

West Des Moines, IA

PROJECT: Harrison Co, FY26 Env Comp, IA 27224470.26      DATE: 2/27/2026

SUBJECT: Harrison County Sanitary Landfill - 43-SDP-05-94P - 2025 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, and Landfill Gas Annual Report      TRANSMITTAL ID: 00001

PURPOSE: For your approval      VIA: Info Exchange

FROM

NAME	COMPANY	EMAIL	PHONE
Sean Marczewski West Des Moines, IA	SCS Engineers	SMarczewski@scsengineers.com	+1-515-631-6152

TO

NAME	COMPANY	EMAIL	PHONE
Mike Smith 502 East 9th Street Des Moines IA 50319-0034 United States	Iowa, State of	mike.smith@dnr.iowa.gov	515-725-8200

REMARKS: Mike -

SCS Engineers, on behalf of the Harrison County Landfill Commission, is submitting the 2025 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, and Landfill Gas Annual Report for the Harrison County Sanitary Landfill. If you have any questions or comments regarding these reports, please contact me at the number below.

Thanks,

Sean A. Marczewski  
Senior Project Professional  
SCS Engineers  
1690 All-State Court, Suite 100  
West Des Moines, Iowa 50265  
712-661-9682 (C)  
515-631-6152 (O)  
[smarczewski@scsengineers.com](mailto:smarczewski@scsengineers.com)

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# Transmittal

DATE: 2/27/2026  
TRANSMITTAL ID: 00001

## DESCRIPTION OF CONTENTS

QTY	DATED	TITLE	NOTES
1	2/27/2026	20260227_Harrison County Sanitary Landfill 2025 AWQR.LCSPER.MMR.pdf	

## COPIES:

Becky Jolly  
Tyler Hinkel (Harrison County Landfill)  
Semir Omerovic (SCS Engineers)  
Sean Marczewski (SCS Engineers)

February 27, 2026  
File No. 27224470.26

Mr. Mike Smith, P.E.  
Land Quality Bureau  
Iowa Department of Natural Resources  
6200 Park Avenue  
Des Moines, Iowa 50321

Subject: 2025 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, and Landfill Gas Annual Report  
Harrison County Sanitary Landfill  
Permit No. 43-SDP-05-94P

Dear Mike:

On behalf of the Harrison County Landfill Commission, SCS Engineers is submitting the 2025 Annual Water Quality Report, as required by Iowa Department of Natural Resources Permit No. 43-SDP-05-94P. This report is intended to satisfy the requirements of 567 Iowa Administrative Code (IAC) Chapter 113.10(5)c(1) and 113.10(6)d(1), related to recordkeeping and notification and annual reporting requirements listed in IAC 113.10(10).

The 2025 Leachate Control System Performance Evaluation Report is included in **Appendix F** to fulfill the requirements listed in IAC 113.7(5)b(14). The 2025 Landfill Gas Report in **Appendix G** is presented to fulfill the landfill gas monitoring and reporting requirements listed in IAC 113.9(2)d.

Please contact us if you have any questions or need additional information regarding the attached reports.

Sincerely,



Semir Omerovic  
Associate Professional  
SCS Engineers



Sean Marczewski  
Senior Project Professional  
SCS Engineers

SO/SAM

Copy: Mr. Tyler Hinkel, Operations Manager, Harrison County Landfill Commission



# 2025 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, and Landfill Gas Report

Harrison County Sanitary Landfill  
Solid Waste Permit No. 43-SDP-05-94P

Prepared for:

Harrison County Landfill Commission

**SCS ENGINEERS**

27224470.26 | February 2026

1690 All-State Court, Suite 100  
West Des Moines, IA 50265  
515-631-6160

## CERTIFICATION

Prepared by:  Date: February 27, 2026

Typed: Semir Omerovic

Reviewed by:  Date: February 27, 2026

Typed: Sean Marczewski

Certification page (PE or groundwater scientist signature) **113.10(1)"d"**

For the purposes of this rule, a “qualified groundwater scientist” means a scientist or an engineer who has received a baccalaureate or postgraduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields demonstrated by state registration, professional certifications, or completion of accredited university programs that enable that individual to make sound professional judgments regarding groundwater monitoring, contaminant fate and transport, and corrective action.

## Executive Summary

### Period of Report Coverage

The period of coverage for this report is from January through December 2025. Groundwater sampling events were conducted in June and December 2025 at the Harrison County Sanitary Landfill.

### Report Priority

- Department review urgency: None.
- Department review impact on rules schedule: None.
- Actions or activities on hold pending Department review or comment: None.
- Action and/or permit amendments needed: None.

### Site Status and Applicable Rules

The following summarizes the site status and applicable rules associated with groundwater sampling at the Harrison County Sanitary Landfill:

- Solid Waste Landfill Status: Active
- Types of Wastes Accepted: MSW and C&D waste
- Applicable IAC Rules: 2009 567-113.10

### Comments

The following summarizes points of special emphasis:

A statistically significant increase (SSI) above background was indicated for Di-n-butyl phthalate in monitoring well MW-4A during the November 2024 semi-annual statistical evaluation. A February 2025 retest did not confirm the indicated SSI.

No statistically significant increases (SSIs) above background were measured during the 2025 statistical evaluation for monitoring wells in the detection monitoring program. Detection monitoring will continue for monitoring wells MW-8A, MW-10R, MW-11A, MW-13R, MW-16, MW-17, and background monitoring wells MW-1A and MW-14.

There were three indicated SSIs above background for monitoring well MW-5A in the assessment monitoring program that are summarized in **Table 6**. Monitoring well MW-5A is in assessment monitoring and does not require a resample. Therefore, the SSIs were not confirmed. Assessment monitoring will continue for monitoring wells MW-4A, MW-5A, and MW-12B.

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### Acronyms/Abbreviations:

ACM = Assessment of Corrective Measures  
C&D = Construction and Demolition  
CAMP = Corrective Action Monitoring Plan  
CCV = Continuing Calibration Verification  
CL = Control Limit - Mean plus Two Standard Deviations  
COC = Chain of Custody  
DO = Dissolved Oxygen  
DQR = Double Quantification Rule  
DNR = Department of Natural Resources  
EPA = Environmental Protection Agency  
GWPS = Groundwater Protection Standard  
HMSP = Hydrologic Monitoring System Plan  
LEL = Lower Explosive Limit  
LCL = Lower Confidence Limit  
LN = Lognormal  
MCL = EPA Maximum Contaminant Level  
MDL = Method Detection Limit  
MSWLF = Municipal Solid Waste Landfill  
N = Normal  
NC = No Change  
NP = Non-Parametric  
ORP = Oxidation Reduction Potential  
P = Parametric  
PL = Prediction Limit  
RL = Reporting Limit  
SWS = DNR Statewide Standard for a protected groundwater source  
SSI = Statistically Significant Increase above background  
SSL = Statistically Significant Level above groundwater protection standard  
UCL = Upper Confidence Limit  
VOC = Volatile Organic Compound

## 1.0 SITE BACKGROUND

### 1.1 SITE HISTORY

The Harrison County Sanitary Landfill (Landfill) is located within the S ½ of the NW ¼ of Section 20, T79N, R42W in Harrison County, Iowa. The Harrison County Sanitary Landfill was formerly made up of two separate areas, the East and West municipal solid waste landfill (MSWLF) units. In 1975 the East MSWLF unit, which covered roughly 12.1 acres, was opened and accepted waste until it closed in 1995. In accordance with an Iowa Department of Natural Resources (DNR) permit revision dated December 2, 2019 (Doc No. 96453), the decision was made to rescind the closure permit for the East MSWLF unit. Therefore, since the 2020 reporting period, the East and West MSWLF units are considered one contiguous unit.

### 1.2 SITE HYDROGEOLOGY

The following summary regarding the Landfill hydrogeology is an excerpt from the February 2009 Hydrologic Monitoring System Plan (HMSP) by Barker Lemar Engineering Consultants (Doc No. 72550).

Previous hydrogeologic investigations of the Harrison County Sanitary Landfill were provided in the Report of Hydrogeologic/Geotechnical Investigation dated May 27, 1994, prepared by Geotechnical Services, Inc. (1994 GSI report). This report incorporated information prepared by Nebraska Testing Corporation in September 1990 (Preliminary Hydrogeological Study), October 1991 (Hydrogeological Study Phase II), and June 1993 (Report of Hydrogeological Study). Information from the 1994 GSI report and subsequent boring log information was compiled to create the summary below.

The following summarizes the regional geologic setting (1994 GSI report):

*In a regional sense, the geologic setting is relatively consistent, with Pleistocene loesses and glacial sediments overlying Pennsylvanian age shales and limestones. Thick sequences of Peoria and Loveland age loess are common on the hilltops, with glacial sediments or bedrock occasionally exposed in ravines and river channels that dissect the uplands. The character of the glacial sediments is quite variable with lithologies of sediments ranging from poorly graded sands and gravels (SP-GP) to high plastic clays and silty clays (CL-CH). The region is drained by the Boyer River and its many smaller tributaries.*

The Harrison County Sanitary Landfill is situated in the Western Loess Hills region, which is characterized by a thick loess cover and sharply ridged terrain. The site is bordered by agricultural and wetland property on the east, Elk Creek on the north and east, the City of Logan wastewater treatment facility to the west, ceased quarry operations to the south, and active quarry operations to the north. The 1994 GSI report characterized the overall site geology as follows:

*... somewhat complex with sand, silt and clay sediments of Pleistocene age and previously excavated, backfilled, and reworked sediments overlying Pennsylvanian age limestone and shales in the existing landfill area [(East MSWLF unit)]. In the proposed expansion area [(West MSWLF unit)], thick sequences of fill materials overlie bedrock.*

Prior to the site's development as a solid waste facility, the western and northern portion of the property was quarried; however, it was determined the quality of limestone in this area was low and the excavation has been backfilled with quarry operation overburden (backfill) materials. The extent of the quarry operation<sup>1</sup> is not clearly defined; however, unusually flat topography was observed in the northwest portion of the site prior to construction of the West MSWLF unit and the 1994 GSI report suggested this was the area of the quarry operation. The on-site boring information also supports the conclusion that the majority of the West MSWLF unit is situated on backfill material. The 1994 GIS report characterized the backfill material as follows:

*These sediments vary in color from light to dark brown with some yellow brown and gray to black. The sediment character ranges from poorly graded sands to high plastic clays (SP, SC, ML, CL, and CH) and varies in consistency from soft to very firm. The fill contains chips of shale and limestone as well as organic horizons (green grass blades) intermixed within the finer grained sediments. The relative thickness of the fill across the site is quite variable too, as it ranges from 67 (MWC-6) to 110 (DH-5- 94) feet.*

The cross-sectional location map and cross-section figures from the 1994 GSI report are included in Attachment A [not included in this Annual Water Quality Report]. The southeastern portion of the West MSWLF unit (bordering the East MSWLF unit) was not quarried as deep since the underlying bedrock and the glacial outwash sand units are present in this area. This can be seen by the cross-section figures and glacial outwash sand aquifer isopach map. The glacial outwash sand unit overlays the Pennsylvanian age limestone and shales and varied in thickness from 22 to 36 feet and seemed to be pervasive throughout much of the site except the quarried area (beneath the majority of the West MSWLF unit), where it had been excavated. The glacial outwash sand aquifer isopach map is included in Attachment A [not included in this Annual Water Quality Report]. A detailed description of the rest of the "complex" site geology is not discussed since it has been excavated and backfilled beneath the West MSWLF unit.

The 1994 GSI report concluded that the sand and gravel seams within the glacial deposits or sediments were the potable water supply in this area and the uppermost bedrock was not an aquifer. The following is the water well inventory in this area from the 1994 GSI report:

*Perusal of available areal water well logs suggests that wells that occur in the upland setting tap potable water supplies within the Pleistocene sediments. The water bearing unit would likely be sand and gravel seams within the glacial deposits or sediments that tend to perch water. Telephone discussions with Mr. Paul Van Dorpe of the Iowa Department of Natural Resources, Geological Survey Bureau (10/20/93) revealed that state researchers consider the deeper Pennsylvanian rocks in western Iowa to be a nonaquifer. He said that most rural homes in this area get their water from large diameter seepage wells that are drilled into the Pleistocene deposits.*

Based on this, two aquifers exist at the site – the water table system aquifer and the glacial outwash sand aquifer. The groundwater flow for the water table system beneath the site was described in the 1994 GSI report as follows:

*... watertable flow beneath the existing landfill area [(East MSWLF unit)] is to the north-northeast at a gradient of 0.077. The flow direction changes in the western portion of*

*the site (where the new development is proposed [(West MSWLF unit)]) to primarily a northwestern flow. This part of the site is where previous quarry excavation and backfilling completely altered and reworked the pre-existing stratigraphy.*

A groundwater contour map of the water table system aquifer was included in Attachment A of the Revised HMSP. The water table system groundwater elevation beneath the West MSWLF unit ranges from approximately 1,130 feet above sea level (asl) to 1,050 feet asl, generally from south to north, respectively. As mentioned previously, the extent of the quarry activity is not clearly defined; however, the boring logs indicate that bedrock was encountered at approximately 1,020 feet asl (DH-3-94) in the southern portion of the West MSWLF unit and at approximately 990 feet asl (DH-2-94) in the northern portion of the West MSWLF unit. Based on the available elevation information, separation between the water table and underlying bedrock is more than 60 feet.

The groundwater flow for the glacial outwash sand aquifer beneath the site was described in the 1994 GSI report as “groundwater flow in this deposit trends to the northwest at a gradient of 0.0049.” A groundwater contour map of the glacial outwash sand aquifer from the 1994 report was included in Attachment A of the 2009 Revised HMSP. The majority of the glacial outwash sand aquifer was excavated beneath the West MSWLF unit. A statement from the 1994 GSI report describes the extent of the glacial outwash sand:

*The northwest portion of the site is presently an old fill area. Several additional borings and monitor wells were drilled/installed in this area. The glacial outwash sand seam that occurs beneath most of the eastern portion of the site has been removed in the fill area. As this glacial sand was likely truncated during the excavation process, it is probable that it continues to drain waters into the fill materials that presently comprise this area.*

From the above review of the hydrogeological setting, the first encountered aquifer beneath the West MSWLF unit appears to be the water table system, which generally flows towards the north to northwest.

## 2.0 SAMPLING STATUS SUMMARY

**Table 1** provides an overview of the sampling status for the Landfill, including the monitoring points in the groundwater monitoring program, the current monitoring program for each monitoring point, comparative statistical findings, and the number of samples collected in each monitoring program since 2008. Samples noted in this table are for the full list required for detection and assessment, and/or corrective action monitoring. For the purpose of tracking samples collected, background samples are included under detection monitoring. Retests for individual parameters, if completed, are not included in the count for the total number of samples in each monitoring program. **Figure 1** depicts the Site Monitoring Network for Harrison County Sanitary Landfill.

Field sheets from the June and December 2025 sampling events are included in **Appendix A**. Sampling completed in 2025 and anticipated sampling for 2026 are summarized in **Table 2**. Laboratory analytical reports from the 2025 sampling events are included in **Appendix B-1**, and the 2025 data validation documentation tables are provided in **Appendix B-2**. The groundwater chemistry summary table for this reporting period is included in **Appendix C**.

### 3.0 MONITORING WELL MAINTENANCE AND PERFORMANCE SUMMARY

The Harrison County Sanitary Landfill is governed by the monitoring well maintenance and performance reevaluation in IAC 567-113.10(2)"f":

*(1) 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.*

*(2) 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.*

*(3) Measurements of well depths to ensure that wells are physically intact and not filling with sediment. Measurements shall be taken annually in wells which do not contain dedicated sampling pumps and every five years in wells containing dedicated sampling pumps.*

*(4) A biennial evaluation of well recharge rates and chemistry to determine if well deterioration is occurring.*

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

#### 3.1 HIGH AND LOW WATER LEVELS EVALUATION

The June and December 2025 groundwater elevations and top of screen elevations are presented in **Table 4**. The measured groundwater elevations in relation to the top of the screened interval elevations indicate that the HMSP monitoring wells are placed at acceptable vertical locations to enable collection of representative groundwater samples and to detect contamination, if present.

#### 3.2 HYDROLOGIC SETTING AND FLOW PATHS EVALUATION

IAC 567-113.10(2)(f)(2) requires an evaluation of groundwater 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. Groundwater contours were produced for the Landfill using groundwater elevation data measured during the June 2025 groundwater sampling event. The groundwater contour map is included in **Figure 2**. Comparisons of the 2025 groundwater contours to previous groundwater contours indicate that the groundwater elevations and flow directions are consistent, with the general groundwater flow direction for the Landfill being northwest.

#### 3.3 WELL DEPTHS EVALUATION

Well depths are required to be measured annually for monitoring wells that do not contain dedicated sampling pumps. Monitoring well depths were measured at MW-11A during both of the 2025 groundwater sampling events and are presented in **Table 4**.

### **3.4 WELL RECHARGE RATE AND CHEMISTRY EVALUATION**

IAC 567-113.10(2)(f)(4) requires a biennial evaluation of well recharge rates and chemistry to determine if well deterioration is occurring. Monitoring wells in the Harrison County Sanitary Landfill HMSP are sampled using low-flow techniques, which entails purging and sampling at a low flow rate to reduce disturbance to the well and aquifer and to limit groundwater level drawdown. To achieve this, the purge and sampling flow rate is generally set between 100 and 500 mL/min. During the sampling events conducted within this reporting period, flow rates were within the recommended rate of 100 to 500 mL/min and control of groundwater level drawdown was subsequently maintained to the extent possible by the low-flow sampling technique. Groundwater samples were collected during both 2025 sampling events with the exception of MW-16 during both sampling events, MW-12B during the fall sampling event, and MW-13R during the spring sampling event due to insufficient water. Monitoring well deterioration is not evident in the HMSP monitoring well network for the Landfill.

### **3.5 WELL MAINTENANCE RECOMMENDATIONS**

Based on observations during the December 2025 sampling event, maintenance does not appear to be necessary at this time. Any well maintenance items noted during 2025 sampling activities will be communicated to Landfill personnel upon completion of the sampling activities.

### **4.0 2025 QUALITY ASSURANCE/QUALITY CONTROL SUMMARY**

Quality assurance/quality control (QA/QC) procedures, also referred to as data validation, are performed on analytical laboratory results for laboratory QC samples and site samples. The QA/QC review procedure provided documentation of the accuracy and precision of the analytical data and confirmed that the analyses were sufficiently sensitive to detect constituents at concentrations below regulatory standards, where such standards exist. QA/QC data validation of the analytical laboratory data included review of sample handling, analytical sensitivity, field QA/QC samples, accuracy, and precision. An explanation of the laboratory QA/QC and data validation procedures along with the QA/QC review findings are described in more detail below. The 2025 QA/QC data validation documentation tables are included in **Appendix B-2**.

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

Sample receipt forms were reviewed and checked to verify that samples were received in proper condition and within the acceptable temperature range. Chain of custody (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. Notable items regarding sample collection and sample handling procedures are included in the 2025 QA/QC summary tables in **Appendix B-2**.

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

Laboratory QA/QC procedures and data validation assist in producing data of acceptable quality and reliability. Eurofins 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. Trip

blanks were submitted with groundwater samples for VOC analysis and verified that cross-contamination did not occur during sample handling and transport.

### 4.3 ACCURACY

Laboratory analytical accuracy can be assessed by evaluating the constituent recoveries from the following laboratory QA/QC samples: initial or continuing calibration verification (ICV or CCV), laboratory control sample (LCS), and LCS duplicate (LCSD). LCS/LCSD samples assess the accuracy of analytical procedures by checking the ability to recover constituents added to clean aqueous matrices. In some cases, the laboratory spiked project samples as matrix spike (MS) and matrix spike duplicate (MSD) samples to assess the ability to recover constituents from a matrix similar to that of project samples. Accuracy was also assessed for organic analyses by evaluating the recovery of organic constituent surrogates.

The data validation confirmed that the laboratory performed accurate QA/QC and appropriately qualified data with laboratory QA/QC accuracy exceedances. The limited CCV and LCS constituent recoveries that were outside of the recommended acceptable range did not appear to affect sample results, as the constituents with recovery exceedances were either not detected in samples or had measured concentrations within the historical range. Laboratory QA/QC items are summarized in the 2025 QA/QC summary tables in **Appendix B-2**.

### 4.4 PRECISION

According to the Practical Guide for Ground-Water Sampling, Barcelona et al, November 1985, prepared in cooperation with the Robert S. Kerr Environmental Research Laboratory and the United States Environmental Protection Agency's Environmental Monitoring System Laboratory:

*“Duplicate sample values which differ by less than  $\pm 50\%$  relative difference indicate good error control.”*

Field duplicate samples were collected during the June and December 2025 sampling events to evaluate the precision of analytical measurements, as well as the reproducibility of sampling technique. The relative percent differences (RPDs; quantitative difference between the site sample and the field duplicate sample) for each constituent were calculated to evaluate the precision of the data. The RPDs can be evaluated only if the laboratory analysis results for both the site sample and the field duplicate sample are detected above the reporting limit, although instances where one sample is reported as non-detect at the reporting limit and the other sample is detected at a concentration greater than the reporting limit are noted. A result qualified with a “J” qualifier, which indicates an estimated concentration measured between the method detection limit and the reporting limit, and total suspended solids were not considered in the duplicate comparison.

Field duplicate samples were collected at monitoring well MW-11A during the June and December 2025 sampling events. The RPD comparisons were within acceptable range and show a general agreement between the site samples and field duplicate samples, indicating any sampling or analysis errors are unlikely and the data are acceptable for their intended use.

## 4.5 DATA QUALITY SUMMARY

Based on the above QA/QC procedures and the Harrison County Sanitary Landfill field sampling standard operating procedures, the samples collected during this reporting period are considered to be representative of groundwater conditions at the locations and times they were obtained, and no samples were rejected as unusable due to QC failures. Data validation checklists are provided in **Appendix B-2**. In general, the quality of the analytical data for this reporting period does not appear to have been compromised by sampling or analytical irregularities and results affected by QC anomalies are qualified with the appropriate data flags, which are listed in the laboratory reports in **Appendix B-1**.

## 5.0 DATA EVALUATION

Statistical evaluations are completed for the Landfill on a semi-annual frequency. **Table 5** provides the background and GWPS summary for the Landfill. The background dataset was updated during the second 2025 semi-annual statistical evaluation. SSIs for arsenic, cobalt, and nickel for monitoring well MW-5A were indicated during the 1<sup>st</sup> 2025 statistical evaluation. Monitoring well MW-5A is in assessment monitoring and does not require a resample; therefore, the indicated SSIs were not confirmed. **Table 6** is a summary of well/detected constituent pairs with no immediately preceding statistically significant increases (SSIs). **Table 7** provides a summary of ongoing and newly identified SSIs. **Table 8** provides a summary of ongoing and newly identified statistically significant levels (SSLs), which for the site are none. Data used for the statistical analyses are included in **Appendix C**. The Summary of Statistical Methodology, which details the statistical evaluations from both the first and second semi-annual sampling events, is included in **Appendix D**. **Table 10** summarizes the historical SSIs and SSLs since 2020. **Table 11** is the Corrective Action Trend Analysis for the Landfill; however, no corrective action is required for the Landfill at this time.

## 6.0 STANDARDS HISTORY

The prediction limits included in the standards history graphs were calculated for the constituents detected during the 2025 sampling event at detection monitoring points. Standards history graphs generated as a result of the 2025 statistical evaluations are included in **Appendix E** and discussed below. The prediction limits for MW-8A, MW-10R, MW-11A, MW-13R, and MW-17 were calculated from background data sets. In all instances the prediction limit was below the statewide standard, with the following exceptions:

- Arsenic in MW-11A;
- Cadmium in MW-8A;
- Cobalt in MW-8A, MW-10R, MW-11A, MW-13R, and MW-17;

As discussed in the 2021 Spring Sampling Notification, submitted by Evora Consulting (Doc #100398), a site-specific cobalt GWPS was developed due to naturally occurring cobalt concentrations in the old fill materials that are above the statewide standard. Additional information about the prediction limits and GWPSs can be found in **Table 5**.

## 7.0 RECOMMENDATIONS

No SSIs or SSLs were confirmed during the 2025 statistical evaluations. Detection monitoring will continue for monitoring MW-8A, MW-10R, MW-11A, MW-13R, MW-16, MW-17, and background monitoring wells MW-1A and MW-14. Assessment monitoring will continue for monitoring wells MW-4A, MW-5A, and MW-12B. Sampling for the full list of Appendix II constituents is scheduled for the 2026 annual sampling event for monitoring well MW-12B.

## 8.0 ADDITIONAL REPORTING

In addition to this Annual Water Quality Report, the 2025 Leachate Control System Performance Evaluation Report is included in **Appendix F** and the 2025 Landfill Gas Report is included in **Appendix G**.

## Tables

**Table 1**  
**Monitoring Program Summary Table**  
**2025 Annual Water Quality Report**  
**Harrison County Sanitary Landfill**  
**Permit No. 43-SDP-05-94P**

Monitoring Well	Formation <sup>(1)</sup>	Current Monitoring Program	Change for Next Sampling Event	Constituents With SSIs During the 2025 Reporting Period	Constituents with SSLs	Total Number of Samples in Each Monitoring Program		
						Detection	Inorganic/Organic Assessment	Pre-Corrective Action
<b>HMSP Monitoring Points</b>								
MW-1A	Silt/lean clay with sand	Background	No change	Not applicable	Not applicable	12/18	-	-
MW-14	Weathered sandstone	Background	No change	Not applicable	Not applicable	16/16	-	-
MW-4A	Silt	Assessment	No change	None	None	-	14/23	-
MW-5A	Lean clay with sand <sup>(2)</sup>	Assessment	No change	Arsenic, Cobalt, Nickel	None	-	12/23	-
MW-8A	Coarse sand/clay <sup>(2)</sup>	Detection	No change	None	Not applicable	18/37	-	-
MW-10R	Clay/silty clay <sup>(2)</sup>	Detection	No change	None	Not applicable	18/33	-	-
MW-11A	Weathered shale/silty clay <sup>(2)</sup>	Detection	No change	None	Not applicable	21/38	-	-
MW-12B	Sandy silty clay <sup>(2)</sup>	Assessment	No change	Not applicable (not sampled in 2025)	None	-	10/10	-
MW-13R	Sandy lean clay/sandstone <sup>(2)</sup>	Detection	No change	None	Not applicable	15/26	-	-
MW-16	Sandy silt	Detection	No change	Not applicable (not sampled in 2025)	Not applicable	1/1	-	-
MW-17	Loess/Clay	Detection	No change	None	Not applicable	10/10	-	-
<b>Other Monitoring Points</b>								
MW-2	Unknown	Water Level						
MW-15	Sandy lean clay/silt	Water Level						
MW-8B	Graded sand	Water Level						
MW-11B	Silty Clay	Water Level						

Notes:

<sup>(1)</sup> Obtained from screened interval on boring logs and/or cross sections.

<sup>(2)</sup> Screened interval located in the old soil fill.

SSL = Statistically Significant Level above groundwater protection standard.

SSI = Statistically Significant Increase above background.

**Table 2**  
**Monitoring Program Implementation Schedule**  
**2025 Annual Water Quality Report**  
**Harrison County Sanitary Landfill**  
**Permit No. 43-SDP-05-94P**

Monitoring Point	Recent Sampling Dates and Constituents				Upcoming Sampling Dates and Constituents		Full Appendix II Sample Dates	
	February 2025 Retest	June 2025	November 2025 Retest	December 2025	1 <sup>st</sup> 2026 Semi-Annual	2 <sup>nd</sup> 2026 Semi-Annual	Previously Collected	Next Event
MW-1A	-	Metals List, TSS	-	None (Annual Sample)	Metals List, TSS	None (Annual Sample)	Not applicable	Not applicable
MW-4A	Di-n-butyl phthalate	Metals List, TSS	-	None (Annual Sample)	Metals List, TSS	None (Annual Sample)	2/24/2009, 10/31/2014, 2/19/2019, 11/12/2024	2029
MW-5A	-	Metals List, TSS	-	None (Annual Sample)	Metals List, TSS	None (Annual Sample)	2/25/2009, 10/31/2014, 2/19/2019, 11/13/2024	2029
MW-8A	-	Appendix I, TSS	Arsenic, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Not applicable <sup>(1)</sup>	Not applicable
MW-10R	-	Appendix I, TSS	-	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Not applicable <sup>(1)</sup>	Not applicable
MW-11A	-	Appendix I, TSS	-	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Not applicable <sup>(1)</sup>	Not applicable
MW-12B	-	No Sample - Dry	-	None (Annual Sample)	Appendix II, Silvex (2,4,5-TP), TSS	None (Annual Sample)	1/14/2011 (MW-12A), 4/14/2016, 3/30/2021	2026
MW-13R	-	Appendix I, TSS	-	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Not applicable <sup>(1)</sup>	Not applicable
MW-14	-	Appendix I, TSS	-	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Not applicable	Not applicable
MW-16	-	No Sample - Dry	-	No Sample - Dry	Appendix I, TSS	Appendix I, TSS	Not applicable	Not applicable
MW-17	-	Appendix I, TSS	-	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Not applicable	Not applicable

Notes:

<sup>(1)</sup> Monitoring wells were moved back to the detection monitoring program beginning with the 1<sup>st</sup> 2019 semi-annual statistical evaluation; therefore, Appendix II sampling is no longer required.

Metals List includes: antimony, arsenic, barium, cobalt, copper, lead, nickel, and zinc.

TSS - Total Suspended Solids.

**Table 3**  
**Monitoring Well Maintenance and Performance Re-Evaluation Schedule**  
**2025 Annual Water Quality Report**  
**Harrison County Sanitary Landfill**  
**Permit No. 43-SDP-05-94P**

Compliance with:	Monitoring Calendar Years			
	2023	2024	2025	2026
567 IAC 113.10(2)"f"(1) high and low water levels	Completed	Completed	Included	Scheduled
567 IAC 113.10(2)"f"(2) changes in the hydrologic setting and flow paths	Completed	Completed	Included	Scheduled
567 IAC 113.10(2)"f"(3) well depths	Completed	Completed	Included	Scheduled
567 IAC 113.10(2)"f"(4) well recharge rates and chemistry		Completed		Scheduled
Waste separation from ground water 113.6(2)i	Completed	Completed	Included	Scheduled

**Table 4**  
**Monitoring Well Performance and Maintenance Summary**  
**2025 Annual Water Quality Report**  
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Well	Top of Casing	Top of Screen	Total Depth		Date of Measurements		Maximum Depth
					6/10/2025	12/10/2025	Discrepancy (ft)
MW-1A	1186.60	1126.5	70.2	Groundwater Level (ft)	57.14	NM	-0.2
				Groundwater Elevation (Ft MSL)	1129.46	NA	
				Measured Well Depth (ft)	70.4	NM	
				Submerged screen	Y	NA	
MW-2	1070.88	1042.7	38.1	Groundwater Level (ft)	NM	16.64	0.0
				Groundwater Elevation (Ft MSL)	NA	1054.24	
				Measured Well Depth (ft)	NM	38.1	
				Submerged screen	NA	Y	
MW-4A	1144.78	1076.4	78.4	Groundwater Level (ft)	68.62	NM	-1.2
				Groundwater Elevation (Ft MSL)	1076.16	NA	
				Measured Well Depth (ft)	79.6	NM	
				Submerged screen	N	NA	
MW-5A	1167.96	1089.8	88.1	Groundwater Level (ft)	72.58	NM	-0.2
				Groundwater Elevation (Ft MSL)	1095.38	NA	
				Measured Well Depth (ft)	88.34	NM	
				Submerged screen	Y	NA	
MW-8A	1098.69	1061.7	52.6	Groundwater Level (ft)	34.52	33.65	-0.1
				Groundwater Elevation (Ft MSL)	1064.17	1065.04	
				Measured Well Depth (ft)	52.7	52.7	
				Submerged screen	Y	Y	
MW-8B	1098.32	1039.1	74.4	Groundwater Level (ft)	NM	33.47	1.3
				Groundwater Elevation (Ft MSL)	NA	1064.85	
				Measured Well Depth (ft)	NM	73.1	
				Submerged screen	NA	Y	
MW-10R	1096.39	1045.0	66.9	Groundwater Level (ft)	30.92	30.72	0.0
				Groundwater Elevation (Ft MSL)	1065.47	1065.67	
				Measured Well Depth (ft)	66.9	66.9	
				Submerged screen	Y	Y	
MW-11A	1076.83	1049.8	37.0	Groundwater Level (ft)	23.77	23.26	-0.3
				Groundwater Elevation (Ft MSL)	1053.06	1053.57	
				Measured Well Depth (ft)	37.3	37.3	
				Submerged screen	Y	Y	
MW-11B	1076.67	1028.7	55.0	Groundwater Level (ft)	NM	16.91	-2.3
				Groundwater Elevation (Ft MSL)	NA	1059.76	
				Measured Well Depth (ft)	NM	57.3	
				Submerged screen	NA	Y	
MW-12B	1190.83	1160.8	45.0	Groundwater Level (ft)	44.42	NM	0.0
				Groundwater Elevation (Ft MSL)	1146.41	NA	
				Measured Well Depth (ft)	44.97	NM	
				Submerged screen	N	NA	
MW-13R	1120.26	1067.3	63.4	Groundwater Level (ft)	50.05	48.84	0.0
				Groundwater Elevation (Ft MSL)	1070.21	1071.42	
				Measured Well Depth (ft)	63.4	NM	
				Submerged screen	Y	Y	

**Table 4**  
**Monitoring Well Performance and Maintenance Summary**  
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Well	Top of Casing	Top of Screen	Total Depth		Date of Measurements		Maximum Depth Discrepancy (ft)
					6/10/2025	12/10/2025	
MW-14	1119.97	1064.7	66.0	Groundwater Level (ft)	46.63	46.63	0.0
				Groundwater Elevation (Ft MSL)	1073.34	1073.34	
				Measured Well Depth (ft)	66.0	NM	
				Submerged screen	Y	Y	
MW-15	1073.51	1061.5	22.6	Groundwater Level (ft)	NM	11.30	-0.1
				Groundwater Elevation (Ft MSL)	NA	1062.21	
				Measured Well Depth (ft)	NM	22.7	
				Submerged screen	NA	Y	
MW-16	1167.69	1092.0	91.6	Groundwater Level (ft)	90.90	Dry	0.1
				Groundwater Elevation (Ft MSL)	1076.79	NA	
				Measured Well Depth (ft)	91.52	NM	
				Submerged screen	N	NA	
MW-17	1173.90	1099.0	90.5	Groundwater Level (ft)	69.81	71.48	-0.1
				Groundwater Elevation (Ft MSL)	1104.09	1102.42	
				Measured Well Depth (ft)	90.6	NM	
				Submerged screen	Y	Y	

Notes:

NM - Not measured.

Comments:

- 1) Total depths in monitoring wells with submersible pumps are only measured once every 5 years. Monitoring wells with submersible pumps were measured during the 2025 reporting period and will be measured next during the 2030 reporting period.
- 2) Measured well depths were within 1.5 feet of the installed depths except for MW-11B. MW-11B is a supplemental well for water level only and is not part of the HMSP monitoring network.
- 3) Total of 1 inch was cut off the top of MW-2 during the fall sampling event. Measurements were taken prior to well maintenance occurring, however base values will require amending prior to the 2026 spring sampling event.

**Table 5  
Background and GWPS Summary  
2025 Annual Water Quality Report  
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**Interwell Background/GWPS (MW-1A & MW-14)**

Constituent	Units	Samples	Detections	Min	Max	Mean	Background Level	Statistical Test	GWPS	Source
Antimony (Sb)	mg/L	28	8	0.000228*	0.0022	0.000798	0.00223	PL (NP)	<b>0.006</b>	MCL
Arsenic (As)	mg/L	28	25	0.000716*	0.0048	0.001783	0.003991	PL (P)	<b>0.01</b>	MCL
Barium (Ba)	mg/L	28	28	0.109	0.8220	0.424321	0.822	PL (NP)	<b>2.0</b>	MCL
Beryllium (Be)	mg/L	23	0	0.0005 (1/2 RL)	0.0005 (1/2 RL)	0.000500	< 0.001	DQR	<b>0.004</b>	MCL
Cadmium (Cd)	mg/L	23	6	0.00005 (1/2 RL)	0.00034*	0.000123	0.00034	PL (NP)	<b>0.005</b>	MCL
Chromium (Cr)	mg/L	23	2	0.0006535*	0.0025 (1/2 RL)	0.002386	0.0025	PL (NP)	<b>0.1</b>	MCL
Cobalt (Co)	mg/L	28	23	0.0000555*	0.0012	0.000397	0.001549	PL (P)	<b>0.0021</b>	SWS
Copper (Cu)	mg/L	28	3	0.000981*	0.005	0.002596	0.00543	PL (NP)	<b>1.3</b>	MCL
Lead (Pb)	mg/L	28	7	0.00025 (1/2 RL)	0.0014	0.000359	0.00138	PL (NP)	<b>0.015</b>	MCL
Nickel (Ni)	mg/L	28	16	0.00197*	0.0103	0.004063	0.0103	PL (NP)	<b>0.1</b>	SWS
Selenium (Se)	mg/L	23	1	0.00112*	0.0025 (1/2 RL)	0.002440	0.0025	PL (NP)	<b>0.05</b>	MCL
Silver (Ag)	mg/L	23	0	0.0005 (1/2 RL)	0.0005 (1/2 RL)	0.000500	< 0.001	DQR	<b>0.1</b>	SWS
Thallium (Tl)	mg/L	23	1	0.0005 (1/2 RL)	0.000861*	0.000516	0.000861	PL (NP)	<b>0.002</b>	MCL
Vanadium (V)	mg/L	23	13	0.000852*	0.00446*	0.002115	0.005892	PL (P)	<b>0.035</b>	SWS
Zinc (Zn)	mg/L	28	4	0.005 (1/2 RL)	0.0267	0.010675	0.0267	PL (NP)	<b>2.0</b>	SWS

**Intrawell Background/GWPS (MW-8A)**

Constituent	Units	Samples	Detections	Min	Max	Mean	Background Level	Statistical Test	GWPS	Source
Antimony (Sb)	mg/L	16	2	0.000463*	0.001 (1/2 RL)	0.000685	0.001	PL (NP)	<b>0.006</b>	MCL
Arsenic (As)	mg/L	16	16	0.00077*	0.00299	0.001749	0.003631	PL (P)	<b>0.01</b>	MCL
Barium (Ba)	mg/L	16	16	0.0186	0.0584	0.02833	0.06569	PL (P)	<b>2.0</b>	MCL
Beryllium (Be)	mg/L	15	2	0.000141*	0.0005 (1/2 RL)	0.000466	0.0005	PL (NP)	<b>0.004</b>	MCL
Cadmium (Cd)	mg/L	18	18	0.000136*	0.00380	0.001049	0.005538	PL (P)	<b>0.005538</b>	SSS
Chromium (Cr)	mg/L	17	8	0.000395*	0.0284	0.005436	0.0284	PL (NP)	<b>0.1</b>	MCL
Cobalt (Co)	mg/L	16	16	0.00515	0.0107	0.006768	0.0107	PL (P)	<b>0.0107</b>	SSS
Copper (Cu)	mg/L	16	6	0.001 (1/2 RL)	0.501	0.035491	0.501	PL (NP)	<b>1.3</b>	MCL
Lead (Pb)	mg/L	16	12	0.00011*	0.00343	0.00102	0.005748	PL (P)	<b>0.015</b>	MCL
Nickel (Ni)	mg/L	16	16	0.0317	0.0464	0.03838	0.05082	PL (P)	<b>0.1</b>	SWS
Selenium (Se)	mg/L	16	1	0.00218*	0.0025 (1/2 RL)	0.0025	0.0025	PL (NP)	<b>0.05</b>	MCL
Silver (Ag)	mg/L	16	1	0.0005 (1/2 RL)	0.0014	0.0006	0.00142	PL (NP)	<b>0.1</b>	SWS
Thallium (Tl)	mg/L	13	6	0.000174*	0.001000	0.000535	0.0009995	PL (NP)	<b>0.002</b>	MCL
Vanadium (V)	mg/L	16	14	0.000719*	0.0052	0.002192	0.005745	PL (P)	<b>0.035</b>	SWS
Zinc (Zn)	mg/L	16	6	0.005 (1/2 RL)	0.131	0.020108	0.131	PL (NP)	<b>2.0</b>	SWS

**Table 5  
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**Intrawell Background/GWPS (MW-10R)**

Constituent	Units	Samples	Detections	Min	Max	Mean	Background Level	Statistical Test	GWPS	Source
Antimony (Sb)	mg/L	16	6	0.000407*	0.001 (1/2 RL)	0.000728	0.001	PL (NP)	<b>0.006</b>	MCL
Arsenic (As)	mg/L	16	12	0.000674*	0.0028	0.001279	0.00276	PL (NP)	<b>0.01</b>	MCL
Barium (Ba)	mg/L	16	16	0.052800	0.123	0.077553	0.123	PL (NP)	<b>2.0</b>	MCL
Beryllium (Be)	mg/L	16	1	0.000413*	0.0005 (1/2 RL)	0.000495	0.0005	PL (NP)	<b>0.004</b>	MCL
Cadmium (Cd)	mg/L	16	6	0.00005 (1/2 RL)	0.0024	0.000274	0.00244	PL (NP)	<b>0.005</b>	MCL
Chromium (Cr)	mg/L	16	2	0.000361*	0.0025 (1/2 RL)	0.002284	0.0025	PL (NP)	<b>0.1</b>	MCL
Cobalt (Co)	mg/L	16	14	0.0001165*	0.0036	0.000673	0.003163	PL (P)	<b>0.003163</b>	SSS
Copper (Cu)	mg/L	16	3	0.0009655*	0.0089	0.002761	0.00893	PL (NP)	<b>1.3</b>	MCL
Lead (Pb)	mg/L	16	8	0.000166*	0.0017	0.000441	0.00165	PL (NP)	<b>0.015</b>	MCL
Nickel (Ni)	mg/L	16	6	0.0016*	0.0115	0.003296	0.0115	PL (NP)	<b>0.1</b>	SWS
Selenium (Se)	mg/L	16	16	0.00478*	0.0091	0.006916	0.01065	PL (P)	<b>0.05</b>	MCL
Silver (Ag)	mg/L	16	1	0.0005 (1/2 RL)	0.0015	0.000560	0.00146	PL (NP)	<b>0.1</b>	SWS
Thallium (Tl)	mg/L	16	2	0.0005 (1/2 RL)	0.000894*	0.000533	0.000894	PL (NP)	<b>0.002</b>	MCL
Vanadium (V)	mg/L	16	16	0.00204*	0.00454*	0.003008	0.004858	PL (P)	<b>0.035</b>	SWS
Zinc (Zn)	mg/L	16	3	0.005 (1/2 RL)	0.9426	0.070127	0.0465	PL (NP)	<b>2.0</b>	SWS

**Intrawell Background/GWPS (MW-11A)**

Constituent	Units	Samples	Detections	Min	Max	Mean	Background Level	Statistical Test	GWPS	Source
Antimony (Sb)	mg/L	19	13	0.000328*	0.00113*	0.000719	0.001446	PL (P)	<b>0.006</b>	MCL
Arsenic (As)	mg/L	19	19	0.005810	0.0151	0.009111	0.01672	PL (P)	<b>0.01672</b>	SSS
Barium (Ba)	mg/L	19	19	0.012400	0.0235	0.015637	0.0235	PL (NP)	<b>2.0</b>	MCL
Beryllium (Be)	mg/L	19	1	0.000135*	0.0005 (1/2 RL)	0.000481	0.0005	PL (NP)	<b>0.004</b>	MCL
Cadmium (Cd)	mg/L	20	20	0.000356*	0.0007	0.000508	0.0007608	PL (P)	<b>0.005</b>	MCL
Chromium (Cr)	mg/L	19	0	0.0025 (1/2 RL)	0.0025 (1/2 RL)	0.002500	< 0.005	DQR	<b>0.1</b>	MCL
Cobalt (Co)	mg/L	19	19	0.00133	0.0034	0.002098	0.003317	PL (P)	<b>0.003317</b>	SSS
Copper (Cu)	mg/L	19	1	0.001 (1/2 RL)	0.0025 (1/2 RL)	0.002421	0.0025	PL (NP)	<b>1.3</b>	MCL
Lead (Pb)	mg/L	19	8	0.00025 (1/2 RL)	0.00101	0.000336	0.00101	PL (NP)	<b>0.015</b>	MCL
Nickel (Ni)	mg/L	19	19	0.009075	0.0179	0.011707	0.01681	PL (P)	<b>0.1</b>	SWS
Selenium (Se)	mg/L	19	0	0.0025 (1/2 RL)	0.0025 (1/2 RL)	0.002500	< 0.005	DQR	<b>0.05</b>	MCL
Silver (Ag)	mg/L	19	0	0.0005 (1/2 RL)	0.0005 (1/2 RL)	0.000500	< 0.001	DQR	<b>0.1</b>	SWS
Thallium (Tl)	mg/L	19	4	0.00003*	0.000782*	0.000454	0.000782	PL (NP)	<b>0.002</b>	MCL
Vanadium (V)	mg/L	19	2	0.000505*	0.0025 (1/2 RL)	0.002351	0.0025	PL (NP)	<b>0.035</b>	SWS
Zinc (Zn)	mg/L	19	2	0.005 (1/2 RL)	1.19	0.071482	1.19	PL (NP)	<b>2.0</b>	SWS

**Table 5  
Background and GWPS Summary  
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**Intrawell Background/GWPS (MW-13R)**

Constituent	Units	Samples	Detections	Min	Max	Mean	Background Level	Statistical Test	GWPS	Source
Antimony (Sb)	mg/L	11	4	0.000363*	0.0028	0.000944	0.00279	PL (NP)	<b>0.006</b>	MCL
Arsenic (As)	mg/L	11	10	0.000938*	0.0037	0.001838	0.004154	PL (P)	<b>0.01</b>	MCL
Barium (Ba)	mg/L	11	11	0.0714	0.3900	0.139386	0.458	PL (P)	<b>2.0</b>	MCL
Beryllium (Be)	mg/L	11	0	0.0005 (1/2 RL)	0.0005 (1/2 RL)	0.000500	< 0.001	DQR	<b>0.004</b>	MCL
Cadmium (Cd)	mg/L	11	2	0.00005 (1/2 RL)	0.00025 (1/2 RL)	0.000138	0.000250	PL (NP)	<b>0.005</b>	MCL
Chromium (Cr)	mg/L	11	5	0.001085*	0.00361*	0.002272	0.00361	PL (NP)	<b>0.1</b>	MCL
Cobalt (Co)	mg/L	11	11	0.000248*	0.0022	0.000865	0.0025	PL (P)	<b>0.0025</b>	SSS
Copper (Cu)	mg/L	11	1	0.00154*	0.0025 (1/2 RL)	0.002413	0.0025	PL (NP)	<b>1.3</b>	MCL
Lead (Pb)	mg/L	11	1	0.00025 (1/2 RL)	0.00166	0.000378	0.00166	PL (NP)	<b>0.015</b>	MCL
Nickel (Ni)	mg/L	11	4	0.00131*	0.0100	0.002937	0.01	PL (NP)	<b>0.1</b>	SWS
Selenium (Se)	mg/L	11	0	0.0025 (1/2 RL)	0.0025 (1/2 RL)	0.002500	< 0.005	DQR	<b>0.05</b>	MCL
Silver (Ag)	mg/L	11	0	0.0005 (1/2 RL)	0.0005 (1/2 RL)	0.000500	< 0.001	DQR	<b>0.1</b>	SWS
Thallium (Tl)	mg/L	11	2	0.00003*	0.00055*	0.000462	0.00055	PL (NP)	<b>0.002</b>	MCL
Vanadium (V)	mg/L	11	4	0.0006985*	0.0025 (1/2 RL)	0.002060	0.0025	PL (NP)	<b>0.035</b>	SWS
Zinc (Zn)	mg/L	11	3	0.00648*	0.827	0.083962	0.827	PL (NP)	<b>2.0</b>	SWS

**Intrawell Background/GWPS (MW-17)**

Constituent	Units	Samples	Detections	Min	Max	Mean	Background Level	Statistical Test	GWPS	Source
Antimony (Sb)	mg/L	8	3	0.000973*	0.0019	0.001159	0.00187	PL (NP)	<b>0.006</b>	MCL
Arsenic (As)	mg/L	8	4	0.000647*	0.00148*	0.001001	0.002522	PL (P)	<b>0.01</b>	MCL
Barium (Ba)	mg/L	8	8	0.0245	0.0774	0.035938	0.1222	PL (P)	<b>2.0</b>	MCL
Beryllium (Be)	mg/L	8	0	0.0005 (1/2 RL)	0.0005 (1/2 RL)	0.000500	< 0.001	DQR	<b>0.004</b>	MCL
Cadmium (Cd)	mg/L	8	6	0.00005 (1/2 RL)	0.00026	0.000119	0.000394	PL (P)	<b>0.005</b>	MCL
Chromium (Cr)	mg/L	8	4	0.00233*	0.0193	0.004694	0.0193	PL (NP)	<b>0.1</b>	MCL
Cobalt (Co)	mg/L	8	8	0.000159*	0.0014	0.000742	0.002262	PL (P)	<b>0.002262</b>	SSS
Copper (Cu)	mg/L	8	3	0.00193*	0.00496*	0.002903	0.00496	PL (NP)	<b>1.3</b>	MCL
Lead (Pb)	mg/L	8	6	0.00025 (1/2 RL)	0.00233	0.000844	0.003668	PL (P)	<b>0.015</b>	MCL
Nickel (Ni)	mg/L	8	7	0.0025 (1/2 RL)	0.0114	0.005066	0.01473	PL (P)	<b>0.1</b>	SWS
Selenium (Se)	mg/L	8	3	0.00105*	0.0025 (1/2 RL)	0.002060	0.0025	PL (NP)	<b>0.05</b>	MCL
Silver (Ag)	mg/L	8	0	0.0005 (1/2 RL)	0.0005 (1/2 RL)	0.000500	< 0.001	DQR	<b>0.1</b>	SWS
Thallium (Tl)	mg/L	8	1	0.0005 (1/2 RL)	0.000658*	0.000520	0.000658	PL (NP)	<b>0.002</b>	MCL
Vanadium (V)	mg/L	8	7	0.00131*	0.00353*	0.002205	0.004622	PL (P)	<b>0.035</b>	SWS
Zinc (Zn)	mg/L	8	5	0.01 (1/2 RL)	0.025	0.014613	0.04488	PL (P)	<b>2.0</b>	SWS

Notes:

Background levels based on calculated prediction limits or reporting limit, as applicable.

\*- J flag: concentration is below the reporting limit but above the method detection limit. The concentration is estimated.

Acronyms/Abbreviations:

RL = Reporting Limit  
 GWPS = Groundwater Protection Standard  
 DQR = Double Quantification Rule  
 SSS = Site-Specific GWPS  
 SWS = Statewide Standard  
 PL = Prediction Limit  
 MCL = EPA Maximum Contaminant Level  
 NP = Non-Parametric  
 P = Parametric

Comments:

- Water quality results and effectiveness of the statistical data evaluation criteria:** Statistical analyses consist of prediction limits, double quantification rule, and confidence intervals/confidence bands, as appropriate, and do not use data from the background wells for development of the confidence interval.
- Changes to the previous statistical method during reporting period:** Background prediction limit methodology for parametric datasets switched from Aitchison's Adjustment to Kaplan-Meier Adjustment.
- Re-sampling strategy:** Retesting at the Landfill is performed on a 1-of-2 retesting scheme.
- Justification for data exclusion:** Inorganic data collected prior to the October 2015 semi-annual sampling event was not considered in this statistical evaluation. Monitoring wells were developed and low-flow equipment installed (with the exception of monitoring well MW-10 which was unable to have low-flow equipment installed due to a kink) prior to the 2<sup>nd</sup> 2015 semi-annual sampling event. Since well development and implementation of low-flow sampling techniques, TSS concentrations have greatly decreased and inorganic samples collected prior to the 2<sup>nd</sup> 2015 semi-annual sampling event are no longer considered representative of the groundwater at the site. Monitoring well MW-10 was replaced with MW-10R during the 2019 reporting period and low-flow equipment was installed.

**Table 6**  
**Summary of Well/Detected Constituent Pairs With No Immediately Preceding SSIs**  
**2025 Annual Water Quality Report**  
**Harrison County Sanitary Landfill**  
**Permit No. 43-SDP-05-94P**

<b>Well</b>	<b>Constituent</b>	<b>Units</b>	<b>Most Recent Result</b>	<b>Background Standard</b>
MW-5A	Arsenic	mg/L	0.00429	0.003991
	Cobalt	mg/L	0.00358	0.001549
	Nickel	mg/L	0.013	0.0103

Notes:

- (1) Criteria for inclusion in this table is a well/constituent pair with a prediction limit exceedance during the current reporting period and no prediction limit exceedance in the immediately preceding reporting period.
- (2) For monitoring wells sampled annually, background standards utilized were calculated in association with the corresponding sampling event.

Comments:

- 1) **Problems with the current detection network:** None.
- 2) **Schedule to implement remedies:** Not applicable.
- 3) **Alternative constituent or sample frequency changes:** None.
- 4) **Significant changes to calculated prediction limits:** None.
- 5) **Re-sampling strategy:** Retesting at the Landfill is performed on a 1-of-2 retesting scheme.

**Table 7**  
**Summary Table of Ongoing and Newly Identified SSIs**  
**2025 Annual Water Quality Report**  
**Harrison County Sanitary Landfill**  
**Permit No. 43-SDP-05-94P**

Well	Constituent	Units	Most Recent Result	Background Standard	Lower Confidence Limit	GWPS	Sample Dates		
							Initial Exceedance	Resample(s)	5 <sup>th</sup> background sample
MW-4A	None								
MW-5A	Arsenic	mg/L	0.00429	0.003991	0.001405	0.01	6/10/2025	NA	7/27/2017
	Cobalt	mg/L	0.00358	0.001549	0.002507	0.0021	6/10/2025	NA	7/27/2017
	Nickel	mg/L	0.013	0.0103	0.01251	0.1	6/10/2025	NA	7/27/2017
MW-8A	None								
MW-10R	None								
MW-11A	None								
MW-12B	No Sample								
MW-13R	None								
MW-14	None								
MW-16	No Sample								
MW-17	None								

Notes:  
For monitoring wells sampled annually, background standards utilized were calculated in association with the corresponding sampling event.  
Shaded rows denote constituent/well pairs with SSIs indicated in 2025 but not in 2024. Unshaded rows denote constituent/well pairs with SSIs indicated during both the 2024 and 2025 reporting periods.  
NA - Not Applicable; Monitoring well is in assessment monitoring and does not require a resample.  
1) A site-specific cobalt GWPS of 0.01071 mg/L was requested in the 2021 Spring Sampling Notification, submitted by Evora Consulting (Doc No. 100398), for wells screened in the old soil fill (MW-8A, MW-10R, MW-11A, MW-12B, and MW-13R). After further investigation it was determined that monitoring well MW-5A is screened in the old soil fill area and the site-specific GWPS was applied beginning with the 1<sup>st</sup> 2023 statistical evaluation.

- Comments:
- 1) **Problems with the current assessment network:** None.
  - 2) **Proposed remedies:** Not applicable.
  - 3) **Alternative constituent or sample frequency changes:** None.
  - 4) **Plume delineation strategies:** Not applicable.
  - 5) **Property owner notifications:** Not applicable.

**Table 8**  
**Summary Table of Ongoing and Newly Identified SSLs**  
**2025 Annual Water Quality Report**  
**Harrison County Sanitary Landfill**  
**Permit No. 43-SDP-05-94P**

Well	Constituent	Units	Most Recent Result	Upper Confidence Limit	GWPS	Initial Exceedance	Upper Confidence Limit Below GWPS							
							1 <sup>st</sup> Year		2 <sup>nd</sup> Year		3 <sup>rd</sup> Year			
None														

Notes:

There are no ongoing or newly identified SSLs at the MSWLF unit.

**Table 9**  
**Summary of Groundwater Chemistry**  
**2025 Annual Water Quality Report**  
**Harrison County Sanitary Landfill**  
**Permit No. 43-SDP-05-94P**

The Summary of Groundwater Chemistry for this reporting period is located in Appendix C. Analytical data prior to 2025 is available in the 2024 Annual Water Quality Report, dated March 7, 2025 (Doc #112467).

**Table 10**  
**Historical SSI and SSL**  
**2025 Annual Water Quality Report**  
**Harrison County Sanitary Landfill**  
**Permit No. 43-SDP-05-94P**

Key  
 = SSI  
 = SSL

Well	Constituent	Spring 2020	Fall 2020	Spring 2021	Fall 2021	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024	Spring 2025	Fall 2025
MW-4A	Arsenic												
	Di-n-butyl phthalate												
MW-5A	Arsenic												
	Carbon Disulfide												
	Cobalt												
	Nickel												
MW-8A	Arsenic												
MW-12B	Benzene												
	Chlorobenzene												
	Chloromethane												
	cis-1,2-Dichloroethene												
	Chromium												
	Cobalt												
	Copper												
	Lead												
	Nickel												
	2,4,5-TP [Silvex][2C]												
	Thallium												

Notes:

- 1) Downgradient monitoring points at the Landfill were moved to intrawell prediction limit analyses beginning with the 1<sup>st</sup> 2019 semi-annual statistical evaluations. Additionally, inorganic data obtained prior to the implementation of low-flow sampling was removed from statistical consideration during the 2018 reporting period. Intrawell background datasets for each of the monitoring wells were established prior to the 2020 reporting period, therefore inorganic SSIs were not confirmed prior to that time.
- 2) Retesting is not performed in assessment monitoring wells as these monitoring wells are not in the detection monitoring program.

**Table 11**  
**Corrective Action Trend Analysis**  
**2025 Annual Water Quality Report**  
**Harrison County Sanitary Landfill**  
**Permit No. 43-SDP-05-94P**

Well	Current SSL	Trend	Calculated S	Critical S	Total N	Projected Date to Completion
None						

Notes:

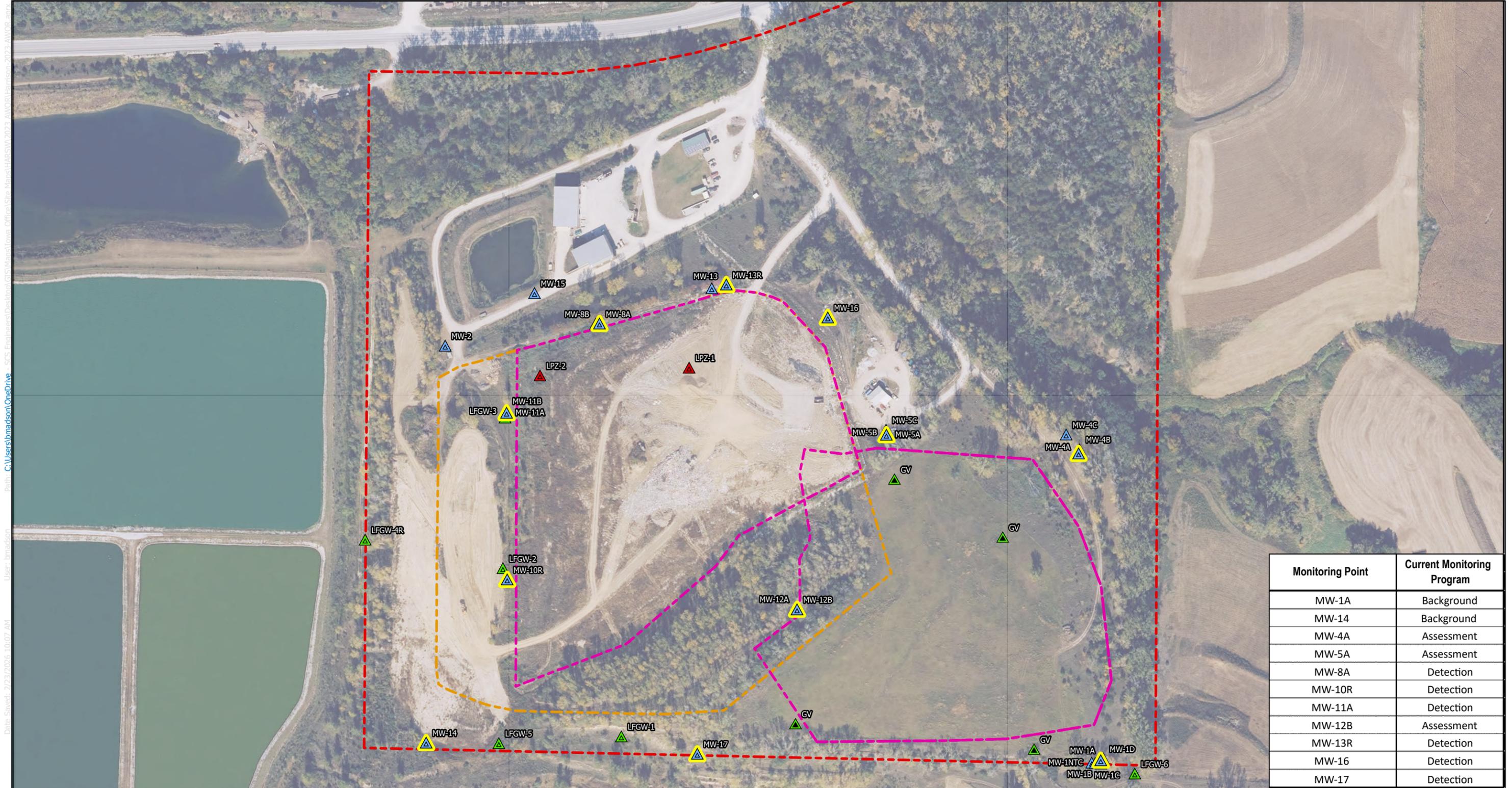
N - Number of Samples

S - Mann-Kendall Statistic

Comments:

1) There are no SSLs at the MSWLF unit, therefore a corrective action analysis is not required.

# Figures



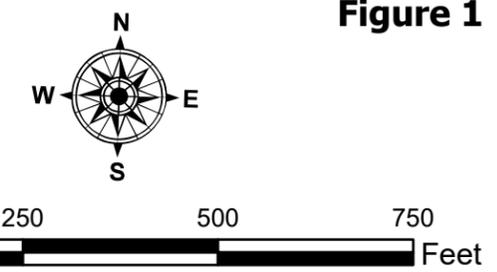
Monitoring Point	Current Monitoring Program
MW-1A	Background
MW-14	Background
MW-4A	Assessment
MW-5A	Assessment
MW-8A	Detection
MW-10R	Detection
MW-11A	Detection
MW-12B	Assessment
MW-13R	Detection
MW-16	Detection
MW-17	Detection

## Approved Monitoring Network

<b>Legend</b> HMSP Monitoring Well Monitoring Well Landfill Gas Well Leachate Piezometer Gas Vent Current Waste Boundary Future Waste Boundary Approximate Property Boundary		Harrison County Sanitary Landfill Logan, Iowa Project No: 27224470.26 Drawing Date: February 2026
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	---------------------------------------------------------------------------------------------------------------



Figure 1



Date Saved: 2/23/2026 10:07 AM  
 User: bmadson  
 Path: C:\Users\bmadson\OneDrive - SCS Engineers\Desktop\GIS\Map\Harrison County Sanitary Landfill\Map\Harrison County Sanitary Landfill.mxd





Appendix A  
Groundwater Sampling Field Sheets











































## Appendix B

### Laboratory Analytical Reports

B-1: Harrison County Sanitary Landfill

B-2: 2025 Data Validation Documentation

## B-1: Harrison County Sanitary Landfill

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Sean Marczewski  
SCS Engineers  
1690 All State Court  
Suite 100  
West Des Moines, Iowa 50265

Generated 3/12/2025 12:08:17 AM

**JOB DESCRIPTION**

Harrison County February 2025 Retest  
Harrison County Sanitary Landfill

**JOB NUMBER**

310-300963-1

# 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  
Samuel Miller, Project Management Assistant I  
[Samuel.Miller@et.eurofinsus.com](mailto:Samuel.Miller@et.eurofinsus.com)  
(319)277-2401



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# Case Narrative

Client: SCS Engineers  
Project: Harrison County February 2025 Retest

Job ID: 310-300963-1

**Job ID: 310-300963-1**

**Eurofins Cedar Falls**

## Job Narrative 310-300963-1

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

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

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

### Receipt

The sample was received on 2/26/2025 4:05 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.7°C.

### GC/MS Semi VOA

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

Eurofins Cedar Falls

# Sample Summary

Client: SCS Engineers  
Project/Site: Harrison County February 2025 Retest

Job ID: 310-300963-1  
SDG: Harrison County Sanitary Landfill

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-300963-1	MW-4A	Water	02/25/25 16:42	02/26/25 16:05

1

2

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# Detection Summary

Client: SCS Engineers  
Project/Site: Harrison County February 2025 Retest

Job ID: 310-300963-1  
SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-4A**

**Lab Sample ID: 310-300963-1**

No Detections.

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This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County February 2025 Retest

Job ID: 310-300963-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-4A**

**Lab Sample ID: 310-300963-1**

Date Collected: 02/25/25 16:42

Matrix: Water

Date Received: 02/26/25 16:05

**Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	<10.0		10.0	5.60	ug/L		02/28/25 10:04	03/08/25 01:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Phenol-d5 (Surr)	27		21 - 110				02/28/25 10:04	03/08/25 01:46	1
Nitrobenzene-d5 (Surr)	75		45 - 129				02/28/25 10:04	03/08/25 01:46	1
2-Fluorobiphenyl (Surr)	62		39 - 118				02/28/25 10:04	03/08/25 01:46	1
Terphenyl-d14 (Surr)	62		12 - 144				02/28/25 10:04	03/08/25 01:46	1

# Definitions/Glossary

Client: SCS Engineers  
Project/Site: Harrison County February 2025 Retest

Job ID: 310-300963-1  
SDG: Harrison County Sanitary Landfill

## Glossary

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

# Surrogate Summary

Client: SCS Engineers  
 Project/Site: Harrison County February 2025 Retest

Job ID: 310-300963-1  
 SDG: Harrison County Sanitary Landfill

## Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	2FP (25-110)	PHL (21-110)	NBZ (45-129)	FBP (39-118)	TBP (27-136)	TPHL (12-144)
310-300963-1	MW-4A		27	75	62		62
LCS 310-447751/2-A	Lab Control Sample	74	67	99	85	99	105
LCSD 310-447751/3-A	Lab Control Sample Dup	57	49	79	67	83	85
MB 310-447751/1-A	Method Blank	66	60	87	72	84	97

#### Surrogate Legend

- 2FP = 2-Fluorophenol (Surr)
- PHL = Phenol-d5 (Surr)
- NBZ = Nitrobenzene-d5 (Surr)
- FBP = 2-Fluorobiphenyl (Surr)
- TBP = 2,4,6-Tribromophenol (Surr)
- TPHL = Terphenyl-d14 (Surr)



# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County February 2025 Retest

Job ID: 310-300963-1  
 SDG: Harrison County Sanitary Landfill

## Method: 8270E - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 310-447751/1-A**  
**Matrix: Water**  
**Analysis Batch: 448375**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 447751**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	<10.0		10.0	5.60	ug/L		02/28/25 10:04	03/07/25 23:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	66		25 - 110				02/28/25 10:04	03/07/25 23:08	1
Phenol-d5 (Surr)	60		21 - 110				02/28/25 10:04	03/07/25 23:08	1
Nitrobenzene-d5 (Surr)	87		45 - 129				02/28/25 10:04	03/07/25 23:08	1
2-Fluorobiphenyl (Surr)	72		39 - 118				02/28/25 10:04	03/07/25 23:08	1
2,4,6-Tribromophenol (Surr)	84		27 - 136				02/28/25 10:04	03/07/25 23:08	1
Terphenyl-d14 (Surr)	97		12 - 144				02/28/25 10:04	03/07/25 23:08	1

**Lab Sample ID: LCS 310-447751/2-A**  
**Matrix: Water**  
**Analysis Batch: 448375**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 447751**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Di-n-butyl phthalate	100	105.1		ug/L		105	50 - 133
Surrogate	%Recovery	Qualifier	Limits				
2-Fluorophenol (Surr)	74		25 - 110				
Phenol-d5 (Surr)	67		21 - 110				
Nitrobenzene-d5 (Surr)	99		45 - 129				
2-Fluorobiphenyl (Surr)	85		39 - 118				
2,4,6-Tribromophenol (Surr)	99		27 - 136				
Terphenyl-d14 (Surr)	105		12 - 144				

**Lab Sample ID: LCSD 310-447751/3-A**  
**Matrix: Water**  
**Analysis Batch: 448375**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 447751**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Di-n-butyl phthalate	100	87.92		ug/L		88	50 - 133	18	35
Surrogate	%Recovery	Qualifier	Limits						
2-Fluorophenol (Surr)	57		25 - 110						
Phenol-d5 (Surr)	49		21 - 110						
Nitrobenzene-d5 (Surr)	79		45 - 129						
2-Fluorobiphenyl (Surr)	67		39 - 118						
2,4,6-Tribromophenol (Surr)	83		27 - 136						
Terphenyl-d14 (Surr)	85		12 - 144						

# QC Association Summary

Client: SCS Engineers  
Project/Site: Harrison County February 2025 Retest

Job ID: 310-300963-1  
SDG: Harrison County Sanitary Landfill

## GC/MS Semi VOA

### Prep Batch: 447751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-300963-1	MW-4A	Total/NA	Water	3510C	
MB 310-447751/1-A	Method Blank	Total/NA	Water	3510C	
LCS 310-447751/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 310-447751/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

### Analysis Batch: 448375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-300963-1	MW-4A	Total/NA	Water	8270E	447751
MB 310-447751/1-A	Method Blank	Total/NA	Water	8270E	447751
LCS 310-447751/2-A	Lab Control Sample	Total/NA	Water	8270E	447751
LCSD 310-447751/3-A	Lab Control Sample Dup	Total/NA	Water	8270E	447751



# Lab Chronicle

Client: SCS Engineers  
Project/Site: Harrison County February 2025 Retest

Job ID: 310-300963-1  
SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-4A**

**Lab Sample ID: 310-300963-1**

**Date Collected: 02/25/25 16:42**

**Matrix: Water**

**Date Received: 02/26/25 16:05**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			447751	L5FG	EET CF	02/28/25 10:04
Total/NA	Analysis	8270E		1	448375	V7YZ	EET CF	03/08/25 01:46

**Laboratory References:**

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

- 1
- 2
- 3
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- 5
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- 10
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- 13
- 14
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# Accreditation/Certification Summary

Client: SCS Engineers  
Project/Site: Harrison County February 2025 Retest

Job ID: 310-300963-1  
SDG: Harrison County Sanitary Landfill

## Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-25

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# Method Summary

Client: SCS Engineers  
Project/Site: Harrison County February 2025 Retest

Job ID: 310-300963-1  
SDG: Harrison County Sanitary Landfill

Method	Method Description	Protocol	Laboratory
8270E	Semivolatile Organic Compounds (GC/MS)	SW846	EET CF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CF

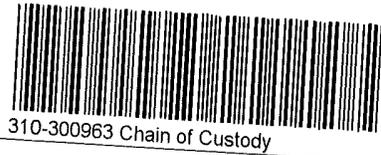
**Protocol References:**

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

**Laboratory References:**

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





**Cooler/Sample Receipt and Temperature Log Form**

<b>Client Information</b>			
Client: <u>SCS</u>			
City/State:	<u>West Des Moines IA</u>	Project:	
<b>Receipt Information</b>			
Date/Time Received:	<u>2/26/25</u>	<u>1605</u>	Received By: <u>XB</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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____	
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>2</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>3.7</u>	Corrected Temp (°C):	<u>3.7</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>			





## Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-300963-1  
SDG Number: Harrison County Sanitary Landfill

**Login Number: 300963**

**List Number: 1**

**Creator: Homolar, Dana J**

**List Source: Eurofins Cedar Falls**

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	



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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Sean Marczewski  
SCS Engineers  
1690 All State Court  
Suite 100  
West Des Moines, Iowa 50265

Generated 6/27/2025 5:28:47 PM

## JOB DESCRIPTION

Harrison County - Spring 2025 - HMSP  
Harrison County Sanitary Landfill

## JOB NUMBER

310-308641-1

# 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  
Samuel Miller, Project Management Assistant I  
[Samuel.Miller@et.eurofinsus.com](mailto:Samuel.Miller@et.eurofinsus.com)  
(319)595-2008



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# Case Narrative

Client: SCS Engineers  
Project: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1

**Job ID: 310-308641-1**

**Eurofins Cedar Falls**

## Job Narrative 310-308641-1

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

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

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

### Receipt

The samples were received on 6/12/2025 4:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were -0.4°C and 0.4°C.

### GC/MS VOA

Method 8260D: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container: Trip Blank 1 (310-308641-11).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-457531 recovered outside of the control limits for trans-1,3-Dichloropropene (-24.7%) and Chlorodibromomethane (-20.7%D). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 310-457531/3).

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

### Metals

Method 6020B: The reference method requires samples to be preserved to a pH of <2. The following sample(s) was received with insufficient preservation at a pH of >2. The sample(s) was preserved to the appropriate pH in the laboratory.

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

### General Chemistry

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

Eurofins Cedar Falls

# Sample Summary

Client: SCS Engineers  
Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
SDG: Harrison County Sanitary Landfill

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-308641-1	MW-1A	Water	06/10/25 15:53	06/12/25 16:15
310-308641-2	MW-4A	Water	06/10/25 16:35	06/12/25 16:15
310-308641-3	MW-5A	Water	06/10/25 18:18	06/12/25 16:15
310-308641-4	MW-8A	Water	06/10/25 13:01	06/12/25 16:15
310-308641-5	MW-10R	Water	06/11/25 09:20	06/12/25 16:15
310-308641-6	MW-11A	Water	06/11/25 08:06	06/12/25 16:15
310-308641-7	MW-13R	Water	06/10/25 14:05	06/12/25 16:15
310-308641-8	MW-14	Water	06/11/25 10:05	06/12/25 16:15
310-308641-9	MW-17	Water	06/11/25 12:32	06/12/25 16:15
310-308641-10	MW-D	Water	06/11/25 08:06	06/12/25 16:15
310-308641-11	Trip Blank 1	Water	06/11/25 00:00	06/12/25 16:15
310-308641-12	Trip Blank 2	Water	06/11/25 00:00	06/12/25 16:15



# Detection Summary

Client: SCS Engineers  
Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
SDG: Harrison County Sanitary Landfill

## Client Sample ID: MW-1A

Lab Sample ID: 310-308641-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.000841	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.721		0.00200	0.000660	mg/L	1		6020B	Total/NA
Copper	0.00378	J	0.00500	0.00320	mg/L	1		6020B	Total/NA
Nickel	0.00394	J	0.00500	0.00230	mg/L	1		6020B	Total/NA
Total Suspended Solids	3.00		1.88	1.31	mg/L	1		I-3765-85	Total/NA

## Client Sample ID: MW-4A

Lab Sample ID: 310-308641-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00158	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.553		0.00200	0.000660	mg/L	1		6020B	Total/NA
Total Suspended Solids	2.38		1.88	1.31	mg/L	1		I-3765-85	Total/NA

## Client Sample ID: MW-5A

Lab Sample ID: 310-308641-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.00101	J	0.00200	0.00100	mg/L	1		6020B	Total/NA
Arsenic	0.00429		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.406		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00358		0.000500	0.000170	mg/L	1		6020B	Total/NA
Lead	0.000591		0.000500	0.000330	mg/L	1		6020B	Total/NA
Nickel	0.0130		0.00500	0.00230	mg/L	1		6020B	Total/NA
Total Suspended Solids	32.3		3.75	2.63	mg/L	1		I-3765-85	Total/NA

## Client Sample ID: MW-8A

Lab Sample ID: 310-308641-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00384		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0320		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cadmium	0.00146		0.000200	0.000100	mg/L	1		6020B	Total/NA
Cobalt	0.00667		0.000500	0.000170	mg/L	1		6020B	Total/NA
Lead	0.000416	J	0.000500	0.000330	mg/L	1		6020B	Total/NA
Nickel	0.0353		0.00500	0.00230	mg/L	1		6020B	Total/NA
Total Suspended Solids	17.0		3.75	2.63	mg/L	1		I-3765-85	Total/NA

## Client Sample ID: MW-10R

Lab Sample ID: 310-308641-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.000691	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0631		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.000246	J	0.000500	0.000170	mg/L	1		6020B	Total/NA
Selenium	0.00790		0.00500	0.00140	mg/L	1		6020B	Total/NA
Vanadium	0.00299	J	0.00500	0.00170	mg/L	1		6020B	Total/NA

## Client Sample ID: MW-11A

Lab Sample ID: 310-308641-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.52	J	10.0	3.10	ug/L	1		8260D	Total/NA
Arsenic	0.00519		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0145		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cadmium	0.000643		0.000200	0.000100	mg/L	1		6020B	Total/NA
Cobalt	0.000621		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0127		0.00500	0.00230	mg/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

# Detection Summary

Client: SCS Engineers  
Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
SDG: Harrison County Sanitary Landfill

## Client Sample ID: MW-13R

Lab Sample ID: 310-308641-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00159	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0717		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.000203	J	0.000500	0.000170	mg/L	1		6020B	Total/NA
Total Suspended Solids	3.75		3.75	2.63	mg/L	1		I-3765-85	Total/NA

## Client Sample ID: MW-14

Lab Sample ID: 310-308641-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00266		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.203		0.00200	0.000660	mg/L	1		6020B	Total/NA
Total Suspended Solids	4.00		1.88	1.31	mg/L	1		I-3765-85	Total/NA

## Client Sample ID: MW-17

Lab Sample ID: 310-308641-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.000787	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0254		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cadmium	0.000102	J	0.000200	0.000100	mg/L	1		6020B	Total/NA
Chromium	0.00207	J	0.00500	0.00180	mg/L	1		6020B	Total/NA
Cobalt	0.000932		0.000500	0.000170	mg/L	1		6020B	Total/NA
Lead	0.000702		0.000500	0.000330	mg/L	1		6020B	Total/NA
Nickel	0.00372	J	0.00500	0.00230	mg/L	1		6020B	Total/NA
Vanadium	0.00206	J	0.00500	0.00170	mg/L	1		6020B	Total/NA
Total Suspended Solids	64.0		15.0	10.5	mg/L	1		I-3765-85	Total/NA

## Client Sample ID: MW-D

Lab Sample ID: 310-308641-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00522		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0149		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cadmium	0.000629		0.000200	0.000100	mg/L	1		6020B	Total/NA
Cobalt	0.000635		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0127		0.00500	0.00230	mg/L	1		6020B	Total/NA

## Client Sample ID: Trip Blank 1

Lab Sample ID: 310-308641-11

No Detections.

## Client Sample ID: Trip Blank 2

Lab Sample ID: 310-308641-12

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-1A**

**Lab Sample ID: 310-308641-1**

Date Collected: 06/10/25 15:53

Matrix: Water

Date Received: 06/12/25 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/17/25 09:10	06/24/25 15:39	1
<b>Arsenic</b>	<b>0.000841</b>	<b>J</b>	0.00200	0.000530	mg/L		06/17/25 09:10	06/24/25 15:39	1
<b>Barium</b>	<b>0.721</b>		0.00200	0.000660	mg/L		06/17/25 09:10	06/24/25 15:39	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		06/17/25 09:10	06/24/25 15:39	1
<b>Copper</b>	<b>0.00378</b>	<b>J</b>	0.00500	0.00320	mg/L		06/17/25 09:10	06/24/25 15:39	1
Lead	<0.000500		0.000500	0.000330	mg/L		06/17/25 09:10	06/24/25 15:39	1
<b>Nickel</b>	<b>0.00394</b>	<b>J</b>	0.00500	0.00230	mg/L		06/17/25 09:10	06/24/25 15:39	1
Zinc	<0.0200		0.0200	0.0130	mg/L		06/17/25 09:10	06/24/25 15:39	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>3.00</b>		1.88	1.31	mg/L			06/13/25 11:47	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-4A**

**Lab Sample ID: 310-308641-2**

Date Collected: 06/10/25 16:35

Matrix: Water

Date Received: 06/12/25 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/17/25 09:10	06/24/25 15:41	1
<b>Arsenic</b>	<b>0.00158</b>	<b>J</b>	0.00200	0.000530	mg/L		06/17/25 09:10	06/24/25 15:41	1
<b>Barium</b>	<b>0.553</b>		0.00200	0.000660	mg/L		06/17/25 09:10	06/24/25 15:41	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		06/17/25 09:10	06/24/25 15:41	1
Copper	<0.00500		0.00500	0.00320	mg/L		06/17/25 09:10	06/24/25 15:41	1
Lead	<0.000500		0.000500	0.000330	mg/L		06/17/25 09:10	06/24/25 15:41	1
Nickel	<0.00500		0.00500	0.00230	mg/L		06/17/25 09:10	06/24/25 15:41	1
Zinc	<0.0200		0.0200	0.0130	mg/L		06/17/25 09:10	06/24/25 15:41	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>2.38</b>		1.88	1.31	mg/L			06/13/25 09:30	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-5A**

**Lab Sample ID: 310-308641-3**

Date Collected: 06/10/25 18:18

Matrix: Water

Date Received: 06/12/25 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00101	J	0.00200	0.00100	mg/L		06/17/25 09:10	06/24/25 15:44	1
Arsenic	0.00429		0.00200	0.000530	mg/L		06/17/25 09:10	06/24/25 15:44	1
Barium	0.406		0.00200	0.000660	mg/L		06/17/25 09:10	06/24/25 15:44	1
Cobalt	0.00358		0.000500	0.000170	mg/L		06/17/25 09:10	06/24/25 15:44	1
Copper	<0.00500		0.00500	0.00320	mg/L		06/17/25 09:10	06/24/25 15:44	1
Lead	0.000591		0.000500	0.000330	mg/L		06/17/25 09:10	06/24/25 15:44	1
Nickel	0.0130		0.00500	0.00230	mg/L		06/17/25 09:10	06/24/25 15:44	1
Zinc	<0.0200		0.0200	0.0130	mg/L		06/17/25 09:10	06/24/25 15:44	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	32.3		3.75	2.63	mg/L			06/13/25 11:47	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-8A**  
**Date Collected: 06/10/25 13:01**  
**Date Received: 06/12/25 16:15**

**Lab Sample ID: 310-308641-4**  
**Matrix: Water**

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/14/25 09:21	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/14/25 09:21	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/14/25 09:21	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/14/25 09:21	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/14/25 09:21	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/14/25 09:21	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/14/25 09:21	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/14/25 09:21	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/14/25 09:21	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/14/25 09:21	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/14/25 09:21	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/14/25 09:21	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/14/25 09:21	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/14/25 09:21	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/14/25 09:21	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/14/25 09:21	1
Acetone	<10.0		10.0	3.10	ug/L			06/14/25 09:21	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/14/25 09:21	1
Benzene	<0.500		0.500	0.220	ug/L			06/14/25 09:21	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/14/25 09:21	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/14/25 09:21	1
Bromoform	<5.00		5.00	0.780	ug/L			06/14/25 09:21	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/14/25 09:21	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/14/25 09:21	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/14/25 09:21	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/14/25 09:21	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/14/25 09:21	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/14/25 09:21	1
Chloroform	<3.00		3.00	1.30	ug/L			06/14/25 09:21	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/14/25 09:21	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/14/25 09:21	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/14/25 09:21	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/14/25 09:21	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/14/25 09:21	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/14/25 09:21	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/14/25 09:21	1
Styrene	<1.00		1.00	0.370	ug/L			06/14/25 09:21	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/14/25 09:21	1
Toluene	<1.00		1.00	0.430	ug/L			06/14/25 09:21	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/14/25 09:21	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/14/25 09:21	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/14/25 09:21	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/14/25 09:21	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/14/25 09:21	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/14/25 09:21	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/14/25 09:21	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/14/25 09:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	110		76 - 130		06/14/25 09:21	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-8A**  
 Date Collected: 06/10/25 13:01  
 Date Received: 06/12/25 16:15

**Lab Sample ID: 310-308641-4**  
 Matrix: Water

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	90		80 - 120		06/14/25 09:21	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/14/25 09:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/17/25 09:10	06/24/25 15:46	1
<b>Arsenic</b>	<b>0.00384</b>		0.00200	0.000530	mg/L		06/17/25 09:10	06/24/25 15:46	1
<b>Barium</b>	<b>0.0320</b>		0.00200	0.000660	mg/L		06/17/25 09:10	06/24/25 15:46	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/17/25 09:10	06/24/25 15:46	1
<b>Cadmium</b>	<b>0.00146</b>		0.000200	0.000100	mg/L		06/17/25 09:10	06/26/25 15:31	1
Chromium	<0.00500		0.00500	0.00180	mg/L		06/17/25 09:10	06/24/25 15:46	1
<b>Cobalt</b>	<b>0.00667</b>		0.000500	0.000170	mg/L		06/17/25 09:10	06/24/25 15:46	1
Copper	<0.00500		0.00500	0.00320	mg/L		06/17/25 09:10	06/24/25 15:46	1
<b>Lead</b>	<b>0.000416</b>	<b>J</b>	0.000500	0.000330	mg/L		06/17/25 09:10	06/24/25 15:46	1
<b>Nickel</b>	<b>0.0353</b>		0.00500	0.00230	mg/L		06/17/25 09:10	06/24/25 15:46	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/17/25 09:10	06/24/25 15:46	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/17/25 09:10	06/24/25 15:46	1
Thallium	<0.00100		0.00100	0.000570	mg/L		06/27/25 09:00	06/27/25 15:58	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		06/17/25 09:10	06/24/25 15:46	1
Zinc	<0.0200		0.0200	0.0130	mg/L		06/17/25 09:10	06/24/25 15:46	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>17.0</b>		3.75	2.63	mg/L			06/13/25 11:47	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-10R**

**Lab Sample ID: 310-308641-5**

Date Collected: 06/11/25 09:20

Matrix: Water

Date Received: 06/12/25 16:15

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/14/25 09:44	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/14/25 09:44	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/14/25 09:44	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/14/25 09:44	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/14/25 09:44	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/14/25 09:44	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/14/25 09:44	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/14/25 09:44	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/14/25 09:44	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/14/25 09:44	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/14/25 09:44	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/14/25 09:44	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/14/25 09:44	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/14/25 09:44	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/14/25 09:44	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/14/25 09:44	1
Acetone	<10.0		10.0	3.10	ug/L			06/14/25 09:44	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/14/25 09:44	1
Benzene	<0.500		0.500	0.220	ug/L			06/14/25 09:44	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/14/25 09:44	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/14/25 09:44	1
Bromoform	<5.00		5.00	0.780	ug/L			06/14/25 09:44	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/14/25 09:44	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/14/25 09:44	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/14/25 09:44	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/14/25 09:44	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/14/25 09:44	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/14/25 09:44	1
Chloroform	<3.00		3.00	1.30	ug/L			06/14/25 09:44	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/14/25 09:44	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/14/25 09:44	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/14/25 09:44	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/14/25 09:44	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/14/25 09:44	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/14/25 09:44	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/14/25 09:44	1
Styrene	<1.00		1.00	0.370	ug/L			06/14/25 09:44	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/14/25 09:44	1
Toluene	<1.00		1.00	0.430	ug/L			06/14/25 09:44	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/14/25 09:44	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/14/25 09:44	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/14/25 09:44	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/14/25 09:44	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/14/25 09:44	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/14/25 09:44	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/14/25 09:44	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/14/25 09:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	112		76 - 130		06/14/25 09:44	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-10R**

**Lab Sample ID: 310-308641-5**

Date Collected: 06/11/25 09:20

Matrix: Water

Date Received: 06/12/25 16:15

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	90		80 - 120		06/14/25 09:44	1
4-Bromofluorobenzene (Surr)	100		80 - 120		06/14/25 09:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/18/25 09:00	06/22/25 21:35	1
<b>Arsenic</b>	<b>0.000691</b>	<b>J</b>	0.00200	0.000530	mg/L		06/18/25 09:00	06/22/25 21:35	1
<b>Barium</b>	<b>0.0631</b>		0.00200	0.000660	mg/L		06/18/25 09:00	06/22/25 21:35	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/18/25 09:00	06/23/25 19:09	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		06/18/25 09:00	06/22/25 21:35	1
Chromium	<0.00500		0.00500	0.00180	mg/L		06/18/25 09:00	06/23/25 19:09	1
<b>Cobalt</b>	<b>0.000246</b>	<b>J</b>	0.000500	0.000170	mg/L		06/18/25 09:00	06/23/25 19:09	1
Copper	<0.00500		0.00500	0.00320	mg/L		06/18/25 09:00	06/22/25 21:35	1
Lead	<0.000500		0.000500	0.000330	mg/L		06/18/25 09:00	06/22/25 21:35	1
Nickel	<0.00500		0.00500	0.00230	mg/L		06/18/25 09:00	06/23/25 19:09	1
<b>Selenium</b>	<b>0.00790</b>		0.00500	0.00140	mg/L		06/18/25 09:00	06/23/25 19:09	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/18/25 09:00	06/23/25 19:09	1
Thallium	<0.00100		0.00100	0.000570	mg/L		06/18/25 09:00	06/22/25 21:35	1
<b>Vanadium</b>	<b>0.00299</b>	<b>J</b>	0.00500	0.00170	mg/L		06/18/25 09:00	06/23/25 19:09	1
Zinc	<0.0200		0.0200	0.0130	mg/L		06/18/25 09:00	06/22/25 21:35	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.31	mg/L			06/13/25 11:47	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-11A**

**Lab Sample ID: 310-308641-6**

Date Collected: 06/11/25 08:06

Matrix: Water

Date Received: 06/12/25 16:15

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/14/25 10:06	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/14/25 10:06	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/14/25 10:06	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/14/25 10:06	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/14/25 10:06	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/14/25 10:06	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/14/25 10:06	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/14/25 10:06	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/14/25 10:06	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/14/25 10:06	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/14/25 10:06	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/14/25 10:06	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/14/25 10:06	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/14/25 10:06	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/14/25 10:06	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/14/25 10:06	1
<b>Acetone</b>	<b>5.52</b>	<b>J</b>	10.0	3.10	ug/L			06/14/25 10:06	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/14/25 10:06	1
Benzene	<0.500		0.500	0.220	ug/L			06/14/25 10:06	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/14/25 10:06	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/14/25 10:06	1
Bromoform	<5.00		5.00	0.780	ug/L			06/14/25 10:06	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/14/25 10:06	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/14/25 10:06	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/14/25 10:06	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/14/25 10:06	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/14/25 10:06	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/14/25 10:06	1
Chloroform	<3.00		3.00	1.30	ug/L			06/14/25 10:06	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/14/25 10:06	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/14/25 10:06	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/14/25 10:06	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/14/25 10:06	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/14/25 10:06	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/14/25 10:06	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/14/25 10:06	1
Styrene	<1.00		1.00	0.370	ug/L			06/14/25 10:06	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/14/25 10:06	1
Toluene	<1.00		1.00	0.430	ug/L			06/14/25 10:06	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/14/25 10:06	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/14/25 10:06	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/14/25 10:06	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/14/25 10:06	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/14/25 10:06	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/14/25 10:06	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/14/25 10:06	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/14/25 10:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	111		76 - 130		06/14/25 10:06	1

Eurofins Cedar Falls

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-11A**

**Lab Sample ID: 310-308641-6**

Date Collected: 06/11/25 08:06

Matrix: Water

Date Received: 06/12/25 16:15

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	90		80 - 120		06/14/25 10:06	1
4-Bromofluorobenzene (Surr)	102		80 - 120		06/14/25 10:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/18/25 09:00	06/22/25 21:38	1
<b>Arsenic</b>	<b>0.00519</b>		0.00200	0.000530	mg/L		06/18/25 09:00	06/22/25 21:38	1
<b>Barium</b>	<b>0.0145</b>		0.00200	0.000660	mg/L		06/18/25 09:00	06/22/25 21:38	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/18/25 09:00	06/23/25 19:12	1
<b>Cadmium</b>	<b>0.000643</b>		0.000200	0.000100	mg/L		06/18/25 09:00	06/22/25 21:38	1
Chromium	<0.00500		0.00500	0.00180	mg/L		06/18/25 09:00	06/23/25 19:12	1
<b>Cobalt</b>	<b>0.000621</b>		0.000500	0.000170	mg/L		06/18/25 09:00	06/23/25 19:12	1
Copper	<0.00500		0.00500	0.00320	mg/L		06/18/25 09:00	06/22/25 21:38	1
Lead	<0.000500		0.000500	0.000330	mg/L		06/18/25 09:00	06/22/25 21:38	1
<b>Nickel</b>	<b>0.0127</b>		0.00500	0.00230	mg/L		06/18/25 09:00	06/23/25 19:12	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/25 09:00	06/23/25 19:12	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/18/25 09:00	06/23/25 19:12	1
Thallium	<0.00100		0.00100	0.000570	mg/L		06/18/25 09:00	06/22/25 21:38	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		06/18/25 09:00	06/23/25 19:12	1
Zinc	<0.0200		0.0200	0.0130	mg/L		06/18/25 09:00	06/22/25 21:38	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.31	mg/L			06/13/25 11:47	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-13R**

**Lab Sample ID: 310-308641-7**

Date Collected: 06/10/25 14:05

Matrix: Water

Date Received: 06/12/25 16:15

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/14/25 10:29	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/14/25 10:29	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/14/25 10:29	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/14/25 10:29	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/14/25 10:29	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/14/25 10:29	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/14/25 10:29	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/14/25 10:29	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/14/25 10:29	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/14/25 10:29	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/14/25 10:29	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/14/25 10:29	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/14/25 10:29	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/14/25 10:29	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/14/25 10:29	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/14/25 10:29	1
Acetone	<10.0		10.0	3.10	ug/L			06/14/25 10:29	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/14/25 10:29	1
Benzene	<0.500		0.500	0.220	ug/L			06/14/25 10:29	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/14/25 10:29	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/14/25 10:29	1
Bromoform	<5.00		5.00	0.780	ug/L			06/14/25 10:29	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/14/25 10:29	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/14/25 10:29	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/14/25 10:29	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/14/25 10:29	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/14/25 10:29	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/14/25 10:29	1
Chloroform	<3.00		3.00	1.30	ug/L			06/14/25 10:29	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/14/25 10:29	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/14/25 10:29	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/14/25 10:29	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/14/25 10:29	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/14/25 10:29	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/14/25 10:29	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/14/25 10:29	1
Styrene	<1.00		1.00	0.370	ug/L			06/14/25 10:29	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/14/25 10:29	1
Toluene	<1.00		1.00	0.430	ug/L			06/14/25 10:29	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/14/25 10:29	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/14/25 10:29	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/14/25 10:29	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/14/25 10:29	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/14/25 10:29	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/14/25 10:29	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/14/25 10:29	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/14/25 10:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	111		76 - 130		06/14/25 10:29	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-13R**

**Lab Sample ID: 310-308641-7**

Date Collected: 06/10/25 14:05

Matrix: Water

Date Received: 06/12/25 16:15

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		80 - 120		06/14/25 10:29	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/14/25 10:29	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/18/25 09:00	06/22/25 21:41	1
<b>Arsenic</b>	<b>0.00159</b>	<b>J</b>	0.00200	0.000530	mg/L		06/18/25 09:00	06/22/25 21:41	1
<b>Barium</b>	<b>0.0717</b>		0.00200	0.000660	mg/L		06/18/25 09:00	06/22/25 21:41	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/18/25 09:00	06/23/25 19:21	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		06/18/25 09:00	06/22/25 21:41	1
Chromium	<0.00500		0.00500	0.00180	mg/L		06/18/25 09:00	06/23/25 19:21	1
<b>Cobalt</b>	<b>0.000203</b>	<b>J</b>	0.000500	0.000170	mg/L		06/18/25 09:00	06/23/25 19:21	1
Copper	<0.00500		0.00500	0.00320	mg/L		06/18/25 09:00	06/22/25 21:41	1
Lead	<0.000500		0.000500	0.000330	mg/L		06/18/25 09:00	06/22/25 21:41	1
Nickel	<0.00500		0.00500	0.00230	mg/L		06/18/25 09:00	06/23/25 19:21	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/25 09:00	06/23/25 19:21	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/18/25 09:00	06/23/25 19:21	1
Thallium	<0.00100		0.00100	0.000570	mg/L		06/18/25 09:00	06/22/25 21:41	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		06/18/25 09:00	06/23/25 19:21	1
Zinc	<0.0200		0.0200	0.0130	mg/L		06/18/25 09:00	06/22/25 21:41	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>3.75</b>		3.75	2.63	mg/L			06/13/25 11:47	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-14**

**Lab Sample ID: 310-308641-8**

Date Collected: 06/11/25 10:05

Matrix: Water

Date Received: 06/12/25 16:15

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/14/25 10:51	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/14/25 10:51	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/14/25 10:51	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/14/25 10:51	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/14/25 10:51	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/14/25 10:51	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/14/25 10:51	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/14/25 10:51	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/14/25 10:51	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/14/25 10:51	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/14/25 10:51	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/14/25 10:51	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/14/25 10:51	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/14/25 10:51	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/14/25 10:51	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/14/25 10:51	1
Acetone	<10.0		10.0	3.10	ug/L			06/14/25 10:51	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/14/25 10:51	1
Benzene	<0.500		0.500	0.220	ug/L			06/14/25 10:51	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/14/25 10:51	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/14/25 10:51	1
Bromoform	<5.00		5.00	0.780	ug/L			06/14/25 10:51	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/14/25 10:51	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/14/25 10:51	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/14/25 10:51	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/14/25 10:51	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/14/25 10:51	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/14/25 10:51	1
Chloroform	<3.00		3.00	1.30	ug/L			06/14/25 10:51	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/14/25 10:51	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/14/25 10:51	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/14/25 10:51	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/14/25 10:51	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/14/25 10:51	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/14/25 10:51	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/14/25 10:51	1
Styrene	<1.00		1.00	0.370	ug/L			06/14/25 10:51	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/14/25 10:51	1
Toluene	<1.00		1.00	0.430	ug/L			06/14/25 10:51	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/14/25 10:51	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/14/25 10:51	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/14/25 10:51	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/14/25 10:51	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/14/25 10:51	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/14/25 10:51	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/14/25 10:51	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/14/25 10:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	112		76 - 130		06/14/25 10:51	1

Eurofins Cedar Falls

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-14**  
 Date Collected: 06/11/25 10:05  
 Date Received: 06/12/25 16:15

**Lab Sample ID: 310-308641-8**  
 Matrix: Water

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	90		80 - 120		06/14/25 10:51	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/14/25 10:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/18/25 09:00	06/22/25 21:49	1
<b>Arsenic</b>	<b>0.00266</b>		0.00200	0.000530	mg/L		06/18/25 09:00	06/22/25 21:49	1
<b>Barium</b>	<b>0.203</b>		0.00200	0.000660	mg/L		06/18/25 09:00	06/22/25 21:49	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/18/25 09:00	06/23/25 19:24	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		06/18/25 09:00	06/22/25 21:49	1
Chromium	<0.00500		0.00500	0.00180	mg/L		06/18/25 09:00	06/23/25 19:24	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		06/18/25 09:00	06/23/25 19:24	1
Copper	<0.00500		0.00500	0.00320	mg/L		06/18/25 09:00	06/22/25 21:49	1
Lead	<0.000500		0.000500	0.000330	mg/L		06/18/25 09:00	06/22/25 21:49	1
Nickel	<0.00500		0.00500	0.00230	mg/L		06/18/25 09:00	06/23/25 19:24	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/25 09:00	06/23/25 19:24	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/18/25 09:00	06/23/25 19:24	1
Thallium	<0.00100		0.00100	0.000570	mg/L		06/18/25 09:00	06/22/25 21:49	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		06/18/25 09:00	06/23/25 19:24	1
Zinc	<0.0200		0.0200	0.0130	mg/L		06/18/25 09:00	06/22/25 21:49	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>4.00</b>		1.88	1.31	mg/L			06/13/25 11:47	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-17**

**Lab Sample ID: 310-308641-9**

Date Collected: 06/11/25 12:32

Matrix: Water

Date Received: 06/12/25 16:15

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/14/25 11:14	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/14/25 11:14	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/14/25 11:14	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/14/25 11:14	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/14/25 11:14	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/14/25 11:14	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/14/25 11:14	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/14/25 11:14	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/14/25 11:14	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/14/25 11:14	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/14/25 11:14	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/14/25 11:14	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/14/25 11:14	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/14/25 11:14	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/14/25 11:14	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/14/25 11:14	1
Acetone	<10.0		10.0	3.10	ug/L			06/14/25 11:14	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/14/25 11:14	1
Benzene	<0.500		0.500	0.220	ug/L			06/14/25 11:14	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/14/25 11:14	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/14/25 11:14	1
Bromoform	<5.00		5.00	0.780	ug/L			06/14/25 11:14	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/14/25 11:14	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/14/25 11:14	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/14/25 11:14	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/14/25 11:14	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/14/25 11:14	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/14/25 11:14	1
Chloroform	<3.00		3.00	1.30	ug/L			06/14/25 11:14	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/14/25 11:14	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/14/25 11:14	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/14/25 11:14	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/14/25 11:14	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/14/25 11:14	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/14/25 11:14	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/14/25 11:14	1
Styrene	<1.00		1.00	0.370	ug/L			06/14/25 11:14	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/14/25 11:14	1
Toluene	<1.00		1.00	0.430	ug/L			06/14/25 11:14	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/14/25 11:14	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/14/25 11:14	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/14/25 11:14	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/14/25 11:14	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/14/25 11:14	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/14/25 11:14	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/14/25 11:14	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/14/25 11:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	109		76 - 130		06/14/25 11:14	1

Eurofins Cedar Falls

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-17**

**Lab Sample ID: 310-308641-9**

Date Collected: 06/11/25 12:32

Matrix: Water

Date Received: 06/12/25 16:15

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		80 - 120		06/14/25 11:14	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/14/25 11:14	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/18/25 09:00	06/22/25 21:52	1
<b>Arsenic</b>	<b>0.000787</b>	<b>J</b>	0.00200	0.000530	mg/L		06/18/25 09:00	06/22/25 21:52	1
<b>Barium</b>	<b>0.0254</b>		0.00200	0.000660	mg/L		06/18/25 09:00	06/22/25 21:52	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/18/25 09:00	06/23/25 19:27	1
<b>Cadmium</b>	<b>0.000102</b>	<b>J</b>	0.000200	0.000100	mg/L		06/18/25 09:00	06/22/25 21:52	1
<b>Chromium</b>	<b>0.00207</b>	<b>J</b>	0.00500	0.00180	mg/L		06/18/25 09:00	06/23/25 19:27	1
<b>Cobalt</b>	<b>0.000932</b>		0.000500	0.000170	mg/L		06/18/25 09:00	06/23/25 19:27	1
Copper	<0.00500		0.00500	0.00320	mg/L		06/18/25 09:00	06/22/25 21:52	1
<b>Lead</b>	<b>0.000702</b>		0.000500	0.000330	mg/L		06/18/25 09:00	06/22/25 21:52	1
<b>Nickel</b>	<b>0.00372</b>	<b>J</b>	0.00500	0.00230	mg/L		06/18/25 09:00	06/23/25 19:27	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/25 09:00	06/23/25 19:27	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/18/25 09:00	06/23/25 19:27	1
Thallium	<0.00100		0.00100	0.000570	mg/L		06/18/25 09:00	06/22/25 21:52	1
<b>Vanadium</b>	<b>0.00206</b>	<b>J</b>	0.00500	0.00170	mg/L		06/18/25 09:00	06/23/25 19:27	1
Zinc	<0.0200		0.0200	0.0130	mg/L		06/18/25 09:00	06/22/25 21:52	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>64.0</b>		15.0	10.5	mg/L			06/13/25 09:30	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-D**

**Lab Sample ID: 310-308641-10**

Date Collected: 06/11/25 08:06

Matrix: Water

Date Received: 06/12/25 16:15

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/14/25 11:37	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/14/25 11:37	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/14/25 11:37	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/14/25 11:37	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/14/25 11:37	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/14/25 11:37	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/14/25 11:37	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/14/25 11:37	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/14/25 11:37	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/14/25 11:37	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/14/25 11:37	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/14/25 11:37	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/14/25 11:37	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/14/25 11:37	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/14/25 11:37	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/14/25 11:37	1
Acetone	<10.0		10.0	3.10	ug/L			06/14/25 11:37	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/14/25 11:37	1
Benzene	<0.500		0.500	0.220	ug/L			06/14/25 11:37	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/14/25 11:37	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/14/25 11:37	1
Bromoform	<5.00		5.00	0.780	ug/L			06/14/25 11:37	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/14/25 11:37	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/14/25 11:37	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/14/25 11:37	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/14/25 11:37	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/14/25 11:37	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/14/25 11:37	1
Chloroform	<3.00		3.00	1.30	ug/L			06/14/25 11:37	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/14/25 11:37	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/14/25 11:37	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/14/25 11:37	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/14/25 11:37	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/14/25 11:37	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/14/25 11:37	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/14/25 11:37	1
Styrene	<1.00		1.00	0.370	ug/L			06/14/25 11:37	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/14/25 11:37	1
Toluene	<1.00		1.00	0.430	ug/L			06/14/25 11:37	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/14/25 11:37	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/14/25 11:37	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/14/25 11:37	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/14/25 11:37	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/14/25 11:37	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/14/25 11:37	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/14/25 11:37	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/14/25 11:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	109		76 - 130		06/14/25 11:37	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-D**

**Lab Sample ID: 310-308641-10**

Date Collected: 06/11/25 08:06

Matrix: Water

Date Received: 06/12/25 16:15

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		80 - 120		06/14/25 11:37	1
4-Bromofluorobenzene (Surr)	104		80 - 120		06/14/25 11:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/18/25 09:00	06/22/25 21:55	1
<b>Arsenic</b>	<b>0.00522</b>		0.00200	0.000530	mg/L		06/18/25 09:00	06/22/25 21:55	1
<b>Barium</b>	<b>0.0149</b>		0.00200	0.000660	mg/L		06/18/25 09:00	06/22/25 21:55	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/18/25 09:00	06/23/25 19:29	1
<b>Cadmium</b>	<b>0.000629</b>		0.000200	0.000100	mg/L		06/18/25 09:00	06/22/25 21:55	1
Chromium	<0.00500		0.00500	0.00180	mg/L		06/18/25 09:00	06/23/25 19:29	1
<b>Cobalt</b>	<b>0.000635</b>		0.000500	0.000170	mg/L		06/18/25 09:00	06/23/25 19:29	1
Copper	<0.00500		0.00500	0.00320	mg/L		06/18/25 09:00	06/22/25 21:55	1
Lead	<0.000500		0.000500	0.000330	mg/L		06/18/25 09:00	06/22/25 21:55	1
<b>Nickel</b>	<b>0.0127</b>		0.00500	0.00230	mg/L		06/18/25 09:00	06/23/25 19:29	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/25 09:00	06/23/25 19:29	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/18/25 09:00	06/23/25 19:29	1
Thallium	<0.00100		0.00100	0.000570	mg/L		06/18/25 09:00	06/22/25 21:55	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		06/18/25 09:00	06/23/25 19:29	1
Zinc	<0.0200		0.0200	0.0130	mg/L		06/18/25 09:00	06/22/25 21:55	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<3.75		3.75	2.63	mg/L			06/13/25 14:04	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: Trip Blank 1**

**Lab Sample ID: 310-308641-11**

Date Collected: 06/11/25 00:00

Matrix: Water

Date Received: 06/12/25 16:15

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/14/25 04:27	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/14/25 04:27	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/14/25 04:27	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/14/25 04:27	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/14/25 04:27	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/14/25 04:27	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/14/25 04:27	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/14/25 04:27	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/14/25 04:27	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/14/25 04:27	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/14/25 04:27	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/14/25 04:27	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/14/25 04:27	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/14/25 04:27	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/14/25 04:27	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/14/25 04:27	1
Acetone	<10.0		10.0	3.10	ug/L			06/14/25 04:27	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/14/25 04:27	1
Benzene	<0.500		0.500	0.220	ug/L			06/14/25 04:27	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/14/25 04:27	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/14/25 04:27	1
Bromoform	<5.00		5.00	0.780	ug/L			06/14/25 04:27	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/14/25 04:27	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/14/25 04:27	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/14/25 04:27	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/14/25 04:27	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/14/25 04:27	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/14/25 04:27	1
Chloroform	<3.00		3.00	1.30	ug/L			06/14/25 04:27	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/14/25 04:27	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/14/25 04:27	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/14/25 04:27	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/14/25 04:27	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/14/25 04:27	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/14/25 04:27	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/14/25 04:27	1
Styrene	<1.00		1.00	0.370	ug/L			06/14/25 04:27	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/14/25 04:27	1
Toluene	<1.00		1.00	0.430	ug/L			06/14/25 04:27	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/14/25 04:27	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/14/25 04:27	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/14/25 04:27	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/14/25 04:27	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/14/25 04:27	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/14/25 04:27	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/14/25 04:27	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/14/25 04:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	113		76 - 130		06/14/25 04:27	1

Eurofins Cedar Falls

# Client Sample Results

Client: SCS Engineers  
Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
SDG: Harrison County Sanitary Landfill

**Client Sample ID: Trip Blank 1**

**Lab Sample ID: 310-308641-11**

Date Collected: 06/11/25 00:00

Matrix: Water

Date Received: 06/12/25 16:15

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
Toluene-d8 (Surr)	90		80 - 120		06/14/25 04:27	1
4-Bromofluorobenzene (Surr)	104		80 - 120		06/14/25 04:27	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: Trip Blank 2**

**Lab Sample ID: 310-308641-12**

Date Collected: 06/11/25 00:00

Matrix: Water

Date Received: 06/12/25 16:15

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/14/25 04:49	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/14/25 04:49	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/14/25 04:49	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/14/25 04:49	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/14/25 04:49	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/19/25 13:39	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/14/25 04:49	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/14/25 04:49	1
Bromoform	<5.00		5.00	0.780	ug/L			06/19/25 13:39	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/14/25 04:49	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/14/25 04:49	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/14/25 04:49	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/14/25 04:49	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/14/25 04:49	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/14/25 04:49	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/14/25 04:49	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/14/25 04:49	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/14/25 04:49	1
Acetone	<10.0		10.0	3.10	ug/L			06/14/25 04:49	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/14/25 04:49	1
Benzene	<0.500		0.500	0.220	ug/L			06/14/25 04:49	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/14/25 04:49	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/14/25 04:49	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/14/25 04:49	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/14/25 04:49	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/14/25 04:49	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/14/25 04:49	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/14/25 04:49	1
Chloroform	<3.00		3.00	1.30	ug/L			06/14/25 04:49	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/14/25 04:49	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/14/25 04:49	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/14/25 04:49	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/14/25 04:49	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/14/25 04:49	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/14/25 04:49	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/14/25 04:49	1
Styrene	<1.00		1.00	0.370	ug/L			06/14/25 04:49	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/14/25 04:49	1
Toluene	<1.00		1.00	0.430	ug/L			06/14/25 04:49	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/14/25 04:49	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/14/25 04:49	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/14/25 04:49	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/14/25 04:49	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/14/25 04:49	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/14/25 04:49	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/14/25 04:49	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/14/25 04:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		06/19/25 13:39	1

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# Client Sample Results

Client: SCS Engineers  
Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
SDG: Harrison County Sanitary Landfill

**Client Sample ID: Trip Blank 2**

**Lab Sample ID: 310-308641-12**

Date Collected: 06/11/25 00:00

Matrix: Water

Date Received: 06/12/25 16:15

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Dibromofluoromethane (Surr)	111		76 - 130		06/19/25 13:39	1
Toluene-d8 (Surr)	97		80 - 120		06/19/25 13:39	1
Dibromofluoromethane (Surr)	111		76 - 130		06/14/25 04:49	1
Toluene-d8 (Surr)	91		80 - 120		06/14/25 04:49	1
4-Bromofluorobenzene (Surr)	104		80 - 120		06/14/25 04:49	1

# Definitions/Glossary

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

## Qualifiers

### GC/MS VOA

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
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.
☼	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

# Surrogate Summary

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

## Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (76-130)	TOL (80-120)	BFB (80-120)
310-308641-4	MW-8A	110	90	101
310-308641-5	MW-10R	112	90	100
310-308641-6	MW-11A	111	90	102
310-308641-6 MS	MW-11A	96	97	102
310-308641-6 MSD	MW-11A	96	99	101
310-308641-7	MW-13R	111	91	101
310-308641-8	MW-14	112	90	101
310-308641-9	MW-17	109	91	101
310-308641-10	MW-D	109	91	104
310-308641-11	Trip Blank 1	113	90	104
310-308641-12	Trip Blank 2	111	91	104
310-308641-12	Trip Blank 2	111	97	100
LCS 310-457531/7	Lab Control Sample	97	97	100
LCS 310-457531/8	Lab Control Sample	109	90	102
LCS 310-458100/6	Lab Control Sample	97	102	102
LCS 310-458100/7	Lab Control Sample	109	97	102
MB 310-457531/6	Method Blank	110	90	104
MB 310-458100/5	Method Blank	110	98	102

**Surrogate Legend**

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

## Method: 8260D - Volatile Organic Compounds by GC/MS

**Lab Sample ID: MB 310-457531/6**  
**Matrix: Water**  
**Analysis Batch: 457531**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/14/25 03:19	1
Acetone	<10.0		10.0	3.10	ug/L			06/14/25 03:19	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/14/25 03:19	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/14/25 03:19	1
Benzene	<0.500		0.500	0.220	ug/L			06/14/25 03:19	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/14/25 03:19	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/14/25 03:19	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/14/25 03:19	1
Bromoform	<5.00		5.00	0.780	ug/L			06/14/25 03:19	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/14/25 03:19	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/14/25 03:19	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/14/25 03:19	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/14/25 03:19	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/14/25 03:19	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/14/25 03:19	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/14/25 03:19	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/14/25 03:19	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/14/25 03:19	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/14/25 03:19	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/14/25 03:19	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/14/25 03:19	1
Chloroform	<3.00		3.00	1.30	ug/L			06/14/25 03:19	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/14/25 03:19	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/14/25 03:19	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/14/25 03:19	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/14/25 03:19	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/14/25 03:19	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/14/25 03:19	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/14/25 03:19	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/14/25 03:19	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/14/25 03:19	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/14/25 03:19	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/14/25 03:19	1
Styrene	<1.00		1.00	0.370	ug/L			06/14/25 03:19	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/14/25 03:19	1
Toluene	<1.00		1.00	0.430	ug/L			06/14/25 03:19	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/14/25 03:19	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/14/25 03:19	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/14/25 03:19	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/14/25 03:19	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/14/25 03:19	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/14/25 03:19	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/14/25 03:19	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/14/25 03:19	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/14/25 03:19	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/14/25 03:19	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/14/25 03:19	1

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: MB 310-457531/6**

**Matrix: Water**

**Analysis Batch: 457531**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	110		76 - 130		06/14/25 03:19	1
Toluene-d8 (Surr)	90		80 - 120		06/14/25 03:19	1
4-Bromofluorobenzene (Surr)	104		80 - 120		06/14/25 03:19	1

**Lab Sample ID: LCS 310-457531/7**

**Matrix: Water**

**Analysis Batch: 457531**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	40.0	39.67		ug/L		99	59 - 136
Acrylonitrile	200	202.5		ug/L		101	50 - 150
1,2-Dibromo-3-Chloropropane	20.0	17.26		ug/L		86	62 - 132
Benzene	20.0	19.15		ug/L		96	71 - 125
1,2-Dibromoethane (EDB)	20.0	18.48		ug/L		92	74 - 122
Bromochloromethane	20.0	20.83		ug/L		104	69 - 131
Bromodichloromethane	20.0	18.26		ug/L		91	70 - 122
Bromoform	20.0	16.55		ug/L		83	62 - 122
1,2-Dichlorobenzene	20.0	18.63		ug/L		93	74 - 120
1,4-Dichlorobenzene	20.0	17.60		ug/L		88	72 - 120
Carbon disulfide	20.0	18.49		ug/L		92	58 - 137
1,1-Dichloroethane	20.0	18.96		ug/L		95	69 - 127
Carbon tetrachloride	20.0	19.06		ug/L		95	63 - 136
1,2-Dichloroethane	20.0	17.85		ug/L		89	68 - 125
Chlorobenzene	20.0	18.14		ug/L		91	74 - 120
1,1-Dichloroethene	20.0	19.29		ug/L		96	64 - 134
Chlorodibromomethane	20.0	16.22		ug/L		81	69 - 121
1,2-Dichloropropane	20.0	20.11		ug/L		101	72 - 128
Chloroform	20.0	17.93		ug/L		90	72 - 122
2-Hexanone	40.0	36.35		ug/L		91	62 - 139
cis-1,2-Dichloroethene	20.0	19.32		ug/L		97	72 - 123
cis-1,3-Dichloropropene	20.0	15.72		ug/L		79	72 - 123
4-Methyl-2-pentanone (MIBK)	40.0	36.36		ug/L		91	62 - 136
Dibromomethane	20.0	18.93		ug/L		95	72 - 122
Ethylbenzene	20.0	18.45		ug/L		92	75 - 120
Iodomethane	20.0	16.92		ug/L		85	18 - 150
1,1,1,2-Tetrachloroethane	20.0	17.77		ug/L		89	70 - 121
Methylene Chloride	20.0	21.36		ug/L		107	72 - 128
1,1,1,2,2-Tetrachloroethane	20.0	18.50		ug/L		93	70 - 122
Styrene	20.0	19.29		ug/L		96	74 - 122
Tetrachloroethene	20.0	18.82		ug/L		94	70 - 128
Toluene	20.0	18.39		ug/L		92	74 - 120
trans-1,2-Dichloroethene	20.0	19.35		ug/L		97	67 - 127
trans-1,3-Dichloropropene	20.0	14.80		ug/L		74	67 - 123
trans-1,4-Dichloro-2-butene	20.0	15.56		ug/L		78	50 - 150
1,1,1-Trichloroethane	20.0	18.98		ug/L		95	69 - 130
1,1,2-Trichloroethane	20.0	18.85		ug/L		94	75 - 121
Trichloroethene	20.0	18.73		ug/L		94	70 - 128

Eurofins Cedar Falls

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 310-457531/7**

**Matrix: Water**

**Analysis Batch: 457531**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1,2,3-Trichloropropane	20.0	18.24		ug/L		91	70 - 122
Vinyl acetate	40.0	33.53		ug/L		84	50 - 150
Xylenes, Total	40.0	37.89		ug/L		95	74 - 121

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	97		76 - 130
Toluene-d8 (Surr)	97		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120

**Lab Sample ID: LCS 310-457531/8**

**Matrix: Water**

**Analysis Batch: 457531**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Bromomethane	20.0	17.60		ug/L		88	33 - 138
Chloroethane	20.0	17.76		ug/L		89	59 - 139
Chloromethane	20.0	18.41		ug/L		92	52 - 146
Trichlorofluoromethane	20.0	17.74		ug/L		89	55 - 150
Vinyl chloride	20.0	17.80		ug/L		89	60 - 142

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	109		76 - 130
Toluene-d8 (Surr)	90		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120

**Lab Sample ID: 310-308641-6 MS**

**Matrix: Water**

**Analysis Batch: 457531**

**Client Sample ID: MW-11A**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
2-Butanone (MEK)	<10.0		50.0	44.19		ug/L		88	46 - 134
Acetone	5.52	J	50.0	49.84		ug/L		89	39 - 141
Acrylonitrile	<10.0		250	217.9		ug/L		87	41 - 150
1,2-Dibromo-3-Chloropropane	<1.20		25.0	21.00		ug/L		84	44 - 138
Benzene	<0.500		25.0	21.79		ug/L		87	48 - 125
1,2-Dibromoethane (EDB)	<0.340		25.0	22.43		ug/L		90	60 - 122
Bromochloromethane	<5.00		25.0	22.62		ug/L		90	55 - 131
Bromodichloromethane	<1.00		25.0	20.44		ug/L		82	53 - 122
Bromoform	<5.00		25.0	19.44		ug/L		78	47 - 122
1,2-Dichlorobenzene	<1.00		25.0	21.68		ug/L		87	60 - 120
1,4-Dichlorobenzene	<1.00		25.0	21.38		ug/L		86	58 - 120
Carbon disulfide	<1.00		25.0	24.13		ug/L		97	45 - 137
1,1-Dichloroethane	<1.00		25.0	20.50		ug/L		82	53 - 127
Carbon tetrachloride	<2.00		25.0	22.21		ug/L		89	45 - 136
1,2-Dichloroethane	<1.00		25.0	19.64		ug/L		79	48 - 128
Chlorobenzene	<1.00		25.0	20.75		ug/L		83	59 - 120
1,1-Dichloroethene	<2.00		25.0	22.73		ug/L		91	51 - 134
Chlorodibromomethane	<5.00		25.0	18.72		ug/L		75	53 - 121

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# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-308641-6 MS

Matrix: Water

Analysis Batch: 457531

Client Sample ID: MW-11A

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
1,2-Dichloropropane	<1.00		25.0	22.63		ug/L		91	59 - 128
Chloroform	<3.00		25.0	19.96		ug/L		80	52 - 122
2-Hexanone	<10.0		50.0	42.16		ug/L		84	46 - 141
cis-1,2-Dichloroethene	<1.00		25.0	21.64		ug/L		87	51 - 123
cis-1,3-Dichloropropene	<5.00		25.0	17.64		ug/L		71	55 - 123
4-Methyl-2-pentanone (MIBK)	<10.0		50.0	41.40		ug/L		83	49 - 138
Dibromomethane	<1.00		25.0	21.29		ug/L		85	57 - 122
Ethylbenzene	<1.00		25.0	20.80		ug/L		83	53 - 120
Iodomethane	<10.0		25.0	20.39		ug/L		82	18 - 150
1,1,1,2-Tetrachloroethane	<1.00		25.0	21.38		ug/L		86	55 - 121
Methylene Chloride	<5.00		25.0	23.69		ug/L		95	59 - 128
1,1,2,2-Tetrachloroethane	<1.00		25.0	21.79		ug/L		87	55 - 123
Styrene	<1.00		25.0	22.00		ug/L		88	50 - 125
Tetrachloroethene	<1.00		25.0	23.15		ug/L		93	51 - 128
Toluene	<1.00		25.0	21.07		ug/L		84	52 - 120
trans-1,2-Dichloroethene	<1.00		25.0	22.41		ug/L		90	53 - 127
trans-1,3-Dichloropropene	<5.00		25.0	16.74		ug/L		67	50 - 123
trans-1,4-Dichloro-2-butene	<10.0		25.0	18.58		ug/L		74	28 - 150
1,1,1-Trichloroethane	<1.00		25.0	21.31		ug/L		85	53 - 130
1,1,2-Trichloroethane	<1.00		25.0	22.28		ug/L		89	60 - 121
Trichloroethene	<1.00		25.0	22.12		ug/L		88	50 - 128
1,2,3-Trichloropropane	<1.00		25.0	21.03		ug/L		84	56 - 122
Vinyl acetate	<10.0		50.0	36.37		ug/L		73	31 - 150
Xylenes, Total	<3.00		50.0	42.69		ug/L		85	50 - 122

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	96		76 - 130
Toluene-d8 (Surr)	97		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120

Lab Sample ID: 310-308641-6 MSD

Matrix: Water

Analysis Batch: 457531

Client Sample ID: MW-11A

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
2-Butanone (MEK)	<10.0		50.0	43.13		ug/L		86	46 - 134	2	23
Acetone	5.52	J	50.0	51.06		ug/L		91	39 - 141	2	23
Acrylonitrile	<10.0		250	226.8		ug/L		91	41 - 150	4	20
1,2-Dibromo-3-Chloropropane	<1.20		25.0	21.55		ug/L		86	44 - 138	3	24
Benzene	<0.500		25.0	22.27		ug/L		89	48 - 125	2	20
1,2-Dibromoethane (EDB)	<0.340		25.0	23.11		ug/L		92	60 - 122	3	20
Bromochloromethane	<5.00		25.0	23.59		ug/L		94	55 - 131	4	21
Bromodichloromethane	<1.00		25.0	21.02		ug/L		84	53 - 122	3	20
Bromoform	<5.00		25.0	20.48		ug/L		82	47 - 122	5	20
1,2-Dichlorobenzene	<1.00		25.0	22.24		ug/L		89	60 - 120	3	20
1,4-Dichlorobenzene	<1.00		25.0	21.59		ug/L		86	58 - 120	1	20
Carbon disulfide	<1.00		25.0	22.35		ug/L		89	45 - 137	8	24
1,1-Dichloroethane	<1.00		25.0	21.05		ug/L		84	53 - 127	3	20

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Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: 310-308641-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 457531**

**Client Sample ID: MW-11A**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
Carbon tetrachloride	<2.00		25.0	22.81		ug/L		91	45 - 136	3	20
1,2-Dichloroethane	<1.00		25.0	20.35		ug/L		81	48 - 128	4	20
Chlorobenzene	<1.00		25.0	21.54		ug/L		86	59 - 120	4	20
1,1-Dichloroethene	<2.00		25.0	22.30		ug/L		89	51 - 134	2	20
Chlorodibromomethane	<5.00		25.0	19.27		ug/L		77	53 - 121	3	20
1,2-Dichloropropane	<1.00		25.0	23.07		ug/L		92	59 - 128	2	20
Chloroform	<3.00		25.0	20.43		ug/L		82	52 - 122	2	20
2-Hexanone	<10.0		50.0	44.31		ug/L		89	46 - 141	5	20
cis-1,2-Dichloroethene	<1.00		25.0	21.90		ug/L		88	51 - 123	1	20
cis-1,3-Dichloropropene	<5.00		25.0	17.90		ug/L		72	55 - 123	1	20
4-Methyl-2-pentanone (MIBK)	<10.0		50.0	43.84		ug/L		88	49 - 138	6	20
Dibromomethane	<1.00		25.0	21.82		ug/L		87	57 - 122	2	20
Ethylbenzene	<1.00		25.0	21.84		ug/L		87	53 - 120	5	20
Iodomethane	<10.0		25.0	23.82		ug/L		95	18 - 150	16	32
1,1,1,2-Tetrachloroethane	<1.00		25.0	21.28		ug/L		85	55 - 121	0	20
Methylene Chloride	<5.00		25.0	24.64		ug/L		99	59 - 128	4	20
1,1,2,2-Tetrachloroethane	<1.00		25.0	21.90		ug/L		88	55 - 123	0	20
Styrene	<1.00		25.0	22.83		ug/L		91	50 - 125	4	20
Tetrachloroethene	<1.00		25.0	23.55		ug/L		94	51 - 128	2	20
Toluene	<1.00		25.0	21.68		ug/L		87	52 - 120	3	20
trans-1,2-Dichloroethene	<1.00		25.0	22.15		ug/L		89	53 - 127	1	20
trans-1,3-Dichloropropene	<5.00		25.0	17.04		ug/L		68	50 - 123	2	20
trans-1,4-Dichloro-2-butene	<10.0		25.0	19.46		ug/L		78	28 - 150	5	24
1,1,1-Trichloroethane	<1.00		25.0	21.87		ug/L		87	53 - 130	3	20
1,1,2-Trichloroethane	<1.00		25.0	22.61		ug/L		90	60 - 121	1	20
Trichloroethene	<1.00		25.0	22.66		ug/L		91	50 - 128	2	20
1,2,3-Trichloropropane	<1.00		25.0	22.30		ug/L		89	56 - 122	6	21
Vinyl acetate	<10.0		50.0	38.38		ug/L		77	31 - 150	5	25
Xylenes, Total	<3.00		50.0	44.68		ug/L		89	50 - 122	5	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Dibromofluoromethane (Surr)	96		76 - 130
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120

**Lab Sample ID: MB 310-458100/5**  
**Matrix: Water**  
**Analysis Batch: 458100**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	<10.0		10.0	3.10	ug/L			06/19/25 12:33	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/19/25 12:33	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/19/25 12:33	1
Benzene	<0.500		0.500	0.220	ug/L			06/19/25 12:33	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/19/25 12:33	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/19/25 12:33	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/19/25 12:33	1
Bromoform	<5.00		5.00	0.780	ug/L			06/19/25 12:33	1

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Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: MB 310-458100/5**  
**Matrix: Water**  
**Analysis Batch: 458100**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/19/25 12:33	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/19/25 12:33	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/19/25 12:33	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/19/25 12:33	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/19/25 12:33	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/19/25 12:33	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/19/25 12:33	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/19/25 12:33	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/19/25 12:33	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/19/25 12:33	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/19/25 12:33	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/19/25 12:33	1
Chloroform	<3.00		3.00	1.30	ug/L			06/19/25 12:33	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/19/25 12:33	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/19/25 12:33	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/19/25 12:33	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/19/25 12:33	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/19/25 12:33	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/19/25 12:33	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/19/25 12:33	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/19/25 12:33	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/19/25 12:33	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/19/25 12:33	1
Styrene	<1.00		1.00	0.370	ug/L			06/19/25 12:33	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/19/25 12:33	1
Toluene	<1.00		1.00	0.430	ug/L			06/19/25 12:33	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/19/25 12:33	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/19/25 12:33	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/19/25 12:33	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/19/25 12:33	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/19/25 12:33	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/19/25 12:33	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/19/25 12:33	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/19/25 12:33	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/19/25 12:33	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/19/25 12:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	110		76 - 130		06/19/25 12:33	1
Toluene-d8 (Surr)	98		80 - 120		06/19/25 12:33	1
4-Bromofluorobenzene (Surr)	102		80 - 120		06/19/25 12:33	1

**Lab Sample ID: LCS 310-458100/6**  
**Matrix: Water**  
**Analysis Batch: 458100**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	40.0	48.16		ug/L		120	59 - 136

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# QC Sample Results

Client: SCS Engineers  
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Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 310-458100/6**

**Matrix: Water**

**Analysis Batch: 458100**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acrylonitrile	200	184.9		ug/L		92	50 - 150
1,2-Dibromo-3-Chloropropane	20.0	20.45		ug/L		102	62 - 132
Benzene	20.0	17.80		ug/L		89	71 - 125
1,2-Dibromoethane (EDB)	20.0	18.74		ug/L		94	74 - 122
Bromochloromethane	20.0	20.16		ug/L		101	69 - 131
Bromodichloromethane	20.0	18.85		ug/L		94	70 - 122
Bromoform	20.0	17.36		ug/L		87	62 - 122
1,2-Dichlorobenzene	20.0	18.85		ug/L		94	74 - 120
1,4-Dichlorobenzene	20.0	18.31		ug/L		92	72 - 120
Carbon disulfide	20.0	21.06		ug/L		105	58 - 137
1,1-Dichloroethane	20.0	19.90		ug/L		100	69 - 127
Carbon tetrachloride	20.0	19.76		ug/L		99	63 - 136
1,2-Dichloroethane	20.0	20.25		ug/L		101	68 - 125
Chlorobenzene	20.0	18.96		ug/L		95	74 - 120
1,1-Dichloroethene	20.0	21.70		ug/L		108	64 - 134
Chlorodibromomethane	20.0	17.92		ug/L		90	69 - 121
1,2-Dichloropropane	20.0	18.71		ug/L		94	72 - 128
Chloroform	20.0	20.19		ug/L		101	72 - 122
2-Hexanone	40.0	36.04		ug/L		90	62 - 139
cis-1,2-Dichloroethene	20.0	20.16		ug/L		101	72 - 123
cis-1,3-Dichloropropene	20.0	18.43		ug/L		92	72 - 123
4-Methyl-2-pentanone (MIBK)	40.0	38.32		ug/L		96	62 - 136
Dibromomethane	20.0	19.93		ug/L		100	72 - 122
Ethylbenzene	20.0	18.72		ug/L		94	75 - 120
Iodomethane	20.0	15.82		ug/L		79	18 - 150
1,1,1,2-Tetrachloroethane	20.0	18.14		ug/L		91	70 - 121
Methylene Chloride	20.0	21.97		ug/L		110	72 - 128
1,1,1,2,2-Tetrachloroethane	20.0	18.82		ug/L		94	70 - 122
Styrene	20.0	18.40		ug/L		92	74 - 122
Tetrachloroethene	20.0	18.71		ug/L		94	70 - 128
Toluene	20.0	19.53		ug/L		98	74 - 120
trans-1,2-Dichloroethene	20.0	19.66		ug/L		98	67 - 127
trans-1,3-Dichloropropene	20.0	18.26		ug/L		91	67 - 123
trans-1,4-Dichloro-2-butene	20.0	16.67		ug/L		83	50 - 150
1,1,1-Trichloroethane	20.0	18.30		ug/L		91	69 - 130
1,1,2-Trichloroethane	20.0	17.97		ug/L		90	75 - 121
Trichloroethene	20.0	18.81		ug/L		94	70 - 128
1,2,3-Trichloropropane	20.0	20.41		ug/L		102	70 - 122
Vinyl acetate	40.0	38.89		ug/L		97	50 - 150
Xylenes, Total	40.0	39.10		ug/L		98	74 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	97		76 - 130
Toluene-d8 (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120

# QC Sample Results

Client: SCS Engineers  
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Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: LCS 310-458100/7**  
**Matrix: Water**  
**Analysis Batch: 458100**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	17.46		ug/L		87	33 - 138
Chloroethane	20.0	20.18		ug/L		101	59 - 139
Chloromethane	20.0	18.88		ug/L		94	52 - 146
Trichlorofluoromethane	20.0	18.60		ug/L		93	55 - 150
Vinyl chloride	20.0	20.70		ug/L		104	60 - 142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	109		76 - 130
Toluene-d8 (Surr)	97		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120

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

**Lab Sample ID: MB 310-457632/1-A**  
**Matrix: Water**  
**Analysis Batch: 458763**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 457632**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/17/25 09:10	06/24/25 14:37	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		06/17/25 09:10	06/24/25 14:37	1
Barium	<0.00200		0.00200	0.000660	mg/L		06/17/25 09:10	06/24/25 14:37	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/17/25 09:10	06/24/25 14:37	1
Chromium	<0.00500		0.00500	0.00180	mg/L		06/17/25 09:10	06/24/25 14:37	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		06/17/25 09:10	06/24/25 14:37	1
Copper	<0.00500		0.00500	0.00320	mg/L		06/17/25 09:10	06/24/25 14:37	1
Lead	<0.000500		0.000500	0.000330	mg/L		06/17/25 09:10	06/24/25 14:37	1
Nickel	<0.00500		0.00500	0.00230	mg/L		06/17/25 09:10	06/24/25 14:37	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/17/25 09:10	06/24/25 14:37	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/17/25 09:10	06/24/25 14:37	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		06/17/25 09:10	06/24/25 14:37	1
Zinc	<0.0200		0.0200	0.0130	mg/L		06/17/25 09:10	06/24/25 14:37	1

**Lab Sample ID: MB 310-457632/1-A**  
**Matrix: Water**  
**Analysis Batch: 458911**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 457632**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.000200		0.000200	0.000100	mg/L		06/17/25 09:10	06/26/25 15:04	1

**Lab Sample ID: LCS 310-457632/2-A**  
**Matrix: Water**  
**Analysis Batch: 458763**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 457632**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2265		mg/L		113	80 - 120
Arsenic	0.200	0.2094		mg/L		105	80 - 120
Barium	0.100	0.1016		mg/L		102	80 - 120
Beryllium	0.100	0.09388		mg/L		94	80 - 120
Chromium	0.100	0.1013		mg/L		101	80 - 120

Eurofins Cedar Falls

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

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

**Lab Sample ID: LCS 310-457632/2-A**  
**Matrix: Water**  
**Analysis Batch: 458763**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 457632**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Cobalt	0.100	0.1000		mg/L		100	80 - 120
Copper	0.200	0.2073		mg/L		104	80 - 120
Lead	0.200	0.2081		mg/L		104	80 - 120
Nickel	0.200	0.2063		mg/L		103	80 - 120
Selenium	0.400	0.3958		mg/L		99	80 - 120
Silver	0.100	0.1099		mg/L		110	80 - 120
Vanadium	0.100	0.09969		mg/L		100	80 - 120
Zinc	0.200	0.1944		mg/L		97	80 - 120

**Lab Sample ID: LCS 310-457632/2-A**  
**Matrix: Water**  
**Analysis Batch: 458911**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 457632**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Cadmium	0.100	0.09918		mg/L		99	80 - 120

**Lab Sample ID: MB 310-457905/1-A**  
**Matrix: Water**  
**Analysis Batch: 458405**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 457905**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.00200		0.00200	0.00100	mg/L		06/18/25 09:00	06/22/25 21:06	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		06/18/25 09:00	06/22/25 21:06	1
Barium	<0.00200		0.00200	0.000660	mg/L		06/18/25 09:00	06/22/25 21:06	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		06/18/25 09:00	06/22/25 21:06	1
Copper	<0.00500		0.00500	0.00320	mg/L		06/18/25 09:00	06/22/25 21:06	1
Lead	<0.000500		0.000500	0.000330	mg/L		06/18/25 09:00	06/22/25 21:06	1
Thallium	<0.00100		0.00100	0.000570	mg/L		06/18/25 09:00	06/22/25 21:06	1
Zinc	<0.0200		0.0200	0.0130	mg/L		06/18/25 09:00	06/22/25 21:06	1

**Lab Sample ID: MB 310-457905/1-A**  
**Matrix: Water**  
**Analysis Batch: 458536**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 457905**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/18/25 09:00	06/23/25 15:42	1
Chromium	<0.00500		0.00500	0.00180	mg/L		06/18/25 09:00	06/23/25 15:42	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		06/18/25 09:00	06/23/25 15:42	1
Nickel	<0.00500		0.00500	0.00230	mg/L		06/18/25 09:00	06/23/25 15:42	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/25 09:00	06/23/25 15:42	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/18/25 09:00	06/23/25 15:42	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		06/18/25 09:00	06/23/25 15:42	1

**Lab Sample ID: LCS 310-457905/2-A**  
**Matrix: Water**  
**Analysis Batch: 458405**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 457905**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Antimony	0.200	0.2071		mg/L		104	80 - 120
Arsenic	0.200	0.1883		mg/L		94	80 - 120

Eurofins Cedar Falls

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

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

**Lab Sample ID: LCS 310-457905/2-A**  
**Matrix: Water**  
**Analysis Batch: 458405**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 457905**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Barium	0.100	0.1040		mg/L		104	80 - 120
Cadmium	0.100	0.09958		mg/L		100	80 - 120
Copper	0.200	0.1887		mg/L		94	80 - 120
Lead	0.200	0.1887		mg/L		94	80 - 120
Thallium	0.100	0.1012		mg/L		101	80 - 120
Zinc	0.200	0.1796		mg/L		90	80 - 120

**Lab Sample ID: LCS 310-457905/2-A**  
**Matrix: Water**  
**Analysis Batch: 458536**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 457905**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Beryllium	0.100	0.09389		mg/L		94	80 - 120
Chromium	0.100	0.09873		mg/L		99	80 - 120
Cobalt	0.100	0.09741		mg/L		97	80 - 120
Nickel	0.200	0.1966		mg/L		98	80 - 120
Selenium	0.400	0.3721		mg/L		93	80 - 120
Silver	0.100	0.1125		mg/L		113	80 - 120
Vanadium	0.100	0.09834		mg/L		98	80 - 120

**Lab Sample ID: MB 310-458914/1-A**  
**Matrix: Water**  
**Analysis Batch: 459067**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 458914**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Thallium	<0.00100		0.00100	0.000570	mg/L		06/27/25 09:00	06/27/25 14:42	1

**Lab Sample ID: LCS 310-458914/2-A**  
**Matrix: Water**  
**Analysis Batch: 459067**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 458914**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Thallium	0.100	0.08290		mg/L		83	80 - 120

## Method: I-3765-85 - Residue, Non-filterable (TSS)

**Lab Sample ID: MB 310-457515/1**  
**Matrix: Water**  
**Analysis Batch: 457515**

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Suspended Solids	<5.00		5.00	3.50	mg/L			06/13/25 09:30	1

**Lab Sample ID: LCS 310-457515/2**  
**Matrix: Water**  
**Analysis Batch: 457515**

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Total Suspended Solids	100	113.0		mg/L		113	82 - 117

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

## Method: I-3765-85 - Residue, Non-filterable (TSS) (Continued)

**Lab Sample ID: MB 310-457567/1**  
**Matrix: Water**  
**Analysis Batch: 457567**

**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	<5.00		5.00	3.50	mg/L			06/13/25 11:47	1

**Lab Sample ID: LCS 310-457567/2**  
**Matrix: Water**  
**Analysis Batch: 457567**

**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	101.0		mg/L		101	82 - 117

**Lab Sample ID: MB 310-457582/1**  
**Matrix: Water**  
**Analysis Batch: 457582**

**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	<5.00		5.00	3.50	mg/L			06/13/25 14:04	1

**Lab Sample ID: LCS 310-457582/2**  
**Matrix: Water**  
**Analysis Batch: 457582**

**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	99.00		mg/L		99	82 - 117

# QC Association Summary

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

## GC/MS VOA

### Analysis Batch: 457531

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-308641-4	MW-8A	Total/NA	Water	8260D	
310-308641-5	MW-10R	Total/NA	Water	8260D	
310-308641-6	MW-11A	Total/NA	Water	8260D	
310-308641-7	MW-13R	Total/NA	Water	8260D	
310-308641-8	MW-14	Total/NA	Water	8260D	
310-308641-9	MW-17	Total/NA	Water	8260D	
310-308641-10	MW-D	Total/NA	Water	8260D	
310-308641-11	Trip Blank 1	Total/NA	Water	8260D	
310-308641-12	Trip Blank 2	Total/NA	Water	8260D	
MB 310-457531/6	Method Blank	Total/NA	Water	8260D	
LCS 310-457531/7	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-457531/8	Lab Control Sample	Total/NA	Water	8260D	
310-308641-6 MS	MW-11A	Total/NA	Water	8260D	
310-308641-6 MSD	MW-11A	Total/NA	Water	8260D	

### Analysis Batch: 458100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-308641-12	Trip Blank 2	Total/NA	Water	8260D	
MB 310-458100/5	Method Blank	Total/NA	Water	8260D	
LCS 310-458100/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-458100/7	Lab Control Sample	Total/NA	Water	8260D	

## Metals

### Prep Batch: 457632

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-308641-1	MW-1A	Total/NA	Water	3005A	
310-308641-2	MW-4A	Total/NA	Water	3005A	
310-308641-3	MW-5A	Total/NA	Water	3005A	
310-308641-4	MW-8A	Total/NA	Water	3005A	
MB 310-457632/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-457632/2-A	Lab Control Sample	Total/NA	Water	3005A	

### Prep Batch: 457905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-308641-5	MW-10R	Total/NA	Water	3005A	
310-308641-6	MW-11A	Total/NA	Water	3005A	
310-308641-7	MW-13R	Total/NA	Water	3005A	
310-308641-8	MW-14	Total/NA	Water	3005A	
310-308641-9	MW-17	Total/NA	Water	3005A	
310-308641-10	MW-D	Total/NA	Water	3005A	
MB 310-457905/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-457905/2-A	Lab Control Sample	Total/NA	Water	3005A	

### Analysis Batch: 458405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-308641-5	MW-10R	Total/NA	Water	6020B	457905
310-308641-6	MW-11A	Total/NA	Water	6020B	457905
310-308641-7	MW-13R	Total/NA	Water	6020B	457905
310-308641-8	MW-14	Total/NA	Water	6020B	457905
310-308641-9	MW-17	Total/NA	Water	6020B	457905

Eurofins Cedar Falls

# QC Association Summary

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

## Metals (Continued)

### Analysis Batch: 458405 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-308641-10	MW-D	Total/NA	Water	6020B	457905
MB 310-457905/1-A	Method Blank	Total/NA	Water	6020B	457905
LCS 310-457905/2-A	Lab Control Sample	Total/NA	Water	6020B	457905

### Analysis Batch: 458536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-308641-5	MW-10R	Total/NA	Water	6020B	457905
310-308641-6	MW-11A	Total/NA	Water	6020B	457905
310-308641-7	MW-13R	Total/NA	Water	6020B	457905
310-308641-8	MW-14	Total/NA	Water	6020B	457905
310-308641-9	MW-17	Total/NA	Water	6020B	457905
310-308641-10	MW-D	Total/NA	Water	6020B	457905
MB 310-457905/1-A	Method Blank	Total/NA	Water	6020B	457905
LCS 310-457905/2-A	Lab Control Sample	Total/NA	Water	6020B	457905

### Analysis Batch: 458763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-308641-1	MW-1A	Total/NA	Water	6020B	457632
310-308641-2	MW-4A	Total/NA	Water	6020B	457632
310-308641-3	MW-5A	Total/NA	Water	6020B	457632
310-308641-4	MW-8A	Total/NA	Water	6020B	457632
MB 310-457632/1-A	Method Blank	Total/NA	Water	6020B	457632
LCS 310-457632/2-A	Lab Control Sample	Total/NA	Water	6020B	457632

### Analysis Batch: 458911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-308641-4	MW-8A	Total/NA	Water	6020B	457632
MB 310-457632/1-A	Method Blank	Total/NA	Water	6020B	457632
LCS 310-457632/2-A	Lab Control Sample	Total/NA	Water	6020B	457632

### Prep Batch: 458914

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-308641-4	MW-8A	Total/NA	Water	3005A	
MB 310-458914/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-458914/2-A	Lab Control Sample	Total/NA	Water	3005A	

### Analysis Batch: 459067

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-308641-4	MW-8A	Total/NA	Water	6020B	458914
MB 310-458914/1-A	Method Blank	Total/NA	Water	6020B	458914
LCS 310-458914/2-A	Lab Control Sample	Total/NA	Water	6020B	458914

## General Chemistry

### Analysis Batch: 457515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-308641-2	MW-4A	Total/NA	Water	I-3765-85	
310-308641-9	MW-17	Total/NA	Water	I-3765-85	
MB 310-457515/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-457515/2	Lab Control Sample	Total/NA	Water	I-3765-85	

# QC Association Summary

Client: SCS Engineers  
Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
SDG: Harrison County Sanitary Landfill

## General Chemistry

### Analysis Batch: 457567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-308641-1	MW-1A	Total/NA	Water	I-3765-85	
310-308641-3	MW-5A	Total/NA	Water	I-3765-85	
310-308641-4	MW-8A	Total/NA	Water	I-3765-85	
310-308641-5	MW-10R	Total/NA	Water	I-3765-85	
310-308641-6	MW-11A	Total/NA	Water	I-3765-85	
310-308641-7	MW-13R	Total/NA	Water	I-3765-85	
310-308641-8	MW-14	Total/NA	Water	I-3765-85	
MB 310-457567/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-457567/2	Lab Control Sample	Total/NA	Water	I-3765-85	

### Analysis Batch: 457582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-308641-10	MW-D	Total/NA	Water	I-3765-85	
MB 310-457582/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-457582/2	Lab Control Sample	Total/NA	Water	I-3765-85	

# Lab Chronicle

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-1A**  
 Date Collected: 06/10/25 15:53  
 Date Received: 06/12/25 16:15

**Lab Sample ID: 310-308641-1**  
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			457632	WK2X	EET CF	06/17/25 09:10
Total/NA	Analysis	6020B		1	458763	ZRI4	EET CF	06/24/25 15:39
Total/NA	Analysis	I-3765-85		1	457567	E6KR	EET CF	06/13/25 11:47

**Client Sample ID: MW-4A**  
 Date Collected: 06/10/25 16:35  
 Date Received: 06/12/25 16:15

**Lab Sample ID: 310-308641-2**  
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			457632	WK2X	EET CF	06/17/25 09:10
Total/NA	Analysis	6020B		1	458763	ZRI4	EET CF	06/24/25 15:41
Total/NA	Analysis	I-3765-85		1	457515	E6KR	EET CF	06/13/25 09:30

**Client Sample ID: MW-5A**  
 Date Collected: 06/10/25 18:18  
 Date Received: 06/12/25 16:15

**Lab Sample ID: 310-308641-3**  
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			457632	WK2X	EET CF	06/17/25 09:10
Total/NA	Analysis	6020B		1	458763	ZRI4	EET CF	06/24/25 15:44
Total/NA	Analysis	I-3765-85		1	457567	E6KR	EET CF	06/13/25 11:47

**Client Sample ID: MW-8A**  
 Date Collected: 06/10/25 13:01  
 Date Received: 06/12/25 16:15

**Lab Sample ID: 310-308641-4**  
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	457531	WSE8	EET CF	06/14/25 09:21
Total/NA	Prep	3005A			457632	WK2X	EET CF	06/17/25 09:10
Total/NA	Analysis	6020B		1	458763	ZRI4	EET CF	06/24/25 15:46
Total/NA	Prep	3005A			458914	WK2X	EET CF	06/27/25 09:00
Total/NA	Analysis	6020B		1	459067	NFT2	EET CF	06/27/25 15:58
Total/NA	Prep	3005A			457632	WK2X	EET CF	06/17/25 09:10
Total/NA	Analysis	6020B		1	458911	NFT2	EET CF	06/26/25 15:31
Total/NA	Analysis	I-3765-85		1	457567	E6KR	EET CF	06/13/25 11:47

**Client Sample ID: MW-10R**  
 Date Collected: 06/11/25 09:20  
 Date Received: 06/12/25 16:15

**Lab Sample ID: 310-308641-5**  
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	457531	WSE8	EET CF	06/14/25 09:44
Total/NA	Prep	3005A			457905	WK2X	EET CF	06/18/25 09:00
Total/NA	Analysis	6020B		1	458405	NFT2	EET CF	06/22/25 21:35

# Lab Chronicle

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-10R**

**Lab Sample ID: 310-308641-5**

Date Collected: 06/11/25 09:20

Matrix: Water

Date Received: 06/12/25 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			457905	WK2X	EET CF	06/18/25 09:00
Total/NA	Analysis	6020B		1	458536	NFT2	EET CF	06/23/25 19:09
Total/NA	Analysis	I-3765-85		1	457567	E6KR	EET CF	06/13/25 11:47

**Client Sample ID: MW-11A**

**Lab Sample ID: 310-308641-6**

Date Collected: 06/11/25 08:06

Matrix: Water

Date Received: 06/12/25 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	457531	WSE8	EET CF	06/14/25 10:06
Total/NA	Prep	3005A			457905	WK2X	EET CF	06/18/25 09:00
Total/NA	Analysis	6020B		1	458405	NFT2	EET CF	06/22/25 21:38
Total/NA	Prep	3005A			457905	WK2X	EET CF	06/18/25 09:00
Total/NA	Analysis	6020B		1	458536	NFT2	EET CF	06/23/25 19:12
Total/NA	Analysis	I-3765-85		1	457567	E6KR	EET CF	06/13/25 11:47

**Client Sample ID: MW-13R**

**Lab Sample ID: 310-308641-7**

Date Collected: 06/10/25 14:05

Matrix: Water

Date Received: 06/12/25 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	457531	WSE8	EET CF	06/14/25 10:29
Total/NA	Prep	3005A			457905	WK2X	EET CF	06/18/25 09:00
Total/NA	Analysis	6020B		1	458405	NFT2	EET CF	06/22/25 21:41
Total/NA	Prep	3005A			457905	WK2X	EET CF	06/18/25 09:00
Total/NA	Analysis	6020B		1	458536	NFT2	EET CF	06/23/25 19:21
Total/NA	Analysis	I-3765-85		1	457567	E6KR	EET CF	06/13/25 11:47

**Client Sample ID: MW-14**

**Lab Sample ID: 310-308641-8**

Date Collected: 06/11/25 10:05

Matrix: Water

Date Received: 06/12/25 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	457531	WSE8	EET CF	06/14/25 10:51
Total/NA	Prep	3005A			457905	WK2X	EET CF	06/18/25 09:00
Total/NA	Analysis	6020B		1	458405	NFT2	EET CF	06/22/25 21:49
Total/NA	Prep	3005A			457905	WK2X	EET CF	06/18/25 09:00
Total/NA	Analysis	6020B		1	458536	NFT2	EET CF	06/23/25 19:24
Total/NA	Analysis	I-3765-85		1	457567	E6KR	EET CF	06/13/25 11:47

# Lab Chronicle

Client: SCS Engineers  
 Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-17**

**Lab Sample ID: 310-308641-9**

Date Collected: 06/11/25 12:32

Matrix: Water

Date Received: 06/12/25 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	457531	WSE8	EET CF	06/14/25 11:14
Total/NA	Prep	3005A			457905	WK2X	EET CF	06/18/25 09:00
Total/NA	Analysis	6020B		1	458405	NFT2	EET CF	06/22/25 21:52
Total/NA	Prep	3005A			457905	WK2X	EET CF	06/18/25 09:00
Total/NA	Analysis	6020B		1	458536	NFT2	EET CF	06/23/25 19:27
Total/NA	Analysis	I-3765-85		1	457515	E6KR	EET CF	06/13/25 09:30

**Client Sample ID: MW-D**

**Lab Sample ID: 310-308641-10**

Date Collected: 06/11/25 08:06

Matrix: Water

Date Received: 06/12/25 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	457531	WSE8	EET CF	06/14/25 11:37
Total/NA	Prep	3005A			457905	WK2X	EET CF	06/18/25 09:00
Total/NA	Analysis	6020B		1	458405	NFT2	EET CF	06/22/25 21:55
Total/NA	Prep	3005A			457905	WK2X	EET CF	06/18/25 09:00
Total/NA	Analysis	6020B		1	458536	NFT2	EET CF	06/23/25 19:29
Total/NA	Analysis	I-3765-85		1	457582	E6KR	EET CF	06/13/25 14:04

**Client Sample ID: Trip Blank 1**

**Lab Sample ID: 310-308641-11**

Date Collected: 06/11/25 00:00

Matrix: Water

Date Received: 06/12/25 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	457531	WSE8	EET CF	06/14/25 04:27

**Client Sample ID: Trip Blank 2**

**Lab Sample ID: 310-308641-12**

Date Collected: 06/11/25 00:00

Matrix: Water

Date Received: 06/12/25 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	458100	WSE8	EET CF	06/19/25 13:39
Total/NA	Analysis	8260D		1	457531	WSE8	EET CF	06/14/25 04:49

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: SCS Engineers  
Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
SDG: Harrison County Sanitary Landfill

## Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-25

- 1
- 2
- 3
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- 16

# Method Summary

Client: SCS Engineers  
Project/Site: Harrison County - Spring 2025 - HMSP

Job ID: 310-308641-1  
SDG: Harrison County Sanitary Landfill

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF

**Protocol References:**

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

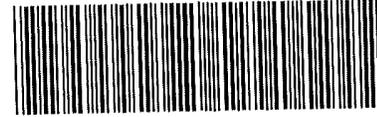
**Laboratory References:**

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





Environment Testing  
America



310-308641 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client <u>SCS</u>			
City/State	CITY <u>W. Des Moines</u>	STATE <u>IA</u>	Project.
Receipt Information			
Date/Time Received	DATE <u>6-12-25</u>	TIME <u>1615</u>	Received By <u>PH</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: _____			
Condition of Cooler/Containers			
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>2</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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes. Which VOA samples are in cooler? ↓	
<u>MU-1A, 4A, 5A, 8A, 10A, 11A, 13A</u>			
Temperature Record			
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>AA</u>	Correction Factor (°C):	<u>0</u>
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	<u>0.4</u>	Corrected Temp (°C):	<u>0.4</u>
• Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C)			
Exceptions Noted			
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			
Additional Comments			





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 <u>W. Des Moines</u>	STATE <u>IA</u>	Project
<b>Receipt Information</b>			
Date/Time Received:	DATE <u>6-12-25</u>	TIME <u>1615</u>	Received By. <u>PH</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>2</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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓	
<u>MW-12B, 14, 16, 17, D</u>			
<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>AA</u>		Correction Factor (°C): <u>C</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>-0.4</u>		Corrected Temp (°C): <u>0.4</u>	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
<b>Exceptions Noted</b>			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE If yes, contact PM before proceeding If no, proceed with login			
<b>Additional Comments</b>			



# Chain of Custody Record

**Eurofins TestAmerica, Cedar Falls**  
 3019 Venture Way  
 Cedar Falls IA 50613-6907  
 phone 319 277 2401 fax 319 277 2425

**Regulatory Program:**  DW  NPDES  RCRA  Other:

**Project Manager: Sean Marczewski**  
 Email: smarczewsk@scsengineers.com  
 Cell: 712-661-9682

**Client Contact**  
 SCS Engineers  
 1690 All-State Court, Suite 11  
 West Des Moines IA 50265

**Site Contact: Tyler Hinkel**  
**Lab Contact: Sam Miller**

**Date:** \_\_\_\_\_ of \_\_\_\_\_ COCs

**Carrier:** \_\_\_\_\_

**Analysis Turnaround Time**  
 CALENDAR DAYS  WORKING DAYS  
 Other:  2 weeks  1 week  2 days  1 day

**Project Name:** Harrison County - Spring 2025 - HMSP  
**Site:** Harrison County Sanitary Landfill  
**P O #:** 27224470 25

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Appendix I	Metals List	Total Suspended Solids	Silvex (2,4,5-TP)	Trip Blank
MW-1A	6/10/25	15:53							X			
MW-4A	6/10/25	16:35							X			
MW-5A	6/10/25	18:18							X			
MW-8A	6/10/25	13:01						X				
MW-10R	6/11/25	9:20						X				
MW-11A	6/11/25	8:06						X				
MW-12B								X				
MW-13R	6/10/25	14:05						X				
MW-14	6/11/25	10:05						X				
MW-16								X				
MW-17	6/11/25	12:32						X				
MW-D	6/11/25	8:06						X				
Trip Blank												X

Please include trip blanks in each cooler containing VOC samples.

**Preservation Used:** 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other

**Possible Hazard Identification:**  
 Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown

**Special Instructions/QC Requirements & Comments:** Metals List: Antimony, Arsenic, Barium, Cobalt, Copper, Lead, Nickel, and Zinc

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**

Received by	Date/Time	Company	Received by	Date/Time	Company	Received in Laboratory by	Date/Time	Company	Cooler Temp (°C)	Obs'd	Corr'd	Therm ID No
Company	6/12/25 2:00	SCS Engineers										
Company												
Company												

Relinquished by: *Shirley Morgan*  
 Relinquished by: *[Signature]*  
 Relinquished by: *[Signature]*

6/27/2025



## Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-308641-1  
SDG Number: Harrison County Sanitary Landfill

**Login Number: 308641**

**List Number: 1**

**Creator: Homolar, Dana J**

**List Source: Eurofins Cedar Falls**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# Quantitation Limit Exceptions Summary

Client: SCS Engineers

Job ID: 310-308641-1

Project/Site: Harrison County - Spring 2025 - HMSP

SDG: Harrison County Sanitary Landfill

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but greater than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedures do not indicate corrective action for detections below the laboratory's PQL.

Method	Analyte	Matrix	Prep Type	Unit	Client RL	Lab PQL
8260D	1,2-Dibromo-3-Chloropropane	Water	Total/NA	ug/L	1.20	5
8260D	1,2-Dibromoethane (EDB)	Water	Total/NA	ug/L	0.340	1

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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Sean Marczewski  
SCS Engineers  
1690 All State Court  
Suite 100  
West Des Moines, Iowa 50265

Generated 12/3/2025 10:04:23 AM

## JOB DESCRIPTION

Harrison County - Retest  
Harrison County Sanitary Landfill

## JOB NUMBER

310-321078-1

# 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



Generated  
12/3/2025 10:04:23 AM

Authorized for release by  
Samuel Miller, Project Management Assistant I  
[Samuel.Miller@et.eurofinsus.com](mailto:Samuel.Miller@et.eurofinsus.com)  
(319)595-2008



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# Case Narrative

Client: SCS Engineers  
Project: Harrison County - Retest

Job ID: 310-321078-1

**Job ID: 310-321078-1**

**Eurofins Cedar Falls**

## Job Narrative 310-321078-1

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

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

### Receipt

The samples were received on 11/20/2025 4:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.7°C.

### Metals

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

### General Chemistry

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

Eurofins Cedar Falls

# Sample Summary

Client: SCS Engineers  
Project/Site: Harrison County - Retest

Job ID: 310-321078-1  
SDG: Harrison County Sanitary Landfill

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Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-321078-1	MW-8A	Ground Water	11/18/25 10:51	11/20/25 16:15	Iowa

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- 1
- 2
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- 7
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- 13
- 14

# Detection Summary

Client: SCS Engineers  
Project/Site: Harrison County - Retest

Job ID: 310-321078-1  
SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-8A**

**Lab Sample ID: 310-321078-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00134	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Total Suspended Solids	3.87		1.88	1.31	mg/L	1		I-3765-85	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls



# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Retest

Job ID: 310-321078-1  
 SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-8A**

**Lab Sample ID: 310-321078-1**

Date Collected: 11/18/25 10:51

Matrix: Ground Water

Date Received: 11/20/25 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00134	J	0.00200	0.000530	mg/L		11/24/25 08:30	12/02/25 19:38	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	3.87		1.88	1.31	mg/L			11/21/25 07:02	1

- 1
- 2
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# Definitions/Glossary

Client: SCS Engineers  
Project/Site: Harrison County - Retest

Job ID: 310-321078-1  
SDG: Harrison County Sanitary Landfill

## Qualifiers

### Metals

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.

## Glossary

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

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - Retest

Job ID: 310-321078-1  
 SDG: Harrison County Sanitary Landfill

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

**Lab Sample ID: MB 310-474500/1-A**  
**Matrix: Water**  
**Analysis Batch: 475370**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 474500**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		11/24/25 08:30	12/02/25 18:31	1

**Lab Sample ID: LCS 310-474500/2-A**  
**Matrix: Water**  
**Analysis Batch: 475370**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 474500**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.1740		mg/L		87	80 - 120

## Method: I-3765-85 - Residue, Non-filterable (TSS)

**Lab Sample ID: MB 310-474366/1**  
**Matrix: Water**  
**Analysis Batch: 474366**

**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	<5.00		5.00	3.50	mg/L			11/21/25 07:02	1

**Lab Sample ID: LCS 310-474366/2**  
**Matrix: Water**  
**Analysis Batch: 474366**

**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	115.0		mg/L		115	82 - 117

# QC Association Summary

Client: SCS Engineers  
Project/Site: Harrison County - Retest

Job ID: 310-321078-1  
SDG: Harrison County Sanitary Landfill

## Metals

### Prep Batch: 474500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-321078-1	MW-8A	Total/NA	Ground Water	3005A	
MB 310-474500/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-474500/2-A	Lab Control Sample	Total/NA	Water	3005A	

### Analysis Batch: 475370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-321078-1	MW-8A	Total/NA	Ground Water	6020B	474500
MB 310-474500/1-A	Method Blank	Total/NA	Water	6020B	474500
LCS 310-474500/2-A	Lab Control Sample	Total/NA	Water	6020B	474500

## General Chemistry

### Analysis Batch: 474366

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-321078-1	MW-8A	Total/NA	Ground Water	I-3765-85	
MB 310-474366/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-474366/2	Lab Control Sample	Total/NA	Water	I-3765-85	

# Lab Chronicle

Client: SCS Engineers  
Project/Site: Harrison County - Retest

Job ID: 310-321078-1  
SDG: Harrison County Sanitary Landfill

**Client Sample ID: MW-8A**

**Lab Sample ID: 310-321078-1**

**Date Collected: 11/18/25 10:51**

**Matrix: Ground Water**

**Date Received: 11/20/25 16:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			474500	RLT9	EET CF	11/24/25 08:30
Total/NA	Analysis	6020B		1	475370	NFT2	EET CF	12/02/25 19:38
Total/NA	Analysis	I-3765-85		1	474366	DGU1	EET CF	11/21/25 07:02

**Laboratory References:**

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



# Accreditation/Certification Summary

Client: SCS Engineers  
Project/Site: Harrison County - Retest

Job ID: 310-321078-1  
SDG: Harrison County Sanitary Landfill

## Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-25 *

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\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Method Summary

Client: SCS Engineers  
Project/Site: Harrison County - Retest

Job ID: 310-321078-1  
SDG: Harrison County Sanitary Landfill

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	EET CF
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
3005A	Preparation, Total Metals	SW846	EET CF

**Protocol References:**

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

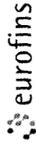


310-321078 Chain of Custody

### Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>			
Client <u>SCS</u>			
City/State:	CITY	STATE	Project:
<b>Receipt Information</b>			
Date/Time Received:	DATE <u>11/20/25</u>	TIME <u>1615</u>	Received By: <u>[Signature]</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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____	
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓	
<u>All - No vials for MW-8A</u>			
<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>PM3</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>1.7</u>		Corrected Temp (°C): <u>1.7</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>			
<u>Vials received were both trip blanks - labels are for job 36013424. Logged at the end of job.</u>			

# Chain of Custody Record



Eurofins TestAmerica, Cedar Falls  
3019 Venture Way

Cedar Falls, IA 50613-6907  
phone 319 277 2401 fax 319 277 2425

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Regulatory Program:  DW  NPDES  RCRA  Other

Project Manager: Sean Marczewski

Client Contact		Site Contact: Tyler Hinkel		Date:	COC No
Email: smarczewski@scsengineers.com		Lab Contact: Sam Miller		Carrier:	of COCs
Cell: 712-661-9682		Perform MS / MSD (Y / N)		Sampler:	
Analysis Turnaround Time		Filtered Sample (Y / N)		For Lab Use Only:	
<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS		Total Suspended Solids		Walk-in Client:	
Other: <u>RUSH</u>		Arsenic		Lab Sampling	
<input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		<input checked="" type="checkbox"/> x <input type="checkbox"/> x		Job / SDG No	
Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes
11/18/25	051	G	GW		

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other  
 Possible Hazard Identification: \_\_\_\_\_  
 Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Special Instructions/QC Requirements & Comments:

Custody Seal No \_\_\_\_\_ Cooler Temp (°C) \_\_\_\_\_ Obs'd \_\_\_\_\_ Cor'd \_\_\_\_\_  
 Relinquished by \_\_\_\_\_ Date/Time \_\_\_\_\_ Received by \_\_\_\_\_ Date/Time \_\_\_\_\_  
 Relinquished by Michael Morgan Date/Time 11/20/25 Received by \_\_\_\_\_ Date/Time \_\_\_\_\_  
 Relinquished by \_\_\_\_\_ Date/Time \_\_\_\_\_ Received in Laboratory by \_\_\_\_\_ Date/Time 11/20/25

## Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-321078-1  
SDG Number: Harrison County Sanitary Landfill

**Login Number: 321078**

**List Number: 1**

**Creator: Robison, Jessie**

**List Source: Eurofins Cedar Falls**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Sean Marczewski  
SCS Engineers  
1690 All State Court  
Suite 100  
West Des Moines, Iowa 50265

Generated 12/31/2025 4:13:31 PM

## JOB DESCRIPTION

Harrison County - 2nd 2025 GW Event

## JOB NUMBER

310-322337-1

# 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



Generated  
12/31/2025 4:13:31 PM

Authorized for release by  
Samuel Miller, Project Management Assistant I  
[Samuel.Miller@et.eurofinsus.com](mailto:Samuel.Miller@et.eurofinsus.com)  
(319)595-2008



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# Case Narrative

Client: SCS Engineers  
Project: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Job ID: 310-322337-1**

**Eurofins Cedar Falls**

## Job Narrative 310-322337-1

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

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

### Receipt

The samples were received on 12/11/2025 4:50 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was -0.3°C.

### GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-476290 recovered above the upper control limit for Carbon tetrachloride (25%D). The LCS associated with this CCV passed CCV criteria for the affected analyte; therefore, the data have been reported. The associated sample is:(CCV 310-476290/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-476286 recovered outside of the control limits for Bromomethane (-26%D). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-476286/4).

Method 8260D: The laboratory control sample (LCS) for analytical batch 310-476461 recovered outside control limits for the following analyte: Methylene Chloride. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

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

### Metals

Method 6020B: The laboratory control sample (LCS) for preparation batch 310-476342 and analytical batch 310-477558 recovered outside control limits for the following analytes: silver. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

### General Chemistry

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

Eurofins Cedar Falls

# Sample Summary

Client: SCS Engineers

Job ID: 310-322337-1

Project/Site: Harrison County - 2nd 2025 GW Event

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-322337-1	MW-8A	Water	12/10/25 09:35	12/11/25 16:50	Iowa
310-322337-2	MW-10R	Water	12/10/25 11:38	12/11/25 16:50	Iowa
310-322337-3	MW-11A	Water	12/10/25 10:25	12/11/25 16:50	Iowa
310-322337-4	MW-13R	Water	12/10/25 14:31	12/11/25 16:50	Iowa
310-322337-5	MW-14	Water	12/10/25 12:28	12/11/25 16:50	Iowa
310-322337-6	MW-17	Water	12/10/25 13:33	12/11/25 16:50	Iowa
310-322337-7	MW-D	Water	12/10/25 10:25	12/11/25 16:50	Iowa
310-322337-8	Trip Blank	Water	12/10/25 00:00	12/11/25 16:50	Iowa

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# Detection Summary

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## Client Sample ID: MW-8A

## Lab Sample ID: 310-322337-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00184	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0202		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cadmium	0.000168	J	0.000200	0.000100	mg/L	1		6020B	Total/NA
Cobalt	0.00467		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0331		0.00500	0.00230	mg/L	1		6020B	Total/NA
Vanadium	0.00223	J	0.00500	0.00170	mg/L	1		6020B	Total/NA
Total Suspended Solids	1.75	J	1.88	1.31	mg/L	1		I-3765-85	Total/NA

## Client Sample ID: MW-10R

## Lab Sample ID: 310-322337-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00101	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0698		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.000675		0.000500	0.000170	mg/L	1		6020B	Total/NA
Selenium	0.00390	J	0.00500	0.00140	mg/L	1		6020B	Total/NA
Vanadium	0.00287	J	0.00500	0.00170	mg/L	1		6020B	Total/NA
Total Suspended Solids	2.00		1.88	1.31	mg/L	1		I-3765-85	Total/NA

## Client Sample ID: MW-11A

## Lab Sample ID: 310-322337-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.00162	J	0.00200	0.00100	mg/L	1		6020B	Total/NA
Arsenic	0.00592		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0148		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cadmium	0.000560		0.000200	0.000100	mg/L	1		6020B	Total/NA
Cobalt	0.00171		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0117		0.00500	0.00230	mg/L	1		6020B	Total/NA

## Client Sample ID: MW-13R

## Lab Sample ID: 310-322337-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00153	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0935		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.000200	J	0.000500	0.000170	mg/L	1		6020B	Total/NA
Total Suspended Solids	2.38		1.88	1.31	mg/L	1		I-3765-85	Total/NA

## Client Sample ID: MW-14

## Lab Sample ID: 310-322337-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00248		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.209		0.00200	0.000660	mg/L	1		6020B	Total/NA
Total Suspended Solids	5.13		1.88	1.31	mg/L	1		I-3765-85	Total/NA

## Client Sample ID: MW-17

## Lab Sample ID: 310-322337-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.000901	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0216		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.000298	J	0.000500	0.000170	mg/L	1		6020B	Total/NA
Vanadium	0.00175	J	0.00500	0.00170	mg/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

# Detection Summary

Client: SCS Engineers  
Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## Client Sample ID: MW-D

Lab Sample ID: 310-322337-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	0.00588		0.00200	0.000530	mg/L			1	6020B	Total/NA
Barium	0.0149		0.00200	0.000660	mg/L			1	6020B	Total/NA
Cadmium	0.000562		0.000200	0.000100	mg/L			1	6020B	Total/NA
Cobalt	0.00167		0.000500	0.000170	mg/L			1	6020B	Total/NA
Nickel	0.0116		0.00500	0.00230	mg/L			1	6020B	Total/NA

## Client Sample ID: Trip Blank

Lab Sample ID: 310-322337-8

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls



# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: MW-8A**

**Lab Sample ID: 310-322337-1**

Date Collected: 12/10/25 09:35

Matrix: Water

Date Received: 12/11/25 16:50

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00	F2	1.00	0.380	ug/L			12/12/25 16:52	1
1,1,1-Trichloroethane	<1.00	F2	1.00	0.420	ug/L			12/12/25 16:52	1
1,1,2,2-Tetrachloroethane	<1.00	F2	1.00	0.350	ug/L			12/12/25 16:52	1
1,1,2-Trichloroethane	<1.00	F2	1.00	0.330	ug/L			12/12/25 16:52	1
1,1-Dichloroethane	<1.00	F2	1.00	0.400	ug/L			12/12/25 16:52	1
1,1-Dichloroethene	<2.00	F2	2.00	0.460	ug/L			12/12/25 16:52	1
1,2,3-Trichloropropane	<1.00	F2	1.00	0.430	ug/L			12/12/25 16:52	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			12/12/25 16:52	1
1,2-Dibromoethane (EDB)	<0.340	F2	0.340	0.340	ug/L			12/12/25 16:52	1
1,2-Dichlorobenzene	<1.00	F2	1.00	0.370	ug/L			12/12/25 16:52	1
1,2-Dichloroethane	<1.00	F2	1.00	0.890	ug/L			12/12/25 16:52	1
1,2-Dichloropropane	<1.00	F2	1.00	0.380	ug/L			12/12/25 16:52	1
1,4-Dichlorobenzene	<1.00	F2	1.00	0.490	ug/L			12/12/25 16:52	1
2-Butanone (MEK)	<10.0	F2	10.0	3.40	ug/L			12/12/25 16:52	1
2-Hexanone	<10.0	F2	10.0	3.80	ug/L			12/12/25 16:52	1
4-Methyl-2-pentanone (MIBK)	<10.0	F2	10.0	3.50	ug/L			12/12/25 16:52	1
Acetone	<10.0	F2	10.0	3.80	ug/L			12/12/25 16:52	1
Acrylonitrile	<10.0	F2	10.0	2.20	ug/L			12/12/25 16:52	1
Benzene	<0.500	F2	0.500	0.220	ug/L			12/12/25 16:52	1
Bromochloromethane	<5.00	F2	5.00	1.70	ug/L			12/12/25 16:52	1
Bromodichloromethane	<1.00	F2	1.00	0.390	ug/L			12/12/25 16:52	1
Bromoform	<5.00	F2	5.00	2.60	ug/L			12/12/25 16:52	1
Bromomethane	<4.00		4.00	1.10	ug/L			12/12/25 16:52	1
Carbon disulfide	<1.00	F2	1.00	0.450	ug/L			12/12/25 16:52	1
Carbon tetrachloride	<2.00	F2	2.00	0.650	ug/L			12/12/25 16:52	1
Chlorobenzene	<1.00	F2	1.00	0.350	ug/L			12/12/25 16:52	1
Chlorodibromomethane	<5.00	F2	5.00	1.50	ug/L			12/12/25 16:52	1
Chloroethane	<4.00		4.00	0.900	ug/L			12/12/25 16:52	1
Chloroform	<3.00	F2	3.00	1.30	ug/L			12/12/25 16:52	1
Chloromethane	<3.00		3.00	0.610	ug/L			12/12/25 16:52	1
cis-1,2-Dichloroethene	<1.00	F2	1.00	0.550	ug/L			12/12/25 16:52	1
cis-1,3-Dichloropropene	<5.00	F2	5.00	1.20	ug/L			12/12/25 16:52	1
Dibromomethane	<1.00	F2	1.00	0.330	ug/L			12/12/25 16:52	1
Ethylbenzene	<1.00	F2	1.00	0.420	ug/L			12/12/25 16:52	1
Iodomethane	<10.0		10.0	2.60	ug/L			12/12/25 16:52	1
Methylene Chloride	<5.00	F2	5.00	1.70	ug/L			12/12/25 16:52	1
Styrene	<1.00	F2	1.00	0.370	ug/L			12/12/25 16:52	1
Tetrachloroethene	<1.00	F2	1.00	0.480	ug/L			12/12/25 16:52	1
Toluene	<1.00	F2	1.00	0.430	ug/L			12/12/25 16:52	1
trans-1,2-Dichloroethene	<1.00	F2	1.00	0.410	ug/L			12/12/25 16:52	1
trans-1,3-Dichloropropene	<5.00	F2	5.00	2.30	ug/L			12/12/25 16:52	1
trans-1,4-Dichloro-2-butene	<10.0	F2	10.0	2.40	ug/L			12/12/25 16:52	1
Trichloroethene	<1.00	F2	1.00	0.350	ug/L			12/12/25 16:52	1
Trichlorofluoromethane	<4.00		4.00	0.470	ug/L			12/12/25 16:52	1
Vinyl acetate	<10.0		10.0	7.10	ug/L			12/12/25 16:52	1
Vinyl chloride	<1.00		1.00	0.430	ug/L			12/12/25 16:52	1
Xylenes, Total	<3.00	F2	3.00	1.10	ug/L			12/12/25 16:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	98		76 - 130		12/12/25 16:52	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: MW-8A**

**Lab Sample ID: 310-322337-1**

Date Collected: 12/10/25 09:35

Matrix: Water

Date Received: 12/11/25 16:50

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120		12/12/25 16:52	1
4-Bromofluorobenzene (Surr)	96		80 - 120		12/12/25 16:52	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		12/12/25 13:40	12/30/25 14:04	1
<b>Arsenic</b>	<b>0.00184</b>	<b>J</b>	0.00200	0.000530	mg/L		12/12/25 13:40	12/30/25 14:04	1
<b>Barium</b>	<b>0.0202</b>		0.00200	0.000660	mg/L		12/12/25 13:40	12/30/25 14:04	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		12/12/25 13:40	12/30/25 14:04	1
<b>Cadmium</b>	<b>0.000168</b>	<b>J</b>	0.000200	0.000100	mg/L		12/12/25 13:40	12/30/25 14:04	1
Chromium	<0.00500		0.00500	0.00180	mg/L		12/12/25 13:40	12/31/25 13:02	1
<b>Cobalt</b>	<b>0.00467</b>		0.000500	0.000170	mg/L		12/12/25 13:40	12/30/25 14:04	1
Copper	<0.00500		0.00500	0.00320	mg/L		12/12/25 13:40	12/30/25 14:04	1
Lead	<0.000500		0.000500	0.000330	mg/L		12/12/25 13:40	12/30/25 14:04	1
<b>Nickel</b>	<b>0.0331</b>		0.00500	0.00230	mg/L		12/12/25 13:40	12/30/25 14:04	1
Selenium	<0.00500		0.00500	0.00140	mg/L		12/12/25 13:40	12/30/25 14:04	1
Silver	<0.00100	*+	0.00100	0.000500	mg/L		12/12/25 13:40	12/30/25 14:04	1
Thallium	<0.00100		0.00100	0.000570	mg/L		12/12/25 13:40	12/30/25 14:04	1
<b>Vanadium</b>	<b>0.00223</b>	<b>J</b>	0.00500	0.00170	mg/L		12/12/25 13:40	12/30/25 14:04	1
Zinc	<0.0200		0.0200	0.0130	mg/L		12/12/25 13:40	12/30/25 14:04	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>1.75</b>	<b>J</b>	1.88	1.31	mg/L			12/16/25 05:29	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: MW-10R**

**Lab Sample ID: 310-322337-2**

Date Collected: 12/10/25 11:38

Matrix: Water

Date Received: 12/11/25 16:50

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			12/12/25 13:20	1
1,1,1-Trichloroethane	<1.00		1.00	0.420	ug/L			12/12/25 13:20	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.350	ug/L			12/12/25 13:20	1
1,1,2-Trichloroethane	<1.00		1.00	0.330	ug/L			12/12/25 13:20	1
1,1-Dichloroethane	<1.00		1.00	0.400	ug/L			12/12/25 13:20	1
1,1-Dichloroethene	<2.00		2.00	0.460	ug/L			12/12/25 13:20	1
1,2,3-Trichloropropane	<1.00		1.00	0.430	ug/L			12/12/25 13:20	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			12/12/25 13:20	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			12/12/25 13:20	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			12/12/25 13:20	1
1,2-Dichloroethane	<1.00		1.00	0.890	ug/L			12/12/25 13:20	1
1,2-Dichloropropane	<1.00		1.00	0.380	ug/L			12/12/25 13:20	1
1,4-Dichlorobenzene	<1.00		1.00	0.490	ug/L			12/12/25 13:20	1
2-Butanone (MEK)	<10.0		10.0	3.40	ug/L			12/12/25 13:20	1
2-Hexanone	<10.0		10.0	3.80	ug/L			12/12/25 13:20	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	3.50	ug/L			12/12/25 13:20	1
Acetone	<10.0		10.0	3.80	ug/L			12/15/25 12:43	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			12/12/25 13:20	1
Benzene	<0.500		0.500	0.220	ug/L			12/12/25 13:20	1
Bromochloromethane	<5.00		5.00	1.70	ug/L			12/12/25 13:20	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			12/12/25 13:20	1
Bromoform	<5.00		5.00	2.60	ug/L			12/12/25 13:20	1
Bromomethane	<4.00		4.00	1.10	ug/L			12/12/25 13:20	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			12/12/25 13:20	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			12/12/25 13:20	1
Chlorobenzene	<1.00		1.00	0.350	ug/L			12/12/25 13:20	1
Chlorodibromomethane	<5.00		5.00	1.50	ug/L			12/12/25 13:20	1
Chloroethane	<4.00		4.00	0.900	ug/L			12/12/25 13:20	1
Chloroform	<3.00		3.00	1.30	ug/L			12/12/25 13:20	1
Chloromethane	<3.00		3.00	0.610	ug/L			12/12/25 13:20	1
cis-1,2-Dichloroethene	<1.00		1.00	0.550	ug/L			12/12/25 13:20	1
cis-1,3-Dichloropropene	<5.00		5.00	1.20	ug/L			12/12/25 13:20	1
Dibromomethane	<1.00		1.00	0.330	ug/L			12/12/25 13:20	1
Ethylbenzene	<1.00		1.00	0.420	ug/L			12/12/25 13:20	1
Iodomethane	<10.0		10.0	2.60	ug/L			12/12/25 13:20	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			12/12/25 13:20	1
Styrene	<1.00		1.00	0.370	ug/L			12/12/25 13:20	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			12/12/25 13:20	1
Toluene	<1.00		1.00	0.430	ug/L			12/12/25 13:20	1
trans-1,2-Dichloroethene	<1.00		1.00	0.410	ug/L			12/12/25 13:20	1
trans-1,3-Dichloropropene	<5.00		5.00	2.30	ug/L			12/12/25 13:20	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	2.40	ug/L			12/12/25 13:20	1
Trichloroethene	<1.00		1.00	0.350	ug/L			12/12/25 13:20	1
Trichlorofluoromethane	<4.00		4.00	0.470	ug/L			12/12/25 13:20	1
Vinyl acetate	<10.0		10.0	7.10	ug/L			12/12/25 13:20	1
Vinyl chloride	<1.00		1.00	0.430	ug/L			12/12/25 13:20	1
Xylenes, Total	<3.00		3.00	1.10	ug/L			12/12/25 13:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	103		76 - 130		12/12/25 13:20	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: MW-10R**

**Lab Sample ID: 310-322337-2**

Date Collected: 12/10/25 11:38

Matrix: Water

Date Received: 12/11/25 16:50

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	114		76 - 130		12/15/25 12:43	1
Toluene-d8 (Surr)	94		80 - 120		12/12/25 13:20	1
Toluene-d8 (Surr)	87		80 - 120		12/15/25 12:43	1
4-Bromofluorobenzene (Surr)	102		80 - 120		12/12/25 13:20	1
4-Bromofluorobenzene (Surr)	101		80 - 120		12/15/25 12:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		12/12/25 13:40	12/30/25 14:10	1
<b>Arsenic</b>	<b>0.00101</b>	<b>J</b>	0.00200	0.000530	mg/L		12/12/25 13:40	12/30/25 14:10	1
<b>Barium</b>	<b>0.0698</b>		0.00200	0.000660	mg/L		12/12/25 13:40	12/30/25 14:10	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		12/12/25 13:40	12/30/25 14:10	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		12/12/25 13:40	12/30/25 14:10	1
Chromium	<0.00500		0.00500	0.00180	mg/L		12/12/25 13:40	12/30/25 14:10	1
<b>Cobalt</b>	<b>0.000675</b>		0.000500	0.000170	mg/L		12/12/25 13:40	12/30/25 14:10	1
Copper	<0.00500		0.00500	0.00320	mg/L		12/12/25 13:40	12/30/25 14:10	1
Lead	<0.000500		0.000500	0.000330	mg/L		12/12/25 13:40	12/30/25 14:10	1
Nickel	<0.00500		0.00500	0.00230	mg/L		12/12/25 13:40	12/30/25 14:10	1
<b>Selenium</b>	<b>0.00390</b>	<b>J</b>	0.00500	0.00140	mg/L		12/12/25 13:40	12/30/25 14:10	1
Silver	<0.00100	*+	0.00100	0.000500	mg/L		12/12/25 13:40	12/30/25 14:10	1
Thallium	<0.00100		0.00100	0.000570	mg/L		12/12/25 13:40	12/30/25 14:10	1
<b>Vanadium</b>	<b>0.00287</b>	<b>J</b>	0.00500	0.00170	mg/L		12/12/25 13:40	12/30/25 14:10	1
Zinc	<0.0200		0.0200	0.0130	mg/L		12/12/25 13:40	12/30/25 14:10	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>2.00</b>		1.88	1.31	mg/L			12/16/25 05:29	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: MW-11A**

**Lab Sample ID: 310-322337-3**

Date Collected: 12/10/25 10:25

Matrix: Water

Date Received: 12/11/25 16:50

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			12/12/25 13:43	1
1,1,1-Trichloroethane	<1.00		1.00	0.420	ug/L			12/12/25 13:43	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.350	ug/L			12/12/25 13:43	1
1,1,2-Trichloroethane	<1.00		1.00	0.330	ug/L			12/12/25 13:43	1
1,1-Dichloroethane	<1.00		1.00	0.400	ug/L			12/12/25 13:43	1
1,1-Dichloroethene	<2.00		2.00	0.460	ug/L			12/12/25 13:43	1
1,2,3-Trichloropropane	<1.00		1.00	0.430	ug/L			12/12/25 13:43	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			12/12/25 13:43	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			12/12/25 13:43	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			12/12/25 13:43	1
1,2-Dichloroethane	<1.00		1.00	0.890	ug/L			12/12/25 13:43	1
1,2-Dichloropropane	<1.00		1.00	0.380	ug/L			12/12/25 13:43	1
1,4-Dichlorobenzene	<1.00		1.00	0.490	ug/L			12/12/25 13:43	1
2-Butanone (MEK)	<10.0		10.0	3.40	ug/L			12/12/25 13:43	1
2-Hexanone	<10.0		10.0	3.80	ug/L			12/12/25 13:43	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	3.50	ug/L			12/12/25 13:43	1
Acetone	<10.0		10.0	3.80	ug/L			12/12/25 13:43	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			12/12/25 13:43	1
Benzene	<0.500		0.500	0.220	ug/L			12/12/25 13:43	1
Bromochloromethane	<5.00		5.00	1.70	ug/L			12/12/25 13:43	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			12/12/25 13:43	1
Bromoform	<5.00		5.00	2.60	ug/L			12/12/25 13:43	1
Bromomethane	<4.00		4.00	1.10	ug/L			12/12/25 13:43	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			12/12/25 13:43	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			12/12/25 13:43	1
Chlorobenzene	<1.00		1.00	0.350	ug/L			12/12/25 13:43	1
Chlorodibromomethane	<5.00		5.00	1.50	ug/L			12/12/25 13:43	1
Chloroethane	<4.00		4.00	0.900	ug/L			12/12/25 13:43	1
Chloroform	<3.00		3.00	1.30	ug/L			12/12/25 13:43	1
Chloromethane	<3.00		3.00	0.610	ug/L			12/12/25 13:43	1
cis-1,2-Dichloroethene	<1.00		1.00	0.550	ug/L			12/12/25 13:43	1
cis-1,3-Dichloropropene	<5.00		5.00	1.20	ug/L			12/12/25 13:43	1
Dibromomethane	<1.00		1.00	0.330	ug/L			12/12/25 13:43	1
Ethylbenzene	<1.00		1.00	0.420	ug/L			12/12/25 13:43	1
Iodomethane	<10.0		10.0	2.60	ug/L			12/12/25 13:43	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			12/12/25 13:43	1
Styrene	<1.00		1.00	0.370	ug/L			12/12/25 13:43	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			12/12/25 13:43	1
Toluene	<1.00		1.00	0.430	ug/L			12/12/25 13:43	1
trans-1,2-Dichloroethene	<1.00		1.00	0.410	ug/L			12/12/25 13:43	1
trans-1,3-Dichloropropene	<5.00		5.00	2.30	ug/L			12/12/25 13:43	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	2.40	ug/L			12/12/25 13:43	1
Trichloroethene	<1.00		1.00	0.350	ug/L			12/12/25 13:43	1
Trichlorofluoromethane	<4.00		4.00	0.470	ug/L			12/12/25 13:43	1
Vinyl acetate	<10.0		10.0	7.10	ug/L			12/12/25 13:43	1
Vinyl chloride	<1.00		1.00	0.430	ug/L			12/12/25 13:43	1
Xylenes, Total	<3.00		3.00	1.10	ug/L			12/12/25 13:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	106		76 - 130		12/12/25 13:43	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: MW-11A**

**Lab Sample ID: 310-322337-3**

Date Collected: 12/10/25 10:25

Matrix: Water

Date Received: 12/11/25 16:50

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	92		80 - 120		12/12/25 13:43	1
4-Bromofluorobenzene (Surr)	102		80 - 120		12/12/25 13:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00162	J	0.00200	0.00100	mg/L		12/12/25 13:40	12/30/25 14:21	1
Arsenic	0.00592		0.00200	0.000530	mg/L		12/12/25 13:40	12/30/25 14:21	1
Barium	0.0148		0.00200	0.000660	mg/L		12/12/25 13:40	12/30/25 14:21	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		12/12/25 13:40	12/30/25 14:21	1
Cadmium	0.000560		0.000200	0.000100	mg/L		12/12/25 13:40	12/30/25 14:21	1
Chromium	<0.00500		0.00500	0.00180	mg/L		12/12/25 13:40	12/30/25 14:21	1
Cobalt	0.00171		0.000500	0.000170	mg/L		12/12/25 13:40	12/30/25 14:21	1
Copper	<0.00500		0.00500	0.00320	mg/L		12/12/25 13:40	12/30/25 14:21	1
Lead	<0.000500		0.000500	0.000330	mg/L		12/12/25 13:40	12/30/25 14:21	1
Nickel	0.0117		0.00500	0.00230	mg/L		12/12/25 13:40	12/30/25 14:21	1
Selenium	<0.00500		0.00500	0.00140	mg/L		12/12/25 13:40	12/30/25 14:21	1
Silver	<0.00100	*+	0.00100	0.000500	mg/L		12/12/25 13:40	12/30/25 14:21	1
Thallium	<0.00100		0.00100	0.000570	mg/L		12/12/25 13:40	12/30/25 14:21	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		12/12/25 13:40	12/30/25 14:21	1
Zinc	<0.0200		0.0200	0.0130	mg/L		12/12/25 13:40	12/30/25 14:21	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.31	mg/L			12/15/25 10:51	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: MW-13R**

**Lab Sample ID: 310-322337-4**

Date Collected: 12/10/25 14:31

Matrix: Water

Date Received: 12/11/25 16:50

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			12/12/25 14:05	1
1,1,1-Trichloroethane	<1.00		1.00	0.420	ug/L			12/12/25 14:05	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.350	ug/L			12/12/25 14:05	1
1,1,2-Trichloroethane	<1.00		1.00	0.330	ug/L			12/12/25 14:05	1
1,1-Dichloroethane	<1.00		1.00	0.400	ug/L			12/12/25 14:05	1
1,1-Dichloroethene	<2.00		2.00	0.460	ug/L			12/12/25 14:05	1
1,2,3-Trichloropropane	<1.00		1.00	0.430	ug/L			12/12/25 14:05	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			12/12/25 14:05	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			12/12/25 14:05	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			12/12/25 14:05	1
1,2-Dichloroethane	<1.00		1.00	0.890	ug/L			12/12/25 14:05	1
1,2-Dichloropropane	<1.00		1.00	0.380	ug/L			12/12/25 14:05	1
1,4-Dichlorobenzene	<1.00		1.00	0.490	ug/L			12/12/25 14:05	1
2-Butanone (MEK)	<10.0		10.0	3.40	ug/L			12/12/25 14:05	1
2-Hexanone	<10.0		10.0	3.80	ug/L			12/12/25 14:05	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	3.50	ug/L			12/12/25 14:05	1
Acetone	<10.0		10.0	3.80	ug/L			12/12/25 14:05	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			12/12/25 14:05	1
Benzene	<0.500		0.500	0.220	ug/L			12/12/25 14:05	1
Bromochloromethane	<5.00		5.00	1.70	ug/L			12/12/25 14:05	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			12/12/25 14:05	1
Bromoform	<5.00		5.00	2.60	ug/L			12/12/25 14:05	1
Bromomethane	<4.00		4.00	1.10	ug/L			12/12/25 14:05	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			12/12/25 14:05	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			12/12/25 14:05	1
Chlorobenzene	<1.00		1.00	0.350	ug/L			12/12/25 14:05	1
Chlorodibromomethane	<5.00		5.00	1.50	ug/L			12/12/25 14:05	1
Chloroethane	<4.00		4.00	0.900	ug/L			12/12/25 14:05	1
Chloroform	<3.00		3.00	1.30	ug/L			12/12/25 14:05	1
Chloromethane	<3.00		3.00	0.610	ug/L			12/12/25 14:05	1
cis-1,2-Dichloroethene	<1.00		1.00	0.550	ug/L			12/12/25 14:05	1
cis-1,3-Dichloropropene	<5.00		5.00	1.20	ug/L			12/12/25 14:05	1
Dibromomethane	<1.00		1.00	0.330	ug/L			12/12/25 14:05	1
Ethylbenzene	<1.00		1.00	0.420	ug/L			12/12/25 14:05	1
Iodomethane	<10.0		10.0	2.60	ug/L			12/12/25 14:05	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			12/12/25 14:05	1
Styrene	<1.00		1.00	0.370	ug/L			12/12/25 14:05	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			12/12/25 14:05	1
Toluene	<1.00		1.00	0.430	ug/L			12/12/25 14:05	1
trans-1,2-Dichloroethene	<1.00		1.00	0.410	ug/L			12/12/25 14:05	1
trans-1,3-Dichloropropene	<5.00		5.00	2.30	ug/L			12/12/25 14:05	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	2.40	ug/L			12/12/25 14:05	1
Trichloroethene	<1.00		1.00	0.350	ug/L			12/12/25 14:05	1
Trichlorofluoromethane	<4.00		4.00	0.470	ug/L			12/12/25 14:05	1
Vinyl acetate	<10.0		10.0	7.10	ug/L			12/12/25 14:05	1
Vinyl chloride	<1.00		1.00	0.430	ug/L			12/12/25 14:05	1
Xylenes, Total	<3.00		3.00	1.10	ug/L			12/12/25 14:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	102		76 - 130		12/12/25 14:05	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: MW-13R**

**Lab Sample ID: 310-322337-4**

Date Collected: 12/10/25 14:31

Matrix: Water

Date Received: 12/11/25 16:50

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		80 - 120		12/12/25 14:05	1
4-Bromofluorobenzene (Surr)	101		80 - 120		12/12/25 14:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		12/12/25 13:40	12/30/25 14:24	1
<b>Arsenic</b>	<b>0.00153</b>	<b>J</b>	0.00200	0.000530	mg/L		12/12/25 13:40	12/30/25 14:24	1
<b>Barium</b>	<b>0.0935</b>		0.00200	0.000660	mg/L		12/12/25 13:40	12/30/25 14:24	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		12/12/25 13:40	12/30/25 14:24	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		12/12/25 13:40	12/30/25 14:24	1
Chromium	<0.00500		0.00500	0.00180	mg/L		12/12/25 13:40	12/30/25 14:24	1
<b>Cobalt</b>	<b>0.000200</b>	<b>J</b>	0.000500	0.000170	mg/L		12/12/25 13:40	12/30/25 14:24	1
Copper	<0.00500		0.00500	0.00320	mg/L		12/12/25 13:40	12/30/25 14:24	1
Lead	<0.000500		0.000500	0.000330	mg/L		12/12/25 13:40	12/30/25 14:24	1
Nickel	<0.00500		0.00500	0.00230	mg/L		12/12/25 13:40	12/30/25 14:24	1
Selenium	<0.00500		0.00500	0.00140	mg/L		12/12/25 13:40	12/30/25 14:24	1
Silver	<0.00100	*+	0.00100	0.000500	mg/L		12/12/25 13:40	12/30/25 14:24	1
Thallium	<0.00100		0.00100	0.000570	mg/L		12/12/25 13:40	12/30/25 14:24	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		12/12/25 13:40	12/30/25 14:24	1
Zinc	<0.0200		0.0200	0.0130	mg/L		12/12/25 13:40	12/30/25 14:24	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>2.38</b>		1.88	1.31	mg/L			12/15/25 10:51	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: MW-14**

**Lab Sample ID: 310-322337-5**

Date Collected: 12/10/25 12:28

Matrix: Water

Date Received: 12/11/25 16:50

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			12/12/25 14:28	1
1,1,1-Trichloroethane	<1.00		1.00	0.420	ug/L			12/12/25 14:28	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.350	ug/L			12/12/25 14:28	1
1,1,2-Trichloroethane	<1.00		1.00	0.330	ug/L			12/12/25 14:28	1
1,1-Dichloroethane	<1.00		1.00	0.400	ug/L			12/12/25 14:28	1
1,1-Dichloroethene	<2.00		2.00	0.460	ug/L			12/12/25 14:28	1
1,2,3-Trichloropropane	<1.00		1.00	0.430	ug/L			12/12/25 14:28	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			12/12/25 14:28	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			12/12/25 14:28	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			12/12/25 14:28	1
1,2-Dichloroethane	<1.00		1.00	0.890	ug/L			12/12/25 14:28	1
1,2-Dichloropropane	<1.00		1.00	0.380	ug/L			12/12/25 14:28	1
1,4-Dichlorobenzene	<1.00		1.00	0.490	ug/L			12/12/25 14:28	1
2-Butanone (MEK)	<10.0		10.0	3.40	ug/L			12/12/25 14:28	1
2-Hexanone	<10.0		10.0	3.80	ug/L			12/12/25 14:28	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	3.50	ug/L			12/12/25 14:28	1
Acetone	<10.0		10.0	3.80	ug/L			12/12/25 14:28	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			12/12/25 14:28	1
Benzene	<0.500		0.500	0.220	ug/L			12/12/25 14:28	1
Bromochloromethane	<5.00		5.00	1.70	ug/L			12/12/25 14:28	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			12/12/25 14:28	1
Bromoform	<5.00		5.00	2.60	ug/L			12/12/25 14:28	1
Bromomethane	<4.00		4.00	1.10	ug/L			12/12/25 14:28	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			12/12/25 14:28	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			12/12/25 14:28	1
Chlorobenzene	<1.00		1.00	0.350	ug/L			12/12/25 14:28	1
Chlorodibromomethane	<5.00		5.00	1.50	ug/L			12/12/25 14:28	1
Chloroethane	<4.00		4.00	0.900	ug/L			12/12/25 14:28	1
Chloroform	<3.00		3.00	1.30	ug/L			12/12/25 14:28	1
Chloromethane	<3.00		3.00	0.610	ug/L			12/12/25 14:28	1
cis-1,2-Dichloroethene	<1.00		1.00	0.550	ug/L			12/12/25 14:28	1
cis-1,3-Dichloropropene	<5.00		5.00	1.20	ug/L			12/12/25 14:28	1
Dibromomethane	<1.00		1.00	0.330	ug/L			12/12/25 14:28	1
Ethylbenzene	<1.00		1.00	0.420	ug/L			12/12/25 14:28	1
Iodomethane	<10.0		10.0	2.60	ug/L			12/12/25 14:28	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			12/12/25 14:28	1
Styrene	<1.00		1.00	0.370	ug/L			12/12/25 14:28	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			12/12/25 14:28	1
Toluene	<1.00		1.00	0.430	ug/L			12/12/25 14:28	1
trans-1,2-Dichloroethene	<1.00		1.00	0.410	ug/L			12/12/25 14:28	1
trans-1,3-Dichloropropene	<5.00		5.00	2.30	ug/L			12/12/25 14:28	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	2.40	ug/L			12/12/25 14:28	1
Trichloroethene	<1.00		1.00	0.350	ug/L			12/12/25 14:28	1
Trichlorofluoromethane	<4.00		4.00	0.470	ug/L			12/12/25 14:28	1
Vinyl acetate	<10.0		10.0	7.10	ug/L			12/12/25 14:28	1
Vinyl chloride	<1.00		1.00	0.430	ug/L			12/12/25 14:28	1
Xylenes, Total	<3.00		3.00	1.10	ug/L			12/12/25 14:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	107		76 - 130		12/12/25 14:28	1

Eurofins Cedar Falls

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: MW-14**

**Lab Sample ID: 310-322337-5**

Date Collected: 12/10/25 12:28

Matrix: Water

Date Received: 12/11/25 16:50

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	90		80 - 120		12/12/25 14:28	1
4-Bromofluorobenzene (Surr)	103		80 - 120		12/12/25 14:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		12/12/25 13:40	12/30/25 14:27	1
<b>Arsenic</b>	<b>0.00248</b>		0.00200	0.000530	mg/L		12/12/25 13:40	12/30/25 14:27	1
<b>Barium</b>	<b>0.209</b>		0.00200	0.000660	mg/L		12/12/25 13:40	12/30/25 14:27	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		12/12/25 13:40	12/30/25 14:27	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		12/12/25 13:40	12/30/25 14:27	1
Chromium	<0.00500		0.00500	0.00180	mg/L		12/12/25 13:40	12/30/25 14:27	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		12/12/25 13:40	12/30/25 14:27	1
Copper	<0.00500		0.00500	0.00320	mg/L		12/12/25 13:40	12/30/25 14:27	1
Lead	<0.000500		0.000500	0.000330	mg/L		12/12/25 13:40	12/30/25 14:27	1
Nickel	<0.00500		0.00500	0.00230	mg/L		12/12/25 13:40	12/30/25 14:27	1
Selenium	<0.00500		0.00500	0.00140	mg/L		12/12/25 13:40	12/30/25 14:27	1
Silver	<0.00100	*+	0.00100	0.000500	mg/L		12/12/25 13:40	12/30/25 14:27	1
Thallium	<0.00100		0.00100	0.000570	mg/L		12/12/25 13:40	12/30/25 14:27	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		12/12/25 13:40	12/30/25 14:27	1
Zinc	<0.0200		0.0200	0.0130	mg/L		12/12/25 13:40	12/30/25 14:27	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>5.13</b>		1.88	1.31	mg/L			12/16/25 05:29	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: MW-17**

**Lab Sample ID: 310-322337-6**

Date Collected: 12/10/25 13:33

Matrix: Water

Date Received: 12/11/25 16:50

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			12/12/25 14:51	1
1,1,1-Trichloroethane	<1.00		1.00	0.420	ug/L			12/12/25 14:51	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.350	ug/L			12/12/25 14:51	1
1,1,2-Trichloroethane	<1.00		1.00	0.330	ug/L			12/12/25 14:51	1
1,1-Dichloroethane	<1.00		1.00	0.400	ug/L			12/12/25 14:51	1
1,1-Dichloroethene	<2.00		2.00	0.460	ug/L			12/12/25 14:51	1
1,2,3-Trichloropropane	<1.00		1.00	0.430	ug/L			12/12/25 14:51	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			12/12/25 14:51	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			12/12/25 14:51	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			12/12/25 14:51	1
1,2-Dichloroethane	<1.00		1.00	0.890	ug/L			12/12/25 14:51	1
1,2-Dichloropropane	<1.00		1.00	0.380	ug/L			12/12/25 14:51	1
1,4-Dichlorobenzene	<1.00		1.00	0.490	ug/L			12/12/25 14:51	1
2-Butanone (MEK)	<10.0		10.0	3.40	ug/L			12/12/25 14:51	1
2-Hexanone	<10.0		10.0	3.80	ug/L			12/12/25 14:51	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	3.50	ug/L			12/12/25 14:51	1
Acetone	<10.0		10.0	3.80	ug/L			12/12/25 14:51	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			12/12/25 14:51	1
Benzene	<0.500		0.500	0.220	ug/L			12/12/25 14:51	1
Bromochloromethane	<5.00		5.00	1.70	ug/L			12/12/25 14:51	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			12/12/25 14:51	1
Bromoform	<5.00		5.00	2.60	ug/L			12/12/25 14:51	1
Bromomethane	<4.00		4.00	1.10	ug/L			12/12/25 14:51	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			12/12/25 14:51	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			12/12/25 14:51	1
Chlorobenzene	<1.00		1.00	0.350	ug/L			12/12/25 14:51	1
Chlorodibromomethane	<5.00		5.00	1.50	ug/L			12/12/25 14:51	1
Chloroethane	<4.00		4.00	0.900	ug/L			12/12/25 14:51	1
Chloroform	<3.00		3.00	1.30	ug/L			12/12/25 14:51	1
Chloromethane	<3.00		3.00	0.610	ug/L			12/12/25 14:51	1
cis-1,2-Dichloroethene	<1.00		1.00	0.550	ug/L			12/12/25 14:51	1
cis-1,3-Dichloropropene	<5.00		5.00	1.20	ug/L			12/12/25 14:51	1
Dibromomethane	<1.00		1.00	0.330	ug/L			12/12/25 14:51	1
Ethylbenzene	<1.00		1.00	0.420	ug/L			12/12/25 14:51	1
Iodomethane	<10.0		10.0	2.60	ug/L			12/12/25 14:51	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			12/12/25 14:51	1
Styrene	<1.00		1.00	0.370	ug/L			12/12/25 14:51	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			12/12/25 14:51	1
Toluene	<1.00		1.00	0.430	ug/L			12/12/25 14:51	1
trans-1,2-Dichloroethene	<1.00		1.00	0.410	ug/L			12/12/25 14:51	1
trans-1,3-Dichloropropene	<5.00		5.00	2.30	ug/L			12/12/25 14:51	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	2.40	ug/L			12/12/25 14:51	1
Trichloroethene	<1.00		1.00	0.350	ug/L			12/12/25 14:51	1
Trichlorofluoromethane	<4.00		4.00	0.470	ug/L			12/12/25 14:51	1
Vinyl acetate	<10.0		10.0	7.10	ug/L			12/12/25 14:51	1
Vinyl chloride	<1.00		1.00	0.430	ug/L			12/12/25 14:51	1
Xylenes, Total	<3.00		3.00	1.10	ug/L			12/12/25 14:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	106		76 - 130		12/12/25 14:51	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: MW-17**

**Lab Sample ID: 310-322337-6**

Date Collected: 12/10/25 13:33

Matrix: Water

Date Received: 12/11/25 16:50

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		80 - 120		12/12/25 14:51	1
4-Bromofluorobenzene (Surr)	96		80 - 120		12/12/25 14:51	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		12/12/25 13:40	12/30/25 14:30	1
<b>Arsenic</b>	<b>0.000901</b>	<b>J</b>	0.00200	0.000530	mg/L		12/12/25 13:40	12/30/25 14:30	1
<b>Barium</b>	<b>0.0216</b>		0.00200	0.000660	mg/L		12/12/25 13:40	12/30/25 14:30	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		12/12/25 13:40	12/30/25 14:30	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		12/12/25 13:40	12/30/25 14:30	1
Chromium	<0.00500		0.00500	0.00180	mg/L		12/12/25 13:40	12/30/25 14:30	1
<b>Cobalt</b>	<b>0.000298</b>	<b>J</b>	0.000500	0.000170	mg/L		12/12/25 13:40	12/30/25 14:30	1
Copper	<0.00500		0.00500	0.00320	mg/L		12/12/25 13:40	12/30/25 14:30	1
Lead	<0.000500		0.000500	0.000330	mg/L		12/12/25 13:40	12/30/25 14:30	1
Nickel	<0.00500		0.00500	0.00230	mg/L		12/12/25 13:40	12/30/25 14:30	1
Selenium	<0.00500		0.00500	0.00140	mg/L		12/12/25 13:40	12/30/25 14:30	1
Silver	<0.00100	*+	0.00100	0.000500	mg/L		12/12/25 13:40	12/30/25 14:30	1
Thallium	<0.00100		0.00100	0.000570	mg/L		12/12/25 13:40	12/30/25 14:30	1
<b>Vanadium</b>	<b>0.00175</b>	<b>J</b>	0.00500	0.00170	mg/L		12/12/25 13:40	12/30/25 14:30	1
Zinc	<0.0200		0.0200	0.0130	mg/L		12/12/25 13:40	12/30/25 14:30	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.31	mg/L			12/16/25 05:29	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: MW-D**

**Lab Sample ID: 310-322337-7**

Date Collected: 12/10/25 10:25

Matrix: Water

Date Received: 12/11/25 16:50

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			12/12/25 15:13	1
1,1,1-Trichloroethane	<1.00		1.00	0.420	ug/L			12/12/25 15:13	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.350	ug/L			12/12/25 15:13	1
1,1,2-Trichloroethane	<1.00		1.00	0.330	ug/L			12/12/25 15:13	1
1,1-Dichloroethane	<1.00		1.00	0.400	ug/L			12/12/25 15:13	1
1,1-Dichloroethene	<2.00		2.00	0.460	ug/L			12/12/25 15:13	1
1,2,3-Trichloropropane	<1.00		1.00	0.430	ug/L			12/12/25 15:13	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			12/12/25 15:13	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			12/12/25 15:13	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			12/12/25 15:13	1
1,2-Dichloroethane	<1.00		1.00	0.890	ug/L			12/12/25 15:13	1
1,2-Dichloropropane	<1.00		1.00	0.380	ug/L			12/12/25 15:13	1
1,4-Dichlorobenzene	<1.00		1.00	0.490	ug/L			12/12/25 15:13	1
2-Butanone (MEK)	<10.0		10.0	3.40	ug/L			12/12/25 15:13	1
2-Hexanone	<10.0		10.0	3.80	ug/L			12/12/25 15:13	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	3.50	ug/L			12/12/25 15:13	1
Acetone	<10.0		10.0	3.80	ug/L			12/12/25 15:13	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			12/12/25 15:13	1
Benzene	<0.500		0.500	0.220	ug/L			12/12/25 15:13	1
Bromochloromethane	<5.00		5.00	1.70	ug/L			12/12/25 15:13	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			12/12/25 15:13	1
Bromoform	<5.00		5.00	2.60	ug/L			12/12/25 15:13	1
Bromomethane	<4.00		4.00	1.10	ug/L			12/12/25 15:13	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			12/12/25 15:13	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			12/12/25 15:13	1
Chlorobenzene	<1.00		1.00	0.350	ug/L			12/12/25 15:13	1
Chlorodibromomethane	<5.00		5.00	1.50	ug/L			12/12/25 15:13	1
Chloroethane	<4.00		4.00	0.900	ug/L			12/12/25 15:13	1
Chloroform	<3.00		3.00	1.30	ug/L			12/12/25 15:13	1
Chloromethane	<3.00		3.00	0.610	ug/L			12/12/25 15:13	1
cis-1,2-Dichloroethene	<1.00		1.00	0.550	ug/L			12/12/25 15:13	1
cis-1,3-Dichloropropene	<5.00		5.00	1.20	ug/L			12/12/25 15:13	1
Dibromomethane	<1.00		1.00	0.330	ug/L			12/12/25 15:13	1
Ethylbenzene	<1.00		1.00	0.420	ug/L			12/12/25 15:13	1
Iodomethane	<10.0		10.0	2.60	ug/L			12/12/25 15:13	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			12/12/25 15:13	1
Styrene	<1.00		1.00	0.370	ug/L			12/12/25 15:13	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			12/12/25 15:13	1
Toluene	<1.00		1.00	0.430	ug/L			12/12/25 15:13	1
trans-1,2-Dichloroethene	<1.00		1.00	0.410	ug/L			12/12/25 15:13	1
trans-1,3-Dichloropropene	<5.00		5.00	2.30	ug/L			12/12/25 15:13	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	2.40	ug/L			12/12/25 15:13	1
Trichloroethene	<1.00		1.00	0.350	ug/L			12/12/25 15:13	1
Trichlorofluoromethane	<4.00		4.00	0.470	ug/L			12/12/25 15:13	1
Vinyl acetate	<10.0		10.0	7.10	ug/L			12/12/25 15:13	1
Vinyl chloride	<1.00		1.00	0.430	ug/L			12/12/25 15:13	1
Xylenes, Total	<3.00		3.00	1.10	ug/L			12/12/25 15:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	107		76 - 130		12/12/25 15:13	1

Eurofins Cedar Falls

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: MW-D**

**Lab Sample ID: 310-322337-7**

Date Collected: 12/10/25 10:25

Matrix: Water

Date Received: 12/11/25 16:50

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	92		80 - 120		12/12/25 15:13	1
4-Bromofluorobenzene (Surr)	103		80 - 120		12/12/25 15:13	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		12/12/25 13:40	12/30/25 14:33	1
<b>Arsenic</b>	<b>0.00588</b>		0.00200	0.000530	mg/L		12/12/25 13:40	12/30/25 14:33	1
<b>Barium</b>	<b>0.0149</b>		0.00200	0.000660	mg/L		12/12/25 13:40	12/30/25 14:33	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		12/12/25 13:40	12/30/25 14:33	1
<b>Cadmium</b>	<b>0.000562</b>		0.000200	0.000100	mg/L		12/12/25 13:40	12/30/25 14:33	1
Chromium	<0.00500		0.00500	0.00180	mg/L		12/12/25 13:40	12/30/25 14:33	1
<b>Cobalt</b>	<b>0.00167</b>		0.000500	0.000170	mg/L		12/12/25 13:40	12/30/25 14:33	1
Copper	<0.00500		0.00500	0.00320	mg/L		12/12/25 13:40	12/30/25 14:33	1
Lead	<0.000500		0.000500	0.000330	mg/L		12/12/25 13:40	12/30/25 14:33	1
<b>Nickel</b>	<b>0.0116</b>		0.00500	0.00230	mg/L		12/12/25 13:40	12/30/25 14:33	1
Selenium	<0.00500		0.00500	0.00140	mg/L		12/12/25 13:40	12/30/25 14:33	1
Silver	<0.00100	*+	0.00100	0.000500	mg/L		12/12/25 13:40	12/30/25 14:33	1
Thallium	<0.00100		0.00100	0.000570	mg/L		12/12/25 13:40	12/30/25 14:33	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		12/12/25 13:40	12/30/25 14:33	1
Zinc	<0.0200		0.0200	0.0130	mg/L		12/12/25 13:40	12/30/25 14:33	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.31	mg/L			12/15/25 10:51	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 310-322337-8**

Date Collected: 12/10/25 00:00

Matrix: Water

Date Received: 12/11/25 16:50

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			12/12/25 11:05	1
1,1,1-Trichloroethane	<1.00		1.00	0.420	ug/L			12/12/25 11:05	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.350	ug/L			12/12/25 11:05	1
1,1,2-Trichloroethane	<1.00		1.00	0.330	ug/L			12/12/25 11:05	1
1,1-Dichloroethane	<1.00		1.00	0.400	ug/L			12/12/25 11:05	1
1,1-Dichloroethene	<2.00		2.00	0.460	ug/L			12/12/25 11:05	1
1,2,3-Trichloropropane	<1.00		1.00	0.430	ug/L			12/12/25 11:05	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			12/12/25 11:05	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			12/12/25 11:05	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			12/12/25 11:05	1
1,2-Dichloroethane	<1.00		1.00	0.890	ug/L			12/12/25 11:05	1
1,2-Dichloropropane	<1.00		1.00	0.380	ug/L			12/12/25 11:05	1
1,4-Dichlorobenzene	<1.00		1.00	0.490	ug/L			12/12/25 11:05	1
2-Butanone (MEK)	<10.0		10.0	3.40	ug/L			12/12/25 11:05	1
2-Hexanone	<10.0		10.0	3.80	ug/L			12/12/25 11:05	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	3.50	ug/L			12/12/25 11:05	1
Acetone	<10.0		10.0	3.80	ug/L			12/12/25 11:05	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			12/12/25 11:05	1
Benzene	<0.500		0.500	0.220	ug/L			12/12/25 11:05	1
Bromochloromethane	<5.00		5.00	1.70	ug/L			12/12/25 11:05	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			12/12/25 11:05	1
Bromoform	<5.00		5.00	2.60	ug/L			12/12/25 11:05	1
Bromomethane	<4.00		4.00	1.10	ug/L			12/12/25 11:05	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			12/12/25 11:05	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			12/12/25 11:05	1
Chlorobenzene	<1.00		1.00	0.350	ug/L			12/12/25 11:05	1
Chlorodibromomethane	<5.00		5.00	1.50	ug/L			12/12/25 11:05	1
Chloroethane	<4.00		4.00	0.900	ug/L			12/12/25 11:05	1
Chloroform	<3.00		3.00	1.30	ug/L			12/12/25 11:05	1
Chloromethane	<3.00		3.00	0.610	ug/L			12/12/25 11:05	1
cis-1,2-Dichloroethene	<1.00		1.00	0.550	ug/L			12/12/25 11:05	1
cis-1,3-Dichloropropene	<5.00		5.00	1.20	ug/L			12/12/25 11:05	1
Dibromomethane	<1.00		1.00	0.330	ug/L			12/12/25 11:05	1
Ethylbenzene	<1.00		1.00	0.420	ug/L			12/12/25 11:05	1
Iodomethane	<10.0		10.0	2.60	ug/L			12/12/25 11:05	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			12/12/25 11:05	1
Styrene	<1.00		1.00	0.370	ug/L			12/12/25 11:05	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			12/12/25 11:05	1
Toluene	<1.00		1.00	0.430	ug/L			12/12/25 11:05	1
trans-1,2-Dichloroethene	<1.00		1.00	0.410	ug/L			12/12/25 11:05	1
trans-1,3-Dichloropropene	<5.00		5.00	2.30	ug/L			12/12/25 11:05	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	2.40	ug/L			12/12/25 11:05	1
Trichloroethene	<1.00		1.00	0.350	ug/L			12/12/25 11:05	1
Trichlorofluoromethane	<4.00		4.00	0.470	ug/L			12/12/25 11:05	1
Vinyl acetate	<10.0		10.0	7.10	ug/L			12/12/25 11:05	1
Vinyl chloride	<1.00		1.00	0.430	ug/L			12/12/25 11:05	1
Xylenes, Total	<3.00		3.00	1.10	ug/L			12/12/25 11:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	101		76 - 130		12/12/25 11:05	1

Eurofins Cedar Falls

# Client Sample Results

Client: SCS Engineers  
Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 310-322337-8**

Date Collected: 12/10/25 00:00

Matrix: Water

Date Received: 12/11/25 16:50

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
Toluene-d8 (Surr)	94		80 - 120		12/12/25 11:05	1
4-Bromofluorobenzene (Surr)	108		80 - 120		12/12/25 11:05	1

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# Definitions/Glossary

Client: SCS Engineers  
Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F2	MS/MSD RPD exceeds control limits

### Metals

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### General Chemistry

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.

## Glossary

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

# Surrogate Summary

Client: SCS Engineers  
Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DBFM	TOL	BFB
		(76-130)	(80-120)	(80-120)
310-322337-1	MW-8A	98	101	96
310-322337-1 MS	MW-8A	96	105	92
310-322337-1 MSD	MW-8A	99	103	93
310-322337-2	MW-10R	103	94	102
310-322337-2	MW-10R	114	87	101
310-322337-3	MW-11A	106	92	102
310-322337-4	MW-13R	102	91	101
310-322337-5	MW-14	107	90	103
310-322337-6	MW-17	106	91	96
310-322337-7	MW-D	107	92	103
310-322337-8	Trip Blank	101	94	108
LCS 310-476286/7	Lab Control Sample	98	100	100
LCS 310-476286/8	Lab Control Sample	97	103	93
LCS 310-476290/6	Lab Control Sample	101	98	104
LCS 310-476290/7	Lab Control Sample	107	95	106
LCS 310-476461/6	Lab Control Sample	102	95	98
LCS 310-476461/7	Lab Control Sample	110	90	103
MB 310-476286/6	Method Blank	98	101	98
MB 310-476290/5	Method Blank	108	94	106
MB 310-476461/5	Method Blank	111	87	102

#### Surrogate Legend

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 310-476286/6

Matrix: Water

Analysis Batch: 476286

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			12/12/25 10:16	1
1,1,1-Trichloroethane	<1.00		1.00	0.420	ug/L			12/12/25 10:16	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.350	ug/L			12/12/25 10:16	1
1,1,2-Trichloroethane	<1.00		1.00	0.330	ug/L			12/12/25 10:16	1
1,1-Dichloroethane	<1.00		1.00	0.400	ug/L			12/12/25 10:16	1
1,1-Dichloroethene	<2.00		2.00	0.460	ug/L			12/12/25 10:16	1
1,2,3-Trichloropropane	<1.00		1.00	0.430	ug/L			12/12/25 10:16	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			12/12/25 10:16	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			12/12/25 10:16	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			12/12/25 10:16	1
1,2-Dichloroethane	<1.00		1.00	0.890	ug/L			12/12/25 10:16	1
1,2-Dichloropropane	<1.00		1.00	0.380	ug/L			12/12/25 10:16	1
1,4-Dichlorobenzene	<1.00		1.00	0.490	ug/L			12/12/25 10:16	1
2-Butanone (MEK)	<10.0		10.0	3.40	ug/L			12/12/25 10:16	1
2-Hexanone	<10.0		10.0	3.80	ug/L			12/12/25 10:16	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	3.50	ug/L			12/12/25 10:16	1
Acetone	<10.0		10.0	3.80	ug/L			12/12/25 10:16	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			12/12/25 10:16	1
Benzene	<0.500		0.500	0.220	ug/L			12/12/25 10:16	1
Bromochloromethane	<5.00		5.00	1.70	ug/L			12/12/25 10:16	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			12/12/25 10:16	1
Bromoform	<5.00		5.00	2.60	ug/L			12/12/25 10:16	1
Bromomethane	<4.00		4.00	1.10	ug/L			12/12/25 10:16	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			12/12/25 10:16	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			12/12/25 10:16	1
Chlorobenzene	<1.00		1.00	0.350	ug/L			12/12/25 10:16	1
Chlorodibromomethane	<5.00		5.00	1.50	ug/L			12/12/25 10:16	1
Chloroethane	<4.00		4.00	0.900	ug/L			12/12/25 10:16	1
Chloroform	<3.00		3.00	1.30	ug/L			12/12/25 10:16	1
Chloromethane	<3.00		3.00	0.610	ug/L			12/12/25 10:16	1
cis-1,2-Dichloroethene	<1.00		1.00	0.550	ug/L			12/12/25 10:16	1
cis-1,3-Dichloropropene	<5.00		5.00	1.20	ug/L			12/12/25 10:16	1
Dibromomethane	<1.00		1.00	0.330	ug/L			12/12/25 10:16	1
Ethylbenzene	<1.00		1.00	0.420	ug/L			12/12/25 10:16	1
Iodomethane	<10.0		10.0	2.60	ug/L			12/12/25 10:16	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			12/12/25 10:16	1
Styrene	<1.00		1.00	0.370	ug/L			12/12/25 10:16	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			12/12/25 10:16	1
Toluene	<1.00		1.00	0.430	ug/L			12/12/25 10:16	1
trans-1,2-Dichloroethene	<1.00		1.00	0.410	ug/L			12/12/25 10:16	1
trans-1,3-Dichloropropene	<5.00		5.00	2.30	ug/L			12/12/25 10:16	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	2.40	ug/L			12/12/25 10:16	1
Trichloroethene	<1.00		1.00	0.350	ug/L			12/12/25 10:16	1
Trichlorofluoromethane	<4.00		4.00	0.470	ug/L			12/12/25 10:16	1
Vinyl acetate	<10.0		10.0	7.10	ug/L			12/12/25 10:16	1
Vinyl chloride	<1.00		1.00	0.430	ug/L			12/12/25 10:16	1
Xylenes, Total	<3.00		3.00	1.10	ug/L			12/12/25 10:16	1

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# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-476286/6

Matrix: Water

Analysis Batch: 476286

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	98		76 - 130		12/12/25 10:16	1
Toluene-d8 (Surr)	101		80 - 120		12/12/25 10:16	1
4-Bromofluorobenzene (Surr)	98		80 - 120		12/12/25 10:16	1

Lab Sample ID: LCS 310-476286/7

Matrix: Water

Analysis Batch: 476286

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	20.0	18.23		ug/L		91	69 - 130
1,1,2,2-Tetrachloroethane	20.0	20.36		ug/L		102	70 - 122
1,1,2-Trichloroethane	20.0	19.63		ug/L		98	75 - 121
1,1-Dichloroethane	20.0	19.43		ug/L		97	69 - 127
1,1-Dichloroethane	20.0	18.76		ug/L		94	64 - 134
1,2,3-Trichloropropane	20.0	21.25		ug/L		106	70 - 122
1,2-Dibromo-3-Chloropropane	20.0	17.98		ug/L		90	62 - 132
1,2-Dibromoethane (EDB)	20.0	18.21		ug/L		91	74 - 122
1,2-Dichlorobenzene	20.0	19.74		ug/L		99	74 - 120
1,2-Dichloroethane	20.0	19.11		ug/L		96	68 - 125
1,2-Dichloropropane	20.0	19.27		ug/L		96	72 - 128
1,4-Dichlorobenzene	20.0	19.57		ug/L		98	72 - 120
2-Butanone (MEK)	40.0	37.60		ug/L		94	60 - 134
2-Hexanone	40.0	39.01		ug/L		98	62 - 139
4-Methyl-2-pentanone (MIBK)	40.0	40.35		ug/L		101	62 - 136
Acetone	40.0	37.52		ug/L		94	59 - 136
Acrylonitrile	200	196.7		ug/L		98	50 - 150
Benzene	20.0	19.13		ug/L		96	71 - 125
Bromochloromethane	20.0	18.64		ug/L		93	69 - 131
Bromodichloromethane	20.0	18.36		ug/L		92	70 - 122
Bromoform	20.0	17.52		ug/L		88	62 - 122
Carbon disulfide	20.0	19.30		ug/L		96	58 - 137
Carbon tetrachloride	20.0	18.37		ug/L		92	63 - 136
Chlorobenzene	20.0	18.36		ug/L		92	74 - 120
Chlorodibromomethane	20.0	17.57		ug/L		88	69 - 121
Chloroform	20.0	18.17		ug/L		91	72 - 122
cis-1,2-Dichloroethene	20.0	18.29		ug/L		91	72 - 123
cis-1,3-Dichloropropene	20.0	18.83		ug/L		94	72 - 123
Dibromomethane	20.0	18.72		ug/L		94	72 - 122
Ethylbenzene	20.0	18.76		ug/L		94	75 - 120
Iodomethane	20.0	12.52		ug/L		63	18 - 150
Methylene Chloride	20.0	19.55		ug/L		98	72 - 128
Styrene	20.0	18.64		ug/L		93	74 - 122
Tetrachloroethene	20.0	17.61		ug/L		88	70 - 128
Toluene	20.0	18.64		ug/L		93	74 - 120
trans-1,2-Dichloroethene	20.0	19.10		ug/L		96	67 - 127
trans-1,3-Dichloropropene	20.0	18.56		ug/L		93	67 - 123
trans-1,4-Dichloro-2-butene	20.0	20.27		ug/L		101	50 - 150

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# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-476286/7

Matrix: Water

Analysis Batch: 476286

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Trichloroethene	20.0	18.90		ug/L		94	70 - 128
Vinyl acetate	40.0	37.81		ug/L		95	50 - 150
Xylenes, Total	40.0	36.27		ug/L		91	74 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	98		76 - 130
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120

Lab Sample ID: LCS 310-476286/8

Matrix: Water

Analysis Batch: 476286

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	14.82		ug/L		74	33 - 138
Chloroethane	20.0	18.77		ug/L		94	59 - 139
Chloromethane	20.0	19.77		ug/L		99	52 - 146
Trichlorofluoromethane	20.0	17.68		ug/L		88	55 - 150
Vinyl chloride	20.0	19.49		ug/L		97	60 - 142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	97		76 - 130
Toluene-d8 (Surr)	103		80 - 120
4-Bromofluorobenzene (Surr)	93		80 - 120

Lab Sample ID: 310-322337-1 MS

Matrix: Water

Analysis Batch: 476286

Client Sample ID: MW-8A

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	<1.00	F2	25.0	23.02		ug/L		92	55 - 121
1,1,1-Trichloroethane	<1.00	F2	25.0	20.55		ug/L		82	53 - 130
1,1,2,2-Tetrachloroethane	<1.00	F2	25.0	24.92		ug/L		100	55 - 123
1,1,2-Trichloroethane	<1.00	F2	25.0	23.23		ug/L		93	60 - 121
1,1-Dichloroethane	<1.00	F2	25.0	21.63		ug/L		87	53 - 127
1,1-Dichloroethane	<2.00	F2	25.0	20.68		ug/L		83	51 - 134
1,2,3-Trichloropropane	<1.00	F2	25.0	24.50		ug/L		98	56 - 122
1,2-Dibromo-3-Chloropropane	<1.20		25.0	19.62		ug/L		78	44 - 138
1,2-Dibromoethane (EDB)	<0.340	F2	25.0	22.37		ug/L		89	60 - 122
1,2-Dichlorobenzene	<1.00	F2	25.0	21.83		ug/L		87	60 - 120
1,2-Dichloroethane	<1.00	F2	25.0	21.38		ug/L		86	48 - 128
1,2-Dichloropropane	<1.00	F2	25.0	21.77		ug/L		87	59 - 128
1,4-Dichlorobenzene	<1.00	F2	25.0	21.51		ug/L		86	58 - 120
2-Butanone (MEK)	<10.0	F2	50.0	46.67		ug/L		93	46 - 134
2-Hexanone	<10.0	F2	50.0	46.90		ug/L		94	46 - 141
4-Methyl-2-pentanone (MIBK)	<10.0	F2	50.0	47.99		ug/L		96	49 - 138
Acetone	<10.0	F2	50.0	43.08		ug/L		86	39 - 141
Acrylonitrile	<10.0	F2	250	226.6		ug/L		91	41 - 150

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# QC Sample Results

Client: SCS Engineers  
Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-322337-1 MS

Matrix: Water

Analysis Batch: 476286

Client Sample ID: MW-8A

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier		Result	Qualifier				
Benzene	<0.500	F2	25.0	21.60		ug/L		86	48 - 125
Bromochloromethane	<5.00	F2	25.0	21.32		ug/L		85	55 - 131
Bromodichloromethane	<1.00	F2	25.0	20.59		ug/L		82	53 - 122
Bromoform	<5.00	F2	25.0	21.27		ug/L		85	47 - 122
Carbon disulfide	<1.00	F2	25.0	22.15		ug/L		89	45 - 137
Carbon tetrachloride	<2.00	F2	25.0	21.24		ug/L		85	45 - 136
Chlorobenzene	<1.00	F2	25.0	22.05		ug/L		88	59 - 120
Chlorodibromomethane	<5.00	F2	25.0	21.19		ug/L		85	53 - 121
Chloroform	<3.00	F2	25.0	20.20		ug/L		81	52 - 122
cis-1,2-Dichloroethene	<1.00	F2	25.0	21.31		ug/L		85	51 - 123
cis-1,3-Dichloropropene	<5.00	F2	25.0	22.04		ug/L		88	55 - 123
Dibromomethane	<1.00	F2	25.0	21.60		ug/L		86	57 - 122
Ethylbenzene	<1.00	F2	25.0	22.01		ug/L		88	53 - 120
Iodomethane	<10.0		25.0	13.22		ug/L		53	18 - 150
Methylene Chloride	<5.00	F2	25.0	22.27		ug/L		89	59 - 128
Styrene	<1.00	F2	25.0	22.53		ug/L		90	50 - 125
Tetrachloroethene	<1.00	F2	25.0	21.32		ug/L		85	51 - 128
Toluene	<1.00	F2	25.0	21.84		ug/L		87	52 - 120
trans-1,2-Dichloroethene	<1.00	F2	25.0	21.27		ug/L		85	53 - 127
trans-1,3-Dichloropropene	<5.00	F2	25.0	21.74		ug/L		87	50 - 123
trans-1,4-Dichloro-2-butene	<10.0	F2	25.0	22.59		ug/L		90	28 - 150
Trichloroethene	<1.00	F2	25.0	21.18		ug/L		85	50 - 128
Vinyl acetate	<10.0		50.0	42.01		ug/L		84	31 - 150
Xylenes, Total	<3.00	F2	50.0	42.57		ug/L		85	50 - 122

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	96		76 - 130
Toluene-d8 (Surr)	105		80 - 120
4-Bromofluorobenzene (Surr)	92		80 - 120

Lab Sample ID: 310-322337-1 MSD

Matrix: Water

Analysis Batch: 476286

Client Sample ID: MW-8A

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier		Result	Qualifier						
1,1,1,2-Tetrachloroethane	<1.00	F2	25.0	17.86	F2	ug/L		71	55 - 121	25	20
1,1,1-Trichloroethane	<1.00	F2	25.0	15.70	F2	ug/L		63	53 - 130	27	20
1,1,1,2,2-Tetrachloroethane	<1.00	F2	25.0	19.46	F2	ug/L		78	55 - 123	25	20
1,1,2-Trichloroethane	<1.00	F2	25.0	18.51	F2	ug/L		74	60 - 121	23	20
1,1-Dichloroethane	<1.00	F2	25.0	16.51	F2	ug/L		66	53 - 127	27	20
1,1-Dichloroethene	<2.00	F2	25.0	14.78	F2	ug/L		59	51 - 134	33	20
1,2,3-Trichloropropane	<1.00	F2	25.0	19.35	F2	ug/L		77	56 - 122	23	21
1,2-Dibromo-3-Chloropropane	<1.20		25.0	16.12		ug/L		64	44 - 138	20	24
1,2-Dibromoethane (EDB)	<0.340	F2	25.0	17.05	F2	ug/L		68	60 - 122	27	20
1,2-Dichlorobenzene	<1.00	F2	25.0	17.03	F2	ug/L		68	60 - 120	25	20
1,2-Dichloroethane	<1.00	F2	25.0	16.45	F2	ug/L		66	48 - 128	26	20
1,2-Dichloropropane	<1.00	F2	25.0	17.34	F2	ug/L		69	59 - 128	23	20
1,4-Dichlorobenzene	<1.00	F2	25.0	17.19	F2	ug/L		69	58 - 120	22	20

Eurofins Cedar Falls

# QC Sample Results

Client: SCS Engineers  
Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-322337-1 MSD

Matrix: Water

Analysis Batch: 476286

Client Sample ID: MW-8A

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
2-Butanone (MEK)	<10.0	F2	50.0	35.41	F2	ug/L		71	46 - 134	27	23
2-Hexanone	<10.0	F2	50.0	36.00	F2	ug/L		72	46 - 141	26	20
4-Methyl-2-pentanone (MIBK)	<10.0	F2	50.0	37.98	F2	ug/L		76	49 - 138	23	20
Acetone	<10.0	F2	50.0	33.89	F2	ug/L		68	39 - 141	24	23
Acrylonitrile	<10.0	F2	250	175.4	F2	ug/L		70	41 - 150	25	20
Benzene	<0.500	F2	25.0	16.33	F2	ug/L		65	48 - 125	28	20
Bromochloromethane	<5.00	F2	25.0	15.80	F2	ug/L		63	55 - 131	30	21
Bromodichloromethane	<1.00	F2	25.0	16.19	F2	ug/L		65	53 - 122	24	20
Bromoform	<5.00	F2	25.0	16.01	F2	ug/L		64	47 - 122	28	20
Carbon disulfide	<1.00	F2	25.0	16.09	F2	ug/L		64	45 - 137	32	24
Carbon tetrachloride	<2.00	F2	25.0	15.83	F2	ug/L		63	45 - 136	29	20
Chlorobenzene	<1.00	F2	25.0	16.82	F2	ug/L		67	59 - 120	27	20
Chlorodibromomethane	<5.00	F2	25.0	16.71	F2	ug/L		67	53 - 121	24	20
Chloroform	<3.00	F2	25.0	15.62	F2	ug/L		62	52 - 122	26	20
cis-1,2-Dichloroethene	<1.00	F2	25.0	15.85	F2	ug/L		63	51 - 123	29	20
cis-1,3-Dichloropropene	<5.00	F2	25.0	17.05	F2	ug/L		68	55 - 123	26	20
Dibromomethane	<1.00	F2	25.0	16.82	F2	ug/L		67	57 - 122	25	20
Ethylbenzene	<1.00	F2	25.0	17.22	F2	ug/L		69	53 - 120	24	20
Iodomethane	<10.0		25.0	12.27		ug/L		49	18 - 150	7	32
Methylene Chloride	<5.00	F2	25.0	16.62	F2	ug/L		66	59 - 128	29	20
Styrene	<1.00	F2	25.0	17.17	F2	ug/L		69	50 - 125	27	20
Tetrachloroethene	<1.00	F2	25.0	16.22	F2	ug/L		65	51 - 128	27	20
Toluene	<1.00	F2	25.0	16.61	F2	ug/L		66	52 - 120	27	20
trans-1,2-Dichloroethene	<1.00	F2	25.0	15.91	F2	ug/L		64	53 - 127	29	20
trans-1,3-Dichloropropene	<5.00	F2	25.0	17.50	F2	ug/L		70	50 - 123	22	20
trans-1,4-Dichloro-2-butene	<10.0	F2	25.0	17.62	F2	ug/L		70	28 - 150	25	24
Trichloroethene	<1.00	F2	25.0	15.91	F2	ug/L		64	50 - 128	28	20
Vinyl acetate	<10.0		50.0	32.56		ug/L		65	31 - 150	25	25
Xylenes, Total	<3.00	F2	50.0	32.88	F2	ug/L		66	50 - 122	26	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Dibromofluoromethane (Surr)	99		76 - 130
Toluene-d8 (Surr)	103		80 - 120
4-Bromofluorobenzene (Surr)	93		80 - 120

Lab Sample ID: MB 310-476290/5

Matrix: Water

Analysis Batch: 476290

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			12/12/25 09:57	1
1,1,1-Trichloroethane	<1.00		1.00	0.420	ug/L			12/12/25 09:57	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.350	ug/L			12/12/25 09:57	1
1,1,2-Trichloroethane	<1.00		1.00	0.330	ug/L			12/12/25 09:57	1
1,1-Dichloroethane	<1.00		1.00	0.400	ug/L			12/12/25 09:57	1
1,1-Dichloroethene	<2.00		2.00	0.460	ug/L			12/12/25 09:57	1
1,2,3-Trichloropropane	<1.00		1.00	0.430	ug/L			12/12/25 09:57	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			12/12/25 09:57	1

Eurofins Cedar Falls

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Lab Sample ID: MB 310-476290/5**

**Client Sample ID: Method Blank**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 476290**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			12/12/25 09:57	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			12/12/25 09:57	1
1,2-Dichloroethane	<1.00		1.00	0.890	ug/L			12/12/25 09:57	1
1,2-Dichloropropane	<1.00		1.00	0.380	ug/L			12/12/25 09:57	1
1,4-Dichlorobenzene	<1.00		1.00	0.490	ug/L			12/12/25 09:57	1
2-Butanone (MEK)	<10.0		10.0	3.40	ug/L			12/12/25 09:57	1
2-Hexanone	<10.0		10.0	3.80	ug/L			12/12/25 09:57	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	3.50	ug/L			12/12/25 09:57	1
Acetone	<10.0		10.0	3.80	ug/L			12/12/25 09:57	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			12/12/25 09:57	1
Benzene	<0.500		0.500	0.220	ug/L			12/12/25 09:57	1
Bromochloromethane	<5.00		5.00	1.70	ug/L			12/12/25 09:57	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			12/12/25 09:57	1
Bromoform	<5.00		5.00	2.60	ug/L			12/12/25 09:57	1
Bromomethane	<4.00		4.00	1.10	ug/L			12/12/25 09:57	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			12/12/25 09:57	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			12/12/25 09:57	1
Chlorobenzene	<1.00		1.00	0.350	ug/L			12/12/25 09:57	1
Chlorodibromomethane	<5.00		5.00	1.50	ug/L			12/12/25 09:57	1
Chloroethane	<4.00		4.00	0.900	ug/L			12/12/25 09:57	1
Chloroform	<3.00		3.00	1.30	ug/L			12/12/25 09:57	1
Chloromethane	<3.00		3.00	0.610	ug/L			12/12/25 09:57	1
cis-1,2-Dichloroethene	<1.00		1.00	0.550	ug/L			12/12/25 09:57	1
cis-1,3-Dichloropropene	<5.00		5.00	1.20	ug/L			12/12/25 09:57	1
Dibromomethane	<1.00		1.00	0.330	ug/L			12/12/25 09:57	1
Ethylbenzene	<1.00		1.00	0.420	ug/L			12/12/25 09:57	1
Iodomethane	<10.0		10.0	2.60	ug/L			12/12/25 09:57	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			12/12/25 09:57	1
Styrene	<1.00		1.00	0.370	ug/L			12/12/25 09:57	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			12/12/25 09:57	1
Toluene	<1.00		1.00	0.430	ug/L			12/12/25 09:57	1
trans-1,2-Dichloroethene	<1.00		1.00	0.410	ug/L			12/12/25 09:57	1
trans-1,3-Dichloropropene	<5.00		5.00	2.30	ug/L			12/12/25 09:57	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	2.40	ug/L			12/12/25 09:57	1
Trichloroethene	<1.00		1.00	0.350	ug/L			12/12/25 09:57	1
Trichlorofluoromethane	<4.00		4.00	0.470	ug/L			12/12/25 09:57	1
Vinyl acetate	<10.0		10.0	7.10	ug/L			12/12/25 09:57	1
Vinyl chloride	<1.00		1.00	0.430	ug/L			12/12/25 09:57	1
Xylenes, Total	<3.00		3.00	1.10	ug/L			12/12/25 09:57	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	108		76 - 130		12/12/25 09:57	1
Toluene-d8 (Surr)	94		80 - 120		12/12/25 09:57	1
4-Bromofluorobenzene (Surr)	106		80 - 120		12/12/25 09:57	1

Eurofins Cedar Falls

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-476290/6

Matrix: Water

Analysis Batch: 476290

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	20.0	19.73		ug/L		99	70 - 121
1,1,1-Trichloroethane	20.0	22.76		ug/L		114	69 - 130
1,1,2,2-Tetrachloroethane	20.0	19.70		ug/L		99	70 - 122
1,1,2-Trichloroethane	20.0	21.04		ug/L		105	75 - 121
1,1-Dichloroethane	20.0	19.81		ug/L		99	69 - 127
1,1-Dichloroethene	20.0	20.71		ug/L		104	64 - 134
1,2,3-Trichloropropane	20.0	19.92		ug/L		100	70 - 122
1,2-Dibromo-3-Chloropropane	20.0	20.08		ug/L		100	62 - 132
1,2-Dibromoethane (EDB)	20.0	19.13		ug/L		96	74 - 122
1,2-Dichlorobenzene	20.0	20.53		ug/L		103	74 - 120
1,2-Dichloroethane	20.0	20.76		ug/L		104	68 - 125
1,2-Dichloropropane	20.0	19.12		ug/L		96	72 - 128
1,4-Dichlorobenzene	20.0	21.27		ug/L		106	72 - 120
2-Butanone (MEK)	40.0	39.74		ug/L		99	60 - 134
2-Hexanone	40.0	40.98		ug/L		102	62 - 139
4-Methyl-2-pentanone (MIBK)	40.0	37.51		ug/L		94	62 - 136
Acetone	40.0	46.96		ug/L		117	59 - 136
Acrylonitrile	200	219.4		ug/L		110	50 - 150
Benzene	20.0	19.46		ug/L		97	71 - 125
Bromochloromethane	20.0	21.02		ug/L		105	69 - 131
Bromodichloromethane	20.0	20.28		ug/L		101	70 - 122
Bromoform	20.0	18.95		ug/L		95	62 - 122
Carbon disulfide	20.0	20.26		ug/L		101	58 - 137
Carbon tetrachloride	20.0	22.91		ug/L		115	63 - 136
Chlorobenzene	20.0	19.12		ug/L		96	74 - 120
Chlorodibromomethane	20.0	19.50		ug/L		97	69 - 121
Chloroform	20.0	19.91		ug/L		100	72 - 122
cis-1,2-Dichloroethene	20.0	20.65		ug/L		103	72 - 123
cis-1,3-Dichloropropene	20.0	19.26		ug/L		96	72 - 123
Dibromomethane	20.0	21.60		ug/L		108	72 - 122
Ethylbenzene	20.0	19.00		ug/L		95	75 - 120
Iodomethane	20.0	16.25		ug/L		81	18 - 150
Methylene Chloride	20.0	22.11		ug/L		111	72 - 128
Styrene	20.0	19.19		ug/L		96	74 - 122
Tetrachloroethene	20.0	19.92		ug/L		100	70 - 128
Toluene	20.0	19.19		ug/L		96	74 - 120
trans-1,2-Dichloroethene	20.0	21.56		ug/L		108	67 - 127
trans-1,3-Dichloropropene	20.0	17.28		ug/L		86	67 - 123
trans-1,4-Dichloro-2-butene	20.0	18.25		ug/L		91	50 - 150
Trichloroethene	20.0	19.27		ug/L		96	70 - 128
Vinyl acetate	40.0	38.07		ug/L		95	50 - 150
Xylenes, Total	40.0	38.28		ug/L		96	74 - 121

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	101		76 - 130
Toluene-d8 (Surr)	98		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120

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# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-476290/7

Matrix: Water

Analysis Batch: 476290

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	19.03		ug/L		95	33 - 138
Chloroethane	20.0	21.99		ug/L		110	59 - 139
Chloromethane	20.0	21.20		ug/L		106	52 - 146
Trichlorofluoromethane	20.0	23.01		ug/L		115	55 - 150
Vinyl chloride	20.0	22.56		ug/L		113	60 - 142

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	107		76 - 130
Toluene-d8 (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	106		80 - 120

Lab Sample ID: MB 310-476461/5

Matrix: Water

Analysis Batch: 476461

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			12/15/25 10:50	1
1,1,1-Trichloroethane	<1.00		1.00	0.420	ug/L			12/15/25 10:50	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.350	ug/L			12/15/25 10:50	1
1,1,2-Trichloroethane	<1.00		1.00	0.330	ug/L			12/15/25 10:50	1
1,1-Dichloroethane	<1.00		1.00	0.400	ug/L			12/15/25 10:50	1
1,1-Dichloroethene	<2.00		2.00	0.460	ug/L			12/15/25 10:50	1
1,2,3-Trichloropropane	<1.00		1.00	0.430	ug/L			12/15/25 10:50	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			12/15/25 10:50	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			12/15/25 10:50	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			12/15/25 10:50	1
1,2-Dichloroethane	<1.00		1.00	0.890	ug/L			12/15/25 10:50	1
1,2-Dichloropropane	<1.00		1.00	0.380	ug/L			12/15/25 10:50	1
1,4-Dichlorobenzene	<1.00		1.00	0.490	ug/L			12/15/25 10:50	1
2-Butanone (MEK)	<10.0		10.0	3.40	ug/L			12/15/25 10:50	1
2-Hexanone	<10.0		10.0	3.80	ug/L			12/15/25 10:50	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	3.50	ug/L			12/15/25 10:50	1
Acetone	<10.0		10.0	3.80	ug/L			12/15/25 10:50	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			12/15/25 10:50	1
Benzene	<0.500		0.500	0.220	ug/L			12/15/25 10:50	1
Bromochloromethane	<5.00		5.00	1.70	ug/L			12/15/25 10:50	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			12/15/25 10:50	1
Bromoform	<5.00		5.00	2.60	ug/L			12/15/25 10:50	1
Bromomethane	<4.00		4.00	1.10	ug/L			12/15/25 10:50	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			12/15/25 10:50	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			12/15/25 10:50	1
Chlorobenzene	<1.00		1.00	0.350	ug/L			12/15/25 10:50	1
Chlorodibromomethane	<5.00		5.00	1.50	ug/L			12/15/25 10:50	1
Chloroethane	<4.00		4.00	0.900	ug/L			12/15/25 10:50	1
Chloroform	<3.00		3.00	1.30	ug/L			12/15/25 10:50	1
Chloromethane	<3.00		3.00	0.610	ug/L			12/15/25 10:50	1
cis-1,2-Dichloroethene	<1.00		1.00	0.550	ug/L			12/15/25 10:50	1
cis-1,3-Dichloropropene	<5.00		5.00	1.20	ug/L			12/15/25 10:50	1

Eurofins Cedar Falls

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-476461/5

Matrix: Water

Analysis Batch: 476461

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Dibromomethane	<1.00		1.00	0.330	ug/L			12/15/25 10:50	1
Ethylbenzene	<1.00		1.00	0.420	ug/L			12/15/25 10:50	1
Iodomethane	<10.0		10.0	2.60	ug/L			12/15/25 10:50	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			12/15/25 10:50	1
Styrene	<1.00		1.00	0.370	ug/L			12/15/25 10:50	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			12/15/25 10:50	1
Toluene	<1.00		1.00	0.430	ug/L			12/15/25 10:50	1
trans-1,2-Dichloroethene	<1.00		1.00	0.410	ug/L			12/15/25 10:50	1
trans-1,3-Dichloropropene	<5.00		5.00	2.30	ug/L			12/15/25 10:50	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	2.40	ug/L			12/15/25 10:50	1
Trichloroethene	<1.00		1.00	0.350	ug/L			12/15/25 10:50	1
Trichlorofluoromethane	<4.00		4.00	0.470	ug/L			12/15/25 10:50	1
Vinyl acetate	<10.0		10.0	7.10	ug/L			12/15/25 10:50	1
Vinyl chloride	<1.00		1.00	0.430	ug/L			12/15/25 10:50	1
Xylenes, Total	<3.00		3.00	1.10	ug/L			12/15/25 10:50	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	111		76 - 130		12/15/25 10:50	1
Toluene-d8 (Surr)	87		80 - 120		12/15/25 10:50	1
4-Bromofluorobenzene (Surr)	102		80 - 120		12/15/25 10:50	1

Lab Sample ID: LCS 310-476461/6

Matrix: Water

Analysis Batch: 476461

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	20.0	24.14		ug/L		121	69 - 130
1,1,1,2-Tetrachloroethane	20.0	21.23		ug/L		106	70 - 122
1,1,2-Trichloroethane	20.0	23.83		ug/L		119	75 - 121
1,1-Dichloroethane	20.0	22.58		ug/L		113	69 - 127
1,1-Dichloroethene	20.0	23.01		ug/L		115	64 - 134
1,2,3-Trichloropropane	20.0	21.00		ug/L		105	70 - 122
1,2-Dibromo-3-Chloropropane	20.0	20.36		ug/L		102	62 - 132
1,2-Dibromoethane (EDB)	20.0	20.05		ug/L		100	74 - 122
1,2-Dichlorobenzene	20.0	22.40		ug/L		112	74 - 120
1,2-Dichloroethane	20.0	21.19		ug/L		106	68 - 125
1,2-Dichloropropane	20.0	22.25		ug/L		111	72 - 128
1,4-Dichlorobenzene	20.0	23.62		ug/L		118	72 - 120
2-Butanone (MEK)	40.0	42.55		ug/L		106	60 - 134
2-Hexanone	40.0	44.18		ug/L		110	62 - 139
4-Methyl-2-pentanone (MIBK)	40.0	39.16		ug/L		98	62 - 136
Acetone	40.0	49.50		ug/L		124	59 - 136
Acrylonitrile	200	262.9		ug/L		131	50 - 150
Benzene	20.0	22.25		ug/L		111	71 - 125
Bromochloromethane	20.0	23.59		ug/L		118	69 - 131
Bromodichloromethane	20.0	22.90		ug/L		114	70 - 122
Bromoform	20.0	21.10		ug/L		106	62 - 122

Eurofins Cedar Falls

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-476461/6

Matrix: Water

Analysis Batch: 476461

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon disulfide	20.0	22.86		ug/L		114	58 - 137
Carbon tetrachloride	20.0	25.18		ug/L		126	63 - 136
Chlorobenzene	20.0	21.31		ug/L		107	74 - 120
Chlorodibromomethane	20.0	21.13		ug/L		106	69 - 121
Chloroform	20.0	22.26		ug/L		111	72 - 122
cis-1,2-Dichloroethene	20.0	23.74		ug/L		119	72 - 123
cis-1,3-Dichloropropene	20.0	21.16		ug/L		106	72 - 123
Dibromomethane	20.0	23.94		ug/L		120	72 - 122
Ethylbenzene	20.0	20.74		ug/L		104	75 - 120
Iodomethane	20.0	15.26		ug/L		76	18 - 150
Methylene Chloride	20.0	25.88	*+	ug/L		129	72 - 128
Styrene	20.0	21.90		ug/L		110	74 - 122
Tetrachloroethene	20.0	23.69		ug/L		118	70 - 128
Toluene	20.0	21.46		ug/L		107	74 - 120
trans-1,2-Dichloroethene	20.0	23.90		ug/L		119	67 - 127
trans-1,3-Dichloropropene	20.0	18.59		ug/L		93	67 - 123
trans-1,4-Dichloro-2-butene	20.0	19.02		ug/L		95	50 - 150
Trichloroethene	20.0	21.79		ug/L		109	70 - 128
Vinyl acetate	40.0	43.06		ug/L		108	50 - 150
Xylenes, Total	40.0	42.09		ug/L		105	74 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	102		76 - 130
Toluene-d8 (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120

Lab Sample ID: LCS 310-476461/7

Matrix: Water

Analysis Batch: 476461

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	20.75		ug/L		104	33 - 138
Chloroethane	20.0	22.81		ug/L		114	59 - 139
Chloromethane	20.0	23.97		ug/L		120	52 - 146
Trichlorofluoromethane	20.0	23.95		ug/L		120	55 - 150
Vinyl chloride	20.0	24.45		ug/L		122	60 - 142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	110		76 - 130
Toluene-d8 (Surr)	90		80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

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

**Lab Sample ID: MB 310-476342/1-A**  
**Matrix: Water**  
**Analysis Batch: 477558**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 476342**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.00200		0.00200	0.00100	mg/L		12/12/25 13:40	12/30/25 13:13	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		12/12/25 13:40	12/30/25 13:13	1
Barium	<0.00200		0.00200	0.000660	mg/L		12/12/25 13:40	12/30/25 13:13	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		12/12/25 13:40	12/30/25 13:13	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		12/12/25 13:40	12/30/25 13:13	1
Chromium	<0.00500		0.00500	0.00180	mg/L		12/12/25 13:40	12/30/25 13:13	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		12/12/25 13:40	12/30/25 13:13	1
Copper	<0.00500		0.00500	0.00320	mg/L		12/12/25 13:40	12/30/25 13:13	1
Lead	<0.000500		0.000500	0.000330	mg/L		12/12/25 13:40	12/30/25 13:13	1
Nickel	<0.00500		0.00500	0.00230	mg/L		12/12/25 13:40	12/30/25 13:13	1
Selenium	<0.00500		0.00500	0.00140	mg/L		12/12/25 13:40	12/30/25 13:13	1
Silver	<0.00100		0.00100	0.000500	mg/L		12/12/25 13:40	12/30/25 13:13	1
Thallium	<0.00100		0.00100	0.000570	mg/L		12/12/25 13:40	12/30/25 13:13	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		12/12/25 13:40	12/30/25 13:13	1
Zinc	<0.0200		0.0200	0.0130	mg/L		12/12/25 13:40	12/30/25 13:13	1

**Lab Sample ID: LCS 310-476342/2-A**  
**Matrix: Water**  
**Analysis Batch: 477558**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 476342**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.2009		mg/L		100	80 - 120
Barium	0.100	0.1055		mg/L		106	80 - 120
Beryllium	0.100	0.1096		mg/L		110	80 - 120
Cadmium	0.100	0.1055		mg/L		106	80 - 120
Chromium	0.100	0.1086		mg/L		109	80 - 120
Cobalt	0.100	0.1031		mg/L		103	80 - 120
Copper	0.200	0.2172		mg/L		109	80 - 120
Lead	0.200	0.2180		mg/L		109	80 - 120
Nickel	0.200	0.2184		mg/L		109	80 - 120
Selenium	0.400	0.4157		mg/L		104	80 - 120
Silver	0.100	0.1207	*+	mg/L		121	80 - 120
Thallium	0.100	0.1028		mg/L		103	80 - 120
Vanadium	0.100	0.1056		mg/L		106	80 - 120
Zinc	0.200	0.2001		mg/L		100	80 - 120

**Lab Sample ID: 310-322337-1 DU**  
**Matrix: Water**  
**Analysis Batch: 477558**

**Client Sample ID: MW-8A**  
**Prep Type: Total/NA**  
**Prep Batch: 476342**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Antimony	<0.00200		<0.00200		mg/L		NC	20
Arsenic	0.00184	J	0.001766	J	mg/L		4	20
Barium	0.0202		0.02001		mg/L		1	20
Beryllium	<0.00100		<0.00100		mg/L		NC	20
Cadmium	0.000168	J	0.0001840	J	mg/L		9	20
Cobalt	0.00467		0.004624		mg/L		1	20
Copper	<0.00500		<0.00500		mg/L		NC	20

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# QC Sample Results

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

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

**Lab Sample ID: 310-322337-1 DU**  
**Matrix: Water**  
**Analysis Batch: 477558**

**Client Sample ID: MW-8A**  
**Prep Type: Total/NA**  
**Prep Batch: 476342**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Lead	<0.000500		<0.000500		mg/L		NC	20
Nickel	0.0331		0.03285		mg/L		0.8	20
Selenium	<0.00500		<0.00500		mg/L		NC	20
Thallium	<0.00100		<0.00100		mg/L		NC	20
Vanadium	0.00223	J	0.002123	J	mg/L		5	20
Zinc	<0.0200		<0.0200		mg/L		NC	20

**Lab Sample ID: 310-322337-1 DU**  
**Matrix: Water**  
**Analysis Batch: 477631**

**Client Sample ID: MW-8A**  
**Prep Type: Total/NA**  
**Prep Batch: 476342**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Chromium	<0.00500		<0.00500		mg/L		NC	20

## Method: I-3765-85 - Residue, Non-filterable (TSS)

**Lab Sample ID: MB 310-476449/1**  
**Matrix: Water**  
**Analysis Batch: 476449**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Suspended Solids	<5.00		5.00	3.50	mg/L			12/15/25 10:51	1

**Lab Sample ID: LCS 310-476449/2**  
**Matrix: Water**  
**Analysis Batch: 476449**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

**Lab Sample ID: MB 310-476514/1**  
**Matrix: Water**  
**Analysis Batch: 476514**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Suspended Solids	<5.00		5.00	3.50	mg/L			12/16/25 05:29	1

**Lab Sample ID: LCS 310-476514/2**  
**Matrix: Water**  
**Analysis Batch: 476514**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

# QC Association Summary

Client: SCS Engineers  
Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## GC/MS VOA

### Analysis Batch: 476286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-322337-1	MW-8A	Total/NA	Water	8260D	
MB 310-476286/6	Method Blank	Total/NA	Water	8260D	
LCS 310-476286/7	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-476286/8	Lab Control Sample	Total/NA	Water	8260D	
310-322337-1 MS	MW-8A	Total/NA	Water	8260D	
310-322337-1 MSD	MW-8A	Total/NA	Water	8260D	

### Analysis Batch: 476290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-322337-2	MW-10R	Total/NA	Water	8260D	
310-322337-3	MW-11A	Total/NA	Water	8260D	
310-322337-4	MW-13R	Total/NA	Water	8260D	
310-322337-5	MW-14	Total/NA	Water	8260D	
310-322337-6	MW-17	Total/NA	Water	8260D	
310-322337-7	MW-D	Total/NA	Water	8260D	
310-322337-8	Trip Blank	Total/NA	Water	8260D	
MB 310-476290/5	Method Blank	Total/NA	Water	8260D	
LCS 310-476290/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-476290/7	Lab Control Sample	Total/NA	Water	8260D	

### Analysis Batch: 476461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-322337-2	MW-10R	Total/NA	Water	8260D	
MB 310-476461/5	Method Blank	Total/NA	Water	8260D	
LCS 310-476461/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-476461/7	Lab Control Sample	Total/NA	Water	8260D	

## Metals

### Prep Batch: 476342

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-322337-1	MW-8A	Total/NA	Water	3005A	
310-322337-2	MW-10R	Total/NA	Water	3005A	
310-322337-3	MW-11A	Total/NA	Water	3005A	
310-322337-4	MW-13R	Total/NA	Water	3005A	
310-322337-5	MW-14	Total/NA	Water	3005A	
310-322337-6	MW-17	Total/NA	Water	3005A	
310-322337-7	MW-D	Total/NA	Water	3005A	
MB 310-476342/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-476342/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-322337-1 DU	MW-8A	Total/NA	Water	3005A	

### Analysis Batch: 477558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-322337-1	MW-8A	Total/NA	Water	6020B	476342
310-322337-2	MW-10R	Total/NA	Water	6020B	476342
310-322337-3	MW-11A	Total/NA	Water	6020B	476342
310-322337-4	MW-13R	Total/NA	Water	6020B	476342
310-322337-5	MW-14	Total/NA	Water	6020B	476342
310-322337-6	MW-17	Total/NA	Water	6020B	476342
310-322337-7	MW-D	Total/NA	Water	6020B	476342

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# QC Association Summary

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## Metals (Continued)

### Analysis Batch: 477558 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-476342/1-A	Method Blank	Total/NA	Water	6020B	476342
LCS 310-476342/2-A	Lab Control Sample	Total/NA	Water	6020B	476342
310-322337-1 DU	MW-8A	Total/NA	Water	6020B	476342

### Analysis Batch: 477631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-322337-1	MW-8A	Total/NA	Water	6020B	476342
310-322337-1 DU	MW-8A	Total/NA	Water	6020B	476342

## General Chemistry

### Analysis Batch: 476449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-322337-3	MW-11A	Total/NA	Water	I-3765-85	
310-322337-4	MW-13R	Total/NA	Water	I-3765-85	
310-322337-7	MW-D	Total/NA	Water	I-3765-85	
MB 310-476449/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-476449/2	Lab Control Sample	Total/NA	Water	I-3765-85	

### Analysis Batch: 476514

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-322337-1	MW-8A	Total/NA	Water	I-3765-85	
310-322337-2	MW-10R	Total/NA	Water	I-3765-85	
310-322337-5	MW-14	Total/NA	Water	I-3765-85	
310-322337-6	MW-17	Total/NA	Water	I-3765-85	
MB 310-476514/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-476514/2	Lab Control Sample	Total/NA	Water	I-3765-85	

# Lab Chronicle

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: MW-8A**  
 Date Collected: 12/10/25 09:35  
 Date Received: 12/11/25 16:50

**Lab Sample ID: 310-322337-1**  
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	476286	WSE8	EET CF	12/12/25 16:52
Total/NA	Prep	3005A			476342	RLT9	EET CF	12/12/25 13:40
Total/NA	Analysis	6020B		1	477558	NFT2	EET CF	12/30/25 14:04
Total/NA	Prep	3005A			476342	RLT9	EET CF	12/12/25 13:40
Total/NA	Analysis	6020B		1	477631	NFT2	EET CF	12/31/25 13:02
Total/NA	Analysis	I-3765-85		1	476514	DGU1	EET CF	12/16/25 05:29

**Client Sample ID: MW-10R**  
 Date Collected: 12/10/25 11:38  
 Date Received: 12/11/25 16:50

**Lab Sample ID: 310-322337-2**  
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	476290	WSE8	EET CF	12/12/25 13:20
Total/NA	Analysis	8260D		1	476461	WSE8	EET CF	12/15/25 12:43
Total/NA	Prep	3005A			476342	RLT9	EET CF	12/12/25 13:40
Total/NA	Analysis	6020B		1	477558	NFT2	EET CF	12/30/25 14:10
Total/NA	Analysis	I-3765-85		1	476514	DGU1	EET CF	12/16/25 05:29

**Client Sample ID: MW-11A**  
 Date Collected: 12/10/25 10:25  
 Date Received: 12/11/25 16:50

**Lab Sample ID: 310-322337-3**  
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	476290	WSE8	EET CF	12/12/25 13:43
Total/NA	Prep	3005A			476342	RLT9	EET CF	12/12/25 13:40
Total/NA	Analysis	6020B		1	477558	NFT2	EET CF	12/30/25 14:21
Total/NA	Analysis	I-3765-85		1	476449	DGU1	EET CF	12/15/25 10:51

**Client Sample ID: MW-13R**  
 Date Collected: 12/10/25 14:31  
 Date Received: 12/11/25 16:50

**Lab Sample ID: 310-322337-4**  
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	476290	WSE8	EET CF	12/12/25 14:05
Total/NA	Prep	3005A			476342	RLT9	EET CF	12/12/25 13:40
Total/NA	Analysis	6020B		1	477558	NFT2	EET CF	12/30/25 14:24
Total/NA	Analysis	I-3765-85		1	476449	DGU1	EET CF	12/15/25 10:51

**Client Sample ID: MW-14**  
 Date Collected: 12/10/25 12:28  
 Date Received: 12/11/25 16:50

**Lab Sample ID: 310-322337-5**  
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	476290	WSE8	EET CF	12/12/25 14:28

# Lab Chronicle

Client: SCS Engineers  
 Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

**Client Sample ID: MW-14**  
**Date Collected: 12/10/25 12:28**  
**Date Received: 12/11/25 16:50**

**Lab Sample ID: 310-322337-5**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			476342	RLT9	EET CF	12/12/25 13:40
Total/NA	Analysis	6020B		1	477558	NFT2	EET CF	12/30/25 14:27
Total/NA	Analysis	I-3765-85		1	476514	DGU1	EET CF	12/16/25 05:29

**Client Sample ID: MW-17**  
**Date Collected: 12/10/25 13:33**  
**Date Received: 12/11/25 16:50**

**Lab Sample ID: 310-322337-6**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	476290	WSE8	EET CF	12/12/25 14:51
Total/NA	Prep	3005A			476342	RLT9	EET CF	12/12/25 13:40
Total/NA	Analysis	6020B		1	477558	NFT2	EET CF	12/30/25 14:30
Total/NA	Analysis	I-3765-85		1	476514	DGU1	EET CF	12/16/25 05:29

**Client Sample ID: MW-D**  
**Date Collected: 12/10/25 10:25**  
**Date Received: 12/11/25 16:50**

**Lab Sample ID: 310-322337-7**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	476290	WSE8	EET CF	12/12/25 15:13
Total/NA	Prep	3005A			476342	RLT9	EET CF	12/12/25 13:40
Total/NA	Analysis	6020B		1	477558	NFT2	EET CF	12/30/25 14:33
Total/NA	Analysis	I-3765-85		1	476449	DGU1	EET CF	12/15/25 10:51

**Client Sample ID: Trip Blank**  
**Date Collected: 12/10/25 00:00**  
**Date Received: 12/11/25 16:50**

**Lab Sample ID: 310-322337-8**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	476290	WSE8	EET CF	12/12/25 11:05

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: SCS Engineers  
Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

## Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-25 *

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Method Summary

Client: SCS Engineers  
Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF

**Protocol References:**

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



310-322337 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>			
Client <u>SCS</u>			
City/State:	CITY <u>W. Des Moines</u>	STATE <u>IA</u>	Project.
<b>Receipt Information</b>			
Date/Time Received:	DATE <u>12-11-25</u>	TIME <u>1650</u>	Received By <u>PH</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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Cooler # ____ of ____			
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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes. Which VOA samples are in cooler? ↓ <u>All</u>			
<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>AA</u>		Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>-0.3</u>		Corrected Temp (°C): <u>-0.3</u>	
<b>• Sample Container Temperature</b>			
Container(s) used:	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
<b>Exceptions Noted</b>			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE If yes, contact PM before proceeding If no, proceed with login			
<b>Additional Comments</b>			

# Chain of Custody Record

**Eurofins TestAmerica, Cedar Falls**  
3019 Venture Way



Cedar Falls IA 50613-6907  
phone 319 277 2401 fax 319 277 2425

TestAmerica Laboratories, Inc. d/b/a Eurofins TestAmerica

Regulatory Program:  DW  NPDES  RCRA  Other

Project Manager: Sean Marczewski  
Email: smarczewski@sceengineers.com  
Cell 712-661-9682

Client Contact		Site Contact: Sean Marczewski		Date: 11/18/2025		COC No	
SCS Engineers		Lab Contact: Sam Miller		Carrier		of COCs	
1690 All-State Court, Suite 100		Appendix I				Sampler	
West Des Moines, IA 50265		Total Suspended Solids				For Lab Use Only.	
712-661-9682		Perform MS / MSD (Y / N)				Walk-in Client.	
Project Name: Harrison County - 2nd 2025 GW Event		Filtered Sample (Y / N)				Lab Sampling	
Site: Harrison County Sanitary Landfill		Trip Blank				Job / SDG No	
P O # 27224470 26							

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Analysis Turnaround Time		Sample Specific Notes
						CALENDAR DAYS	WORKING DAYS	
MW-8A	12/10/25	9:35				<input type="checkbox"/>	<input type="checkbox"/>	
MW-10R		11:38				<input type="checkbox"/>	<input type="checkbox"/>	
MW-11A		10:25				<input type="checkbox"/>	<input type="checkbox"/>	
MW-13R		14:31				<input type="checkbox"/>	<input type="checkbox"/>	
MW-14		12:28				<input type="checkbox"/>	<input type="checkbox"/>	
MW-16						<input type="checkbox"/>	<input type="checkbox"/>	
MW-17		13:33				<input type="checkbox"/>	<input type="checkbox"/>	
MW-D		10:25				<input type="checkbox"/>	<input type="checkbox"/>	
Trip Blank						<input checked="" type="checkbox"/>	<input type="checkbox"/>	Please include trip blanks in each cooler with VOC containers

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other

Possible Hazard Identification  
Are any samples from a listed EPA Hazardous Waste? Please list any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample

Special Instructions/QC Requirements & Comments:

Non-Hazardous  Flammable  Skin Irritant  Poison B  Unknown

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Cooler Temp (°C) Obs'd _____	Therm ID No _____
Relinquished by: <i>Michael Morgan</i>	Received by: _____	Company: _____
Relinquished by: _____	Date/Time: 12/11/25	Date/Time: _____
Relinquished by: _____	Date/Time: _____	Date/Time: _____
Relinquished by: _____	Received in Laboratory by: <i>[Signature]</i>	Company: _____
Relinquished by: _____	Date/Time: _____	Date/Time: 12/11/25

Form No. CA-C-WI-002, Rev 4.23, dated 4/16/2019



## Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-322337-1

SDG Number:

**Login Number: 322337**

**List Number: 1**

**Creator: Homolar, Dana J**

**List Source: Eurofins Cedar Falls**

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	

# Quantitation Limit Exceptions Summary

Client: SCS Engineers  
Project/Site: Harrison County - 2nd 2025 GW Event

Job ID: 310-322337-1

The requested project specific reporting limits listed below were less than laboratory standard quantitation limits (PQL) but greater than or equal to the laboratory method detection limits (MDL). It must be noted that results reported below lab standard quantitation limits may result in false positive/false negative values and less accurate quantitation. Routine laboratory procedures do not indicate corrective action for detections below the laboratory's PQL.

Method	Analyte	Matrix	Prep Type	Unit	Client RL	Lab PQL
8260D	1,2-Dibromo-3-Chloropropane	Water	Total/NA	ug/L	1.20	5.0
8260D	1,2-Dibromoethane (EDB)	Water	Total/NA	ug/L	0.340	1.0

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

## B-2: 2025 Data Validation Documentation

QA/QC Completed by: Michael Morgan  
 Sample Date: 2/25/2025  
 Site Name: Harrison County Sanitary Landfill  
 Sample Delivery Group: N/A  
 Project Type: Harrison County Sanitary Landfill - February 2025 Retest  
 Laboratory: Eurofins TestAmerica, Cedar Falls  
 Lab Job ID: 310-300963-1  
 Lab Report Date: 3/12/2025

	OK	NO	N/A	NOTES
<b>Sample Collection and Sample Holding</b>				
Chain of Custody	X			
Temperature	X			
Preservation	X			
Condition	X			
Correct Constituents Analyzed	X			
Case Narrative	X			
Holding Times	X			
<b>Analytical Sensitivity and Blanks</b>				
Method Blank Detections	X			
Trip Blank Detections	X			
<b>Accuracy</b>				
ICV/CCV	X			
LCS/LCSD	X			
MS/MSD	X			
Surrogates (organics only)	X			
<b>Precision</b>				
QA/QC Sample RPDs	X			
Field Duplicates			X	

QA/QC Completed by: Michael Morgan  
 Sample Date: 6/10/2025  
 Site Name: Harrison County Sanitary Landfill  
 Sample Delivery Group: N/A  
 Project Type: Harrison County Sanitary Landfill - 1<sup>st</sup> 2025 Semi-Annual Groundwater Sampling Event  
 Laboratory: Eurofins TestAmerica, Cedar Falls  
 Lab Job ID: 310-308641-1  
 Lab Report Date: 6/27/2025

	OK	NO	N/A	NOTES
<b>Sample Collection and Sample Holding</b>				
Chain of Custody	X			
Temperature	X			
Preservation		X		Method 6020B: The reference method requires samples to be preserved to a pH of <2. The following sample(s) was received with insufficient preservation at a pH of >2. The sample(s) was preserved to the appropriate pH in the laboratory.
Condition	X			
Correct Constituents Analyzed	X			
Case Narrative		X		Method 8260D: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container: Trip Blank 1 (310-308641-11).
Holding Times	X			
<b>Analytical Sensitivity and Blanks</b>				
Method Blank Detections	X			
Trip Blank Detections	X			
<b>Accuracy</b>				
ICV/CCV		X		Method 8260D: The continuing calibration verification (CCV) associated with batch 310-457531 recovered outside of the control 'limits for trans-1,3-Dichloropropene (-24.7%) and Chlorodibromomethane (-20.7%D). A CCV standard at or below the reporting 'limit (RL) was analyzed with the affected samples and found to be acceptable. The samples associated with this CCV were nondetects 'for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 310-457531/3).
LCS/LCSD	X			
MS/MSD	X			
Surrogates (organics only)	X			
<b>Precision</b>				
QA/QC Sample RPDs	X			
Field Duplicates	X			A field duplicate sample was collected at MW-11A. RPD for analyzed parameters was <50%.

QA/QC Completed by: Michael Morgan  
 Sample Date: 11/18/2025  
 Site Name: Harrison County Sanitary Landfill  
 Sample Delivery Group: N/A  
 Project Type: Harrison County Sanitary Landfill - November 2025 Retest  
 Laboratory: Eurofins TestAmerica, Cedar Falls  
 Lab Job ID: 310-321078-1  
 Lab Report Date: 12/3/2025

	OK	NO	N/A	NOTES
<b>Sample Collection and Sample Holding</b>				
Chain of Custody	X			
Temperature	X			
Preservation	X			
Condition	X			
Correct Constituents Analyzed	X			
Case Narrative	X			
Holding Times	X			
<b>Analytical Sensitivity and Blanks</b>				
Method Blank Detections	X			
Trip Blank Detections	X			
<b>Accuracy</b>				
ICV/CCV	X			
LCS/LCSD	X			
MS/MSD	X			
Surrogates (organics only)	X			
<b>Precision</b>				
QA/QC Sample RPDs	X			
Field Duplicates			X	

QA/QC Completed by: Michael Morgan  
 Sample Date: 12/10/2025  
 Site Name: Harrison County Sanitary Landfill  
 Sample Delivery Group: N/A  
 Project Type: Harrison County Sanitary Landfill - 2<sup>nd</sup> 2025 Semi-Annual Groundwater Sampling Event  
 Laboratory: Eurofins TestAmerica, Cedar Falls  
 Lab Job ID: 310-322337-1  
 Lab Report Date: 12/31/2025

	OK	NO	N/A	NOTES
<b>Sample Collection and Sample Holding</b>				
Chain of Custody	X			
Temperature	X			
Preservation	X			
Condition	X			
Correct Constituents Analyzed	X			
Case Narrative	X			
Holding Times	X			
<b>Analytical Sensitivity and Blanks</b>				
Method Blank Detections	X			
Trip Blank Detections	X			
<b>Accuracy</b>				
ICV/CCV		X		<p>Method 8260D: The continuing calibration verification (CCV) associated with batch 310-476290 recovered above the upper control limit for Carbon tetrachloride (25%D). The LCS associated with this CCV passed CCV criteria for the affected analyte; therefore, the data have been reported. The associated sample is:(CCV 310-476290/3).</p> <p>Method 8260D: The continuing calibration verification (CCV) associated with batch 310-476286 recovered outside of the control limits for Bromomethane (-26%D). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-476286/4).</p>
LCS/LCSD		X		<p>Method 8260D: The laboratory control sample (LCS) for analytical batch 310-476461 recovered outside control limits for the following analyte: Methylene Chloride. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.</p> <p>Method 6020B: The laboratory control sample (LCS) for preparation batch 310-476342 and analytical batch 310-477558 recovered outside control limits for the following analytes: silver. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.</p>
MS/MSD	X			
Surrogates (organics only)	X			
<b>Precision</b>				
QA/QC Sample RPDs	X			
Field Duplicates	X			A field duplicate sample was collected at MW-11A. RPD for analyzed parameters was <50%.



# Appendix C

## Summary of Groundwater Chemistry

# SCS ENGINEERS

## Summary of Groundwater Chemistry

Harrison County Sanitary Landfill - 43-SDP-05-94P

Total Metals Constituents	Sample Date	MW-1A UPG	MW-14 UPG	MW-4A DNG	MW-5A DNG	MW-8A DNG	MW-10R DNG	MW-11A DNG	MW-13R DNG	MW-17 DNG
Antimony, mg/L (CAS NO - 7440-36-0)	6/10/2025	< 0.002	< 0.002	< 0.002	0.00101*	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A
	12/10/2025	N/A	< 0.002	N/A	N/A	< 0.002	< 0.002	0.00162*	< 0.002	< 0.002
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A
Arsenic, mg/L (CAS NO - 7440-38-2)	6/10/2025	0.000841*	0.00266	0.00158*	0.00429	0.00384	0.000691*	0.00519	0.00159*	0.000787*
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	0.00522	N/A	N/A
	11/18/2025	N/A	N/A	N/A	N/A	0.00134*	N/A	N/A	N/A	N/A
	12/10/2025	N/A	0.00248	N/A	N/A	0.00184*	0.00101*	0.00592	0.00153*	0.000901*
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	0.00588	N/A	N/A
Barium, mg/L (CAS NO - 7440-39-3)	6/10/2025	0.721	0.203	0.553	0.406	0.032	0.0631	0.0149	0.0717	0.0254
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	0.0145	N/A	N/A
	12/10/2025	N/A	0.209	N/A	N/A	0.0202	0.0698	0.0149	0.0935	0.0216
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	0.0148	N/A	N/A
Beryllium, mg/L (CAS NO - 7440-41-7)	6/10/2025	N/A	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	12/10/2025	N/A	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
Cadmium, mg/L (CAS NO - 7440-43-9)	6/10/2025	N/A	< 0.0002	N/A	N/A	0.00146	< 0.0002	0.000643	< 0.0002	0.000102*
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	0.000629	N/A	N/A
	12/10/2025	N/A	< 0.0002	N/A	N/A	0.000168*	< 0.0002	0.000562	< 0.0002	< 0.0002
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	0.00056	N/A	N/A
Chromium, mg/L (CAS NO - 7440-47-3)	6/10/2025	N/A	< 0.005	N/A	N/A	< 0.005	< 0.005	< 0.005	< 0.005	0.00207*
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	12/10/2025	N/A	< 0.005	N/A	N/A	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
Cobalt, mg/L (CAS NO - 7440-48-4)	6/10/2025	< 0.0005	< 0.0005	< 0.0005	0.00358	0.00667	0.000246*	0.000621	0.000203*	0.000932
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	0.000635	N/A	N/A
	12/10/2025	N/A	< 0.0005	N/A	N/A	0.00467	0.000675	0.00167	0.0002*	0.000298*
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	0.00171	N/A	N/A
Copper, mg/L (CAS NO - 7440-50-8)	6/10/2025	0.00378*	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	12/10/2025	N/A	< 0.005	N/A	N/A	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
Lead, mg/L (CAS NO - 7439-92-1)	6/10/2025	< 0.0005	< 0.0005	< 0.0005	0.000591	0.000416*	< 0.0005	< 0.0005	< 0.0005	0.000702
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A
	12/10/2025	N/A	< 0.0005	N/A	N/A	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A
Nickel, mg/L (CAS NO - 7440-02-0)	6/10/2025	0.00394*	< 0.005	< 0.005	0.013	0.0353	< 0.005	0.0127	< 0.005	0.00372*
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	0.0127	N/A	N/A
	12/10/2025	N/A	< 0.005	N/A	N/A	0.0331	< 0.005	0.0116	< 0.005	< 0.005
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	0.0117	N/A	N/A
Selenium, mg/L (CAS NO - 7782-49-2)	6/10/2025	N/A	< 0.005	N/A	N/A	< 0.005	0.0079	< 0.005	< 0.005	< 0.005
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	12/10/2025	N/A	< 0.005	N/A	N/A	< 0.005	0.0039*	< 0.005	< 0.005	< 0.005
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
Silver, mg/L (CAS NO - 7440-22-4)	6/10/2025	N/A	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	12/10/2025	N/A	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
Thallium, mg/L (CAS NO - 7440-28-0)	6/10/2025	N/A	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	12/10/2025	N/A	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
Vanadium, mg/L (CAS NO - 7440-62-2)	6/10/2025	N/A	< 0.005	N/A	N/A	< 0.005	0.00299*	< 0.005	< 0.005	0.00206*
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	12/10/2025	N/A	< 0.005	N/A	N/A	0.00223*	0.00287*	< 0.005	< 0.005	0.00175*
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
Zinc, mg/L (CAS NO - 7440-66-6)	6/10/2025	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A
	12/10/2025	N/A	< 0.02	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A
Total Suspended Solids, mg/L (CAS NO - TSS)	6/10/2025	3	4	2.38	32.3	17	< 1.88	< 3.75	3.75	64
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1.88	N/A	N/A
	11/18/2025	N/A	N/A	N/A	N/A	3.87	N/A	N/A	N/A	N/A
	12/10/2025	N/A	5.13	N/A	N/A	1.75*	2	< 1.88	2.38	< 1.88
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1.88	N/A	N/A

Note: \* indicates 'J flag'. Detection is below the reporting limit, but greater than the MDL (Method Detection Limit). The concentration is estimated.

**Denotes Detection.**

**Denotes Confirmed Outlier. Statistically Excluded.**

Sampling performed over multiple dates is recorded on the first date sampled. Refer to field forms for exact sample date.

# SCS ENGINEERS

## Summary of Groundwater Chemistry

Harrison County Sanitary Landfill - 43-SDP-05-94P

Appendix I VOC Constituents	Sample Date	MW-1A UPG	MW-14 UPG	MW-4A DNG	MW-5A DNG	MW-8A DNG	MW-10R DNG	MW-11A DNG	MW-13R DNG	MW-17 DNG
1,1,1,2-Tetrachloroethane, ug/L (CAS NO - 630-20-6)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,1,1-Trichloroethane, ug/L (CAS NO - 71-55-6)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,1,2,2-Tetrachloroethane, ug/L (CAS NO - 79-34-5)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,1,2-Trichloroethane, ug/L (CAS NO - 79-00-5)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,1-Dichloroethane, ug/L (CAS NO - 75-34-3)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,1-Dichloroethene, ug/L (CAS NO - 75-35-4)	6/10/2025	N/A	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	12/10/2025	N/A	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
1,2,3-Trichloropropane, ug/L (CAS NO - 96-18-4)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,2-Dibromo-3-Chloropropane, ug/L (CAS NO - 96-12-8)	6/10/2025	N/A	< 1.2	N/A	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A
	12/10/2025	N/A	< 1.2	N/A	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A
1,2-Dibromoethane [EDB], ug/L (CAS NO - 106-93-4)	6/10/2025	N/A	< 0.34	N/A	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A
	12/10/2025	N/A	< 0.34	N/A	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A
1,2-Dichlorobenzene, ug/L (CAS NO - 95-50-1)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,2-Dichloroethane, ug/L (CAS NO - 107-06-2)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,2-Dichloropropane, ug/L (CAS NO - 78-87-5)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,4-Dichlorobenzene, ug/L (CAS NO - 106-46-7)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
2-Butanone, ug/L (CAS NO - 78-93-3)	6/10/2025	N/A	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	12/10/2025	N/A	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
2-Hexanone, ug/L (CAS NO - 591-78-6)	6/10/2025	N/A	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	12/10/2025	N/A	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
4-Methyl-2-Pentanone, ug/L (CAS NO - 108-10-1)	6/10/2025	N/A	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	12/10/2025	N/A	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
Acetone, ug/L (CAS NO - 67-64-1)	6/10/2025	N/A	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	5.52*	N/A	N/A
	12/10/2025	N/A	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
Acrylonitrile, ug/L (CAS NO - 107-13-1)	6/10/2025	N/A	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	12/10/2025	N/A	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
Benzene, ug/L (CAS NO - 71-43-2)	6/10/2025	N/A	< 0.5	N/A	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A
	12/10/2025	N/A	< 0.5	N/A	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A

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## Summary of Groundwater Chemistry

Harrison County Sanitary Landfill - 43-SDP-05-94P

Appendix I VOC Constituents	Sample Date	MW-1A UPG	MW-14 UPG	MW-4A DNG	MW-5A DNG	MW-8A DNG	MW-10R DNG	MW-11A DNG	MW-13R DNG	MW-17 DNG
Bromochloromethane, ug/L (CAS NO - 74-97-5)	6/10/2025	N/A	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	12/10/2025	N/A	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
Bromodichloromethane, ug/L (CAS NO - 75-27-4)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Bromoform, ug/L (CAS NO - 75-25-2)	6/10/2025	N/A	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	12/10/2025	N/A	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
Bromomethane, ug/L (CAS NO - 74-83-9)	6/10/2025	N/A	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	12/10/2025	N/A	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
Carbon Disulfide, ug/L (CAS NO - 75-15-0)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Carbon Tetrachloride, ug/L (CAS NO - 56-23-5)	6/10/2025	N/A	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	12/10/2025	N/A	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
Chlorobenzene, ug/L (CAS NO - 108-90-7)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Chlorodibromomethane, ug/L (CAS NO - 124-48-1)	6/10/2025	N/A	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	12/10/2025	N/A	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
Chloroethane, ug/L (CAS NO - 75-00-3)	6/10/2025	N/A	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	12/10/2025	N/A	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
Chloroform, ug/L (CAS NO - 67-66-3)	6/10/2025	N/A	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	12/10/2025	N/A	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
Chloromethane, ug/L (CAS NO - 74-87-3)	6/10/2025	N/A	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	12/10/2025	N/A	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
cis-1,2-Dichloroethene, ug/L (CAS NO - 156-59-2)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
cis-1,3-Dichloropropene, ug/L (CAS NO - 10061-01-5)	6/10/2025	N/A	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	12/10/2025	N/A	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
Ethylbenzene, ug/L (CAS NO - 100-41-4)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Iodomethane, ug/L (CAS NO - 74-88-4)	6/10/2025	N/A	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	12/10/2025	N/A	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
Methylene Bromide, ug/L (CAS NO - 74-95-3)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Methylene Chloride, ug/L (CAS NO - 75-09-2)	6/10/2025	N/A	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	12/10/2025	N/A	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
Styrene, ug/L (CAS NO - 100-42-5)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Tetrachloroethene, ug/L (CAS NO - 127-18-4)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A

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## Summary of Groundwater Chemistry

Harrison County Sanitary Landfill - 43-SDP-05-94P

Appendix I VOC Constituents	Sample Date	MW-1A UPG	MW-14 UPG	MW-4A DNG	MW-5A DNG	MW-8A DNG	MW-10R DNG	MW-11A DNG	MW-13R DNG	MW-17 DNG
Toluene, ug/L (CAS NO - 108-88-3)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
trans-1,2-Dichloroethene, ug/L (CAS NO - 156-60-5)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
trans-1,3-Dichloropropene, ug/L (CAS NO - 10061-02-6)	6/10/2025	N/A	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	12/10/2025	N/A	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
trans-1,4-Dichloro-2-Butene, ug/L (CAS NO - 110-57-6)	6/10/2025	N/A	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	12/10/2025	N/A	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
Trichloroethene, ug/L (CAS NO - 79-01-6)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Trichlorofluoromethane, ug/L (CAS NO - 75-69-4)	6/10/2025	N/A	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	12/10/2025	N/A	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
Vinyl Acetate, ug/L (CAS NO - 108-05-4)	6/10/2025	N/A	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	12/10/2025	N/A	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
Vinyl Chloride, ug/L (CAS NO - 75-01-4)	6/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	12/10/2025	N/A	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Xylenes, total, ug/L (CAS NO - 1330-20-7)	6/10/2025	N/A	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3
	6/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	12/10/2025	N/A	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3
	12/10/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A

Note: \* indicates 'J flag'. Detection is below the reporting limit, but greater than the MDL (Method Detection Limit). The concentration is estimated.

**Denotes Detection.**

**Denotes Confirmed Outlier. Statistically Excluded.**

Sampling performed over multiple dates is recorded on the first date sampled. Refer to field forms for exact sample date.

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## Summary of Groundwater Chemistry

Harrison County Sanitary Landfill - 43-SDP-05-94P

Other Constituents	Sample Date	MW-1A UPG	MW-14 UPG	MW-4A DNG	MW-5A DNG	MW-8A DNG	MW-10R DNG	MW-11A DNG	MW-13R DNG	MW-17 DNG
Di-n-butyl phthalate, ug/L (CAS NO - 84-74-2)	2/25/2025	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A

Note: \* indicates 'J flag'. Detection is below the reporting limit, but greater than the MDL (Method Detection Limit). The concentration is estimated.

**Denotes Detection.**

**Denotes Confirmed Outlier. Statistically Excluded.**

Sampling performed over multiple dates is recorded on the first date sampled. Refer to field forms for exact sample date.



Appendix D  
Summary of Statistical Methodology

# SUMMARY OF STATISTICAL METHODOLOGY

## Purpose

The purpose of this document is to provide the statistical method used in the evaluation of groundwater analytical data collected from the groundwater monitoring network of the municipal solid waste landfill (MSWLF) unit at the Harrison County Sanitary Landfill (Landfill).

## Statistical Method

### Diagnostic and Exploratory Evaluations and Tests of Assumptions

The detection monitoring statistical programs includes diagnostic and exploratory evaluations and statistical tests of assumptions, as appropriate, including the following:

- Time Series Plots
- Shapiro-Wilk test for normality
- Ohio Environmental Protection Agency (EPA) Method for identification of outliers
- Mann-Kendall/Sen's Slope trend test

### Management of Non-Detect Data

Non-detect values in the dataset are managed using simple substitution or the Kaplan-Meier estimator. If less than 15% of the data are non-detects, simple substitution is used, where non-detect values are assigned a concentration of one-half ( $\frac{1}{2}$ ) of the practical quantification limit (PQL). If greater than 15% but less than 50% of the data are non-detects, the Kaplan-Meier estimator is used to define the distribution of the dataset. If non-detects comprise greater than 50% of the available data, non-parametric statistical methods are used.

### Management of Outliers

Background datasets are evaluated for outliers using the Ohio EPA Method included in the Sanitas™ statistical software program and described below, which includes the use of Dixon's, Rosner's, and Tukey's outlier tests, as appropriate based on the diagnostic tests, for the datasets that contain less than 75% of the measured concentrations below the PQL. Outliers are not confirmed unless a physical cause or explanation for the outlier is determined.

### Management of Data (ND data < 75%)

If less than 75% of the background dataset is below the PQL, outliers are statistically evaluated using the following guidelines.

- A parametric dataset with  $n < 20$  is evaluated with the Dixon's outlier test.
- A parametric dataset with  $n \geq 20$  is evaluated with the Rosner's outlier test.
- A non-parametric dataset is evaluated with the Tukey's outlier test.

In accordance with the Ohio EPA Method, if a statistically significant outlier is not found using the above tests, but the highest value data point exceeds the second highest data point by an order of magnitude, the highest point is considered an outlier.

### ***Management of Data (ND data $\geq$ 75%)***

If greater than or equal to 75% of the background dataset is less than the PQL, outliers are statistically evaluated using the following guidelines.

- Single detection  $\geq$  the PQL:
  - If  $\geq$  50% of the background dataset has detections  $\geq$  the method detection limit (MDL), any value  $\geq$  two times the PQL of background is considered an outlier.
  - If  $<$  50% of the background dataset has detections  $\geq$  the MDL, any value  $\geq$  the PQL of background is considered an outlier.
- Two or more detections  $\geq$  the PQL:
  - If  $\geq$  50% of the background dataset has detections  $\geq$  the MDL, any value  $\geq$  three times the PQL of background is considered an outlier.
  - If  $<$  50% of the background dataset has detections  $\geq$  the MDL, any value  $\geq$  two times the PQL of background is considered an outlier.

Confirmed outliers, if any, are shown in the Summary of Groundwater Chemistry included in the Annual Water Quality Report.

### ***Detection Monitoring Statistical Program***

The detection monitoring statistical program for the Landfill is defined by Iowa Administrative Code (IAC) 567-113.10(4) "g". Intrawell prediction limits with retesting were selected as the appropriate statistical method for the determination of statistically significant increases (SSIs) over background for inorganic constituents with historic detections in background. Prediction limits are established using the process below. Data from the most recent sampling event is compared to the prediction limits for the determination of SSIs.

### ***Intrawell Prediction Limits with Retesting***

- If the dataset has a normal distribution (or can be transformed to a normal distribution using Ladder of Powers), parametric intrawell prediction limits are calculated if at least five datasets have been collected from the background dataset.
- If the dataset does not have a normal distribution (and cannot be transformed to a normal distribution using Ladder of Powers) or has greater than 50% non-detects, non-parametric intrawell prediction limits are calculated if at least five datasets have been collected from the background dataset.
- If an SSI above the prediction limit is indicated, retesting samples using the 1-of-2 retesting scheme should be collected prior to the next regularly scheduled sampling event with temporal sample spacing consideration to provide samples with greater independence. If all of the retesting results are above the prediction limit, the SSI is confirmed, and the monitoring point should be placed into the assessment monitoring program. If any retesting sample concentration is below the prediction limit, the SSI is not confirmed, and the monitoring point continues in the detection monitoring program.

### ***Updating the Background Dataset for Intrawell Prediction Limits***

If no SSI is confirmed for any two-year period, the intrawell background dataset is updated using the following procedure:

- Test the new dataset for normal distribution either outright or through a transformation using Ladder of Powers using the Shapiro-Wilk test.
- Test the new dataset for statistically significant outliers using the Ohio EPA Method, and remove the confirmed outliers (see the “Management of Outliers” section).
- Test the new dataset for statistically significant trends using the Mann-Kendall/Sen’s Slope trend test. If a statistically significantly increasing trend is detected, the monitoring point will be placed into the assessment monitoring program or treated with the leachate, whichever is appropriate.
- If the dataset has a normal distribution and no statistically significant increasing trend is present, a two-sample Welch’s t-test at a 0.01 significance level is performed to compare current background to the most recent two years of detection monitoring data. If the Welch’s t-test is significant and shows that the most recent two years of concentration data appear to be increasing, the background will not be updated.
- If the dataset does not have a normal distribution and no statistically significant increasing trend is present, a two-sample non-parametric Wilcoxon rank-sum test (also known as the Mann-Whitney test) at a 0.01 significance level is performed to compare current background to the most recent two years of detection monitoring data. If the Wilcoxon rank-sum test is significant and shows that the most recent two years of concentration data appear to be increasing, the background will not be updated.
- If the Welch’s t-test or the Wilcoxon rank-sum tests are not significant, the most recent two years of detection data will be added to the intrawell background dataset.

The process will repeat every two years in which an SSI is not confirmed.

### ***Double Quantification Method***

The quasi-statistical “double quantification” method is used for constituents not detected in the background monitoring set. If a constituent is detected in the compliance dataset that has not been historically detected in the background dataset, that constituent must be retested for prior to the next regularly scheduled sampling event. If the retesting results confirm the original detection with a quantifiable detection, the SSI is confirmed, and the monitoring point must be placed into the assessment monitoring program.

### ***Assessment Monitoring Statistical Program***

#### ***Interwell Prediction Limits***

Interwell prediction limits were selected as the appropriate statistical method for the determination of statistically significant increases (SSIs) over background for inorganic constituents with historical detections in background. Prediction limits are established using the process below. Data from the most recent sampling event is compared to the prediction limits for the determination of SSIs.

- If the dataset has a normal distribution (or can be transformed to a normal distribution using Ladder of Powers), parametric interwell prediction limits are calculated if at least five datasets have been collected from the background monitoring point(s).
- If the dataset does not have a normal distribution (and cannot be transformed to a normal distribution using Ladder of Powers) or has greater than 50% non-detects, nonparametric interwell prediction limits are calculated if at least five datasets have been collected from the background monitoring point(s).

### ***Confidence Intervals or Confidence Bands***

Confidence intervals or confidence bands, as appropriate, were selected as the appropriate statistical methods for comparison of the groundwater analytical data against a fixed groundwater protection standard (GWPS). In the event that a monitoring well enters into assessment monitoring, the assessment monitoring statistical evaluations will be performed using the most recent eight samples or all samples if less than eight samples are available. The confidence intervals or confidence bands used for the assessment monitoring statistical evaluation will be established using the process below. Transformation of the distribution will not be considered.

- A parametric confidence interval around a normal mean will be calculated if the dataset has a normal distribution and no statistically significant trend is present.
- A non-parametric confidence interval around a median will be calculated if the dataset does not have a normal distribution and no statistically significant trend is present.
- Non-parametric confidence bands around a Theil-Sen trend line will be calculated if the dataset has a statistically significant trend.

In the event that the lower confidence limit or any part of the lower confidence band, as appropriate, exceeds the GWPS, then the monitoring point is declared out of compliance, and an assessment of corrective measures (ACM) is required.

Statistical output for the reporting period statistical evaluations are included in Attachment A, Spring 2025 Statistical Evaluation Output, and Attachment B, Fall 2025 Statistical Evaluation Output.

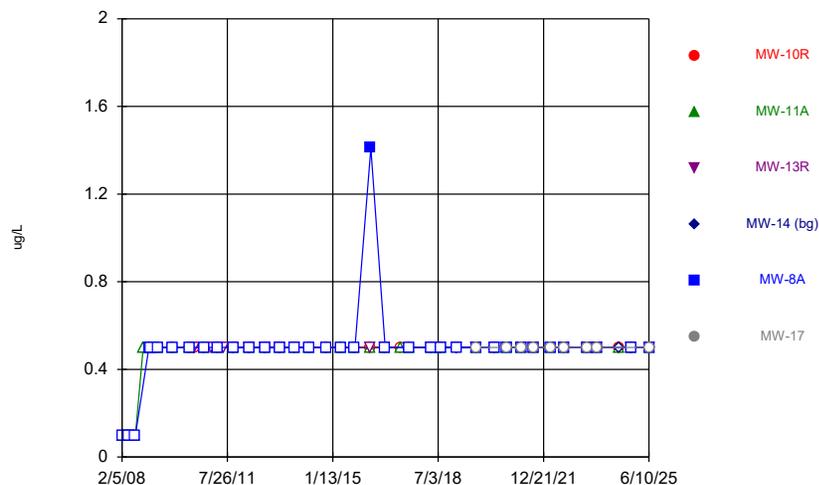


Attachment A  
Spring 2025 Statistical Evaluation Output



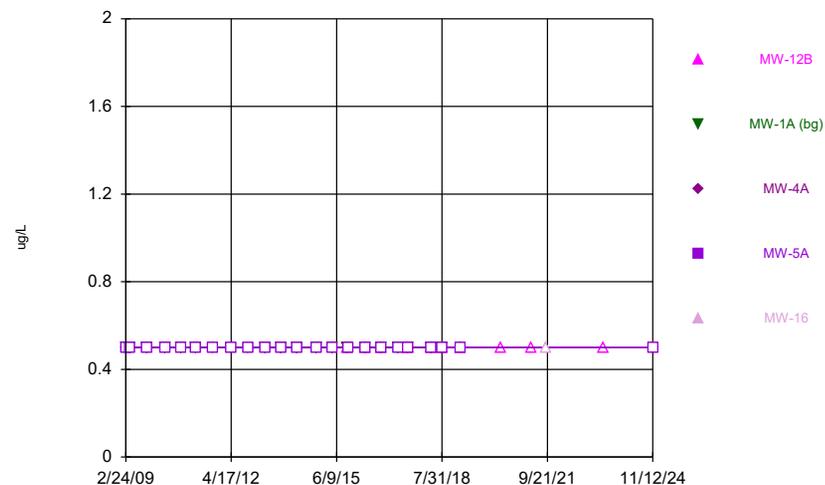
Attachment A.1  
Time Series Plots

### Time Series



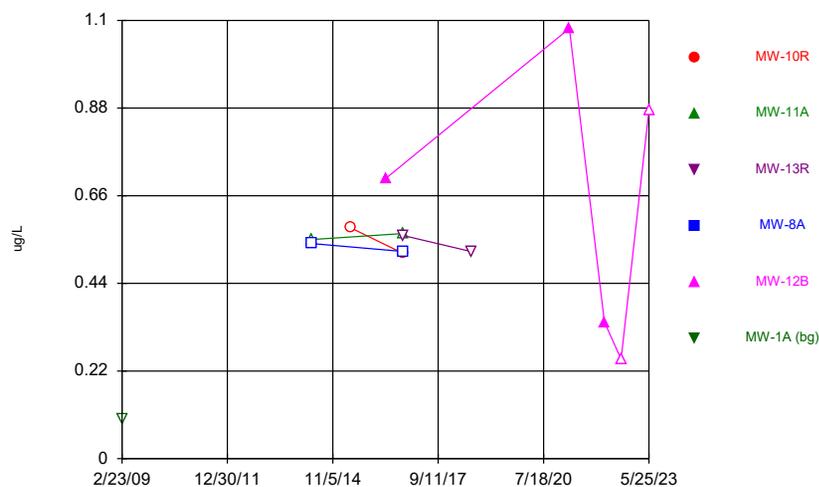
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Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

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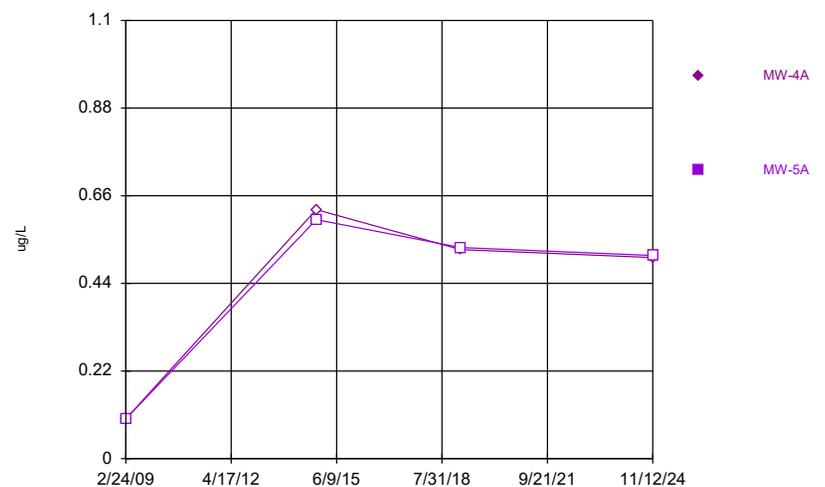
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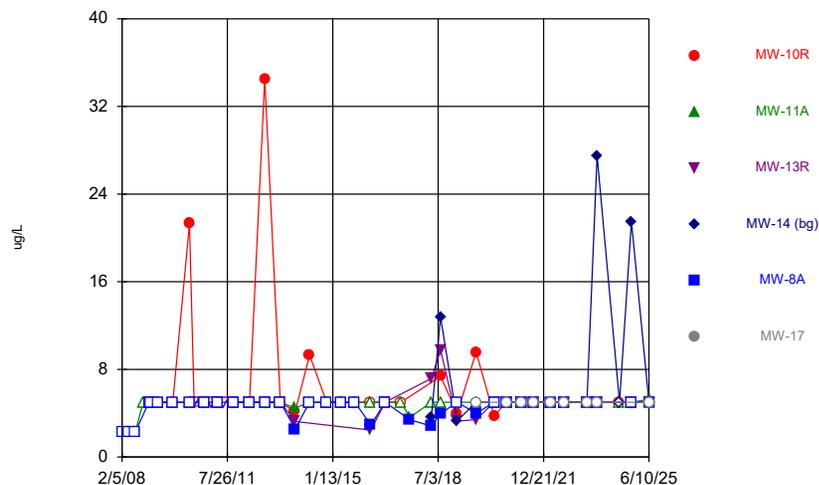
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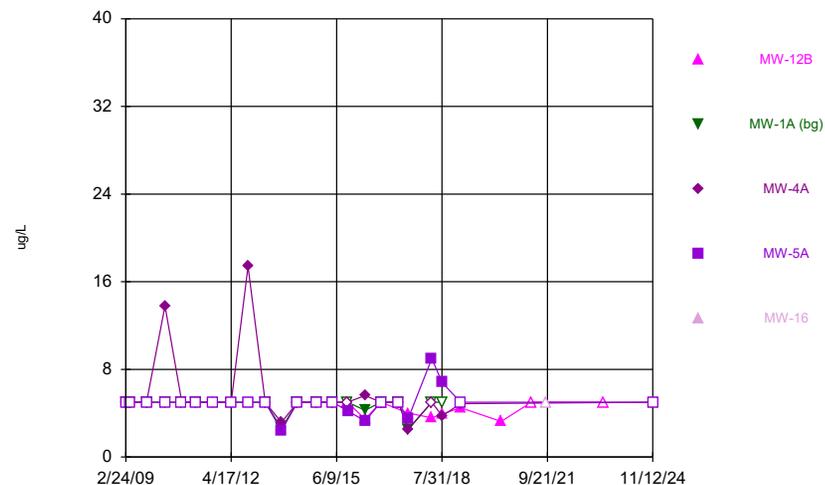
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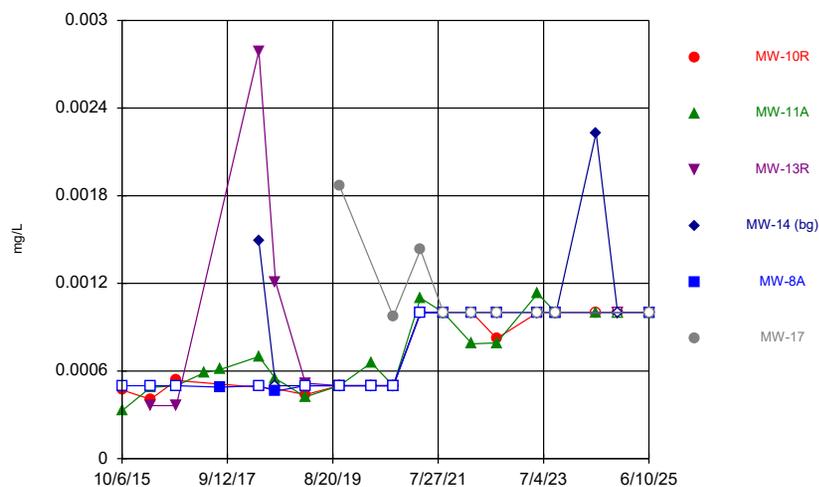
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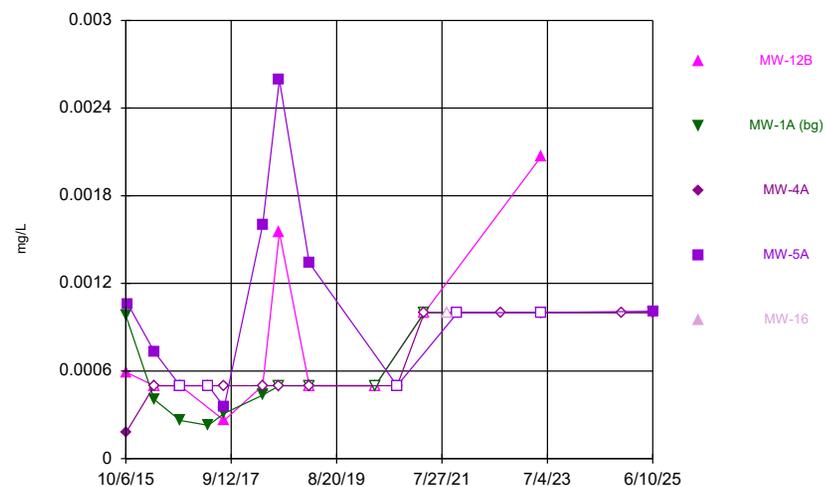
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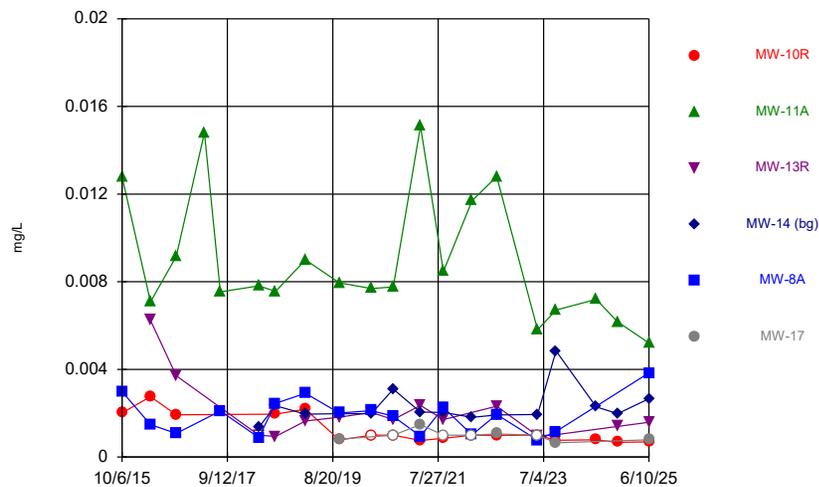
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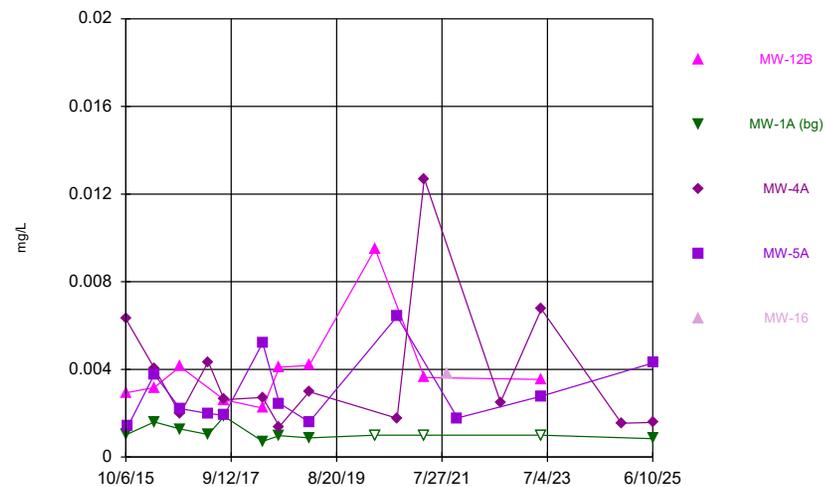


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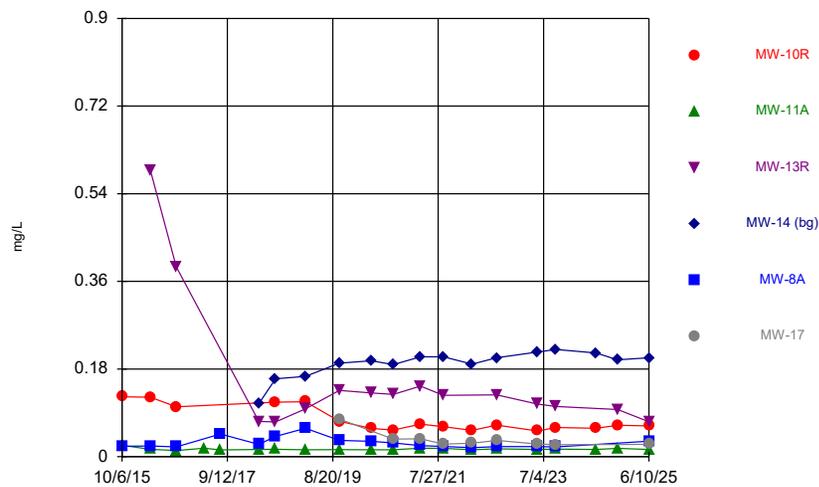
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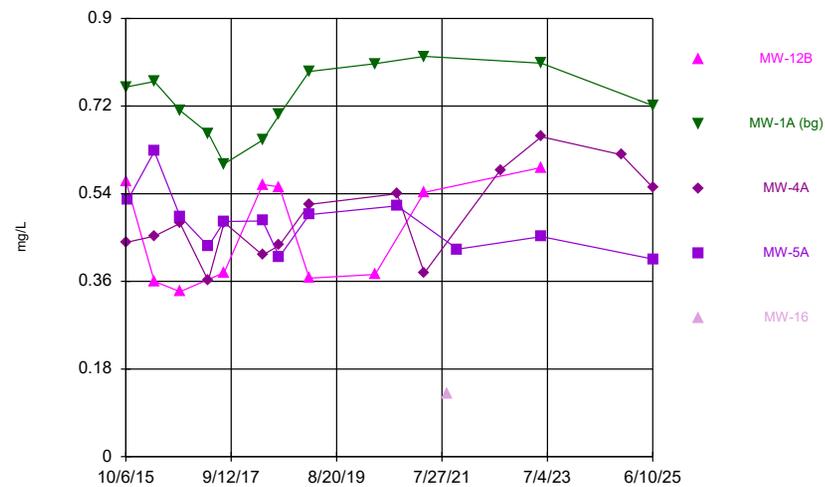
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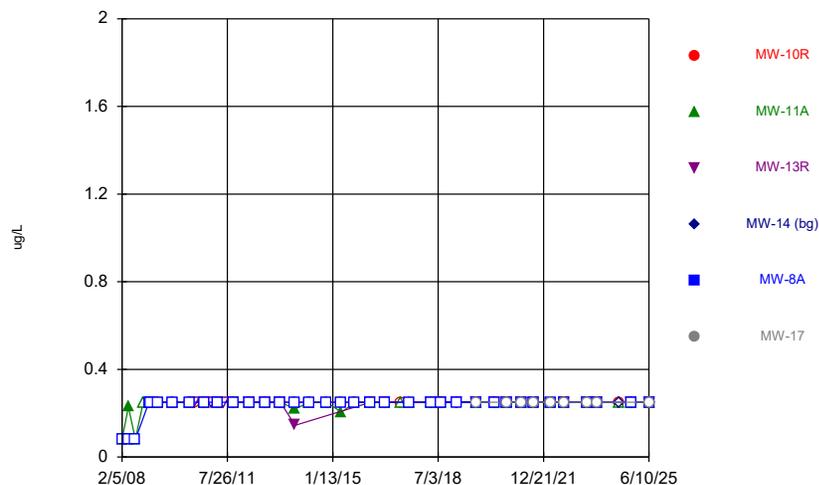
### Time Series



### Time Series

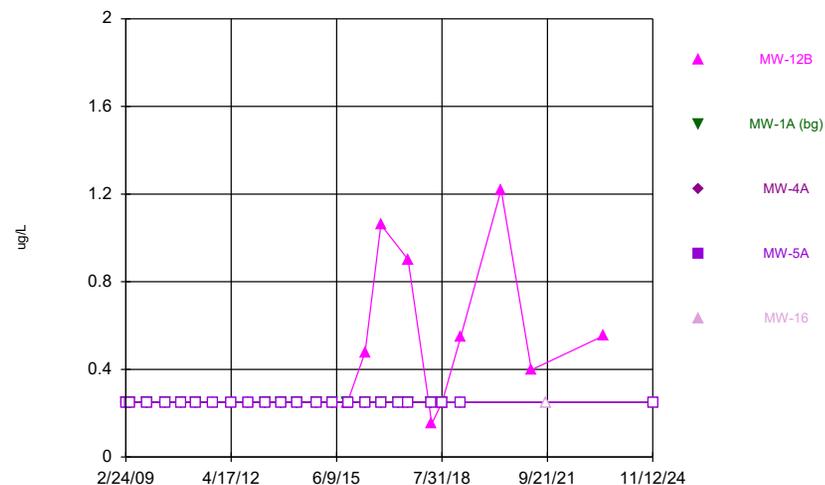


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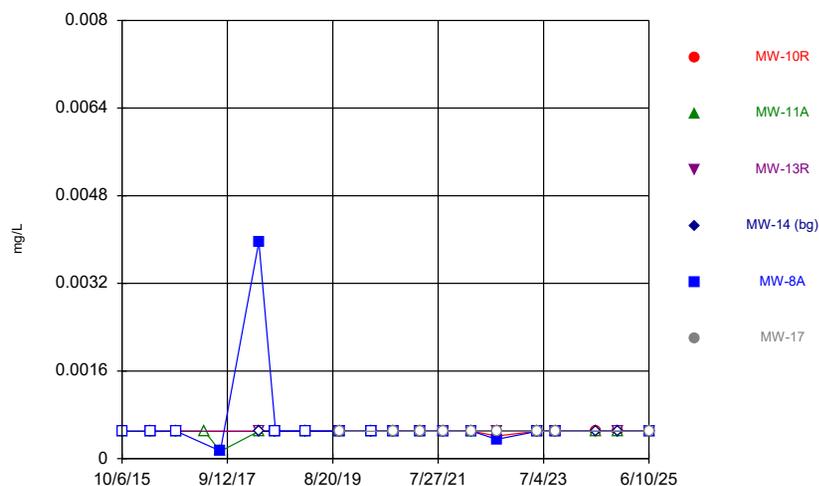
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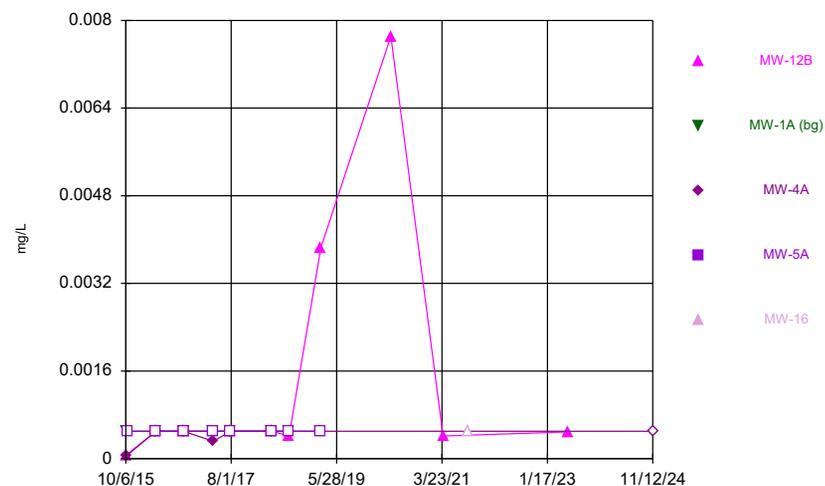
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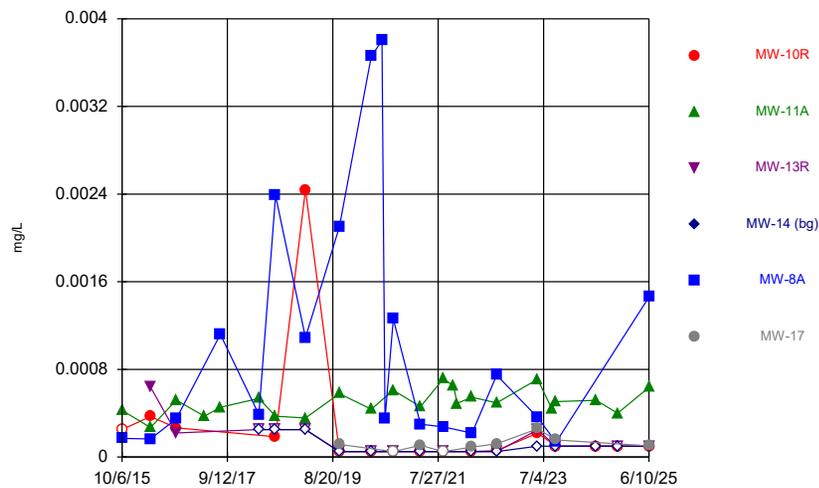
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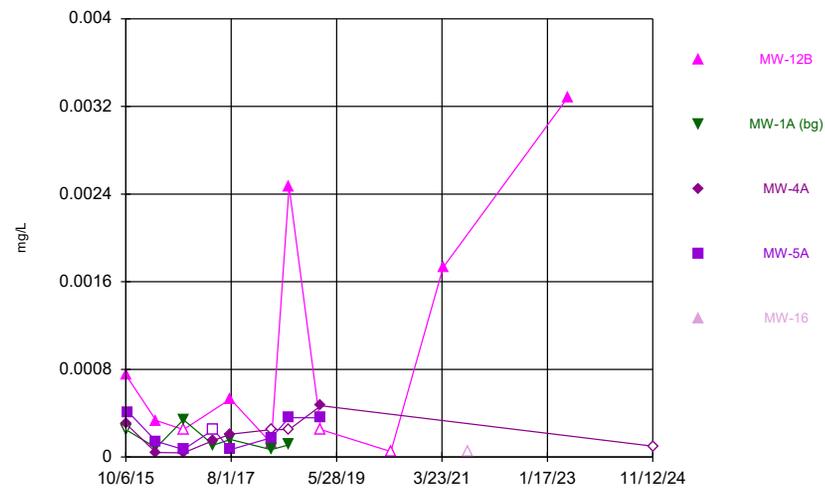
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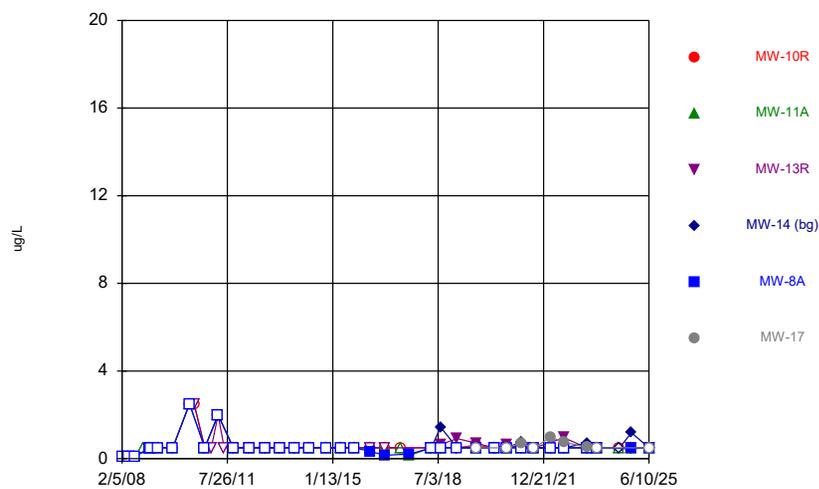
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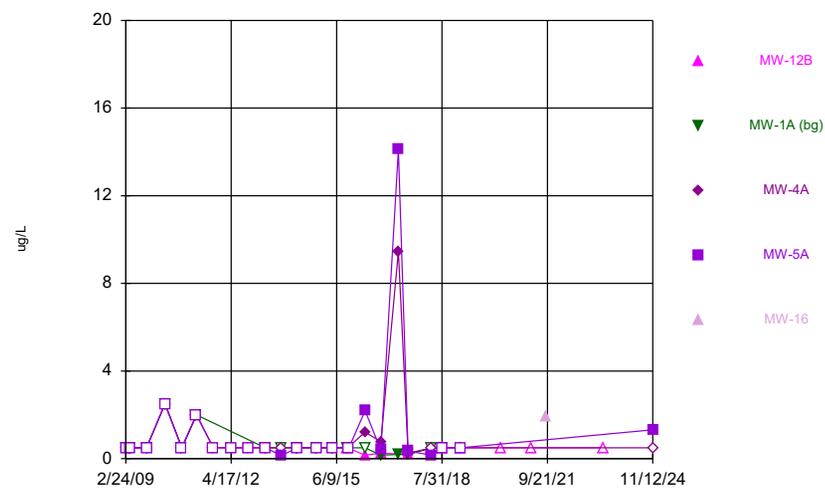
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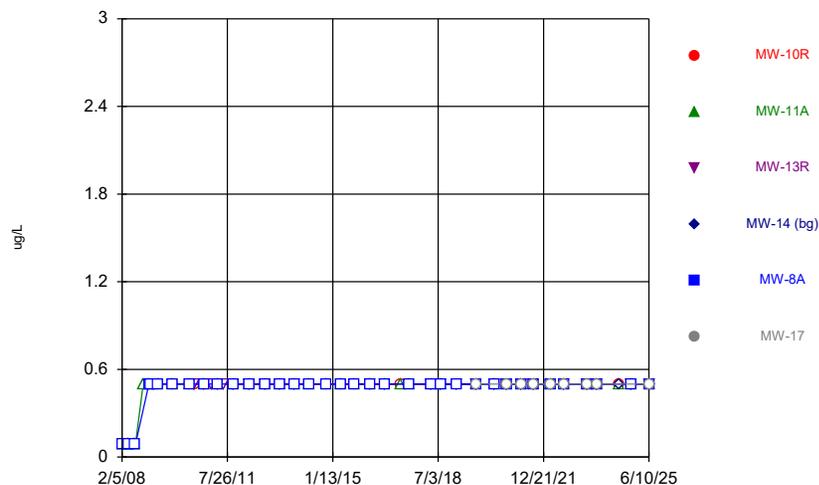
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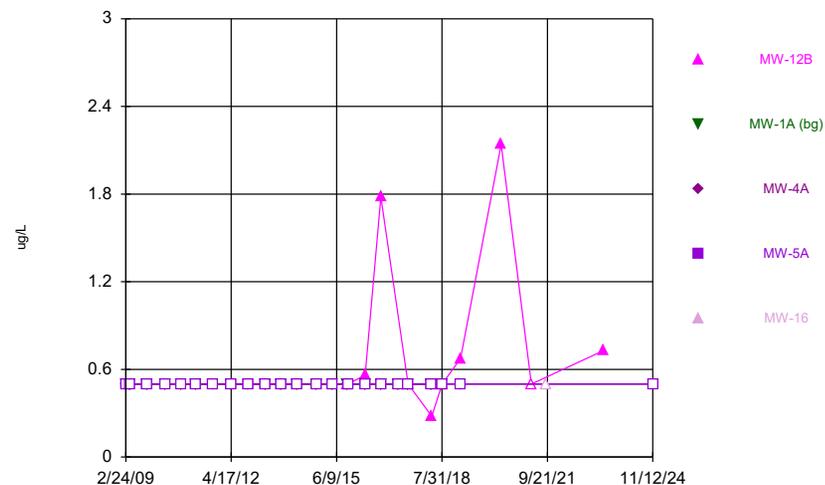
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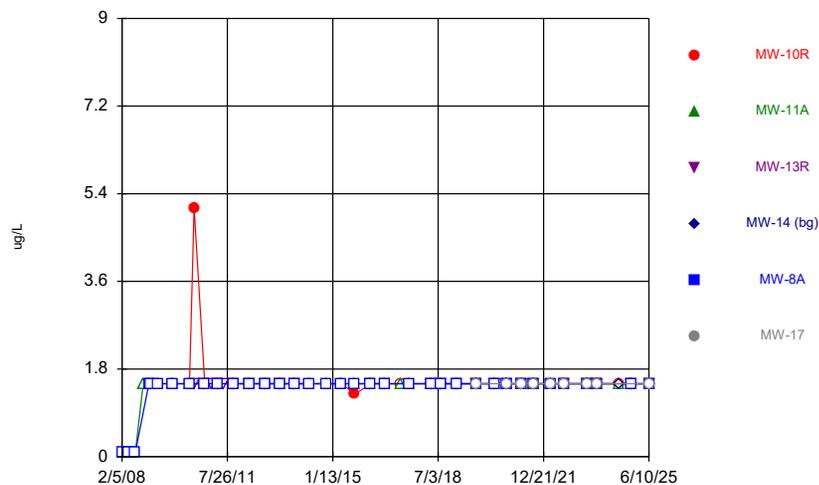
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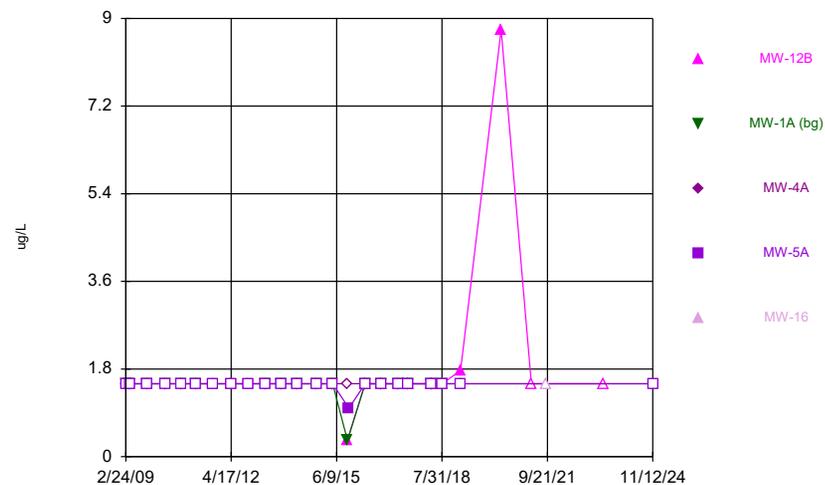
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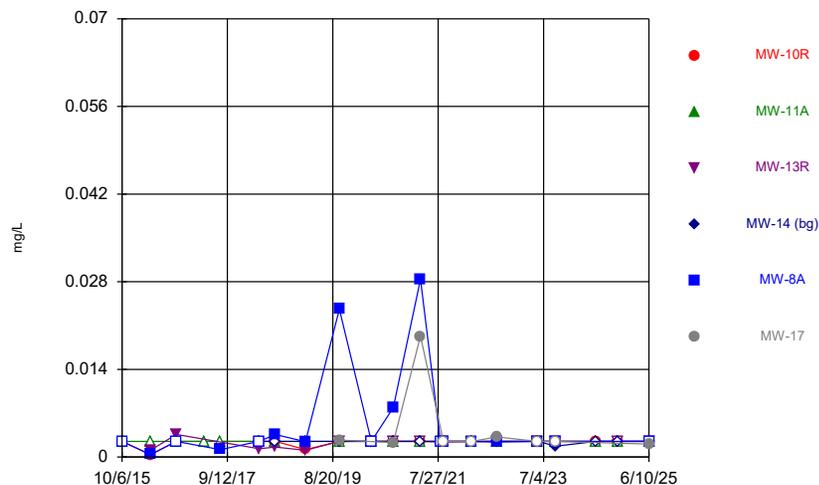
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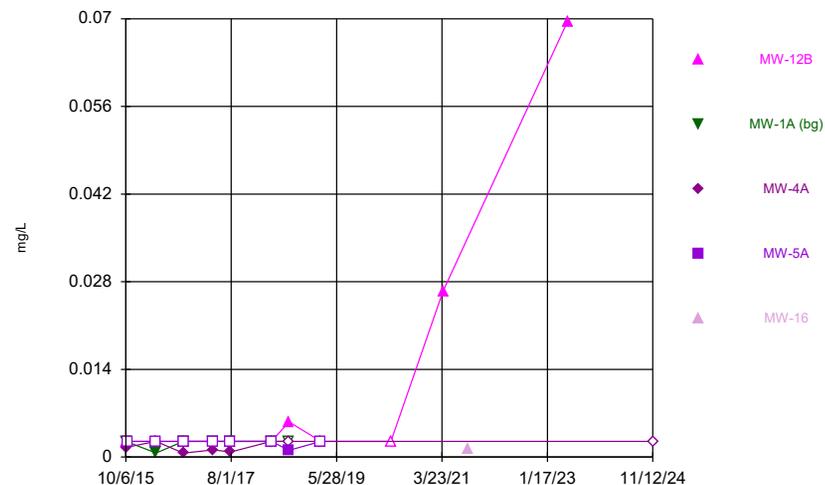
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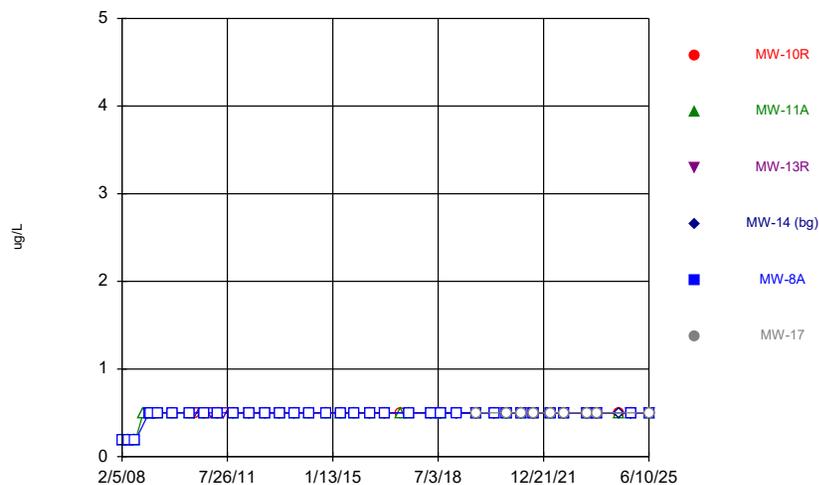
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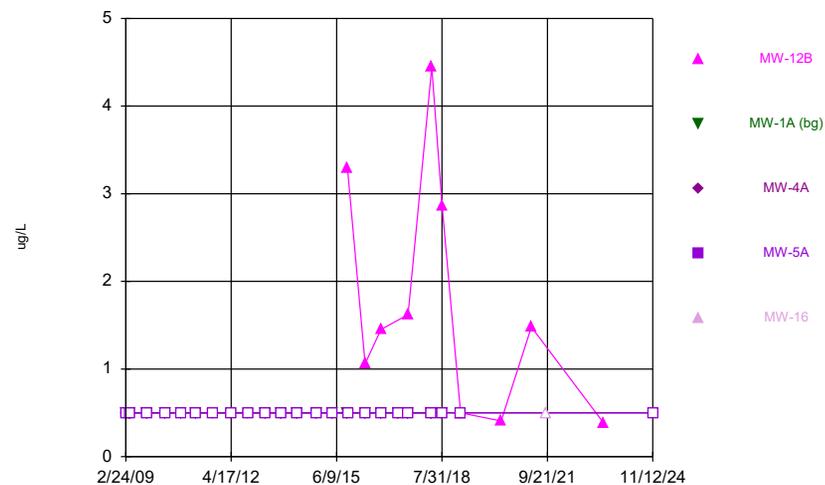
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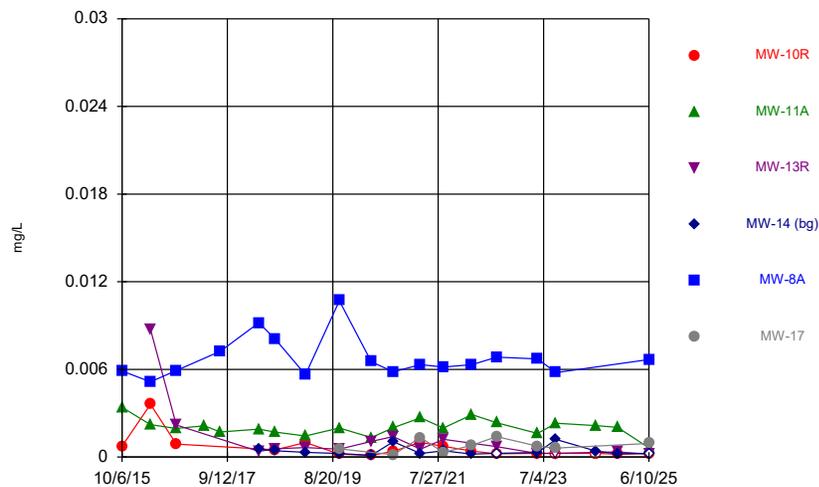
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Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



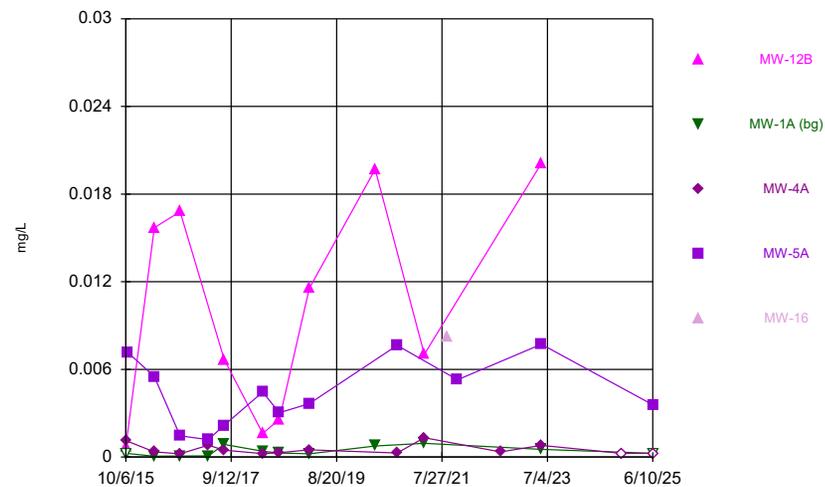
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### Time Series



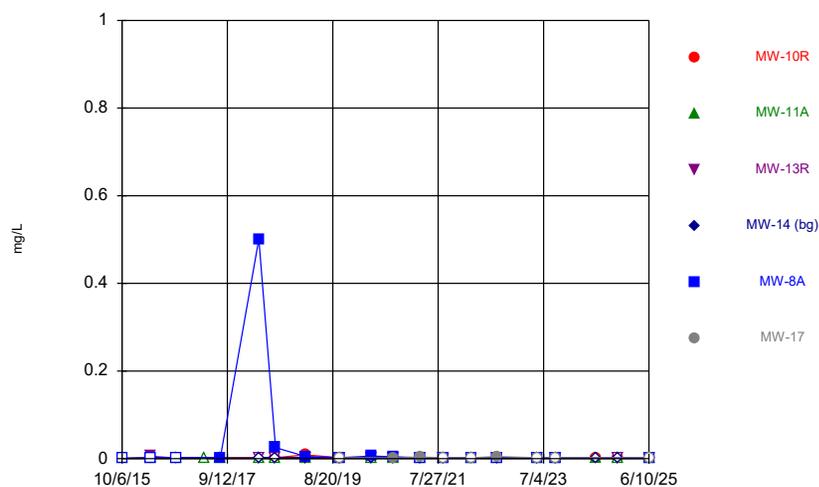
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Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

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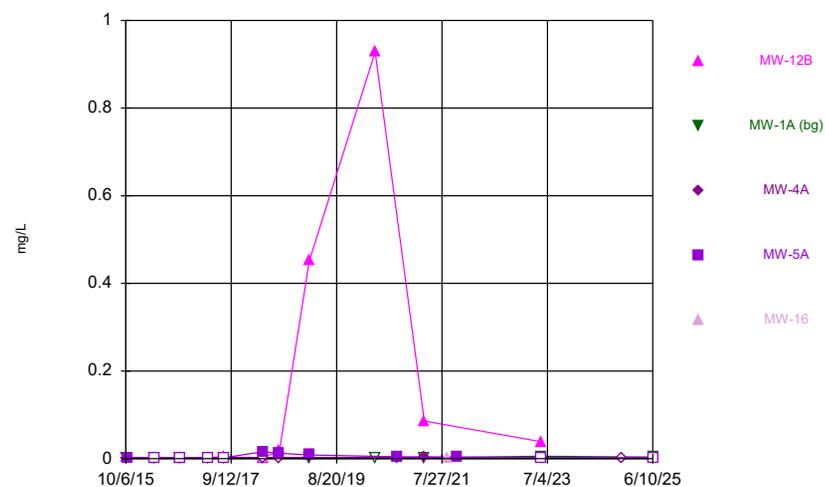
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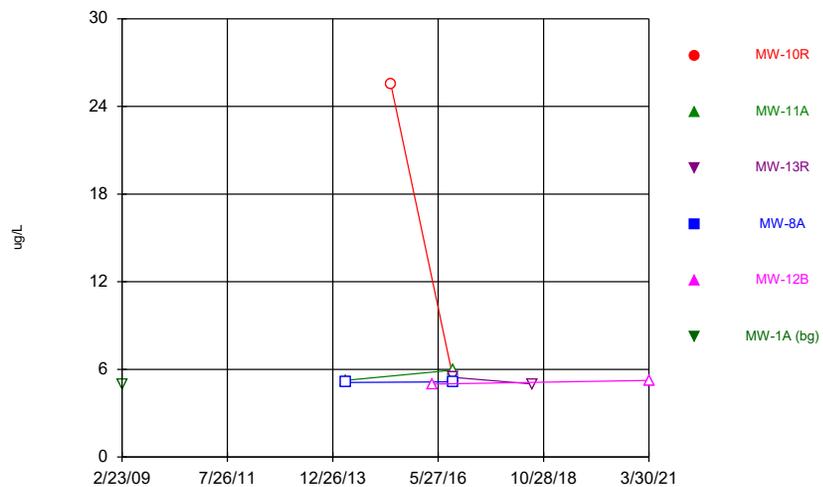
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Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



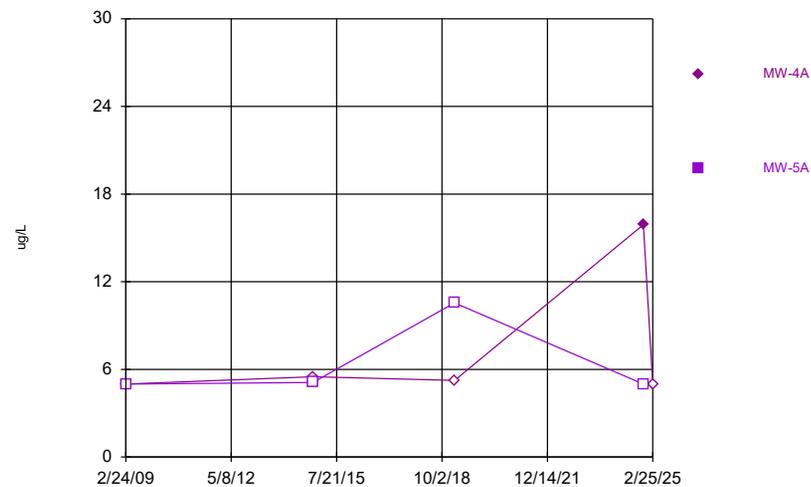
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### Time Series



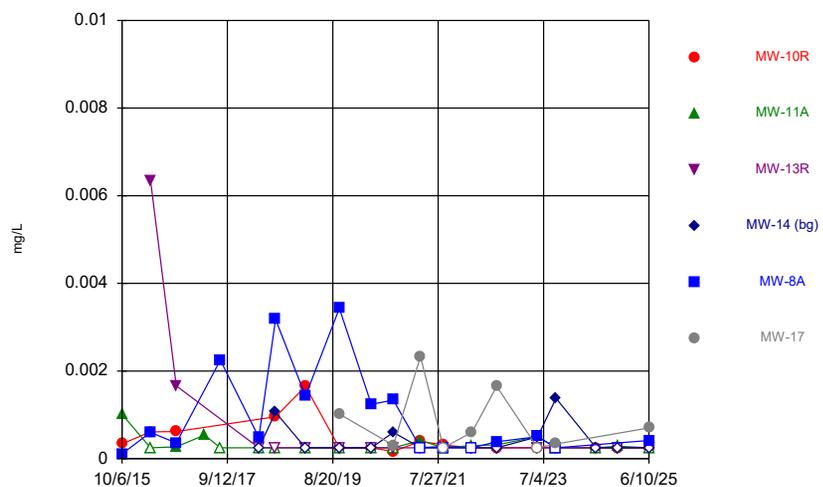
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Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



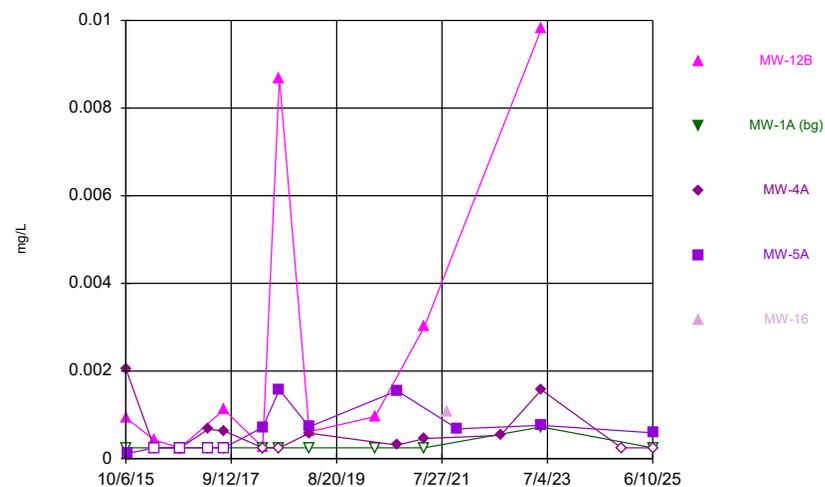
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### Time Series



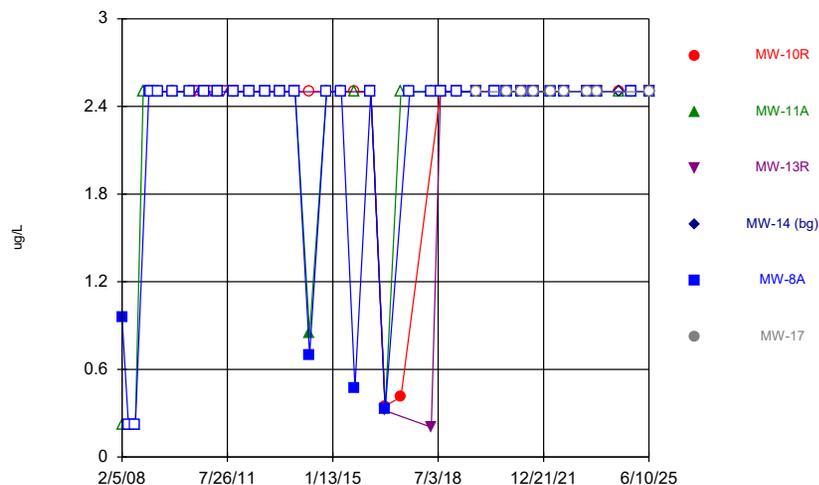
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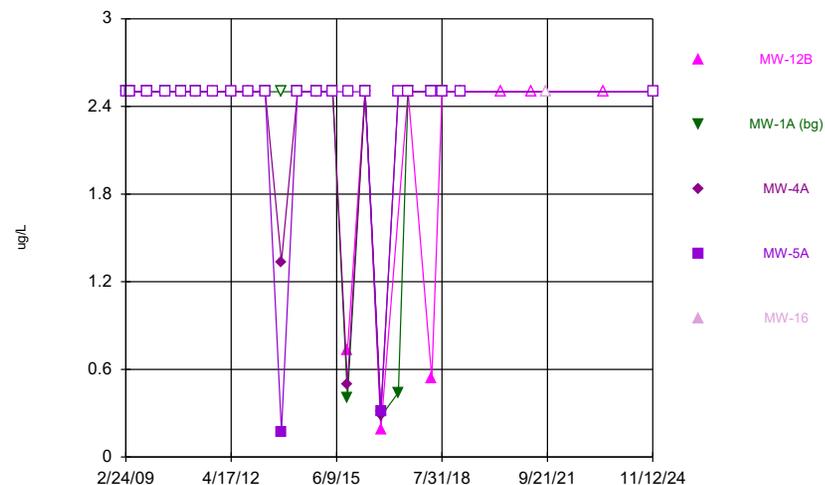
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### Time Series



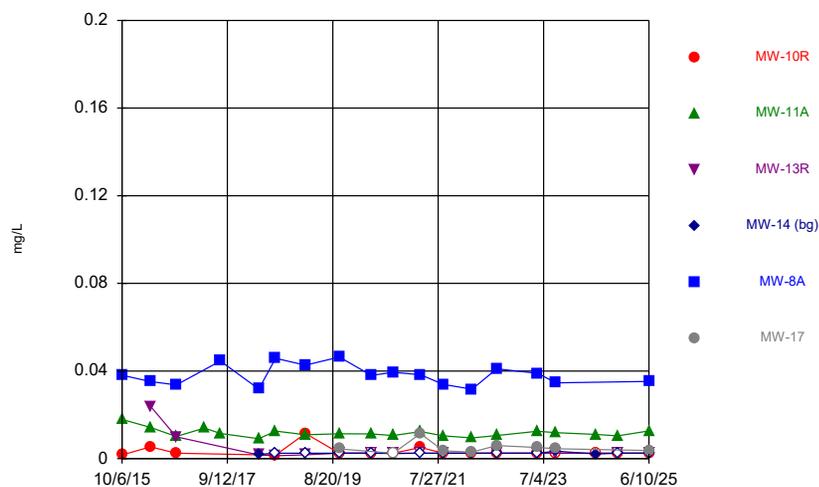
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### Time Series



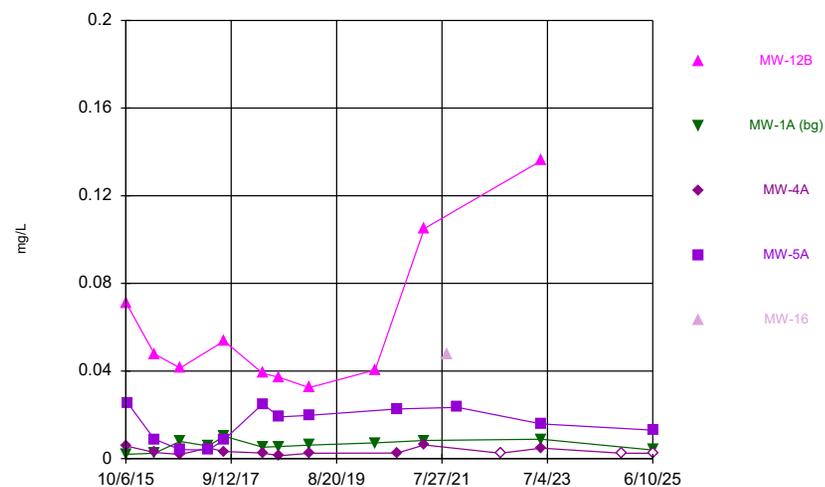
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### Time Series



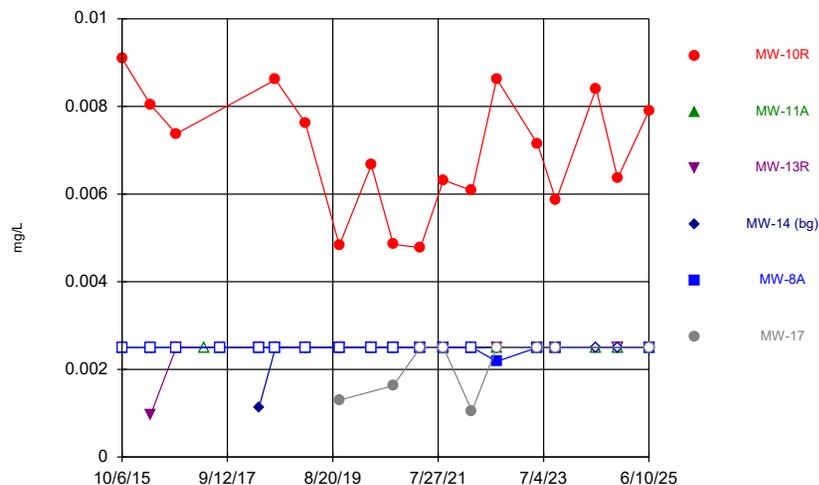
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### Time Series

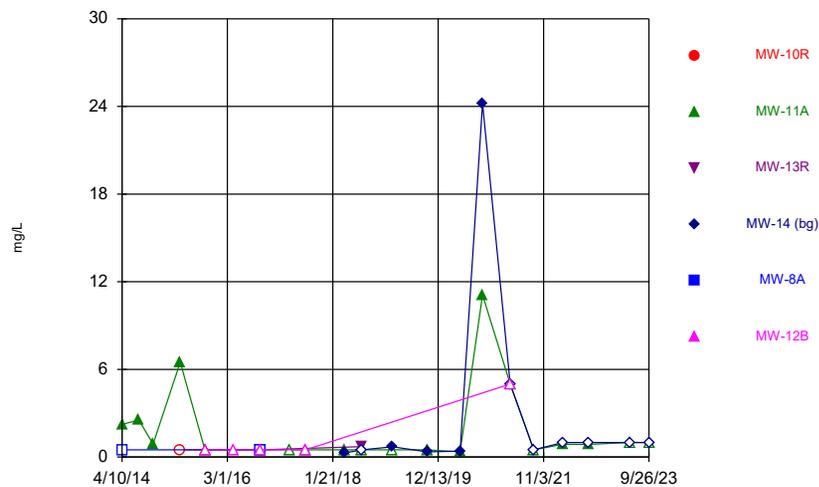


Constituent: Nickel Analysis Run 10/10/2025 3:36 PM View: 2025\_SSN-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Time Series

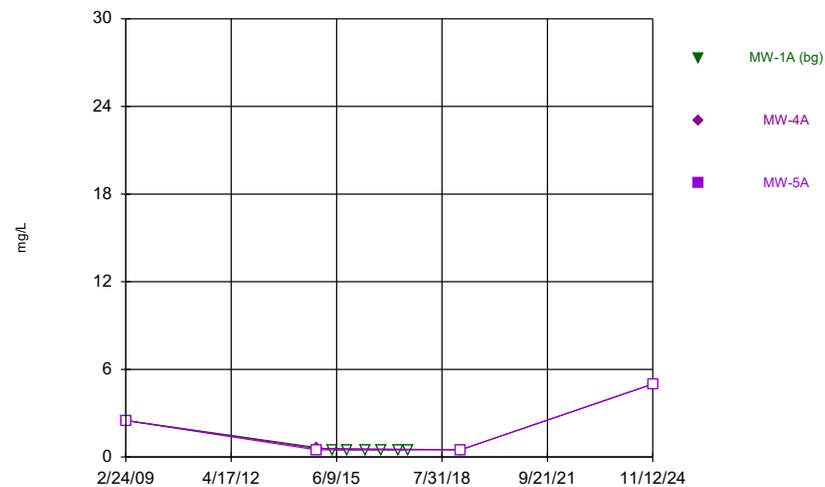


### Time Series



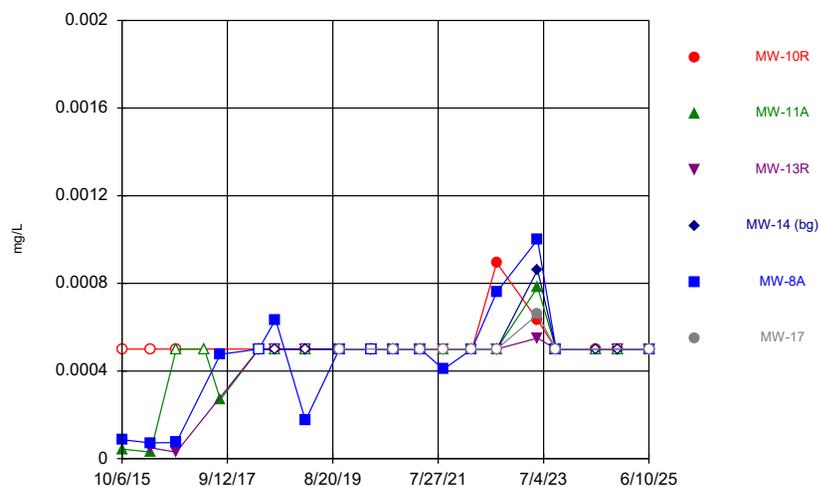
Constituent: Sulfide Analysis Run 10/10/2025 3:36 PM View: 2025\_SSN-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



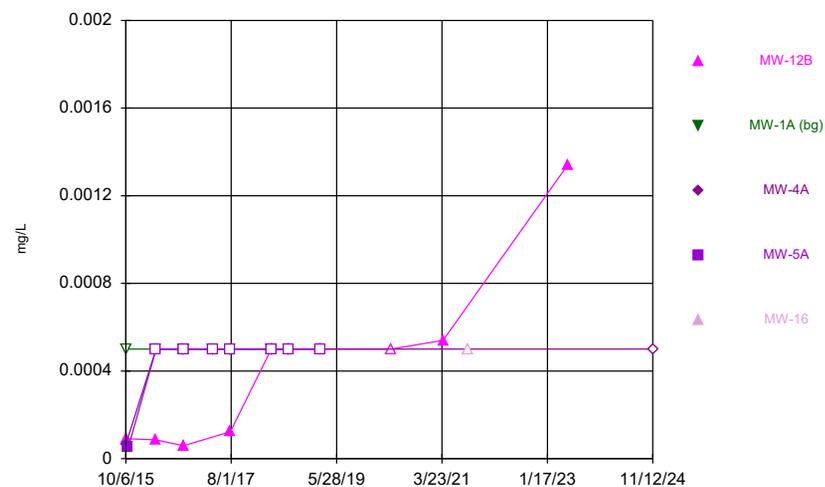
Constituent: Sulfide Analysis Run 10/10/2025 3:36 PM View: 2025\_SSN-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



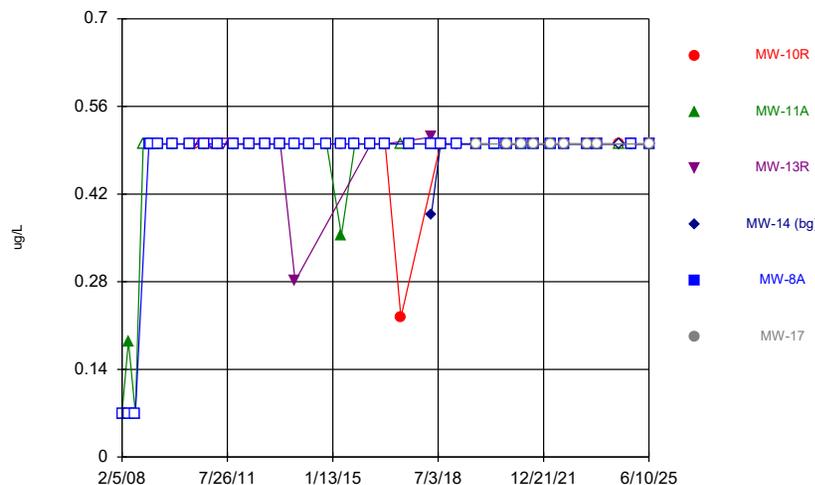
Constituent: Thallium Analysis Run 10/10/2025 3:36 PM View: 2025\_SSN-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



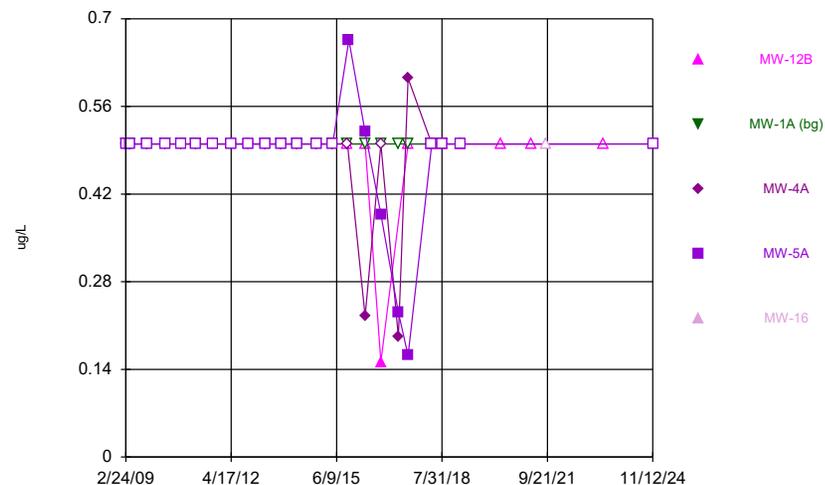
Constituent: Thallium Analysis Run 10/10/2025 3:36 PM View: 2025\_SSN-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



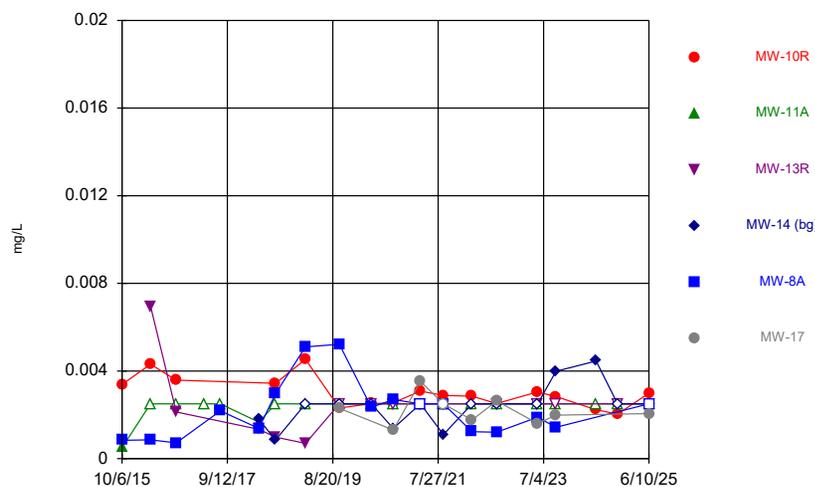
Constituent: Toluene Analysis Run 10/10/2025 3:36 PM View: 2025\_SSN-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



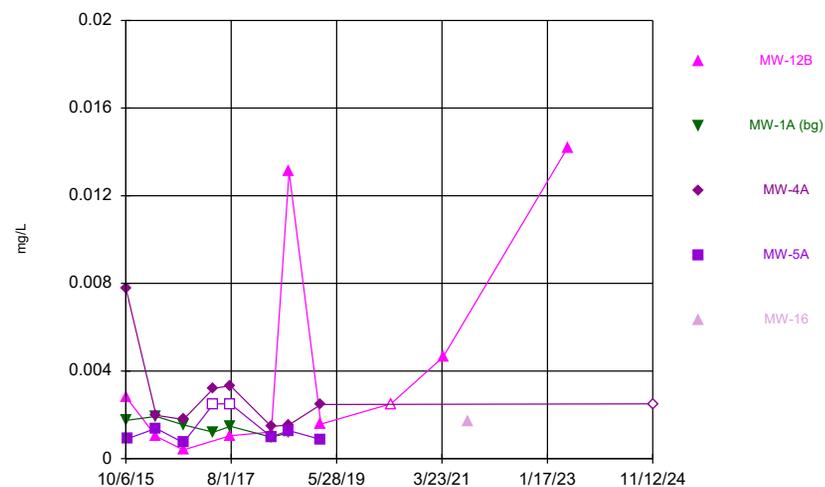
Constituent: Toluene Analysis Run 10/10/2025 3:36 PM View: 2025\_SSN-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



Constituent: Vanadium Analysis Run 10/10/2025 3:36 PM View: 2025\_SSN-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



Constituent: Vanadium Analysis Run 10/10/2025 3:36 PM View: 2025\_SSN-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master



Attachment A.2  
Outlier Analysis

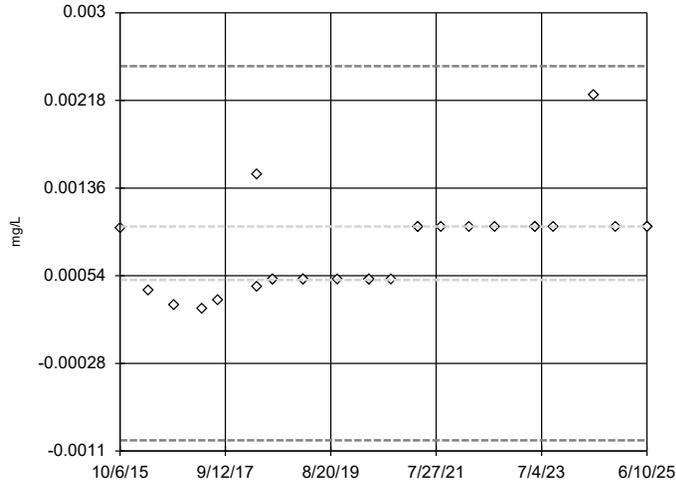
# BG Outlier Analysis

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 10/10/2025, 4:25 PM

<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>
Antimony (mg/L)	MW-14,MW-1A	n/a	n/a	n/a w/combined bg	NP	NaN	27	0.0007903	0.0004322	unknown	ShapiroWilk
Arsenic (mg/L)	MW-14,MW-1A	No	n/a	n/a w/combined bg	NP	NaN	27	0.001757	0.0008706	normal	ShapiroWilk
Barium (mg/L)	MW-14,MW-1A	No	n/a	n/a w/combined bg	NP	NaN	27	0.4323	0.2795	normal	ShapiroWilk
Cadmium (mg/L)	MW-1A (bg)	No	n/a	n/a	NP	NaN	7	0.0001606	0.00009964	normal	ShapiroWilk
Chromium (mg/L)	MW-14,MW-1A	n/a	n/a	n/a w/combined bg	NP	NaN	22	0.002381	0.0004193	unknown	ShapiroWilk
Cobalt (mg/L)	MW-14,MW-1A	No	n/a	n/a w/combined bg	NP	NaN	27	0.0004024	0.0003047	normal	ShapiroWilk
Copper (mg/L)	MW-1A (bg)	n/a	n/a	n/a	NP	NaN	12	0.002724	0.001041	unknown	ShapiroWilk
<b>Lead (mg/L)</b>	<b>MW-14,MW-1A</b>	<b>Yes</b>	<b>0.00106,0.0006,0.000276,0.000498,0.00138,0.000724</b>	<b>n/a w/combined bg</b>	<b>NP</b>	<b>NaN</b>	<b>27</b>	<b>0.0003626</b>	<b>0.0002774</b>	<b>normal</b>	<b>ShapiroWilk</b>
Nickel (mg/L)	MW-14,MW-1A	No	n/a	n/a w/combined bg	NP	NaN	27	0.004121	0.002485	normal	ShapiroWilk
Selenium (mg/L)	MW-14 (bg)	n/a	n/a	n/a	NP	NaN	15	0.002408	0.0003563	unknown	ShapiroWilk
Thallium (mg/L)	MW-14 (bg)	n/a	n/a	n/a	NP	NaN	15	0.0005241	0.00009321	unknown	ShapiroWilk
Vanadium (mg/L)	MW-14,MW-1A	No	n/a	n/a w/combined bg	NP	NaN	22	0.002098	0.0009125	normal	ShapiroWilk
Zinc (mg/L)	MW-14,MW-1A	n/a	n/a	n/a w/combined bg	NP	NaN	27	0.0107	0.004608	unknown	ShapiroWilk

### Tukey's Outlier Screening, Pooled Background

MW-14,MW-1A

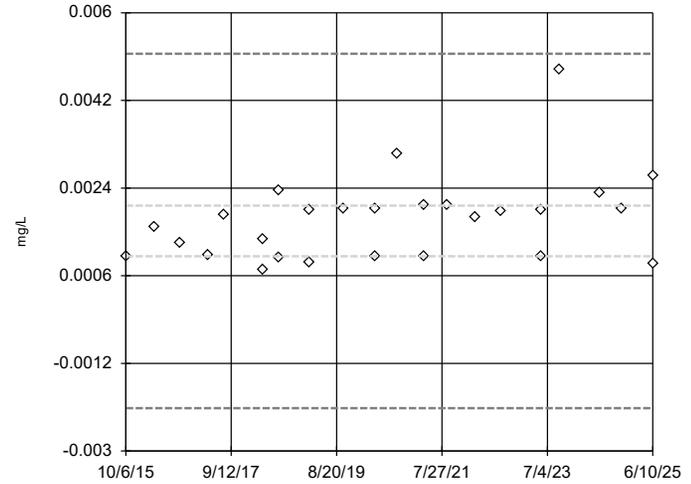


n = 27  
 No outliers found.  
 Tukey's method selected by user.  
 The results were invalidated, because both the lower and upper quartiles represent reporting limits.

Constituent: Antimony Analysis Run 10/10/2025 4:21 PM View: 2025\_SSN-BG\_Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening, Pooled Background

MW-14,MW-1A

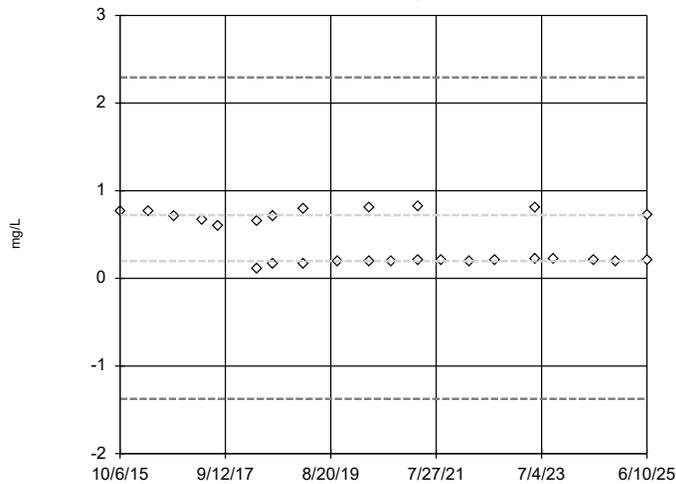


n = 27  
 No outliers found.  
 Tukey's method selected by user.  
 High cutoff = 0.00516,  
 low cutoff = -0.00212,  
 based on IQR multiplier of 3.

Constituent: Arsenic Analysis Run 10/10/2025 4:21 PM View: 2025\_SSN-BG\_Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening, Pooled Background

MW-14,MW-1A

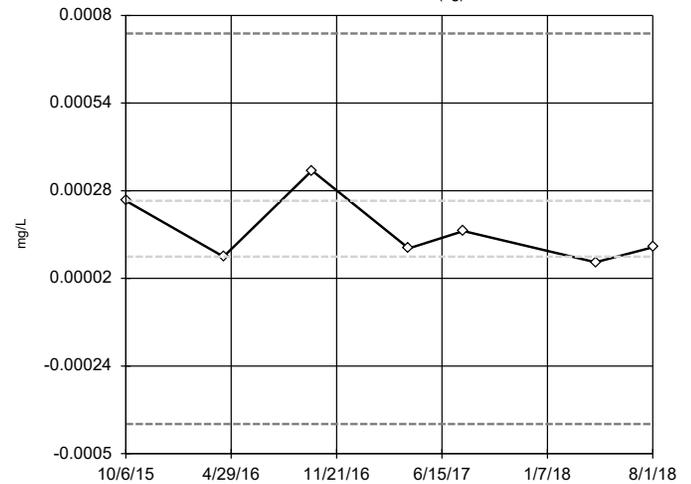


n = 27  
 No outliers found.  
 Tukey's method selected by user.  
 High cutoff = 2.293, low cutoff = -1.375, based on IQR multiplier of 3.

Constituent: Barium Analysis Run 10/10/2025 4:21 PM View: 2025\_SSN-BG\_Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening

MW-1A (bg)

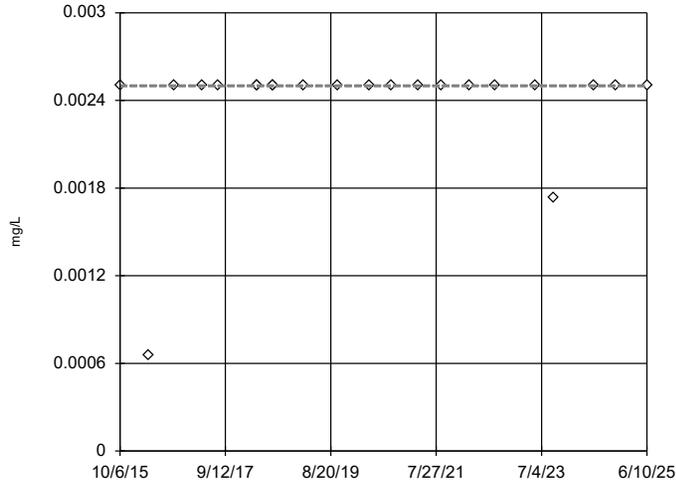


n = 7  
 No outliers found.  
 Tukey's method selected by user.  
 High cutoff = 0.0007465,  
 low cutoff = -0.000412,  
 based on IQR multiplier of 3.

Constituent: Cadmium Analysis Run 10/10/2025 4:21 PM View: 2025\_SSN-BG\_Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening, Pooled Background

MW-14,MW-1A



n = 22

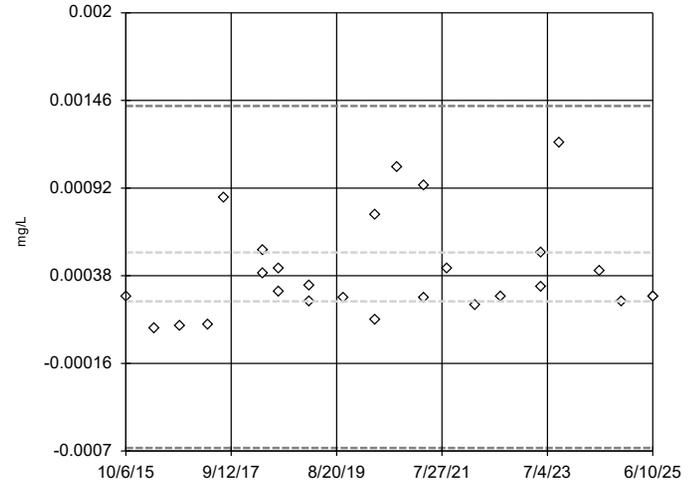
No outliers found. Tukey's method selected by user.

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Chromium Analysis Run 10/10/2025 4:21 PM View: 2025\_SSN-BG\_Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening, Pooled Background

MW-14,MW-1A



n = 27

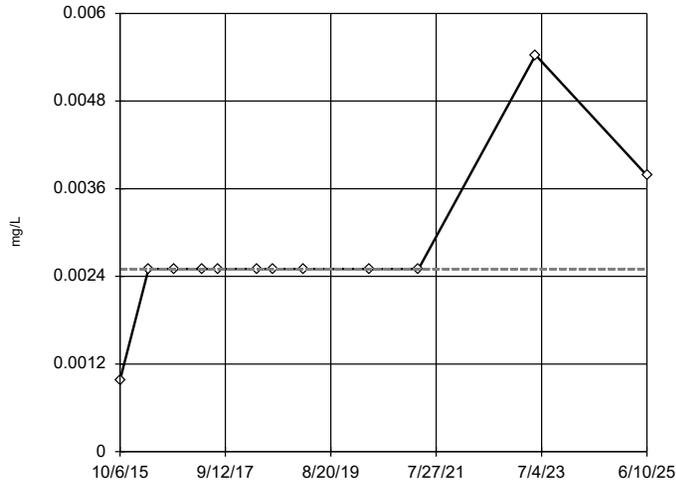
No outliers found. Tukey's method selected by user.

High cutoff = 0.001426, low cutoff = -0.000681, based on IQR multiplier of 3.

Constituent: Cobalt Analysis Run 10/10/2025 4:21 PM View: 2025\_SSN-BG\_Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening

MW-1A (bg)



n = 12

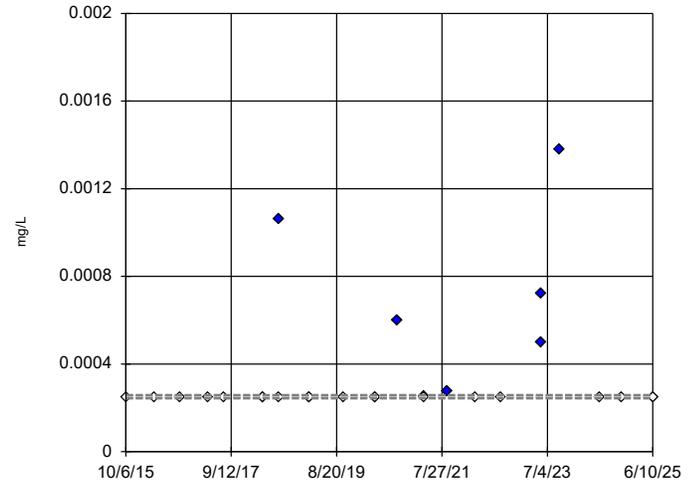
No outliers found. Tukey's method selected by user.

The results were invalidated, because the lower and upper quartiles are equal.

Constituent: Copper Analysis Run 10/10/2025 4:21 PM View: 2025\_SSN-BG\_Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening, Pooled Background

MW-14,MW-1A



n = 27

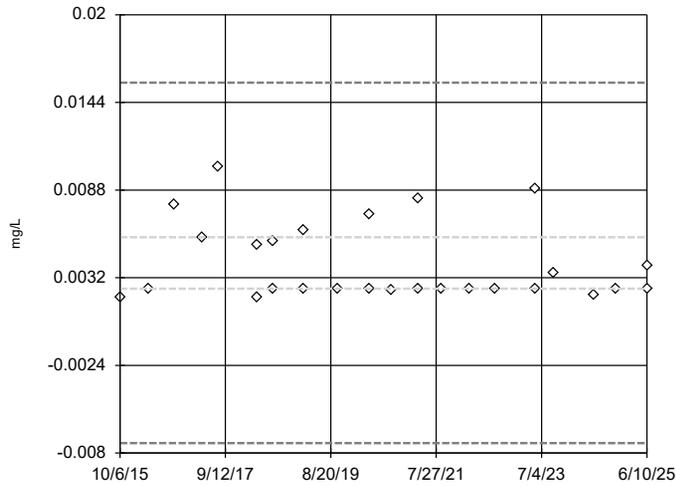
Outliers are drawn as solid. Tukey's method selected by user.

High cutoff = 0.000258, low cutoff = 0.000244, based on IQR multiplier of 3.

Constituent: Lead Analysis Run 10/10/2025 4:21 PM View: 2025\_SSN-BG\_Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening, Pooled Background

MW-14,MW-1A

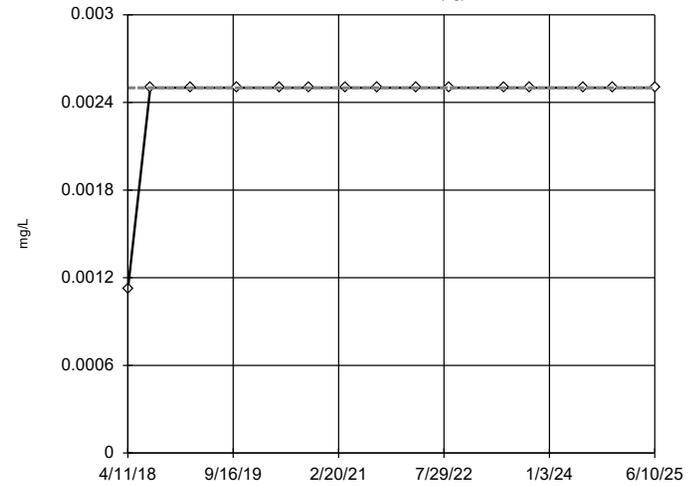


n = 27  
 No outliers found.  
 Tukey's method selected by user.  
 High cutoff = 0.01566,  
 low cutoff = -0.00737,  
 based on IQR multiplier of 3.

Constituent: Nickel Analysis Run 10/10/2025 4:21 PM View: 2025\_SSN-BG\_Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening

MW-14 (bg)

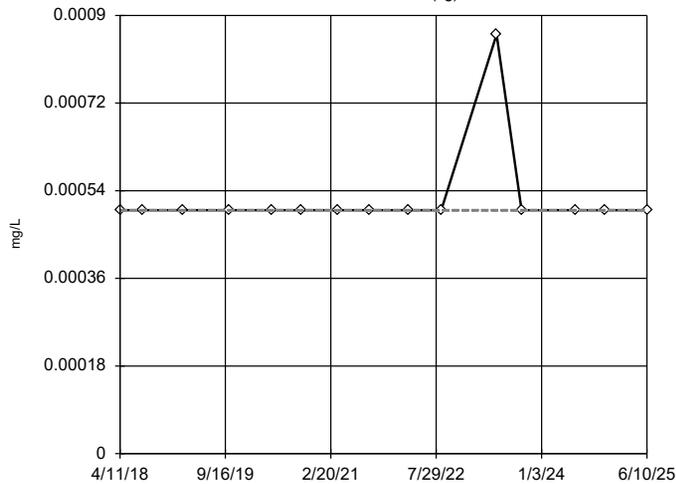


n = 15  
 No outliers found.  
 Tukey's method selected by user.  
 The results were invalidated,  
 because the lower and upper  
 quartiles are equal.

Constituent: Selenium Analysis Run 10/10/2025 4:21 PM View: 2025\_SSN-BG\_Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening

MW-14 (bg)

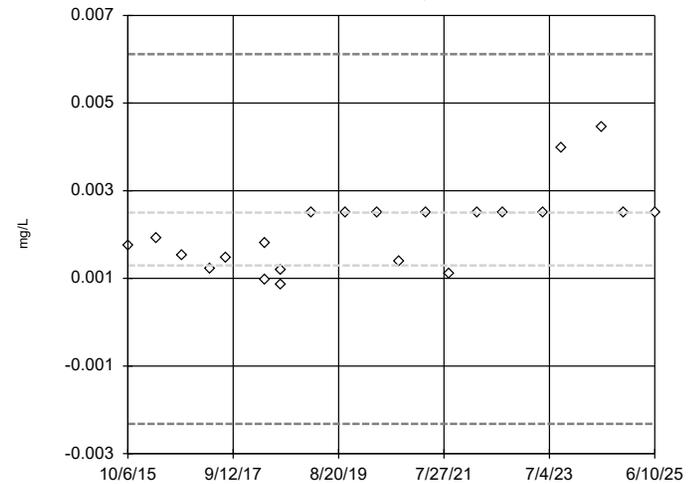


n = 15  
 No outliers found.  
 Tukey's method selected by user.  
 The results were invalidated,  
 because the lower and upper  
 quartiles are equal.

Constituent: Thallium Analysis Run 10/10/2025 4:21 PM View: 2025\_SSN-BG\_Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening, Pooled Background

MW-14,MW-1A

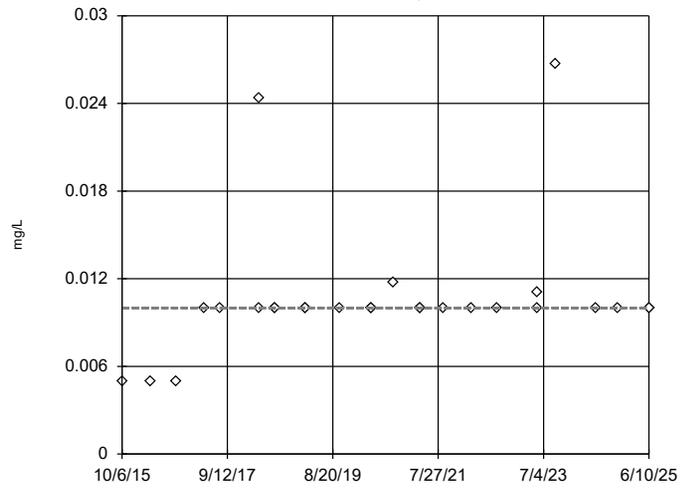


n = 22  
 No outliers found.  
 Tukey's method selected by user.  
 High cutoff = 0.006115,  
 low cutoff = -0.00232,  
 based on IQR multiplier of 3.

Constituent: Vanadium Analysis Run 10/10/2025 4:21 PM View: 2025\_SSN-BG\_Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening, Pooled Background

MW-14,MW-1A





Attachment A.3  
Intrawell Prediction Limits

# MW-8A IntraPrediction Limit

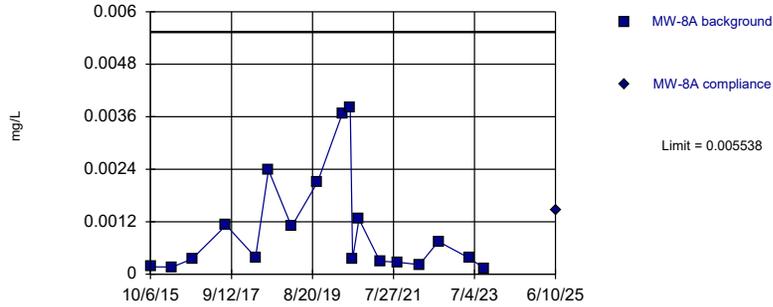
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 11/12/2025, 11:31 AM

<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>
Antimony (mg/L)	MW-8A	0.001	n/a	6/10/2025	0.001ND	No	16	n/a	n/a	n/a	87.5
<b>Arsenic (mg/L)</b>	<b>MW-8A</b>	<b>0.003631</b>	<b>n/a</b>	<b>6/10/2025</b>	<b>0.00384</b>	<b>Yes</b>	<b>16</b>	<b>n/a</b>	<b>0.001749</b>	<b>0.0007196</b>	<b>0</b>
Barium (mg/L)	MW-8A	0.06569	n/a	6/10/2025	0.032	No	16	n/a	-3.626	0.3454	0
Beryllium (mg/L)	MW-8A	0.0005	n/a	6/10/2025	0.0005ND	No	15	n/a	n/a	n/a	86.67
Cadmium (mg/L)	MW-8A	0.005538	n/a	6/10/2025	0.00146	No	18	n/a	0.08979	0.03419	0
Chromium (mg/L)	MW-8A	0.0284	n/a	6/10/2025	0.0025ND	No	17	n/a	n/a	n/a	52.94
Cobalt (mg/L)	MW-8A	0.0107	n/a	6/10/2025	0.00667	No	16	n/a	0.08188	0.008247	0
Copper (mg/L)	MW-8A	0.501	n/a	6/10/2025	0.0025ND	No	16	n/a	n/a	n/a	62.5
Lead (mg/L)	MW-8A	0.005748	n/a	6/10/2025	0.000416J	No	16	n/a	0.02437	0.01967	25
Nickel (mg/L)	MW-8A	0.05082	n/a	6/10/2025	0.0353	No	16	n/a	0.03838	0.004757	0
Selenium (mg/L)	MW-8A	0.0025	n/a	6/10/2025	0.0025ND	No	16	n/a	n/a	n/a	93.75
Silver (mg/L)	MW-8A	0.00142	n/a	6/10/2025	0.0005ND	No	16	n/a	n/a	n/a	93.75
Thallium (mg/L)	MW-8A	0.0009995	n/a	6/10/2025	0.0005ND	No	13	n/a	n/a	n/a	53.85
Vanadium (mg/L)	MW-8A	0.005745	n/a	6/10/2025	0.0025ND	No	16	n/a	0.002192	0.001359	12.5
Zinc (mg/L)	MW-8A	0.131	n/a	6/10/2025	0.01ND	No	16	n/a	n/a	n/a	62.5



Within Limit

### Prediction Limit Intrawell Parametric

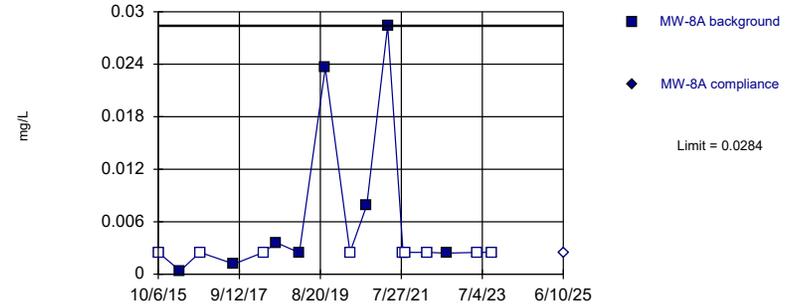


Background Data Summary (based on cube root transformation): Mean=0.08979, Std. Dev.=0.03419, n=18. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8782, critical = 0.858. Kappa = 2.548 (c=15, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0003901.

Constituent: Cadmium Analysis Run 11/12/2025 11:27 AM View: 2025\_SSN-MW-8A\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric

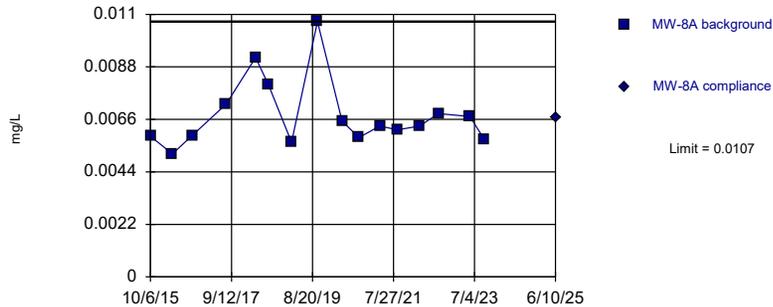


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 52.94% NDs. Well-constituent pair annual alpha = 0.01179. Individual comparison alpha = 0.005914 (1 of 2).

Constituent: Chromium Analysis Run 11/12/2025 11:27 AM View: 2025\_SSN-MW-8A\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Parametric

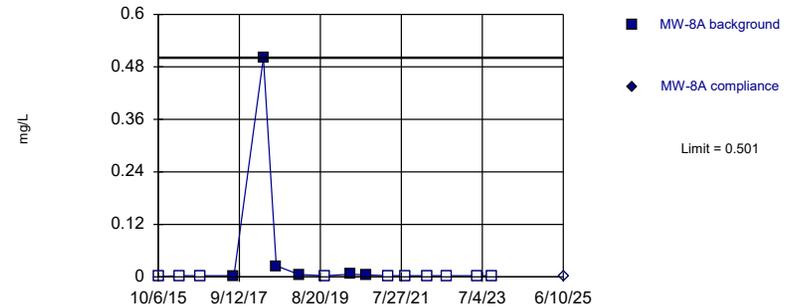


Background Data Summary (based on square root transformation): Mean=0.08188, Std. Dev.=0.008247, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.852, critical = 0.844. Kappa = 2.615 (c=15, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0003901.

Constituent: Cobalt Analysis Run 11/12/2025 11:27 AM View: 2025\_SSN-MW-8A\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 62.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

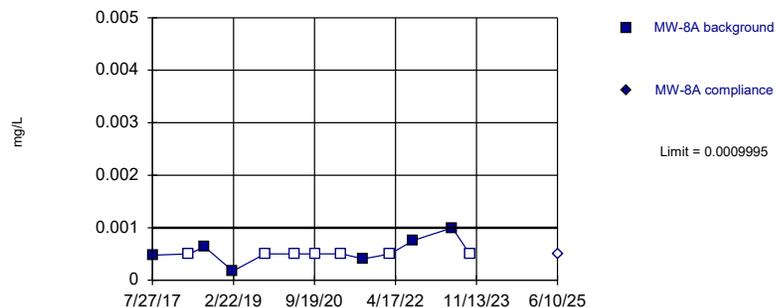
Constituent: Copper Analysis Run 11/12/2025 11:27 AM View: 2025\_SSN-MW-8A\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master



Within Limit

### Prediction Limit

Intrawell Non-parametric



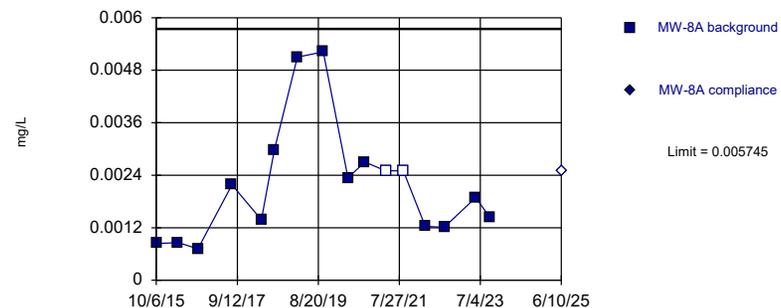
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 13 background values. 53.85% NDs. Well-constituent pair annual alpha = 0.01929. Individual comparison alpha = 0.009692 (1 of 2).

Constituent: Thallium Analysis Run 11/12/2025 11:28 AM View: 2025\_SSN-MW-8A\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Parametric



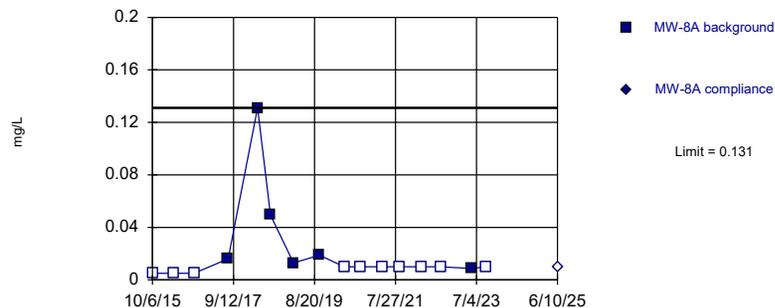
Background Data Summary: Mean=0.002192, Std. Dev.=0.001359, n=16, 12.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.851, critical = 0.844. Kappa = 2.615 (c=15, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0003901.

Constituent: Vanadium Analysis Run 11/12/2025 11:28 AM View: 2025\_SSN-MW-8A\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 62.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Zinc Analysis Run 11/12/2025 11:28 AM View: 2025\_SSN-MW-8A\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

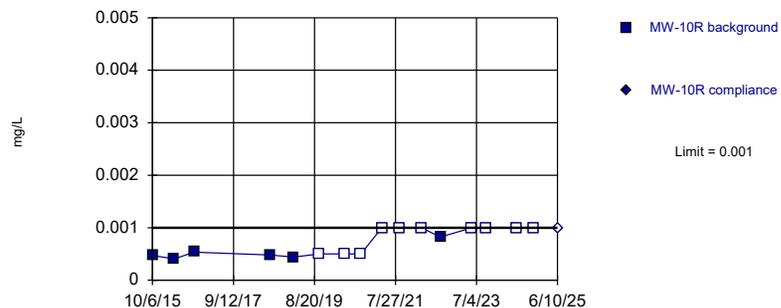
# MW-10R IntraPrediction Limit

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 11/12/2025, 12:26 PM

<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>
Antimony (mg/L)	MW-10R	0.001	n/a	6/10/2025	0.001ND	No	16	n/a	n/a	n/a	62.5
Arsenic (mg/L)	MW-10R	0.00276	n/a	6/10/2025	0.000691J	No	16	n/a	n/a	n/a	25
Barium (mg/L)	MW-10R	0.123	n/a	6/10/2025	0.0631	No	16	n/a	n/a	n/a	0
Beryllium (mg/L)	MW-10R	0.0005	n/a	6/10/2025	0.0005ND	No	16	n/a	n/a	n/a	93.75
Cadmium (mg/L)	MW-10R	0.00244	n/a	6/10/2025	0.0001ND	No	16	n/a	n/a	n/a	62.5
Chromium (mg/L)	MW-10R	0.0025	n/a	6/10/2025	0.0025ND	No	16	n/a	n/a	n/a	87.5
Cobalt (mg/L)	MW-10R	0.003163	n/a	6/10/2025	0.000246J	No	16	n/a	0.0795	0.02573	12.5
Copper (mg/L)	MW-10R	0.00893	n/a	6/10/2025	0.0025ND	No	16	n/a	n/a	n/a	81.25
Lead (mg/L)	MW-10R	0.00165	n/a	6/10/2025	0.00025ND	No	16	n/a	n/a	n/a	50
Nickel (mg/L)	MW-10R	0.0115	n/a	6/10/2025	0.0025ND	No	16	n/a	n/a	n/a	62.5
Selenium (mg/L)	MW-10R	0.01065	n/a	6/10/2025	0.0079	No	16	n/a	0.006916	0.001427	0
Silver (mg/L)	MW-10R	0.00146	n/a	6/10/2025	0.0005ND	No	16	n/a	n/a	n/a	93.75
Thallium (mg/L)	MW-10R	0.000894	n/a	6/10/2025	0.0005ND	No	16	n/a	n/a	n/a	87.5
Vanadium (mg/L)	MW-10R	0.004858	n/a	6/10/2025	0.00299J	No	16	n/a	0.003008	0.0007074	0
Zinc (mg/L)	MW-10R	0.0465	n/a	6/10/2025	0.01ND	No	16	n/a	n/a	n/a	81.25

Within Limit

Prediction Limit  
Intrawell Non-parametric

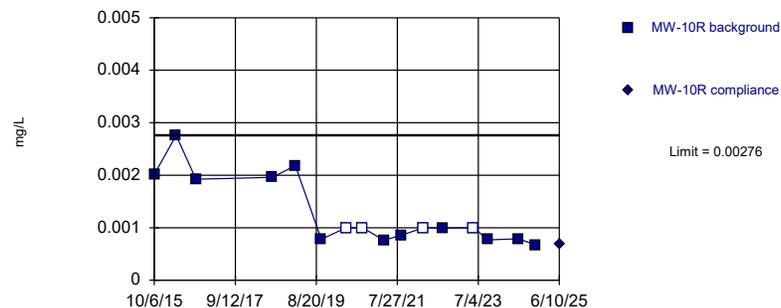


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 62.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Antimony Analysis Run 11/12/2025 12:24 PM View: 2025\_SSN-MW-10R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric

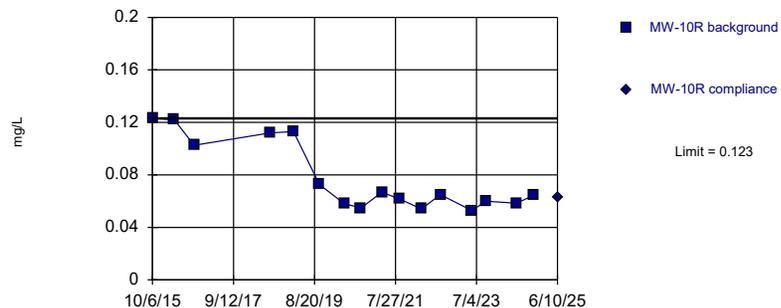


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 16 background values. 25% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Arsenic Analysis Run 11/12/2025 12:24 PM View: 2025\_SSN-MW-10R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric

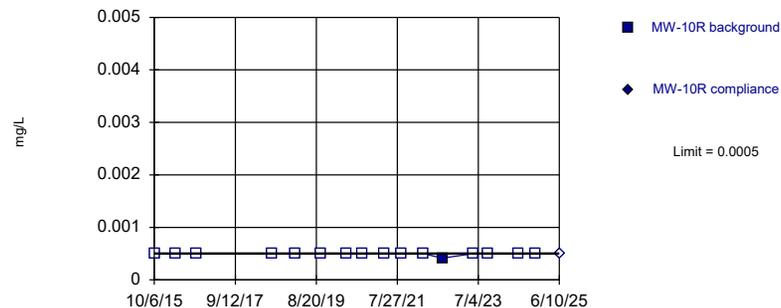


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 16 background values. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Barium Analysis Run 11/12/2025 12:24 PM View: 2025\_SSN-MW-10R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric

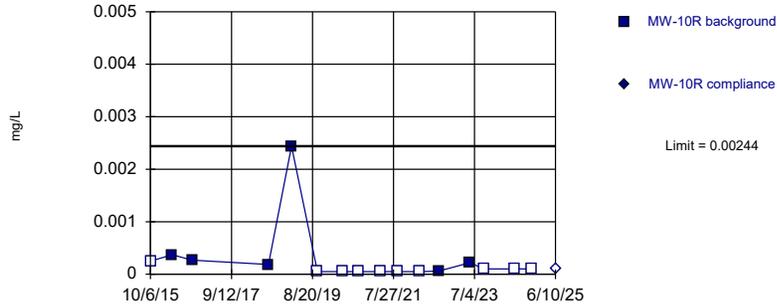


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 93.75% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Beryllium Analysis Run 11/12/2025 12:24 PM View: 2025\_SSN-MW-10R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric

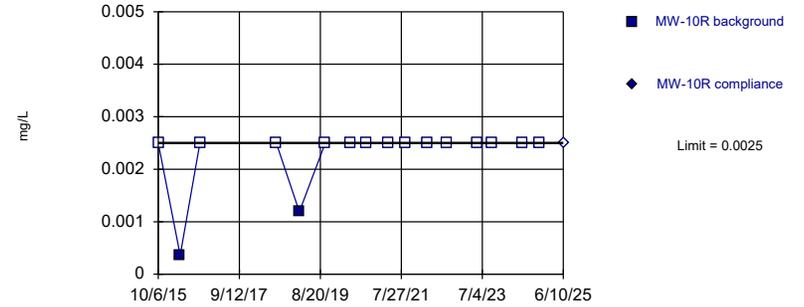


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 62.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Cadmium Analysis Run 11/12/2025 12:24 PM View: 2025\_SSN-MW-10R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

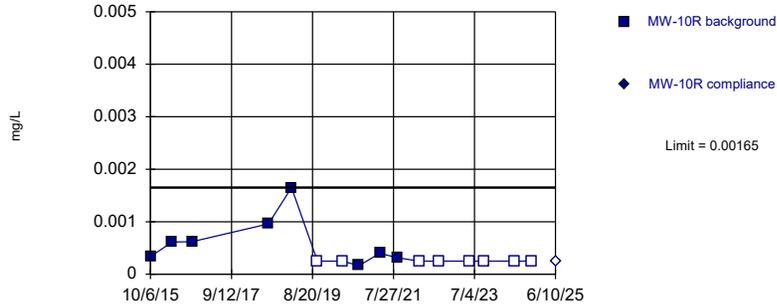
Within Limit

Prediction Limit  
Intrawell Non-parametric



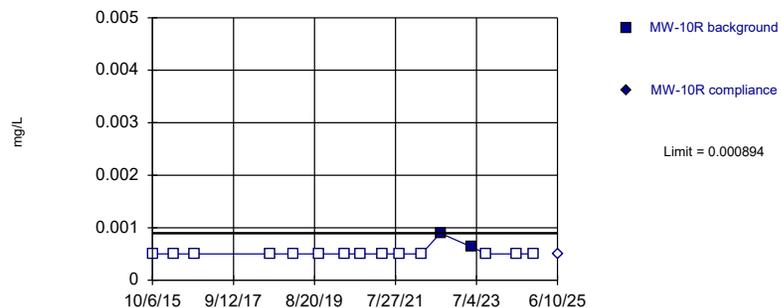
Within Limit

Prediction Limit  
Intrawell Non-parametric



Within Limit

### Prediction Limit Intrawell Non-parametric

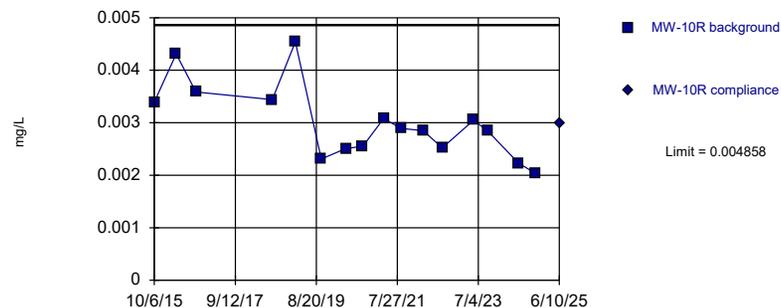


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 87.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Thallium Analysis Run 11/12/2025 12:24 PM View: 2025\_SSN-MW-10R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Parametric

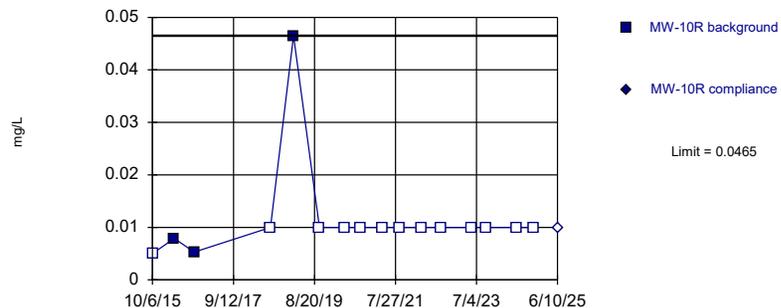


Background Data Summary: Mean=0.003008, Std. Dev.=0.0007074, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9301, critical = 0.844. Kappa = 2.615 (c=15, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0003901.

Constituent: Vanadium Analysis Run 11/12/2025 12:24 PM View: 2025\_SSN-MW-10R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 81.25% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Zinc Analysis Run 11/12/2025 12:24 PM View: 2025\_SSN-MW-10R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

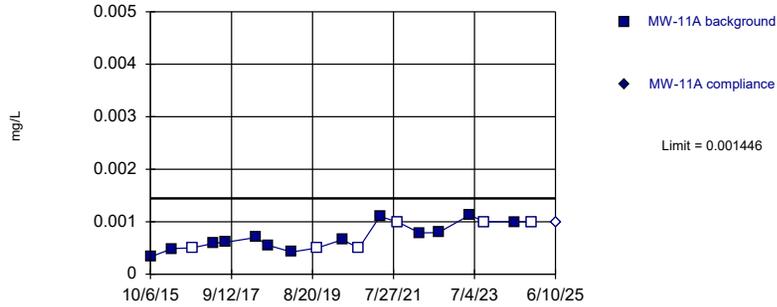
# MW-11A IntraPrediction Limit

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 11/12/2025, 2:47 PM

<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>
Antimony (mg/L)	MW-11A	0.001446	n/a	6/10/2025	0.001ND	No	19	n/a	0.0004817	0.0003938	31.58
Arsenic (mg/L)	MW-11A	0.01672	n/a	6/10/2025	0.005205	No	19	n/a	0.09444	0.01424	0
Barium (mg/L)	MW-11A	0.0235	n/a	6/10/2025	0.0147	No	19	n/a	n/a	n/a	0
Beryllium (mg/L)	MW-11A	0.0005	n/a	6/10/2025	0.0005ND	No	19	n/a	n/a	n/a	94.74
Cadmium (mg/L)	MW-11A	0.0007608	n/a	6/10/2025	0.000636	No	20	n/a	0.000508	0.0001047	0
Cobalt (mg/L)	MW-11A	0.003317	n/a	6/10/2025	0.000628	No	19	n/a	0.002098	0.0004981	0
Copper (mg/L)	MW-11A	0.0025	n/a	6/10/2025	0.0025ND	No	19	n/a	n/a	n/a	94.74
Lead (mg/L)	MW-11A	0.00101	n/a	6/10/2025	0.00025ND	No	19	n/a	n/a	n/a	57.89
Nickel (mg/L)	MW-11A	0.01681	n/a	6/10/2025	0.0127	No	19	n/a	0.1079	0.008906	0
Thallium (mg/L)	MW-11A	0.000782	n/a	6/10/2025	0.0005ND	No	19	n/a	n/a	n/a	78.95
Vanadium (mg/L)	MW-11A	0.0025	n/a	6/10/2025	0.0025ND	No	19	n/a	n/a	n/a	89.47
Zinc (mg/L)	MW-11A	1.19	n/a	6/10/2025	0.01ND	No	19	n/a	n/a	n/a	89.47

Within Limit

Prediction Limit  
Intrawell Parametric

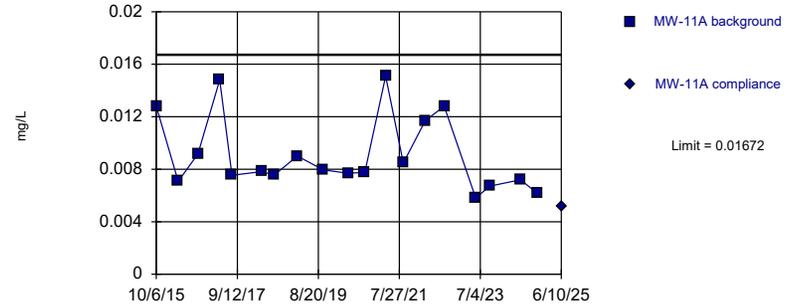


Background Data Summary (after Aitchison's Adjustment): Mean=0.0004817, Std. Dev.=0.0003938, n=19, 31.58% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9159, critical = 0.863. Kappa = 2.448 (c=12, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004877.

Constituent: Antimony Analysis Run 11/12/2025 2:46 PM View: 2025\_SSN-MW-11A\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Parametric

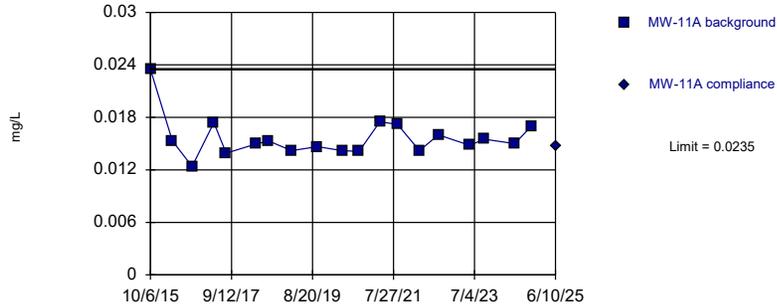


Background Data Summary (based on square root transformation): Mean=0.09444, Std. Dev.=0.01424, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8695, critical = 0.863. Kappa = 2.448 (c=12, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004877.

Constituent: Arsenic Analysis Run 11/12/2025 2:46 PM View: 2025\_SSN-MW-11A\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric

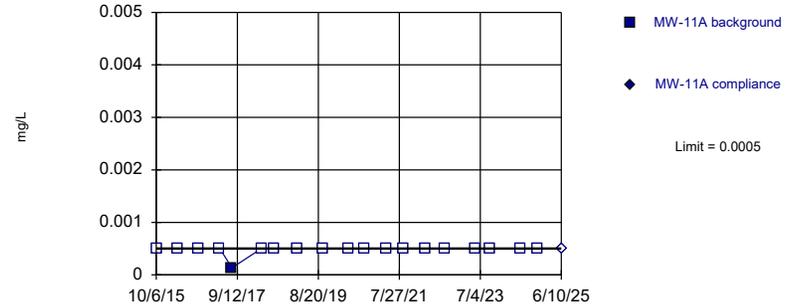


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 19 background values. Well-constituent pair annual alpha = 0.009641. Individual comparison alpha = 0.004832 (1 of 2).

Constituent: Barium Analysis Run 11/12/2025 2:46 PM View: 2025\_SSN-MW-11A\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric

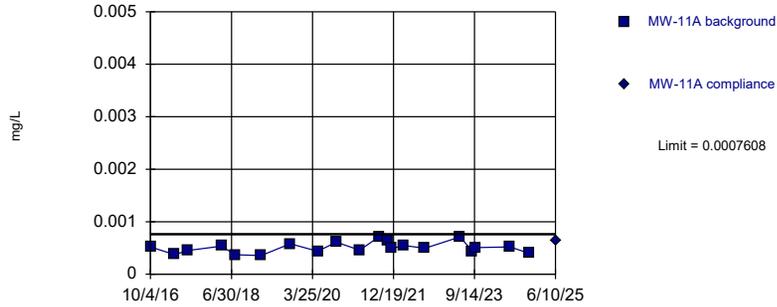


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 19 background values. 94.74% NDs. Well-constituent pair annual alpha = 0.009641. Individual comparison alpha = 0.004832 (1 of 2).

Constituent: Beryllium Analysis Run 11/12/2025 2:46 PM View: 2025\_SSN-MW-11A\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Parametric

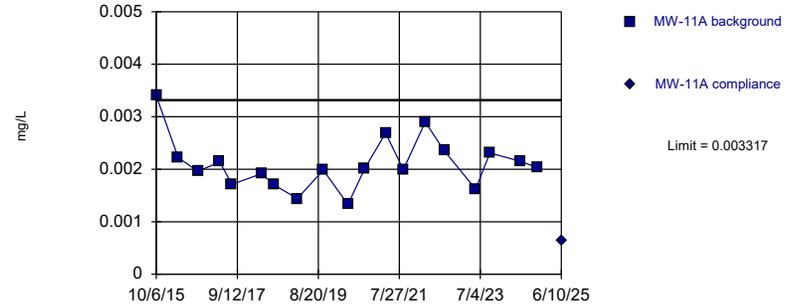


Background Data Summary: Mean=0.000508, Std. Dev.=0.0001047, n=20. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.951, critical = 0.868. Kappa = 2.416 (c=12, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004877.

Constituent: Cadmium Analysis Run 11/12/2025 2:46 PM View: 2025\_SSN-MW-11A\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Parametric

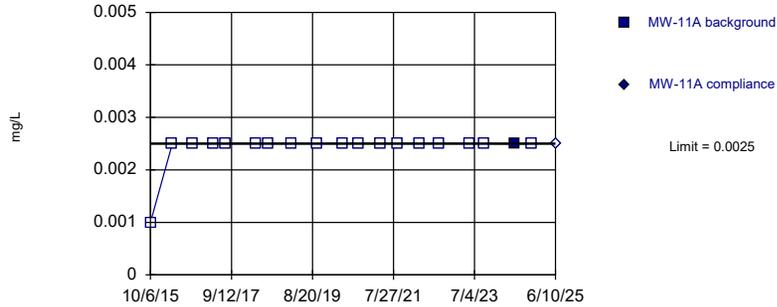


Background Data Summary: Mean=0.002098, Std. Dev.=0.0004981, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9325, critical = 0.863. Kappa = 2.448 (c=12, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004877.

Constituent: Cobalt Analysis Run 11/12/2025 2:46 PM View: 2025\_SSN-MW-11A\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric

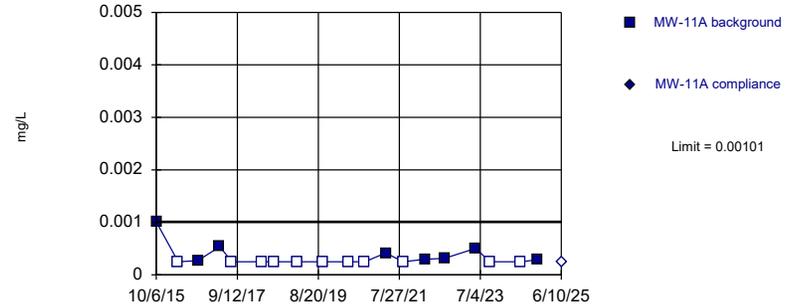


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 19 background values. 94.74% NDs. Well-constituent pair annual alpha = 0.009641. Individual comparison alpha = 0.004832 (1 of 2).

Constituent: Copper Analysis Run 11/12/2025 2:46 PM View: 2025\_SSN-MW-11A\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric

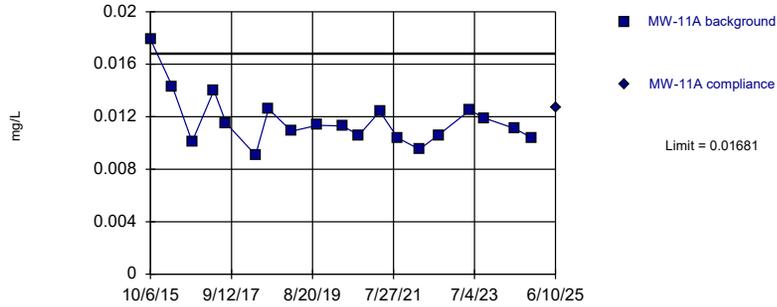


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 19 background values. 57.89% NDs. Well-constituent pair annual alpha = 0.009641. Individual comparison alpha = 0.004832 (1 of 2).

Constituent: Lead Analysis Run 11/12/2025 2:46 PM View: 2025\_SSN-MW-11A\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Parametric



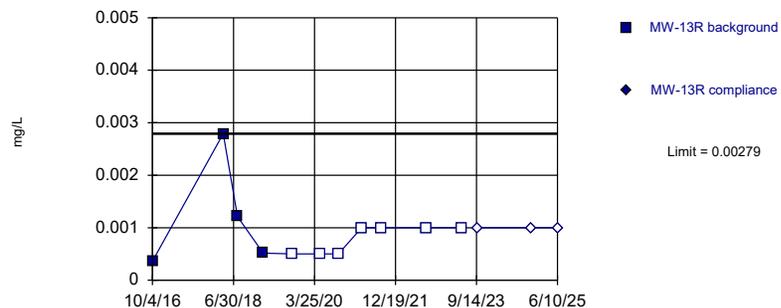
# MW-13R IntraPrediction Limit

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 11/12/2025, 2:53 PM

<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>
Antimony (mg/L)	MW-13R	0.00279	n/a	6/10/2025	0.001ND	No	11	n/a	n/a	n/a	63.64
Arsenic (mg/L)	MW-13R	0.004154	n/a	6/10/2025	0.00159J	No	11	n/a	0.001838	0.0007992	9.091
Barium (mg/L)	MW-13R	0.458	n/a	6/10/2025	0.0717	No	11	n/a	-2.082	0.449	0
Cadmium (mg/L)	MW-13R	0.00025	n/a	6/10/2025	0.0001ND	No	11	n/a	n/a	n/a	81.82
Chromium (mg/L)	MW-13R	0.00361	n/a	6/10/2025	0.0025ND	No	11	n/a	n/a	n/a	54.55
Cobalt (mg/L)	MW-13R	0.0025	n/a	6/10/2025	0.000203J	No	11	n/a	0.000865	0.0005643	0
Copper (mg/L)	MW-13R	0.0025	n/a	6/10/2025	0.0025ND	No	11	n/a	n/a	n/a	90.91
Lead (mg/L)	MW-13R	0.00166	n/a	6/10/2025	0.00025ND	No	11	n/a	n/a	n/a	90.91
Nickel (mg/L)	MW-13R	0.01	n/a	6/10/2025	0.0025ND	No	11	n/a	n/a	n/a	63.64
Thallium (mg/L)	MW-13R	0.00055	n/a	6/10/2025	0.0005ND	No	11	n/a	n/a	n/a	81.82
Vanadium (mg/L)	MW-13R	0.0025	n/a	6/10/2025	0.0025ND	No	11	n/a	n/a	n/a	63.64
Zinc (mg/L)	MW-13R	0.827	n/a	6/10/2025	0.01ND	No	11	n/a	n/a	n/a	72.73

Within Limit

### Prediction Limit Intrawell Non-parametric

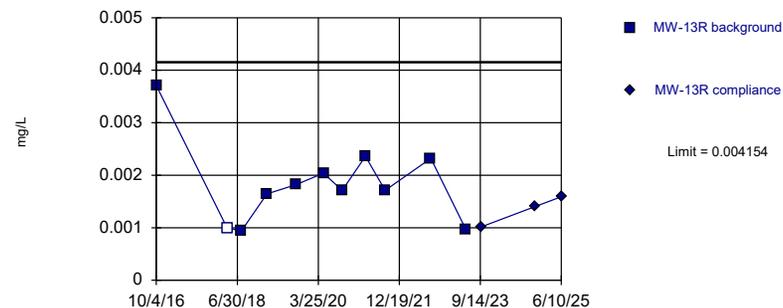


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 63.64% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Antimony Analysis Run 11/12/2025 2:51 PM View: 2025\_SSN-MW-13R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Parametric

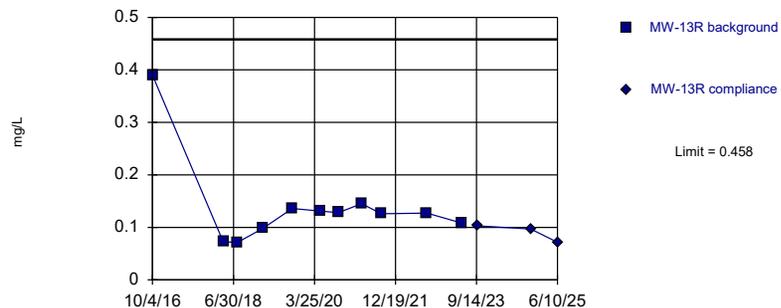


Background Data Summary: Mean=0.001838, Std. Dev.=0.0007992, n=11, 9.091% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8839, critical = 0.792. Kappa = 2.897 (c=12, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004877.

Constituent: Arsenic Analysis Run 11/12/2025 2:51 PM View: 2025\_SSN-MW-13R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Parametric

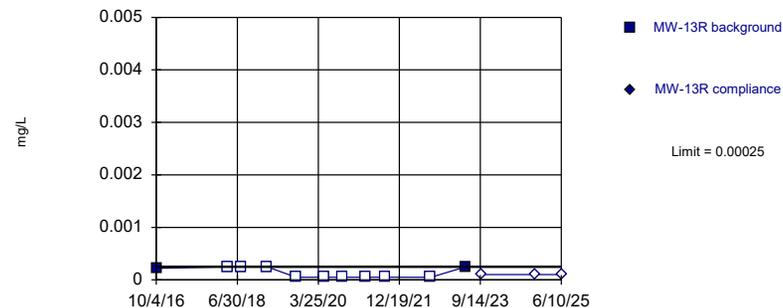


Background Data Summary (based on natural log transformation): Mean=-2.082, Std. Dev.=0.449, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8161, critical = 0.792. Kappa = 2.897 (c=12, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004877.

Constituent: Barium Analysis Run 11/12/2025 2:51 PM View: 2025\_SSN-MW-13R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric

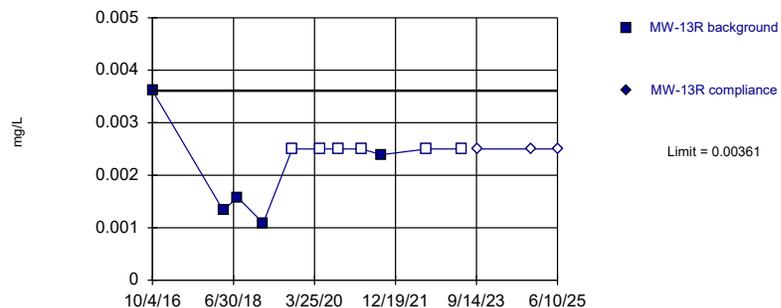


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 81.82% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Cadmium Analysis Run 11/12/2025 2:51 PM View: 2025\_SSN-MW-13R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric

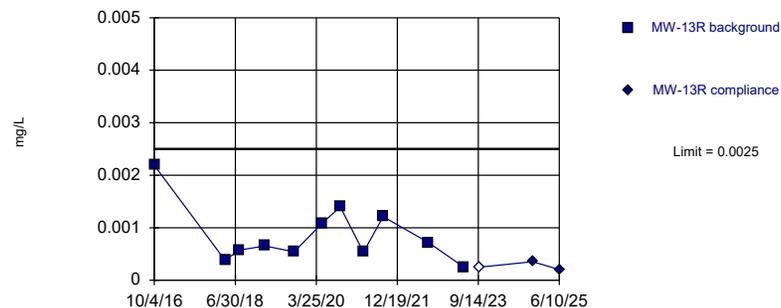


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 54.55% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Chromium Analysis Run 11/12/2025 2:52 PM View: 2025\_SSN-MW-13R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Parametric

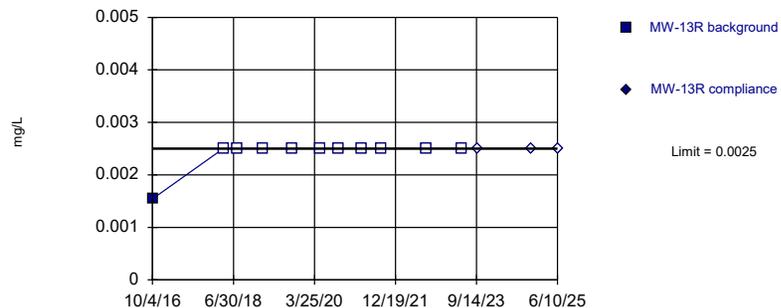


Background Data Summary: Mean=0.000865, Std. Dev.=0.0005643, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8689, critical = 0.792. Kappa = 2.897 (c=12, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004877.

Constituent: Cobalt Analysis Run 11/12/2025 2:52 PM View: 2025\_SSN-MW-13R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric

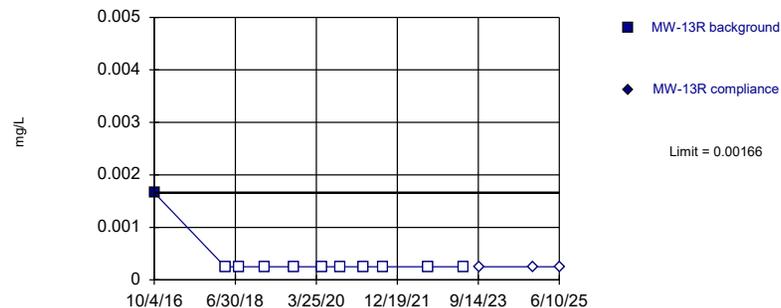


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 90.91% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Copper Analysis Run 11/12/2025 2:52 PM View: 2025\_SSN-MW-13R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric



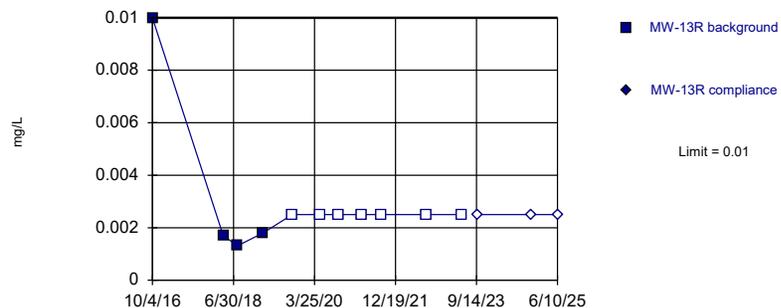
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 90.91% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Lead Analysis Run 11/12/2025 2:52 PM View: 2025\_SSN-MW-13R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Non-parametric



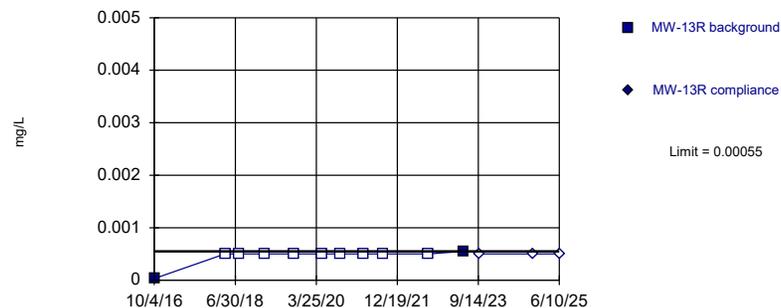
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 63.64% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Nickel Analysis Run 11/12/2025 2:52 PM View: 2025\_SSN-MW-13R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Non-parametric



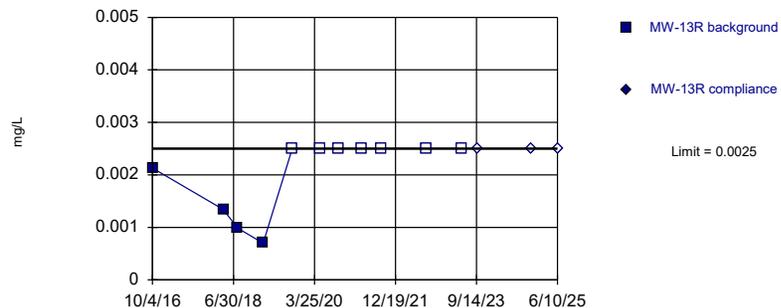
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 81.82% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Thallium Analysis Run 11/12/2025 2:52 PM View: 2025\_SSN-MW-13R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Non-parametric



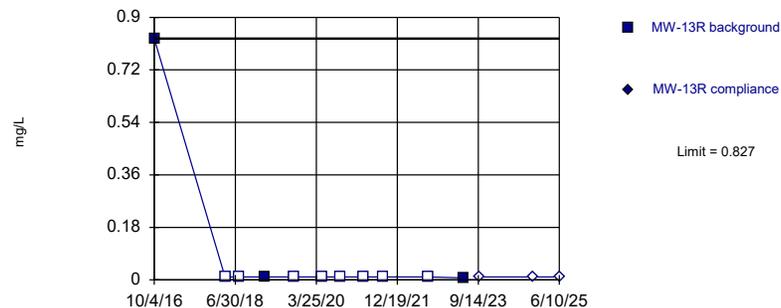
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 63.64% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Vanadium Analysis Run 11/12/2025 2:52 PM View: 2025\_SSN-MW-13R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 72.73% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Zinc Analysis Run 11/12/2025 2:52 PM View: 2025\_SSN-MW-13R\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

# Intrawell Prediction Limit

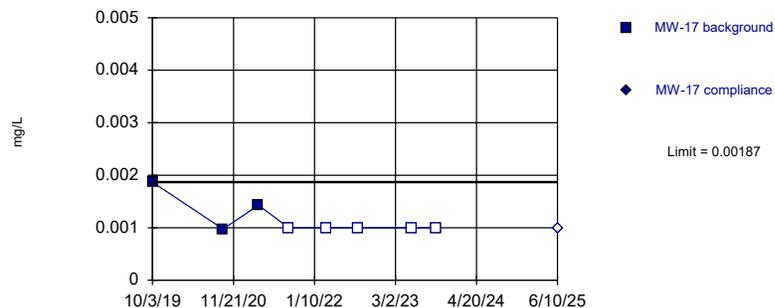
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 10/20/2025, 2:07 PM

<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>
Antimony (mg/L)	MW-17	0.00187	n/a	6/10/2025	0.001ND	No	8	n/a	n/a	n/a	62.5	n/a	n/a	0.02144	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	MW-17	0.002522	n/a	6/10/2025	0.000787J	No	8	n/a	0.0005005	0.0005851	50	Aitchison's	No	0.0004502	Param Intra 1 of 2
Barium (mg/L)	MW-17	0.1222	n/a	6/10/2025	0.0254	No	8	n/a	-3.399	0.3752	0	None	ln(x)	0.0004502	Param Intra 1 of 2
Cadmium (mg/L)	MW-17	0.000394	n/a	6/10/2025	0.000102J	No	8	n/a	0.000106	0.0000833325	25	Aitchison's	No	0.0004502	Param Intra 1 of 2
Chromium (mg/L)	MW-17	0.0193	n/a	6/10/2025	0.00207J	No	8	n/a	n/a	n/a	50	n/a	n/a	0.02144	NP Intra (normality) 1 of 2
Cobalt (mg/L)	MW-17	0.002262	n/a	6/10/2025	0.000932	No	8	n/a	0.0007423	0.0004397	0	None	No	0.0004502	Param Intra 1 of 2
Copper (mg/L)	MW-17	0.00496	n/a	6/10/2025	0.0025ND	No	8	n/a	n/a	n/a	62.5	n/a	n/a	0.02144	NP Intra (NDs) 1 of 2
Lead (mg/L)	MW-17	0.003668	n/a	6/10/2025	0.000702	No	8	n/a	0.000781	0.0008355	25	Aitchison's	No	0.0004502	Param Intra 1 of 2
Nickel (mg/L)	MW-17	0.01473	n/a	6/10/2025	0.00372J	No	8	n/a	0.005066	0.002797	12.5	None	No	0.0004502	Param Intra 1 of 2
Selenium (mg/L)	MW-17	0.0025	n/a	6/10/2025	0.0025ND	No	8	n/a	n/a	n/a	62.5	n/a	n/a	0.02144	NP Intra (NDs) 1 of 2
Thallium (mg/L)	MW-17	0.000658	n/a	6/10/2025	0.0005ND	No	8	n/a	n/a	n/a	87.5	n/a	n/a	0.02144	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	MW-17	0.004622	n/a	6/10/2025	0.00206J	No	8	n/a	0.002205	0.0006993	12.5	None	No	0.0004502	Param Intra 1 of 2
Zinc (mg/L)	MW-17	0.04488	n/a	6/10/2025	0.01ND	No	8	n/a	0.01086	0.009842	37.5	Aitchison's	No	0.0004502	Param Intra 1 of 2

Within Limit

### Prediction Limit

Intrawell Non-parametric



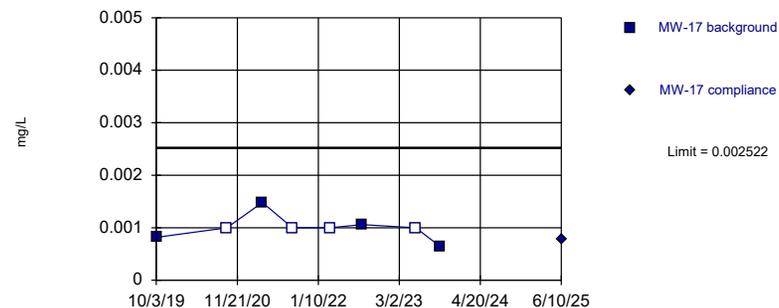
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 62.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Antimony Analysis Run 10/20/2025 2:02 PM View: 2025\_SSN-MW-17\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Parametric



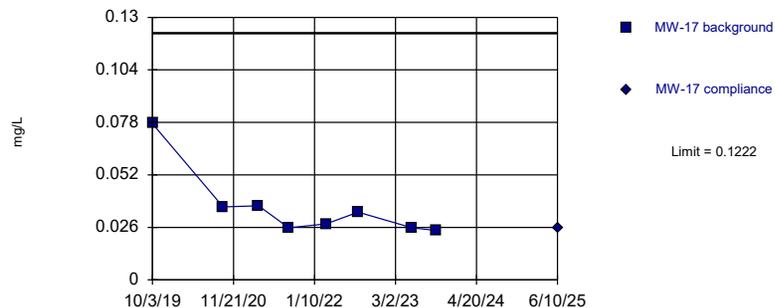
Background Data Summary (after Aitchison's Adjustment): Mean=0.0005005, Std. Dev.=0.0005851, n=8, 50% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.861, critical = 0.749. Kappa = 3.456 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004502.

Constituent: Arsenic Analysis Run 10/20/2025 2:02 PM View: 2025\_SSN-MW-17\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Parametric



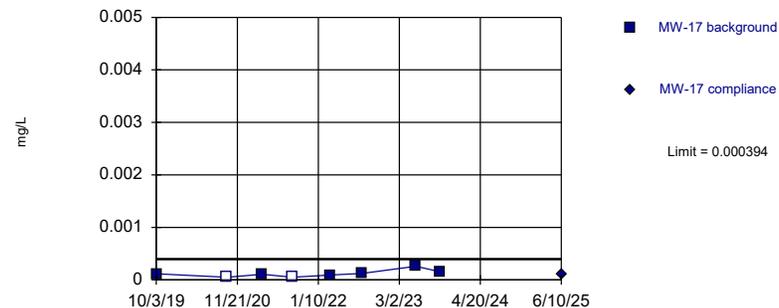
Background Data Summary (based on natural log transformation): Mean=-3.399, Std. Dev.=0.3752, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7802, critical = 0.749. Kappa = 3.456 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004502.

Constituent: Barium Analysis Run 10/20/2025 2:02 PM View: 2025\_SSN-MW-17\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Parametric



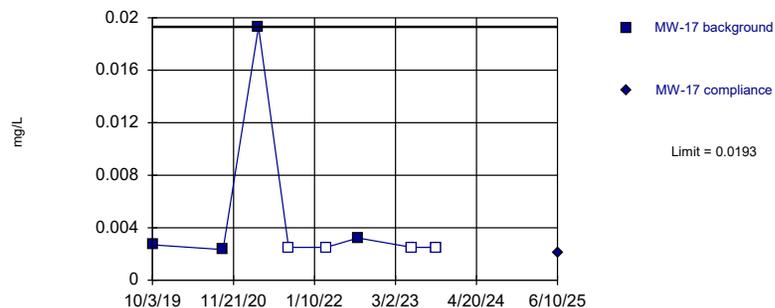
Background Data Summary (after Aitchison's Adjustment): Mean=0.000106, Std. Dev.=0.00008333, n=8, 25% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8748, critical = 0.749. Kappa = 3.456 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004502.

Constituent: Cadmium Analysis Run 10/20/2025 2:02 PM View: 2025\_SSN-MW-17\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Non-parametric



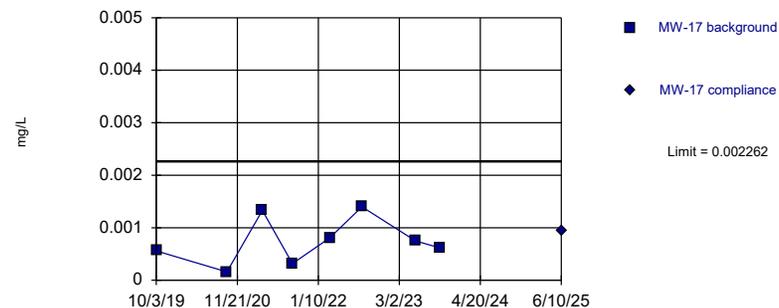
Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. 50% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Chromium Analysis Run 10/20/2025 2:02 PM View: 2025\_SSN-MW-17\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Parametric



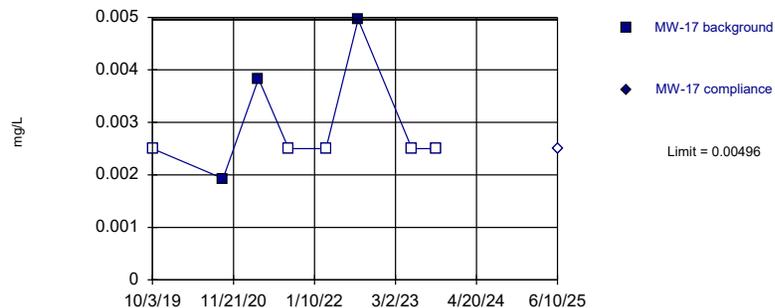
Background Data Summary: Mean=0.0007423, Std. Dev.=0.0004397, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9312, critical = 0.749. Kappa = 3.456 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004502.

Constituent: Cobalt Analysis Run 10/20/2025 2:02 PM View: 2025\_SSN-MW-17\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Non-parametric



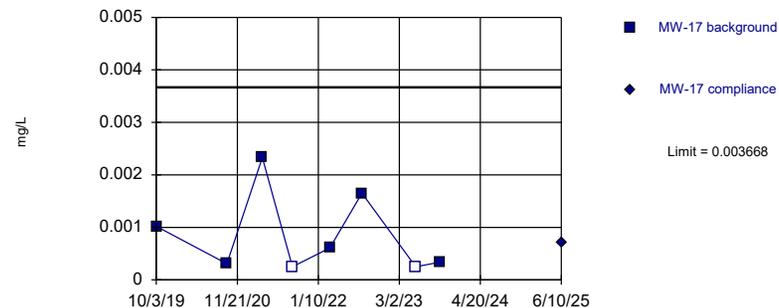
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 62.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Copper Analysis Run 10/20/2025 2:02 PM View: 2025\_SSN-MW-17\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Parametric

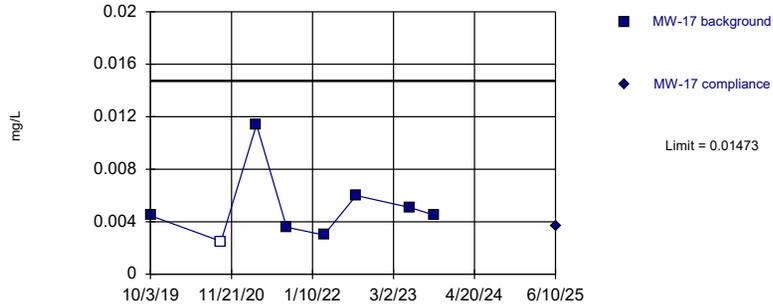


Background Data Summary (after Aitchison's Adjustment): Mean=0.000781, Std. Dev.=0.0008355, n=8, 25% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8076, critical = 0.749. Kappa = 3.456 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004502.

Constituent: Lead Analysis Run 10/20/2025 2:02 PM View: 2025\_SSN-MW-17\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Parametric

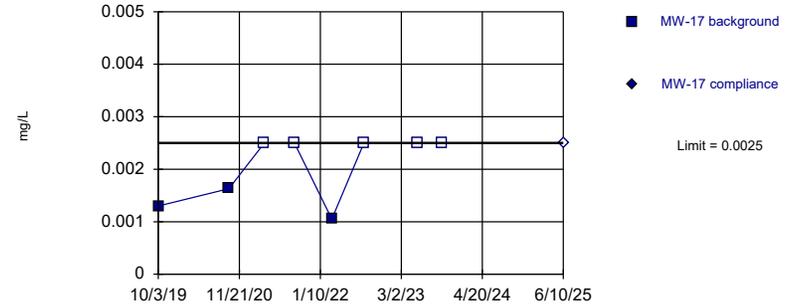


Background Data Summary: Mean=0.005066, Std. Dev.=0.002797, n=8, 12.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7962, critical = 0.749. Kappa = 3.456 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004502.

Constituent: Nickel Analysis Run 10/20/2025 2:02 PM View: 2025\_SSN-MW-17\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric

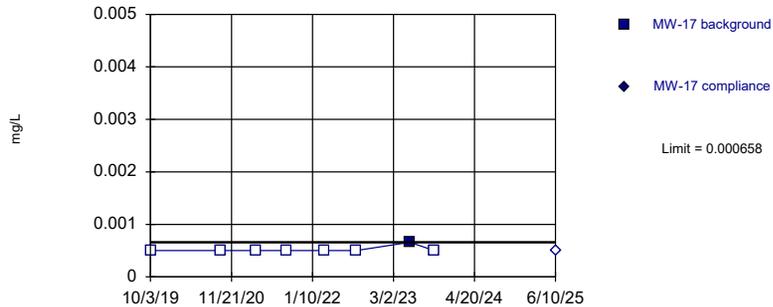


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 62.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Selenium Analysis Run 10/20/2025 2:02 PM View: 2025\_SSN-MW-17\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric

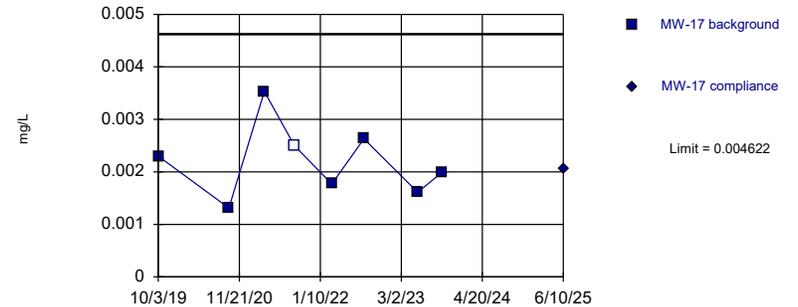


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 87.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Thallium Analysis Run 10/20/2025 2:02 PM View: 2025\_SSN-MW-17\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Parametric



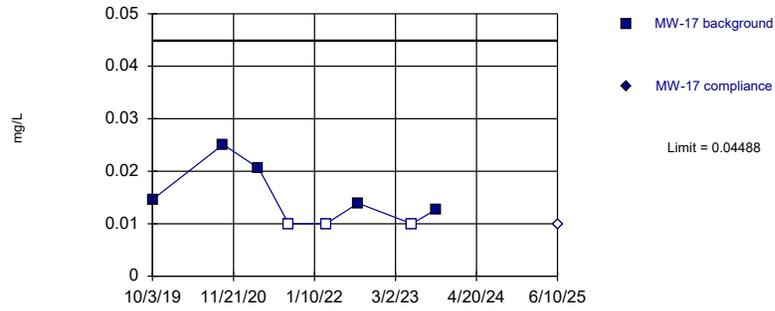
Background Data Summary: Mean=0.002205, Std. Dev.=0.0006993, n=8, 12.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9581, critical = 0.749. Kappa = 3.456 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004502.

Constituent: Vanadium Analysis Run 10/20/2025 2:02 PM View: 2025\_SSN-MW-17\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Parametric



Background Data Summary (after Aitchison's Adjustment): Mean=0.01086, Std. Dev.=0.009842, n=8, 37.5% NDs.  
Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8349, critical = 0.749. Kappa = 3.456 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004502.

Constituent: Zinc Analysis Run 10/20/2025 2:02 PM View: 2025\_SSN-MW-17\_IntraPL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master



Attachment A.4  
Interwell Prediction Limits

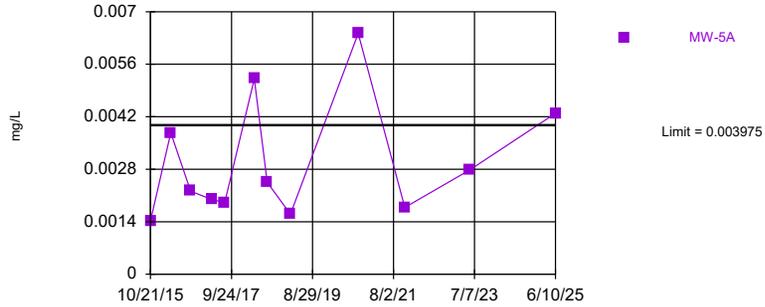
# AM Prediction Limit

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 10/10/2025, 4:55 PM

<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>Arsenic (mg/L)</b>	<b>MW-5A</b>	<b>0.003975</b>	<b>n/a</b>	<b>6/10/2025</b>	<b>0.00429</b>	<b>Yes</b>	<b>27</b>	<b>MW-14,MW-1A</b>	<b>0.04084</b>	<b>0.009602</b>	<b>11.11</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0004502</b>	<b>Param Inter 1 of 2</b>
Barium (mg/L)	MW-4A	0.822	n/a	6/10/2025	0.553	No	27	MW-14,MW-1A	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
Barium (mg/L)	MW-5A	0.822	n/a	6/10/2025	0.406	No	27	MW-14,MW-1A	n/a	n/a	0	n/a	n/a	0.002308	NP Inter (normality) 1 of 2
<b>Cobalt (mg/L)</b>	<b>MW-5A</b>	<b>0.001248</b>	<b>n/a</b>	<b>6/10/2025</b>	<b>0.00358</b>	<b>Yes</b>	<b>27</b>	<b>MW-14,MW-1A</b>	<b>0.01879</b>	<b>0.00715</b>	<b>14.81</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0004502</b>	<b>Param Inter 1 of 2</b>
Lead (mg/L)	MW-5A	0.00138	n/a	6/10/2025	0.000591	No	27	MW-14,MW-1A	n/a	n/a	74.07	n/a	n/a	0.002308	NP Inter (NDs) 1 of 2
<b>Nickel (mg/L)</b>	<b>MW-5A</b>	<b>0.0103</b>	<b>n/a</b>	<b>6/10/2025</b>	<b>0.013</b>	<b>Yes</b>	<b>27</b>	<b>MW-14,MW-1A</b>	<b>n/a</b>	<b>n/a</b>	<b>40.74</b>	<b>n/a</b>	<b>n/a</b>	<b>0.002308</b>	<b>NP Inter (normality) 1 of 2</b>

Exceeds Limit: MW-5A

### Prediction Limit Interwell Parametric

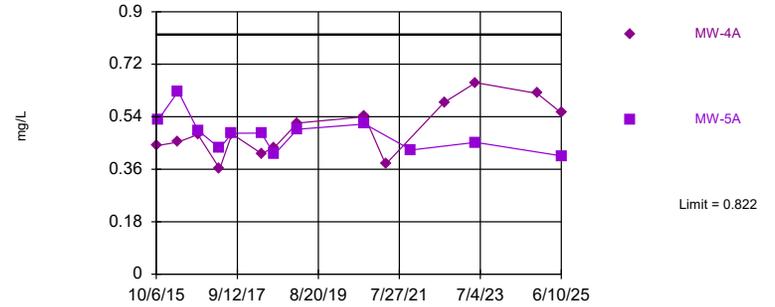


Background Data Summary (based on square root transformation): Mean=0.04084, Std. Dev.=0.009602, n=27, 11.11% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9116, critical = 0.894. Kappa = 2.312 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.004044. Individual comparison alpha = 0.0004502. Assumes 8 future values.

Constituent: Arsenic Analysis Run 10/10/2025 4:51 PM View: 2025\_SSN-AM\_Interwell\_PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Interwell Non-parametric

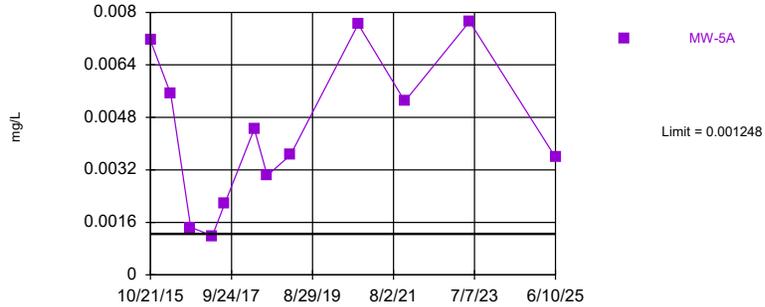


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 27 background values. Annual per-constituent alpha = 0.04074. Individual comparison alpha = 0.002308 (1 of 2). Comparing 2 points to limit. Assumes 7 future values.

Constituent: Barium Analysis Run 10/10/2025 4:51 PM View: 2025\_SSN-AM\_Interwell\_PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Exceeds Limit: MW-5A

### Prediction Limit Interwell Parametric

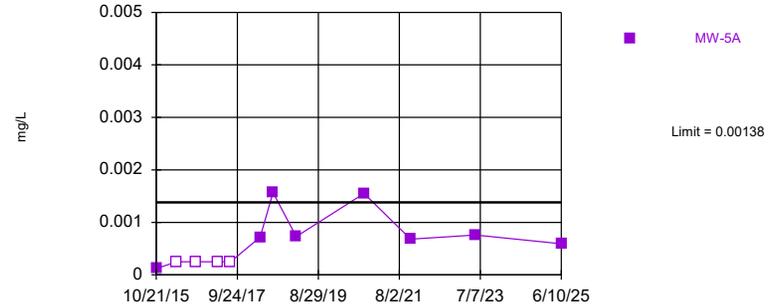


Background Data Summary (based on square root transformation): Mean=0.01879, Std. Dev.=0.00715, n=27, 14.81% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9323, critical = 0.894. Kappa = 2.312 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.004044. Individual comparison alpha = 0.0004502. Assumes 8 future values.

Constituent: Cobalt Analysis Run 10/10/2025 4:51 PM View: 2025\_SSN-AM\_Interwell\_PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Interwell Non-parametric



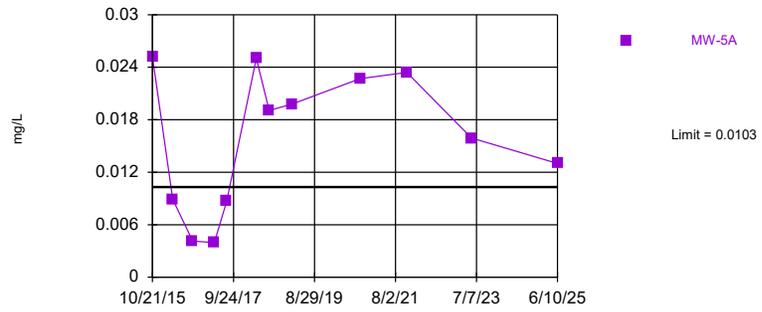
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 27 background values. 74.07% NDs. Annual per-constituent alpha = 0.04074. Individual comparison alpha = 0.002308 (1 of 2). Assumes 8 future values.

Constituent: Lead Analysis Run 10/10/2025 4:51 PM View: 2025\_SSN-AM\_Interwell\_PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Exceeds Limit: MW-5A

### Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 27 background values. 40.74% NDs. Annual per-constituent alpha = 0.04074. Individual comparison alpha = 0.002308 (1 of 2). Assumes 8 future values.

Constituent: Nickel Analysis Run 10/10/2025 4:52 PM View: 2025\_SSN-AM\_Interwell\_PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master



Attachment A.5  
Sen's Slope/Mann-Kendall Trend Analysis

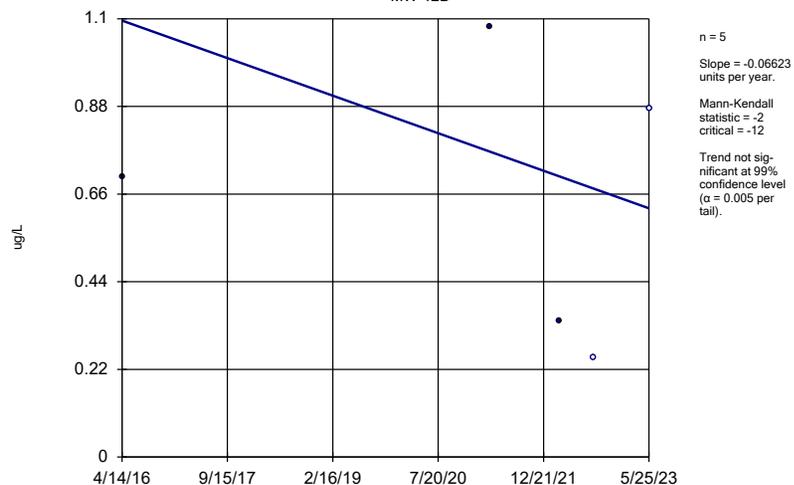
# Trend Test

Harrison County Sanitary Landfill    Client: SCS Engineers    Data: HARSW\_AM\_2025\_SSN    Printed 10/10/2025, 5:26 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>Alpha</u>	<u>Method</u>
2,4,5-TP [Silvex] [2C] (ug/L)	MW-12B	-0.06623	-2	-12	No	5	40	0.01	NP
Antimony (mg/L)	MW-5A	-0.00002614	-1	-21	No	8	37.5	0.01	NP
Antimony (mg/L)	MW-12B	0.0001602	14	21	No	8	62.5	0.01	NP
Arsenic (mg/L)	MW-4A	-0.000008291	0	21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-5A	0.0001089	4	21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-12B	0.00008316	2	21	No	8	0	0.01	NP
Barium (mg/L)	MW-4A	0.01981	14	21	No	8	0	0.01	NP
Barium (mg/L)	MW-5A	-0.005909	-6	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-12B	0.01763	10	21	No	8	0	0.01	NP
Benzene (ug/L)	MW-12B	-0.02902	0	21	No	8	12.5	0.01	NP
Beryllium (mg/L)	MW-12B	-8.3e-7	-3	-21	No	8	37.5	0.01	NP
Cadmium (mg/L)	MW-12B	0.0003281	7	21	No	8	37.5	0.01	NP
Carbon disulfide (ug/L)	MW-4A	-0.09986	-10	-21	No	8	50	0.01	NP
Carbon disulfide (ug/L)	MW-5A	-0.02158	-1	-21	No	8	25	0.01	NP
Chlorobenzene (ug/L)	MW-12B	0.02582	5	21	No	8	37.5	0.01	NP
Chloromethane (ug/L)	MW-12B	0	5	21	No	8	75	0.01	NP
Chromium (mg/L)	MW-12B	0.004208	14	21	No	8	62.5	0.01	NP
cis-1,2-Dichloroethene (ug/L)	MW-12B	-0.251	-12	-21	No	8	12.5	0.01	NP
Cobalt (mg/L)	MW-4A	-0.000007095	-7	-21	No	8	25	0.01	NP
Cobalt (mg/L)	MW-5A	0.0006643	12	21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-12B	0.001747	10	21	No	8	0	0.01	NP
Copper (mg/L)	MW-5A	-0.001247	-15	-21	No	8	37.5	0.01	NP
Copper (mg/L)	MW-12B	0.01609	15	21	No	8	25	0.01	NP
Di-n-butyl phthalate (ug/L)	MW-4A	0.01251	1	12	No	5	80	0.01	NP
Lead (mg/L)	MW-4A	0	-1	-21	No	8	37.5	0.01	NP
Lead (mg/L)	MW-5A	-9.9e-7	0	21	No	8	12.5	0.01	NP
Lead (mg/L)	MW-12B	0.0005645	16	21	No	8	12.5	0.01	NP
Nickel (mg/L)	MW-4A	0	1	21	No	8	37.5	0.01	NP
Nickel (mg/L)	MW-5A	-0.0005504	-2	-21	No	8	0	0.01	NP
Nickel (mg/L)	MW-12B	0.0103	6	21	No	8	0	0.01	NP
<b>Thallium (mg/L)</b>	<b>MW-12B</b>	<b>0.0001294</b>	<b>22</b>	<b>21</b>	<b>Yes</b>	<b>8</b>	<b>50</b>	<b>0.01</b>	<b>NP</b>
<b>Vanadium (mg/L)</b>	<b>MW-12B</b>	<b>0.0008724</b>	<b>22</b>	<b>21</b>	<b>Yes</b>	<b>8</b>	<b>12.5</b>	<b>0.01</b>	<b>NP</b>
Zinc (mg/L)	MW-4A	0	3	21	No	8	87.5	0.01	NP
Zinc (mg/L)	MW-5A	-0.0003928	-8	-21	No	8	50	0.01	NP
Zinc (mg/L)	MW-12B	0.005119	19	21	No	8	25	0.01	NP

### Sen's Slope Estimator

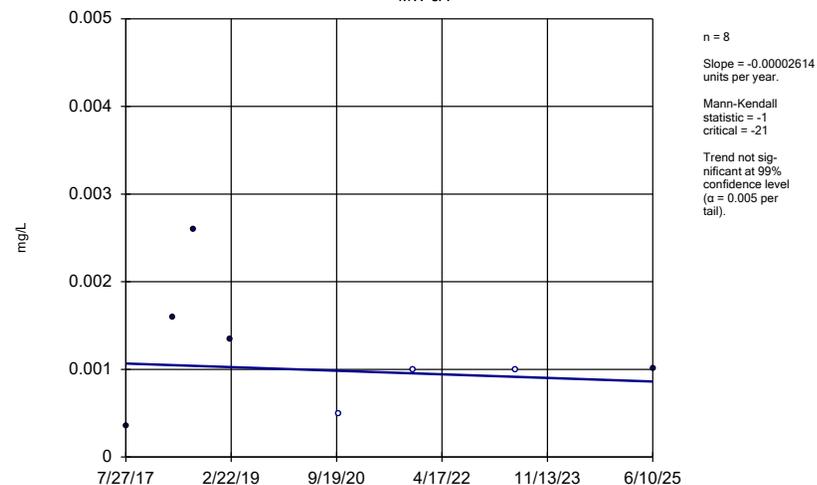
MW-12B



Constituent: 2,4,5-TP [Silvex] [2C] Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

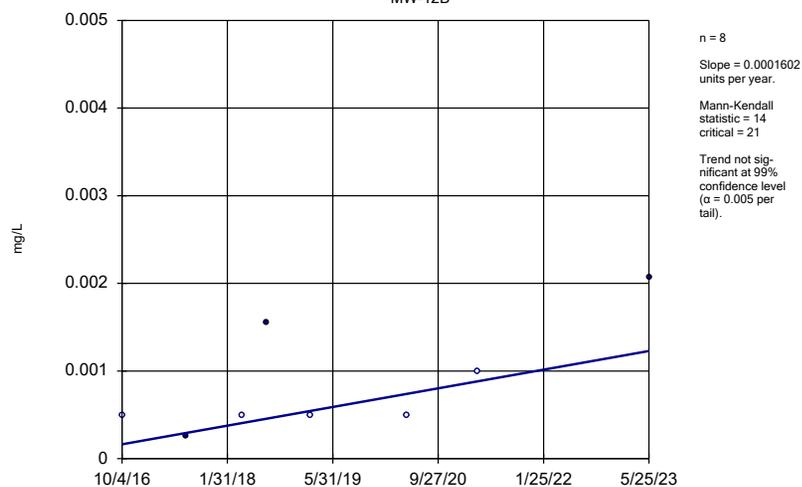
MW-5A



Constituent: Antimony Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

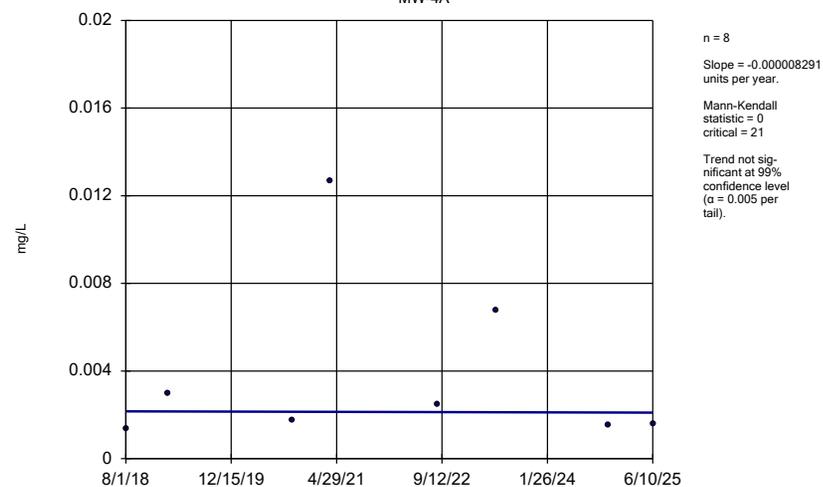
MW-12B



Constituent: Antimony Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

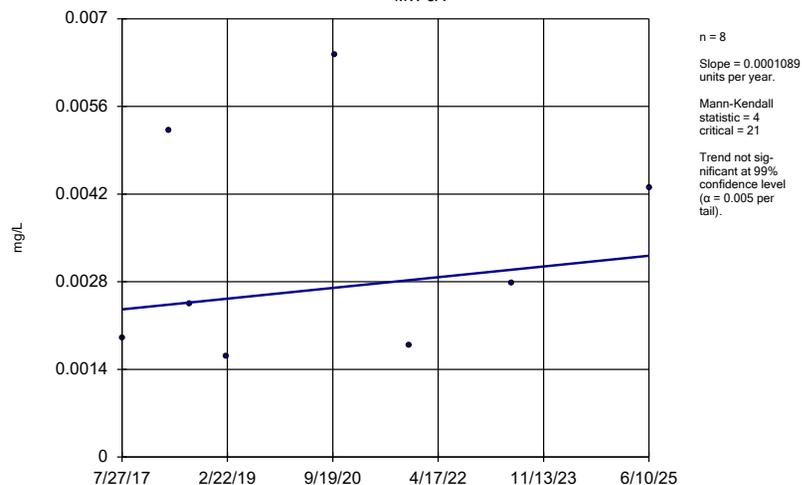
MW-4A



Constituent: Arsenic Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

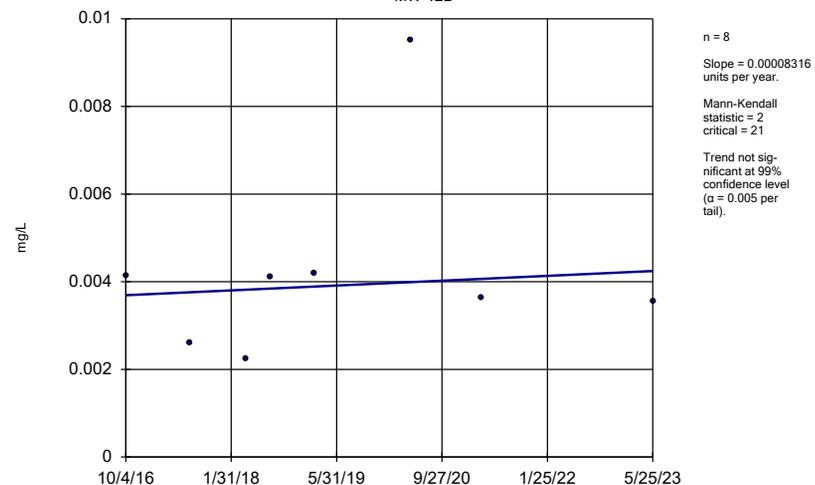
MW-5A



Constituent: Arsenic Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

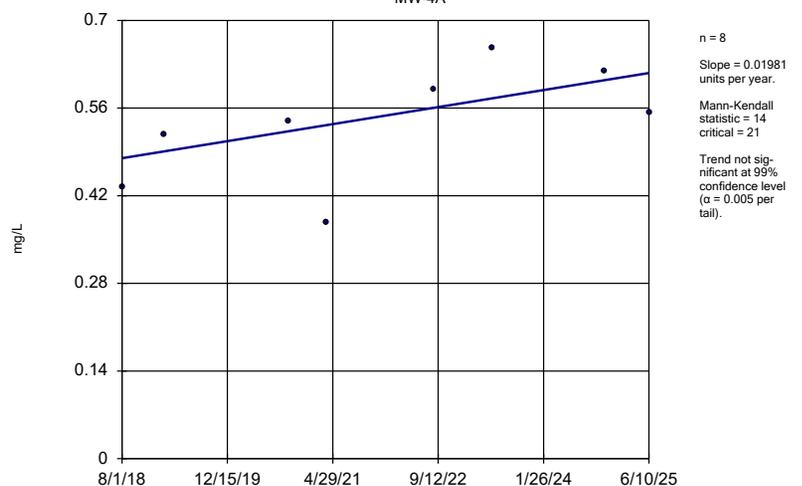
MW-12B



Constituent: Arsenic Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

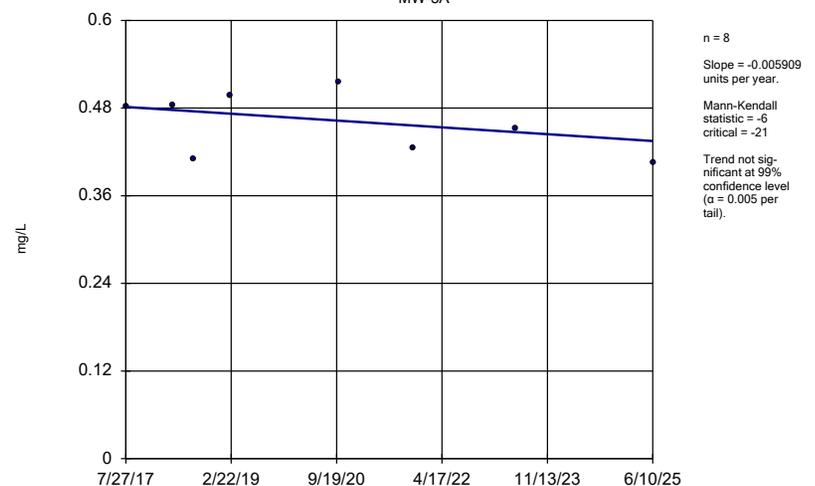
MW-4A



Constituent: Barium Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

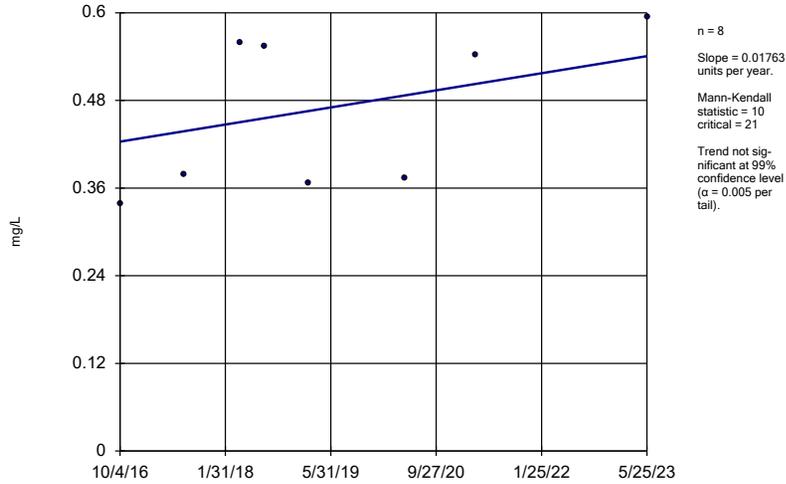
MW-5A



Constituent: Barium Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

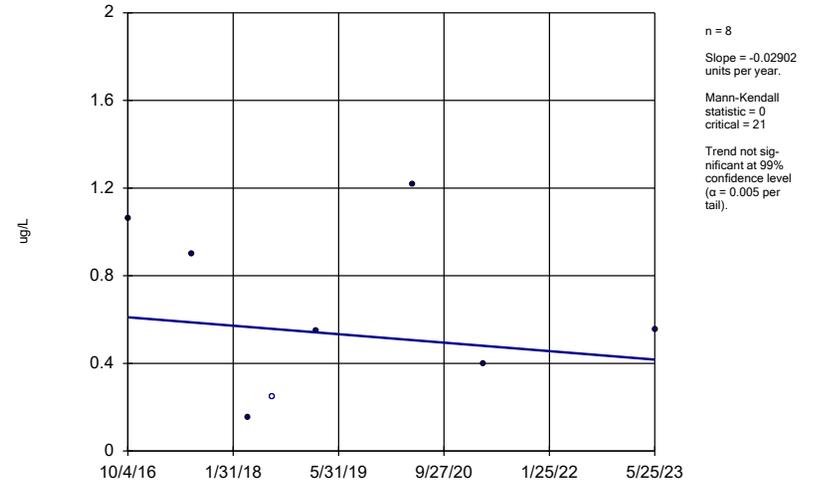
MW-12B



Constituent: Barium Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

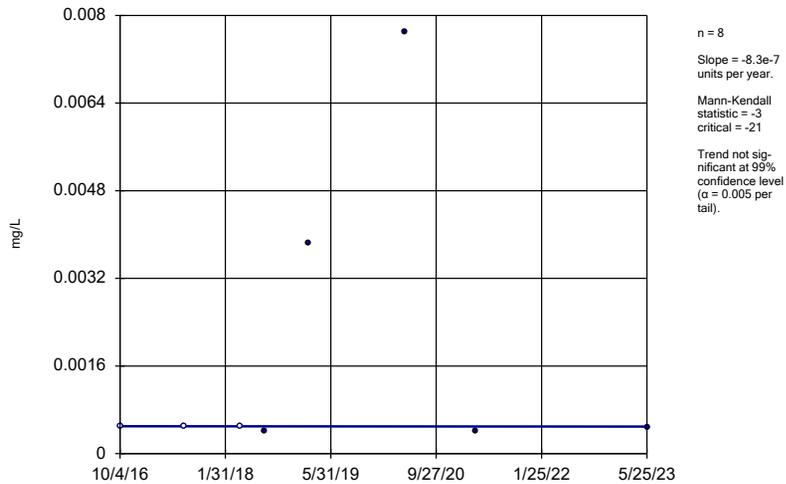
MW-12B



Constituent: Benzene Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

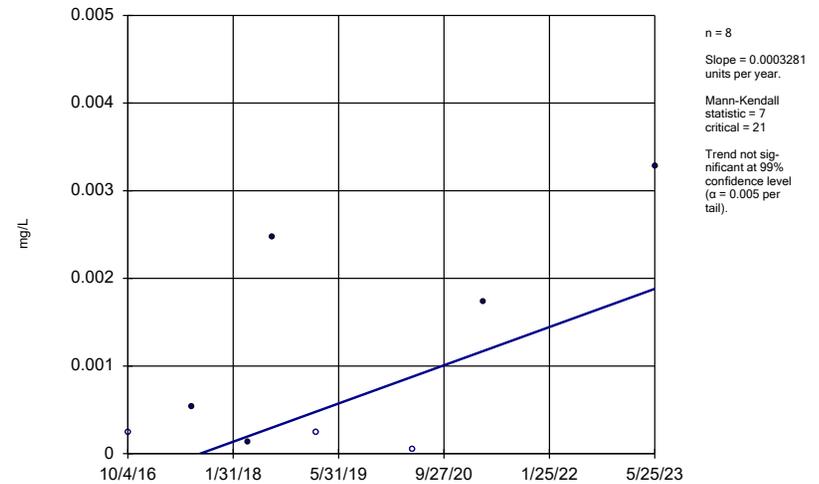
MW-12B



Constituent: Beryllium Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

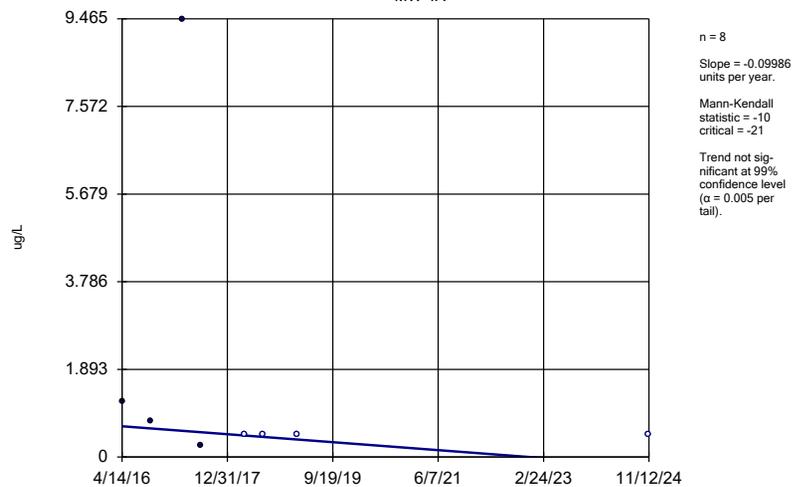
MW-12B



Constituent: Cadmium Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

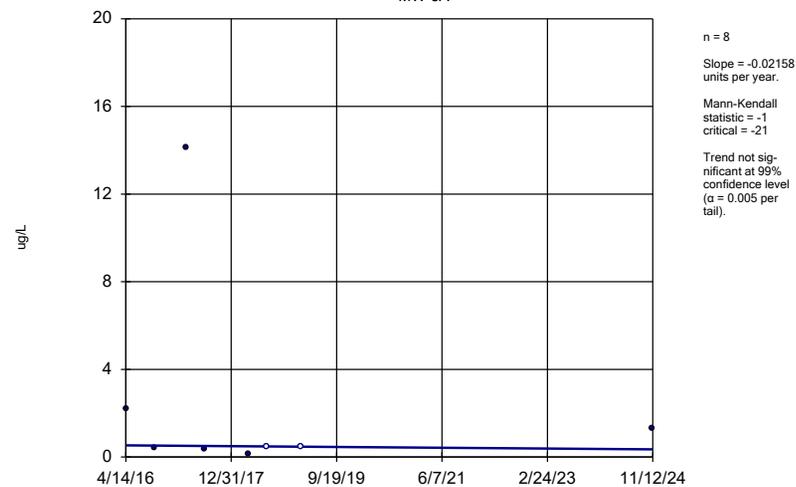
MW-4A



Constituent: Carbon disulfide Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

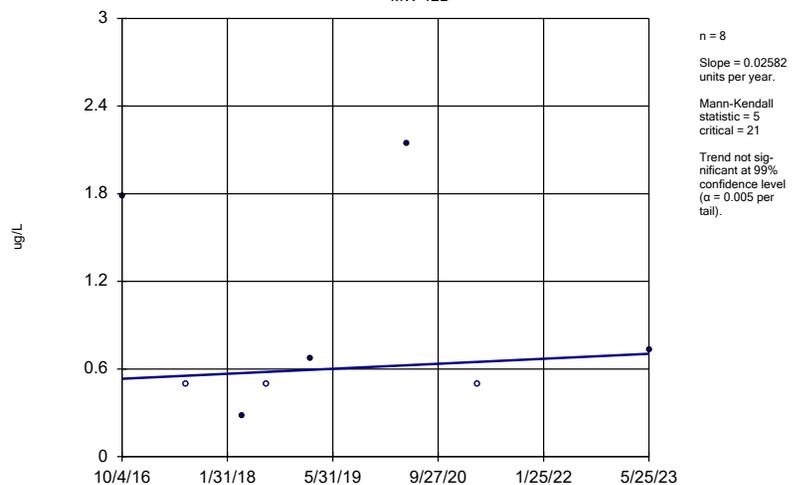
MW-5A



Constituent: Carbon disulfide Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

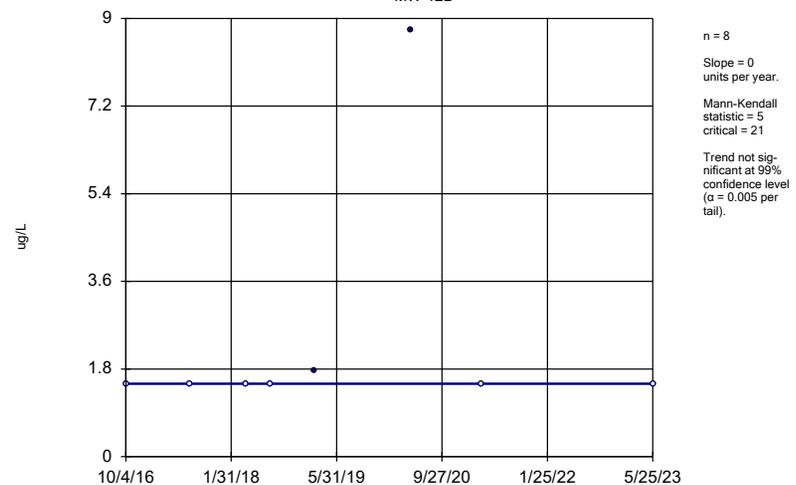
MW-12B



Constituent: Chlorobenzene Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

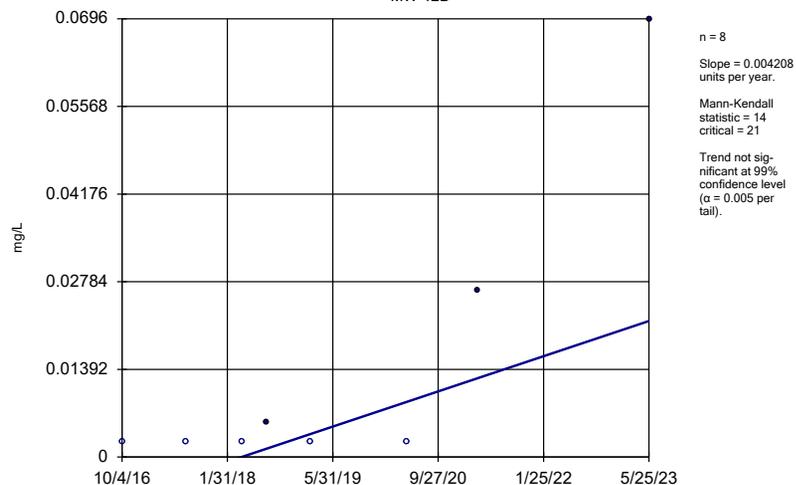
MW-12B



Constituent: Chloromethane Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

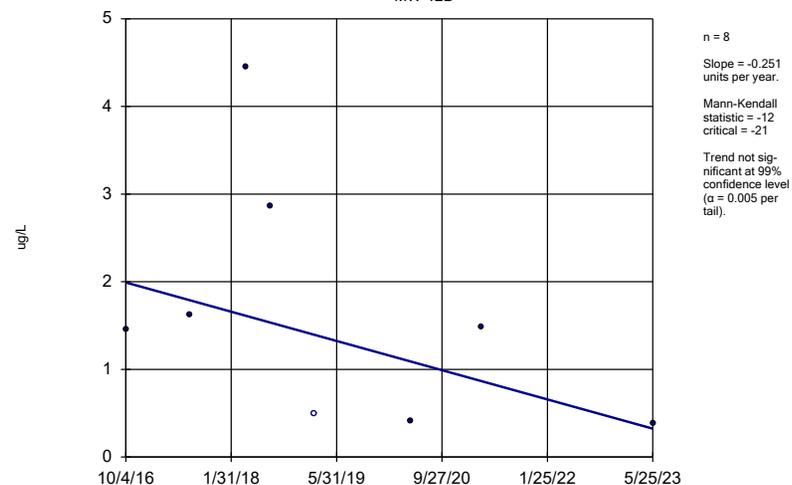
MW-12B



Constituent: Chromium Analysis Run 10/10/2025 5:18 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

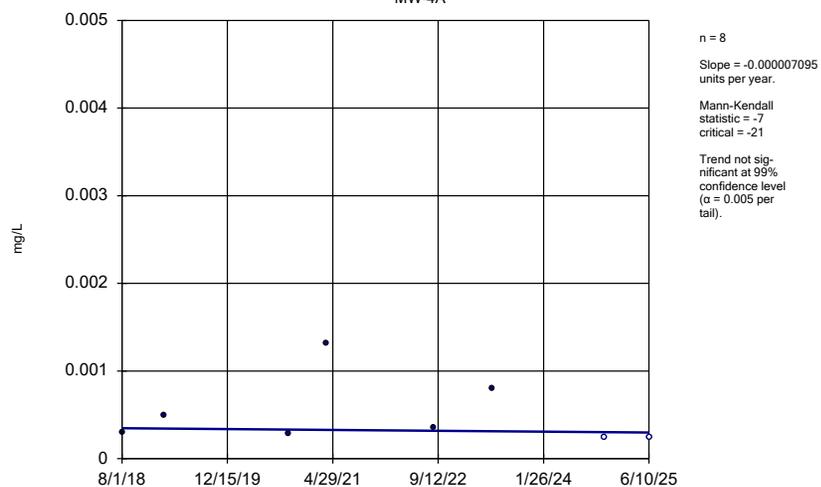
MW-12B



Constituent: cis-1,2-Dichloroethene Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

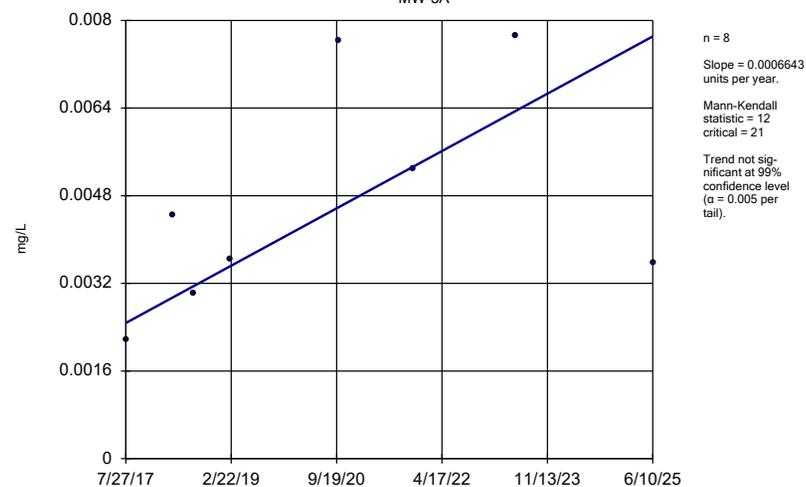
MW-4A



Constituent: Cobalt Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

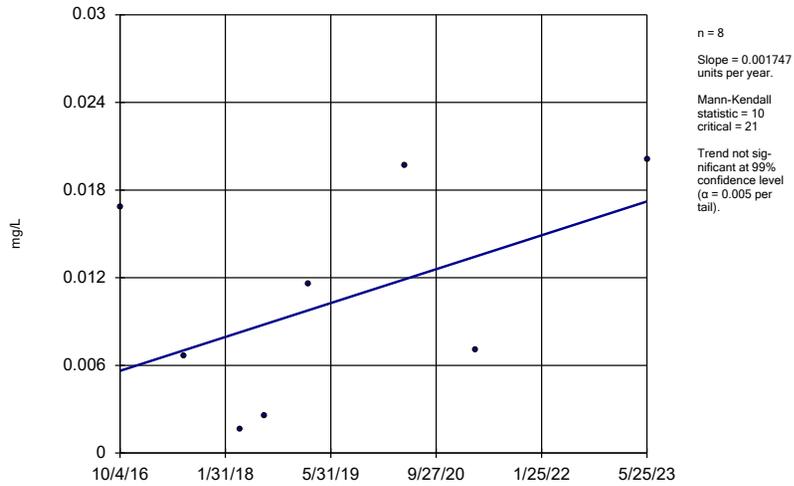
MW-5A



Constituent: Cobalt Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

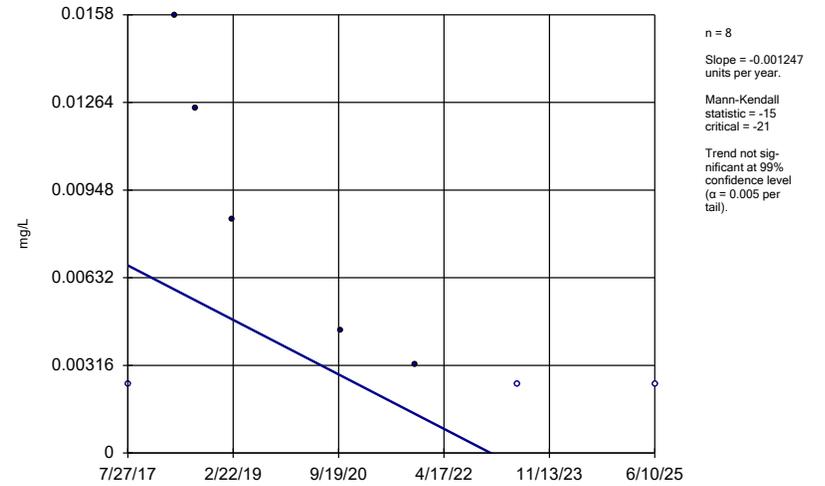
MW-12B



Constituent: Cobalt Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

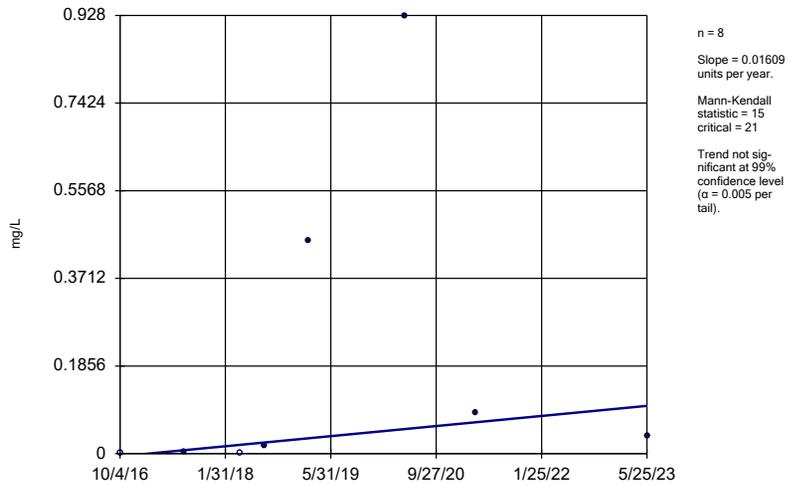
MW-5A



Constituent: Copper Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

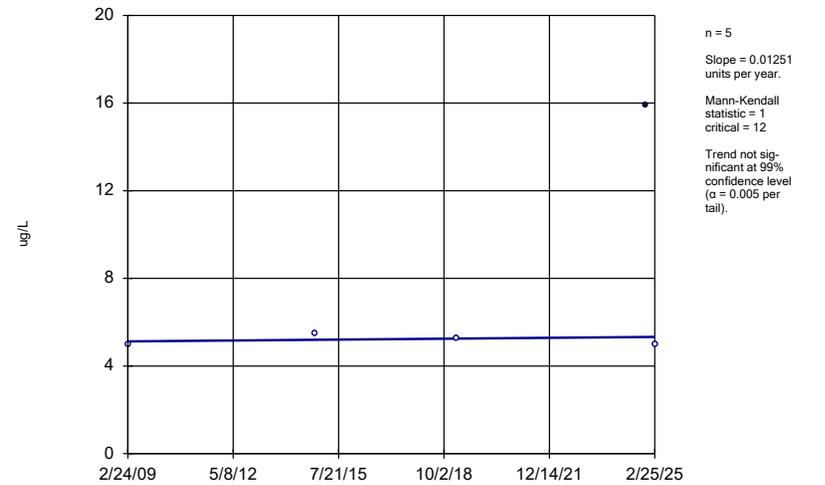
MW-12B



Constituent: Copper Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

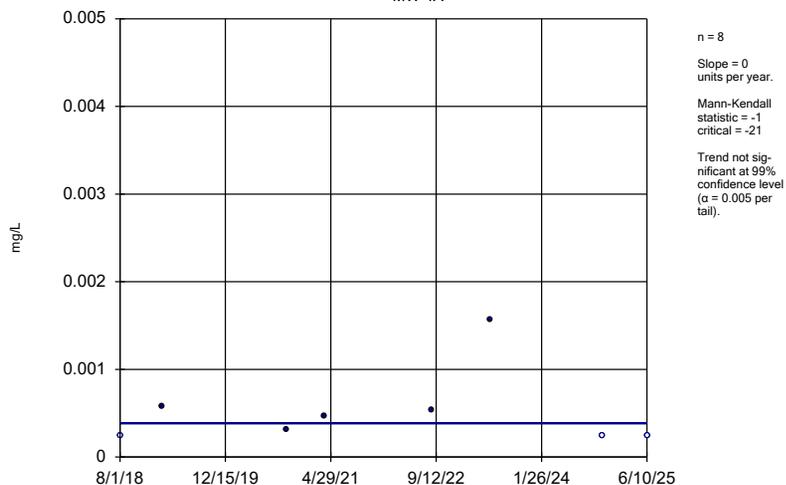
MW-4A



Constituent: Di-n-butyl phthalate Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

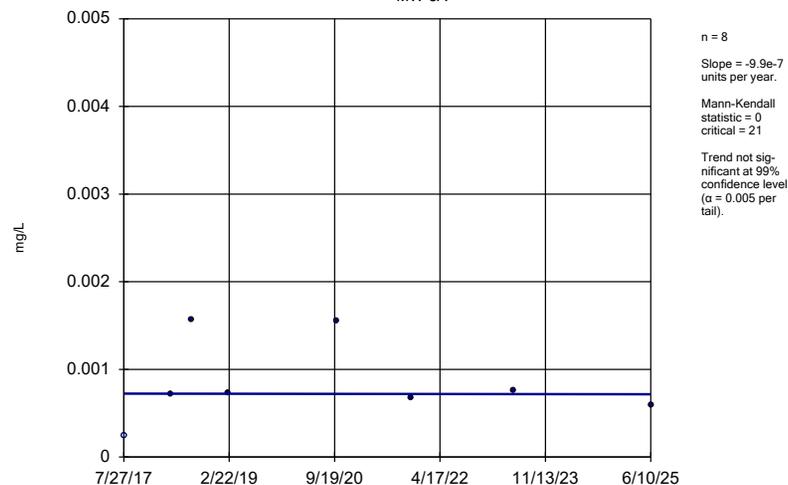
MW-4A



Constituent: Lead Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

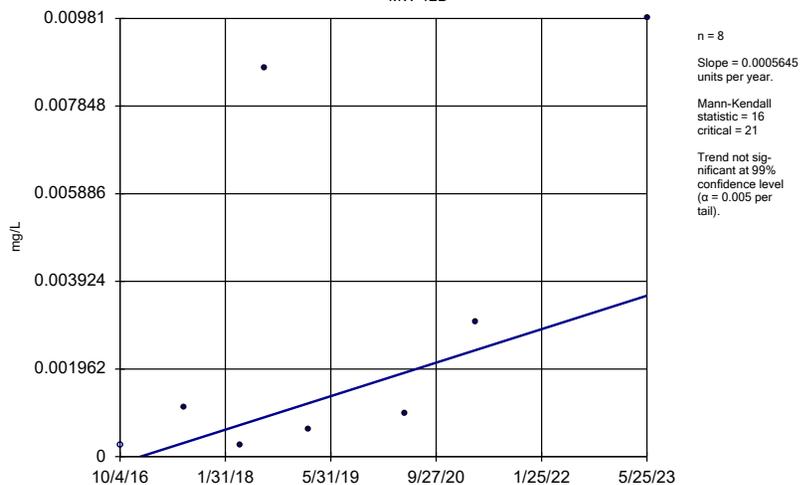
MW-5A



Constituent: Lead Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

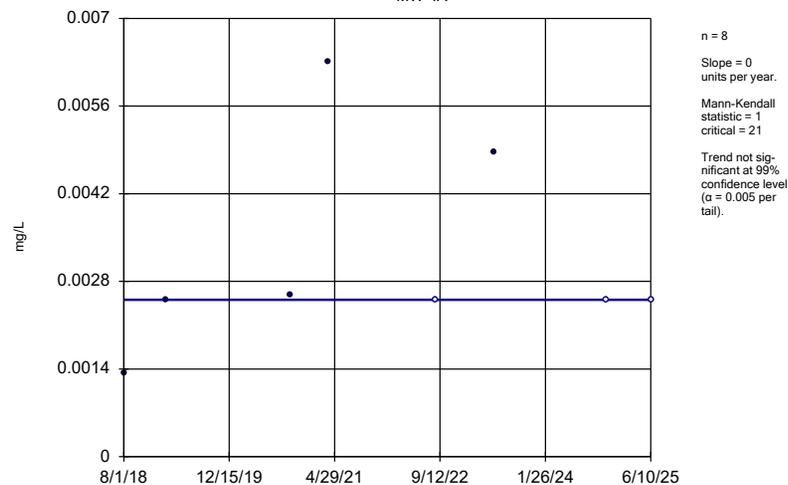
MW-12B



Constituent: Lead Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

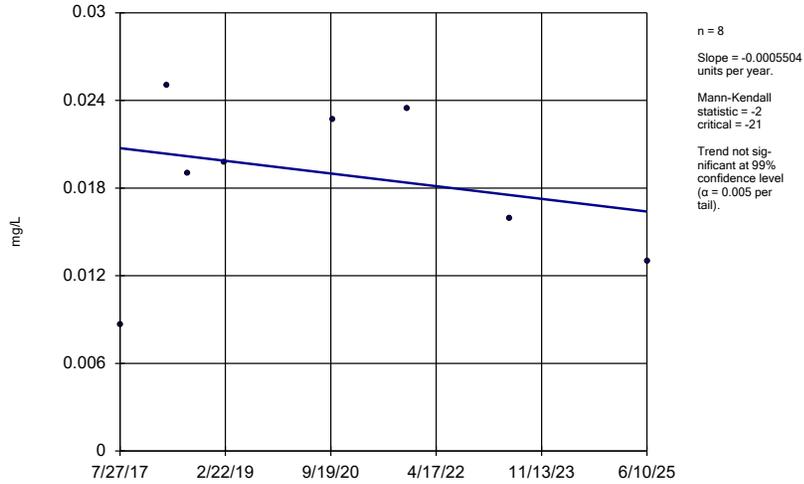
MW-4A



Constituent: Nickel Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

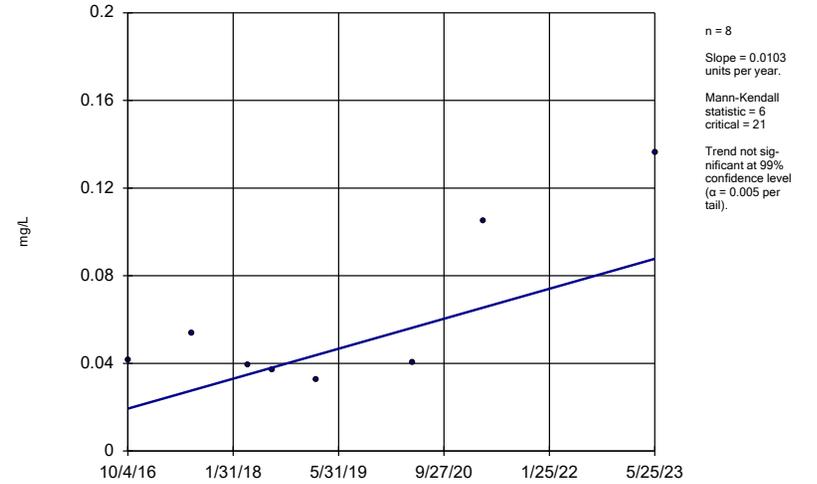
MW-5A



Constituent: Nickel Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

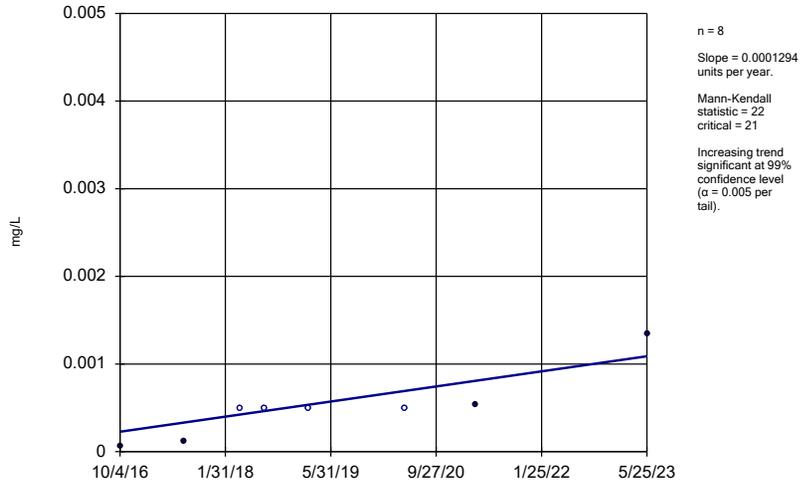
MW-12B



Constituent: Nickel Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

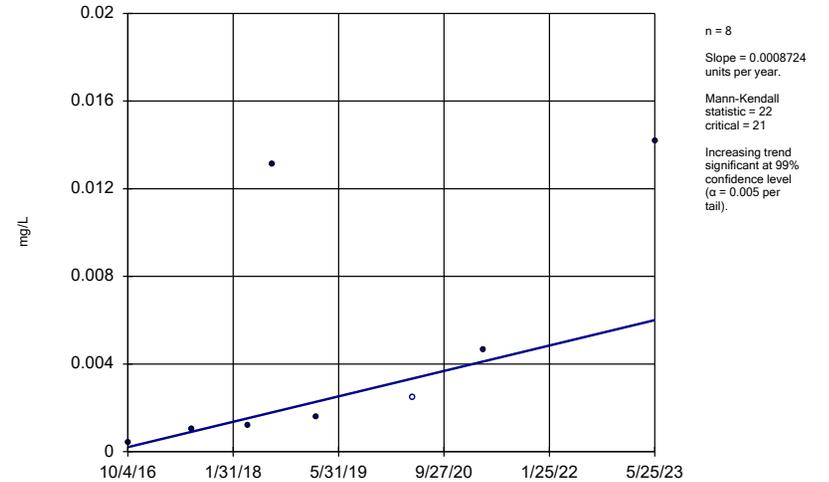
MW-12B



Constituent: Thallium Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

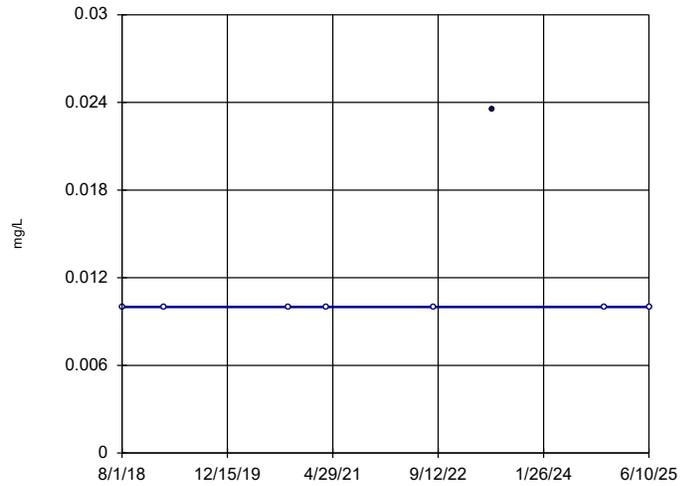
MW-12B



Constituent: Vanadium Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

MW-4A

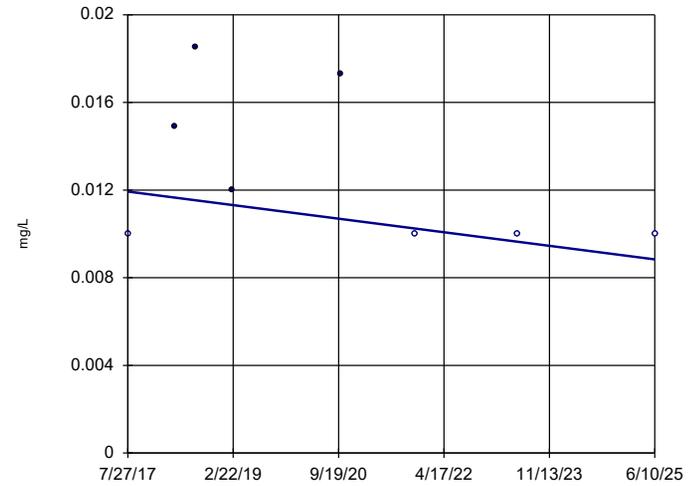


n = 8  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = 3  
critical = 21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Zinc Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

MW-5A

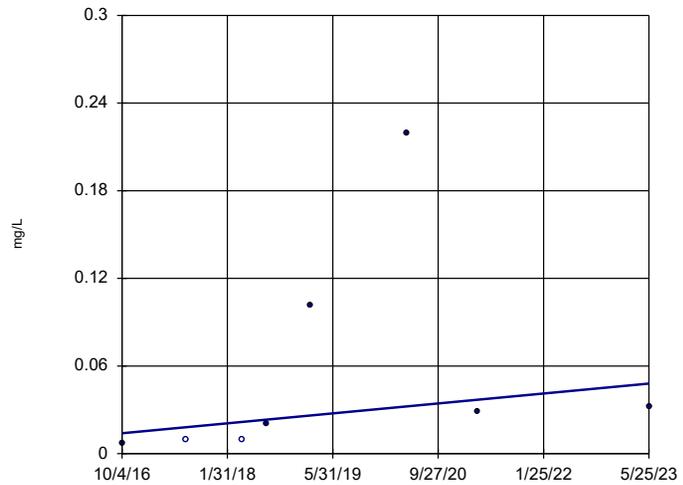


n = 8  
Slope = -0.0003928  
units per year.  
Mann-Kendall  
statistic = -8  
critical = -21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Zinc Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope Estimator

MW-12B



n = 8  
Slope = 0.005119  
units per year.  
Mann-Kendall  
statistic = 19  
critical = 21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Zinc Analysis Run 10/10/2025 5:19 PM View: 2025\_SSN-Mann\_Kendall  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN



Attachment A.6  
Confidence Interval Analysis

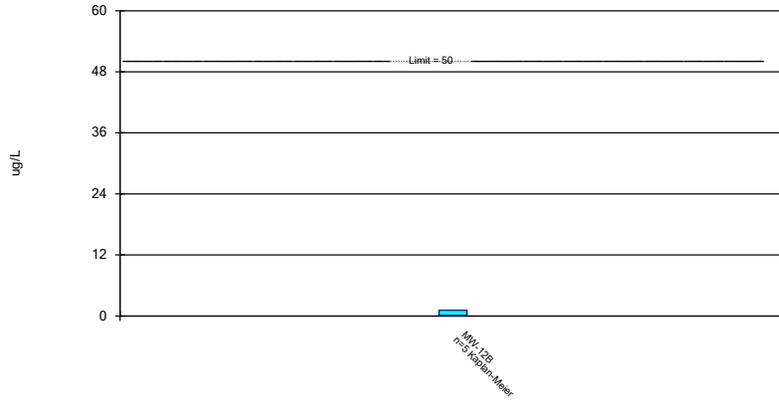
# Confidence Interval

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN Printed 10/10/2025, 5:58 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
2,4,5-TP [Silvex] [2C] (ug/L)	MW-12B	1.129	0.1064	50	No	5	40	No	0.01	Param.
Antimony (mg/L)	MW-5A	0.00191	0.0003687	0.006	No	8	37.5	No	0.01	Param.
Antimony (mg/L)	MW-12B	0.00207	0.000262	0.006	No	8	62.5	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-4A	0.0127	0.00139	0.01	No	8	0	No	0.004	NP (normality)
Arsenic (mg/L)	MW-5A	0.005205	0.001405	0.01	No	8	0	No	0.01	Param.
Arsenic (mg/L)	MW-12B	0.0095	0.00223	0.01	No	8	0	No	0.004	NP (normality)
Barium (mg/L)	MW-4A	0.6348	0.4372	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-5A	0.5032	0.4152	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-12B	0.5774	0.3495	2	No	8	0	No	0.01	Param.
Benzene (ug/L)	MW-12B	1.045	0.2253	5	No	8	12.5	No	0.01	Param.
Beryllium (mg/L)	MW-12B	0.00771	0.000413	0.004	No	8	37.5	No	0.004	NP (normality)
Cadmium (mg/L)	MW-12B	0.002314	0	0.005	No	8	37.5	No	0.01	Param.
Carbon disulfide (ug/L)	MW-4A	9.465	0.253	700	No	8	50	No	0.004	NP (normality)
Carbon disulfide (ug/L)	MW-5A	14.1	0.153	700	No	8	25	No	0.004	NP (normality)
Chlorobenzene (ug/L)	MW-12B	1.585	0.2357	100	No	8	37.5	No	0.01	Param.
Chloromethane (ug/L)	MW-12B	8.77	1.5	3	No	8	75	No	0.004	NP (NDs)
Chromium (mg/L)	MW-12B	0.0696	0.0025	0.1	No	8	62.5	No	0.004	NP (NDs)
cis-1,2-Dichloroethene (ug/L)	MW-12B	3.132	0.1552	70	No	8	12.5	No	0.01	Param.
Cobalt (mg/L)	MW-4A	0.00132	0.00025	0.0021	No	8	25	No	0.004	NP (normality)
Copper (mg/L)	MW-5A	0.01174	0.002199	1.3	No	8	37.5	No	0.01	Param.
Copper (mg/L)	MW-12B	0.928	0.0025	1.3	No	8	25	No	0.004	NP (normality)
Di-n-butyl phthalate (ug/L)	MW-4A	15.9	5	700	No	5	80	No	0.031	NP (NDs)
Lead (mg/L)	MW-4A	0.00157	0.00025	0.015	No	8	37.5	No	0.004	NP (normality)
Lead (mg/L)	MW-5A	0.001347	0.0003643	0.015	No	8	12.5	No	0.01	Param.
Lead (mg/L)	MW-12B	0.00981	0.00025	0.015	No	8	12.5	No	0.004	NP (normality)
Nickel (mg/L)	MW-4A	0.005019	0.001498	0.1	No	8	37.5	No	0.01	Param.
Nickel (mg/L)	MW-5A	0.02437	0.01251	0.1	No	8	0	No	0.01	Param.
Nickel (mg/L)	MW-12B	0.136	0.03245	0.1	No	8	0	No	0.004	NP (normality)
Zinc (mg/L)	MW-4A	0.0235	0.01	2	No	8	87.5	No	0.004	NP (NDs)
Zinc (mg/L)	MW-5A	0.01831	0.01304	2	No	8	50	No	0.01	Param.
Zinc (mg/L)	MW-12B	0.219	0.00669	2	No	8	25	No	0.004	NP (normality)

### Parametric Confidence Interval

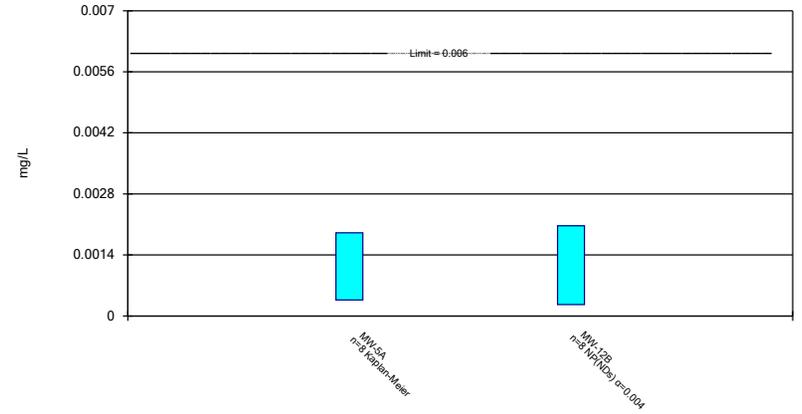
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: 2,4,5-TP [Silvex] [2C] Analysis Run 10/10/2025 5:56 PM View: 2025\_SSN-Confidence\_Interv  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Parametric and Non-Parametric (NP) Confidence Interval

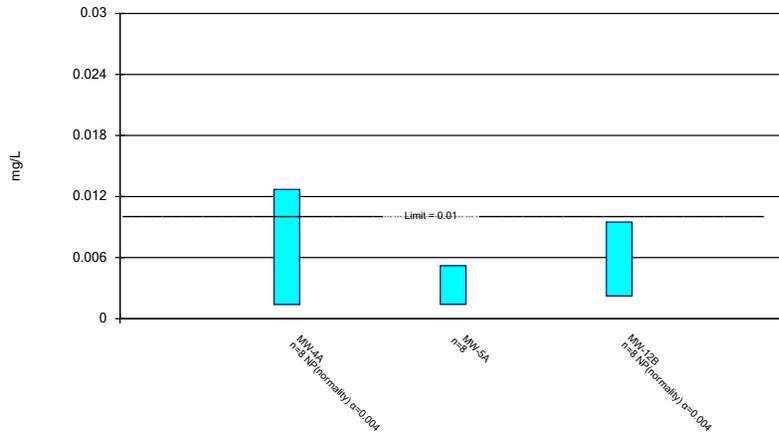
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Antimony Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Interval  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Parametric and Non-Parametric (NP) Confidence Interval

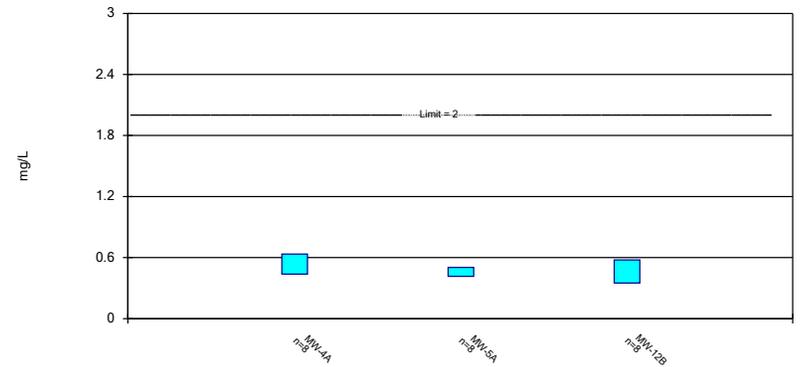
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Arsenic Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Interval  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Parametric Confidence Interval

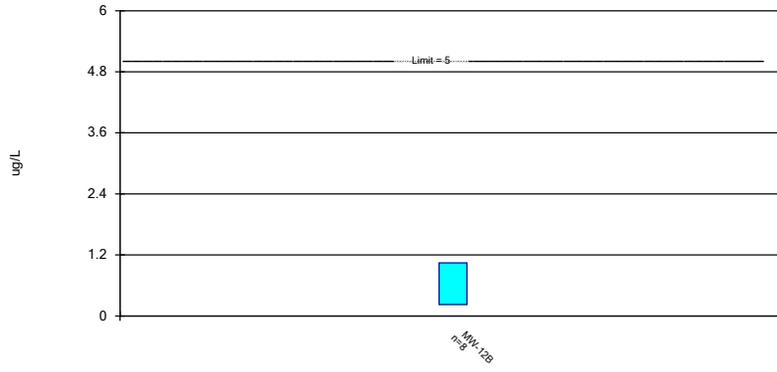
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Barium Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Interval  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Parametric Confidence Interval

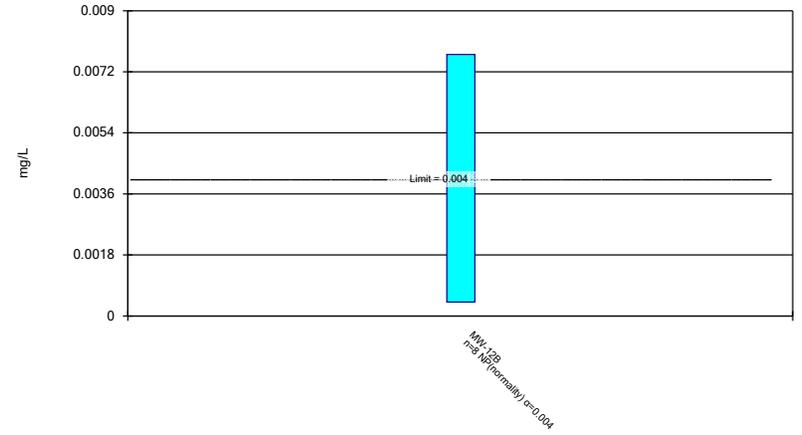
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Benzene Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Interval  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Non-Parametric Confidence Interval

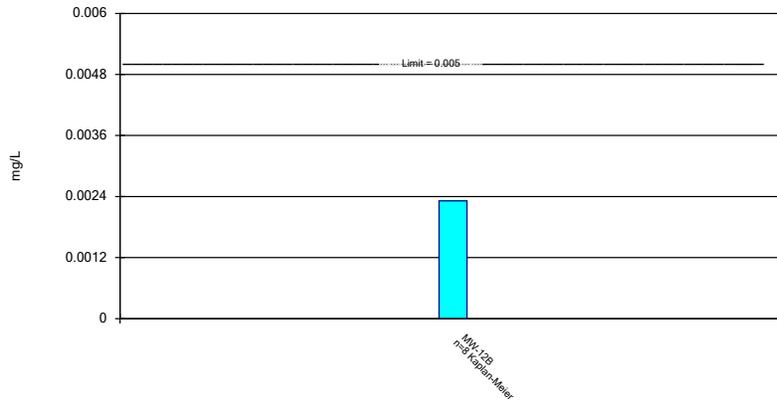
Compliance Limit is not exceeded.



Constituent: Beryllium Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Interval  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Parametric Confidence Interval

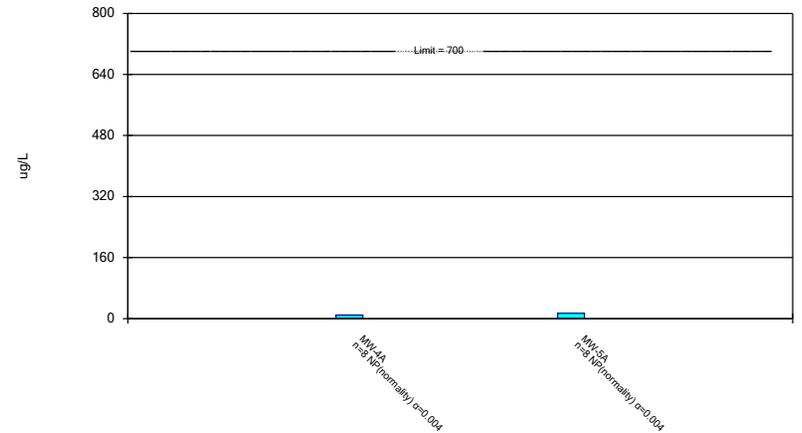
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Cadmium Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Interval  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Non-Parametric Confidence Interval

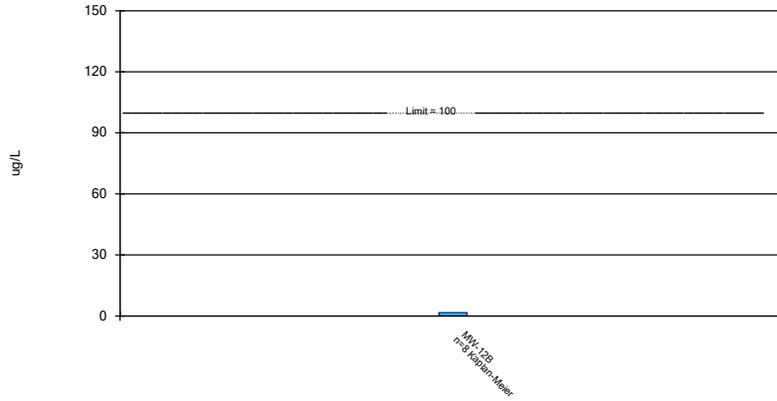
Compliance Limit is not exceeded.



Constituent: Carbon disulfide Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Interval  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Parametric Confidence Interval

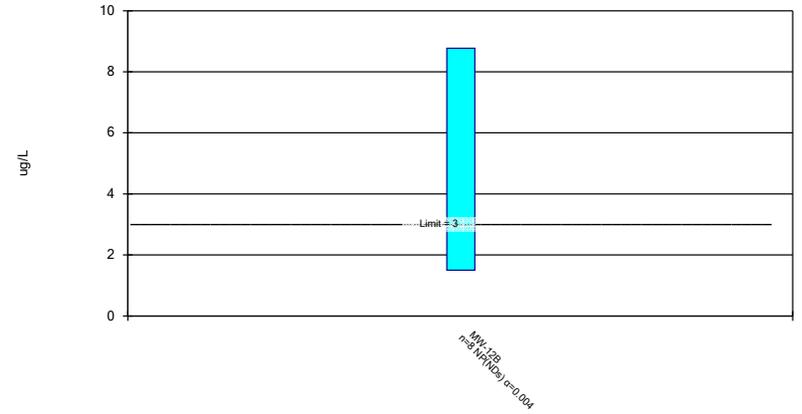
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Chlorobenzene Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Interval  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Non-Parametric Confidence Interval

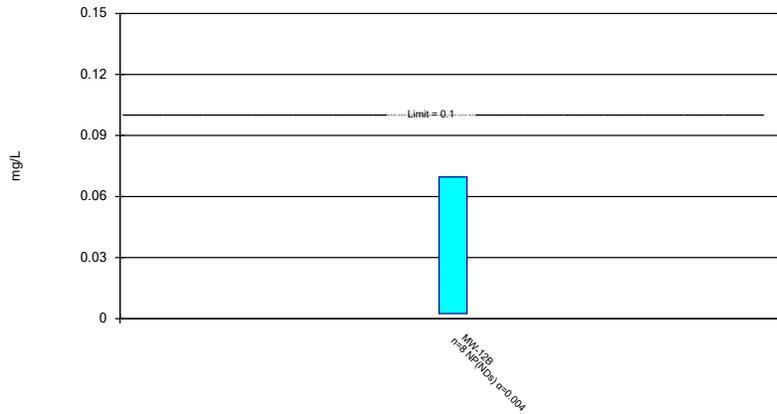
Compliance Limit is not exceeded.



Constituent: Chloromethane Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Interval  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Non-Parametric Confidence Interval

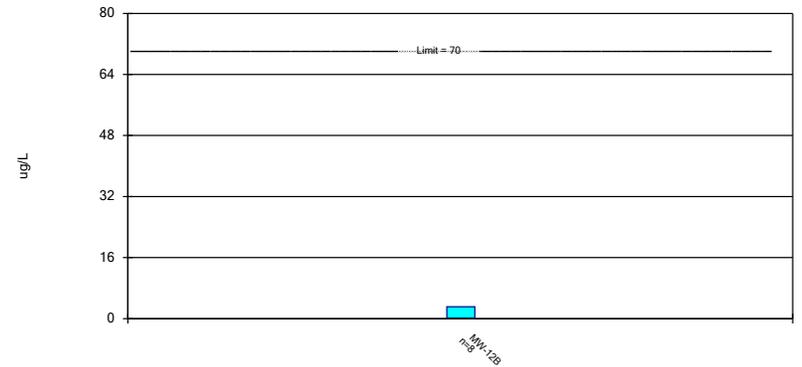
Compliance Limit is not exceeded.



Constituent: Chromium Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Interval  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Parametric Confidence Interval

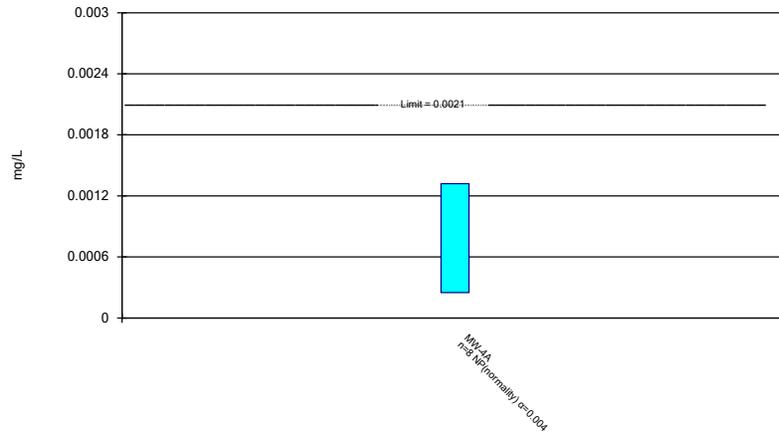
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: cis-1,2-Dichloroethene Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Inter  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Non-Parametric Confidence Interval

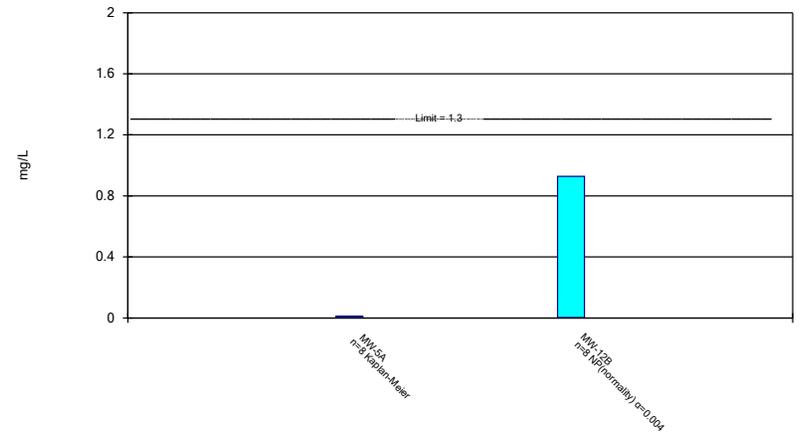
Compliance Limit is not exceeded.



Constituent: Cobalt Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Interval  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Parametric and Non-Parametric (NP) Confidence Interval

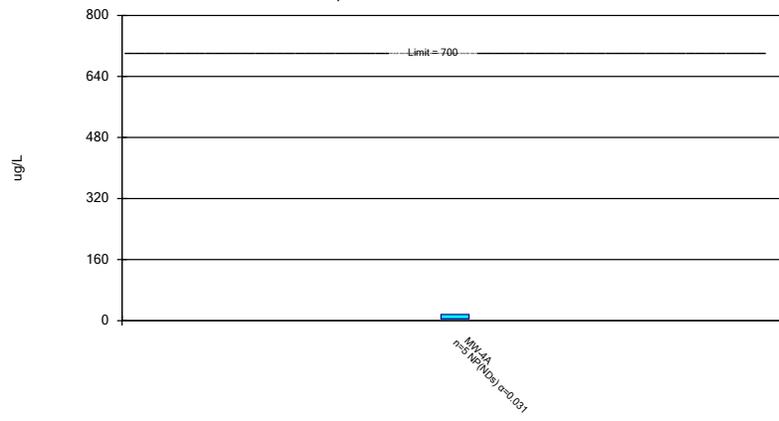
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Copper Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Interval  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Non-Parametric Confidence Interval

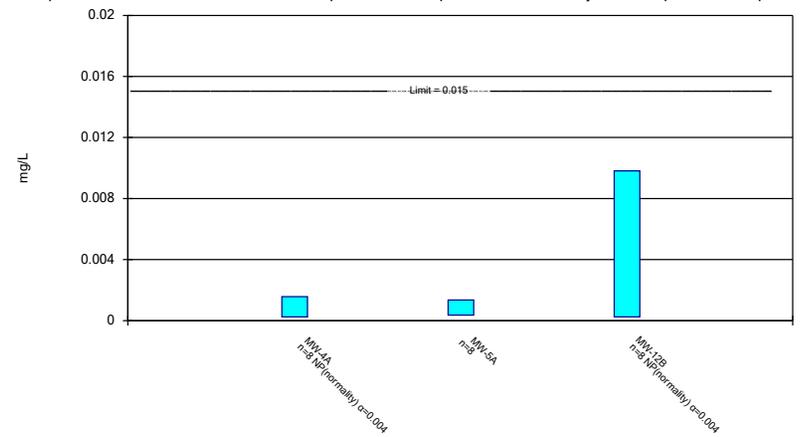
Compliance Limit is not exceeded.



Constituent: Di-n-butyl phthalate Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Interval  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Parametric and Non-Parametric (NP) Confidence Interval

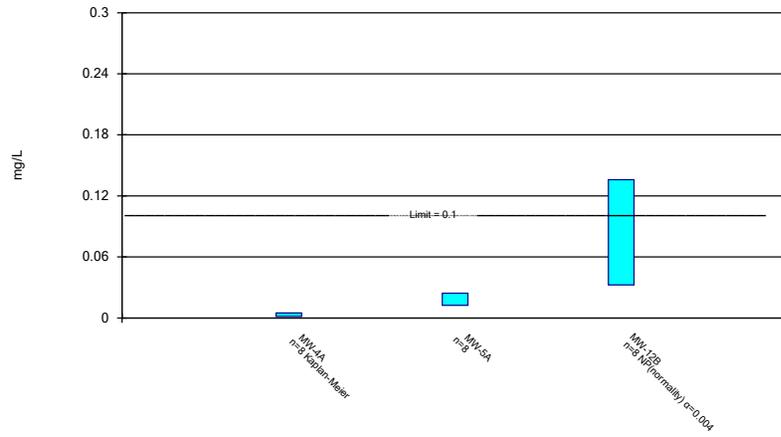
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Lead Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Interval  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Parametric and Non-Parametric (NP) Confidence Interval

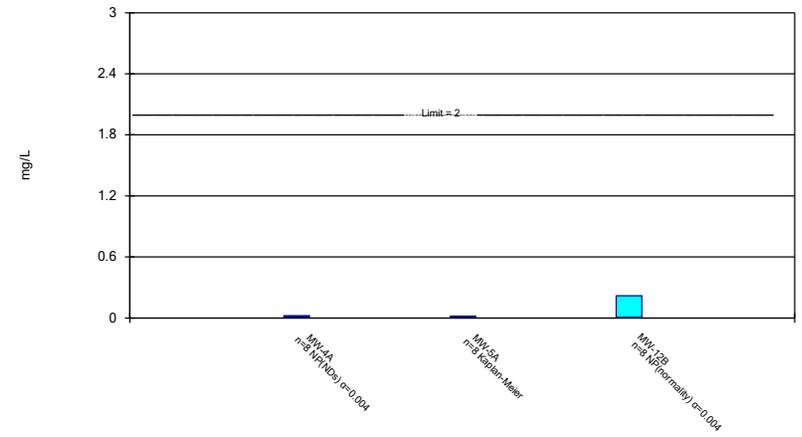
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Nickel Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Interval  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Parametric and Non-Parametric (NP) Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Zinc Analysis Run 10/10/2025 5:57 PM View: 2025\_SSN-Confidence\_Interval  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

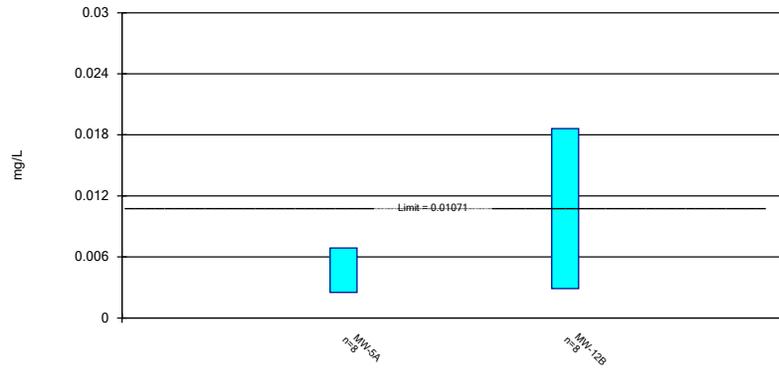
# Confidence Interval

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN Printed 10/10/2025, 6:03 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	MW-5A	0.006875	0.002507	0.01071	No	8	0	No	0.01	Param.
Cobalt (mg/L)	MW-12B	0.01862	0.002892	0.01071	No	8	0	No	0.01	Param.

### Parametric Confidence Interval

Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Cobalt Analysis Run 10/10/2025 6:02 PM View: 2025\_SSN-Confidence\_Interval-CoMW5AM  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

## Attachment A.7

### Theil-Sen

# Theil Sen/Trend Test

Harrison County Sanitary Landfill

Client: SCS Engineers

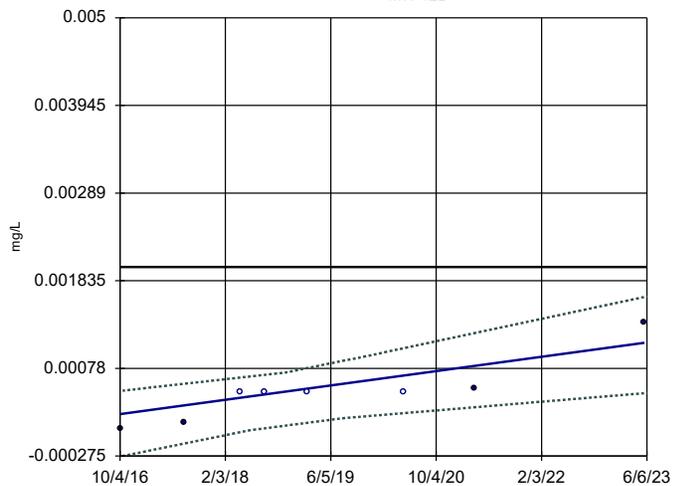
Data: HARSW\_AM\_2025\_SSN

Printed 10/10/2025, 5:43 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>Alpha</u>	<u>Method</u>
<b>Thallium (mg/L)</b>	<b>MW-12B</b>	<b>0.0001294</b>	<b>22</b>	<b>21</b>	<b>Yes</b>	<b>8</b>	<b>50</b>	<b>0.01</b>	<b>NP</b>
<b>Vanadium (mg/L)</b>	<b>MW-12B</b>	<b>0.0008724</b>	<b>22</b>	<b>21</b>	<b>Yes</b>	<b>8</b>	<b>12.5</b>	<b>0.01</b>	<b>NP</b>

### Sen's Slope and 99% Confidence Band

MW-12B

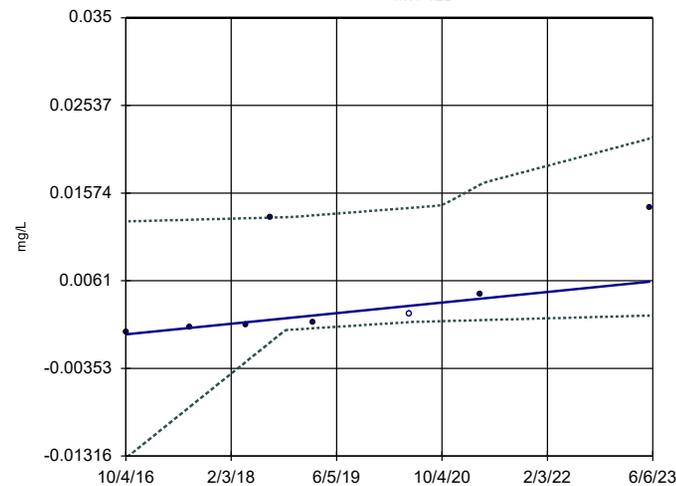


n = 8  
Slope = 0.0001294  
units per year.  
Mann-Kendall  
statistic = 22  
critical = 21  
Increasing trend  
significant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).  
Confidence band is  
below GWPS mg/L (0.002).

Constituent: Thallium Analysis Run 10/10/2025 5:42 PM View: 2025\_SSN-Theil\_Sen  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

### Sen's Slope and 99% Confidence Band

MW-12B



n = 8  
Slope = 0.0008724  
units per year.  
Mann-Kendall  
statistic = 22  
critical = 21  
Increasing trend  
significant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).  
Confidence band is  
below GWPS mg/L (0.035).

Constituent: Vanadium Analysis Run 10/10/2025 5:42 PM View: 2025\_SSN-Theil\_Sen  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW\_AM\_2025\_SSN

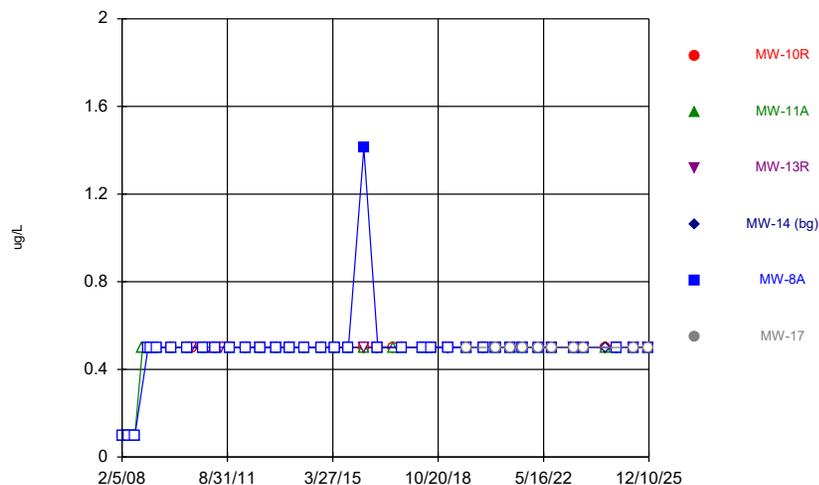


Attachment B  
Fall 2025 Statistical Evaluation Output



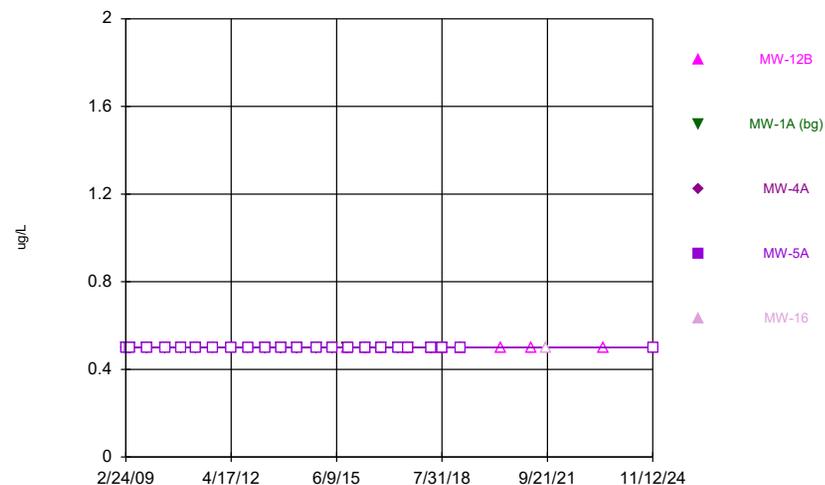
Attachment B.1  
Time Series Plots

### Time Series



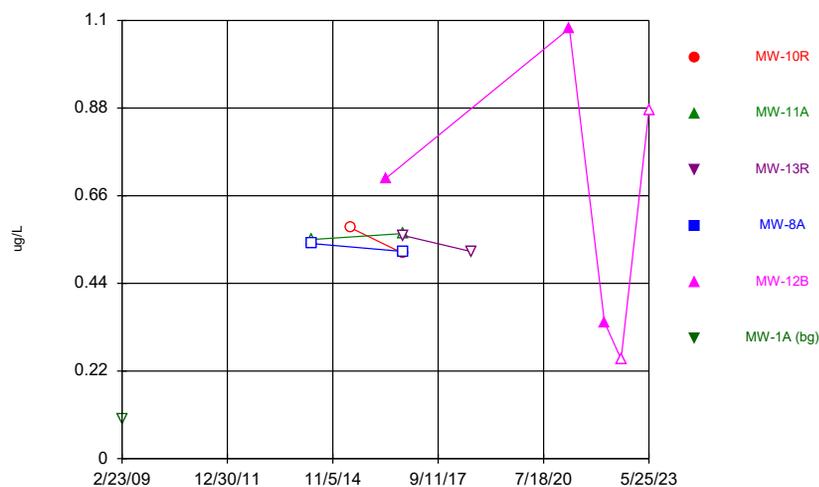
Constituent: 1,2-Dichloroethane Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



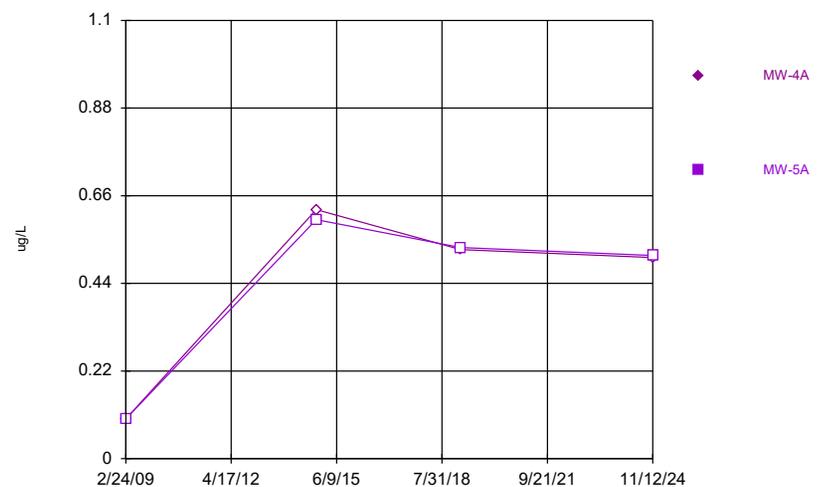
Constituent: 1,2-Dichloroethane Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



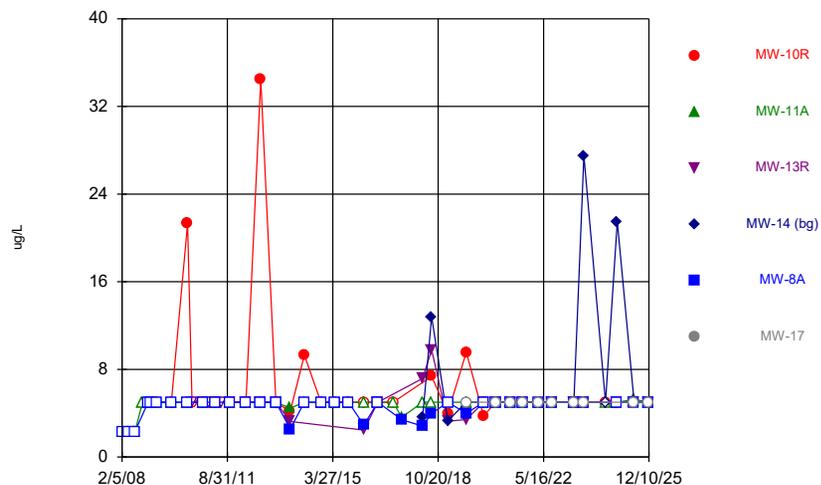
Constituent: 2,4,5-TP [Silvex] [2C] Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



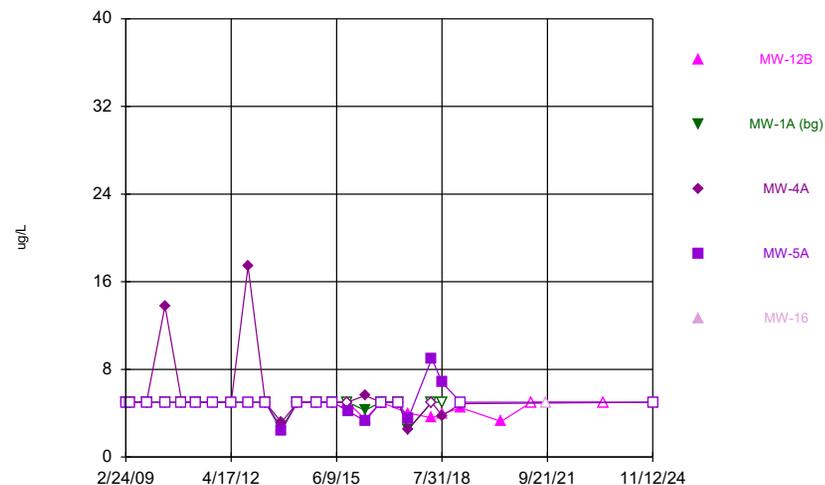
Constituent: 2,4,5-TP [Silvex] [2C] Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



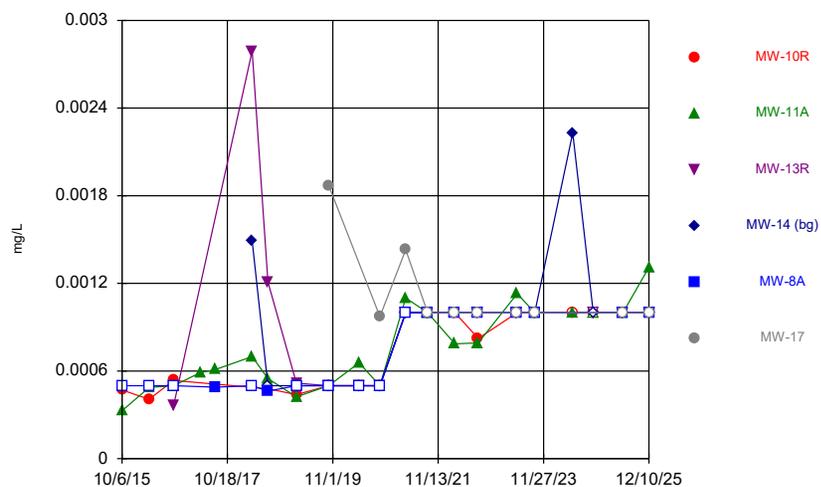
Constituent: Acetone Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



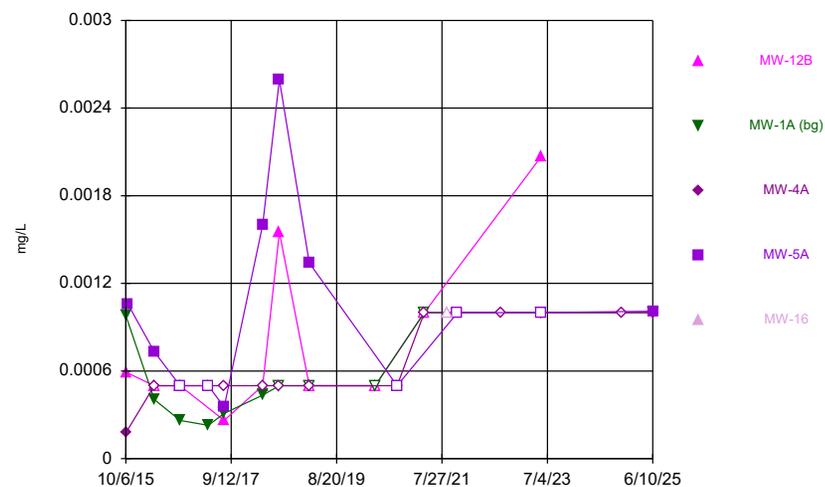
Constituent: Acetone Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



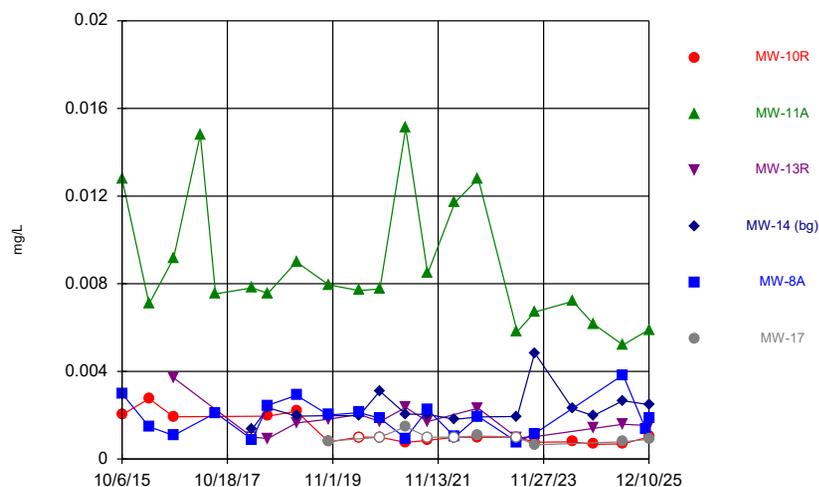
Constituent: Antimony Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



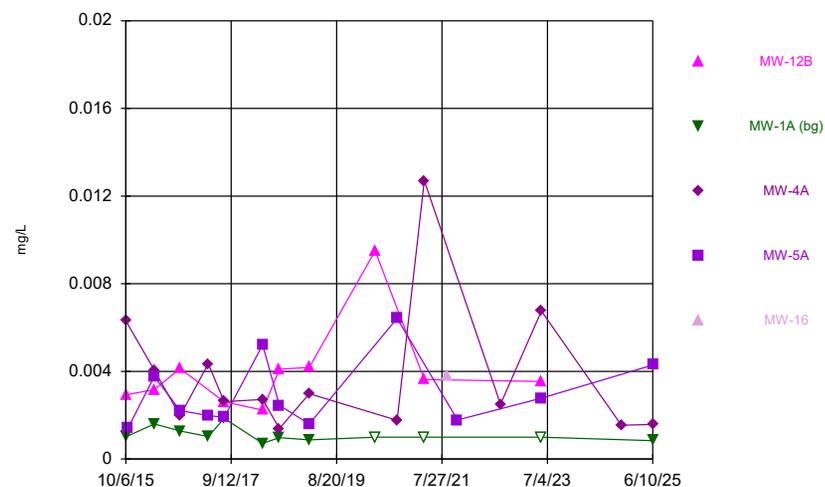
Constituent: Antimony Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



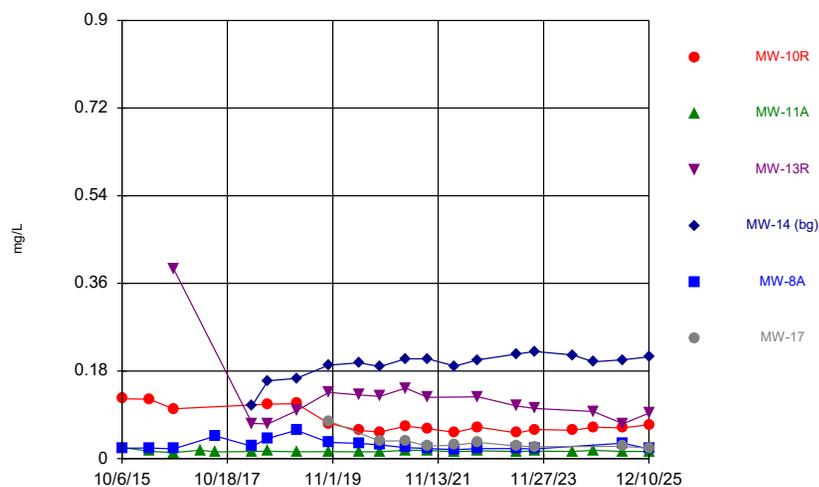
Constituent: Arsenic Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



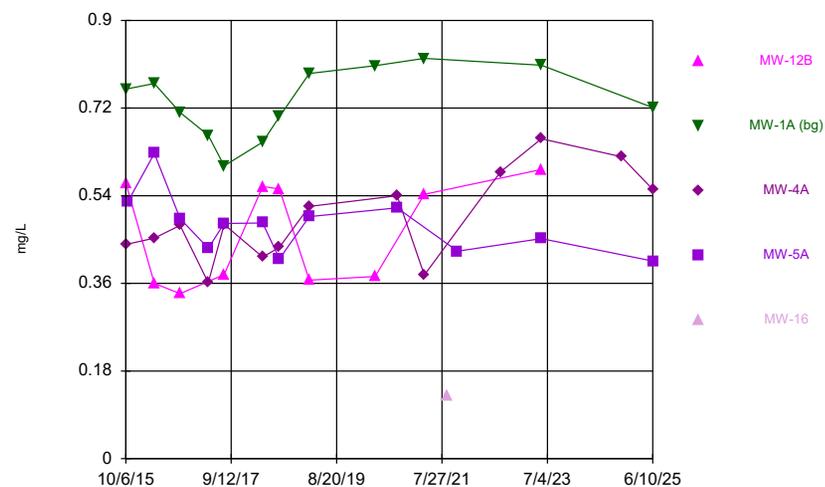
Constituent: Arsenic Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



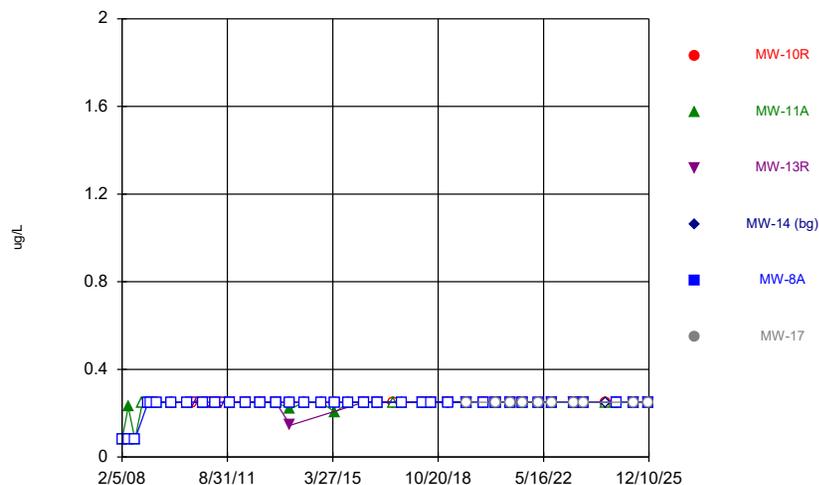
Constituent: Barium Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



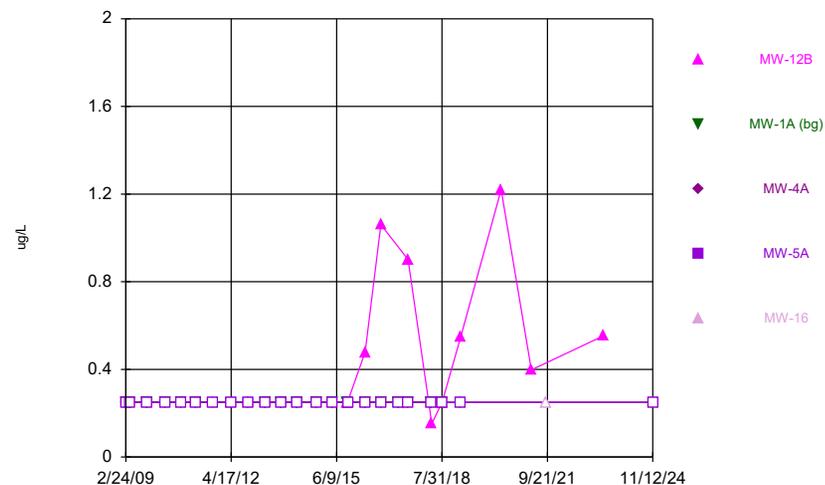
Constituent: Barium Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



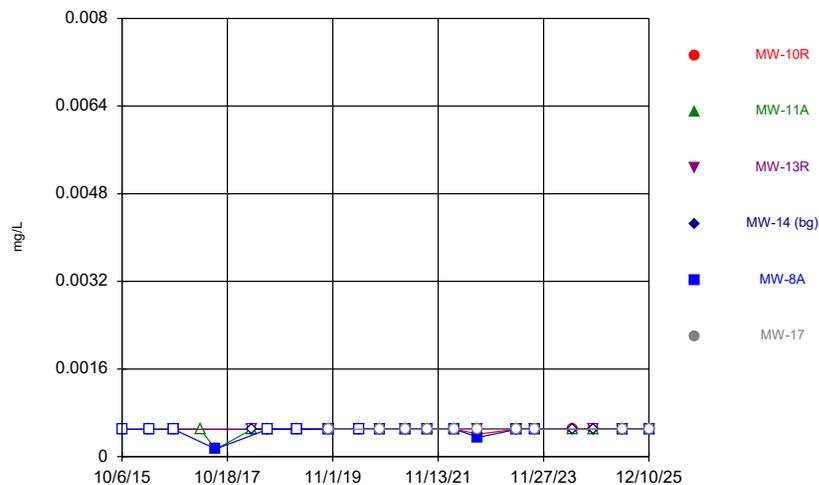
Constituent: Benzene Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



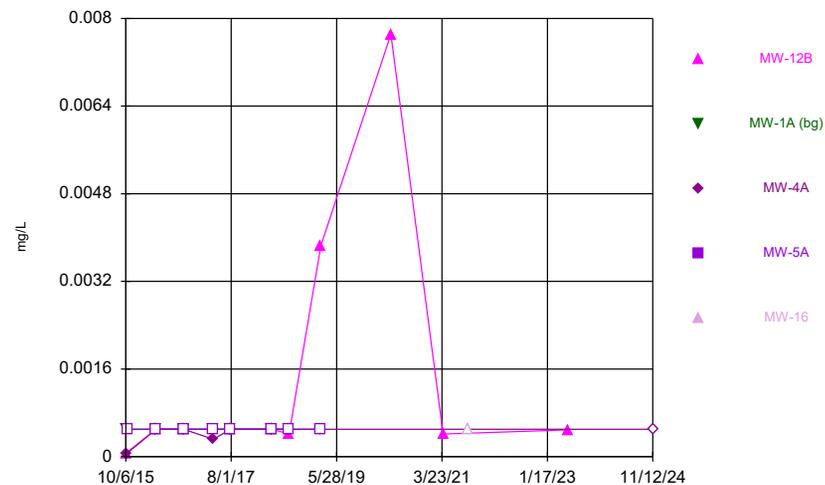
Constituent: Benzene Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



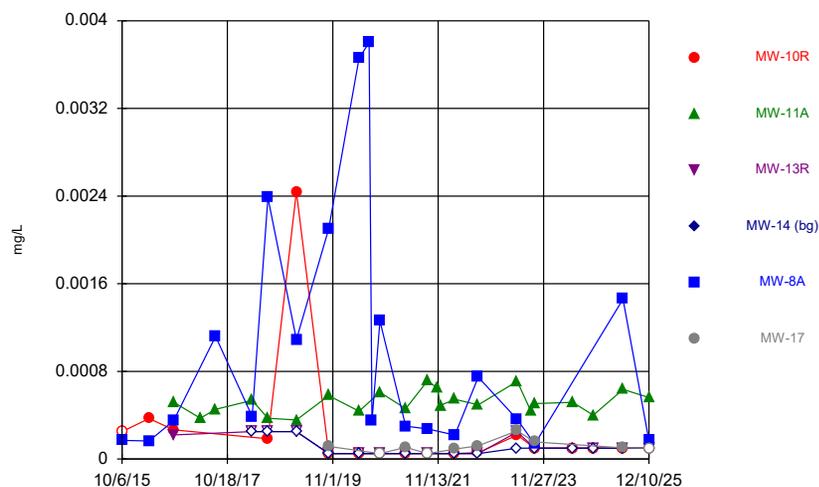
Constituent: Beryllium Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



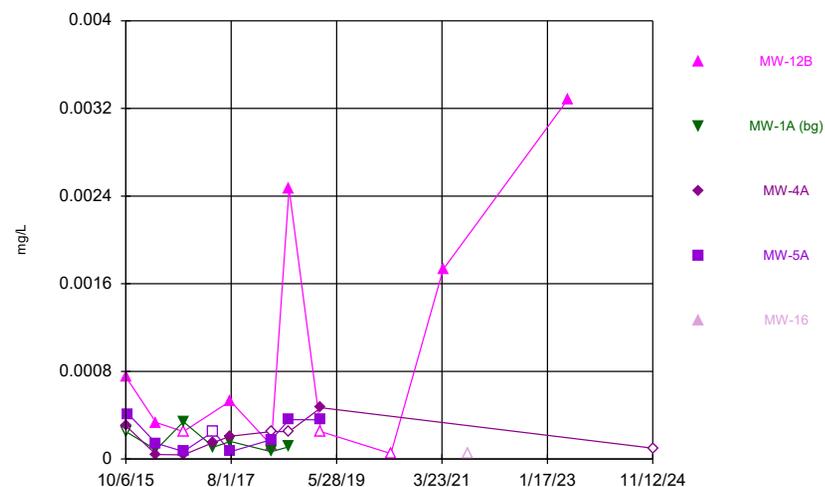
Constituent: Beryllium Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



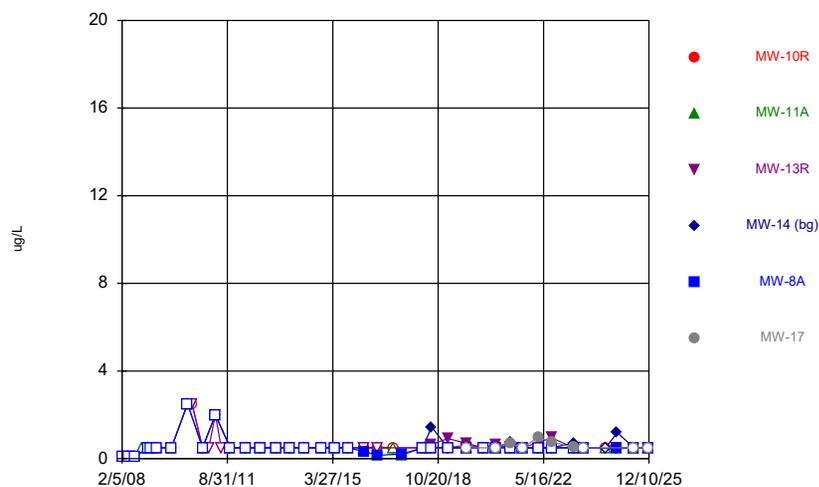
Constituent: Cadmium Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



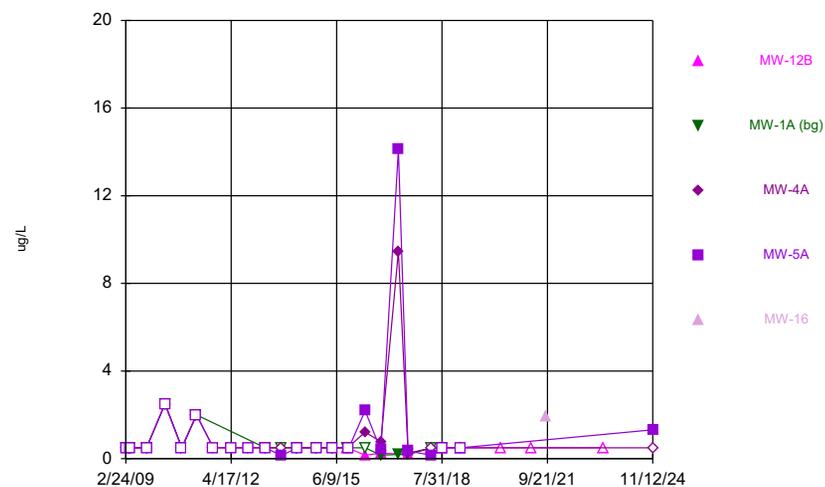
Constituent: Cadmium Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



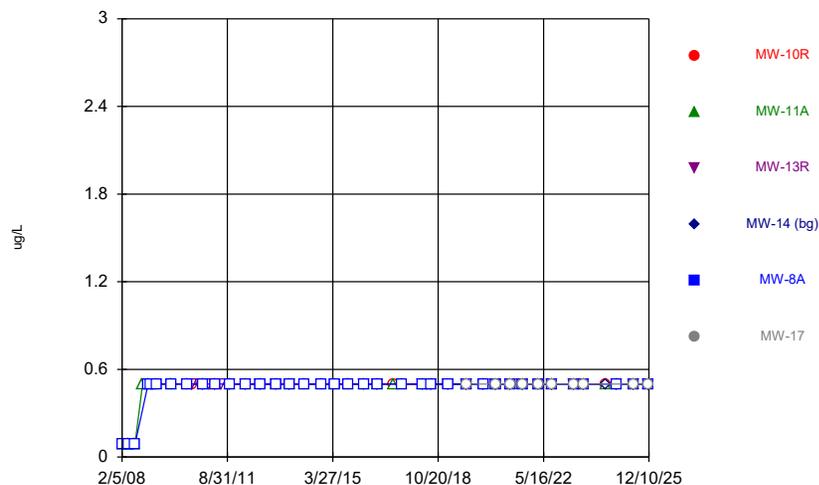
Constituent: Carbon disulfide Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



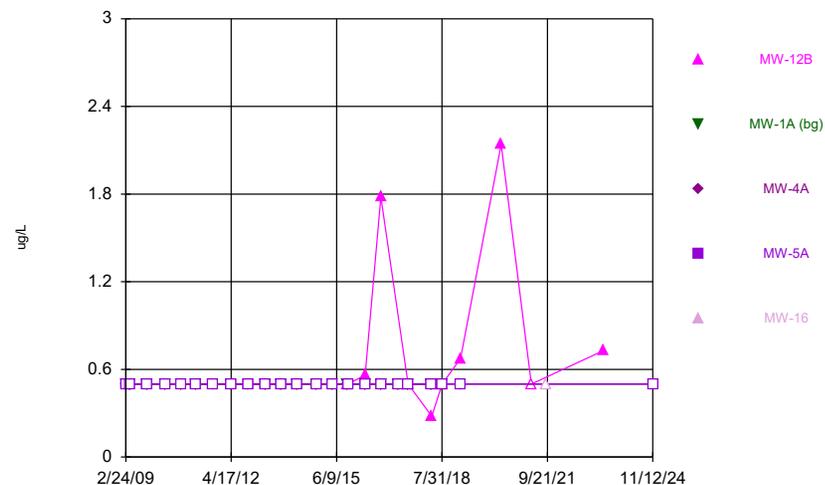
Constituent: Carbon disulfide Analysis Run 2/17/2026 11:08 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



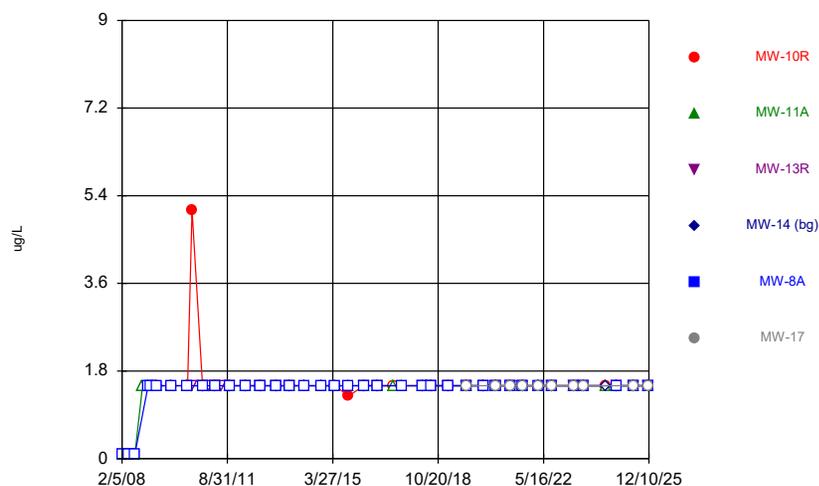
Constituent: Chlorobenzene Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



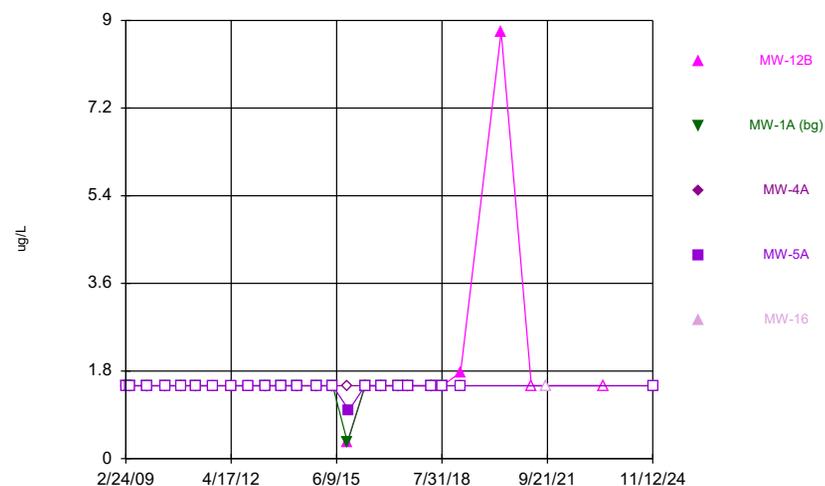
Constituent: Chlorobenzene Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



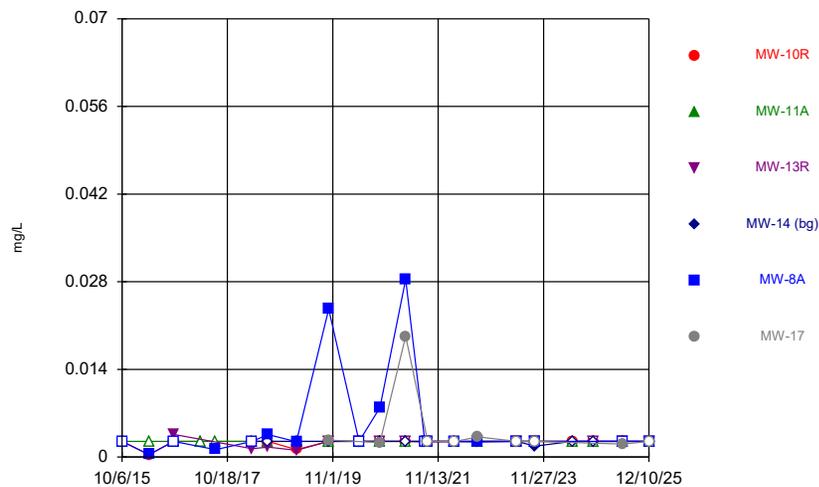
Constituent: Chloromethane Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



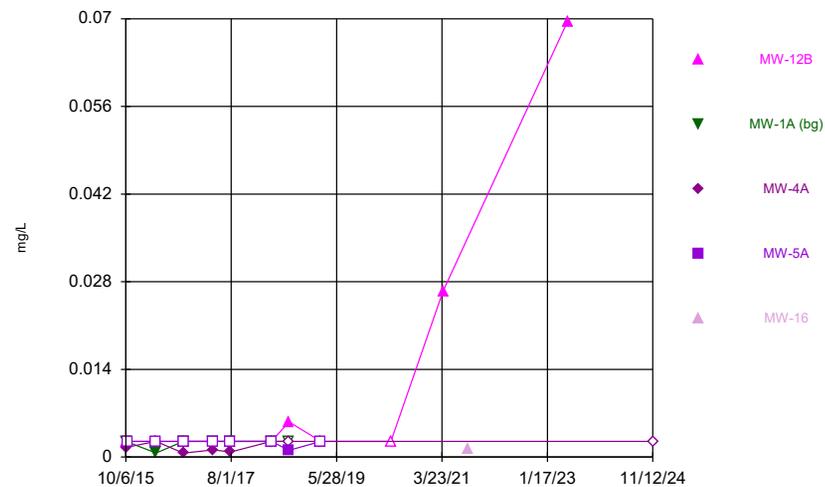
Constituent: Chloromethane Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Time Series



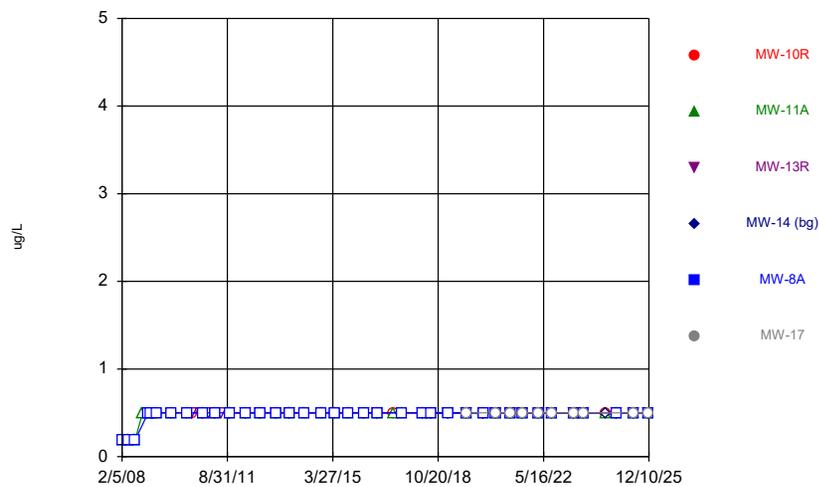
Constituent: Chromium Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Time Series



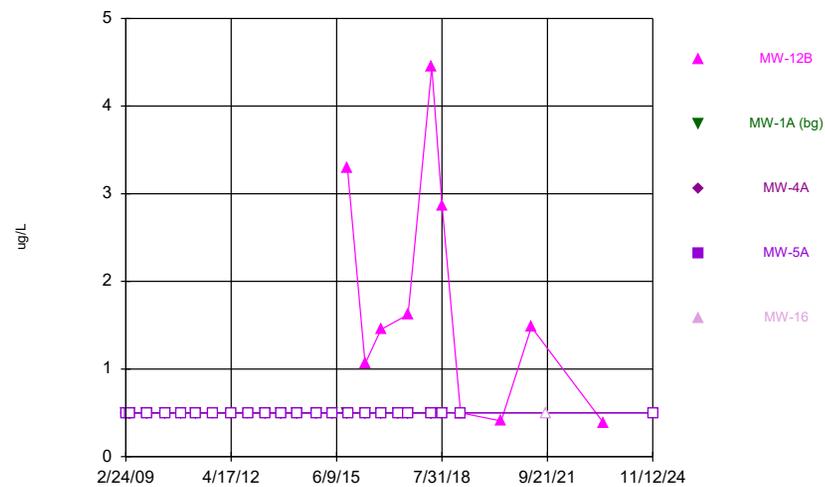
Constituent: Chromium Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Time Series



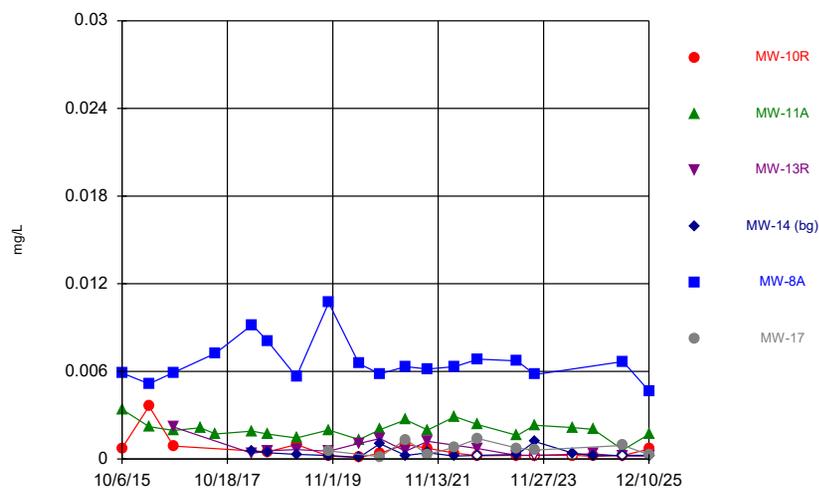
Constituent: cis-1,2-Dichloroethene Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Time Series



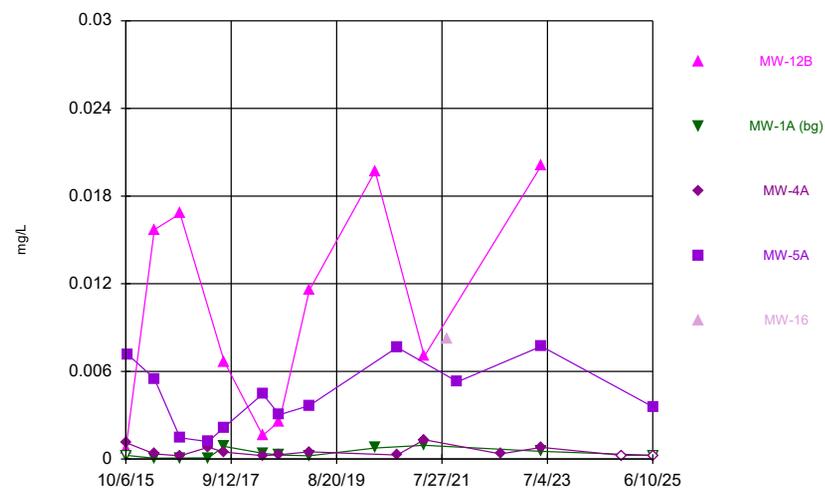
Constituent: cis-1,2-Dichloroethene Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



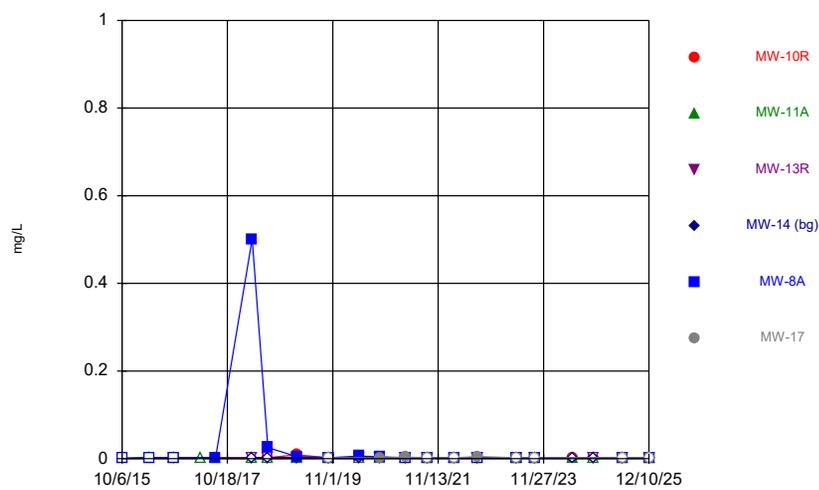
Constituent: Cobalt Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



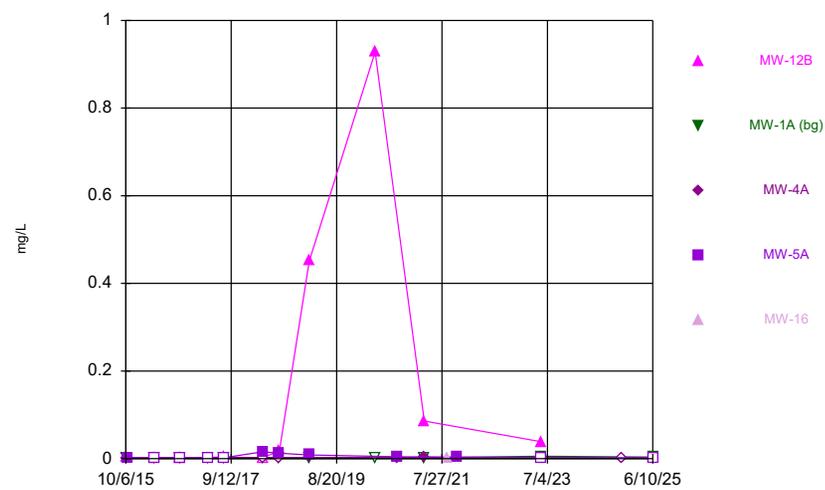
Constituent: Cobalt Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



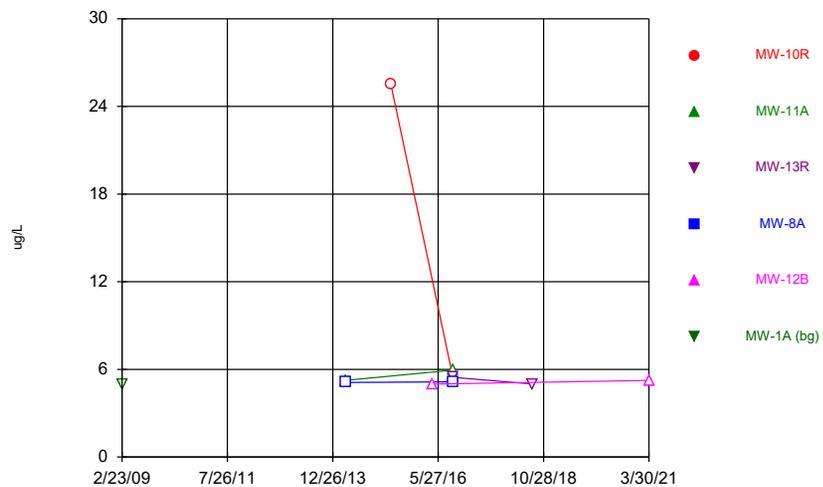
Constituent: Copper Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



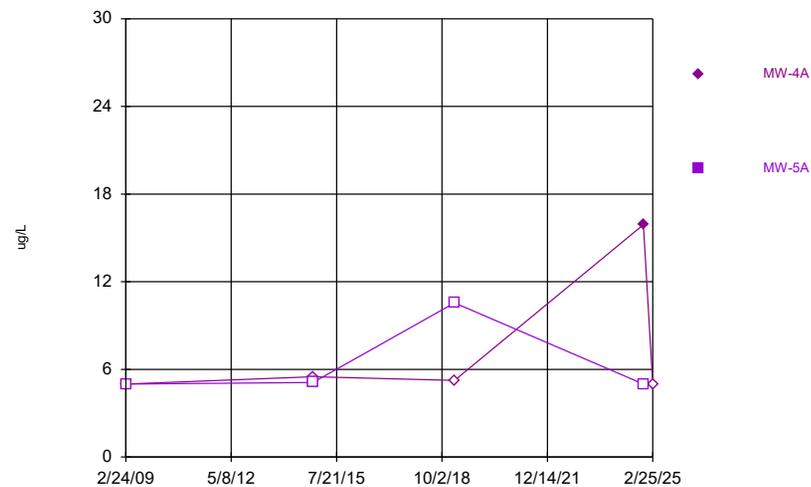
Constituent: Copper Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



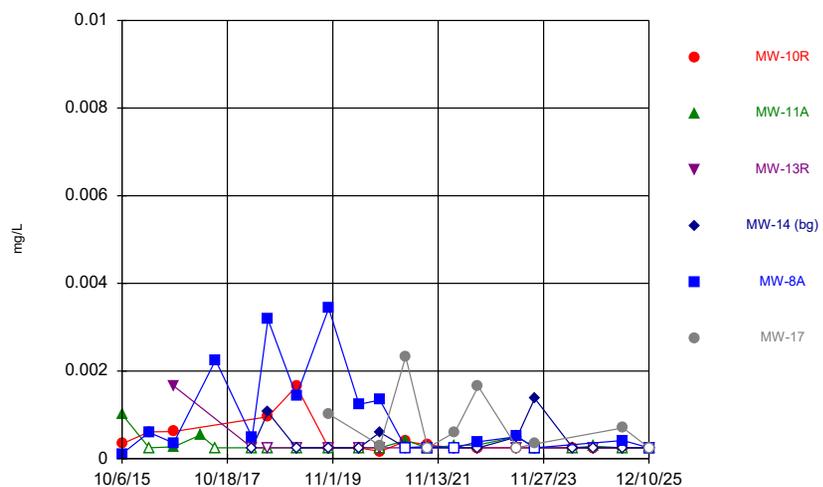
Constituent: Di-n-butyl phthalate Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



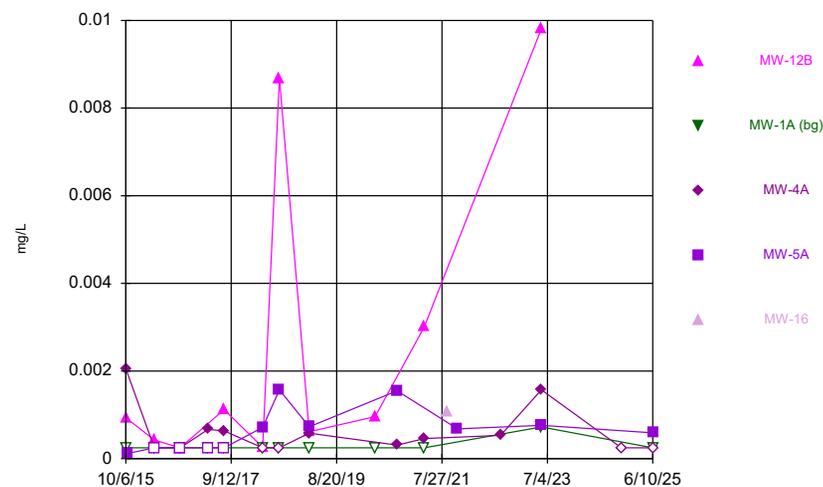
Constituent: Di-n-butyl phthalate Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



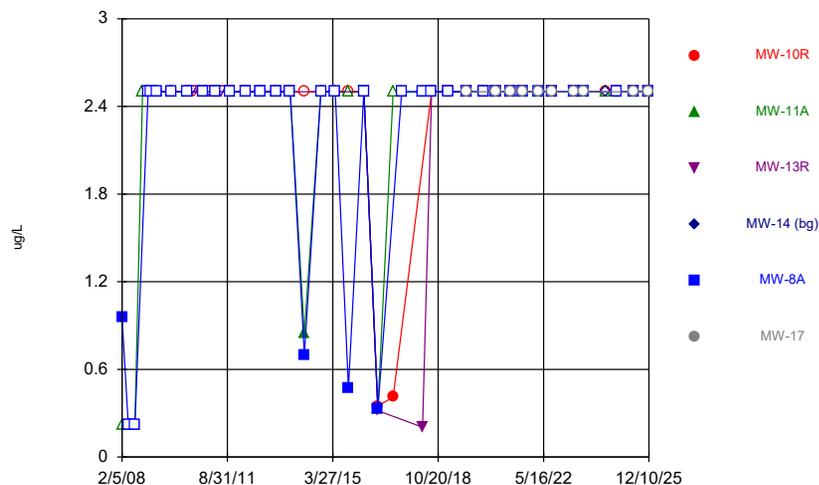
Constituent: Lead Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



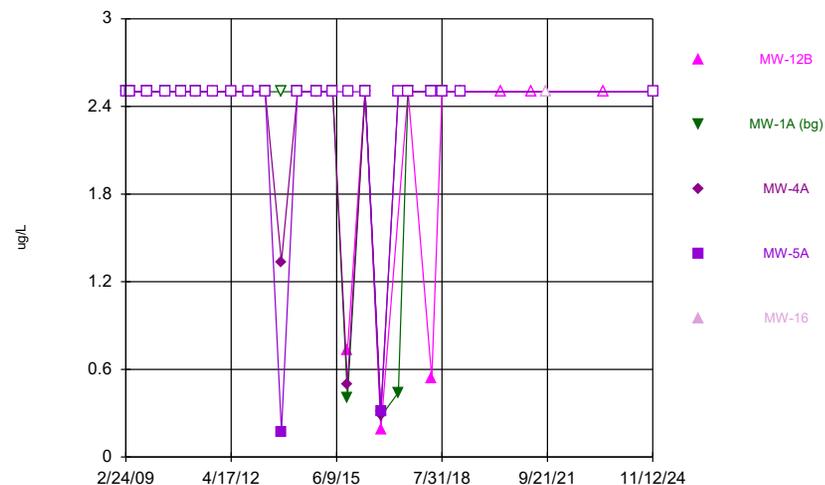
Constituent: Lead Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



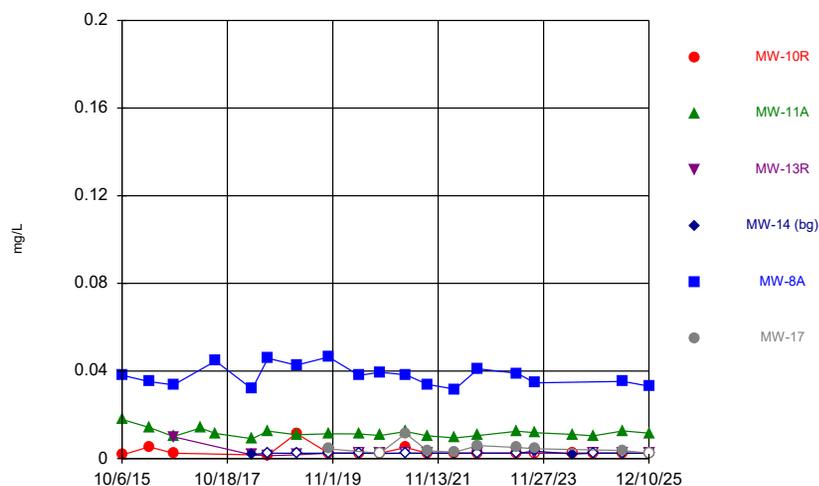
Constituent: Methylene Chloride Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



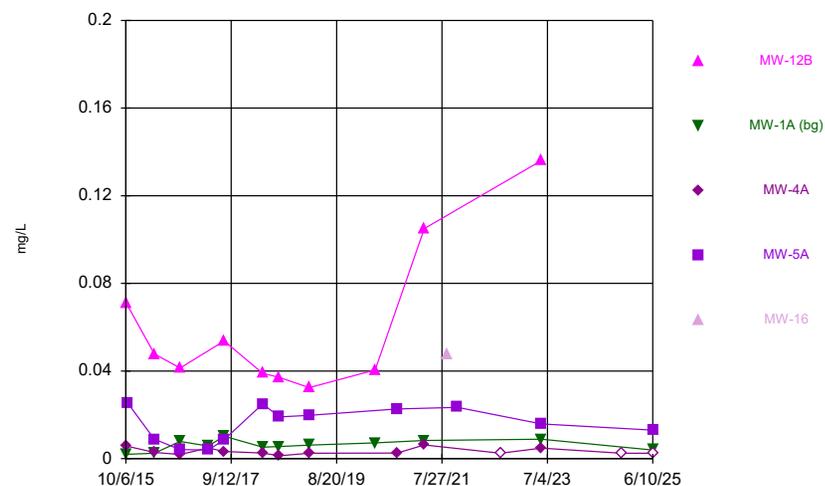
Constituent: Methylene Chloride Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



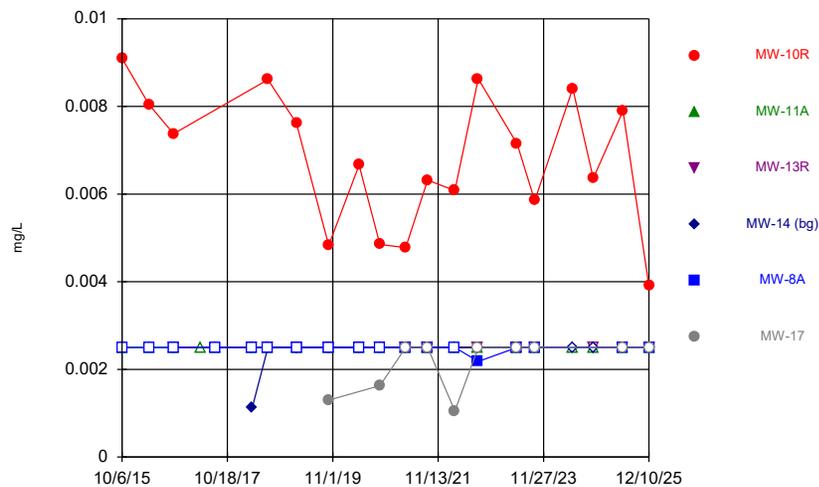
Constituent: Nickel Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



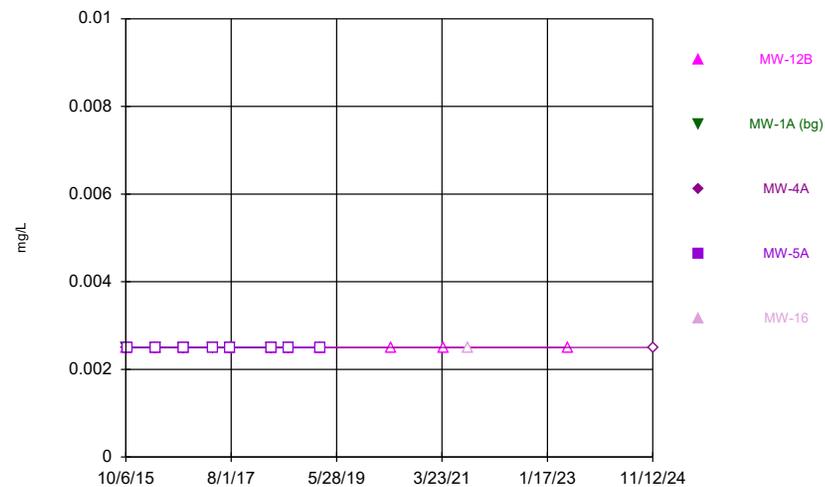
Constituent: Nickel Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



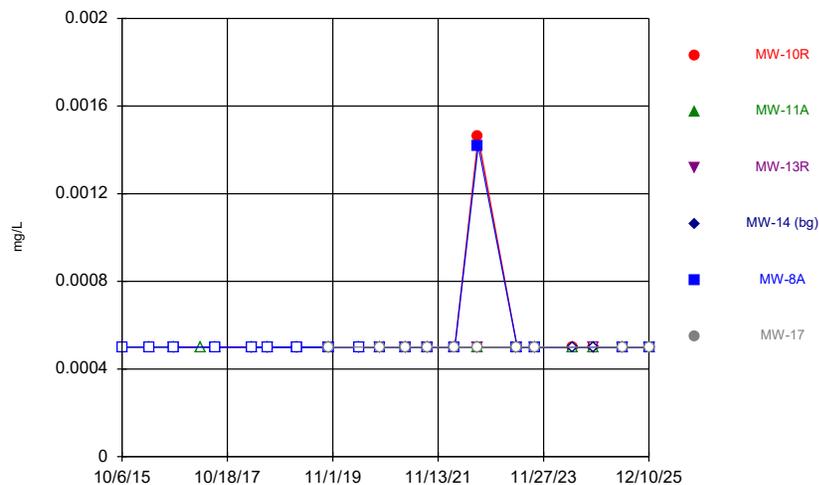
Constituent: Selenium Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



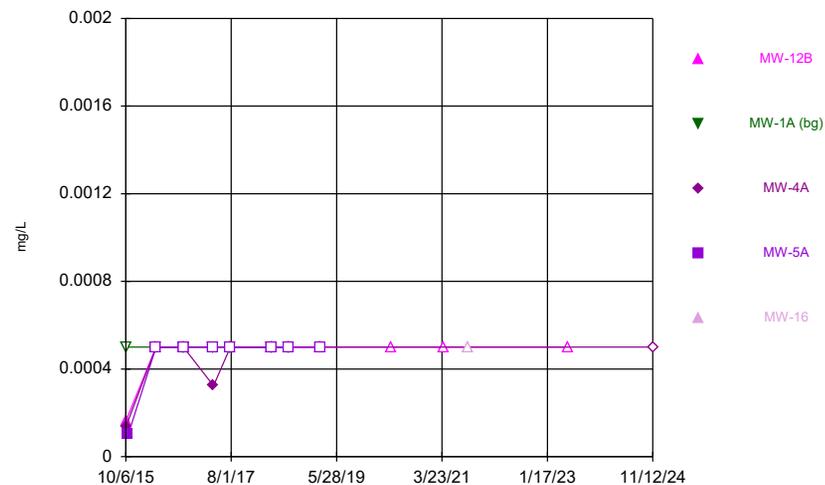
Constituent: Selenium Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



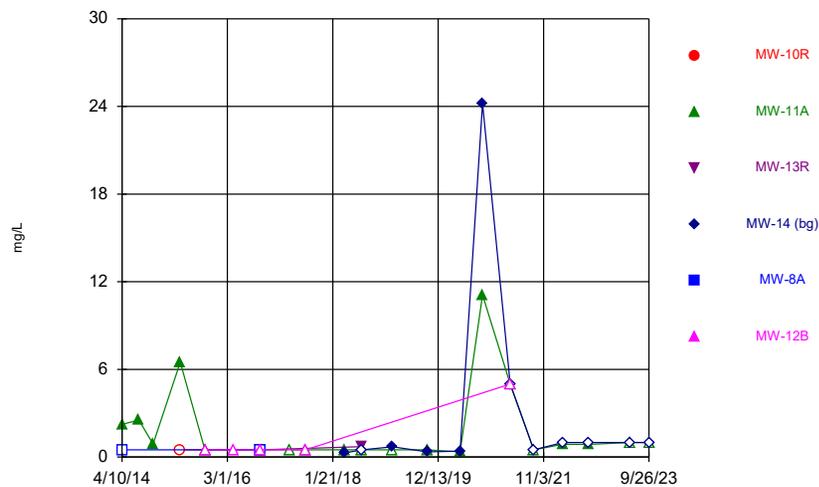
Constituent: Silver Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



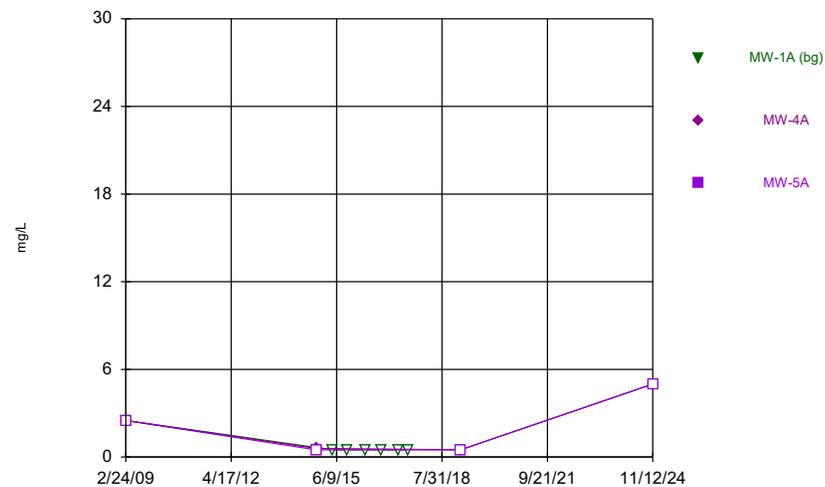
Constituent: Silver Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Time Series



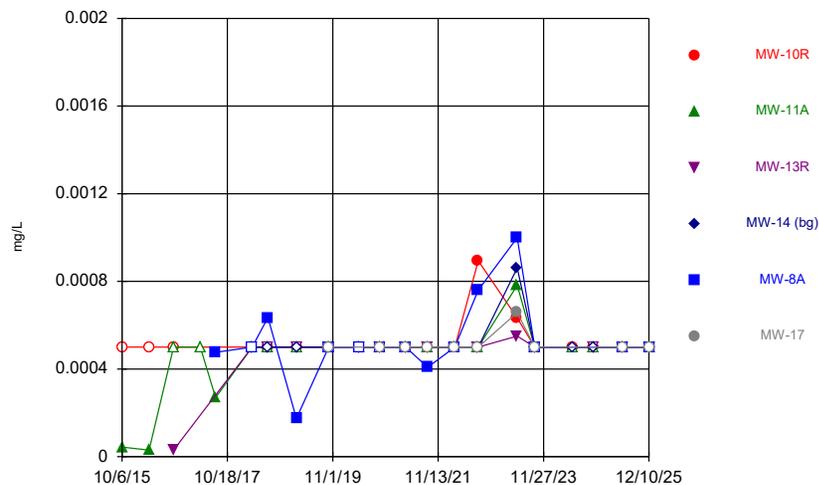
Constituent: Sulfide Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Time Series



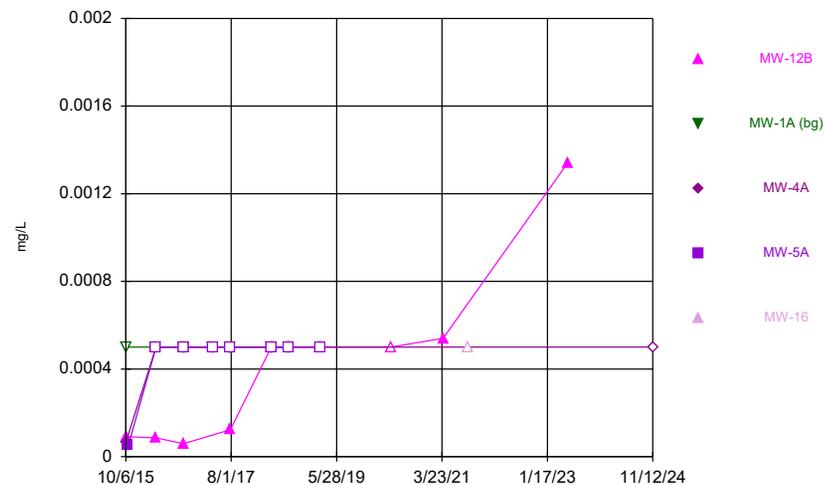
Constituent: Sulfide Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Time Series



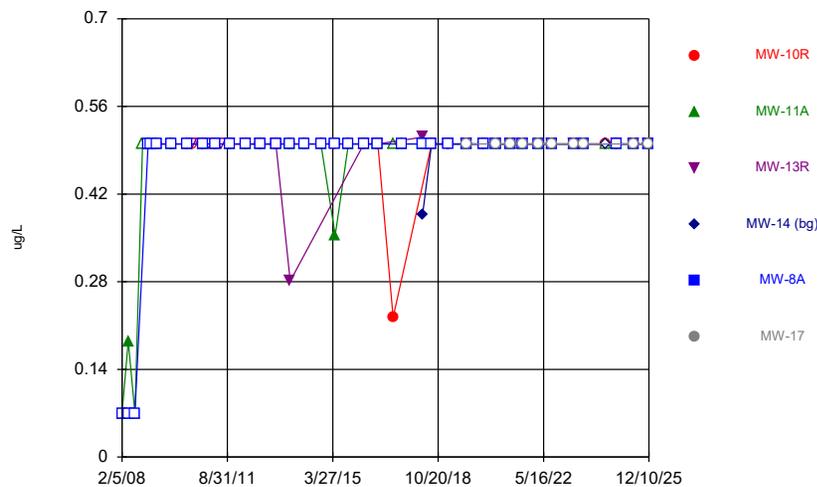
Constituent: Thallium Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Time Series



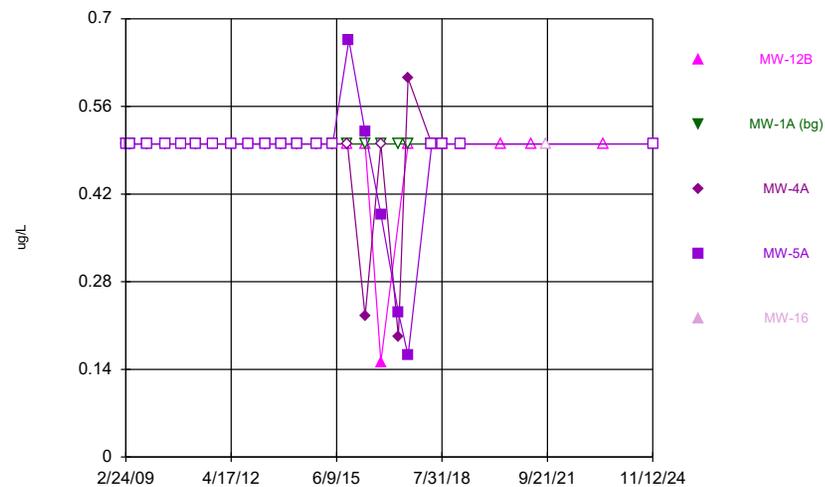
Constituent: Thallium Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



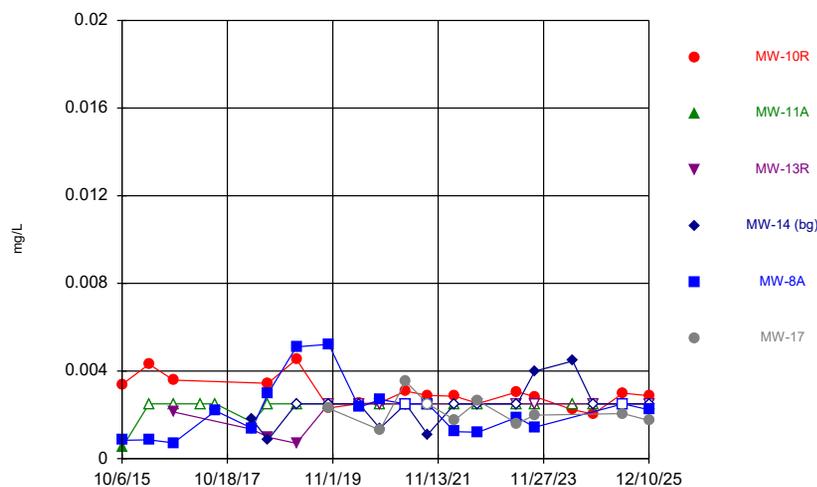
Constituent: Toluene Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



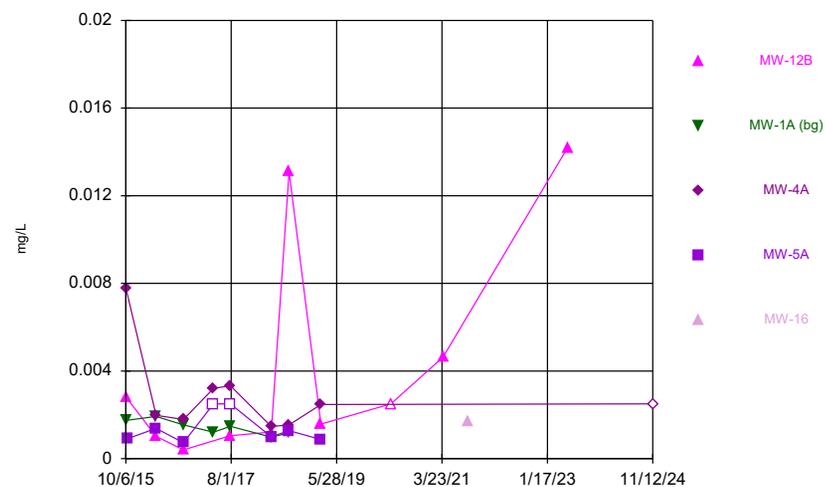
Constituent: Toluene Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



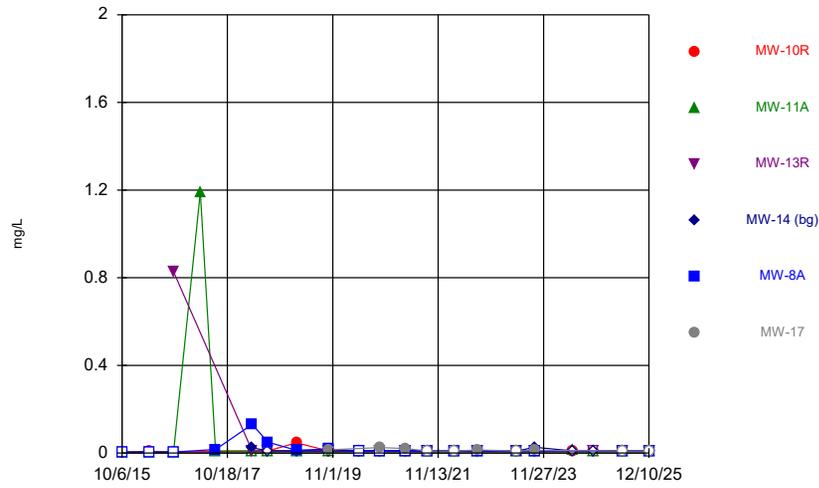
Constituent: Vanadium Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



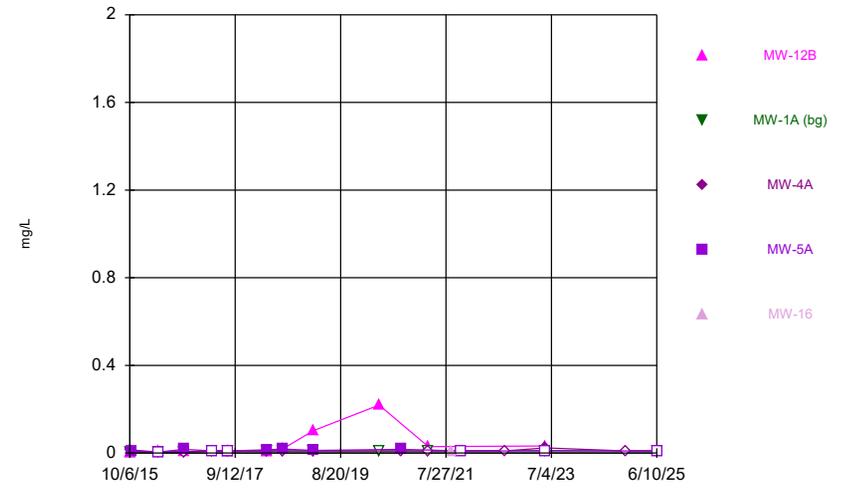
Constituent: Vanadium Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



Constituent: Zinc Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Time Series



Constituent: Zinc Analysis Run 2/17/2026 11:09 AM View: 2025\_AWQR-Time\_Series  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master



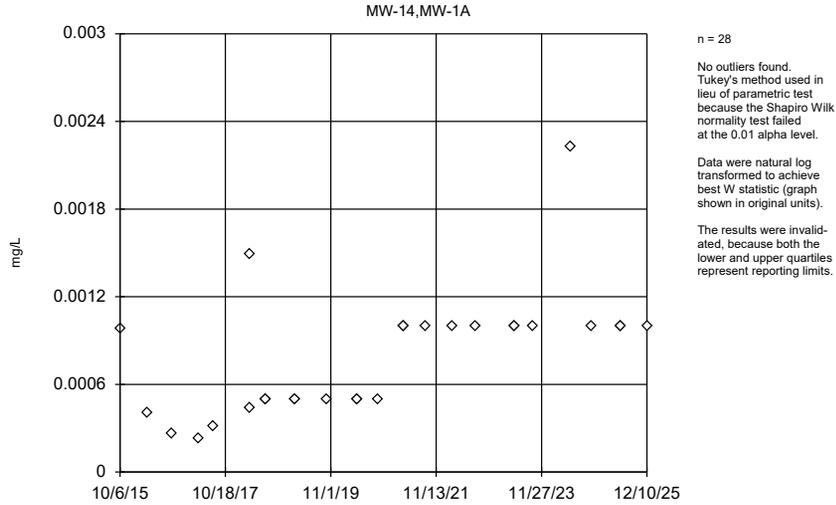
Attachment B.2  
Outlier Analysis

# Outlier Analysis

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 2/3/2026, 2:24 PM

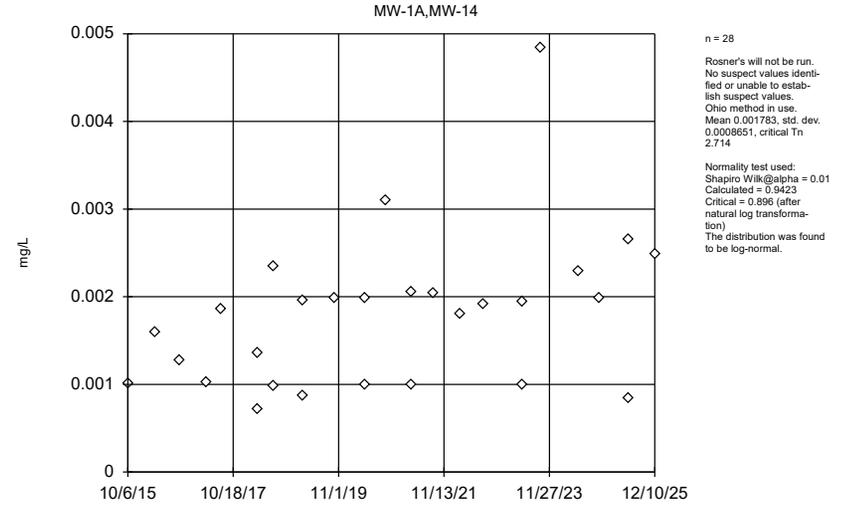
Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Antimony (mg/L)	MW-14,MW-1A	No	n/a	n/a w/combined bg	NP (nrm)/OH	NaN	28	0.0007978	0.000426	unknown	ShapiroWilk
Arsenic (mg/L)	MW-1A,MW-14	No	n/a	n/a w/combined bg	EPA/OH	0.05	28	0.001783	0.0008651	ln(x)	ShapiroWilk
Barium (mg/L)	MW-14,MW-1A	No	n/a	n/a w/combined bg	NP (nrm)/OH	NaN	28	0.4243	0.2775	unknown	ShapiroWilk
Cadmium (mg/L)	MW-14,MW-1A	No	n/a	n/a w/combined bg	NP (nrm)/OH	NaN	23	0.0001228	0.00008483	unknown	ShapiroWilk
Chromium (mg/L)	MW-14,MW-1A	No	n/a	n/a w/combined bg	OH	NaN	23	0.002386	0.0004104	n/a	n/a
Cobalt (mg/L)	MW-1A,MW-14	No	n/a	n/a w/combined bg	EPA/OH	0.05	28	0.000397	0.0003004	ln(x)	ShapiroWilk
Copper (mg/L)	MW-14,MW-1A	No	n/a	n/a w/combined bg	OH	NaN	28	0.002596	0.0006742	n/a	n/a
<b>Lead (mg/L)</b>	<b>MW-14,MW-1A</b>	<b>Yes</b>	<b>0.00138,0.00106</b>	<b>n/a w/combined bg</b>	<b>OH</b>	<b>NaN</b>	<b>28</b>	<b>0.0003586</b>	<b>0.000273</b>	<b>n/a</b>	<b>n/a</b>
Nickel (mg/L)	MW-14,MW-1A	No	n/a	n/a w/combined bg	NP (nrm)/OH	NaN	28	0.004063	0.002458	unknown	ShapiroWilk
Selenium (mg/L)	MW-14,MW-1A	No	n/a	n/a w/combined bg	OH	NaN	23	0.00244	0.0002877	n/a	n/a
Thallium (mg/L)	MW-14,MW-1A	No	n/a	n/a w/combined bg	OH	NaN	23	0.0005157	0.00007527	n/a	n/a
Vanadium (mg/L)	MW-14,MW-1A	No	n/a	n/a w/combined bg	EPA/OH	0.05	23	0.002115	0.0008955	ln(x)	ShapiroWilk
Zinc (mg/L)	MW-14,MW-1A	No	n/a	n/a w/combined bg	OH	NaN	28	0.01067	0.004524	n/a	n/a

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm, Pooled Background



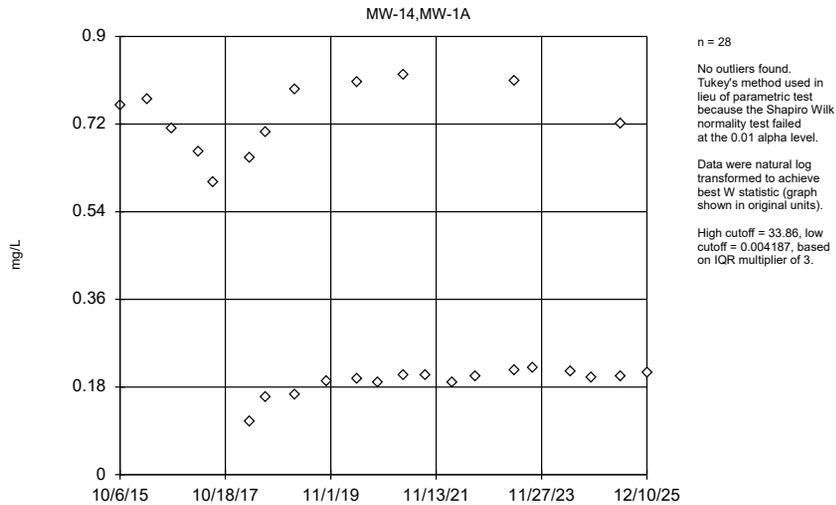
Constituent: Antimony Analysis Run 2/3/2026 2:22 PM View: 2025\_AWQR-BG\_Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

EPA Screening (suspected outliers for Rosner's Test)



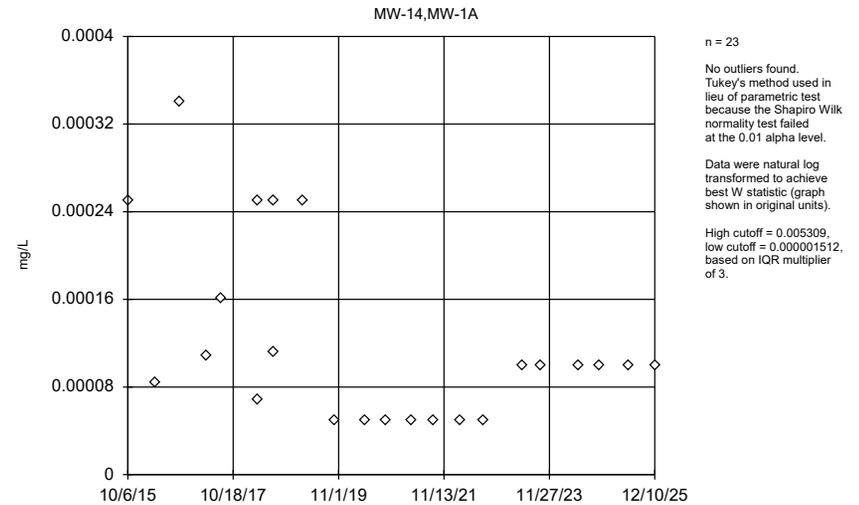
Constituent: Arsenic Analysis Run 2/3/2026 2:22 PM View: 2025\_AWQR-BG\_Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm, Pooled Background



Constituent: Barium Analysis Run 2/3/2026 2:22 PM View: 2025\_AWQR-BG\_Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

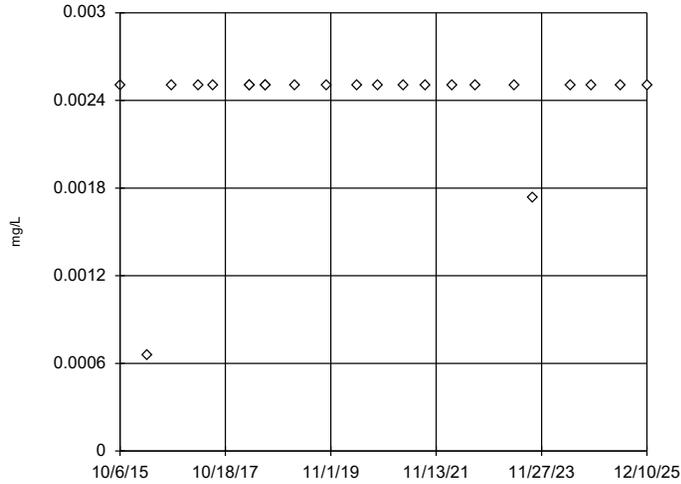
Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm, Pooled Background



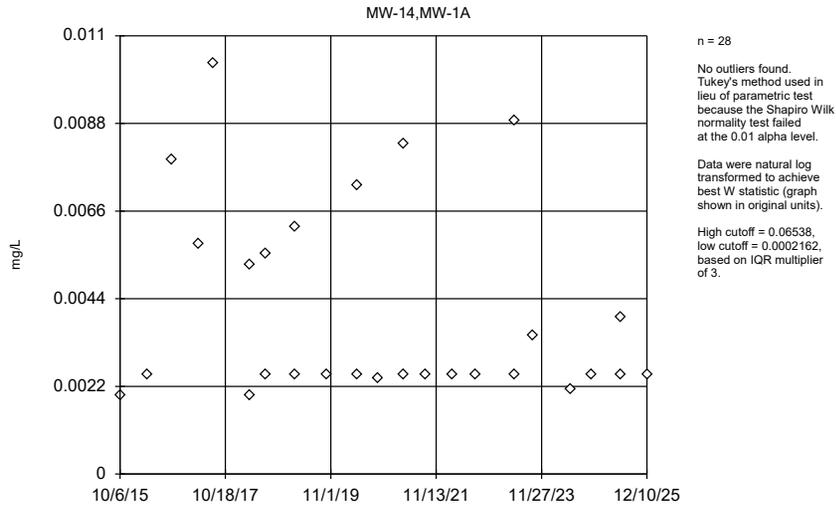
Constituent: Cadmium Analysis Run 2/3/2026 2:22 PM View: 2025\_AWQR-BG\_Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-14,MW-1A

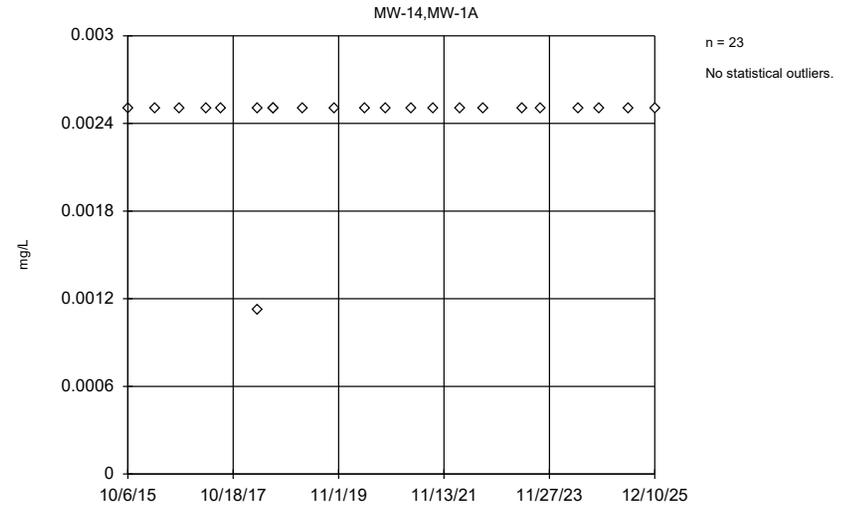


Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm, Pooled Background



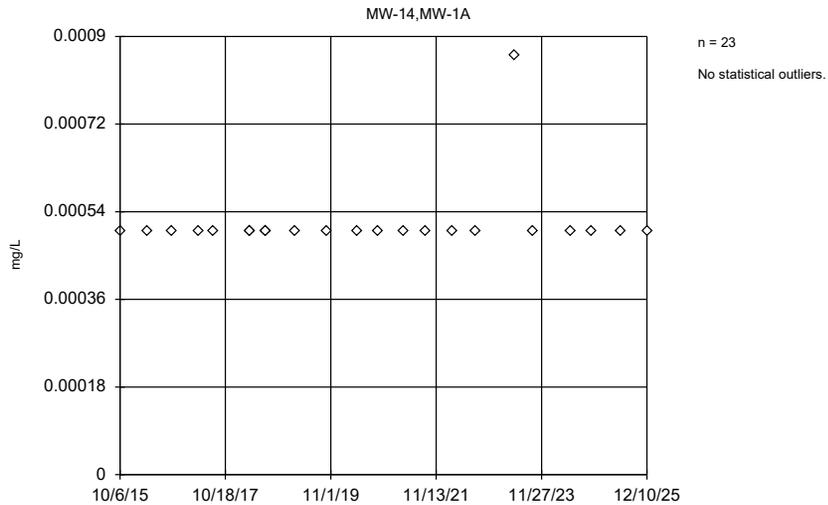
Constituent: Nickel Analysis Run 2/3/2026 2:22 PM View: 2025\_AWQR-BG\_Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Ohio EPA 0715 Outlier Algorithm, Pooled Background



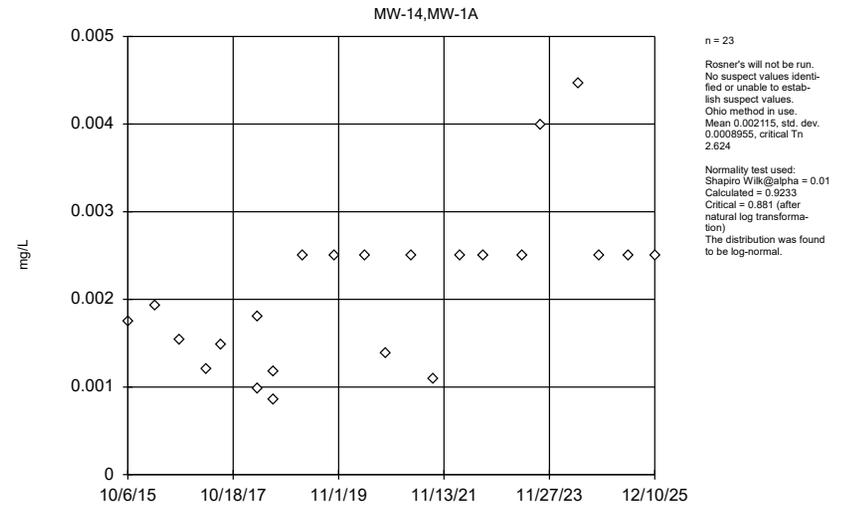
Constituent: Selenium Analysis Run 2/3/2026 2:22 PM View: 2025\_AWQR-BG\_Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Ohio EPA 0715 Outlier Algorithm, Pooled Background



Constituent: Thallium Analysis Run 2/3/2026 2:22 PM View: 2025\_AWQR-BG\_Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

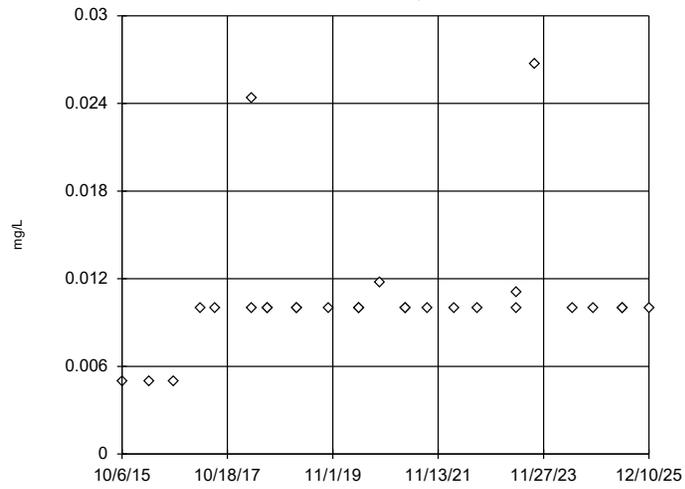
EPA Screening (suspected outliers for Rosner's Test)



Constituent: Vanadium Analysis Run 2/3/2026 2:22 PM View: 2025\_AWQR-BG\_Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-14,MW-1A



n = 28

No statistical outliers.

Constituent: Zinc Analysis Run 2/3/2026 2:22 PM View: 2025\_AWQR-BG\_Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

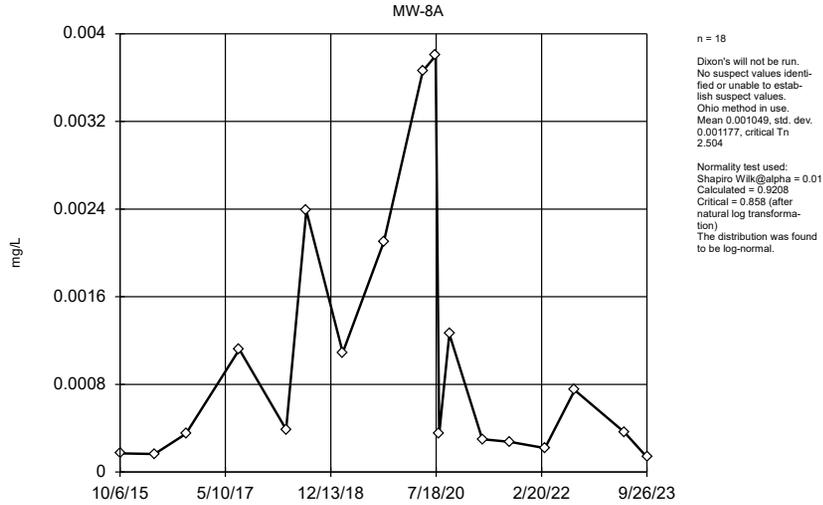
# MW-8A BG Outlier Analysis

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 2/4/2026, 1:06 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Antimony (mg/L)	MW-8A	No	n/a	n/a	OH	NaN	16	0.0006846	0.0002525	n/a	n/a
Arsenic (mg/L)	MW-8A	No	n/a	n/a	EPA/OH	0.05	16	0.001749	0.0007196	normal	ShapiroWilk
Barium (mg/L)	MW-8A	No	n/a	n/a	EPA/OH	0.05	16	0.02833	0.01149	ln(x)	ShapiroWilk
Beryllium (mg/L)	MW-8A	No	n/a	n/a	OH	NaN	15	0.0004662	0.00009771	n/a	n/a
Cadmium (mg/L)	MW-8A	No	n/a	n/a	EPA/OH	0.05	18	0.001049	0.001177	ln(x)	ShapiroWilk
<b>Chromium (mg/L)</b>	<b>MW-8A</b>	<b>Yes</b>	<b>0.000395,0.00117,0.0236,0.00789,0.0284</b>	<b>4/14/2016,7/27/2017,10/3/2019,9/29/2020,3/30/2021</b>	<b>NP (nrm)/OH</b>	<b>NaN</b>	<b>17</b>	<b>0.005436</b>	<b>0.007929</b>	<b>unknown</b>	<b>ShapiroWilk</b>
<b>Cobalt (mg/L)</b>	<b>MW-8A</b>	<b>Yes</b>	<b>0.00919,0.0107</b>	<b>4/11/2018,10/3/2019</b>	<b>Dixon/OH</b>	<b>0.05</b>	<b>16</b>	<b>0.006768</b>	<b>0.001443</b>	<b>normal</b>	<b>ShapiroWilk</b>
<b>Copper (mg/L)</b>	<b>MW-8A</b>	<b>Yes</b>	<b>0.501</b>	<b>4/11/2018</b>	<b>NP (nrm)/OH</b>	<b>NaN</b>	<b>16</b>	<b>0.03549</b>	<b>0.1243</b>	<b>unknown</b>	<b>ShapiroWilk</b>
Lead (mg/L)	MW-8A	No	n/a	n/a	EPA/OH	0.05	16	0.001019	0.001067	ln(x)	ShapiroWilk
Nickel (mg/L)	MW-8A	No	n/a	n/a	EPA/OH	0.05	16	0.03838	0.004757	normal	ShapiroWilk
Selenium (mg/L)	MW-8A	No	n/a	n/a	OH	NaN	16	0.00248	0.00008	n/a	n/a
<b>Silver (mg/L)</b>	<b>MW-8A</b>	<b>Yes</b>	<b>0.00142</b>	<b>8/23/2022</b>	<b>OH</b>	<b>NaN</b>	<b>16</b>	<b>0.0005575</b>	<b>0.00023</b>	<b>n/a</b>	<b>n/a</b>
Thallium (mg/L)	MW-8A	No	n/a	n/a	EPA/OH	0.05	13	0.0005348	0.0001904	unknown	ShapiroWilk
Vanadium (mg/L)	MW-8A	No	n/a	n/a	EPA/OH	0.05	16	0.002192	0.001359	normal	ShapiroWilk
<b>Zinc (mg/L)</b>	<b>MW-8A</b>	<b>Yes</b>	<b>0.0494,0.131</b>	<b>8/1/2018,4/11/2018</b>	<b>Dixon/OH</b>	<b>0.05</b>	<b>16</b>	<b>0.02011</b>	<b>0.03137</b>	<b>normal</b>	<b>ShapiroWilk</b>

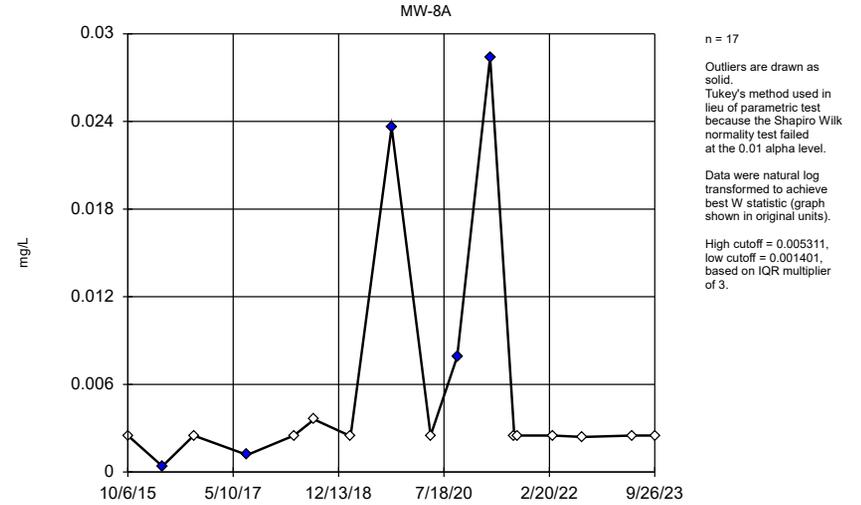


### EPA Screening (suspected outliers for Dixon's Test)



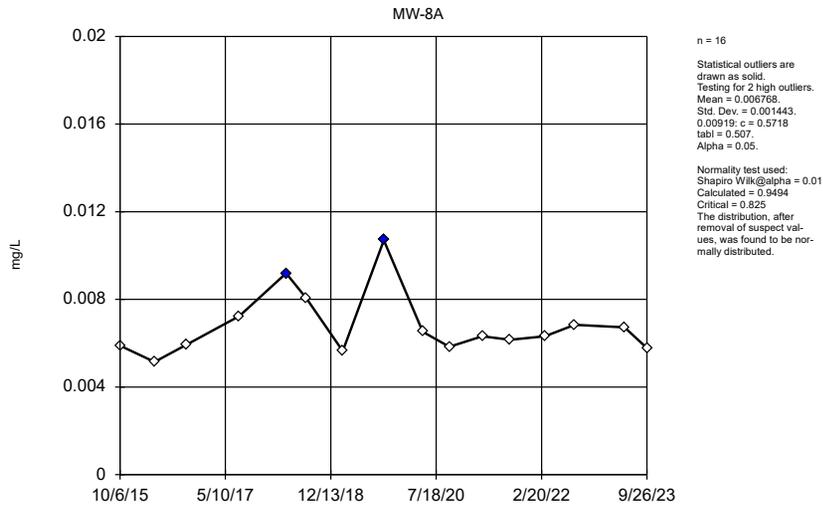
Constituent: Cadmium Analysis Run 2/4/2026 1:03 PM View: 2025 AWQR BG Outliers MW-8A  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



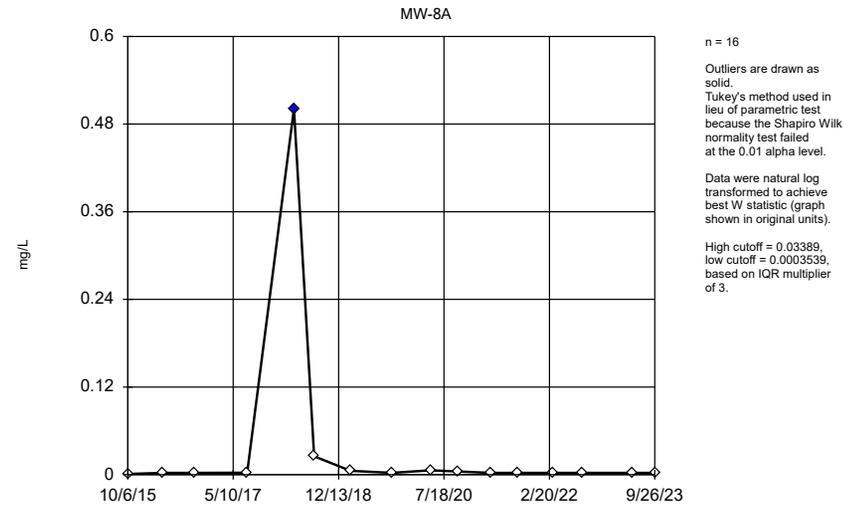
Constituent: Chromium Analysis Run 2/4/2026 1:03 PM View: 2025 AWQR BG Outliers MW-8A  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Dixon's Outlier Test / Ohio EPA 0715 Outlier Algorithm



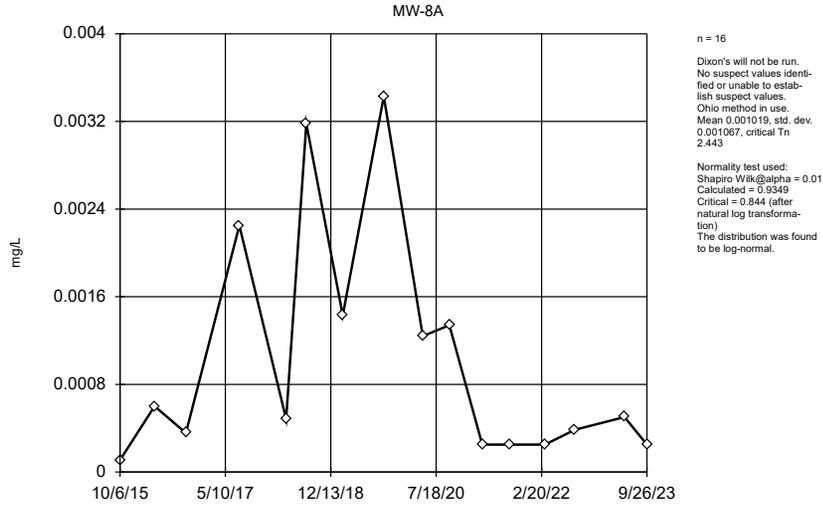
Constituent: Cobalt Analysis Run 2/4/2026 1:03 PM View: 2025 AWQR BG Outliers MW-8A  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



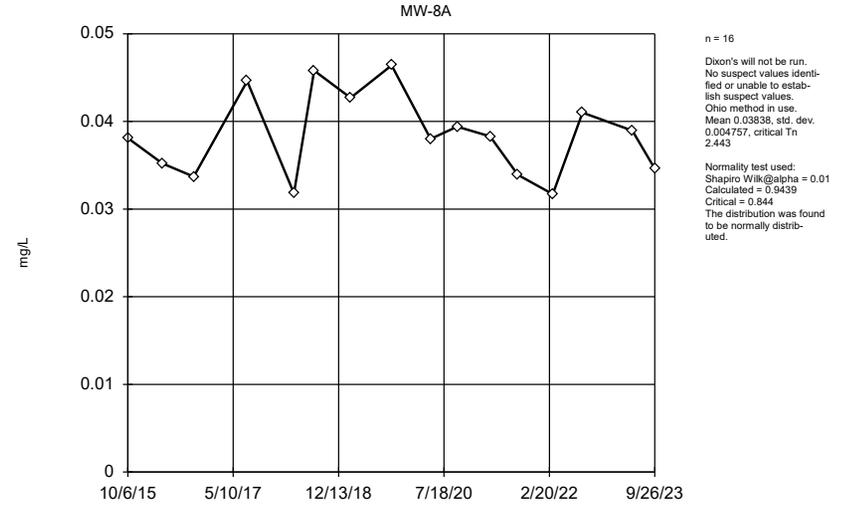
Constituent: Copper Analysis Run 2/4/2026 1:03 PM View: 2025 AWQR BG Outliers MW-8A  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)



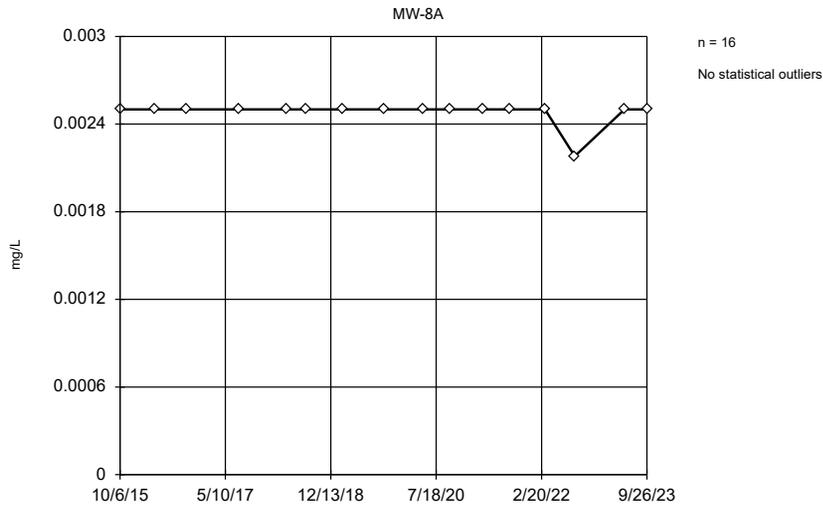
Constituent: Lead Analysis Run 2/4/2026 1:03 PM View: 2025 AWQR BG Outliers MW-8A  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)



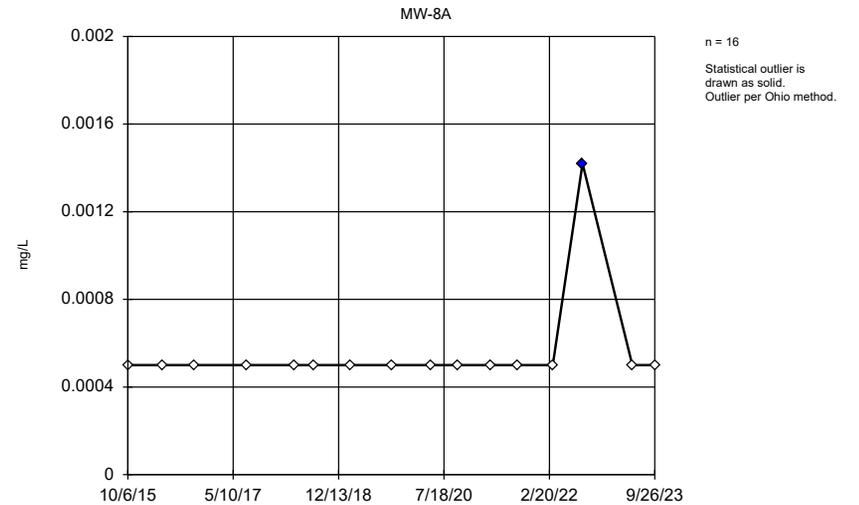
Constituent: Nickel Analysis Run 2/4/2026 1:03 PM View: 2025 AWQR BG Outliers MW-8A  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Ohio EPA 0715 Outlier Algorithm



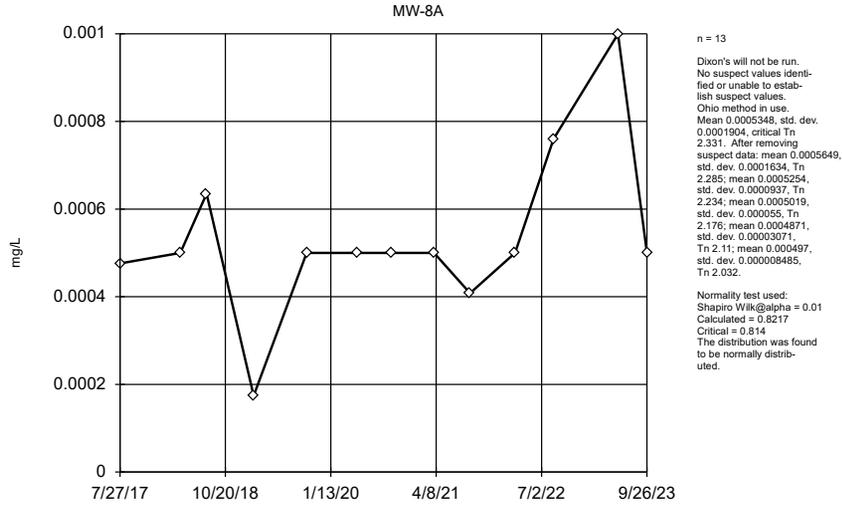
Constituent: Selenium Analysis Run 2/4/2026 1:03 PM View: 2025 AWQR BG Outliers MW-8A  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Ohio EPA 0715 Outlier Algorithm



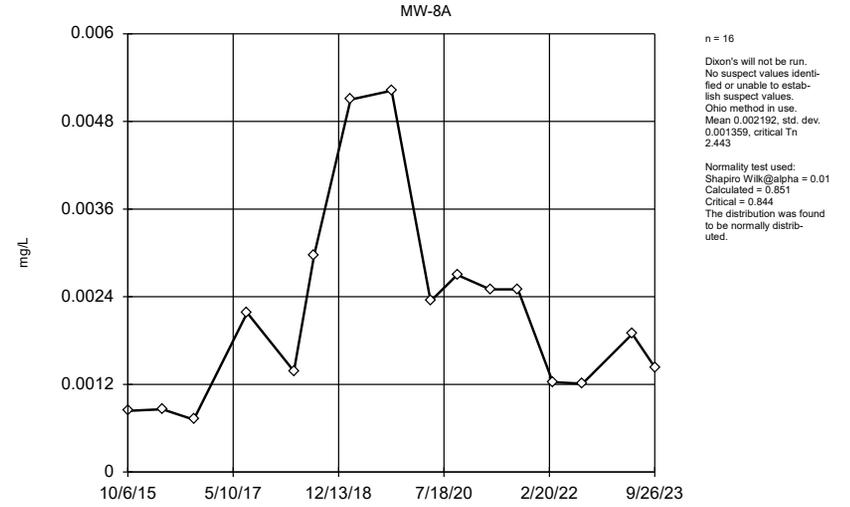
Constituent: Silver Analysis Run 2/4/2026 1:03 PM View: 2025 AWQR BG Outliers MW-8A  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)



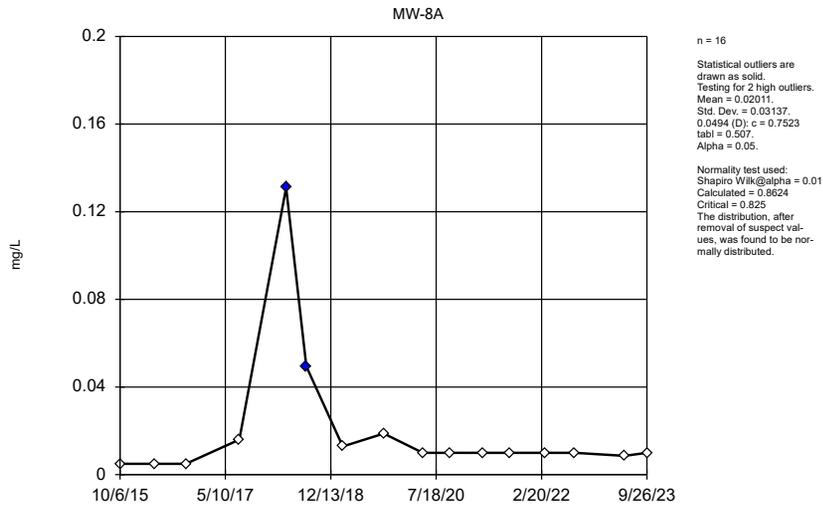
Constituent: Thallium Analysis Run 2/4/2026 1:03 PM View: 2025 AWQR BG Outliers MW-8A  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)



Constituent: Vanadium Analysis Run 2/4/2026 1:03 PM View: 2025 AWQR BG Outliers MW-8A  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Dixon's Outlier Test / Ohio EPA 0715 Outlier Algorithm



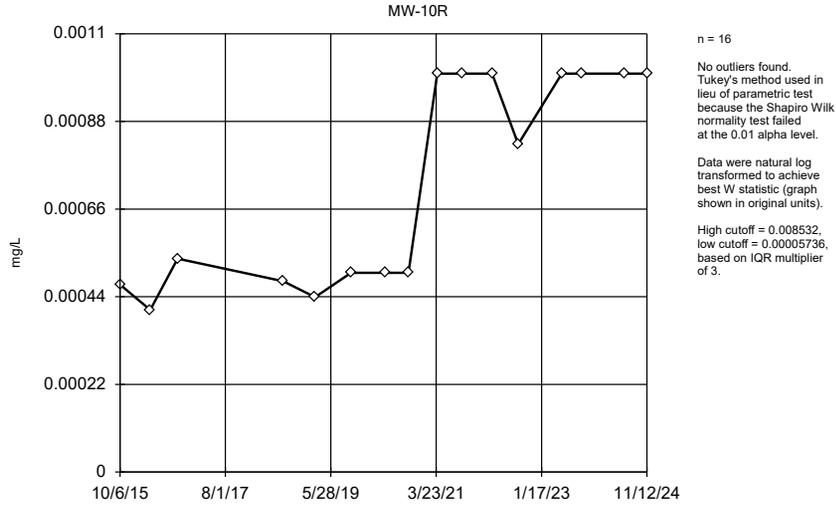
Constituent: Zinc Analysis Run 2/4/2026 1:03 PM View: 2025 AWQR BG Outliers MW-8A  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

# MW-10R BG Outlier Analysis

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 2/4/2026, 1:28 PM

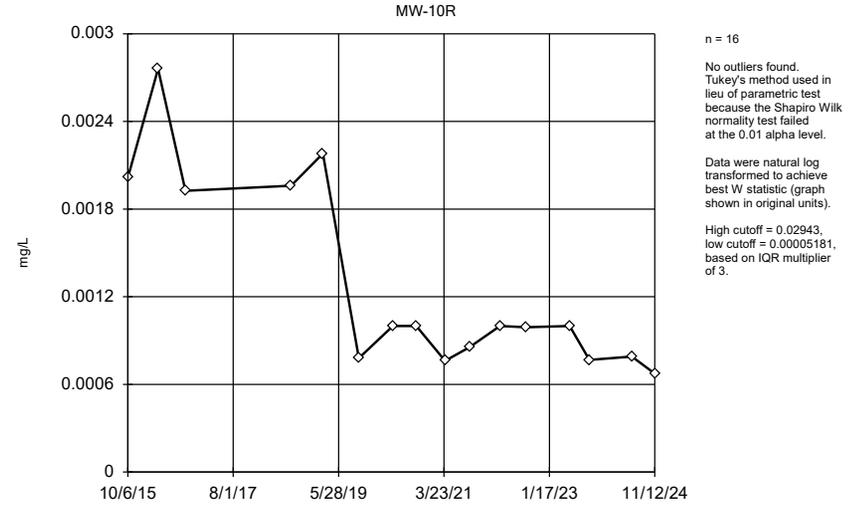
<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Date(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Distribution</u>	<u>Normality Test</u>
Antimony (mg/L)	MW-10R	No	n/a	n/a	NP (nrm)/OH	NaN	16	0.0007284	0.0002627	unknown	ShapiroWilk
Arsenic (mg/L)	MW-10R	No	n/a	n/a	NP (nrm)/OH	NaN	16	0.001279	0.0006525	unknown	ShapiroWilk
Barium (mg/L)	MW-10R	No	n/a	n/a	NP (nrm)/OH	NaN	16	0.07755	0.02655	unknown	ShapiroWilk
Beryllium (mg/L)	MW-10R	No	n/a	n/a	OH	NaN	16	0.0004946	0.00002175	n/a	n/a
Cadmium (mg/L)	MW-10R	No	n/a	n/a	NP (nrm)/OH	NaN	16	0.0002742	0.000586	unknown	ShapiroWilk
Chromium (mg/L)	MW-10R	No	n/a	n/a	OH	NaN	16	0.002284	0.0006082	n/a	n/a
Cobalt (mg/L)	MW-10R	No	n/a	n/a	EPA/OH	0.05	16	0.0006729	0.0008399	ln(x)	ShapiroWilk
Copper (mg/L)	MW-10R	No	n/a	n/a	OH	NaN	16	0.002761	0.001696	n/a	n/a
Lead (mg/L)	MW-10R	No	n/a	n/a	NP (nrm)/OH	NaN	16	0.0004408	0.0003817	unknown	ShapiroWilk
Nickel (mg/L)	MW-10R	No	n/a	n/a	NP (nrm)/OH	NaN	16	0.003296	0.002412	unknown	ShapiroWilk
Selenium (mg/L)	MW-10R	No	n/a	n/a	EPA/OH	0.05	16	0.006916	0.001427	normal	ShapiroWilk
<b>Silver (mg/L)</b>	<b>MW-10R</b>	<b>Yes</b>	<b>0.00146</b>	<b>8/23/2022</b>	<b>OH</b>	<b>NaN</b>	<b>16</b>	<b>0.00056</b>	<b>0.00024</b>	<b>n/a</b>	<b>n/a</b>
Thallium (mg/L)	MW-10R	No	n/a	n/a	OH	NaN	16	0.0005329	0.0001018	n/a	n/a
Vanadium (mg/L)	MW-10R	No	n/a	n/a	EPA/OH	0.05	16	0.003008	0.0007074	normal	ShapiroWilk
<b>Zinc (mg/L)</b>	<b>MW-10R</b>	<b>Yes</b>	<b>0.0465</b>	<b>2/18/2019</b>	<b>OH</b>	<b>NaN</b>	<b>16</b>	<b>0.01154</b>	<b>0.009472</b>	<b>n/a</b>	<b>n/a</b>

### Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm

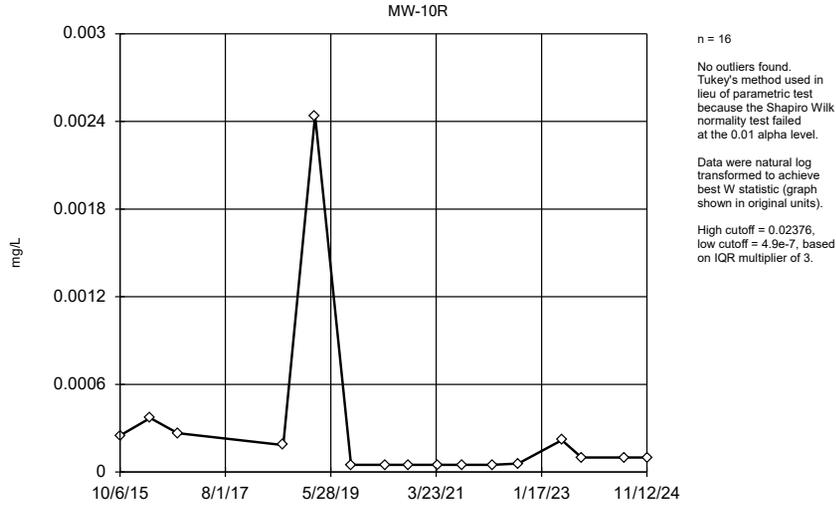


Constituent: Antimony Analysis Run 2/4/2026 1:25 PM View: 2025 AWQR MW-10R BG Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

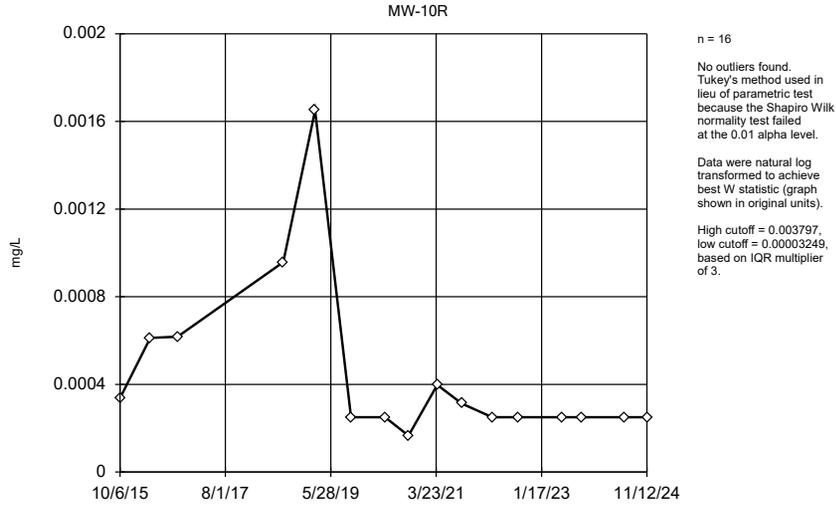
### Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



### Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm

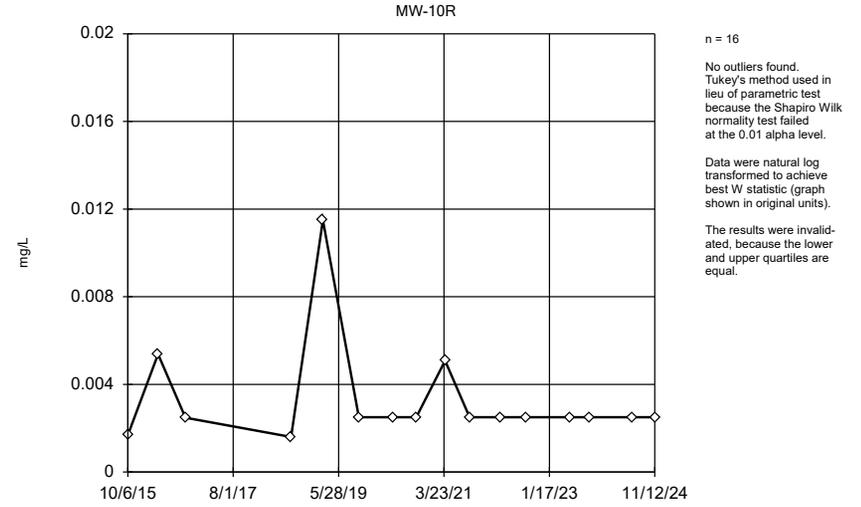


### Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



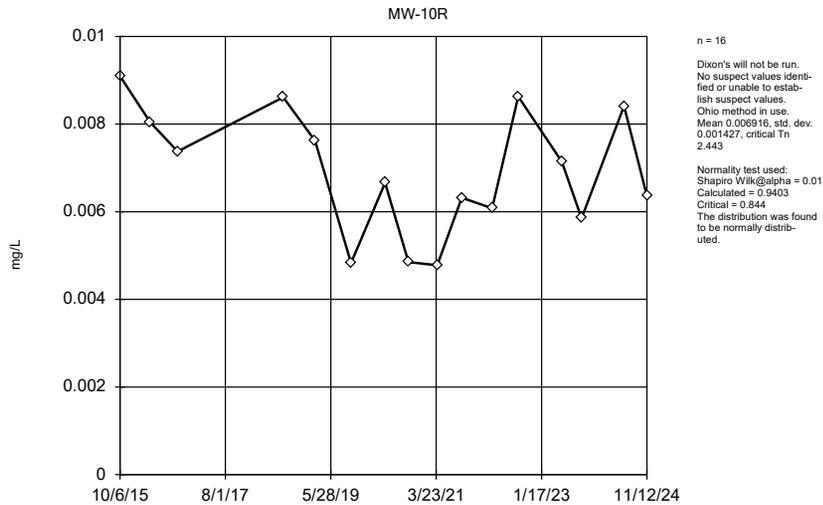
Constituent: Lead Analysis Run 2/4/2026 1:25 PM View: 2025 AWQR MW-10R BG Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



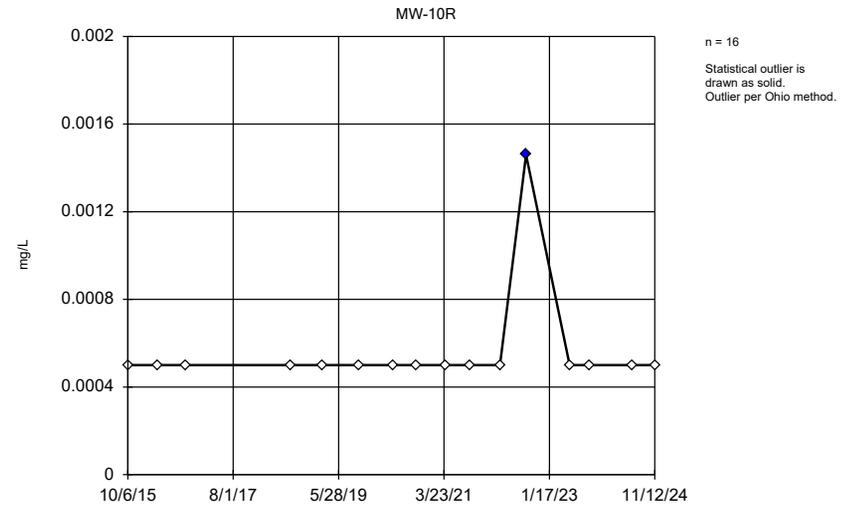
Constituent: Nickel Analysis Run 2/4/2026 1:25 PM View: 2025 AWQR MW-10R BG Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)



Constituent: Selenium Analysis Run 2/4/2026 1:25 PM View: 2025 AWQR MW-10R BG Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

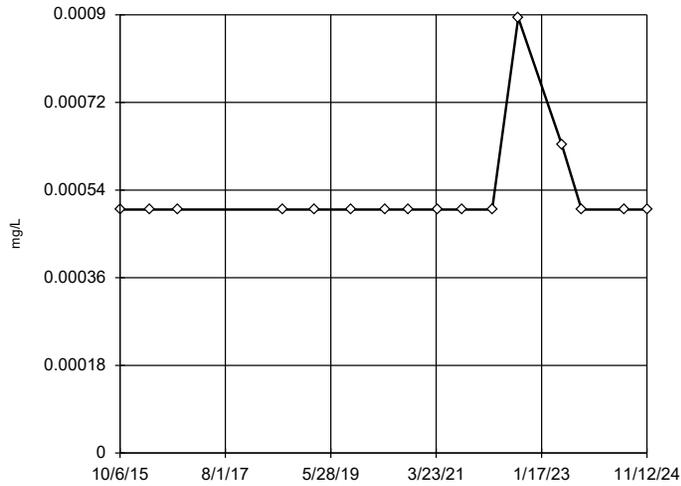
### Ohio EPA 0715 Outlier Algorithm



Constituent: Silver Analysis Run 2/4/2026 1:25 PM View: 2025 AWQR MW-10R BG Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Ohio EPA 0715 Outlier Algorithm

MW-10R

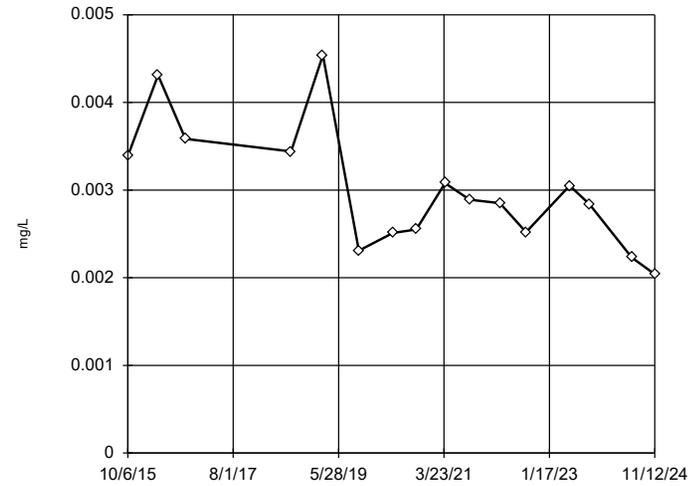


n = 16  
No statistical outliers.

Constituent: Thallium Analysis Run 2/4/2026 1:25 PM View: 2025 AWQR MW-10R BG Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)

MW-10R

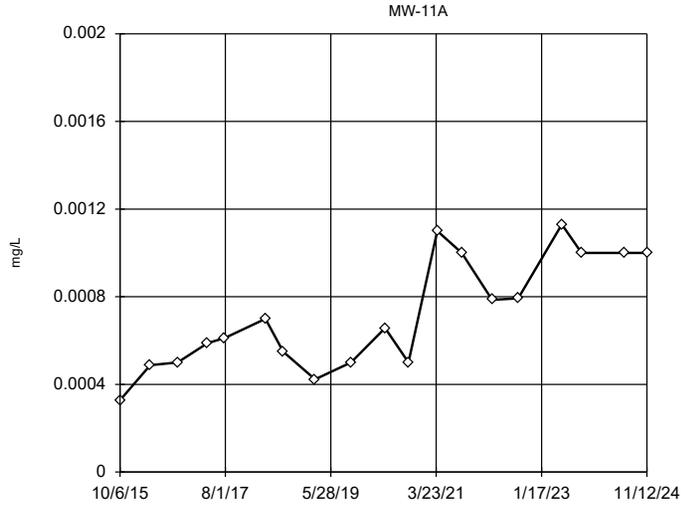


# MW-11A BG Outlier Analysis

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 2/4/2026, 1:56 PM

<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>
Antimony (mg/L)	MW-11A	No	n/a	n/a	EPA/OH	0.05	19	0.0007186	0.0002516	normal	ShapiroWilk
Arsenic (mg/L)	MW-11A	No	n/a	n/a	EPA/OH	0.05	19	0.009111	0.002862	ln(x)	ShapiroWilk
<b>Barium (mg/L)</b>	<b>MW-11A</b>	<b>Yes</b>	<b>0.0235</b>	<b>10/6/2015</b>	<b>Dixon/OH</b>	<b>0.05</b>	<b>19</b>	<b>0.01564</b>	<b>0.00233</b>	<b>normal</b>	<b>ShapiroWilk</b>
Beryllium (mg/L)	MW-11A	No	n/a	n/a	OH	NaN	19	0.0004808	0.00008374	n/a	n/a
Cadmium (mg/L)	MW-11A	No	n/a	n/a	EPA/OH	0.05	20	0.000508	0.0001047	normal	ShapiroWilk
Cobalt (mg/L)	MW-11A	No	n/a	n/a	EPA/OH	0.05	19	0.002098	0.0004981	normal	ShapiroWilk
Copper (mg/L)	MW-11A	No	n/a	n/a	OH	NaN	19	0.002421	0.0003441	n/a	n/a
<b>Lead (mg/L)</b>	<b>MW-11A</b>	<b>Yes</b>	<b>0.00101</b>	<b>10/6/2015</b>	<b>NP (nrm)/OH</b>	<b>NaN</b>	<b>19</b>	<b>0.0003362</b>	<b>0.0001857</b>	<b>unknown</b>	<b>ShapiroWilk</b>
<b>Nickel (mg/L)</b>	<b>MW-11A</b>	<b>Yes</b>	<b>0.0179</b>	<b>10/6/2015</b>	<b>Dixon/OH</b>	<b>0.05</b>	<b>19</b>	<b>0.01171</b>	<b>0.002025</b>	<b>normal</b>	<b>ShapiroWilk</b>
Thallium (mg/L)	MW-11A	No	n/a	n/a	OH	NaN	19	0.000454	0.0001701	n/a	n/a
Vanadium (mg/L)	MW-11A	No	n/a	n/a	OH	NaN	19	0.002351	0.000486	n/a	n/a
<b>Zinc (mg/L)</b>	<b>MW-11A</b>	<b>Yes</b>	<b>1.19</b>	<b>4/11/2017</b>	<b>OH</b>	<b>NaN</b>	<b>19</b>	<b>0.07148</b>	<b>0.2709</b>	<b>n/a</b>	<b>n/a</b>

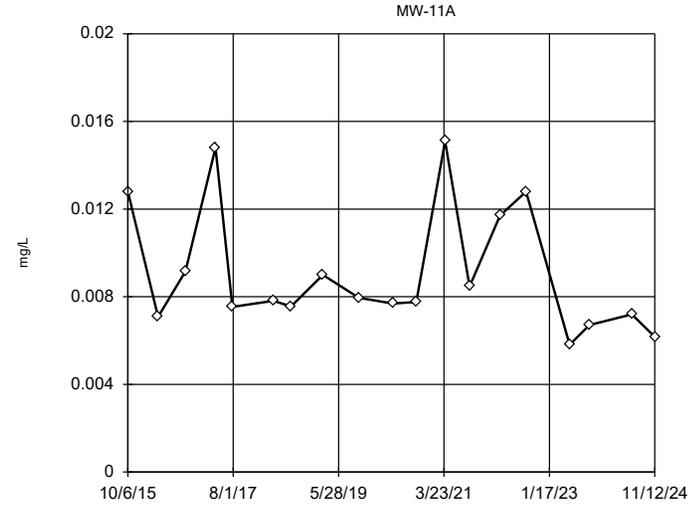
### EPA Screening (suspected outliers for Dixon's Test)



n = 19  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Ohio method in use.  
 Mean 0.0007186, std. dev. 0.0002516, critical Tn 2.532  
 Normality test used:  
 Shapiro Wilk@alpha = 0.01  
 Calculated = 0.9159  
 Critical = 0.993  
 The distribution was found to be normally distributed.

Constituent: Antimony Analysis Run 2/4/2026 1:54 PM View: 2025 AWQR MW-11A BG Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

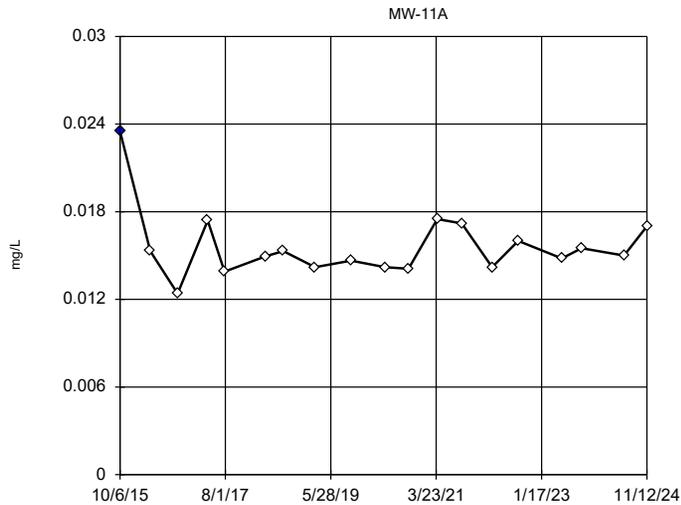
### EPA Screening (suspected outliers for Dixon's Test)



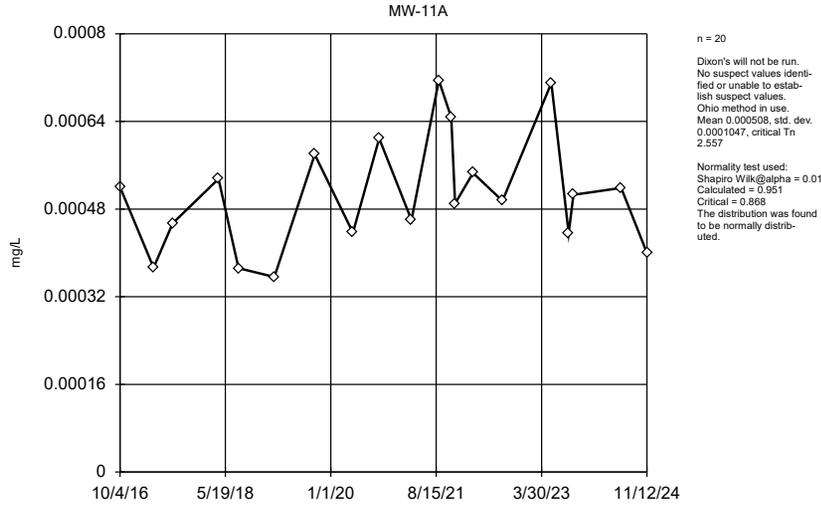
n = 19  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Ohio method in use.  
 Mean 0.009111, std. dev. 0.002862, critical Tn 2.532  
 Normality test used:  
 Shapiro Wilk@alpha = 0.01  
 Calculated = 0.8971  
 Critical = 0.993 (after natural log transformation)  
 The distribution was found to be log-normal.

Constituent: Arsenic Analysis Run 2/4/2026 1:54 PM View: 2025 AWQR MW-11A BG Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Dixon's Outlier Test / Ohio EPA 0715 Outlier Algorithm

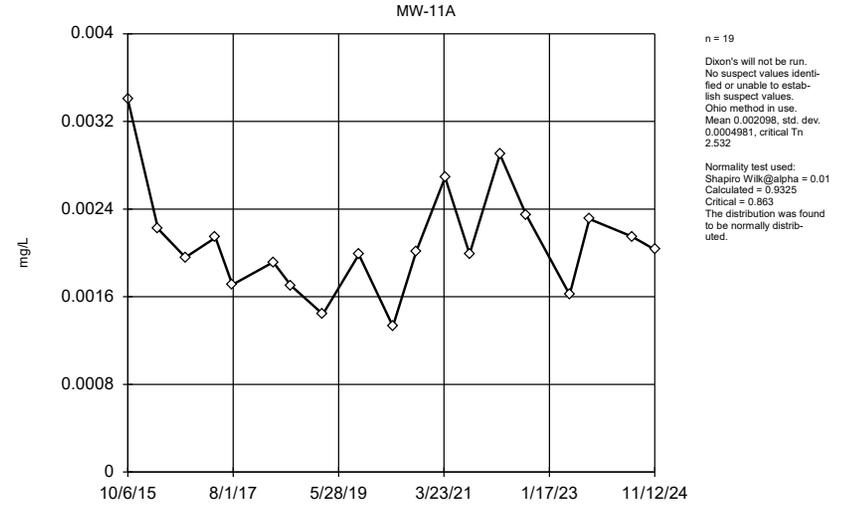


### EPA Screening (suspected outliers for Dixon's Test)



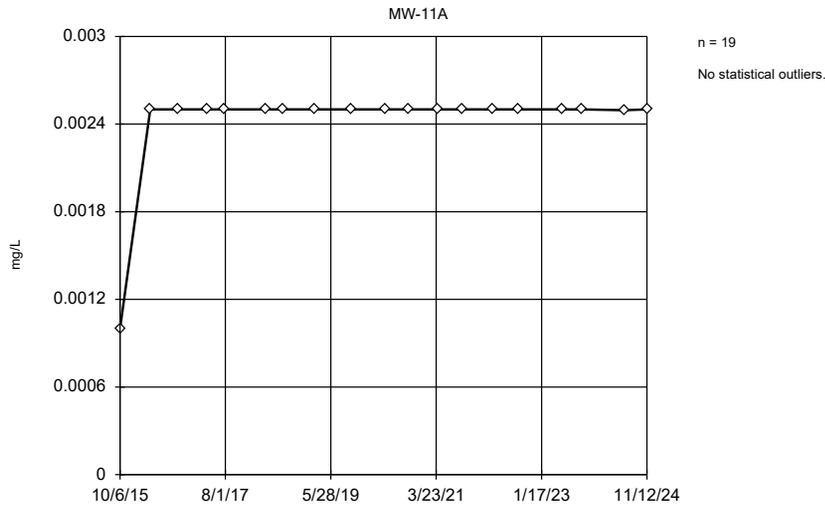
Constituent: Cadmium Analysis Run 2/4/2026 1:54 PM View: 2025 AWQR MW-11A BG Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)



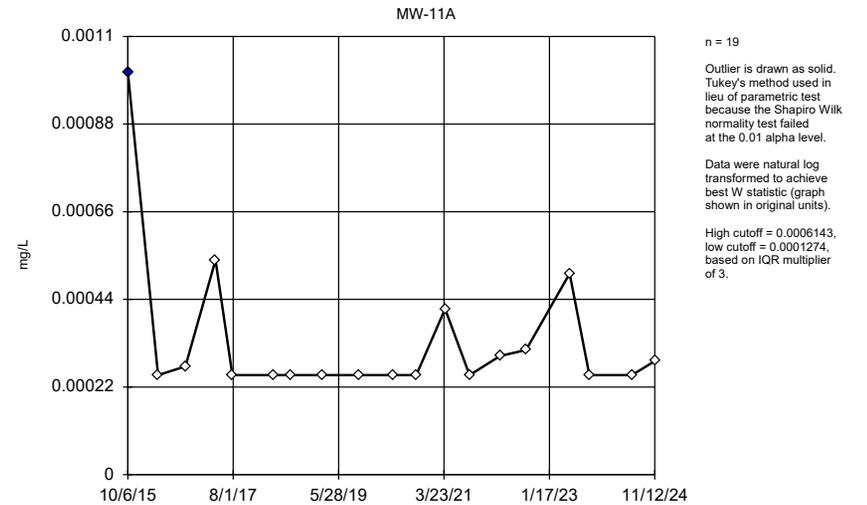
Constituent: Cobalt Analysis Run 2/4/2026 1:54 PM View: 2025 AWQR MW-11A BG Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Ohio EPA 0715 Outlier Algorithm



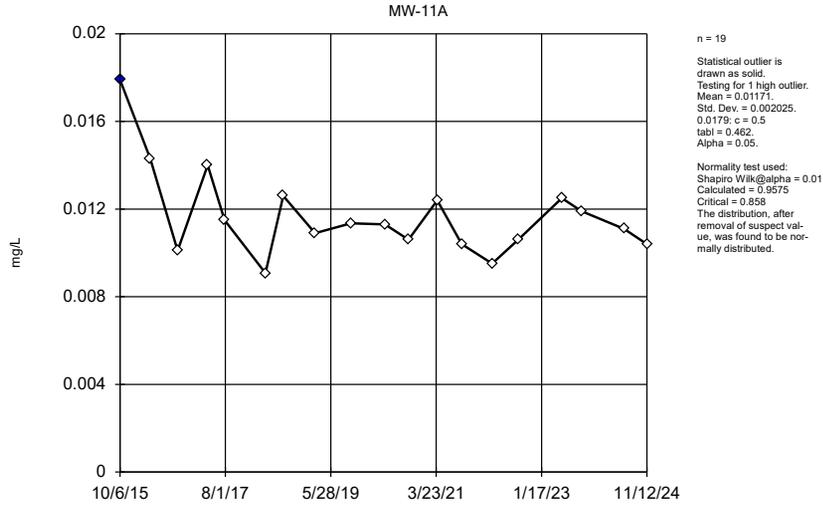
Constituent: Copper Analysis Run 2/4/2026 1:54 PM View: 2025 AWQR MW-11A BG Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



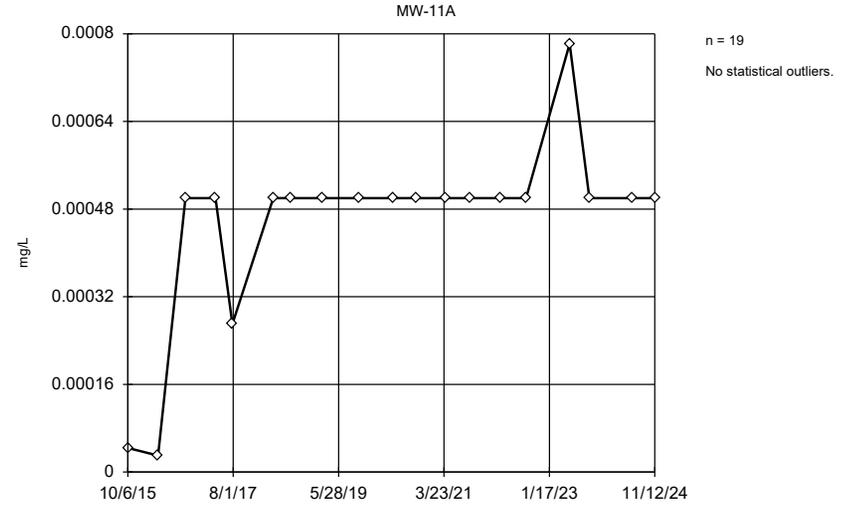
Constituent: Lead Analysis Run 2/4/2026 1:54 PM View: 2025 AWQR MW-11A BG Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Dixon's Outlier Test / Ohio EPA 0715 Outlier Algorithm



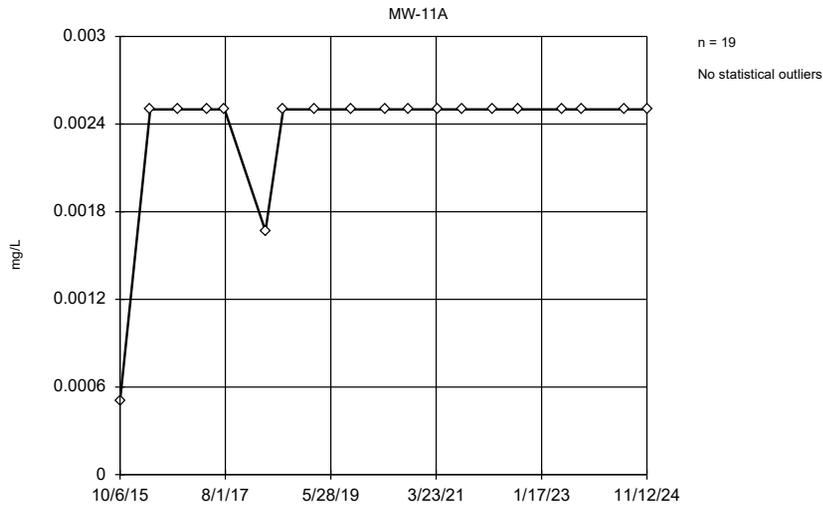
Constituent: Nickel Analysis Run 2/4/2026 1:54 PM View: 2025 AWQR MW-11A BG Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Ohio EPA 0715 Outlier Algorithm



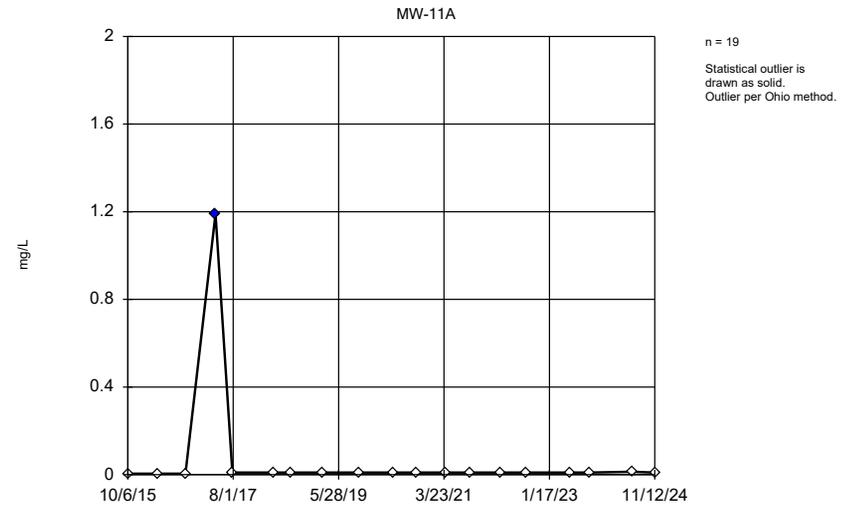
Constituent: Thallium Analysis Run 2/4/2026 1:54 PM View: 2025 AWQR MW-11A BG Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Ohio EPA 0715 Outlier Algorithm



Constituent: Vanadium Analysis Run 2/4/2026 1:54 PM View: 2025 AWQR MW-11A BG Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Ohio EPA 0715 Outlier Algorithm



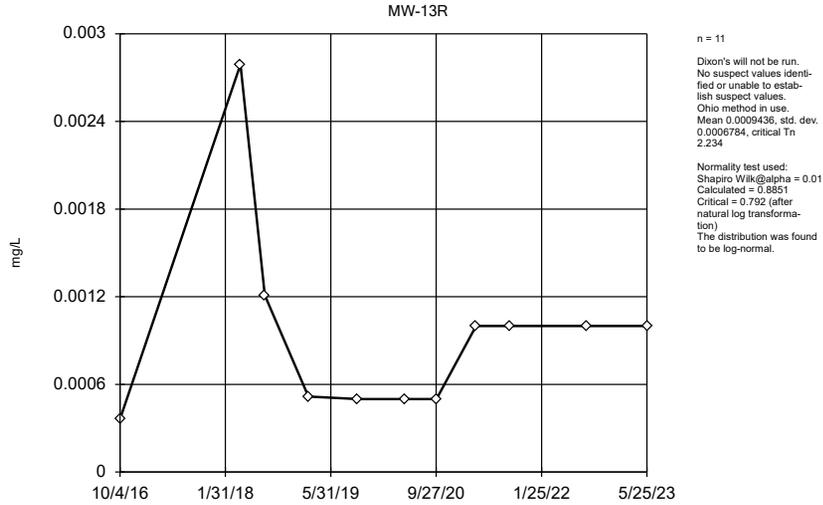
Constituent: Zinc Analysis Run 2/4/2026 1:54 PM View: 2025 AWQR MW-11A BG Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

# Outlier Analysis

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 2/4/2026, 2:34 PM

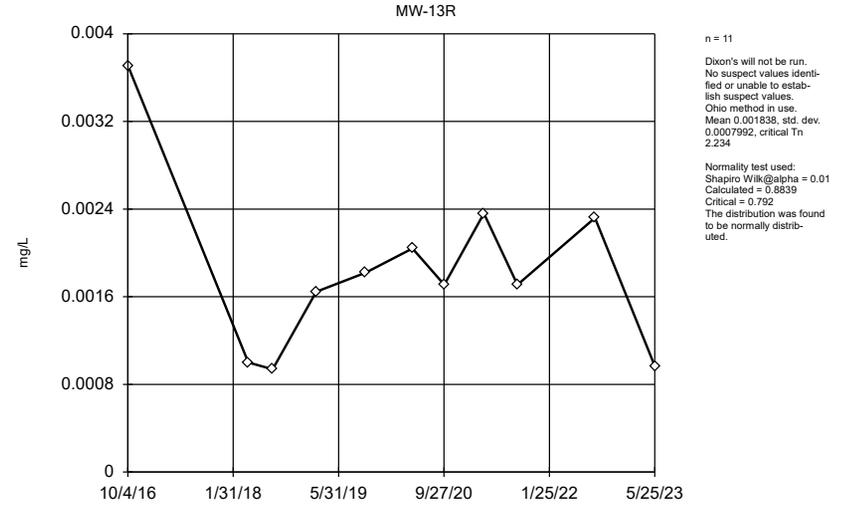
<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Date(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Distribution</u>	<u>Normality Test</u>
Antimony (mg/L)	MW-13R	No	n/a	n/a	EPA/OH	0.05	11	0.0009436	0.0006784	In(x)	ShapiroWilk
Arsenic (mg/L)	MW-13R	No	n/a	n/a	EPA/OH	0.05	11	0.001838	0.0007992	normal	ShapiroWilk
<b>Barium (mg/L)</b>	<b>MW-13R</b>	<b>Yes</b>	<b>0.39</b>	<b>10/4/2016</b>	<b>Dixon/OH</b>	<b>0.05</b>	<b>11</b>	<b>0.1394</b>	<b>0.08669</b>	<b>normal</b>	<b>ShapiroWilk</b>
<b>Cadmium (mg/L)</b>	<b>MW-13R</b>	<b>Yes</b>	<b>0.00025,0.00025,0.00025,0.000248,0.00022</b>	<b>4/11/2018,8/1/2018,2/18/2019,5/25/2023,10/4/2016</b>	<b>OH</b>	<b>NaN</b>	<b>11</b>	<b>0.000138</b>	<b>0.0001014</b>	<b>n/a</b>	<b>n/a</b>
Chromium (mg/L)	MW-13R	No	n/a	n/a	EPA/OH	0.05	11	0.002272	0.0006994	normal	ShapiroWilk
Cobalt (mg/L)	MW-13R	No	n/a	n/a	EPA/OH	0.05	11	0.000865	0.0005643	normal	ShapiroWilk
Copper (mg/L)	MW-13R	No	n/a	n/a	OH	NaN	11	0.002413	0.0002895	n/a	n/a
<b>Lead (mg/L)</b>	<b>MW-13R</b>	<b>Yes</b>	<b>0.00166</b>	<b>10/4/2016</b>	<b>OH</b>	<b>NaN</b>	<b>11</b>	<b>0.0003782</b>	<b>0.0004251</b>	<b>n/a</b>	<b>n/a</b>
<b>Nickel (mg/L)</b>	<b>MW-13R</b>	<b>Yes</b>	<b>0.01</b>	<b>10/4/2016</b>	<b>NP (nrm)/OH</b>	<b>NaN</b>	<b>11</b>	<b>0.002937</b>	<b>0.002381</b>	<b>unknown</b>	<b>ShapiroWilk</b>
Thallium (mg/L)	MW-13R	No	n/a	n/a	OH	NaN	11	0.0004618	0.000144	n/a	n/a
Vanadium (mg/L)	MW-13R	No	n/a	n/a	NP (nrm)/OH	NaN	11	0.00206	0.0006988	unknown	ShapiroWilk
<b>Zinc (mg/L)</b>	<b>MW-13R</b>	<b>Yes</b>	<b>0.827</b>	<b>10/4/2016</b>	<b>NP (nrm)/OH</b>	<b>NaN</b>	<b>11</b>	<b>0.08396</b>	<b>0.2464</b>	<b>unknown</b>	<b>ShapiroWilk</b>

EPA Screening (suspected outliers for Dixon's Test)



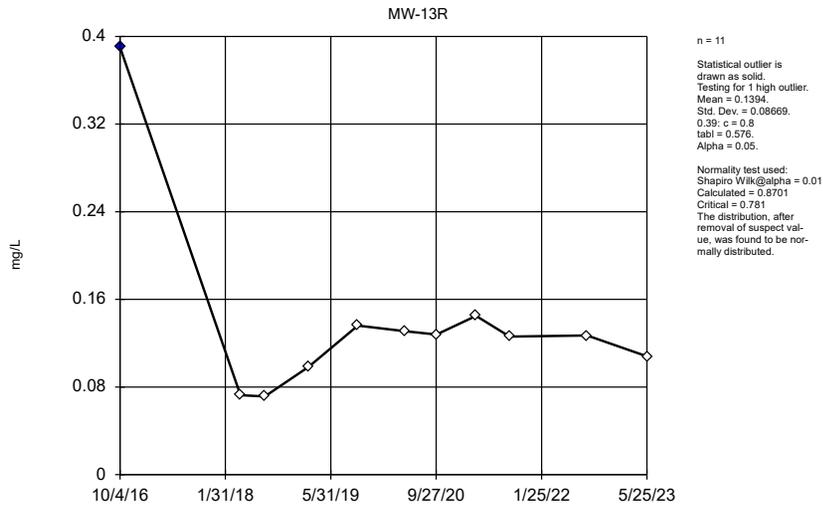
Constituent: Antimony Analysis Run 2/4/2026 2:33 PM View: 2025 AWQR MW-13R Bg Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

EPA Screening (suspected outliers for Dixon's Test)



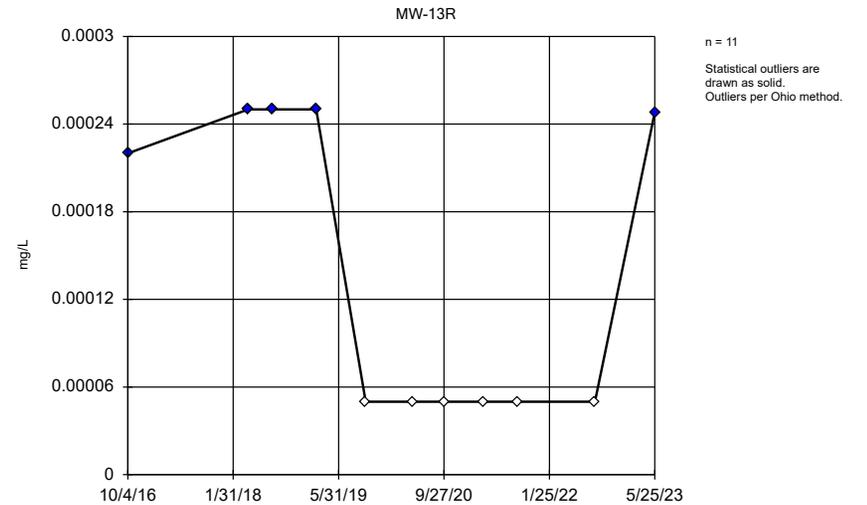
Constituent: Arsenic Analysis Run 2/4/2026 2:33 PM View: 2025 AWQR MW-13R Bg Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Dixon's Outlier Test / Ohio EPA 0715 Outlier Algorithm



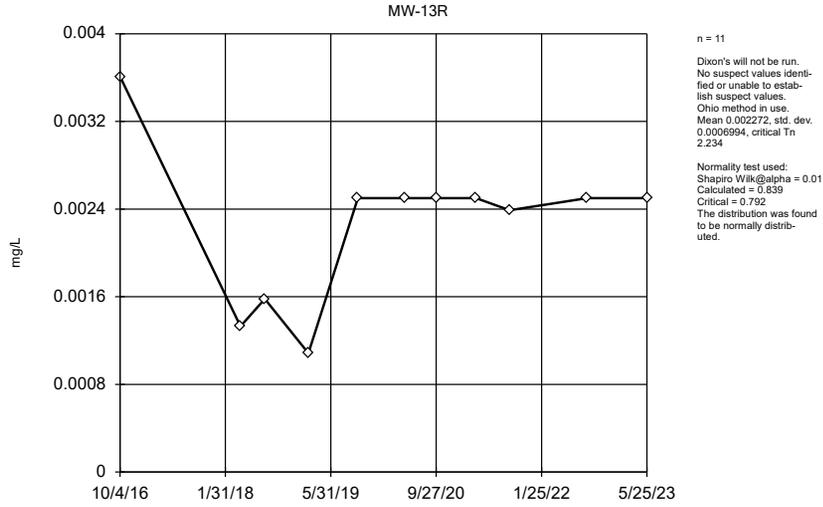
Constituent: Barium Analysis Run 2/4/2026 2:33 PM View: 2025 AWQR MW-13R Bg Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Ohio EPA 0715 Outlier Algorithm



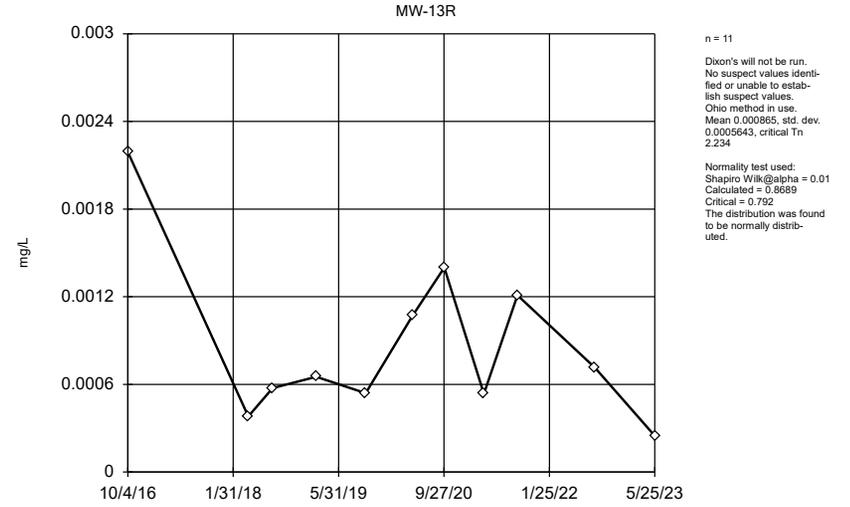
Constituent: Cadmium Analysis Run 2/4/2026 2:33 PM View: 2025 AWQR MW-13R Bg Outliers  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)



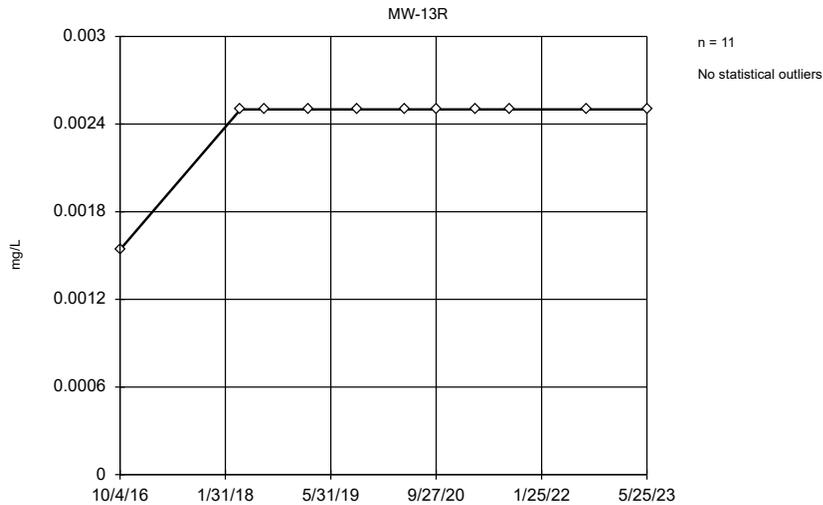
Constituent: Chromium Analysis Run 2/4/2026 2:33 PM View: 2025 AWQR MW-13R Bg Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)



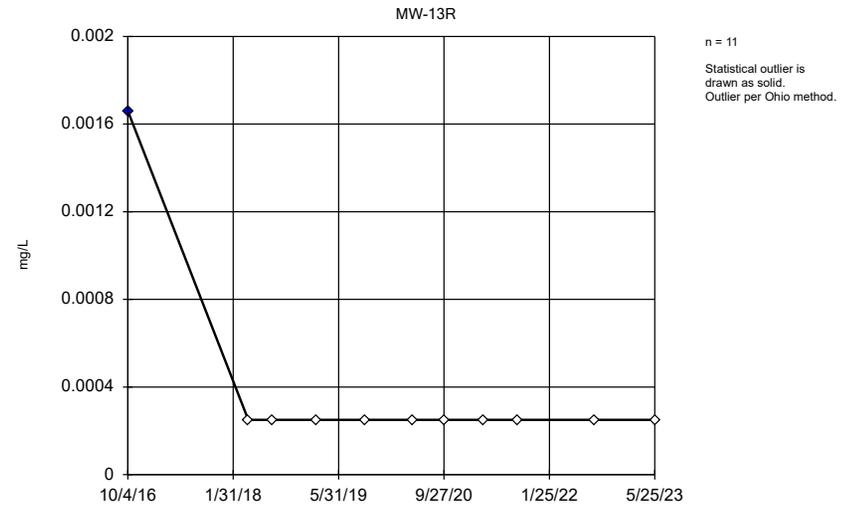
Constituent: Cobalt Analysis Run 2/4/2026 2:34 PM View: 2025 AWQR MW-13R Bg Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Ohio EPA 0715 Outlier Algorithm



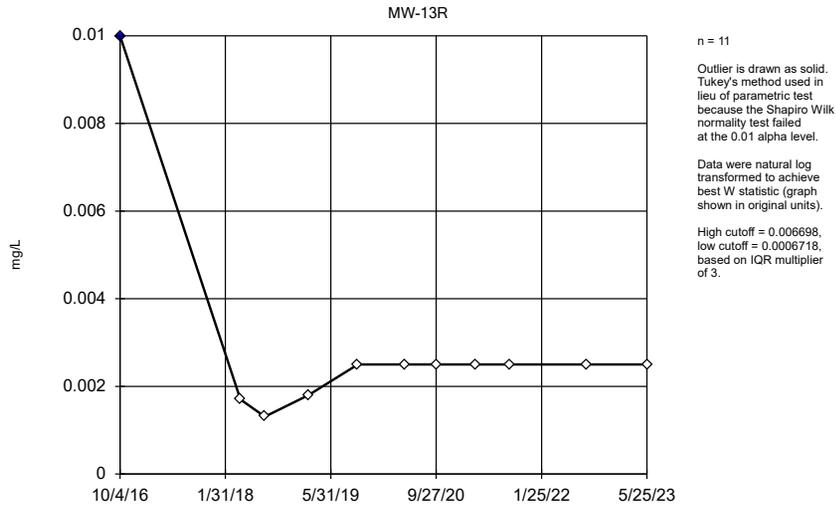
Constituent: Copper Analysis Run 2/4/2026 2:34 PM View: 2025 AWQR MW-13R Bg Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Ohio EPA 0715 Outlier Algorithm



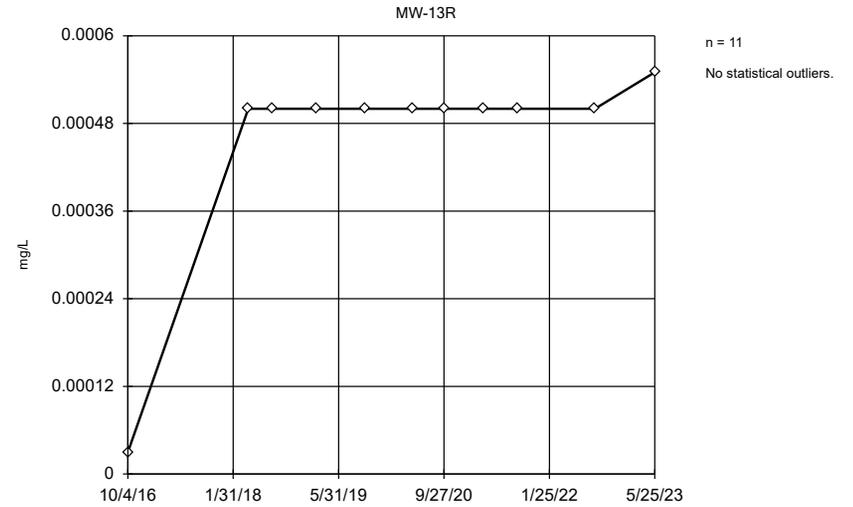
Constituent: Lead Analysis Run 2/4/2026 2:34 PM View: 2025 AWQR MW-13R Bg Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



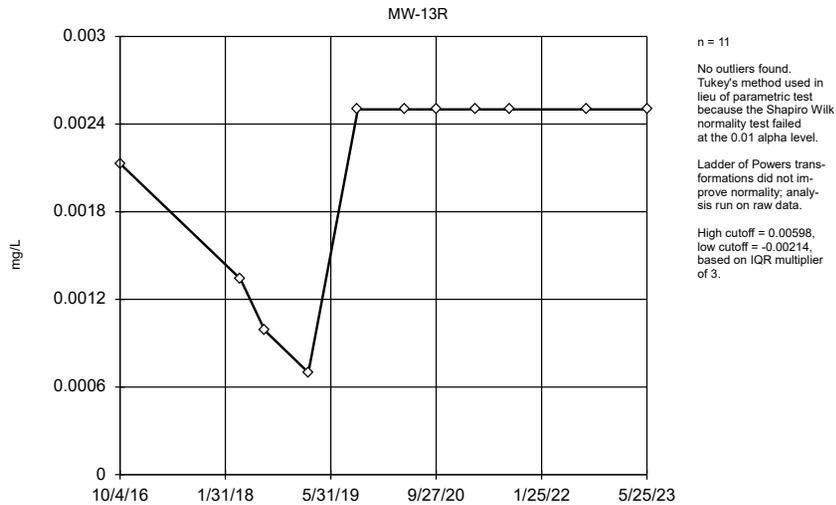
Constituent: Nickel Analysis Run 2/4/2026 2:34 PM View: 2025 AWQR MW-13R Bg Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Ohio EPA 0715 Outlier Algorithm



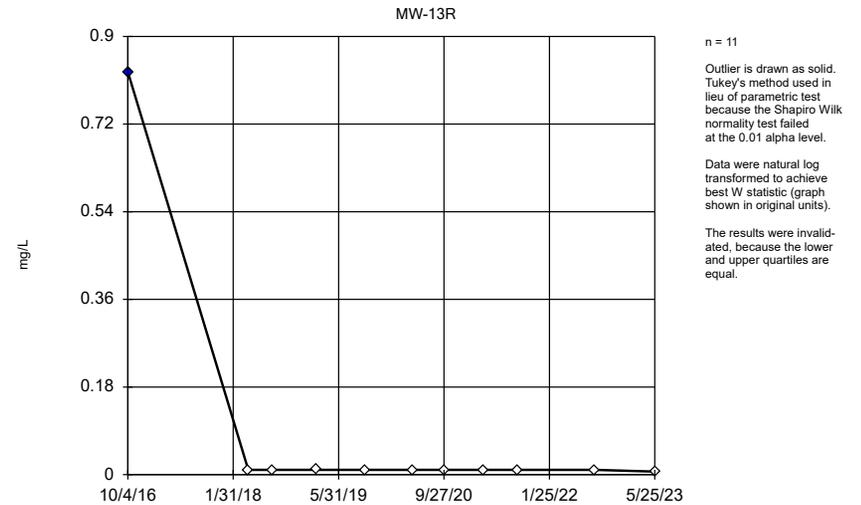
Constituent: Thallium Analysis Run 2/4/2026 2:34 PM View: 2025 AWQR MW-13R Bg Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



Constituent: Vanadium Analysis Run 2/4/2026 2:34 PM View: 2025 AWQR MW-13R Bg Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



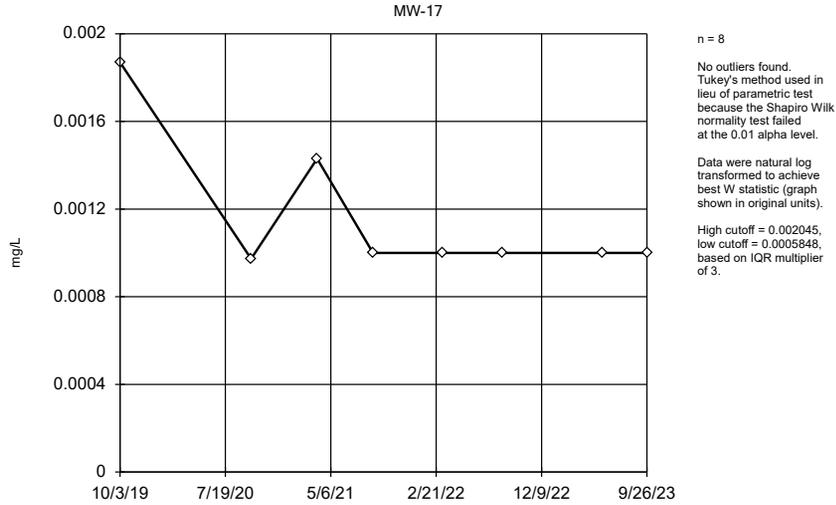
Constituent: Zinc Analysis Run 2/4/2026 2:34 PM View: 2025 AWQR MW-13R Bg Outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

# MW-17 BG Outlier Analysis

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 2/4/2026, 2:15 PM

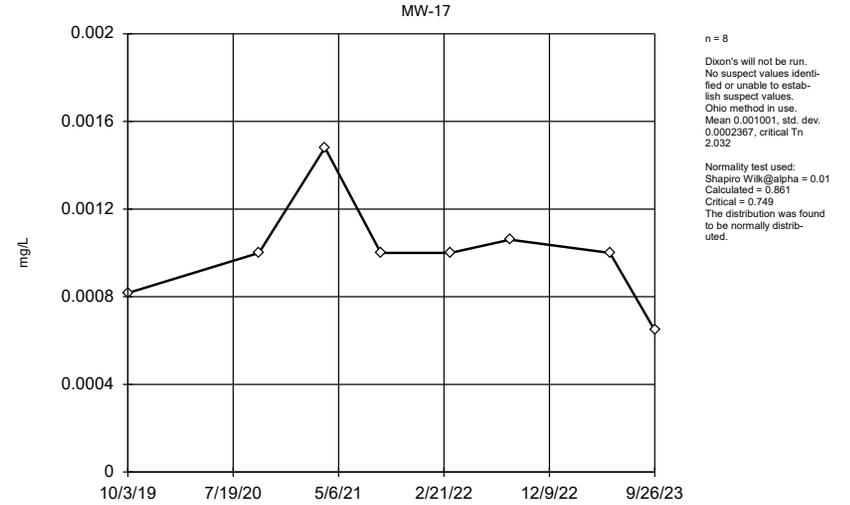
<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Date(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Distribution</u>	<u>Normality Test</u>
Antimony (mg/L)	MW-17	No	n/a	n/a	NP (nrm)/OH	NaN	8	0.001159	0.0003251	unknown	ShapiroWilk
Arsenic (mg/L)	MW-17	No	n/a	n/a	EPA/OH	0.05	8	0.001001	0.0002367	normal	ShapiroWilk
<b>Barium (mg/L)</b>	<b>MW-17</b>	<b>Yes</b>	<b>0.0774</b>	<b>10/3/2019</b>	<b>Dixon/OH</b>	<b>0.05</b>	<b>8</b>	<b>0.03594</b>	<b>0.01744</b>	<b>normal</b>	<b>ShapiroWilk</b>
Cadmium (mg/L)	MW-17	No	n/a	n/a	EPA/OH	0.05	8	0.0001185	0.00006672	normal	ShapiroWilk
<b>Chromium (mg/L)</b>	<b>MW-17</b>	<b>Yes</b>	<b>0.00322,0.0193</b>	<b>8/23/2022,3/30/2021</b>	<b>Dixon/OH</b>	<b>0.05</b>	<b>8</b>	<b>0.004694</b>	<b>0.005908</b>	<b>normal</b>	<b>ShapiroWilk</b>
Cobalt (mg/L)	MW-17	No	n/a	n/a	EPA/OH	0.05	8	0.0007423	0.0004397	normal	ShapiroWilk
Copper (mg/L)	MW-17	No	n/a	n/a	EPA/OH	0.05	8	0.002902	0.0009892	ln(x)	ShapiroWilk
Lead (mg/L)	MW-17	No	n/a	n/a	EPA/OH	0.05	8	0.0008435	0.0007745	normal	ShapiroWilk
Nickel (mg/L)	MW-17	No	n/a	n/a	EPA/OH	0.05	8	0.005066	0.002797	normal	ShapiroWilk
Selenium (mg/L)	MW-17	No	n/a	n/a	NP (nrm)/OH	NaN	8	0.00206	0.0006269	unknown	ShapiroWilk
Thallium (mg/L)	MW-17	No	n/a	n/a	OH	NaN	8	0.0005198	0.00005586	n/a	n/a
Vanadium (mg/L)	MW-17	No	n/a	n/a	EPA/OH	0.05	8	0.002205	0.0006993	normal	ShapiroWilk
Zinc (mg/L)	MW-17	No	n/a	n/a	EPA/OH	0.05	8	0.01461	0.005527	normal	ShapiroWilk

### Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



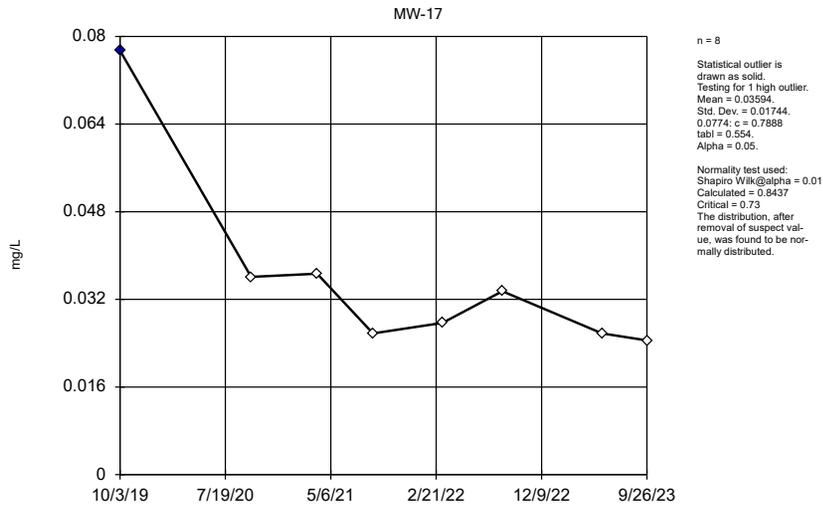
Constituent: Antimony Analysis Run 2/4/2026 2:13 PM View: 2025 AWQR MW-17 Bg outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)



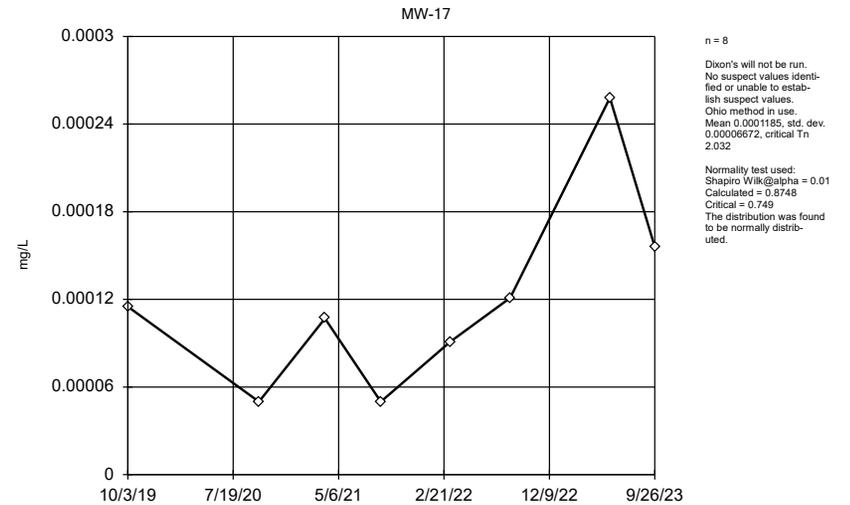
Constituent: Arsenic Analysis Run 2/4/2026 2:13 PM View: 2025 AWQR MW-17 Bg outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Dixon's Outlier Test / Ohio EPA 0715 Outlier Algorithm



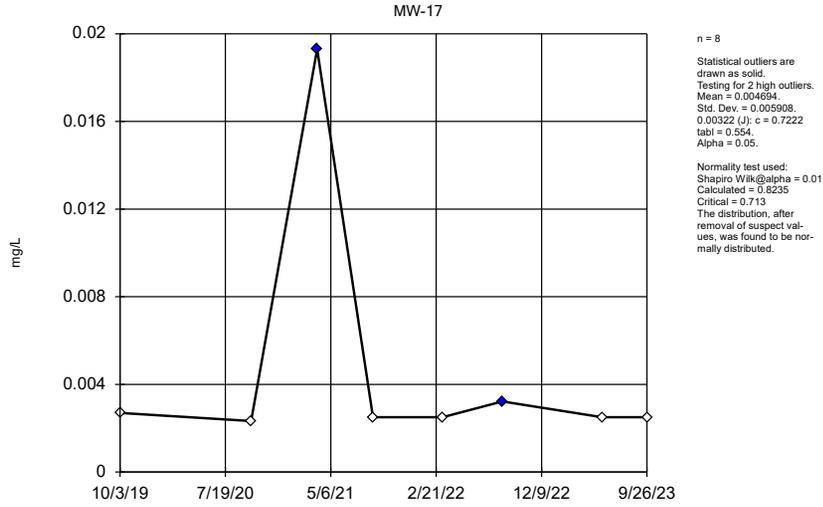
Constituent: Barium Analysis Run 2/4/2026 2:13 PM View: 2025 AWQR MW-17 Bg outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)



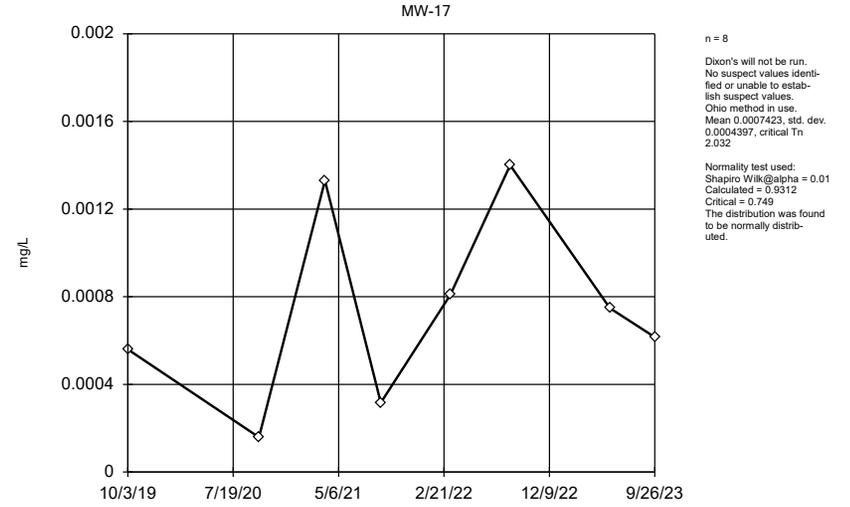
Constituent: Cadmium Analysis Run 2/4/2026 2:13 PM View: 2025 AWQR MW-17 Bg outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Dixon's Outlier Test / Ohio EPA 0715 Outlier Algorithm



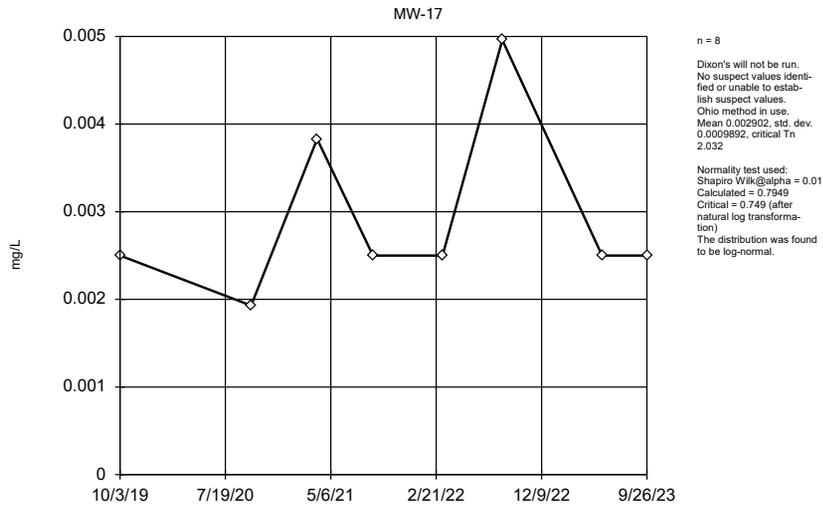
Constituent: Chromium Analysis Run 2/4/2026 2:14 PM View: 2025 AWQR MW-17 Bg outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)



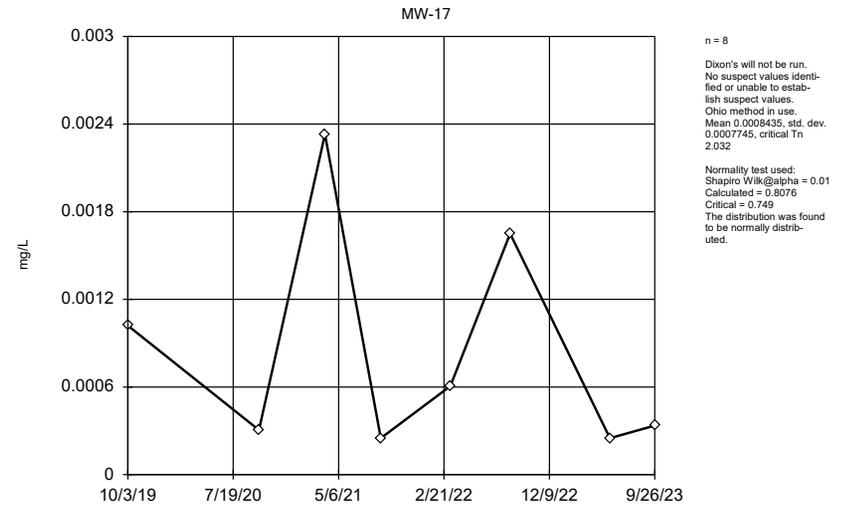
Constituent: Cobalt Analysis Run 2/4/2026 2:14 PM View: 2025 AWQR MW-17 Bg outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)



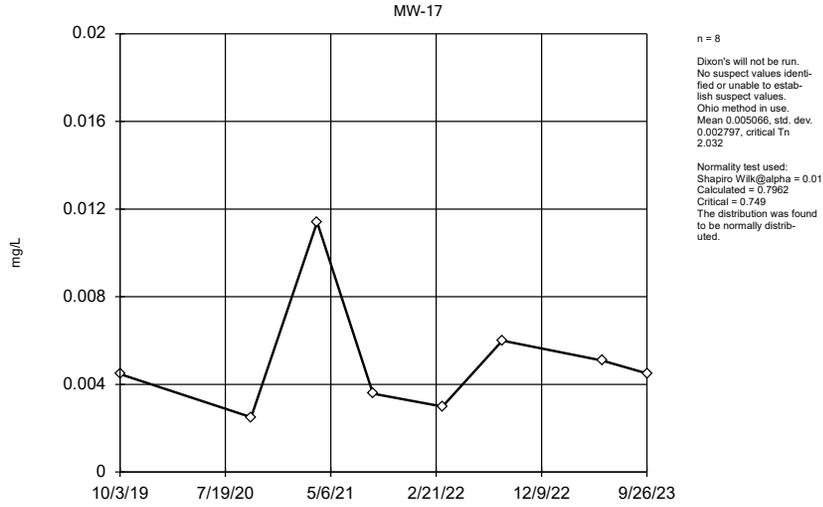
Constituent: Copper Analysis Run 2/4/2026 2:14 PM View: 2025 AWQR MW-17 Bg outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)



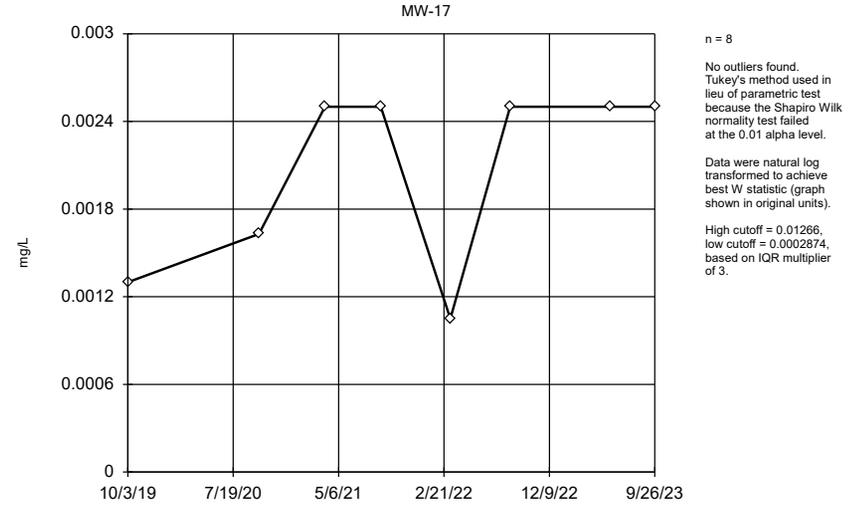
Constituent: Lead Analysis Run 2/4/2026 2:14 PM View: 2025 AWQR MW-17 Bg outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)



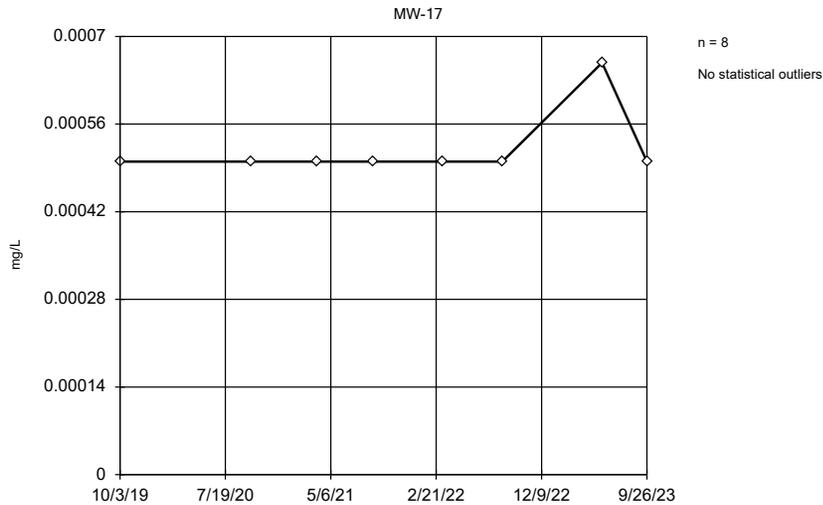
Constituent: Nickel Analysis Run 2/4/2026 2:14 PM View: 2025 AWQR MW-17 Bg outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



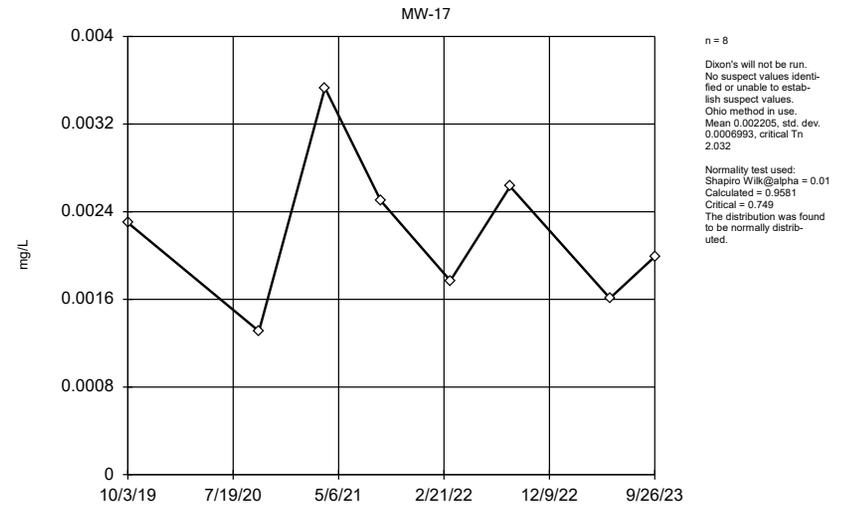
Constituent: Selenium Analysis Run 2/4/2026 2:14 PM View: 2025 AWQR MW-17 Bg outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### Ohio EPA 0715 Outlier Algorithm



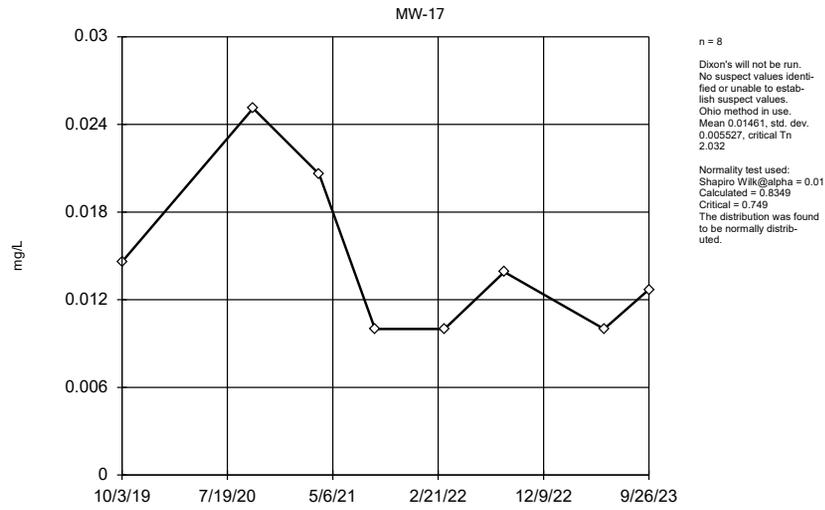
Constituent: Thallium Analysis Run 2/4/2026 2:14 PM View: 2025 AWQR MW-17 Bg outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)



Constituent: Vanadium Analysis Run 2/4/2026 2:14 PM View: 2025 AWQR MW-17 Bg outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

### EPA Screening (suspected outliers for Dixon's Test)



Constituent: Zinc Analysis Run 2/4/2026 2:14 PM View: 2025 AWQR MW-17 Bg outliers  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master



Attachment B.3  
Intrawell Prediction Limit

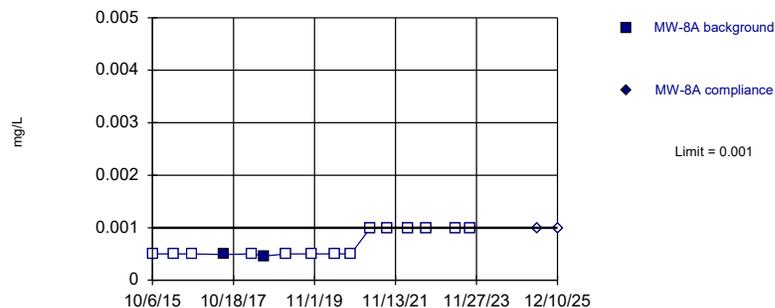
# MW-8A Intrawell Prediction Limit

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 2/17/2026, 11:20 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>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	MW-8A	0.001	n/a	12/10/2025	0.001ND	No	16	n/a	87.5	n/a	0.006456	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	MW-8A	0.003631	n/a	12/10/2025	0.00184J	No	16	n/a	0	No	0.0003901	Param Intra 1 of 2
Barium (mg/L)	MW-8A	0.06569	n/a	12/10/2025	0.0202	No	16	n/a	0	ln(x)	0.0003901	Param Intra 1 of 2
Beryllium (mg/L)	MW-8A	0.0005	n/a	12/10/2025	0.0005ND	No	15	n/a	86.67	n/a	0.007533	NP Intra (NDs) 1 of 2
Cadmium (mg/L)	MW-8A	0.005538	n/a	12/10/2025	0.000168J	No	18	n/a	0	x^(1/3)	0.0003901	Param Intra 1 of 2
Chromium (mg/L)	MW-8A	0.0284	n/a	12/10/2025	0.0025ND	No	17	n/a	52.94	n/a	0.005914	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	MW-8A	0.0107	n/a	12/10/2025	0.00467	No	16	n/a	0	sqrt(x)	0.0003901	Param Intra 1 of 2
Copper (mg/L)	MW-8A	0.501	n/a	12/10/2025	0.0025ND	No	16	n/a	62.5	n/a	0.006456	NP Intra (NDs) 1 of 2
Lead (mg/L)	MW-8A	0.005748	n/a	12/10/2025	0.00025ND	No	16	n/a	25	sqrt(x)	0.0003901	Param Intra 1 of 2
Nickel (mg/L)	MW-8A	0.05082	n/a	12/10/2025	0.0331	No	16	n/a	0	No	0.0003901	Param Intra 1 of 2
Selenium (mg/L)	MW-8A	0.0025	n/a	12/10/2025	0.0025ND	No	16	n/a	93.75	n/a	0.006456	NP Intra (NDs) 1 of 2
Silver (mg/L)	MW-8A	0.00142	n/a	12/10/2025	0.0005ND	No	16	n/a	93.75	n/a	0.006456	NP Intra (NDs) 1 of 2
Thallium (mg/L)	MW-8A	0.0009995	n/a	12/10/2025	0.0005ND	No	13	n/a	53.85	n/a	0.009692	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	MW-8A	0.005745	n/a	12/10/2025	0.00223J	No	16	n/a	12.5	No	0.0003901	Param Intra 1 of 2
Zinc (mg/L)	MW-8A	0.131	n/a	12/10/2025	0.01ND	No	16	n/a	62.5	n/a	0.006456	NP Intra (NDs) 1 of 2

Within Limit

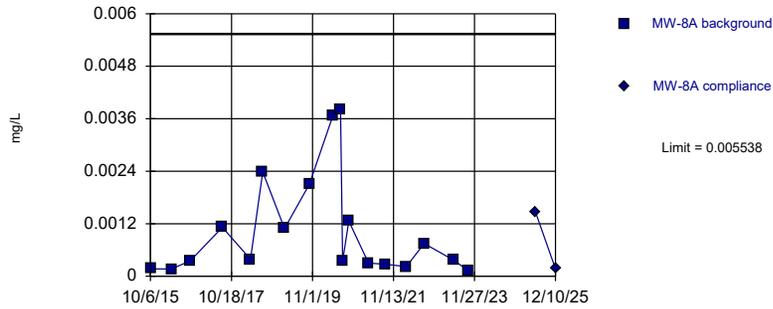
### Prediction Limit Intrawell Non-parametric



Within Limit

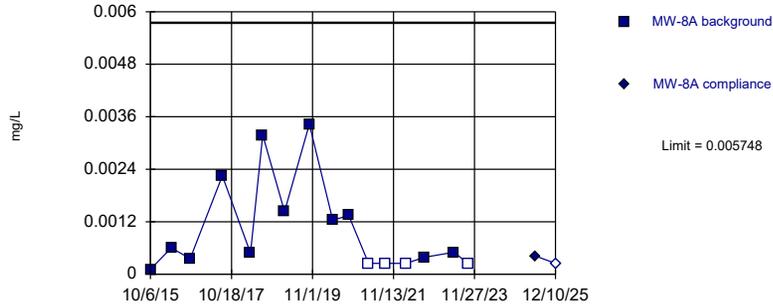
### Prediction Limit

Intrawell Parametric



Within Limit

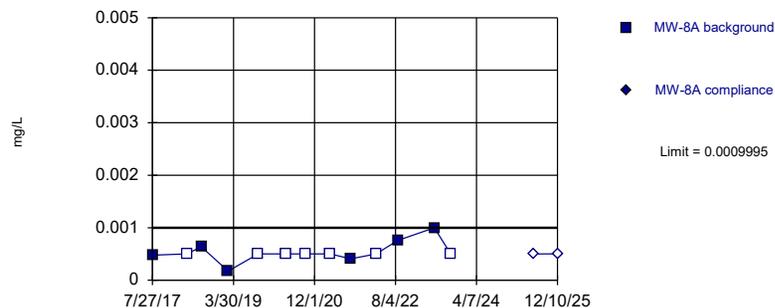
Prediction Limit  
Intrawell Parametric



Within Limit

### Prediction Limit

Intrawell Non-parametric



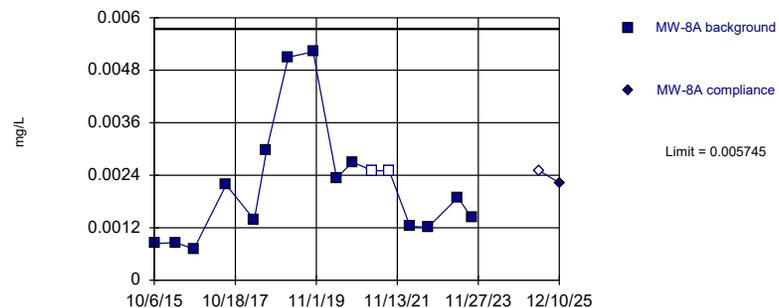
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 13 background values. 53.85% NDs. Well-constituent pair annual alpha = 0.01929. Individual comparison alpha = 0.009692 (1 of 2).

Constituent: Thallium Analysis Run 2/17/2026 11:18 AM View: 2025 AWQR MW-8A Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Parametric



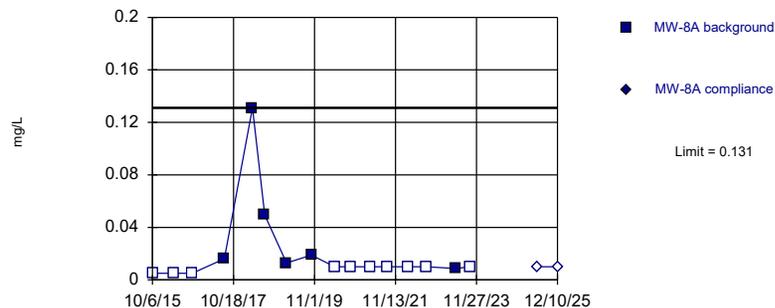
Background Data Summary: Mean=0.002192, Std. Dev.=0.001359, n=16, 12.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.851, critical = 0.844. Kappa = 2.615 (c=15, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0003901.

Constituent: Vanadium Analysis Run 2/17/2026 11:18 AM View: 2025 AWQR MW-8A Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 62.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Zinc Analysis Run 2/17/2026 11:18 AM View: 2025 AWQR MW-8A Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

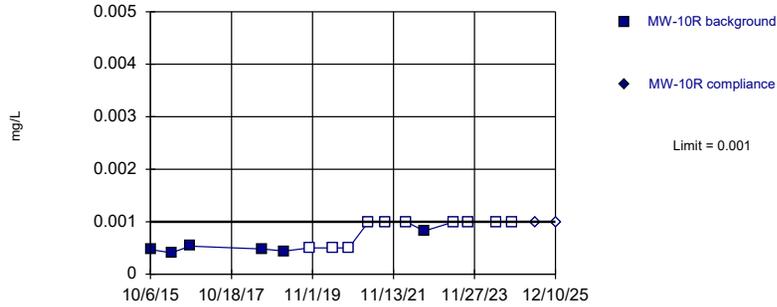
# MW-10R Intra Prediction Limit

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 2/4/2026, 1:50 PM

<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>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	MW-10R	0.001	n/a	12/10/2025	0.001ND	No	16	n/a	62.5	n/a	0.006456	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	MW-10R	0.00276	n/a	12/10/2025	0.00101J	No	16	n/a	25	n/a	0.006456	NP Intra (normality) 1 of 2
Barium (mg/L)	MW-10R	0.123	n/a	12/10/2025	0.0698	No	16	n/a	0	n/a	0.006456	NP Intra (normality) 1 of 2
Beryllium (mg/L)	MW-10R	0.0005	n/a	12/10/2025	0.0005ND	No	16	n/a	93.75	n/a	0.006456	NP Intra (NDs) 1 of 2
Cadmium (mg/L)	MW-10R	0.00244	n/a	12/10/2025	0.0001ND	No	16	n/a	62.5	n/a	0.006456	NP Intra (NDs) 1 of 2
Chromium (mg/L)	MW-10R	0.0025	n/a	12/10/2025	0.0025ND	No	16	n/a	87.5	n/a	0.006456	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	MW-10R	0.003163	n/a	12/10/2025	0.000675	No	16	n/a	12.5	x^(1/3)	0.0003901	Param Intra 1 of 2
Copper (mg/L)	MW-10R	0.00893	n/a	12/10/2025	0.0025ND	No	16	n/a	81.25	n/a	0.006456	NP Intra (NDs) 1 of 2
Lead (mg/L)	MW-10R	0.00165	n/a	12/10/2025	0.00025ND	No	16	n/a	50	n/a	0.006456	NP Intra (normality) 1 of 2
Nickel (mg/L)	MW-10R	0.0115	n/a	12/10/2025	0.0025ND	No	16	n/a	62.5	n/a	0.006456	NP Intra (NDs) 1 of 2
Selenium (mg/L)	MW-10R	0.01065	n/a	12/10/2025	0.0039J	No	16	n/a	0	No	0.0003901	Param Intra 1 of 2
Silver (mg/L)	MW-10R	0.00146	n/a	12/10/2025	0.0005ND	No	16	n/a	93.75	n/a	0.006456	NP Intra (NDs) 1 of 2
Thallium (mg/L)	MW-10R	0.000894	n/a	12/10/2025	0.0005ND	No	16	n/a	87.5	n/a	0.006456	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	MW-10R	0.004858	n/a	12/10/2025	0.00287J	No	16	n/a	0	No	0.0003901	Param Intra 1 of 2
Zinc (mg/L)	MW-10R	0.0465	n/a	12/10/2025	0.01ND	No	16	n/a	81.25	n/a	0.006456	NP Intra (NDs) 1 of 2

Within Limit

Prediction Limit  
Intrawell Non-parametric

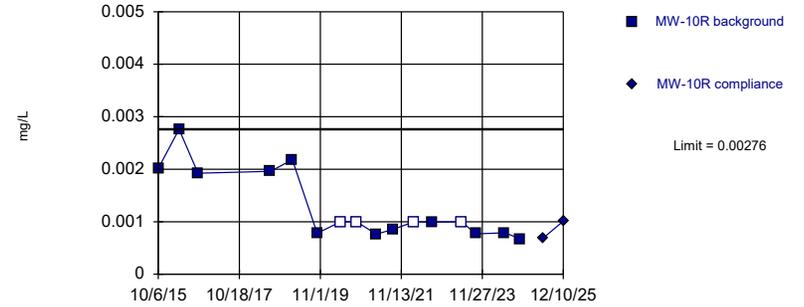


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 62.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Antimony Analysis Run 2/4/2026 1:47 PM View: 2025 AWQR MW-10R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric

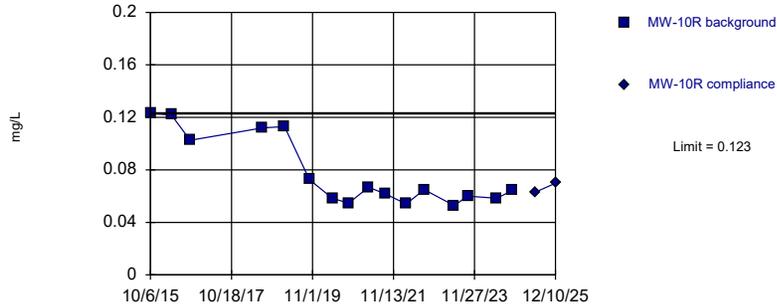


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 16 background values. 25% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Arsenic Analysis Run 2/4/2026 1:47 PM View: 2025 AWQR MW-10R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric

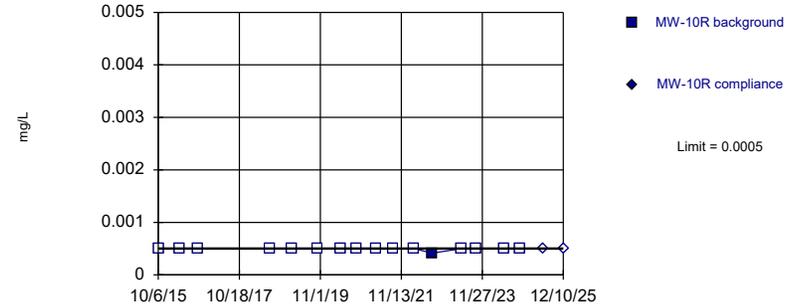


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 16 background values. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Barium Analysis Run 2/4/2026 1:47 PM View: 2025 AWQR MW-10R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric



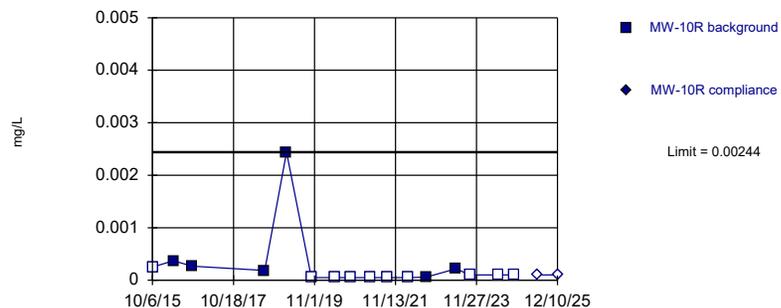
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 93.75% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Beryllium Analysis Run 2/4/2026 1:47 PM View: 2025 AWQR MW-10R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

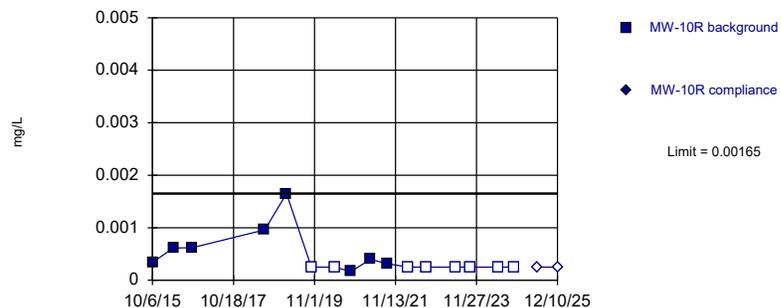
Intrawell Non-parametric



Within Limit

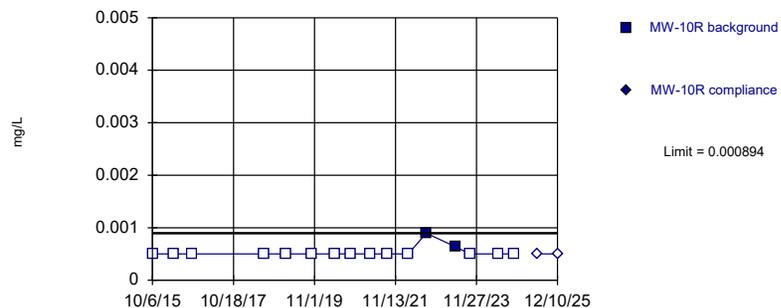
### Prediction Limit

Intrawell Non-parametric



Within Limit

### Prediction Limit Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 87.5% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Thallium Analysis Run 2/4/2026 1:47 PM View: 2025 AWQR MW-10R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Parametric

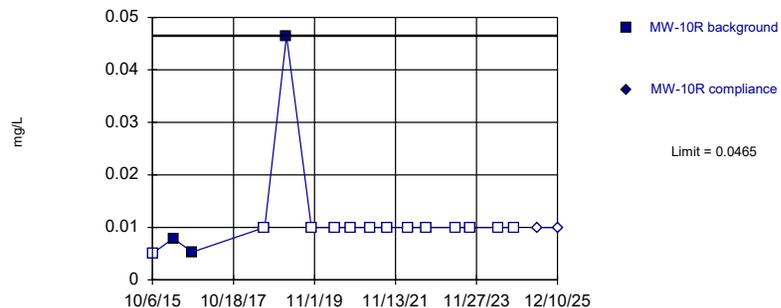


Background Data Summary: Mean=0.003008, Std. Dev.=0.0007074, n=16. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9301, critical = 0.844. Kappa = 2.615 (c=15, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0003901.

Constituent: Vanadium Analysis Run 2/4/2026 1:47 PM View: 2025 AWQR MW-10R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 81.25% NDs. Well-constituent pair annual alpha = 0.01287. Individual comparison alpha = 0.006456 (1 of 2).

Constituent: Zinc Analysis Run 2/4/2026 1:47 PM View: 2025 AWQR MW-10R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

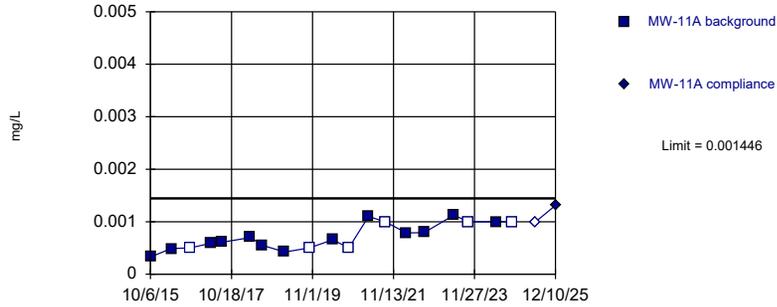
# MW-11A Intra Prediction Limit

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 2/4/2026, 2:00 PM

<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>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	MW-11A	0.001446	n/a	12/10/2025	0.00131J	No	19	n/a	31.58	No	0.0004877	Param Intra 1 of 2
Arsenic (mg/L)	MW-11A	0.01672	n/a	12/10/2025	0.0059	No	19	n/a	0	sqrt(x)	0.0004877	Param Intra 1 of 2
Barium (mg/L)	MW-11A	0.0235	n/a	12/10/2025	0.01485	No	19	n/a	0	n/a	0.004832	NP Intra (normality) 1 of 2
Beryllium (mg/L)	MW-11A	0.0005	n/a	12/10/2025	0.0005ND	No	19	n/a	94.74	n/a	0.004832	NP Intra (NDs) 1 of 2
Cadmium (mg/L)	MW-11A	0.0007608	n/a	12/10/2025	0.000561	No	20	n/a	0	No	0.0004877	Param Intra 1 of 2
Cobalt (mg/L)	MW-11A	0.003317	n/a	12/10/2025	0.00169	No	19	n/a	0	No	0.0004877	Param Intra 1 of 2
Copper (mg/L)	MW-11A	0.0025	n/a	12/10/2025	0.0025ND	No	19	n/a	94.74	n/a	0.004832	NP Intra (NDs) 1 of 2
Lead (mg/L)	MW-11A	0.00101	n/a	12/10/2025	0.00025ND	No	19	n/a	57.89	n/a	0.004832	NP Intra (NDs) 1 of 2
Nickel (mg/L)	MW-11A	0.01681	n/a	12/10/2025	0.01165	No	19	n/a	0	sqrt(x)	0.0004877	Param Intra 1 of 2
Thallium (mg/L)	MW-11A	0.000782	n/a	12/10/2025	0.0005ND	No	19	n/a	78.95	n/a	0.004832	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	MW-11A	0.0025	n/a	12/10/2025	0.0025ND	No	19	n/a	89.47	n/a	0.004832	NP Intra (NDs) 1 of 2
Zinc (mg/L)	MW-11A	1.19	n/a	12/10/2025	0.01ND	No	19	n/a	89.47	n/a	0.004832	NP Intra (NDs) 1 of 2

Within Limit

Prediction Limit  
 Intrawell Parametric

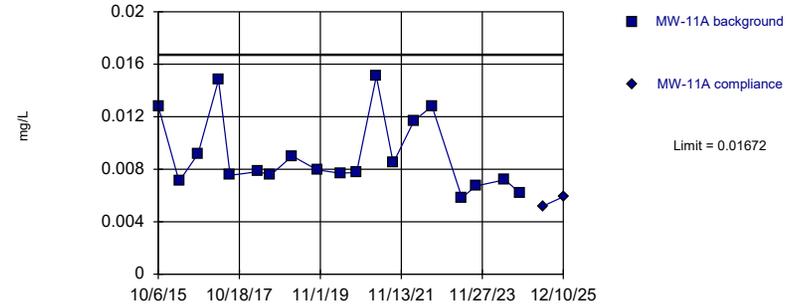


Background Data Summary (after Aitchison's Adjustment): Mean=0.0004817, Std. Dev.=0.0003938, n=19, 31.58% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9159, critical = 0.863. Kappa = 2.448 (c=12, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004877.

Constituent: Antimony Analysis Run 2/4/2026 1:58 PM View: 2025 AWQR MW-11A Intra PL  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
 Intrawell Parametric

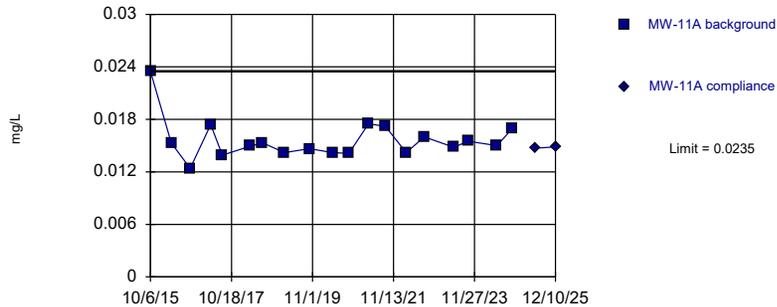


Background Data Summary (based on square root transformation): Mean=0.09444, Std. Dev.=0.01424, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8695, critical = 0.863. Kappa = 2.448 (c=12, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004877.

Constituent: Arsenic Analysis Run 2/4/2026 1:58 PM View: 2025 AWQR MW-11A Intra PL  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
 Intrawell Non-parametric

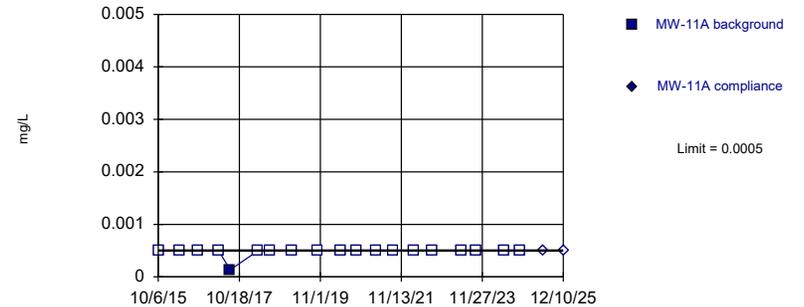


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 19 background values. Well-constituent pair annual alpha = 0.009641. Individual comparison alpha = 0.004832 (1 of 2).

Constituent: Barium Analysis Run 2/4/2026 1:58 PM View: 2025 AWQR MW-11A Intra PL  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
 Intrawell Non-parametric

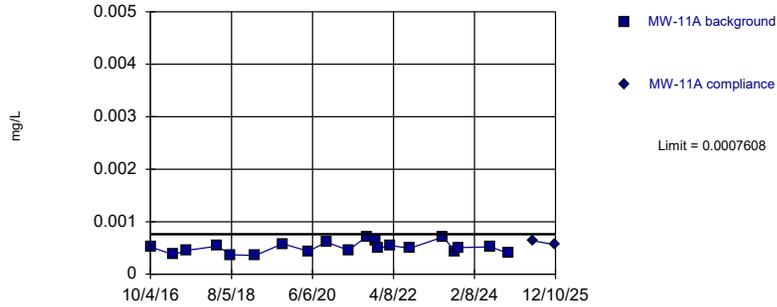


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 19 background values. 94.74% NDs. Well-constituent pair annual alpha = 0.009641. Individual comparison alpha = 0.004832 (1 of 2).

Constituent: Beryllium Analysis Run 2/4/2026 1:58 PM View: 2025 AWQR MW-11A Intra PL  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Parametric

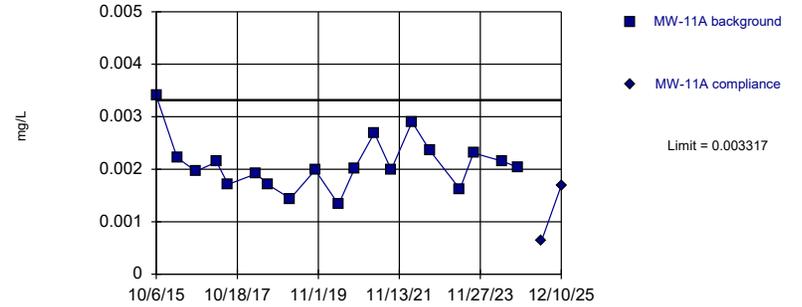


Background Data Summary: Mean=0.000508, Std. Dev.=0.0001047, n=20. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.951, critical = 0.868. Kappa = 2.416 (c=12, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004877.

Constituent: Cadmium Analysis Run 2/4/2026 1:58 PM View: 2025 AWQR MW-11A Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Parametric

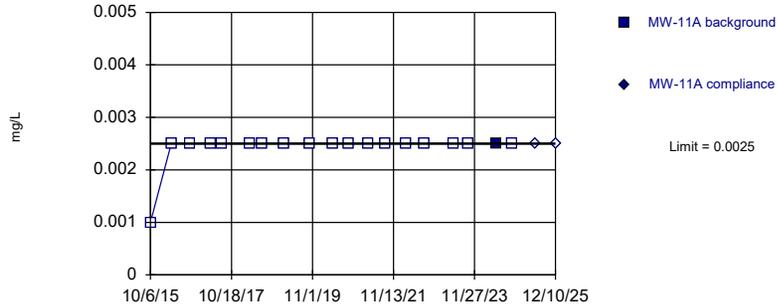


Background Data Summary: Mean=0.002098, Std. Dev.=0.0004981, n=19. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9325, critical = 0.863. Kappa = 2.448 (c=12, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004877.

Constituent: Cobalt Analysis Run 2/4/2026 1:58 PM View: 2025 AWQR MW-11A Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric

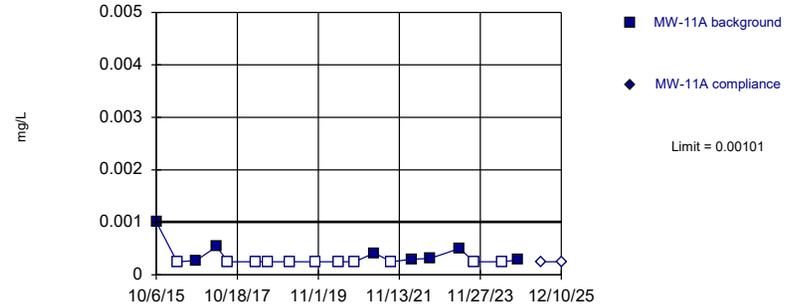


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 19 background values. 94.74% NDs. Well-constituent pair annual alpha = 0.009641. Individual comparison alpha = 0.004832 (1 of 2).

Constituent: Copper Analysis Run 2/4/2026 1:58 PM View: 2025 AWQR MW-11A Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric

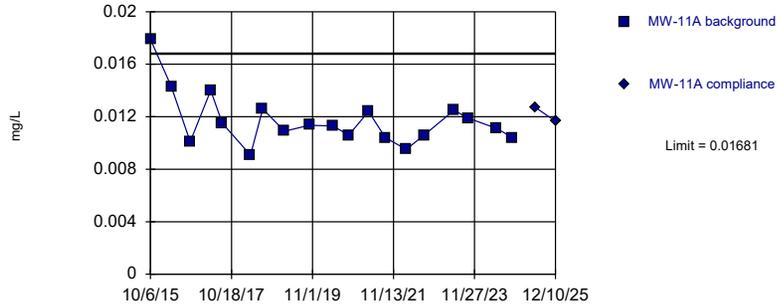


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 19 background values. 57.89% NDs. Well-constituent pair annual alpha = 0.009641. Individual comparison alpha = 0.004832 (1 of 2).

Constituent: Lead Analysis Run 2/4/2026 1:58 PM View: 2025 AWQR MW-11A Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Parametric

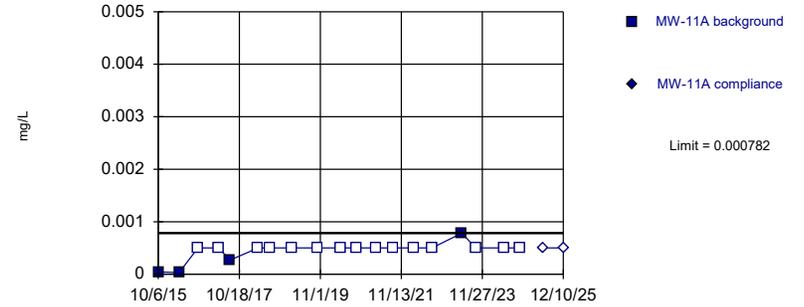


Background Data Summary (based on square root transformation): Mean=0.1079, Std. Dev.=0.008906, n=19.  
 Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8974, critical = 0.863. Kappa = 2.448 (c=12, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004877.

Constituent: Nickel Analysis Run 2/4/2026 1:58 PM View: 2025 AWQR MW-11A Intra PL  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric

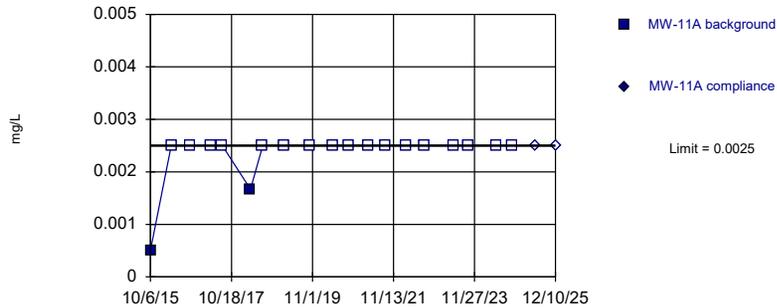


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 19 background values. 78.95% NDs. Well-constituent pair annual alpha = 0.009641. Individual comparison alpha = 0.004832 (1 of 2).

Constituent: Thallium Analysis Run 2/4/2026 1:58 PM View: 2025 AWQR MW-11A Intra PL  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric

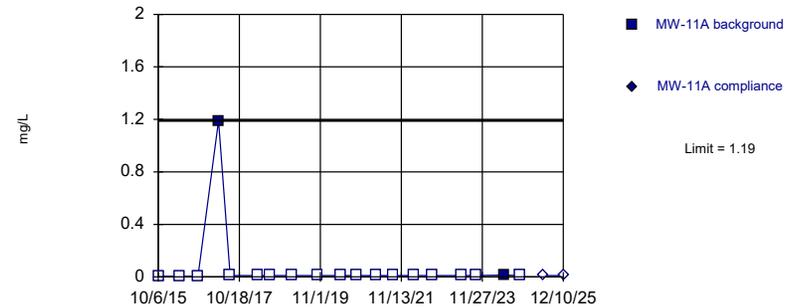


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 19 background values. 89.47% NDs. Well-constituent pair annual alpha = 0.009641. Individual comparison alpha = 0.004832 (1 of 2).

Constituent: Vanadium Analysis Run 2/4/2026 1:58 PM View: 2025 AWQR MW-11A Intra PL  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 19 background values. 89.47% NDs. Well-constituent pair annual alpha = 0.009641. Individual comparison alpha = 0.004832 (1 of 2).

Constituent: Zinc Analysis Run 2/4/2026 1:58 PM View: 2025 AWQR MW-11A Intra PL  
 Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

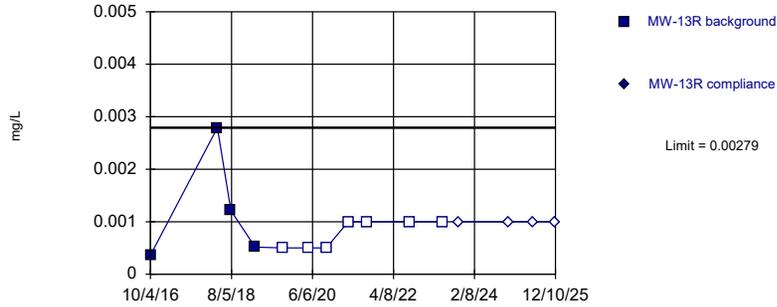
# MW-13R Intra Prediction Limit

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 2/4/2026, 2:44 PM

<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>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	MW-13R	0.00279	n/a	12/10/2025	0.001ND	No	11	n/a	63.64	n/a	0.01276	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	MW-13R	0.004154	n/a	12/10/2025	0.00153J	No	11	n/a	9.091	No	0.0004877	Param Intra 1 of 2
Barium (mg/L)	MW-13R	0.458	n/a	12/10/2025	0.0935	No	11	n/a	0	ln(x)	0.0004877	Param Intra 1 of 2
Cadmium (mg/L)	MW-13R	0.00025	n/a	12/10/2025	0.0001ND	No	11	n/a	81.82	n/a	0.01276	NP Intra (NDs) 1 of 2
Chromium (mg/L)	MW-13R	0.00361	n/a	12/10/2025	0.0025ND	No	11	n/a	54.55	n/a	0.01276	NP Intra (NDs) 1 of 2
Cobalt (mg/L)	MW-13R	0.0025	n/a	12/10/2025	0.0002J	No	11	n/a	0	No	0.0004877	Param Intra 1 of 2
Copper (mg/L)	MW-13R	0.0025	n/a	12/10/2025	0.0025ND	No	11	n/a	90.91	n/a	0.01276	NP Intra (NDs) 1 of 2
Lead (mg/L)	MW-13R	0.00166	n/a	12/10/2025	0.00025ND	No	11	n/a	90.91	n/a	0.01276	NP Intra (NDs) 1 of 2
Nickel (mg/L)	MW-13R	0.01	n/a	12/10/2025	0.0025ND	No	11	n/a	63.64	n/a	0.01276	NP Intra (NDs) 1 of 2
Thallium (mg/L)	MW-13R	0.00055	n/a	12/10/2025	0.0005ND	No	11	n/a	81.82	n/a	0.01276	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	MW-13R	0.0025	n/a	12/10/2025	0.0025ND	No	11	n/a	63.64	n/a	0.01276	NP Intra (NDs) 1 of 2
Zinc (mg/L)	MW-13R	0.827	n/a	12/10/2025	0.01ND	No	11	n/a	72.73	n/a	0.01276	NP Intra (NDs) 1 of 2

Within Limit

Prediction Limit  
Intrawell Non-parametric

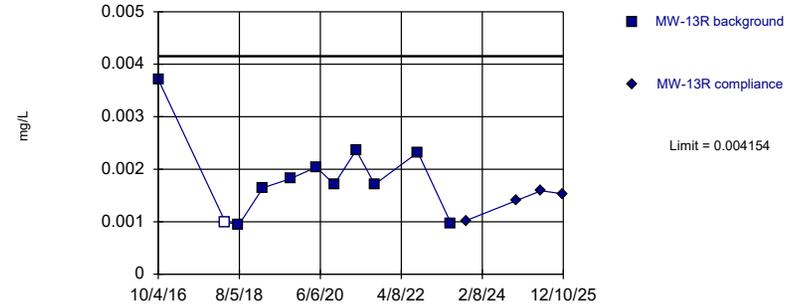


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 63.64% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Antimony Analysis Run 2/4/2026 2:43 PM View: 2025 AWQR MW-13R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Parametric

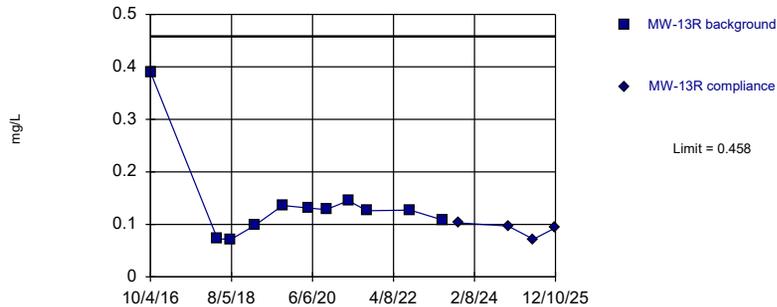


Background Data Summary: Mean=0.001838, Std. Dev.=0.0007992, n=11, 9.091% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8839, critical = 0.792. Kappa = 2.897 (c=12, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004877.

Constituent: Arsenic Analysis Run 2/4/2026 2:43 PM View: 2025 AWQR MW-13R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Parametric

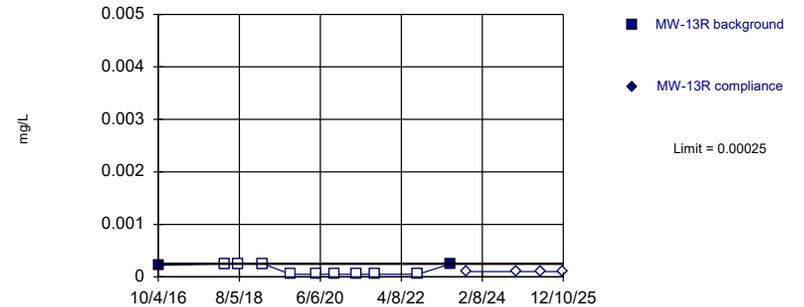


Background Data Summary (based on natural log transformation): Mean=-2.082, Std. Dev.=0.449, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8161, critical = 0.792. Kappa = 2.897 (c=12, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004877.

Constituent: Barium Analysis Run 2/4/2026 2:43 PM View: 2025 AWQR MW-13R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric

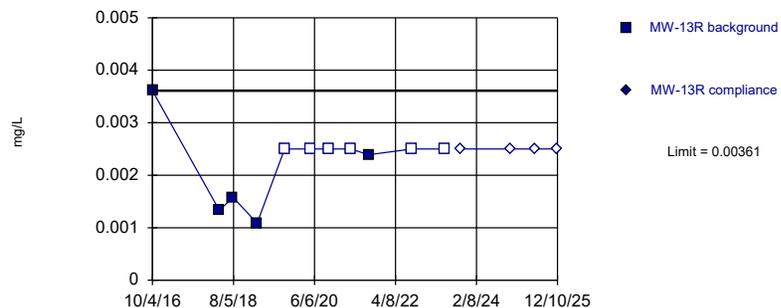


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 81.82% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Cadmium Analysis Run 2/4/2026 2:43 PM View: 2025 AWQR MW-13R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric

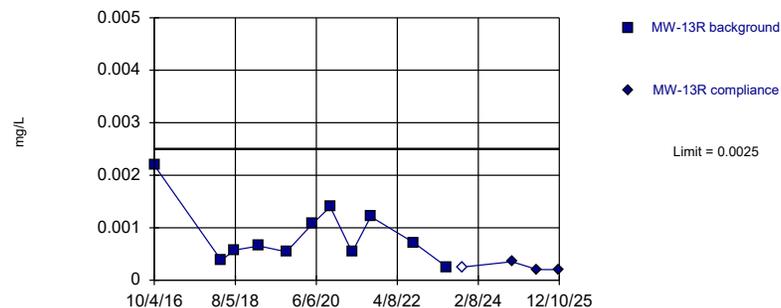


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 54.55% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Chromium Analysis Run 2/4/2026 2:43 PM View: 2025 AWQR MW-13R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Parametric

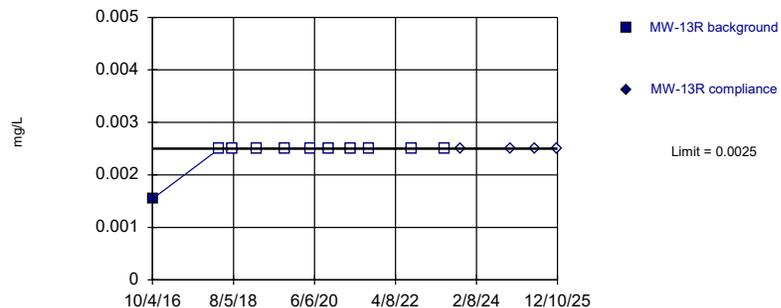


Background Data Summary: Mean=0.000865, Std. Dev.=0.0005643, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8689, critical = 0.792. Kappa = 2.897 (c=12, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004877.

Constituent: Cobalt Analysis Run 2/4/2026 2:43 PM View: 2025 AWQR MW-13R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric

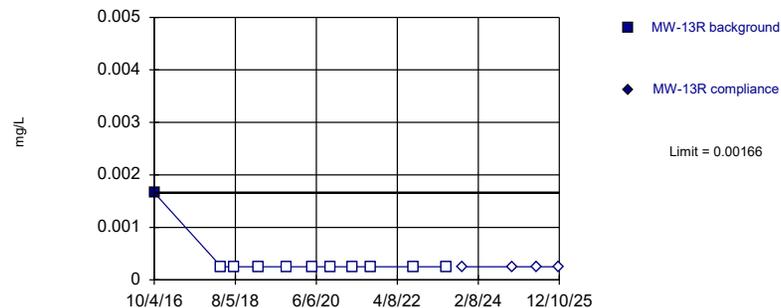


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 90.91% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Copper Analysis Run 2/4/2026 2:43 PM View: 2025 AWQR MW-13R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric

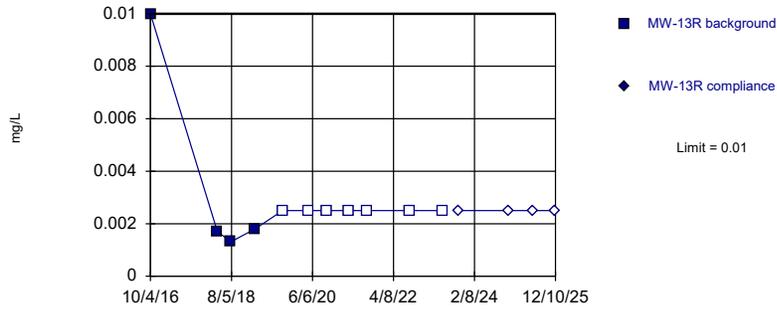


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 90.91% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Lead Analysis Run 2/4/2026 2:43 PM View: 2025 AWQR MW-13R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric

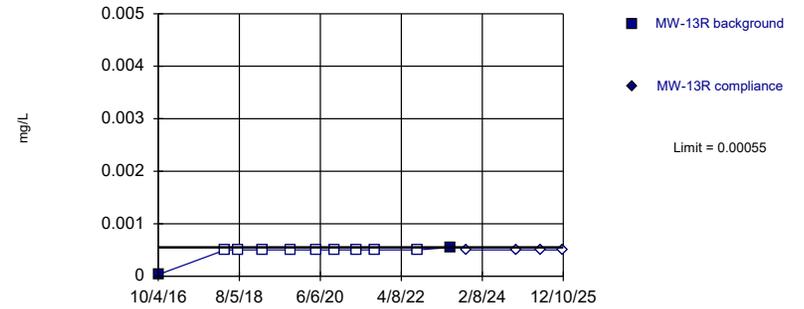


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 63.64% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Nickel Analysis Run 2/4/2026 2:43 PM View: 2025 AWQR MW-13R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric

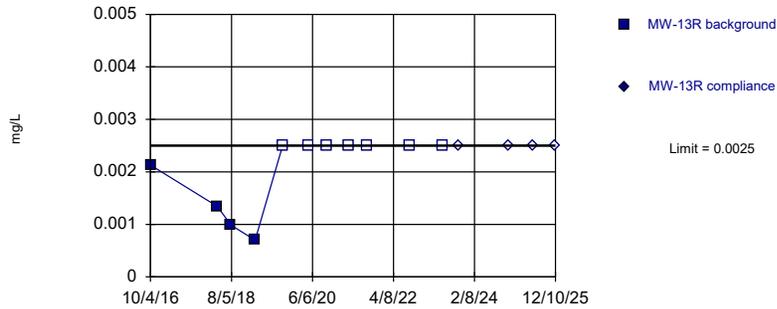


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 81.82% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Thallium Analysis Run 2/4/2026 2:43 PM View: 2025 AWQR MW-13R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric

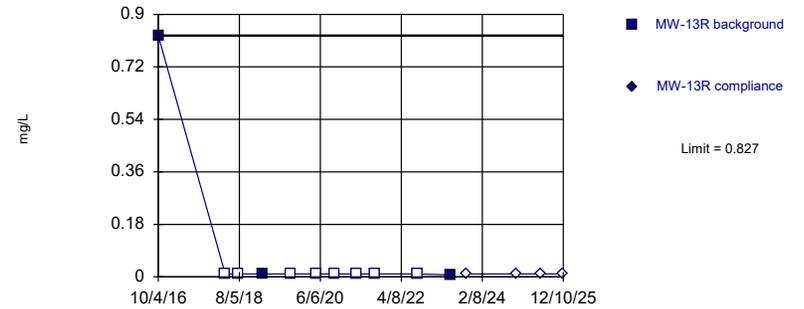


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 63.64% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Vanadium Analysis Run 2/4/2026 2:43 PM View: 2025 AWQR MW-13R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 72.73% NDs. Well-constituent pair annual alpha = 0.02537. Individual comparison alpha = 0.01276 (1 of 2).

Constituent: Zinc Analysis Run 2/4/2026 2:43 PM View: 2025 AWQR MW-13R Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

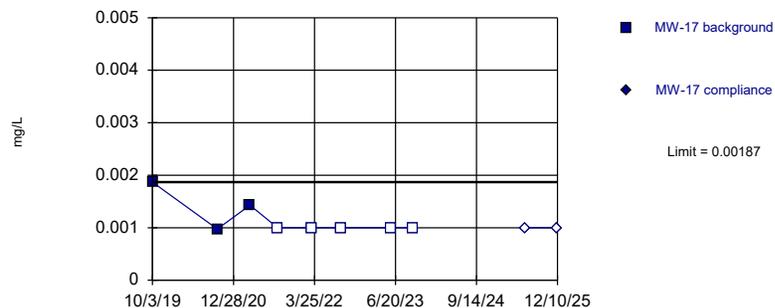
# MW-17 Intra Prediction Limit

Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master Printed 2/4/2026, 2:22 PM

<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>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	MW-17	0.00187	n/a	12/10/2025	0.001ND	No	8	n/a	62.5	n/a	0.02144	NP Intra (NDs) 1 of 2
Arsenic (mg/L)	MW-17	0.002522	n/a	12/10/2025	0.000901J	No	8	n/a	50	No	0.0004502	Param Intra 1 of 2
Barium (mg/L)	MW-17	0.1222	n/a	12/10/2025	0.0216	No	8	n/a	0	ln(x)	0.0004502	Param Intra 1 of 2
Cadmium (mg/L)	MW-17	0.000394	n/a	12/10/2025	0.0001ND	No	8	n/a	25	No	0.0004502	Param Intra 1 of 2
Chromium (mg/L)	MW-17	0.0193	n/a	12/10/2025	0.0025ND	No	8	n/a	50	n/a	0.02144	NP Intra (normality) 1 of 2
Cobalt (mg/L)	MW-17	0.002262	n/a	12/10/2025	0.000298J	No	8	n/a	0	No	0.0004502	Param Intra 1 of 2
Copper (mg/L)	MW-17	0.00496	n/a	12/10/2025	0.0025ND	No	8	n/a	62.5	n/a	0.02144	NP Intra (NDs) 1 of 2
Lead (mg/L)	MW-17	0.003668	n/a	12/10/2025	0.00025ND	No	8	n/a	25	No	0.0004502	Param Intra 1 of 2
Nickel (mg/L)	MW-17	0.01473	n/a	12/10/2025	0.0025ND	No	8	n/a	12.5	No	0.0004502	Param Intra 1 of 2
Selenium (mg/L)	MW-17	0.0025	n/a	12/10/2025	0.0025ND	No	8	n/a	62.5	n/a	0.02144	NP Intra (NDs) 1 of 2
Thallium (mg/L)	MW-17	0.000658	n/a	12/10/2025	0.0005ND	No	8	n/a	87.5	n/a	0.02144	NP Intra (NDs) 1 of 2
Vanadium (mg/L)	MW-17	0.004622	n/a	12/10/2025	0.00175J	No	8	n/a	12.5	No	0.0004502	Param Intra 1 of 2
Zinc (mg/L)	MW-17	0.04488	n/a	12/10/2025	0.01ND	No	8	n/a	37.5	No	0.0004502	Param Intra 1 of 2

Within Limit

Prediction Limit  
Intrawell Non-parametric

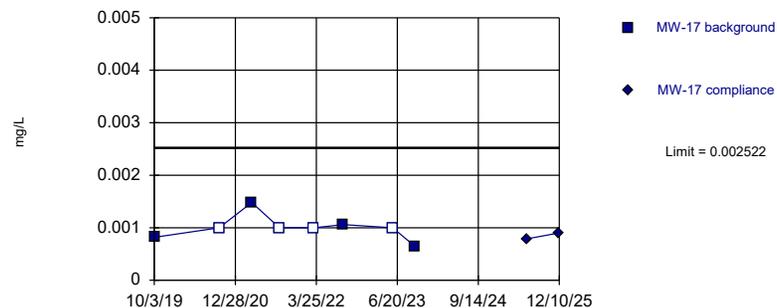


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 62.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Antimony Analysis Run 2/4/2026 2:20 PM View: 2025 AWQR MW-17 Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Parametric

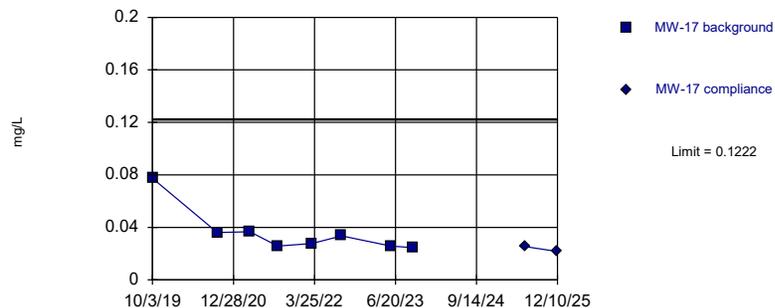


Background Data Summary (after Aitchison's Adjustment): Mean=0.0005005, Std. Dev.=0.0005851, n=8, 50% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.861, critical = 0.749. Kappa = 3.456 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004502.

Constituent: Arsenic Analysis Run 2/4/2026 2:20 PM View: 2025 AWQR MW-17 Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Parametric

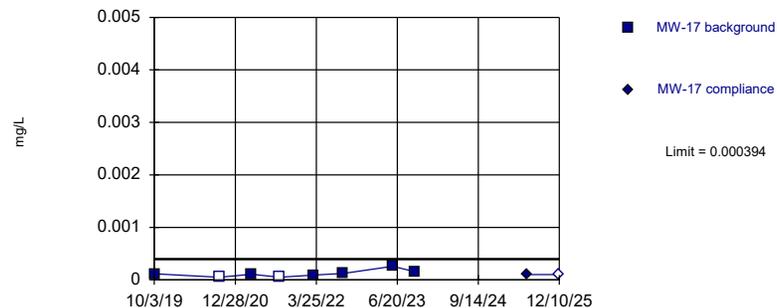


Background Data Summary (based on natural log transformation): Mean=-3.399, Std. Dev.=0.3752, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7802, critical = 0.749. Kappa = 3.456 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004502.

Constituent: Barium Analysis Run 2/4/2026 2:20 PM View: 2025 AWQR MW-17 Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Parametric

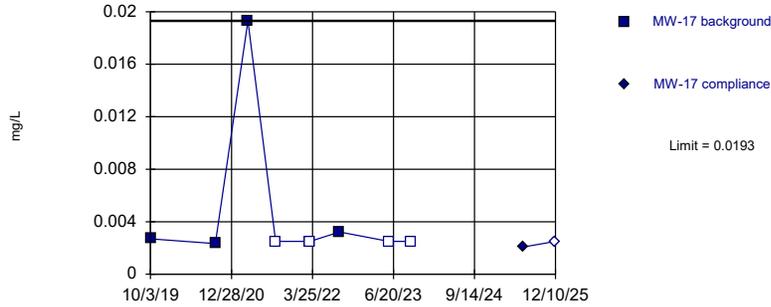


Background Data Summary (after Aitchison's Adjustment): Mean=0.000106, Std. Dev.=0.00008333, n=8, 25% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8748, critical = 0.749. Kappa = 3.456 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004502.

Constituent: Cadmium Analysis Run 2/4/2026 2:20 PM View: 2025 AWQR MW-17 Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric

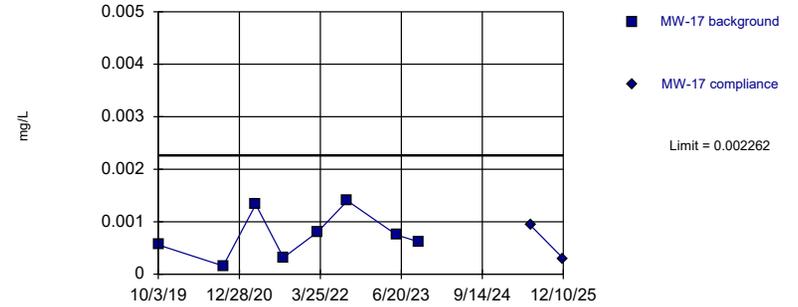


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 8 background values. 50% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Chromium Analysis Run 2/4/2026 2:20 PM View: 2025 AWQR MW-17 Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Parametric

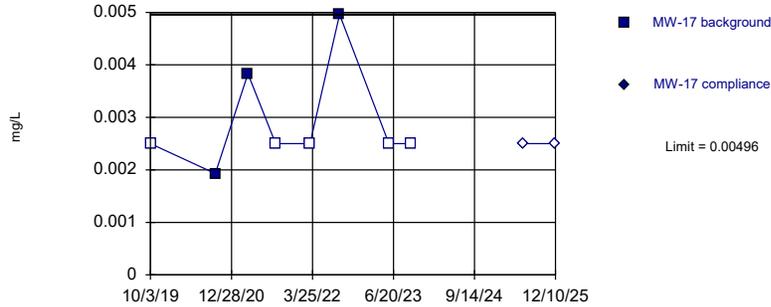


Background Data Summary: Mean=0.0007423, Std. Dev.=0.0004397, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9312, critical = 0.749. Kappa = 3.456 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004502.

Constituent: Cobalt Analysis Run 2/4/2026 2:20 PM View: 2025 AWQR MW-17 Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Non-parametric

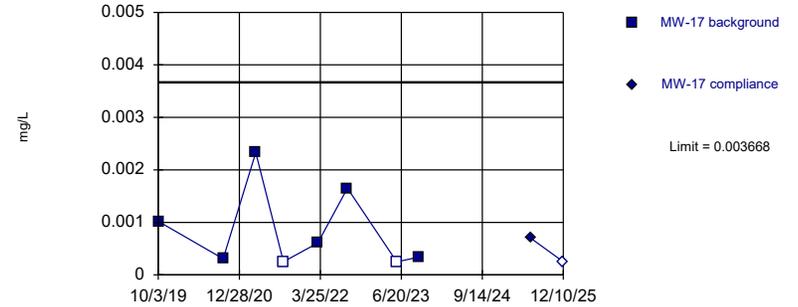


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 62.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Copper Analysis Run 2/4/2026 2:20 PM View: 2025 AWQR MW-17 Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

Prediction Limit  
Intrawell Parametric



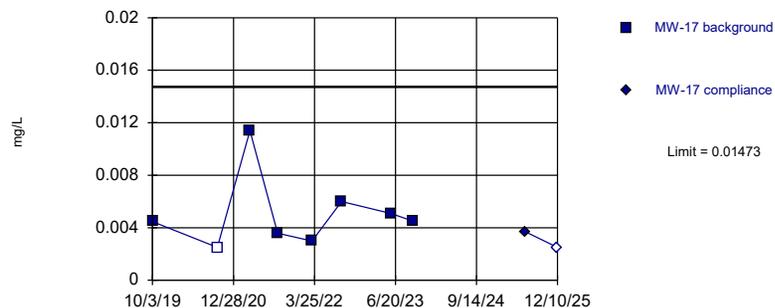
Background Data Summary (after Aitchison's Adjustment): Mean=0.000781, Std. Dev.=0.0008355, n=8, 25% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8076, critical = 0.749. Kappa = 3.456 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004502.

Constituent: Lead Analysis Run 2/4/2026 2:20 PM View: 2025 AWQR MW-17 Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Parametric



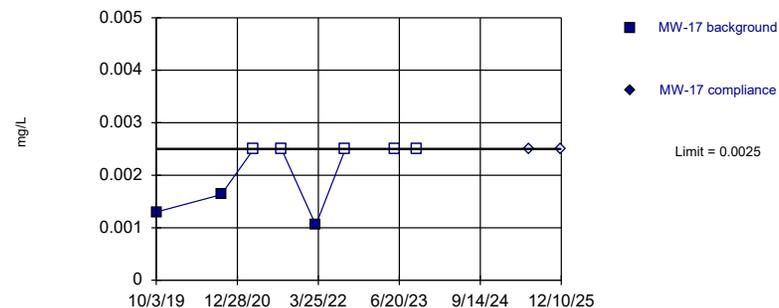
Background Data Summary: Mean=0.005066, Std. Dev.=0.002797, n=8, 12.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7962, critical = 0.749. Kappa = 3.456 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004502.

Constituent: Nickel Analysis Run 2/4/2026 2:20 PM View: 2025 AWQR MW-17 Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Non-parametric



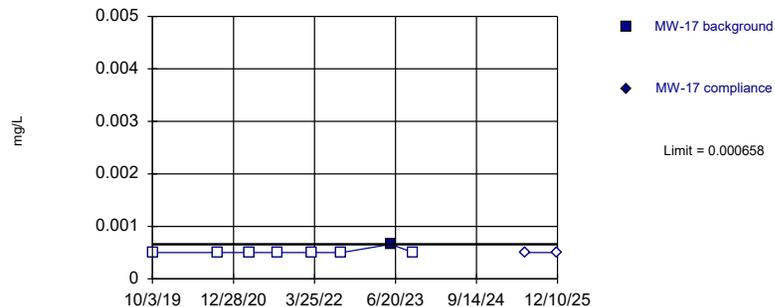
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 62.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Selenium Analysis Run 2/4/2026 2:20 PM View: 2025 AWQR MW-17 Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Non-parametric



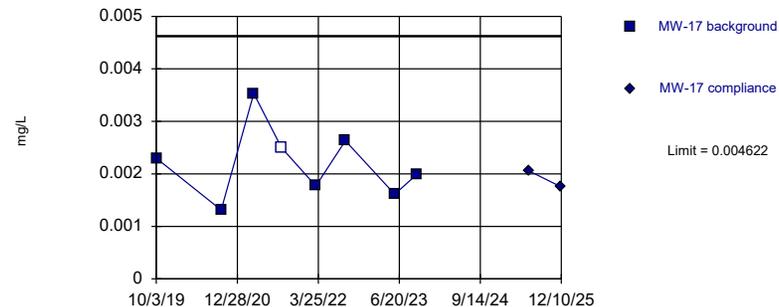
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 87.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Thallium Analysis Run 2/4/2026 2:20 PM View: 2025 AWQR MW-17 Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Parametric



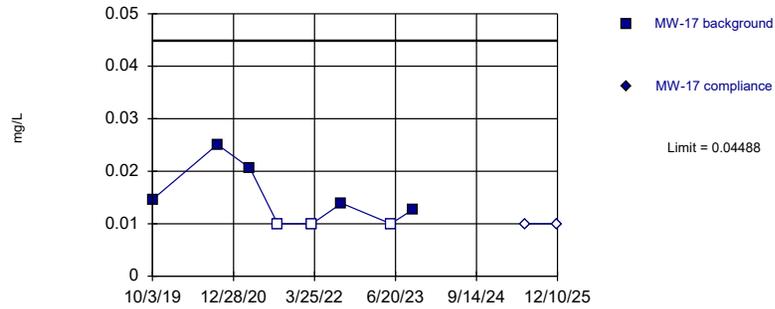
Background Data Summary: Mean=0.002205, Std. Dev.=0.0006993, n=8, 12.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9581, critical = 0.749. Kappa = 3.456 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004502.

Constituent: Vanadium Analysis Run 2/4/2026 2:20 PM View: 2025 AWQR MW-17 Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

Within Limit

### Prediction Limit

Intrawell Parametric



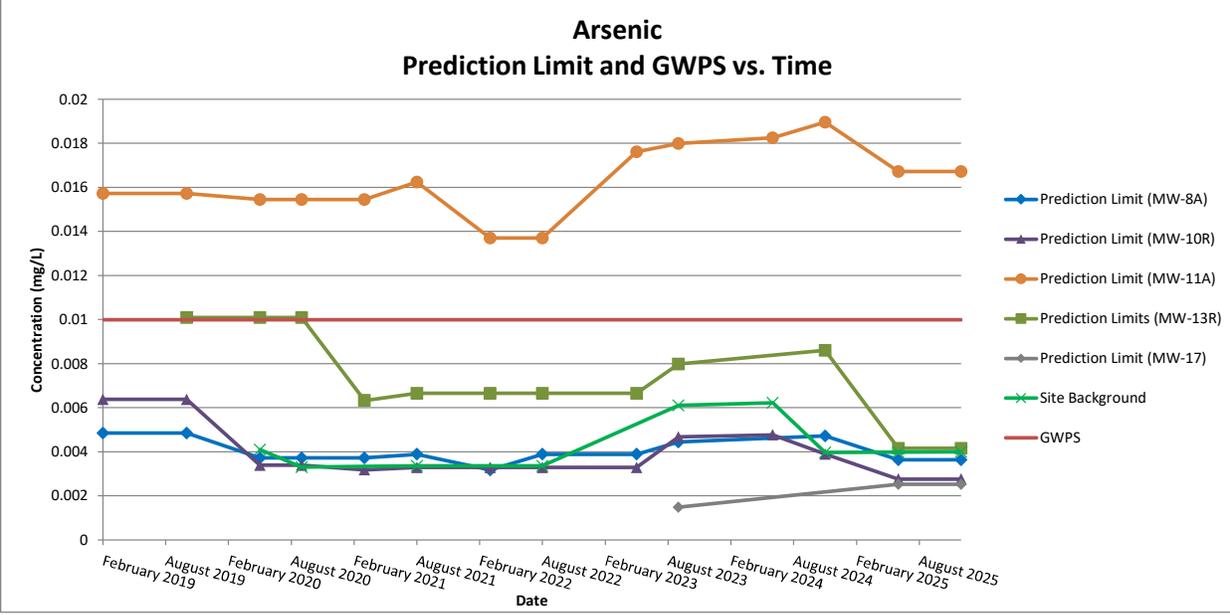
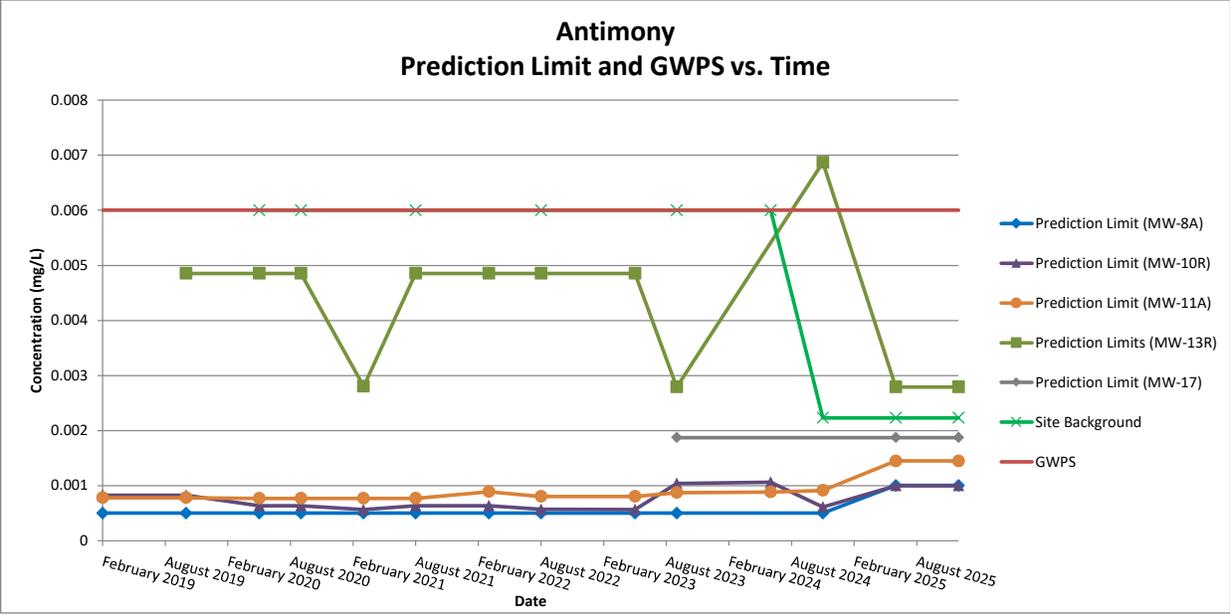
Background Data Summary (after Aitchison's Adjustment): Mean=0.01086, Std. Dev.=0.009842, n=8, 37.5% NDs.  
Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8349, critical = 0.749. Kappa = 3.456 (c=13, w=9, 1 of 2, event alpha = 0.05132). Report alpha = 0.0004502.

Constituent: Zinc Analysis Run 2/4/2026 2:20 PM View: 2025 AWQR MW-17 Intra PL  
Harrison County Sanitary Landfill Client: SCS Engineers Data: HARSW PRIME Master

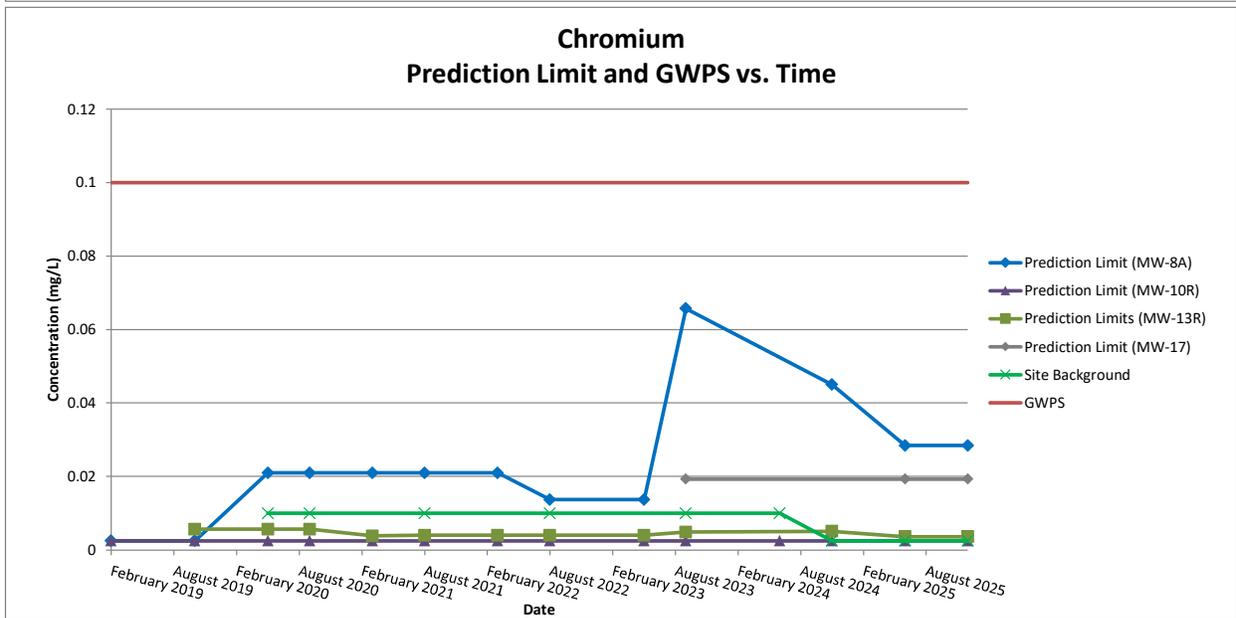
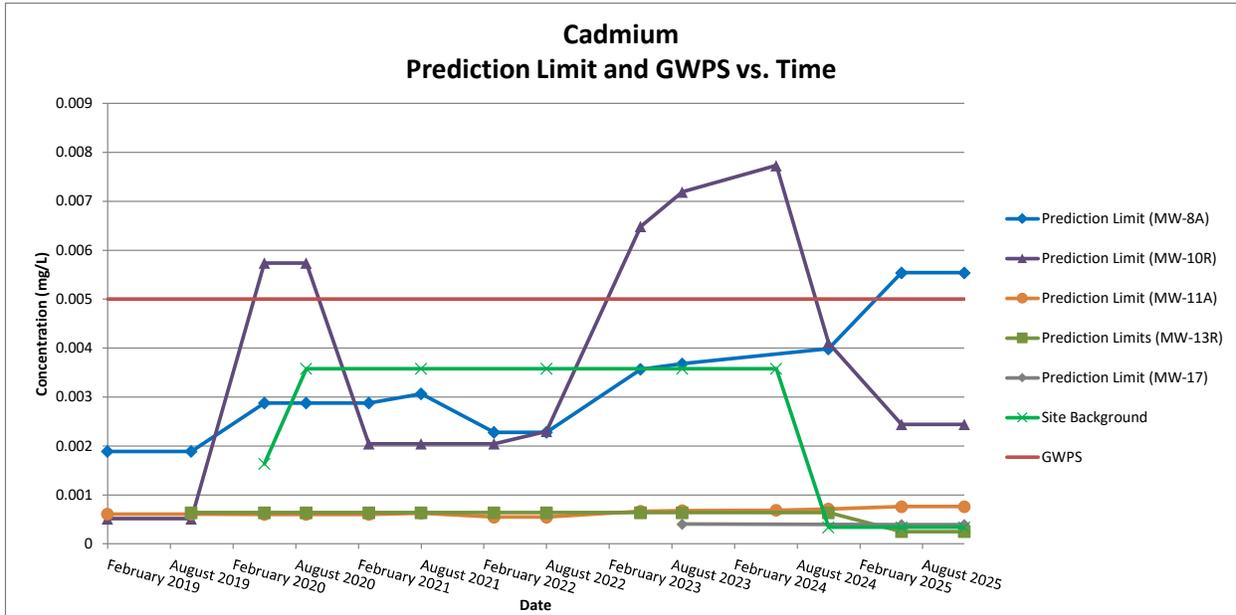


# Appendix E

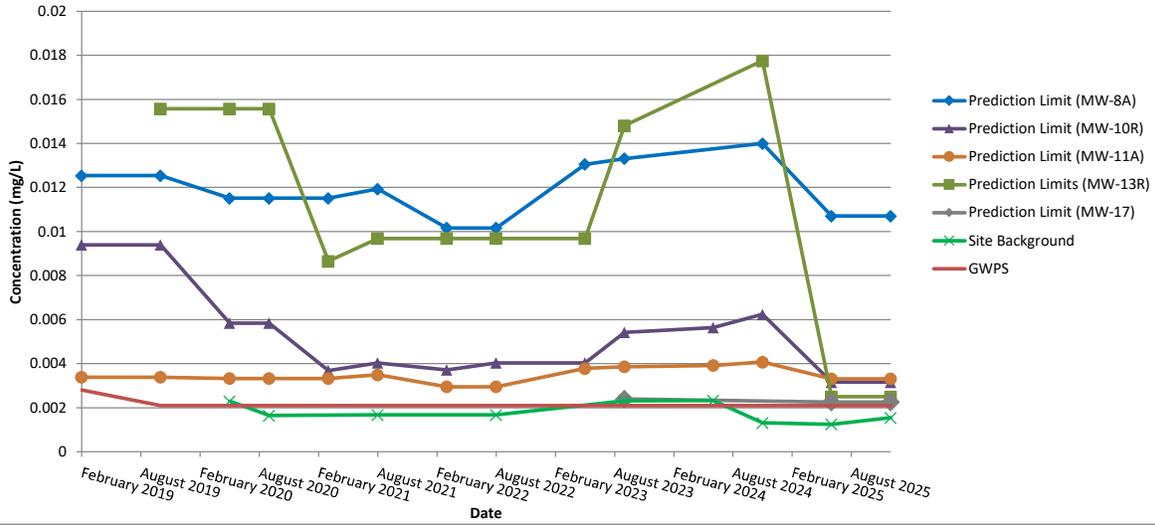
## Standards History Graphs



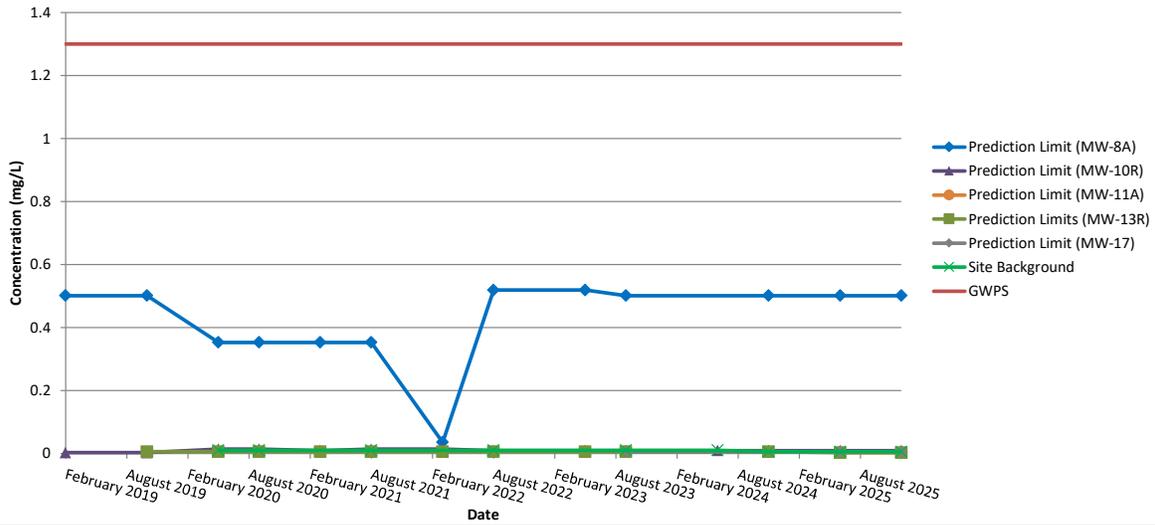




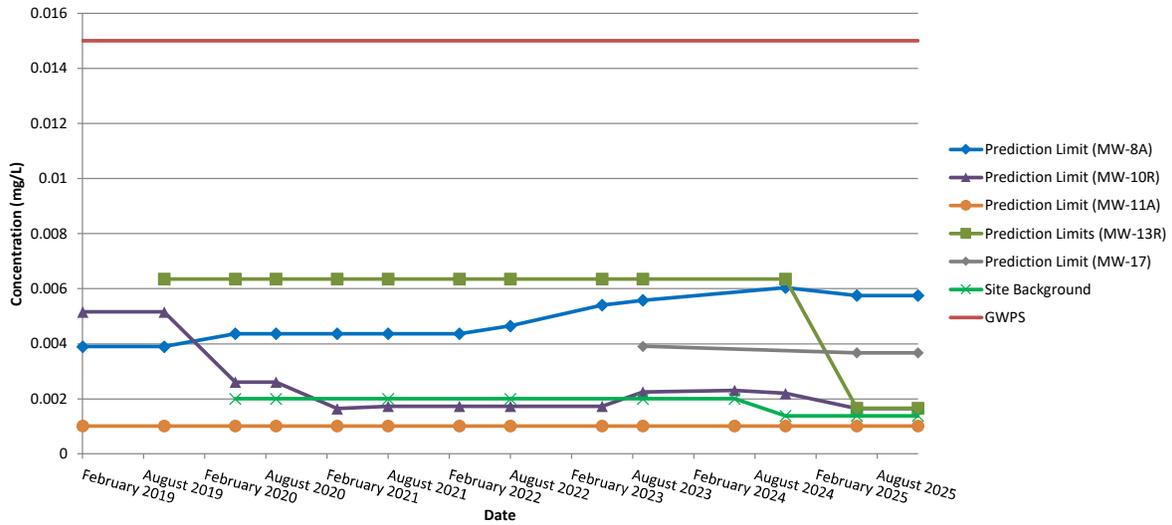
### Cobalt Prediction Limit and GWPS vs. Time



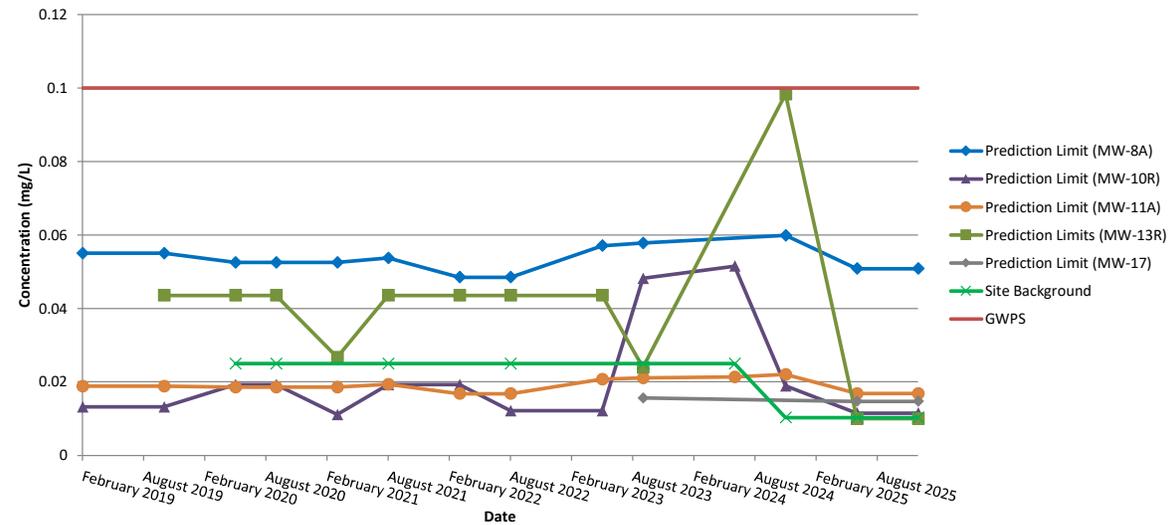
### Copper Prediction Limit and GWPS vs. Time



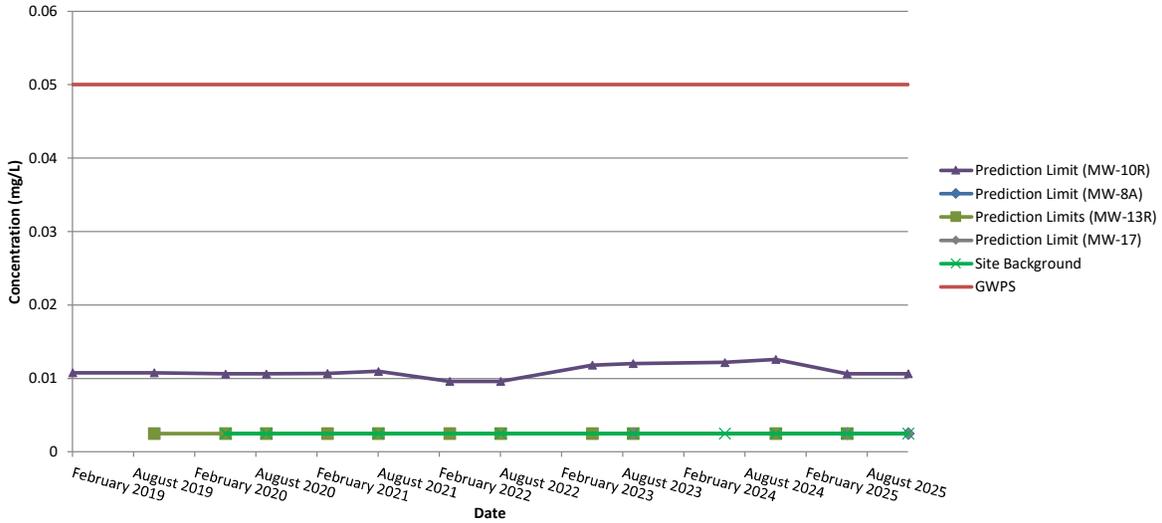
### Lead Prediction Limit and GWPS vs. Time



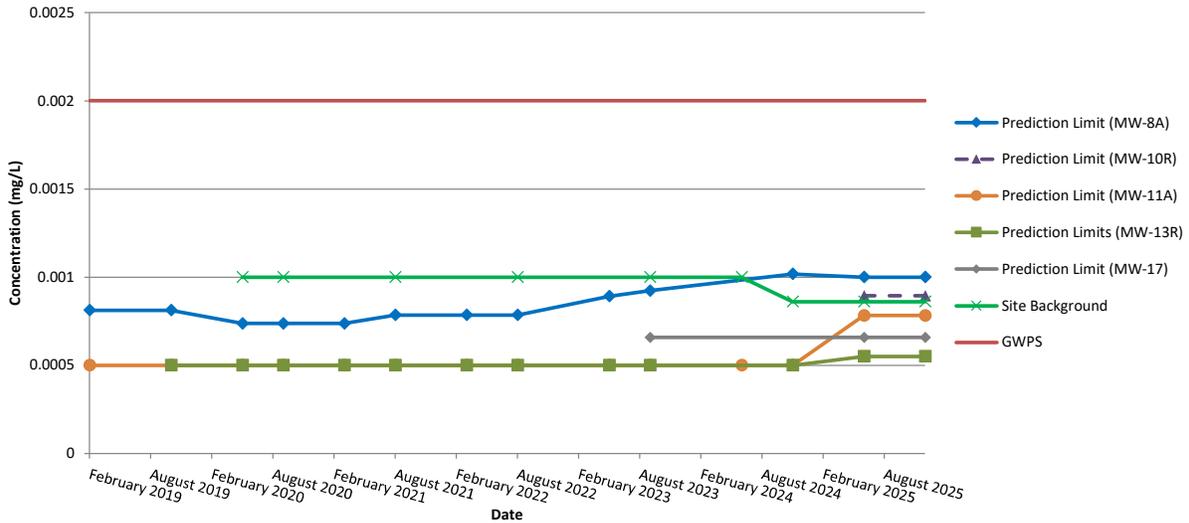
### Nickel Prediction Limit and GWPS vs. Time

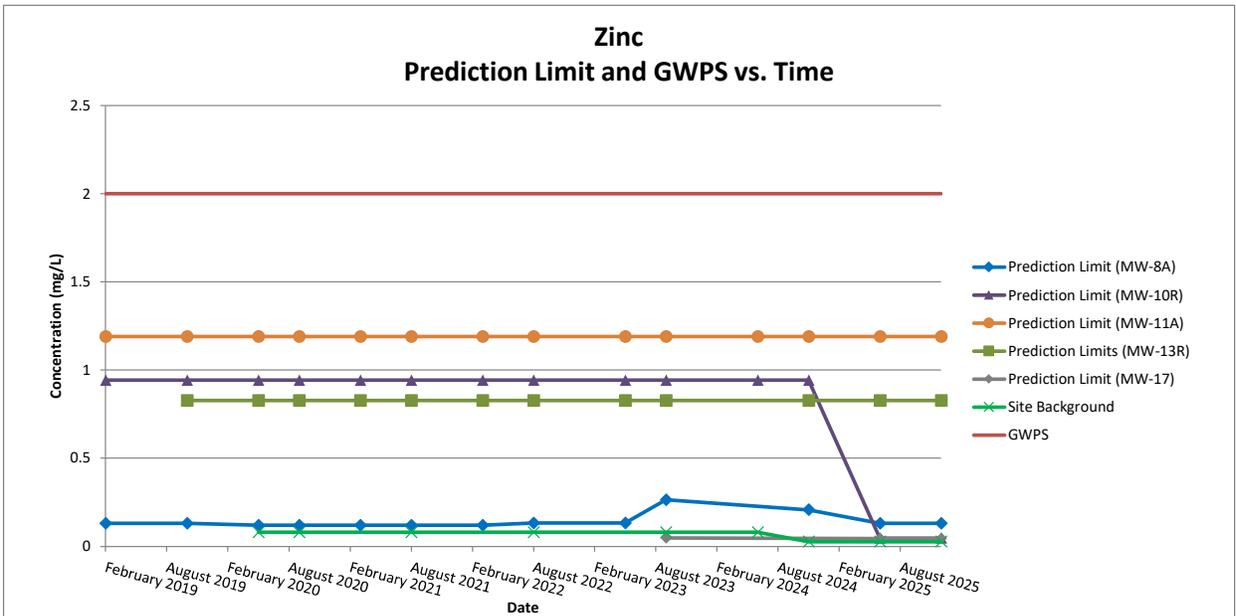
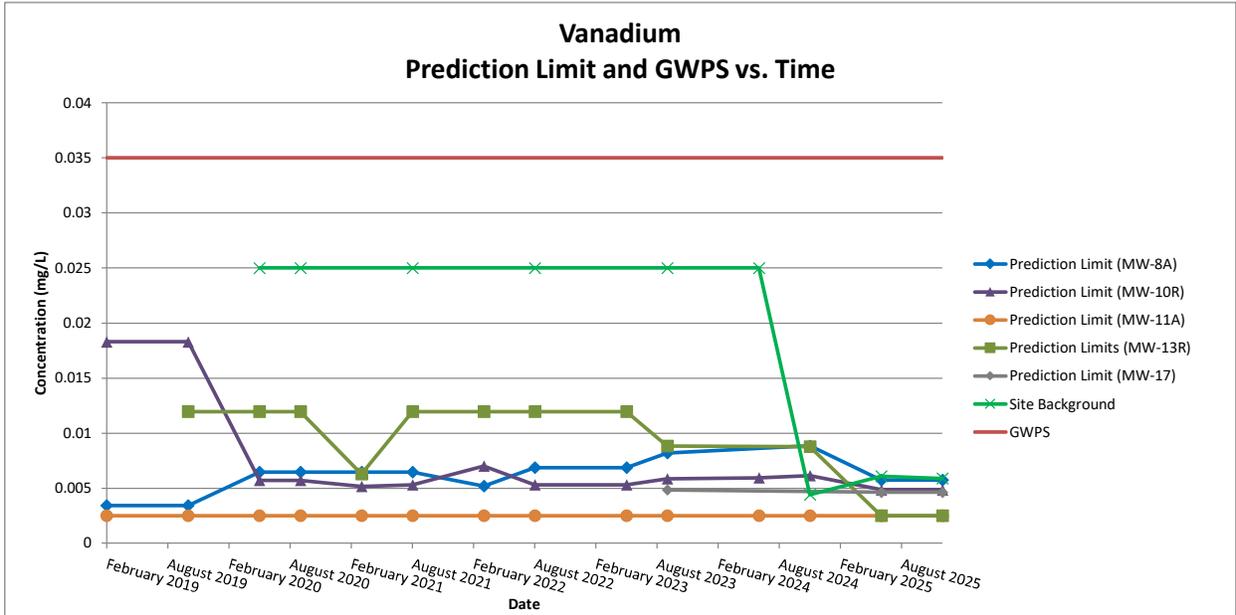


### Selenium Prediction Limit and GWPS vs. Time



### Thallium Prediction Limit and GWPS vs. Time







## Appendix F

# 2025 Leachate Control System Performance Evaluation Report

**Table F1**  
**Leachate Management Summary**  
**2025 Leachate Control System Performance Evaluation Report**  
**Harrison County Sanitary Landfill**  
**Permit No. 43-SDP-05-94P**

Month	Lined Cell - Maximum Head on Liner (ft)		Volume Recirculated (gal)	Discharged to Logan POTW <sup>(1)</sup> (gal)	Precipitation <sup>(2)</sup> (in)
	LPZ-1	LPZ-2			
January 2025	NM	0.2	0	17,765	0.05
February 2025	NM	0.4	0	24,179	0.35
March 2025	NM	0.6	0	85,681	2.30
April 2025	NM	0.6	0	69,302	3.30
May 2025	NM	0.6	0	70,888	1.84
June 2025	NM	0.5	0	64,451	3.01
July 2025	NM	0.9	0	131,708	6.00
August 2025	NM	0.8	0	101,216	3.15
September 2025	NM	0.5	0	41,585	1.47
October 2025	NM	0.3	0	30,433	1.78
November 2025	NM	0.2	0	23,212	1.15
December 2025	NM	0.2	0	22,648	0.33
<b>January - December 2025 Total Gallons:</b>				683,068	24.73

Notes:

- <sup>(1)</sup> Gallons of leachate provided by Harrison County Landfill staff.
- <sup>(2)</sup> Precipitation data obtained from Iowa State Environmental Mesonet in Omaha, NE.  
[\[https://mesonet.agron.iastate.edu/ASOS/reports/mon\\_prec.php?network=NE\\_ASOS&year=2025\]](https://mesonet.agron.iastate.edu/ASOS/reports/mon_prec.php?network=NE_ASOS&year=2025)

NM - Not Measured.

Comments:

**Reporting Period:** January - December 2025.

**Recommended Changes to Leachate Collection System:** SCS performed a joint measurement event during the 2024 reporting period with Landfill staff to ensure accurate measurement techniques are being performed. It was found that LPZ-1 was damaged and a leachate measurement cannot be obtained. A request to abandon LPZ-1 was submitted to the DNR (Doc # 113021) and approved (Doc #113672). Abandonment will occur during the 2026 reporting period.

**Maintenance Performed on Leachate Collection System:** None.

**Last Date of Cleaning and Inspection:** The leachate lines were jetted on June 11, 2025 by Superior Jetting.

**Date for Next Cleaning and Inspection:** Leachate line cleaning and inspection will be performed during the 2028 reporting period.

**Volume of Leachate Recirculated:** Leachate is not recirculated at this facility.

**Volume of Leachate Treated On-Site:** Leachate is not treated on-site at this facility.

**Volume of Leachate Treated Off-Site:** 683,068 gallons of leachate were discharged to the Logan POTW during this reporting period.

**Leachate Quality Testing Results:** The monthly leachate sample results obtained from the Landfill manager are included in Attachment A.



Attachment A  
Leachate Quality Testing Results



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11A0780

Harrison County Landfill

Project Name: Harrison County Landfill

Tyler Hinkel
2812 E Hwy 30, PO Box 121
Logan, IA 51546

Project / PO Number: N/A
Received: 01/10/2025
Reported: 01/23/2025

Analytical Testing Parameters

Table with client sample information: Client Sample ID: Leachate Sample, Sample Matrix: Aqueous, Lab Sample ID: 11A0780-01, Collected By: Hinkel, Tyler, Collection Date: 01/09/2025 14:00

Main data table with columns: Determination of Conventional Chemistry Parameters, Result, RL, Units, DF, Note, Prepared, Analyzed, Analyst. Rows include EPA 1664A, EPA 351.2, SM 4500-H+ B-2011, SM 5210 B-2016, TIMBERLINE, and USGS I-3765-85.

Definitions

- A14: Sample was preserved with Hydrochloric Acid to pH <2 on receipt.
H2: Initial analysis was within holding time. Reanalysis was done past holding time.
H4: The test was performed outside of the EPA recommended holding time of 15 minutes.
RL: Reporting Limit
RPD: Relative Percent Difference

Report Comments

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Handwritten signature of Heather Tisdale

Heather Tisdale
Customer Relationship Specialist
01/23/25 13:12

# Keystone

LABORATORIES  
A Microbac Company

Newton, IA  
641-792-24



Harrison County Landfill  
P/N: Tiffanie Clymer

Printed: 12/13/2024 4:04:49P

www.keystonelabs.

**SITE INFORMATION**

Sampler: Tyler Hinkel  
Project: Leachate Testing  
Harrison County Landfill

**SPECIAL INSTRUCTIONS**

OG & NH3 is Quarterly  
 Standard  RUSH, need by \_\_\_/\_\_\_/\_\_\_

**REPORT TO**

Tyler Hinkel  
Harrison County Landfill  
2812 E Hwy 30, PO Box 121  
Logan, IA 51545

**INVOICE TO**

Accounts Payable  
Harrison County Landfill  
2812 E Hwy 30, PO Box 121  
Logan, IA 51545

**LAB USE ONLY**

Work Order 1EAD180  
Temperature 0.0  
Turn-Cooler: NO

Custody Seal  
 Containers Intact  
 COC/Labels Agree  
 Preservation Confirmed  
 Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
001	Leachate Sample	Aqueous	GRAB	1/9/25	7:00	3	had-5210 og-1604 hu-3512 th-4500 ph-4500 ts-1-3765-85	01

Relinquished By: [Signature] Date/Time: 1-9-25

Relinquished By: [Signature] Date/Time: 10:00

Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Received for Lab By: [Signature] Date/Time: \_\_\_\_\_

Remarks:



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11B1554

Harrison County Landfill

Project Name: Harrison County Landfill

Tyler Hinkel
2812 E Hwy 30, PO Box 121
Logan, IA 51546

Project / PO Number: N/A
Received: 02/26/2025
Reported: 03/12/2025

Analytical Testing Parameters

Table with client sample information: Client Sample ID (Leachate Sample), Sample Matrix (Aqueous), Lab Sample ID (11B1554-01), Collected By (Hinkel, Tyler), and Collection Date (02/25/2025 13:00).

Main data table with columns: Determination of Conventional Chemistry Parameters, Result, RL, Units, DF, Note, Prepared, Analyzed, Analyst. Rows include EPA 1664A (Oil and Grease), EPA 351.2 (Nitrogen), SM 4500-H+ B-2011 (pH), SM 5210 B-2016 (BOD), TIMBERLINE (Nitrogen), and USGS I-3765-85 (Total Suspended Solids).

Definitions

- A14: Sample was preserved with Hydrochloric Acid to pH <2 on receipt.
H4: The test was performed outside of the EPA recommended holding time of 15 minutes.
RL: Reporting Limit
RPD: Relative Percent Difference

Report Comments

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Tiffannie Clymer (handwritten signature)

Tiffannie Clymer
Customer Relationship Specialist
tiffannie.clymer@microbac.com
03/12/25 08:51



600 East 17th Street South  
Newton, IA 50208  
841-792-8451

1 I B 1 5 5 4  
Harrison County Landfill  
PM: Tiffanie Clymer

Page 1 of  
1/13/2025 1:11:44P  
keystone labs.com

SITE INFORMATION

Sampler:

Project:

*TCHK*  
Leachate Testing  
Harrison County Landfill

SPECIAL INSTRUCTIONS

OG & NH3 is Quarterly

Turn Around Time

Standard  RUSH, need by \_\_\_/\_\_\_/\_\_\_

REPORT TO

Tyler Hinkel  
Harrison County Landfill  
2812 E Hwy 30, PO Box 121  
Logan, IA 51546

INVOICE TO

Accounts Payable  
Harrison County Landfill  
2812 E Hwy 30, PO Box 121  
Logan, IA 51546

LAB USE ONLY

Work Order

Temperature

Turn-Cooler:

*1 IB1554*

*0.0*

*No*

- Custody Seal
- Containers Intact
- COC/Labels Agree
- Preservation Confirmed
- Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
--------	-----------------------------------	--------	-------------	------	------	----------------------	----------	-------------------

-001	Leachate Sample	Aqueous	GRAB	<i>2/25/25</i>	<i>1300</i>	<i>3</i>	heat-52110 og-1-1664 rad-331.2  nit3-further time ph-4500 tss-1-3765-85	<i>1</i>
------	-----------------	---------	------	----------------	-------------	----------	-------------------------------------------------------------------------------------------	----------

Relinquished By *TCHK* Date/Time *1300 2-25-25*

Relinquished By \_\_\_\_\_ Date/Time \_\_\_\_\_

Received By \_\_\_\_\_ Date/Time \_\_\_\_\_

Received for Lab By *Channah Murphy* Date/Time *2/26/25 10:10AM*

Remarks:



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11E0962

Harrison County Landfill

Project Name: Harrison County Landfill

Tyler Hinkel
2812 E Hwy 30, PO Box 121
Logan, IA 51546

Project / PO Number: N/A
Received: 05/12/2025
Reported: 05/22/2025

Analytical Testing Parameters

Table with 4 columns: Client Sample ID, Sample Matrix, Lab Sample ID, Collected By, Collection Date. Values include Leachate Sample, Aqueous, 11E0962-01, Hinkel, Tyler, 05/08/2025 14:45.

Main data table with 9 columns: Determination of Conventional Chemistry Parameters, Result, RL, Units, DF, Note, Prepared, Analyzed, Analyst. Rows include EPA 1664A, EPA 351.2, SM 4500-H+ B-2011, SM 5210 B-2016, TIMBERLINE, and USGS I-3765-85.

Definitions

- DF: Dilution Factor representing the amount the sample was diluted during analysis and may not represent preparation factors.
H1: Sample was received past holding time.
H4: The test was performed outside of the EPA recommended holding time of 15 minutes.
RL: Reporting Limit
RPD: Relative Percent Difference

Report Comments

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Tiffannie Clymer (handwritten signature)

Tiffannie Clymer
Customer Relationship Specialist
tiffannie.clymer@microbac.com
05/22/25 16:53



500 Ea  
Newto  
641-79

Harrison County Landfill  
PM: Tiffanie Clymer



1 I E 0 9 6 2

Page 1 of  
Printed: 4/16/2025 9:53:58A  
www.keystonelabs.com

SITE INFORMATION

Sampler: Tyler Hinkel  
Project: Leachate Testing  
Harrison County Landfill

REPORT TO

Tyler Hinkel  
Harrison County Landfill  
2812 E Hwy 30, PO Box 121  
Logan, IA 51546

INVOICE TO

Accounts Payable  
Harrison County Landfill  
2812 E Hwy 30, PO Box 121  
Logan, IA 51546

SPECIAL INSTRUCTIONS

OG & NH3 is Quarterly  
Turn Around Time  
 Standard  RUSH, need by \_\_\_/\_\_\_/\_\_\_

LAB USE ONLY

Work Order IE962  
Temperature 21.0  
Turn-Cooler: No

Custody Seal  
 Containers Intact  
 COC/Labels Agree  
 Preservation Confirmed  
 Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	Leachate Sample	Aqueous	GRAB	<u>5/8/85</u>	<u>1445</u>	<u>3</u>	hnd-5210 og-t-1664 hnd-351.2  nh3-dimertime ph-4500 hnd-1-3765-85	<u>01</u>

Relinquished By [Signature] Date/Time 5-8-25 1445

Relinquished By [Signature] Date/Time 05-12-25 10545

Received By \_\_\_\_\_ Date/Time \_\_\_\_\_

Received for Lab By [Signature] Date/Time \_\_\_\_\_

Remarks:

Original - Lab Copy Yellow - Sampler Copy



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11F0818

Harrison County Landfill

Project Name: Harrison County Landfill

Tyler Hinkel  
2812 E Hwy 30, PO Box 121  
Logan, IA 51546

Project / PO Number: N/A  
Received: 06/10/2025  
Reported: 06/24/2025

Analytical Testing Parameters

Client Sample ID:	Leachate Sample	Collected By:	Hinkel, Tyler
Sample Matrix:	Aqueous	Collection Date:	06/09/2025 14:30
Lab Sample ID:	11F0818-01		

Determination of Conventional Chemistry Parameters	Result	RL	Units	Note	Prepared	Analyzed	Analyst
<b>EPA 1664A</b>							
Oil and Grease	16	4	mg/L	A14	06/11/25 1306	06/13/25 1335	GSC
<b>EPA 351.2, Rv. 2 (1993)</b>							
Nitrogen, Kjeldahl, total	41.1	2.50	mg/L		06/20/25 1222	06/24/25 1417	SGB
<b>SM 4500-H+ B-2011</b>							
pH	7.8	0.5	pH	H4	06/10/25 1448	06/11/25 1354	BSS
<b>SM 5210 B-2016</b>							
BOD (5 day)	10	6	mg/L		06/10/25 1552	06/10/25 1652	MND
<b>TIMBERLINE</b>							
Nitrogen, Ammonia	46.3	1.00	mg/L		06/12/25 1402	06/12/25 1537	SDF
<b>USGS I-3765-85</b>							
Total Suspended Solids (TSS)	20	1	mg/L		06/11/25 0745	06/12/25 0821	LAW

Definitions

- A14: Sample was preserved with Hydrochloric Acid to pH <2 on receipt.
- H4: The test was performed outside of the EPA recommended holding time of 15 minutes.
- RL: Reporting Limit

Report Comments

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <<https://www.microbac.com/standard-terms-conditions>>.

Reviewed and Approved By:

Sue Thompson  
Client Services Manager  
06/24/25 18:35



500 East 17th Street South  
 Newton, IA 50208  
 841-792-8451

CHAIN OF CUSTODY RE



1 I F 0 8 1 8  
 Harrison County Landfill  
 P.M.: Tiffanie Clymer

Page 1 of  
 5/13/2025 9:13:26A  
 www.keystonelabs.com

SITE INFORMATION

Sampler: Tyler Hinkel  
 Project: Leachate Testing  
Harrison County Landfill

REPORT TO

Tyler Hinkel  
Harrison County Landfill  
2812 E Hwy 30, PO Box 121  
Logan, IA 51546

INVOICE TO

Accounts Payable  
Harrison County Landfill  
2812 E Hwy 30, PO Box 121  
Logan, IA 51546

SPECIAL INSTRUCTIONS

O&G & NH3 Is Quarterly  
 Turn Around Time  
 Standard  RUSH, need by \_\_\_/\_\_\_/\_\_\_

LAB USE ONLY

Work Order: 11F0818  
 Temperature: 0.9  
 Turn-Cooler: No

Custody Seal  
 Containers Intact  
 COC/Labels Agree  
 Preservation Confirmed  
 Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	Leachate Sample	Aqueous	GRAB	6/19/25	1430	3	hant-5210 og-1-1664 ka-351.2  nh3-fimberline ph-4500 tes-1-3765-85	01

Relinquished By: [Signature] Date/Time: 6/19/25 1430

Received for Lab By: [Signature] Date/Time: 6/10/25 10:15

Remarks:



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1IG1178

Harrison County Landfill

Project Name: Harrison County Landfill

Tyler Hinkel
2812 E Hwy 30, PO Box 121
Logan, IA 51546

Project / PO Number: N/A
Received: 07/10/2025
Reported: 07/25/2025

Analytical Testing Parameters

Table with 4 columns: Client Sample ID, Sample Matrix, Lab Sample ID, Collected By, Collection Date. Values include Leachate Sample, Aqueous, 1IG1178-01, Hinkel, Tyler, 07/09/2025 14:00.

Main data table with 8 columns: Determination of Conventional Chemistry Parameters, Result, RL, Units, Note, Prepared, Analyzed, Analyst. Rows include EPA 1664A, EPA 351.2, SM 4500-H+ B-2011, SM 5210 B-2016, TIMBERLINE, and USGS I-3765-85.

Definitions

- A14: Sample was preserved with Hydrochloric Acid to pH <2 on receipt.
H4: The test was performed outside of the EPA recommended holding time of 15 minutes.
RL: Reporting Limit

Report Comments

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Handwritten signature of Heather Murphy

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
07/25/25 08:15

**CHAIN OF CUSTODY RECORD**



600 East 17th Street South  
 Newton, IA 50208  
 Phone: 641-792-8451

Page 1 of 1  
 Printed: 6/12/2025 7:49:29AM

**SITE INFORMATION**

Sampler: Tyler Hinkel  
 Project: Leachate Testing  
 Harrison County Landfill

**REPORT TO**

Tyler Hinkel  
 Harrison County Landfill  
 2812 E Hwy 30, PO Box 121  
 Logan, IA 51546

**INVOICE TO**

Accounts Payable  
 Harrison County Landfill  
 2812 E Hwy 30, PO Box 121  
 Logan, IA 51546

**SPECIAL INSTRUCTIONS**

OG & NH3 is Quarterly

Turn Around Time  
 Standard  RUSH, need by \_\_\_/\_\_\_/\_\_\_

HARRISON COUNTY



Harrison County Landfill  
 PM: Tiffanie Cymer

Temperature: 13.01666C

Number Sample Identification / Client ID

Matrix

Sample Type

Date

Time

# Containers

Analyses

Lab Sample Number

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	# Containers	Analyses	Lab Sample Number	
01-001	Leachate Sample	Aqueous	GRAB	7-9-25	1400	3	bod-5210 ph-4500 tss-i-3765-85	nh3-timberline tkn-351.2 og-t-1664	01

Relinquished By \_\_\_\_\_ Date/Time \_\_\_\_\_

Relinquished By \_\_\_\_\_ Date/Time \_\_\_\_\_

Remarks:

Received By \_\_\_\_\_ Date/Time \_\_\_\_\_

Received for Lab By Aimee Coffey Date/Time 07-10-25 0210:35 PM

Remarks:



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11H2200

Harrison County Landfill

Project Name: Harrison County Landfill

Tyler Hinkel
2812 E Hwy 30, PO Box 121
Logan, IA 51546

Project / PO Number: N/A
Received: 08/22/2025
Reported: 09/05/2025

Analytical Testing Parameters

Table with 2 columns: Parameter and Value. Includes Client Sample ID (Leachate Sample), Sample Matrix (Aqueous), Lab Sample ID (11H2200-01), Collected By (Hinkel, Tyler), and Collection Date (08/21/2025 14:20).

Main data table with columns: Determination of Conventional Chemistry Parameters, Result, RL, Units, Note, Prepared, Analyzed, Analyst. Rows include EPA 1664A (Oil and Grease), EPA 351.2 (Nitrogen), SM 4500-H+ B-2011 (pH), SM 5210 B-2016 (BOD), TIMBERLINE (Nitrogen), and USGS I-3765-85 (Total Suspended Solids).

Definitions

- A14: Sample was preserved with Hydrochloric Acid to pH <2 on receipt.
H4: The test was performed outside of the EPA recommended holding time of 15 minutes.
K2: Glucose/glutamic acid recovery was below acceptance limits. The reported value is estimated.
RL: Reporting Limit

Report Comments

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Handwritten signature of Heather Murphy

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
09/05/25 11:19

**CHAIN OF CUSTODY RECORD**



600 East 17th Street South  
 Newton, IA 50208  
 Phone: 641-792-8451

Page 1 of 1  
 Printed: 7/14/2025 12:52:52PM

**SITE INFORMATION**

Sampler: [Signature]  
 Project: **Leachate Testing**  
 Harrison County Landfill

**REPORT TO**

Tyler Hinkel  
 Harrison County Landfill  
 2812 E Hwy 30, PO Box 121  
 Logan, IA 51546

**INVOICE TO**

Accounts Payable  
 Harrison County Landfill  
 2812 E Hwy 30, PO Box 121  
 Logan, IA 51546

**SPECIAL INSTRUCTIONS**

OG & NH3 is Quarterly  
 Standard  RUSH, need by 8/1 / 1 / 1  
 Turn Around Time

**LAB USE ONLY**

Barcode: 1 I H 2 2 0 0  
 Harrison County Landfill  
 P.M. Heather Murphy

Temperature: 1.716250C

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	# Containers	Analyses	Lab Sample Number
01-001	Leachate Sample	Aqueous	GRAB				bod-5210 ph-4500 tss-1-3765-85 nh3-timberline tkn-351.2 o2-l-1664	01

8-21-25  
 1420

Relinquished By [Signature]  
 Date/Time 8-21-25

Relinquished By [Signature]  
 Date/Time 8-22-25 10:00a

Received By \_\_\_\_\_ Date/Time \_\_\_\_\_

Received for Lab By \_\_\_\_\_ Date/Time \_\_\_\_\_

Remarks: \_\_\_\_\_



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11I1469

Harrison County Landfill

Project Name: Annual Leachate Testing

Tyler Hinkel
2812 E Hwy 30, PO Box 121
Logan, IA 51546

Project / PO Number: N/A
Received: 09/18/2025
Reported: 10/07/2025

Analytical Testing Parameters

Table with client sample information: Client Sample ID: Leachate Sample, Sample Matrix: Aqueous, Lab Sample ID: 11I1469-01, Collected By: Hinkel, Tyler, Collection Date: 09/17/2025 14:00

Main data table with columns: Determination of Volatile Organic Compounds, Result, RL, Units, Note, Prepared, Analyzed, Analyst. Lists various compounds like Chloromethane, Vinyl Chloride, etc., with their respective results and limits.



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

111469

<b>Client Sample ID:</b>	Leachate Sample	<b>Collected By:</b>	Hinkel, Tyler
<b>Sample Matrix:</b>	Aqueous	<b>Collection Date:</b>	09/17/2025 14:00
<b>Lab Sample ID:</b>	111469-01		

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
---------------------------------------------	--------	----	-------	------	----------	----------	---------

Surrogate: 4-Bromofluorobenzene	93.1	Limit: 82-112	% Rec		09/25/25 0000	09/25/25 1301	RAF
---------------------------------	------	---------------	-------	--	---------------	---------------	-----

Determination of Conventional Chemistry Parameters	Result	RL	Units	Note	Prepared	Analyzed	Analyst
----------------------------------------------------	--------	----	-------	------	----------	----------	---------

**EPA 1664A**

Oil and Grease	<4	4	mg/L	<b>A14</b>	09/25/25 0727	09/29/25 0900	RDH
----------------	----	---	------	------------	---------------	---------------	-----

**EPA 351.2, Rv. 2 (1993)**

Nitrogen, Kjeldahl, total	<b>22.3</b>	1.00	mg/L		10/01/25 0812	10/06/25 0819	AKK
---------------------------	-------------	------	------	--	---------------	---------------	-----

**EPA 410.4, Rv. 2 (1993)**

COD, total	<b>132</b>	54	mg/L		09/24/25 0817	09/24/25 1337	KAC
------------	------------	----	------	--	---------------	---------------	-----

**EPA 420.1**

Phenols, total	<b>0.039</b>	0.035	mg/L		09/24/25 0724	09/26/25 1356	RDH
----------------	--------------	-------	------	--	---------------	---------------	-----

**EPA 9020B**

Total Organic Halogens (TOX)	<b>0.481</b>	0.100	mg/L		10/01/25 0000	10/06/25 1647	CSM
------------------------------	--------------	-------	------	--	---------------	---------------	-----

**SM 2510 B-2011**

Conductivity	<b>2000</b>	2.0	uS/cm		09/19/25 1316	09/19/25 1505	BSS
--------------	-------------	-----	-------	--	---------------	---------------	-----

**SM 4500-H+ B-2011**

pH	<b>7.4</b>	0.5	pH	<b>H4</b>		09/19/25 1318	BSS
----	------------	-----	----	-----------	--	---------------	-----

**SM 5210 B-2016**

BOD (5 day)	<b>8</b>	6	mg/L		09/18/25 1416	09/23/25 1150	MND
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**TIMBERLINE**

Nitrogen, Ammonia	<b>22.2</b>	0.50	mg/L		09/23/25 1056	09/24/25 1512	BHF
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**USGS I-3765-85**

Total Suspended Solids (TSS)	<b>28</b>	1	mg/L		09/18/25 1538	09/19/25 0916	LAW
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Determination of Inorganic Anions	Result	RL	Units	Note	Prepared	Analyzed	Analyst
-----------------------------------	--------	----	-------	------	----------	----------	---------

**300.0**

Chloride	<b>371</b>	10.0	mg/L			09/23/25 0639	BMS
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Determination of Total Metals	Result	RL	Units	Note	Prepared	Analyzed	Analyst
-------------------------------	--------	----	-------	------	----------	----------	---------

**200.7**

Iron, total	<b>1.27</b>	0.100	mg/L		09/19/25 1754	09/23/25 0338	JAR
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Magnesium, total	<b>50.9</b>	0.10	mg/L		09/19/25 1754	09/23/25 0338	JAR
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**245.1**

Mercury, total	<0.00050	0.00050	mg/L		09/24/25 1631	09/26/25 1201	JAR
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**EPA 200.7, Rv. 4.4 (1994)**

Zinc, total	<0.020	0.020	mg/L		09/19/25 1754	09/23/25 0338	JAR
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**EPA 200.8, Rv. 5.4 (1994)**

Arsenic, total	<b>0.0100</b>	0.0010	mg/L		09/18/25 1543	09/20/25 0407	JAR
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Barium, total	<b>0.647</b>	0.0010	mg/L		09/18/25 1543	09/20/25 0407	JAR
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Cadmium, total	<0.0002	0.0002	mg/L		09/18/25 1543	09/20/25 0407	JAR
----------------	---------	--------	------	--	---------------	---------------	-----

Copper, total	<0.0050	0.0050	mg/L		09/18/25 1543	09/20/25 0407	JAR
---------------	---------	--------	------	--	---------------	---------------	-----

Lead, total	<b>0.0007</b>	0.0005	mg/L		09/18/25 1543	09/20/25 0407	JAR
-------------	---------------	--------	------	--	---------------	---------------	-----

Microbac Laboratories, Inc., Newton

600 East 17th Street South | Newton, IA 50208 | 641-792-8451 p | www.microbac.com



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1111469

---

**Definitions**

- A14:** Sample was preserved with Hydrochloric Acid to pH <2 on receipt.  
**H4:** The test was performed outside of the EPA recommended holding time of 15 minutes.  
**RL:** Reporting Limit  
**TX1:** Repeated analysis of this sample consistently exceeded greater than 10% breakthrough to the second column.
- 

**Report Comments**

*The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. **The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

**Reviewed and Approved By:**

Heather Murphy

Customer Relationship Specialist  
heather.murphy@microbac.com  
10/07/25 09:59





Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11K0660

Harrison County Landfill

Project Name: Harrison County Landfill

Tyler Hinkel
2812 E Hwy 30, PO Box 121
Logan, IA 51546

Project / PO Number: N/A
Received: 11/07/2025
Reported: 11/21/2025

Analytical Testing Parameters

Table with client sample information: Client Sample ID: Leachate Sample, Sample Matrix: Aqueous, Lab Sample ID: 11K0660-01, Collected By: Hinkel, Tyler, Collection Date: 11/06/2025 14:00

Main data table with columns: Inorganics Total, General Parameters, Determination of Conventional Chemistry Parameters. Rows include Biochemical Oxygen Demand (BOD5), pH, Nitrogen (Kjeldahl, total), Nitrogen (Ammonia), and Total Suspended Solids (TSS).

Definitions

- H4: The test was performed outside of the EPA recommended holding time of 15 minutes.
RL: Reporting Limit

Report Comments

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Handwritten signature of Heather Murphy

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
11/21/25 15:56



600 East 17th Street South  
Newton, IA 50208  
Phone: 641-792-8451

Page 1 of 1  
Printed: 10/20/2025 3:33:55PM

**CHAIN OF CUSTODY RECORD**

**SITE INFORMATION**

Sampler: Tyler Hinkel  
Project: Leachate Testing  
Harrison County Landfill

**REPORT TO**

Tyler Hinkel  
Harrison County Landfill  
2812 E Hwy 30, PO Box 121  
Logan, IA 51546

**INVOICE TO**

Accounts Payable  
Harrison County Landfill  
2812 E Hwy 30, PO Box 121  
Logan, IA 51546

**SPECIAL INSTRUCTIONS**

OG & NH3 is Quarterly  
Turn Around Time  
 Standard  RUSH, need by \_\_\_/\_\_\_/\_\_\_

**LAB USE ONLY**

Barcode: 1 I K 0 6 6 0  
Harrison County Landfill  
P.M.: Heather Murphy

Temperature: 2.5 °C

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	# Containers	Analyses	Lab Sample Number
01-001	Leachate Sample	Aqueous	GRAB	11-6	1400	2	bod-5210 ph-4500 tss-i-3765-85  nh3-timberline tkn-351.2 og-t-1664	01

**DID NOT RECEIVE 1L AMBER BATH**

*[Handwritten signature]*

Relinquished By \_\_\_\_\_ Date/Time \_\_\_\_\_

Relinquished By Ame Koffi Date/Time 11-07-25 10:25

Remarks: \_\_\_\_\_

Received By \_\_\_\_\_ Date/Time \_\_\_\_\_

Received for Lab By \_\_\_\_\_ Date/Time \_\_\_\_\_



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11L0839

Harrison County Landfill

Project Name: Harrison County Landfill

Tyler Hinkel
2812 E Hwy 30, PO Box 121
Logan, IA 51546

Project / PO Number: N/A
Received: 12/10/2025
Reported: 12/23/2025

Analytical Testing Parameters

Table with client sample details: Client Sample ID: Leachate Sample, Sample Matrix: Aqueous, Lab Sample ID: 11L0839-01, Collected By: Hinkel, Tyler, Collection Date: 12/09/2025 14:00

Main data table with columns: Inorganics Total, General Parameters, n-Hexane Extractable Material by Gravametric, Determination of Conventional Chemistry Parameters. Includes rows for EPA 351.2, SM 5210 B-2016, USGS I-3765-85, SM 4500-H+ B-2011, EPA 1664A, and TIMBERLINE.

Definitions

- A14: Sample was preserved with Hydrochloric Acid to pH <2 on receipt.
H4: The test was performed outside of the EPA recommended holding time of 15 minutes.
RL: Reporting Limit

Report Comments

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Handwritten signature: Heather Tisdale

Heather Tisdale
Customer Relationship Specialist
12/23/25 16:31

**CHAIN OF CUSTODY RECORD**



600 East 17th Street South  
 Newton, IA 50208  
 Phone: 641-792-8451

Page 1 of 1  
 Printed: 11/10/2025 3:14:43PM

**SITE INFORMATION**

**Sampler:** Tyler Hinkel  
**Project:** Leachate Testing  
 Harrison County Landfill

**REPORT TO**

**Tyler Hinkel**  
 Harrison County Landfill  
 2812 E Hwy 30, PO Box 121  
 Logan, IA 51546

**INVOICE TO**

**Accounts Payable**  
 Harrison County Landfill  
 2812 E Hwy 30, PO Box 121  
 Logan, IA 51546

**SPECIAL INSTRUCTIONS**

OG & NH3 is Quarterly  
 Turn Around Time  
 Standard  RUSH, need by \_\_\_/\_\_\_/\_\_\_

**LAB USE ONLY**

1 I L 0 8 3 9  
 Harrison County Landfill  
 P.M.: Heather Murphy

Temperature: 0.1 °C

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	# Containers	Analyses	Lab Sample Number
01-001	Leachate Sample	Aqueous	GRAB	12.9	1400	3	BOD5 SM5210 B-20 InH3-timberline ph-4500 tkn-351.2 tss-i-3765-85 og-t-1664	01

Relinquished By [Signature] Date/Time 12.9.25 1400

Relinquished By [Signature] Date/Time 12.10.25 10:55

Received By \_\_\_\_\_ Date/Time \_\_\_\_\_

Received for Lab By [Signature] Date/Time 12/10/25

Remarks: \_\_\_\_\_



Appendix G  
2025 Annual Landfill Gas Report

**Table G1  
Gas Monitoring Summary  
2025 Gas Monitoring Report  
Harrison County Sanitary Landfill  
Permit No. 43-SDP-05-94P**

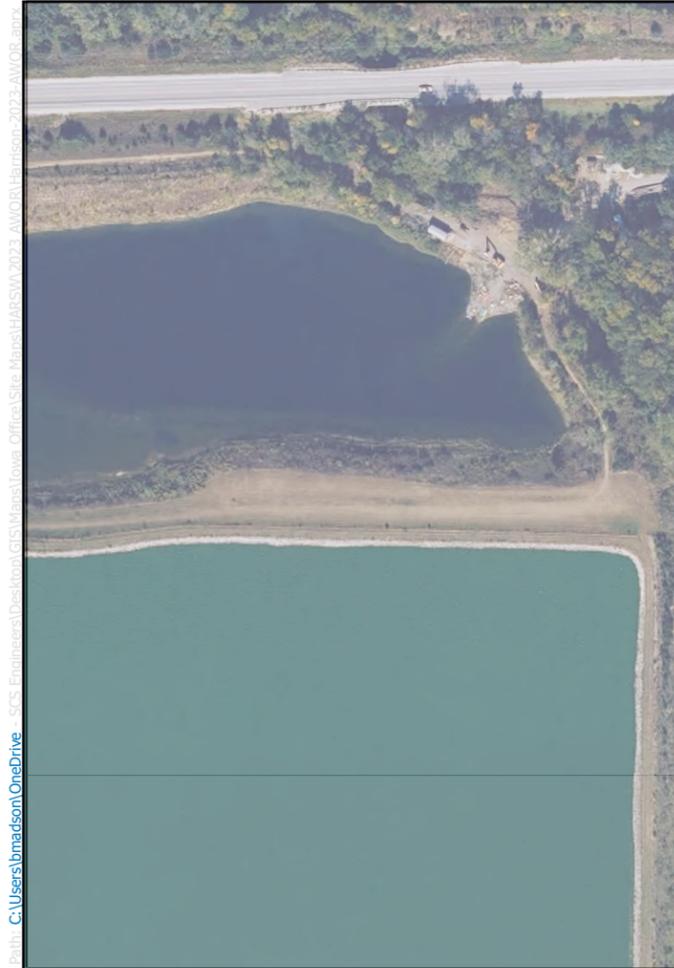
Monitoring Points				Methane Concentration % of LEL							
Name	Type	Description	2/25/2025	S (Y/N/U)	6/11/2025	S (Y/N/U)	9/9/2025	S (Y/N/U)	12/11/2025	S (Y/N/U)	
#1	G-1	Outdoor	Northwest corner of East MSWLF unit	0%		0%		0%		0%	
#2	G-2	Outdoor	Northeast corner of East MSWLF unit	0%		0%		0%		0%	
#3	G-3	Outdoor	Southeast corner of East MSWLF unit	0%		0%		0%		0%	
#4	G-4	Outdoor	Southwest corner of East MSWLF unit	0%		0%		0%		0%	
#5	G-5	Outdoor	Center of north boundary of West MSWLF unit	0%		0%		0%		0%	
#6	G-6	Outdoor	Center of east boundary of West MSWLF unit	0%		0%		0%		0%	
#7	G-7	Outdoor	Center of south extent of West MSWLF unit	0%		0%		0%		0%	
#8	G-8	Outdoor	Center of west boundary of West MSWLF unit	0%		0%		0%		0%	
#9	G9: Scale House	Indoor	Scale House	0%		0%		0%		0%	
#10	G10: Transfer Station Floor Drain	Indoor	Transfer Station floor drain	0%		0%		0%		0%	
#11	G11: Cleanout East of Transfer Station	Outdoor	Cleanout east of Transfer Station	0%		0%		0%		0%	
#12	G12: Leachate Vault	Outdoor	Leachate vault	0%		0%		4%		0%	
#13	G13: Shop	Indoor	Shop	0%		0%		0%		0%	
#14	G14: LFGW-1	Subsurface	LFGW-1	0%	N	0%	N	0%	N	0%	N
#15	G15: MW-12A	Subsurface	Subsurface of MW-12A	0%	N	0%	N	0%	N	0%	N
#17	G17: LFGW-3	Subsurface	LFGW-3	0%	N	0%	N	0%	N	0%	N
#18	G18: LFGW-4R	Subsurface	LFGW-4R	0%	N	0%	N	0%	N	0%	N
#19	G19: LFGW-5	Subsurface	LFGW-5	0%	N	0%	N	0%	N	0%	N
#20	G20: LFGW-6	Subsurface	LFGW-6	0%	N	0%	N	1%	N	0%	N
#21	G-21: HHM Storage Building	Indoor	HHM Storage Building	0%		0%		0%		0%	
#22	G-22: Storage Shed	Indoor	Storage Shed	0%		0%		0%		0%	

Comments:

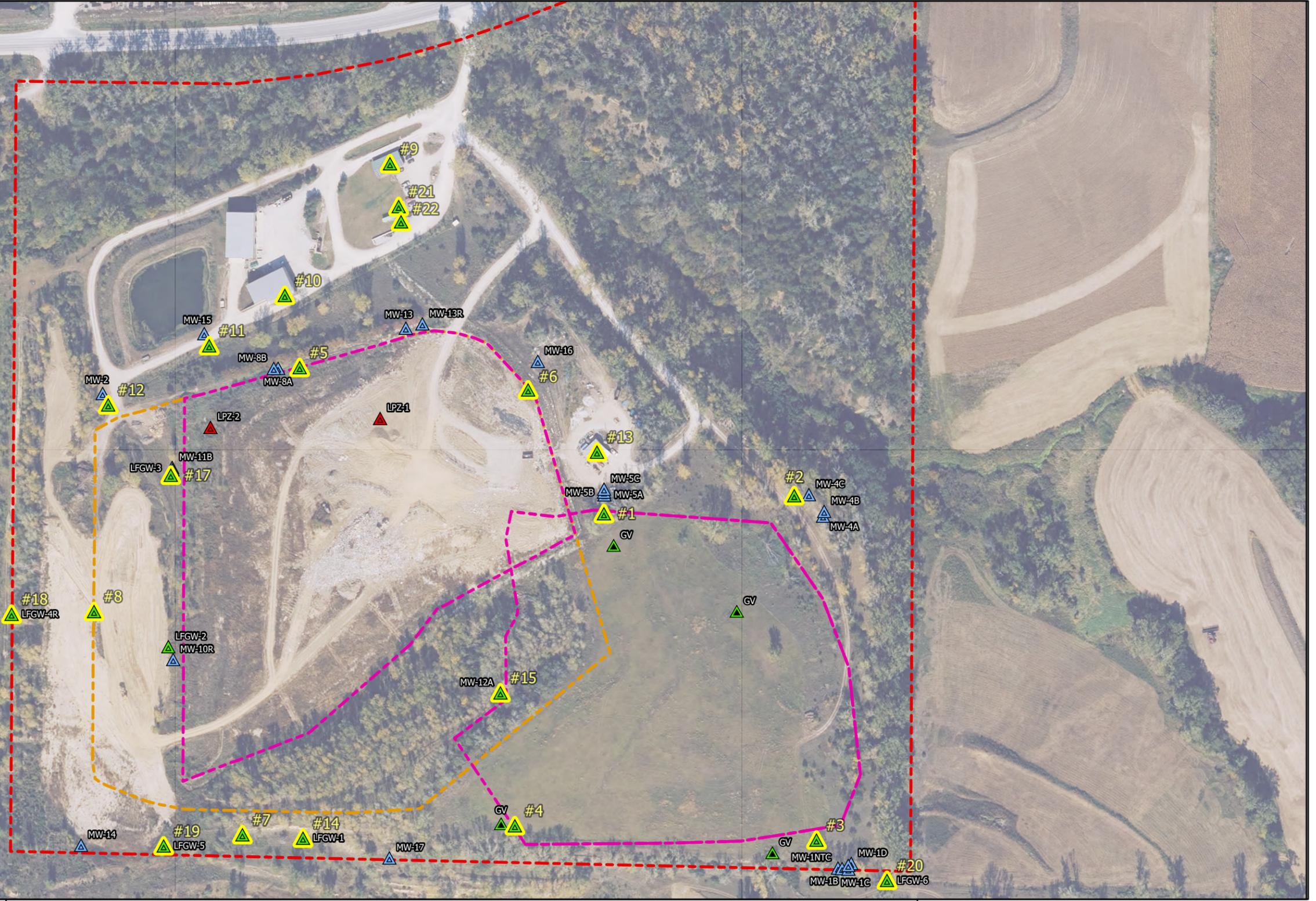
S(Y/N/U) - Was screen submerged, yes, no, or unknown.

SCS Engineers monitors methane concentrations on a quarterly basis.

No action limits were exceeded during this reporting period.



No.	Monitoring Point	Type	Description
#1	G-1	Outdoor	Northwest corner of East MSWLF unit
#2	G-2	Outdoor	Northeast corner of East MSWLF unit
#3	G-3	Outdoor	Southeast corner of East MSWLF unit
#4	G-4	Outdoor	Southwest corner of East MSWLF unit
#5	G-5	Outdoor	Center of north boundary of West MSWLF unit
#6	G-6	Outdoor	Center of east boundary of West MSWLF unit
#7	G-7	Outdoor	Center of south extent of West MSWLF unit
#8	G-8	Outdoor	Center of west boundary of West MSWLF unit
#9	G9: Scale House	Indoor	Scale House
#10	G10: Transfer Station Floor drain	Indoor	Transfer Station floor drain
#11	G11: Cleanout East of Transfer Station	Outdoor	Cleanout east of Transfer Station
#12	G12: Leachate Vault	Outdoor	Leachate vault
#13	G13: Shop	Indoor	Shop
#14	G14: LFGW-1	Subsurface	LFGW-1
#15	G15: MW-12A	Subsurface	Subsurface of MW-12A
#17	G17: LFGW-3	Subsurface	LFGW-3
#18	G18: LFGW-4R	Subsurface	LFGW-4R
#19	G19: LFGW-5	Subsurface	LFGW-5
#20	G20: LFGW-6	Subsurface	LFGW-6
#21	G-21: HHM Storage Building	Indoor	HHM Storage Building
#22	G-22: Storage Shed	Indoor	Storage Shed



## Methane Monitoring Network

Legend	
	Methane Monitoring Point
	Monitoring Well
	Landfill Gas Well
	Leachate Piezometer
	Gas Vent
	Current Waste Boundary
	Future Waste Boundary
	Approximate Property Boundary

Harrison County Sanitary Landfill  
 Logan, Iowa  
 Project No: 27224470.26  
 Drawing Date: February 2026

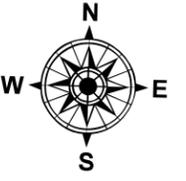


Figure 1



Date Saved: 2/22/2026 10:07 AM  
 User: hmadson  
 Path: C:\Users\hmadson\OneDrive