesium

Interwell Parametric



Background Data Summary: Mean=17000, Std. Dev.=5694, n=8. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.762, critical = 0.749. Kappa = 3.158 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 5 points to limit. Assumes 9 future values.

Prediction Limit Analysis Run 10/13/2023 9:02 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Prediction Limit

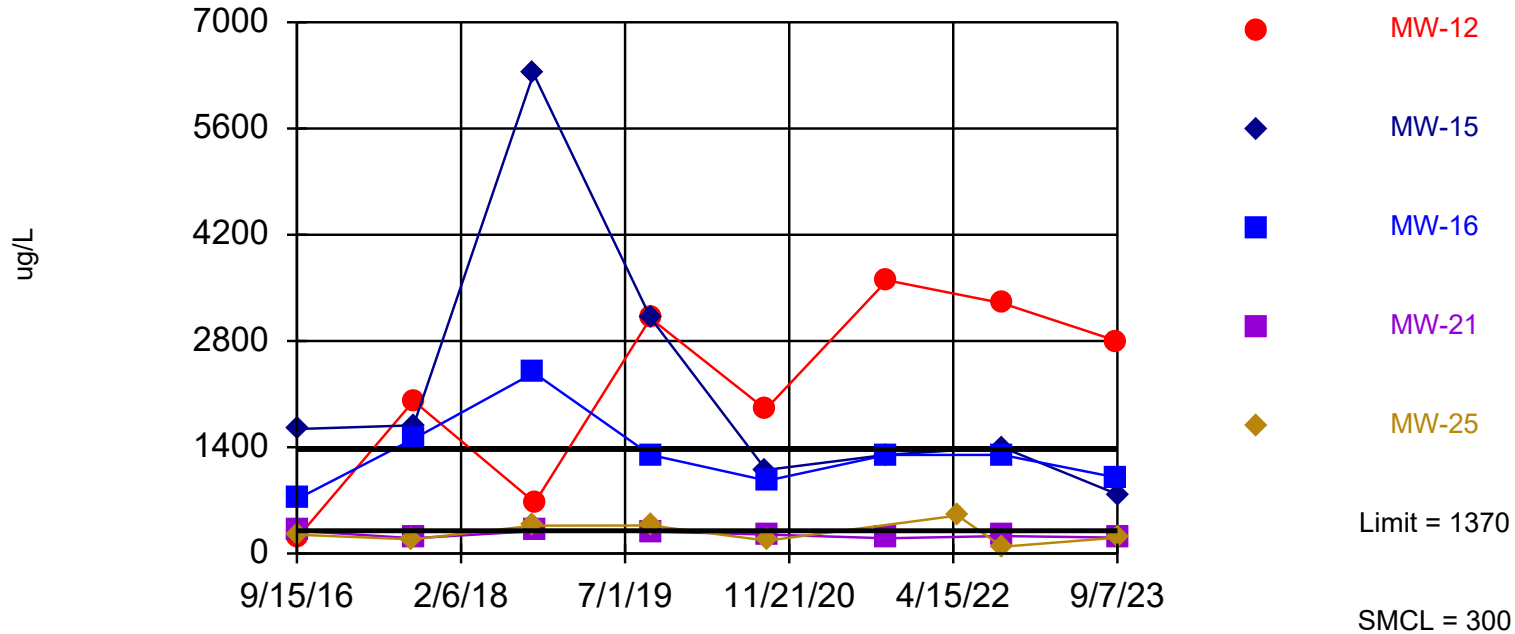
Constituent: Magnesium (ug/L) Analysis Run 10/13/2023 9:08 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	14000					
9/16/2016						23800
9/20/2016		67200				
9/21/2016					22500	
9/22/2016			96000	30100		
9/8/2017					23700	27700
9/11/2017				29300		
9/12/2017	18300	70100	103000			
9/20/2018		62900			21900	15500
9/21/2018			106000			
9/24/2018	10800			32800		
9/18/2019	19000		83000		21000	
9/19/2019		53000		30000		13000
9/10/2020	16000					
9/11/2020		58000				
9/14/2020			100000		21000	13000
9/15/2020				29000		
9/15/2021						17000
9/17/2021		66000				
9/20/2021				26000		
9/21/2021			75000			
9/22/2021	16000					
4/29/2022					20000	
9/13/2022	18000					
9/14/2022		63000	130000	30000		13000
9/15/2022					23000	
9/6/2023	18000		90000			
9/7/2023		61000		28000	22000	13000

Exceeds Limit: MW-12

# Manganese

## Interwell Parametric



Background Data Summary (based on natural log transformation): Mean=3.301, Std. Dev.=1.241, n=8. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7857, critical = 0.749. Kappa = 3.158 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 5 points to limit. Assumes 9 future values.

Prediction Limit Analysis Run 10/13/2023 9:02 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Prediction Limit

Constituent: Manganese (ug/L) Analysis Run 10/13/2023 9:08 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

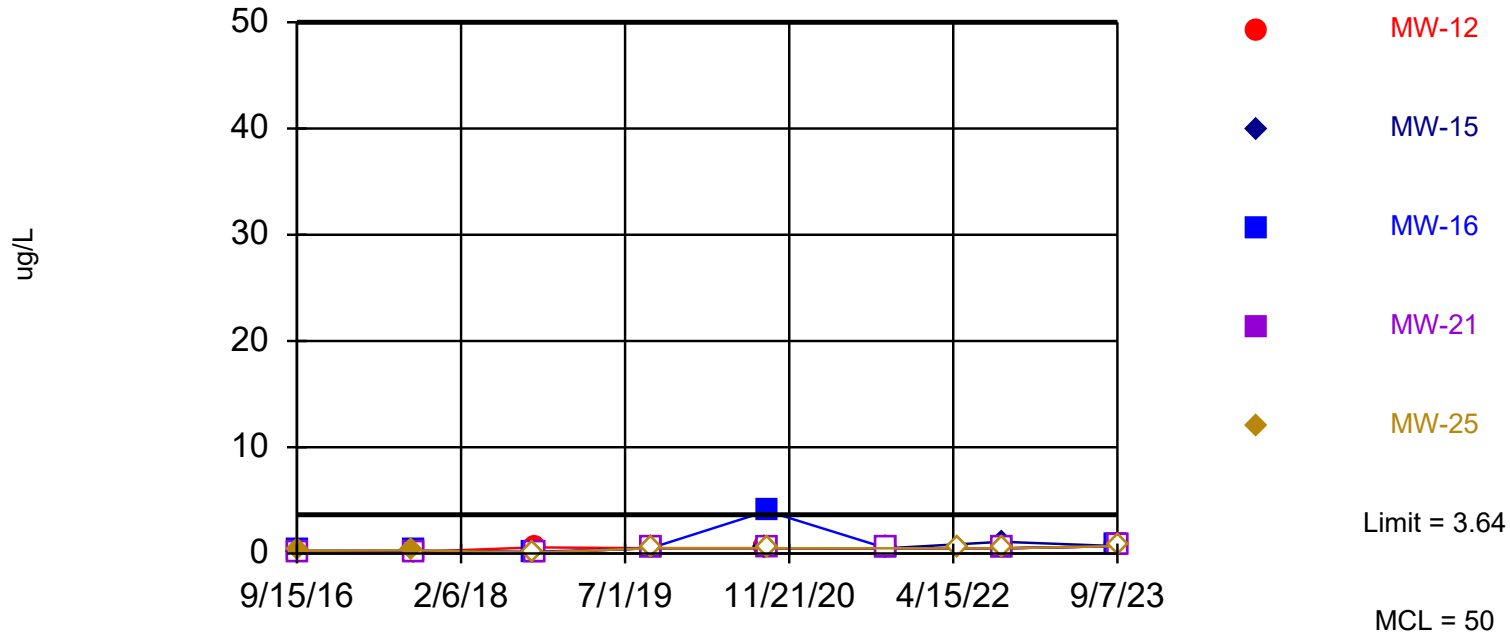
	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	201					
9/16/2016						35.6
9/20/2016		1640				
9/21/2016					248	
9/22/2016			731	298		
9/8/2017					186	464
9/11/2017				200		
9/12/2017	2010	1690	1510			
9/20/2018		6320			368	8.2
9/21/2018			2380			
9/24/2018	670			296		
9/18/2019	3100		1300		370	
9/19/2019		3100		290		27
9/10/2020	1900					
9/11/2020		1100				
9/14/2020			960		170	24
9/15/2020				250		
9/15/2021						18
9/17/2021		1300				
9/20/2021				200		
9/21/2021			1300			
9/22/2021	3600					
4/29/2022					500	
9/13/2022	3300					
9/14/2022		1400	1300	230		17
9/15/2022					89	
9/6/2023	2800		1000			
9/7/2023		780		210	210	11



Within Limit

# Selenium

## Interwell Parametric



Background Data Summary: Mean=1.405, Std. Dev.=0.7082, n=8, 12.5% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9689, critical = 0.749. Kappa = 3.158 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 5 points to limit. Assumes 9 future values.

Prediction Limit Analysis Run 10/13/2023 9:02 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Prediction Limit

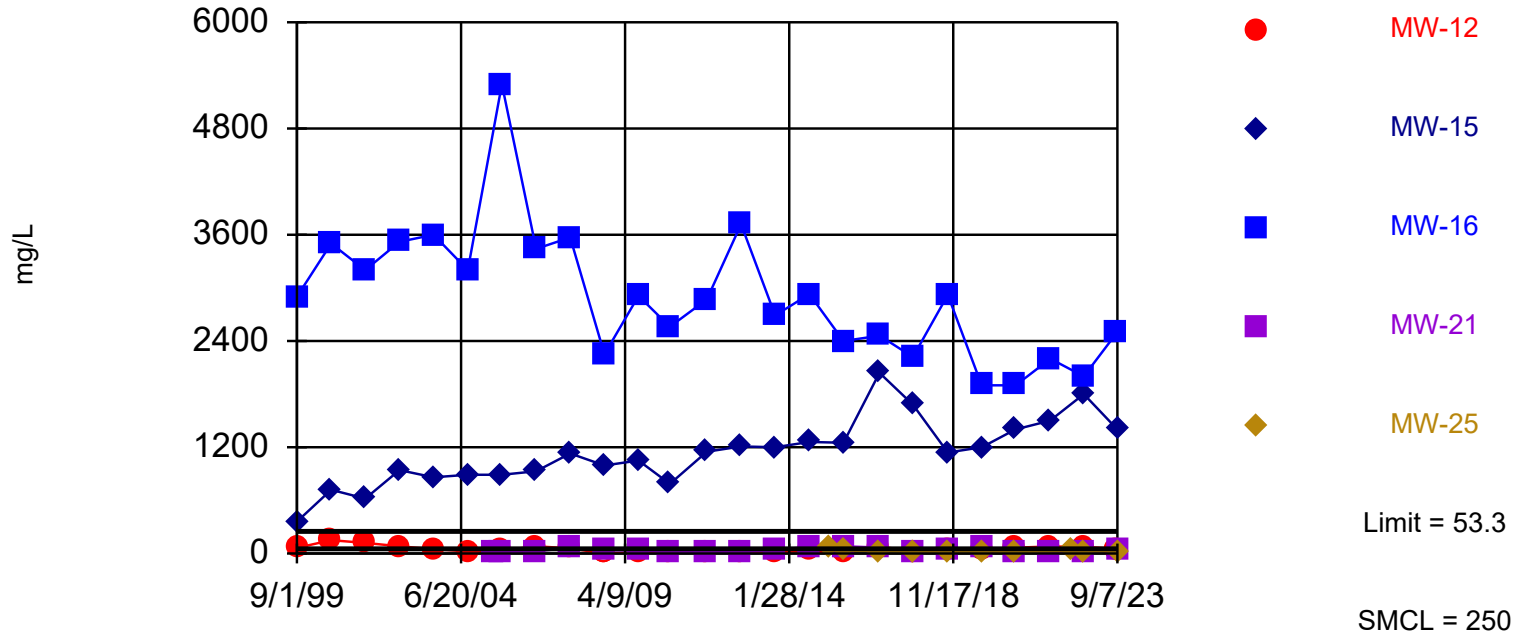
Constituent: Selenium (ug/L) Analysis Run 10/13/2023 9:08 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/15/2016	<0.18					
9/16/2016						0.99 (J)
9/20/2016		<0.18				
9/21/2016					0.26 (J)	
9/22/2016			0.26 (J)	<0.18		
9/8/2017					0.3 (J)	0.65 (J)
9/11/2017				<0.086		
9/12/2017	0.15 (J)	0.17 (J)	0.28 (J)			
9/20/2018		<0.16			<0.16	1.7
9/21/2018			0.16 (J)			
9/24/2018	0.58 (J)			<0.16		
9/18/2019	<1		<1		<1	
9/19/2019		<1		<1		<1
9/10/2020	<1					
9/11/2020		<1				
9/14/2020			4 (J)		<1	1.2 (J)
9/15/2020				<1		
9/15/2021						1.6 (J)
9/17/2021		<0.96				
9/20/2021				<0.96		
9/21/2021			<0.96			
9/22/2021	<0.96					
4/29/2022					<0.96	
9/13/2022	<0.96					
9/14/2022		1.1 (J)	<0.96	<0.96		2 (J)
9/15/2022					<0.96	
9/6/2023	<1.4 (U)		<1.4 (U)			
9/7/2023		<1.4 (U)		<1.4 (U)	<1.4 (U)	2.6 (J)

Exceeds Limit: MW-12, MW-15, MW-16

## Sulfate

### Interwell Parametric



Background Data Summary: Mean=37.94, Std. Dev.=6.856, n=25. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9518, critical = 0.888. Kappa = 2.245 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 5 points to limit. Assumes 9 future values.

Prediction Limit Analysis Run 10/13/2023 9:02 AM View: Shallow

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 10/13/2023 9:08 AM View: Shallow  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	MW-15	MW-16	MW-21	MW-25	MW-2A (bg)
9/1/1999	63	360	2900			32
9/1/2000	150	720	3500			47
9/1/2001	120	620	3200			41
9/1/2002	82.5	942	3520			45.6
9/1/2003	49	860	3600			46
9/1/2004	24	890	3200			44
6/1/2005				19		
9/1/2005	34	890	5300	16		44
9/1/2006	81	930	3440	26.3		37.7
9/1/2007	58.3	1130	3570	62.2		36.2
9/1/2008	<2	994	2250	34.8		34.4
9/1/2009	7.88	1050	2910	33.9		34.7
8/1/2010	2.14	786	2560	15.4		30.8
9/1/2011	24.8	1150	2870	21.9		36
9/1/2012	21.8	1210	3720	17.8		40.2
9/1/2013	16.9	1200	2690	34.2		31.2
9/1/2014	29.2	1260	2930	79.6		33.3
4/1/2015					56.2	
9/1/2015	4.4	1250	2400	81.6	35.4	32.4
9/15/2016	80.6					
9/16/2016						37.4
9/20/2016		2040				
9/21/2016					25.6	
9/22/2016			2460	66.7		
9/8/2017					21.4	56.9
9/11/2017				10.7		
9/12/2017	25.7	1680	2220			
9/20/2018		1140			20.3	43.6
9/21/2018			2920			
9/24/2018	42.8			41.3		
9/18/2019	40		1900		23	
9/19/2019		1200		61		35
9/10/2020	65					
9/11/2020		1400				
9/14/2020			1900		17	37
9/15/2020				16		
9/15/2021						37
9/17/2021		1500				
9/20/2021				13		
9/21/2021			2200			
9/22/2021	79					
4/29/2022					28	
9/13/2022	75					
9/14/2022		1800	2000	24		27
9/15/2022					22	
9/6/2023	54		2500			
9/7/2023		1400		33	27	28



Attachment E6

Interwell Prediction Limit Analysis Results – Deep Unit

# Prediction Limit

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile Printed 10/13/2023, 9:13 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Wells	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (ug/L)	MW-11	0.880	n/a	9/7/2023	0.93J	No	8	MW-8	n/a	n/a	62.5	n/a	n/a	0.0158	NP Inter (NDs) 1 of 2
Arsenic (ug/L)	MW-17	0.880	n/a	9/6/2023	0.67J	No	8	MW-8	n/a	n/a	62.5	n/a	n/a	0.0158	NP Inter (NDs) 1 of 2
<b>Arsenic (ug/L)</b>	<b>MW-20</b>	<b>0.880</b>	<b>n/a</b>	<b>9/14/2020</b>	<b>16</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>n/a</b>	<b>n/a</b>	<b>62.5</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0158</b>	<b>NP Inter (NDs) 1 of 2</b>
Arsenic (ug/L)	MW-22	0.880	n/a	9/7/2023	0.53ND	No	8	MW-8	n/a	n/a	62.5	n/a	n/a	0.0158	NP Inter (NDs) 1 of 2
Arsenic (ug/L)	MW-23	0.880	n/a	9/7/2023	0.63J	No	8	MW-8	n/a	n/a	62.5	n/a	n/a	0.0158	NP Inter (NDs) 1 of 2
Arsenic (ug/L)	MW-24	0.880	n/a	9/6/2023	1.7J	No	8	MW-8	n/a	n/a	62.5	n/a	n/a	0.0158	NP Inter (NDs) 1 of 2
Arsenic (ug/L)	MW-26	0.880	n/a	9/7/2023	0.53ND	No	8	MW-8	n/a	n/a	62.5	n/a	n/a	0.0158	NP Inter (NDs) 1 of 2
Arsenic (ug/L)	MW-27	0.880	n/a	9/6/2023	0.85J	No	8	MW-8	n/a	n/a	62.5	n/a	n/a	0.0158	NP Inter (NDs) 1 of 2
Barium (ug/L)	MW-11	98.5	n/a	9/7/2023	45	No	8	MW-8	84.31	4.506	0	None	No	0.0006269	Param Inter 1 of 2
Barium (ug/L)	MW-17	98.5	n/a	9/6/2023	52	No	8	MW-8	84.31	4.506	0	None	No	0.0006269	Param Inter 1 of 2
<b>Barium (ug/L)</b>	<b>MW-20</b>	<b>98.5</b>	<b>n/a</b>	<b>9/14/2020</b>	<b>140</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>84.31</b>	<b>4.506</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Barium (ug/L)</b>	<b>MW-22</b>	<b>98.5</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>160</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>84.31</b>	<b>4.506</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Barium (ug/L)</b>	<b>MW-23</b>	<b>98.5</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>170</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>84.31</b>	<b>4.506</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Barium (ug/L)</b>	<b>MW-24</b>	<b>98.5</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>290</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>84.31</b>	<b>4.506</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Barium (ug/L)</b>	<b>MW-26</b>	<b>98.5</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>160</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>84.31</b>	<b>4.506</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Barium (ug/L)	MW-27	98.5	n/a	9/6/2023	80	No	8	MW-8	84.31	4.506	0	None	No	0.0006269	Param Inter 1 of 2
<b>Boron (ug/L)</b>	<b>MW-11</b>	<b>1880</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>4100</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>571.6</b>	<b>415.9</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Boron (ug/L)</b>	<b>MW-17</b>	<b>1880</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>2600</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>571.6</b>	<b>415.9</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Boron (ug/L)</b>	<b>MW-20</b>	<b>1880</b>	<b>n/a</b>	<b>9/14/2020</b>	<b>9400</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>571.6</b>	<b>415.9</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Boron (ug/L)	MW-22	1880	n/a	9/7/2023	130	No	8	MW-8	571.6	415.9	0	None	No	0.0006269	Param Inter 1 of 2
Boron (ug/L)	MW-23	1880	n/a	9/7/2023	150	No	8	MW-8	571.6	415.9	0	None	No	0.0006269	Param Inter 1 of 2
Boron (ug/L)	MW-24	1880	n/a	9/6/2023	130	No	8	MW-8	571.6	415.9	0	None	No	0.0006269	Param Inter 1 of 2
Boron (ug/L)	MW-26	1880	n/a	9/7/2023	38ND	No	8	MW-8	571.6	415.9	0	None	No	0.0006269	Param Inter 1 of 2
Boron (ug/L)	MW-27	1880	n/a	9/6/2023	160	No	8	MW-8	571.6	415.9	0	None	No	0.0006269	Param Inter 1 of 2
<b>Chloride (mg/L)</b>	<b>MW-11</b>	<b>13</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>23</b>	<b>Yes</b>	<b>37</b>	<b>MW-8</b>	<b>1.552</b>	<b>0.4733</b>	<b>35.14</b>	<b>None</b>	<b>ln(x)</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Chloride (mg/L)</b>	<b>MW-17</b>	<b>13</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>26</b>	<b>Yes</b>	<b>37</b>	<b>MW-8</b>	<b>1.552</b>	<b>0.4733</b>	<b>35.14</b>	<b>None</b>	<b>ln(x)</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Chloride (mg/L)</b>	<b>MW-20</b>	<b>13</b>	<b>n/a</b>	<b>9/14/2020</b>	<b>70</b>	<b>Yes</b>	<b>37</b>	<b>MW-8</b>	<b>1.552</b>	<b>0.4733</b>	<b>35.14</b>	<b>None</b>	<b>ln(x)</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Chloride (mg/L)</b>	<b>MW-22</b>	<b>13</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>31</b>	<b>Yes</b>	<b>37</b>	<b>MW-8</b>	<b>1.552</b>	<b>0.4733</b>	<b>35.14</b>	<b>None</b>	<b>ln(x)</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Chloride (mg/L)	MW-23	13	n/a	9/7/2023	7.7	No	37	MW-8	1.552	0.4733	35.14	None	ln(x)	0.0006269	Param Inter 1 of 2
<b>Chloride (mg/L)</b>	<b>MW-24</b>	<b>13</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>28</b>	<b>Yes</b>	<b>37</b>	<b>MW-8</b>	<b>1.552</b>	<b>0.4733</b>	<b>35.14</b>	<b>None</b>	<b>ln(x)</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Chloride (mg/L)</b>	<b>MW-26</b>	<b>13</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>240</b>	<b>Yes</b>	<b>37</b>	<b>MW-8</b>	<b>1.552</b>	<b>0.4733</b>	<b>35.14</b>	<b>None</b>	<b>ln(x)</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Chloride (mg/L)	MW-27	13	n/a	9/6/2023	7.7	No	37	MW-8	1.552	0.4733	35.14	None	ln(x)	0.0006269	Param Inter 1 of 2
Cobalt (ug/L)	MW-11	0.756	n/a	9/7/2023	0.085ND	No	8	MW-8	0.3338	0.1338	12.5	None	No	0.0006269	Param Inter 1 of 2
Cobalt (ug/L)	MW-17	0.756	n/a	9/6/2023	0.66	No	8	MW-8	0.3338	0.1338	12.5	None	No	0.0006269	Param Inter 1 of 2
<b>Cobalt (ug/L)</b>	<b>MW-20</b>	<b>0.756</b>	<b>n/a</b>	<b>9/14/2020</b>	<b>52</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>0.3338</b>	<b>0.1338</b>	<b>12.5</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Cobalt (ug/L)	MW-22	0.756	n/a	9/7/2023	0.085ND	No	8	MW-8	0.3338	0.1338	12.5	None	No	0.0006269	Param Inter 1 of 2
Cobalt (ug/L)	MW-23	0.756	n/a	9/7/2023	0.17J	No	8	MW-8	0.3338	0.1338	12.5	None	No	0.0006269	Param Inter 1 of 2
Cobalt (ug/L)	MW-24	0.756	n/a	9/6/2023	0.085ND	No	8	MW-8	0.3338	0.1338	12.5	None	No	0.0006269	Param Inter 1 of 2
Cobalt (ug/L)	MW-26	0.756	n/a	9/7/2023	0.085ND	No	8	MW-8	0.3338	0.1338	12.5	None	No	0.0006269	Param Inter 1 of 2
Cobalt (ug/L)	MW-27	0.756	n/a	9/6/2023	0.085ND	No	8	MW-8	0.3338	0.1338	12.5	None	No	0.0006269	Param Inter 1 of 2
<b>Iron (ug/L)</b>	<b>MW-11</b>	<b>113</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>3700</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>56.45</b>	<b>17.9</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Iron (ug/L)</b>	<b>MW-17</b>	<b>113</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>3900</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>56.45</b>	<b>17.9</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Iron (ug/L)</b>	<b>MW-20</b>	<b>113</b>	<b>n/a</b>	<b>9/14/2020</b>	<b>37000</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>56.45</b>	<b>17.9</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Iron (ug/L)</b>	<b>MW-22</b>	<b>113</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>1500</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>56.45</b>	<b>17.9</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Iron (ug/L)</b>	<b>MW-23</b>	<b>113</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>260</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>56.45</b>	<b>17.9</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
<b>Iron (ug/L)</b>	<b>MW-24</b>	<b>113</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>1900</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>56.45</b>	<b>17.9</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Iron (ug/L)	MW-26	113	n/a	9/7/2023	76J	No	8	MW-8	56.45	17.9	0	None	No	0.0006269	Param Inter 1 of 2
<b>Iron (ug/L)</b>	<b>MW-27</b>	<b>113</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>660</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>56.45</b>	<b>17.9</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Lead (ug/L)	MW-11	0.794	n/a	9/7/2023	0.47J	No	8	MW-8	0.2784	0.1632	37.5	None	No	0.0006269	Param Inter 1 of 2
<b>Lead (ug/L)</b>	<b>MW-17</b>	<b>0.794</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>1.4</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>0.2784</b>	<b>0.1632</b>	<b>37.5</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>

## Prediction Limit

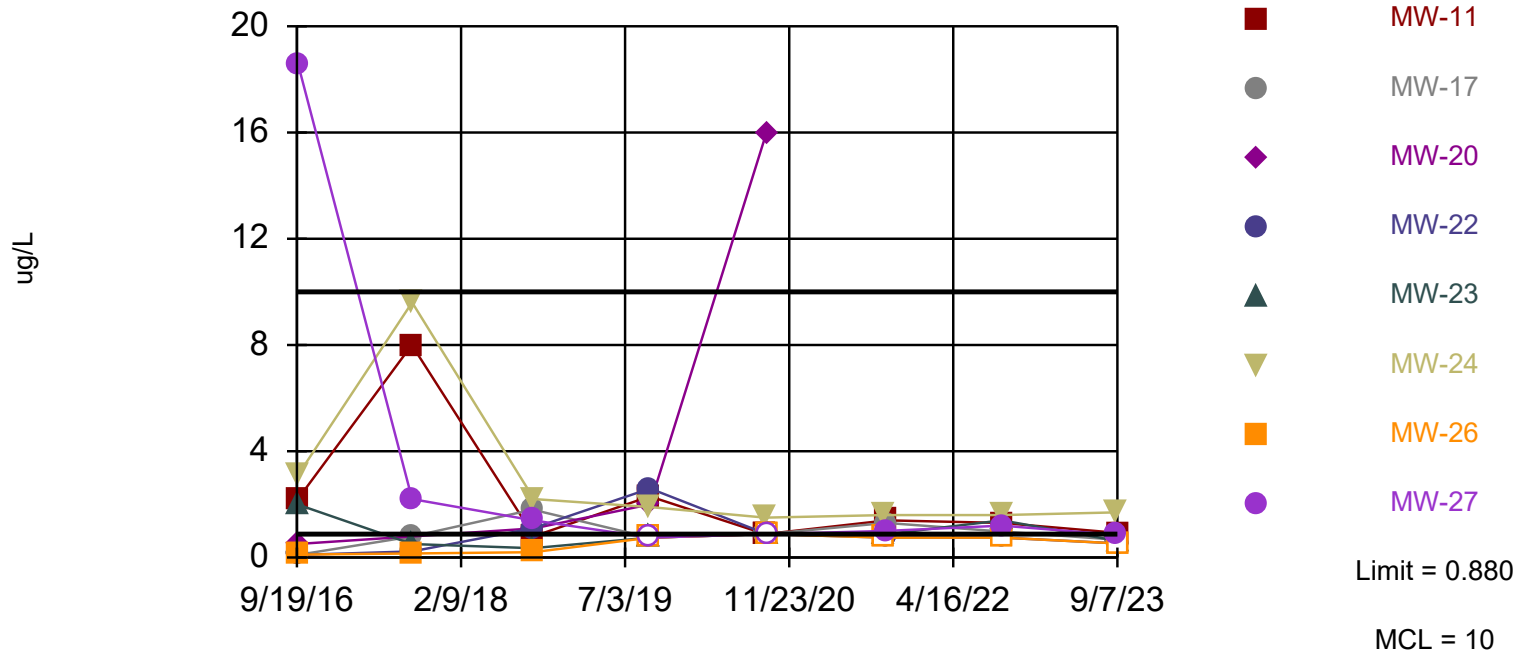
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile Printed 10/13/2023, 9:13 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>Bg Wells</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
<b>Lead (ug/L)</b>	<b>MW-20</b>	<b>0.794</b>	<b>n/a</b>	<b>9/14/2020</b>	<b>26</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>0.2784</b>	<b>0.1632</b>	<b>37.5</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Lead (ug/L)	MW-22	0.794	n/a	9/7/2023	0.31J	No	8	MW-8	0.2784	0.1632	37.5	None	No	0.0006269	Param Inter 1 of 2
Lead (ug/L)	MW-23	0.794	n/a	9/7/2023	0.66	No	8	MW-8	0.2784	0.1632	37.5	None	No	0.0006269	Param Inter 1 of 2
Lead (ug/L)	MW-24	0.794	n/a	9/6/2023	0.24ND	No	8	MW-8	0.2784	0.1632	37.5	None	No	0.0006269	Param Inter 1 of 2
Lead (ug/L)	MW-26	0.794	n/a	9/7/2023	0.3J	No	8	MW-8	0.2784	0.1632	37.5	None	No	0.0006269	Param Inter 1 of 2
Lead (ug/L)	MW-27	0.794	n/a	9/6/2023	0.3J	No	8	MW-8	0.2784	0.1632	37.5	None	No	0.0006269	Param Inter 1 of 2
<b>Magnesium (ug/L)</b>	<b>MW-11</b>	<b>23000</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>60000</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>19500</b>	<b>1122</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Magnesium (ug/L)	MW-17	23000	n/a	9/6/2023	60000	Yes	8	MW-8	19500	1122	0	None	No	0.0006269	Param Inter 1 of 2
Magnesium (ug/L)	MW-20	23000	n/a	9/14/2020	92000	Yes	8	MW-8	19500	1122	0	None	No	0.0006269	Param Inter 1 of 2
Magnesium (ug/L)	MW-22	23000	n/a	9/7/2023	33000	Yes	8	MW-8	19500	1122	0	None	No	0.0006269	Param Inter 1 of 2
Magnesium (ug/L)	MW-23	23000	n/a	9/7/2023	28000	Yes	8	MW-8	19500	1122	0	None	No	0.0006269	Param Inter 1 of 2
Magnesium (ug/L)	MW-24	23000	n/a	9/6/2023	25000	Yes	8	MW-8	19500	1122	0	None	No	0.0006269	Param Inter 1 of 2
Magnesium (ug/L)	MW-26	23000	n/a	9/7/2023	12000	No	8	MW-8	19500	1122	0	None	No	0.0006269	Param Inter 1 of 2
Magnesium (ug/L)	MW-27	23000	n/a	9/6/2023	25000	Yes	8	MW-8	19500	1122	0	None	No	0.0006269	Param Inter 1 of 2
<b>Manganese (ug/L)</b>	<b>MW-11</b>	<b>139</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>200</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>72.81</b>	<b>20.89</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Manganese (ug/L)	MW-17	139	n/a	9/6/2023	320	Yes	8	MW-8	72.81	20.89	0	None	No	0.0006269	Param Inter 1 of 2
Manganese (ug/L)	MW-20	139	n/a	9/14/2020	550	Yes	8	MW-8	72.81	20.89	0	None	No	0.0006269	Param Inter 1 of 2
Manganese (ug/L)	MW-22	139	n/a	9/7/2023	150	Yes	8	MW-8	72.81	20.89	0	None	No	0.0006269	Param Inter 1 of 2
Manganese (ug/L)	MW-23	139	n/a	9/7/2023	30	No	8	MW-8	72.81	20.89	0	None	No	0.0006269	Param Inter 1 of 2
<b>Manganese (ug/L)</b>	<b>MW-24</b>	<b>139</b>	<b>n/a</b>	<b>9/6/2023</b>	<b>360</b>	<b>Yes</b>	<b>8</b>	<b>MW-8</b>	<b>72.81</b>	<b>20.89</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Manganese (ug/L)	MW-26	139	n/a	9/7/2023	4.7J	No	8	MW-8	72.81	20.89	0	None	No	0.0006269	Param Inter 1 of 2
Manganese (ug/L)	MW-27	139	n/a	9/6/2023	49	No	8	MW-8	72.81	20.89	0	None	No	0.0006269	Param Inter 1 of 2
<b>Sulfate (mg/L)</b>	<b>MW-11</b>	<b>91.9</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>700</b>	<b>Yes</b>	<b>25</b>	<b>MW-8</b>	<b>44.23</b>	<b>21.24</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Sulfate (mg/L)	MW-17	91.9	n/a	9/6/2023	600	Yes	25	MW-8	44.23	21.24	0	None	No	0.0006269	Param Inter 1 of 2
Sulfate (mg/L)	MW-20	91.9	n/a	9/14/2020	440	Yes	25	MW-8	44.23	21.24	0	None	No	0.0006269	Param Inter 1 of 2
<b>Sulfate (mg/L)</b>	<b>MW-22</b>	<b>91.9</b>	<b>n/a</b>	<b>9/7/2023</b>	<b>210</b>	<b>Yes</b>	<b>25</b>	<b>MW-8</b>	<b>44.23</b>	<b>21.24</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0006269</b>	<b>Param Inter 1 of 2</b>
Sulfate (mg/L)	MW-23	91.9	n/a	9/7/2023	50	No	25	MW-8	44.23	21.24	0	None	No	0.0006269	Param Inter 1 of 2
Sulfate (mg/L)	MW-24	91.9	n/a	9/6/2023	16	No	25	MW-8	44.23	21.24	0	None	No	0.0006269	Param Inter 1 of 2
Sulfate (mg/L)	MW-26	91.9	n/a	9/7/2023	49	No	25	MW-8	44.23	21.24	0	None	No	0.0006269	Param Inter 1 of 2
Sulfate (mg/L)	MW-27	91.9	n/a	9/6/2023	25	No	25	MW-8	44.23	21.24	0	None	No	0.0006269	Param Inter 1 of 2

Exceeds Limit: MW-20

## Arsenic

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 49%. Limit is highest of 8 background values. 62.5% NDs. Annual per-constituent alpha = 0.1999. Individual comparison alpha = 0.0158 (1 of 2). Comparing 8 points to limit. Assumes 6 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Prediction Limit Analysis Run 10/13/2023 9:12 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile



# Prediction Limit

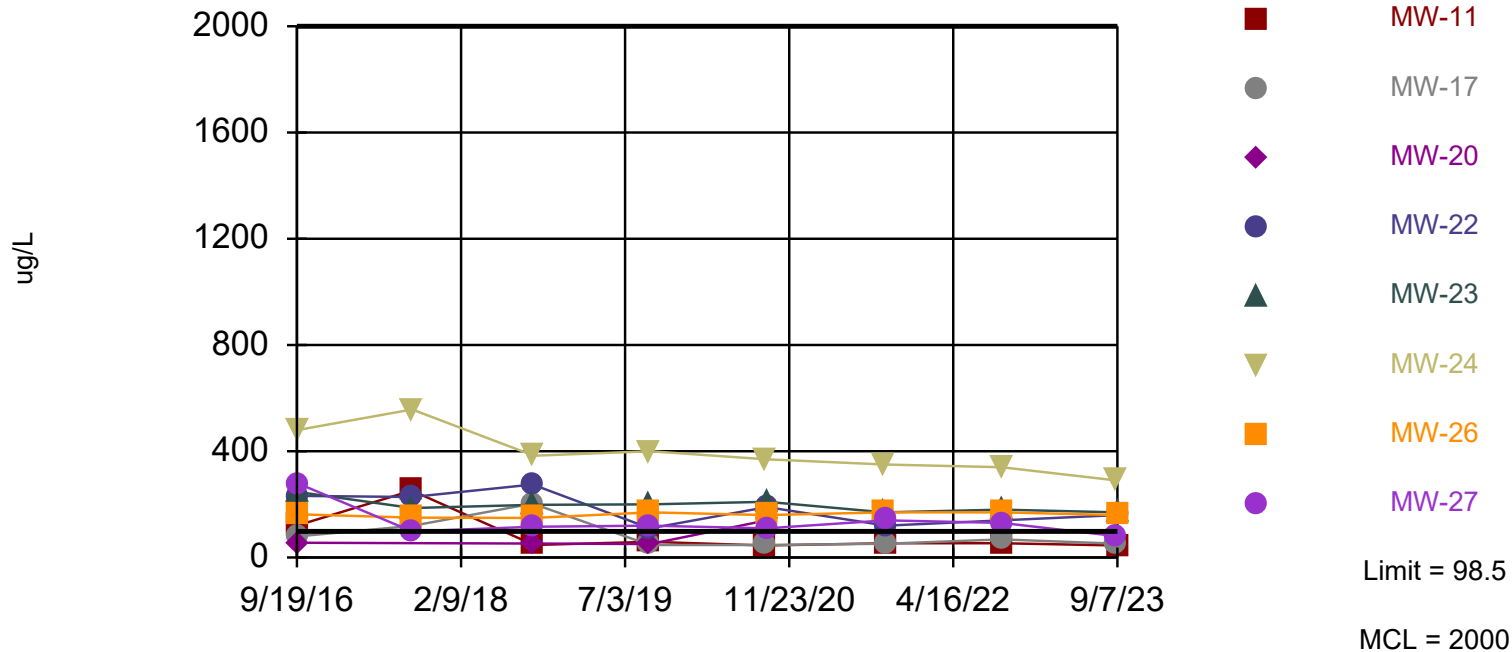
Constituent: Arsenic (ug/L) Analysis Run 10/13/2023 9:13 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-8 (bg)	MW-20	MW-23	MW-26	MW-24	MW-27	MW-22	MW-17	MW-11
9/15/2016	0.17 (J)								
9/19/2016		0.51 (J)							
9/20/2016			2						
9/21/2016				0.11 (J)					
9/22/2016					3.1	18.6	<0.1	<0.1	2.2
9/9/2017	0.18 (J)								
9/10/2017								0.79 (J)	8
9/11/2017			0.51 (J)	0.15 (J)	9.6	2.2	0.23 (J)		
9/20/2018	0.2 (J)		0.35 (J)				1.1	1.8	
9/21/2018				0.2 (J)		1.4			
9/24/2018		1.1			2.2				0.8 (J)
9/18/2019			<0.75					<0.75	2.3
9/19/2019	<0.75	2		<0.75	1.9 (J)	<0.75	2.6		
9/10/2020					1.5 (J)				<0.88
9/11/2020	<0.88							<0.88	
9/14/2020		16		<0.88		<0.88			
9/15/2020			<0.88				<0.88		
9/15/2021			0.87 (J)						
9/16/2021	<0.75			<0.75	1.6 (J)				
9/20/2021						1 (J)			
9/21/2021							<0.75	1.3 (J)	
9/22/2021									1.4 (J)
9/13/2022					1.6 (J)				1.3 (J)
9/14/2022	<0.75		1.4 (J)	<0.75		1.2 (J)	<0.75	0.98 (J)	
9/6/2023					1.7 (J)	0.85 (J)		0.67 (J)	
9/7/2023	<0.53 (U)		0.63 (J)	<0.53 (U)			<0.53 (U)		0.93 (J)

Exceeds Limit: MW-20, MW-22, MW-23, MW-24, MW-26

## Barium

### Interwell Parametric



Background Data Summary: Mean=84.31, Std. Dev.=4.506, n=8. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8446, critical = 0.749. Kappa = 3.158 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 8 points to limit. Assumes 6 future values.

Prediction Limit Analysis Run 10/13/2023 9:12 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Prediction Limit

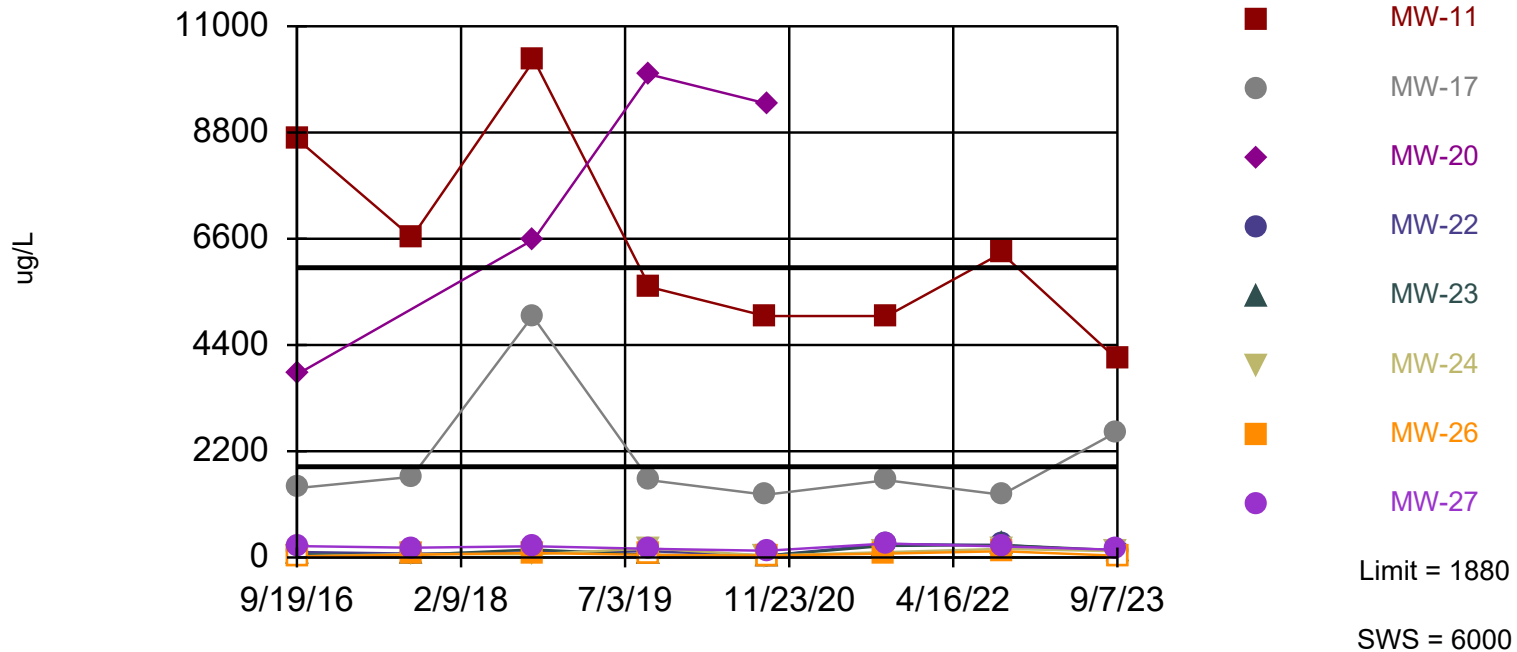
Constituent: Barium (ug/L) Analysis Run 10/13/2023 9:13 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									84.2
9/19/2016			55.3						
9/20/2016					247				
9/21/2016							163		
9/22/2016	121	79.6		232		480		279	
9/9/2017									81.2
9/10/2017	252	119							
9/11/2017				228	186	557	150	98.4	
9/20/2018		203		275	198				84.1
9/21/2018							149	116	
9/24/2018	46.9		52.5			383			
9/18/2019	59	47			200				
9/19/2019			51	110		400	170	120	87
9/10/2020	45					370			
9/11/2020		47							80
9/14/2020			140				160	110	
9/15/2020				190	210				
9/15/2021					170				
9/16/2021						350	170		83
9/20/2021								140	
9/21/2021		52		120					
9/22/2021	54								
9/13/2022	54 (B)					340 (B)			
9/14/2022		68 (B)		140 (B)	180 (B)		170 (B)	130 (B)	81 (B)
9/6/2023		52				290		80	
9/7/2023	45			160	170		160		94

Exceeds Limit: MW-11, MW-17, MW-20

## Boron

### Interwell Parametric



Background Data Summary: Mean=571.6, Std. Dev.=415.9, n=8. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8448, critical = 0.749. Kappa = 3.158 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 8 points to limit. Assumes 6 future values.

Prediction Limit Analysis Run 10/13/2023 9:12 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

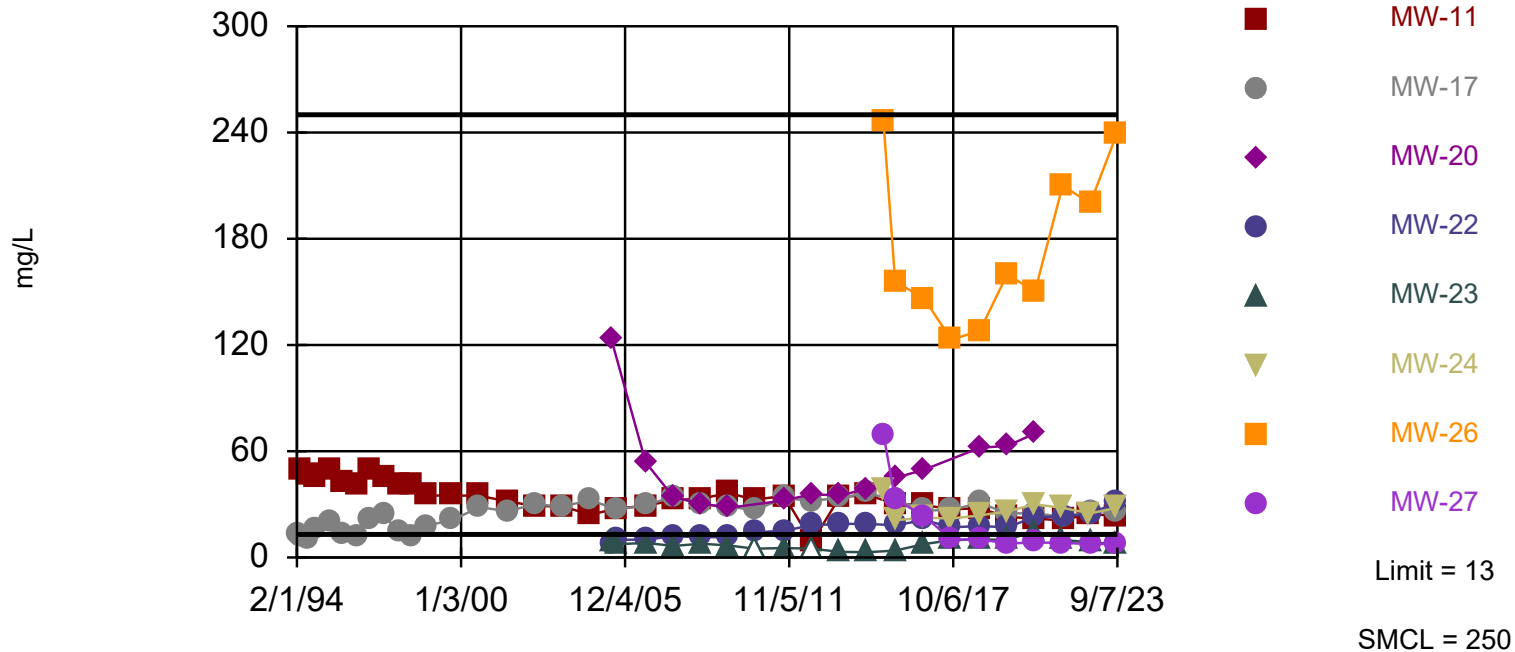
# Prediction Limit

Constituent: Boron (ug/L) Analysis Run 10/13/2023 9:13 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									244
9/19/2016			3790						
9/20/2016					66.8 (J)				
9/21/2016							<50		
9/22/2016	8650	1440		114		<50		237	
9/9/2017									339
9/10/2017	6630	1670							
9/11/2017				79.2 (J)	53.6 (J)	72.7 (J)	58.3 (J)	203	
9/20/2018		5000		108	165				1220
9/21/2018							94.5 (J)	232	
9/24/2018	10300		6590			65.7 (J)			
9/18/2019	5600	1600			<110				
9/19/2019			10000	130 (J)		190 (J)	<110	180 (J)	1100
9/10/2020	5000					<80			
9/11/2020		1300							380
9/14/2020			9400				<80	140	
9/15/2020				<80	<80				
9/15/2021					240				
9/16/2021						110	80 (J)		150
9/20/2021								290	
9/21/2021		1600		280					
9/22/2021	5000								
9/13/2022	6300					180			
9/14/2022		1300		260	260		130	230	310
9/6/2023		2600				130		160	
9/7/2023	4100			130	150		<76 (U)		830

Exceeds Limit: MW-11, MW-17, MW-20,  
MW-22, MW-24, MW-26

## Chloride Interwell Parametric



Background Data Summary (based on natural log transformation): Mean=1.552, Std. Dev.=0.4733, n=37, 35.14% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9407, critical = 0.914. Kappa = 2.139 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 8 points to limit. Assumes 6 future values.

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/13/2023 9:13 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
2/1/1994		13							7
4/1/1994	50	12							2
7/1/1994	47	11							<5
10/1/1994	45	16							<5
4/1/1995	50	20							<5
10/1/1995	42	13							<5
4/1/1996	41	12							2.8
10/1/1996	49	21							13
4/1/1997	46	24							<5
10/1/1997	41	14							<5
4/1/1998	40.7	11.6							<5
10/1/1998	35	18							<5
9/1/1999	35	21							<5
9/1/2000	34.9	28.4							5.5
9/1/2001	31.7	26.2							10.2
9/1/2002	29.1	29.9							<5
9/1/2003	28.8	28.9							6.4
9/1/2004	24.2	32.3							7.3
6/1/2005			124	8.1	9				
9/1/2005	27.8	27.1		10	7.5				7
9/1/2006	29.2	29.5	53.7	10.1	8.23				<5
9/1/2007	32.4	34.4	34.2	11.9	6.49				7.85
9/1/2008	33.3	30	30.4	11.5	7.83				7.7
9/1/2009	36.4	28.8	28.1	11.5	6.78				<5
8/1/2010	32.6	26.7		14.1	<5				3.44
9/1/2011	34.8	33.5	32.2	15.2	5.38				3.12
9/1/2012	8.64	32	35.8	18.2	<5				<5
9/1/2013	34.2	33.7	34.9	19	3.2				7.5
9/1/2014	35.3	36.3	39	19	3				8.1
4/1/2015						37.9	246	69.5	
9/1/2015	30.4	32.5	44.9	18.2	3.9	21.1	156	32.9	4.3
9/15/2016									1.3
9/19/2016			49.6						
9/20/2016					7.6				
9/21/2016							146		
9/22/2016	29.5	26.6		21.2		22.5		23.3	
9/9/2017									1.8
9/10/2017	27.4	26.8							
9/11/2017				17	9.8	22.1	123	10.1	
9/20/2018		30.8		17.8	10.2				4.7
9/21/2018							128	10.2	
9/24/2018	27.7		62			23.8			
9/18/2019	23	25			10				
9/19/2019			63	17		26	160	8	5
9/10/2020	22					30			
9/11/2020		25							2.6 (J)
9/14/2020			70				150	8.4	
9/15/2020				23	15				
9/15/2021					10				
9/16/2021						28	210		3 (J)
9/20/2021								8.3	
9/21/2021		23		23					

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 10/13/2023 9:13 AM View: Deep  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

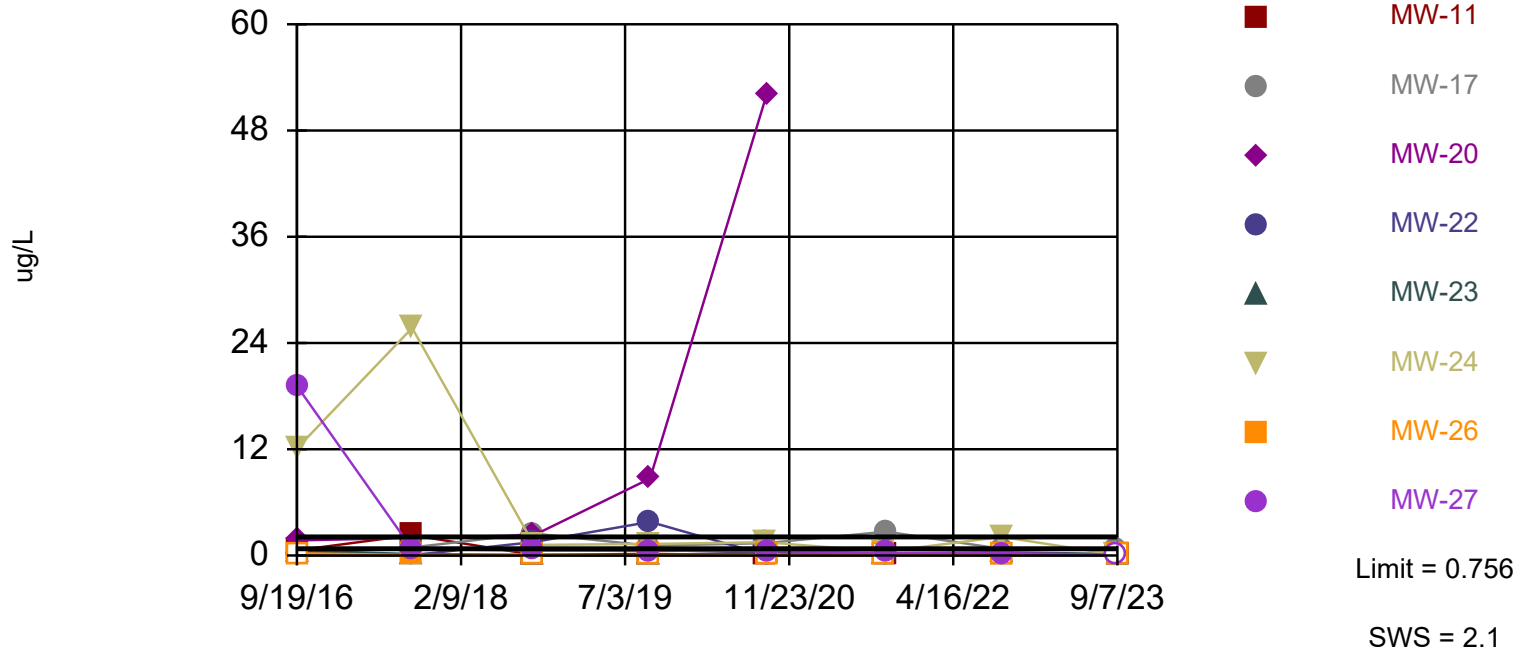
	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/22/2021	21								
9/13/2022	25					25			
9/14/2022		26		25	8.5		200	7.5	2.8 (J)
9/6/2023		26				28		7.7	
9/7/2023	23			31	7.7		240		3.7 (J)



Exceeds Limit: MW-20

# Cobalt

## Interwell Parametric



Background Data Summary: Mean=0.3338, Std. Dev.=0.1338, n=8, 12.5% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8937, critical = 0.749. Kappa = 3.158 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 8 points to limit. Assumes 6 future values.

Prediction Limit Analysis Run 10/13/2023 9:13 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

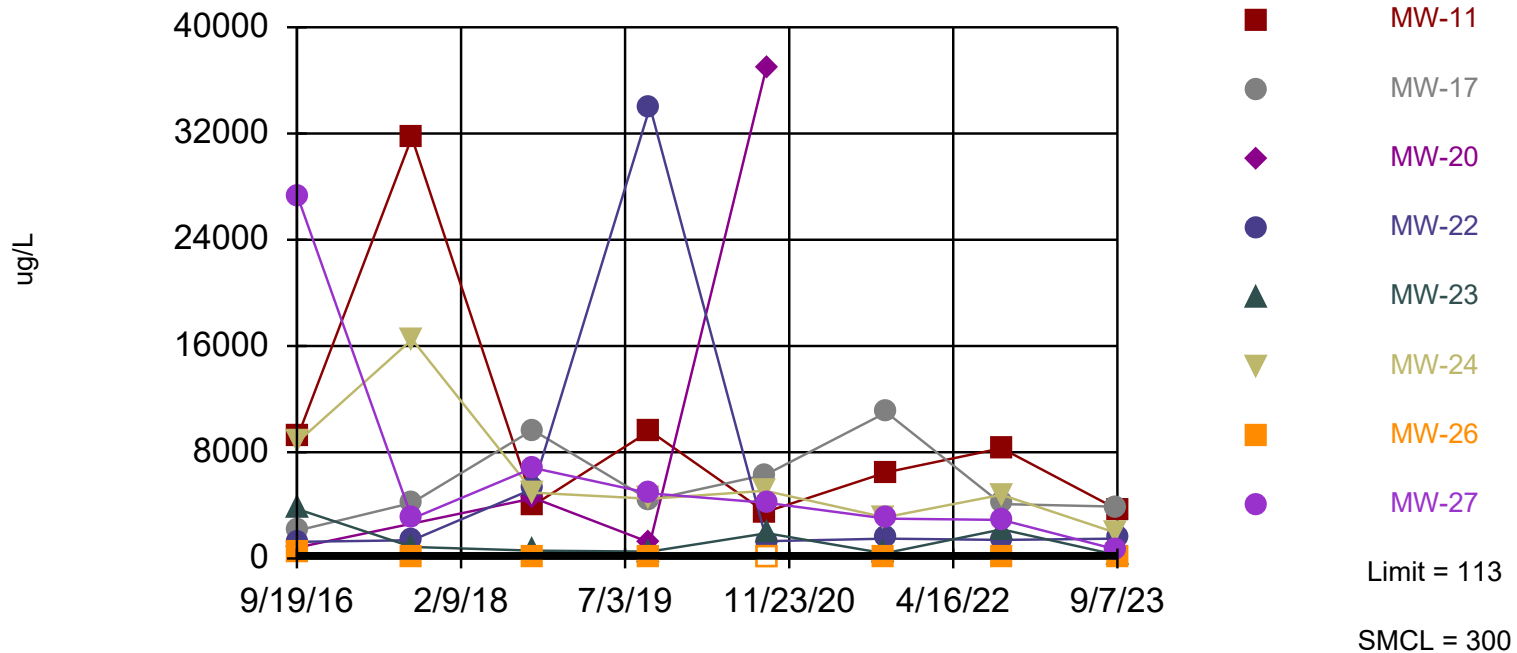
# Prediction Limit

Constituent: Cobalt (ug/L) Analysis Run 10/13/2023 9:13 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									<0.5
9/19/2016			1.7						
9/20/2016					0.55 (J)				
9/21/2016							<0.5		
9/22/2016	0.6 (J)	<0.5		<0.5		12.2		19	
9/9/2017									0.28 (J)
9/10/2017	2.3	0.91 (J)							
9/11/2017				0.047 (J)	0.17 (J)	25.7	0.055 (J)	0.73 (J)	
9/20/2018		2.5		1.5	<0.15				0.17 (J)
9/21/2018							<0.15	0.56 (J)	
9/24/2018	<0.15		2.3			1.2			
9/18/2019	0.18 (J)	1.1			<0.091				
9/19/2019			8.7	3.8		1.3	<0.091	0.54	0.47 (J)
9/10/2020	<0.091					1.5			
9/11/2020		1.4							0.32 (J)
9/14/2020			52				<0.091	0.49 (J)	
9/15/2020				<0.091	0.37 (J)				
9/15/2021					0.26 (J)				
9/16/2021						0.43 (J)	<0.19		0.59
9/20/2021								0.29 (J)	
9/21/2021		2.7		0.2 (J)					
9/22/2021	0.2 (J)								
9/13/2022	0.23 (J)								
9/14/2022		0.75		<0.19	0.36 (J)		<0.19	0.27 (J)	0.27 (J)
9/6/2023		0.66				<0.17 (U)		<0.17 (U)	
9/7/2023	<0.17 (U)			<0.17 (U)	0.17 (J)		<0.17 (U)		0.32 (J)

Exceeds Limit: MW-11, MW-17, MW-20,  
MW-22, MW-23, MW-24, MW-27

### Iron Interwell Parametric



Background Data Summary: Mean=56.45, Std. Dev.=17.9, n=8. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9733, critical = 0.749. Kappa = 3.158 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 8 points to limit. Assumes 6 future values.

# Prediction Limit

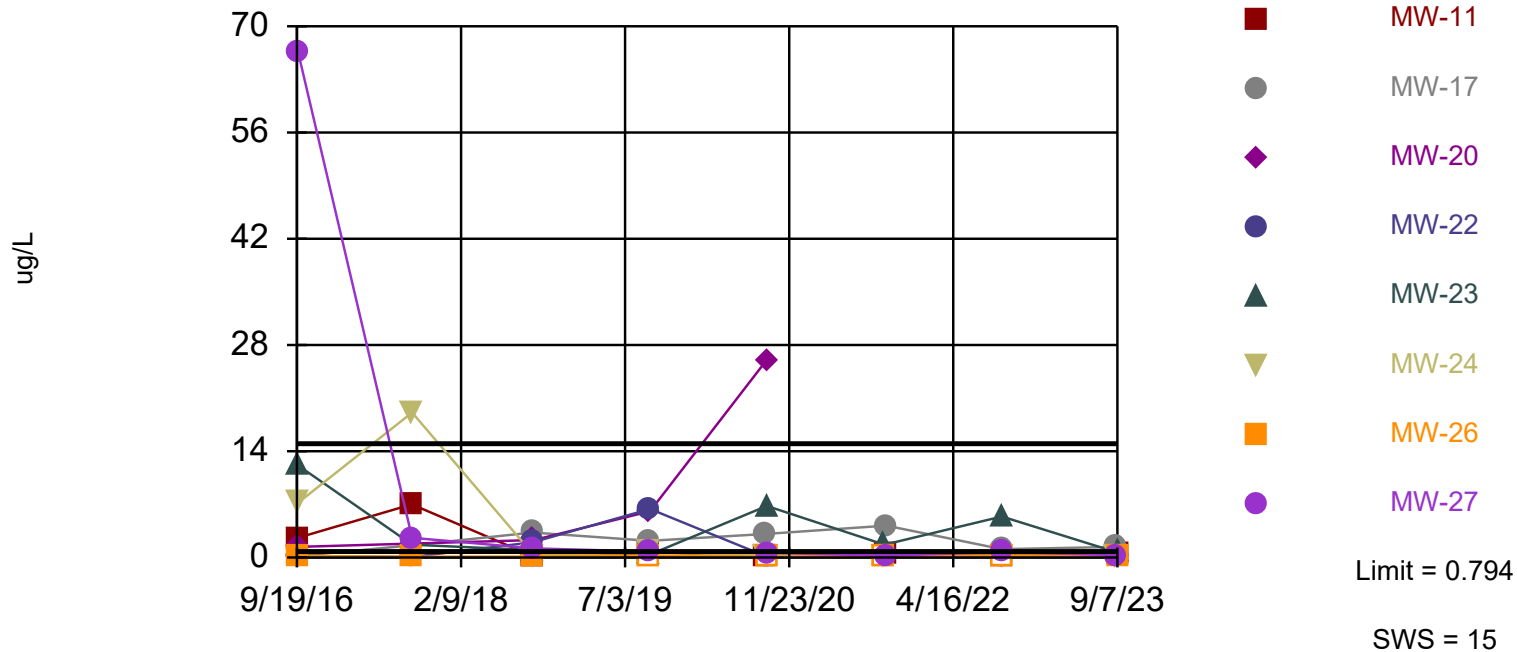
Constituent: Iron (ug/L) Analysis Run 10/13/2023 9:13 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									56.6
9/19/2016			819						
9/20/2016					3730				
9/21/2016							396		
9/22/2016	9230	2110		1250		8800		27200	
9/9/2017									27 (J)
9/10/2017	31700	4180							
9/11/2017				1380	875	16500	55.4	3000	
9/20/2018		9670		5230	591				45 (J)
9/21/2018							124	6820	
9/24/2018	4040		4550			4950			
9/18/2019	9600	4400			520				
9/19/2019			1200	34000		4500	78 (J)	4900	84 (J)
9/10/2020	3500					5100			
9/11/2020		6300							76 (J)
9/14/2020			37000				<50	4200	
9/15/2020				1300	1900				
9/15/2021					390				
9/16/2021						3100	53 (J)		62 (J)
9/20/2021								3000	
9/21/2021		11000		1500					
9/22/2021	6500								
9/13/2022	8300					4800			
9/14/2022		4100		1400	2200		140	2900	51 (J)
9/6/2023		3900				1900		660	
9/7/2023	3700			1500	260		76 (J)		50 (J)

Exceeds Limit: MW-17, MW-20

# Lead

## Interwell Parametric



Background Data Summary: Mean=0.2784, Std. Dev.=0.1632, n=8, 37.5% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8793, critical = 0.749. Kappa = 3.158 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 8 points to limit. Assumes 6 future values.

Prediction Limit Analysis Run 10/13/2023 9:13 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Prediction Limit

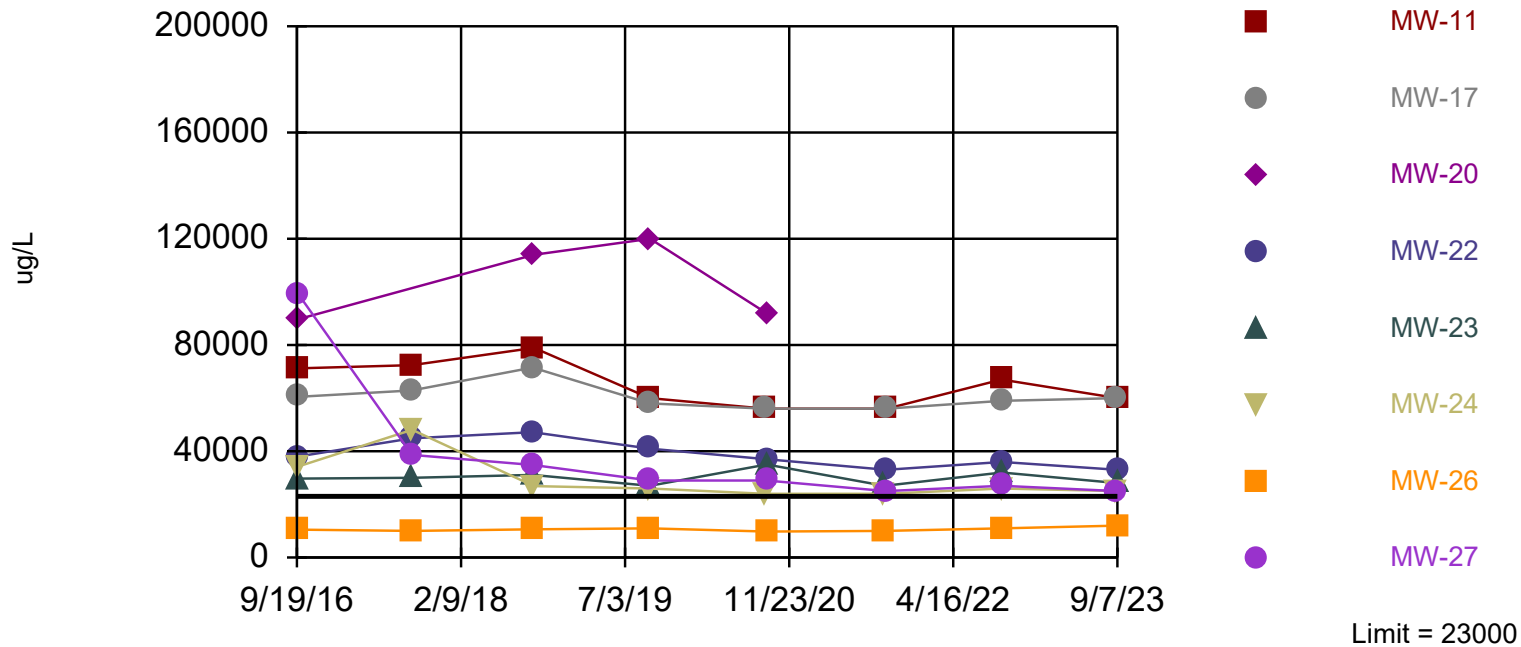
Constituent: Lead (ug/L) Analysis Run 10/13/2023 9:13 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									<0.19
9/19/2016			1.4						
9/20/2016					12.2				
9/21/2016							0.2 (J)		
9/22/2016	2.6	<0.19		<0.19		7.2		66.7	
9/9/2017									0.087 (J)
9/10/2017	7	1.6							
9/11/2017				0.07 (J)	1.7	19.1	0.12 (J)	2.6	
9/20/2018		3.3		2	0.97 (J)				0.17 (J)
9/21/2018							0.14 (J)	1.2	
9/24/2018	<0.12		2.3			0.28 (J)			
9/18/2019	0.72	2.2			0.39 (J)				
9/19/2019			6.1	6.4		0.67	<0.27	0.79	0.56
9/10/2020	0.18 (J)					0.3 (J)			
9/11/2020		3.1							0.49 (J)
9/14/2020			26				<0.11	0.61	
9/15/2020				<0.11	6.8				
9/15/2021					1.7				
9/16/2021						0.23 (J)	<0.21		<0.21
9/20/2021								0.23 (J)	
9/21/2021		4.2		0.45 (J)					
9/22/2021	0.39 (J)								
9/13/2022	0.3 (J)								
9/14/2022		1.1		<0.24	5.4		<0.24	0.72	<0.24
9/6/2023		1.4				<0.24 (U)		0.3 (J)	
9/7/2023	0.47 (J)			0.31 (J)	0.66		0.3 (J)		0.28 (J)

Exceeds Limit: MW-11, MW-17, MW-20,  
MW-22, MW-23, MW-24, MW-27

## Magnesium

### Interwell Parametric



Background Data Summary: Mean=19500, Std. Dev.=1122, n=8. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9083, critical = 0.749. Kappa = 3.158 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 8 points to limit. Assumes 6 future values.

# Prediction Limit

Constituent: Magnesium (ug/L) Analysis Run 10/13/2023 9:13 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

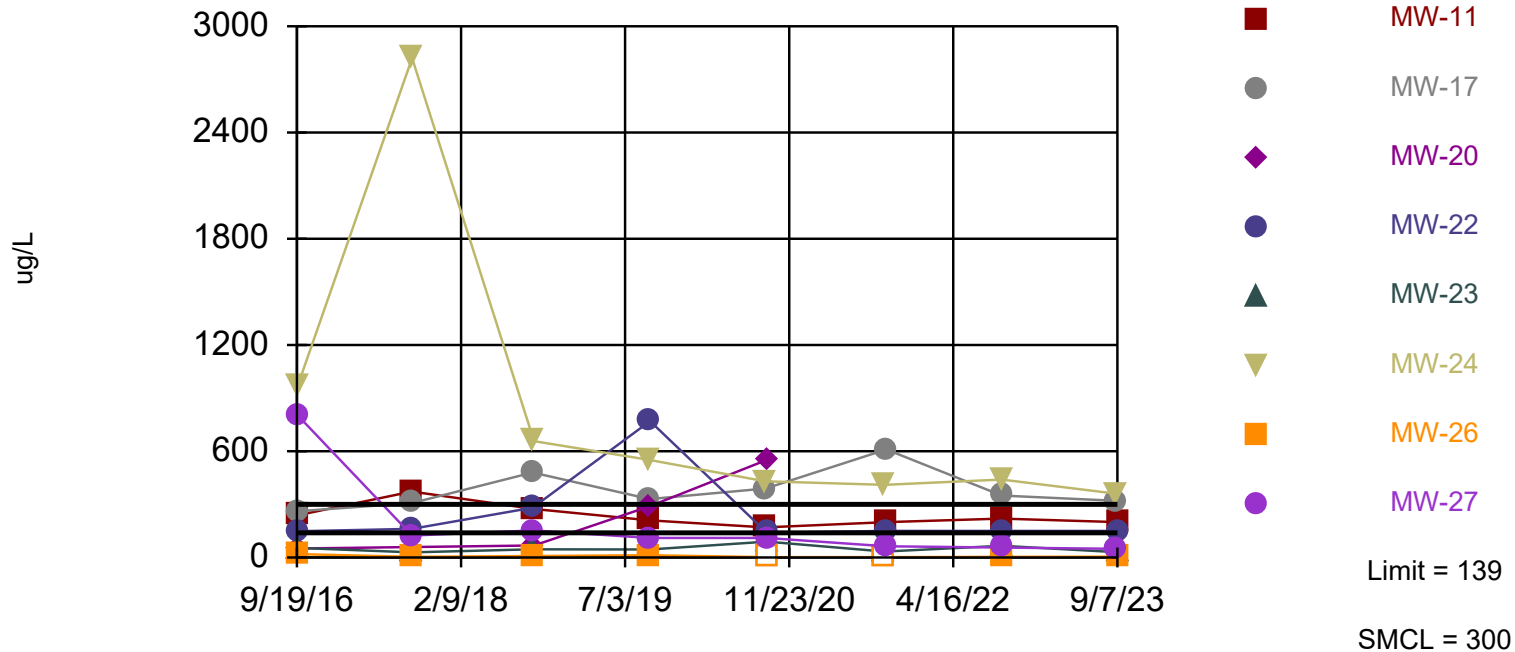
	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									18900
9/19/2016			89600						
9/20/2016					29700				
9/21/2016							10500		
9/22/2016	71200	60500		38000		34200		99400	
9/9/2017									20600
9/10/2017	72400	62900							
9/11/2017				44900	30000	48100	10000	38600	
9/20/2018		71500		47200	31100				21500
9/21/2018							10600	34800	
9/24/2018	78900		114000			26900			
9/18/2019	60000	58000			27000				
9/19/2019			120000	41000		26000	11000	29000	20000
9/10/2020	56000					24000			
9/11/2020		56000							18000
9/14/2020			92000				9800	29000	
9/15/2020				37000	35000				
9/15/2021					27000				
9/16/2021						24000	10000		19000
9/20/2021								25000	
9/21/2021		56000		33000					
9/22/2021	56000								
9/13/2022	67000					26000			
9/14/2022		59000		36000	32000		11000	27000	19000
9/6/2023		60000				25000		25000	
9/7/2023	60000			33000	28000		12000		19000



Exceeds Limit: MW-11, MW-17, MW-20,  
MW-22, MW-24

## Manganese

### Interwell Parametric



Background Data Summary: Mean=72.81, Std. Dev.=20.89, n=8. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8441, critical = 0.749. Kappa = 3.158 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 8 points to limit. Assumes 6 future values.

# Prediction Limit

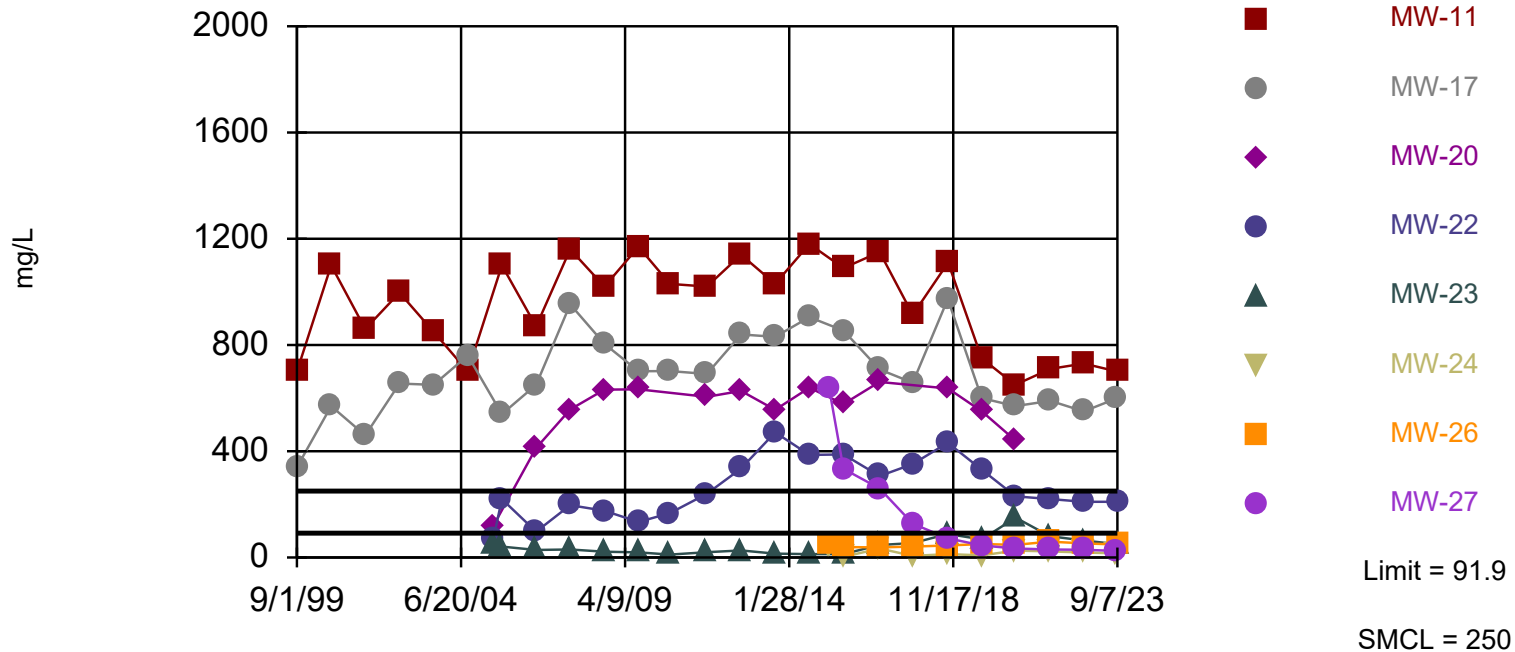
Constituent: Manganese (ug/L) Analysis Run 10/13/2023 9:13 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/15/2016									27.6
9/19/2016			50.6						
9/20/2016					54.1				
9/21/2016							19.1		
9/22/2016	239	261		148		973		802	
9/9/2017									77.4
9/10/2017	372	307							
9/11/2017				162	28.8	2820	3.9	124	
9/20/2018		480		281	46.2				74.5
9/21/2018							8.6	153	
9/24/2018	274		67.8			657			
9/18/2019	210	330			45				
9/19/2019			290	770		550	13	110	77
9/10/2020	170					430			
9/11/2020		390							84
9/14/2020			550				<4	110	
9/15/2020				140	90				
9/15/2021					34				
9/16/2021						410	<4.4		100
9/20/2021								63	
9/21/2021		610		150					
9/22/2021	200								
9/13/2022	220					440			
9/14/2022		350		150	66		4 (J)	56	78
9/6/2023		320				360		49	
9/7/2023	200			150	30		4.7 (J)		64

Exceeds Limit: MW-11, MW-17, MW-20,  
MW-22

## Sulfate

### Interwell Parametric



Background Data Summary: Mean=44.23, Std. Dev.=21.24, n=25. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9643, critical = 0.888. Kappa = 2.245 (c=12, w=14, 1 of 2, event alpha = 0.1). Report alpha = 0.008742. Individual comparison alpha = 0.0006269. Comparing 8 points to limit. Assumes 6 future values.


Prediction Limit Analysis Run 10/13/2023 9:13 AM View: Deep

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

# Prediction Limit

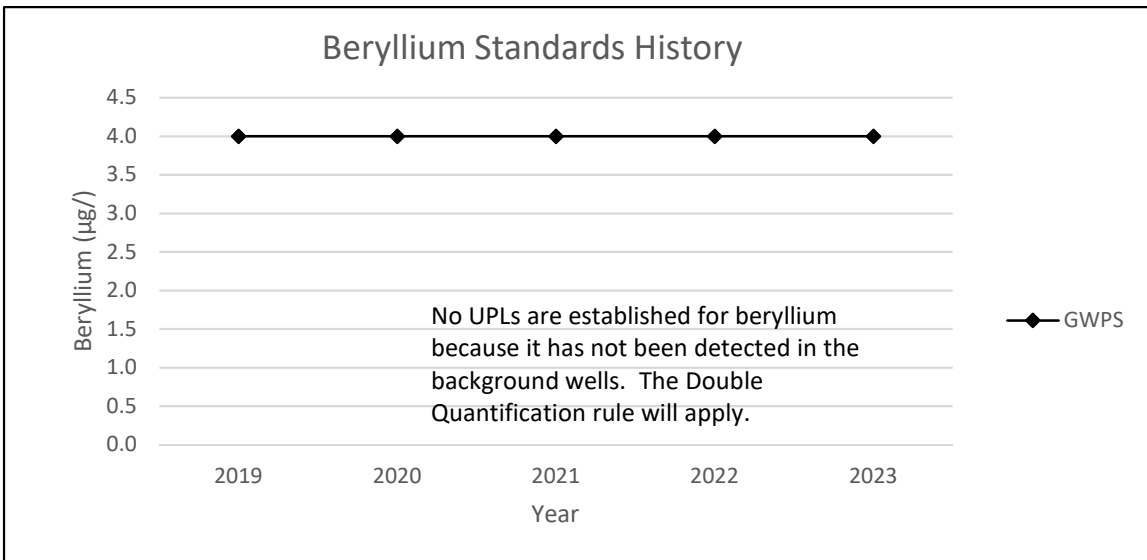
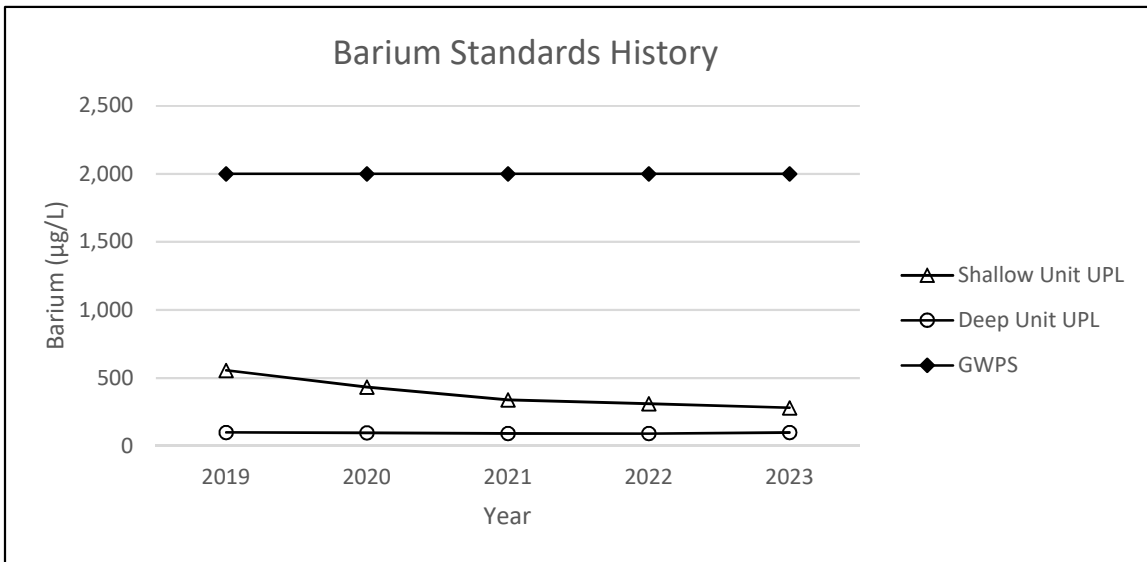
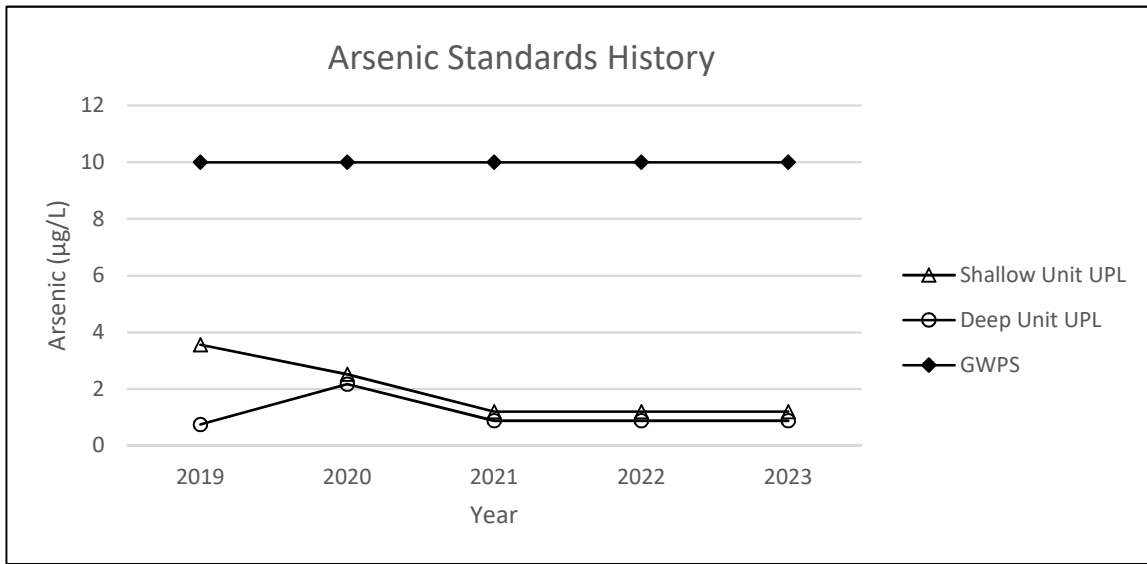
Constituent: Sulfate (mg/L) Analysis Run 10/13/2023 9:13 AM View: Deep  
 Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-11	MW-17	MW-20	MW-22	MW-23	MW-24	MW-26	MW-27	MW-8 (bg)
9/1/1999	700	340							26
9/1/2000	1100	570							28
9/1/2001	860	460							58
9/1/2002	997	655							37.8
9/1/2003	850	650							60
9/1/2004	700	760							63
6/1/2005			120	70	54				
9/1/2005	1100	540		220	41				95
9/1/2006	870	650	412	97.2	28.4				38
9/1/2007	1160	953	557	197	30.2				64.1
9/1/2008	1020	804	632	176	21.6				67.7
9/1/2009	1170	701	633	134	19.3				48.6
8/1/2010	1030	702		167	11				47.1
9/1/2011	1020	691	605	240	20.3				40.8
9/1/2012	1140	840	627	335	26.5				44.1
9/1/2013	1030	831	556	471	14.8				66.3
9/1/2014	1180	905	639	386	12.7				73.5
4/1/2015						41.8	52.3	635	
9/1/2015	1090	854	578	388	12.8	2.8	39.4	334	54.9
9/15/2016									12.7
9/19/2016			661						
9/20/2016					47.1				
9/21/2016							37.8		
9/22/2016	1150	708		307		33.8		260	
9/9/2017									19.9
9/10/2017	914	658							
9/11/2017				352	54.5	6.4	40.8	127	
9/20/2018		973		432	88.6				49.2
9/21/2018							45	72.7	
9/24/2018	1110		636			12.6			
9/18/2019	750	600			68				
9/19/2019			550	330		8	51	45	35
9/10/2020	650					26			
9/11/2020		570							17
9/14/2020			440				48	34	
9/15/2020				230	150				
9/15/2021					80				
9/16/2021						23	60		14
9/20/2021								30	
9/21/2021		590		220					
9/22/2021	710								
9/13/2022	730					19			
9/14/2022		550		210	64		53	29	18
9/6/2023		600				16		25	
9/7/2023	700			210	50		49		27

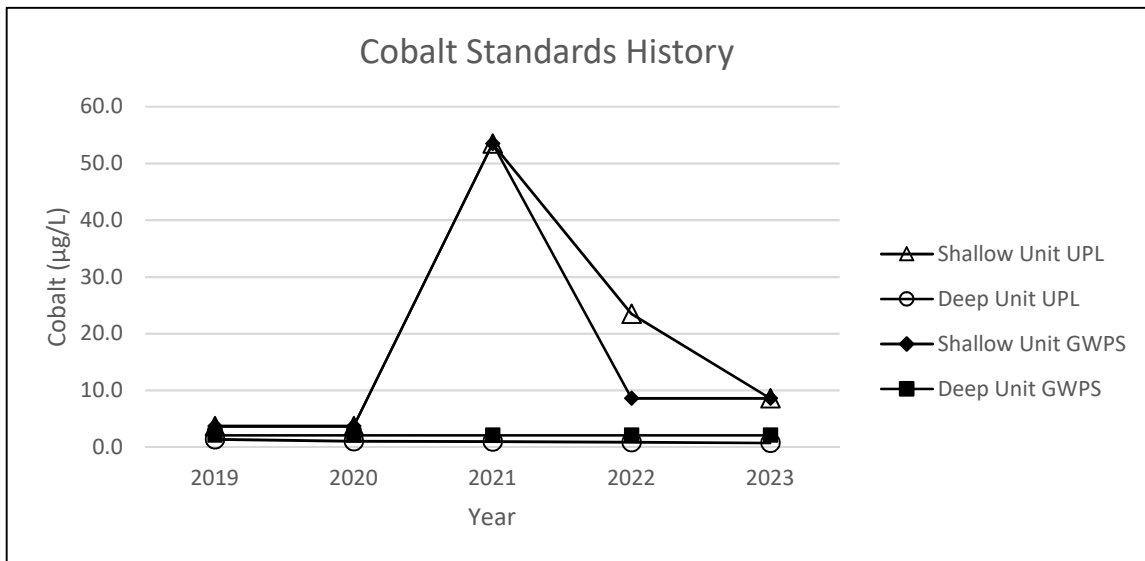
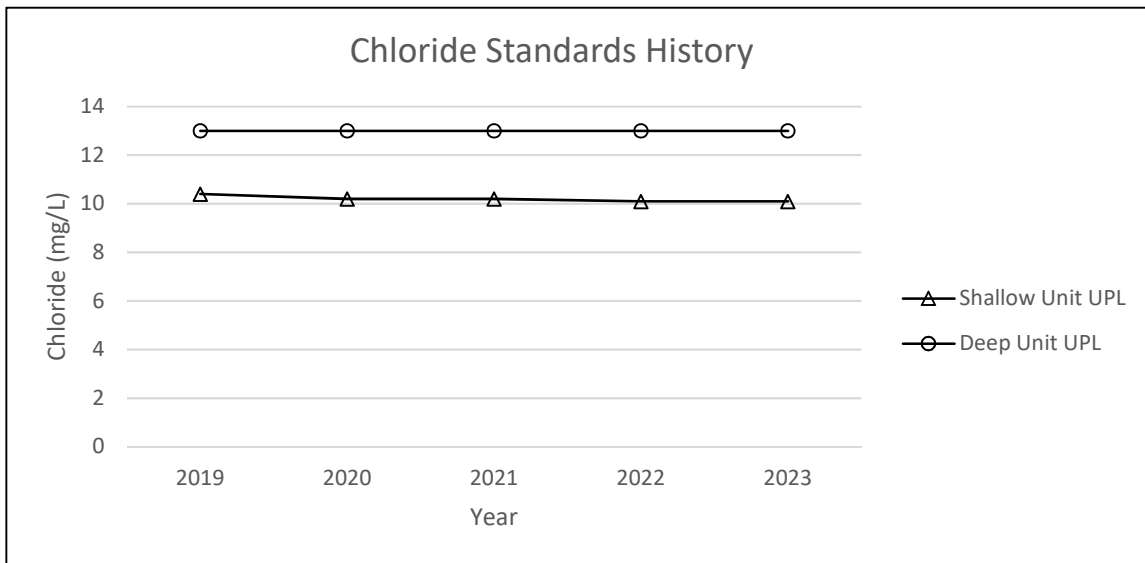
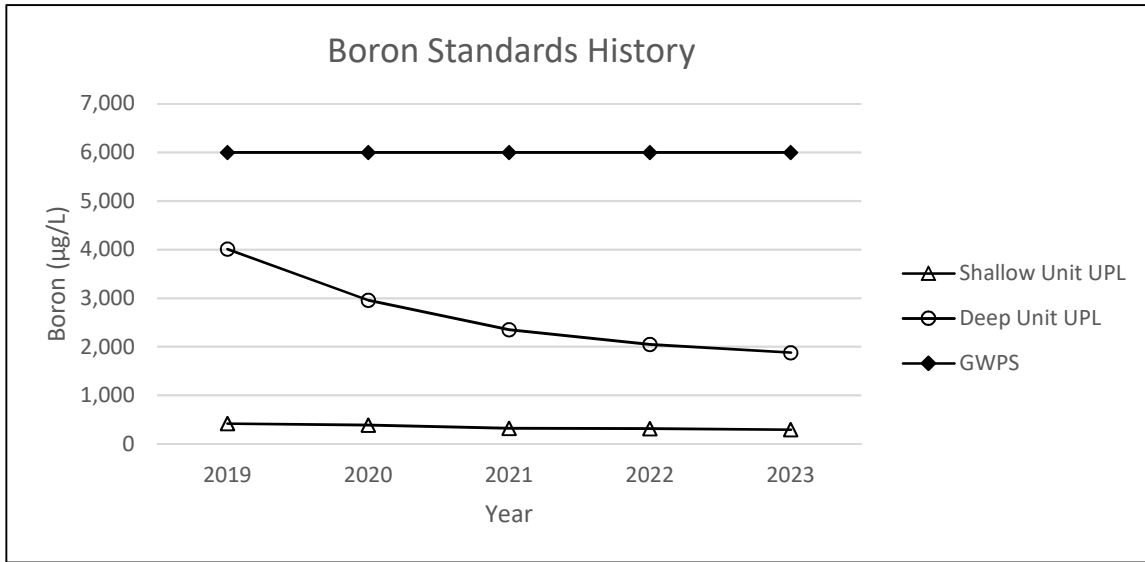


Appendix F  
Standards History Graphs

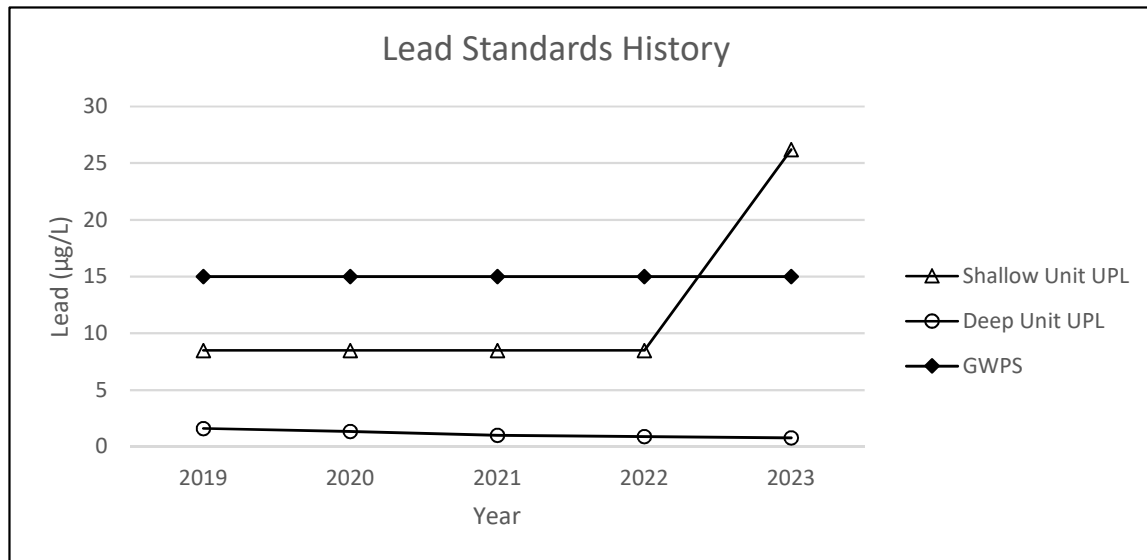
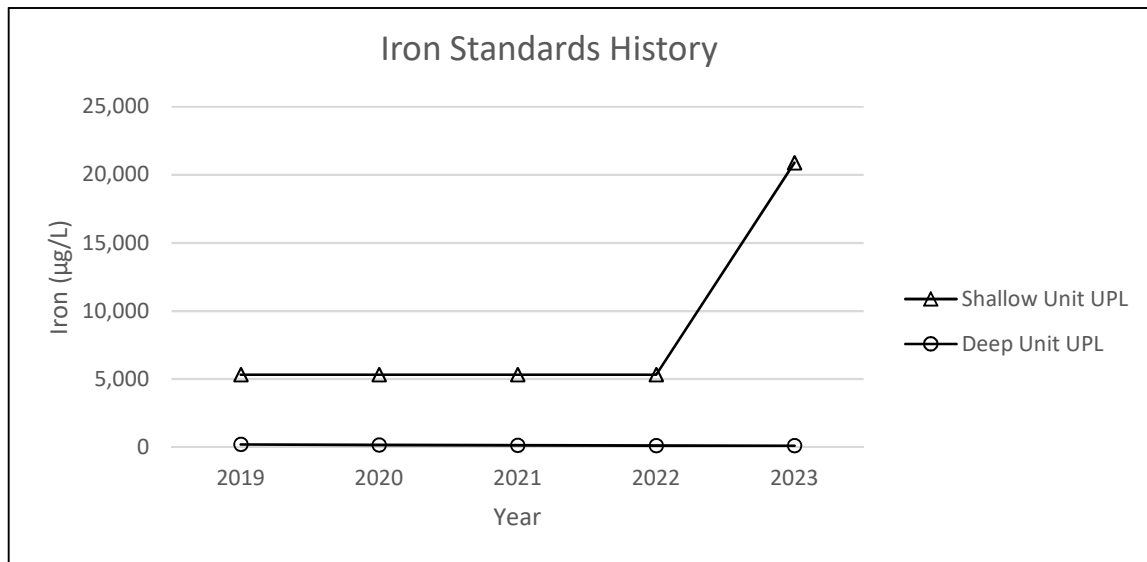
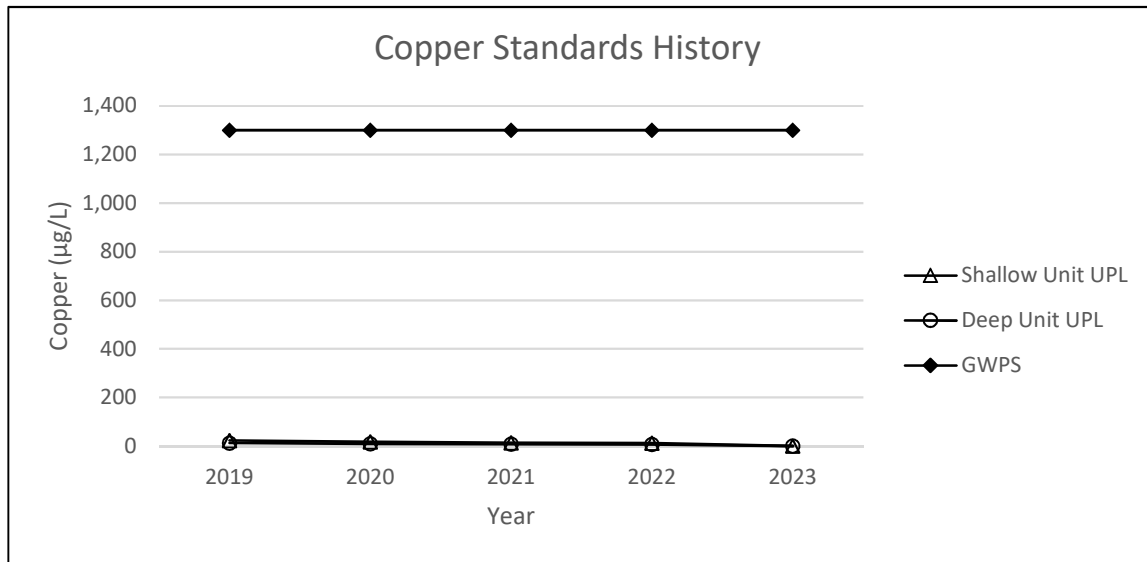
Stoney Point Closed Landfill, Cedar Rapids, IA  
Permit #57-SDP-11-90C



Stoney Point Closed Landfill, Cedar Rapids, IA  
Permit #57-SDP-11-90C

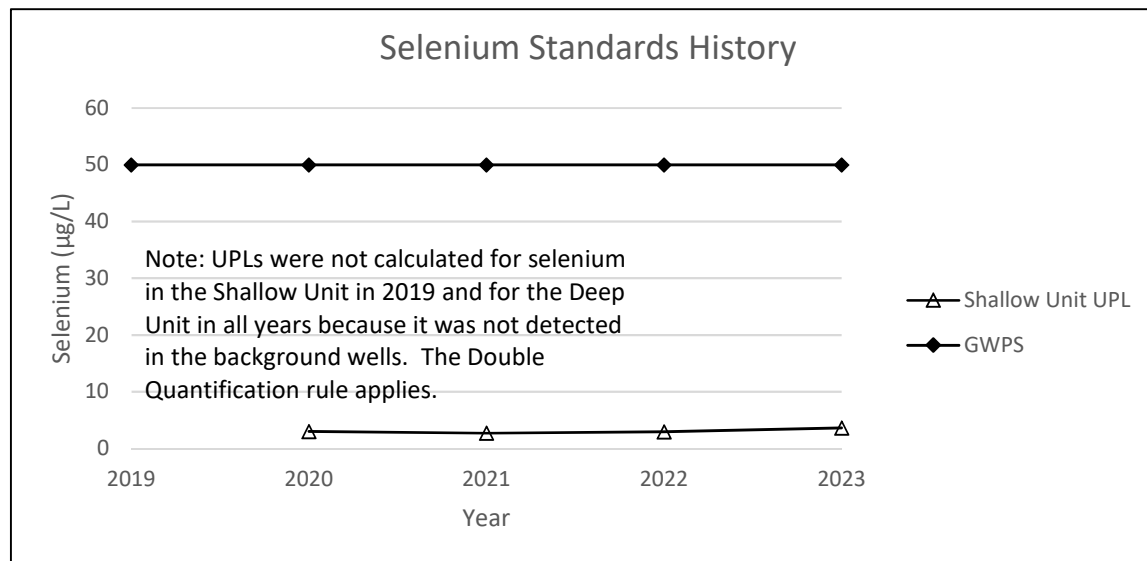
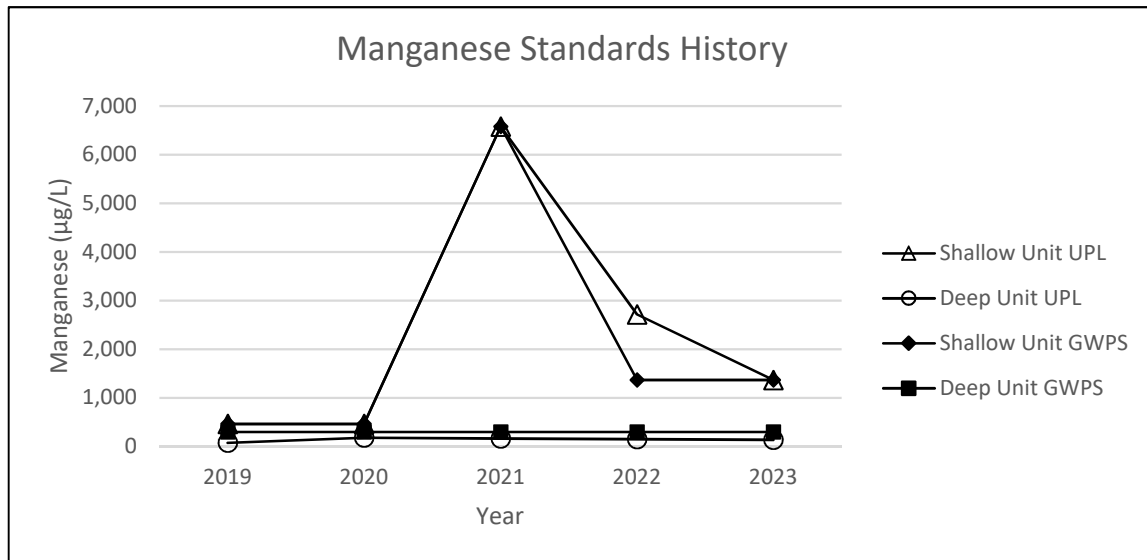
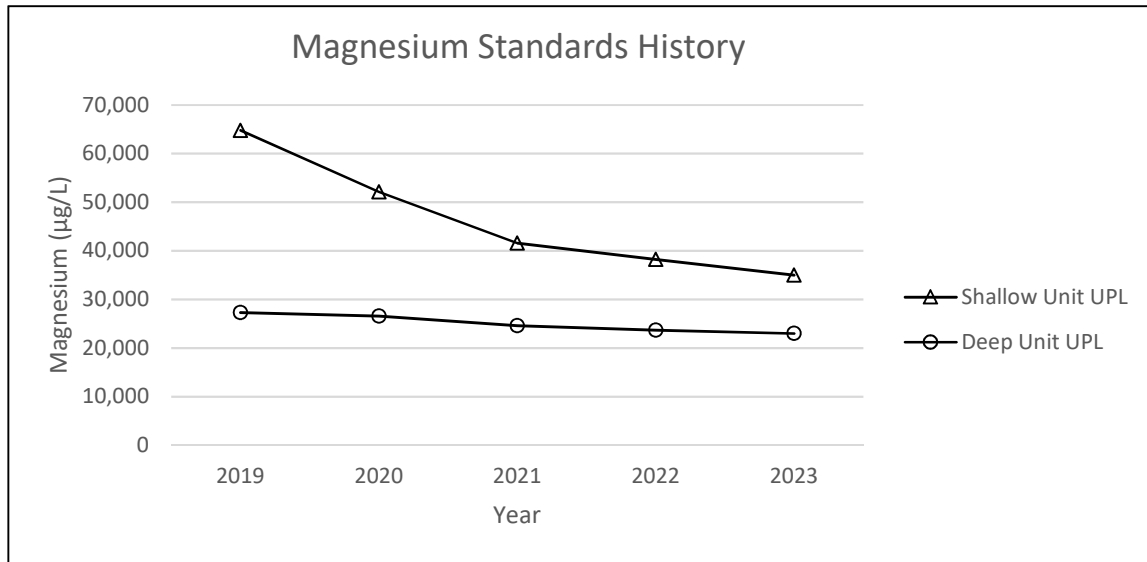


Stoney Point Closed Landfill, Cedar Rapids, IA  
Permit #57-SDP-11-90C

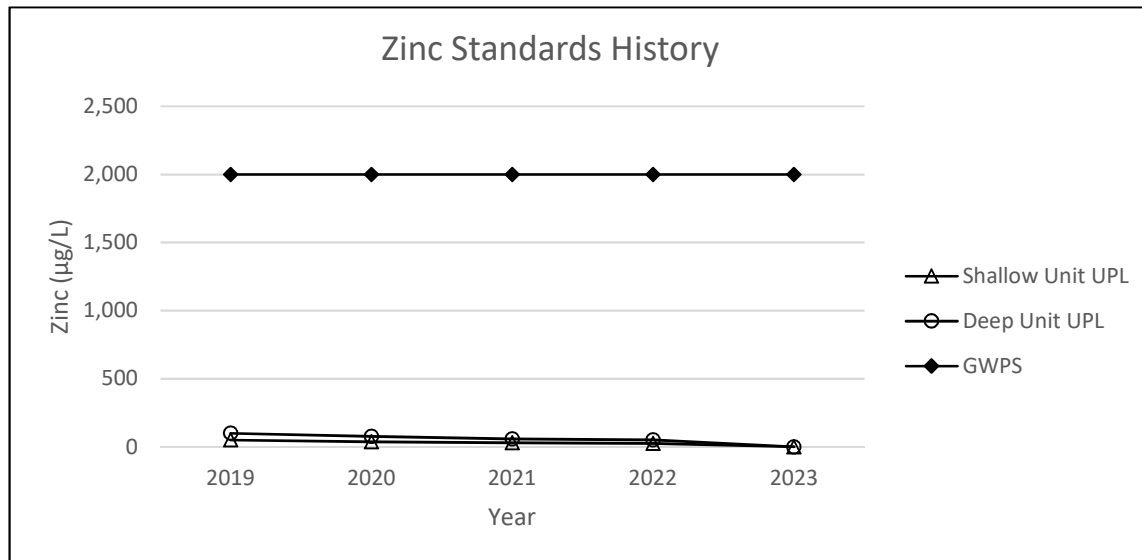
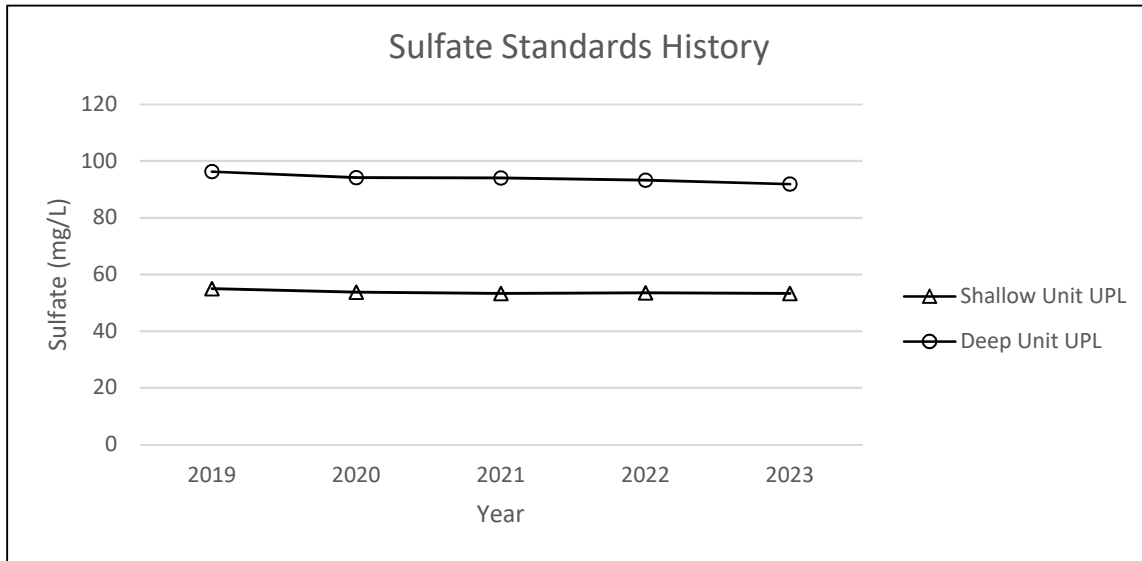





Stoney Point Closed Landfill, Cedar Rapids, IA  
Permit #57-SDP-11-90C



Stoney Point Closed Landfill, Cedar Rapids, IA  
Permit #57-SDP-11-90C



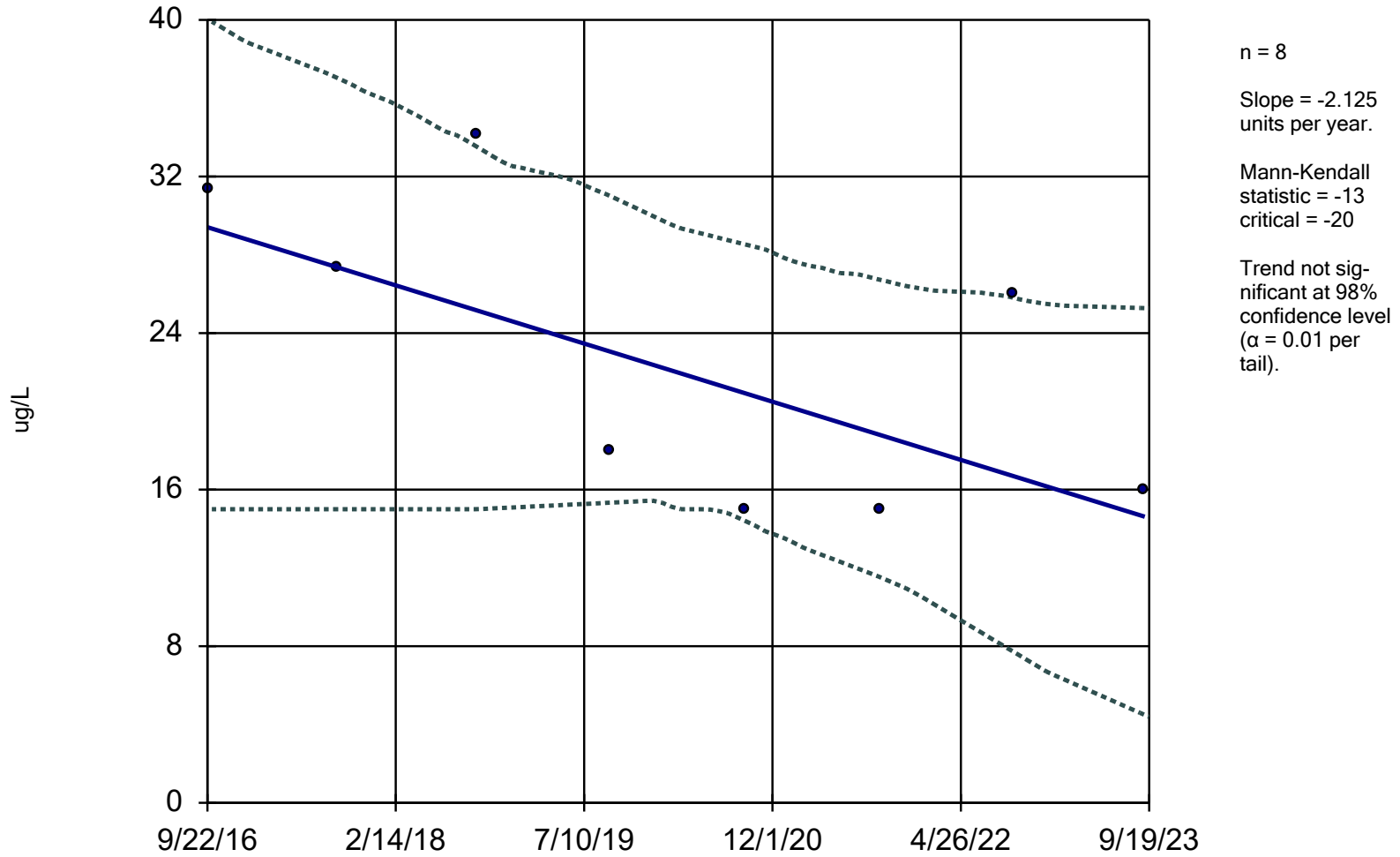


# Appendix G

## Trend Analyses

# Arsenic

## MW-21



Sen's Slope and 95% Confidence Band    Analysis Run 11/2/2023 12:08 PM    View: COL Secondary Pond  
Stoney Point Closed Landfill    Client: SCS Engineers    Data: StoneyPoint\_InputFile

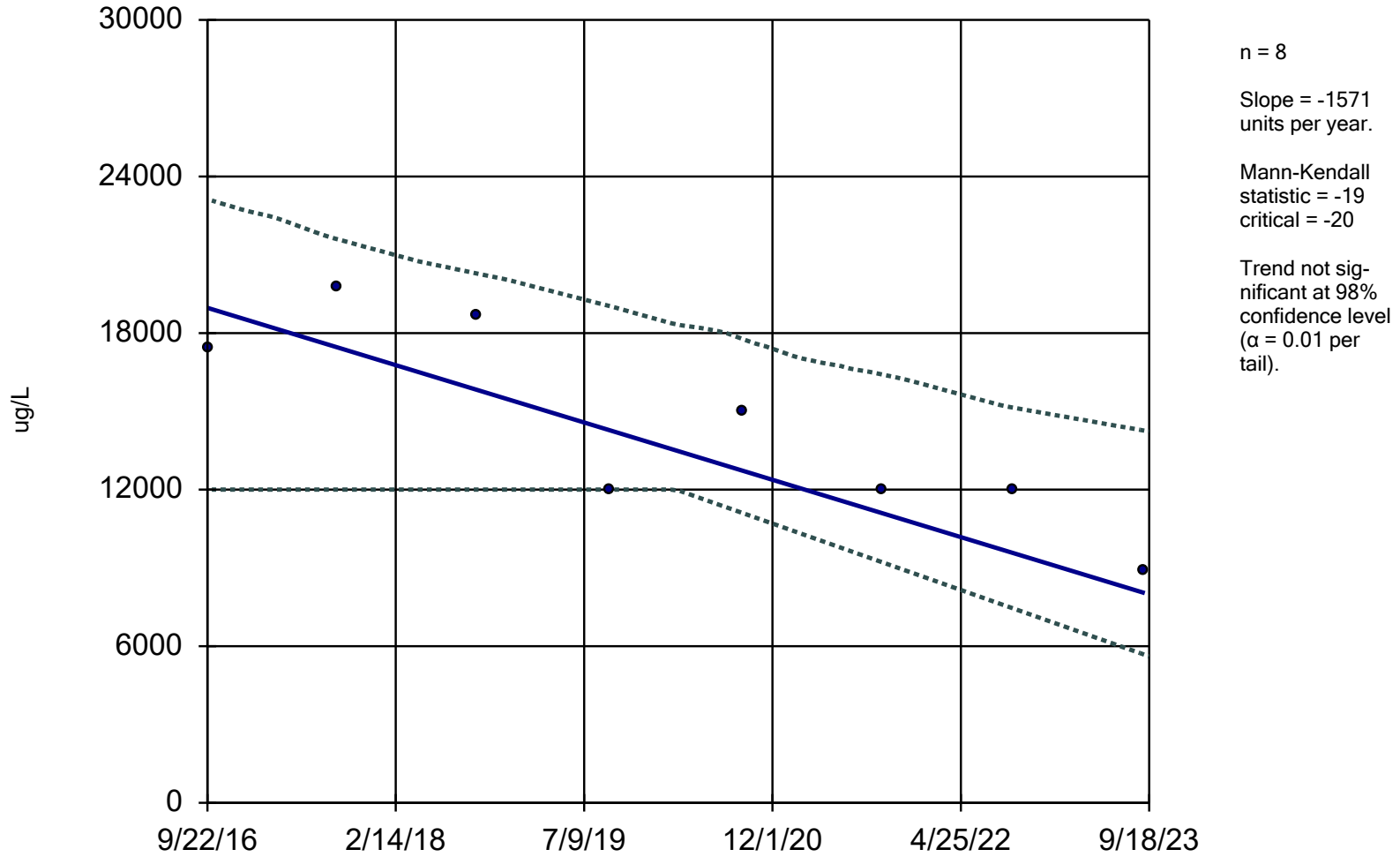
# Sen's Slope Estimator

Constituent: Arsenic (ug/L) Analysis Run 11/2/2023 12:11 PM View: COL Secondary Pond  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-21	LCL	UCL
9/22/2016	31.4	15	40
9/11/2017	27.4	15	37.02
9/24/2018	34.1	15	33.5
9/19/2019	18	15.33	31
9/15/2020	15	14.43	28.55
9/20/2021	15	11.53	26.73
9/14/2022	26	7.739	25.81
9/7/2023	16	4.492	25.27

# Boron

## MW-10



Sen's Slope and 95% Confidence Band    Analysis Run 11/2/2023 12:08 PM    View: COL Secondary Pond  
Stoney Point Closed Landfill    Client: SCS Engineers    Data: StoneyPoint\_InputFile

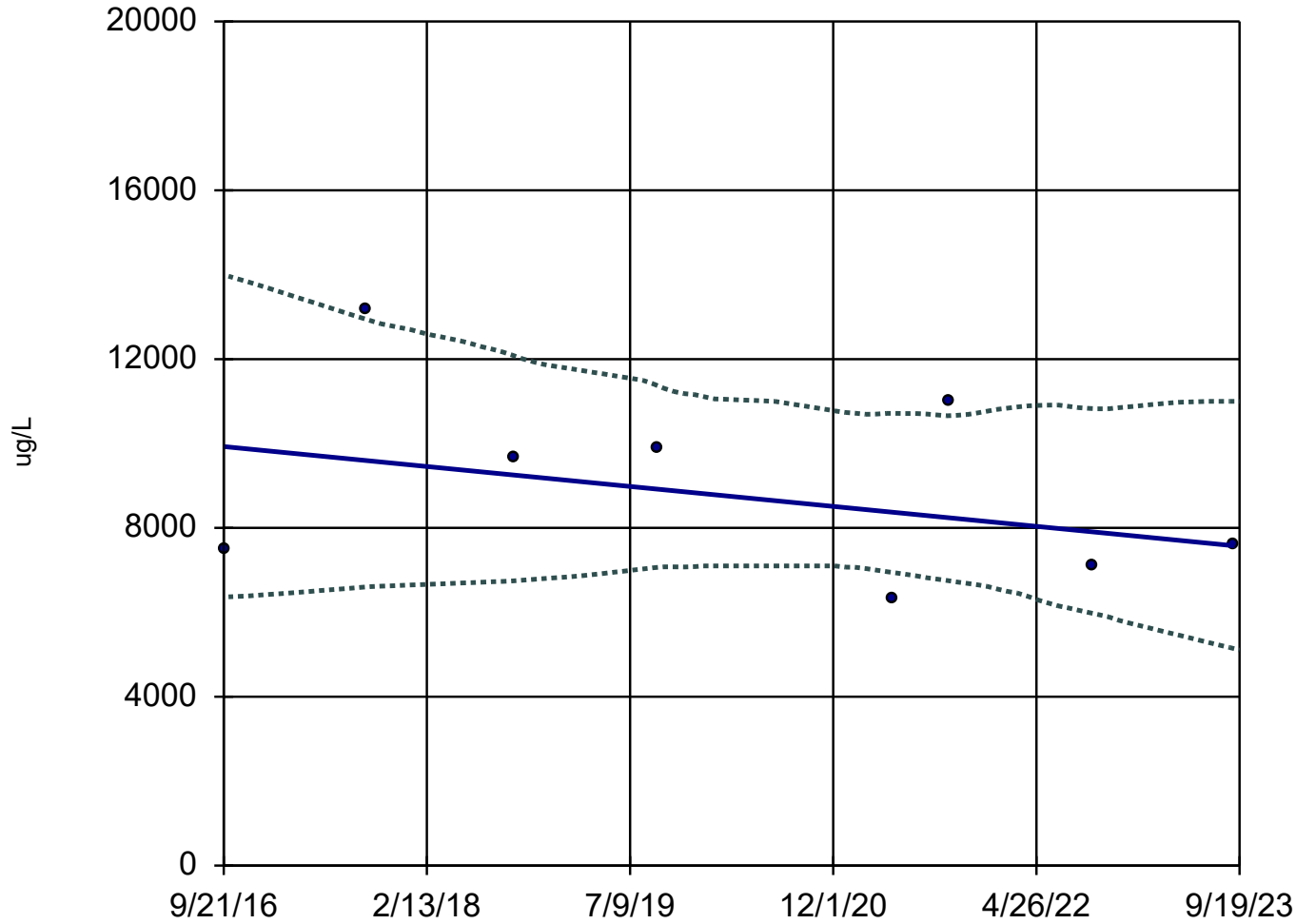
# Sen's Slope Estimator

Constituent: Boron (ug/L) Analysis Run 11/2/2023 12:11 PM View: COL Secondary Pond  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-10	LCL	UCL
9/22/2016	17400	12000	23128
9/10/2017	19800	12000	21592
9/20/2018	18700	12000	20290
9/18/2019	12000	12000	19028
9/10/2020	15000	11108	17780
9/22/2021	12000	9229	16419
9/13/2022	12000	7455	15143
9/6/2023	8900	5670	14257

# Boron

## MW-13



n = 8  
Slope = -337.5  
units per year.  
Mann-Kendall  
statistic = -4  
critical = -20  
Trend not sig-  
nificant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).



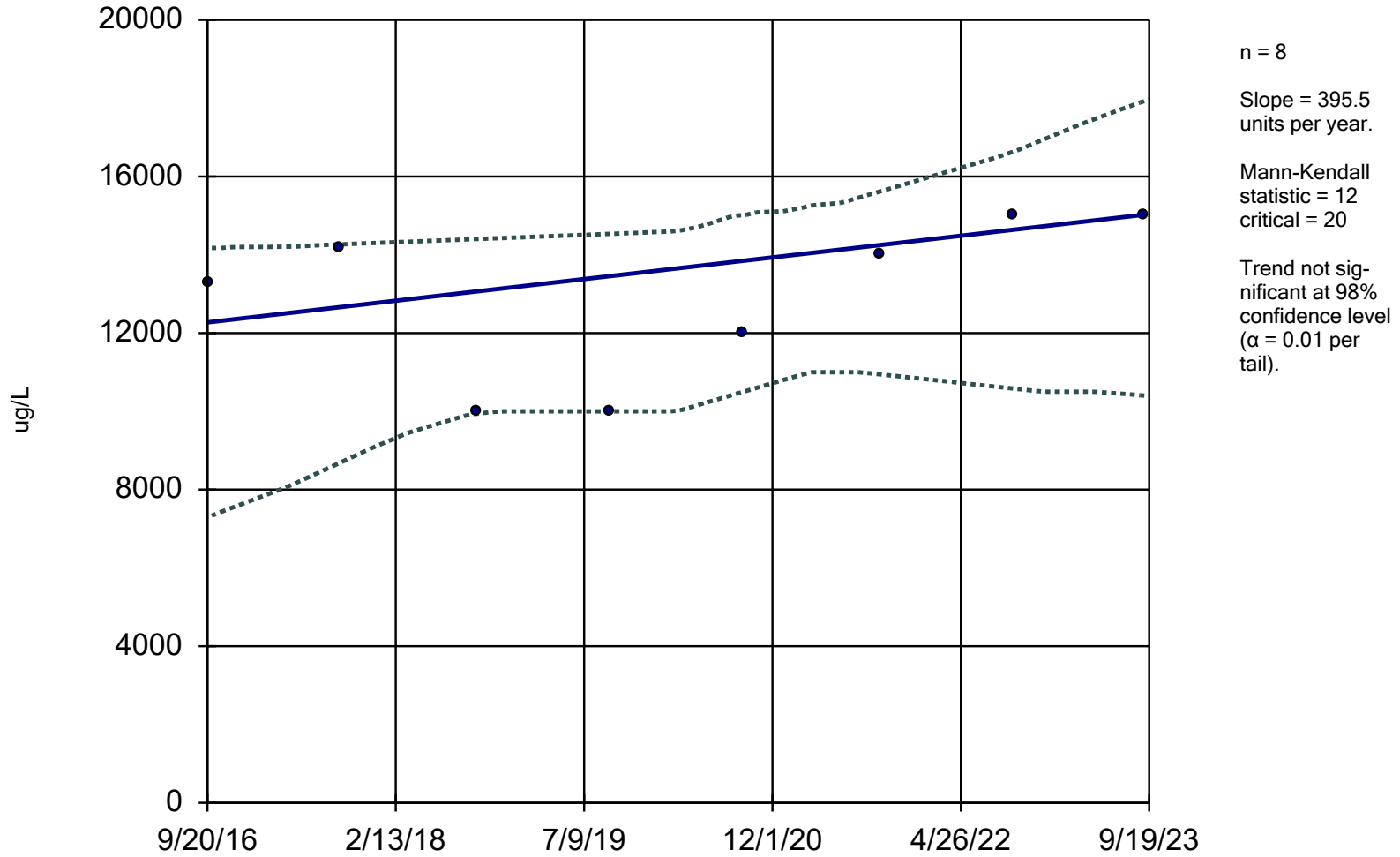
# Sen's Slope Estimator

Constituent: Boron (ug/L) Analysis Run 11/2/2023 12:11 PM View: COL Secondary Pond  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-13	LCL	UCL
9/21/2016	7470	6362	13998
9/12/2017	13200	6600	12950
9/20/2018	9690	6748	12083
9/18/2019	9900	7068	11360
4/28/2021	6300	6947	10713
9/16/2021	11000	6750	10656
9/12/2022	7100	5982	10830
9/7/2023	7600	5135	11000

# Boron

## MW-15



Sen's Slope and 95% Confidence Band    Analysis Run 11/2/2023 12:08 PM    View: COL Secondary Pond  
Stoney Point Closed Landfill    Client: SCS Engineers    Data: StoneyPoint\_InputFile

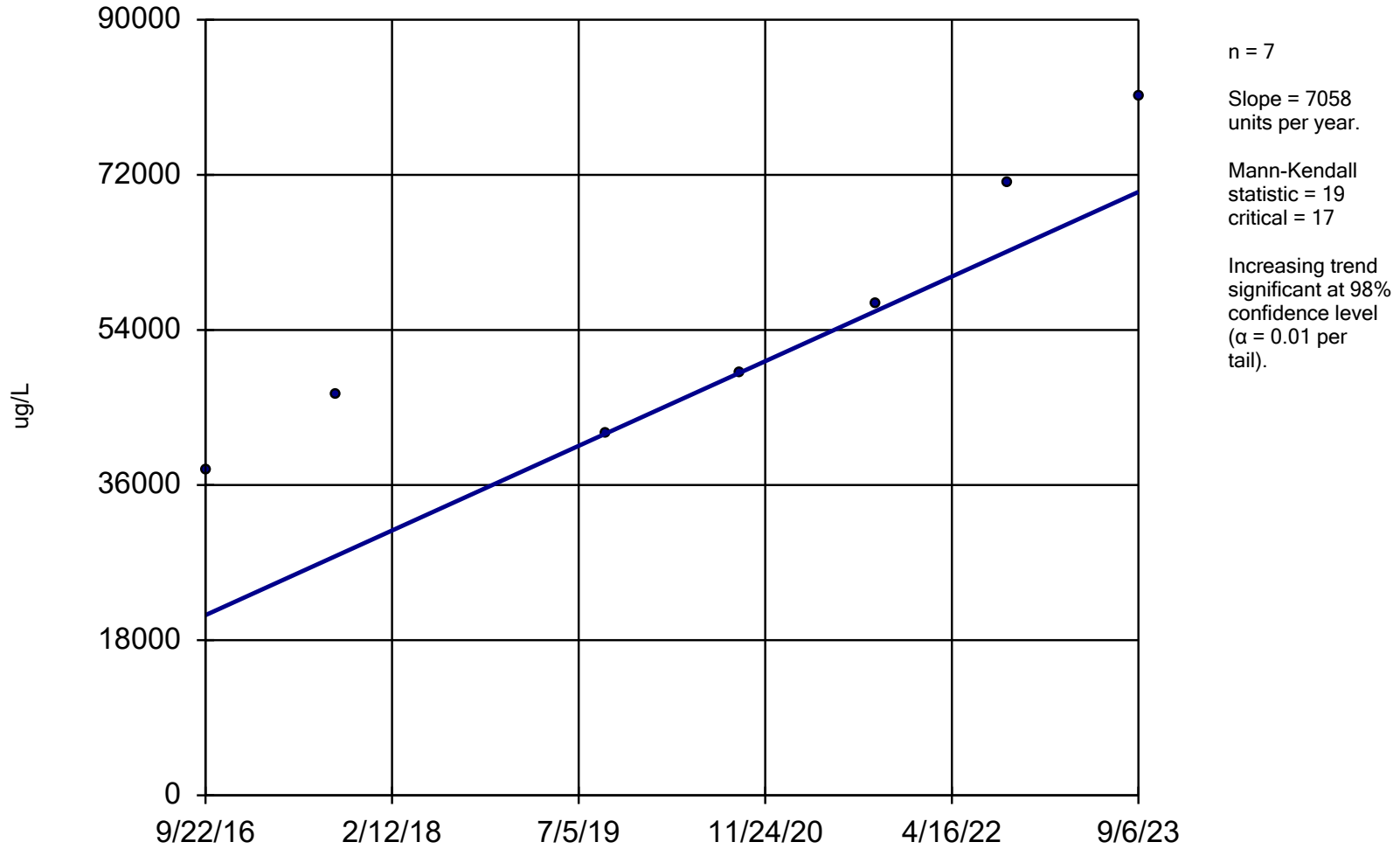
# Sen's Slope Estimator

Constituent: Boron (ug/L) Analysis Run 11/2/2023 12:11 PM View: COL Secondary Pond  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-15	LCL	UCL
9/20/2016	13300	7284	14174
9/12/2017	14200	8677	14265
9/20/2018	10000	9938	14401
9/19/2019	10000	10000	14534
9/11/2020	12000	10495	15000
9/17/2021	14000	10947	15612
9/14/2022	15000	10584	16627
9/7/2023	15000	10403	17928

# Boron

## MW-16



Sen's Slope Estimator Analysis Run 11/2/2023 12:09 PM View: COL Secondary Pond  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

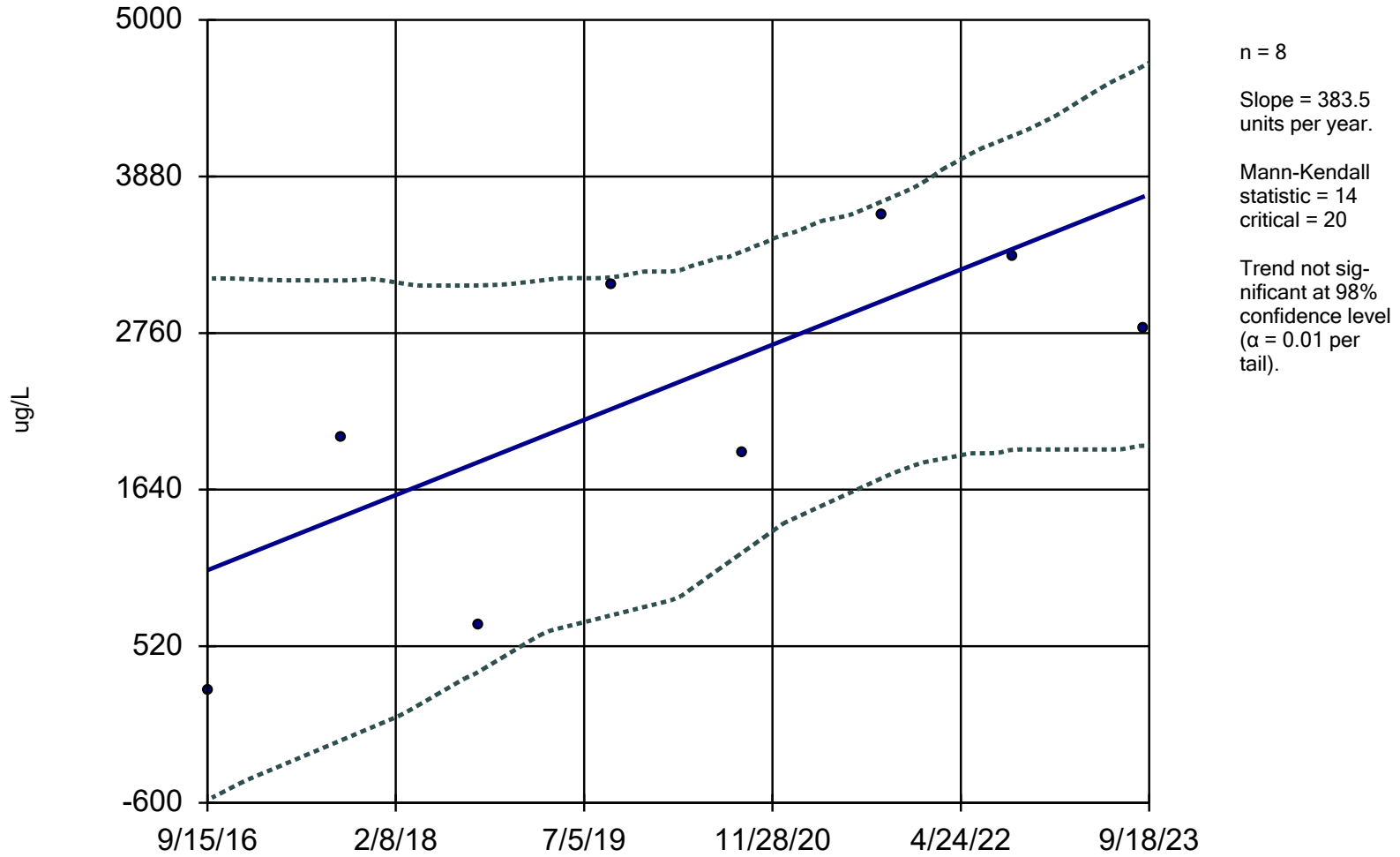
# Sen's Slope Estimator

Constituent: Boron (ug/L) Analysis Run 11/2/2023 12:11 PM View: COL Secondary Pond  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-16
9/22/2016	37800
9/12/2017	46400
9/18/2019	42000
9/14/2020	49000
9/21/2021	57000
9/14/2022	71000
9/6/2023	81000

# Manganese

## MW-12



Sen's Slope and 95% Confidence Band    Analysis Run 11/2/2023 12:09 PM    View: COL Secondary Pond  
Stoney Point Closed Landfill    Client: SCS Engineers    Data: StoneyPoint\_InputFile

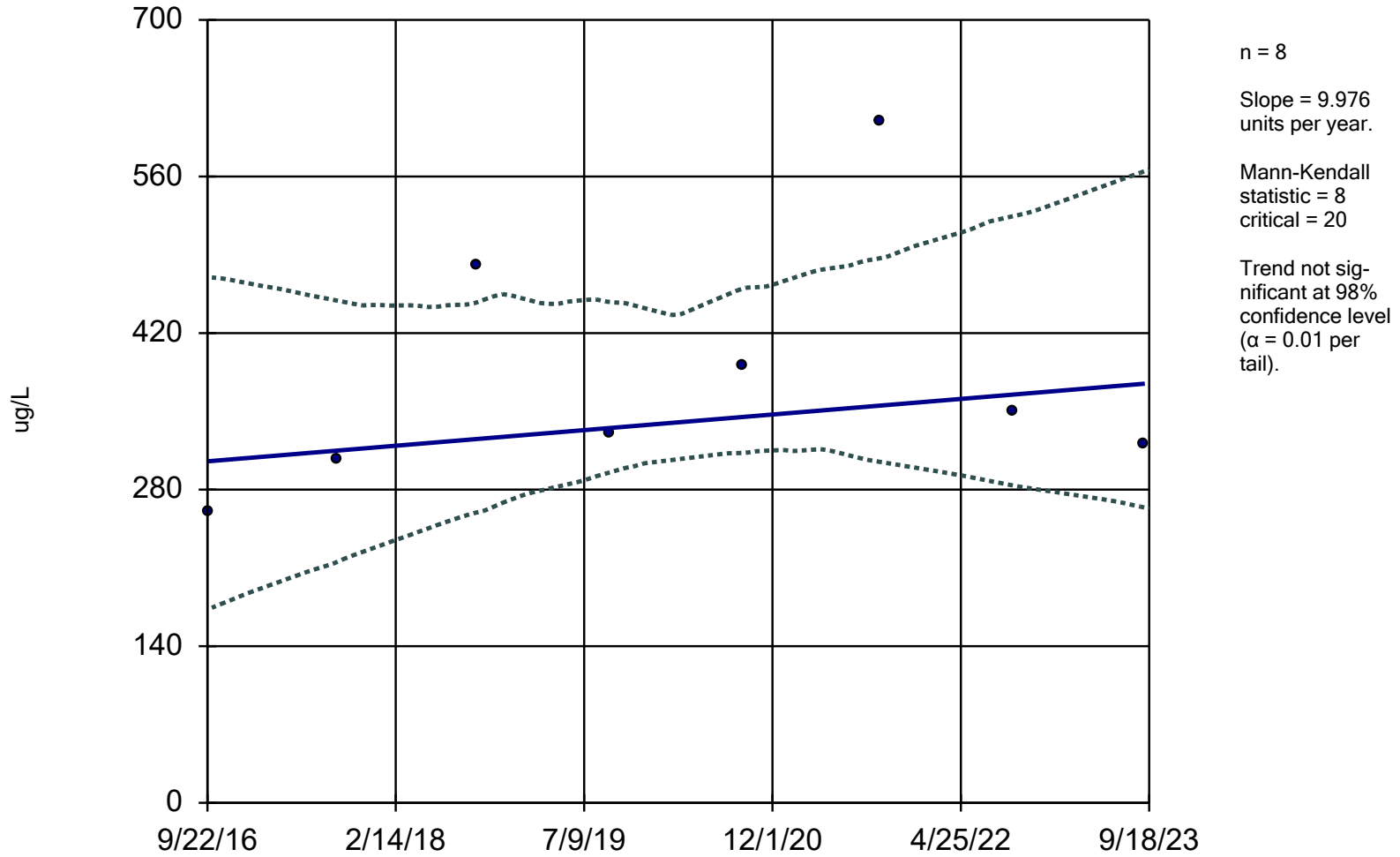
# Sen's Slope Estimator

Constituent: Manganese (ug/L) Analysis Run 11/2/2023 12:11 PM View: COL Secondary Pond  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-12	LCL	UCL
9/15/2016	201	-578	3150
9/12/2017	2010	-154.2	3136
9/24/2018	670	340.3	3101
9/18/2019	3100	741.8	3159
9/10/2020	1900	1194	3343
9/22/2021	3600	1723	3701
9/13/2022	3300	1927.5	4172
9/6/2023	2800	1955	4676

# Manganese

## MW-17



Sen's Slope and 95% Confidence Band    Analysis Run 11/2/2023 12:09 PM    View: COL Secondary Pond  
Stoney Point Closed Landfill    Client: SCS Engineers    Data: StoneyPoint\_InputFile



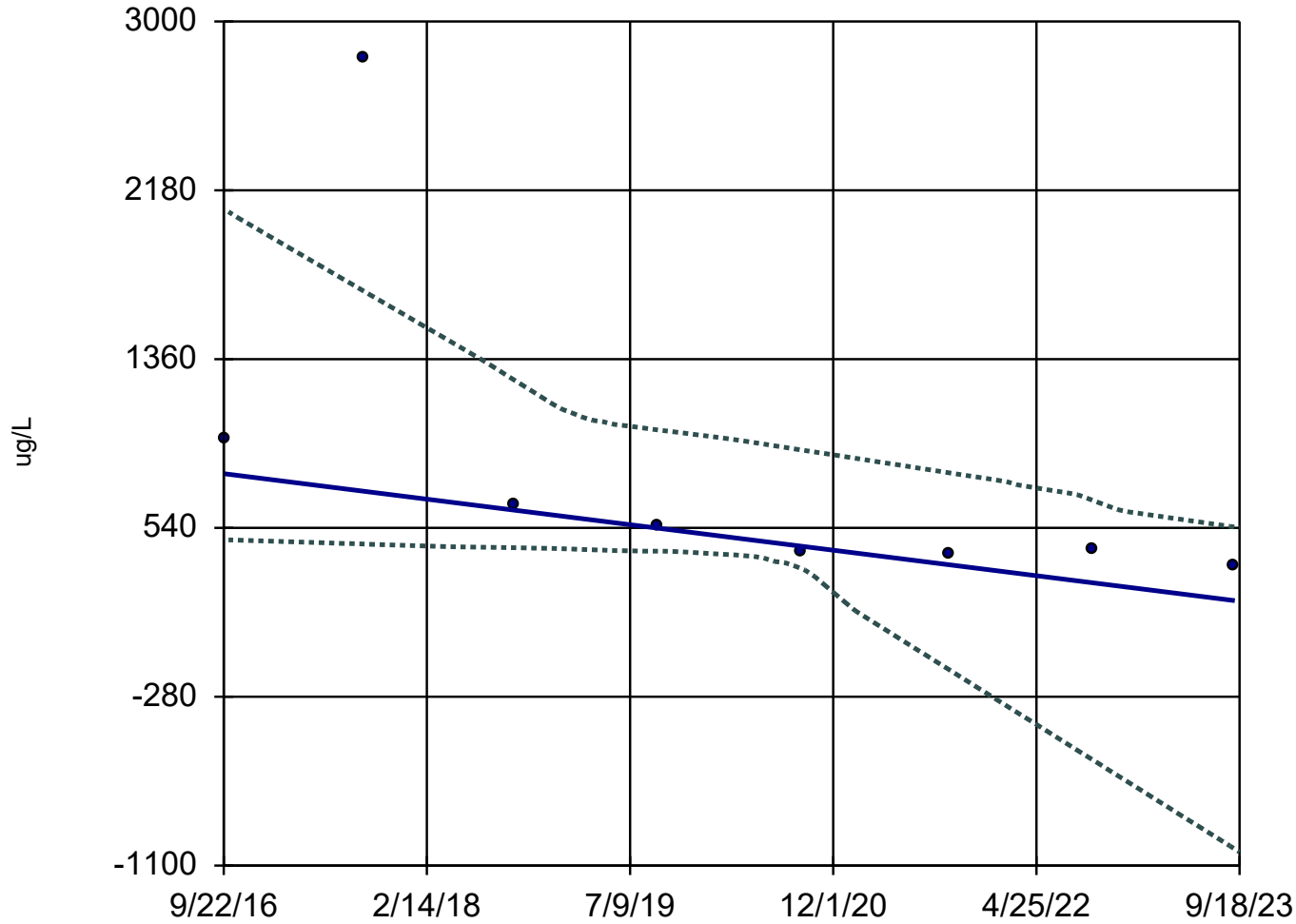
# Sen's Slope Estimator

Constituent: Manganese (ug/L) Analysis Run 11/2/2023 12:11 PM View: COL Secondary Pond  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-17	LCL	UCL
9/22/2016	261	172.8	470
9/10/2017	307	215.5	448.9
9/20/2018	480	259.4	447.2
9/18/2019	330	295.4	447.4
9/11/2020	390	312.7	460.1
9/21/2021	610	304.7	487
9/14/2022	350	283.7	524.5
9/6/2023	320	263.9	564.8

# Manganese

## MW-24



n = 8  
Slope = -88.62  
units per year.  
Mann-Kendall  
statistic = -22  
critical = -20  
Decreasing trend  
significant at 98%  
confidence level  
( $\alpha = 0.01$  per  
tail).

# Sen's Slope Estimator

Constituent: Manganese (ug/L) Analysis Run 11/2/2023 12:11 PM View: COL Secondary Pond  
Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile

	MW-24	LCL	UCL
9/22/2016	973	482.5	2091
9/11/2017	2820	461.6	1688
9/24/2018	657	443.7	1256
9/19/2019	550	427.3	1016
9/10/2020	430	347.8	919.5
9/16/2021	410	-145.8	808.5
9/13/2022	440	-585.1	674.8
9/6/2023	360	-1020	544.3

# Trend Test

Stoney Point Closed Landfill Client: SCS Engineers Data: StoneyPoint\_InputFile Printed 11/2/2023, 12:11 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (ug/L)	MW-21	-2.125	-13	-20	No	8	0	n/a	n/a	0.02	NP
Boron (ug/L)	MW-10	-1571	-19	-20	No	8	0	n/a	n/a	0.02	NP
Boron (ug/L)	MW-13	-337.5	-4	-20	No	8	0	n/a	n/a	0.02	NP
Boron (ug/L)	MW-15	395.5	12	20	No	8	0	n/a	n/a	0.02	NP
<b>Boron (ug/L)</b>	<b>MW-16</b>	<b>7058</b>	<b>19</b>	<b>17</b>	<b>Yes</b>	<b>7</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.02</b>	<b>NP</b>
Manganese (ug/L)	MW-12	383.5	14	20	No	8	0	n/a	n/a	0.02	NP
Manganese (ug/L)	MW-17	9.976	8	20	No	8	0	n/a	n/a	0.02	NP
<b>Manganese (ug/L)</b>	<b>MW-24</b>	<b>-88.62</b>	<b>-22</b>	<b>-20</b>	<b>Yes</b>	<b>8</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.02</b>	<b>NP</b>