

West Des Moines, IA

PROJECT: Adair County LF, FY26 Env Comp, IA 27224370.26 DATE: 2/25/2026

SUBJECT: Adair County Sanitary Landfill - 2025 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, and Landfill Gas Annual Report TRANSMITTAL ID: 00003

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
Brad Davison		brad.davison@dnr.iowa.gov	

REMARKS: Brad -

SCS Engineers, on behalf of the Adair County Landfill and Recycling Center, is submitting the 2025 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, and Landfill Gas Annual Report for the Adair 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: 2/25/2026  
TRANSMITTAL ID: 00003

## DESCRIPTION OF CONTENTS

QTY	DATED	TITLE	NOTES
1	2/25/2026	Adair County Sanitary Landfill - 01-SDP-01-74C - 2025 AWQR.LCSPER.MMR 02.25.2026.pdf	

## COPIES:

Becky Jolly  
DJ Luhrs (Adair County Sanitary Landfill & Recycling Center  
Commission)  
Sean Marczewski (SCS Engineers)  
Nathan Ohrt (SCS Engineers)

February 25, 2026  
File No. 27224370.26

Mr. Brad Davison  
Iowa Department of Natural Resources  
Land Quality Bureau  
6200 Park Avenue  
Des Moines, Iowa 50321

Subject: 2025 Annual Water Quality Report, 2025 Leachate Control System Performance  
Evaluation Report, and 2025 Landfill Gas Annual Report  
Adair County Sanitary Landfill  
Permit No. 01-SDP-01-74C

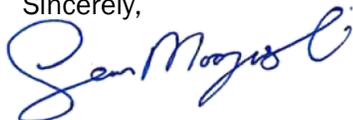
Dear Brad:

On behalf of the Adair County Landfill and Recycling Center, SCS Engineers is submitting the 2025 Annual Water Quality Report as required by Iowa Department of Natural Resources Permit No. 01-SDP-01-74C. 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 E to fulfill the requirements listed in IAC 113.7(5)b(14). The 2025 Landfill Gas Report in Appendix F is presented to fulfill the landfill gas monitoring and reporting requirements listed in IAC 113.9(2)d.

If you have any questions regarding these reports, please contact Sean Marczewski at (712) 661-9682.

Sincerely,



Sean Marczewski  
Senior Project Professional  
SCS Engineers



Nathan Ohrt  
Senior Project Professional  
SCS Engineers

SAM/NPO

Copies: Mr. DJ Luhrs, Director, Adair County Sanitary Landfill and Recycling Center



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

## Adair County Sanitary Landfill Permit #01-SDP-01-74C

Adair County Sanitary Landfill and Recycling Center Commission  
1645 State Highway #25  
Menlo, IA 50164

**SCS ENGINEERS**

27224370.26 | February 2026

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

## CERTIFICATION

Prepared by:  Date: February 25, 2026

Typed: Sean Marczewski

Reviewed by:  Date: February 25, 2026

Typed: Nathan Ohrt

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 February and September 2025 during this reporting period at the closed Adair County Sanitary Landfill (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 closed Adair County Sanitary Landfill:

- **Solid Waste Landfill Status:** Closed.
- **Types of Wastes Accepted:** Currently none. While active the Adair County Sanitary Landfill & Recycling Center Commission planning area accepted municipal solid waste and construction and demolition waste that were collected from an approximate population of 10,000 in Adair County and select cities in Guthrie County.
- **Applicable IAC Rules:** 567-113 current version.

### Comments

The following summarizes points of special emphasis:

- There were two newly identified and ten ongoing well/detected constituent pairs with statistically significant increases (SSIs) above background during this reporting period as summarized in **Table 7**. The monitoring wells with SSIs are in assessment monitoring and do not require a resample. Therefore, the SSIs were not confirmed.
- There were no statistically significant levels (SSLs) above the GWPSs during the 2025 reporting period.
- Background monitoring will continue for monitoring well MW-10. Detection monitoring will continue for monitoring points GU-2 and GWD-1. Assessment monitoring will continue for monitoring wells MW-2, MW-3, MW-6, MW-7, and MW-9.

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### **Acronyms/Abbreviations:**

ACM = Assessment of Corrective Measures  
CAMP = Corrective Action Monitoring Plan  
CL = Control Limit - Mean plus Two Standard Deviations  
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  
SS = 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

## 1.0 SITE BACKGROUND

### 1.1 SITE HISTORY

The Adair County Landfill and Recycling Center facility (Site) is located on Highway 25 approximately 6 miles south of Interstate 80 and 6.5 miles north of the City of Greenfield. The Site property consists of approximately 80 acres and contains two landfill areas: the unlined landfill (approximately 21.4 acres) and the 2006 Development and Operation Plan expansion area, of which only Phase 1 (approximately 2.4 acres) was constructed with an alternative liner and a leachate collection system. Both areas are now closed, with the closure activities for the unlined landfill completed during the summer of 2009 and the Phase 1 expansion area closed in December 2012.

### 1.2 SITE HYDROGEOLOGY

The following summary regarding the Site hydrogeology is an excerpt from the September 2020 Revised Hydrologic Monitoring System Plan (HMSP) by SCS Engineers. The Site hydrogeology, as described below, was originally reported by Barker Lemar Engineering Consultants in the previous version of the Site's HMSP (September 2008):

*"The site is located within the geomorphic setting referred to as the Southern Iowa Drift Plain. Topography is characterized by steeply rolling hills interspersed with areas of uniformly level upland divides and level alluvial lowlands. Previous research indicated that the regional stratigraphy located within the landfill area consists of sediments of either glacial or alluvial origin. The glacial sediments are comprised of till, glacial-fluvial, and loess deposits. Alluvial sediments are found on flood plains and along stream channels. Present-day soils are derived from the weathering of these parent sediments. Weathered particles of these parent materials were lifted by the wind to be deposited as a blanket of loess over the entire land surface within the landfill area.*

*The area near the landfill consists of relatively well drained, hilly terrain resulting primarily from fluvial erosion of loess deposits. The drainage of the area surrounding the landfill is generally to Turkey Creek located to the west and north of the landfill property. This creek discharges into Middle River located approximately three miles east of the site. The topographically upgradient portion of the site is located in the east-southeast area of the landfill. Surface water runoff is primarily through pre-existing natural gullies which extend toward the west and north.*

*The site geology sequence was described in the Hydrogeologic Investigation of the Adair County Sanitary Landfill, Adair County, Iowa (September 21, 1990), which was prepared by Howard R. Green Company as loess over glacial till over bedrock. In general, the soil borings in the report indicated that the site is covered with a loess mantle with thicknesses ranging from 16 to 30 feet. The loess deposits are typically thickest in the upland areas and thinner in gullies and valleys.*

*The thickness of the glacial till unit beneath the loess varies from 16 to 134. The composition of the till has been classified by grain-size distribution analyses as silty-clay rich*

till to a sandy-clay rich till. A five-foot thick sand layer was observed within the till at the base of one of the borings. The glacial till is typically encountered approximately 6 to 20 feet below the base of the landfill (Howard R. Green Company, 1990).

Bedrock at the site reportedly consists of Pennsylvanian age shale, sandstone, and thin limestone, and is not a regional aquifer. The surface of the bedrock is irregular with the site situated on an elongated high ridge. It appears that the bedrock surface slopes from the site to both the east (toward the Middle River) and to the west (toward the Nodaway River). The Pennsylvanian bedrock is approximately 750 feet thick below the site and is a regional aquiclude (Howard R. Green Company, 1990).

The Hydrogeologic Investigation Report included in the 2006 DOPS notes that the average hydraulic conductivity of the loess unit ( $1.30 \times 10^{-7}$  cm/sec) is greater than that of the underlying glacial till unit ( $9.70 \times 10^{-8}$  cm/sec). Although the average loess hydraulic conductivity values were reportedly higher than the average glacial till values, the 2006 DOPS states that the shallow glacial till soils along with the overlying loess are collectively considered a hydraulic unit. The 1990 Hydrogeologic Investigation Report indicated calculated transmissivities of  $3.4 \times 10^{-2}$  m<sup>2</sup>/day to  $6.3 \times 10^{-2}$  m<sup>2</sup>/day for the loess unit and  $1.9 \times 10^{-2}$  m<sup>2</sup>/day to  $3.3 \times 10^{-2}$  m<sup>2</sup>/day for the glacial till unit, and repeatedly noted the water table existing within the loess rather than the loess and glacial till units collectively. The hydrogeology of Southern Iowa Drift Plain strata typically includes the phreatic water table surface existing at or slightly above the interface of the loess and glacial till units. Based on this generality and the reported higher values of hydraulic conductivity and transmissivity for the loess unit observed within both of the previous hydrogeologic investigations, it is likely that the water table exists primarily within the base of the loess unit at the loess/glacial till interface."

## 2.0 SAMPLING STATUS SUMMARY

The DNR has provided a series of tables to consistently convey information related to groundwater monitoring at municipal solid waste landfills throughout Iowa. These tables are discussed within the text in appropriate sections and are included in the Tables section of this report. **Table 1** provides an overview of the sampling status for the Site, 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, 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 since 2008. **Figure 1** depicts the Site Monitoring Network for the closed Adair County Sanitary Landfill.

Field sheets from the February and September 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 closed Adair 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 met and is next scheduled for.

#### 3.1 HIGH AND LOW WATER LEVELS EVALUATION

Groundwater elevations were measured above the top of the screened interval in each monitoring well during the 2025 sampling events. The February and September 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 the collection of representative groundwater samples and to detect contamination, if present. The HMSP monitoring wells are within 600 feet from other monitoring wells in the unlined former fill area, within 300 feet from other monitoring wells in the 2006 Development and Operation Plan expansion area, or at alternate spacing criteria dependent upon groundwater flow paths. Thus, the horizontal spacing of the HMSP monitoring wells is acceptable.

#### 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. The Adair County Sanitary Landfill is closed and no waste disposal is occurring. Groundwater contours were produced for the Landfill using groundwater elevation data measured during the September 2025 groundwater sampling event. The September 2025 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-2, MW-3, MW-6, MW-7, MW-9, and MW-10 during the 2025 groundwater sampling events. The difference between the as-drilled and 2025 measured well depths at MW-2, MW-3, MW-7, MW-9, and MW-10 were not greater than 0.3 feet. The difference between the as-drilled and 2025 measured well depths at MW-6 was 1.30 feet, but MW-6 has consistently measured 1 to 3 feet deeper than the as-drilled well depth. The difference between the MW-6 measured and as-drilled well depths may be the result of the as-drilled well depth having been reported as feet below ground surface (ft bgs), and the measured well depth is reported as feet below top-of-casing. It does not appear siltation is affecting the ability of the monitoring wells to produce representative groundwater samples.

### **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 Adair 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. Based on the recorded sampling flow rates, drawdown observations, and laboratory and statistical results, in addition to the fact that groundwater samples were collected from the HMSP monitoring wells during the 2025 sampling events (i.e., no “dry” wells), monitoring well deterioration is not evident in the HMSP monitoring well network for the Site.

### **3.5 WELL MAINTENANCE RECOMMENDATIONS**

Based on observations during the September 2025 sampling event, maintenance does not appear to be necessary at this time. Any well maintenance items noted during 2026 sampling activities will be communicated to Site 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 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 levels below regulatory standards when technically feasible with the laboratory method utilized. 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.

## 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 MS 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 Site samples or had measured concentrations within the historical range.

## 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 February and September 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 above the method detection limit and below the reporting limit, and total suspended solids were not considered in the duplicate comparison.

Field duplicate samples were collected at monitoring wells MW-7 and MW-6 during the February and September 2025 sampling events, respectively. The RPD comparisons were within an acceptable range and show a general agreement between the site samples and field duplicate samples, indicating 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 Adair County Sanitary Landfill field sampling standard operating procedures, the samples collected during this reporting period are considered to be representative of Site conditions at the locations and times they were obtained, 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 STANDARDS HISTORY

Statistical evaluations are completed for the Site on a semi-annual frequency. **Table 5** provides the background and GWPS summary for the Site. **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 SSLs, which again for the Site are none. Data used for the statistical evaluations are included in **Appendix C** (also known as **Table 9** of the DNR water quality report format). The Summary of Statistical Method and Output, which details the statistical evaluations from both the first and second semi-annual sampling events, is included in **Appendix D**. **Table 10** illustrates the historical SSIs and SSLs since 2020. **Table 11** is the Corrective Action Trend Analysis for the Site; however, no corrective action is required for the Site. Standards history graphs are included in **Appendix G**.

The Site was assigned a site-specific GWPS in 2012 for cobalt (0.052 mg/L) due to historically high levels of cobalt detected site-wide (Doc #70013). It should be noted that the site-specific GWPS was calculated using data collected prior to low-flow sampling methods and was eliminated prior to the 1<sup>st</sup> 2023 statistical evaluation due to background cobalt concentrations being below the state-wide standard.

## 6.0 RECOMMENDATIONS

There were twelve well/detected constituent pairs with SSIs above background. The monitoring wells with SSIs are in assessment monitoring and do not require a resample. Therefore, the SSIs were not confirmed. No SSLs were indicated during the 2025 statistical analyses. Detection monitoring will continue for GU-2, GWD-1, and background monitoring well MW-10. Assessment monitoring will continue for monitoring wells MW-2, MW-3, MW-6, MW-7, and MW-9. Sampling for the full list of

Appendix II constituents is scheduled for 2026 for monitoring wells MW-2 and MW-9 and 2027 for monitoring wells MW-3, MW-6, and MW-7.

## **7.0 ADDITIONAL REPORTING**

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

## Tables

**Table 1**  
**Monitoring Program Summary**  
**2025 Annual Water Quality Report**  
**Adair County Sanitary Landfill**  
**Permit No. 01-SDP-01-74C**

Monitoring Point	Formation	Current Monitoring Program	Change For Next Sampling Event	Constituent(s) With SSI	Constituent(s) With SSL	Total Number of Samples in Each Monitoring Program Since 2008		
						Detection	Assessment	Corrective Action
<b>HMSP Monitoring Points</b>								
MW-2	Glacial Till	Assessment	No Change	Arsenic, Barium, Cobalt, Nickel, Benzene	None	6	34	0
MW-3	Glacial Till	Assessment	No Change	None	None	10	30	0
MW-6	Glacial Till	Assessment	No Change	Selenium	None	8	30	0
MW-7	Glacial Till	Assessment	No Change	Copper, Lead, Nickel, Zinc	None	10	30	0
MW-9	Glacial Till	Assessment	No Change	Cobalt, Nickel	None	6	34	0
MW-10	Glacial Till	Background	No Change	None	Not applicable	39	0	0
GU-2	Glacial Till	Detection	No Change	None (no samples)	Not applicable	12	0	0
GWD-1	Glacial Till	Detection	No Change	None	Not applicable	3	0	0
<b>Other Monitoring Points</b>								
MW-15	Glacial Till	Groundwater level	No Change	Not applicable	Not applicable	Not applicable		
MW-17	Glacial Till	Groundwater level	No Change	Not applicable	Not applicable	Not applicable		
MW-19	Glacial Till	Groundwater level	No Change	Not applicable	Not applicable	Not applicable		
MW-20	Glacial Till	Groundwater level	No Change	Not applicable	Not applicable	Not applicable		
MW-21	Glacial Till	Groundwater level	No Change	Not applicable	Not applicable	Not applicable		
MW-22	Glacial Till	Groundwater level	No Change	Not applicable	Not applicable	Not applicable		

Notes:

SSL - Statistically Significant Level above groundwater protection standard.

SSI - Statistically Significant Increase above background level.

**Table 2**  
**Monitoring Program Implementation Schedule**  
**2025 Annual Water Quality Report**  
**Adair County Sanitary Landfill**  
**Permit No. 01-SDP-01-74C**

Monitoring Point	Recent Sampling Dates and Constituents		Upcoming Sampling Dates and Constituents		Full Appendix II Sample Dates	
	February 2025	September 2025	1 <sup>st</sup> 2026 Semi-Annual	2 <sup>nd</sup> 2026 Semi-Annual	Collected Since January 1, 2016	Next Scheduled Event
MW-2	Appendix I, TSS	Appendix I, TSS	Appendix II, TSS	Appendix I+, TSS	Spring 2016, Spring 2021	2026
MW-3	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Spring 2017, Spring 2022	2027
MW-6	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Spring 2017, Spring 2022	2027
MW-7	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Spring 2017, Spring 2022	2027
MW-9	Appendix I, TSS	Appendix I, TSS	Appendix II, TSS	Appendix I+, TSS	Spring 2016, Fall 2021	2026
MW-10	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Not applicable	Not applicable
GU-2	No Sample (No Flow)	No Sample (No Flow)	Appendix I, TSS	Appendix I, TSS	Not applicable	Not applicable
GWD-1	No Sample (No Flow)	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Not applicable	Not applicable

Notes:

TSS - Total Suspended Solids.

Appendix I+ refers to parameters detected during the Appendix II sampling event that are outside of the Appendix I parameter list.

**Table 3**  
**Monitoring Well Maintenance and Performance Re-Evaluation Schedule**  
**2025 Annual Water Quality Report**  
**Adair County Sanitary Landfill**  
**Permit No. 01-SDP-01-74C**

<b>Compliance with:</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>
567 IAC 113.10(2)"f"(1) high and low water levels	Completed	Completed	Included <sup>(2)</sup>	Scheduled
567 IAC 113.10(2)"f"(2) changes in the hydrologic setting and flow paths	Completed	Completed	Included <sup>(1)</sup>	Scheduled
567 IAC 113.10(2)"f"(3) well depths	Completed	Completed	Included <sup>(2)</sup>	Scheduled
567 IAC 113.10(2)"f"(4) well recharge rates and chemistry		Completed		Scheduled

Notes:

(1) See Section 3.2 of this report.

(2) See Table 4.

**Table 4**  
**Monitoring Well Maintenance and Performance Summary**  
**2025 Annual Water Quality Report**  
**Adair County Sanitary Landfill**  
**Permit No. 01-SDP-01-74C**

Well	Top of casing	Top of Screen	Total Depth		Date of Measurements		Maximum Depth
					2/6/2025	9/22/2025	Discrepancy (ft)
MW-2	1236.14	1223.11	22.7	Groundwater Level (ft)	9.77	10.62	-0.2
				Groundwater Elevation (Ft MSL)	1226.37	1225.52	
				Measured Well Depth (ft)	22.9	22.9	
				Submerged screen	Y	Y	
MW-3	1226.51	1208.69	27.9	Groundwater Level (ft)	15.69	15.44	-0.2
				Groundwater Elevation (Ft MSL)	1210.82	1211.07	
				Measured Well Depth (ft)	28.1	28.0	
				Submerged screen	Y	Y	
MW-6	1227.26	1214.52	20.1	Groundwater Level (ft)	10.27	12.27	-1.3
				Groundwater Elevation (Ft MSL)	1216.99	1214.99	
				Measured Well Depth (ft)	21.4	21.4	
				Submerged screen	Y	Y	
MW-7	1245.53	1227.68	27.9	Groundwater Level (ft)	12.65	13.57	-0.1
				Groundwater Elevation (Ft MSL)	1232.88	1231.96	
				Measured Well Depth (ft)	28.0	28.0	
				Submerged screen	Y	Y	
MW-9	1259.73	1241.89	27.8	Groundwater Level (ft)	13.65	13.58	-0.2
				Groundwater Elevation (Ft MSL)	1246.08	1246.15	
				Measured Well Depth (ft)	28.0	28.0	
				Submerged screen	Y	Y	
MW-10	1322.44	1299.65	32.8	Groundwater Level (ft)	16.29	14.96	-0.3
				Groundwater Elevation (Ft MSL)	1306.15	1307.48	
				Measured Well Depth (ft)	33.1	33.0	
				Submerged screen	Y	Y	

**Table 5**  
**Background and GWPS Summary**  
**2025 Annual Water Quality Report**  
**Adair County Sanitary Landfill**  
**Permit No. 01-SDP-01-74C**

**Interwell Background/GWPS (MW-10)**

Constituent	Units	Samples	Detections	Min	Max	Mean	Background level	Statistical Test	GWPS	Source
<b>Inorganics</b>										
Antimony (Sb)	mg/L	15	0	0.0005 (1/2 RL)	0.001 (1/2 RL)	0.0008	< 0.002	DQR	0.006	MCL
Arsenic (As)	mg/L	15	0	0.001 (1/2 RL)	0.001 (1/2 RL)	0.001	< 0.002	DQR	0.01	MCL
Barium (Ba)	mg/L	21	21	0.148	0.195	0.17297619	0.1967	PL (P)	2	MCL
Beryllium (Be)	mg/L	15	0	0.0005 (1/2 RL)	0.0005 (1/2 RL)	5.00E-04	< 0.001	DQR	0.004	MCL
Cadmium (Ca)	mg/L	16	6	0.00005 (1/2 RL)	0.000372	0.00015994	0.000372	PL (NP)	0.005	MCL
Chromium (Cr)	mg/L	15	1	0.00047*	0.0025 (1/2 RL)	0.00236467	0.0025	PL (NP)	0.1	MCL
Cobalt (Co)	mg/L	15	3	0.000038*	0.00025 (1/2 RL)	0.00021027	0.00025	PL (NP)	0.0021	SWS
Copper (Cu)	mg/L	15	1	0.001 (1/2 RL)	0.0025 (1/2 RL)	0.00236767	0.0025	PL (NP)	1.3	MCL
Lead (Pb)	mg/L	15	2	0.00012*	0.00522	0.00057267	0.00522	PL (NP)	0.015	MCL
Nickel (Ni)	mg/L	15	0	0.0025 (1/2 RL)	0.0025 (1/2 RL)	0.0025	< 0.005	DQR	0.1	SWS
Selenium (Se)	mg/L	17	7	0.00091*	0.0025 (1/2 RL)	0.00192659	0.0025	PL (NP)	0.05	MCL
Silver (Ag)	mg/L	15	0	0.0005 (1/2 RL)	0.0005 (1/2 RL)	5.00E-04	< 0.001	DQR	0.1	SWS
Thallium (Tl)	mg/L	16	1	0.0005 (1/2 RL)	0.00129	0.00054938	0.00129	PL (NP)	0.002	MCL
Vanadium (V)	mg/L	19	8	0.000621*	0.0025 (1/2 RL)	0.00184016	0.0025	PL (NP)	0.035	SWS
Zinc (Zn)	mg/L	16	1	0.005 (1/2 RL)	0.0128*	0.0092375	0.0128	PL (NP)	2	SWS

Notes:

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

\* - J Flag, concentration was below the reporting limit but above the method detection limit. The concentration is estimated.

Acronyms/Abbreviations:

RL = Reporting Limit

PL = Prediction Limit

GWPS = Groundwater Protection Standard (mg/L)

MCL = EPA Maximum Contaminant Level

DQR = Double Quantification Rule

NP = Non-Parametric

SSGWPS = Site-Specific GWPS

P = Parametric

SWS = Statewide Standard

Comments:

- 1) **Water quality results and effectiveness of the statistical data evaluation criteria:** Statistical evaluations consist of prediction limits, double quantification rule, confidence intervals/confidence bands, as appropriate, and do not use data from the background wells for development of the confidence intervals or confidence bands.
- 2) **Changes to the previous statistical method during reporting period:** There were no changes to the statistical method during the 2025 reporting period.
- 3) **Re-sampling strategy:** Retesting is performed on a 1-of-2 scheme.
- 4) **Justification for data exclusion:** Due to the effect of elevated TSS on inorganic concentrations, inorganic data measured prior to the installation of low-flow sampling apparatuses during the 2015 reporting period were no longer considered representative of groundwater quality and removed from statistical consideration beginning with the 1<sup>st</sup> 2023 semi-annual statistical evaluation.

**Table 6**  
**Summary of Well/Detected Constituent Pairs With No Previous SSIs**  
**2025 Annual Water Quality Report**  
**Adair County Sanitary Landfill**  
**Permit No. 01-SDP-01-74C**

<b>Monitoring Point</b>	<b>Constituent</b>	<b>Units</b>	<b>Most Recent Result</b>	<b>Background Standard</b>
MW-7	Lead	mg/L	0.0149	0.00522
	Zinc	mg/L	0.022	0.0128

Notes:

- 1) Criteria for inclusion in this table is a well/constituent pair with an indicated SSI during this current reporting period and no SSI in the immediately preceding reporting period.
- 2) A single exceedance in an assessment monitoring well is recorded above as an SSI. Retesting is not performed as these monitoring wells are not in the detection monitoring program.

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:** Not applicable.
- 5) **Resampling strategy:** Retesting is performed on a 1-of-2 scheme.

Table 7  
 Summary of Ongoing and Newly Identified SSIs  
 2025 Annual Water Quality Report  
 Adair County Sanitary Landfill  
 Permit No. 01-SDP-01-74C

Monitoring Point	Constituent	Units	Most recent result	Background Standard	Lower Confidence Limit	GWPS	Sample Dates		
							Initial Exceedance	Resample(s)	5th background sample
MW-2	Arsenic	mg/L	0.00616	< 0.002	0.001822	0.01	6/22/2023	NA	10/19/2017
	Barium	mg/L	0.193	0.1967	0.1585	2	6/22/2023	NA	10/19/2017
	Benzene	µg/L	0.85	<0.5	0.3899	5	6/20/2008	NA	11/13/2009
	Cobalt	mg/L	0.000505	0.00025	0.0004405	0.0021	6/22/2023	NA	10/19/2017
	Nickel	mg/L	< 0.005	< 0.005	0.0025	0.1	6/22/2023	NA	10/19/2017
MW-3	None								
MW-6	Selenium	mg/L	0.00543	0.0025	0.003645	0.05	6/22/2023	NA	10/19/2017
MW-7	Copper	mg/L	0.0224	0.0025	0.00226	1.3	7/25/2024	NA	10/19/2017
	Lead	mg/L	0.0149	0.00522	0.00025	0.015	9/22/2025	NA	10/19/2017
	Nickel	mg/L	0.0188	< 0.005	0.01657	0.1	6/22/2023	NA	10/19/2017
	Zinc	mg/L	0.022	0.0128	0.01	2	9/22/2025	NA	10/19/2017
MW-9	Cobalt	mg/L	0.000773	0.00025	0.000538	0.0021	6/22/2023	NA	10/19/2017
	Nickel	mg/L	0.00629	< 0.005	0.004876	0.1	6/22/2023	NA	10/19/2017
GU-2	No samples								
GWD-1	None								

- Notes:
- 1) Shaded rows denote constituent/well pairs with SSIs indicated in 2025 but not 2024. Unshaded rows denote constituent/well pairs with SSIs indicated during both the 2024 and 2025 reporting periods.
  - 2) NA - Not applicable. Monitoring well is in assessment monitoring and does not require a resample.

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

**Table 8**  
**Summary of Ongoing and Newly Identified SSLs**  
**2025 Annual Water Quality Report**  
**Adair County Sanitary Landfill**  
**Permit No. 01-SDP-01-74C**

Monitoring Point	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:

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

**Table 9**  
**Summary of Groundwater Chemistry**  
**2025 Annual Water Quality Report**  
**Adair County Sanitary Landfill**  
**Permit No. 01-SDP-01-74C**

The Summary of Groundwater Chemistry is located in Appendix C.

Analytical data prior to 2025 is available in the 2024 Annual Water Quality Report dated January 20, 2025 (Doc #111897).

**Table 10**  
**Historical SSI and SSL**  
**2025 Annual Water Quality Report**  
**Adair County Sanitary Landfill**  
**Permit No. 01-SDP-01-74C**

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-2	Arsenic												
	Barium												
	Benzene												
	Cobalt												
	Chlorobenzene												
	cis-1,2-Dichloroethene												
	Nickel												
	Thallium												
MW-6	Acetone												
	Cobalt												
	Selenium												
MW-7	Acetone												
	Cadmium												
	Cobalt												
	Copper												
	Lead												
	Nickel												
	Zinc												
MW-9	Cobalt												
	Nickel												

Comments:

- 1) Background was updated during the 2<sup>nd</sup> 2023 semi-annual statistical evaluation. Inorganic data from the sampling events that occurred prior to the implementation of low-flow sampling, which began during the 2<sup>nd</sup> 2015 semi-annual sampling event, were removed from statistical consideration.
- 2) Retesting is not performed as these monitoring wells are not in the detection monitoring program.

**Table 11**  
**Corrective Action Trend Analysis**  
**2025 Annual Water Quality Report**  
**Adair County Sanitary Landfill**  
**Permit No. 01-SDP-01-74C**

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

Notes:

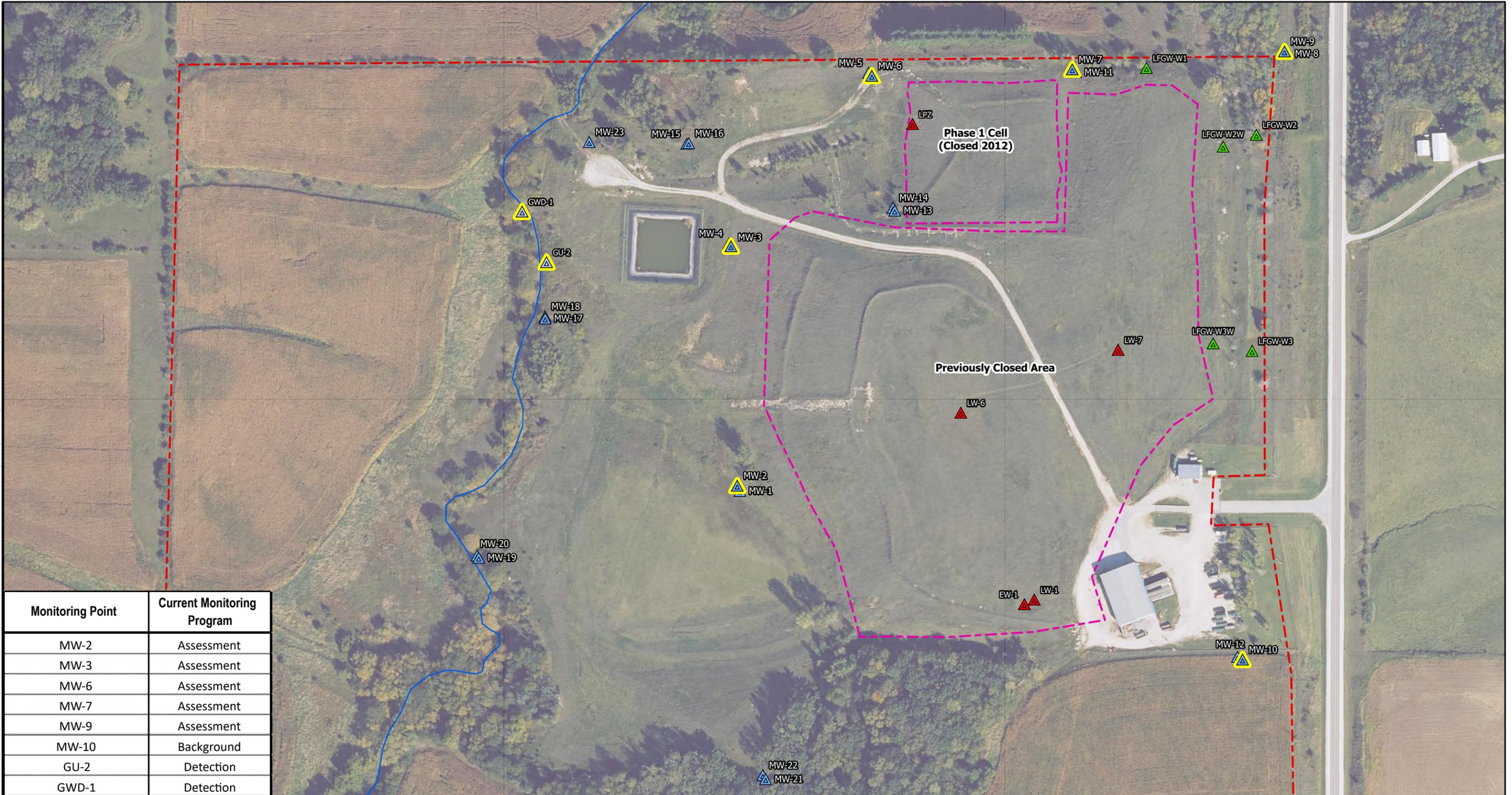
- N - Number of Samples.
- S - Mann-Kendall Statistics.

Comments:

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

# Figures

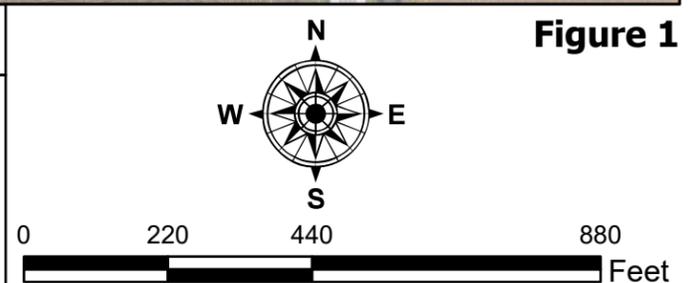
C:\Users\jmadson\OneDrive - SCS Engineers\Desktop\GIS\MapInfo\Adair-2023-AMON-APP  
 User: jmadson  
 Date Saved: 7/24/2023 2:51 PM



Monitoring Point	Current Monitoring Program
MW-2	Assessment
MW-3	Assessment
MW-6	Assessment
MW-7	Assessment
MW-9	Assessment
MW-10	Background
GU-2	Detection
GWD-1	Detection

## Approved Monitoring Network

<b>Legend</b> <ul style="list-style-type: none"> <li><span style="color: yellow;">▲</span> HMSG Monitoring Well</li> <li><span style="color: yellow;">▲</span> HMSG Groundwater Underdrain Monitoring Point</li> <li><span style="color: blue;">▲</span> Monitoring Well</li> <li><span style="color: blue;">▲</span> Groundwater Underdrain Monitoring Point</li> <li><span style="color: green;">▲</span> Landfill Gas Monitoring Well</li> <li><span style="color: red;">▲</span> Leachate Monitoring Point</li> </ul>	<ul style="list-style-type: none"> <li><span style="color: blue;">—</span> Stream</li> <li><span style="border-bottom: 1px dashed pink;">—</span> Approximate Waste Boundary</li> <li><span style="border-bottom: 1px dashed red;">—</span> Approximate Property Boundary</li> </ul>	Adair County Sanitary Landfill Adair, IA Project No: 27224370.26 Drawing Date: February 2026
--	--	---







Appendix A  
Field Sampling Forms













FORM FOR SURFACE WATER SAMPLING

Site Name Adair County Sanitary Landfill Permit No.
Surface Monitoring Point No. GU-2 Date 2/6/25

Name of Person Sampling Michael Morgan

A. TYPE OF MONITORING POINT

Stream
Road Ditch
Drainage Ditch
Open Tile
Tile with Riser
Other Pipe

B. PURPOSE OF MONITORING POINT

Upstream
Within Landfill
Downstream
Other

C. MONITORING POINT CONDITIONS

[Blank lines for monitoring point conditions]

Was monitoring point dry? No Too little water to sample?
Was water flowing? No If yes, estimate quantity (cfs)
If yes, estimate depth (inches)

Was water discolored?
Does water have odor?
Was ground discolored?
Litter present?

Comments Pipe found near orange stickup on East bank. Pictures taken from west bank. Stream frozen, no flowing water observed.

D. FIELD MEASUREMENTS

Weather Conditions

Field Measurements (after stabilization):

Temperature Units Celsius
Equipment Used
pH Units Standard units
Equipment Used
Spec. Conductance Units uS/cm
Equipment Used

COMMENTS

FORM FOR SURFACE WATER SAMPLING

Site Name Adair County Sanitary Landfill Permit No. \_\_\_\_\_  
Surface Monitoring Point No. GWD-1 Date 2/6/25

Name of Person Sampling Michael Morgan

A. TYPE OF MONITORING POINT

Stream \_\_\_\_\_ Open Tile \_\_\_\_\_  
Road Ditch \_\_\_\_\_ Tile with Riser \_\_\_\_\_  
Drainage Ditch \_\_\_\_\_ Other Lowvoltage pipe

B. PURPOSE OF MONITORING POINT

Upstream \_\_\_\_\_ Downstream ✓  
Within Landfill \_\_\_\_\_ Other \_\_\_\_\_

C. MONITORING POINT CONDITIONS

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Was monitoring point dry? NO Too little water to sample? \_\_\_\_\_  
Was water flowing? NO If yes, estimate quantity (cfs) \_\_\_\_\_  
If yes, estimate depth (inches) \_\_\_\_\_

Was water discolored? \_\_\_\_\_  
Does water have odor? \_\_\_\_\_  
Was ground discolored? \_\_\_\_\_  
Litter present? \_\_\_\_\_

Comments Stream frozen, no flowing water observed  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

D. FIELD MEASUREMENTS

Weather Conditions \_\_\_\_\_

Field Measurements (after stabilization):

Temperature \_\_\_\_\_ Units Celsius  
Equipment Used \_\_\_\_\_  
pH \_\_\_\_\_ Units Standard units  
Equipment Used \_\_\_\_\_  
Spec. Conductance \_\_\_\_\_ Units uS/cm  
Equipment Used \_\_\_\_\_

COMMENTS \_\_\_\_\_  
\_\_\_\_\_













### FORM FOR SURFACE WATER SAMPLING

Site Name Adair County Sanitary Landfill Permit No. \_\_\_\_\_  
 Surface Monitoring Point No. GWD-1 Date 9/22/25

Name of Person Sampling Michael Morgan

**A. TYPE OF MONITORING POINT**

Stream \_\_\_\_\_ Open Tile \_\_\_\_\_  
 Road Ditch \_\_\_\_\_ Tile with Riser \_\_\_\_\_  
 Drainage Ditch \_\_\_\_\_ Other drainage pipe

**B. PURPOSE OF MONITORING POINT**

Upstream \_\_\_\_\_ Downstream \_\_\_\_\_  
 Within Landfill ✓ Other \_\_\_\_\_

**C. MONITORING POINT CONDITIONS**

Construction to repair pipe - outlet surrounded by bare earth/dirt  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Was monitoring point dry? No Too little water to sample? No  
 Was water flowing? Yes If yes, estimate quantity (cfs) 50 ml/min  
 If yes, estimate depth (inches) NA

Was water discolored? No  
 Does water have odor? Yes  
 Was ground discolored? No  
 Litter present? No

Comments odor = landfill  
sampled 11/5/25  
 \_\_\_\_\_  
 \_\_\_\_\_

**D. FIELD MEASUREMENTS**

Weather Conditions Partly cloudy, Wind S 15-20 mph, 84°F

Field Measurements (after stabilization):

Temperature	<u>23.5</u>	Units	<u>Celsius</u>
Equipment Used	<u>YSI</u>		
pH	<u>6.99</u>	Units	<u>Standard units</u>
Equipment Used	<u>YSI</u>		
Spec. Conductance	<u>3180</u>	Units	<u>uS/cm</u>
Equipment Used	<u>YSI</u>		

COMMENTS DO = 5.31 mg/L ORP = 74.5 uV Turbidity = 8.72 NTU

### FORM FOR SURFACE WATER SAMPLING

Site Name Adair County Sanitary Landfill Permit No. \_\_\_\_\_  
 Surface Monitoring Point No. GU-2 Date 9/22/25

Name of Person Sampling Michael Morgan

**A. TYPE OF MONITORING POINT**

Stream \_\_\_\_\_ Open Tile \_\_\_\_\_  
 Road Ditch \_\_\_\_\_ Tile with Riser \_\_\_\_\_  
 Drainage Ditch \_\_\_\_\_ Other Drainage pipe

**B. PURPOSE OF MONITORING POINT**

Upstream \_\_\_\_\_ Downstream \_\_\_\_\_  
 Within Landfill J Other \_\_\_\_\_

**C. MONITORING POINT CONDITIONS**

Pipe covered by overgrown grass  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Was monitoring point dry? No Too little water to sample? Yes  
 Was water flowing? No If yes, estimate quantity (cfs) \_\_\_\_\_  
 If yes, estimate depth (inches) \_\_\_\_\_

Was water discolored? \_\_\_\_\_  
 Does water have odor? \_\_\_\_\_  
 Was ground discolored? \_\_\_\_\_  
 Litter present? \_\_\_\_\_

Comments Stream runs below outlet of pipe. No water flowing from pipe  
 \_\_\_\_\_  
 \_\_\_\_\_

**D. FIELD MEASUREMENTS**

Weather Conditions 84°F, Partly cloudy, wind S 15-20 mph

Field Measurements (after stabilization):

Temperature	_____	Units	<u>Celsius</u>
Equipment Used	_____		
pH	_____	Units	<u>Standard units</u>
Equipment Used	_____		
Spec. Conductance	_____	Units	<u>uS/cm</u>
Equipment Used	_____		

**COMMENTS**  
 \_\_\_\_\_  
 \_\_\_\_\_



Appendix B-1  
Laboratory Analytical Data Sheets

# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 2/17/2025 11:29:27 AM

## JOB DESCRIPTION

Adair County 1st 2025 GW Sampling Event  
Adair County Sanitary Landfill

## JOB NUMBER

310-300100-1

# 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.

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## 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: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1

**Job ID: 310-300100-1**

**Eurofins Cedar Falls**

## Job Narrative 310-300100-1

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 2/7/2025 4:00 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 0.1°C and 0.4°C.

### GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-446555 recovered above the upper control limit for Bromoform (20.2%D). The LCS associated with this CCV passed CCV criteria for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-446555/3).

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

### Metals

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

### General Chemistry

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

Eurofins Cedar Falls

# Sample Summary

Client: SCS Engineers  
Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
SDG: Adair County Sanitary Landfill

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-300100-1	MW-2	Water	02/06/25 14:35	02/07/25 16:00
310-300100-2	MW-3	Water	02/06/25 13:50	02/07/25 16:00
310-300100-3	MW-6	Water	02/06/25 11:51	02/07/25 16:00
310-300100-4	MW-7	Water	02/06/25 12:36	02/07/25 16:00
310-300100-5	MW-9	Water	02/06/25 10:48	02/07/25 16:00
310-300100-6	MW-10	Water	02/06/25 15:36	02/07/25 16:00
310-300100-7	MW-D	Water	02/06/25 12:36	02/07/25 16:00
310-300100-8	Trip Blank 1	Water	02/06/25 00:00	02/07/25 16:00
310-300100-9	Trip Blank 2	Water	02/06/25 00:00	02/07/25 16:00

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

# Detection Summary

Client: SCS Engineers  
Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
SDG: Adair County Sanitary Landfill

## Client Sample ID: MW-2

Lab Sample ID: 310-300100-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00323		0.00200		mg/L	1		6020B	Total/NA
Barium	0.233		0.00200		mg/L	1		6020B	Total/NA
Cobalt	0.00235		0.000500		mg/L	1		6020B	Total/NA
Nickel	0.0208		0.00500		mg/L	1		6020B	Total/NA
Total Suspended Solids	6.50		3.75		mg/L	1		I-3765-85	Total/NA

## Client Sample ID: MW-3

Lab Sample ID: 310-300100-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0291		0.00200		mg/L	1		6020B	Total/NA

## Client Sample ID: MW-6

Lab Sample ID: 310-300100-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0192		0.00200		mg/L	1		6020B	Total/NA
Selenium	0.00731		0.00500		mg/L	1		6020B	Total/NA

## Client Sample ID: MW-7

Lab Sample ID: 310-300100-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0272		0.00200		mg/L	1		6020B	Total/NA
Cadmium	0.000281		0.000200		mg/L	1		6020B	Total/NA
Nickel	0.0171		0.00500		mg/L	1		6020B	Total/NA

## Client Sample ID: MW-9

Lab Sample ID: 310-300100-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0556		0.00200		mg/L	1		6020B	Total/NA
Cobalt	0.000538		0.000500		mg/L	1		6020B	Total/NA

## Client Sample ID: MW-10

Lab Sample ID: 310-300100-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.175		0.00200		mg/L	1		6020B	Total/NA

## Client Sample ID: MW-D

Lab Sample ID: 310-300100-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0278		0.00200		mg/L	1		6020B	Total/NA
Cadmium	0.000295		0.000200		mg/L	1		6020B	Total/NA
Nickel	0.0178		0.00500		mg/L	1		6020B	Total/NA

## Client Sample ID: Trip Blank 1

Lab Sample ID: 310-300100-8

No Detections.

## Client Sample ID: Trip Blank 2

Lab Sample ID: 310-300100-9

No Detections.

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-2**

**Lab Sample ID: 310-300100-1**

Date Collected: 02/06/25 14:35

Matrix: Water

Date Received: 02/07/25 16:00

**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		ug/L			02/10/25 12:55	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			02/10/25 12:55	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			02/10/25 12:55	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			02/10/25 12:55	1
1,1-Dichloroethane	<1.00		1.00		ug/L			02/10/25 12:55	1
1,1-Dichloroethene	<2.00		2.00		ug/L			02/10/25 12:55	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			02/10/25 12:55	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			02/10/25 12:55	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			02/10/25 12:55	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 12:55	1
1,2-Dichloroethane	<1.00		1.00		ug/L			02/10/25 12:55	1
1,2-Dichloropropane	<1.00		1.00		ug/L			02/10/25 12:55	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 12:55	1
2-Butanone (MEK)	<10.0		10.0		ug/L			02/10/25 12:55	1
2-Hexanone	<10.0		10.0		ug/L			02/10/25 12:55	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			02/10/25 12:55	1
Acetone	<10.0		10.0		ug/L			02/10/25 12:55	1
Acrylonitrile	<5.00		5.00		ug/L			02/10/25 12:55	1
Benzene	<0.500		0.500		ug/L			02/10/25 12:55	1
Bromochloromethane	<5.00		5.00		ug/L			02/10/25 12:55	1
Bromodichloromethane	<1.00		1.00		ug/L			02/10/25 12:55	1
Bromoform	<5.00		5.00		ug/L			02/10/25 12:55	1
Bromomethane	<4.00		4.00		ug/L			02/10/25 12:55	1
Carbon disulfide	<1.00		1.00		ug/L			02/10/25 12:55	1
Carbon tetrachloride	<2.00		2.00		ug/L			02/10/25 12:55	1
Chlorobenzene	<1.00		1.00		ug/L			02/10/25 12:55	1
Chlorodibromomethane	<5.00		5.00		ug/L			02/10/25 12:55	1
Chloroethane	<4.00		4.00		ug/L			02/10/25 12:55	1
Chloroform	<3.00		3.00		ug/L			02/10/25 12:55	1
Chloromethane	<3.00		3.00		ug/L			02/10/25 12:55	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 12:55	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 12:55	1
Dibromomethane	<1.00		1.00		ug/L			02/10/25 12:55	1
Ethylbenzene	<1.00		1.00		ug/L			02/10/25 12:55	1
Iodomethane	<10.0		10.0		ug/L			02/10/25 12:55	1
Methylene chloride	<5.00		5.00		ug/L			02/10/25 12:55	1
Styrene	<1.00		1.00		ug/L			02/10/25 12:55	1
Tetrachloroethene	<1.00		1.00		ug/L			02/10/25 12:55	1
Toluene	<1.00		1.00		ug/L			02/10/25 12:55	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 12:55	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 12:55	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			02/10/25 12:55	1
Trichloroethene	<1.00		1.00		ug/L			02/10/25 12:55	1
Trichlorofluoromethane	<4.00		4.00		ug/L			02/10/25 12:55	1
Vinyl acetate	<10.0		10.0		ug/L			02/10/25 12:55	1
Vinyl chloride	<1.00		1.00		ug/L			02/10/25 12:55	1
Xylenes, Total	<3.00		3.00		ug/L			02/10/25 12:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	103		73 - 130		02/10/25 12:55	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-2**

**Lab Sample ID: 310-300100-1**

Date Collected: 02/06/25 14:35

Matrix: Water

Date Received: 02/07/25 16:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		02/10/25 12:55	1
4-Bromofluorobenzene (Surr)	106		80 - 120		02/10/25 12:55	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		02/11/25 08:45	02/14/25 16:35	1
<b>Arsenic</b>	<b>0.00323</b>		0.00200		mg/L		02/11/25 08:45	02/14/25 16:35	1
<b>Barium</b>	<b>0.233</b>		0.00200		mg/L		02/11/25 08:45	02/14/25 16:35	1
Beryllium	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 16:35	1
Cadmium	<0.000200		0.000200		mg/L		02/11/25 08:45	02/14/25 16:35	1
Chromium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:35	1
<b>Cobalt</b>	<b>0.00235</b>		0.000500		mg/L		02/11/25 08:45	02/14/25 16:35	1
Copper	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:35	1
Lead	<0.000500		0.000500		mg/L		02/11/25 08:45	02/14/25 16:35	1
<b>Nickel</b>	<b>0.0208</b>		0.00500		mg/L		02/11/25 08:45	02/14/25 16:35	1
Selenium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:35	1
Silver	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 16:35	1
Thallium	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 16:35	1
Vanadium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:35	1
Zinc	<0.0200		0.0200		mg/L		02/11/25 08:45	02/14/25 16:35	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>6.50</b>		3.75		mg/L			02/11/25 12:37	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-3**

**Lab Sample ID: 310-300100-2**

Date Collected: 02/06/25 13:50

Matrix: Water

Date Received: 02/07/25 16:00

**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		ug/L			02/10/25 13:17	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			02/10/25 13:17	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			02/10/25 13:17	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			02/10/25 13:17	1
1,1-Dichloroethane	<1.00		1.00		ug/L			02/10/25 13:17	1
1,1-Dichloroethene	<2.00		2.00		ug/L			02/10/25 13:17	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			02/10/25 13:17	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			02/10/25 13:17	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			02/10/25 13:17	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 13:17	1
1,2-Dichloroethane	<1.00		1.00		ug/L			02/10/25 13:17	1
1,2-Dichloropropane	<1.00		1.00		ug/L			02/10/25 13:17	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 13:17	1
2-Butanone (MEK)	<10.0		10.0		ug/L			02/10/25 13:17	1
2-Hexanone	<10.0		10.0		ug/L			02/10/25 13:17	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			02/10/25 13:17	1
Acetone	<10.0		10.0		ug/L			02/10/25 13:17	1
Acrylonitrile	<5.00		5.00		ug/L			02/10/25 13:17	1
Benzene	<0.500		0.500		ug/L			02/10/25 13:17	1
Bromochloromethane	<5.00		5.00		ug/L			02/10/25 13:17	1
Bromodichloromethane	<1.00		1.00		ug/L			02/10/25 13:17	1
Bromoform	<5.00		5.00		ug/L			02/10/25 13:17	1
Bromomethane	<4.00		4.00		ug/L			02/10/25 13:17	1
Carbon disulfide	<1.00		1.00		ug/L			02/10/25 13:17	1
Carbon tetrachloride	<2.00		2.00		ug/L			02/10/25 13:17	1
Chlorobenzene	<1.00		1.00		ug/L			02/10/25 13:17	1
Chlorodibromomethane	<5.00		5.00		ug/L			02/10/25 13:17	1
Chloroethane	<4.00		4.00		ug/L			02/10/25 13:17	1
Chloroform	<3.00		3.00		ug/L			02/10/25 13:17	1
Chloromethane	<3.00		3.00		ug/L			02/10/25 13:17	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 13:17	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 13:17	1
Dibromomethane	<1.00		1.00		ug/L			02/10/25 13:17	1
Ethylbenzene	<1.00		1.00		ug/L			02/10/25 13:17	1
Iodomethane	<10.0		10.0		ug/L			02/10/25 13:17	1
Methylene chloride	<5.00		5.00		ug/L			02/10/25 13:17	1
Styrene	<1.00		1.00		ug/L			02/10/25 13:17	1
Tetrachloroethene	<1.00		1.00		ug/L			02/10/25 13:17	1
Toluene	<1.00		1.00		ug/L			02/10/25 13:17	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 13:17	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 13:17	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			02/10/25 13:17	1
Trichloroethene	<1.00		1.00		ug/L			02/10/25 13:17	1
Trichlorofluoromethane	<4.00		4.00		ug/L			02/10/25 13:17	1
Vinyl acetate	<10.0		10.0		ug/L			02/10/25 13:17	1
Vinyl chloride	<1.00		1.00		ug/L			02/10/25 13:17	1
Xylenes, Total	<3.00		3.00		ug/L			02/10/25 13:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	104		73 - 130		02/10/25 13:17	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-3**

**Lab Sample ID: 310-300100-2**

Date Collected: 02/06/25 13:50

Matrix: Water

Date Received: 02/07/25 16:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		02/10/25 13:17	1
4-Bromofluorobenzene (Surr)	106		80 - 120		02/10/25 13:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		02/11/25 08:45	02/14/25 16:38	1
Arsenic	<0.00200		0.00200		mg/L		02/11/25 08:45	02/14/25 16:38	1
<b>Barium</b>	<b>0.0291</b>		0.00200		mg/L		02/11/25 08:45	02/14/25 16:38	1
Beryllium	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 16:38	1
Cadmium	<0.000200		0.000200		mg/L		02/11/25 08:45	02/14/25 16:38	1
Chromium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:38	1
Cobalt	<0.000500		0.000500		mg/L		02/11/25 08:45	02/14/25 16:38	1
Copper	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:38	1
Lead	<0.000500		0.000500		mg/L		02/11/25 08:45	02/14/25 16:38	1
Nickel	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:38	1
Selenium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:38	1
Silver	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 16:38	1
Thallium	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 16:38	1
Vanadium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:38	1
Zinc	<0.0200		0.0200		mg/L		02/11/25 08:45	02/14/25 16:38	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		mg/L			02/11/25 12:37	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-6**

**Lab Sample ID: 310-300100-3**

Date Collected: 02/06/25 11:51

Matrix: Water

Date Received: 02/07/25 16:00

**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		ug/L			02/10/25 13:40	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			02/10/25 13:40	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			02/10/25 13:40	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			02/10/25 13:40	1
1,1-Dichloroethane	<1.00		1.00		ug/L			02/10/25 13:40	1
1,1-Dichloroethene	<2.00		2.00		ug/L			02/10/25 13:40	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			02/10/25 13:40	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			02/10/25 13:40	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			02/10/25 13:40	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 13:40	1
1,2-Dichloroethane	<1.00		1.00		ug/L			02/10/25 13:40	1
1,2-Dichloropropane	<1.00		1.00		ug/L			02/10/25 13:40	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 13:40	1
2-Butanone (MEK)	<10.0		10.0		ug/L			02/10/25 13:40	1
2-Hexanone	<10.0		10.0		ug/L			02/10/25 13:40	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			02/10/25 13:40	1
Acetone	<10.0		10.0		ug/L			02/10/25 13:40	1
Acrylonitrile	<5.00		5.00		ug/L			02/10/25 13:40	1
Benzene	<0.500		0.500		ug/L			02/10/25 13:40	1
Bromochloromethane	<5.00		5.00		ug/L			02/10/25 13:40	1
Bromodichloromethane	<1.00		1.00		ug/L			02/10/25 13:40	1
Bromoform	<5.00		5.00		ug/L			02/10/25 13:40	1
Bromomethane	<4.00		4.00		ug/L			02/10/25 13:40	1
Carbon disulfide	<1.00		1.00		ug/L			02/10/25 13:40	1
Carbon tetrachloride	<2.00		2.00		ug/L			02/10/25 13:40	1
Chlorobenzene	<1.00		1.00		ug/L			02/10/25 13:40	1
Chlorodibromomethane	<5.00		5.00		ug/L			02/10/25 13:40	1
Chloroethane	<4.00		4.00		ug/L			02/10/25 13:40	1
Chloroform	<3.00		3.00		ug/L			02/10/25 13:40	1
Chloromethane	<3.00		3.00		ug/L			02/10/25 13:40	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 13:40	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 13:40	1
Dibromomethane	<1.00		1.00		ug/L			02/10/25 13:40	1
Ethylbenzene	<1.00		1.00		ug/L			02/10/25 13:40	1
Iodomethane	<10.0		10.0		ug/L			02/10/25 13:40	1
Methylene chloride	<5.00		5.00		ug/L			02/10/25 13:40	1
Styrene	<1.00		1.00		ug/L			02/10/25 13:40	1
Tetrachloroethene	<1.00		1.00		ug/L			02/10/25 13:40	1
Toluene	<1.00		1.00		ug/L			02/10/25 13:40	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 13:40	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 13:40	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			02/10/25 13:40	1
Trichloroethene	<1.00		1.00		ug/L			02/10/25 13:40	1
Trichlorofluoromethane	<4.00		4.00		ug/L			02/10/25 13:40	1
Vinyl acetate	<10.0		10.0		ug/L			02/10/25 13:40	1
Vinyl chloride	<1.00		1.00		ug/L			02/10/25 13:40	1
Xylenes, Total	<3.00		3.00		ug/L			02/10/25 13:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	108		73 - 130		02/10/25 13:40	1

Eurofins Cedar Falls

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-6**

**Lab Sample ID: 310-300100-3**

Date Collected: 02/06/25 11:51

Matrix: Water

Date Received: 02/07/25 16:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120		02/10/25 13:40	1
4-Bromofluorobenzene (Surr)	110		80 - 120		02/10/25 13:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		02/11/25 08:45	02/14/25 16:44	1
Arsenic	<0.00200		0.00200		mg/L		02/11/25 08:45	02/14/25 16:44	1
<b>Barium</b>	<b>0.0192</b>		0.00200		mg/L		02/11/25 08:45	02/14/25 16:44	1
Beryllium	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 16:44	1
Cadmium	<0.000200		0.000200		mg/L		02/11/25 08:45	02/14/25 16:44	1
Chromium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:44	1
Cobalt	<0.000500		0.000500		mg/L		02/11/25 08:45	02/14/25 16:44	1
Copper	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:44	1
Lead	<0.000500		0.000500		mg/L		02/11/25 08:45	02/14/25 16:44	1
Nickel	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:44	1
<b>Selenium</b>	<b>0.00731</b>		0.00500		mg/L		02/11/25 08:45	02/14/25 16:44	1
Silver	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 16:44	1
Thallium	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 16:44	1
Vanadium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:44	1
Zinc	<0.0200		0.0200		mg/L		02/11/25 08:45	02/14/25 16:44	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		mg/L			02/11/25 12:37	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-7**

**Lab Sample ID: 310-300100-4**

Date Collected: 02/06/25 12:36

Matrix: Water

Date Received: 02/07/25 16:00

**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		ug/L			02/10/25 14:02	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			02/10/25 14:02	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			02/10/25 14:02	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			02/10/25 14:02	1
1,1-Dichloroethane	<1.00		1.00		ug/L			02/10/25 14:02	1
1,1-Dichloroethene	<2.00		2.00		ug/L			02/10/25 14:02	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			02/10/25 14:02	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			02/10/25 14:02	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			02/10/25 14:02	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 14:02	1
1,2-Dichloroethane	<1.00		1.00		ug/L			02/10/25 14:02	1
1,2-Dichloropropane	<1.00		1.00		ug/L			02/10/25 14:02	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 14:02	1
2-Butanone (MEK)	<10.0		10.0		ug/L			02/10/25 14:02	1
2-Hexanone	<10.0		10.0		ug/L			02/10/25 14:02	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			02/10/25 14:02	1
Acetone	<10.0		10.0		ug/L			02/10/25 14:02	1
Acrylonitrile	<5.00		5.00		ug/L			02/10/25 14:02	1
Benzene	<0.500		0.500		ug/L			02/10/25 14:02	1
Bromochloromethane	<5.00		5.00		ug/L			02/10/25 14:02	1
Bromodichloromethane	<1.00		1.00		ug/L			02/10/25 14:02	1
Bromoform	<5.00		5.00		ug/L			02/10/25 14:02	1
Bromomethane	<4.00		4.00		ug/L			02/10/25 14:02	1
Carbon disulfide	<1.00		1.00		ug/L			02/10/25 14:02	1
Carbon tetrachloride	<2.00		2.00		ug/L			02/10/25 14:02	1
Chlorobenzene	<1.00		1.00		ug/L			02/10/25 14:02	1
Chlorodibromomethane	<5.00		5.00		ug/L			02/10/25 14:02	1
Chloroethane	<4.00		4.00		ug/L			02/10/25 14:02	1
Chloroform	<3.00		3.00		ug/L			02/10/25 14:02	1
Chloromethane	<3.00		3.00		ug/L			02/10/25 14:02	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 14:02	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 14:02	1
Dibromomethane	<1.00		1.00		ug/L			02/10/25 14:02	1
Ethylbenzene	<1.00		1.00		ug/L			02/10/25 14:02	1
Iodomethane	<10.0		10.0		ug/L			02/10/25 14:02	1
Methylene chloride	<5.00		5.00		ug/L			02/10/25 14:02	1
Styrene	<1.00		1.00		ug/L			02/10/25 14:02	1
Tetrachloroethene	<1.00		1.00		ug/L			02/10/25 14:02	1
Toluene	<1.00		1.00		ug/L			02/10/25 14:02	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 14:02	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 14:02	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			02/10/25 14:02	1
Trichloroethene	<1.00		1.00		ug/L			02/10/25 14:02	1
Trichlorofluoromethane	<4.00		4.00		ug/L			02/10/25 14:02	1
Vinyl acetate	<10.0		10.0		ug/L			02/10/25 14:02	1
Vinyl chloride	<1.00		1.00		ug/L			02/10/25 14:02	1
Xylenes, Total	<3.00		3.00		ug/L			02/10/25 14:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	102		73 - 130		02/10/25 14:02	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-7**

**Lab Sample ID: 310-300100-4**

Date Collected: 02/06/25 12:36

Matrix: Water

Date Received: 02/07/25 16:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		02/10/25 14:02	1
4-Bromofluorobenzene (Surr)	106		80 - 120		02/10/25 14:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		02/11/25 08:45	02/14/25 16:58	1
Arsenic	<0.00200		0.00200		mg/L		02/11/25 08:45	02/14/25 16:58	1
<b>Barium</b>	<b>0.0272</b>		0.00200		mg/L		02/11/25 08:45	02/14/25 16:58	1
Beryllium	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 16:58	1
<b>Cadmium</b>	<b>0.000281</b>		0.000200		mg/L		02/11/25 08:45	02/14/25 16:58	1
Chromium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:58	1
Cobalt	<0.000500		0.000500		mg/L		02/11/25 08:45	02/14/25 16:58	1
Copper	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:58	1
Lead	<0.000500		0.000500		mg/L		02/11/25 08:45	02/14/25 16:58	1
<b>Nickel</b>	<b>0.0171</b>		0.00500		mg/L		02/11/25 08:45	02/14/25 16:58	1
Selenium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:58	1
Silver	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 16:58	1
Thallium	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 16:58	1
Vanadium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 16:58	1
Zinc	<0.0200		0.0200		mg/L		02/11/25 08:45	02/14/25 16:58	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		mg/L			02/11/25 12:37	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-9**

**Lab Sample ID: 310-300100-5**

Date Collected: 02/06/25 10:48

Matrix: Water

Date Received: 02/07/25 16:00

**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		ug/L			02/10/25 14:25	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			02/10/25 14:25	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			02/10/25 14:25	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			02/10/25 14:25	1
1,1-Dichloroethane	<1.00		1.00		ug/L			02/10/25 14:25	1
1,1-Dichloroethene	<2.00		2.00		ug/L			02/10/25 14:25	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			02/10/25 14:25	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			02/10/25 14:25	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			02/10/25 14:25	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 14:25	1
1,2-Dichloroethane	<1.00		1.00		ug/L			02/10/25 14:25	1
1,2-Dichloropropane	<1.00		1.00		ug/L			02/10/25 14:25	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 14:25	1
2-Butanone (MEK)	<10.0		10.0		ug/L			02/10/25 14:25	1
2-Hexanone	<10.0		10.0		ug/L			02/10/25 14:25	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			02/10/25 14:25	1
Acetone	<10.0		10.0		ug/L			02/10/25 14:25	1
Acrylonitrile	<5.00		5.00		ug/L			02/10/25 14:25	1
Benzene	<0.500		0.500		ug/L			02/10/25 14:25	1
Bromochloromethane	<5.00		5.00		ug/L			02/10/25 14:25	1
Bromodichloromethane	<1.00		1.00		ug/L			02/10/25 14:25	1
Bromoform	<5.00		5.00		ug/L			02/10/25 14:25	1
Bromomethane	<4.00		4.00		ug/L			02/10/25 14:25	1
Carbon disulfide	<1.00		1.00		ug/L			02/10/25 14:25	1
Carbon tetrachloride	<2.00		2.00		ug/L			02/10/25 14:25	1
Chlorobenzene	<1.00		1.00		ug/L			02/10/25 14:25	1
Chlorodibromomethane	<5.00		5.00		ug/L			02/10/25 14:25	1
Chloroethane	<4.00		4.00		ug/L			02/10/25 14:25	1
Chloroform	<3.00		3.00		ug/L			02/10/25 14:25	1
Chloromethane	<3.00		3.00		ug/L			02/10/25 14:25	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 14:25	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 14:25	1
Dibromomethane	<1.00		1.00		ug/L			02/10/25 14:25	1
Ethylbenzene	<1.00		1.00		ug/L			02/10/25 14:25	1
Iodomethane	<10.0		10.0		ug/L			02/10/25 14:25	1
Methylene chloride	<5.00		5.00		ug/L			02/10/25 14:25	1
Styrene	<1.00		1.00		ug/L			02/10/25 14:25	1
Tetrachloroethene	<1.00		1.00		ug/L			02/10/25 14:25	1
Toluene	<1.00		1.00		ug/L			02/10/25 14:25	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 14:25	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 14:25	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			02/10/25 14:25	1
Trichloroethene	<1.00		1.00		ug/L			02/10/25 14:25	1
Trichlorofluoromethane	<4.00		4.00		ug/L			02/10/25 14:25	1
Vinyl acetate	<10.0		10.0		ug/L			02/10/25 14:25	1
Vinyl chloride	<1.00		1.00		ug/L			02/10/25 14:25	1
Xylenes, Total	<3.00		3.00		ug/L			02/10/25 14:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	103		73 - 130		02/10/25 14:25	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-9**

**Lab Sample ID: 310-300100-5**

Date Collected: 02/06/25 10:48

Matrix: Water

Date Received: 02/07/25 16:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		80 - 120		02/10/25 14:25	1
4-Bromofluorobenzene (Surr)	103		80 - 120		02/10/25 14:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		02/11/25 08:45	02/14/25 17:01	1
Arsenic	<0.00200		0.00200		mg/L		02/11/25 08:45	02/14/25 17:01	1
<b>Barium</b>	<b>0.0556</b>		0.00200		mg/L		02/11/25 08:45	02/14/25 17:01	1
Beryllium	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 17:01	1
Cadmium	<0.000200		0.000200		mg/L		02/11/25 08:45	02/14/25 17:01	1
Chromium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 17:01	1
<b>Cobalt</b>	<b>0.000538</b>		0.000500		mg/L		02/11/25 08:45	02/14/25 17:01	1
Copper	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 17:01	1
Lead	<0.000500		0.000500		mg/L		02/11/25 08:45	02/14/25 17:01	1
Nickel	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 17:01	1
Selenium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 17:01	1
Silver	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 17:01	1
Thallium	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 17:01	1
Vanadium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 17:01	1
Zinc	<0.0200		0.0200		mg/L		02/11/25 08:45	02/14/25 17:01	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<2.50		2.50		mg/L			02/11/25 12:37	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-10**

**Lab Sample ID: 310-300100-6**

Date Collected: 02/06/25 15:36

Matrix: Water

Date Received: 02/07/25 16:00

**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		ug/L			02/10/25 14:47	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			02/10/25 14:47	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			02/10/25 14:47	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			02/10/25 14:47	1
1,1-Dichloroethane	<1.00		1.00		ug/L			02/10/25 14:47	1
1,1-Dichloroethene	<2.00		2.00		ug/L			02/10/25 14:47	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			02/10/25 14:47	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			02/10/25 14:47	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			02/10/25 14:47	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 14:47	1
1,2-Dichloroethane	<1.00		1.00		ug/L			02/10/25 14:47	1
1,2-Dichloropropane	<1.00		1.00		ug/L			02/10/25 14:47	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 14:47	1
2-Butanone (MEK)	<10.0		10.0		ug/L			02/10/25 14:47	1
2-Hexanone	<10.0		10.0		ug/L			02/10/25 14:47	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			02/10/25 14:47	1
Acetone	<10.0		10.0		ug/L			02/10/25 14:47	1
Acrylonitrile	<5.00		5.00		ug/L			02/10/25 14:47	1
Benzene	<0.500		0.500		ug/L			02/10/25 14:47	1
Bromochloromethane	<5.00		5.00		ug/L			02/10/25 14:47	1
Bromodichloromethane	<1.00		1.00		ug/L			02/10/25 14:47	1
Bromoform	<5.00		5.00		ug/L			02/10/25 14:47	1
Bromomethane	<4.00		4.00		ug/L			02/10/25 14:47	1
Carbon disulfide	<1.00		1.00		ug/L			02/10/25 14:47	1
Carbon tetrachloride	<2.00		2.00		ug/L			02/10/25 14:47	1
Chlorobenzene	<1.00		1.00		ug/L			02/10/25 14:47	1
Chlorodibromomethane	<5.00		5.00		ug/L			02/10/25 14:47	1
Chloroethane	<4.00		4.00		ug/L			02/10/25 14:47	1
Chloroform	<3.00		3.00		ug/L			02/10/25 14:47	1
Chloromethane	<3.00		3.00		ug/L			02/10/25 14:47	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 14:47	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 14:47	1
Dibromomethane	<1.00		1.00		ug/L			02/10/25 14:47	1
Ethylbenzene	<1.00		1.00		ug/L			02/10/25 14:47	1
Iodomethane	<10.0		10.0		ug/L			02/10/25 14:47	1
Methylene chloride	<5.00		5.00		ug/L			02/10/25 14:47	1
Styrene	<1.00		1.00		ug/L			02/10/25 14:47	1
Tetrachloroethene	<1.00		1.00		ug/L			02/10/25 14:47	1
Toluene	<1.00		1.00		ug/L			02/10/25 14:47	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 14:47	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 14:47	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			02/10/25 14:47	1
Trichloroethene	<1.00		1.00		ug/L			02/10/25 14:47	1
Trichlorofluoromethane	<4.00		4.00		ug/L			02/10/25 14:47	1
Vinyl acetate	<10.0		10.0		ug/L			02/10/25 14:47	1
Vinyl chloride	<1.00		1.00		ug/L			02/10/25 14:47	1
Xylenes, Total	<3.00		3.00		ug/L			02/10/25 14:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	103		73 - 130		02/10/25 14:47	1

Eurofins Cedar Falls

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-10**

**Lab Sample ID: 310-300100-6**

Date Collected: 02/06/25 15:36

Matrix: Water

Date Received: 02/07/25 16:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		02/10/25 14:47	1
4-Bromofluorobenzene (Surr)	103		80 - 120		02/10/25 14:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		02/11/25 08:45	02/14/25 17:04	1
Arsenic	<0.00200		0.00200		mg/L		02/11/25 08:45	02/14/25 17:04	1
<b>Barium</b>	<b>0.175</b>		0.00200		mg/L		02/11/25 08:45	02/14/25 17:04	1
Beryllium	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 17:04	1
Cadmium	<0.000200		0.000200		mg/L		02/11/25 08:45	02/14/25 17:04	1
Chromium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 17:04	1
Cobalt	<0.000500		0.000500		mg/L		02/11/25 08:45	02/14/25 17:04	1
Copper	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 17:04	1
Lead	<0.000500		0.000500		mg/L		02/11/25 08:45	02/14/25 17:04	1
Nickel	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 17:04	1
Selenium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 17:04	1
Silver	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 17:04	1
Thallium	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 17:04	1
Vanadium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 17:04	1
Zinc	<0.0200		0.0200		mg/L		02/11/25 08:45	02/14/25 17:04	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		mg/L			02/11/25 12:37	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-D**

**Lab Sample ID: 310-300100-7**

Date Collected: 02/06/25 12:36

Matrix: Water

Date Received: 02/07/25 16:00

**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		ug/L			02/10/25 15:10	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			02/10/25 15:10	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			02/10/25 15:10	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			02/10/25 15:10	1
1,1-Dichloroethane	<1.00		1.00		ug/L			02/10/25 15:10	1
1,1-Dichloroethene	<2.00		2.00		ug/L			02/10/25 15:10	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			02/10/25 15:10	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			02/10/25 15:10	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			02/10/25 15:10	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 15:10	1
1,2-Dichloroethane	<1.00		1.00		ug/L			02/10/25 15:10	1
1,2-Dichloropropane	<1.00		1.00		ug/L			02/10/25 15:10	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 15:10	1
2-Butanone (MEK)	<10.0		10.0		ug/L			02/10/25 15:10	1
2-Hexanone	<10.0		10.0		ug/L			02/10/25 15:10	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			02/10/25 15:10	1
Acetone	<10.0		10.0		ug/L			02/10/25 15:10	1
Acrylonitrile	<5.00		5.00		ug/L			02/10/25 15:10	1
Benzene	<0.500		0.500		ug/L			02/10/25 15:10	1
Bromochloromethane	<5.00		5.00		ug/L			02/10/25 15:10	1
Bromodichloromethane	<1.00		1.00		ug/L			02/10/25 15:10	1
Bromoform	<5.00		5.00		ug/L			02/10/25 15:10	1
Bromomethane	<4.00		4.00		ug/L			02/10/25 15:10	1
Carbon disulfide	<1.00		1.00		ug/L			02/10/25 15:10	1
Carbon tetrachloride	<2.00		2.00		ug/L			02/10/25 15:10	1
Chlorobenzene	<1.00		1.00		ug/L			02/10/25 15:10	1
Chlorodibromomethane	<5.00		5.00		ug/L			02/10/25 15:10	1
Chloroethane	<4.00		4.00		ug/L			02/10/25 15:10	1
Chloroform	<3.00		3.00		ug/L			02/10/25 15:10	1
Chloromethane	<3.00		3.00		ug/L			02/10/25 15:10	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 15:10	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 15:10	1
Dibromomethane	<1.00		1.00		ug/L			02/10/25 15:10	1
Ethylbenzene	<1.00		1.00		ug/L			02/10/25 15:10	1
Iodomethane	<10.0		10.0		ug/L			02/10/25 15:10	1
Methylene chloride	<5.00		5.00		ug/L			02/10/25 15:10	1
Styrene	<1.00		1.00		ug/L			02/10/25 15:10	1
Tetrachloroethene	<1.00		1.00		ug/L			02/10/25 15:10	1
Toluene	<1.00		1.00		ug/L			02/10/25 15:10	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 15:10	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 15:10	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			02/10/25 15:10	1
Trichloroethene	<1.00		1.00		ug/L			02/10/25 15:10	1
Trichlorofluoromethane	<4.00		4.00		ug/L			02/10/25 15:10	1
Vinyl acetate	<10.0		10.0		ug/L			02/10/25 15:10	1
Vinyl chloride	<1.00		1.00		ug/L			02/10/25 15:10	1
Xylenes, Total	<3.00		3.00		ug/L			02/10/25 15:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	102		73 - 130		02/10/25 15:10	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-D**

**Lab Sample ID: 310-300100-7**

Date Collected: 02/06/25 12:36

Matrix: Water

Date Received: 02/07/25 16:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		02/10/25 15:10	1
4-Bromofluorobenzene (Surr)	104		80 - 120		02/10/25 15:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		02/11/25 08:45	02/14/25 17:06	1
Arsenic	<0.00200		0.00200		mg/L		02/11/25 08:45	02/14/25 17:06	1
<b>Barium</b>	<b>0.0278</b>		0.00200		mg/L		02/11/25 08:45	02/14/25 17:06	1
Beryllium	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 17:06	1
<b>Cadmium</b>	<b>0.000295</b>		0.000200		mg/L		02/11/25 08:45	02/14/25 17:06	1
Chromium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 17:06	1
Cobalt	<0.000500		0.000500		mg/L		02/11/25 08:45	02/14/25 17:06	1
Copper	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 17:06	1
Lead	<0.000500		0.000500		mg/L		02/11/25 08:45	02/14/25 17:06	1
<b>Nickel</b>	<b>0.0178</b>		0.00500		mg/L		02/11/25 08:45	02/14/25 17:06	1
Selenium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 17:06	1
Silver	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 17:06	1
Thallium	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 17:06	1
Vanadium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 17:06	1
Zinc	<0.0200		0.0200		mg/L		02/11/25 08:45	02/14/25 17:06	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		mg/L			02/11/25 12:37	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: Trip Blank 1**

**Lab Sample ID: 310-300100-8**

Date Collected: 02/06/25 00:00

Matrix: Water

Date Received: 02/07/25 16:00

**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		ug/L			02/10/25 11:25	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			02/10/25 11:25	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			02/10/25 11:25	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			02/10/25 11:25	1
1,1-Dichloroethane	<1.00		1.00		ug/L			02/10/25 11:25	1
1,1-Dichloroethene	<2.00		2.00		ug/L			02/10/25 11:25	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			02/10/25 11:25	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			02/10/25 11:25	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			02/10/25 11:25	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 11:25	1
1,2-Dichloroethane	<1.00		1.00		ug/L			02/10/25 11:25	1
1,2-Dichloropropane	<1.00		1.00		ug/L			02/10/25 11:25	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 11:25	1
2-Butanone (MEK)	<10.0		10.0		ug/L			02/10/25 11:25	1
2-Hexanone	<10.0		10.0		ug/L			02/10/25 11:25	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			02/10/25 11:25	1
Acetone	<10.0		10.0		ug/L			02/10/25 11:25	1
Acrylonitrile	<5.00		5.00		ug/L			02/10/25 11:25	1
Benzene	<0.500		0.500		ug/L			02/10/25 11:25	1
Bromochloromethane	<5.00		5.00		ug/L			02/10/25 11:25	1
Bromodichloromethane	<1.00		1.00		ug/L			02/10/25 11:25	1
Bromoform	<5.00		5.00		ug/L			02/10/25 11:25	1
Bromomethane	<4.00		4.00		ug/L			02/10/25 11:25	1
Carbon disulfide	<1.00		1.00		ug/L			02/10/25 11:25	1
Carbon tetrachloride	<2.00		2.00		ug/L			02/10/25 11:25	1
Chlorobenzene	<1.00		1.00		ug/L			02/10/25 11:25	1
Chlorodibromomethane	<5.00		5.00		ug/L			02/10/25 11:25	1
Chloroethane	<4.00		4.00		ug/L			02/10/25 11:25	1
Chloroform	<3.00		3.00		ug/L			02/10/25 11:25	1
Chloromethane	<3.00		3.00		ug/L			02/10/25 11:25	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 11:25	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 11:25	1
Dibromomethane	<1.00		1.00		ug/L			02/10/25 11:25	1
Ethylbenzene	<1.00		1.00		ug/L			02/10/25 11:25	1
Iodomethane	<10.0		10.0		ug/L			02/10/25 11:25	1
Methylene chloride	<5.00		5.00		ug/L			02/10/25 11:25	1
Styrene	<1.00		1.00		ug/L			02/10/25 11:25	1
Tetrachloroethene	<1.00		1.00		ug/L			02/10/25 11:25	1
Toluene	<1.00		1.00		ug/L			02/10/25 11:25	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 11:25	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 11:25	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			02/10/25 11:25	1
Trichloroethene	<1.00		1.00		ug/L			02/10/25 11:25	1
Trichlorofluoromethane	<4.00		4.00		ug/L			02/10/25 11:25	1
Vinyl acetate	<10.0		10.0		ug/L			02/10/25 11:25	1
Vinyl chloride	<1.00		1.00		ug/L			02/10/25 11:25	1
Xylenes, Total	<3.00		3.00		ug/L			02/10/25 11:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	109		73 - 130		02/10/25 11:25	1

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# Client Sample Results

Client: SCS Engineers  
Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
SDG: Adair County Sanitary Landfill

**Client Sample ID: Trip Blank 1**

**Lab Sample ID: 310-300100-8**

Date Collected: 02/06/25 00:00

Matrix: Water

Date Received: 02/07/25 16:00

**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)	95		80 - 120		02/10/25 11:25	1
4-Bromofluorobenzene (Surr)	104		80 - 120		02/10/25 11:25	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: Trip Blank 2**

**Lab Sample ID: 310-300100-9**

Date Collected: 02/06/25 00:00

Matrix: Water

Date Received: 02/07/25 16:00

**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		ug/L			02/10/25 11:48	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			02/10/25 11:48	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			02/10/25 11:48	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			02/10/25 11:48	1
1,1-Dichloroethane	<1.00		1.00		ug/L			02/10/25 11:48	1
1,1-Dichloroethene	<2.00		2.00		ug/L			02/10/25 11:48	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			02/10/25 11:48	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			02/10/25 11:48	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			02/10/25 11:48	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 11:48	1
1,2-Dichloroethane	<1.00		1.00		ug/L			02/10/25 11:48	1
1,2-Dichloropropane	<1.00		1.00		ug/L			02/10/25 11:48	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 11:48	1
2-Butanone (MEK)	<10.0		10.0		ug/L			02/10/25 11:48	1
2-Hexanone	<10.0		10.0		ug/L			02/10/25 11:48	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			02/10/25 11:48	1
Acetone	<10.0		10.0		ug/L			02/10/25 11:48	1
Acrylonitrile	<5.00		5.00		ug/L			02/10/25 11:48	1
Benzene	<0.500		0.500		ug/L			02/10/25 11:48	1
Bromochloromethane	<5.00		5.00		ug/L			02/10/25 11:48	1
Bromodichloromethane	<1.00		1.00		ug/L			02/10/25 11:48	1
Bromoform	<5.00		5.00		ug/L			02/10/25 11:48	1
Bromomethane	<4.00		4.00		ug/L			02/10/25 11:48	1
Carbon disulfide	<1.00		1.00		ug/L			02/10/25 11:48	1
Carbon tetrachloride	<2.00		2.00		ug/L			02/10/25 11:48	1
Chlorobenzene	<1.00		1.00		ug/L			02/10/25 11:48	1
Chlorodibromomethane	<5.00		5.00		ug/L			02/10/25 11:48	1
Chloroethane	<4.00		4.00		ug/L			02/10/25 11:48	1
Chloroform	<3.00		3.00		ug/L			02/10/25 11:48	1
Chloromethane	<3.00		3.00		ug/L			02/10/25 11:48	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 11:48	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 11:48	1
Dibromomethane	<1.00		1.00		ug/L			02/10/25 11:48	1
Ethylbenzene	<1.00		1.00		ug/L			02/10/25 11:48	1
Iodomethane	<10.0		10.0		ug/L			02/10/25 11:48	1
Methylene chloride	<5.00		5.00		ug/L			02/10/25 11:48	1
Styrene	<1.00		1.00		ug/L			02/10/25 11:48	1
Tetrachloroethene	<1.00		1.00		ug/L			02/10/25 11:48	1
Toluene	<1.00		1.00		ug/L			02/10/25 11:48	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 11:48	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 11:48	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			02/10/25 11:48	1
Trichloroethene	<1.00		1.00		ug/L			02/10/25 11:48	1
Trichlorofluoromethane	<4.00		4.00		ug/L			02/10/25 11:48	1
Vinyl acetate	<10.0		10.0		ug/L			02/10/25 11:48	1
Vinyl chloride	<1.00		1.00		ug/L			02/10/25 11:48	1
Xylenes, Total	<3.00		3.00		ug/L			02/10/25 11:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	107		73 - 130		02/10/25 11:48	1

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# Client Sample Results

Client: SCS Engineers  
Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
SDG: Adair County Sanitary Landfill

**Client Sample ID: Trip Blank 2**

**Lab Sample ID: 310-300100-9**

Date Collected: 02/06/25 00:00

Matrix: Water

Date Received: 02/07/25 16:00

**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)	95		80 - 120		02/10/25 11:48	1
4-Bromofluorobenzene (Surr)	107		80 - 120		02/10/25 11:48	1

- 1
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- 3
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- 14
- 15

## Definitions/Glossary

Client: SCS Engineers  
Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
SDG: Adair 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: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair 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 (73-130)	TOL (80-120)	BFB (80-120)
310-300100-1	MW-2	103	97	106
310-300100-2	MW-3	104	96	106
310-300100-3	MW-6	108	95	110
310-300100-3 MS	MW-6	97	103	99
310-300100-3 MSD	MW-6	97	101	97
310-300100-4	MW-7	102	97	106
310-300100-5	MW-9	103	93	103
310-300100-6	MW-10	103	96	103
310-300100-7	MW-D	102	97	104
310-300100-8	Trip Blank 1	109	95	104
310-300100-9	Trip Blank 2	107	95	107
LCS 310-446555/6	Lab Control Sample	100	101	99
LCS 310-446555/7	Lab Control Sample	109	95	106
MB 310-446555/5	Method Blank	107	95	105

**Surrogate Legend**

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

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

**Lab Sample ID: MB 310-446555/5**  
**Matrix: Water**  
**Analysis Batch: 446555**

**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		ug/L			02/10/25 10:17	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			02/10/25 10:17	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			02/10/25 10:17	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			02/10/25 10:17	1
1,1-Dichloroethane	<1.00		1.00		ug/L			02/10/25 10:17	1
1,1-Dichloroethene	<2.00		2.00		ug/L			02/10/25 10:17	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			02/10/25 10:17	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			02/10/25 10:17	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			02/10/25 10:17	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 10:17	1
1,2-Dichloroethane	<1.00		1.00		ug/L			02/10/25 10:17	1
1,2-Dichloropropane	<1.00		1.00		ug/L			02/10/25 10:17	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			02/10/25 10:17	1
2-Butanone (MEK)	<10.0		10.0		ug/L			02/10/25 10:17	1
2-Hexanone	<10.0		10.0		ug/L			02/10/25 10:17	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			02/10/25 10:17	1
Acetone	<10.0		10.0		ug/L			02/10/25 10:17	1
Acrylonitrile	<5.00		5.00		ug/L			02/10/25 10:17	1
Benzene	<0.500		0.500		ug/L			02/10/25 10:17	1
Bromochloromethane	<5.00		5.00		ug/L			02/10/25 10:17	1
Bromodichloromethane	<1.00		1.00		ug/L			02/10/25 10:17	1
Bromoform	<5.00		5.00		ug/L			02/10/25 10:17	1
Bromomethane	<4.00		4.00		ug/L			02/10/25 10:17	1
Carbon disulfide	<1.00		1.00		ug/L			02/10/25 10:17	1
Carbon tetrachloride	<2.00		2.00		ug/L			02/10/25 10:17	1
Chlorobenzene	<1.00		1.00		ug/L			02/10/25 10:17	1
Chlorodibromomethane	<5.00		5.00		ug/L			02/10/25 10:17	1
Chloroethane	<4.00		4.00		ug/L			02/10/25 10:17	1
Chloroform	<3.00		3.00		ug/L			02/10/25 10:17	1
Chloromethane	<3.00		3.00		ug/L			02/10/25 10:17	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 10:17	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 10:17	1
Dibromomethane	<1.00		1.00		ug/L			02/10/25 10:17	1
Ethylbenzene	<1.00		1.00		ug/L			02/10/25 10:17	1
Iodomethane	<10.0		10.0		ug/L			02/10/25 10:17	1
Methylene chloride	<5.00		5.00		ug/L			02/10/25 10:17	1
Styrene	<1.00		1.00		ug/L			02/10/25 10:17	1
Tetrachloroethene	<1.00		1.00		ug/L			02/10/25 10:17	1
Toluene	<1.00		1.00		ug/L			02/10/25 10:17	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			02/10/25 10:17	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			02/10/25 10:17	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			02/10/25 10:17	1
Trichloroethene	<1.00		1.00		ug/L			02/10/25 10:17	1
Trichlorofluoromethane	<4.00		4.00		ug/L			02/10/25 10:17	1
Vinyl acetate	<10.0		10.0		ug/L			02/10/25 10:17	1
Vinyl chloride	<1.00		1.00		ug/L			02/10/25 10:17	1
Xylenes, Total	<3.00		3.00		ug/L			02/10/25 10:17	1

# QC Sample Results

Client: SCS Engineers  
Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
SDG: Adair County Sanitary Landfill

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

**Lab Sample ID: MB 310-446555/5**

**Matrix: Water**

**Analysis Batch: 446555**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	107		73 - 130		02/10/25 10:17	1
Toluene-d8 (Surr)	95		80 - 120		02/10/25 10:17	1
4-Bromofluorobenzene (Surr)	105		80 - 120		02/10/25 10:17	1

**Lab Sample ID: LCS 310-446555/6**

**Matrix: Water**

**Analysis Batch: 446555**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,1-Trichloroethane	20.0	19.35		ug/L		97	73 - 129
1,1,1,2,2-Tetrachloroethane	20.0	18.64		ug/L		93	68 - 124
1,1,2-Trichloroethane	20.0	17.79		ug/L		89	73 - 123
1,1-Dichloroethane	20.0	20.34		ug/L		102	70 - 127
1,1-Dichloroethane	20.0	19.36		ug/L		97	63 - 132
1,2,3-Trichloropropane	20.0	18.45		ug/L		92	65 - 127
1,2-Dibromo-3-chloropropane	20.0	20.97		ug/L		105	50 - 150
1,2-Dibromoethane (EDB)	20.0	18.74		ug/L		94	75 - 125
1,2-Dichlorobenzene	20.0	20.17		ug/L		101	74 - 120
1,2-Dichloroethane	20.0	20.04		ug/L		100	71 - 125
1,2-Dichloropropane	20.0	19.33		ug/L		97	73 - 124
1,4-Dichlorobenzene	20.0	19.16		ug/L		96	72 - 120
2-Butanone (MEK)	40.0	36.60		ug/L		92	50 - 150
2-Hexanone	40.0	40.35		ug/L		101	60 - 140
4-Methyl-2-pentanone (MIBK)	40.0	38.30		ug/L		96	60 - 139
Acetone	40.0	40.31		ug/L		101	50 - 150
Acrylonitrile	200	196.4		ug/L		98	50 - 150
Benzene	20.0	19.67		ug/L		98	72 - 124
Bromochloromethane	20.0	19.87		ug/L		99	73 - 130
Bromodichloromethane	20.0	18.21		ug/L		91	74 - 122
Bromoform	20.0	19.89		ug/L		99	61 - 122
Carbon disulfide	20.0	20.73		ug/L		104	59 - 135
Carbon tetrachloride	20.0	19.38		ug/L		97	67 - 132
Chlorobenzene	20.0	18.36		ug/L		92	76 - 120
Chlorodibromomethane	20.0	18.57		ug/L		93	71 - 121
Chloroform	20.0	20.00		ug/L		100	72 - 125
cis-1,2-Dichloroethene	20.0	20.19		ug/L		101	74 - 123
cis-1,3-Dichloropropene	20.0	20.67		ug/L		103	71 - 125
Dibromomethane	20.0	20.22		ug/L		101	74 - 125
Ethylbenzene	20.0	18.95		ug/L		95	74 - 122
Iodomethane	20.0	19.36		ug/L		97	10 - 150
Methylene chloride	20.0	20.73		ug/L		104	50 - 150
Styrene	20.0	20.07		ug/L		100	74 - 121
Tetrachloroethene	20.0	19.59		ug/L		98	71 - 130
Toluene	20.0	19.77		ug/L		99	74 - 123
trans-1,2-Dichloroethene	20.0	18.78		ug/L		94	70 - 126
trans-1,3-Dichloropropene	20.0	18.52		ug/L		93	69 - 123
trans-1,4-Dichloro-2-butene	20.0	18.68		ug/L		93	50 - 150

Eurofins Cedar Falls

# QC Sample Results

Client: SCS Engineers  
Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
SDG: Adair County Sanitary Landfill

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

**Lab Sample ID: LCS 310-446555/6**

**Matrix: Water**

**Analysis Batch: 446555**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Trichloroethene	20.0	18.27		ug/L		91	72 - 126
Vinyl acetate	40.0	36.29		ug/L		91	50 - 150
Xylenes, Total	40.0	39.38		ug/L		98	73 - 123

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	100		73 - 130
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120

**Lab Sample ID: LCS 310-446555/7**

**Matrix: Water**

**Analysis Batch: 446555**

**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	15.52		ug/L		78	23 - 150
Chloroethane	20.0	19.95		ug/L		100	54 - 136
Chloromethane	20.0	20.53		ug/L		103	38 - 150
Trichlorofluoromethane	20.0	19.87		ug/L		99	54 - 149
Vinyl chloride	20.0	19.69		ug/L		98	56 - 140

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	109		73 - 130
Toluene-d8 (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	106		80 - 120

**Lab Sample ID: 310-300100-3 MS**

**Matrix: Water**

**Analysis Batch: 446555**

**Client Sample ID: MW-6**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
1,1,1,2-Tetrachloroethane	<1.00		25.0	22.23		ug/L		89	55 - 130
1,1,1-Trichloroethane	<1.00		25.0	21.36		ug/L		85	52 - 130
1,1,2,2-Tetrachloroethane	<1.00		25.0	22.60		ug/L		90	54 - 130
1,1,2-Trichloroethane	<1.00		25.0	21.00		ug/L		84	58 - 130
1,1-Dichloroethane	<1.00		25.0	22.79		ug/L		91	49 - 130
1,1-Dichloroethane	<2.00		25.0	21.69		ug/L		87	37 - 132
1,2,3-Trichloropropane	<1.00		25.0	22.22		ug/L		89	49 - 130
1,2-Dibromo-3-chloropropane	<5.00		25.0	23.27		ug/L		93	38 - 150
1,2-Dibromoethane (EDB)	<1.00		25.0	21.98		ug/L		88	60 - 130
1,2-Dichlorobenzene	<1.00		25.0	23.75		ug/L		95	59 - 130
1,2-Dichloroethane	<1.00		25.0	23.55		ug/L		94	51 - 130
1,2-Dichloropropane	<1.00		25.0	22.30		ug/L		89	57 - 130
1,4-Dichlorobenzene	<1.00		25.0	22.39		ug/L		90	57 - 130
2-Butanone (MEK)	<10.0		50.0	42.54		ug/L		85	38 - 150
2-Hexanone	<10.0		50.0	47.09		ug/L		94	46 - 140
4-Methyl-2-pentanone (MIBK)	<10.0		50.0	47.09		ug/L		94	47 - 139
Acetone	<10.0		50.0	48.29		ug/L		97	31 - 150
Acrylonitrile	<5.00		250	239.6		ug/L		96	40 - 150

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# QC Sample Results

Client: SCS Engineers  
Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
SDG: Adair County Sanitary Landfill

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

**Lab Sample ID: 310-300100-3 MS**

**Matrix: Water**

**Analysis Batch: 446555**

**Client Sample ID: MW-6**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
Benzene	<0.500		25.0	22.42		ug/L		90	46 - 130
Bromochloromethane	<5.00		25.0	23.16		ug/L		93	57 - 130
Bromodichloromethane	<1.00		25.0	21.19		ug/L		85	57 - 130
Bromoform	<5.00		25.0	23.05		ug/L		92	44 - 130
Carbon disulfide	<1.00		25.0	25.25		ug/L		101	38 - 135
Carbon tetrachloride	<2.00		25.0	21.43		ug/L		86	45 - 132
Chlorobenzene	<1.00		25.0	21.12		ug/L		84	59 - 130
Chlorodibromomethane	<5.00		25.0	20.96		ug/L		84	54 - 130
Chloroform	<3.00		25.0	22.75		ug/L		91	51 - 130
cis-1,2-Dichloroethene	<1.00		25.0	22.80		ug/L		91	45 - 130
cis-1,3-Dichloropropene	<5.00		25.0	22.77		ug/L		91	53 - 130
Dibromomethane	<1.00		25.0	22.88		ug/L		92	59 - 130
Ethylbenzene	<1.00		25.0	21.65		ug/L		87	45 - 130
Iodomethane	<10.0		25.0	20.24		ug/L		81	10 - 150
Methylene chloride	<5.00		25.0	23.72		ug/L		95	37 - 150
Styrene	<1.00		25.0	22.98		ug/L		92	47 - 130
Tetrachloroethene	<1.00		25.0	22.04		ug/L		88	47 - 130
Toluene	<1.00		25.0	22.42		ug/L		90	51 - 130
trans-1,2-Dichloroethene	<1.00		25.0	21.75		ug/L		87	48 - 130
trans-1,3-Dichloropropene	<5.00		25.0	20.22		ug/L		81	50 - 130
trans-1,4-Dichloro-2-butene	<10.0		25.0	21.65		ug/L		87	26 - 150
Trichloroethene	<1.00		25.0	21.37		ug/L		85	51 - 130
Vinyl acetate	<10.0		50.0	39.94		ug/L		80	29 - 150
Xylenes, Total	<3.00		50.0	44.45		ug/L		89	43 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	97		73 - 130
Toluene-d8 (Surr)	103		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120

**Lab Sample ID: 310-300100-3 MSD**

**Matrix: Water**

**Analysis Batch: 446555**

**Client Sample ID: MW-6**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
1,1,1,2-Tetrachloroethane	<1.00		25.0	21.84		ug/L		87	55 - 130	2	20
1,1,1-Trichloroethane	<1.00		25.0	21.44		ug/L		86	52 - 130	0	20
1,1,1,2,2-Tetrachloroethane	<1.00		25.0	22.56		ug/L		90	54 - 130	0	20
1,1,2-Trichloroethane	<1.00		25.0	21.19		ug/L		85	58 - 130	1	20
1,1-Dichloroethane	<1.00		25.0	22.65		ug/L		91	49 - 130	1	20
1,1-Dichloroethene	<2.00		25.0	20.91		ug/L		84	37 - 132	4	26
1,2,3-Trichloropropane	<1.00		25.0	22.54		ug/L		90	49 - 130	1	26
1,2-Dibromo-3-chloropropane	<5.00		25.0	22.31		ug/L		89	38 - 150	4	20
1,2-Dibromoethane (EDB)	<1.00		25.0	21.27		ug/L		85	60 - 130	3	20
1,2-Dichlorobenzene	<1.00		25.0	23.21		ug/L		93	59 - 130	2	20
1,2-Dichloroethane	<1.00		25.0	23.37		ug/L		93	51 - 130	1	20
1,2-Dichloropropane	<1.00		25.0	22.09		ug/L		88	57 - 130	1	20
1,4-Dichlorobenzene	<1.00		25.0	21.51		ug/L		86	57 - 130	4	20

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# QC Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

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

**Lab Sample ID: 310-300100-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 446555**

**Client Sample ID: MW-6**  
**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		50.0	47.02		ug/L		94	38 - 150	10	20
2-Hexanone	<10.0		50.0	52.06		ug/L		104	46 - 140	10	20
4-Methyl-2-pentanone (MIBK)	<10.0		50.0	49.72		ug/L		99	47 - 139	5	20
Acetone	<10.0		50.0	46.99		ug/L		94	31 - 150	3	29
Acrylonitrile	<5.00		250	239.5		ug/L		96	40 - 150	0	20
Benzene	<0.500		25.0	21.86		ug/L		87	46 - 130	2	20
Bromochloromethane	<5.00		25.0	21.53		ug/L		86	57 - 130	7	20
Bromodichloromethane	<1.00		25.0	21.48		ug/L		86	57 - 130	1	20
Bromoform	<5.00		25.0	23.26		ug/L		93	44 - 130	1	20
Carbon disulfide	<1.00		25.0	21.99		ug/L		88	38 - 135	14	30
Carbon tetrachloride	<2.00		25.0	21.56		ug/L		86	45 - 132	1	20
Chlorobenzene	<1.00		25.0	20.57		ug/L		82	59 - 130	3	20
Chlorodibromomethane	<5.00		25.0	20.93		ug/L		84	54 - 130	0	20
Chloroform	<3.00		25.0	22.38		ug/L		90	51 - 130	2	20
cis-1,2-Dichloroethene	<1.00		25.0	22.20		ug/L		89	45 - 130	3	20
cis-1,3-Dichloropropene	<5.00		25.0	23.42		ug/L		94	53 - 130	3	20
Dibromomethane	<1.00		25.0	22.37		ug/L		89	59 - 130	2	20
Ethylbenzene	<1.00		25.0	21.33		ug/L		85	45 - 130	2	20
Iodomethane	<10.0		25.0	22.04		ug/L		88	10 - 150	9	35
Methylene chloride	<5.00		25.0	23.11		ug/L		92	37 - 150	3	24
Styrene	<1.00		25.0	22.67		ug/L		91	47 - 130	1	20
Tetrachloroethene	<1.00		25.0	21.67		ug/L		87	47 - 130	2	20
Toluene	<1.00		25.0	21.90		ug/L		88	51 - 130	2	20
trans-1,2-Dichloroethene	<1.00		25.0	20.45		ug/L		82	48 - 130	6	22
trans-1,3-Dichloropropene	<5.00		25.0	20.78		ug/L		83	50 - 130	3	20
trans-1,4-Dichloro-2-butene	<10.0		25.0	22.56		ug/L		90	26 - 150	4	23
Trichloroethene	<1.00		25.0	20.86		ug/L		83	51 - 130	2	20
Vinyl acetate	<10.0		50.0	40.76		ug/L		82	29 - 150	2	23
Xylenes, Total	<3.00		50.0	44.41		ug/L		89	43 - 130	0	20

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	97		73 - 130
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	97		80 - 120

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

**Lab Sample ID: MB 310-446622/1-A**  
**Matrix: Water**  
**Analysis Batch: 446979**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 446622**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.00200		0.00200		mg/L		02/11/25 08:45	02/14/25 15:41	1
Arsenic	<0.00200		0.00200		mg/L		02/11/25 08:45	02/14/25 15:41	1
Barium	<0.00200		0.00200		mg/L		02/11/25 08:45	02/14/25 15:41	1
Beryllium	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 15:41	1
Cadmium	<0.000200		0.000200		mg/L		02/11/25 08:45	02/14/25 15:41	1
Chromium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 15:41	1
Cobalt	<0.000500		0.000500		mg/L		02/11/25 08:45	02/14/25 15:41	1

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# QC Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

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

**Lab Sample ID: MB 310-446622/1-A**  
**Matrix: Water**  
**Analysis Batch: 446979**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 446622**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Copper	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 15:41	1
Lead	<0.000500		0.000500		mg/L		02/11/25 08:45	02/14/25 15:41	1
Nickel	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 15:41	1
Selenium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 15:41	1
Silver	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 15:41	1
Thallium	<0.00100		0.00100		mg/L		02/11/25 08:45	02/14/25 15:41	1
Vanadium	<0.00500		0.00500		mg/L		02/11/25 08:45	02/14/25 15:41	1
Zinc	<0.0200		0.0200		mg/L		02/11/25 08:45	02/14/25 15:41	1

**Lab Sample ID: LCS 310-446622/2-A**  
**Matrix: Water**  
**Analysis Batch: 446979**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 446622**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.1913		mg/L		96	80 - 120
Barium	0.100	0.1062		mg/L		106	80 - 120
Beryllium	0.100	0.1052		mg/L		105	80 - 120
Cadmium	0.100	0.09965		mg/L		100	80 - 120
Chromium	0.100	0.1036		mg/L		104	80 - 120
Cobalt	0.100	0.1020		mg/L		102	80 - 120
Copper	0.200	0.2170		mg/L		108	80 - 120
Lead	0.200	0.2087		mg/L		104	80 - 120
Nickel	0.200	0.2092		mg/L		105	80 - 120
Selenium	0.400	0.4000		mg/L		100	80 - 120
Silver	0.100	0.1063		mg/L		106	80 - 120
Thallium	0.100	0.1087		mg/L		109	80 - 120
Vanadium	0.100	0.1034		mg/L		103	80 - 120
Zinc	0.200	0.1949		mg/L		97	80 - 120

**Lab Sample ID: 310-300100-2 DU**  
**Matrix: Water**  
**Analysis Batch: 446979**

**Client Sample ID: MW-3**  
**Prep Type: Total/NA**  
**Prep Batch: 446622**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Antimony	<0.00200		<0.00200		mg/L		NC	20
Arsenic	<0.00200		<0.00200		mg/L		NC	20
Barium	0.0291		0.02840		mg/L		2	20
Beryllium	<0.00100		<0.00100		mg/L		NC	20
Cadmium	<0.000200		<0.000200		mg/L		NC	20
Chromium	<0.00500		<0.00500		mg/L		NC	20
Cobalt	<0.000500		<0.000500		mg/L		NC	20
Copper	<0.00500		<0.00500		mg/L		NC	20
Lead	<0.000500		<0.000500		mg/L		NC	20
Nickel	<0.00500		<0.00500		mg/L		NC	20
Selenium	<0.00500		<0.00500		mg/L		NC	20
Silver	<0.00100		<0.00100		mg/L		NC	20
Thallium	<0.00100		<0.00100		mg/L		NC	20
Vanadium	<0.00500		<0.00500		mg/L		NC	20

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# QC Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

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

Lab Sample ID: 310-300100-2 DU  
 Matrix: Water  
 Analysis Batch: 446979

Client Sample ID: MW-3  
 Prep Type: Total/NA  
 Prep Batch: 446622

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Zinc	<0.0200		<0.0200		mg/L		NC	20

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

Lab Sample ID: MB 310-446698/1  
 Matrix: Water  
 Analysis Batch: 446698

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		mg/L			02/11/25 12:37	1

Lab Sample ID: LCS 310-446698/2  
 Matrix: Water  
 Analysis Batch: 446698

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	98.00		mg/L		98	81 - 116

# QC Association Summary

Client: SCS Engineers  
Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
SDG: Adair County Sanitary Landfill

## GC/MS VOA

### Analysis Batch: 446555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-300100-1	MW-2	Total/NA	Water	8260D	
310-300100-2	MW-3	Total/NA	Water	8260D	
310-300100-3	MW-6	Total/NA	Water	8260D	
310-300100-4	MW-7	Total/NA	Water	8260D	
310-300100-5	MW-9	Total/NA	Water	8260D	
310-300100-6	MW-10	Total/NA	Water	8260D	
310-300100-7	MW-D	Total/NA	Water	8260D	
310-300100-8	Trip Blank 1	Total/NA	Water	8260D	
310-300100-9	Trip Blank 2	Total/NA	Water	8260D	
MB 310-446555/5	Method Blank	Total/NA	Water	8260D	
LCS 310-446555/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-446555/7	Lab Control Sample	Total/NA	Water	8260D	
310-300100-3 MS	MW-6	Total/NA	Water	8260D	
310-300100-3 MSD	MW-6	Total/NA	Water	8260D	

## Metals

### Prep Batch: 446622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-300100-1	MW-2	Total/NA	Water	3005A	
310-300100-2	MW-3	Total/NA	Water	3005A	
310-300100-3	MW-6	Total/NA	Water	3005A	
310-300100-4	MW-7	Total/NA	Water	3005A	
310-300100-5	MW-9	Total/NA	Water	3005A	
310-300100-6	MW-10	Total/NA	Water	3005A	
310-300100-7	MW-D	Total/NA	Water	3005A	
MB 310-446622/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-446622/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-300100-2 DU	MW-3	Total/NA	Water	3005A	

### Analysis Batch: 446979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-300100-1	MW-2	Total/NA	Water	6020B	446622
310-300100-2	MW-3	Total/NA	Water	6020B	446622
310-300100-3	MW-6	Total/NA	Water	6020B	446622
310-300100-4	MW-7	Total/NA	Water	6020B	446622
310-300100-5	MW-9	Total/NA	Water	6020B	446622
310-300100-6	MW-10	Total/NA	Water	6020B	446622
310-300100-7	MW-D	Total/NA	Water	6020B	446622
MB 310-446622/1-A	Method Blank	Total/NA	Water	6020B	446622
LCS 310-446622/2-A	Lab Control Sample	Total/NA	Water	6020B	446622
310-300100-2 DU	MW-3	Total/NA	Water	6020B	446622

## General Chemistry

### Analysis Batch: 446698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-300100-1	MW-2	Total/NA	Water	I-3765-85	
310-300100-2	MW-3	Total/NA	Water	I-3765-85	
310-300100-3	MW-6	Total/NA	Water	I-3765-85	
310-300100-4	MW-7	Total/NA	Water	I-3765-85	
310-300100-5	MW-9	Total/NA	Water	I-3765-85	

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# QC Association Summary

Client: SCS Engineers  
Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
SDG: Adair County Sanitary Landfill

## General Chemistry (Continued)

### Analysis Batch: 446698 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-300100-6	MW-10	Total/NA	Water	I-3765-85	
310-300100-7	MW-D	Total/NA	Water	I-3765-85	
MB 310-446698/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-446698/2	Lab Control Sample	Total/NA	Water	I-3765-85	

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# Lab Chronicle

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-2**

**Lab Sample ID: 310-300100-1**

Date Collected: 02/06/25 14:35

Matrix: Water

Date Received: 02/07/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	446555	WSE8	EET CF	02/10/25 12:55
Total/NA	Prep	3005A			446622	QTZ5	EET CF	02/11/25 08:45
Total/NA	Analysis	6020B		1	446979	ZRI4	EET CF	02/14/25 16:35
Total/NA	Analysis	I-3765-85		1	446698	XJ7V	EET CF	02/11/25 12:37

**Client Sample ID: MW-3**

**Lab Sample ID: 310-300100-2**

Date Collected: 02/06/25 13:50

Matrix: Water

Date Received: 02/07/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	446555	WSE8	EET CF	02/10/25 13:17
Total/NA	Prep	3005A			446622	QTZ5	EET CF	02/11/25 08:45
Total/NA	Analysis	6020B		1	446979	ZRI4	EET CF	02/14/25 16:38
Total/NA	Analysis	I-3765-85		1	446698	XJ7V	EET CF	02/11/25 12:37

**Client Sample ID: MW-6**

**Lab Sample ID: 310-300100-3**

Date Collected: 02/06/25 11:51

Matrix: Water

Date Received: 02/07/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	446555	WSE8	EET CF	02/10/25 13:40
Total/NA	Prep	3005A			446622	QTZ5	EET CF	02/11/25 08:45
Total/NA	Analysis	6020B		1	446979	ZRI4	EET CF	02/14/25 16:44
Total/NA	Analysis	I-3765-85		1	446698	XJ7V	EET CF	02/11/25 12:37

**Client Sample ID: MW-7**

**Lab Sample ID: 310-300100-4**

Date Collected: 02/06/25 12:36

Matrix: Water

Date Received: 02/07/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	446555	WSE8	EET CF	02/10/25 14:02
Total/NA	Prep	3005A			446622	QTZ5	EET CF	02/11/25 08:45
Total/NA	Analysis	6020B		1	446979	ZRI4	EET CF	02/14/25 16:58
Total/NA	Analysis	I-3765-85		1	446698	XJ7V	EET CF	02/11/25 12:37

**Client Sample ID: MW-9**

**Lab Sample ID: 310-300100-5**

Date Collected: 02/06/25 10:48

Matrix: Water

Date Received: 02/07/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	446555	WSE8	EET CF	02/10/25 14:25
Total/NA	Prep	3005A			446622	QTZ5	EET CF	02/11/25 08:45
Total/NA	Analysis	6020B		1	446979	ZRI4	EET CF	02/14/25 17:01
Total/NA	Analysis	I-3765-85		1	446698	XJ7V	EET CF	02/11/25 12:37

# Lab Chronicle

Client: SCS Engineers  
 Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-10**

**Lab Sample ID: 310-300100-6**

Date Collected: 02/06/25 15:36

Matrix: Water

Date Received: 02/07/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	446555	WSE8	EET CF	02/10/25 14:47
Total/NA	Prep	3005A			446622	QTZ5	EET CF	02/11/25 08:45
Total/NA	Analysis	6020B		1	446979	ZRI4	EET CF	02/14/25 17:04
Total/NA	Analysis	I-3765-85		1	446698	XJ7V	EET CF	02/11/25 12:37

**Client Sample ID: MW-D**

**Lab Sample ID: 310-300100-7**

Date Collected: 02/06/25 12:36

Matrix: Water

Date Received: 02/07/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	446555	WSE8	EET CF	02/10/25 15:10
Total/NA	Prep	3005A			446622	QTZ5	EET CF	02/11/25 08:45
Total/NA	Analysis	6020B		1	446979	ZRI4	EET CF	02/14/25 17:06
Total/NA	Analysis	I-3765-85		1	446698	XJ7V	EET CF	02/11/25 12:37

**Client Sample ID: Trip Blank 1**

**Lab Sample ID: 310-300100-8**

Date Collected: 02/06/25 00:00

Matrix: Water

Date Received: 02/07/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	446555	WSE8	EET CF	02/10/25 11:25

**Client Sample ID: Trip Blank 2**

**Lab Sample ID: 310-300100-9**

Date Collected: 02/06/25 00:00

Matrix: Water

Date Received: 02/07/25 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	446555	WSE8	EET CF	02/10/25 11:48

**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: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
SDG: Adair County Sanitary Landfill

## Laboratory: Eurofins Cedar Falls

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

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

- 1
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# Method Summary

Client: SCS Engineers  
Project/Site: Adair County 1st 2025 GW Sampling Event

Job ID: 310-300100-1  
SDG: Adair 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



### 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>2/7/25</u>	TIME <u>1600</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 checked="" type="checkbox"/> Yes <input 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>MW-2 through MW-9, WTB-1</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>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>0.1</u>	Corrected Temp (°C):	<u>0.1</u>
• <b>Sample Container Temperature</b>			
Container(s) used:	<u>CONTAINER 1</u>	<u>CONTAINER 2</u>	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
<b>Exceptions Noted</b>			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
<b>Additional Comments</b>			





Environment Testing  
America

Place COC scanning label  
here

### Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
<b>Receipt Information</b>			
Date/Time Received:	DATE <u>2/7/25</u>	TIME <u>1600</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 checked="" type="checkbox"/> Yes <input 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>MW-10, MW-P, TBZ</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>Z</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>0.4</u>		Corrected Temp (°C): <u>0.4</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: 310-300100-1  
SDG Number: Adair County Sanitary Landfill

**Login Number: 300100**

**List Number: 1**

**Creator: Bunker, Xavier M**

**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	





# ANALYTICAL REPORT

## PREPARED FOR

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

Generated 10/6/2025 11:07:40 AM

## JOB DESCRIPTION

Adair County 2nd 2025 GW Sampling Event  
Adair County Sanitary Landfill

## JOB NUMBER

310-316331-1

# 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  
10/6/2025 11:07:40 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: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1

**Job ID: 310-316331-1**

**Eurofins Cedar Falls**

## Job Narrative 310-316331-1

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 9/23/2025 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.6°C and 2.2°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 2 (310-316331-10).

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 was received with insufficient preservation at a pH of >2: MW-2 (310-316331-1). The sample(s) was preserved to the appropriate pH in the laboratory.

Method 6020B: The reference method requires samples to be preserved to a pH of <2. The following sample was received with insufficient preservation at a pH of >2: GWD-1 (310-316331-7). 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: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
SDG: Adair County Sanitary Landfill

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-316331-1	MW-2	Water	09/22/25 16:20	09/23/25 16:20	Nebraska
310-316331-2	MW-3	Water	09/22/25 16:53	09/23/25 16:20	Nebraska
310-316331-3	MW-6	Water	09/22/25 12:52	09/23/25 16:20	Nebraska
310-316331-4	MW-7	Water	09/22/25 13:58	09/23/25 16:20	Nebraska
310-316331-5	MW-9	Water	09/22/25 10:45	09/23/25 16:20	Nebraska
310-316331-6	MW-10	Water	09/22/25 11:30	09/23/25 16:20	Nebraska
310-316331-7	GWD-1	Water	09/22/25 14:55	09/23/25 16:20	Nebraska
310-316331-8	MW-D	Water	09/22/25 13:06	09/23/25 16:20	Nebraska
310-316331-9	Trip Blank 1	Water	09/22/25 00:00	09/23/25 16:20	Nebraska
310-316331-10	Trip Blank 2	Water	09/22/25 00:00	09/23/25 16:20	Nebraska

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# Detection Summary

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

## Client Sample ID: MW-2

## Lab Sample ID: 310-316331-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.850		0.500		ug/L	1		8260D	Total/NA
Arsenic	0.00616		0.00200		mg/L	1		6020B	Total/NA
Barium	0.193		0.00200		mg/L	1		6020B	Total/NA
Cobalt	0.000505		0.000500		mg/L	1		6020B	Total/NA
Total Suspended Solids	25.0		15.0		mg/L	1		I-3765-85	Total/NA

## Client Sample ID: MW-3

## Lab Sample ID: 310-316331-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0259		0.00200		mg/L	1		6020B	Total/NA
Total Suspended Solids	2.00		1.88		mg/L	1		I-3765-85	Total/NA

## Client Sample ID: MW-6

## Lab Sample ID: 310-316331-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0205		0.00200		mg/L	1		6020B	Total/NA
Selenium	0.00519		0.00500		mg/L	1		6020B	Total/NA
Total Suspended Solids	2.13		1.88		mg/L	1		I-3765-85	Total/NA

## Client Sample ID: MW-7

## Lab Sample ID: 310-316331-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0289		0.00200		mg/L	1		6020B	Total/NA
Cadmium	0.000264		0.000200		mg/L	1		6020B	Total/NA
Copper	0.0224		0.00500		mg/L	1		6020B	Total/NA
Lead	0.0149		0.000500		mg/L	1		6020B	Total/NA
Nickel	0.0188		0.00500		mg/L	1		6020B	Total/NA
Zinc	0.0220		0.0200		mg/L	1		6020B	Total/NA

## Client Sample ID: MW-9

## Lab Sample ID: 310-316331-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0607		0.00200		mg/L	1		6020B	Total/NA
Cobalt	0.000773		0.000500		mg/L	1		6020B	Total/NA
Nickel	0.00629		0.00500		mg/L	1		6020B	Total/NA

## Client Sample ID: MW-10

## Lab Sample ID: 310-316331-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.148		0.00200		mg/L	1		6020B	Total/NA

## Client Sample ID: GWD-1

## Lab Sample ID: 310-316331-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0551		0.00200		mg/L	1		6020B	Total/NA
Zinc	0.0278		0.0200		mg/L	1		6020B	Total/NA
Total Suspended Solids	8.00		3.75		mg/L	1		I-3765-85	Total/NA

## Client Sample ID: MW-D

## Lab Sample ID: 310-316331-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0204		0.00200		mg/L	1		6020B	Total/NA
Selenium	0.00567		0.00500		mg/L	1		6020B	Total/NA
Total Suspended Solids	4.25		1.88		mg/L	1		I-3765-85	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

# Detection Summary

Client: SCS Engineers  
Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
SDG: Adair County Sanitary Landfill

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**Client Sample ID: Trip Blank 1**

**Lab Sample ID: 310-316331-9**

No Detections.

---

**Client Sample ID: Trip Blank 2**

**Lab Sample ID: 310-316331-10**

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: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-2**

**Lab Sample ID: 310-316331-1**

Date Collected: 09/22/25 16:20

Matrix: Water

Date Received: 09/23/25 16:20

**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		ug/L			09/25/25 01:18	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			09/25/25 01:18	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			09/25/25 01:18	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			09/25/25 01:18	1
1,1-Dichloroethane	<1.00		1.00		ug/L			09/25/25 01:18	1
1,1-Dichloroethene	<2.00		2.00		ug/L			09/25/25 01:18	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			09/25/25 01:18	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			09/25/25 01:18	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			09/25/25 01:18	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			09/25/25 01:18	1
1,2-Dichloroethane	<1.00		1.00		ug/L			09/25/25 01:18	1
1,2-Dichloropropane	<1.00		1.00		ug/L			09/25/25 01:18	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			09/25/25 01:18	1
2-Butanone (MEK)	<10.0		10.0		ug/L			09/25/25 01:18	1
2-Hexanone	<10.0		10.0		ug/L			09/25/25 01:18	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			09/25/25 01:18	1
Acetone	<10.0		10.0		ug/L			09/25/25 01:18	1
Acrylonitrile	<5.00		5.00		ug/L			09/25/25 01:18	1
<b>Benzene</b>	<b>0.850</b>		0.500		ug/L			09/25/25 01:18	1
Bromochloromethane	<5.00		5.00		ug/L			09/25/25 01:18	1
Bromodichloromethane	<1.00		1.00		ug/L			09/25/25 01:18	1
Bromoform	<5.00		5.00		ug/L			09/25/25 01:18	1
Bromomethane	<4.00		4.00		ug/L			09/25/25 01:18	1
Carbon disulfide	<1.00		1.00		ug/L			09/25/25 01:18	1
Carbon tetrachloride	<2.00		2.00		ug/L			09/25/25 01:18	1
Chlorobenzene	<1.00		1.00		ug/L			09/25/25 01:18	1
Chlorodibromomethane	<5.00		5.00		ug/L			09/25/25 01:18	1
Chloroethane	<4.00		4.00		ug/L			09/25/25 01:18	1
Chloroform	<3.00		3.00		ug/L			09/25/25 01:18	1
Chloromethane	<3.00		3.00		ug/L			09/25/25 01:18	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			09/25/25 01:18	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			09/25/25 01:18	1
Dibromomethane	<1.00		1.00		ug/L			09/25/25 01:18	1
Ethylbenzene	<1.00		1.00		ug/L			09/25/25 01:18	1
Iodomethane	<10.0		10.0		ug/L			09/25/25 01:18	1
Methylene chloride	<5.00		5.00		ug/L			09/25/25 01:18	1
Styrene	<1.00		1.00		ug/L			09/25/25 01:18	1
Tetrachloroethene	<1.00		1.00		ug/L			09/25/25 01:18	1
Toluene	<1.00		1.00		ug/L			09/25/25 01:18	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			09/25/25 01:18	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			09/25/25 01:18	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			09/25/25 01:18	1
Trichloroethene	<1.00		1.00		ug/L			09/25/25 01:18	1
Trichlorofluoromethane	<4.00		4.00		ug/L			09/25/25 01:18	1
Vinyl acetate	<10.0		10.0		ug/L			09/25/25 01:18	1
Vinyl chloride	<1.00		1.00		ug/L			09/25/25 01:18	1
Xylenes, Total	<3.00		3.00		ug/L			09/25/25 01:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	115		76 - 130		09/25/25 01:18	1

Eurofins Cedar Falls

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-2**  
 Date Collected: 09/22/25 16:20  
 Date Received: 09/23/25 16:20

**Lab Sample ID: 310-316331-1**  
 Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		09/25/25 01:18	1
4-Bromofluorobenzene (Surr)	103		80 - 120		09/25/25 01:18	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:47	1
<b>Arsenic</b>	<b>0.00616</b>		0.00200		mg/L		09/30/25 09:00	10/03/25 18:47	1
<b>Barium</b>	<b>0.193</b>		0.00200		mg/L		09/30/25 09:00	10/03/25 18:47	1
Beryllium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:47	1
Cadmium	<0.000200		0.000200		mg/L		09/30/25 09:00	10/03/25 18:47	1
Chromium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:47	1
<b>Cobalt</b>	<b>0.000505</b>		0.000500		mg/L		09/30/25 09:00	10/03/25 18:47	1
Copper	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:47	1
Lead	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:47	1
Nickel	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:47	1
Selenium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:47	1
Silver	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:47	1
Thallium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:47	1
Vanadium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:47	1
Zinc	<0.0200		0.0200		mg/L		09/30/25 09:00	10/03/25 18:47	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>25.0</b>		15.0		mg/L			09/24/25 06:37	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-3**

**Lab Sample ID: 310-316331-2**

Date Collected: 09/22/25 16:53

Matrix: Water

Date Received: 09/23/25 16:20

**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		ug/L			09/25/25 01:40	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			09/25/25 01:40	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			09/25/25 01:40	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			09/25/25 01:40	1
1,1-Dichloroethane	<1.00		1.00		ug/L			09/25/25 01:40	1
1,1-Dichloroethene	<2.00		2.00		ug/L			09/25/25 01:40	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			09/25/25 01:40	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			09/25/25 01:40	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			09/25/25 01:40	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			09/25/25 01:40	1
1,2-Dichloroethane	<1.00		1.00		ug/L			09/25/25 01:40	1
1,2-Dichloropropane	<1.00		1.00		ug/L			09/25/25 01:40	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			09/25/25 01:40	1
2-Butanone (MEK)	<10.0		10.0		ug/L			09/25/25 01:40	1
2-Hexanone	<10.0		10.0		ug/L			09/25/25 01:40	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			09/25/25 01:40	1
Acetone	<10.0		10.0		ug/L			09/25/25 01:40	1
Acrylonitrile	<5.00		5.00		ug/L			09/25/25 01:40	1
Benzene	<0.500		0.500		ug/L			09/25/25 01:40	1
Bromochloromethane	<5.00		5.00		ug/L			09/25/25 01:40	1
Bromodichloromethane	<1.00		1.00		ug/L			09/25/25 01:40	1
Bromoform	<5.00		5.00		ug/L			09/25/25 01:40	1
Bromomethane	<4.00		4.00		ug/L			09/25/25 01:40	1
Carbon disulfide	<1.00		1.00		ug/L			09/25/25 01:40	1
Carbon tetrachloride	<2.00		2.00		ug/L			09/25/25 01:40	1
Chlorobenzene	<1.00		1.00		ug/L			09/25/25 01:40	1
Chlorodibromomethane	<5.00		5.00		ug/L			09/25/25 01:40	1
Chloroethane	<4.00		4.00		ug/L			09/25/25 01:40	1
Chloroform	<3.00		3.00		ug/L			09/25/25 01:40	1
Chloromethane	<3.00		3.00		ug/L			09/25/25 01:40	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			09/25/25 01:40	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			09/25/25 01:40	1
Dibromomethane	<1.00		1.00		ug/L			09/25/25 01:40	1
Ethylbenzene	<1.00		1.00		ug/L			09/25/25 01:40	1
Iodomethane	<10.0		10.0		ug/L			09/25/25 01:40	1
Methylene chloride	<5.00		5.00		ug/L			09/25/25 01:40	1
Styrene	<1.00		1.00		ug/L			09/25/25 01:40	1
Tetrachloroethene	<1.00		1.00		ug/L			09/25/25 01:40	1
Toluene	<1.00		1.00		ug/L			09/25/25 01:40	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			09/25/25 01:40	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			09/25/25 01:40	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			09/25/25 01:40	1
Trichloroethene	<1.00		1.00		ug/L			09/25/25 01:40	1
Trichlorofluoromethane	<4.00		4.00		ug/L			09/25/25 01:40	1
Vinyl acetate	<10.0		10.0		ug/L			09/25/25 01:40	1
Vinyl chloride	<1.00		1.00		ug/L			09/25/25 01:40	1
Xylenes, Total	<3.00		3.00		ug/L			09/25/25 01:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	113		76 - 130		09/25/25 01:40	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-3**

**Lab Sample ID: 310-316331-2**

Date Collected: 09/22/25 16:53

Matrix: Water

Date Received: 09/23/25 16:20

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		09/25/25 01:40	1
4-Bromofluorobenzene (Surr)	102		80 - 120		09/25/25 01:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:50	1
Arsenic	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:50	1
<b>Barium</b>	<b>0.0259</b>		0.00200		mg/L		09/30/25 09:00	10/03/25 18:50	1
Beryllium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:50	1
Cadmium	<0.000200		0.000200		mg/L		09/30/25 09:00	10/03/25 18:50	1
Chromium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:50	1
Cobalt	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:50	1
Copper	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:50	1
Lead	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:50	1
Nickel	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:50	1
Selenium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:50	1
Silver	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:50	1
Thallium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:50	1
Vanadium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:50	1
Zinc	<0.0200		0.0200		mg/L		09/30/25 09:00	10/03/25 18:50	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		mg/L			09/24/25 06:37	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-6**

**Lab Sample ID: 310-316331-3**

Date Collected: 09/22/25 12:52

Matrix: Water

Date Received: 09/23/25 16:20

**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		ug/L			09/25/25 02:03	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			09/25/25 02:03	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			09/25/25 02:03	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			09/25/25 02:03	1
1,1-Dichloroethane	<1.00		1.00		ug/L			09/25/25 02:03	1
1,1-Dichloroethene	<2.00		2.00		ug/L			09/25/25 02:03	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			09/25/25 02:03	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			09/25/25 02:03	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			09/25/25 02:03	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			09/25/25 02:03	1
1,2-Dichloroethane	<1.00		1.00		ug/L			09/25/25 02:03	1
1,2-Dichloropropane	<1.00		1.00		ug/L			09/25/25 02:03	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			09/25/25 02:03	1
2-Butanone (MEK)	<10.0		10.0		ug/L			09/25/25 02:03	1
2-Hexanone	<10.0		10.0		ug/L			09/25/25 02:03	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			09/25/25 02:03	1
Acetone	<10.0		10.0		ug/L			09/25/25 02:03	1
Acrylonitrile	<5.00		5.00		ug/L			09/25/25 02:03	1
Benzene	<0.500		0.500		ug/L			09/25/25 02:03	1
Bromochloromethane	<5.00		5.00		ug/L			09/25/25 02:03	1
Bromodichloromethane	<1.00		1.00		ug/L			09/25/25 02:03	1
Bromoform	<5.00		5.00		ug/L			09/25/25 02:03	1
Bromomethane	<4.00		4.00		ug/L			09/25/25 02:03	1
Carbon disulfide	<1.00		1.00		ug/L			09/25/25 02:03	1
Carbon tetrachloride	<2.00		2.00		ug/L			09/25/25 02:03	1
Chlorobenzene	<1.00		1.00		ug/L			09/25/25 02:03	1
Chlorodibromomethane	<5.00		5.00		ug/L			09/25/25 02:03	1
Chloroethane	<4.00		4.00		ug/L			09/25/25 02:03	1
Chloroform	<3.00		3.00		ug/L			09/25/25 02:03	1
Chloromethane	<3.00		3.00		ug/L			09/25/25 02:03	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			09/25/25 02:03	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			09/25/25 02:03	1
Dibromomethane	<1.00		1.00		ug/L			09/25/25 02:03	1
Ethylbenzene	<1.00		1.00		ug/L			09/25/25 02:03	1
Iodomethane	<10.0		10.0		ug/L			09/25/25 02:03	1
Methylene chloride	<5.00		5.00		ug/L			09/25/25 02:03	1
Styrene	<1.00		1.00		ug/L			09/25/25 02:03	1
Tetrachloroethene	<1.00		1.00		ug/L			09/25/25 02:03	1
Toluene	<1.00		1.00		ug/L			09/25/25 02:03	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			09/25/25 02:03	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			09/25/25 02:03	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			09/25/25 02:03	1
Trichloroethene	<1.00		1.00		ug/L			09/25/25 02:03	1
Trichlorofluoromethane	<4.00		4.00		ug/L			09/25/25 02:03	1
Vinyl acetate	<10.0		10.0		ug/L			09/25/25 02:03	1
Vinyl chloride	<1.00		1.00		ug/L			09/25/25 02:03	1
Xylenes, Total	<3.00		3.00		ug/L			09/25/25 02:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	113		76 - 130		09/25/25 02:03	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-6**

**Lab Sample ID: 310-316331-3**

Date Collected: 09/22/25 12:52

Matrix: Water

Date Received: 09/23/25 16:20

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		09/25/25 02:03	1
4-Bromofluorobenzene (Surr)	103		80 - 120		09/25/25 02:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:53	1
Arsenic	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:53	1
<b>Barium</b>	<b>0.0205</b>		0.00200		mg/L		09/30/25 09:00	10/03/25 18:53	1
Beryllium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:53	1
Cadmium	<0.000200		0.000200		mg/L		09/30/25 09:00	10/03/25 18:53	1
Chromium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:53	1
Cobalt	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:53	1
Copper	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:53	1
Lead	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:53	1
Nickel	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:53	1
<b>Selenium</b>	<b>0.00519</b>		0.00500		mg/L		09/30/25 09:00	10/03/25 18:53	1
Silver	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:53	1
Thallium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:53	1
Vanadium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:53	1
Zinc	<0.0200		0.0200		mg/L		09/30/25 09:00	10/03/25 18:53	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>2.13</b>		1.88		mg/L			09/24/25 06:37	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-7**

**Lab Sample ID: 310-316331-4**

Date Collected: 09/22/25 13:58

Matrix: Water

Date Received: 09/23/25 16:20

**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		ug/L			09/25/25 02:25	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			09/25/25 02:25	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			09/25/25 02:25	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			09/25/25 02:25	1
1,1-Dichloroethane	<1.00		1.00		ug/L			09/25/25 02:25	1
1,1-Dichloroethene	<2.00		2.00		ug/L			09/25/25 02:25	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			09/25/25 02:25	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			09/25/25 02:25	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			09/25/25 02:25	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			09/25/25 02:25	1
1,2-Dichloroethane	<1.00		1.00		ug/L			09/25/25 02:25	1
1,2-Dichloropropane	<1.00		1.00		ug/L			09/25/25 02:25	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			09/25/25 02:25	1
2-Butanone (MEK)	<10.0		10.0		ug/L			09/25/25 02:25	1
2-Hexanone	<10.0		10.0		ug/L			09/25/25 02:25	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			09/25/25 02:25	1
Acetone	<10.0		10.0		ug/L			09/25/25 02:25	1
Acrylonitrile	<5.00		5.00		ug/L			09/25/25 02:25	1
Benzene	<0.500		0.500		ug/L			09/25/25 02:25	1
Bromochloromethane	<5.00		5.00		ug/L			09/25/25 02:25	1
Bromodichloromethane	<1.00		1.00		ug/L			09/25/25 02:25	1
Bromoform	<5.00		5.00		ug/L			09/25/25 02:25	1
Bromomethane	<4.00		4.00		ug/L			09/25/25 02:25	1
Carbon disulfide	<1.00		1.00		ug/L			09/25/25 02:25	1
Carbon tetrachloride	<2.00		2.00		ug/L			09/25/25 02:25	1
Chlorobenzene	<1.00		1.00		ug/L			09/25/25 02:25	1
Chlorodibromomethane	<5.00		5.00		ug/L			09/25/25 02:25	1
Chloroethane	<4.00		4.00		ug/L			09/25/25 02:25	1
Chloroform	<3.00		3.00		ug/L			09/25/25 02:25	1
Chloromethane	<3.00		3.00		ug/L			09/25/25 02:25	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			09/25/25 02:25	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			09/25/25 02:25	1
Dibromomethane	<1.00		1.00		ug/L			09/25/25 02:25	1
Ethylbenzene	<1.00		1.00		ug/L			09/25/25 02:25	1
Iodomethane	<10.0		10.0		ug/L			09/25/25 02:25	1
Methylene chloride	<5.00		5.00		ug/L			09/25/25 02:25	1
Styrene	<1.00		1.00		ug/L			09/25/25 02:25	1
Tetrachloroethene	<1.00		1.00		ug/L			09/25/25 02:25	1
Toluene	<1.00		1.00		ug/L			09/25/25 02:25	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			09/25/25 02:25	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			09/25/25 02:25	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			09/25/25 02:25	1
Trichloroethene	<1.00		1.00		ug/L			09/25/25 02:25	1
Trichlorofluoromethane	<4.00		4.00		ug/L			09/25/25 02:25	1
Vinyl acetate	<10.0		10.0		ug/L			09/25/25 02:25	1
Vinyl chloride	<1.00		1.00		ug/L			09/25/25 02:25	1
Xylenes, Total	<3.00		3.00		ug/L			09/25/25 02:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	117		76 - 130		09/25/25 02:25	1

Eurofins Cedar Falls

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-7**

**Lab Sample ID: 310-316331-4**

Date Collected: 09/22/25 13:58

Matrix: Water

Date Received: 09/23/25 16:20

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		80 - 120		09/25/25 02:25	1
4-Bromofluorobenzene (Surr)	104		80 - 120		09/25/25 02:25	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:56	1
Arsenic	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:56	1
<b>Barium</b>	<b>0.0289</b>		0.00200		mg/L		09/30/25 09:00	10/03/25 18:56	1
Beryllium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:56	1
<b>Cadmium</b>	<b>0.000264</b>		0.000200		mg/L		09/30/25 09:00	10/03/25 18:56	1
Chromium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:56	1
Cobalt	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:56	1
<b>Copper</b>	<b>0.0224</b>		0.00500		mg/L		09/30/25 09:00	10/03/25 18:56	1
<b>Lead</b>	<b>0.0149</b>		0.000500		mg/L		09/30/25 09:00	10/03/25 18:56	1
<b>Nickel</b>	<b>0.0188</b>		0.00500		mg/L		09/30/25 09:00	10/03/25 18:56	1
Selenium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:56	1
Silver	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:56	1
Thallium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:56	1
Vanadium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:56	1
<b>Zinc</b>	<b>0.0220</b>		0.0200		mg/L		09/30/25 09:00	10/03/25 18:56	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		mg/L			09/24/25 12:02	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-9**

**Lab Sample ID: 310-316331-5**

Date Collected: 09/22/25 10:45

Matrix: Water

Date Received: 09/23/25 16:20

**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		ug/L			09/25/25 02:48	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			09/25/25 02:48	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			09/25/25 02:48	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			09/25/25 02:48	1
1,1-Dichloroethane	<1.00		1.00		ug/L			09/25/25 02:48	1
1,1-Dichloroethene	<2.00		2.00		ug/L			09/25/25 02:48	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			09/25/25 02:48	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			09/25/25 02:48	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			09/25/25 02:48	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			09/25/25 02:48	1
1,2-Dichloroethane	<1.00		1.00		ug/L			09/25/25 02:48	1
1,2-Dichloropropane	<1.00		1.00		ug/L			09/25/25 02:48	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			09/25/25 02:48	1
2-Butanone (MEK)	<10.0		10.0		ug/L			09/25/25 02:48	1
2-Hexanone	<10.0		10.0		ug/L			09/25/25 02:48	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			09/25/25 02:48	1
Acetone	<10.0		10.0		ug/L			09/25/25 02:48	1
Acrylonitrile	<5.00		5.00		ug/L			09/25/25 02:48	1
Benzene	<0.500		0.500		ug/L			09/25/25 02:48	1
Bromochloromethane	<5.00		5.00		ug/L			09/25/25 02:48	1
Bromodichloromethane	<1.00		1.00		ug/L			09/25/25 02:48	1
Bromoform	<5.00		5.00		ug/L			09/25/25 02:48	1
Bromomethane	<4.00		4.00		ug/L			09/25/25 02:48	1
Carbon disulfide	<1.00		1.00		ug/L			09/25/25 02:48	1
Carbon tetrachloride	<2.00		2.00		ug/L			09/25/25 02:48	1
Chlorobenzene	<1.00		1.00		ug/L			09/25/25 02:48	1
Chlorodibromomethane	<5.00		5.00		ug/L			09/25/25 02:48	1
Chloroethane	<4.00		4.00		ug/L			09/25/25 02:48	1
Chloroform	<3.00		3.00		ug/L			09/25/25 02:48	1
Chloromethane	<3.00		3.00		ug/L			09/25/25 02:48	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			09/25/25 02:48	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			09/25/25 02:48	1
Dibromomethane	<1.00		1.00		ug/L			09/25/25 02:48	1
Ethylbenzene	<1.00		1.00		ug/L			09/25/25 02:48	1
Iodomethane	<10.0		10.0		ug/L			09/25/25 02:48	1
Methylene chloride	<5.00		5.00		ug/L			09/25/25 02:48	1
Styrene	<1.00		1.00		ug/L			09/25/25 02:48	1
Tetrachloroethene	<1.00		1.00		ug/L			09/25/25 02:48	1
Toluene	<1.00		1.00		ug/L			09/25/25 02:48	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			09/25/25 02:48	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			09/25/25 02:48	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			09/25/25 02:48	1
Trichloroethene	<1.00		1.00		ug/L			09/25/25 02:48	1
Trichlorofluoromethane	<4.00		4.00		ug/L			09/25/25 02:48	1
Vinyl acetate	<10.0		10.0		ug/L			09/25/25 02:48	1
Vinyl chloride	<1.00		1.00		ug/L			09/25/25 02:48	1
Xylenes, Total	<3.00		3.00		ug/L			09/25/25 02:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	117		76 - 130		09/25/25 02:48	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-9**

**Lab Sample ID: 310-316331-5**

Date Collected: 09/22/25 10:45

Matrix: Water

Date Received: 09/23/25 16:20

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		09/25/25 02:48	1
4-Bromofluorobenzene (Surr)	107		80 - 120		09/25/25 02:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 19:10	1
Arsenic	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 19:10	1
<b>Barium</b>	<b>0.0607</b>		0.00200		mg/L		09/30/25 09:00	10/03/25 19:10	1
Beryllium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 19:10	1
Cadmium	<0.000200		0.000200		mg/L		09/30/25 09:00	10/03/25 19:10	1
Chromium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 19:10	1
<b>Cobalt</b>	<b>0.000773</b>		0.000500		mg/L		09/30/25 09:00	10/03/25 19:10	1
Copper	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 19:10	1
Lead	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 19:10	1
<b>Nickel</b>	<b>0.00629</b>		0.00500		mg/L		09/30/25 09:00	10/03/25 19:10	1
Selenium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 19:10	1
Silver	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 19:10	1
Thallium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 19:10	1
Vanadium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 19:10	1
Zinc	<0.0200		0.0200		mg/L		09/30/25 09:00	10/03/25 19:10	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		mg/L			09/24/25 06:37	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-10**

**Lab Sample ID: 310-316331-6**

Date Collected: 09/22/25 11:30

Matrix: Water

Date Received: 09/23/25 16:20

**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		ug/L			09/25/25 03:11	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			09/25/25 03:11	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			09/25/25 03:11	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			09/25/25 03:11	1
1,1-Dichloroethane	<1.00		1.00		ug/L			09/25/25 03:11	1
1,1-Dichloroethene	<2.00		2.00		ug/L			09/25/25 03:11	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			09/25/25 03:11	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			09/25/25 03:11	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			09/25/25 03:11	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			09/25/25 03:11	1
1,2-Dichloroethane	<1.00		1.00		ug/L			09/25/25 03:11	1
1,2-Dichloropropane	<1.00		1.00		ug/L			09/25/25 03:11	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			09/25/25 03:11	1
2-Butanone (MEK)	<10.0		10.0		ug/L			09/25/25 03:11	1
2-Hexanone	<10.0		10.0		ug/L			09/25/25 03:11	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			09/25/25 03:11	1
Acetone	<10.0		10.0		ug/L			09/25/25 03:11	1
Acrylonitrile	<5.00		5.00		ug/L			09/25/25 03:11	1
Benzene	<0.500		0.500		ug/L			09/25/25 03:11	1
Bromochloromethane	<5.00		5.00		ug/L			09/25/25 03:11	1
Bromodichloromethane	<1.00		1.00		ug/L			09/25/25 03:11	1
Bromoform	<5.00		5.00		ug/L			09/25/25 03:11	1
Bromomethane	<4.00		4.00		ug/L			09/25/25 03:11	1
Carbon disulfide	<1.00		1.00		ug/L			09/25/25 03:11	1
Carbon tetrachloride	<2.00		2.00		ug/L			09/25/25 03:11	1
Chlorobenzene	<1.00		1.00		ug/L			09/25/25 03:11	1
Chlorodibromomethane	<5.00		5.00		ug/L			09/25/25 03:11	1
Chloroethane	<4.00		4.00		ug/L			09/25/25 03:11	1
Chloroform	<3.00		3.00		ug/L			09/25/25 03:11	1
Chloromethane	<3.00		3.00		ug/L			09/25/25 03:11	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			09/25/25 03:11	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			09/25/25 03:11	1
Dibromomethane	<1.00		1.00		ug/L			09/25/25 03:11	1
Ethylbenzene	<1.00		1.00		ug/L			09/25/25 03:11	1
Iodomethane	<10.0		10.0		ug/L			09/25/25 03:11	1
Methylene chloride	<5.00		5.00		ug/L			09/25/25 03:11	1
Styrene	<1.00		1.00		ug/L			09/25/25 03:11	1
Tetrachloroethene	<1.00		1.00		ug/L			09/25/25 03:11	1
Toluene	<1.00		1.00		ug/L			09/25/25 03:11	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			09/25/25 03:11	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			09/25/25 03:11	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			09/25/25 03:11	1
Trichloroethene	<1.00		1.00		ug/L			09/25/25 03:11	1
Trichlorofluoromethane	<4.00		4.00		ug/L			09/25/25 03:11	1
Vinyl acetate	<10.0		10.0		ug/L			09/25/25 03:11	1
Vinyl chloride	<1.00		1.00		ug/L			09/25/25 03:11	1
Xylenes, Total	<3.00		3.00		ug/L			09/25/25 03:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	117		76 - 130		09/25/25 03:11	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-10**

**Lab Sample ID: 310-316331-6**

Date Collected: 09/22/25 11:30

Matrix: Water

Date Received: 09/23/25 16:20

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		80 - 120		09/25/25 03:11	1
4-Bromofluorobenzene (Surr)	107		80 - 120		09/25/25 03:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:58	1
Arsenic	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:58	1
<b>Barium</b>	<b>0.148</b>		0.00200		mg/L		09/30/25 09:00	10/03/25 18:58	1
Beryllium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:58	1
Cadmium	<0.000200		0.000200		mg/L		09/30/25 09:00	10/03/25 18:58	1
Chromium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:58	1
Cobalt	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:58	1
Copper	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:58	1
Lead	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:58	1
Nickel	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:58	1
Selenium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:58	1
Silver	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:58	1
Thallium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:58	1
Vanadium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:58	1
Zinc	<0.0200		0.0200		mg/L		09/30/25 09:00	10/03/25 18:58	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		mg/L			09/24/25 12:02	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: GWD-1**

**Lab Sample ID: 310-316331-7**

Date Collected: 09/22/25 14:55

Matrix: Water

Date Received: 09/23/25 16:20

**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		ug/L			09/26/25 08:38	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			09/26/25 08:38	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			09/26/25 08:38	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			09/26/25 08:38	1
1,1-Dichloroethane	<1.00		1.00		ug/L			09/26/25 08:38	1
1,1-Dichloroethene	<2.00		2.00		ug/L			09/26/25 08:38	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			09/26/25 08:38	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			09/26/25 08:38	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			09/26/25 08:38	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			09/26/25 08:38	1
1,2-Dichloroethane	<1.00		1.00		ug/L			09/26/25 08:38	1
1,2-Dichloropropane	<1.00		1.00		ug/L			09/26/25 08:38	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			09/26/25 08:38	1
2-Butanone (MEK)	<10.0		10.0		ug/L			09/26/25 08:38	1
2-Hexanone	<10.0		10.0		ug/L			09/26/25 08:38	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			09/26/25 08:38	1
Acetone	<10.0		10.0		ug/L			09/26/25 08:38	1
Acrylonitrile	<5.00		5.00		ug/L			09/26/25 08:38	1
Benzene	<0.500		0.500		ug/L			09/26/25 08:38	1
Bromochloromethane	<5.00		5.00		ug/L			09/26/25 08:38	1
Bromodichloromethane	<1.00		1.00		ug/L			09/26/25 08:38	1
Bromoform	<5.00		5.00		ug/L			09/26/25 08:38	1
Bromomethane	<4.00		4.00		ug/L			09/26/25 08:38	1
Carbon disulfide	<1.00		1.00		ug/L			09/26/25 08:38	1
Carbon tetrachloride	<2.00		2.00		ug/L			09/26/25 08:38	1
Chlorobenzene	<1.00		1.00		ug/L			09/26/25 08:38	1
Chlorodibromomethane	<5.00		5.00		ug/L			09/26/25 08:38	1
Chloroethane	<4.00		4.00		ug/L			09/26/25 08:38	1
Chloroform	<3.00		3.00		ug/L			09/26/25 08:38	1
Chloromethane	<3.00		3.00		ug/L			09/26/25 08:38	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			09/26/25 08:38	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			09/26/25 08:38	1
Dibromomethane	<1.00		1.00		ug/L			09/26/25 08:38	1
Ethylbenzene	<1.00		1.00		ug/L			09/26/25 08:38	1
Iodomethane	<10.0		10.0		ug/L			09/26/25 08:38	1
Methylene chloride	<5.00		5.00		ug/L			09/26/25 08:38	1
Styrene	<1.00		1.00		ug/L			09/26/25 08:38	1
Tetrachloroethene	<1.00		1.00		ug/L			09/26/25 08:38	1
Toluene	<1.00		1.00		ug/L			09/26/25 08:38	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			09/26/25 08:38	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			09/26/25 08:38	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			09/26/25 08:38	1
Trichloroethene	<1.00		1.00		ug/L			09/26/25 08:38	1
Trichlorofluoromethane	<4.00		4.00		ug/L			09/26/25 08:38	1
Vinyl acetate	<10.0		10.0		ug/L			09/26/25 08:38	1
Vinyl chloride	<1.00		1.00		ug/L			09/26/25 08:38	1
Xylenes, Total	<3.00		3.00		ug/L			09/26/25 08:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	122		76 - 130		09/26/25 08:38	1

Eurofins Cedar Falls

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: GWD-1**

**Lab Sample ID: 310-316331-7**

Date Collected: 09/22/25 14:55

Matrix: Water

Date Received: 09/23/25 16:20

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		09/26/25 08:38	1
4-Bromofluorobenzene (Surr)	104		80 - 120		09/26/25 08:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 19:13	1
Arsenic	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 19:13	1
<b>Barium</b>	<b>0.0551</b>		0.00200		mg/L		09/30/25 09:00	10/03/25 19:13	1
Beryllium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 19:13	1
Cadmium	<0.000200		0.000200		mg/L		09/30/25 09:00	10/03/25 19:13	1
Chromium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 19:13	1
Cobalt	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 19:13	1
Copper	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 19:13	1
Lead	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 19:13	1
Nickel	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 19:13	1
Selenium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 19:13	1
Silver	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 19:13	1
Thallium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 19:13	1
Vanadium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 19:13	1
<b>Zinc</b>	<b>0.0278</b>		0.0200		mg/L		09/30/25 09:00	10/03/25 19:13	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>8.00</b>		3.75		mg/L			09/24/25 12:02	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-D**

**Lab Sample ID: 310-316331-8**

Date Collected: 09/22/25 13:06

Matrix: Water

Date Received: 09/23/25 16:20

**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		ug/L			09/26/25 09:00	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			09/26/25 09:00	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			09/26/25 09:00	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			09/26/25 09:00	1
1,1-Dichloroethane	<1.00		1.00		ug/L			09/26/25 09:00	1
1,1-Dichloroethene	<2.00		2.00		ug/L			09/26/25 09:00	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			09/26/25 09:00	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			09/26/25 09:00	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			09/26/25 09:00	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			09/26/25 09:00	1
1,2-Dichloroethane	<1.00		1.00		ug/L			09/26/25 09:00	1
1,2-Dichloropropane	<1.00		1.00		ug/L			09/26/25 09:00	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			09/26/25 09:00	1
2-Butanone (MEK)	<10.0		10.0		ug/L			09/26/25 09:00	1
2-Hexanone	<10.0		10.0		ug/L			09/26/25 09:00	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			09/26/25 09:00	1
Acetone	<10.0		10.0		ug/L			09/26/25 09:00	1
Acrylonitrile	<5.00		5.00		ug/L			09/26/25 09:00	1
Benzene	<0.500		0.500		ug/L			09/26/25 09:00	1
Bromochloromethane	<5.00		5.00		ug/L			09/26/25 09:00	1
Bromodichloromethane	<1.00		1.00		ug/L			09/26/25 09:00	1
Bromoform	<5.00		5.00		ug/L			09/26/25 09:00	1
Bromomethane	<4.00		4.00		ug/L			09/26/25 09:00	1
Carbon disulfide	<1.00		1.00		ug/L			09/26/25 09:00	1
Carbon tetrachloride	<2.00		2.00		ug/L			09/26/25 09:00	1
Chlorobenzene	<1.00		1.00		ug/L			09/26/25 09:00	1
Chlorodibromomethane	<5.00		5.00		ug/L			09/26/25 09:00	1
Chloroethane	<4.00		4.00		ug/L			09/26/25 09:00	1
Chloroform	<3.00		3.00		ug/L			09/26/25 09:00	1
Chloromethane	<3.00		3.00		ug/L			09/26/25 09:00	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			09/26/25 09:00	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			09/26/25 09:00	1
Dibromomethane	<1.00		1.00		ug/L			09/26/25 09:00	1
Ethylbenzene	<1.00		1.00		ug/L			09/26/25 09:00	1
Iodomethane	<10.0		10.0		ug/L			09/26/25 09:00	1
Methylene chloride	<5.00		5.00		ug/L			09/26/25 09:00	1
Styrene	<1.00		1.00		ug/L			09/26/25 09:00	1
Tetrachloroethene	<1.00		1.00		ug/L			09/26/25 09:00	1
Toluene	<1.00		1.00		ug/L			09/26/25 09:00	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			09/26/25 09:00	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			09/26/25 09:00	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			09/26/25 09:00	1
Trichloroethene	<1.00		1.00		ug/L			09/26/25 09:00	1
Trichlorofluoromethane	<4.00		4.00		ug/L			09/26/25 09:00	1
Vinyl acetate	<10.0		10.0		ug/L			09/26/25 09:00	1
Vinyl chloride	<1.00		1.00		ug/L			09/26/25 09:00	1
Xylenes, Total	<3.00		3.00		ug/L			09/26/25 09:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	116		76 - 130		09/26/25 09:00	1

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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-D**

**Lab Sample ID: 310-316331-8**

Date Collected: 09/22/25 13:06

Matrix: Water

Date Received: 09/23/25 16:20

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		80 - 120		09/26/25 09:00	1
4-Bromofluorobenzene (Surr)	104		80 - 120		09/26/25 09:00	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 19:16	1
Arsenic	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 19:16	1
<b>Barium</b>	<b>0.0204</b>		0.00200		mg/L		09/30/25 09:00	10/03/25 19:16	1
Beryllium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 19:16	1
Cadmium	<0.000200		0.000200		mg/L		09/30/25 09:00	10/03/25 19:16	1
Chromium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 19:16	1
Cobalt	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 19:16	1
Copper	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 19:16	1
Lead	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 19:16	1
Nickel	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 19:16	1
<b>Selenium</b>	<b>0.00567</b>		0.00500		mg/L		09/30/25 09:00	10/03/25 19:16	1
Silver	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 19:16	1
Thallium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 19:16	1
Vanadium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 19:16	1
Zinc	<0.0200		0.0200		mg/L		09/30/25 09:00	10/03/25 19:16	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>4.25</b>		1.88		mg/L			09/24/25 12:02	1

# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: Trip Blank 1**

**Lab Sample ID: 310-316331-9**

Date Collected: 09/22/25 00:00

Matrix: Water

Date Received: 09/23/25 16:20

**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		ug/L			09/26/25 07:07	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			09/26/25 07:07	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			09/26/25 07:07	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			09/26/25 07:07	1
1,1-Dichloroethane	<1.00		1.00		ug/L			09/26/25 07:07	1
1,1-Dichloroethene	<2.00		2.00		ug/L			09/26/25 07:07	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			09/26/25 07:07	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			09/26/25 07:07	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			09/26/25 07:07	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			09/26/25 07:07	1
1,2-Dichloroethane	<1.00		1.00		ug/L			09/26/25 07:07	1
1,2-Dichloropropane	<1.00		1.00		ug/L			09/26/25 07:07	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			09/26/25 07:07	1
2-Butanone (MEK)	<10.0		10.0		ug/L			09/26/25 07:07	1
2-Hexanone	<10.0		10.0		ug/L			09/26/25 07:07	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			09/26/25 07:07	1
Acetone	<10.0		10.0		ug/L			09/26/25 07:07	1
Acrylonitrile	<5.00		5.00		ug/L			09/26/25 07:07	1
Benzene	<0.500		0.500		ug/L			09/26/25 07:07	1
Bromochloromethane	<5.00		5.00		ug/L			09/26/25 07:07	1
Bromodichloromethane	<1.00		1.00		ug/L			09/26/25 07:07	1
Bromoform	<5.00		5.00		ug/L			09/26/25 07:07	1
Bromomethane	<4.00		4.00		ug/L			09/26/25 07:07	1
Carbon disulfide	<1.00		1.00		ug/L			09/26/25 07:07	1
Carbon tetrachloride	<2.00		2.00		ug/L			09/26/25 07:07	1
Chlorobenzene	<1.00		1.00		ug/L			09/26/25 07:07	1
Chlorodibromomethane	<5.00		5.00		ug/L			09/26/25 07:07	1
Chloroethane	<4.00		4.00		ug/L			09/26/25 07:07	1
Chloroform	<3.00		3.00		ug/L			09/26/25 07:07	1
Chloromethane	<3.00		3.00		ug/L			09/26/25 07:07	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			09/26/25 07:07	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			09/26/25 07:07	1
Dibromomethane	<1.00		1.00		ug/L			09/26/25 07:07	1
Ethylbenzene	<1.00		1.00		ug/L			09/26/25 07:07	1
Iodomethane	<10.0		10.0		ug/L			09/26/25 07:07	1
Methylene chloride	<5.00		5.00		ug/L			09/26/25 07:07	1
Styrene	<1.00		1.00		ug/L			09/26/25 07:07	1
Tetrachloroethene	<1.00		1.00		ug/L			09/26/25 07:07	1
Toluene	<1.00		1.00		ug/L			09/26/25 07:07	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			09/26/25 07:07	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			09/26/25 07:07	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			09/26/25 07:07	1
Trichloroethene	<1.00		1.00		ug/L			09/26/25 07:07	1
Trichlorofluoromethane	<4.00		4.00		ug/L			09/26/25 07:07	1
Vinyl acetate	<10.0		10.0		ug/L			09/26/25 07:07	1
Vinyl chloride	<1.00		1.00		ug/L			09/26/25 07:07	1
Xylenes, Total	<3.00		3.00		ug/L			09/26/25 07:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	113		76 - 130		09/26/25 07:07	1

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# Client Sample Results

Client: SCS Engineers  
Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
SDG: Adair County Sanitary Landfill

**Client Sample ID: Trip Blank 1**

**Lab Sample ID: 310-316331-9**

Date Collected: 09/22/25 00:00

Matrix: Water

Date Received: 09/23/25 16:20

**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		09/26/25 07:07	1
4-Bromofluorobenzene (Surr)	105		80 - 120		09/26/25 07:07	1

- 1
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# Client Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: Trip Blank 2**

**Lab Sample ID: 310-316331-10**

Date Collected: 09/22/25 00:00

Matrix: Water

Date Received: 09/23/25 16:20

**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		ug/L			09/26/25 07:30	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			09/26/25 07:30	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			09/26/25 07:30	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			09/26/25 07:30	1
1,1-Dichloroethane	<1.00		1.00		ug/L			09/26/25 07:30	1
1,1-Dichloroethene	<2.00		2.00		ug/L			09/26/25 07:30	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			09/26/25 07:30	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			09/26/25 07:30	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			09/26/25 07:30	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			09/26/25 07:30	1
1,2-Dichloroethane	<1.00		1.00		ug/L			09/26/25 07:30	1
1,2-Dichloropropane	<1.00		1.00		ug/L			09/26/25 07:30	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			09/26/25 07:30	1
2-Butanone (MEK)	<10.0		10.0		ug/L			09/26/25 07:30	1
2-Hexanone	<10.0		10.0		ug/L			09/26/25 07:30	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			09/26/25 07:30	1
Acetone	<10.0		10.0		ug/L			09/26/25 07:30	1
Acrylonitrile	<5.00		5.00		ug/L			09/26/25 07:30	1
Benzene	<0.500		0.500		ug/L			09/26/25 07:30	1
Bromochloromethane	<5.00		5.00		ug/L			09/26/25 07:30	1
Bromodichloromethane	<1.00		1.00		ug/L			09/26/25 07:30	1
Bromoform	<5.00		5.00		ug/L			09/26/25 07:30	1
Bromomethane	<4.00		4.00		ug/L			09/26/25 07:30	1
Carbon disulfide	<1.00		1.00		ug/L			09/26/25 07:30	1
Carbon tetrachloride	<2.00		2.00		ug/L			09/26/25 07:30	1
Chlorobenzene	<1.00		1.00		ug/L			09/26/25 07:30	1
Chlorodibromomethane	<5.00		5.00		ug/L			09/26/25 07:30	1
Chloroethane	<4.00		4.00		ug/L			09/26/25 07:30	1
Chloroform	<3.00		3.00		ug/L			09/26/25 07:30	1
Chloromethane	<3.00		3.00		ug/L			09/26/25 07:30	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			09/26/25 07:30	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			09/26/25 07:30	1
Dibromomethane	<1.00		1.00		ug/L			09/26/25 07:30	1
Ethylbenzene	<1.00		1.00		ug/L			09/26/25 07:30	1
Iodomethane	<10.0		10.0		ug/L			09/26/25 07:30	1
Methylene chloride	<5.00		5.00		ug/L			09/26/25 07:30	1
Styrene	<1.00		1.00		ug/L			09/26/25 07:30	1
Tetrachloroethene	<1.00		1.00		ug/L			09/26/25 07:30	1
Toluene	<1.00		1.00		ug/L			09/26/25 07:30	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			09/26/25 07:30	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			09/26/25 07:30	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			09/26/25 07:30	1
Trichloroethene	<1.00		1.00		ug/L			09/26/25 07:30	1
Trichlorofluoromethane	<4.00		4.00		ug/L			09/26/25 07:30	1
Vinyl acetate	<10.0		10.0		ug/L			09/26/25 07:30	1
Vinyl chloride	<1.00		1.00		ug/L			09/26/25 07:30	1
Xylenes, Total	<3.00		3.00		ug/L			09/26/25 07:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	122		76 - 130		09/26/25 07:30	1

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# Client Sample Results

Client: SCS Engineers  
Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
SDG: Adair County Sanitary Landfill

**Client Sample ID: Trip Blank 2**

**Lab Sample ID: 310-316331-10**

Date Collected: 09/22/25 00:00

Matrix: Water

Date Received: 09/23/25 16:20

**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		09/26/25 07:30	1
4-Bromofluorobenzene (Surr)	103		80 - 120		09/26/25 07:30	1

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- 14
- 15

# Definitions/Glossary

Client: SCS Engineers  
Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
SDG: Adair 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.

## 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: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair 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)
310-316331-1	MW-2	115	97	103
310-316331-1 MS	MW-2	93	102	101
310-316331-1 MSD	MW-2	89	105	97
310-316331-2	MW-3	113	97	102
310-316331-3	MW-6	113	96	103
310-316331-4	MW-7	117	93	104
310-316331-5	MW-9	117	96	107
310-316331-6	MW-10	117	94	107
310-316331-7	GWD-1	122	96	104
310-316331-8	MW-D	116	93	104
310-316331-9	Trip Blank 1	113	94	105
310-316331-10	Trip Blank 2	122	94	103
LCS 310-467777/6	Lab Control Sample	98	102	96
LCS 310-467777/7	Lab Control Sample	118	96	104
LCS 310-467904/6	Lab Control Sample	96	98	96
LCS 310-467904/7	Lab Control Sample	114	95	103
MB 310-467777/5	Method Blank	120	93	103
MB 310-467904/5	Method Blank	120	93	100

**Surrogate Legend**

- DBFM = Dibromofluoromethane (Surr)
- TOL = Toluene-d8 (Surr)
- BFB = 4-Bromofluorobenzene (Surr)

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

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

**Lab Sample ID: MB 310-467777/5**  
**Matrix: Water**  
**Analysis Batch: 467777**

**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		ug/L			09/24/25 21:55	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			09/24/25 21:55	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			09/24/25 21:55	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			09/24/25 21:55	1
1,1-Dichloroethane	<1.00		1.00		ug/L			09/24/25 21:55	1
1,1-Dichloroethene	<2.00		2.00		ug/L			09/24/25 21:55	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			09/24/25 21:55	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			09/24/25 21:55	1
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			09/24/25 21:55	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			09/24/25 21:55	1
1,2-Dichloroethane	<1.00		1.00		ug/L			09/24/25 21:55	1
1,2-Dichloropropane	<1.00		1.00		ug/L			09/24/25 21:55	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			09/24/25 21:55	1
2-Butanone (MEK)	<10.0		10.0		ug/L			09/24/25 21:55	1
2-Hexanone	<10.0		10.0		ug/L			09/24/25 21:55	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			09/24/25 21:55	1
Acetone	<10.0		10.0		ug/L			09/24/25 21:55	1
Acrylonitrile	<5.00		5.00		ug/L			09/24/25 21:55	1
Benzene	<0.500		0.500		ug/L			09/24/25 21:55	1
Bromochloromethane	<5.00		5.00		ug/L			09/24/25 21:55	1
Bromodichloromethane	<1.00		1.00		ug/L			09/24/25 21:55	1
Bromoform	<5.00		5.00		ug/L			09/24/25 21:55	1
Bromomethane	<4.00		4.00		ug/L			09/24/25 21:55	1
Carbon disulfide	<1.00		1.00		ug/L			09/24/25 21:55	1
Carbon tetrachloride	<2.00		2.00		ug/L			09/24/25 21:55	1
Chlorobenzene	<1.00		1.00		ug/L			09/24/25 21:55	1
Chlorodibromomethane	<5.00		5.00		ug/L			09/24/25 21:55	1
Chloroethane	<4.00		4.00		ug/L			09/24/25 21:55	1
Chloroform	<3.00		3.00		ug/L			09/24/25 21:55	1
Chloromethane	<3.00		3.00		ug/L			09/24/25 21:55	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			09/24/25 21:55	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			09/24/25 21:55	1
Dibromomethane	<1.00		1.00		ug/L			09/24/25 21:55	1
Ethylbenzene	<1.00		1.00		ug/L			09/24/25 21:55	1
Iodomethane	<10.0		10.0		ug/L			09/24/25 21:55	1
Methylene chloride	<5.00		5.00		ug/L			09/24/25 21:55	1
Styrene	<1.00		1.00		ug/L			09/24/25 21:55	1
Tetrachloroethene	<1.00		1.00		ug/L			09/24/25 21:55	1
Toluene	<1.00		1.00		ug/L			09/24/25 21:55	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			09/24/25 21:55	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			09/24/25 21:55	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			09/24/25 21:55	1
Trichloroethene	<1.00		1.00		ug/L			09/24/25 21:55	1
Trichlorofluoromethane	<4.00		4.00		ug/L			09/24/25 21:55	1
Vinyl acetate	<10.0		10.0		ug/L			09/24/25 21:55	1
Vinyl chloride	<1.00		1.00		ug/L			09/24/25 21:55	1
Xylenes, Total	<3.00		3.00		ug/L			09/24/25 21:55	1

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

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

**Lab Sample ID: MB 310-467777/5**

**Matrix: Water**

**Analysis Batch: 467777**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	120		76 - 130		09/24/25 21:55	1
Toluene-d8 (Surr)	93		80 - 120		09/24/25 21:55	1
4-Bromofluorobenzene (Surr)	103		80 - 120		09/24/25 21:55	1

**Lab Sample ID: LCS 310-467777/6**

**Matrix: Water**

**Analysis Batch: 467777**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,1-Trichloroethane	10.0	8.767		ug/L		88	69 - 130
1,1,1,2,2-Tetrachloroethane	10.0	9.404		ug/L		94	70 - 122
1,1,2-Trichloroethane	10.0	9.896		ug/L		99	75 - 121
1,1-Dichloroethane	10.0	10.50		ug/L		105	69 - 127
1,1-Dichloroethane	10.0	9.541		ug/L		95	64 - 134
1,2,3-Trichloropropane	10.0	10.45		ug/L		104	70 - 122
1,2-Dibromo-3-chloropropane	10.0	8.824		ug/L		88	62 - 132
1,2-Dibromoethane (EDB)	10.0	10.47		ug/L		105	74 - 122
1,2-Dichlorobenzene	10.0	9.719		ug/L		97	74 - 120
1,2-Dichloroethane	10.0	9.346		ug/L		93	68 - 125
1,2-Dichloropropane	10.0	8.404		ug/L		84	72 - 128
1,4-Dichlorobenzene	10.0	9.159		ug/L		92	72 - 120
2-Butanone (MEK)	20.0	17.15		ug/L		86	60 - 134
2-Hexanone	20.0	17.74		ug/L		89	62 - 139
4-Methyl-2-pentanone (MIBK)	20.0	17.31		ug/L		87	62 - 136
Acetone	20.0	19.89		ug/L		99	59 - 136
Acrylonitrile	100	89.26		ug/L		89	50 - 150
Benzene	10.0	9.309		ug/L		93	71 - 125
Bromochloromethane	10.0	9.848		ug/L		98	69 - 131
Bromodichloromethane	10.0	8.258		ug/L		83	70 - 122
Bromoform	10.0	9.389		ug/L		94	62 - 122
Carbon disulfide	10.0	9.860		ug/L		99	58 - 137
Carbon tetrachloride	10.0	9.314		ug/L		93	63 - 136
Chlorobenzene	10.0	9.428		ug/L		94	74 - 120
Chlorodibromomethane	10.0	9.585		ug/L		96	69 - 121
Chloroform	10.0	9.491		ug/L		95	72 - 122
cis-1,2-Dichloroethene	10.0	9.382		ug/L		94	72 - 123
cis-1,3-Dichloropropene	10.0	9.357		ug/L		94	72 - 123
Dibromomethane	10.0	9.554		ug/L		96	72 - 122
Ethylbenzene	10.0	9.642		ug/L		96	75 - 120
Iodomethane	10.0	9.483	J	ug/L		95	18 - 150
Methylene chloride	10.0	10.62		ug/L		106	72 - 128
Styrene	10.0	9.349		ug/L		93	74 - 122
Tetrachloroethene	10.0	10.07		ug/L		101	70 - 128
Toluene	10.0	9.358		ug/L		94	74 - 120
trans-1,2-Dichloroethene	10.0	9.281		ug/L		93	67 - 127
trans-1,3-Dichloropropene	10.0	9.761		ug/L		98	67 - 123
trans-1,4-Dichloro-2-butene	10.0	9.917	J	ug/L		99	50 - 150

Eurofins Cedar Falls

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

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

**Lab Sample ID: LCS 310-467777/6**

**Client Sample ID: Lab Control Sample**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 467777**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Trichloroethene	10.0	8.992		ug/L		90	70 - 128
Vinyl acetate	20.0	18.27		ug/L		91	50 - 150
Xylenes, Total	20.0	19.31		ug/L		97	74 - 121

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	98		76 - 130
Toluene-d8 (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	96		80 - 120

**Lab Sample ID: LCS 310-467777/7**

**Client Sample ID: Lab Control Sample**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 467777**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Bromomethane	10.0	10.30		ug/L		103	33 - 138
Chloroethane	10.0	10.80		ug/L		108	59 - 139
Chloromethane	10.0	11.12		ug/L		111	52 - 146
Trichlorofluoromethane	10.0	11.82		ug/L		118	55 - 150
Vinyl chloride	10.0	10.67		ug/L		107	60 - 142

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	118		76 - 130
Toluene-d8 (Surr)	96		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120

**Lab Sample ID: 310-316331-1 MS**

**Client Sample ID: MW-2**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 467777**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
1,1,1,2-Tetrachloroethane	<1.00		25.0	21.30		ug/L		85	55 - 121
1,1,1-Trichloroethane	<1.00		25.0	16.65		ug/L		67	53 - 130
1,1,2,2-Tetrachloroethane	<1.00		25.0	21.37		ug/L		85	55 - 123
1,1,2-Trichloroethane	<1.00		25.0	22.65		ug/L		91	60 - 121
1,1-Dichloroethane	<1.00		25.0	20.50		ug/L		82	53 - 127
1,1-Dichloroethene	<2.00		25.0	15.86		ug/L		63	51 - 134
1,2,3-Trichloropropane	<1.00		25.0	22.68		ug/L		91	56 - 122
1,2-Dibromo-3-chloropropane	<5.00		25.0	22.65		ug/L		91	44 - 138
1,2-Dibromoethane (EDB)	<1.00		25.0	22.93		ug/L		92	60 - 122
1,2-Dichlorobenzene	<1.00		25.0	21.97		ug/L		88	60 - 120
1,2-Dichloroethane	<1.00		25.0	20.21		ug/L		81	48 - 128
1,2-Dichloropropane	<1.00		25.0	18.04		ug/L		72	59 - 128
1,4-Dichlorobenzene	<1.00		25.0	20.91		ug/L		84	58 - 120
2-Butanone (MEK)	<10.0		50.0	39.33		ug/L		79	46 - 134
2-Hexanone	<10.0		50.0	40.66		ug/L		81	46 - 141
4-Methyl-2-pentanone (MIBK)	<10.0		50.0	42.50		ug/L		85	49 - 138
Acetone	<10.0		50.0	43.06		ug/L		86	39 - 141
Acrylonitrile	<5.00		250	197.6		ug/L		79	41 - 150

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# QC Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

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

**Lab Sample ID: 310-316331-1 MS**  
**Matrix: Water**  
**Analysis Batch: 467777**

**Client Sample ID: MW-2**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				
Benzene	0.850		25.0	19.17		ug/L		73	48 - 125
Bromochloromethane	<5.00		25.0	20.32		ug/L		81	55 - 131
Bromodichloromethane	<1.00		25.0	19.03		ug/L		76	53 - 122
Bromoform	<5.00		25.0	23.34		ug/L		93	47 - 122
Carbon disulfide	<1.00		25.0	18.28		ug/L		73	45 - 137
Carbon tetrachloride	<2.00		25.0	16.09		ug/L		64	45 - 136
Chlorobenzene	<1.00		25.0	20.81		ug/L		83	59 - 120
Chlorodibromomethane	<5.00		25.0	20.45		ug/L		82	53 - 121
Chloroform	<3.00		25.0	19.57		ug/L		78	52 - 122
cis-1,2-Dichloroethene	<1.00		25.0	19.44		ug/L		77	51 - 123
cis-1,3-Dichloropropene	<5.00		25.0	20.95		ug/L		84	55 - 123
Dibromomethane	<1.00		25.0	20.14		ug/L		81	57 - 122
Ethylbenzene	<1.00		25.0	20.00		ug/L		80	53 - 120
Iodomethane	<10.0		25.0	15.83		ug/L		63	18 - 150
Methylene chloride	<5.00		25.0	21.79		ug/L		87	59 - 128
Styrene	<1.00		25.0	20.48		ug/L		82	50 - 125
Tetrachloroethene	<1.00		25.0	19.09		ug/L		76	51 - 128
Toluene	<1.00		25.0	20.21		ug/L		81	52 - 120
trans-1,2-Dichloroethene	<1.00		25.0	18.74		ug/L		75	53 - 127
trans-1,3-Dichloropropene	<5.00		25.0	22.57		ug/L		90	50 - 123
trans-1,4-Dichloro-2-butene	<10.0		25.0	20.33		ug/L		81	28 - 150
Trichloroethene	<1.00		25.0	17.41		ug/L		70	50 - 128
Vinyl acetate	<10.0		50.0	40.82		ug/L		82	31 - 150
Xylenes, Total	<3.00		50.0	41.17		ug/L		82	50 - 122

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	93		76 - 130
Toluene-d8 (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120

**Lab Sample ID: 310-316331-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 467777**

**Client Sample ID: MW-2**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						
1,1,1,2-Tetrachloroethane	<1.00		25.0	22.83		ug/L		91	55 - 121	7	20
1,1,1-Trichloroethane	<1.00		25.0	16.10		ug/L		64	53 - 130	3	20
1,1,1,2,2-Tetrachloroethane	<1.00		25.0	22.23		ug/L		89	55 - 123	4	20
1,1,2-Trichloroethane	<1.00		25.0	23.96		ug/L		96	60 - 121	6	20
1,1-Dichloroethane	<1.00		25.0	20.26		ug/L		81	53 - 127	1	20
1,1-Dichloroethene	<2.00		25.0	14.81		ug/L		59	51 - 134	7	20
1,2,3-Trichloropropane	<1.00		25.0	22.35		ug/L		89	56 - 122	1	21
1,2-Dibromo-3-chloropropane	<5.00		25.0	22.07		ug/L		88	44 - 138	3	24
1,2-Dibromoethane (EDB)	<1.00		25.0	23.07		ug/L		92	60 - 122	1	20
1,2-Dichlorobenzene	<1.00		25.0	22.26		ug/L		89	60 - 120	1	20
1,2-Dichloroethane	<1.00		25.0	20.35		ug/L		81	48 - 128	1	20
1,2-Dichloropropane	<1.00		25.0	17.61		ug/L		70	59 - 128	2	20
1,4-Dichlorobenzene	<1.00		25.0	21.05		ug/L		84	58 - 120	1	20

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# QC Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

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

**Lab Sample ID: 310-316331-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 467777**

**Client Sample ID: MW-2**  
**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		50.0	39.71		ug/L		79	46 - 134	1	23
2-Hexanone	<10.0		50.0	41.89		ug/L		84	46 - 141	3	20
4-Methyl-2-pentanone (MIBK)	<10.0		50.0	43.79		ug/L		88	49 - 138	3	20
Acetone	<10.0		50.0	43.41		ug/L		87	39 - 141	1	23
Acrylonitrile	<5.00		250	195.1		ug/L		78	41 - 150	1	20
Benzene	0.850		25.0	18.66		ug/L		71	48 - 125	3	20
Bromochloromethane	<5.00		25.0	19.32		ug/L		77	55 - 131	5	21
Bromodichloromethane	<1.00		25.0	18.90		ug/L		76	53 - 122	1	20
Bromoform	<5.00		25.0	24.95		ug/L		100	47 - 122	7	20
Carbon disulfide	<1.00		25.0	16.27		ug/L		65	45 - 137	12	24
Carbon tetrachloride	<2.00		25.0	15.76		ug/L		63	45 - 136	2	20
Chlorobenzene	<1.00		25.0	21.05		ug/L		84	59 - 120	1	20
Chlorodibromomethane	<5.00		25.0	21.61		ug/L		86	53 - 121	6	20
Chloroform	<3.00		25.0	19.01		ug/L		76	52 - 122	3	20
cis-1,2-Dichloroethene	<1.00		25.0	18.49		ug/L		73	51 - 123	5	20
cis-1,3-Dichloropropene	<5.00		25.0	20.89		ug/L		84	55 - 123	0	20
Dibromomethane	<1.00		25.0	19.97		ug/L		80	57 - 122	1	20
Ethylbenzene	<1.00		25.0	20.16		ug/L		81	53 - 120	1	20
Iodomethane	<10.0		25.0	17.25		ug/L		69	18 - 150	9	32
Methylene chloride	<5.00		25.0	21.08		ug/L		84	59 - 128	3	20
Styrene	<1.00		25.0	20.71		ug/L		83	50 - 125	1	20
Tetrachloroethene	<1.00		25.0	19.17		ug/L		77	51 - 128	0	20
Toluene	<1.00		25.0	20.25		ug/L		81	52 - 120	0	20
trans-1,2-Dichloroethene	<1.00		25.0	17.56		ug/L		70	53 - 127	7	20
trans-1,3-Dichloropropene	<5.00		25.0	22.24		ug/L		89	50 - 123	1	20
trans-1,4-Dichloro-2-butene	<10.0		25.0	20.96		ug/L		84	28 - 150	3	24
Trichloroethene	<1.00		25.0	17.04		ug/L		68	50 - 128	2	20
Vinyl acetate	<10.0		50.0	40.70		ug/L		81	31 - 150	0	25
Xylenes, Total	<3.00		50.0	41.70		ug/L		83	50 - 122	1	20

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	89		76 - 130
Toluene-d8 (Surr)	105		80 - 120
4-Bromofluorobenzene (Surr)	97		80 - 120

**Lab Sample ID: MB 310-467904/5**  
**Matrix: Water**  
**Analysis Batch: 467904**

**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		ug/L			09/26/25 05:37	1
1,1,1-Trichloroethane	<1.00		1.00		ug/L			09/26/25 05:37	1
1,1,2,2-Tetrachloroethane	<1.00		1.00		ug/L			09/26/25 05:37	1
1,1,2-Trichloroethane	<1.00		1.00		ug/L			09/26/25 05:37	1
1,1-Dichloroethane	<1.00		1.00		ug/L			09/26/25 05:37	1
1,1-Dichloroethene	<2.00		2.00		ug/L			09/26/25 05:37	1
1,2,3-Trichloropropane	<1.00		1.00		ug/L			09/26/25 05:37	1
1,2-Dibromo-3-chloropropane	<5.00		5.00		ug/L			09/26/25 05:37	1

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# QC Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

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

**Lab Sample ID: MB 310-467904/5**

**Client Sample ID: Method Blank**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 467904**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2-Dibromoethane (EDB)	<1.00		1.00		ug/L			09/26/25 05:37	1
1,2-Dichlorobenzene	<1.00		1.00		ug/L			09/26/25 05:37	1
1,2-Dichloroethane	<1.00		1.00		ug/L			09/26/25 05:37	1
1,2-Dichloropropane	<1.00		1.00		ug/L			09/26/25 05:37	1
1,4-Dichlorobenzene	<1.00		1.00		ug/L			09/26/25 05:37	1
2-Butanone (MEK)	<10.0		10.0		ug/L			09/26/25 05:37	1
2-Hexanone	<10.0		10.0		ug/L			09/26/25 05:37	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0		ug/L			09/26/25 05:37	1
Acetone	<10.0		10.0		ug/L			09/26/25 05:37	1
Acrylonitrile	<5.00		5.00		ug/L			09/26/25 05:37	1
Benzene	<0.500		0.500		ug/L			09/26/25 05:37	1
Bromochloromethane	<5.00		5.00		ug/L			09/26/25 05:37	1
Bromodichloromethane	<1.00		1.00		ug/L			09/26/25 05:37	1
Bromoform	<5.00		5.00		ug/L			09/26/25 05:37	1
Bromomethane	<4.00		4.00		ug/L			09/26/25 05:37	1
Carbon disulfide	<1.00		1.00		ug/L			09/26/25 05:37	1
Carbon tetrachloride	<2.00		2.00		ug/L			09/26/25 05:37	1
Chlorobenzene	<1.00		1.00		ug/L			09/26/25 05:37	1
Chlorodibromomethane	<5.00		5.00		ug/L			09/26/25 05:37	1
Chloroethane	<4.00		4.00		ug/L			09/26/25 05:37	1
Chloroform	<3.00		3.00		ug/L			09/26/25 05:37	1
Chloromethane	<3.00		3.00		ug/L			09/26/25 05:37	1
cis-1,2-Dichloroethene	<1.00		1.00		ug/L			09/26/25 05:37	1
cis-1,3-Dichloropropene	<5.00		5.00		ug/L			09/26/25 05:37	1
Dibromomethane	<1.00		1.00		ug/L			09/26/25 05:37	1
Ethylbenzene	<1.00		1.00		ug/L			09/26/25 05:37	1
Iodomethane	<10.0		10.0		ug/L			09/26/25 05:37	1
Methylene chloride	<5.00		5.00		ug/L			09/26/25 05:37	1
Styrene	<1.00		1.00		ug/L			09/26/25 05:37	1
Tetrachloroethene	<1.00		1.00		ug/L			09/26/25 05:37	1
Toluene	<1.00		1.00		ug/L			09/26/25 05:37	1
trans-1,2-Dichloroethene	<1.00		1.00		ug/L			09/26/25 05:37	1
trans-1,3-Dichloropropene	<5.00		5.00		ug/L			09/26/25 05:37	1
trans-1,4-Dichloro-2-butene	<10.0		10.0		ug/L			09/26/25 05:37	1
Trichloroethene	<1.00		1.00		ug/L			09/26/25 05:37	1
Trichlorofluoromethane	<4.00		4.00		ug/L			09/26/25 05:37	1
Vinyl acetate	<10.0		10.0		ug/L			09/26/25 05:37	1
Vinyl chloride	<1.00		1.00		ug/L			09/26/25 05:37	1
Xylenes, Total	<3.00		3.00		ug/L			09/26/25 05:37	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	120		76 - 130		09/26/25 05:37	1
Toluene-d8 (Surr)	93		80 - 120		09/26/25 05:37	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/26/25 05:37	1

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

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

**Lab Sample ID: LCS 310-467904/6**

**Matrix: Water**

**Analysis Batch: 467904**

**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	17.89		ug/L		89	70 - 121
1,1,1-Trichloroethane	20.0	17.61		ug/L		88	69 - 130
1,1,2,2-Tetrachloroethane	20.0	17.84		ug/L		89	70 - 122
1,1,2-Trichloroethane	20.0	19.90		ug/L		100	75 - 121
1,1-Dichloroethane	20.0	18.56		ug/L		93	69 - 127
1,1-Dichloroethene	20.0	17.05		ug/L		85	64 - 134
1,2,3-Trichloropropane	20.0	20.38		ug/L		102	70 - 122
1,2-Dibromo-3-chloropropane	20.0	18.24		ug/L		91	62 - 132
1,2-Dibromoethane (EDB)	20.0	18.79		ug/L		94	74 - 122
1,2-Dichlorobenzene	20.0	18.66		ug/L		93	74 - 120
1,2-Dichloroethane	20.0	17.27		ug/L		86	68 - 125
1,2-Dichloropropane	20.0	15.98		ug/L		80	72 - 128
1,4-Dichlorobenzene	20.0	17.93		ug/L		90	72 - 120
2-Butanone (MEK)	40.0	31.98		ug/L		80	60 - 134
2-Hexanone	40.0	34.46		ug/L		86	62 - 139
4-Methyl-2-pentanone (MIBK)	40.0	35.21		ug/L		88	62 - 136
Acetone	40.0	35.90		ug/L		90	59 - 136
Acrylonitrile	200	171.2		ug/L		86	50 - 150
Benzene	20.0	16.91		ug/L		85	71 - 125
Bromochloromethane	20.0	18.72		ug/L		94	69 - 131
Bromodichloromethane	20.0	16.64		ug/L		83	70 - 122
Bromoform	20.0	20.23		ug/L		101	62 - 122
Carbon disulfide	20.0	17.41		ug/L		87	58 - 137
Carbon tetrachloride	20.0	17.43		ug/L		87	63 - 136
Chlorobenzene	20.0	17.61		ug/L		88	74 - 120
Chlorodibromomethane	20.0	18.18		ug/L		91	69 - 121
Chloroform	20.0	17.28		ug/L		86	72 - 122
cis-1,2-Dichloroethene	20.0	16.62		ug/L		83	72 - 123
cis-1,3-Dichloropropene	20.0	17.52		ug/L		88	72 - 123
Dibromomethane	20.0	17.98		ug/L		90	72 - 122
Ethylbenzene	20.0	17.93		ug/L		90	75 - 120
Iodomethane	20.0	13.43		ug/L		67	18 - 150
Methylene chloride	20.0	19.44		ug/L		97	72 - 128
Styrene	20.0	16.94		ug/L		85	74 - 122
Tetrachloroethene	20.0	18.63		ug/L		93	70 - 128
Toluene	20.0	17.43		ug/L		87	74 - 120
trans-1,2-Dichloroethene	20.0	17.24		ug/L		86	67 - 127
trans-1,3-Dichloropropene	20.0	18.65		ug/L		93	67 - 123
trans-1,4-Dichloro-2-butene	20.0	18.44		ug/L		92	50 - 150
Trichloroethene	20.0	16.63		ug/L		83	70 - 128
Vinyl acetate	40.0	34.38		ug/L		86	50 - 150
Xylenes, Total	40.0	34.72		ug/L		87	74 - 121

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	96		76 - 130
Toluene-d8 (Surr)	98		80 - 120
4-Bromofluorobenzene (Surr)	96		80 - 120

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

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

**Lab Sample ID: LCS 310-467904/7**  
**Matrix: Water**  
**Analysis Batch: 467904**

**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	18.51		ug/L		93	33 - 138
Chloroethane	20.0	16.80		ug/L		84	59 - 139
Chloromethane	20.0	19.58		ug/L		98	52 - 146
Trichlorofluoromethane	20.0	18.60		ug/L		93	55 - 150
Vinyl chloride	20.0	17.33		ug/L		87	60 - 142

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	114		76 - 130
Toluene-d8 (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120

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

**Lab Sample ID: MB 310-468307/1-A**  
**Matrix: Water**  
**Analysis Batch: 468963**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 468307**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:10	1
Arsenic	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:10	1
Barium	<0.00200		0.00200		mg/L		09/30/25 09:00	10/03/25 18:10	1
Beryllium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:10	1
Cadmium	<0.000200		0.000200		mg/L		09/30/25 09:00	10/03/25 18:10	1
Chromium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:10	1
Cobalt	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:10	1
Copper	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:10	1
Lead	<0.000500		0.000500		mg/L		09/30/25 09:00	10/03/25 18:10	1
Nickel	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:10	1
Selenium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:10	1
Silver	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:10	1
Thallium	<0.00100		0.00100		mg/L		09/30/25 09:00	10/03/25 18:10	1
Vanadium	<0.00500		0.00500		mg/L		09/30/25 09:00	10/03/25 18:10	1
Zinc	<0.0200		0.0200		mg/L		09/30/25 09:00	10/03/25 18:10	1

**Lab Sample ID: LCS 310-468307/2-A**  
**Matrix: Water**  
**Analysis Batch: 468963**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 468307**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2015		mg/L		101	80 - 120
Arsenic	0.200	0.2016		mg/L		101	80 - 120
Barium	0.100	0.09352		mg/L		94	80 - 120
Beryllium	0.100	0.09844		mg/L		98	80 - 120
Cadmium	0.100	0.09359		mg/L		94	80 - 120
Chromium	0.100	0.09596		mg/L		96	80 - 120
Cobalt	0.100	0.09515		mg/L		95	80 - 120
Copper	0.200	0.1992		mg/L		100	80 - 120
Lead	0.200	0.1942		mg/L		97	80 - 120
Nickel	0.200	0.2027		mg/L		101	80 - 120

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# QC Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

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

**Lab Sample ID: LCS 310-468307/2-A**  
**Matrix: Water**  
**Analysis Batch: 468963**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 468307**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Selenium	0.400	0.3714		mg/L		93	80 - 120	
Silver	0.100	0.09616		mg/L		96	80 - 120	
Thallium	0.100	0.09888		mg/L		99	80 - 120	
Vanadium	0.100	0.09482		mg/L		95	80 - 120	
Zinc	0.200	0.1757		mg/L		88	80 - 120	

**Lab Sample ID: 310-316331-6 DU**  
**Matrix: Water**  
**Analysis Batch: 468963**

**Client Sample ID: MW-10**  
**Prep Type: Total/NA**  
**Prep Batch: 468307**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD	
								Limit	
Antimony	<0.00200		<0.00200		mg/L		NC	20	
Arsenic	<0.00200		<0.00200		mg/L		NC	20	
Barium	0.148		0.1451		mg/L		2	20	
Beryllium	<0.00100		<0.00100		mg/L		NC	20	
Cadmium	<0.000200		<0.000200		mg/L		NC	20	
Chromium	<0.00500		<0.00500		mg/L		NC	20	
Cobalt	<0.000500		<0.000500		mg/L		NC	20	
Copper	<0.00500		<0.00500		mg/L		NC	20	
Lead	<0.000500		<0.000500		mg/L		NC	20	
Nickel	<0.00500		<0.00500		mg/L		NC	20	
Selenium	<0.00500		<0.00500		mg/L		NC	20	
Silver	<0.00100		<0.00100		mg/L		NC	20	
Thallium	<0.00100		<0.00100		mg/L		NC	20	
Vanadium	<0.00500		<0.00500		mg/L		NC	20	
Zinc	<0.0200		<0.0200		mg/L		NC	20	

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

**Lab Sample ID: MB 310-467692/1**  
**Matrix: Water**  
**Analysis Batch: 467692**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

**Lab Sample ID: LCS 310-467692/2**  
**Matrix: Water**  
**Analysis Batch: 467692**

**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	104.0		mg/L		104	82 - 117	

**Lab Sample ID: MB 310-467778/1**  
**Matrix: Water**  
**Analysis Batch: 467778**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Eurofins Cedar Falls

# QC Sample Results

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

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

**Lab Sample ID: LCS 310-467778/2**  
**Matrix: Water**  
**Analysis Batch: 467778**

**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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

# QC Association Summary

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

## GC/MS VOA

### Analysis Batch: 467777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316331-1	MW-2	Total/NA	Water	8260D	
310-316331-2	MW-3	Total/NA	Water	8260D	
310-316331-3	MW-6	Total/NA	Water	8260D	
310-316331-4	MW-7	Total/NA	Water	8260D	
310-316331-5	MW-9	Total/NA	Water	8260D	
310-316331-6	MW-10	Total/NA	Water	8260D	
MB 310-467777/5	Method Blank	Total/NA	Water	8260D	
LCS 310-467777/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-467777/7	Lab Control Sample	Total/NA	Water	8260D	
310-316331-1 MS	MW-2	Total/NA	Water	8260D	
310-316331-1 MSD	MW-2	Total/NA	Water	8260D	

### Analysis Batch: 467904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316331-7	GWD-1	Total/NA	Water	8260D	
310-316331-8	MW-D	Total/NA	Water	8260D	
310-316331-9	Trip Blank 1	Total/NA	Water	8260D	
310-316331-10	Trip Blank 2	Total/NA	Water	8260D	
MB 310-467904/5	Method Blank	Total/NA	Water	8260D	
LCS 310-467904/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-467904/7	Lab Control Sample	Total/NA	Water	8260D	

## Metals

### Prep Batch: 468307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316331-1	MW-2	Total/NA	Water	3005A	
310-316331-2	MW-3	Total/NA	Water	3005A	
310-316331-3	MW-6	Total/NA	Water	3005A	
310-316331-4	MW-7	Total/NA	Water	3005A	
310-316331-5	MW-9	Total/NA	Water	3005A	
310-316331-6	MW-10	Total/NA	Water	3005A	
310-316331-7	GWD-1	Total/NA	Water	3005A	
310-316331-8	MW-D	Total/NA	Water	3005A	
MB 310-468307/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-468307/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-316331-6 DU	MW-10	Total/NA	Water	3005A	

### Analysis Batch: 468963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316331-1	MW-2	Total/NA	Water	6020B	468307
310-316331-2	MW-3	Total/NA	Water	6020B	468307
310-316331-3	MW-6	Total/NA	Water	6020B	468307
310-316331-4	MW-7	Total/NA	Water	6020B	468307
310-316331-5	MW-9	Total/NA	Water	6020B	468307
310-316331-6	MW-10	Total/NA	Water	6020B	468307
310-316331-7	GWD-1	Total/NA	Water	6020B	468307
310-316331-8	MW-D	Total/NA	Water	6020B	468307
MB 310-468307/1-A	Method Blank	Total/NA	Water	6020B	468307
LCS 310-468307/2-A	Lab Control Sample	Total/NA	Water	6020B	468307
310-316331-6 DU	MW-10	Total/NA	Water	6020B	468307

# QC Association Summary

Client: SCS Engineers  
Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
SDG: Adair County Sanitary Landfill

## General Chemistry

### Analysis Batch: 467692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316331-1	MW-2	Total/NA	Water	I-3765-85	
310-316331-2	MW-3	Total/NA	Water	I-3765-85	
310-316331-3	MW-6	Total/NA	Water	I-3765-85	
310-316331-5	MW-9	Total/NA	Water	I-3765-85	
MB 310-467692/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-467692/2	Lab Control Sample	Total/NA	Water	I-3765-85	

### Analysis Batch: 467778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316331-4	MW-7	Total/NA	Water	I-3765-85	
310-316331-6	MW-10	Total/NA	Water	I-3765-85	
310-316331-7	GWD-1	Total/NA	Water	I-3765-85	
310-316331-8	MW-D	Total/NA	Water	I-3765-85	
MB 310-467778/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-467778/2	Lab Control Sample	Total/NA	Water	I-3765-85	

# Lab Chronicle

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-2**  
 Date Collected: 09/22/25 16:20  
 Date Received: 09/23/25 16:20

**Lab Sample ID: 310-316331-1**  
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	467777	WSE8	EET CF	09/25/25 01:18
Total/NA	Prep	3005A			468307	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 18:47
Total/NA	Analysis	I-3765-85		1	467692	DGU1	EET CF	09/24/25 06:37

**Client Sample ID: MW-3**  
 Date Collected: 09/22/25 16:53  
 Date Received: 09/23/25 16:20

**Lab Sample ID: 310-316331-2**  
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	467777	WSE8	EET CF	09/25/25 01:40
Total/NA	Prep	3005A			468307	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 18:50
Total/NA	Analysis	I-3765-85		1	467692	DGU1	EET CF	09/24/25 06:37

**Client Sample ID: MW-6**  
 Date Collected: 09/22/25 12:52  
 Date Received: 09/23/25 16:20

**Lab Sample ID: 310-316331-3**  
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	467777	WSE8	EET CF	09/25/25 02:03
Total/NA	Prep	3005A			468307	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 18:53
Total/NA	Analysis	I-3765-85		1	467692	DGU1	EET CF	09/24/25 06:37

**Client Sample ID: MW-7**  
 Date Collected: 09/22/25 13:58  
 Date Received: 09/23/25 16:20

**Lab Sample ID: 310-316331-4**  
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	467777	WSE8	EET CF	09/25/25 02:25
Total/NA	Prep	3005A			468307	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 18:56
Total/NA	Analysis	I-3765-85		1	467778	DGU1	EET CF	09/24/25 12:02

**Client Sample ID: MW-9**  
 Date Collected: 09/22/25 10:45  
 Date Received: 09/23/25 16:20

**Lab Sample ID: 310-316331-5**  
 Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	467777	WSE8	EET CF	09/25/25 02:48
Total/NA	Prep	3005A			468307	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 19:10
Total/NA	Analysis	I-3765-85		1	467692	DGU1	EET CF	09/24/25 06:37

# Lab Chronicle

Client: SCS Engineers  
 Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
 SDG: Adair County Sanitary Landfill

**Client Sample ID: MW-10**

**Lab Sample ID: 310-316331-6**

Date Collected: 09/22/25 11:30

Matrix: Water

Date Received: 09/23/25 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	467777	WSE8	EET CF	09/25/25 03:11
Total/NA	Prep	3005A			468307	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 18:58
Total/NA	Analysis	I-3765-85		1	467778	DGU1	EET CF	09/24/25 12:02

**Client Sample ID: GWD-1**

**Lab Sample ID: 310-316331-7**

Date Collected: 09/22/25 14:55

Matrix: Water

Date Received: 09/23/25 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	467904	WSE8	EET CF	09/26/25 08:38
Total/NA	Prep	3005A			468307	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 19:13
Total/NA	Analysis	I-3765-85		1	467778	DGU1	EET CF	09/24/25 12:02

**Client Sample ID: MW-D**

**Lab Sample ID: 310-316331-8**

Date Collected: 09/22/25 13:06

Matrix: Water

Date Received: 09/23/25 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	467904	WSE8	EET CF	09/26/25 09:00
Total/NA	Prep	3005A			468307	QTZ5	EET CF	09/30/25 09:00
Total/NA	Analysis	6020B		1	468963	NFT2	EET CF	10/03/25 19:16
Total/NA	Analysis	I-3765-85		1	467778	DGU1	EET CF	09/24/25 12:02

**Client Sample ID: Trip Blank 1**

**Lab Sample ID: 310-316331-9**

Date Collected: 09/22/25 00:00

Matrix: Water

Date Received: 09/23/25 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	467904	WSE8	EET CF	09/26/25 07:07

**Client Sample ID: Trip Blank 2**

**Lab Sample ID: 310-316331-10**

Date Collected: 09/22/25 00:00

Matrix: Water

Date Received: 09/23/25 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	467904	WSE8	EET CF	09/26/25 07:30

**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: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
SDG: Adair County Sanitary Landfill

## Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	IA100001	09-29-26

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# Method Summary

Client: SCS Engineers  
Project/Site: Adair County 2nd 2025 GW Sampling Event

Job ID: 310-316331-1  
SDG: Adair 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



310-316331 Chain of Custody

### 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>9/23/25</u>	Received By:	<u>JR</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
<b>Condition of Cooler/Containers</b>			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID.	
Multiple Coolers?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>1</u> of <u>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-2, MW-3, MW-6, MW-7, MW-9</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>BB</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>2.2</u>	Corrected Temp (°C)	<u>2.2</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>			





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:	<u>West Des Moines IA</u>	Project:	
<b>Receipt Information</b>			
Date/Time Received:	<u>9/13/25</u>	TIME <u>1620</u>	Received By. <u>JK</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-10, GuD-1, MW-10</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>B B</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>1.6</u>	Corrected Temp (°C):	<u>1.6</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>			



# Chain of Custody Record

EUROFINS  
DES MOINES SERVICE CENTER  
214

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

<b>Client Contact</b> SCS Engineers 1690 All-State Court, Suite 100 West Des Moines, IA 50265 515-631-6160		<b>Project Manager: Sean Marczewski</b> Email: smarczewski@scsengineers.com Cell 712-661-9682		<b>Site Contact: Sean Marczewski</b> <b>Lab Contact: Sam Miller</b>		<b>Date:</b> Carrier:		COC No _____ of _____ COCs	
Project Name: Adair County 2nd 2025 GW Sampling Event Site: Adair County Sanitary Landfill P O # 27224370.26		Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS Other: <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Perform MS / MSD ( Y / N )		Filtered Sample ( Y / N )		Appendix I	
Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Gab)	Matrix	# of Cont.	Total Suspended Solids	Trip Blank	Sample Specific Notes	
MW-2	9/22/25	16:20	G	W		X			
MW-3	9/22/25	16:53	G	W		X			
MW-6	9/22/25	17:54	G	W		X			
MW-7	9/22/25	18:58	G	W		X			
MW-9	9/22/25	19:45	G	W		X			
MW-10	9/22/25	11:30	G	W		X			
GU-2			G	W		X			
GWD-1	9/22/25	14:55	G	W		X			
MW-D	9/22/25	13:00	G	W		X			
Trip Blank							X		Please include trip blanks in every cooler containing VOC sample 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  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  
**Special Instructions/QC Requirements & Comments:** Please include trip blanks in every cooler containing VOC sample containers  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months  
 Cooler Temp (°C) Obs'd \_\_\_\_\_ Corrd' \_\_\_\_\_ Therm ID No \_\_\_\_\_  
 Received by \_\_\_\_\_ Date/Time \_\_\_\_\_ Company \_\_\_\_\_  
 Received by \_\_\_\_\_ Date/Time \_\_\_\_\_ Company \_\_\_\_\_  
 Received in Laboratory by *BS* Date/Time *9/23/25 1628* Company \_\_\_\_\_

## Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-316331-1  
SDG Number: Adair County Sanitary Landfill

**Login Number: 316331**

**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	





## Appendix B-2 Data Validation

QA/QC Completed by: Michael Morgan  
 Sample Date: 2/6/2025  
 Site Name: Adair County Sanitary Landfill  
 Project Type: Adair County Sanitary Landfill - 1<sup>st</sup> 2025 Semi-Annual Groundwater Sampling Event  
 Laboratory: Eurofins TestAmerica, Cedar Falls  
 Lab Job ID: 310-300100-1  
 Lab Report Date: 2/17/2025

	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		Method 8260D: The continuing calibration verification (CCV) associated with batch 310-446555 recovered above the upper control limit for Bromoform (20.2%D). The LCS associated with this CCV passed CCV criteria for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-446555/3).
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-7. RPD for analyzed parameters was <50%.

QA/QC Completed by: Michael Morgan  
 Sample Date: 9/22/2025  
 Site Name: Adair County Sanitary Landfill  
 Project Type: Adair County Sanitary Landfill - 2<sup>nd</sup> 2025 Semi-Annual Groundwater Sampling Event  
 Laboratory: Eurofins TestAmerica, Cedar Falls  
 Lab Job ID: 310-316331-1  
 Lab Report Date: 10/6/2025

	OK	NO	N/A	NOTES
<b>Sample Collection and Sample Holding</b>				
Chain of Custody	X			
Temperature	X			
Preservation		X		<p>Method 6020B: The reference method requires samples to be preserved to a pH of &lt;2. The following sample was received with insufficient preservation at a pH of &gt;2: MW-2 (310-316331-1). The sample(s) was preserved to the appropriate pH in the laboratory.</p> <p>Method 6020B: The reference method requires samples to be preserved to a pH of &lt;2. The following sample was received with insufficient preservation at a pH of &gt;2: GWD-1 (310-316331-7). The sample(s) was preserved to the appropriate pH in the laboratory.</p>
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 2 (310-316331-10).
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			A field duplicate sample was collected at MW-6. RPD for analyzed parameters was <50%.



## Appendix C

### Reporting Period Summary of Groundwater Chemistry

# SCS ENGINEERS

## Summary of Groundwater Chemistry Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P

Total Metals Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GWD-1 DNG
Antimony, mg/L (CAS NO - 7440-36-0)	2/6/2025	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A
	9/22/2025	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
	9/22/2025	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A
Arsenic, mg/L (CAS NO - 7440-38-2)	2/6/2025	< 0.002	0.00323	< 0.002	< 0.002	< 0.002	< 0.002	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A
	9/22/2025	< 0.002	0.00616	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
	9/22/2025	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A
Barium, mg/L (CAS NO - 7440-39-3)	2/6/2025	0.175	0.233	0.0291	0.0192	0.0272	0.0556	N/A
	2/6/2025	N/A	N/A	N/A	N/A	0.0278	N/A	N/A
	9/22/2025	0.148	0.193	0.0259	0.0204	0.0289	0.0607	0.0551
	9/22/2025	N/A	N/A	N/A	0.0205	N/A	N/A	N/A
Beryllium, mg/L (CAS NO - 7440-41-7)	2/6/2025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	9/22/2025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	9/22/2025	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
Cadmium, mg/L (CAS NO - 7440-43-9)	2/6/2025	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.000281	< 0.0002	N/A
	2/6/2025	N/A	N/A	N/A	N/A	0.000295	N/A	N/A
	9/22/2025	< 0.0002	< 0.0002	< 0.0002	< 0.0002	0.000264	< 0.0002	< 0.0002
	9/22/2025	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A
Chromium, mg/L (CAS NO - 7440-47-3)	2/6/2025	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	9/22/2025	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	9/22/2025	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
Cobalt, mg/L (CAS NO - 7440-48-4)	2/6/2025	< 0.0005	0.00235	< 0.0005	< 0.0005	< 0.0005	0.000538	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A
	9/22/2025	< 0.0005	0.000505	< 0.0005	< 0.0005	< 0.0005	0.000773	< 0.0005
	9/22/2025	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A
Copper, mg/L (CAS NO - 7440-50-8)	2/6/2025	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	9/22/2025	< 0.005	< 0.005	< 0.005	< 0.005	0.0224	< 0.005	< 0.005
	9/22/2025	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
Lead, mg/L (CAS NO - 7439-92-1)	2/6/2025	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A
	9/22/2025	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0149	< 0.0005	< 0.0005
	9/22/2025	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A
Nickel, mg/L (CAS NO - 7440-02-0)	2/6/2025	< 0.005	0.0208	< 0.005	< 0.005	0.0171	< 0.005	N/A
	2/6/2025	N/A	N/A	N/A	N/A	0.0178	N/A	N/A
	9/22/2025	< 0.005	< 0.005	< 0.005	< 0.005	0.0188	0.00629	< 0.005
	9/22/2025	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
Selenium, mg/L (CAS NO - 7782-49-2)	2/6/2025	< 0.005	< 0.005	< 0.005	0.00731	< 0.005	< 0.005	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	9/22/2025	< 0.005	< 0.005	< 0.005	0.00567	< 0.005	< 0.005	< 0.005
	9/22/2025	N/A	N/A	N/A	0.00519	N/A	N/A	N/A
Silver, mg/L (CAS NO - 7440-22-4)	2/6/2025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	9/22/2025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	9/22/2025	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
Thallium, mg/L (CAS NO - 7440-28-0)	2/6/2025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	9/22/2025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	9/22/2025	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
Vanadium, mg/L (CAS NO - 7440-62-2)	2/6/2025	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	9/22/2025	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	9/22/2025	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
Zinc, mg/L (CAS NO - 7440-66-6)	2/6/2025	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A
	9/22/2025	< 0.02	< 0.02	< 0.02	< 0.02	0.022	< 0.02	0.0278
	9/22/2025	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A

# SCS ENGINEERS

**Summary of Groundwater Chemistry**  
**Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P**

Total Metals Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GWD-1 DNG
Total Suspended Solids, mg/L (CAS NO - TSS)	2/6/2025	< 1.88	6.5	< 1.88	< 1.88	< 1.88	< 2.5	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1.88	N/A	N/A
	9/22/2025	< 1.88	25	2	2.13	< 1.88	< 1.88	8
	9/22/2025	N/A	N/A	N/A	4.25	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.

# SCS ENGINEERS

**Summary of Groundwater Chemistry**  
**Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P**

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GWD-1 DNG
1,1,1,2-Tetrachloroethane, ug/L (CAS NO - 630-20-6)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,1,1-Trichloroethane, ug/L (CAS NO - 71-55-6)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane, ug/L (CAS NO - 79-34-5)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,1,2-Trichloroethane, ug/L (CAS NO - 79-00-5)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,1-Dichloroethane, ug/L (CAS NO - 75-34-3)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,1-Dichloroethene, ug/L (CAS NO - 75-35-4)	2/6/2025	< 2	< 2	< 2	< 2	< 2	< 2	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	9/22/2025	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	9/22/2025	N/A	N/A	N/A	< 2	N/A	N/A	N/A
1,2,3-Trichloropropane, ug/L (CAS NO - 96-18-4)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,2-Dibromo-3-Chloropropane, ug/L (CAS NO - 96-12-8)	2/6/2025	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	9/22/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/22/2025	N/A	N/A	N/A	< 5	N/A	N/A	N/A
1,2-Dibromoethane [EDB], ug/L (CAS NO - 106-93-4)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,2-Dichlorobenzene, ug/L (CAS NO - 95-50-1)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,2-Dichloroethane, ug/L (CAS NO - 107-06-2)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,2-Dichloropropane, ug/L (CAS NO - 78-87-5)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,4-Dichlorobenzene, ug/L (CAS NO - 106-46-7)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
2-Butanone, ug/L (CAS NO - 78-93-3)	2/6/2025	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	9/22/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/22/2025	N/A	N/A	N/A	< 10	N/A	N/A	N/A
2-Hexanone, ug/L (CAS NO - 591-78-6)	2/6/2025	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	9/22/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/22/2025	N/A	N/A	N/A	< 10	N/A	N/A	N/A

# SCS ENGINEERS

Summary of Groundwater Chemistry  
Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GWD-1 DNG
4-Methyl-2-Pentanone, ug/L (CAS NO - 108-10-1)	2/6/2025	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	9/22/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/22/2025	N/A	N/A	N/A	< 10	N/A	N/A	N/A
Acetone, ug/L (CAS NO - 67-64-1)	2/6/2025	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	9/22/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/22/2025	N/A	N/A	N/A	< 10	N/A	N/A	N/A
Acrylonitrile, ug/L (CAS NO - 107-13-1)	2/6/2025	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	9/22/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/22/2025	N/A	N/A	N/A	< 5	N/A	N/A	N/A
Benzene, ug/L (CAS NO - 71-43-2)	2/6/2025	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A
	9/22/2025	< 0.5	0.85	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	9/22/2025	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A
Bromochloromethane, ug/L (CAS NO - 74-97-5)	2/6/2025	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	9/22/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/22/2025	N/A	N/A	N/A	< 5	N/A	N/A	N/A
Bromodichloromethane, ug/L (CAS NO - 75-27-4)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Bromoform, ug/L (CAS NO - 75-25-2)	2/6/2025	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	9/22/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/22/2025	N/A	N/A	N/A	< 5	N/A	N/A	N/A
Bromomethane, ug/L (CAS NO - 74-83-9)	2/6/2025	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	9/22/2025	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	9/22/2025	N/A	N/A	N/A	< 4	N/A	N/A	N/A
Carbon Disulfide, ug/L (CAS NO - 75-15-0)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Carbon Tetrachloride, ug/L (CAS NO - 56-23-5)	2/6/2025	< 2	< 2	< 2	< 2	< 2	< 2	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	9/22/2025	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	9/22/2025	N/A	N/A	N/A	< 2	N/A	N/A	N/A
Chlorobenzene, ug/L (CAS NO - 108-90-7)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Chlorodibromomethane, ug/L (CAS NO - 124-48-1)	2/6/2025	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	9/22/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/22/2025	N/A	N/A	N/A	< 5	N/A	N/A	N/A
Chloroethane, ug/L (CAS NO - 75-00-3)	2/6/2025	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	9/22/2025	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	9/22/2025	N/A	N/A	N/A	< 4	N/A	N/A	N/A
Chloroform, ug/L (CAS NO - 67-66-3)	2/6/2025	< 3	< 3	< 3	< 3	< 3	< 3	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	9/22/2025	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	9/22/2025	N/A	N/A	N/A	< 3	N/A	N/A	N/A
Chloromethane, ug/L (CAS NO - 74-87-3)	2/6/2025	< 3	< 3	< 3	< 3	< 3	< 3	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	9/22/2025	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	9/22/2025	N/A	N/A	N/A	< 3	N/A	N/A	N/A

# SCS ENGINEERS

## Summary of Groundwater Chemistry Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GWD-1 DNG
cis-1,2-Dichloroethene, ug/L (CAS NO - 156-59-2)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
cis-1,3-Dichloropropene, ug/L (CAS NO - 10061-01-5)	2/6/2025	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	9/22/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/22/2025	N/A	N/A	N/A	< 5	N/A	N/A	N/A
Ethylbenzene, ug/L (CAS NO - 100-41-4)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Iodomethane, ug/L (CAS NO - 74-88-4)	2/6/2025	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	9/22/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/22/2025	N/A	N/A	N/A	< 10	N/A	N/A	N/A
Methylene Bromide, ug/L (CAS NO - 74-95-3)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Methylene Chloride, ug/L (CAS NO - 75-09-2)	2/6/2025	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	9/22/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/22/2025	N/A	N/A	N/A	< 5	N/A	N/A	N/A
Styrene, ug/L (CAS NO - 100-42-5)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Tetrachloroethene, ug/L (CAS NO - 127-18-4)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Toluene, ug/L (CAS NO - 108-88-3)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
trans-1,2-Dichloroethene, ug/L (CAS NO - 156-60-5)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
trans-1,3-Dichloropropene, ug/L (CAS NO - 10061-02-6)	2/6/2025	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	9/22/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/22/2025	N/A	N/A	N/A	< 5	N/A	N/A	N/A
trans-1,4-Dichloro-2-Butene, ug/L (CAS NO - 110-57-6)	2/6/2025	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	9/22/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/22/2025	N/A	N/A	N/A	< 10	N/A	N/A	N/A
Trichloroethene, ug/L (CAS NO - 79-01-6)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Trichlorofluoromethane, ug/L (CAS NO - 75-69-4)	2/6/2025	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	9/22/2025	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	9/22/2025	N/A	N/A	N/A	< 4	N/A	N/A	N/A
Vinyl Acetate, ug/L (CAS NO - 108-05-4)	2/6/2025	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	9/22/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/22/2025	N/A	N/A	N/A	< 10	N/A	N/A	N/A

# SCS ENGINEERS

**Summary of Groundwater Chemistry**  
**Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P**

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GWD-1 DNG
Vinyl Chloride, ug/L (CAS NO - 75-01-4)	2/6/2025	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/22/2025	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Xylenes, total, ug/L (CAS NO - 1330-20-7)	2/6/2025	< 3	< 3	< 3	< 3	< 3	< 3	N/A
	2/6/2025	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	9/22/2025	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	9/22/2025	N/A	N/A	N/A	< 3	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 Method and Output

# STATISTICAL METHOD AND OUTPUT

## Purpose

The purpose of this document is to provide the statistical evaluation of groundwater analytical data collected from the groundwater monitoring network of the Adair County Sanitary Landfill (Landfill).

## Statistical Method

### Diagnostic and Exploratory Evaluations and Tests of Assumptions

The detection and assessment monitoring statistical programs include 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 comprised 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 was 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. Analytical data prior to 2025 is available in the 2024 Annual Water Quality Report dated January 20, 2025 (Doc #111897).

### ***Detection Monitoring Statistical Program***

The detection monitoring statistical program for the Landfill is defined by Iowa Administrative Code (IAC) 567-113.10(4)"g". Interwell 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. Statistical outputs are included in Attachments A and B.

### ***Interwell Prediction Limits with Retesting***

- If the dataset has a normal distribution (or could 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 did not have a normal distribution (and could not be transformed to a normal distribution using Ladder of Powers) or had 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).
- 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 the retesting result is above the prediction limit, the SSI is confirmed, and the monitoring point should be placed into the assessment monitoring program. If the retesting sample concentration is below the prediction limit, the SSI is not confirmed, and the monitoring point continues in the detection monitoring program.

### ***Double Quantification Method***

The quasi-statistical “double quantification” method is used for constituents not detected in the background monitoring points. If a constituent is detected in the compliance dataset that has not been historically detected in the background dataset, that constituent must be retested before the next semi-annual 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***

Confidence intervals or confidence bands, as appropriate, are selected as the appropriate statistical methods for comparison of the groundwater analytical data against a fixed groundwater protection standard (GWPS). The assessment monitoring statistical evaluations are 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 are established using the process below. Transformation of the distribution is not considered. Statistical outputs are included in Attachments A and B.

### ***Confidence Intervals or Confidence Bands***

- A parametric confidence interval around a normal mean is calculated if the dataset has a normal distribution and no statistically significant trend is present.
- A non-parametric confidence interval around a median is 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 are calculated if the dataset has a statistically significant trend.

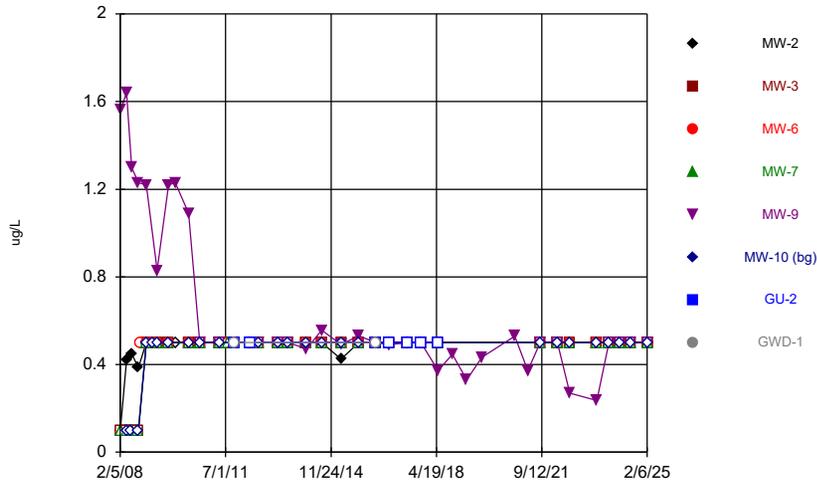
In the event that the lower confidence limit or any part of the lower confidence band, as appropriate, exceeds the GWPS, then the monitoring point is declared out of compliance, and an assessment of corrective measures (ACM) is required. Statistical outputs for the reporting period are included in Attachments A and B.

## Attachment A

### 1<sup>st</sup> 2025 Semi-Annual Statistical Output

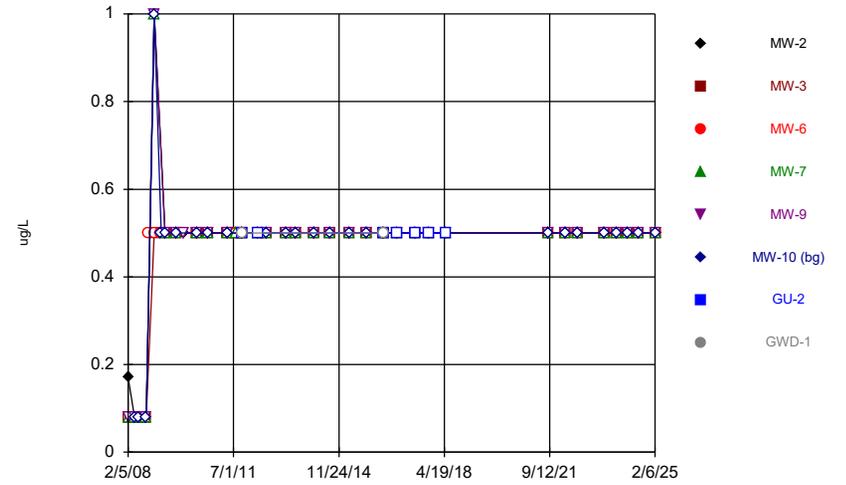
## Time Series Tables and Graphs

Time Series



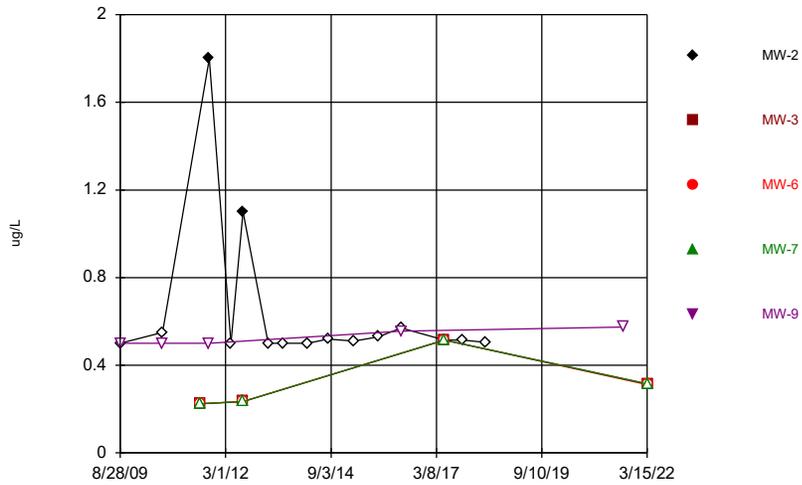
Constituent: 1,1-Dichloroethane Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



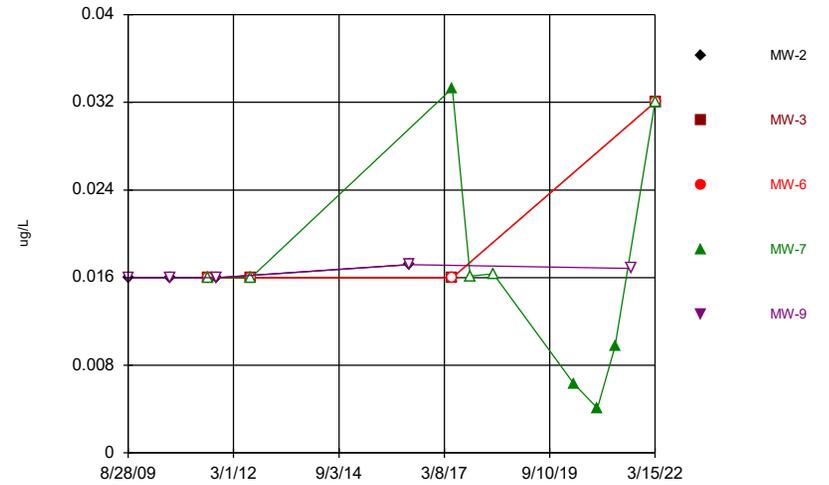
Constituent: 1,4-Dichlorobenzene Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



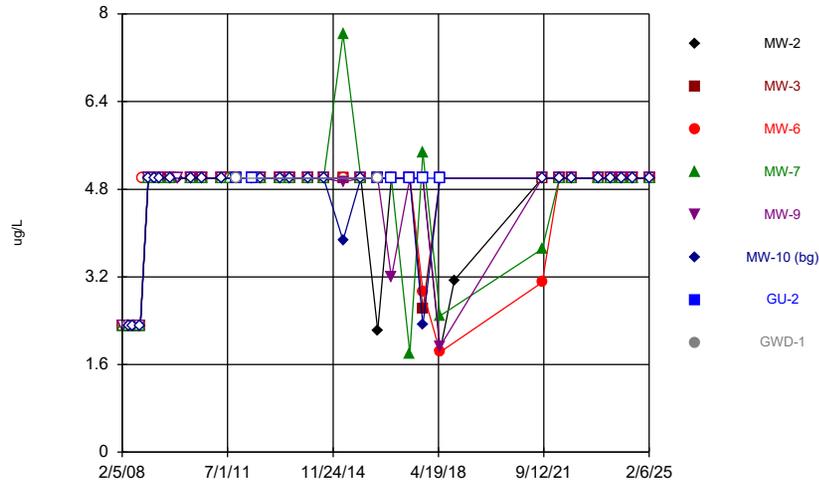
Constituent: 2,4-D Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



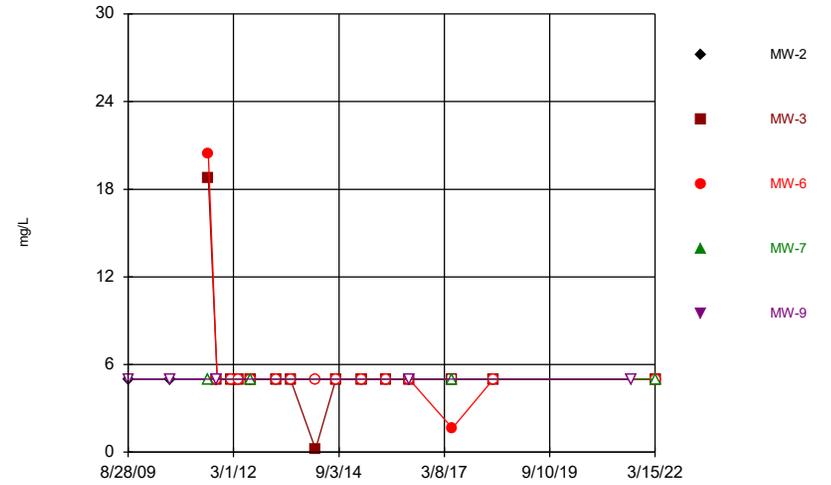
Constituent: 4,4'-DDT Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



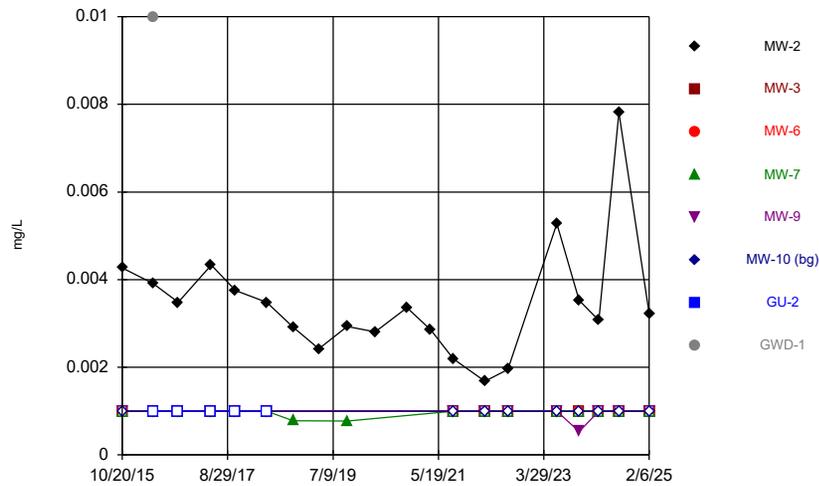
Constituent: Acetone Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



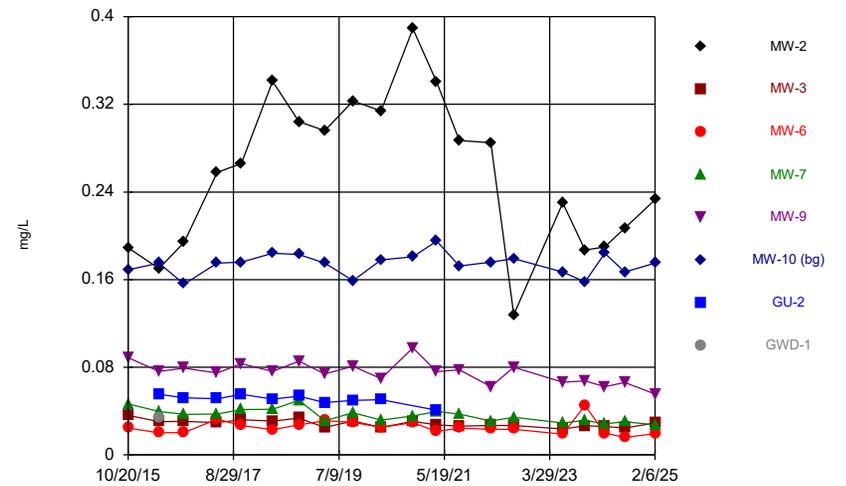
Constituent: Acetonitrile Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



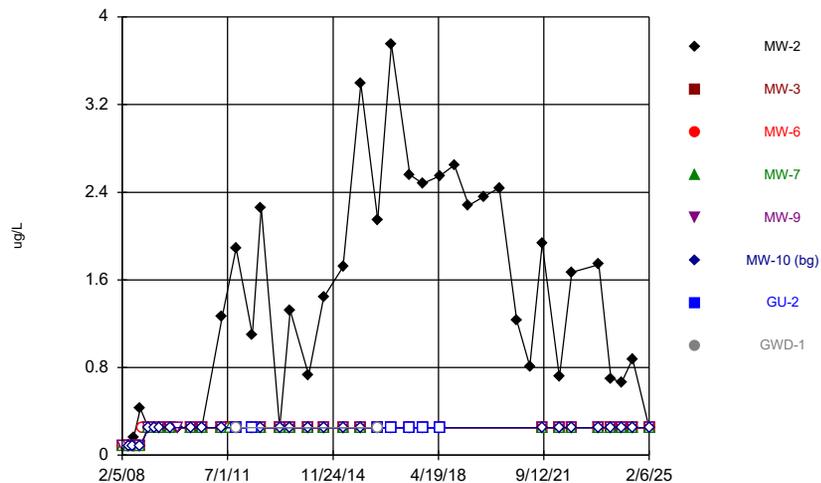
Constituent: Arsenic [total] Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



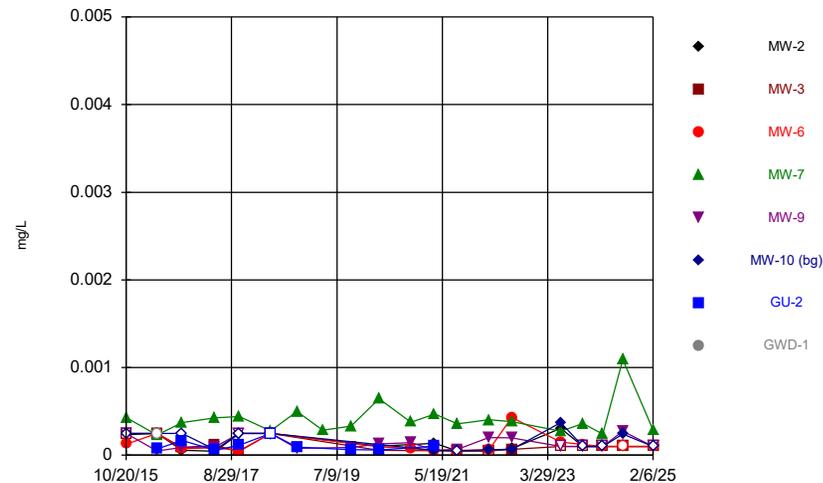
Constituent: Barium [total] Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



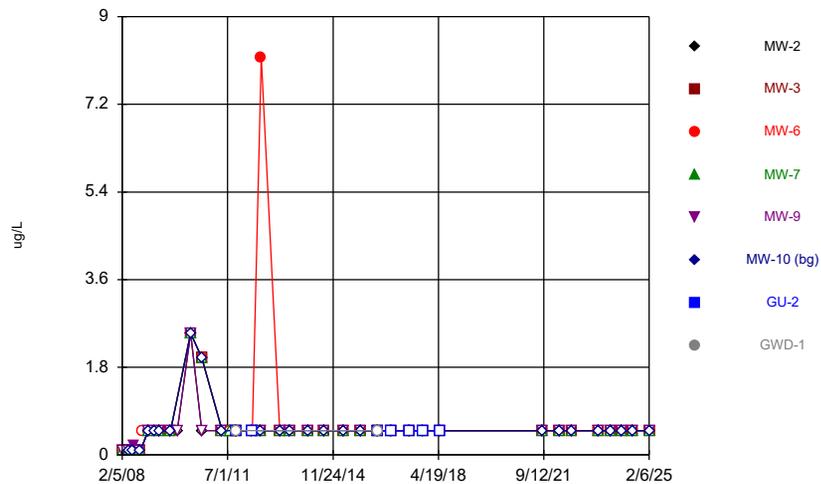
Constituent: Benzene Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



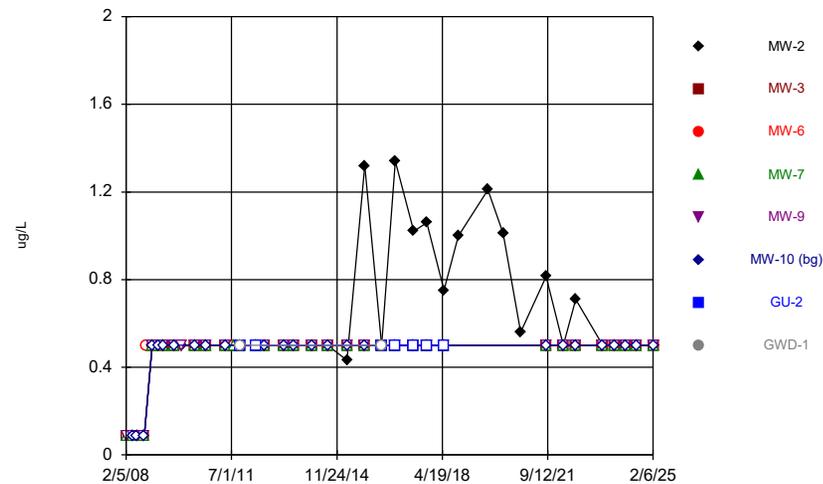
Constituent: Cadmium [total] Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



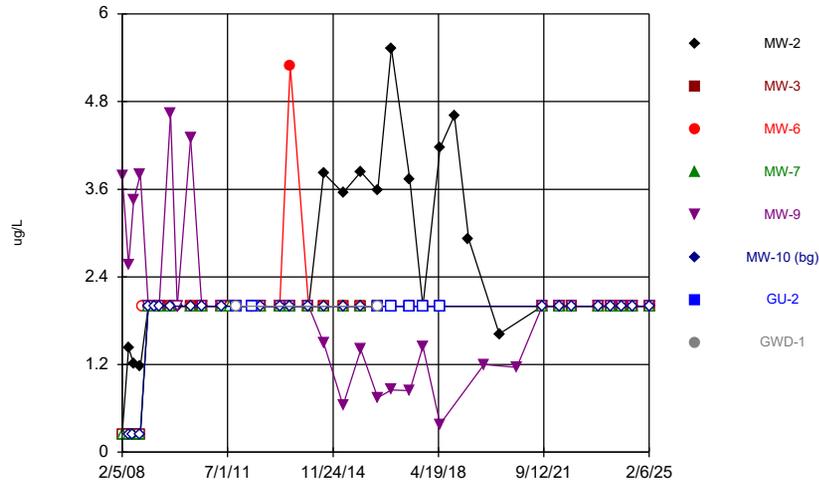
Constituent: Carbon disulfide Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



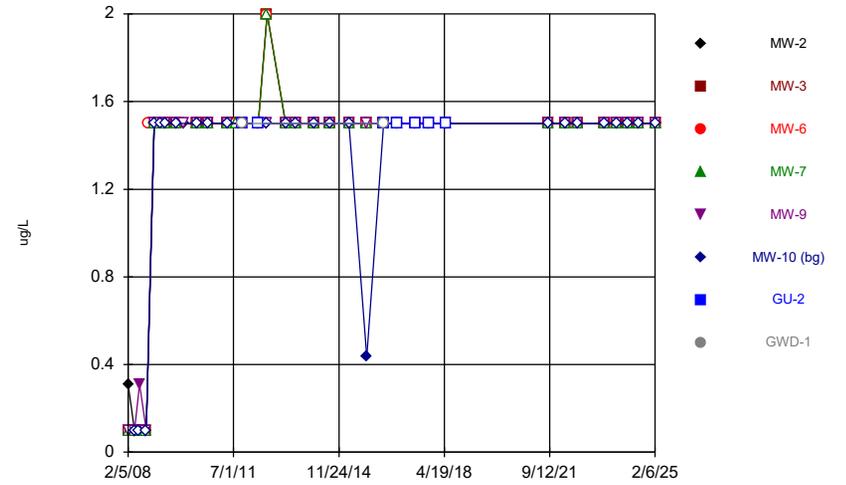
Constituent: Chlorobenzene Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



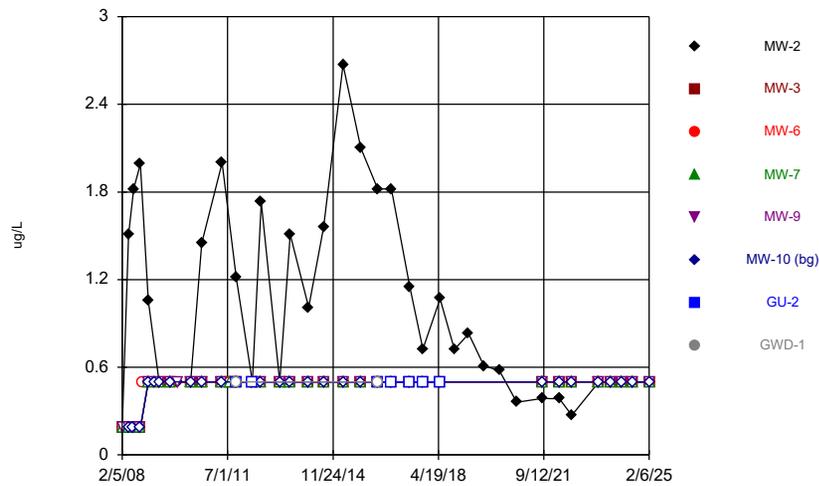
Constituent: Chloroethane Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



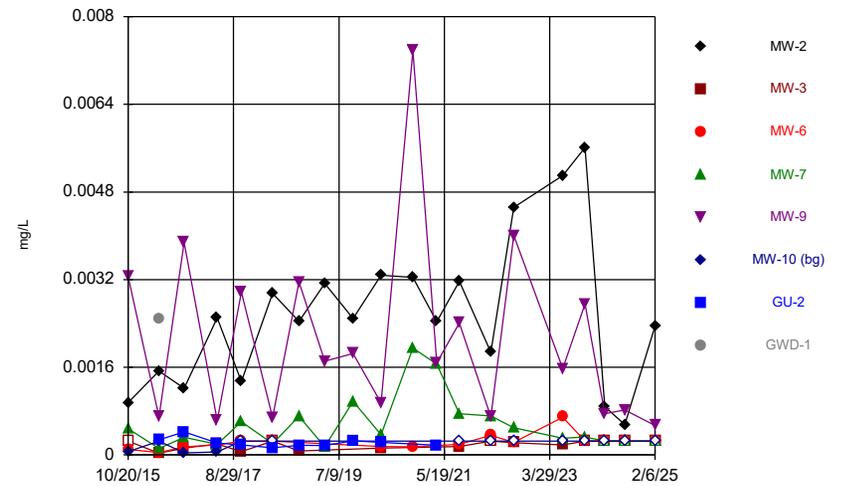
Constituent: Chloromethane Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



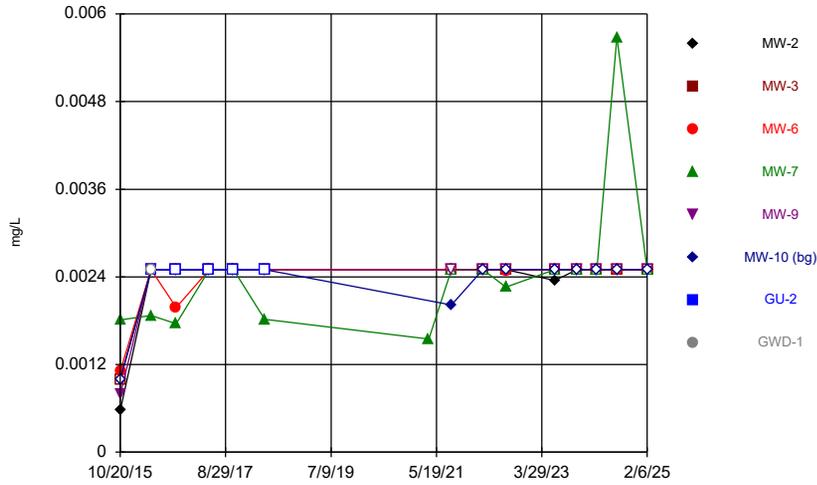
Constituent: cis-1,2-Dichloroethene Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



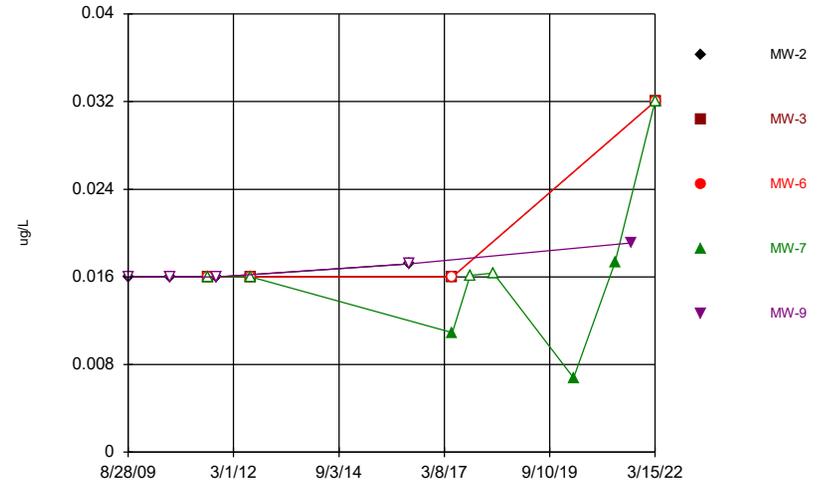
Constituent: Cobalt [total] Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



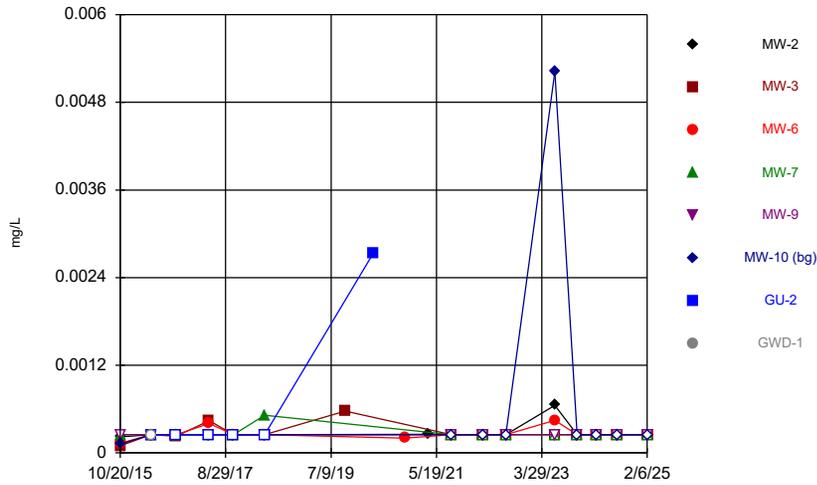
Constituent: Copper [total] Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



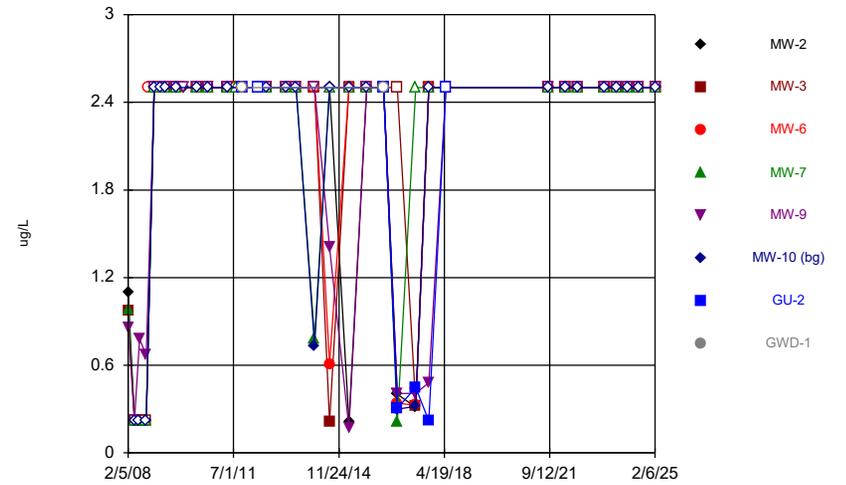
Constituent: Heptachlor Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



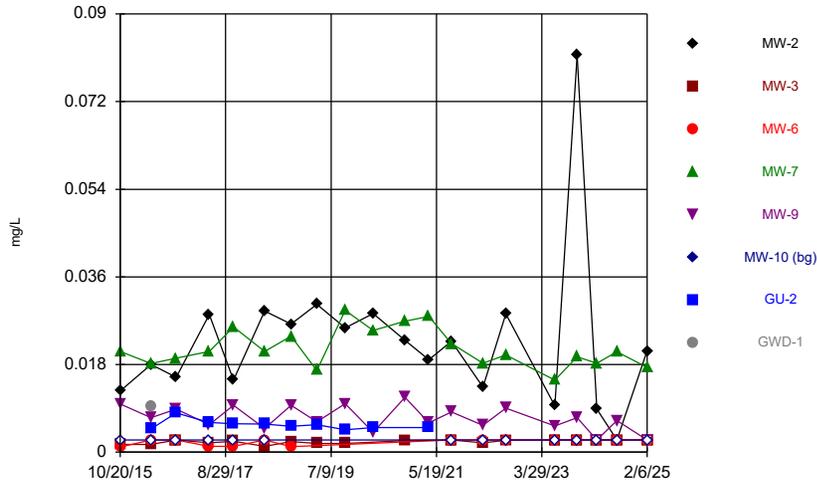
Constituent: Lead [total] Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



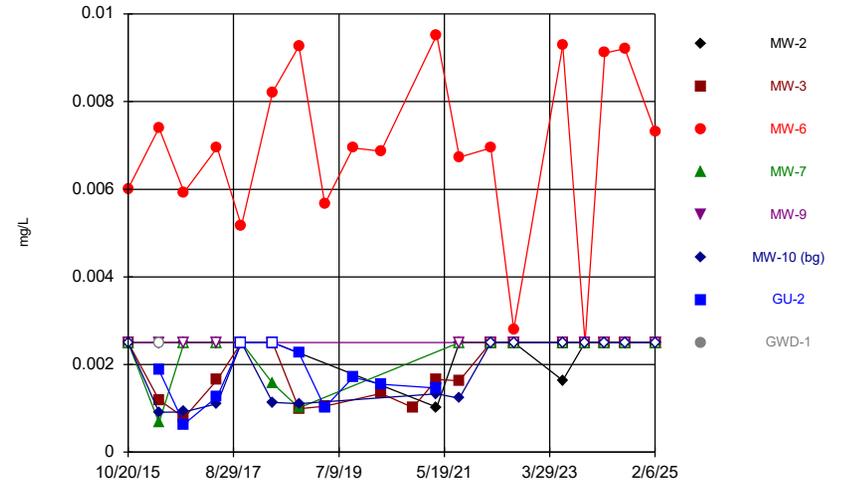
Constituent: Methylene Chloride Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



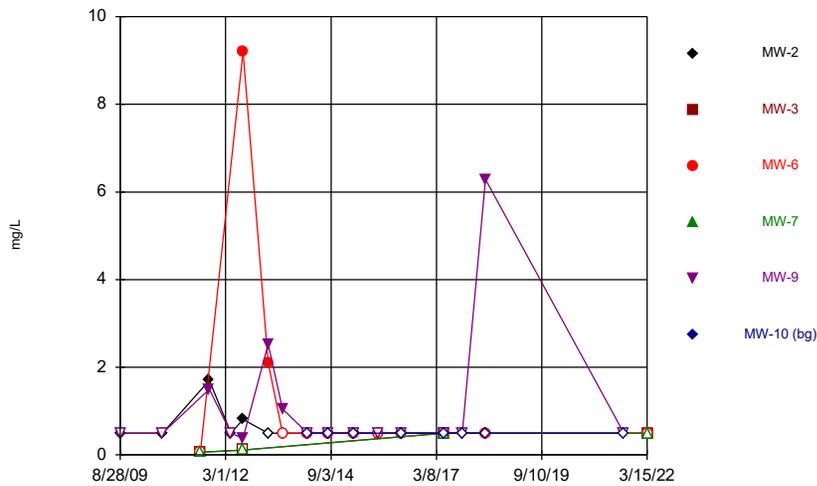
Constituent: Nickel [total] Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



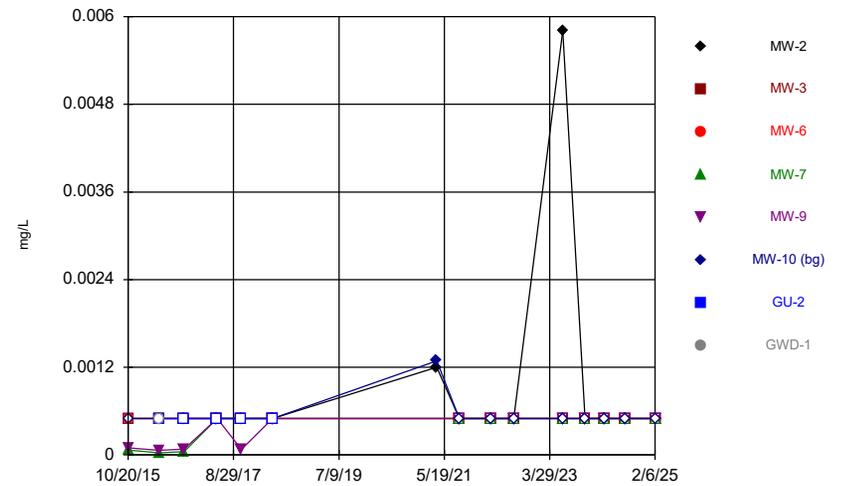
Constituent: Selenium [total] Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



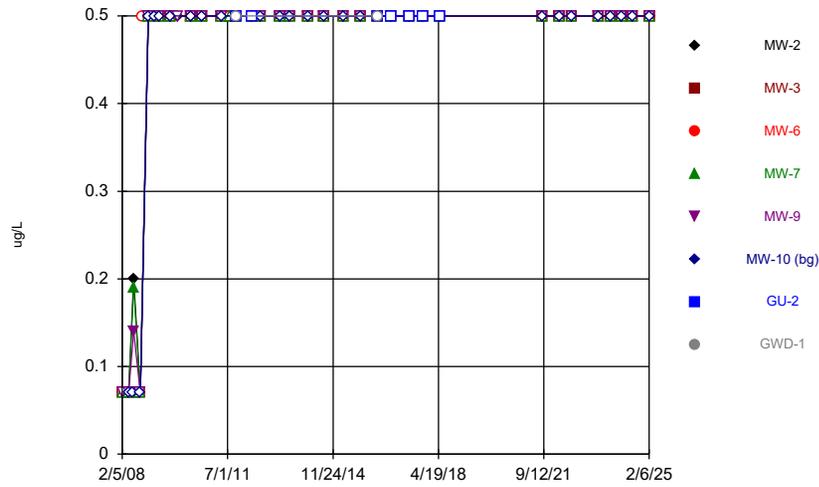
Constituent: Sulfide Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



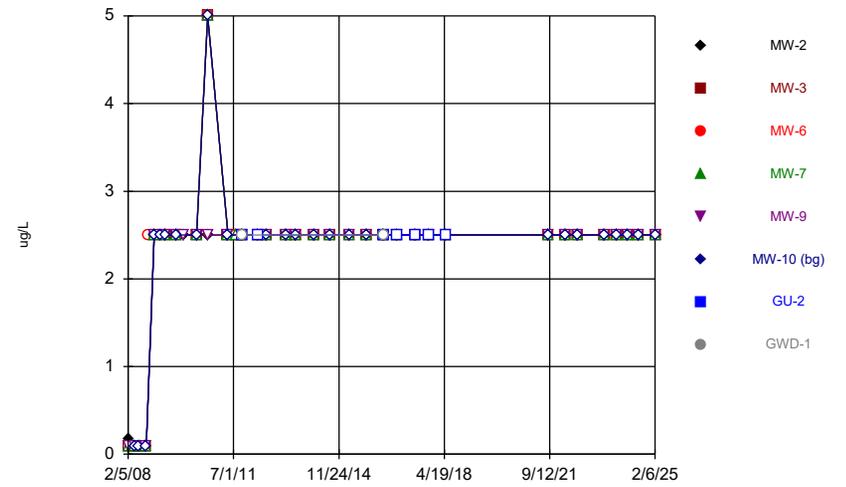
Constituent: Thallium [total] Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



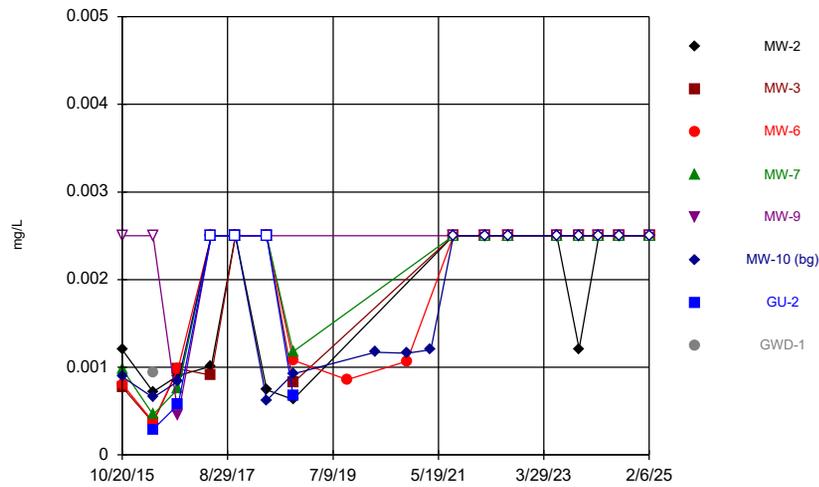
Constituent: Toluene Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



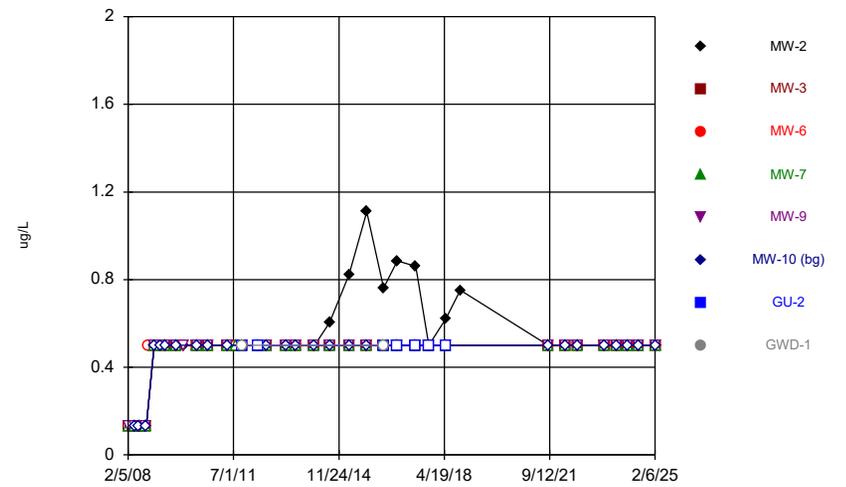
Constituent: trans-1,3-Dichloropropene Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



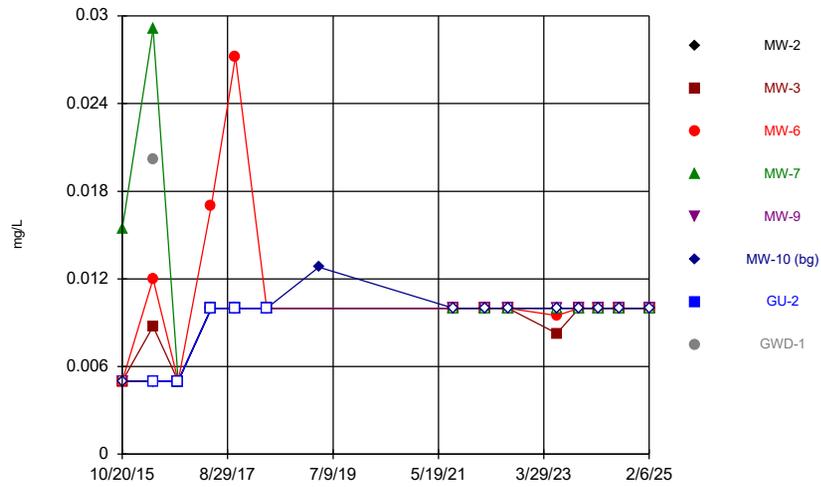
Constituent: Vanadium [total] Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



Constituent: Vinyl chloride Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



Constituent: Zinc [total] Analysis Run 3/6/2025 1:10 PM View: 2025SSN-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

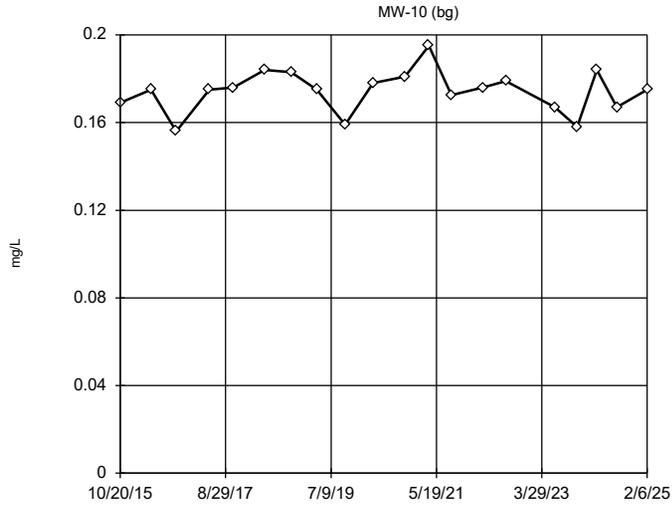
## Outliers Tables and Graphs

# BG Outlier Analysis

Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database Printed 3/6/2025, 2:35 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>
Barium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	EPA/OH	0.05	20	0.1742	0.009606	normal	ShapiroWilk
Cadmium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	NP (nrm)/OH	NaN	15	0.0001639	0.0001046	unknown	ShapiroWilk
Chromium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	OH	NaN	14	0.002355	0.0005425	n/a	n/a
Cobalt [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	OH	NaN	14	0.0002074	0.00008472	n/a	n/a
Copper [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	OH	NaN	14	0.002358	0.0004117	n/a	n/a
<b>Lead [total] (mg/L)</b>	<b>MW-10 (bg)</b>	<b>Yes</b>	<b>0.00522</b>	<b>6/22/2023</b>	<b>OH</b>	<b>NaN</b>	<b>14</b>	<b>0.0005957</b>	<b>0.001331</b>	<b>n/a</b>	<b>n/a</b>
Selenium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	NP (nrm)/OH	NaN	16	0.001891	0.0007199	unknown	ShapiroWilk
<b>Thallium [total] (mg/L)</b>	<b>MW-10 (bg)</b>	<b>Yes</b>	<b>0.00129</b>	<b>3/31/2021</b>	<b>OH</b>	<b>NaN</b>	<b>15</b>	<b>0.0005527</b>	<b>0.000204</b>	<b>n/a</b>	<b>n/a</b>
Vanadium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	NP (nrm)/OH	NaN	18	0.001803	0.0008145	unknown	ShapiroWilk
Zinc [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	OH	NaN	15	0.009187	0.002282	n/a	n/a

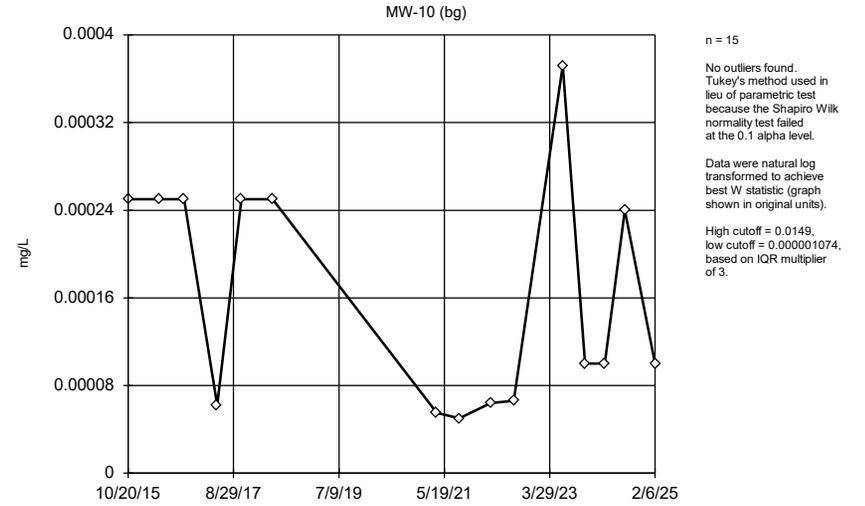
EPA Screening (suspected outliers for Dixon's Test)



n = 20  
 Dixon's will not be run.  
 No suspect values identified or unable to establish suspect values.  
 Ohio method in use.  
 Mean 0.1742, std. dev. 0.009606, critical Tn 2.557  
 Normality test used:  
 Shapiro Wilk@alpha = 0.1  
 Calculated = 0.9553  
 Critical = 0.92  
 The distribution was found to be normally distributed.

Constituent: Barium [total] Analysis Run 3/6/2025 2:33 PM View: 2025SSN-BG\_Outliers  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

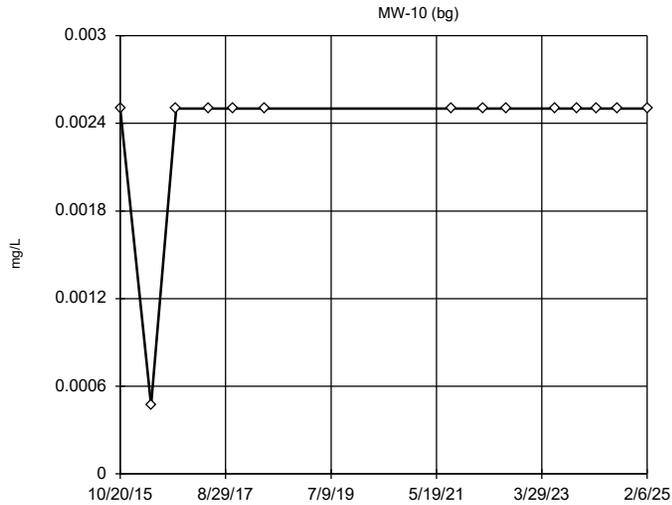
Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



n = 15  
 No outliers found.  
 Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.  
 Data were natural log transformed to achieve best W statistic (graph shown in original units).  
 High cutoff = 0.0149,  
 low cutoff = 0.000001074,  
 based on IQR multiplier of 3.

Constituent: Cadmium [total] Analysis Run 3/6/2025 2:33 PM View: 2025SSN-BG\_Outliers  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

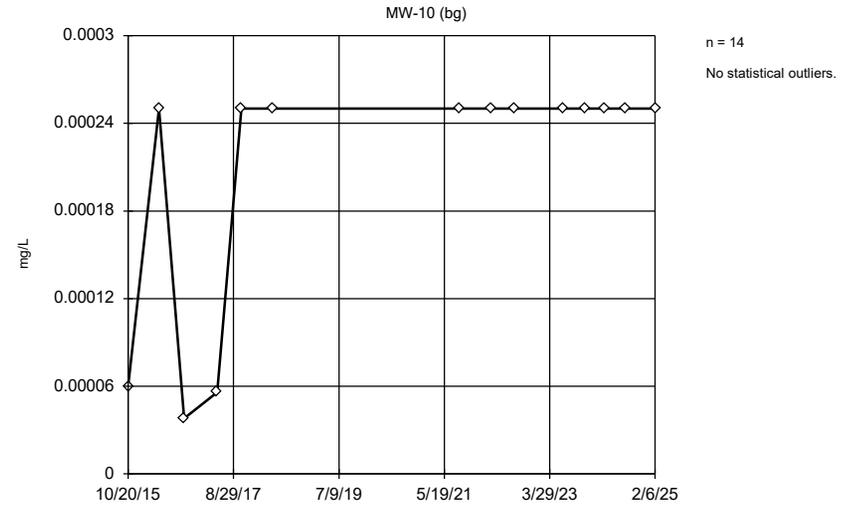
Ohio EPA 0715 Outlier Algorithm



n = 14  
 No statistical outliers.

Constituent: Chromium [total] Analysis Run 3/6/2025 2:33 PM View: 2025SSN-BG\_Outliers  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Ohio EPA 0715 Outlier Algorithm

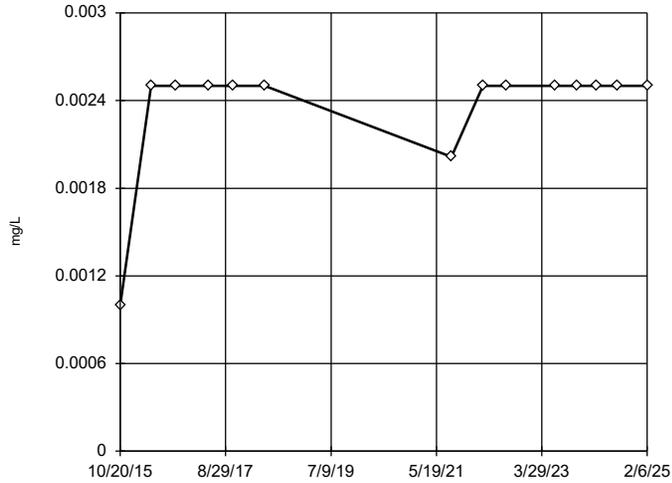


n = 14  
 No statistical outliers.

Constituent: Cobalt [total] Analysis Run 3/6/2025 2:33 PM View: 2025SSN-BG\_Outliers  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Ohio EPA 0715 Outlier Algorithm

MW-10 (bg)

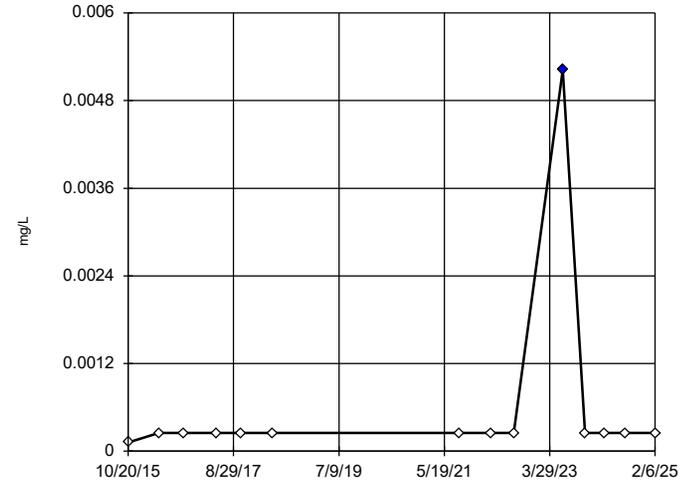


n = 14  
No statistical outliers.

Constituent: Copper [total] Analysis Run 3/6/2025 2:33 PM View: 2025SSN-BG\_Outliers  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Ohio EPA 0715 Outlier Algorithm

MW-10 (bg)

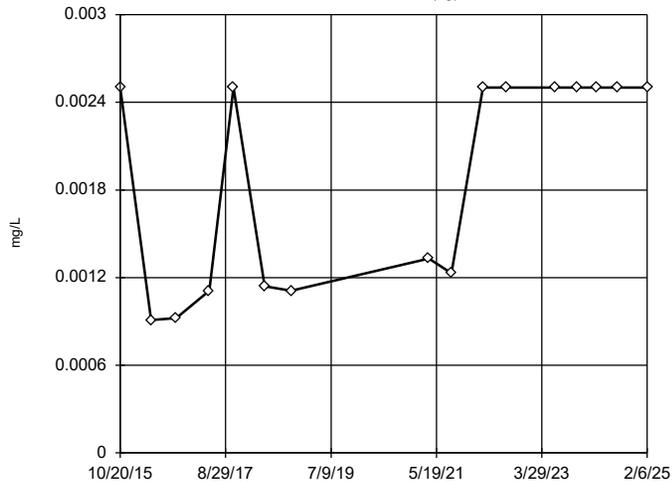


n = 14  
Statistical outlier is drawn as solid. Outlier per Ohio method.

Constituent: Lead [total] Analysis Run 3/6/2025 2:33 PM View: 2025SSN-BG\_Outliers  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm

MW-10 (bg)

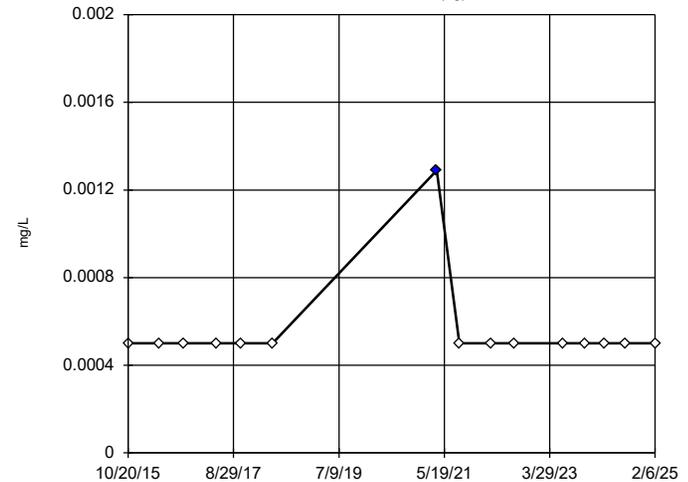


n = 16  
No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normally test failed at the 0.1 alpha level.  
Data were natural log transformed to achieve best W statistic (graph shown in original units).  
High cutoff = 0.02744, low cutoff = 0.0001025, based on IQR multiplier of 3.

Constituent: Selenium [total] Analysis Run 3/6/2025 2:33 PM View: 2025SSN-BG\_Outliers  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Ohio EPA 0715 Outlier Algorithm

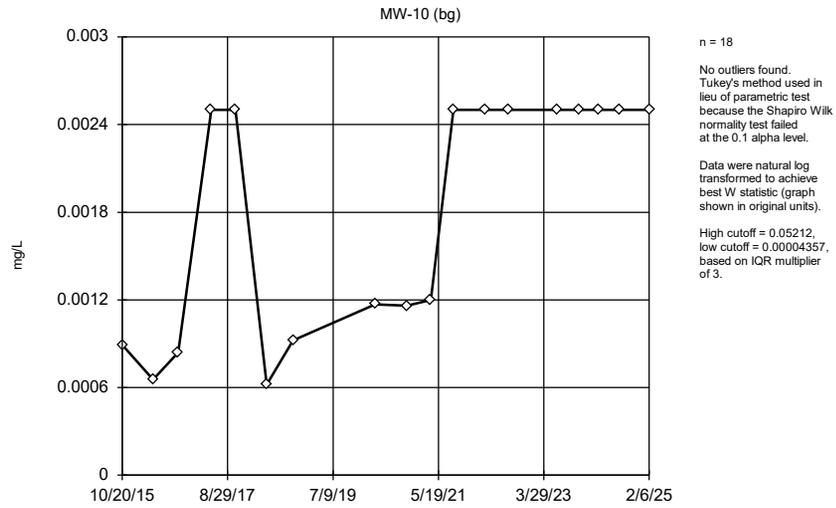
MW-10 (bg)



n = 15  
Statistical outlier is drawn as solid. Outlier per Ohio method.

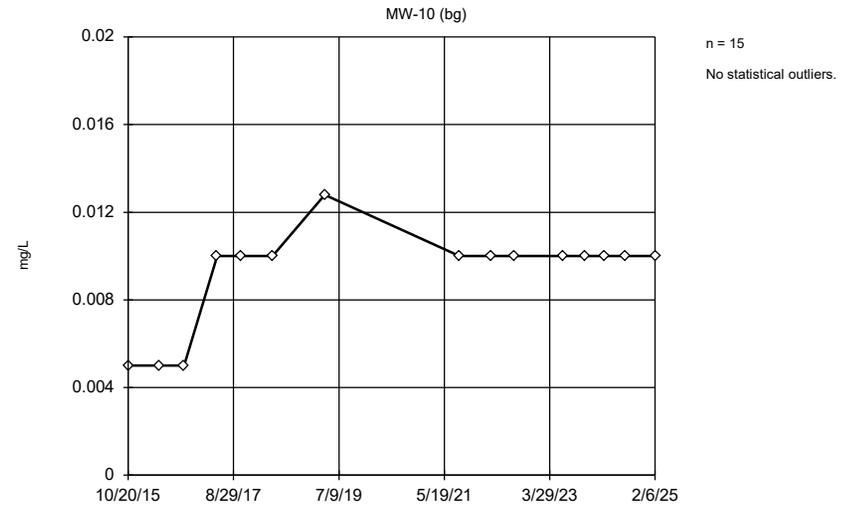
Constituent: Thallium [total] Analysis Run 3/6/2025 2:33 PM View: 2025SSN-BG\_Outliers  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



Constituent: Vanadium [total] Analysis Run 3/6/2025 2:33 PM View: 2025SSN-BG\_Outliers  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Ohio EPA 0715 Outlier Algorithm



Constituent: Zinc [total] Analysis Run 3/6/2025 2:33 PM View: 2025SSN-BG\_Outliers  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

## Prediction Limit Table and Graphs

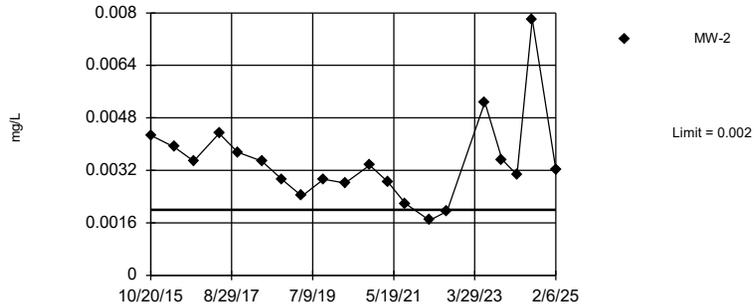
# AM Prediction Limit

Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database Printed 3/6/2025, 2:27 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>
<b>Arsenic [total] (mg/L)</b>	<b>MW-2</b>	<b>0.002</b>	<b>n/a</b>	<b>2/6/2025</b>	<b>0.00323</b>	<b>Yes</b>	<b>14</b>	<b>MW-10</b>	<b>100</b>	<b>n/a</b>	<b>0.007644</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Barium [total] (mg/L)</b>	<b>MW-2</b>	<b>0.1952</b>	<b>n/a</b>	<b>2/6/2025</b>	<b>0.233</b>	<b>Yes</b>	<b>20</b>	<b>MW-10</b>	<b>0</b>	<b>No</b>	<b>0.001053</b>	<b>Param Inter 1 of 2</b>
Barium [total] (mg/L)	MW-3	0.1952	n/a	2/6/2025	0.0291	No	20	MW-10	0	No	0.001053	Param Inter 1 of 2
Barium [total] (mg/L)	MW-6	0.1952	n/a	2/6/2025	0.0192	No	20	MW-10	0	No	0.001053	Param Inter 1 of 2
Barium [total] (mg/L)	MW-7	0.1952	n/a	2/6/2025	0.0275	No	20	MW-10	0	No	0.001053	Param Inter 1 of 2
Barium [total] (mg/L)	MW-9	0.1952	n/a	2/6/2025	0.0556	No	20	MW-10	0	No	0.001053	Param Inter 1 of 2
Cadmium [total] (mg/L)	MW-7	0.000372	n/a	2/6/2025	0.000288	No	15	MW-10	60	n/a	0.006767	NP Inter (NDs) 1 of 2
<b>Cobalt [total] (mg/L)</b>	<b>MW-2</b>	<b>0.00025</b>	<b>n/a</b>	<b>2/6/2025</b>	<b>0.00235</b>	<b>Yes</b>	<b>14</b>	<b>MW-10</b>	<b>78.57</b>	<b>n/a</b>	<b>0.007644</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Cobalt [total] (mg/L)</b>	<b>MW-9</b>	<b>0.00025</b>	<b>n/a</b>	<b>2/6/2025</b>	<b>0.000538</b>	<b>Yes</b>	<b>14</b>	<b>MW-10</b>	<b>78.57</b>	<b>n/a</b>	<b>0.007644</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Nickel [total] (mg/L)</b>	<b>MW-2</b>	<b>0.005</b>	<b>n/a</b>	<b>2/6/2025</b>	<b>0.0208</b>	<b>Yes</b>	<b>14</b>	<b>MW-10</b>	<b>100</b>	<b>n/a</b>	<b>0.007644</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Nickel [total] (mg/L)</b>	<b>MW-7</b>	<b>0.005</b>	<b>n/a</b>	<b>2/6/2025</b>	<b>0.01745</b>	<b>Yes</b>	<b>14</b>	<b>MW-10</b>	<b>100</b>	<b>n/a</b>	<b>0.007644</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Selenium [total] (mg/L)</b>	<b>MW-6</b>	<b>0.0025</b>	<b>n/a</b>	<b>2/6/2025</b>	<b>0.00731</b>	<b>Yes</b>	<b>16</b>	<b>MW-10</b>	<b>56.25</b>	<b>n/a</b>	<b>0.005898</b>	<b>NP Inter (NDs) 1 of 2</b>

Exceeds Limit: MW-2

Prediction Limit  
Interwell Non-parametric

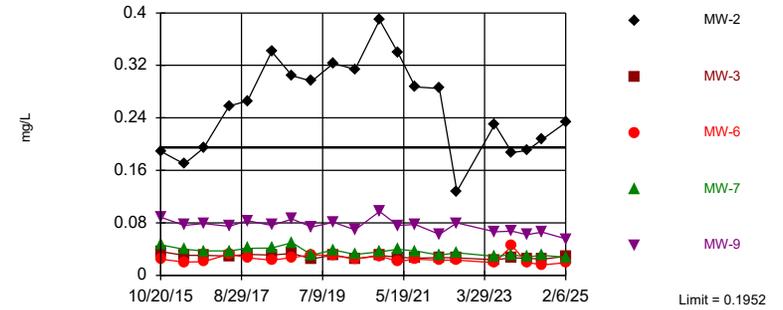


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 14) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.07386. Individual comparison alpha = 0.007644 (1 of 2). Assumes 4 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Arsenic [total] Analysis Run 3/6/2025 2:25 PM View: 2025SSN-AM\_Interwell\_PL  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Exceeds Limit: MW-2

Prediction Limit  
Interwell Parametric

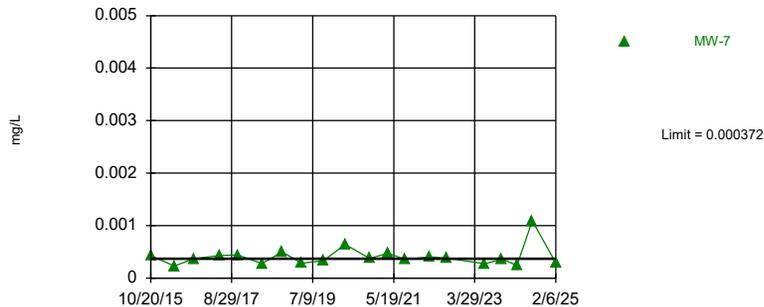


Background Data Summary: Mean=0.1742, Std. Dev.=0.009606, n=20. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9553, critical = 0.868. Kappa = 2.18 (c=10, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.005254. Individual comparison alpha = 0.001053. Comparing 5 points to limit.

Constituent: Barium [total] Analysis Run 3/6/2025 2:25 PM View: 2025SSN-AM\_Interwell\_PL  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Within Limit

Prediction Limit  
Interwell Non-parametric

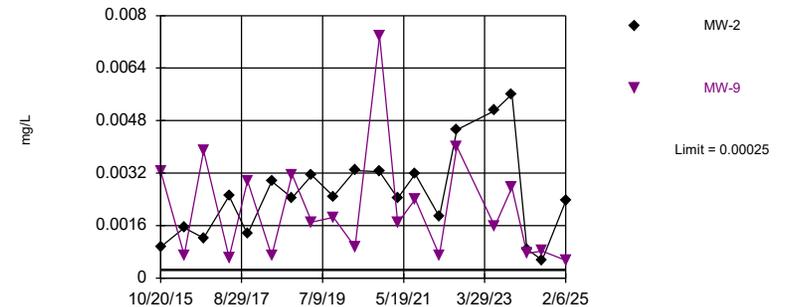


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 15 background values. 60% NDs. Annual per-constituent alpha = 0.06565. Individual comparison alpha = 0.006767 (1 of 2). Assumes 4 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Cadmium [total] Analysis Run 3/6/2025 2:25 PM View: 2025SSN-AM\_Interwell\_PL  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Exceeds Limit: MW-2, MW-9

Prediction Limit  
Interwell Non-parametric

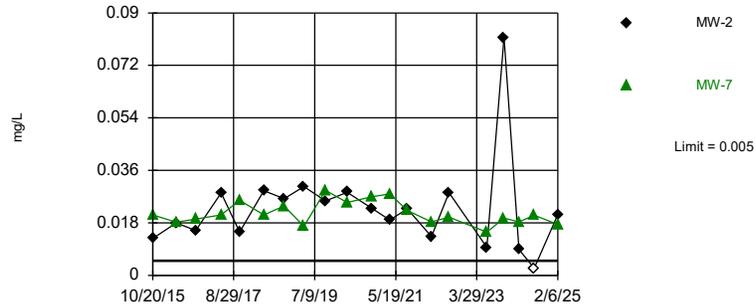


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 14 background values. 78.57% NDs. Annual per-constituent alpha = 0.07386. Individual comparison alpha = 0.007644 (1 of 2). Comparing 2 points to limit. Assumes 3 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Cobalt [total] Analysis Run 3/6/2025 2:25 PM View: 2025SSN-AM\_Interwell\_PL  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Exceeds Limit: MW-2, MW-7

### Prediction Limit Interwell Non-parametric

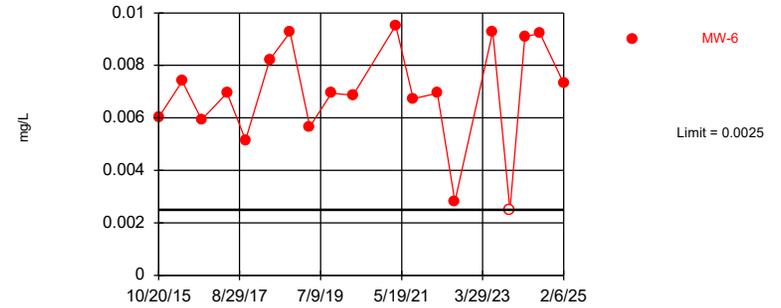


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 14) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.07386. Individual comparison alpha = 0.007644 (1 of 2). Comparing 2 points to limit. Assumes 3 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Nickel [total] Analysis Run 3/6/2025 2:25 PM View: 2025SSN-AM\_Interwell\_PL  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Exceeds Limit: MW-6

### Prediction Limit Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 56.25% NDs. Annual per-constituent alpha = 0.05744. Individual comparison alpha = 0.005898 (1 of 2). Assumes 4 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Selenium [total] Analysis Run 3/6/2025 2:25 PM View: 2025SSN-AM\_Interwell\_PL  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

## Mann-Kendall Trend Table and Graphs

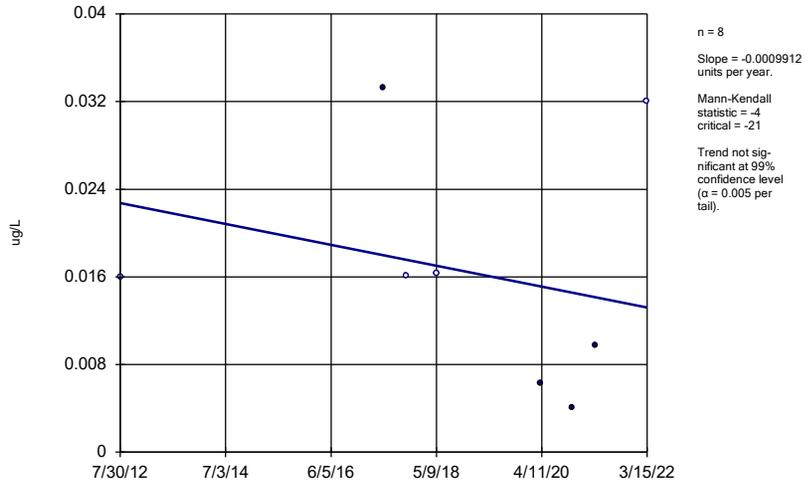
# Trend Test

Adair County Sanitary Landfill    Client: Adair County    Data: ADAIR-2025\_SSN-AM    Printed 3/6/2025, 11:46 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>
4,4'-DDT (ug/L)	MW-7	-0.0009912	-4	-21	No	8	50	0.01	NP
Acetone (ug/L)	MW-6	0	7	21	No	8	87.5	0.01	NP
Acetone (ug/L)	MW-7	0	7	21	No	8	87.5	0.01	NP
Arsenic (mg/L)	MW-2	0.0006341	12	21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-9	0	-1	-21	No	8	87.5	0.01	NP
Barium (mg/L)	MW-2	-0.01676	-4	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-3	-0.0001195	-2	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-6	-0.001827	-13	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-7	-0.002092	-18	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-9	-0.005774	-14	-21	No	8	0	0.01	NP
Benzene (ug/L)	MW-2	-0.384	-16	-21	No	8	12.5	0.01	NP
Cadmium (mg/L)	MW-2	0.00001469	13	21	No	8	75	0.01	NP
Cadmium (mg/L)	MW-6	0	1	21	No	8	37.5	0.01	NP
Cadmium (mg/L)	MW-7	-0.00002242	-4	-21	No	8	0	0.01	NP
Cadmium (mg/L)	MW-9	0	2	21	No	8	50	0.01	NP
Chlorobenzene (ug/L)	MW-2	0	-11	-21	No	8	75	0.01	NP
cis-1,2-Dichloroethene (ug/L)	MW-2	0.03597	12	21	No	8	62.5	0.01	NP
Cobalt (mg/L)	MW-2	-0.0005269	-4	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-3	0.00001184	12	21	No	8	62.5	0.01	NP
Cobalt (mg/L)	MW-6	0	4	21	No	8	50	0.01	NP
<b>Cobalt (mg/L)</b>	<b>MW-7</b>	<b>-0.0001498</b>	<b>-23</b>	<b>-21</b>	<b>Yes</b>	<b>8</b>	<b>37.5</b>	<b>0.01</b>	<b>NP</b>
Cobalt (mg/L)	MW-9	-0.0005425	-10	-21	No	8	0	0.01	NP
Copper (mg/L)	MW-7	0	7	21	No	8	75	0.01	NP
Heptachlor (ug/L)	MW-9	0.0002348	7	12	No	5	80	0.01	NP
Lead (mg/L)	MW-2	0	-1	-21	No	8	87.5	0.01	NP
Nickel (mg/L)	MW-2	-0.003021	-8	-21	No	8	12.5	0.01	NP
Nickel (mg/L)	MW-7	-0.0007695	-7	-21	No	8	0	0.01	NP
Nickel (mg/L)	MW-9	-0.001416	-13	-21	No	8	25	0.01	NP
Selenium (mg/L)	MW-3	0	7	21	No	8	87.5	0.01	NP
Selenium (mg/L)	MW-6	0.0003304	6	21	No	8	12.5	0.01	NP
Sulfide (mg/L)	MW-9	0	5	21	No	8	87.5	0.01	NP
Thallium (mg/L)	MW-2	0	-1	-21	No	8	87.5	0.01	NP
Vanadium (mg/L)	MW-2	0	-1	-21	No	8	87.5	0.01	NP

### Sen's Slope Estimator

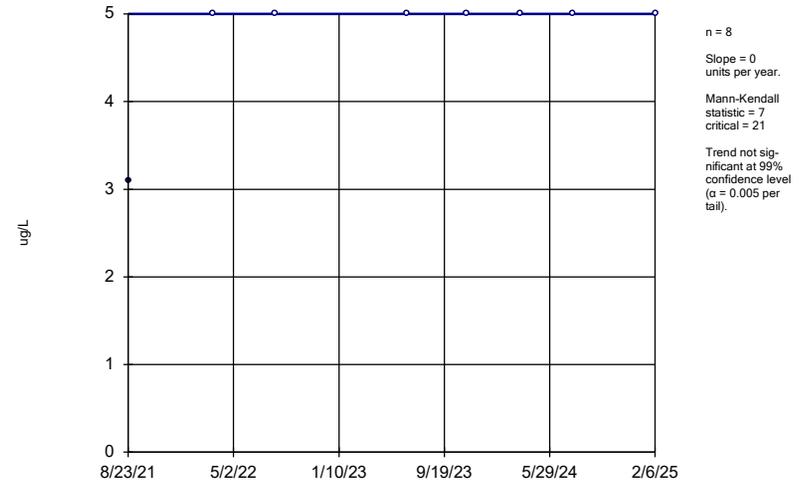
MW-7



Constituent: 4,4'-DDT Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

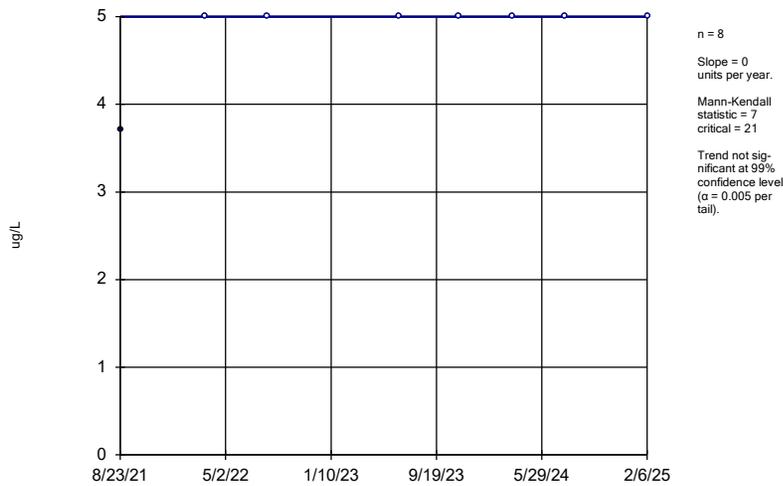
MW-6



Constituent: Acetone Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

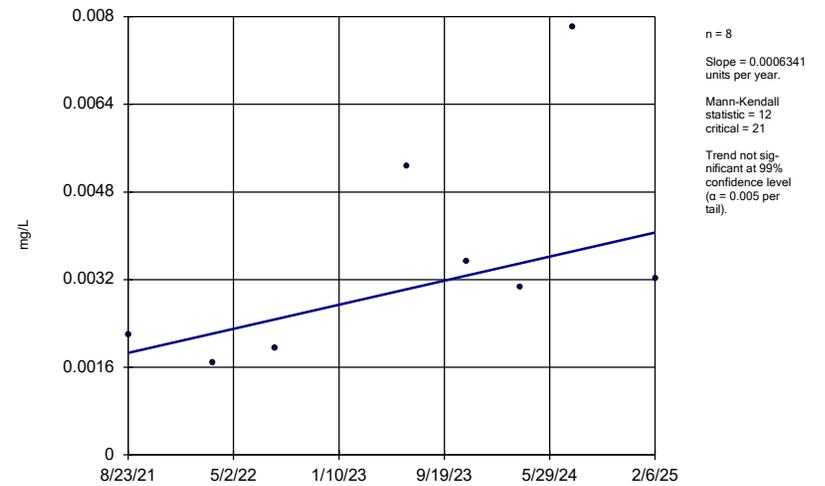
MW-7



Constituent: Acetone Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

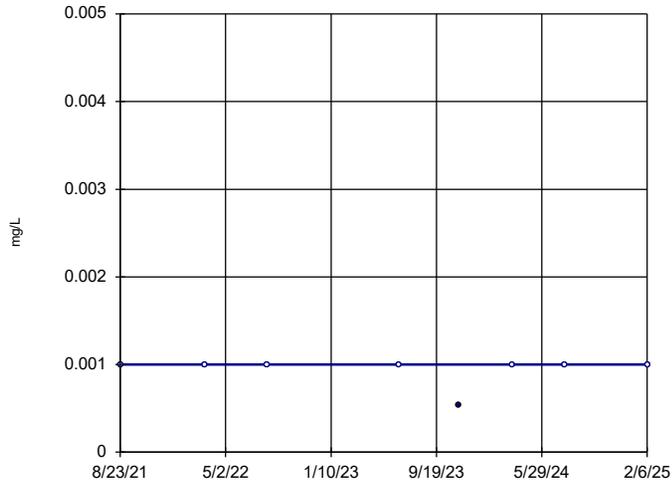
MW-2



Constituent: Arsenic Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-9

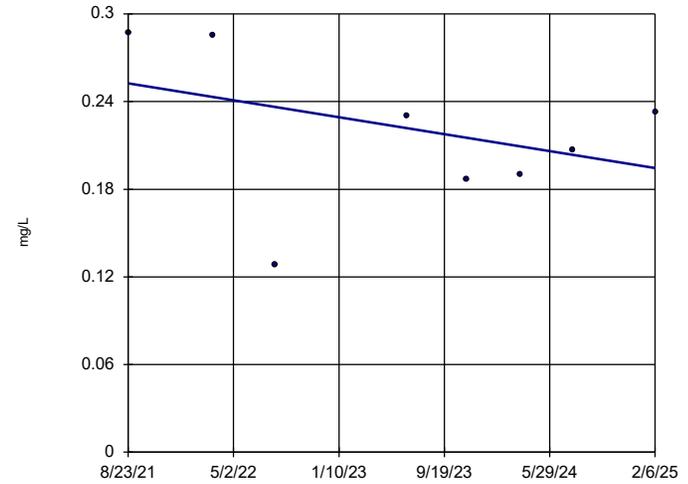


n = 8  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = -1  
critical = -21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Arsenic Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-2

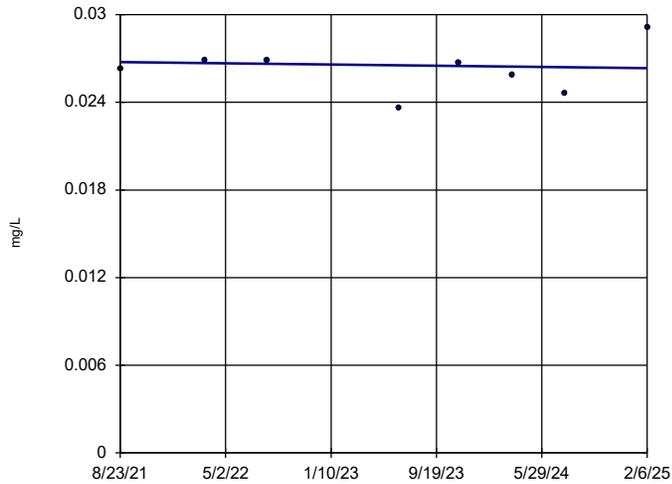


n = 8  
Slope = -0.01676  
units per year.  
Mann-Kendall  
statistic = -4  
critical = -21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Barium Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-3

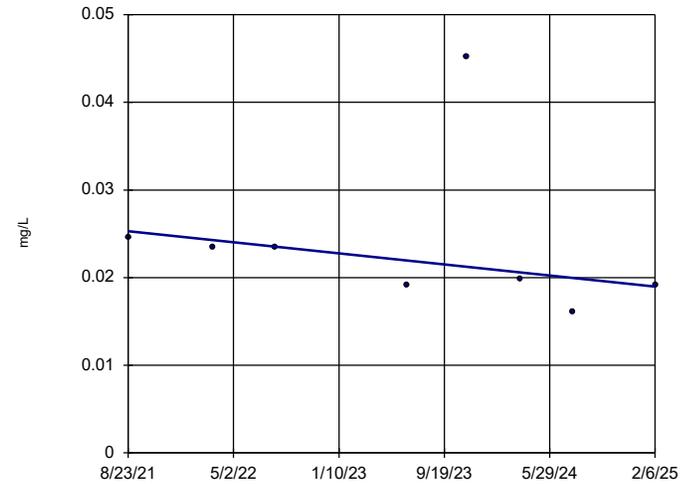


n = 8  
Slope = -0.0001195  
units per year.  
Mann-Kendall  
statistic = -2  
critical = -21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Barium Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-6

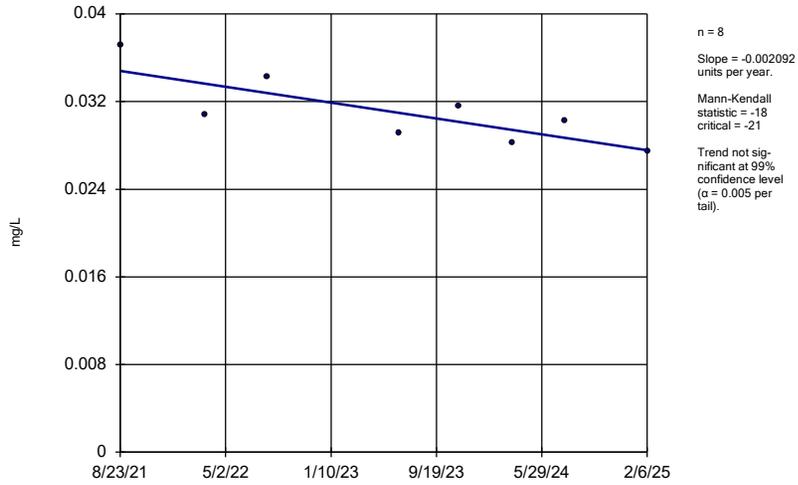


n = 8  
Slope = -0.001827  
units per year.  
Mann-Kendall  
statistic = -13  
critical = -21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Barium Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

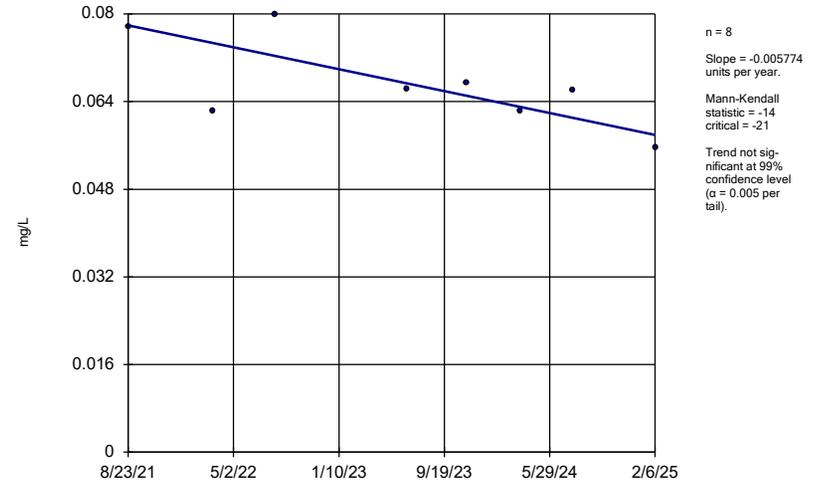
MW-7



Constituent: Barium Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
 Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

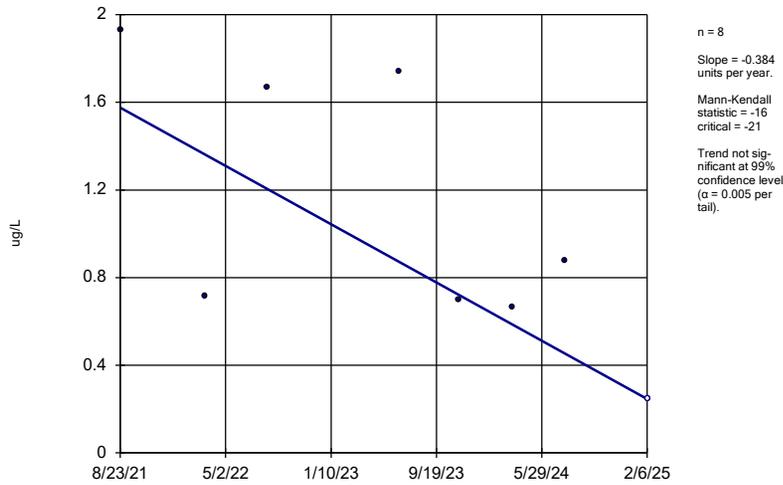
MW-9



Constituent: Barium Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
 Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

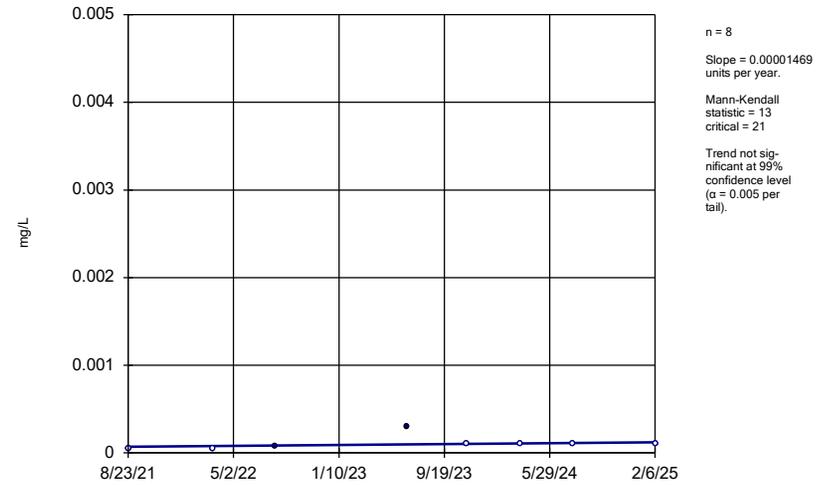
MW-2



Constituent: Benzene Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
 Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

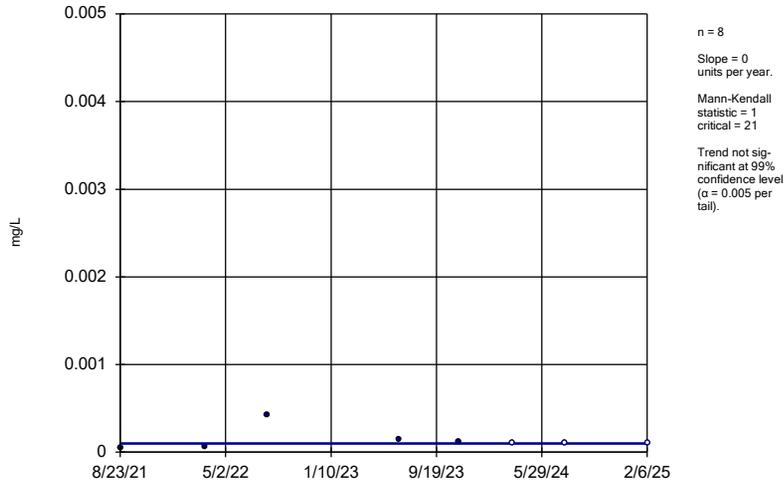
MW-2



Constituent: Cadmium Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
 Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

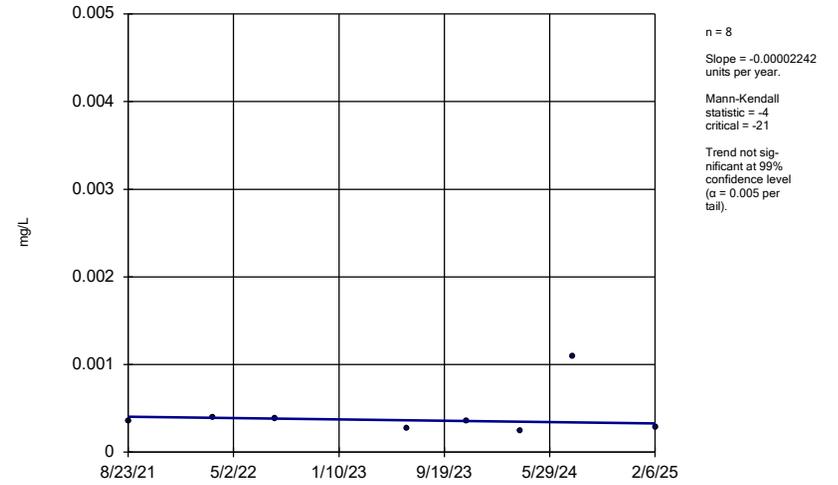
MW-6



Constituent: Cadmium Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

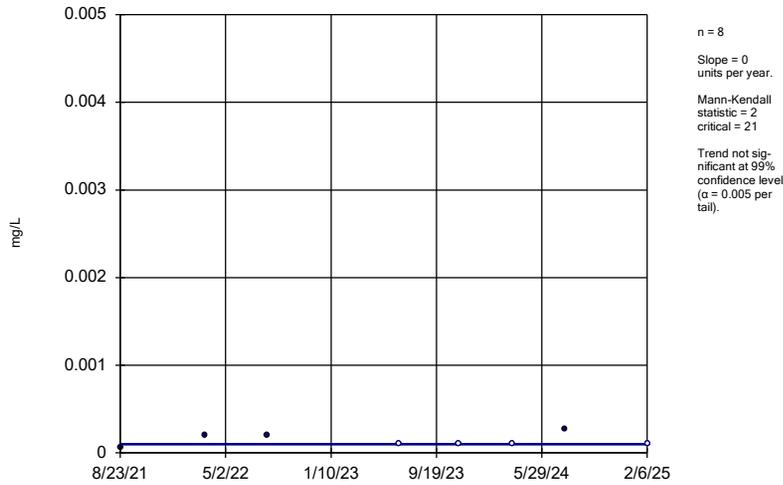
MW-7



Constituent: Cadmium Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

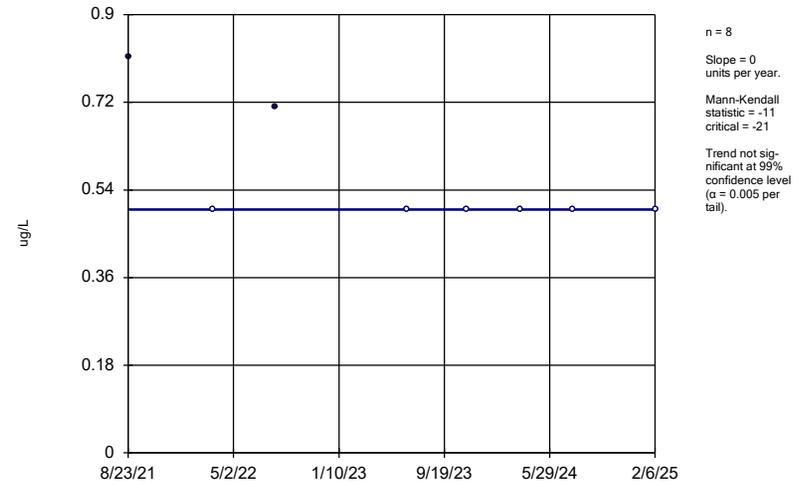
MW-9



Constituent: Cadmium Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

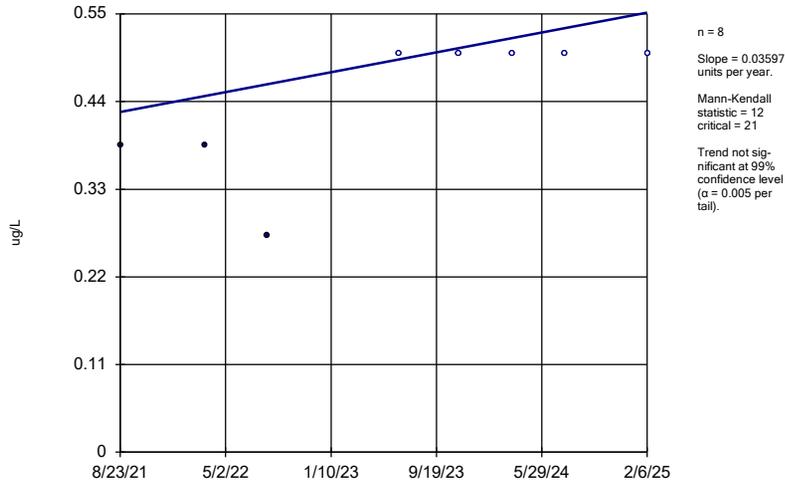
MW-2



Constituent: Chlorobenzene Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

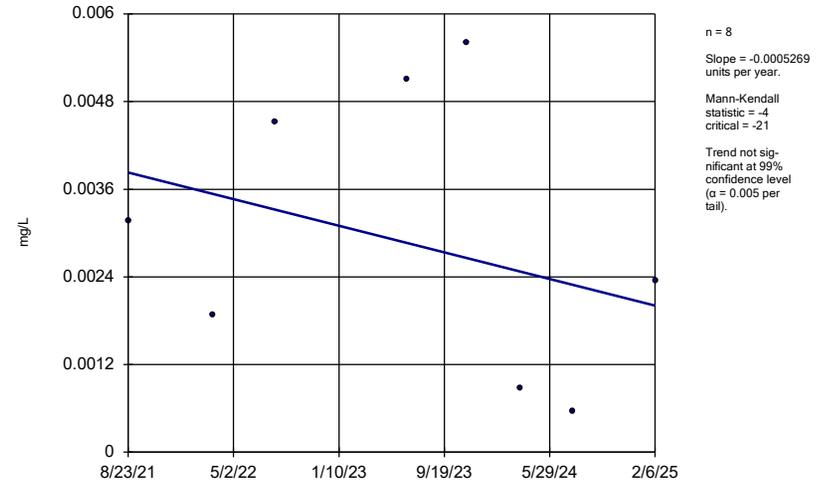
MW-2



Constituent: cis-1,2-Dichloroethene Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

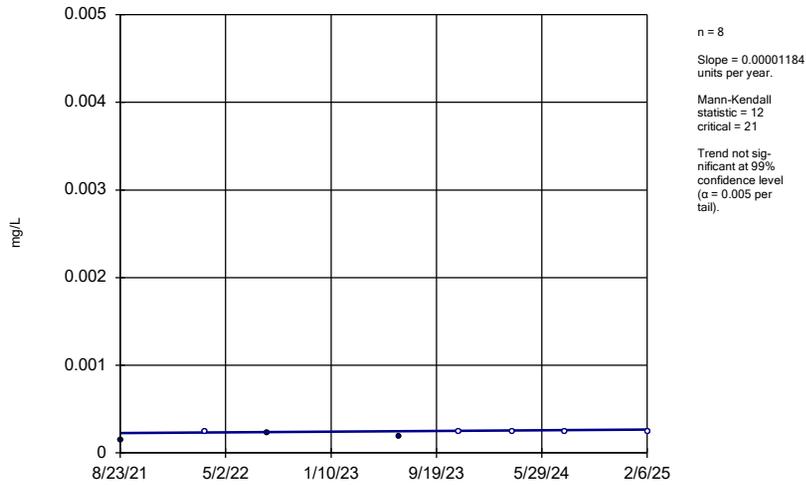
MW-2



Constituent: Cobalt Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

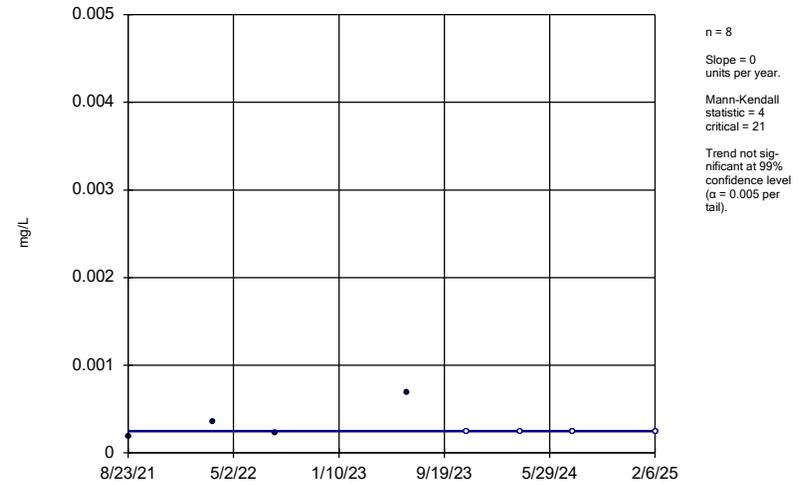
MW-3



Constituent: Cobalt Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

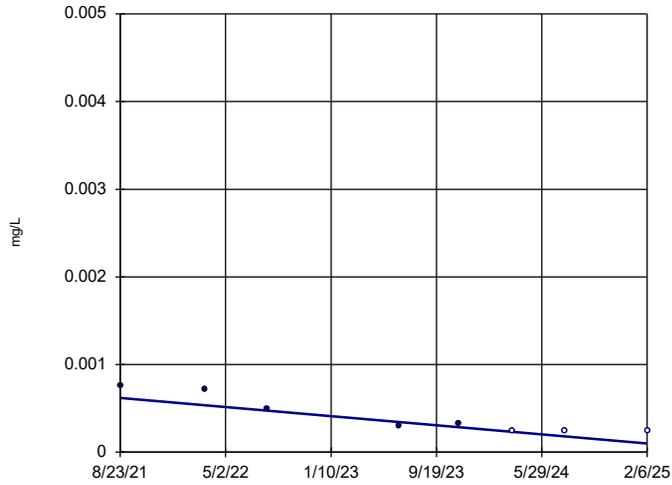
MW-6



Constituent: Cobalt Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-7

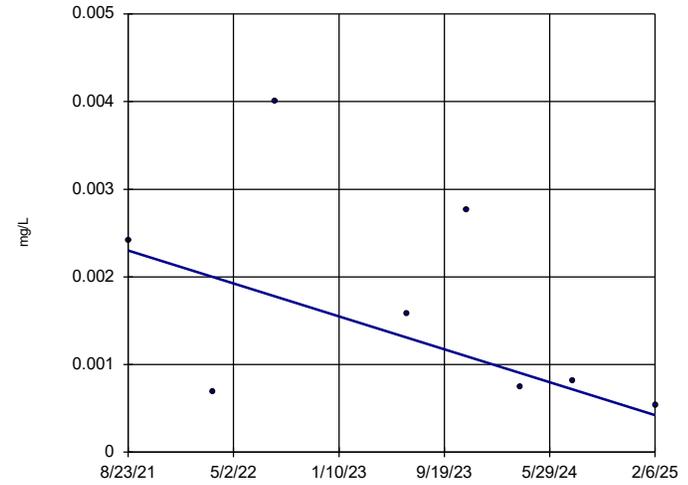


n = 8  
Slope = -0.0001498  
units per year.  
Mann-Kendall  
statistic = -23  
critical = -21  
Decreasing trend  
significant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Cobalt Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-9

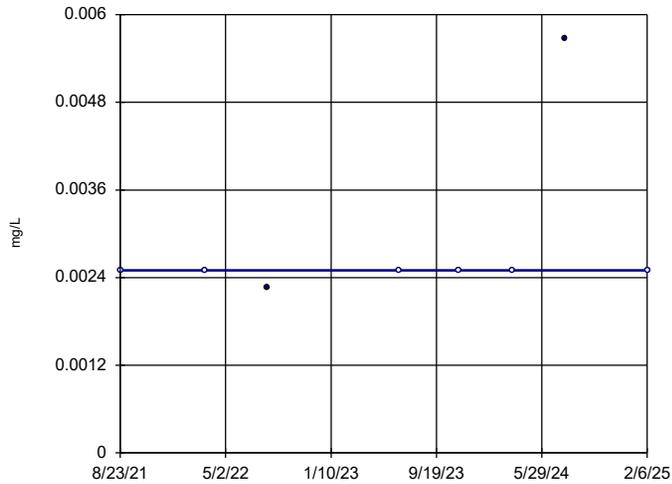


n = 8  
Slope = -0.0005425  
units per year.  
Mann-Kendall  
statistic = -10  
critical = -21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Cobalt Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-7

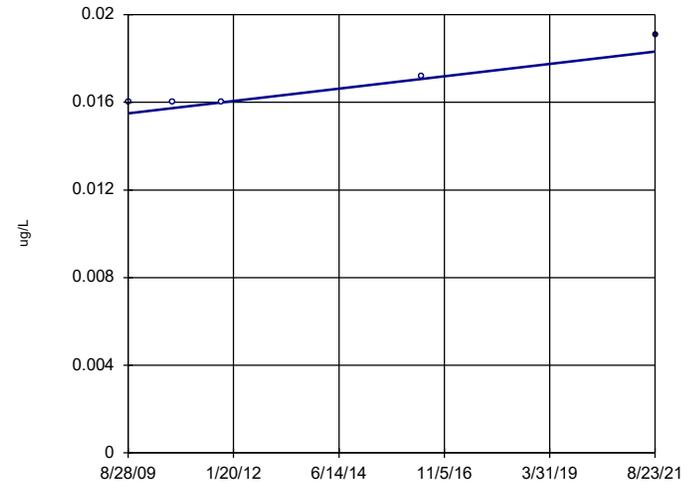


n = 8  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = 7  
critical = 21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Copper Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-9

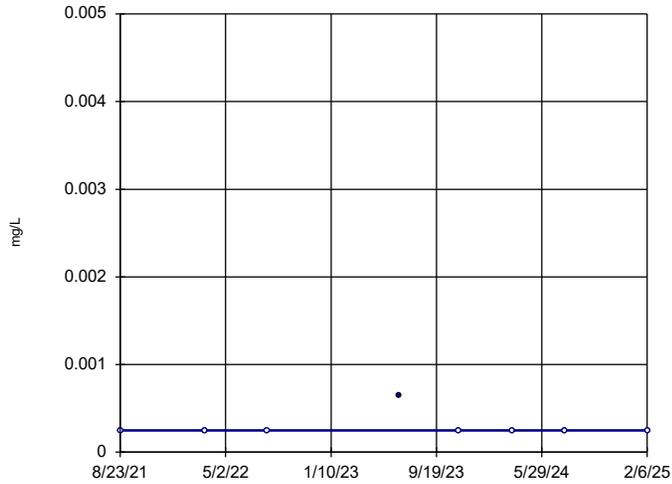


n = 5  
Slope = 0.0002348  
units per year.  
Mann-Kendall  
statistic = 7  
critical = 12  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Heptachlor Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-2

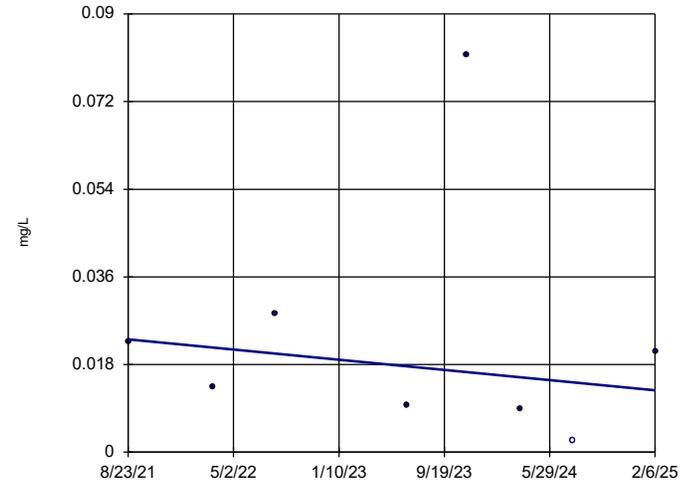


n = 8  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = -1  
critical = -21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Lead Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-2

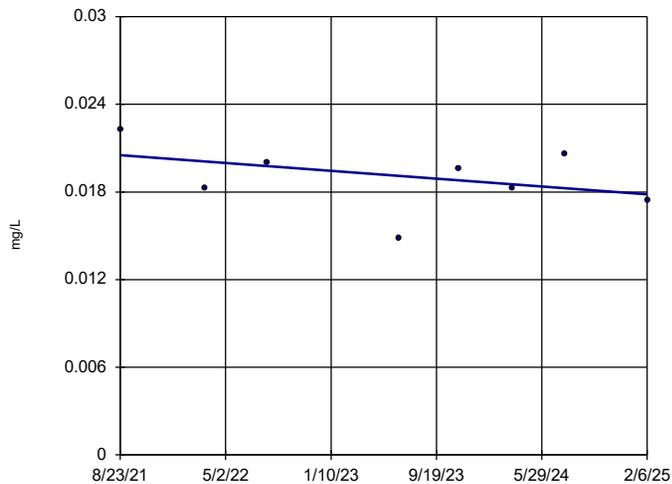


n = 8  
Slope = -0.003021  
units per year.  
Mann-Kendall  
statistic = -8  
critical = -21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Nickel Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-7

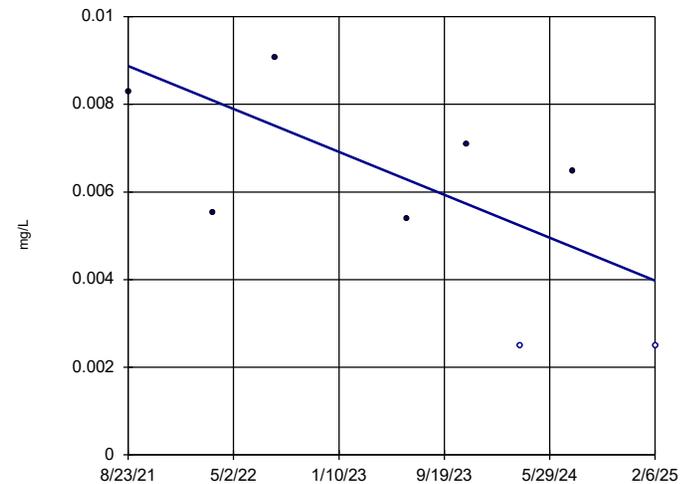


n = 8  
Slope = -0.0007695  
units per year.  
Mann-Kendall  
statistic = -7  
critical = -21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Nickel Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-9

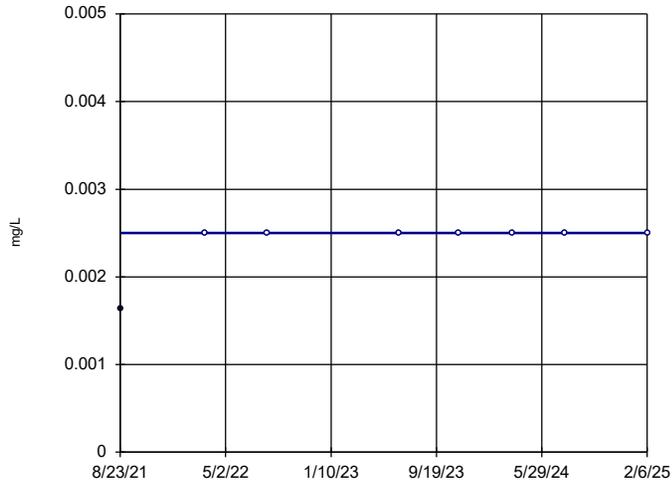


n = 8  
Slope = -0.001416  
units per year.  
Mann-Kendall  
statistic = -13  
critical = -21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Nickel Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-3

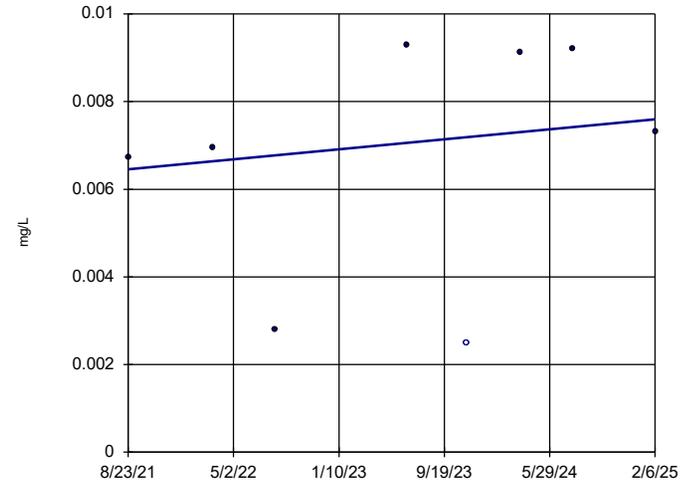


n = 8  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = 7  
critical = 21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Selenium Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-6

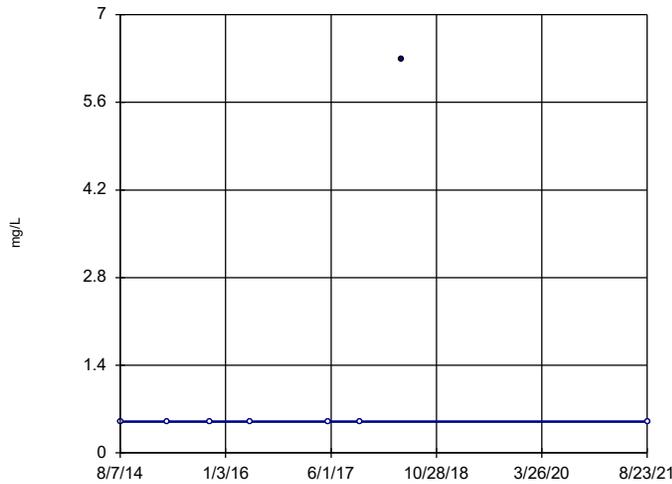


n = 8  
Slope = 0.0003304  
units per year.  
Mann-Kendall  
statistic = 6  
critical = 21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Selenium Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-9

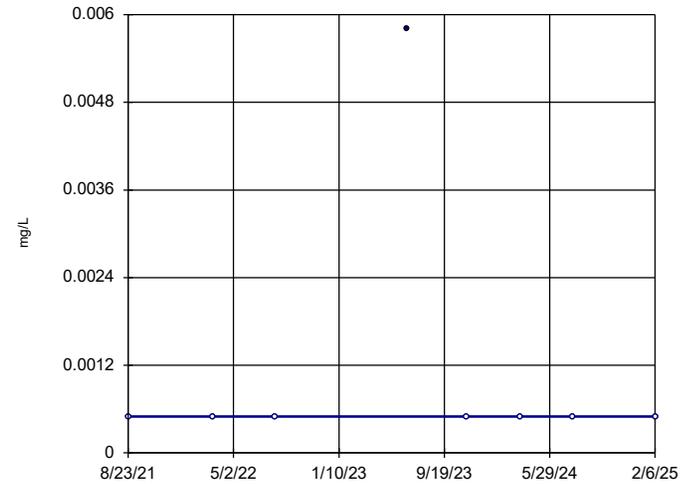


n = 8  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = 5  
critical = 21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Sulfide Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-2

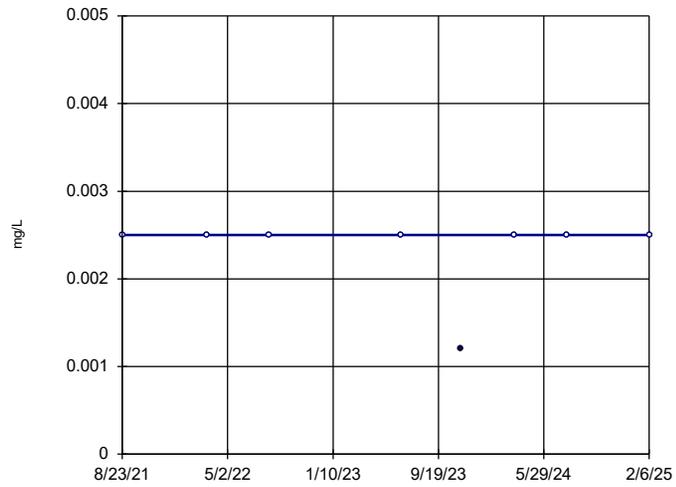


n = 8  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = -1  
critical = -21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Thallium Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Sen's Slope Estimator

MW-2



n = 8  
Slope = 0  
units per year.  
Mann-Kendall  
statistic = -1  
critical = -21  
Trend not sig-  
nificant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).

Constituent: Vanadium Analysis Run 3/6/2025 11:42 PM View: 2025SSN-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

## Confidence Interval Table and Graphs

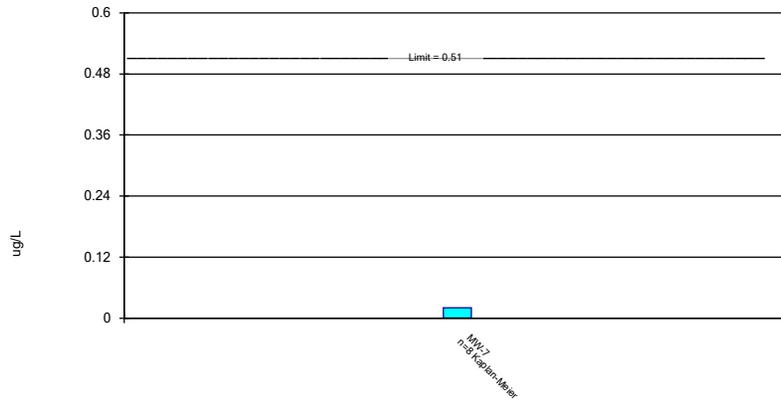
# Confidence Interval

Adair County Sanitary Landfill    Client: Adair County    Data: ADAIR-2025\_SSN-AM    Printed 3/7/2025, 12:08 AM

<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>
4,4'-DDT (ug/L)	MW-7	0.02063	0.0003853	0.51	No	8	50	No	0.01	Param.
Acetone (ug/L)	MW-6	5	3.1	6300	No	8	87.5	No	0.004	NP (NDs)
Acetone (ug/L)	MW-7	5	3.71	6300	No	8	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-2	0.005763	0.001422	0.01	No	8	0	No	0.01	Param.
Arsenic (mg/L)	MW-9	0.001	0.000534	0.01	No	8	87.5	No	0.004	NP (NDs)
Barium (mg/L)	MW-2	0.2744	0.1623	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-3	0.02799	0.0245	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-6	0.0452	0.01615	2	No	8	0	No	0.004	NP (normality)
Barium (mg/L)	MW-7	0.03457	0.02771	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-9	0.0758	0.05862	2	No	8	0	No	0.01	Param.
Benzene (ug/L)	MW-2	1.725	0.4126	5	No	8	12.5	No	0.01	Param.
Cadmium (mg/L)	MW-2	0.000306	0.00005	0.005	No	8	75	No	0.004	NP (normality)
Cadmium (mg/L)	MW-6	0.000431	0.000055	0.005	No	8	37.5	No	0.004	NP (normality)
Cadmium (mg/L)	MW-7	0.00109	0.0002425	0.005	No	8	0	No	0.004	NP (normality)
Cadmium (mg/L)	MW-9	0.0002394	0.00007858	0.005	No	8	50	No	0.01	Param.
Chlorobenzene (ug/L)	MW-2	0.814	0.5	100	No	8	75	No	0.004	NP (normality)
cis-1,2-Dichloroethene (ug/L)	MW-2	0.5	0.272	70	No	8	62.5	No	0.004	NP (normality)
Cobalt (mg/L)	MW-2	0.005039	0.0009748	0.0021	No	8	0	No	0.01	Param.
Cobalt (mg/L)	MW-3	0.00025	0.000153	0.0021	No	8	62.5	No	0.004	NP (normality)
Cobalt (mg/L)	MW-6	0.000691	0.000193	0.0021	No	8	50	No	0.004	NP (normality)
Cobalt (mg/L)	MW-9	0.003025	0.000366	0.0021	No	8	0	No	0.01	Param.
Copper (mg/L)	MW-7	0.00568	0.00226	1.3	No	8	75	No	0.004	NP (normality)
Heptachlor (ug/L)	MW-9	0.0191	0.016	0.4	No	5	80	No	0.031	NP (NDs)
Lead (mg/L)	MW-2	0.000653	0.00025	0.015	No	8	87.5	No	0.004	NP (NDs)
Nickel (mg/L)	MW-2	0.0815	0.0025	0.1	No	8	12.5	No	0.004	NP (normality)
Nickel (mg/L)	MW-7	0.02132	0.01652	0.1	No	8	0	No	0.01	Param.
Nickel (mg/L)	MW-9	0.008025	0.004945	0.1	No	8	25	No	0.01	Param.
Selenium (mg/L)	MW-3	0.0025	0.00163	0.05	No	8	87.5	No	0.004	NP (NDs)
Selenium (mg/L)	MW-6	0.009627	0.003848	0.05	No	8	12.5	No	0.01	Param.
Sulfide (mg/L)	MW-9	6.29	0.5	1	No	8	87.5	No	0.004	NP (NDs)
Thallium (mg/L)	MW-2	0.00581	0.0005	0.002	No	8	87.5	No	0.004	NP (NDs)
Vanadium (mg/L)	MW-2	0.0025	0.00121	0.035	No	8	87.5	No	0.004	NP (NDs)

### Parametric Confidence Interval

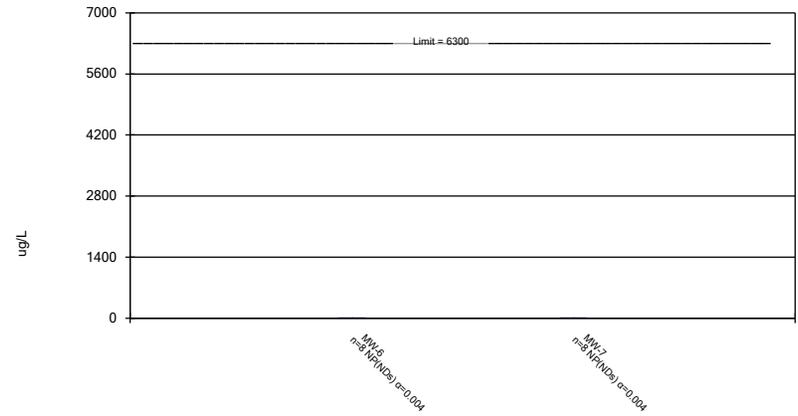
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: 4,4'-DDT Analysis Run 3/7/2025 12:04 AM View: 2025SSN-Confidence\_Interval  
 Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Non-Parametric Confidence Interval

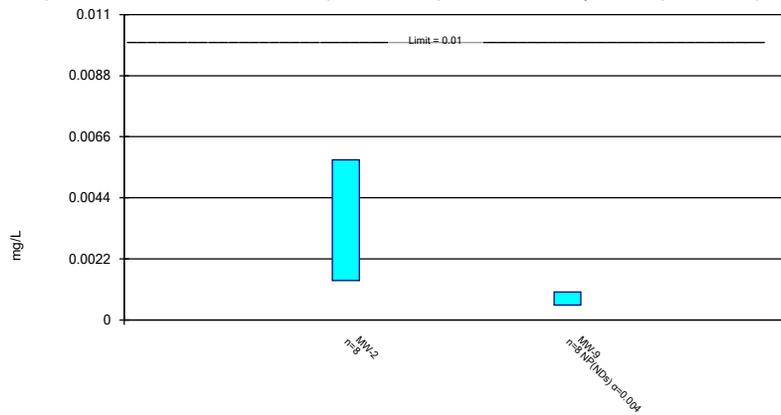
Compliance Limit is not exceeded.



Constituent: Acetone Analysis Run 3/7/2025 12:04 AM View: 2025SSN-Confidence\_Interval  
 Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Parametric and Non-Parametric (NP) Confidence Interval

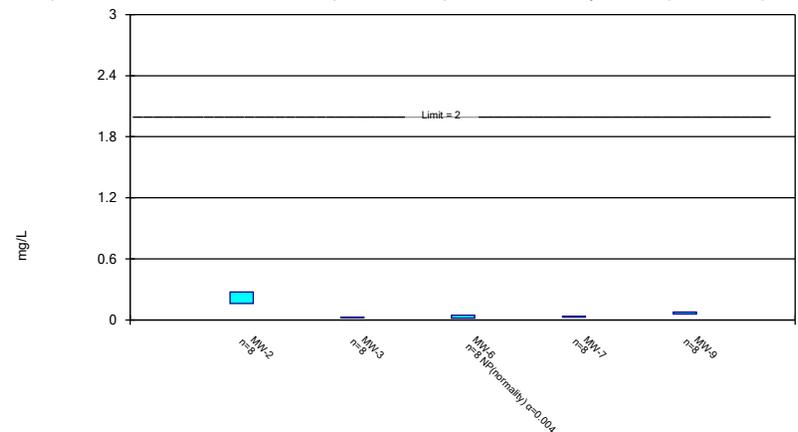
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Arsenic Analysis Run 3/7/2025 12:04 AM View: 2025SSN-Confidence\_Interval  
 Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Parametric and Non-Parametric (NP) Confidence Interval

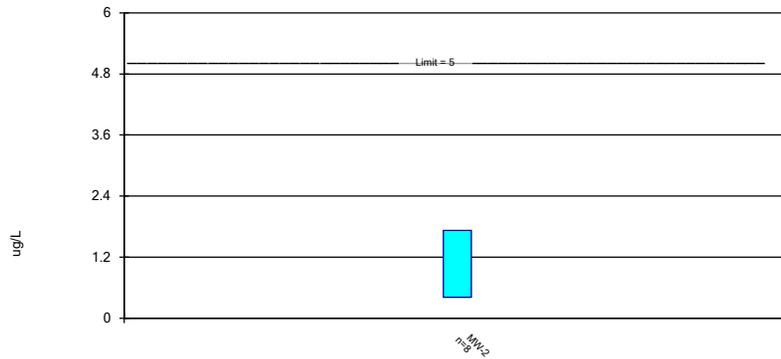
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Barium Analysis Run 3/7/2025 12:04 AM View: 2025SSN-Confidence\_Interval  
 Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Parametric Confidence Interval

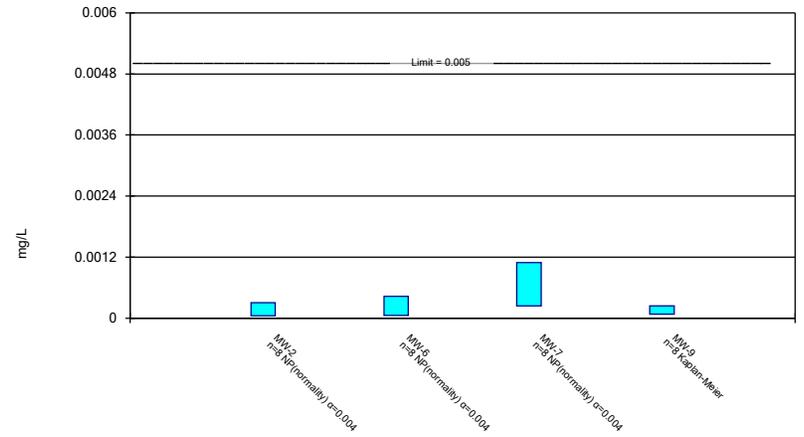
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Benzene Analysis Run 3/7/2025 12:05 AM View: 2025SSN-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Parametric and Non-Parametric (NP) Confidence Interval

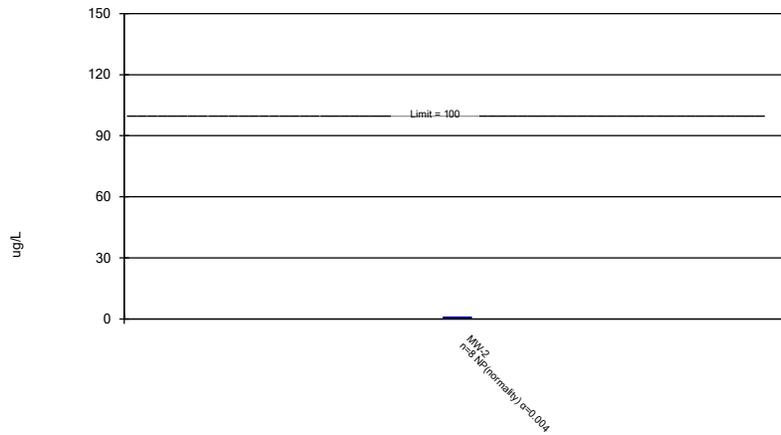
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Cadmium Analysis Run 3/7/2025 12:05 AM View: 2025SSN-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Non-Parametric Confidence Interval

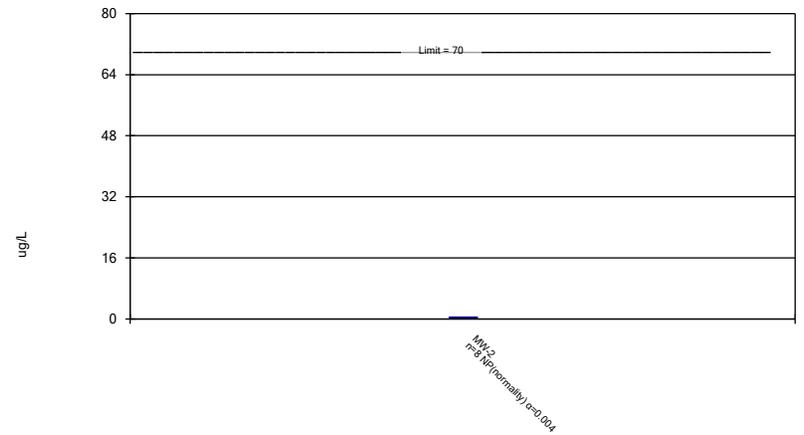
Compliance Limit is not exceeded.



Constituent: Chlorobenzene Analysis Run 3/7/2025 12:05 AM View: 2025SSN-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Non-Parametric Confidence Interval

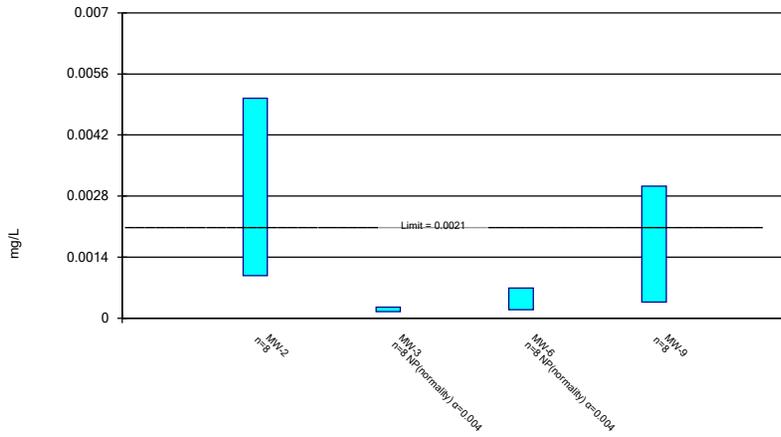
Compliance Limit is not exceeded.



Constituent: cis-1,2-Dichloroethene Analysis Run 3/7/2025 12:05 AM View: 2025SSN-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Parametric and Non-Parametric (NP) Confidence Interval

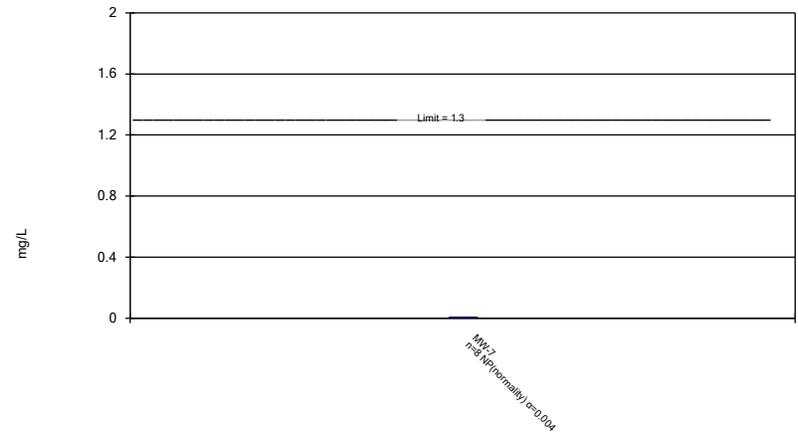
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Cobalt Analysis Run 3/7/2025 12:05 AM View: 2025SSN-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Non-Parametric Confidence Interval

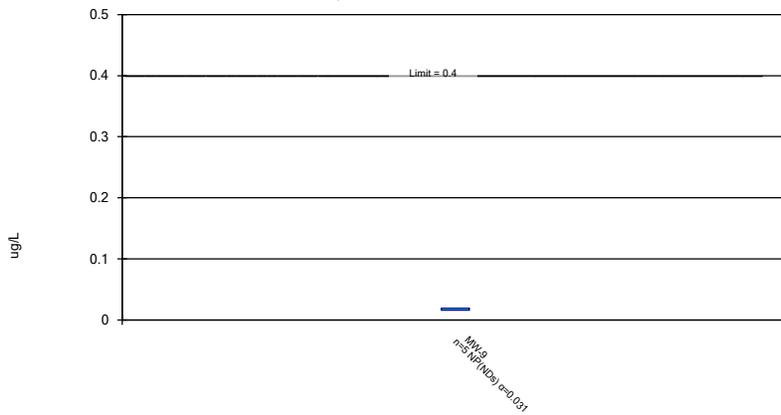
Compliance Limit is not exceeded.



Constituent: Copper Analysis Run 3/7/2025 12:05 AM View: 2025SSN-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Non-Parametric Confidence Interval

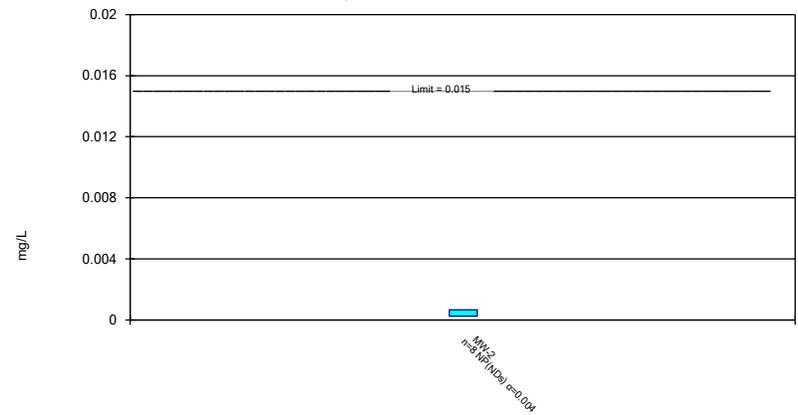
Compliance Limit is not exceeded.



Constituent: Heptachlor Analysis Run 3/7/2025 12:05 AM View: 2025SSN-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Non-Parametric Confidence Interval

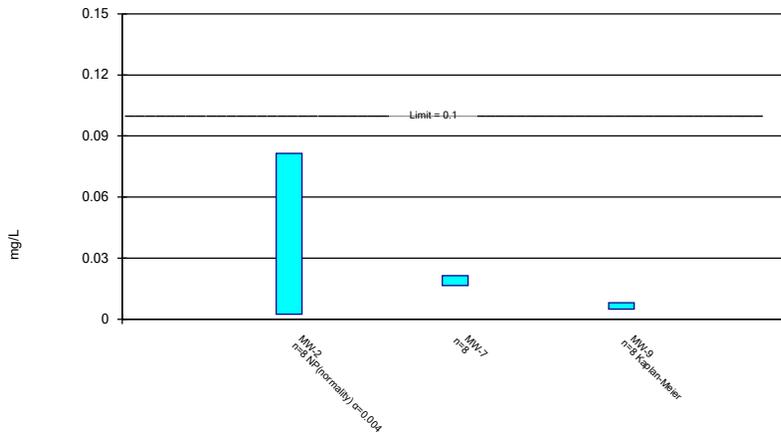
Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 3/7/2025 12:05 AM View: 2025SSN-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Parametric and Non-Parametric (NP) Confidence Interval

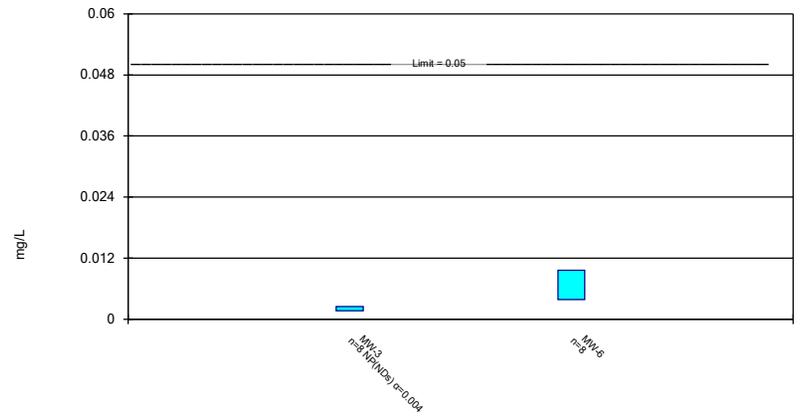
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Nickel Analysis Run 3/7/2025 12:05 AM View: 2025SSN-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Parametric and Non-Parametric (NP) Confidence Interval

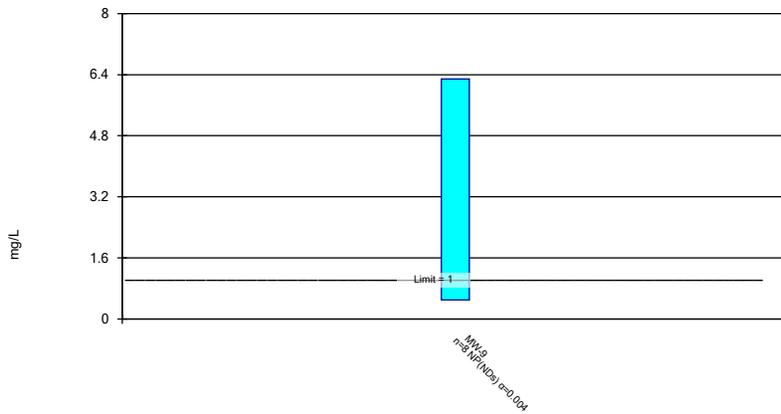
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Selenium Analysis Run 3/7/2025 12:05 AM View: 2025SSN-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Non-Parametric Confidence Interval

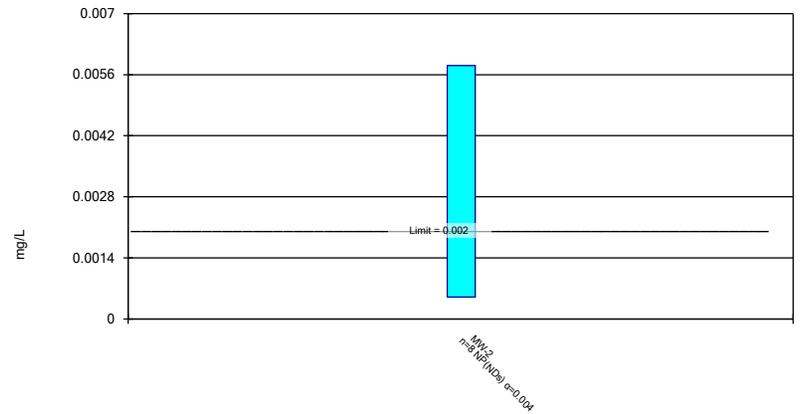
Compliance Limit is not exceeded.



Constituent: Sulfide Analysis Run 3/7/2025 12:05 AM View: 2025SSN-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Non-Parametric Confidence Interval

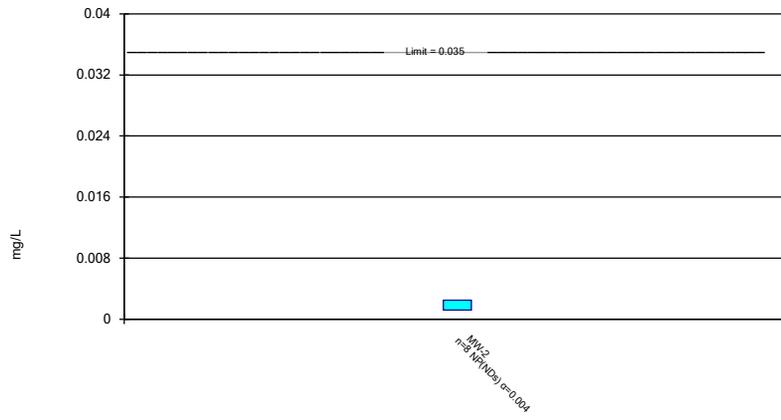
Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 3/7/2025 12:05 AM View: 2025SSN-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

### Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Vanadium Analysis Run 3/7/2025 12:05 AM View: 2025SSN-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

## Theil-Sen Confidence Bands Summary Table and Graphs

# TheilSen/Trend Test

Adair County Sanitary Landfill

Client: Adair County

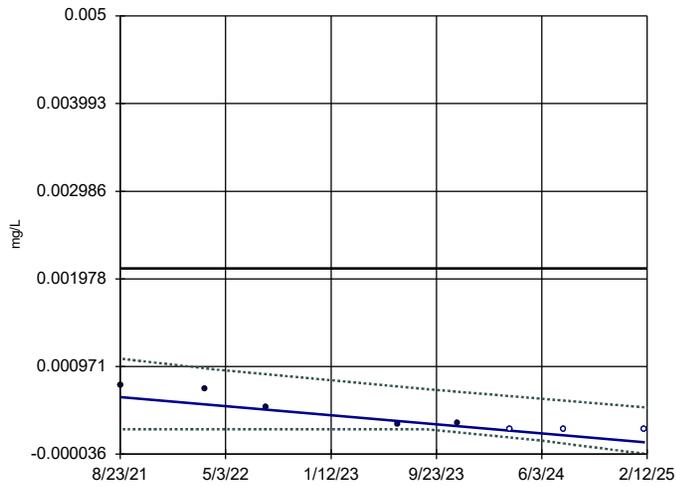
Data: ADAIR-2025\_SSN-AM

Printed 3/7/2025, 12:20 AM

<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>Cobalt (mg/L)</b>	<b>MW-7</b>	<b>-0.0001498</b>	<b>-23</b>	<b>-21</b>	<b>Yes</b>	<b>8</b>	<b>37.5</b>	<b>0.01</b>	<b>NP</b>

### Sen's Slope and 99% Confidence Band

MW-7



n = 8  
Slope = -0.0001498  
units per year.  
Mann-Kendall  
statistic = -23  
critical = -21  
Decreasing trend  
significant at 99%  
confidence level  
( $\alpha = 0.005$  per  
tail).  
Confidence band is  
below GWPS mg/L (0.0021).

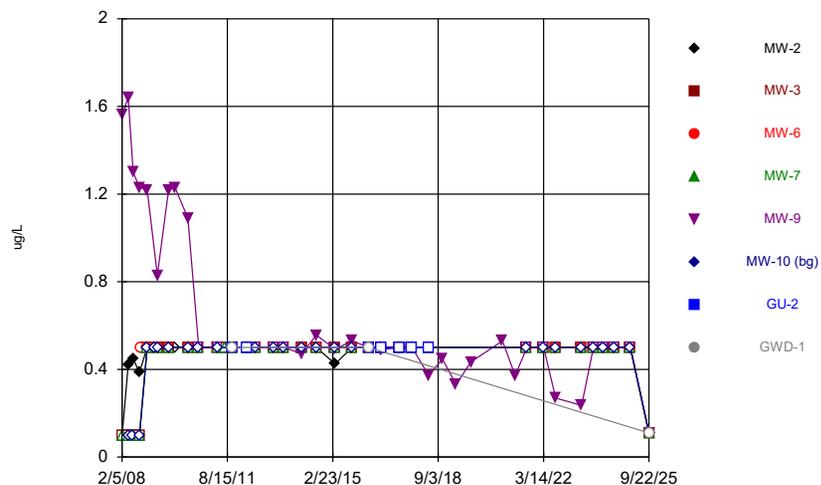
Constituent: Cobalt Analysis Run 3/7/2025 12:19 AM View: 2025SSN-Theil\_Sen  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR-2025\_SSN-AM

## Attachment B

### 2<sup>nd</sup> 2025 Semi-Annual Statistical Output

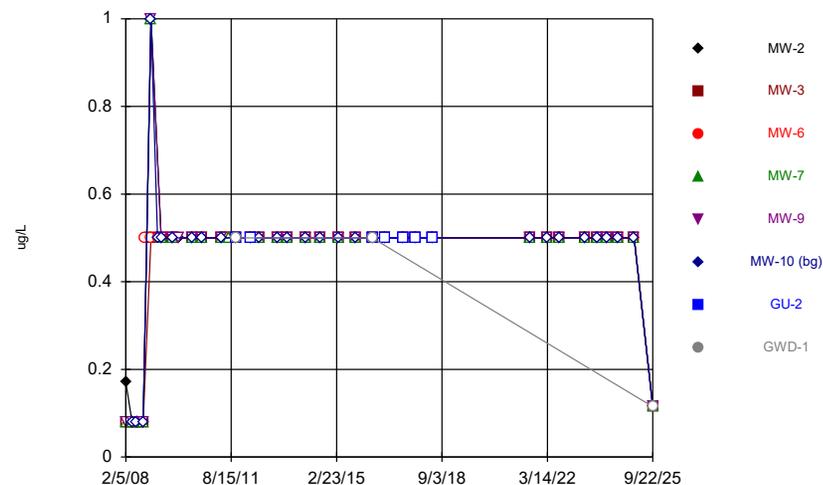
## Time Series Table and Graphs

### Time Series



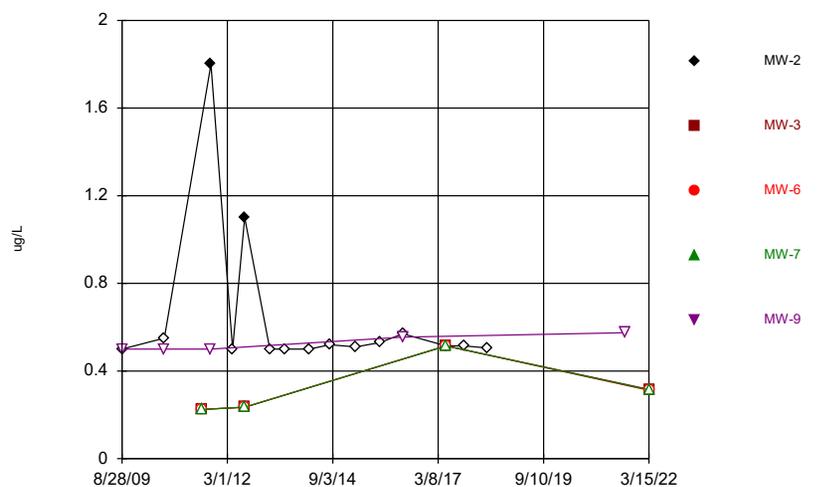
Constituent: 1,1-Dichloroethane Analysis Run 2/13/2026 12:30 PM View: 2025\_AWQR-Time\_Series  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



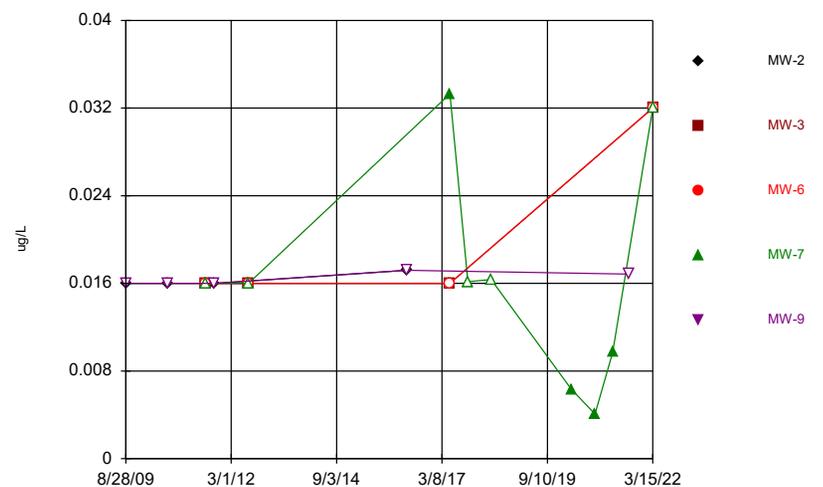
Constituent: 1,4-Dichlorobenzene Analysis Run 2/13/2026 12:30 PM View: 2025\_AWQR-Time\_Series  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



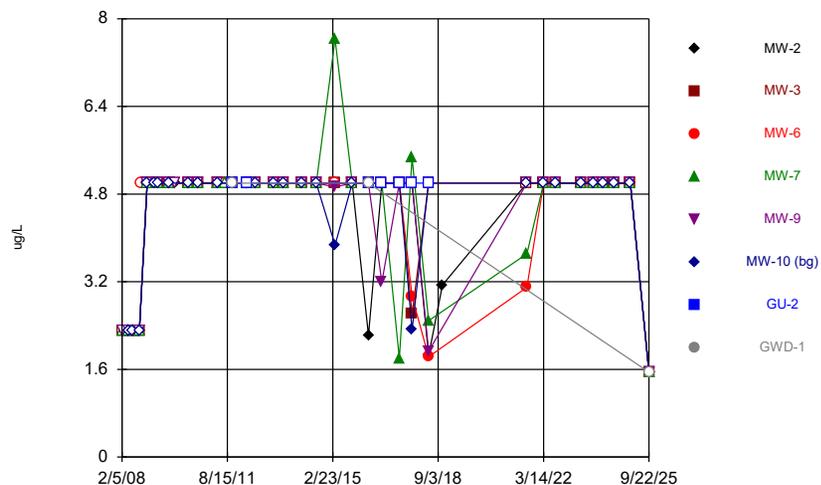
Constituent: 2,4-D Analysis Run 2/13/2026 12:30 PM View: 2025\_AWQR-Time\_Series  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



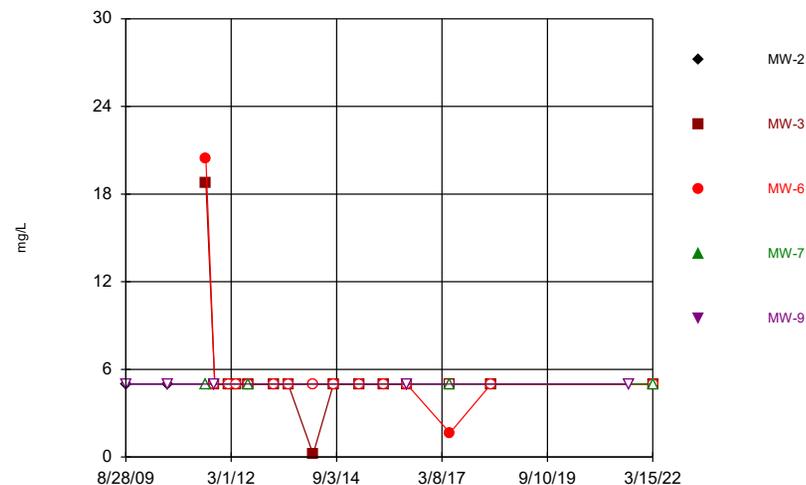
Constituent: 4,4'-DDT Analysis Run 2/13/2026 12:30 PM View: 2025\_AWQR-Time\_Series  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



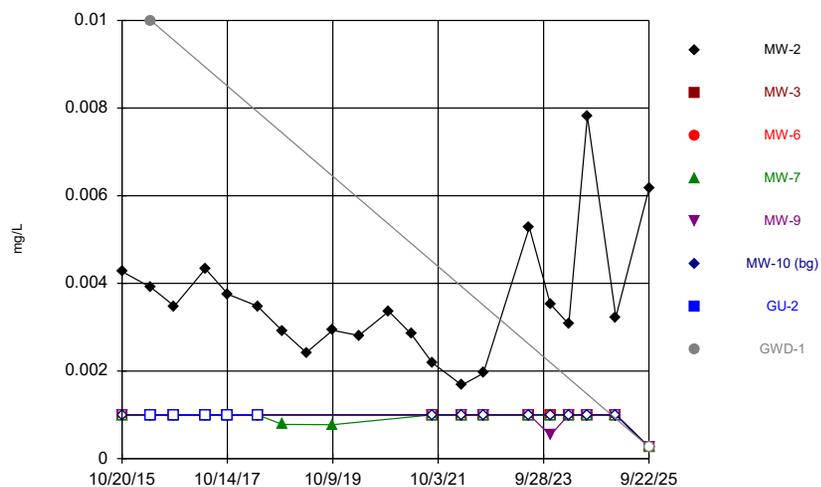
Constituent: Acetone Analysis Run 2/13/2026 12:30 PM View: 2025\_AWQR-Time\_Series  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



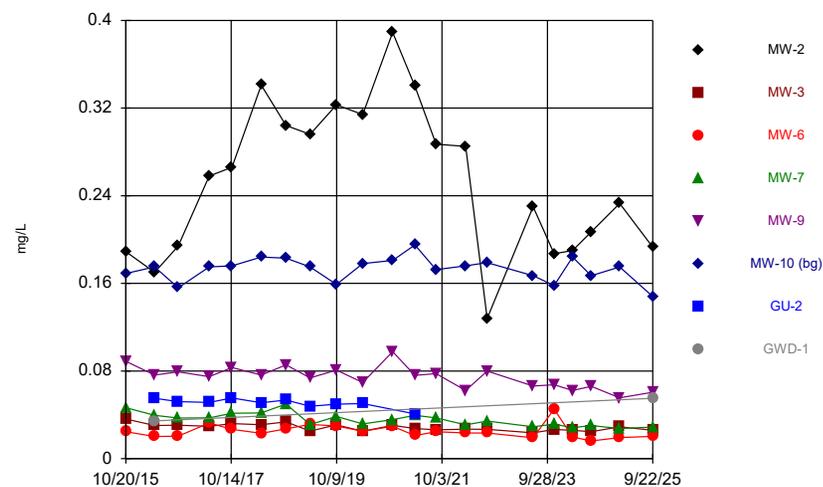
Constituent: Acetonitrile Analysis Run 2/13/2026 12:30 PM View: 2025\_AWQR-Time\_Series  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



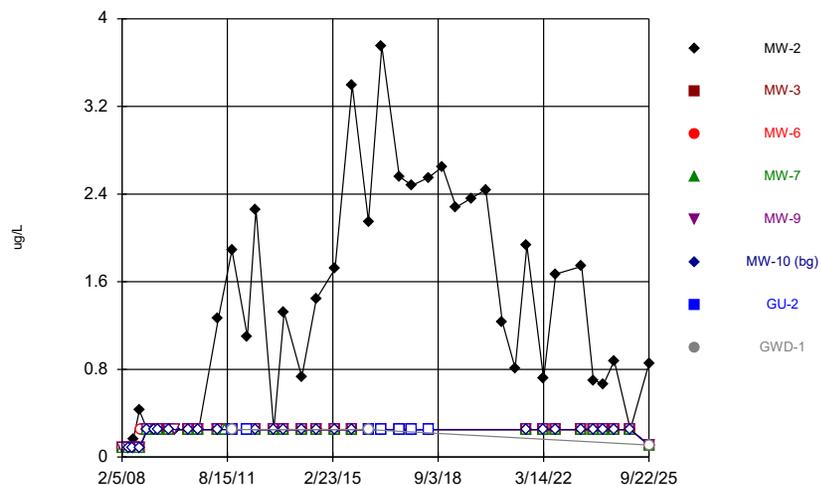
Constituent: Arsenic [total] Analysis Run 2/13/2026 12:30 PM View: 2025\_AWQR-Time\_Series  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



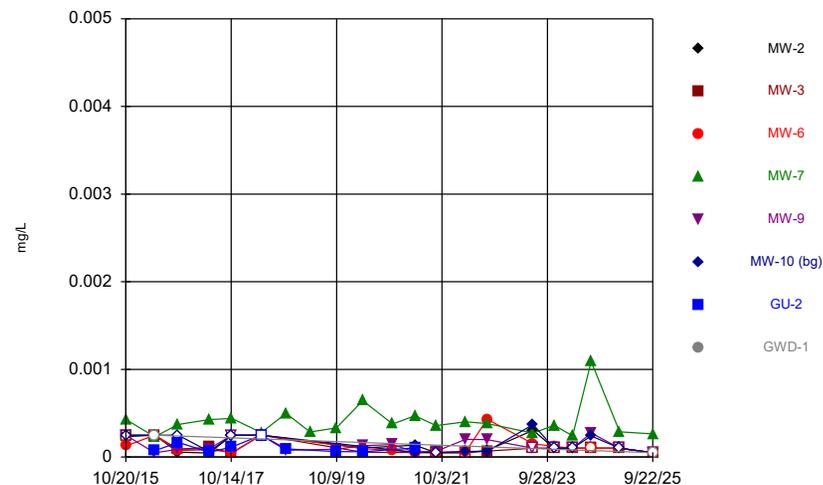
Constituent: Barium [total] Analysis Run 2/13/2026 12:30 PM View: 2025\_AWQR-Time\_Series  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



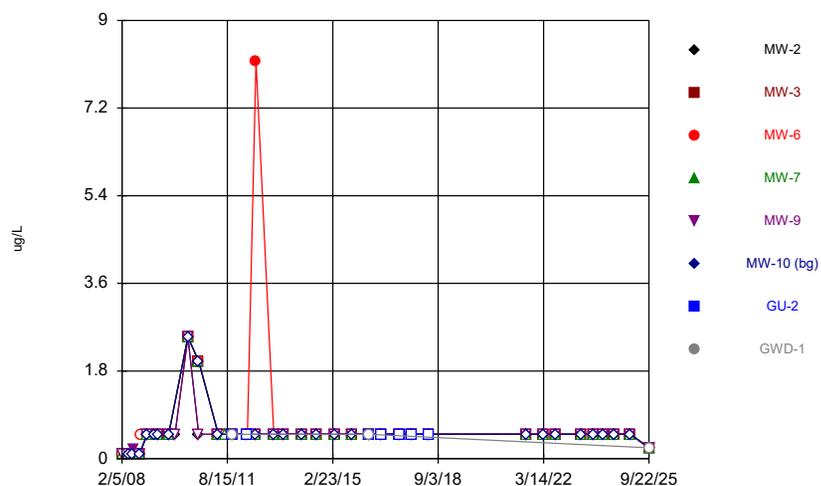
Constituent: Benzene Analysis Run 2/13/2026 12:30 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



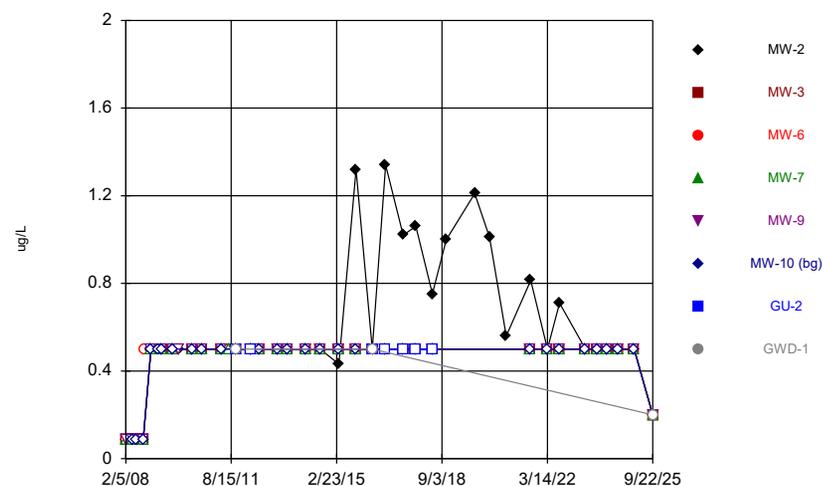
Constituent: Cadmium [total] Analysis Run 2/13/2026 12:30 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



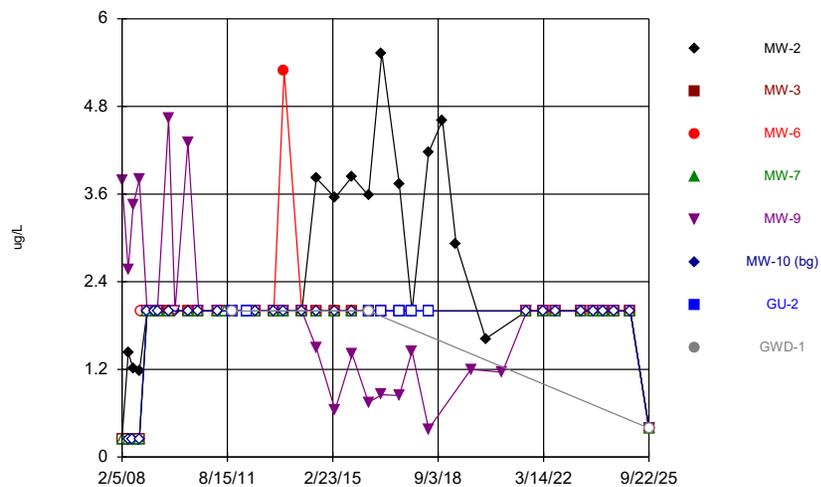
Constituent: Carbon disulfide Analysis Run 2/13/2026 12:30 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



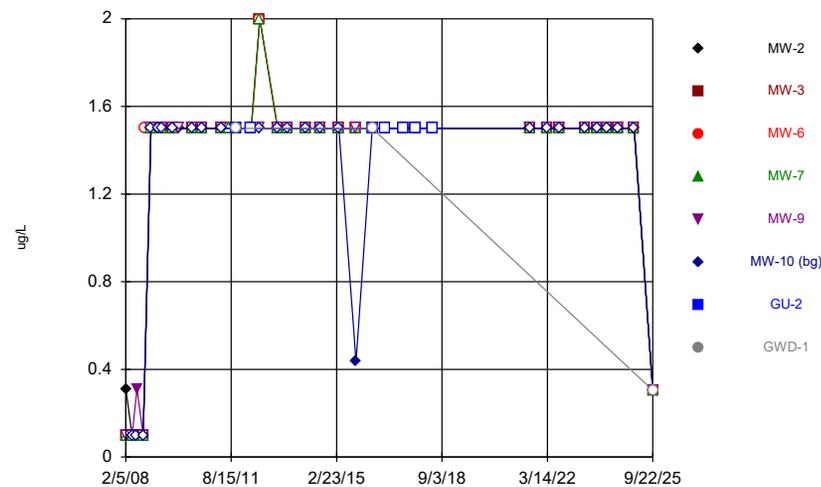
Constituent: Chlorobenzene Analysis Run 2/13/2026 12:30 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



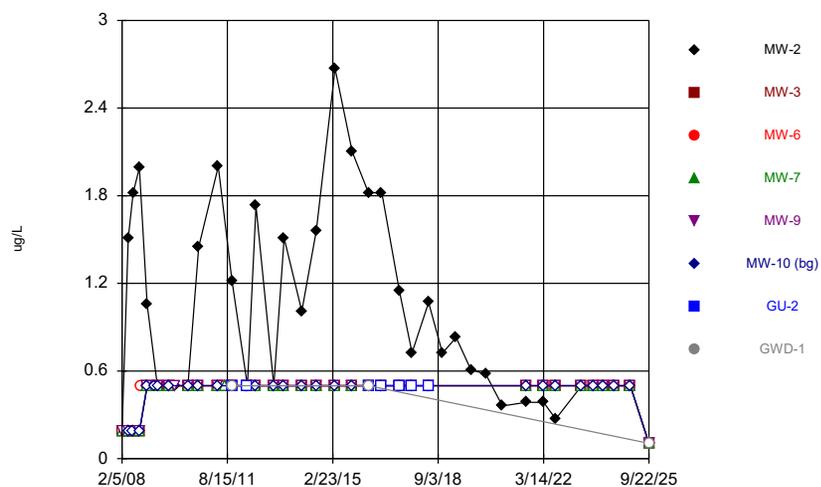
Constituent: Chloroethane Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



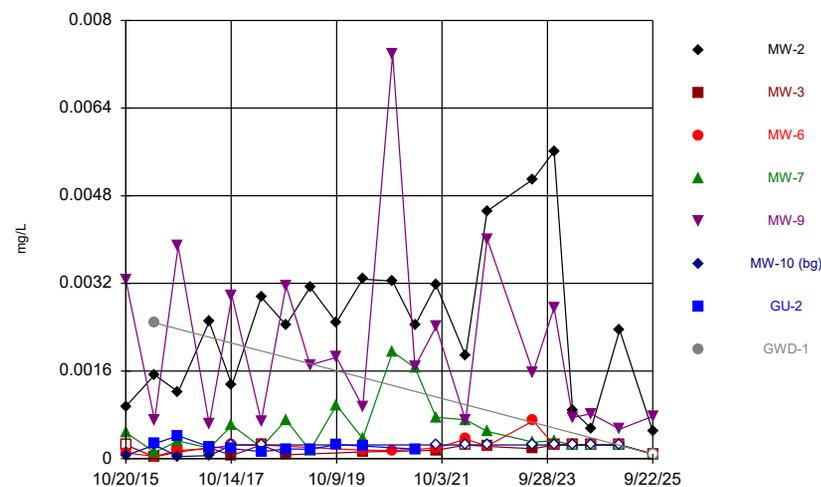
Constituent: Chloromethane Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



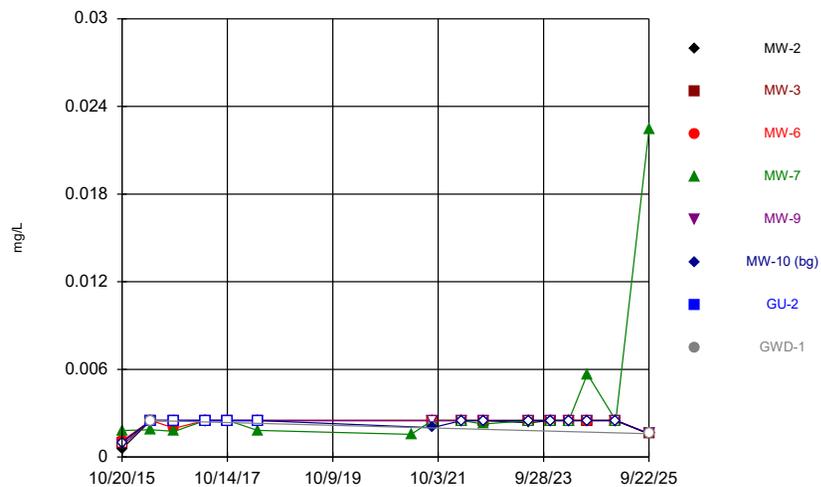
Constituent: cis-1,2-Dichloroethene Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



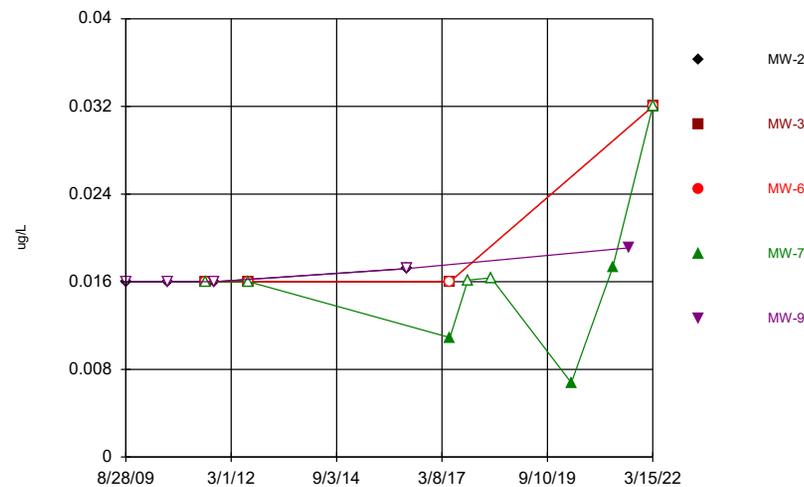
Constituent: Cobalt [total] Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



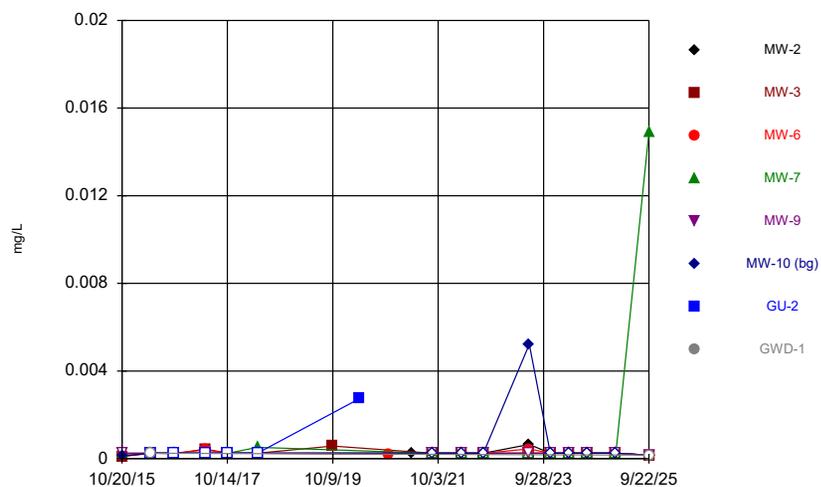
Constituent: Copper [total] Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



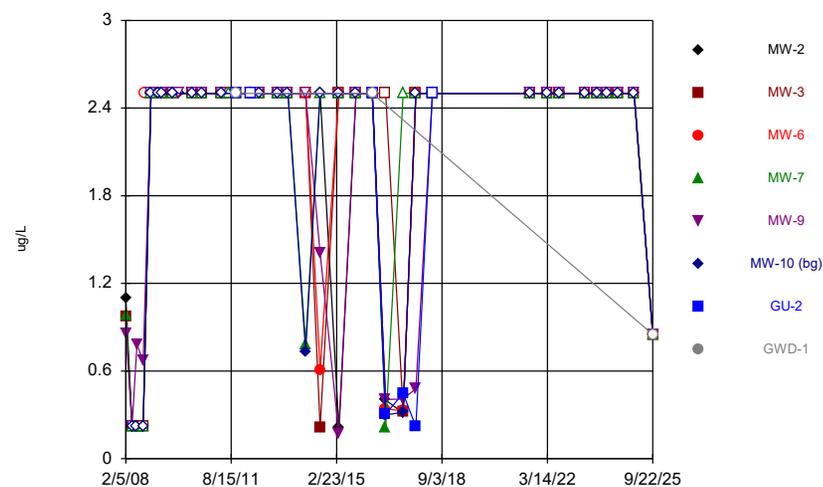
Constituent: Heptachlor Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



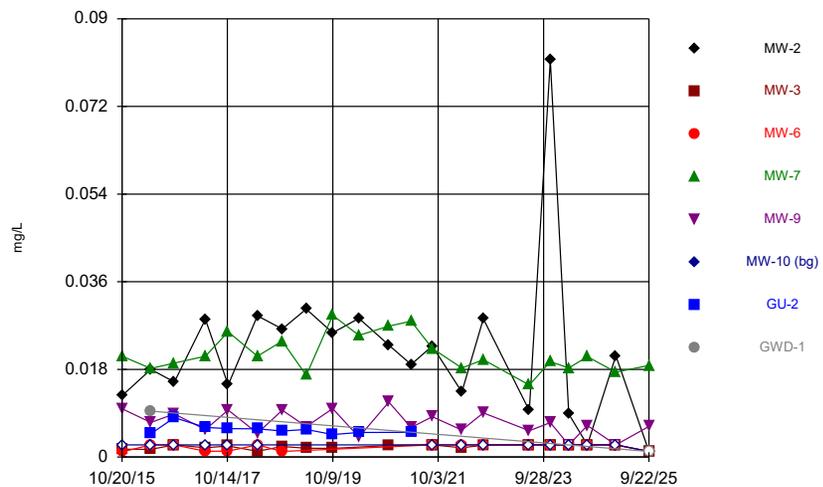
Constituent: Lead [total] Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



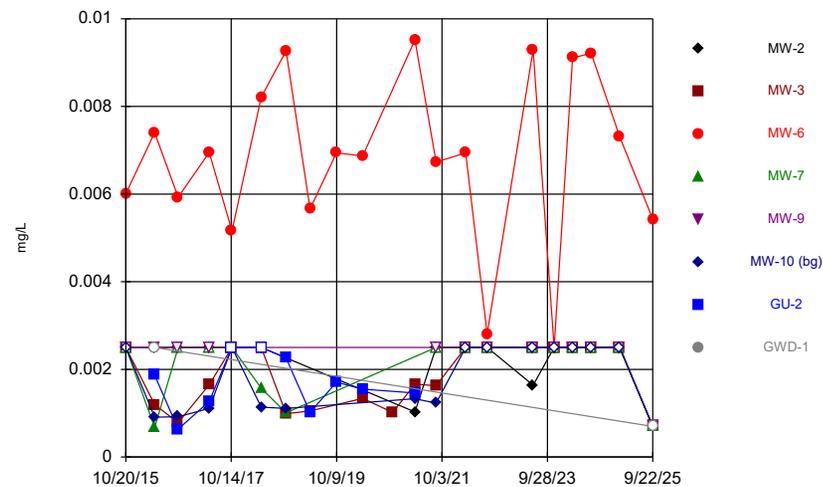
Constituent: Methylene Chloride Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



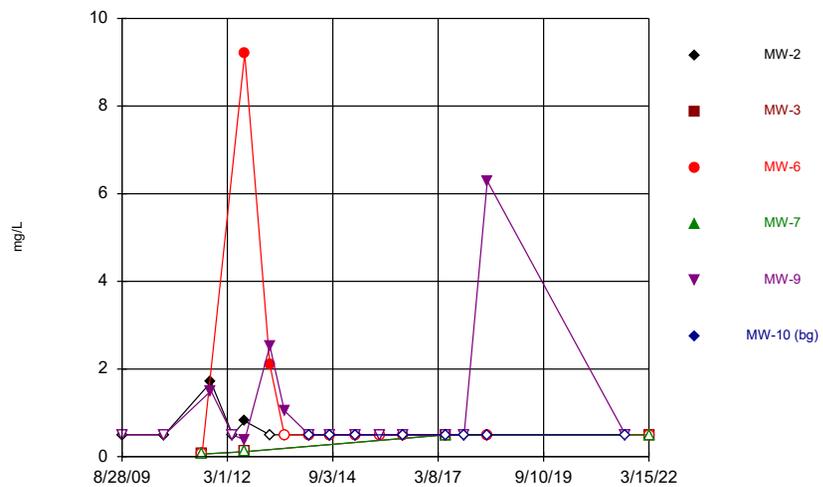
Constituent: Nickel [total] Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



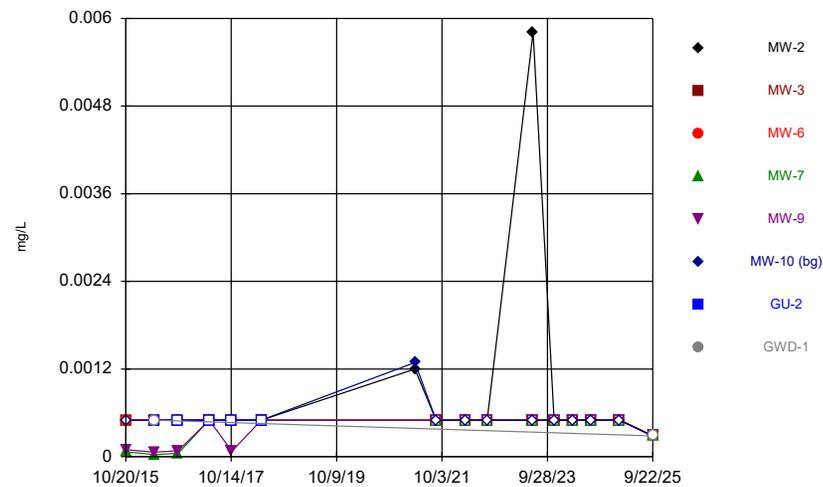
Constituent: Selenium [total] Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



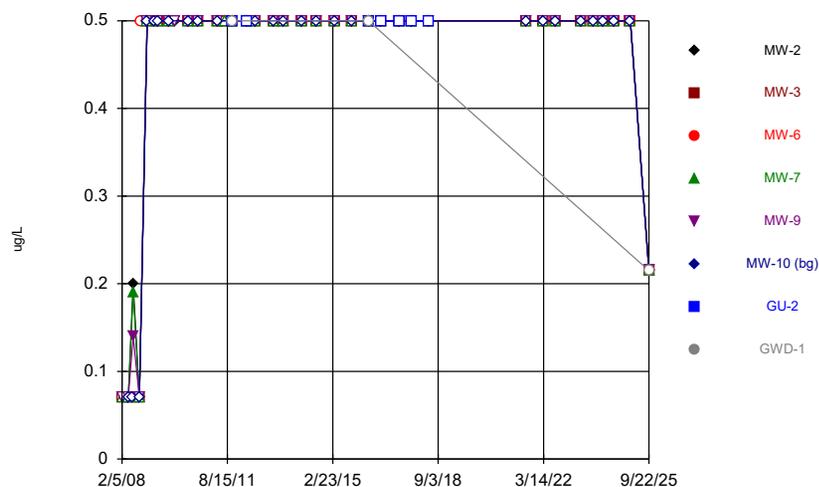
Constituent: Sulfide Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



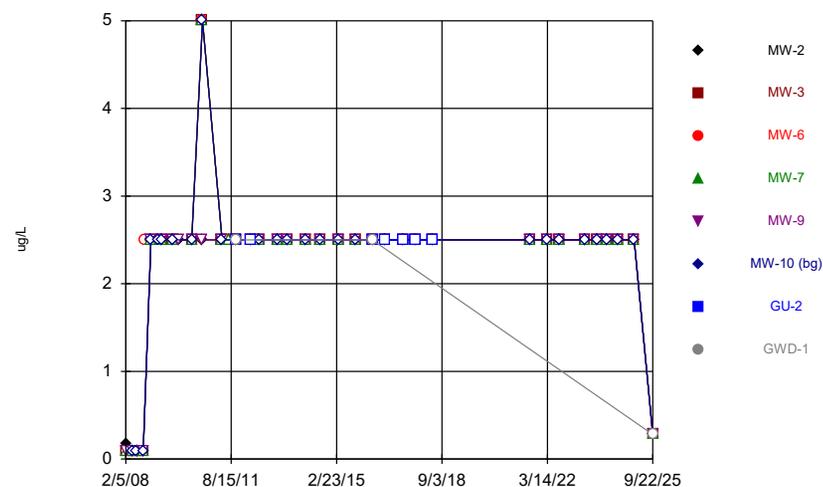
Constituent: Thallium [total] Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



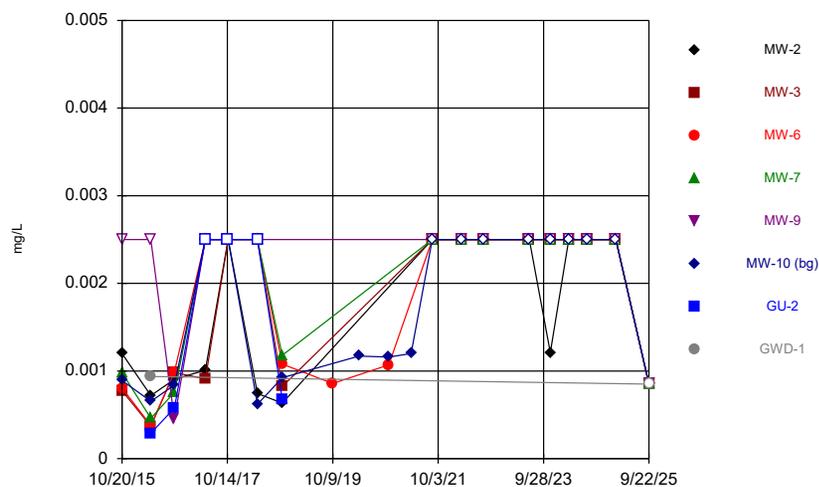
Constituent: Toluene Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Series  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



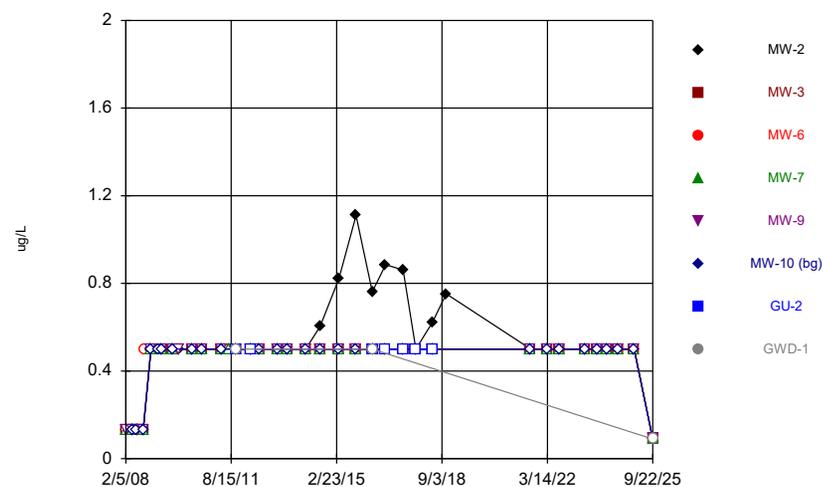
Constituent: trans-1,3-Dichloropropene Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Serie  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



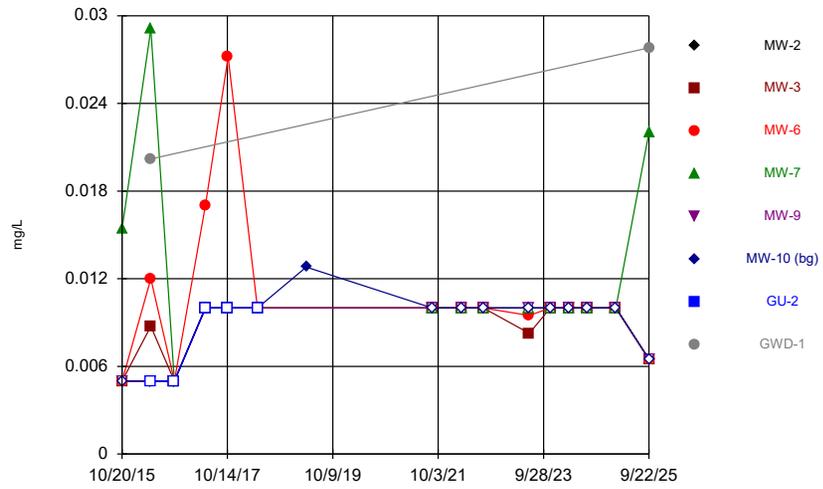
Constituent: Vanadium [total] Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Series  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



Constituent: Vinyl chloride Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Series  
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Time Series



Constituent: Zinc [total] Analysis Run 2/13/2026 12:31 PM View: 2025\_AWQR-Time\_Series  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

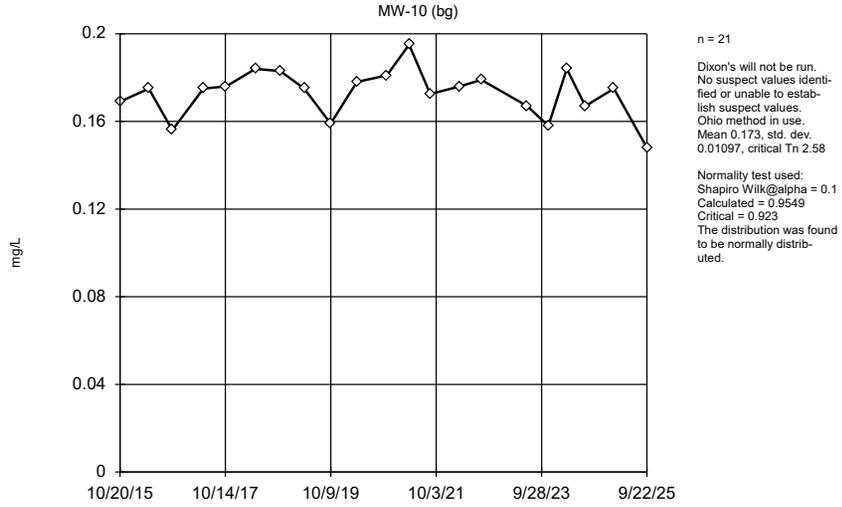
## Outliers Table and Graphs

# BG Outlier Analysis

Adair County Sanitary Landfill    Client: Adair County    Data: Adair County LF Database    Printed 2/13/2026, 12:24 PM

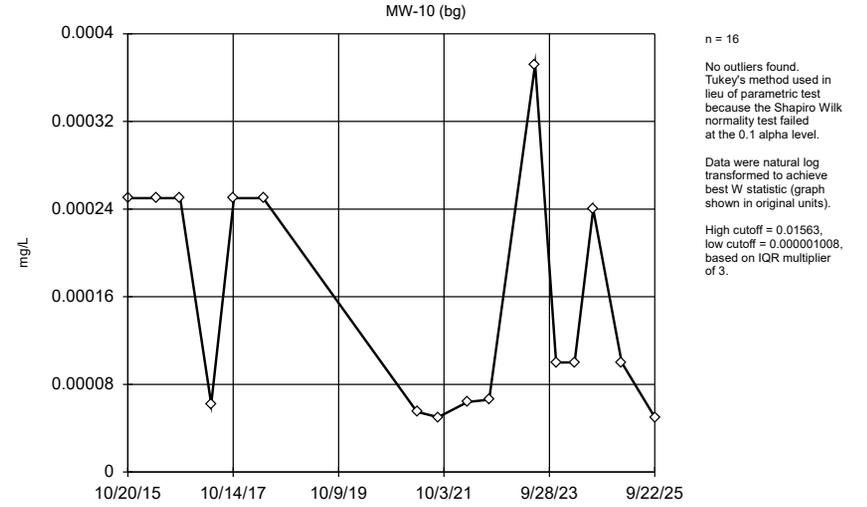
<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Date(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Distribution</u>	<u>Normality Test</u>
Barium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	EPA/OH	0.05	21	0.173	0.01097	normal	ShapiroWilk
Cadmium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	NP (nrm)/OH	NaN	16	0.0001568	0.000105	unknown	ShapiroWilk
Chromium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	OH	NaN	15	0.002258	0.0006438	n/a	n/a
Cobalt [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	OH	NaN	15	0.0001993	0.00008754	n/a	n/a
Copper [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	OH	NaN	15	0.002308	0.0004424	n/a	n/a
<b>Lead [total] (mg/L)</b>	<b>MW-10 (bg)</b>	<b>Yes</b>	<b>0.00522</b>	<b>6/22/2023</b>	<b>OH</b>	<b>NaN</b>	<b>15</b>	<b>0.000567</b>	<b>0.001288</b>	<b>n/a</b>	<b>n/a</b>
Selenium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	NP (nrm)/OH	NaN	17	0.001821	0.0007545	unknown	ShapiroWilk
<b>Thallium [total] (mg/L)</b>	<b>MW-10 (bg)</b>	<b>Yes</b>	<b>0.00129</b>	<b>3/31/2021</b>	<b>OH</b>	<b>NaN</b>	<b>16</b>	<b>0.0005359</b>	<b>0.0002081</b>	<b>n/a</b>	<b>n/a</b>
Vanadium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	NP (nrm)/OH	NaN	19	0.001753	0.0008213	unknown	ShapiroWilk
Zinc [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	OH	NaN	16	0.009019	0.002305	n/a	n/a

### EPA Screening (suspected outliers for Dixon's Test)



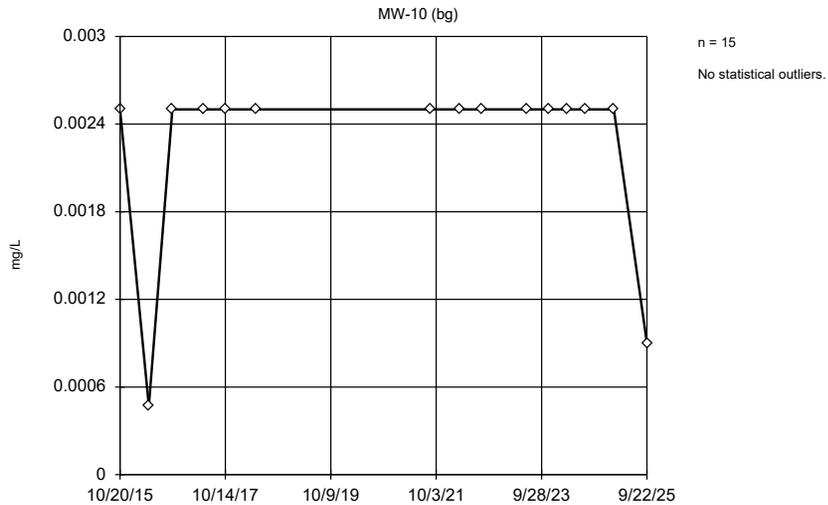
Constituent: Barium [total] Analysis Run 2/13/2026 12:21 PM View: 2025\_AWQR-BG\_Outliers  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



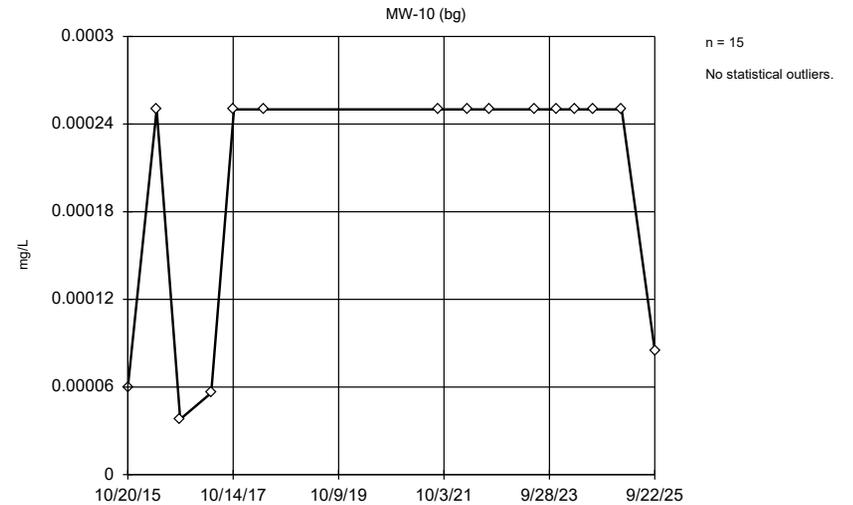
Constituent: Cadmium [total] Analysis Run 2/13/2026 12:21 PM View: 2025\_AWQR-BG\_Outliers  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Ohio EPA 0715 Outlier Algorithm



Constituent: Chromium [total] Analysis Run 2/13/2026 12:21 PM View: 2025\_AWQR-BG\_Outliers  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

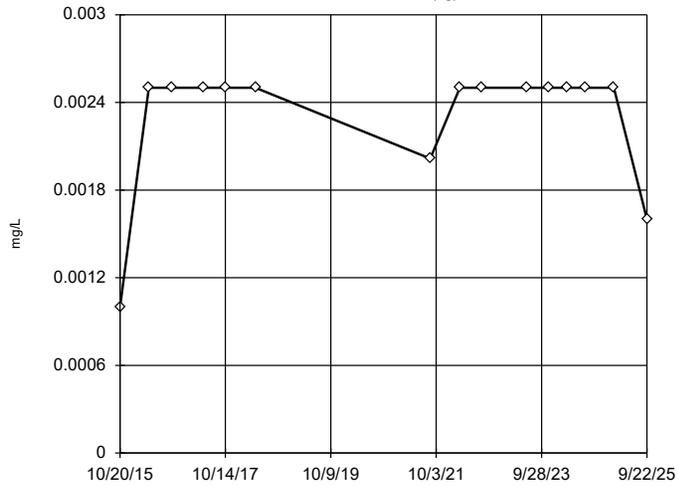
### Ohio EPA 0715 Outlier Algorithm



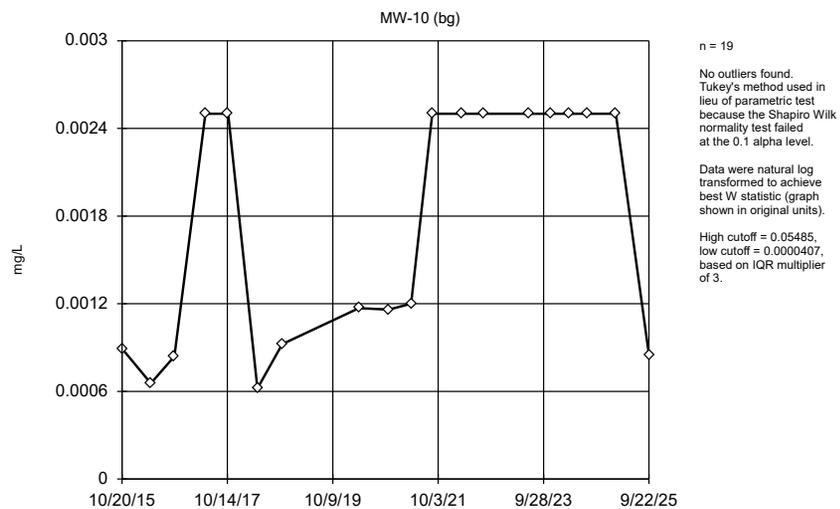
Constituent: Cobalt [total] Analysis Run 2/13/2026 12:21 PM View: 2025\_AWQR-BG\_Outliers  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

### Ohio EPA 0715 Outlier Algorithm

MW-10 (bg)



Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



## Prediction Limits Table and Graphs

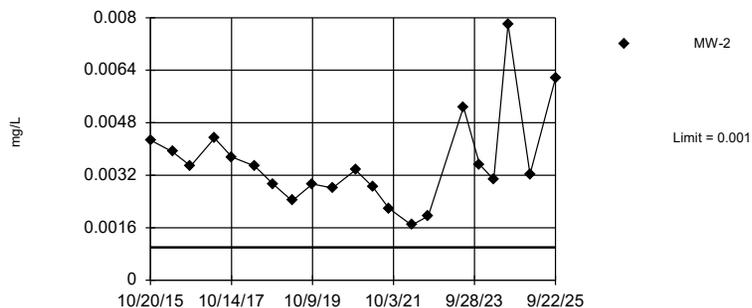
# AM Prediction Limit

Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database Printed 2/13/2026, 12:03 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>
<b>Arsenic [total] (mg/L)</b>	<b>MW-2</b>	<b>0.001</b>	<b>n/a</b>	<b>9/22/2025</b>	<b>0.00616</b>	<b>Yes</b>	<b>15</b>	<b>MW-10</b>	<b>100</b>	<b>n/a</b>	<b>0.006767</b>	<b>NP Inter (NDs) 1 of 2</b>
Barium [total] (mg/L)	MW-2	0.1967	n/a	9/22/2025	0.193	No	21	MW-10	0	No	0.001053	Param Inter 1 of 2
Barium [total] (mg/L)	MW-3	0.1967	n/a	9/22/2025	0.0259	No	21	MW-10	0	No	0.001053	Param Inter 1 of 2
Barium [total] (mg/L)	MW-6	0.1967	n/a	9/22/2025	0.02045	No	21	MW-10	0	No	0.001053	Param Inter 1 of 2
Barium [total] (mg/L)	MW-7	0.1967	n/a	9/22/2025	0.0289	No	21	MW-10	0	No	0.001053	Param Inter 1 of 2
Barium [total] (mg/L)	MW-9	0.1967	n/a	9/22/2025	0.0607	No	21	MW-10	0	No	0.001053	Param Inter 1 of 2
Cadmium [total] (mg/L)	MW-7	0.000372	n/a	9/22/2025	0.000264	No	16	MW-10	62.5	n/a	0.005898	NP Inter (NDs) 1 of 2
<b>Cobalt [total] (mg/L)</b>	<b>MW-2</b>	<b>0.00025</b>	<b>n/a</b>	<b>9/22/2025</b>	<b>0.000505</b>	<b>Yes</b>	<b>15</b>	<b>MW-10</b>	<b>80</b>	<b>n/a</b>	<b>0.006767</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Cobalt [total] (mg/L)</b>	<b>MW-9</b>	<b>0.00025</b>	<b>n/a</b>	<b>9/22/2025</b>	<b>0.000773</b>	<b>Yes</b>	<b>15</b>	<b>MW-10</b>	<b>80</b>	<b>n/a</b>	<b>0.006767</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Copper [total] (mg/L)</b>	<b>MW-7</b>	<b>0.0025</b>	<b>n/a</b>	<b>9/22/2025</b>	<b>0.0224</b>	<b>Yes</b>	<b>15</b>	<b>MW-10</b>	<b>93.33</b>	<b>n/a</b>	<b>0.006767</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Lead [total] (mg/L)</b>	<b>MW-7</b>	<b>0.00522</b>	<b>n/a</b>	<b>9/22/2025</b>	<b>0.0149</b>	<b>Yes</b>	<b>15</b>	<b>MW-10</b>	<b>86.67</b>	<b>n/a</b>	<b>0.006767</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Nickel [total] (mg/L)</b>	<b>MW-7</b>	<b>0.0025</b>	<b>n/a</b>	<b>9/22/2025</b>	<b>0.0188</b>	<b>Yes</b>	<b>15</b>	<b>MW-10</b>	<b>100</b>	<b>n/a</b>	<b>0.006767</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Nickel [total] (mg/L)</b>	<b>MW-9</b>	<b>0.0025</b>	<b>n/a</b>	<b>9/22/2025</b>	<b>0.00629</b>	<b>Yes</b>	<b>15</b>	<b>MW-10</b>	<b>100</b>	<b>n/a</b>	<b>0.006767</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Selenium [total] (mg/L)</b>	<b>MW-6</b>	<b>0.0025</b>	<b>n/a</b>	<b>9/22/2025</b>	<b>0.00543</b>	<b>Yes</b>	<b>17</b>	<b>MW-10</b>	<b>58.82</b>	<b>n/a</b>	<b>0.005427</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Zinc [total] (mg/L)</b>	<b>MW-7</b>	<b>0.0128</b>	<b>n/a</b>	<b>9/22/2025</b>	<b>0.022</b>	<b>Yes</b>	<b>16</b>	<b>MW-10</b>	<b>93.75</b>	<b>n/a</b>	<b>0.005898</b>	<b>NP Inter (NDs) 1 of 2</b>

Exceeds Limit: MW-2

Prediction Limit  
Interwell Non-parametric

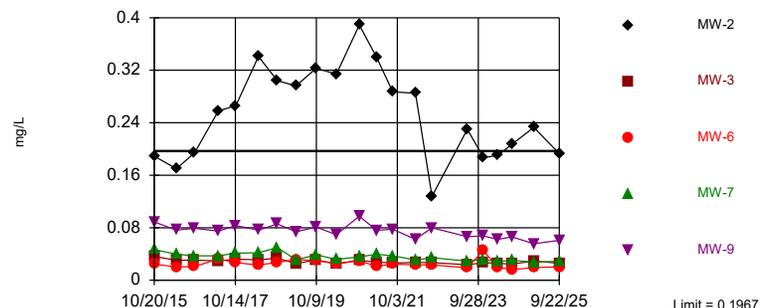


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 15 background values. 100% NDs. Annual per-constituent alpha = 0.06565. Individual comparison alpha = 0.006767 (1 of 2). Assumes 4 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Arsenic [total] Analysis Run 2/13/2026 12:00 PM View: 2025\_AWQR\_Interwell\_PL  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Within Limit

Prediction Limit  
Interwell Parametric

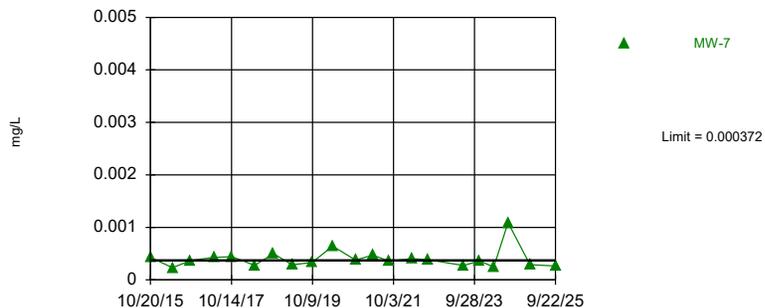


Background Data Summary: Mean=0.173, Std. Dev.=0.01097, n=21. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9549, critical = 0.873. Kappa = 2.166 (c=10, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.005254. Individual comparison alpha = 0.001053. Comparing 5 points to limit.

Constituent: Barium [total] Analysis Run 2/13/2026 12:00 PM View: 2025\_AWQR\_Interwell\_PL  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Within Limit

Prediction Limit  
Interwell Non-parametric

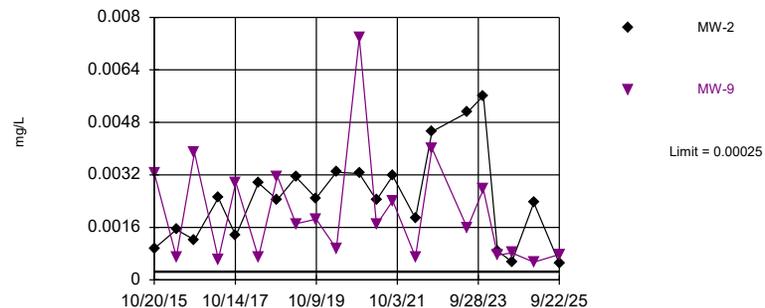


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 16 background values. 62.5% NDs. Annual per-constituent alpha = 0.05744. Individual comparison alpha = 0.005898 (1 of 2). Assumes 4 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Cadmium [total] Analysis Run 2/13/2026 12:00 PM View: 2025\_AWQR\_Interwell\_PL  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Exceeds Limit: MW-2, MW-9

Prediction Limit  
Interwell Non-parametric

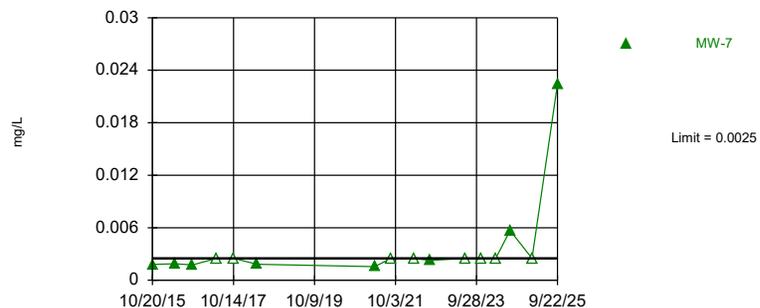


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 15 background values. 80% NDs. Annual per-constituent alpha = 0.06565. Individual comparison alpha = 0.006767 (1 of 2). Comparing 2 points to limit. Assumes 3 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Cobalt [total] Analysis Run 2/13/2026 12:00 PM View: 2025\_AWQR\_Interwell\_PL  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Exceeds Limit: MW-7

### Prediction Limit Interwell Non-parametric

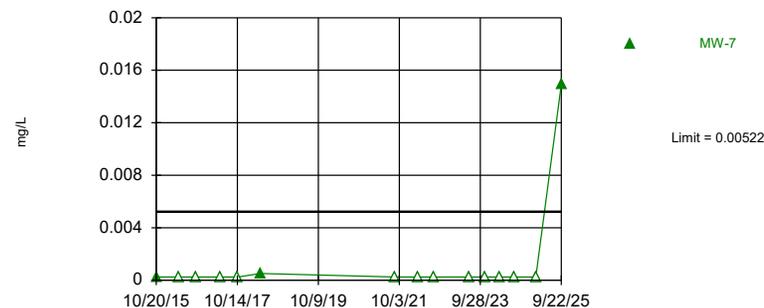


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 15 background values. 93.33% NDs. Annual per-constituent alpha = 0.06565. Individual comparison alpha = 0.006767 (1 of 2). Assumes 4 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Copper [total] Analysis Run 2/13/2026 12:01 PM View: 2025\_AWQR\_Interwell\_PL  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Exceeds Limit: MW-7

### Prediction Limit Interwell Non-parametric

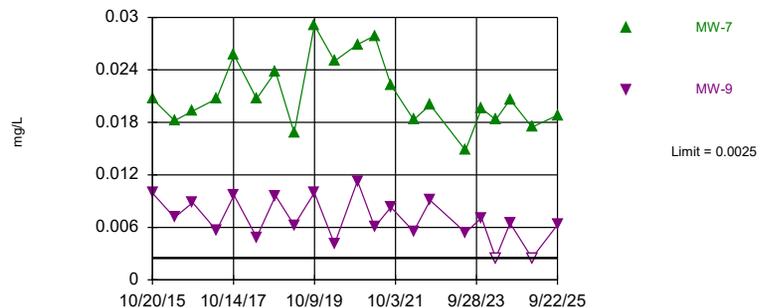


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 15 background values. 86.67% NDs. Annual per-constituent alpha = 0.06565. Individual comparison alpha = 0.006767 (1 of 2). Assumes 4 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Lead [total] Analysis Run 2/13/2026 12:01 PM View: 2025\_AWQR\_Interwell\_PL  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Exceeds Limit: MW-7, MW-9

### Prediction Limit Interwell Non-parametric

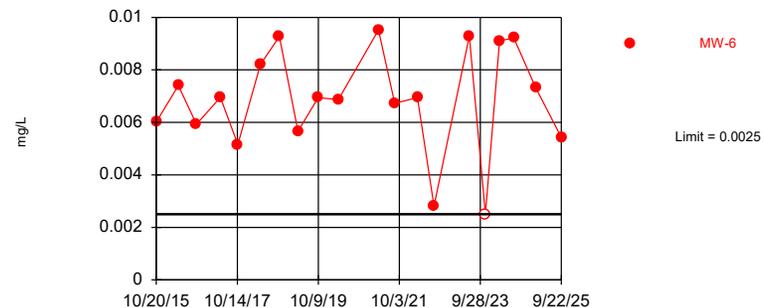


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 15 background values. 100% NDs. Annual per-constituent alpha = 0.06565. Individual comparison alpha = 0.006767 (1 of 2). Comparing 2 points to limit. Assumes 3 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Nickel [total] Analysis Run 2/13/2026 12:01 PM View: 2025\_AWQR\_Interwell\_PL  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Exceeds Limit: MW-6

### Prediction Limit Interwell Non-parametric



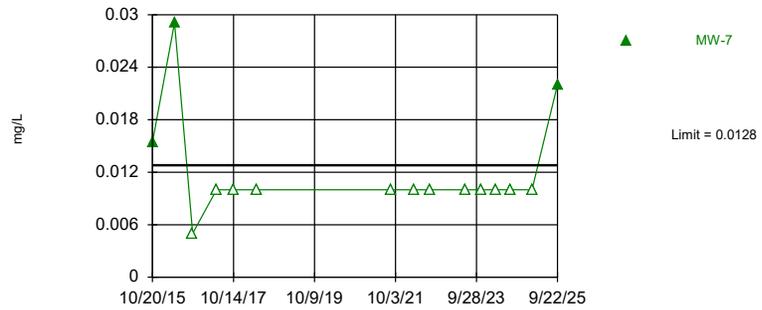
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 17 background values. 58.82% NDs. Annual per-constituent alpha = 0.05296. Individual comparison alpha = 0.005427 (1 of 2). Assumes 4 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Selenium [total] Analysis Run 2/13/2026 12:01 PM View: 2025\_AWQR\_Interwell\_PL  
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Exceeds Limit: MW-7

### Prediction Limit

Interwell 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. Annual per-constituent alpha = 0.05744. Individual comparison alpha = 0.005898 (1 of 2). Assumes 4 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

## Mann-Kendall Trend Table and Graphs

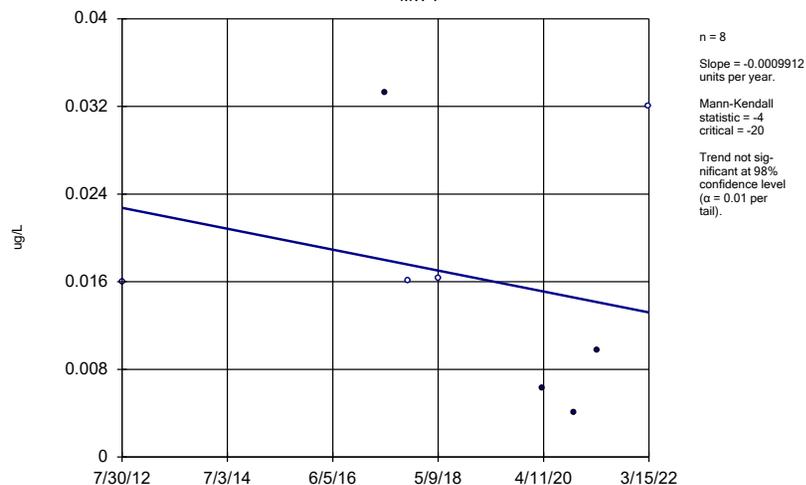
# Trend Test

Adair County Sanitary Landfill    Client: Adair County    Data: ADAIR\_AM\_2025\_AWQR    Printed 2/2/2026, 2:00 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>
4,4'-DDT (ug/L)	MW-7	-0.0009912	-4	-20	No	8	50	0.02	NP
Arsenic (mg/L)	MW-2	0.0009035	14	20	No	8	0	0.02	NP
Arsenic (mg/L)	MW-9	0	1	20	No	8	87.5	0.02	NP
Barium (mg/L)	MW-2	0.001912	2	20	No	8	0	0.02	NP
Barium (mg/L)	MW-3	-0.0001217	-5	-20	No	8	0	0.02	NP
Barium (mg/L)	MW-6	-0.001196	-7	-20	No	8	0	0.02	NP
Barium (mg/L)	MW-7	-0.001171	-14	-20	No	8	0	0.02	NP
Barium (mg/L)	MW-9	-0.003069	-14	-20	No	8	0	0.02	NP
Benzene (ug/L)	MW-2	-0.1275	-8	-20	No	8	12.5	0.02	NP
Cadmium (mg/L)	MW-2	0	8	20	No	8	75	0.02	NP
Cadmium (mg/L)	MW-6	-0.00001448	-8	-20	No	8	50	0.02	NP
Cadmium (mg/L)	MW-7	-0.00003828	-10	-20	No	8	0	0.02	NP
Cadmium (mg/L)	MW-9	0	-8	-20	No	8	62.5	0.02	NP
Cobalt (mg/L)	MW-2	-0.0007141	-10	-20	No	8	0	0.02	NP
Cobalt (mg/L)	MW-3	0	7	20	No	8	75	0.02	NP
Cobalt (mg/L)	MW-6	0	-4	-20	No	8	62.5	0.02	NP
Cobalt (mg/L)	MW-7	-0.00008942	-20	-20	No	8	50	0.02	NP
Cobalt (mg/L)	MW-9	-0.0004415	-8	-20	No	8	0	0.02	NP
Copper (mg/L)	MW-7	0.0001698	14	20	No	8	62.5	0.02	NP
Heptachlor (ug/L)	MW-9	0.0002348	7	10	No	5	80	0.02	NP
Lead (mg/L)	MW-2	0	-3	-20	No	8	87.5	0.02	NP
Lead (mg/L)	MW-7	0	7	20	No	8	87.5	0.02	NP
Nickel (mg/L)	MW-2	-0.0031	-11	-20	No	8	25	0.02	NP
Nickel (mg/L)	MW-7	0.0000709	1	20	No	8	0	0.02	NP
Nickel (mg/L)	MW-9	-0.0006516	-7	-20	No	8	25	0.02	NP
Selenium (mg/L)	MW-6	0.00002717	0	20	No	8	12.5	0.02	NP
Sulfide (mg/L)	MW-9	0	5	20	No	8	87.5	0.02	NP
Thallium (mg/L)	MW-2	0	-3	-20	No	8	87.5	0.02	NP
Vanadium (mg/L)	MW-2	0	1	20	No	8	87.5	0.02	NP
Zinc (mg/L)	MW-7	0	7	20	No	8	87.5	0.02	NP

### Sen's Slope Estimator

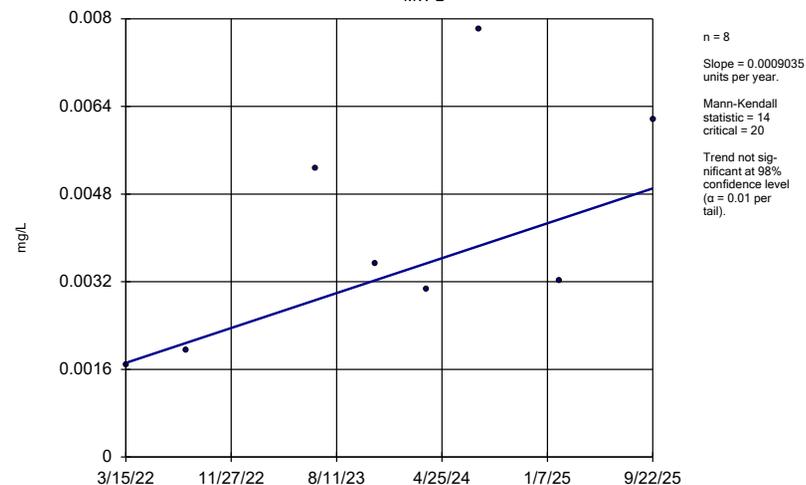
MW-7



Constituent: 4,4'-DDT Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
 Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

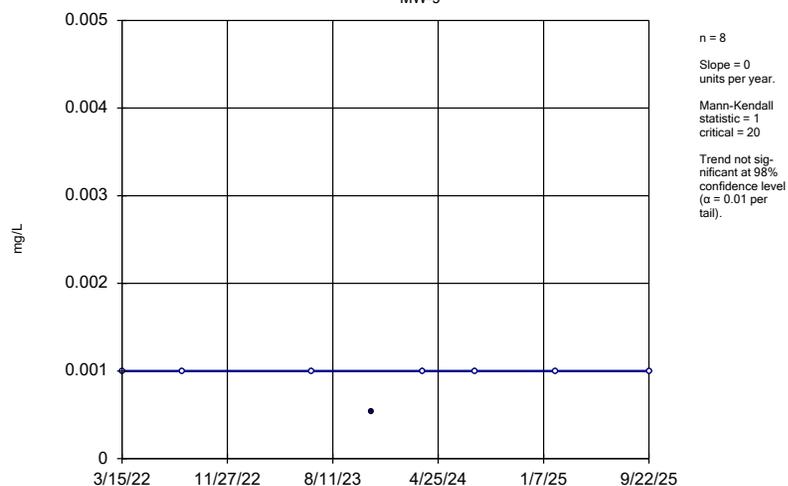
MW-2



Constituent: Arsenic Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
 Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

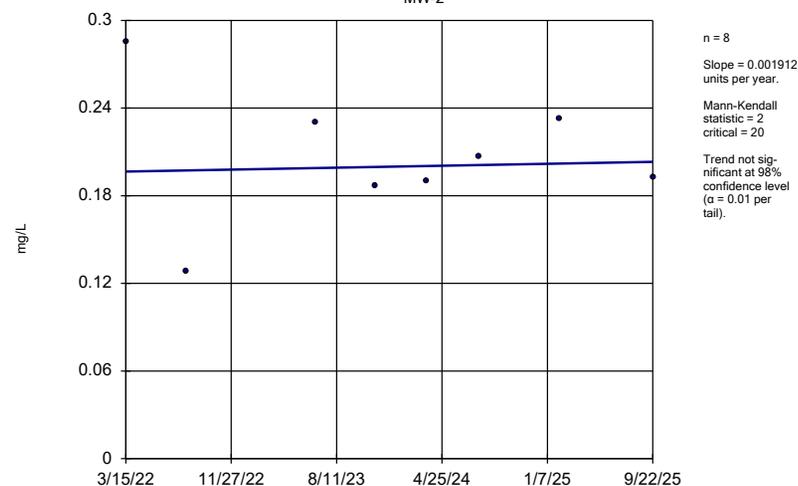
MW-9



Constituent: Arsenic Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
 Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

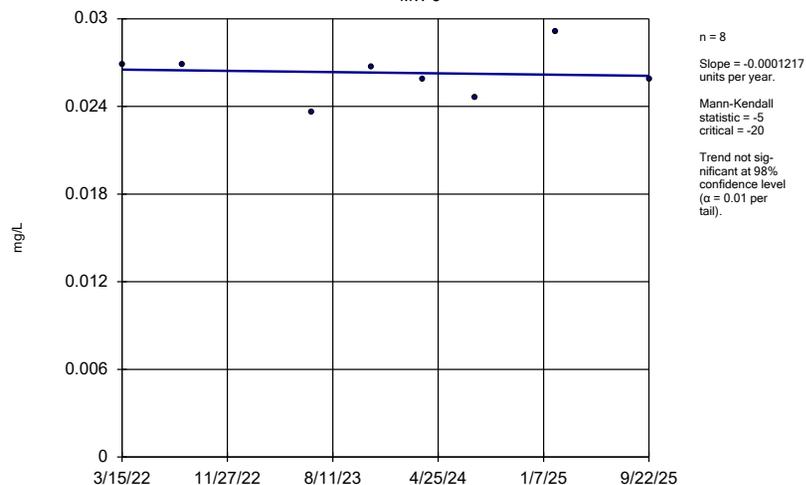
MW-2



Constituent: Barium Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
 Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

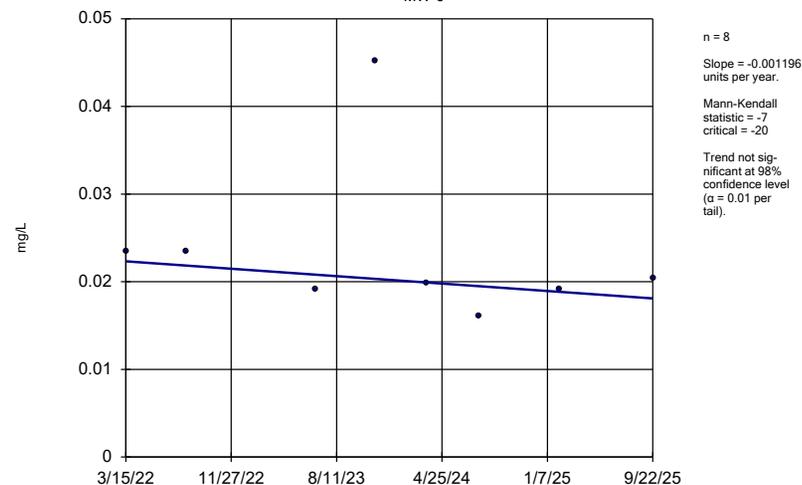
MW-3



Constituent: Barium Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
 Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

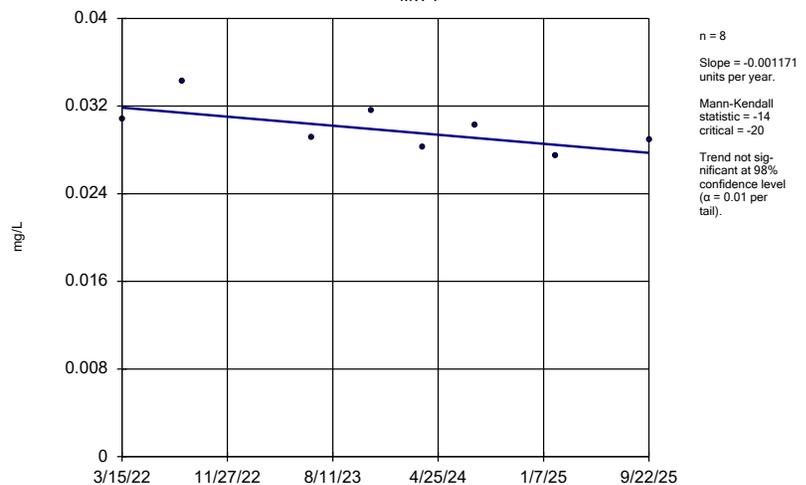
MW-6



Constituent: Barium Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
 Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

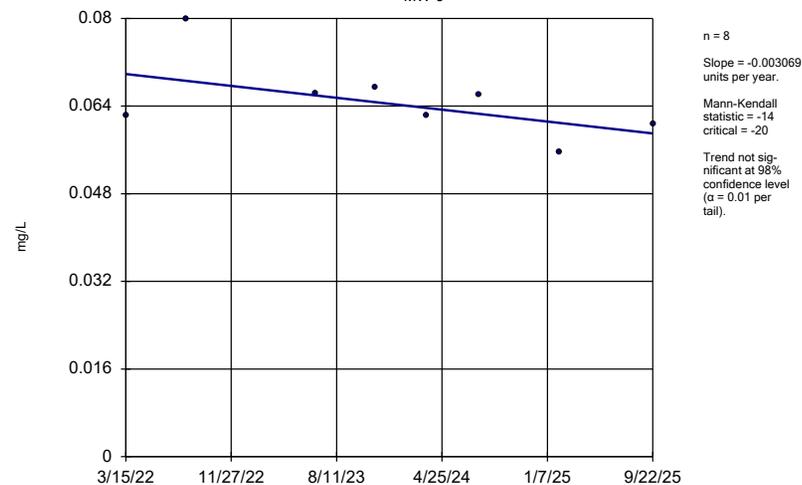
MW-7



Constituent: Barium Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
 Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

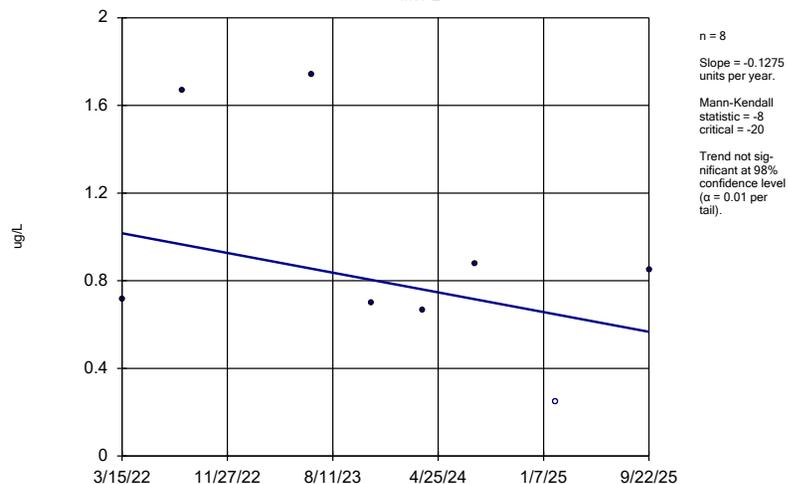
MW-9



Constituent: Barium Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
 Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

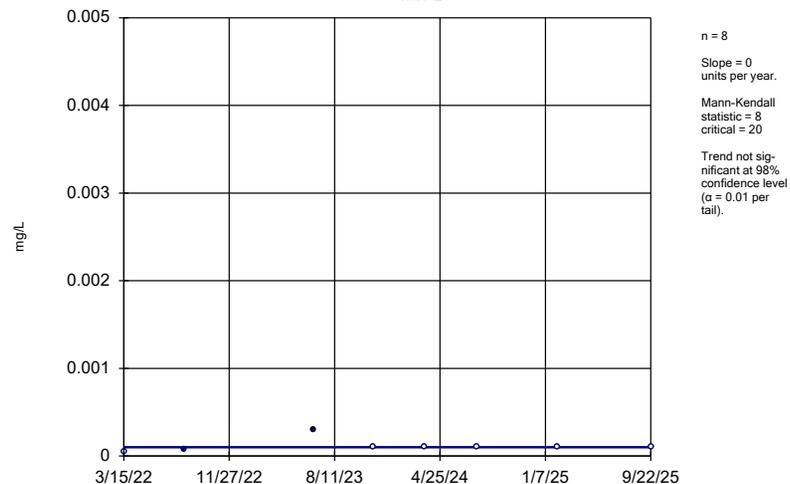
MW-2



Constituent: Benzene Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

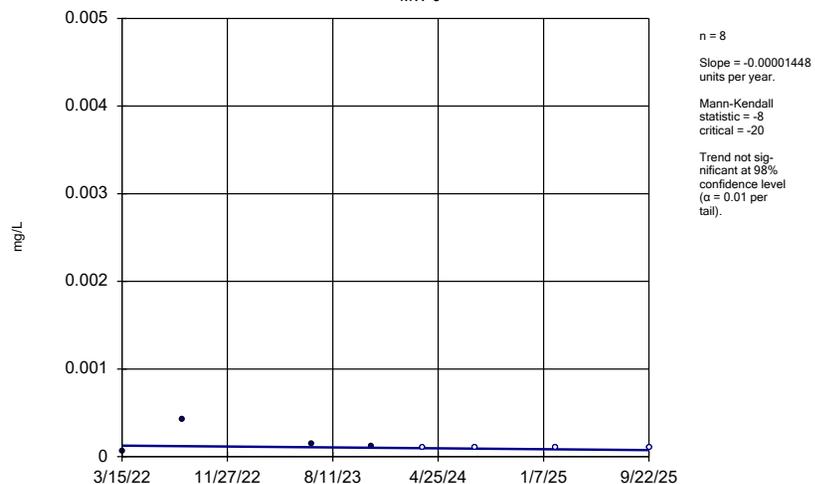
MW-2



Constituent: Cadmium Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

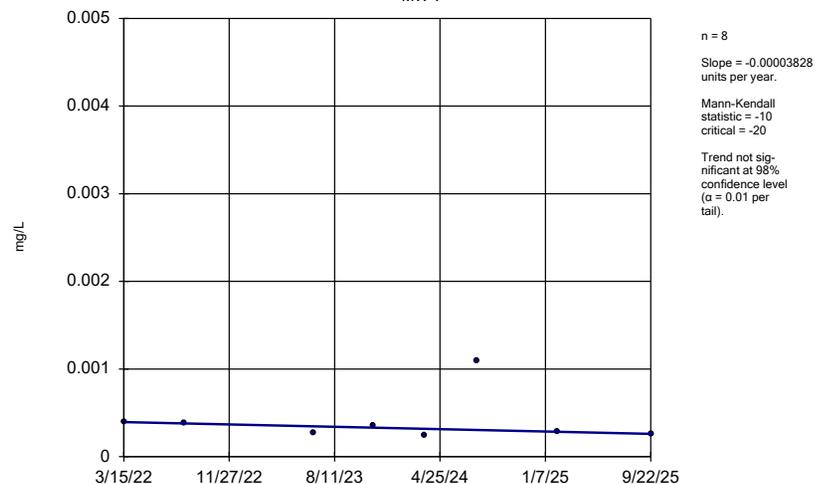
MW-6



Constituent: Cadmium Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

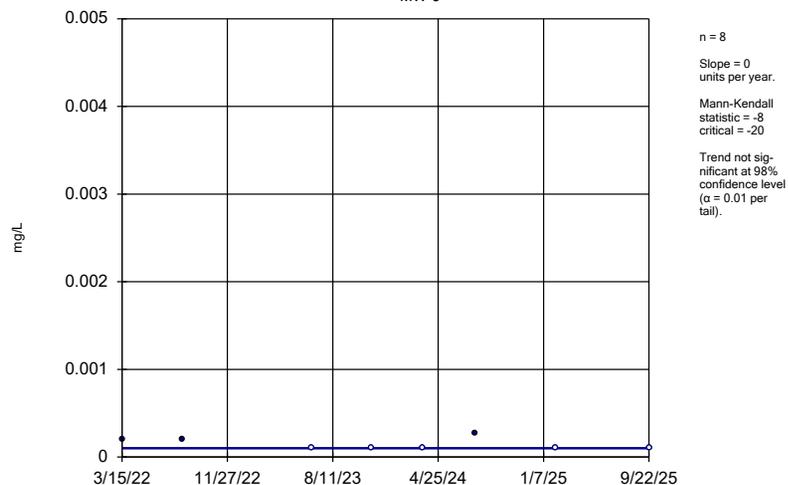
MW-7



Constituent: Cadmium Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

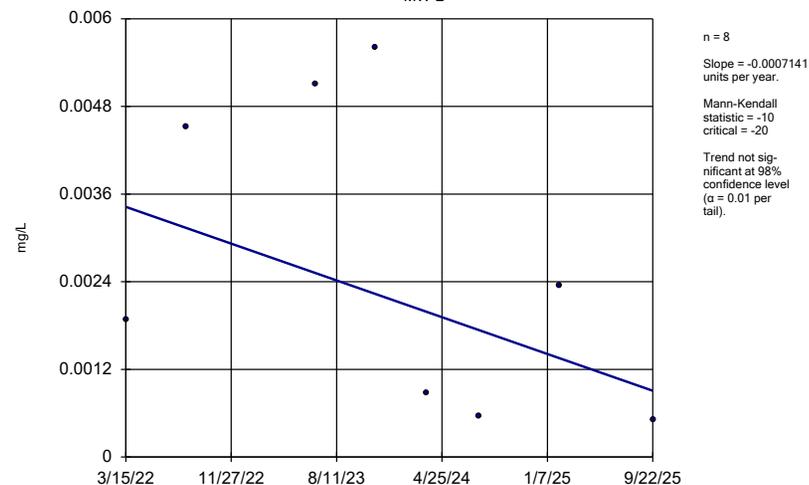
MW-9



Constituent: Cadmium Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

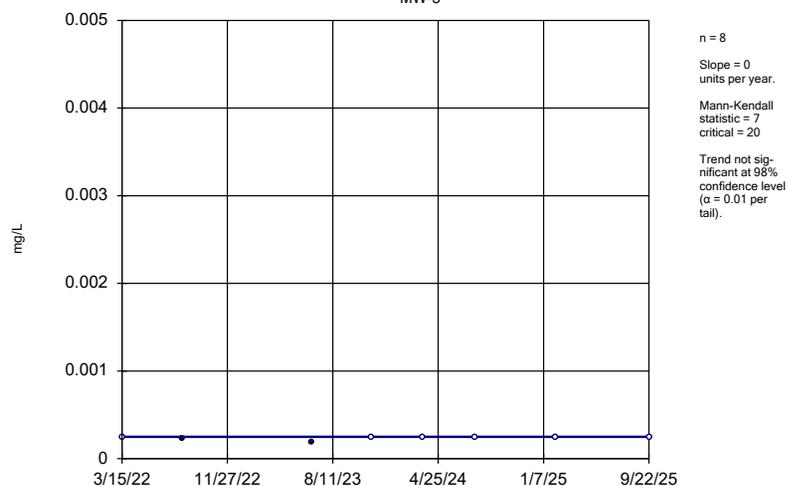
MW-2



Constituent: Cobalt Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

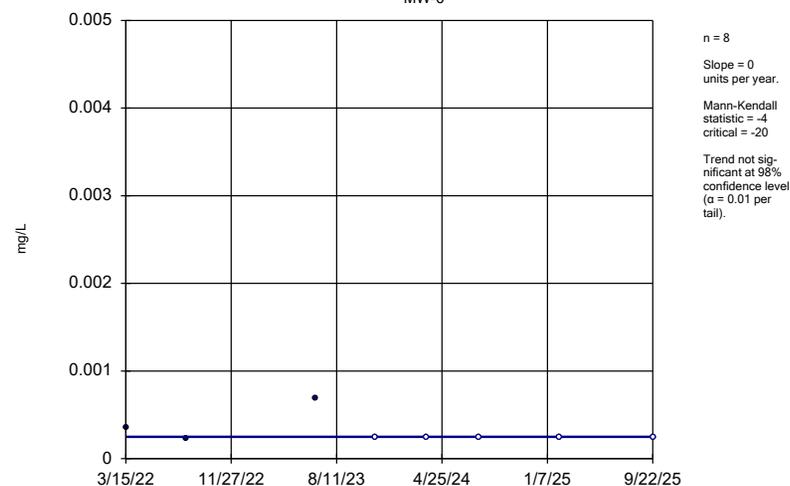
MW-3



Constituent: Cobalt Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

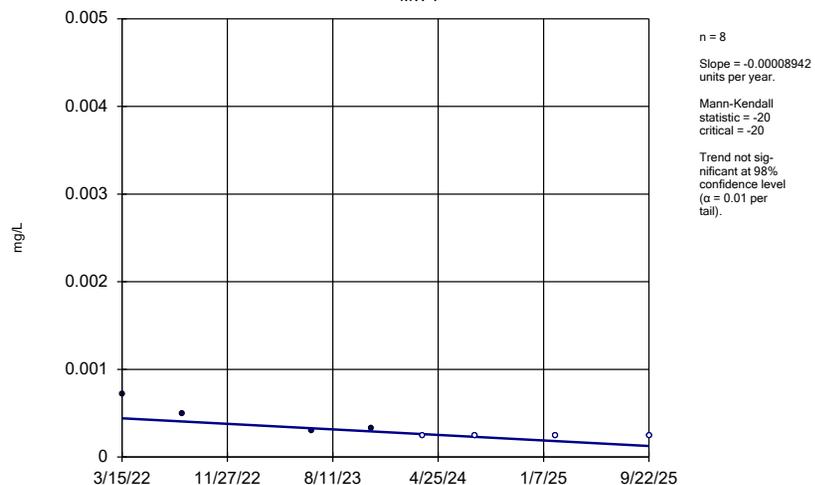
MW-6



Constituent: Cobalt Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

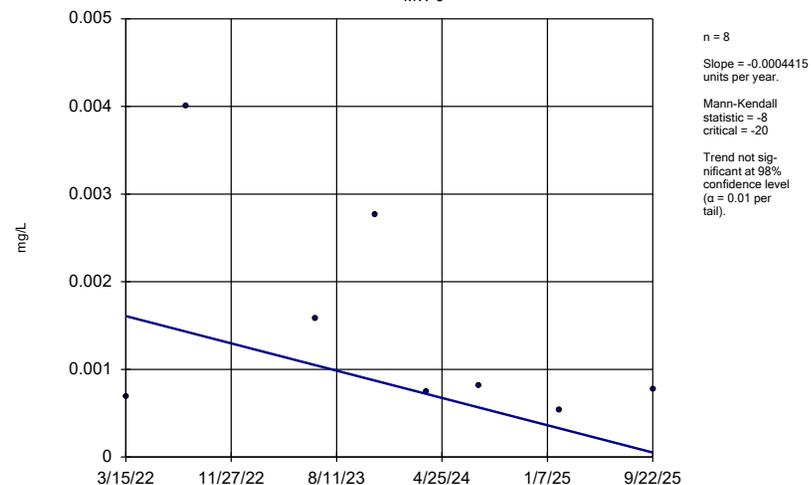
MW-7



Constituent: Cobalt Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

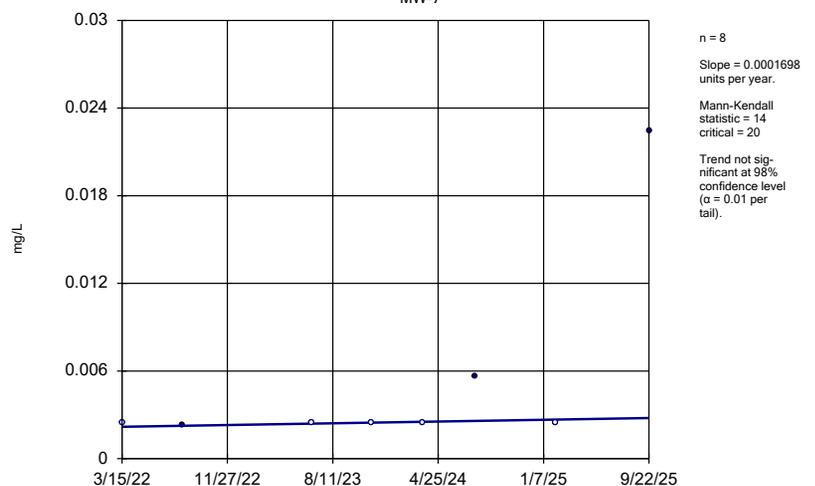
MW-9



Constituent: Cobalt Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

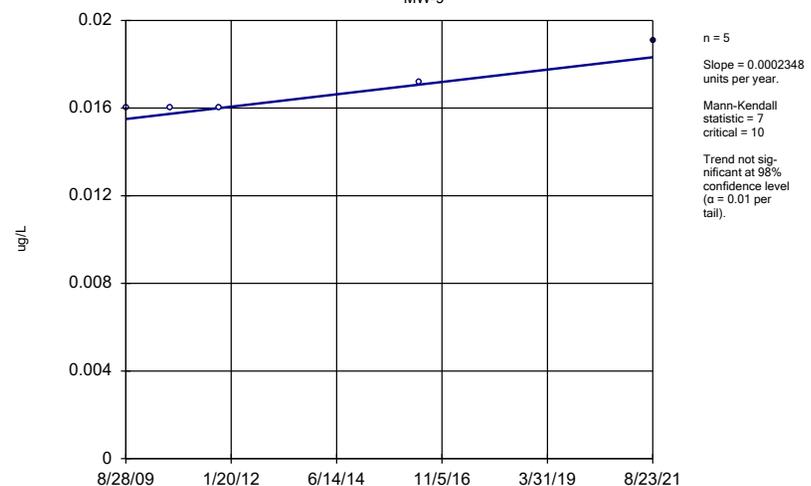
MW-7



Constituent: Copper Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

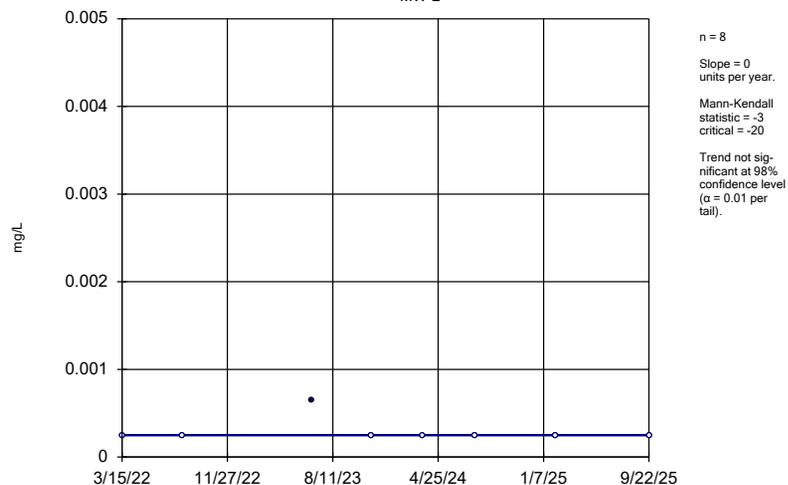
MW-9



Constituent: Heptachlor Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

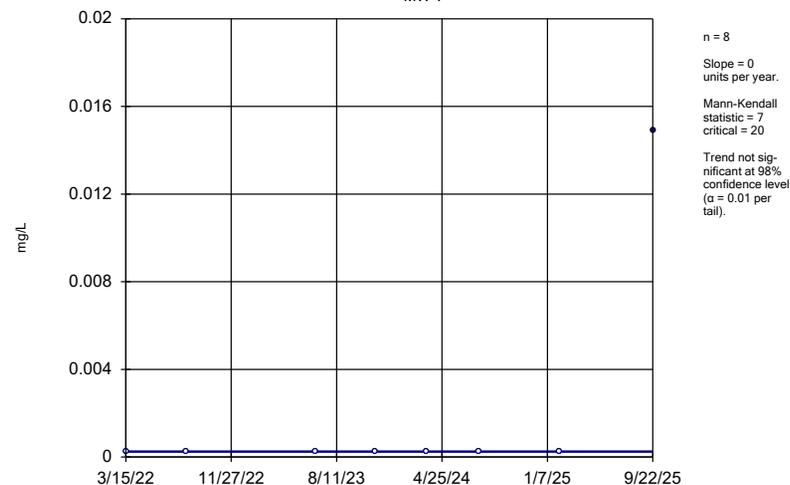
MW-2



Constituent: Lead Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

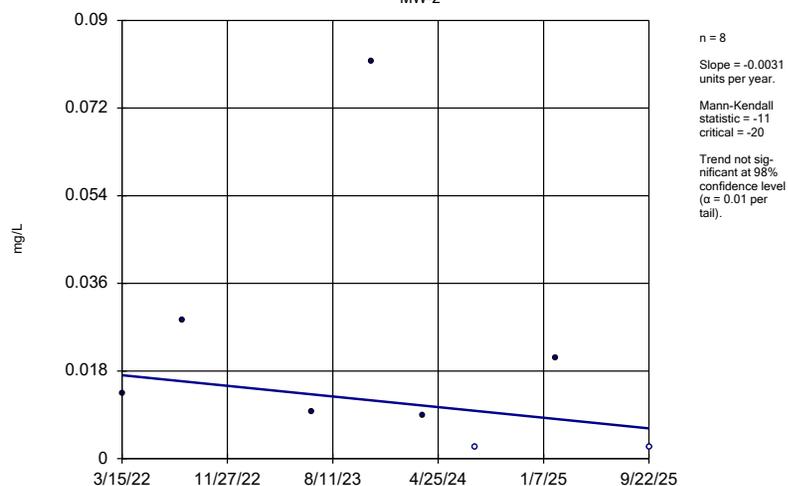
MW-7



Constituent: Lead Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

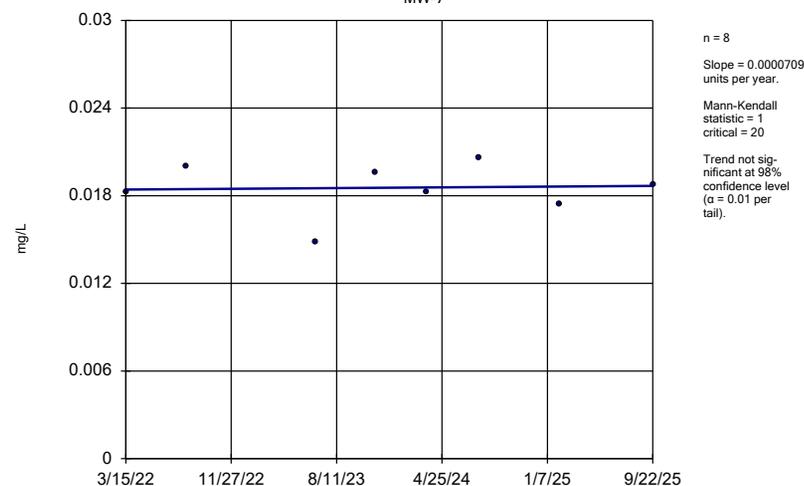
MW-2



Constituent: Nickel Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

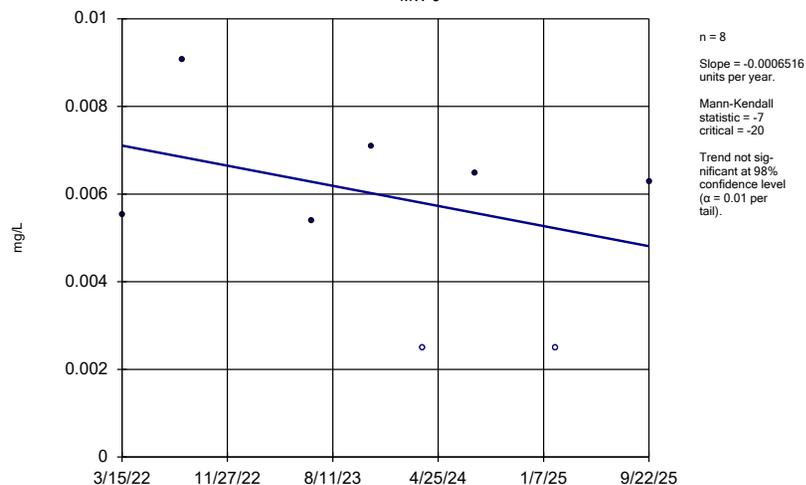
MW-7



Constituent: Nickel Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

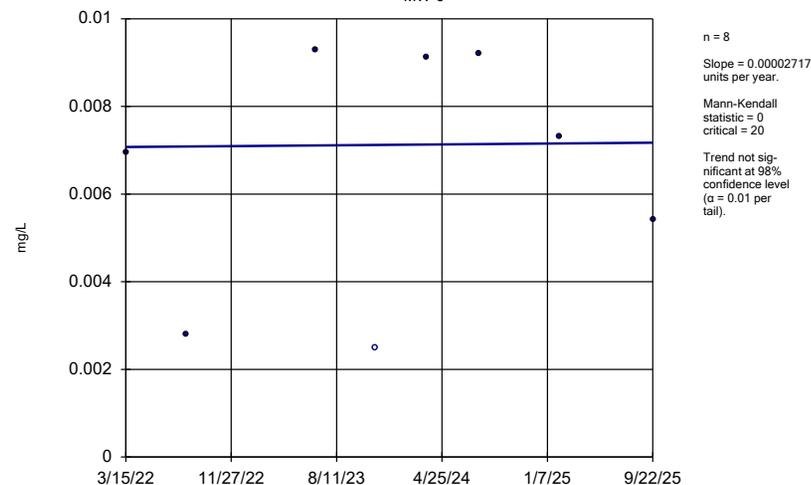
MW-9



Constituent: Nickel Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

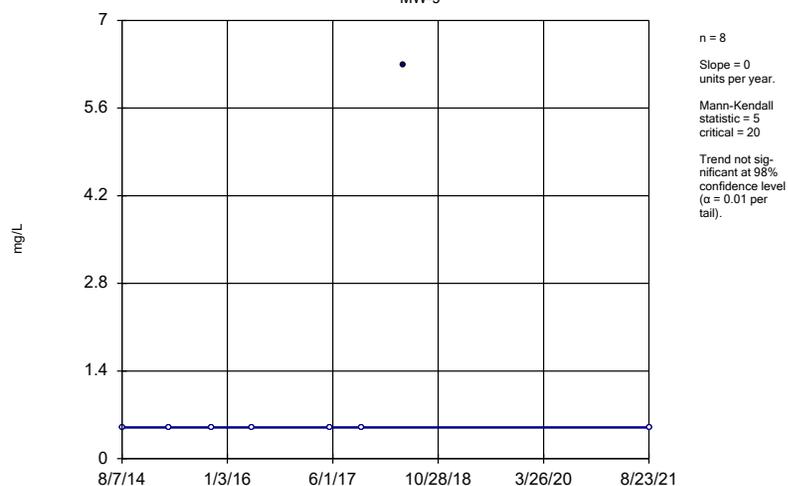
MW-6



Constituent: Selenium Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

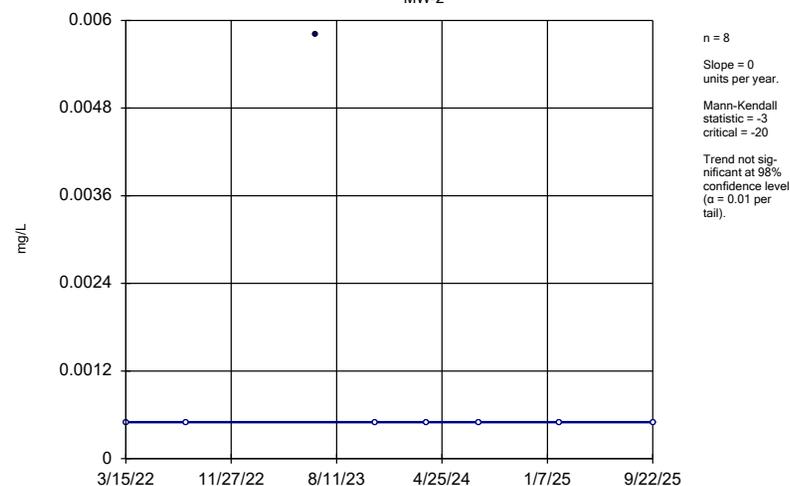
MW-9



Constituent: Sulfide Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

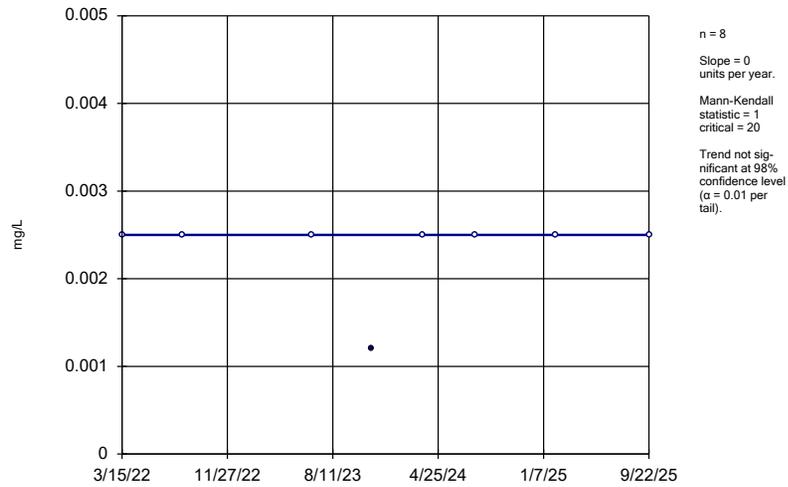
MW-2



Constituent: Thallium Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

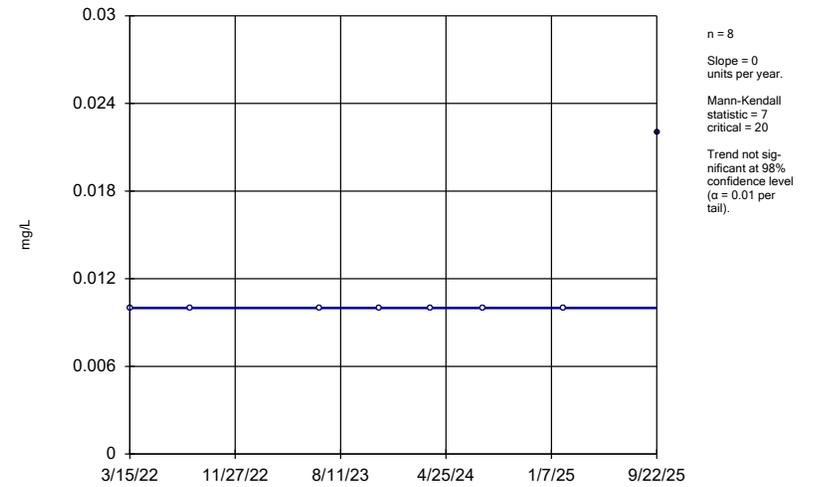
MW-2



Constituent: Vanadium Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Sen's Slope Estimator

MW-7



Constituent: Zinc Analysis Run 2/2/2026 1:55 PM View: 2025\_AWQR-Mann\_Kendall  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

## Confidence Interval Table and Graphs

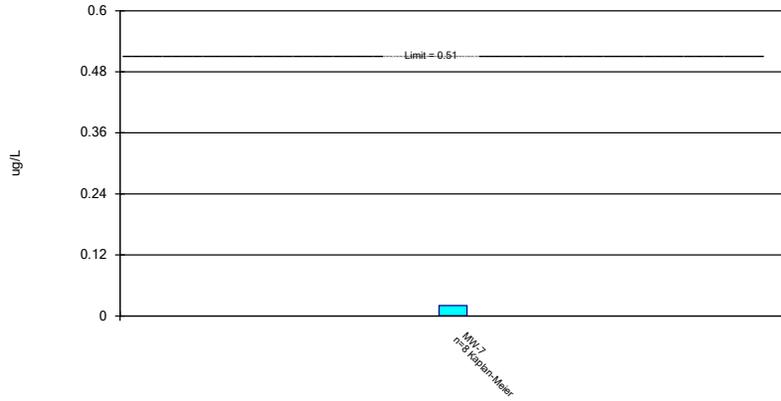
# Confidence Interval

Adair County Sanitary Landfill    Client: Adair County    Data: ADAIR\_AM\_2025\_AWQR    Printed 2/2/2026, 2:47 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>
4,4'-DDT (ug/L)	MW-7	0.02063	0.0003853	0.51	No	8	50	No	0.01	Param.
Arsenic (mg/L)	MW-2	0.006356	0.001822	0.01	No	8	0	No	0.01	Param.
Arsenic (mg/L)	MW-9	0.001	0.000534	0.01	No	8	87.5	No	0.004	NP (NDs)
Barium (mg/L)	MW-2	0.2547	0.1585	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-3	0.02794	0.02444	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-6	0.0452	0.01615	2	No	8	0	No	0.004	NP (normality)
Barium (mg/L)	MW-7	0.0324	0.0278	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-9	0.07265	0.05753	2	No	8	0	No	0.01	Param.
Benzene (ug/L)	MW-2	1.478	0.3899	5	No	8	12.5	No	0.01	Param.
Cadmium (mg/L)	MW-2	0.000306	0.00005	0.005	No	8	75	No	0.004	NP (normality)
Cadmium (mg/L)	MW-6	0.000431	0.00006	0.005	No	8	50	No	0.004	NP (normality)
Cadmium (mg/L)	MW-7	0.00109	0.0002425	0.005	No	8	0	No	0.004	NP (normality)
Cadmium (mg/L)	MW-9	0.000275	0.0001	0.005	No	8	62.5	No	0.004	NP (normality)
Cobalt (mg/L)	MW-2	0.004907	0.0004405	0.0021	No	8	0	No	0.01	Param.
Cobalt (mg/L)	MW-3	0.00025	0.0001815	0.0021	No	8	75	No	0.004	NP (normality)
Cobalt (mg/L)	MW-6	0.000691	0.00023	0.0021	No	8	62.5	No	0.004	NP (normality)
Cobalt (mg/L)	MW-7	0.000711	0.00025	0.0021	No	8	50	No	0.004	NP (normality)
Cobalt (mg/L)	MW-9	0.00401	0.000538	0.0021	No	8	0	No	0.004	NP (normality)
Copper (mg/L)	MW-7	0.0224	0.00226	1.3	No	8	62.5	No	0.004	NP (normality)
Heptachlor (ug/L)	MW-9	0.0191	0.016	0.4	No	5	80	No	0.031	NP (NDs)
Lead (mg/L)	MW-2	0.000653	0.00025	0.015	No	8	87.5	No	0.004	NP (NDs)
Lead (mg/L)	MW-7	0.0149	0.00025	0.015	No	8	87.5	No	0.004	NP (NDs)
Nickel (mg/L)	MW-2	0.0815	0.0025	0.1	No	8	25	No	0.004	NP (normality)
Nickel (mg/L)	MW-7	0.0204	0.01657	0.1	No	8	0	No	0.01	Param.
Nickel (mg/L)	MW-9	0.007592	0.004876	0.1	No	8	25	No	0.01	Param.
Selenium (mg/L)	MW-6	0.009505	0.003645	0.05	No	8	12.5	No	0.01	Param.
Sulfide (mg/L)	MW-9	6.29	0.5	1	No	8	87.5	No	0.004	NP (NDs)
Thallium (mg/L)	MW-2	0.00581	0.0005	0.002	No	8	87.5	No	0.004	NP (NDs)
Vanadium (mg/L)	MW-2	0.0025	0.00121	0.035	No	8	87.5	No	0.004	NP (NDs)
Zinc (mg/L)	MW-7	0.022	0.01	2	No	8	87.5	No	0.004	NP (NDs)

### Parametric Confidence Interval

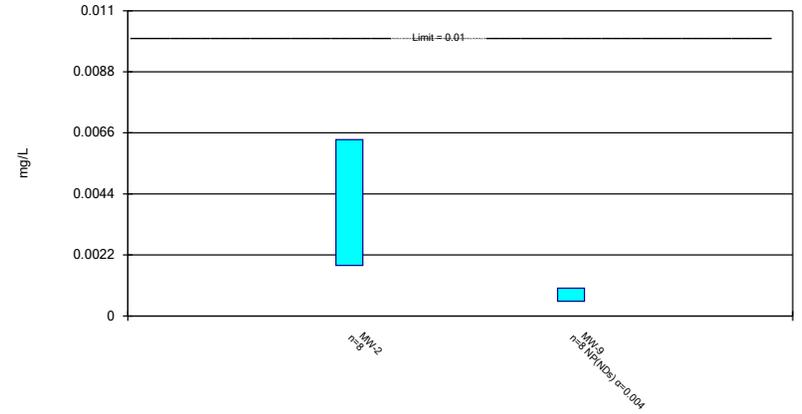
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: 4,4'-DDT Analysis Run 2/2/2026 2:40 PM View: 2025\_AWQR-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Parametric and Non-Parametric (NP) Confidence Interval

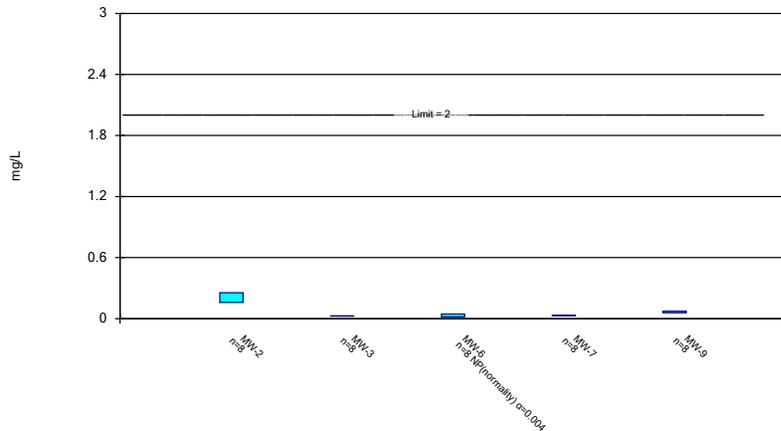
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 2/2/2026 2:40 PM View: 2025\_AWQR-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Parametric and Non-Parametric (NP) Confidence Interval

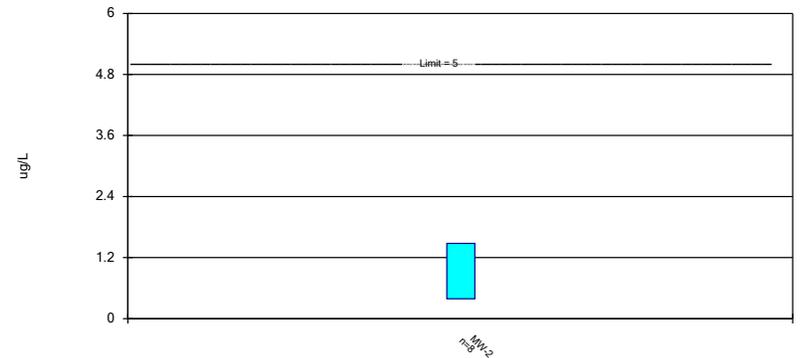
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 2/2/2026 2:40 PM View: 2025\_AWQR-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Parametric Confidence Interval

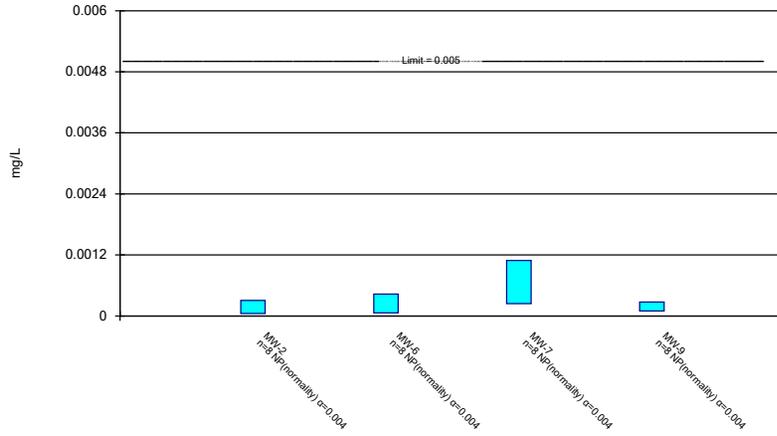
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Benzene Analysis Run 2/2/2026 2:40 PM View: 2025\_AWQR-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Non-Parametric Confidence Interval

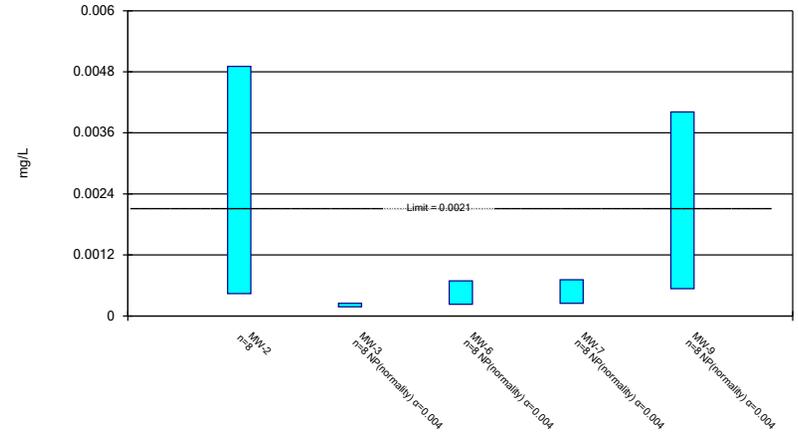
Compliance Limit is not exceeded.



Constituent: Cadmium Analysis Run 2/2/2026 2:40 PM View: 2025\_AWQR-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Parametric and Non-Parametric (NP) Confidence Interval

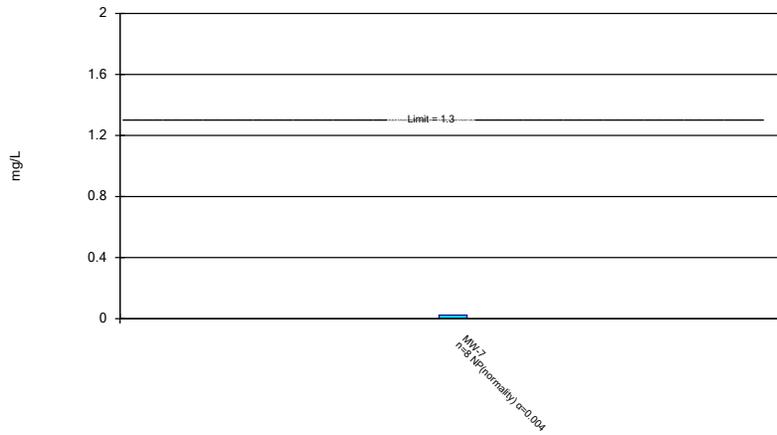
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 2/2/2026 2:40 PM View: 2025\_AWQR-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Copper Analysis Run 2/2/2026 2:40 PM View: 2025\_AWQR-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Non-Parametric Confidence Interval

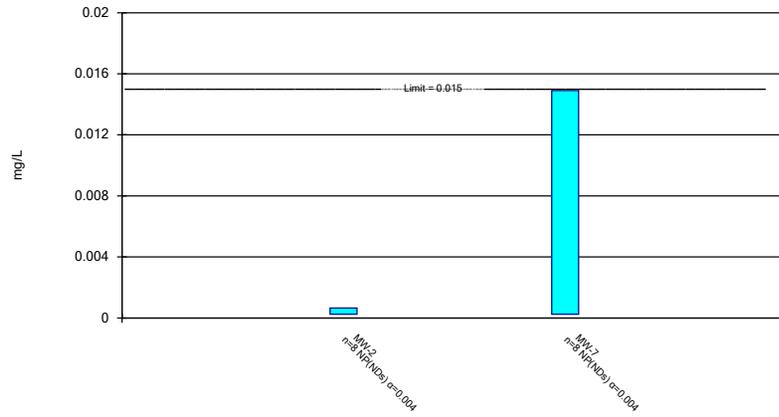
Compliance Limit is not exceeded.



Constituent: Heptachlor Analysis Run 2/2/2026 2:40 PM View: 2025\_AWQR-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Non-Parametric Confidence Interval

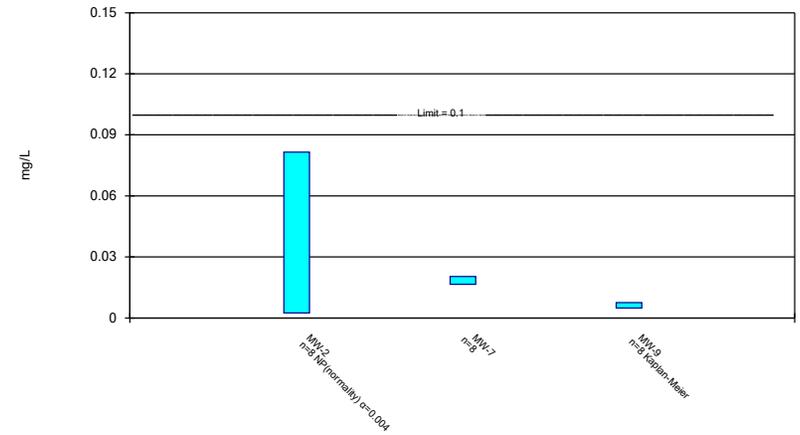
Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 2/2/2026 2:40 PM View: 2025\_AWQR-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Parametric and Non-Parametric (NP) Confidence Interval

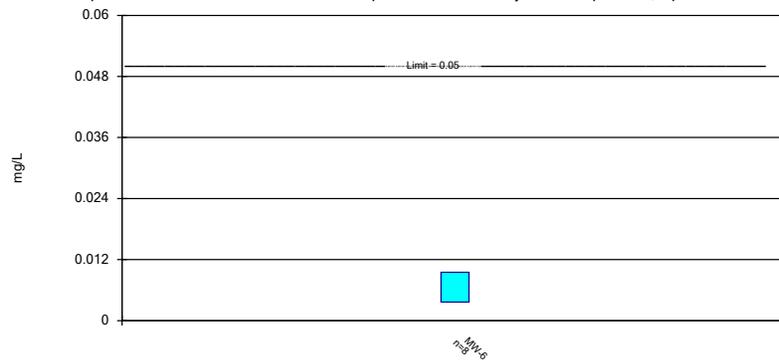
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Nickel Analysis Run 2/2/2026 2:40 PM View: 2025\_AWQR-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Parametric Confidence Interval

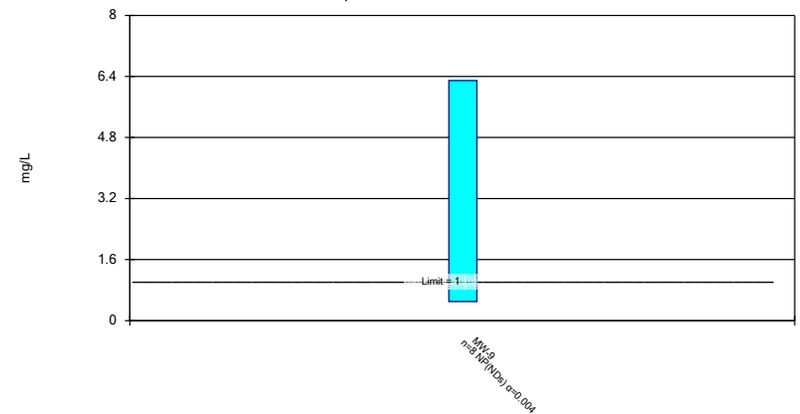
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 2/2/2026 2:40 PM View: 2025\_AWQR-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Non-Parametric Confidence Interval

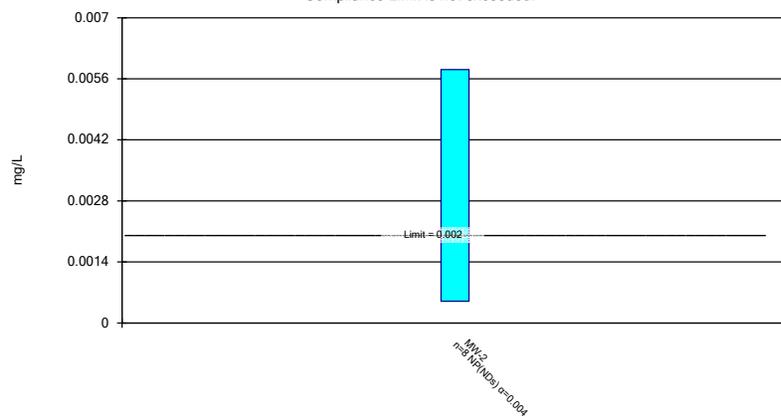
Compliance Limit is not exceeded.



Constituent: Sulfide Analysis Run 2/2/2026 2:40 PM View: 2025\_AWQR-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Non-Parametric Confidence Interval

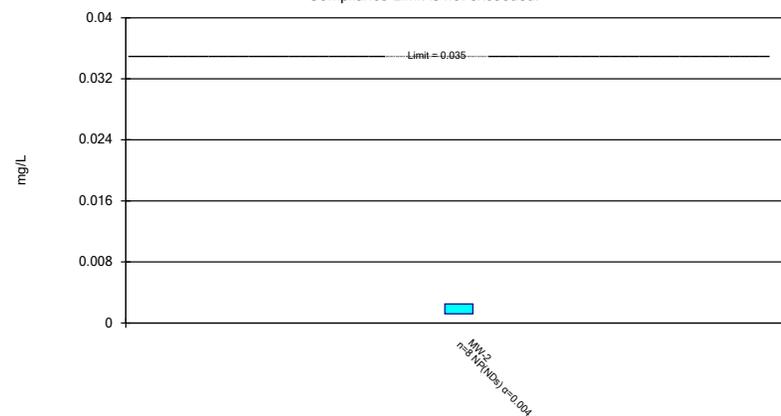
Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 2/2/2026 2:40 PM View: 2025\_AWQR-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Non-Parametric Confidence Interval

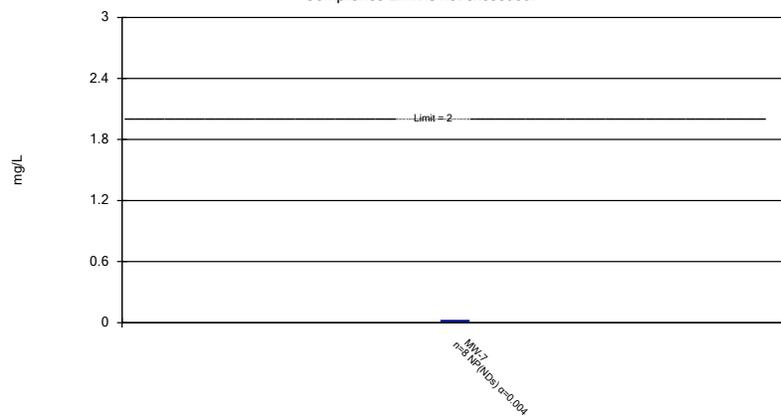
Compliance Limit is not exceeded.



Constituent: Vanadium Analysis Run 2/2/2026 2:40 PM View: 2025\_AWQR-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR

### Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Zinc Analysis Run 2/2/2026 2:40 PM View: 2025\_AWQR-Confidence\_Interval  
Adair County Sanitary Landfill Client: Adair County Data: ADAIR\_AM\_2025\_AWQR



## Appendix E

# 2025 Leachate Control System Performance Evaluation Report

# Adair County Sanitary Landfill - 2025 Leachate Control System Performance Evaluation Report

Adair County Landfill and Recycling Center Commission  
1645 State Highway #25  
Menlo, IA 50164

**SCS ENGINEERS**

Project No. 27224370.26 | February 2026

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

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## 1.0 DESCRIPTION OF SYSTEM

The Adair County Sanitary Landfill and Recycling Center Commission owns and maintains the closed Adair County Sanitary Landfill (Site) in addition to the recycling center and transfer station located on site. This report was prepared to meet the requirements of Iowa Administrative Code (IAC) 567-113.7(5)b.(14) and covers the period of January through December 2025.

The Site consists of both a lined area (Phase 1 Cell) and an unlined area. According to the Development and Operational Plans and Specifications by Fox Engineering and Turkle-Clark Environmental Consulting dated December 2006 and approved in the Permit Renewal Application dated December 13, 2006 (Doc #37656), the leachate collection system for the Phase 1 Cell includes a Subtitle D-compliant alternative liner design consisting of a 4-foot thick layer of clay compacted to achieve a maximum hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec, overlain by a 1-foot-thick layer of drainage media consisting of sand with a minimum permeability of  $1 \times 10^{-3}$  cm/sec. A perforated collection pipe collects leachate and conveys it to a solid pipe, which discharges the leachate to the leachate lagoon. A leachate piezometer is located at the downgradient boundary of the Phase 1 Cell and is designated LPZ, with no number (see Figure 1). The Phase 1 Cell was closed in 2012. During closure construction activities, leachate piezometer LPZ was replaced and constructed in a toe drain trench. According to the closure plans outlined in Division 2, Section 2000 – Technical Provisions of the Adair County Sanitary Landfill 2012 Landfill Closure Bid Package, the contractor shall commence excavation at LPZ’s aggregate backfill at the base of the Cell and extend 25 feet north and south. The toe drain trench shall be two linear feet wide, and the maximum excavation depth shall be 14 feet, with an average depth of 8 to 10 feet. The top of casing elevation and total depth of the newly installed leachate piezometer were not documented by the contractor. Photo documentation in Attachment G of the Construction Observation Report 2012 Landfill Closure dated November 30, 2012 (Doc #75157) shows the new leachate piezometer being installed in the toe drain trench in aggregate backfill; however, the elevation of the base of the piezometer casing and the screened interval elevations are unknown.

The unlined area of the Adair County Sanitary Landfill is located to the south of the Phase 1 Cell. Construction of the final cover, toe drain, and leachate storage lagoon was completed in the second half of 2009. Leachate wells LW-1, LW-6, LW-7, and extraction well EW-1 are the piezometers associated with this area.

## 2.0 MAINTENANCE OF LEACHATE CONTROL SYSTEM

The leachate lateral and main lines to the leachate lagoon were cleaned and inspected in April 2024. No issues were noted during this reporting period. The next cleaning is currently scheduled to take place during the 2027 reporting period. No other maintenance was required or performed on the leachate control system during this reporting period.

## 3.0 COMPLIANCE AND TRENDS OF LEACHATE HEAD LEVELS

**Table 12** provides an overall site summary for leachate management during this reporting period, including head levels, volume of leachate treated, and precipitation for the City of Atlantic (nearest historical data available). A summary table and graphs showing historical leachate head levels in the monitoring points are also included in **Attachment A**. A review of these graphs with data available since 2010 shows that the 2025 reporting period liquid levels were within the historical range for each measurement point.

Liquid levels in LW-1, LW-6, LW-7, and EW-1 are over the unlined area, where the requirement is to achieve the lowest possible leachate head above the landfill liner (landfill base). Leachate piezometer LPZ (Phase 1 Cell) is over the lined cell with the requirement of remaining below 12 inches of head.

Levels in LPZ were elevated above 12 inches during this reporting period. It was noted that a sudden change in fluid levels in all the measurement points occurred abruptly beginning in January 2021. This coincides directly with a change in responsibility for the measurement of leachate levels at the Landfill. On April 10, 2024, SCS performed a joint measurement event with Landfill staff to ensure accurate measurement techniques were being performed. Following the joint measurement event, leachate lines were jetted on April 15, 2024. The leachate head levels were unchanged following leachate line jetting. In April 2025, SCS used a bailer to confirm the liquid column thickness in the piezometer, purge the liquid in the piezometer, and determine if there is any liquid recharge in the piezometer following purging. The liquid measurement in May 2025 showed that the leachate recharged to the same level before purging of 1.2 feet. Since the monthly leachate levels measured 1.2 feet consistently in 2024 and 2025, further investigation into the piezometer's construction was performed. During closure construction activities, leachate piezometer LPZ was replaced and constructed in a toe drain trench. According to the closure plans in Division 2, Section 2000 – Technical Provisions of the Adair County Sanitary Landfill 2012 Landfill Closure Bid Package, the contractor shall commence excavation at LPZ's aggregate backfill at the base of the Cell and extend 25 feet north and south. The toe drain trench shall be two linear feet wide, and the maximum excavation depth shall be 14 feet, with an average depth of 8 to 10 feet. The top of casing elevation and total depth of the newly installed leachate piezometer were not documented by the contractor. Photo documentation in Attachment G of the Construction Observation Report 2012 Landfill Closure dated November 30, 2012 (Doc #75157) shows the new leachate piezometer being installed in the toe drain trench in aggregate backfill; however, the elevation of the base of the piezometer casing and the screened interval elevations are unknown. Based on these findings, it appears that the base of the new leachate piezometer was installed below the liner of Phase 1 Cell and that approximately 1.2 feet of fluid thickness remains in the toe drain trench aggregate consistently until it reaches the elevation of the perforated toe drain pipe and discharges to the lagoon. Further evaluation will occur if fluid levels begin to increase to greater than 1.2 feet.

Based on the semi-annual inspection reports, Site staff have continued to maintain stormwater controls and perform cap maintenance and seeding as required. These efforts assist in the performance of the landfill cover to keep storm water moving off the closed landfill areas.

### **3.1 IMPACT OF RAINFALL QUANTITY**

No effect was observed on leachate head levels due to the listed precipitation quantity included in **Table 12**. Please note that the precipitation levels were obtained from the Iowa State University Mesonet for Atlantic, IA. Actual amounts at the Site could vary, but there is no indication in the information presented that further investigation is warranted at this time.

### **4.0 ADEQUACY OF LEACHATE STORAGE VOLUME**

The leachate lagoon on site has an approximate operating capacity of 500,000 gallons. Based on observations and quantities of leachate hauled, the operating capacity of the leachate lagoon provides adequate storage capacity on site.

## **5.0 LEACHATE RECIRCULATION AREA**

Leachate recirculation does not occur at this site.

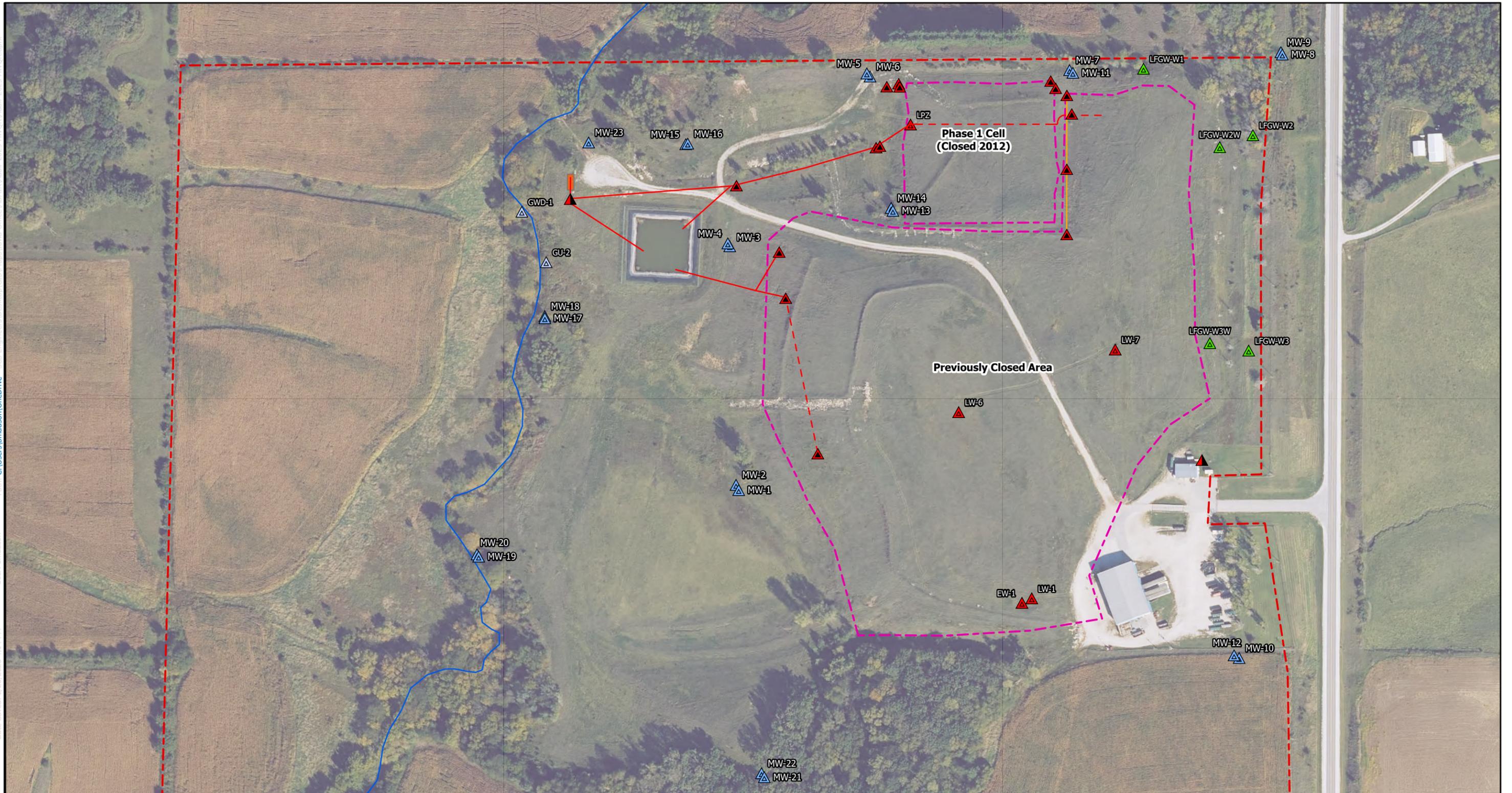
## **6.0 APPROVED POTW UTILIZATION**

The Adair County Sanitary Landfill and Recycling Center Commission has established a leachate treatment agreement with the City of Greenfield Publicly Owned Treatment Works (POTW). Site staff haul leachate to the Greenfield POTW on an as-needed basis. As seen in **Table 12**, approximately 46,198 gallons of leachate were hauled for treatment during this reporting period. The required annual leachate sample was collected in September 2025 by SCS Engineers and analytical data is included in **Appendix B**.

## **7.0 RECOMMENDED CHANGES TO THE LEACHATE COLLECTION SYSTEM**

There are no recommended changes to the leachate collection system at this time.

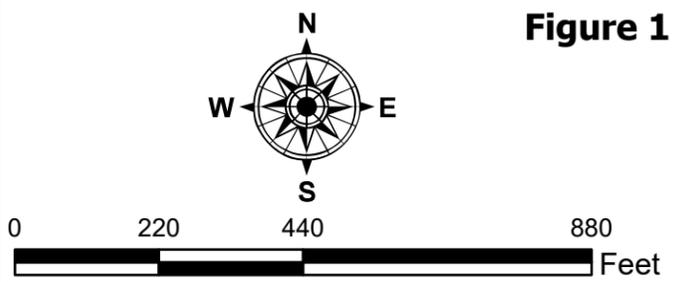
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 User: bmadson  
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## Leachate Control System

Legend					
	Leachate Monitoring Point		Perforated Leachate Pipe		Stream
	Cleanout		Leachate Storage Tank		Approximate Waste Boundary
	Manhole		Landfill Gas Monitoring Well		Approximate Property Boundary
	Seep Repair Pipe		Groundwater Underdrain Monitoring Point		
	Solid Leachate Pipe		Monitoring Well		

Adair County Sanitary Landfill  
 Adair, IA  
 Project No: 27224370.26  
 Drawing Date: February 2026



Sources: Esri, DeLorme, Garmin, Intel, NOAA, USGS, OpenStreetMap contributors, and the GIS User Community, Esri, CGIA, USGS, USIA, USIA, Iowa State University GIS Facility

**Table 12**  
**Leachate Management Summary**  
**2025 Leachate Control System Performance Evaluation Report**  
**Adair County Sanitary Landfill (Closed)**  
**Permit No. 01-SDP-01-74C**

Month	Maximum Head on Liner <sup>(1)</sup> (ft)					Discharged to City of Greenfield POTW <sup>(1)</sup> (gal)	Precipitation <sup>(2)</sup> (in)
	LW-1	LW-6	LW-7	EW-1	LPZ (Lined Cell)		
January 2025	17.4	0.8	22.7	15.5	1.2	0	0.00
February 2025	17.3	0.8	22.5	15.3	1.2	0	0.00
March 2025	17.1	0.8	22.3	15.2	1.2	0	1.14
April 2025	18.2	1.0	22.7	15.9	1.2	0	3.85
May 2025 <sup>(3)</sup>	17.8	0.8	22.6	15.7	1.2	2,948	1.78
June 2025	17.4	1.1	22.9	15.6	1.2	0	5.30
July 2025 <sup>(3)</sup>	17.2	0.7	22.5	15.4	1.2	1,464	6.55
August 2025	18.3	1.2	23.7	16.9	1.2	27,815	2.88
September 2025	17.6	1.1	23.4	16.1	1.2	12,475	1.19
October 2025	17.9	1.3	23.7	16.4	1.2	1,496	1.85
November 2025 <sup>(4)</sup>	NM	NM	NM	NM	NM	0	0.70
December 2025	18.0	1.3	23.6	16.2	1.2	0	0.23
<b>January 2025 - December 2025 Totals</b>						<b>46,198</b>	<b>25.47</b>

Table Notes

<sup>(1)</sup> Gallons of leachate discharged and monthly leachate level measurements provided by Adair County Landfill staff.

<sup>(2)</sup> Precipitation data for January 2025 - December 2025 obtained from [https://mesonet.agron.iastate.edu/ASOS/reports/mon\\_prec.php](https://mesonet.agron.iastate.edu/ASOS/reports/mon_prec.php)  
2025, Atlantic, Iowa

<sup>(3)</sup> Monthly leachate measurement collected in the first week of the following month.

<sup>(4)</sup> Monthly leachate measurement was inadvertently missed.

## Appendix A

### Historical Leachate Head Levels Table and Chart

**Historical Leachate Head Levels  
Adair County Sanitary Landfill**

	Leachate Piezometer				
	LW-1	LW-6	LW-7	EW-1	LPZ (New Cell)
<b>Piezometer Depth</b>	39.95	52.40	37.70	31.75	23.20
<b>Date</b>					
1/12/2006	17.6	NI	NI	15.9	NA
6/10/2008	20.0	NI	NI	NA	7.2
9/5/2008	18.6	NI	NI	NA	3.5
4/13/2009	18.9	NI	NI	16.8	NA
8/31/2009	19.4	NI	NI	17.9	NA
1/10/2010	20.1	NI	NI	12.7	3.0
2/5/2010	20.3	NI	NI	24.1	2.0
3/15/2010	20.8	NI	NI	23.7	1.0
4/21/2010	20.3	NI	NI	20.4	1.0
5/18/2010	20.8	NI	NI	20.4	1.0
6/17/2010	20.1	NI	NI	20.7	1.0
7/21/2010	20.0	NI	NI	20.7	1.0
8/21/2010	19.9	NI	NI	20.7	1.0
9/13/2010	20.3	NI	NI	20.7	1.2
10/18/2010	20.3	NI	NI	20.8	1.2
11/19/2010	20.1	NI	NI	20.7	1.0
12/21/2010	20.3	NI	NI	20.3	2.8
1/22/2011	15.7	NI	NI	20.1	3.0
2/16/2011	15.3	NI	NI	20.7	2.8
3/16/2011	15.6	NI	NI	20.7	2.8
4/21/2011	14.6	NI	NI	19.6	2.2
5/18/2011	14.3	NI	NI	19.5	2.0
6/14/2011	14.3	NI	NI	19.7	1.9
7/21/2011	14.7	NI	NI	20.7	2.8
8/18/2011	14.8	NI	NI	20.8	3.0
9/22/2011	14.7	NI	NI	20.9	3.1
10/21/2011	14.6	NI	NI	20.7	3.0
11/17/2011	14.8	NI	NI	20.5	3.4
12/5/2011	14.6	NI	NI	20.7	3.4
1/7/2012	14.7	NI	NI	NA	2.8
2/29/2012	14.7	NI	NI	19.7	5.0
3/14/2012	14.8	NI	NI	19.5	4.8
4/17/2012	14.8	NI	NI	19.7	4.5
5/22/2012	14.5	NI	NI	19.4	0.0
6/18/2012	14.8	NI	NI	19.9	0.0
7/10/2012	15.0	NI	NI	12.0	2.0
8/5/2012	14.8	NI	NI	20.5	2.0
9/11/2012	15.0	NI	NI	20.7	1.5
10/4/2012	16.8	NI	NI	21.7	1.0
11/21/2012	18.8	NI	NI	21.7	2.8
12/15/2012	18.6	NI	NI	21.5	2.2
1/16/2013	18.8	NI	NI	21.7	2.0
2/19/2013	19.2	NI	NI	21.5	1.9
3/15/2013	19.6	NI	NI	21.7	0.1
4/30/2013	19.0	NI	NI	20.8	3.0
6/21/2013	14.8	7.2	22.8	19.0	0.1
7/19/2013	14.8	7.3	22.4	18.8	0.2
8/26/2013	15.6	8.2	23.0	19.7	0.1
9/17/2013	14.3	5.9	22.7	18.7	0.2
10/17/2013	14.4	5.8	22.0	18.7	0.2
11/21/2013	14.1	5.6	21.9	18.7	0.1
12/20/2013	14.4	5.8	22.0	18.7	0.1

**Historical Leachate Head Levels  
Adair County Sanitary Landfill**

	Leachate Piezometer				
	LW-1	LW-6	LW-7	EW-1	LPZ (New Cell)
<b>Piezometer Depth</b>	39.95	52.40	37.70	31.75	23.20
<b>Date</b>					
1/15/2014	14.0	5.0	21.8	18.5	0.1
2/18/2014	13.8	5.2	22.0	18.3	0.0
3/20/2014	13.7	5.4	22.6	18.7	0.2
4/15/2014	13.0	5.2	22.2	18.1	0.4
5/15/2014	12.8	4.2	21.8	17.7	0.3
6/5/2014	12.7	4.0	21.6	17.3	0.5
7/16/2014	12.8	4.2	21.8	17.5	0.6
8/20/2014	12.4	3.6	21.6	17.7	0.6
9/16/2014	12.2	3.4	21.4	17.5	0.6
10/1/2014	11.8	3.2	21.2	17.3	0.5
11/9/2014	15.5	5.2	23.6	19.7	0.2
12/15/2014	15.6	5.2	23.8	19.7	0.2
1/15/2015	15.6	4.9	23.6	19.7	0.2
2/12/2015	15.6	4.8	23.6	19.5	0.2
3/17/2015	15.5	4.2	22.8	19.3	0.2
4/28/2015	14.1	Dry	21.6	18.3	0.2
5/15/2015	14.1	Dry	22.8	17.7	0.2
6/16/2015	14.2	Dry	22.8	17.7	0.2
7/15/2015	14.2	Dry	22.7	17.7	0.2
8/4/2015	14.1	1.2	1.8	0.8	0.1
9/17/2015	1.0	1.1	1.1	1.2	0.2
10/22/2015	1.0	1.1	1.1	1.2	0.2
11/5/2015	1.0	1.1	0.9	1.1	0.4
12/18/2015	15.1	5.2	22.8	19.0	0.2
1/20/2016	14.8	4.9	22.8	0.7	0.4
2/16/2016	14.8	5.1	22.5	0.7	0.3
3/17/2016	14.6	5.2	22.6	0.0	0.4
4/22/2016	14.6	5.2	22.3	0.7	0.4
5/11/2016	14.4	5.0	22.4	12.7	0.6
6/13/2016	14.0	5.2	23.0	17.7	0.4
7/20/2016	13.9	4.9	23.2	16.7	0.5
8/19/2016	14.0	4.8	23.0	18.7	0.3
9/20/2016	14.8	5.2	23.5	19.1	0.2
10/19/2016	14.7	5.2	23.5	18.9	0.3
11/17/2016	14.5	5.2	23.5	18.8	0.4
12/14/2016	14.8	5.2	23.6	18.7	0.2
1/11/2017	14.4	4.2	23.3	18.9	0.4
2/14/2017	14.3	3.8	22.8	18.8	0.2
3/14/2017	13.8	3.7	22.7	18.8	0.3
4/12/2017	13.4	3.4	22.0	19.1	0.2
5/17/2017	13.2	4.1	22.7	18.9	0.1
6/22/2017	13.3	4.0	21.9	18.8	0.3
7/20/2017	13.2	3.3	22.2	19.0	0.4
8/24/2017	13.4	3.6	22.3	18.7	0.3
9/2/2017	13.8	4.2	22.0	18.5	0.4
10/23/2017	13.6	4.1	21.8	18.3	0.3
11/17/2017	14.5	5.2	23.5	18.8	0.4
12/14/2017	14.8	5.2	23.6	18.7	0.2

**Historical Leachate Head Levels  
Adair County Sanitary Landfill**

	Leachate Piezometer				
	LW-1	LW-6	LW-7	EW-1	LPZ (New Cell)
<b>Piezometer Depth</b>	39.95	52.40	37.70	31.75	23.20
<b>Date</b>					
1/10/2018	13.3	4.0	22.0	18.8	0.2
2/13/2018	10.4	4.2	21.8	18.7	0.1
3/14/2018	13.5	4.0	22.0	18.8	0.2
4/11/2018	13.4	4.1	22.0	18.9	0.3
5/8/2018	13.3	3.9	22.2	19.1	0.1
6/5/2018	13.2	4.1	22.0	19.0	0.4
7/17/2018	13.1	4.0	22.2	19.0	0.3
8/16/2018	12.9	3.8	22.2	19.0	0.4
9/4/2018	12.8	3.5	22.0	18.8	0.2
10/11/2018	12.7	3.2	22.2	18.9	0.4
11/20/2018	12.6	3.0	22.2	19.0	0.6
12/3/2018	12.5	3.2	22.4	19.0	0.7
1/10/2019	13.2	4.0	22.2	19.1	0.4
2/15/2019	13.2	4.0	22.2	19.1	0.4
3/13/2019	12.9	3.7	22.0	18.9	0.5
4/10/2019	13.3	3.9	22.3	19.0	0.4
5/15/2019	13.3	3.9	22.4	19.2	0.6
6/20/2019	13.2	4.0	22.2	19.1	0.4
7/18/2019	12.9	3.7	22.0	18.9	0.5
8/14/2019	13.0	3.8	22.2	19.0	0.6
9/12/2019	13.0	3.9	22.1	18.9	0.7
10/17/2019	13.0	3.8	22.0	18.9	0.5
11/4/2019	13.2	4.0	22.2	19.1	0.4
12/3/2019	13.8	3.9	21.9	19.2	0.4
1/9/2020	13.0	3.9	22.4	19.2	0.6
2/18/2020	12.9	3.7	22.7	19.5	0.4
3/12/2020	13.6	3.9	22.7	0.6	0.7
4/15/2020	13.4	3.8	22.6	19.3	0.5
5/13/2020	13.2	4.2	22.3	19.3	0.6
6/9/2020	12.9	4.0	22.7	19.1	0.5
7/7/2020	13.0	3.9	22.4	19.2	0.4
8/11/2020	13.6	4.1	22.8	19.0	0.3
9/10/2020	13.8	4.3	22.6	19.2	0.4
10/28/2020	13.97	5.4	NI	18.5	NA
11/23/2020	12.6	5.2	22.5	18.1	Dry
12/10/2020	12.1	4.6	2.1	16.9	Dry
1/28/2021	17.9	0.4	16.7	16.1	1.9
2/12/2021	18.0	0.5	17.0	14.4	2.0
3/18/2021	18.9	0.8	18.0	16.0	2.1
4/14/2021	18.9	0.8	17.9	16.0	2.1
5/25/2021	18.3	0.8	17.9	15.9	2.1
6/3/2021	18.2	0.7	17.9	15.8	2.1
7/14/2021	18.3	0.8	17.8	15.8	2.2
8/11/2021	18.3	0.8	17.8	15.8	2.2
9/27/2021	18.0	0.8	17.7	17.2	2.1
10/12/2021	18.1	0.8	17.7	17.2	2.1
11/23/2021	18.2	0.8	17.7	17.3	1.6
12/3/2021	18.2	0.8	17.7	17.3	1.6

**Historical Leachate Head Levels  
Adair County Sanitary Landfill**

	Leachate Piezometer				
	LW-1	LW-6	LW-7	EW-1	LPZ (New Cell)
<b>Piezometer Depth</b>	39.95	52.40	37.70	31.75	23.20
<b>Date</b>					
1/31/2022	17.9	0.8	16.9	15.8	2.7
2/17/2022	18.0	0.8	16.8	15.8	2.7
3/22/2022	18.0	0.8	16.8	15.8	2.7
4/25/2022	18.0	0.8	16.8	15.8	2.7
5/12/2022	18.4	0.8	16.9	16.9	2.6
6/21/2022	18.5	0.7	17.8	16.9	2.6
7/18/2022	18.4	0.8	17.9	16.9	2.6
8/29/2022	18.3	0.9	18.0	17.0	2.7
9/13/2022	18.3	0.9	18.0	17.0	2.7
10/28/2022	17.6	0.6	17.8	16.7	2.3
11/11/2022	17.6	0.6	18.3	16.8	2.4
12/5/2022	17.6	0.6	17.8	16.8	2.4
1/20/2023	17.7	0.6	17.9	16.7	2.4
2/23/2023	17.6	0.7	17.8	16.7	2.4
3/21/2023	17.8	0.8	17.7	16.7	2.5
4/27/2023	18.3	0.9	17.5	16.5	2.6
5/24/2023	18.3	0.9	17.5	16.5	2.6
6/15/2023	18.0	0.7	15.2	15.9	2.6
7/26/2023	18.0	0.8	17.6	16.5	2.6
8/30/2023	18.1	0.7	17.8	16.6	3.1
9/25/2023	18.1	0.8	17.8	16.4	2.7
10/30/2023	17.6	1.2	17.4	16.1	2.5
11/29/2023	17.5	0.7	17.3	16.0	2.6
12/21/2023	17.3	1.0	17.1	15.6	2.7
1/30/2024	17.2	0.6	22.2	15.6	1.2
2/27/2024	18.0	0.7	22.5	16.4	1.2
3/28/2024	17.7	0.8	22.5	15.8	1.2
4/29/2024	17.7	0.7	22.6	16.0	1.2
6/4/2024	18.4	0.7	22.9	16.7	1.2
6/27/2024	18.3	0.7	23.2	16.6	1.2
7/31/2024	18.6	0.7	23.4	17.0	1.2
9/3/2024	18.1	0.6	23.1	16.6	1.2
9/25/2024	18.0	0.6	23.2	16.3	1.2
10/30/2024	17.4	0.7	22.9	15.9	1.2
12/2/2024	18.0	0.7	23.0	16.2	1.2

**Historical Leachate Head Levels  
Adair County Sanitary Landfill**

	Leachate Piezometer				
	LW-1	LW-6	LW-7	EW-1	LPZ (New Cell)
<b>Piezometer Depth</b>	39.95	52.40	37.70	31.75	23.20
<b>Date</b>					
1/29/2025	17.4	0.8	22.7	15.5	1.2
2/25/2025	17.3	0.8	22.5	15.3	1.2
3/26/2025	17.1	0.8	22.3	15.2	1.2
4/30/2025	18.2	1.0	22.7	15.9	1.2
6/4/2025	17.8	0.8	22.6	15.7	1.2
6/23/2025	17.4	1.1	22.9	15.6	1.2
8/8/2025	17.2	0.7	22.5	15.4	1.2
8/29/2025	18.3	1.2	23.7	16.9	1.2
9/24/2025	17.6	1.1	23.4	16.1	1.2
10/31/2025	17.9	1.3	23.7	16.4	1.2
12/24/2025	18.0	1.3	23.6	16.2	1.2

General Notes:

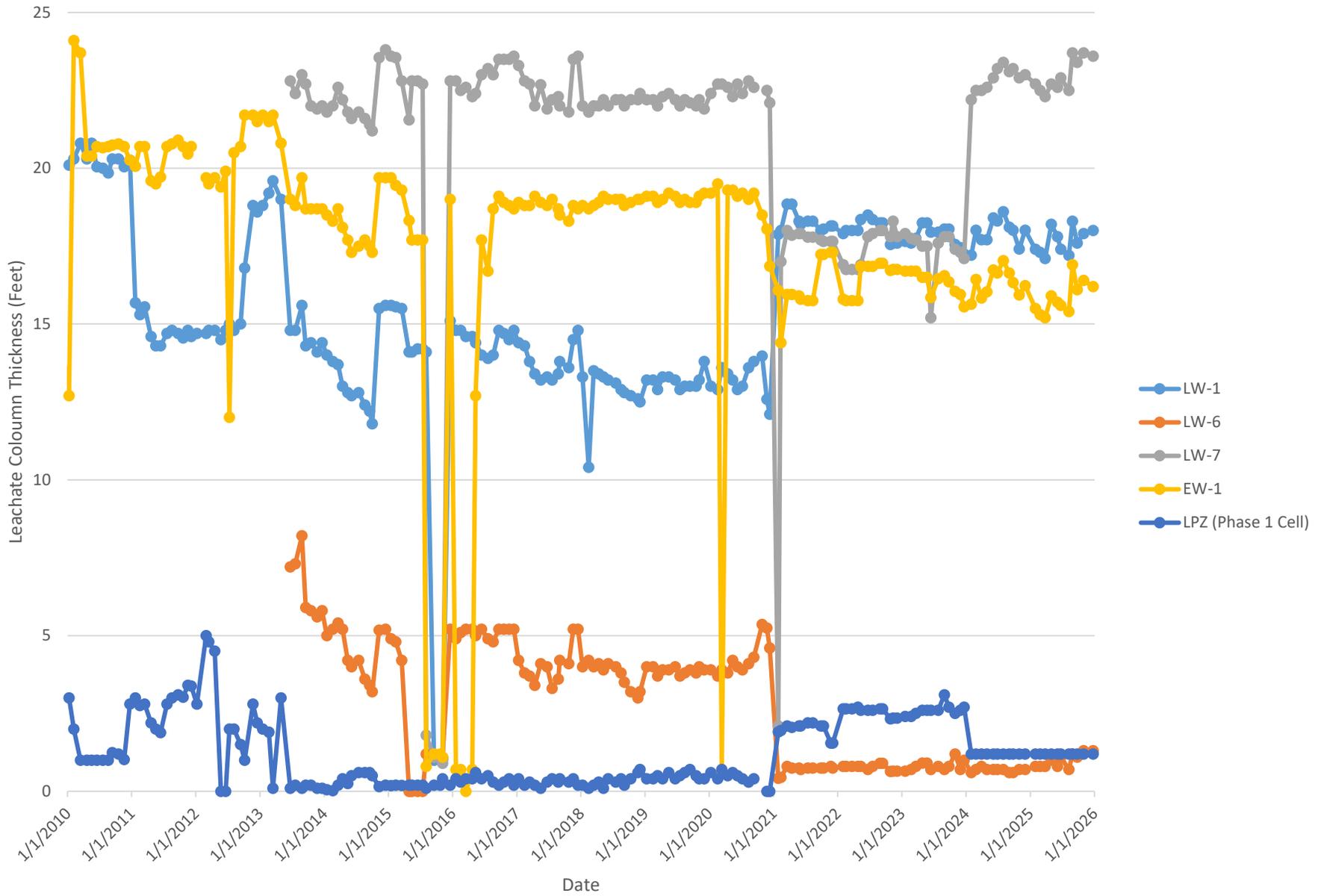
NM = Not Measured.

NI = Not Installed or Not Included.

NA = Not Available.

1. January 12, 2006 measurements conducted by Fox Engineering.
2. June 6, 2008 through August 31, 2009 measurements were conducted by Barker Lemar Engineering Consultants.
3. January 10, 2010 through September 2020 measurements were conducted by Adair County Sanitary Landfill staff.
4. October through December 2020 measurements were conducted by SCS Engineers.
5. January 2021 through December 2025 measurements were conducted by Adair County Sanitary Landfill staff.
6. LW-2, LW-3, and LW-4 were kinked or damaged sometime in 2010 resulting in inaccurate measurements and subsequently abandoned on 5/16/2013. These points are no longer shown in this summary table.
7. LW-6 and LW-7 were installed on May 16, 2013.

### Historical Leachate Columns





Appendix B  
2025 Leachate Analytical Report



# ANALYTICAL REPORT

## PREPARED FOR

Attn: DJ Luhrs  
Adair County Sanitary Landfill  
1645 State Hwy 25  
Menlo, Iowa 50164

Generated 10/6/2025 3:54:19 PM

## JOB DESCRIPTION

Adair Co Sanitary Landfill Leachate

## JOB NUMBER

310-316243-1

# 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: Adair County Sanitary Landfill  
Project: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

**Job ID: 310-316243-1**

**Eurofins Cedar Falls**

## Job Narrative 310-316243-1

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 9/22/2025 4:05 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 1.8°C.

### GC/MS VOA

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

### GC/MS Semi VOA

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

### PCBs

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

### Pesticides

Method 608.3\_Pest\_PREC: The continuing calibration verification (CCV) associated with batch 310-468779 recovered above the upper control limit for 4,4'-DDT. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 608.3\_Pest\_PREC: RT for the LCS and LCSD were slightly outside the RT windows. This is suspected to be due to a poor solvent exchange, as the closing CCV met all RT criteria.

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

### Metals

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

### General Chemistry

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

Eurofins Cedar Falls

# Sample Summary

Client: Adair County Sanitary Landfill  
Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-316243-1	Leachate	Water	09/22/25 12:20	09/22/25 16:05	Iowa
310-316243-2	Field Blank LL HHg	Water	09/22/25 12:20	09/22/25 16:05	Iowa

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

## Detection Summary

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

### Client Sample ID: Leachate

### Lab Sample ID: 310-316243-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.00128		0.000500	0.000200	ug/L	1		1631E	Total/NA
Arsenic	0.00137	J	0.00200	0.000530	mg/L	1		200.8	Total/NA
Barium	0.0566		0.00200	0.000660	mg/L	1		200.8	Total/NA
Iron	0.604		0.100	0.0500	mg/L	1		200.8	Total/NA
Nickel	0.00427	J	0.00500	0.00230	mg/L	1		200.8	Total/NA
Ammonia as N	1.85		0.500	0.120	mg/L	1		350.1	Total/NA
Nitrogen, Kjeldahl	3.67		1.00	0.620	mg/L	1		351.2	Total/NA
Total Suspended Solids	41.0		15.0	10.5	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	950		250	180	mg/L	1		SM 2540C	Total/NA
pH	7.9	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Biochemical Oxygen Demand	3.70		3.00	3.00	mg/L	1		SM 5210B	Total/NA
Total Organic Carbon	57.6	B	40.0	20.0	mg/L	40		SM 5310C	Total/NA

### Client Sample ID: Field Blank LL HHg

### Lab Sample ID: 310-316243-2

No Detections.

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

**Client Sample ID: Leachate**

**Lab Sample ID: 310-316243-1**

Date Collected: 09/22/25 12:20

Matrix: Water

Date Received: 09/22/25 16:05

**Method: EPA 624.1 - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			09/23/25 19:40	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			09/23/25 19:40	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			09/23/25 19:40	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			09/23/25 19:40	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			09/23/25 19:40	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			09/23/25 19:40	1
1,2-Dichloroethene, Total	<1.00		1.00	0.270	ug/L			09/23/25 19:40	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			09/23/25 19:40	1
1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			09/23/25 19:40	1
2-Chloroethyl vinyl ether	<2.00		2.00	1.70	ug/L			09/23/25 19:40	1
Benzene	<0.500		0.500	0.220	ug/L			09/23/25 19:40	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			09/23/25 19:40	1
Bromoform	<5.00		5.00	0.780	ug/L			09/23/25 19:40	1
Bromomethane	<4.00		4.00	1.10	ug/L			09/23/25 19:40	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			09/23/25 19:40	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			09/23/25 19:40	1
Dibromochloromethane	<5.00		5.00	0.750	ug/L			09/23/25 19:40	1
Chloroethane	<4.00		4.00	0.790	ug/L			09/23/25 19:40	1
Chloroform	<3.00		3.00	1.30	ug/L			09/23/25 19:40	1
Chloromethane	<3.00		3.00	0.610	ug/L			09/23/25 19:40	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			09/23/25 19:40	1
Methylene chloride	<5.00		5.00	1.70	ug/L			09/23/25 19:40	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			09/23/25 19:40	1
Toluene	<1.00		1.00	0.430	ug/L			09/23/25 19:40	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			09/23/25 19:40	1
Trichloroethylene	<1.00		1.00	0.430	ug/L			09/23/25 19:40	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			09/23/25 19:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	97		76 - 130		09/23/25 19:40	1
Toluene-d8 (Surr)	101		80 - 120		09/23/25 19:40	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/23/25 19:40	1

**Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<9.62		9.62	0.538	ug/L		09/24/25 09:30	10/03/25 00:38	1
1,2-Dichlorobenzene	<9.62		9.62	0.596	ug/L		09/24/25 09:30	10/03/25 00:38	1
1,3-Dichlorobenzene	<9.62		9.62	0.615	ug/L		09/24/25 09:30	10/03/25 00:38	1
1,4-Dichlorobenzene	<9.62		9.62	0.615	ug/L		09/24/25 09:30	10/03/25 00:38	1
2,4,5-Trichlorophenol	<9.62		9.62	5.10	ug/L		09/24/25 09:30	10/03/25 00:38	1
2,4,6-Trichlorophenol	<9.62		9.62	4.81	ug/L		09/24/25 09:30	10/03/25 00:38	1
2,4-Dichlorophenol	<9.62		9.62	0.817	ug/L		09/24/25 09:30	10/03/25 00:38	1
2,4-Dimethylphenol	<9.62		9.62	0.558	ug/L		09/24/25 09:30	10/03/25 00:38	1
2,4-Dinitrophenol	<19.2		19.2	12.5	ug/L		09/24/25 09:30	10/03/25 00:38	1
2,4-Dinitrotoluene	<9.62		9.62	6.15	ug/L		09/24/25 09:30	10/03/25 00:38	1
2,6-Dinitrotoluene	<9.62		9.62	0.500	ug/L		09/24/25 09:30	10/03/25 00:38	1
2-Chloronaphthalene	<9.62		9.62	0.615	ug/L		09/24/25 09:30	10/03/25 00:38	1
2-Chlorophenol	<9.62		9.62	0.519	ug/L		09/24/25 09:30	10/03/25 00:38	1
2-Nitrophenol	<9.62		9.62	6.54	ug/L		09/24/25 09:30	10/03/25 00:38	1
3,3'-Dichlorobenzidine	<9.62		9.62	1.35	ug/L		09/24/25 09:30	10/03/25 00:38	1

Eurofins Cedar Falls

# Client Sample Results

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

**Client Sample ID: Leachate**

**Lab Sample ID: 310-316243-1**

Date Collected: 09/22/25 12:20

Matrix: Water

Date Received: 09/22/25 16:05

**Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	<9.62		9.62	6.63	ug/L		09/24/25 09:30	10/03/25 00:38	1
4-Bromophenyl phenyl ether	<9.62		9.62	0.673	ug/L		09/24/25 09:30	10/03/25 00:38	1
4-Chloro-3-methylphenol	<9.62		9.62	0.808	ug/L		09/24/25 09:30	10/03/25 00:38	1
4-Chlorophenyl phenyl ether	<9.62		9.62	0.663	ug/L		09/24/25 09:30	10/03/25 00:38	1
4-Nitrophenol	<9.62		9.62	7.31	ug/L		09/24/25 09:30	10/03/25 00:38	1
Acenaphthene	<9.62		9.62	0.615	ug/L		09/24/25 09:30	10/03/25 00:38	1
Acenaphthylene	<9.62		9.62	0.692	ug/L		09/24/25 09:30	10/03/25 00:38	1
Anthracene	<9.62		9.62	0.837	ug/L		09/24/25 09:30	10/03/25 00:38	1
Benzo[a]anthracene	<9.62		9.62	0.817	ug/L		09/24/25 09:30	10/03/25 00:38	1
Benzo[a]pyrene	<9.62		9.62	7.79	ug/L		09/24/25 09:30	10/03/25 00:38	1
Benzo[b]fluoranthene	<9.62		9.62	4.71	ug/L		09/24/25 09:30	10/03/25 00:38	1
Benzo[g,h,i]perylene	<9.62		9.62	6.06	ug/L		09/24/25 09:30	10/03/25 00:38	1
Benzo[k]fluoranthene	<9.62		9.62	2.12	ug/L		09/24/25 09:30	10/03/25 00:38	1
Benzoic acid	<96.2		96.2	16.3	ug/L		09/24/25 09:30	10/03/25 00:38	1
Benzyl alcohol	<9.62		9.62	1.25	ug/L		09/24/25 09:30	10/03/25 00:38	1
Bis(2-chloroethoxy)methane	<9.62		9.62	0.731	ug/L		09/24/25 09:30	10/03/25 00:38	1
Bis(2-chloroethyl)ether	<9.62		9.62	0.788	ug/L		09/24/25 09:30	10/03/25 00:38	1
bis (2-chloroisopropyl) ether	<9.62		9.62	0.519	ug/L		09/24/25 09:30	10/03/25 00:38	1
Bis(2-ethylhexyl) phthalate	<9.62		9.62	5.29	ug/L		09/24/25 09:30	10/03/25 00:38	1
Butyl benzyl phthalate	<9.62		9.62	5.19	ug/L		09/24/25 09:30	10/03/25 00:38	1
Chrysene	<9.62		9.62	0.837	ug/L		09/24/25 09:30	10/03/25 00:38	1
Dibenz(a,h)anthracene	<9.62		9.62	3.75	ug/L		09/24/25 09:30	10/03/25 00:38	1
Dibenzofuran	<9.62		9.62	0.712	ug/L		09/24/25 09:30	10/03/25 00:38	1
Diethyl phthalate	<9.62		9.62	1.63	ug/L		09/24/25 09:30	10/03/25 00:38	1
Dimethyl phthalate	<9.62		9.62	0.962	ug/L		09/24/25 09:30	10/03/25 00:38	1
Di-n-butyl phthalate	<9.62		9.62	5.38	ug/L		09/24/25 09:30	10/03/25 00:38	1
Di-n-octyl phthalate	<19.2		19.2	6.73	ug/L		09/24/25 09:30	10/03/25 00:38	1
Fluoranthene	<9.62		9.62	1.63	ug/L		09/24/25 09:30	10/03/25 00:38	1
Fluorene	<9.62		9.62	0.760	ug/L		09/24/25 09:30	10/03/25 00:38	1
Hexachlorobenzene	<9.62		9.62	0.673	ug/L		09/24/25 09:30	10/03/25 00:38	1
Hexachlorobutadiene	<9.62		9.62	0.827	ug/L		09/24/25 09:30	10/03/25 00:38	1
Hexachlorocyclopentadiene	<9.62		9.62	4.90	ug/L		09/24/25 09:30	10/03/25 00:38	1
Hexachloroethane	<9.62		9.62	0.933	ug/L		09/24/25 09:30	10/03/25 00:38	1
Indeno[1,2,3-cd]pyrene	<9.62		9.62	4.04	ug/L		09/24/25 09:30	10/03/25 00:38	1
Isophorone	<9.62		9.62	0.894	ug/L		09/24/25 09:30	10/03/25 00:38	1
Naphthalene	<9.62		9.62	5.87	ug/L		09/24/25 09:30	10/03/25 00:38	1
Nitrobenzene	<9.62		9.62	0.769	ug/L		09/24/25 09:30	10/03/25 00:38	1
N-Nitrosodi-n-propylamine	<9.62		9.62	0.885	ug/L		09/24/25 09:30	10/03/25 00:38	1
N-Nitrosodiphenylamine	<9.62		9.62	0.721	ug/L		09/24/25 09:30	10/03/25 00:38	1
Pentachlorophenol	<9.62		9.62	9.23	ug/L		09/24/25 09:30	10/03/25 00:38	1
Phenanthrene	<9.62		9.62	0.760	ug/L		09/24/25 09:30	10/03/25 00:38	1
Pyrene	<9.62		9.62	0.760	ug/L		09/24/25 09:30	10/03/25 00:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	47		21 - 110	09/24/25 09:30	10/03/25 00:38	1
Phenol-d5 (Surr)	37		21 - 110	09/24/25 09:30	10/03/25 00:38	1
Nitrobenzene-d5 (Surr)	60		39 - 140	09/24/25 09:30	10/03/25 00:38	1
2-Fluorobiphenyl (Surr)	54		33 - 126	09/24/25 09:30	10/03/25 00:38	1
2,4,6-Tribromophenol (Surr)	61		20 - 144	09/24/25 09:30	10/03/25 00:38	1
Terphenyl-d14 (Surr)	60		13 - 150	09/24/25 09:30	10/03/25 00:38	1

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# Client Sample Results

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

**Client Sample ID: Leachate**

**Lab Sample ID: 310-316243-1**

Date Collected: 09/22/25 12:20

Matrix: Water

Date Received: 09/22/25 16:05

**Method: EPA 608.3 - Organochlorine Pesticides in Water**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.0615		0.0615	0.0260	ug/L		09/24/25 12:54	10/03/25 13:38	1
4,4'-DDE	<0.0615		0.0615	0.0260	ug/L		09/24/25 12:54	10/03/25 13:38	1
4,4'-DDT	<0.0615		0.0615	0.0404	ug/L		09/24/25 12:54	10/03/25 13:38	1
Aldrin	<0.0615		0.0615	0.0308	ug/L		09/24/25 12:54	10/03/25 13:38	1
beta-BHC	<0.0615		0.0615	0.0356	ug/L		09/24/25 12:54	10/03/25 13:38	1
Chlordane (technical)	<1.92		1.92	0.779	ug/L		09/24/25 12:54	10/03/25 13:38	1
delta-BHC	<0.0615		0.0615	0.0260	ug/L		09/24/25 12:54	10/03/25 13:38	1
Dieldrin	<0.0615		0.0615	0.0250	ug/L		09/24/25 12:54	10/03/25 13:38	1
Endosulfan I	<0.0615		0.0615	0.0317	ug/L		09/24/25 12:54	10/03/25 13:38	1
Endosulfan II	<0.0615		0.0615	0.0279	ug/L		09/24/25 12:54	10/03/25 13:38	1
Endosulfan sulfate	<0.0615		0.0615	0.0288	ug/L		09/24/25 12:54	10/03/25 13:38	1
Endrin	<0.0615		0.0615	0.0250	ug/L		09/24/25 12:54	10/03/25 13:38	1
Endrin aldehyde	<0.0615		0.0615	0.0279	ug/L		09/24/25 12:54	10/03/25 13:38	1
gamma-BHC (Lindane)	<0.0615		0.0615	0.0346	ug/L		09/24/25 12:54	10/03/25 13:38	1
Heptachlor	<0.0615		0.0615	0.0317	ug/L		09/24/25 12:54	10/03/25 13:38	1
Heptachlor epoxide	<0.0615		0.0615	0.0279	ug/L		09/24/25 12:54	10/03/25 13:38	1
Toxaphene	<1.92		1.92	0.663	ug/L		09/24/25 12:54	10/03/25 13:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	82		10 - 126				09/24/25 12:54	10/03/25 13:38	1
Tetrachloro-m-xylene	59		10 - 124				09/24/25 12:54	10/03/25 13:38	1

**Method: EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.769		0.769	0.154	ug/L		09/24/25 12:54	10/03/25 13:38	1
PCB-1221	<0.769		0.769	0.154	ug/L		09/24/25 12:54	10/03/25 13:38	1
PCB-1232	<0.769		0.769	0.154	ug/L		09/24/25 12:54	10/03/25 13:38	1
PCB-1242	<0.769		0.769	0.154	ug/L		09/24/25 12:54	10/03/25 13:38	1
PCB-1248	<0.769		0.769	0.106	ug/L		09/24/25 12:54	10/03/25 13:38	1
PCB-1254	<0.769		0.769	0.106	ug/L		09/24/25 12:54	10/03/25 13:38	1
PCB-1260	<0.769		0.769	0.106	ug/L		09/24/25 12:54	10/03/25 13:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	83		10 - 126				09/24/25 12:54	10/03/25 13:38	1
Tetrachloro-m-xylene (Surr)	78		10 - 124				09/24/25 12:54	10/03/25 13:38	1

**Method: EPA 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.00128</b>		0.000500	0.000200	ug/L		09/24/25 16:00	10/01/25 13:10	1

**Method: EPA 200.8 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Arsenic</b>	<b>0.00137</b>	<b>J</b>	0.00200	0.000530	mg/L		09/26/25 09:00	09/26/25 18:22	1
<b>Barium</b>	<b>0.0566</b>		0.00200	0.000660	mg/L		09/26/25 09:00	09/26/25 18:22	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		09/26/25 09:00	09/26/25 18:22	1
Chromium	<0.00500		0.00500	0.00180	mg/L		09/26/25 09:00	09/26/25 18:22	1
Copper	<0.00500		0.00500	0.00320	mg/L		09/26/25 09:00	09/26/25 18:22	1
<b>Iron</b>	<b>0.604</b>		0.100	0.0500	mg/L		09/26/25 09:00	09/26/25 18:22	1
Lead	<0.000500		0.000500	0.000330	mg/L		09/26/25 09:00	09/26/25 18:22	1
Molybdenum	<0.00200		0.00200	0.00130	mg/L		09/26/25 09:00	09/26/25 18:22	1
<b>Nickel</b>	<b>0.00427</b>	<b>J</b>	0.00500	0.00230	mg/L		09/26/25 09:00	09/26/25 18:22	1

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# Client Sample Results

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

**Client Sample ID: Leachate**

**Lab Sample ID: 310-316243-1**

Date Collected: 09/22/25 12:20

Matrix: Water

Date Received: 09/22/25 16:05

**Method: EPA 200.8 - Metals (ICP/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	<0.00500		0.00500	0.00140	mg/L		09/26/25 09:00	09/26/25 18:22	1
Silver	<0.00100		0.00100	0.000500	mg/L		09/26/25 09:00	10/03/25 14:23	1
Zinc	<0.0200		0.0200	0.0130	mg/L		09/26/25 09:00	09/26/25 18:22	1

**Method: EPA 245.2 - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200	0.000110	mg/L		10/01/25 15:10	10/02/25 09:25	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Ammonia as N (EPA 350.1)</b>	<b>1.85</b>		0.500	0.120	mg/L			09/25/25 12:22	1
<b>Nitrogen, Kjeldahl (EPA 351.2)</b>	<b>3.67</b>		1.00	0.620	mg/L		09/24/25 06:13	09/24/25 16:55	1
<b>Total Suspended Solids (USGS I-3765-85)</b>	<b>41.0</b>		15.0	10.5	mg/L			09/24/25 12:02	1
<b>Total Dissolved Solids (SM 2540C)</b>	<b>950</b>		250	180	mg/L			09/25/25 14:31	1
<b>Biochemical Oxygen Demand (SM 5210B)</b>	<b>3.70</b>		3.00	3.00	mg/L			09/24/25 06:19	1
<b>Total Organic Carbon (SM 5310C)</b>	<b>57.6</b>	<b>B</b>	40.0	20.0	mg/L			09/25/25 00:01	40
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>pH (SM 4500 H+ B)</b>	<b>7.9</b>	<b>HF</b>	1.0	1.0	SU			09/23/25 01:28	1

# Client Sample Results

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

**Client Sample ID: Field Blank LL HHg**

**Lab Sample ID: 310-316243-2**

Date Collected: 09/22/25 12:20

Matrix: Water

Date Received: 09/22/25 16:05

**Method: EPA 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000500		0.000500	0.000200	ug/L		09/24/25 16:00	10/01/25 13:17	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

# Definitions/Glossary

Client: Adair County Sanitary Landfill  
Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## 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.

### General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
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: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## Method: 624.1 - Volatile Organic Compounds (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)
310-316243-1	Leachate	97	101	100
LCS 310-467616/6	Lab Control Sample	100	101	103
LCS 310-467616/7	Lab Control Sample	93	101	101
MB 310-467616/5	Method Blank	96	100	103

**Surrogate Legend**

DBFM = Dibromofluoromethane (Surr)  
 TOL = Toluene-d8 (Surr)  
 BFB = 4-Bromofluorobenzene (Surr)

## Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (21-110)	PHL (21-110)	NBZ (39-140)	FBP (33-126)	TBP (20-144)	TPHL (13-150)
310-316243-1	Leachate	47	37	60	54	61	60
LCS 310-467737/2-A	Lab Control Sample	66	54	84	84	101	100
MB 310-467737/1-A	Method Blank	70	58	87	85	93	107

**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)

## Method: 608.3 - Organochlorine Pesticides in Water

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCB2 (10-126)	TCX2 (10-124)
310-316243-1	Leachate	82	59
LCS 310-467791/4-A	Lab Control Sample	84	70
LCSD 310-467791/5-A	Lab Control Sample Dup	82	76
MB 310-467791/1-A	Method Blank	83	64

**Surrogate Legend**

DCB = DCB Decachlorobiphenyl (Surr)  
 TCX = Tetrachloro-m-xylene

## Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCB1 (10-126)	TCX1 (10-124)
310-316243-1	Leachate	83	78
LCS 310-467791/2-A	Lab Control Sample	92	73
LCSD 310-467791/3-A	Lab Control Sample Dup	87	

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# Surrogate Summary

Client: Adair County Sanitary Landfill  
Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Matrix: Water

Prep Type: Total/NA

### Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCB1 (10-126)	TCX1 (10-124)
MB 310-467791/1-A	Method Blank	79	80

#### Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene (Surr)

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

# QC Sample Results

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 310-467616/5**  
**Matrix: Water**  
**Analysis Batch: 467616**

**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-Trichloroethane	<1.00		1.00	0.190	ug/L			09/23/25 12:39	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			09/23/25 12:39	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			09/23/25 12:39	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			09/23/25 12:39	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			09/23/25 12:39	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			09/23/25 12:39	1
1,2-Dichloroethene, Total	<1.00		1.00	0.270	ug/L			09/23/25 12:39	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			09/23/25 12:39	1
1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			09/23/25 12:39	1
2-Chloroethyl vinyl ether	<2.00		2.00	1.70	ug/L			09/23/25 12:39	1
Benzene	<0.500		0.500	0.220	ug/L			09/23/25 12:39	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			09/23/25 12:39	1
Bromoform	<5.00		5.00	0.780	ug/L			09/23/25 12:39	1
Bromomethane	<4.00		4.00	1.10	ug/L			09/23/25 12:39	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			09/23/25 12:39	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			09/23/25 12:39	1
Dibromochloromethane	<5.00		5.00	0.750	ug/L			09/23/25 12:39	1
Chloroethane	<4.00		4.00	0.790	ug/L			09/23/25 12:39	1
Chloroform	<3.00		3.00	1.30	ug/L			09/23/25 12:39	1
Chloromethane	<3.00		3.00	0.610	ug/L			09/23/25 12:39	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			09/23/25 12:39	1
Methylene chloride	<5.00		5.00	1.70	ug/L			09/23/25 12:39	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			09/23/25 12:39	1
Toluene	<1.00		1.00	0.430	ug/L			09/23/25 12:39	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			09/23/25 12:39	1
Trichloroethylene	<1.00		1.00	0.430	ug/L			09/23/25 12:39	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			09/23/25 12:39	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	96		76 - 130		09/23/25 12:39	1
Toluene-d8 (Surr)	100		80 - 120		09/23/25 12:39	1
4-Bromofluorobenzene (Surr)	103		80 - 120		09/23/25 12:39	1

**Lab Sample ID: LCS 310-467616/6**  
**Matrix: Water**  
**Analysis Batch: 467616**

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1,1,1-Trichloroethane	20.0	21.26		ug/L		106	70 - 130
1,1,1,2-Tetrachloroethane	20.0	21.22		ug/L		106	70 - 122
1,1,2-Trichloroethane	20.0	20.84		ug/L		104	75 - 121
1,1-Dichloroethane	20.0	19.86		ug/L		99	70 - 127
1,1-Dichloroethene	20.0	22.23		ug/L		111	64 - 134
1,2-Dichloroethane	20.0	20.54		ug/L		103	70 - 125
1,2-Dichloropropane	20.0	19.22		ug/L		96	72 - 128
1,3-Dichloropropene	40.0	43.85		ug/L		110	67 - 123
2-Chloroethyl vinyl ether	20.0	20.96		ug/L		105	50 - 150
Benzene	20.0	20.04		ug/L		100	71 - 125

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# QC Sample Results

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 310-467616/6

Matrix: Water

Analysis Batch: 467616

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Bromodichloromethane	20.0	20.17		ug/L		101	70 - 122
Bromoform	20.0	20.82		ug/L		104	70 - 122
Carbon tetrachloride	20.0	19.05		ug/L		95	70 - 130
Chlorobenzene	20.0	20.25		ug/L		101	74 - 120
Dibromochloromethane	20.0	18.29		ug/L		91	70 - 121
Chloroform	20.0	20.47		ug/L		102	72 - 122
cis-1,2-Dichloroethene	20.0	21.08		ug/L		105	72 - 123
cis-1,3-Dichloropropene	20.0	22.00		ug/L		110	72 - 123
Methylene chloride	20.0	17.78		ug/L		89	72 - 128
Tetrachloroethene	20.0	21.67		ug/L		108	70 - 128
Toluene	20.0	19.84		ug/L		99	74 - 120
trans-1,2-Dichloroethene	20.0	20.32		ug/L		102	70 - 127
trans-1,3-Dichloropropene	20.0	21.85		ug/L		109	67 - 123
Trichloroethylene	20.0	19.99		ug/L		100	70 - 128

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	100		76 - 130
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120

Lab Sample ID: LCS 310-467616/7

Matrix: Water

Analysis Batch: 467616

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	18.66		ug/L		93	33 - 138
Chloroethane	20.0	19.14		ug/L		96	59 - 139
Chloromethane	20.0	20.63		ug/L		103	52 - 146
Vinyl chloride	20.0	20.83		ug/L		104	60 - 142

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	93		76 - 130
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120

## Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 310-467737/1-A

Matrix: Water

Analysis Batch: 468671

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 467737

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	<10.0		10.0	0.560	ug/L		09/24/25 09:30	10/02/25 22:26	1
1,2-Dichlorobenzene	<10.0		10.0	0.620	ug/L		09/24/25 09:30	10/02/25 22:26	1
1,3-Dichlorobenzene	<10.0		10.0	0.640	ug/L		09/24/25 09:30	10/02/25 22:26	1
1,4-Dichlorobenzene	<10.0		10.0	0.640	ug/L		09/24/25 09:30	10/02/25 22:26	1
2,4,5-Trichlorophenol	<10.0		10.0	5.30	ug/L		09/24/25 09:30	10/02/25 22:26	1
2,4,6-Trichlorophenol	<10.0		10.0	5.00	ug/L		09/24/25 09:30	10/02/25 22:26	1

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# QC Sample Results

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 310-467737/1-A

Matrix: Water

Analysis Batch: 468671

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 467737

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,4-Dichlorophenol	<10.0		10.0	0.850	ug/L		09/24/25 09:30	10/02/25 22:26	1
2,4-Dimethylphenol	<10.0		10.0	0.580	ug/L		09/24/25 09:30	10/02/25 22:26	1
2,4-Dinitrophenol	<20.0		20.0	13.0	ug/L		09/24/25 09:30	10/02/25 22:26	1
2,4-Dinitrotoluene	<10.0		10.0	6.40	ug/L		09/24/25 09:30	10/02/25 22:26	1
2,6-Dinitrotoluene	<10.0		10.0	0.520	ug/L		09/24/25 09:30	10/02/25 22:26	1
2-Chloronaphthalene	<10.0		10.0	0.640	ug/L		09/24/25 09:30	10/02/25 22:26	1
2-Chlorophenol	<10.0		10.0	0.540	ug/L		09/24/25 09:30	10/02/25 22:26	1
2-Nitrophenol	<10.0		10.0	6.80	ug/L		09/24/25 09:30	10/02/25 22:26	1
3,3'-Dichlorobenzidine	<10.0		10.0	1.40	ug/L		09/24/25 09:30	10/02/25 22:26	1
4,6-Dinitro-2-methylphenol	<10.0		10.0	6.90	ug/L		09/24/25 09:30	10/02/25 22:26	1
4-Bromophenyl phenyl ether	<10.0		10.0	0.700	ug/L		09/24/25 09:30	10/02/25 22:26	1
4-Chloro-3-methylphenol	<10.0		10.0	0.840	ug/L		09/24/25 09:30	10/02/25 22:26	1
4-Chlorophenyl phenyl ether	<10.0		10.0	0.690	ug/L		09/24/25 09:30	10/02/25 22:26	1
4-Nitrophenol	<10.0		10.0	7.60	ug/L		09/24/25 09:30	10/02/25 22:26	1
Acenaphthene	<10.0		10.0	0.640	ug/L		09/24/25 09:30	10/02/25 22:26	1
Acenaphthylene	<10.0		10.0	0.720	ug/L		09/24/25 09:30	10/02/25 22:26	1
Anthracene	<10.0		10.0	0.870	ug/L		09/24/25 09:30	10/02/25 22:26	1
Benzo[a]anthracene	<10.0		10.0	0.850	ug/L		09/24/25 09:30	10/02/25 22:26	1
Benzo[a]pyrene	<10.0		10.0	8.10	ug/L		09/24/25 09:30	10/02/25 22:26	1
Benzo[b]fluoranthene	<10.0		10.0	4.90	ug/L		09/24/25 09:30	10/02/25 22:26	1
Benzo[g,h,i]perylene	<10.0		10.0	6.30	ug/L		09/24/25 09:30	10/02/25 22:26	1
Benzo[k]fluoranthene	<10.0		10.0	2.20	ug/L		09/24/25 09:30	10/02/25 22:26	1
Benzoic acid	<100		100	17.0	ug/L		09/24/25 09:30	10/02/25 22:26	1
Benzyl alcohol	<10.0		10.0	1.30	ug/L		09/24/25 09:30	10/02/25 22:26	1
Bis(2-chloroethoxy)methane	<10.0		10.0	0.760	ug/L		09/24/25 09:30	10/02/25 22:26	1
Bis(2-chloroethyl)ether	<10.0		10.0	0.820	ug/L		09/24/25 09:30	10/02/25 22:26	1
bis (2-chloroisopropyl) ether	<10.0		10.0	0.540	ug/L		09/24/25 09:30	10/02/25 22:26	1
Bis(2-ethylhexyl) phthalate	<10.0		10.0	5.50	ug/L		09/24/25 09:30	10/02/25 22:26	1
Butyl benzyl phthalate	<10.0		10.0	5.40	ug/L		09/24/25 09:30	10/02/25 22:26	1
Chrysene	<10.0		10.0	0.870	ug/L		09/24/25 09:30	10/02/25 22:26	1
Dibenz(a,h)anthracene	<10.0		10.0	3.90	ug/L		09/24/25 09:30	10/02/25 22:26	1
Dibenzofuran	<10.0		10.0	0.740	ug/L		09/24/25 09:30	10/02/25 22:26	1
Diethyl phthalate	<10.0		10.0	1.70	ug/L		09/24/25 09:30	10/02/25 22:26	1
Dimethyl phthalate	<10.0		10.0	1.00	ug/L		09/24/25 09:30	10/02/25 22:26	1
Di-n-butyl phthalate	<10.0		10.0	5.60	ug/L		09/24/25 09:30	10/02/25 22:26	1
Di-n-octyl phthalate	<20.0		20.0	7.00	ug/L		09/24/25 09:30	10/02/25 22:26	1
Fluoranthene	<10.0		10.0	1.70	ug/L		09/24/25 09:30	10/02/25 22:26	1
Fluorene	<10.0		10.0	0.790	ug/L		09/24/25 09:30	10/02/25 22:26	1
Hexachlorobenzene	<10.0		10.0	0.700	ug/L		09/24/25 09:30	10/02/25 22:26	1
Hexachlorobutadiene	<10.0		10.0	0.860	ug/L		09/24/25 09:30	10/02/25 22:26	1
Hexachlorocyclopentadiene	<10.0		10.0	5.10	ug/L		09/24/25 09:30	10/02/25 22:26	1
Hexachloroethane	<10.0		10.0	0.970	ug/L		09/24/25 09:30	10/02/25 22:26	1
Indeno[1,2,3-cd]pyrene	<10.0		10.0	4.20	ug/L		09/24/25 09:30	10/02/25 22:26	1
Isophorone	<10.0		10.0	0.930	ug/L		09/24/25 09:30	10/02/25 22:26	1
Naphthalene	<10.0		10.0	6.10	ug/L		09/24/25 09:30	10/02/25 22:26	1
Nitrobenzene	<10.0		10.0	0.800	ug/L		09/24/25 09:30	10/02/25 22:26	1
N-Nitrosodi-n-propylamine	<10.0		10.0	0.920	ug/L		09/24/25 09:30	10/02/25 22:26	1
N-Nitrosodiphenylamine	<10.0		10.0	0.750	ug/L		09/24/25 09:30	10/02/25 22:26	1
Pentachlorophenol	<10.0		10.0	9.60	ug/L		09/24/25 09:30	10/02/25 22:26	1

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# QC Sample Results

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 310-467737/1-A

Matrix: Water

Analysis Batch: 468671

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 467737

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Phenanthrene	<10.0		10.0	0.790	ug/L		09/24/25 09:30	10/02/25 22:26	1
Pyrene	<10.0		10.0	0.790	ug/L		09/24/25 09:30	10/02/25 22:26	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorophenol (Surr)	70		21 - 110	09/24/25 09:30	10/02/25 22:26	1
Phenol-d5 (Surr)	58		21 - 110	09/24/25 09:30	10/02/25 22:26	1
Nitrobenzene-d5 (Surr)	87		39 - 140	09/24/25 09:30	10/02/25 22:26	1
2-Fluorobiphenyl (Surr)	85		33 - 126	09/24/25 09:30	10/02/25 22:26	1
2,4,6-Tribromophenol (Surr)	93		20 - 144	09/24/25 09:30	10/02/25 22:26	1
Terphenyl-d14 (Surr)	107		13 - 150	09/24/25 09:30	10/02/25 22:26	1

Lab Sample ID: LCS 310-467737/2-A

Matrix: Water

Analysis Batch: 468671

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 467737

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1,2,4-Trichlorobenzene	100	67.89		ug/L		68	44 - 110
1,2-Dichlorobenzene	100	59.43		ug/L		59	31 - 110
1,3-Dichlorobenzene	100	56.39		ug/L		56	29 - 110
1,4-Dichlorobenzene	100	57.18		ug/L		57	29 - 110
2,4,5-Trichlorophenol	100	85.38		ug/L		85	39 - 136
2,4,6-Trichlorophenol	100	88.84		ug/L		89	37 - 141
2,4-Dichlorophenol	100	93.05		ug/L		93	44 - 131
2,4-Dimethylphenol	100	85.75		ug/L		86	32 - 120
2,4-Dinitrophenol	200	128.5		ug/L		64	10 - 150
2,4-Dinitrotoluene	100	88.01		ug/L		88	48 - 136
2,6-Dinitrotoluene	100	88.59		ug/L		89	50 - 135
2-Chloronaphthalene	100	70.61		ug/L		71	60 - 112
2-Chlorophenol	100	82.83		ug/L		83	43 - 119
2-Nitrophenol	100	94.45		ug/L		94	36 - 144
4,6-Dinitro-2-methylphenol	200	143.0		ug/L		71	22 - 150
4-Bromophenyl phenyl ether	100	90.78		ug/L		91	53 - 127
4-Chloro-3-methylphenol	100	96.87		ug/L		97	51 - 132
4-Chlorophenyl phenyl ether	100	82.22		ug/L		82	44 - 118
4-Nitrophenol	200	99.55		ug/L		50	22 - 110
Acenaphthene	100	82.27		ug/L		82	47 - 118
Acenaphthylene	100	76.51		ug/L		77	39 - 115
Anthracene	100	94.57		ug/L		95	49 - 127
Benzo[a]anthracene	100	88.16		ug/L		88	49 - 126
Benzo[a]pyrene	100	91.30		ug/L		91	44 - 133
Benzo[b]fluoranthene	100	84.77		ug/L		85	44 - 136
Benzo[g,h,i]perylene	100	99.36		ug/L		99	42 - 135
Benzo[k]fluoranthene	100	93.08		ug/L		93	49 - 134
Benzyl alcohol	100	86.18		ug/L		86	46 - 123
Bis(2-chloroethoxy)methane	100	92.51		ug/L		93	44 - 126
Bis(2-chloroethyl)ether	100	77.43		ug/L		77	41 - 116
bis (2-chloroisopropyl) ether	100	78.16		ug/L		78	36 - 115
Bis(2-ethylhexyl) phthalate	100	83.90		ug/L		84	46 - 138

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## QC Sample Results

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

### Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 310-467737/2-A

Matrix: Water

Analysis Batch: 468671

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 467737

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Butyl benzyl phthalate	100	83.25		ug/L		83	47 - 133
Chrysene	100	92.96		ug/L		93	50 - 128
Dibenz(a,h)anthracene	100	92.69		ug/L		93	36 - 146
Dibenzofuran	100	83.56		ug/L		84	44 - 114
Diethyl phthalate	100	89.70		ug/L		90	43 - 120
Dimethyl phthalate	100	89.29		ug/L		89	46 - 120
Di-n-butyl phthalate	100	83.05		ug/L		83	49 - 120
Di-n-octyl phthalate	100	73.07		ug/L		73	33 - 146
Fluoranthene	100	88.91		ug/L		89	49 - 132
Fluorene	100	87.08		ug/L		87	59 - 118
Hexachlorobenzene	100	98.63		ug/L		99	42 - 134
Hexachlorobutadiene	100	63.38		ug/L		63	29 - 110
Hexachlorocyclopentadiene	100	52.80		ug/L		53	10 - 110
Hexachloroethane	100	50.13		ug/L		50	40 - 110
Indeno[1,2,3-cd]pyrene	100	89.06		ug/L		89	36 - 149
Isophorone	100	90.22		ug/L		90	46 - 126
Naphthalene	100	73.30		ug/L		73	34 - 110
Nitrobenzene	100	83.81		ug/L		84	42 - 123
N-Nitrosodi-n-propylamine	100	88.05		ug/L		88	44 - 124
N-Nitrosodiphenylamine	100	92.29		ug/L		92	43 - 132
Pentachlorophenol	200	178.1		ug/L		89	28 - 142
Phenanthrene	100	94.44		ug/L		94	54 - 120
Pyrene	100	96.46		ug/L		96	52 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorophenol (Surr)	66		21 - 110
Phenol-d5 (Surr)	54		21 - 110
Nitrobenzene-d5 (Surr)	84		39 - 140
2-Fluorobiphenyl (Surr)	84		33 - 126
2,4,6-Tribromophenol (Surr)	101		20 - 144
Terphenyl-d14 (Surr)	100		13 - 150

### Method: 608.3 - Organochlorine Pesticides in Water

Lab Sample ID: MB 310-467791/1-A

Matrix: Water

Analysis Batch: 468779

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 467791

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
4,4'-DDD	<0.0640		0.0640	0.0270	ug/L		09/24/25 12:54	10/03/25 12:20	1
4,4'-DDE	<0.0640		0.0640	0.0270	ug/L		09/24/25 12:54	10/03/25 12:20	1
4,4'-DDT	<0.0640		0.0640	0.0420	ug/L		09/24/25 12:54	10/03/25 12:20	1
Aldrin	<0.0640		0.0640	0.0320	ug/L		09/24/25 12:54	10/03/25 12:20	1
beta-BHC	<0.0640		0.0640	0.0370	ug/L		09/24/25 12:54	10/03/25 12:20	1
Chlordane (technical)	<2.00		2.00	0.810	ug/L		09/24/25 12:54	10/03/25 12:20	1
delta-BHC	<0.0640		0.0640	0.0270	ug/L		09/24/25 12:54	10/03/25 12:20	1
Dieldrin	<0.0640		0.0640	0.0260	ug/L		09/24/25 12:54	10/03/25 12:20	1
Endosulfan I	<0.0640		0.0640	0.0330	ug/L		09/24/25 12:54	10/03/25 12:20	1
Endosulfan II	<0.0640		0.0640	0.0290	ug/L		09/24/25 12:54	10/03/25 12:20	1

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# QC Sample Results

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## Method: 608.3 - Organochlorine Pesticides in Water (Continued)

**Lab Sample ID: MB 310-467791/1-A**  
**Matrix: Water**  
**Analysis Batch: 468779**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 467791**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Endosulfan sulfate	<0.0640		0.0640	0.0300	ug/L		09/24/25 12:54	10/03/25 12:20	1
Endrin	<0.0640		0.0640	0.0260	ug/L		09/24/25 12:54	10/03/25 12:20	1
Endrin aldehyde	<0.0640		0.0640	0.0290	ug/L		09/24/25 12:54	10/03/25 12:20	1
gamma-BHC (Lindane)	<0.0640		0.0640	0.0360	ug/L		09/24/25 12:54	10/03/25 12:20	1
Heptachlor	<0.0640		0.0640	0.0330	ug/L		09/24/25 12:54	10/03/25 12:20	1
Heptachlor epoxide	<0.0640		0.0640	0.0290	ug/L		09/24/25 12:54	10/03/25 12:20	1
Toxaphene	<2.00		2.00	0.690	ug/L		09/24/25 12:54	10/03/25 12:20	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl (Surr)	83		10 - 126	09/24/25 12:54	10/03/25 12:20	1
Tetrachloro-m-xylene	64		10 - 124	09/24/25 12:54	10/03/25 12:20	1

**Lab Sample ID: LCS 310-467791/4-A**  
**Matrix: Water**  
**Analysis Batch: 468779**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 467791**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
4,4'-DDD	1.00	0.7211		ug/L		72	41 - 117
4,4'-DDE	1.00	0.6849		ug/L		68	35 - 110
4,4'-DDT	1.00	0.6947		ug/L		69	26 - 123
Aldrin	1.00	0.6184		ug/L		62	42 - 110
beta-BHC	1.00	0.7861		ug/L		79	38 - 114
delta-BHC	1.00	0.7239		ug/L		72	34 - 114
Dieldrin	1.00	0.7292		ug/L		73	37 - 114
Endosulfan I	1.00	0.4569		ug/L		46	45 - 113
Endosulfan II	1.00	0.5006		ug/L		50	12 - 113
Endosulfan sulfate	1.00	0.7363		ug/L		74	35 - 123
Endrin	1.00	0.6900		ug/L		69	36 - 119
Endrin aldehyde	1.00	0.7025		ug/L		70	37 - 111
gamma-BHC (Lindane)	1.00	0.7587		ug/L		76	35 - 113
Heptachlor	1.00	0.7363		ug/L		74	34 - 110
Heptachlor epoxide	1.00	0.7714		ug/L		77	38 - 114

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl (Surr)	84		10 - 126
Tetrachloro-m-xylene	70		10 - 124

**Lab Sample ID: LCSD 310-467791/5-A**  
**Matrix: Water**  
**Analysis Batch: 468779**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 467791**

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
		Result	Qualifier						
4,4'-DDD	1.00	0.7906		ug/L		79	41 - 117	9	34
4,4'-DDE	1.00	0.7608		ug/L		76	35 - 110	11	35
4,4'-DDT	1.00	0.7708		ug/L		77	26 - 123	10	35
Aldrin	1.00	0.6996		ug/L		70	42 - 110	12	35
beta-BHC	1.00	0.8413		ug/L		84	38 - 114	7	35
delta-BHC	1.00	0.7755		ug/L		78	34 - 114	7	35

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# QC Sample Results

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## Method: 608.3 - Organochlorine Pesticides in Water (Continued)

**Lab Sample ID: LCSD 310-467791/5-A**  
**Matrix: Water**  
**Analysis Batch: 468779**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 467791**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Dieldrin	1.00	0.7849		ug/L		78	37 - 114	7	35	
Endosulfan I	1.00	0.4830		ug/L		48	45 - 113	6	28	
Endosulfan II	1.00	0.5326		ug/L		53	12 - 113	6	35	
Endosulfan sulfate	1.00	0.7963		ug/L		80	35 - 123	8	35	
Endrin	1.00	0.7515		ug/L		75	36 - 119	9	35	
Endrin aldehyde	1.00	0.7600		ug/L		76	37 - 111	8	35	
gamma-BHC (Lindane)	1.00	0.7939		ug/L		79	35 - 113	5	35	
Heptachlor	1.00	0.8118		ug/L		81	34 - 110	10	35	
Heptachlor epoxide	1.00	0.8310		ug/L		83	38 - 114	7	26	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl (Surr)	82		10 - 126
Tetrachloro-m-xylene	76		10 - 124

## Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

**Lab Sample ID: MB 310-467791/1-A**  
**Matrix: Water**  
**Analysis Batch: 468780**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 467791**

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
PCB-1016	<0.800		0.800	0.160	ug/L		09/24/25 12:54	10/03/25 12:20	1
PCB-1221	<0.800		0.800	0.160	ug/L		09/24/25 12:54	10/03/25 12:20	1
PCB-1232	<0.800		0.800	0.160	ug/L		09/24/25 12:54	10/03/25 12:20	1
PCB-1242	<0.800		0.800	0.160	ug/L		09/24/25 12:54	10/03/25 12:20	1
PCB-1248	<0.800		0.800	0.110	ug/L		09/24/25 12:54	10/03/25 12:20	1
PCB-1254	<0.800		0.800	0.110	ug/L		09/24/25 12:54	10/03/25 12:20	1
PCB-1260	<0.800		0.800	0.110	ug/L		09/24/25 12:54	10/03/25 12:20	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl (Surr)	79		10 - 126	09/24/25 12:54	10/03/25 12:20	1
Tetrachloro-m-xylene (Surr)	80		10 - 124	09/24/25 12:54	10/03/25 12:20	1

**Lab Sample ID: LCS 310-467791/2-A**  
**Matrix: Water**  
**Analysis Batch: 468780**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 467791**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	RPD
PCB-1016	10.0	8.174		ug/L		82	50 - 123	
PCB-1260	10.0	8.462		ug/L		85	38 - 118	

Surrogate	LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl (Surr)	92		10 - 126
Tetrachloro-m-xylene (Surr)	73		10 - 124

# QC Sample Results

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: LCSD 310-467791/3-A  
 Matrix: Water  
 Analysis Batch: 468780

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA  
 Prep Batch: 467791

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit	
PCB-1016	10.0	7.915		ug/L		79	50 - 123	3	33	
PCB-1260	10.0	8.157		ug/L		82	38 - 118	4	33	
		<b>LCSD</b>	<b>LCSD</b>							
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>							
DCB Decachlorobiphenyl (Surr)	87		10 - 126							

## Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 400-725183/3-A  
 Matrix: Water  
 Analysis Batch: 725267

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 725183

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000500		0.000500	0.000200	ug/L		09/30/25 16:00	10/01/25 09:33	1

Lab Sample ID: LCS 400-725183/4-A  
 Matrix: Water  
 Analysis Batch: 725267

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 725183

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00500	0.004225		ug/L		85	79 - 121

Lab Sample ID: LCSD 400-725183/5-A  
 Matrix: Water  
 Analysis Batch: 725267

Client Sample ID: Lab Control Sample Dup  
 Prep Type: Total/NA  
 Prep Batch: 725183

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Mercury	0.00500	0.004253		ug/L		85	79 - 121	1	20

## Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 310-467988/1-A  
 Matrix: Water  
 Analysis Batch: 468193

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 467988

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		09/26/25 09:00	09/26/25 17:22	1
Barium	<0.00200		0.00200	0.000660	mg/L		09/26/25 09:00	09/26/25 17:22	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		09/26/25 09:00	09/26/25 17:22	1
Chromium	<0.00500		0.00500	0.00180	mg/L		09/26/25 09:00	09/26/25 17:22	1
Copper	<0.00500		0.00500	0.00320	mg/L		09/26/25 09:00	09/26/25 17:22	1
Iron	<0.100		0.100	0.0500	mg/L		09/26/25 09:00	09/26/25 17:22	1
Lead	<0.000500		0.000500	0.000330	mg/L		09/26/25 09:00	09/26/25 17:22	1
Molybdenum	<0.00200		0.00200	0.00130	mg/L		09/26/25 09:00	09/26/25 17:22	1
Nickel	<0.00500		0.00500	0.00230	mg/L		09/26/25 09:00	09/26/25 17:22	1
Selenium	<0.00500		0.00500	0.00140	mg/L		09/26/25 09:00	09/26/25 17:22	1
Zinc	0.01590	J	0.0200	0.0130	mg/L		09/26/25 09:00	09/26/25 17:22	1

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# QC Sample Results

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 310-467988/1-A  
 Matrix: Water  
 Analysis Batch: 468892

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 467988

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.00100		0.00100	0.000500	mg/L		09/26/25 09:00	10/03/25 13:57	1

Lab Sample ID: LCS 310-467988/2-A  
 Matrix: Water  
 Analysis Batch: 468193

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 467988

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.1911		mg/L		96	85 - 115
Barium	0.100	0.1006		mg/L		101	85 - 115
Cadmium	0.100	0.09402		mg/L		94	85 - 115
Chromium	0.100	0.09781		mg/L		98	85 - 115
Copper	0.200	0.2071		mg/L		104	85 - 115
Iron	0.200	0.2053		mg/L		103	85 - 115
Lead	0.200	0.1971		mg/L		99	85 - 115
Molybdenum	0.200	0.1954		mg/L		98	85 - 115
Nickel	0.200	0.1886		mg/L		94	85 - 115
Selenium	0.400	0.3673		mg/L		92	85 - 115
Zinc	0.200	0.2070		mg/L		104	85 - 115

Lab Sample ID: LCS 310-467988/2-A  
 Matrix: Water  
 Analysis Batch: 468892

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 467988

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	0.100	0.1017		mg/L		102	85 - 115

## Method: 245.2 - Mercury (CVAA)

Lab Sample ID: MB 310-468529/1-A  
 Matrix: Water  
 Analysis Batch: 468697

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 468529

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200	0.000110	mg/L		10/01/25 15:10	10/02/25 09:15	1

Lab Sample ID: LCS 310-468529/2-A  
 Matrix: Water  
 Analysis Batch: 468697

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 468529

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00167	0.001663		mg/L		100	85 - 115

## Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 310-468005/16  
 Matrix: Water  
 Analysis Batch: 468005

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500	0.120	mg/L			09/25/25 11:27	1

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# QC Sample Results

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 310-468005/17  
 Matrix: Water  
 Analysis Batch: 468005

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia as N	2.26	2.250		mg/L		100	90 - 110

## Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 310-467688/1-A  
 Matrix: Water  
 Analysis Batch: 467834

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 467688

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	<1.00		1.00	0.620	mg/L		09/24/25 06:13	09/24/25 16:50	1

Lab Sample ID: LCS 310-467688/21-A  
 Matrix: Water  
 Analysis Batch: 467834

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 467688

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	4.01	4.307		mg/L		107	90 - 110

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

Lab Sample ID: MB 310-467778/1  
 Matrix: Water  
 Analysis Batch: 467778

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			09/24/25 12:02	1

Lab Sample ID: LCS 310-467778/2  
 Matrix: Water  
 Analysis Batch: 467778

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

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

Lab Sample ID: MB 310-467966/1  
 Matrix: Water  
 Analysis Batch: 467966

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0	36.0	mg/L			09/25/25 14:31	1

Lab Sample ID: LCS 310-467966/2  
 Matrix: Water  
 Analysis Batch: 467966

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	962.0		mg/L		96	89 - 110

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# QC Sample Results

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-467536/28  
 Matrix: Water  
 Analysis Batch: 467536

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.1		SU		101	98 - 102

## Method: SM 5210B - BOD, 5-Day

Lab Sample ID: USB 310-467693/1  
 Matrix: Water  
 Analysis Batch: 467693

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

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	<3.00		3.00	3.00	mg/L			09/24/25 05:47	1

Lab Sample ID: LCS 310-467693/2  
 Matrix: Water  
 Analysis Batch: 467693

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	174.2		mg/L		88	85 - 115

## Method: SM 5310C - TOC

Lab Sample ID: MB 310-467968/10  
 Matrix: Water  
 Analysis Batch: 467968

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.5011	J	1.00	0.500	mg/L			09/24/25 15:00	1

Lab Sample ID: LCS 310-467968/11  
 Matrix: Water  
 Analysis Batch: 467968

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	9.99	9.650		mg/L		97	85 - 115

Lab Sample ID: 310-316243-1 MS  
 Matrix: Water  
 Analysis Batch: 467968

Client Sample ID: Leachate  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	57.6	B	200	258.6		mg/L		101	85 - 115

# QC Association Summary

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## GC/MS VOA

### Analysis Batch: 467616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	624.1	
MB 310-467616/5	Method Blank	Total/NA	Water	624.1	
LCS 310-467616/6	Lab Control Sample	Total/NA	Water	624.1	
LCS 310-467616/7	Lab Control Sample	Total/NA	Water	624.1	

## GC/MS Semi VOA

### Prep Batch: 467737

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	625	
MB 310-467737/1-A	Method Blank	Total/NA	Water	625	
LCS 310-467737/2-A	Lab Control Sample	Total/NA	Water	625	

### Analysis Batch: 468671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	625.1	467737
MB 310-467737/1-A	Method Blank	Total/NA	Water	625.1	467737
LCS 310-467737/2-A	Lab Control Sample	Total/NA	Water	625.1	467737

## GC Semi VOA

### Prep Batch: 467791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	608	
MB 310-467791/1-A	Method Blank	Total/NA	Water	608	
LCS 310-467791/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 310-467791/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 310-467791/3-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 310-467791/5-A	Lab Control Sample Dup	Total/NA	Water	608	

### Analysis Batch: 468779

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	608.3	467791
MB 310-467791/1-A	Method Blank	Total/NA	Water	608.3	467791
LCS 310-467791/4-A	Lab Control Sample	Total/NA	Water	608.3	467791
LCSD 310-467791/5-A	Lab Control Sample Dup	Total/NA	Water	608.3	467791

### Analysis Batch: 468780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	608.3	467791
MB 310-467791/1-A	Method Blank	Total/NA	Water	608.3	467791
LCS 310-467791/2-A	Lab Control Sample	Total/NA	Water	608.3	467791
LCSD 310-467791/3-A	Lab Control Sample Dup	Total/NA	Water	608.3	467791

## Metals

### Prep Batch: 467988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	200.8	
MB 310-467988/1-A	Method Blank	Total/NA	Water	200.8	
LCS 310-467988/2-A	Lab Control Sample	Total/NA	Water	200.8	

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# QC Association Summary

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## Metals

### Analysis Batch: 468193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	200.8	467988
MB 310-467988/1-A	Method Blank	Total/NA	Water	200.8	467988
LCS 310-467988/2-A	Lab Control Sample	Total/NA	Water	200.8	467988

### Prep Batch: 468529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	245.1	
MB 310-468529/1-A	Method Blank	Total/NA	Water	245.1	
LCS 310-468529/2-A	Lab Control Sample	Total/NA	Water	245.1	

### Analysis Batch: 468697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	245.2	468529
MB 310-468529/1-A	Method Blank	Total/NA	Water	245.2	468529
LCS 310-468529/2-A	Lab Control Sample	Total/NA	Water	245.2	468529

### Analysis Batch: 468892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	200.8	467988
MB 310-467988/1-A	Method Blank	Total/NA	Water	200.8	467988
LCS 310-467988/2-A	Lab Control Sample	Total/NA	Water	200.8	467988

### Prep Batch: 725183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	1631E	
310-316243-2	Field Blank LL HHg	Total/NA	Water	1631E	
MB 400-725183/3-A	Method Blank	Total/NA	Water	1631E	
LCS 400-725183/4-A	Lab Control Sample	Total/NA	Water	1631E	
LCSD 400-725183/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	

### Analysis Batch: 725267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	1631E	725183
310-316243-2	Field Blank LL HHg	Total/NA	Water	1631E	725183
MB 400-725183/3-A	Method Blank	Total/NA	Water	1631E	725183
LCS 400-725183/4-A	Lab Control Sample	Total/NA	Water	1631E	725183
LCSD 400-725183/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	725183

## General Chemistry

### Analysis Batch: 467536

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	SM 4500 H+ B	
LCS 310-467536/28	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

### Prep Batch: 467688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	351.2	
MB 310-467688/1-A	Method Blank	Total/NA	Water	351.2	
LCS 310-467688/21-A	Lab Control Sample	Total/NA	Water	351.2	

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# QC Association Summary

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## General Chemistry

### Analysis Batch: 467693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	SM 5210B	
USB 310-467693/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 310-467693/2	Lab Control Sample	Total/NA	Water	SM 5210B	

### Analysis Batch: 467778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	I-3765-85	
MB 310-467778/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-467778/2	Lab Control Sample	Total/NA	Water	I-3765-85	

### Analysis Batch: 467834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	351.2	467688
MB 310-467688/1-A	Method Blank	Total/NA	Water	351.2	467688
LCS 310-467688/21-A	Lab Control Sample	Total/NA	Water	351.2	467688

### Analysis Batch: 467966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	SM 2540C	
MB 310-467966/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-467966/2	Lab Control Sample	Total/NA	Water	SM 2540C	

### Analysis Batch: 467968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	SM 5310C	
MB 310-467968/10	Method Blank	Total/NA	Water	SM 5310C	
LCS 310-467968/11	Lab Control Sample	Total/NA	Water	SM 5310C	
310-316243-1 MS	Leachate	Total/NA	Water	SM 5310C	

### Analysis Batch: 468005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-316243-1	Leachate	Total/NA	Water	350.1	
MB 310-468005/16	Method Blank	Total/NA	Water	350.1	
LCS 310-468005/17	Lab Control Sample	Total/NA	Water	350.1	

## Lab Chronicle

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

**Client Sample ID: Leachate**

**Lab Sample ID: 310-316243-1**

**Date Collected: 09/22/25 12:20**

**Matrix: Water**

**Date Received: 09/22/25 16:05**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	624.1		1	467616	FE5V	EET CF	09/23/25 19:40
Total/NA	Prep	625			467737	J5BR	EET CF	09/24/25 09:30
Total/NA	Analysis	625.1		1	468671	V7YZ	EET CF	10/03/25 00:38
Total/NA	Prep	608			467791	J5BR	EET CF	09/24/25 12:54
Total/NA	Analysis	608.3		1	468779	BW2O	EET CF	10/03/25 13:38
Total/NA	Prep	608			467791	J5BR	EET CF	09/24/25 12:54
Total/NA	Analysis	608.3		1	468780	BW2O	EET CF	10/03/25 13:38
Total/NA	Prep	1631E			725183	VLC	EET PEN	09/24/25 16:00 - 09/25/25 09:00 <sup>1</sup>
Total/NA	Analysis	1631E		1	725267	VLC	EET PEN	10/01/25 13:10
Total/NA	Prep	200.8			467988	QTZ5	EET CF	09/26/25 09:00
Total/NA	Analysis	200.8		1	468193	ZRI4	EET CF	09/26/25 18:22
Total/NA	Prep	200.8			467988	QTZ5	EET CF	09/26/25 09:00
Total/NA	Analysis	200.8		1	468892	NFT2	EET CF	10/03/25 14:23
Total/NA	Prep	245.1			468529	RLT9	EET CF	10/01/25 15:10
Total/NA	Analysis	245.2		1	468697	RLT9	EET CF	10/02/25 09:25
Total/NA	Analysis	350.1		1	468005	WZC8	EET CF	09/25/25 12:22
Total/NA	Prep	351.2			467688	W9YR	EET CF	09/24/25 06:13
Total/NA	Analysis	351.2		1	467834	ZJX4	EET CF	09/24/25 16:55
Total/NA	Analysis	I-3765-85		1	467778	DGU1	EET CF	09/24/25 12:02
Total/NA	Analysis	SM 2540C		1	467966	TGN5	EET CF	09/25/25 14:31
Total/NA	Analysis	SM 4500 H+ B		1	467536	ZJX4	EET CF	09/23/25 01:28
Total/NA	Analysis	SM 5210B		1	467693	W9YR	EET CF	09/24/25 06:19
Total/NA	Analysis	SM 5310C		40	467968	WZC8	EET CF	09/25/25 00:01

**Client Sample ID: Field Blank LL HHg**

**Lab Sample ID: 310-316243-2**

**Date Collected: 09/22/25 12:20**

**Matrix: Water**

**Date Received: 09/22/25 16:05**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1631E			725183	VLC	EET PEN	09/24/25 16:00 - 09/25/25 09:00 <sup>1</sup>
Total/NA	Analysis	1631E		1	725267	VLC	EET PEN	10/01/25 13:17

<sup>1</sup> This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

**Laboratory References:**

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

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

# Accreditation/Certification Summary

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

## Laboratory: Eurofins Cedar Falls

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-25
<p>The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.</p>			
Analysis Method	Prep Method	Matrix	Analyte
624.1		Water	1,2-Dichloroethene, Total
624.1		Water	1,3-Dichloropropene
625.1	625	Water	1,2-Dichlorobenzene
625.1	625	Water	1,3-Dichlorobenzene
625.1	625	Water	1,4-Dichlorobenzene
625.1	625	Water	Dibenzofuran

## Laboratory: Eurofins Pensacola

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

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-26
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-00689	08-01-26
Florida	NELAP	E81010	06-30-26
Georgia	State	E81010(FL)	06-30-26
Illinois	NELAP	200041	10-31-26
Kansas	NELAP	E-10253	10-31-25
Kentucky (UST)	State	53	06-30-26
Louisiana (All)	NELAP	30976	06-30-26
Louisiana (DW)	State	LA017	12-31-25
North Carolina (WW/SW)	State	314	12-31-25
Oklahoma	NELAP	9810	12-31-25
Pennsylvania	NELAP	68-00467	01-31-26
South Carolina	State	96026	06-30-26
Tennessee	State	TN02907	06-30-26
Texas	NELAP	T104704286	09-30-26
US Fish & Wildlife	US Federal Programs	A22340	06-30-26
USDA	US Federal Programs	FLGNV23001	01-08-26
USDA	US Federal Programs	525-23-9-22801	01-09-26
Virginia	NELAP	460166	06-14-26
West Virginia DEP	State	136	03-31-26

# Method Summary

Client: Adair County Sanitary Landfill  
 Project/Site: Adair Co Sanitary Landfill Leachate

Job ID: 310-316243-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	EPA	EET CF
625.1	Semivolatile Organic Compounds (GC/MS)	EPA	EET CF
608.3	Organochlorine Pesticides in Water	EPA	EET CF
608.3	Polychlorinated Biphenyls (PCBs) (GC)	EPA	EET CF
1631E	Mercury, Low Level (CVAFS)	EPA	EET PEN
200.8	Metals (ICP/MS)	EPA	EET CF
245.2	Mercury (CVAA)	EPA	EET CF
350.1	Nitrogen, Ammonia	EPA	EET CF
351.2	Nitrogen, Total Kjeldahl	EPA	EET CF
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
SM 4500 H+ B	pH	SM	EET CF
SM 5210B	BOD, 5-Day	SM	EET CF
SM 5310C	TOC	SM	EET CF
1631E	Preparation, Mercury, Low Level	EPA	EET PEN
200.8	Preparation, Total Metals	EPA	EET CF
245.1	Preparation, Mercury	EPA	EET CF
351.2	Nitrogen, Total Kjeldahl	EPA	EET CF
608	Liquid-Liquid Extraction (Separatory Funnel)	EPA	EET CF
625	Liquid-Liquid Extraction	EPA	EET CF

**Protocol References:**

- EPA = US Environmental Protection Agency
- SM = "Standard Methods For The Examination Of Water And Wastewater"
- 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
- EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001





Environment Testing  
America



310-316243 Chain of Custody

### Cooler/Sample Receipt and Temperature Log Form

<b>Client Information</b>			
Client: <u>SCS</u>			
City/State:	<u>West Des Moines</u> STATE <u>IA</u>	Project:	
<b>Receipt Information</b>			
Date/Time Received:	DATE <u>9/22/25</u>	TIME <u>1605</u>	Received By <u>BP</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>R</u>		Correction Factor (°C): <u>±0</u>	
• <b>Temp Blank Temperature</b> – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>1.8</u>		Corrected Temp (°C): <u>1.8</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>			







- 1
- 2
- 3
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- 7
- 8
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- 11
- 12
- 13
- 14
- 15

Part # 169409-434 RHO3 BOP 04/28

ORIGIN ID ALOA (319) 277-2401  
 SAMPLE RECEIVING  
 EUROFINS TESTAMERICA  
 3019 VENTURE WAY

SHIP DATE 23SEP25  
 ACTWGT 10.46 LB  
 CAD 0870970/CAFE3962

CEDAR FALLS, IA 50613  
 UNITED STATES US

BILL SENDER

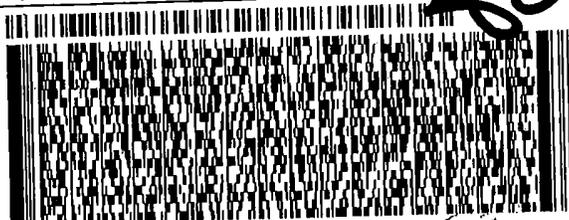
TO SHIPPING/RECEIVING  
 EUROFINS ENVIRONMENT TESTING SOUTHE  
 3355 MCLEMORE DRIVE

PENSACOLA FL 32514

(850) 474-1001  
 REF: S310-110982

*Handwritten:* REP, OIC

586C3/780E/459F2



FedEx  
 Express



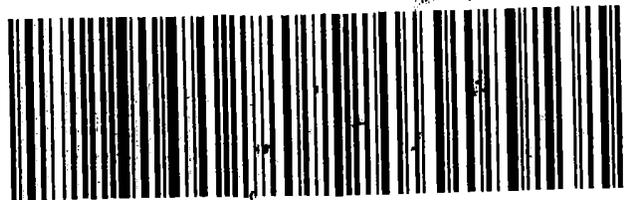
J253R258428810

WED - 24 SEP 10:30A  
 PRIORITY OVERNIGHT

TRK# 4671.5425 7914  
 0201

**XX PNSA**

32514  
 FL-US BFM



## Login Sample Receipt Checklist

Client: Adair County Sanitary Landfill

Job Number: 310-316243-1

SDG Number:

**Login Number: 316243**

**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	



## Login Sample Receipt Checklist

Client: Adair County Sanitary Landfill

Job Number: 310-316243-1

SDG Number:

**Login Number: 316243**

**List Number: 2**

**Creator: Beecher (Roberts), Alexis J**

**List Source: Eurofins Pensacola**

**List Creation: 09/24/25 03:18 PM**

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	0.1°C IR10
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.	N/A	
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").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Appendix F  
2025 Landfill Gas Report

**Table 13**  
**Gas Monitoring Summary**  
**2025 Gas Monitoring Report**  
**Adair County Sanitary Landfill (Closed)**  
**Permit No. 01-SDP-01-74C**

Monitoring Points		Methane Results (% LEL)							
Point #		3/26/2025		6/23/2025		9/24/2025		10/31/2025	
1	Scale	0		0		0		0	
2	Scale House	0		0		0		0	
3	Recycling Center	0		0		0		0	
6	NE Waste Boundary	0		0		0		0	
7	N Central Waste Boundary	0		0		0		0	
8	NW Waste Boundary	0		0		0		0	
9	W Central Waste Boundary	0		0		0		0	
10	SW Waste Boundary	0		0		0		0	
11	S Central Waste Boundary	0		0		0		0	
12	SE Waste Boundary	0		0		0		0	
13	E Central Waste Boundary	0		0		0		0	
14	MW-22	0	N	0	N	0	N	0	N
15	LFGW-W1	NM	Y	0	Y	0	Y	0	Y
16	LFGW-W2	0	N	0	N	0	N	0	N
17	LFGW-W3	0	N	0	N	0	N	0	N
18	LFG-GU01	0		0		0		0	
19	LFGW-W2W	0	N	0	N	0	N	0	N
20	LFGW-W3W	0	N	51	N	69	N	72	N

S(Y/N/U) - Was screen submerged, yes or no, blank is non-applicable, and U is unknown.

No action level exceedances measured during this reporting period.

**Notes**

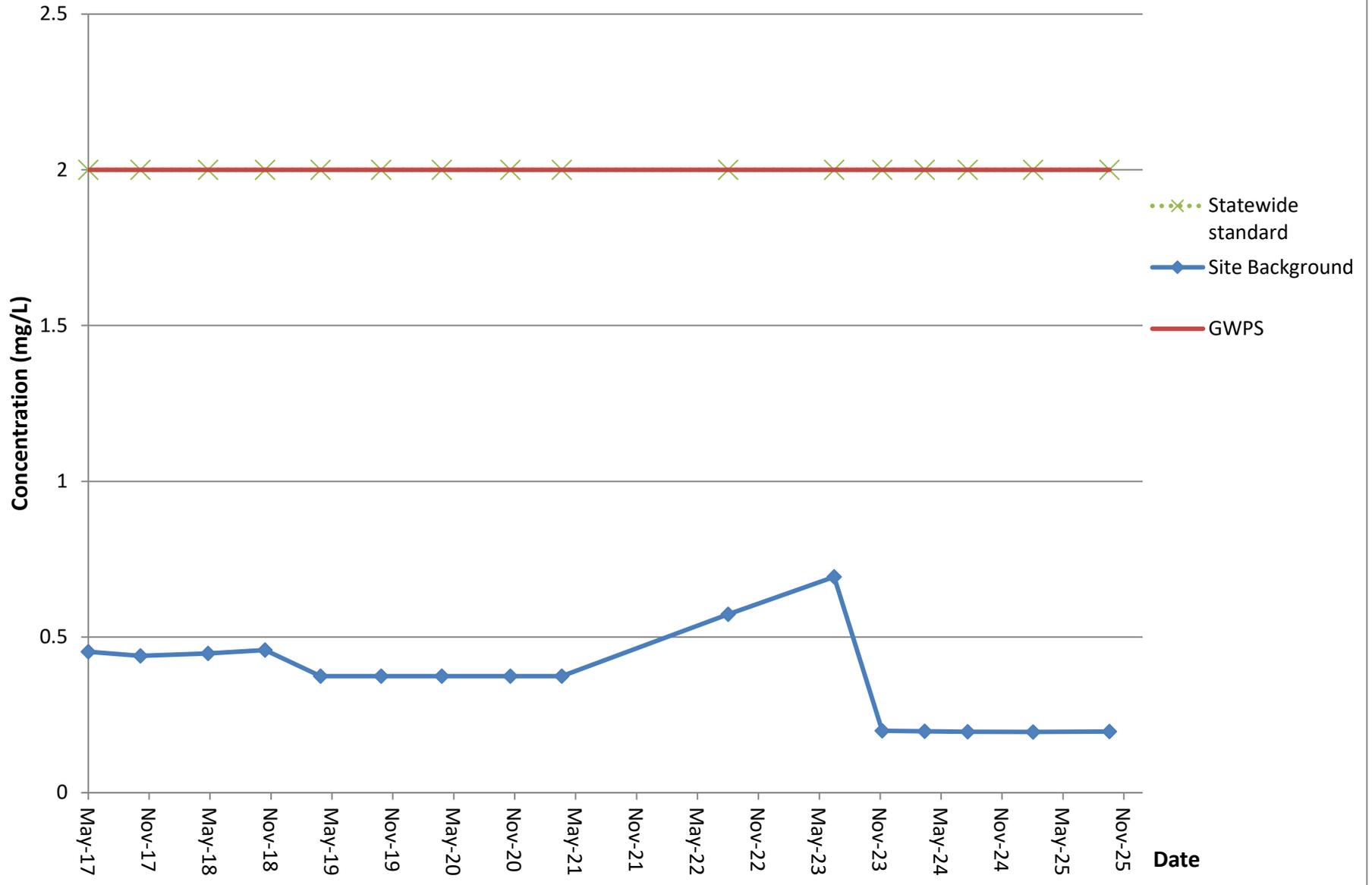
- 1) **Figure 1** Methane Monitoring Network shows the location of the methane monitoring system points.
- 2) Quarterly methane monitoring is completed by Adair County Landfill and Recycling Center staff and provided to SCS Engineers for reporting.
- 3) The screen in LFGW-W1 was submerged during the Q1, Q2, Q3, and Q4 monitoring events. The maximum water column height above the top of the screen was 2.46' during the reporting period.





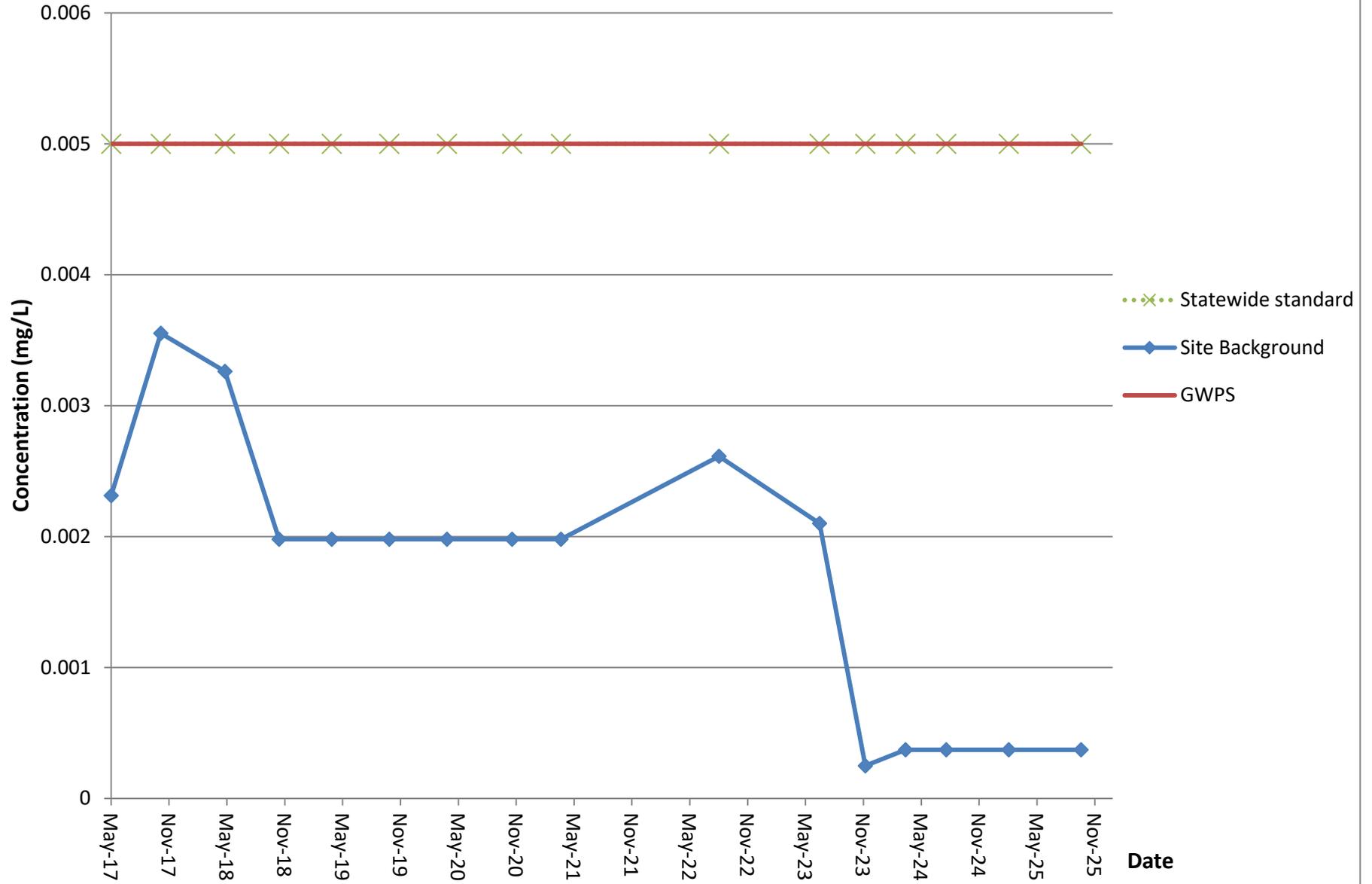
Appendix G  
Standards History Graphs

# Barium Prediction Limits and GWPS vs. Time



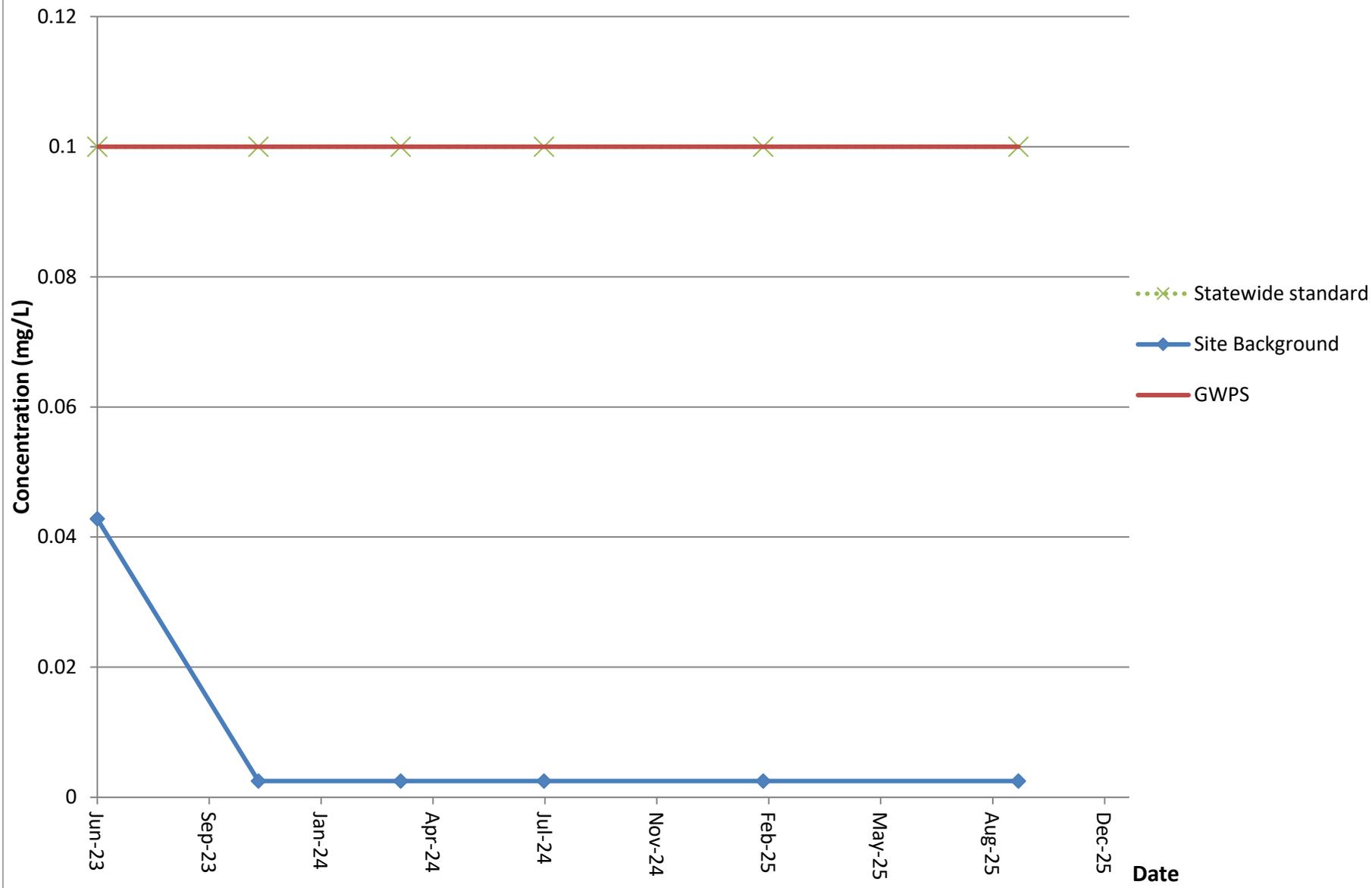
# Cadmium

## Prediction Limits and GWPS vs. Time



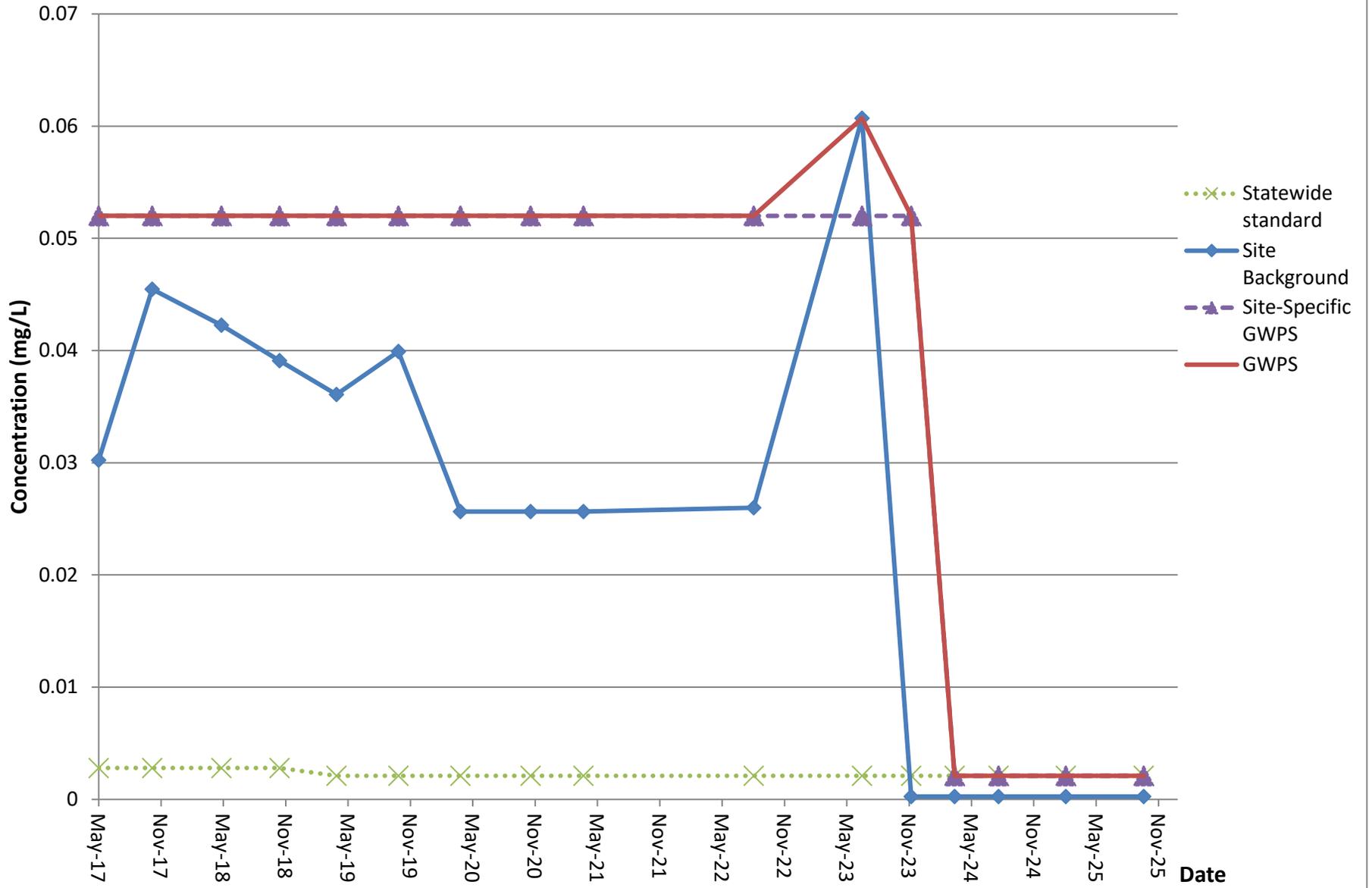
# Chromium

## Prediction Limits and GWPS vs. Time



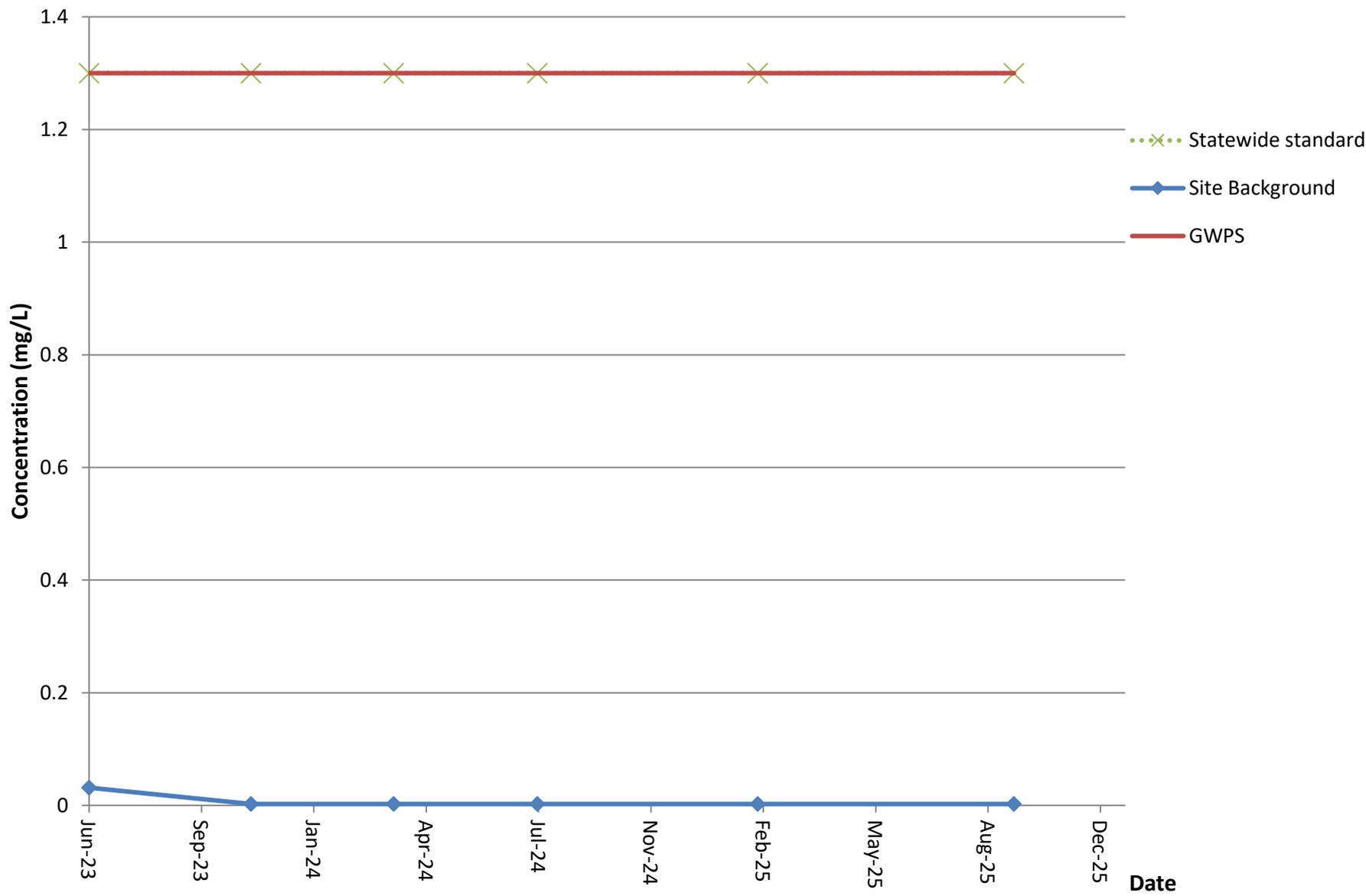
# Cobalt

## Prediction Limits and GWPS vs. Time



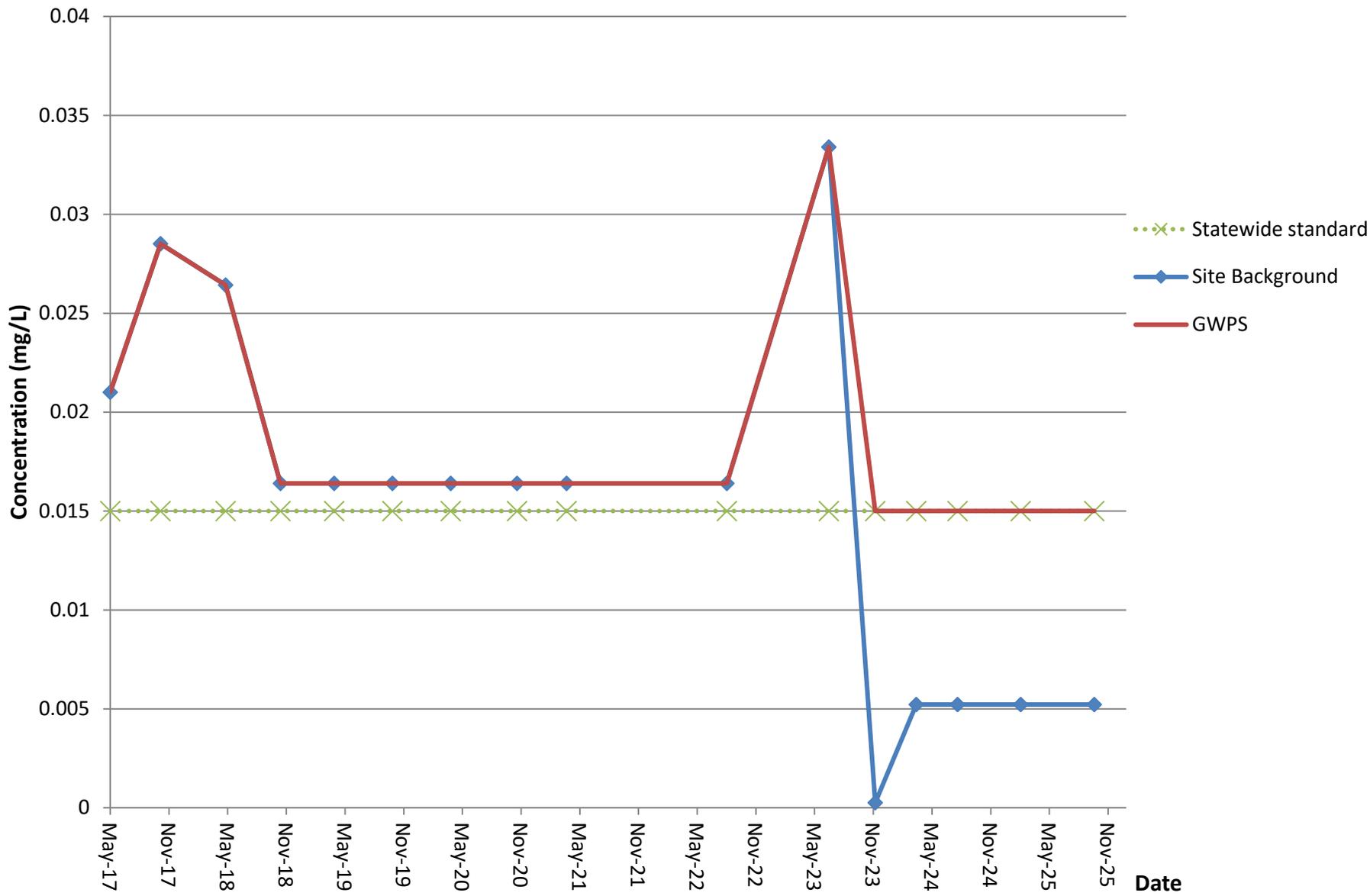
# Copper

## Prediction Limits and GWPS vs. Time



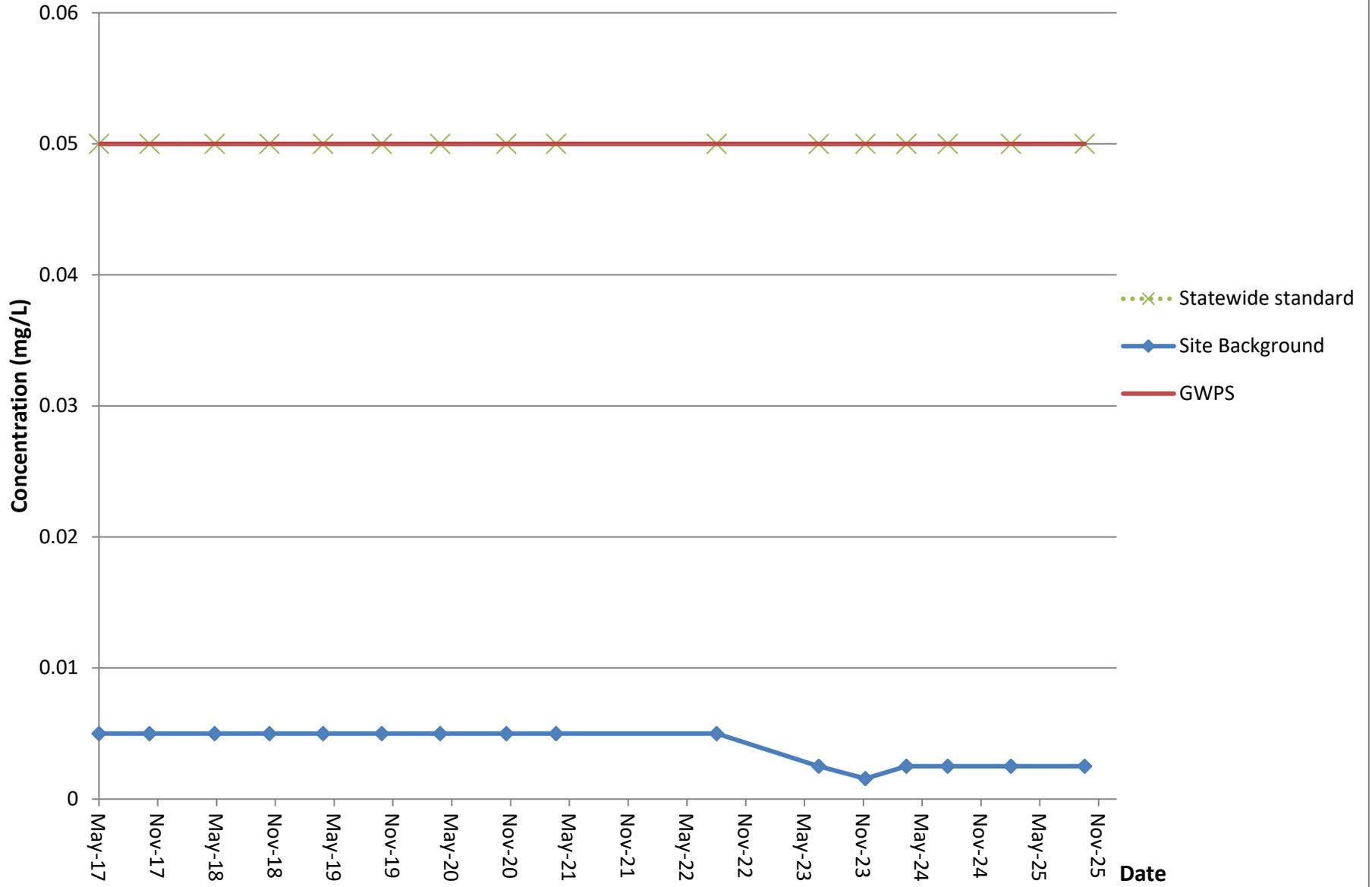
# Lead

## Prediction Limits and GWPS vs. Time



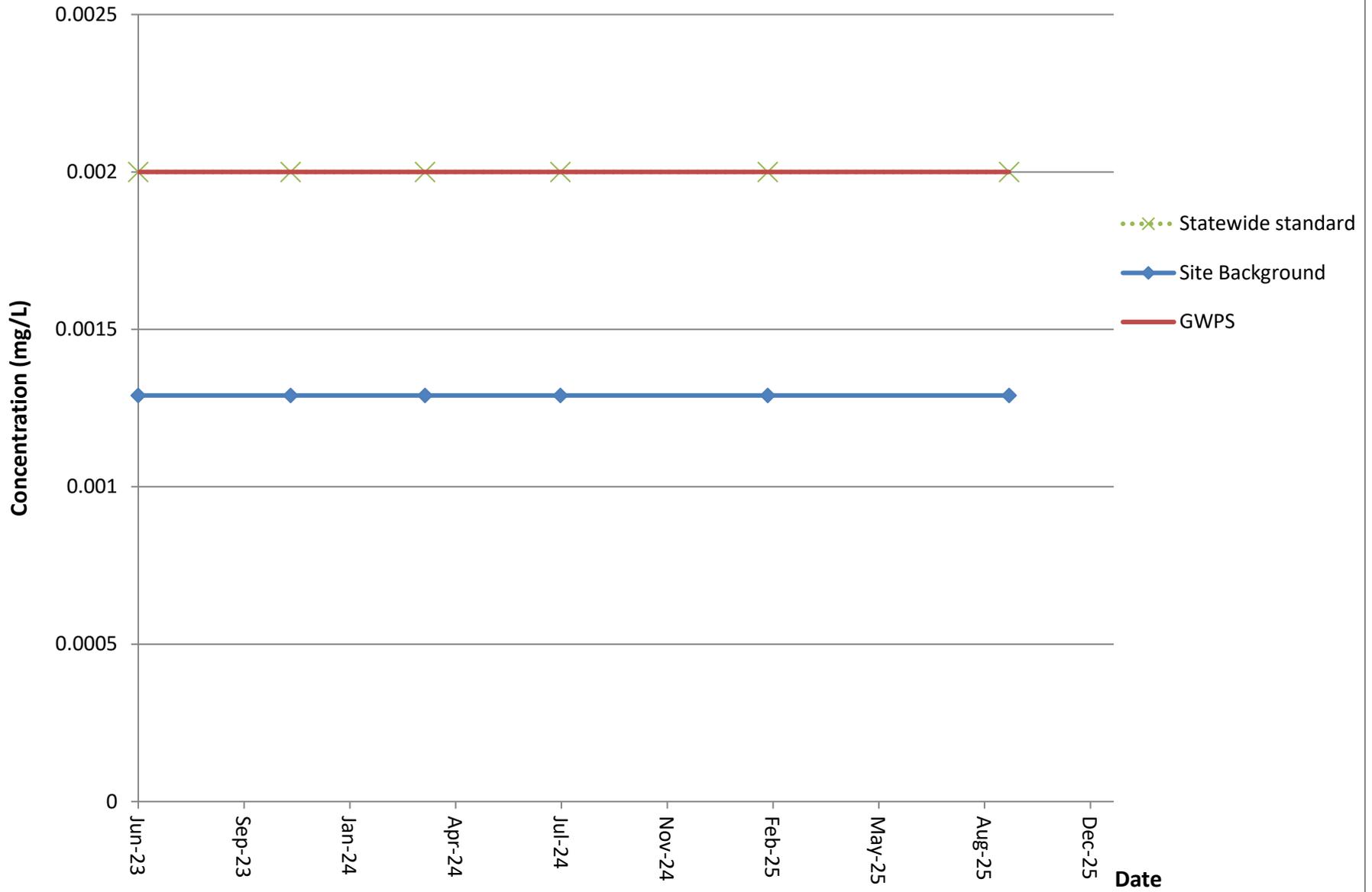
# Selenium

## Prediction Limits and GWPS vs. Time

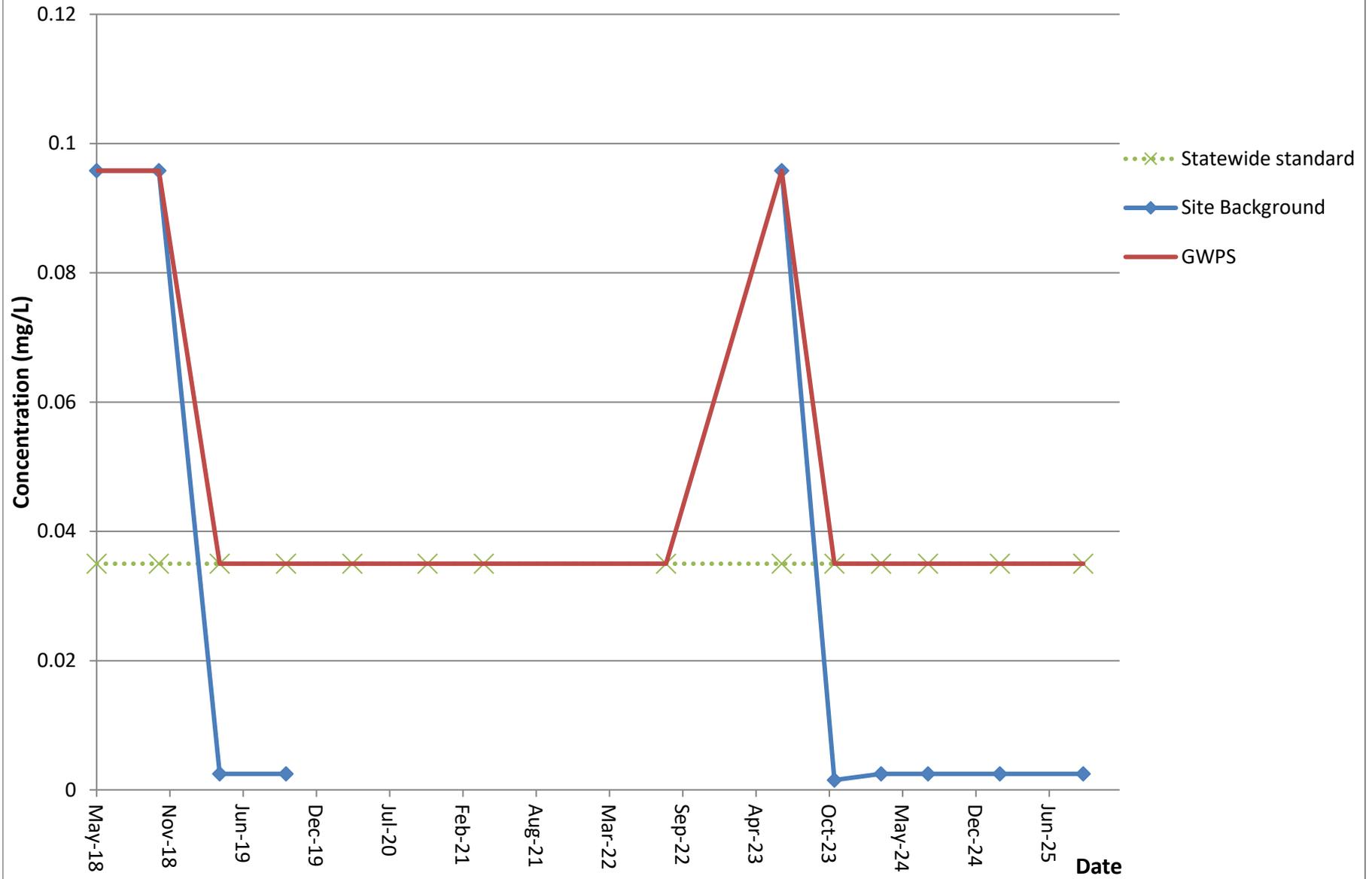


# Thallium

## Prediction Limits and GWPS vs. Time



# Vanadium Prediction Limits and GWPS vs. Time



# Zinc

## Prediction Limits and GWPS vs. Time

