

January 29, 2024
File No. 27223238.24

Mr. Brian Rath, P.E., Environmental Engineer Senior
Land Quality Bureau
Iowa Department of Natural Resources
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Des Moines, Iowa 50319

Subject: 2023 Annual Water Quality Report, 2023 Leachate Control System Performance
Evaluation Report, and 2023 Landfill Gas Annual Report
Adair County Sanitary Landfill (Closed)
Permit No. 01-SDP-01-74C

Dear Mr. Rath:

On behalf of the Adair County Landfill and Recycling Center, SCS Engineers (SCS) is submitting the 2023 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 Leachate Control System Performance Evaluation Report is included in Appendix F to fulfill the requirements listed in IAC 113.7(5)b(14). The Landfill Gas Report in Appendix G is presented to fulfill the landfill gas monitoring and reporting requirements listed in IAC 113.9(2)d.

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

Sincerely,



Sean Marczewski
Project Professional
SCS Engineers



Timothy C. Buelow, P.E.
Project Director
SCS Engineers

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



2023 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, and Landfill Gas Report

Adair County Sanitary Landfill (Closed) Permit #01-SDP-01-74C

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

SCS ENGINEERS

27223238.24 | January 29, 2024

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CERTIFICATION

Prepared by: Sean Marczewski Date: January 29, 2024

Typed: Sean Marczewski

Reviewed by: Timothy C. Buelow Date: January 29, 2024

Typed: Timothy C. Buelow, P.E.

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 1, 2023, through December 31, 2023. Groundwater sampling events were conducted in June and November 2023 during this reporting period at the closed Adair County Sanitary Landfill (Site).

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:

The 2023 statistical analyses excluded data collected prior to the implementation of low-flow sampling techniques. The first low-flow sampling event included in the background dataset occurred on October 20, 2015. The Site was assigned a site-specific groundwater protection standard (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 1st 2023 statistical evaluation due to background cobalt concentrations being below the state-wide standard.

There were eleven new and one 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 2023 reporting period. A lower confidence limit for cobalt in monitoring well MW-2 was calculated to be 0.002117 mg/L. Rounding the lower confidence limit to the ten-thousandth place to compare it to the statewide cobalt GWPS (0.0021 mg/L) which does not specify the numerical value of the digits right of the "1" resulted in both numbers being 0.0021. Rounding was done in order to compare the two numbers against each other using the same number of significant figures. The lower confidence limit was then equal to and not greater than the GWPS, and an SSL was not indicated. 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 (1.30×10^{-7} cm/sec) is greater than that of the underlying glacial till unit (9.70×10^{-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 3.4×10^{-2} m²/day to 6.3×10^{-2} m²/day for the loess unit and 1.9×10^{-2} m²/day to 3.3×10^{-2} m²/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 statistics 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 June and November 2023 sampling events are included in **Appendix A**. Sampling completed in 2022 and 2023 and anticipated sampling for 2024 are summarized in **Table 2**. Laboratory analytical reports from the 2023 sampling events are included in **Appendix B-1**, and the 2023 data validation documentation tables are provided in **Appendix B-2**. The groundwater chemistry summary table 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 2023 sampling events except for MW-6 which was below the screened interval during the November sampling event. The June and November 2023 groundwater elevations and top of screen elevations are presented in **Table 4**. The measured groundwater elevations in relation to the top of the screened interval elevations indicate that the HMSP monitoring wells are placed at acceptable vertical locations to enable collection of representative groundwater samples and to detect contamination, if present. 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 Site using groundwater elevation data measured during the spring and fall 2023 groundwater sampling events. The spring and fall 2023 contour maps are included as **Figures 2 and 3**, respectively. Comparisons of the 2023 groundwater contours to previous groundwater contours indicate that the groundwater elevations and flow directions are consistent, with the general groundwater flow direction for the Site 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 2023 groundwater sampling events. The difference between the as-drilled and 2023 measured well depths at MW-2, MW-3, MW-7, MW-9, and MW-10 were not greater than 0.7 feet. The difference between the as-drilled and 2023 measured well depths at MW-6 was 1.2 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 2023 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 November 2023 sampling event, maintenance does not appear to be necessary at this time. Any well maintenance items noted during 2024 sampling activities will be communicated to Site personnel upon completion of the sampling activities.

4.0 2023 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 provides documentation of the accuracy and precision of the analytical data and confirms that the analyses are sufficiently sensitive to detect constituents at levels below regulatory standards when technically feasible with the laboratory method utilized. QA/QC data validation of the analytical laboratory data includes 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 2023 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. However, the Eurofins Cedar Falls Lab inadvertently left the VOC sample vials collected during the 1st semi-annual sampling event out of the fridge from June 24 to June 25, 2023. Due to the temperature being out of the acceptable range requirement, SCS decided to cancel 8260 Method VOCs and resample. Resampling occurred on June 27, 2023. Notable items regarding sample collection and sample handling procedures are included in the 2023 QA/QC summary tables in **Appendix B-2** and summarized as follows:

- Samples were delivered to the laboratory on-ice and received within the appropriate temperature range.
- Samples were received at the laboratory in good condition and with proper preservation.
- Holding times were met for sample analyses.
- COC controls were followed and the correct constituents were analyzed for Site samples.

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 historical range. Laboratory QA/QC items are summarized on the 2023 QA/QC summary tables in **Appendix B-2**.

4.4 PRECISION

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

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

Field duplicate samples were collected during the June and November 2023 sampling events to evaluate the precision of analytical measurements, as well as the reproducibility of sampling technique. The relative percent differences (RPDs; quantitative difference between the site sample and the field duplicate sample) for each constituent were calculated to evaluate the precision of the data. The RPDs can be evaluated only if the laboratory analysis results for both the site sample and the field duplicate sample are detected above the reporting limit, although instances where one sample is reported as non-detect at the reporting limit and the other sample is detected at a concentration greater than the reporting limit are noted. A result qualified with a “J” qualifier, which indicates an estimated concentration measured between the method detection limit and the reporting limit, and total suspended solids were not considered in the duplicate comparison.

Field duplicate samples were collected at monitoring well MW-3 and MW-6 during the June and November 2023 sampling events, respectively. The RPD comparisons were within 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 analyses are completed for the Site on a semiannual 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 significantly 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 analyses are included in **Appendix C** (also known as **Table 9** of the DNR water quality report format). The 2023 Annual Statistical Summary Report, which details the statistical analyses from both the first and second semiannual 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 were not generated because this is the first reporting period with non-low flow data removed from the background data set.

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 1st 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 SSIs were confirmed during the 2023 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 2023 Leachate Control System Performance Evaluation Report is included in **Appendix E** and the 2023 Gas Monitoring Report is included in **Appendix F**.

Tables

Table 1
Monitoring Program Summary
2023 Annual Water Quality Report
Adair County Sanitary Landfill (Closed)
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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
HMSP Monitoring Points								
MW-2	Glacial Till	Assessment	No Change	Arsenic, Benzene, Barium, Cobalt, Nickel, Thallium	None	6	30	0
MW-3	Glacial Till	Assessment	No Change	None	None	11	26	0
MW-6	Glacial Till	Assessment	No Change	Cobalt, Selenium	None	11	24	0
MW-7	Glacial Till	Assessment	No Change	Cobalt, Nickel	None	10	26	0
MW-9	Glacial Till	Assessment	No Change	Cobalt, Nickel	None	7	29	0
MW-10	Glacial Till	Background	No Change	None	None	35	0	0
GU-2	Glacial Till	Detection	No Change	None	None	12	0	0
GWD-1	Glacial Till	Detection	No Change	None	None	2	0	0
Other Monitoring Points								
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		

Comments: No additional comments.

Table 2
Monitoring Program Implementation Schedule
2023 Annual Water Quality Report
Adair County Sanitary Landfill (Closed)
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Monitoring Point	Recent Sampling Dates and Constituents		Recent Sampling Dates and Constituents		Upcoming Sampling Dates and Constituents		Full Appendix II Sample Dates	
	March 2022	August 2022	June 22, 2023	November 13, 2023	1 st 2024 Semi-Annual	2 nd 2024 Semi-Annual	Collected Since January 1, 2016	Next Scheduled Event
MW-2	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Spring 2016, Spring 2021	2026
MW-3	Appendix II, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Spring 2017, Spring 2022	2027
MW-6	Appendix II, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Spring 2017, Spring 2022	2027
MW-7	Appendix II, TSS	Appendix I, TSS	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 I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Spring 2016, Fall 2021	2026
MW-10	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Not applicable	Not applicable
GU-2	Dry (no sample)	Dry (no sample)	Dry (no sample)	Dry (no sample)	Appendix I, TSS	Appendix I, TSS	Not applicable	Not applicable
GWD-1	Dry (no sample)	Dry (no sample)	Dry (no sample)	Dry (no sample)	Appendix I, TSS	Appendix I, TSS	Not applicable	Not applicable

Notes:
TSS - Total Suspended Solids.

Table 3
Monitoring Well Maintenance and Performance Re-Evaluation Schedule
2023 Annual Water Quality Report
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Permit No. 01-SDP-01-74C

Compliance with:	2021	2022	2023	2024
567 IAC 113.10(2)"f"(1) high and low water levels		Completed	Included ⁽²⁾	Scheduled
567 IAC 113.10(2)"f"(2) changes in the hydrologic setting and flow paths		Completed	Included ⁽¹⁾	Scheduled
567 IAC 113.10(2)"f"(3) well depths	Completed	Completed	Included ⁽²⁾	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
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Well	Top of casing	Top of Screen	Total Depth		Date of Measurements		Maximum Depth
					6/22/2023	11/13/2023	Discrepancy (ft)
MW-2	1236.14	1223.11	22.7	Groundwater Level (ft)	10.95	11.53	-0.25
				Groundwater Elevation (Ft MSL)	1225.19	1224.61	
				Measured Well Depth (ft)	22.95	22.87	
				Submerged screen	Y	Y	
MW-3	1226.51	1208.69	27.9	Groundwater Level (ft)	15.55	16.42	-0.62
				Groundwater Elevation (Ft MSL)	1210.96	1210.09	
				Measured Well Depth (ft)	28.08	28.52	
				Submerged screen	Y	Y	
MW-6	1227.26	1214.52	20.1	Groundwater Level (ft)	11.28	13.70	-1.21
				Groundwater Elevation (Ft MSL)	1215.98	1213.56	
				Measured Well Depth (ft)	21.25	21.31	
				Submerged screen	Y	N	
MW-7	1245.53	1227.68	27.9	Groundwater Level (ft)	13.90	13.14	-0.17
				Groundwater Elevation (Ft MSL)	1231.63	1232.39	
				Measured Well Depth (ft)	28.07	28.02	
				Submerged screen	Y	Y	
MW-9	1259.73	1241.89	27.8	Groundwater Level (ft)	14.55	14.78	-0.18
				Groundwater Elevation (Ft MSL)	1245.18	1244.95	
				Measured Well Depth (ft)	27.98	27.97	
				Submerged screen	Y	Y	
MW-10	1322.44	1299.65	32.8	Groundwater Level (ft)	15.30	18.94	-0.20
				Groundwater Elevation (Ft MSL)	1307.14	1303.50	
				Measured Well Depth (ft)	32.82	33.00	
				Submerged screen	Y	Y	

Comments: See Section 3.0 Monitoring Well Maintenance and Performance Summary for further discussion.

Table 5
Background and GWPS Summary
2023 Annual Water Quality Report
Adair County Sanitary Landfill (Closed)
Permit No. 01-SDP-01-74C

Interwell Background/GWPS (MW-10)

Constituent	Units	Samples	Detections	Min	Max	Mean	Background level	Statistical Test	GWPS	Source
Inorganics										
Antimony (Sb)	mg/L	11	0	0.0005 (1/2 RL)	0.001 (1/2 RL)	0.00072727	< 0.002	DQR	0.006	MCL
Arsenic (As)	mg/L	11	0	0.001 (1/2 RL)	0.001 (1/2 RL)	0.001	< 0.002	DQR	0.01	MCL
Barium (Ba)	mg/L	17	17	0.156	0.195	0.17402941	0.1986	PL (P)	2	MCL
Beryllium (Be)	mg/L	11	0	0.0005 (1/2 RL)	0.0005 (1/2 RL)	5.00E-04	< 0.001	DQR	0.004	MCL
Cadmium (Ca)	mg/L	12	5	0.00005 (1/2 RL)	0.000372	0.00016825	0.00025	PL (NP)	0.005	MCL
Chromium (Cr)	mg/L	11	1	0.00047*	0.0025 (1/2 RL)	0.00231545	0.0025	PL (NP)	0.1	MCL
Cobalt (Co)	mg/L	11	3	0.000038*	0.00025 (1/2 RL)	0.00019582	0.00025	PL (NP)	0.0021	SWS
Copper (Cu)	mg/L	11	1	0.001 (1/2 RL)	0.0025 (1/2 RL)	0.00231955	0.0025	PL (NP)	1.3	MCL
Lead (Pb)	mg/L	11	2	0.00012*	0.00522	0.00069	0.00025	PL (NP)	0.015	MCL
Nickel (Ni)	mg/L	11	0	0.0025 (1/2 RL)	0.0025 (1/2 RL)	0.0025	< 0.005	DQR	0.1	SWS
Selenium (Se)	mg/L	13	7	0.00091*	0.0025 (1/2 RL)	0.00175015	0.00156	PL (P)	0.05	MCL
Silver (Ag)	mg/L	11	0	0.0005 (1/2 RL)	0.0005 (1/2 RL)	5.00E-04	< 0.001	DQR	0.1	SWS
Thallium (Tl)	mg/L	12	1	0.0005 (1/2 RL)	0.00129	0.00056583	0.00129	PL (NP)	0.002	MCL
Vanadium (V)	mg/L	15	8	0.000621*	0.0025 (1/2 RL)	0.0016642	0.001528	PL (P)	0.035	SWS
Zinc (Zn)	mg/L	12	1	0.005 (1/2 RL)	0.0128*	0.00898333	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 2023 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 1st 2023 semi-annual statistical evaluation.

Table 6
Summary of Well/Detected Constituent Pairs With No Previous SSIs
2023 Annual Water Quality Report
Adair County Sanitary Landfill (Closed)
Permit No. 01-SDP-01-74C

Monitoring Point	Constituent	Units	Most Recent Result	Background Standard
MW-2	Arsenic	mg/L	0.00353	<0.002
	Barium	mg/L	0.187	0.1986
	Cobalt	mg/L	0.00561	0.00025
	Nickel	mg/L	0.0815	<0.005
	Thallium	mg/L	<0.001	0.00129
MW-6	Cobalt	mg/L	<0.0005	0.00025
	Selenium	mg/L	<0.005	0.00156
MW-7	Cobalt	mg/L	0.000328	0.00025
	Nickel	mg/L	0.0196	<0.005
MW-9	Cobalt	mg/L	0.00276	0.00025
	Nickel	mg/L	0.00709	<0.005

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.
- 3) The spring 2023 statistical analyses were revised to include the updated background data set.

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
 2023 Annual Water Quality Report
 Adair County Sanitary Landfill (Closed)
 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	0.00353	< 0.002	0.001744	0.01	6/22/2023	NA	10/19/2017
	Barium	mg/L	0.187	0.1986	0.1803	2	6/22/2023	NA	10/19/2017
	Benzene	µg/L	0.7	<0.5	0.7238	5	6/20/2008	NA	11/13/2009
	Cobalt	mg/L	0.00561	0.00025	0.002117	0.0021	6/22/2023	NA	10/19/2017
	Nickel	mg/L	0.0815	< 0.005	0.00954	0.1	6/22/2023	NA	10/19/2017
	Thallium	mg/L	<0.001	0.00129	0.0005	0.002	6/22/2023	NA	10/19/2017
MW-3	None								
MW-6	Cobalt	mg/L	<0.0005	0.00025	0.000148	0.0021	6/22/2023	NA	10/19/2017
	Selenium	mg/L	<0.005	0.00156	0.003701	0.05	6/22/2023	NA	10/19/2017
MW-7	Cobalt	mg/L	0.000328	0.00025	0.0001489	0.0021	11/13/2023	NA	3/31/2021
	Nickel	mg/L	0.0196	< 0.005	0.01706	0.1	6/22/2023	NA	10/19/2017
MW-9	Cobalt	mg/L	0.00276	0.00025	0.0003786	0.0021	6/22/2023	NA	10/19/2017
	Nickel	mg/L	0.00709	< 0.005	0.004622	0.1	6/22/2023	NA	10/19/2017
GU-2	No samples								
GWD-1	No samples								

- Notes:
- 1) Shaded rows denote constituent/well pairs with SSIs indicated in 2023 but not 2022. Unshaded rows denote constituent/well pairs with SSIs indicated during both the 2022 and 2023 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
2023 Annual Water Quality Report
Adair County Sanitary Landfill (Closed)
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 st Year	2 nd Year	3 rd Year
None									

Notes:

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

Table 9
Summary of Groundwater Chemistry
2023 Annual Water Quality Report
Adair County Sanitary Landfill (Closed)
Permit No. 01-SDP-01-74C

The Summary of Groundwater Chemistry s is located in Appendix C.

Table 10
Historical SSI and SSL
2023 Annual Water Quality Report
Adair County Sanitary Landfill (Closed)
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
MW-2	Arsenic								
	Barium								
	Benzene								
	Cobalt								
	Chlorobenzene								
	cis-1,2,-Dichloroethene								
	Nickel								
	Thallium								
MW-6	Acetone								
	Cobalt								
	Selenium								
MW-7	Acetone								
	Cobalt								
	Nickel								
MW-9	Cobalt								
	Nickel								

Comments:

- 1) Background was updated during the 2nd 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 2nd 2015 semi-annual sampling event, were removed from statistical consideration.
- 2) Retesting is not performed in assessment monitoring wells as these monitoring wells are not in the detection monitoring program.

Table 11
Corrective Action Trend Analysis
2023 Annual Water Quality Report
Adair County Sanitary Landfill (Closed)
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.

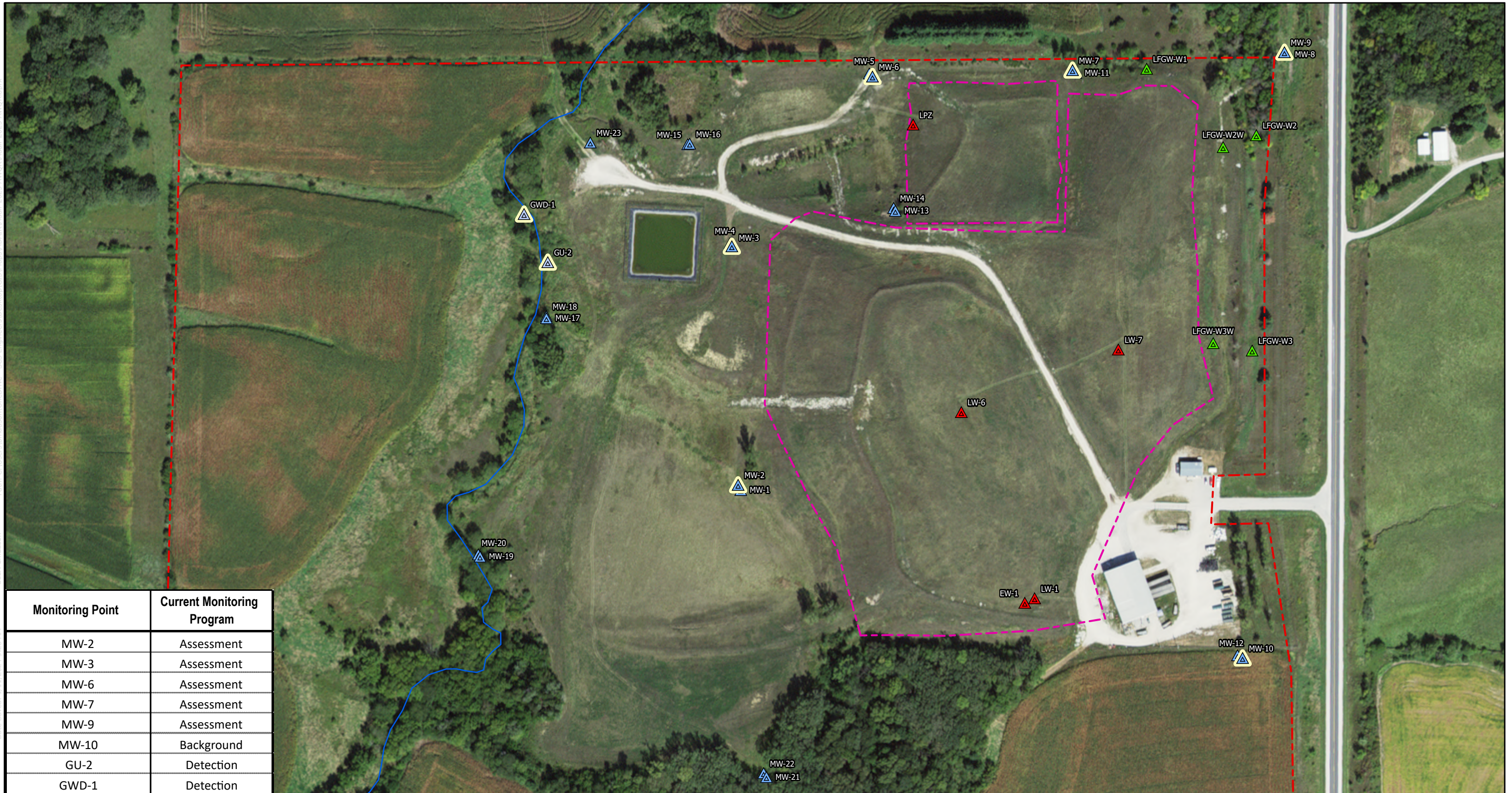
S - Mann-Kendall Statistics.

Comments:

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

Figures

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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

Legend		
<ul style="list-style-type: none"> ▲ HMSC Monitoring Well ▲ HMSC Goundwater Underdrain Monitoring Point 	<ul style="list-style-type: none"> ▲ Monitoring Well ▲ Landfill Gas Monitoring Well ▲ Leachate Monitoring Point 	<ul style="list-style-type: none"> — Stream — Approximate Waste Boundary — Approximate Property Boundary
<p>Adair County Sanitary Landfill Adair, IA Project No: 27223238.24 Drawing Date: January 2024</p>		

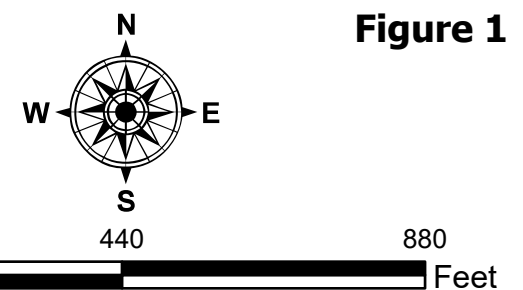
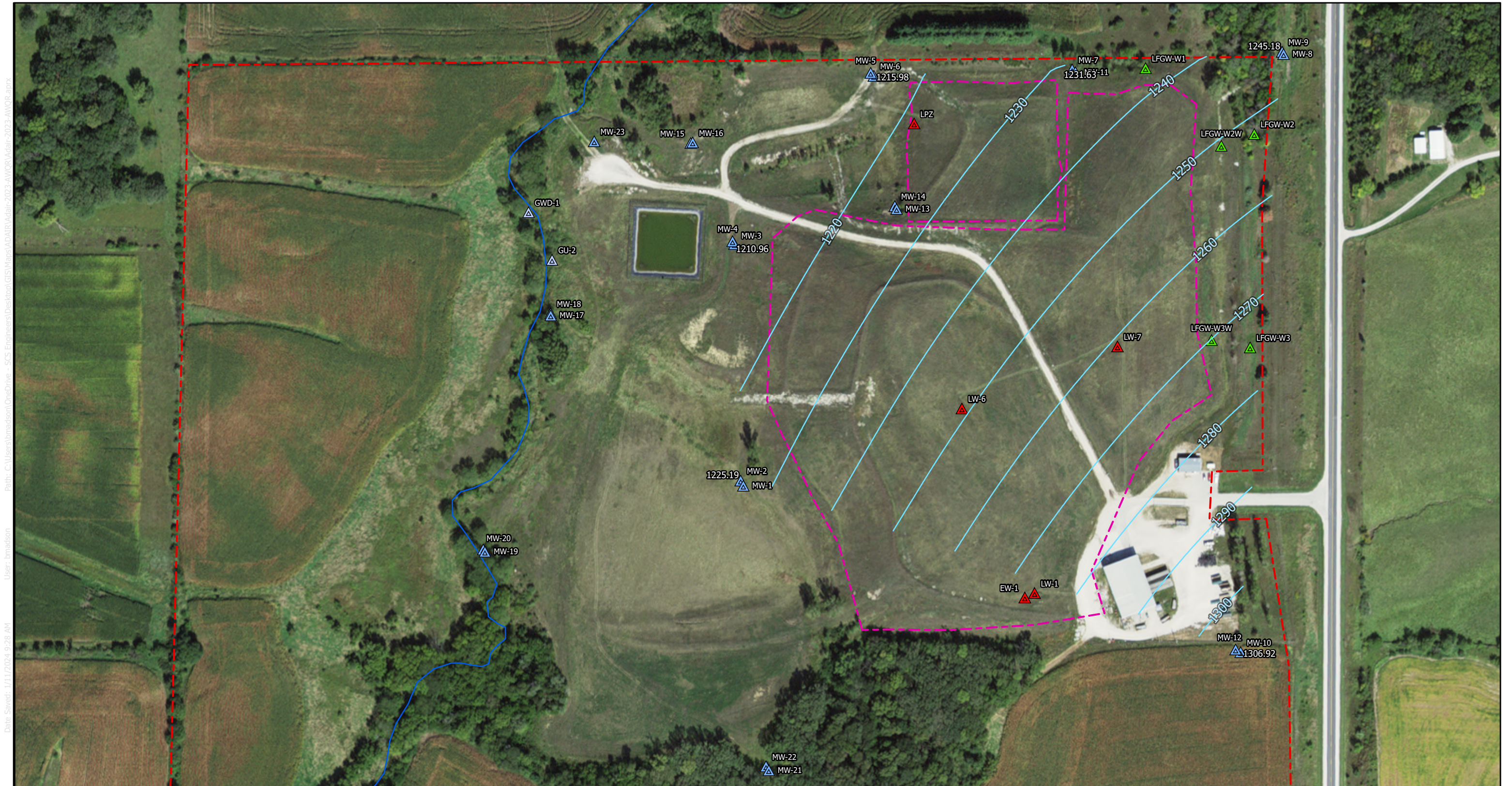


Figure 1



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Spring Groundwater Contours

Legend		
<p>Approximate Groundwater Contours Based on Field Measurements Taken June 22, 2023</p>	<ul style="list-style-type: none"> ▲ Monitoring Well ▲ Landfill Gas Monitoring Well ▲ Leachate Monitoring Point 	<ul style="list-style-type: none"> — Stream Approximate Waste Boundary Approximate Property Boundary
<p style="text-align: center;">Adair County Sanitary Landfill Adair, IA Project No: 27223238.24 Drawing Date: January 2024</p>		

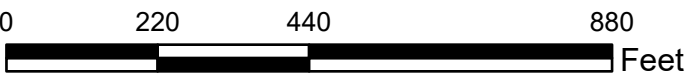
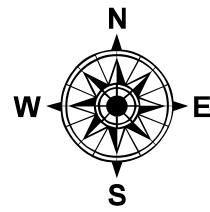
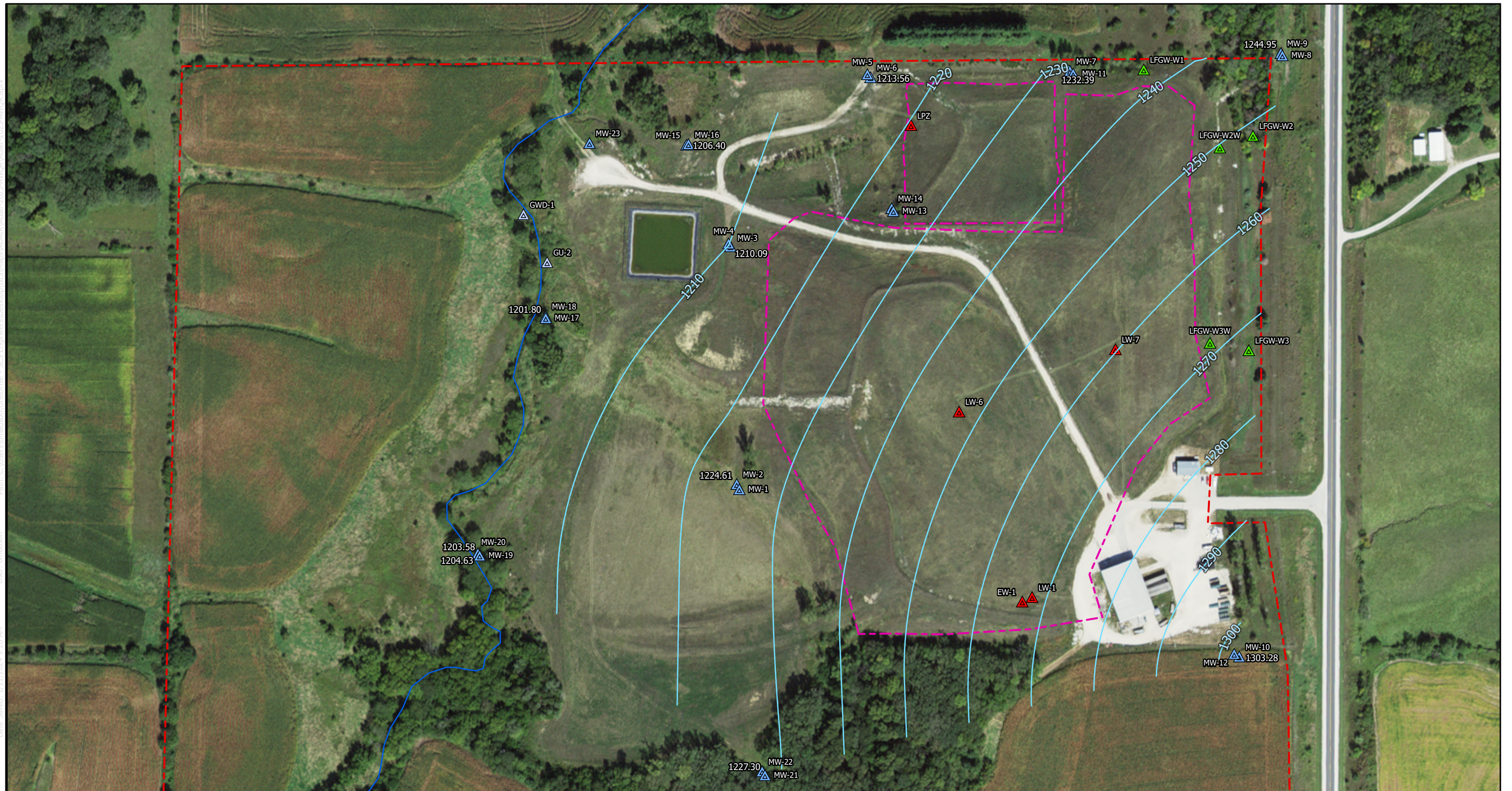


Figure 2

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Fall Groundwater Contours

Legend

— Approximate Groundwater Contour Based on Field Measurements Taken November 13, 2023

▲ Monitoring Well

▲ Landfill Gas Monitoring Well

▲ Leachate Monitoring Point

— Stream

- - - Approximate Waste Boundary

- - - Approximate Property Boundary

Adair County Sanitary Landfill
Adair, IA
Project No: 27223238.24
Drawing Date: January 2024

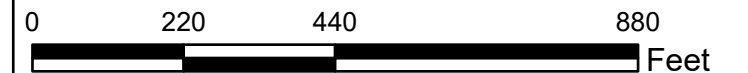
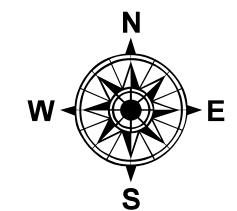



Figure 3

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Appendix A
Field Sampling Forms

FORM FOR GROUNDWATER SAMPLING

Project: Adair County Sanitary Landfill	
Monitoring Well/Piezometer ID: MW-2	Date: 6/22/2023
Gradient: Down	Sampler: Scott Stoller

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped? Yes	
Litter/Standing Water? No	

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	23.0
Initial Static Water Level (feet):	10.45
Initial Groundwater Elevation (ft-amsl):	1225.69
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
3:35 PM	Purging start time.						
3:38 PM	16.9	1.1	1547.2	6.74	25.5	5.3	
3:41 PM	15.9	0.8	1546.1	6.61	20.4	4.8	
3:44 PM	15.6	0.6	1533.6	6.59	18.4	4.8	
3:47 PM	15.3	0.5	1534.4	6.58	16.2	4.8	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.0
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	166.67

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	
----------------------	--

FORM FOR GROUNDWATER SAMPLING

Project: Adair County Sanitary Landfill	
Monitoring Well/Piezometer ID: MW-3	Date: 6/22/2023
Gradient: Down	Sampler: Scott Stoller

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped? Yes	
Litter/Standing Water? No	

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	28.1
Initial Static Water Level (feet):	15.55
Initial Groundwater Elevation (ft-amsl):	1210.96
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
2:34 PM	Purging start time.						
2:37 PM	15.8	4.7	1466.8	7.36	254.3	7.3	
2:40 PM	15.3	4.6	1458.2	7.07	247.6	7.3	
2:43 PM	15.3	4.7	1453.5	6.99	243.8	6.2	
2:46 PM	15.7	4.8	1452.4	6.92	240.5	6.8	
2:49 PM	16.7	4.8	1449.9	6.86	237.3	8.7	
2:52 PM	17.2	4.5	1458.7	6.83	234.6	6.7	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.4
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	18:00
Average Purge Rate (mL/min):	133.33

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	
----------------------	--

FORM FOR GROUNDWATER SAMPLING

Project: Adair County Sanitary Landfill	
Monitoring Well/Piezometer ID: MW-6	Date: 6/22/2023
Gradient: Down	Sampler: Scott Stoller

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped? Yes	
Litter/Standing Water? No	

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	21.3
Initial Static Water Level (feet):	11.28
Initial Groundwater Elevation (ft-amsl):	1215.98
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
1:31 PM	Purging start time.						
1:34 PM	17.2	1.6	1651.0	7.30	274.8	18.1	
1:37 PM	17.3	1.5	1621.4	6.99	261.8	19.7	
1:40 PM	18.1	1.6	1616.5	6.85	251.0	19.8	
1:43 PM	18.1	1.7	1612.3	6.83	242.7	21.9	
1:46 PM	17.1	1.8	1601.0	6.85	236.5	27.3	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.1
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	15:00
Average Purge Rate (mL/min):	140.00

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	

FORM FOR GROUNDWATER SAMPLING

Project: Adair County Sanitary Landfill	
Monitoring Well/Piezometer ID: MW-7	Date: 6/22/2023
Gradient: Down	Sampler: Scott Stoller

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	28.1
Initial Static Water Level (feet):	13.90
Initial Groundwater Elevation (ft-amsl):	1231.63
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
12:45 PM	Purging start time.						
12:48 PM	15.3	1.7	1983.5	7.02	279.9	9.7	
12:51 PM	14.4	0.9	1981.9	6.81	262.4	12.0	
12:54 PM	14.2	0.7	1981.4	6.65	252.3	14.2	
12:57 PM	14.9	0.6	1972.6	6.61	245.1	16.0	
1:00 PM	14.7	0.5	1979.6	6.62	239.5	10.2	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.3
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	15:00
Average Purge Rate (mL/min):	153.33

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	
----------------------	--

FORM FOR GROUNDWATER SAMPLING

Project: Adair County Sanitary Landfill	
Monitoring Well/Piezometer ID: MW-9	Date: 6/23/2023
Gradient: Down	Sampler: Scott Stoller

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	28.0
Initial Static Water Level (feet):	14.55
Initial Groundwater Elevation (ft-amsl):	1245.18
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
11:51 AM	Purging start time.						
11:54 AM	13.2	1.4	1373.3	7.01	259.9	6.8	
11:57 AM	13.0	0.8	1374.2	6.81	247.4	8.5	
12:00 PM	12.9	0.7	1372.1	6.76	239.4	9.2	
12:03 PM	13.1	0.6	1379.7	6.72	227.3	10.5	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.1
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	175.00

D. WELL MAINTENANCE	
Does the well require any future maintenance?	Yes
If yes, explain:	Needs well marker and T-posts. May need shrubs cleared.

Additional Comments:	
----------------------	--

FORM FOR GROUNDWATER SAMPLING

Project: Adair County Sanitary Landfill	
Monitoring Well/Piezometer ID: MW-10	Date: 6/22/2023
Gradient: Up	Sampler: Scott Stoller

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped? Yes	
Litter/Standing Water? No	

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	32.9
Initial Static Water Level (feet):	15.30
Initial Groundwater Elevation (ft-amsl):	1316.92
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
4:41 PM	Purging start time.						
4:44 PM	15.1	7.2	406.0	7.93	74.3	4.5	
4:47 PM	14.8	7.2	380.7	7.74	97.0	6.7	
4:50 PM	15.3	7.1	379.3	7.61	110.9	5.6	
4:53 PM	15.4	7.1	378.1	7.59	121.2	5.1	
4:56 PM	15.4	7.0	376.4	7.57	128.5	8.5	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.9
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	15:00
Average Purge Rate (mL/min):	123.33

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	
----------------------	--

FORM FOR GROUNDWATER SAMPLING

Project: Adair County Sanitary Landfill	
Monitoring Well/Piezometer ID: MW-2	Date: 11/13/2023
Gradient: Down	Sampler: Caleb Gomez

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped? Yes	
Litter/Standing Water? No	

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	22.9
Initial Static Water Level (feet):	11.53
Initial Groundwater Elevation (ft-amsl):	1224.61
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING	
-----------------	--

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
2:30 PM	Purging start time.						
2:33 PM	15.0	3.4	1492.0	6.76	3.9	3.4	
2:36 PM	15.0	1.9	1488.3	6.64	-15.6	3.2	
2:39 PM	15.0	1.4	1479.0	6.59	-21.5	3.3	
2:42 PM	14.9	1.2	1473.7	6.57	-24.1	3.4	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.3
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	191.67

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	
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FORM FOR GROUNDWATER SAMPLING

Project: Adair County Sanitary Landfill	
Monitoring Well/Piezometer ID: MW-3	Date: 11/13/2023
Gradient: Down	Sampler: Caleb Gomez

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	28.5
Initial Static Water Level (feet):	16.42
Initial Groundwater Elevation (ft-amsl):	1210.09
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING	
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES	

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
3:06 PM	Purging start time.						
3:09 PM	13.6	4.1	1662.6	7.12	35.2	4.5	
3:12 PM	13.4	2.8	1669.5	7.00	34.5	4.3	
3:15 PM	13.5	2.3	1663.6	6.94	36.4	6.4	
3:18 PM	13.5	2.2	1675.2	6.89	40.4	8.9	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.1
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	175.00

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	

FORM FOR GROUNDWATER SAMPLING

Project: Adair County Sanitary Landfill	
Monitoring Well/Piezometer ID: MW-6	Date: 11/13/2023
Gradient: Down	Sampler: Caleb Gomez

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	21.3
Initial Static Water Level (feet):	13.70
Initial Groundwater Elevation (ft-amsl):	1213.56
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
12:47 PM	Purging start time.						
12:50 PM	14.5	3.8	1990.6	6.97	120.3	6.0	
12:53 PM	14.5	2.1	1977.5	6.88	116.9	8.4	
12:56 PM	14.5	1.5	1974.5	6.85	112.3	11.8	
12:59 PM	14.5	1.2	1967.8	6.83	107.5	12.3	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.3
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	191.67

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	
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FORM FOR GROUNDWATER SAMPLING

Project: Adair County Sanitary Landfill	
Monitoring Well/Piezometer ID: MW-7	Date: 11/13/2023
Gradient: Down	Sampler: Caleb Gomez

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped? Yes	
Litter/Standing Water? No	

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	28.0
Initial Static Water Level (feet):	13.14
Initial Groundwater Elevation (ft-amsl):	1232.39
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
12:06 PM	Purging start time.						
12:09 PM	13.0	4.5	2147.9	6.54	201.2	12.2	
12:12 PM	13.1	2.3	2143.6	6.55	197.1	5.1	
12:15 PM	13.2	1.7	2146.9	6.58	187.4	13.7	
12:18 PM	13.1	1.4	2142.7	6.67	175.5	14.9	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.3
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	191.67

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	

Additional Comments:	
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FORM FOR GROUNDWATER SAMPLING

Project: Adair County Sanitary Landfill	
Monitoring Well/Piezometer ID: MW-9	Date: 11/13/2023
Gradient: Down	Sampler: Caleb Gomez

A. MW/PIEZOMETER CONDITIONS	
Well/Piezometer Capped?	Yes
Litter/Standing Water?	No


B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	28.0
Initial Static Water Level (feet):	14.78
Initial Groundwater Elevation (ft-amsl):	1244.95
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
3:53 PM	Purging start time.						
3:56 PM	12.0	3.7	1529.2	6.93	82.1	3.9	
3:59 PM	11.9	2.2	1526.4	6.94	59.1	4.1	
4:02 PM	12.0	1.7	1526.9	6.93	43.5	4.2	
4:05 PM	12.0	1.4	1529.0	6.91	34.5	3.8	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.3
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	191.67

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	



Appendix B-1
Laboratory Analytical Data Sheets



ANALYTICAL REPORT

PREPARED FOR

Attn: DJ Luhrs
Adair County Sanitary Landfill
1645 State Hwy 25
Menlo, Iowa 50164

Generated 7/12/2023 11:36:04 AM

JOB DESCRIPTION

Adair County Sanitary Landfill

JOB NUMBER

310-258897-1

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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7/12/2023 11:36:04 AM

Authorized for release by
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Case Narrative

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Job ID: 310-258897-1

Laboratory: Eurofins Cedar Falls

Narrative

310-258897-1

Comments

The data for this report has been reviewed with the following errors encountered: Cedar Falls Lab left vials out of fridge over the weekend on a cart. Due to temperature out of hold, client decided to cancel 8260 Method VOC's and re-sample.

Receipt

The samples were received on 6/23/2023 4:50 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.3° C.

Metals

Method 6020B: The continuing calibration verification (CCV) associated with batch 310-392605 recovered above the upper cont limit for Copper & Thallium. The samples associated with this CCV were non-detects for the affected analytes; therefore, the da have been reported. The associated samples are impacted: MW-3 (310-258897-2), MW-6 (310-258897-3), MW-7 (310-258897-5), MW-9 (310-258897-5), MW-10 (310-258897-6) and DUP (310-258897-7).

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

General Chemistry

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

Sample Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-258897-1	MW-2	Water	06/22/23 15:47	06/23/23 16:50
310-258897-2	MW-3	Water	06/22/23 14:52	06/23/23 16:50
310-258897-3	MW-6	Water	06/22/23 13:46	06/23/23 16:50
310-258897-4	MW-7	Water	06/22/23 13:00	06/23/23 16:50
310-258897-5	MW-9	Water	06/23/23 12:03	06/23/23 16:50
310-258897-6	MW-10	Water	06/22/23 16:55	06/23/23 16:50
310-258897-7	DUP	Water	06/22/23 14:52	06/23/23 16:50

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

Detection Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Client Sample ID: MW-2

Lab Sample ID: 310-258897-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00528		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.230		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cadmium	0.000306		0.000200	0.000100	mg/L	1		6020B	Total/NA
Cobalt	0.00510		0.000500	0.000170	mg/L	1		6020B	Total/NA
Copper	0.00235	J	0.00500	0.00180	mg/L	1		6020B	Total/NA
Lead	0.000653		0.000500	0.000240	mg/L	1		6020B	Total/NA
Nickel	0.00954		0.00500	0.00190	mg/L	1		6020B	Total/NA
Selenium	0.00164	J	0.00500	0.00140	mg/L	1		6020B	Total/NA
Thallium	0.00581	F1	0.00100	0.000260	mg/L	1		6020B	Total/NA
Total Suspended Solids	12.6		3.00	1.02	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-3

Lab Sample ID: 310-258897-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0234		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cobalt	0.000192	J	0.000500	0.000170	mg/L	1		6020B	Total/NA
Total Suspended Solids	3.87		1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-6

Lab Sample ID: 310-258897-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0191		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cadmium	0.000152	J	0.000200	0.000100	mg/L	1		6020B	Total/NA
Cobalt	0.000691		0.000500	0.000170	mg/L	1		6020B	Total/NA
Lead	0.000445	J	0.000500	0.000240	mg/L	1		6020B	Total/NA
Selenium	0.00929		0.00500	0.00140	mg/L	1		6020B	Total/NA
Zinc	0.00949	J	0.0200	0.00640	mg/L	1		6020B	Total/NA
Total Suspended Solids	35.9		1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-7

Lab Sample ID: 310-258897-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0291		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cadmium	0.000274		0.000200	0.000100	mg/L	1		6020B	Total/NA
Cobalt	0.000304	J	0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0148		0.00500	0.00190	mg/L	1		6020B	Total/NA
Total Suspended Solids	2.00		1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-9

Lab Sample ID: 310-258897-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0663		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cobalt	0.00158		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.00540		0.00500	0.00190	mg/L	1		6020B	Total/NA
Total Suspended Solids	3.87		1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-10

Lab Sample ID: 310-258897-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.167		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cadmium	0.000372		0.000200	0.000100	mg/L	1		6020B	Total/NA
Lead	0.00522		0.000500	0.000240	mg/L	1		6020B	Total/NA
Total Suspended Solids	2.50		1.88	0.638	mg/L	1		I-3765-85	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Client Sample ID: DUP

Lab Sample ID: 310-258897-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0238		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cobalt	0.000171	J	0.000500	0.000170	mg/L	1		6020B	Total/NA
Zinc	0.00654	J	0.0200	0.00640	mg/L	1		6020B	Total/NA
Total Suspended Solids	2.63		1.88	0.638	mg/L	1		I-3765-85	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Client Sample ID: MW-2

Lab Sample ID: 310-258897-1

Date Collected: 06/22/23 15:47

Matrix: Water

Date Received: 06/23/23 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/28/23 08:45	07/04/23 01:35	1
Arsenic	0.00528		0.00200	0.000530	mg/L		06/28/23 08:45	07/04/23 01:35	1
Barium	0.230		0.00200	0.000640	mg/L		06/28/23 08:45	07/04/23 01:35	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/28/23 08:45	07/04/23 01:35	1
Cadmium	0.000306		0.000200	0.000100	mg/L		06/28/23 08:45	07/04/23 01:35	1
Chromium	<0.00500		0.00500	0.00110	mg/L		06/28/23 08:45	07/04/23 01:35	1
Cobalt	0.00510		0.000500	0.000170	mg/L		06/28/23 08:45	07/04/23 01:35	1
Copper	0.00235	J	0.00500	0.00180	mg/L		06/28/23 08:45	07/06/23 18:55	1
Lead	0.000653		0.000500	0.000240	mg/L		06/28/23 08:45	07/04/23 01:35	1
Nickel	0.00954		0.00500	0.00190	mg/L		06/28/23 08:45	07/04/23 01:35	1
Selenium	0.00164	J	0.00500	0.00140	mg/L		06/28/23 08:45	07/04/23 01:35	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/28/23 08:45	07/04/23 01:35	1
Thallium	0.00581	F1	0.00100	0.000260	mg/L		06/28/23 08:45	07/06/23 18:55	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/28/23 08:45	07/04/23 01:35	1
Zinc	<0.0200		0.0200	0.00640	mg/L		06/28/23 08:45	07/04/23 01:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	12.6		3.00	1.02	mg/L			06/27/23 20:52	1

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Client Sample ID: MW-3

Lab Sample ID: 310-258897-2

Date Collected: 06/22/23 14:52

Matrix: Water

Date Received: 06/23/23 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/28/23 08:45	07/04/23 02:00	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		06/28/23 08:45	07/04/23 02:00	1
Barium	0.0234		0.00200	0.000640	mg/L		06/28/23 08:45	07/04/23 02:00	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/28/23 08:45	07/04/23 02:00	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		06/28/23 08:45	07/04/23 02:00	1
Chromium	<0.00500		0.00500	0.00110	mg/L		06/28/23 08:45	07/04/23 02:00	1
Cobalt	0.000192	J	0.000500	0.000170	mg/L		06/28/23 08:45	07/04/23 02:00	1
Copper	<0.00500	^+	0.00500	0.00180	mg/L		06/28/23 08:45	07/04/23 02:00	1
Lead	<0.000500		0.000500	0.000240	mg/L		06/28/23 08:45	07/04/23 02:00	1
Nickel	<0.00500		0.00500	0.00190	mg/L		06/28/23 08:45	07/04/23 02:00	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/28/23 08:45	07/04/23 02:00	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/28/23 08:45	07/04/23 02:00	1
Thallium	<0.00100	^+	0.00100	0.000260	mg/L		06/28/23 08:45	07/04/23 02:00	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/28/23 08:45	07/04/23 02:00	1
Zinc	<0.0200		0.0200	0.00640	mg/L		06/28/23 08:45	07/04/23 02:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	3.87		1.88	0.638	mg/L			06/28/23 09:49	1



Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Client Sample ID: MW-6

Lab Sample ID: 310-258897-3

Date Collected: 06/22/23 13:46

Matrix: Water

Date Received: 06/23/23 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/28/23 08:45	07/04/23 02:03	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		06/28/23 08:45	07/04/23 02:03	1
Barium	0.0191		0.00200	0.000640	mg/L		06/28/23 08:45	07/04/23 02:03	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/28/23 08:45	07/04/23 02:03	1
Cadmium	0.000152	J	0.000200	0.000100	mg/L		06/28/23 08:45	07/04/23 02:03	1
Chromium	<0.00500		0.00500	0.00110	mg/L		06/28/23 08:45	07/04/23 02:03	1
Cobalt	0.000691		0.000500	0.000170	mg/L		06/28/23 08:45	07/04/23 02:03	1
Copper	<0.00500	^+	0.00500	0.00180	mg/L		06/28/23 08:45	07/04/23 02:03	1
Lead	0.000445	J	0.000500	0.000240	mg/L		06/28/23 08:45	07/04/23 02:03	1
Nickel	<0.00500		0.00500	0.00190	mg/L		06/28/23 08:45	07/04/23 02:03	1
Selenium	0.00929		0.00500	0.00140	mg/L		06/28/23 08:45	07/04/23 02:03	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/28/23 08:45	07/04/23 02:03	1
Thallium	<0.00100	^+	0.00100	0.000260	mg/L		06/28/23 08:45	07/04/23 02:03	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/28/23 08:45	07/04/23 02:03	1
Zinc	0.00949	J	0.0200	0.00640	mg/L		06/28/23 08:45	07/04/23 02:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	35.9		1.88	0.638	mg/L			06/27/23 19:29	1

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Client Sample ID: MW-7
Date Collected: 06/22/23 13:00
Date Received: 06/23/23 16:50

Lab Sample ID: 310-258897-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/28/23 08:45	07/04/23 02:05	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		06/28/23 08:45	07/04/23 02:05	1
Barium	0.0291		0.00200	0.000640	mg/L		06/28/23 08:45	07/04/23 02:05	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/28/23 08:45	07/04/23 02:05	1
Cadmium	0.000274		0.000200	0.000100	mg/L		06/28/23 08:45	07/04/23 02:05	1
Chromium	<0.00500		0.00500	0.00110	mg/L		06/28/23 08:45	07/04/23 02:05	1
Cobalt	0.000304	J	0.000500	0.000170	mg/L		06/28/23 08:45	07/04/23 02:05	1
Copper	<0.00500	^+	0.00500	0.00180	mg/L		06/28/23 08:45	07/04/23 02:05	1
Lead	<0.000500		0.000500	0.000240	mg/L		06/28/23 08:45	07/04/23 02:05	1
Nickel	0.0148		0.00500	0.00190	mg/L		06/28/23 08:45	07/04/23 02:05	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/28/23 08:45	07/04/23 02:05	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/28/23 08:45	07/04/23 02:05	1
Thallium	<0.00100	^+	0.00100	0.000260	mg/L		06/28/23 08:45	07/04/23 02:05	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/28/23 08:45	07/04/23 02:05	1
Zinc	<0.0200		0.0200	0.00640	mg/L		06/28/23 08:45	07/04/23 02:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	2.00		1.88	0.638	mg/L			06/27/23 19:29	1

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- 2
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Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Client Sample ID: MW-9

Lab Sample ID: 310-258897-5

Date Collected: 06/23/23 12:03

Matrix: Water

Date Received: 06/23/23 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/28/23 08:45	07/04/23 02:08	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		06/28/23 08:45	07/04/23 02:08	1
Barium	0.0663		0.00200	0.000640	mg/L		06/28/23 08:45	07/04/23 02:08	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/28/23 08:45	07/04/23 02:08	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		06/28/23 08:45	07/04/23 02:08	1
Chromium	<0.00500		0.00500	0.00110	mg/L		06/28/23 08:45	07/04/23 02:08	1
Cobalt	0.00158		0.000500	0.000170	mg/L		06/28/23 08:45	07/04/23 02:08	1
Copper	<0.00500	^+	0.00500	0.00180	mg/L		06/28/23 08:45	07/04/23 02:08	1
Lead	<0.000500		0.000500	0.000240	mg/L		06/28/23 08:45	07/04/23 02:08	1
Nickel	0.00540		0.00500	0.00190	mg/L		06/28/23 08:45	07/04/23 02:08	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/28/23 08:45	07/04/23 02:08	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/28/23 08:45	07/04/23 02:08	1
Thallium	<0.00100	^+	0.00100	0.000260	mg/L		06/28/23 08:45	07/04/23 02:08	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/28/23 08:45	07/04/23 02:08	1
Zinc	<0.0200		0.0200	0.00640	mg/L		06/28/23 08:45	07/04/23 02:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	3.87		1.88	0.638	mg/L			06/27/23 19:29	1

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Client Sample ID: MW-10

Lab Sample ID: 310-258897-6

Date Collected: 06/22/23 16:55

Matrix: Water

Date Received: 06/23/23 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/28/23 08:45	07/04/23 02:10	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		06/28/23 08:45	07/04/23 02:10	1
Barium	0.167		0.00200	0.000640	mg/L		06/28/23 08:45	07/04/23 02:10	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/28/23 08:45	07/04/23 02:10	1
Cadmium	0.000372		0.000200	0.000100	mg/L		06/28/23 08:45	07/04/23 02:10	1
Chromium	<0.00500		0.00500	0.00110	mg/L		06/28/23 08:45	07/04/23 02:10	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		06/28/23 08:45	07/04/23 02:10	1
Copper	<0.00500	^+	0.00500	0.00180	mg/L		06/28/23 08:45	07/04/23 02:10	1
Lead	0.00522		0.000500	0.000240	mg/L		06/28/23 08:45	07/04/23 02:10	1
Nickel	<0.00500		0.00500	0.00190	mg/L		06/28/23 08:45	07/04/23 02:10	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/28/23 08:45	07/04/23 02:10	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/28/23 08:45	07/04/23 02:10	1
Thallium	<0.00100	^+	0.00100	0.000260	mg/L		06/28/23 08:45	07/04/23 02:10	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/28/23 08:45	07/04/23 02:10	1
Zinc	<0.0200		0.0200	0.00640	mg/L		06/28/23 08:45	07/04/23 02:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	2.50		1.88	0.638	mg/L			06/27/23 19:29	1

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Client Sample ID: DUP

Lab Sample ID: 310-258897-7

Date Collected: 06/22/23 14:52

Matrix: Water

Date Received: 06/23/23 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/28/23 08:45	07/04/23 02:13	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		06/28/23 08:45	07/04/23 02:13	1
Barium	0.0238		0.00200	0.000640	mg/L		06/28/23 08:45	07/04/23 02:13	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/28/23 08:45	07/04/23 02:13	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		06/28/23 08:45	07/04/23 02:13	1
Chromium	<0.00500		0.00500	0.00110	mg/L		06/28/23 08:45	07/04/23 02:13	1
Cobalt	0.000171	J	0.000500	0.000170	mg/L		06/28/23 08:45	07/04/23 02:13	1
Copper	<0.00500	^+	0.00500	0.00180	mg/L		06/28/23 08:45	07/04/23 02:13	1
Lead	<0.000500		0.000500	0.000240	mg/L		06/28/23 08:45	07/04/23 02:13	1
Nickel	<0.00500		0.00500	0.00190	mg/L		06/28/23 08:45	07/04/23 02:13	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/28/23 08:45	07/04/23 02:13	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/28/23 08:45	07/04/23 02:13	1
Thallium	<0.00100	^+	0.00100	0.000260	mg/L		06/28/23 08:45	07/04/23 02:13	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/28/23 08:45	07/04/23 02:13	1
Zinc	0.00654	J	0.0200	0.00640	mg/L		06/28/23 08:45	07/04/23 02:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	2.63		1.88	0.638	mg/L			06/28/23 09:49	1

- 1
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Definitions/Glossary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Qualifiers

Metals

Qualifier	Qualifier Description
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-391962/1-A
Matrix: Water
Analysis Batch: 392605

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 391962

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.00200		0.00200	0.00100	mg/L		06/28/23 08:45	07/04/23 01:30	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		06/28/23 08:45	07/04/23 01:30	1
Barium	<0.00200		0.00200	0.000640	mg/L		06/28/23 08:45	07/04/23 01:30	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/28/23 08:45	07/04/23 01:30	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		06/28/23 08:45	07/04/23 01:30	1
Chromium	<0.00500		0.00500	0.00110	mg/L		06/28/23 08:45	07/04/23 01:30	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		06/28/23 08:45	07/04/23 01:30	1
Copper	<0.00500	^+	0.00500	0.00180	mg/L		06/28/23 08:45	07/04/23 01:30	1
Lead	<0.000500		0.000500	0.000240	mg/L		06/28/23 08:45	07/04/23 01:30	1
Nickel	<0.00500		0.00500	0.00190	mg/L		06/28/23 08:45	07/04/23 01:30	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/28/23 08:45	07/04/23 01:30	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/28/23 08:45	07/04/23 01:30	1
Thallium	<0.00100	^+	0.00100	0.000260	mg/L		06/28/23 08:45	07/04/23 01:30	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/28/23 08:45	07/04/23 01:30	1
Zinc	<0.0200		0.0200	0.00640	mg/L		06/28/23 08:45	07/04/23 01:30	1

Lab Sample ID: MB 310-391962/1-A
Matrix: Water
Analysis Batch: 392870

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 391962

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Copper	<0.00500		0.00500	0.00180	mg/L		06/28/23 08:45	07/06/23 18:50	1

Lab Sample ID: LCS 310-391962/2-A
Matrix: Water
Analysis Batch: 392605

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 391962

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.2021		mg/L		101	80 - 120
Barium	0.100	0.1019		mg/L		102	80 - 120
Beryllium	0.100	0.1043		mg/L		104	80 - 120
Cadmium	0.100	0.1032		mg/L		103	80 - 120
Chromium	0.100	0.1047		mg/L		105	80 - 120
Cobalt	0.100	0.1022		mg/L		102	80 - 120
Lead	0.200	0.2124		mg/L		106	80 - 120
Nickel	0.200	0.2150		mg/L		107	80 - 120
Selenium	0.400	0.3994		mg/L		100	80 - 120
Silver	0.100	0.1070		mg/L		107	80 - 120
Vanadium	0.100	0.1051		mg/L		105	80 - 120
Zinc	0.200	0.1966		mg/L		98	80 - 120

Lab Sample ID: LCS 310-391962/2-A
Matrix: Water
Analysis Batch: 392870

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 391962

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

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

Lab Sample ID: LCS 310-391962/2-A
Matrix: Water
Analysis Batch: 393236

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 391962

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thallium	0.200	0.1708		mg/L		85	80 - 120

Lab Sample ID: 310-258897-1 MS
Matrix: Water
Analysis Batch: 392605

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 391962

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.00200		0.200	0.2033		mg/L		102	75 - 125
Arsenic	0.00528		0.200	0.2050		mg/L		100	75 - 125
Barium	0.230		0.100	0.3295		mg/L		100	75 - 125
Beryllium	<0.00100		0.100	0.1003		mg/L		100	75 - 125
Cadmium	0.000306		0.100	0.1044		mg/L		104	75 - 125
Chromium	<0.00500		0.100	0.1022		mg/L		102	75 - 125
Cobalt	0.00510		0.100	0.1016		mg/L		97	75 - 125
Lead	0.000653		0.200	0.2014		mg/L		100	75 - 125
Nickel	0.00954		0.200	0.2127		mg/L		102	75 - 125
Selenium	0.00164	J	0.400	0.3965		mg/L		99	75 - 125
Silver	<0.00100		0.100	0.09975		mg/L		100	75 - 125
Vanadium	<0.00500		0.100	0.1049		mg/L		105	75 - 125
Zinc	<0.0200		0.200	0.2004		mg/L		100	75 - 125

Lab Sample ID: 310-258897-1 MS
Matrix: Water
Analysis Batch: 392870

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 391962

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Copper	0.00235	J	0.200	0.1935		mg/L		96	75 - 125

Lab Sample ID: 310-258897-1 MSD
Matrix: Water
Analysis Batch: 392605

Client Sample ID: MW-2
Prep Type: Total/NA
Prep Batch: 391962

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Antimony	<0.00200		0.200	0.2077		mg/L		104	75 - 125	2	20
Arsenic	0.00528		0.200	0.2088		mg/L		102	75 - 125	2	20
Barium	0.230		0.100	0.3346		mg/L		105	75 - 125	2	20
Beryllium	<0.00100		0.100	0.1019		mg/L		102	75 - 125	2	20
Cadmium	0.000306		0.100	0.1076		mg/L		107	75 - 125	3	20
Chromium	<0.00500		0.100	0.1032		mg/L		103	75 - 125	1	20
Cobalt	0.00510		0.100	0.1024		mg/L		97	75 - 125	1	20
Lead	0.000653		0.200	0.2005		mg/L		100	75 - 125	0	20
Nickel	0.00954		0.200	0.2148		mg/L		103	75 - 125	1	20
Selenium	0.00164	J	0.400	0.4054		mg/L		101	75 - 125	2	20
Silver	<0.00100		0.100	0.09825		mg/L		98	75 - 125	2	20
Vanadium	<0.00500		0.100	0.1061		mg/L		106	75 - 125	1	20
Zinc	<0.0200		0.200	0.2028		mg/L		101	75 - 125	1	20

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

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

Lab Sample ID: 310-258897-1 MSD
 Matrix: Water
 Analysis Batch: 392870

Client Sample ID: MW-2
 Prep Type: Total/NA
 Prep Batch: 391962

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Copper	0.00235	J	0.200	0.1996		mg/L		99	75 - 125	3	20

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

Lab Sample ID: MB 310-391974/1
 Matrix: Water
 Analysis Batch: 391974

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	1.70	mg/L			06/27/23 19:29	1

Lab Sample ID: LCS 310-391974/2
 Matrix: Water
 Analysis Batch: 391974

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	75 - 116

Lab Sample ID: MB 310-391977/1
 Matrix: Water
 Analysis Batch: 391977

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	1.70	mg/L			06/27/23 20:52	1

Lab Sample ID: LCS 310-391977/2
 Matrix: Water
 Analysis Batch: 391977

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	75 - 116

Lab Sample ID: MB 310-392032/1
 Matrix: Water
 Analysis Batch: 392032

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	1.70	mg/L			06/28/23 09:49	1

Lab Sample ID: LCS 310-392032/2
 Matrix: Water
 Analysis Batch: 392032

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	100.0		mg/L		100	75 - 116

QC Association Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Metals

Prep Batch: 391962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-258897-1	MW-2	Total/NA	Water	3005A	
310-258897-2	MW-3	Total/NA	Water	3005A	
310-258897-3	MW-6	Total/NA	Water	3005A	
310-258897-4	MW-7	Total/NA	Water	3005A	
310-258897-5	MW-9	Total/NA	Water	3005A	
310-258897-6	MW-10	Total/NA	Water	3005A	
310-258897-7	DUP	Total/NA	Water	3005A	
MB 310-391962/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-391962/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-258897-1 MS	MW-2	Total/NA	Water	3005A	
310-258897-1 MSD	MW-2	Total/NA	Water	3005A	

Analysis Batch: 392605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-258897-1	MW-2	Total/NA	Water	6020B	391962
310-258897-2	MW-3	Total/NA	Water	6020B	391962
310-258897-3	MW-6	Total/NA	Water	6020B	391962
310-258897-4	MW-7	Total/NA	Water	6020B	391962
310-258897-5	MW-9	Total/NA	Water	6020B	391962
310-258897-6	MW-10	Total/NA	Water	6020B	391962
310-258897-7	DUP	Total/NA	Water	6020B	391962
MB 310-391962/1-A	Method Blank	Total/NA	Water	6020B	391962
LCS 310-391962/2-A	Lab Control Sample	Total/NA	Water	6020B	391962
310-258897-1 MS	MW-2	Total/NA	Water	6020B	391962
310-258897-1 MSD	MW-2	Total/NA	Water	6020B	391962

Analysis Batch: 392870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-258897-1	MW-2	Total/NA	Water	6020B	391962
MB 310-391962/1-A	Method Blank	Total/NA	Water	6020B	391962
LCS 310-391962/2-A	Lab Control Sample	Total/NA	Water	6020B	391962
310-258897-1 MS	MW-2	Total/NA	Water	6020B	391962
310-258897-1 MSD	MW-2	Total/NA	Water	6020B	391962

Analysis Batch: 393236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-391962/2-A	Lab Control Sample	Total/NA	Water	6020B	391962

General Chemistry

Analysis Batch: 391974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-258897-3	MW-6	Total/NA	Water	I-3765-85	
310-258897-4	MW-7	Total/NA	Water	I-3765-85	
310-258897-5	MW-9	Total/NA	Water	I-3765-85	
310-258897-6	MW-10	Total/NA	Water	I-3765-85	
MB 310-391974/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-391974/2	Lab Control Sample	Total/NA	Water	I-3765-85	

QC Association Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

General Chemistry

Analysis Batch: 391977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-258897-1	MW-2	Total/NA	Water	I-3765-85	
MB 310-391977/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-391977/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 392032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-258897-2	MW-3	Total/NA	Water	I-3765-85	
310-258897-7	DUP	Total/NA	Water	I-3765-85	
MB 310-392032/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-392032/2	Lab Control Sample	Total/NA	Water	I-3765-85	

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Lab Chronicle

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Client Sample ID: MW-2

Date Collected: 06/22/23 15:47

Date Received: 06/23/23 16:50

Lab Sample ID: 310-258897-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			391962	QTZ5	EET CF	06/28/23 08:45
Total/NA	Analysis	6020B		1	392605	A6US	EET CF	07/04/23 01:35
Total/NA	Prep	3005A			391962	QTZ5	EET CF	06/28/23 08:45
Total/NA	Analysis	6020B		1	392870	A6US	EET CF	07/06/23 18:55
Total/NA	Analysis	I-3765-85		1	391977	D7CP	EET CF	06/27/23 20:52

Client Sample ID: MW-3

Date Collected: 06/22/23 14:52

Date Received: 06/23/23 16:50

Lab Sample ID: 310-258897-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			391962	QTZ5	EET CF	06/28/23 08:45
Total/NA	Analysis	6020B		1	392605	A6US	EET CF	07/04/23 02:00
Total/NA	Analysis	I-3765-85		1	392032	T8GC	EET CF	06/28/23 09:49

Client Sample ID: MW-6

Date Collected: 06/22/23 13:46

Date Received: 06/23/23 16:50

Lab Sample ID: 310-258897-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			391962	QTZ5	EET CF	06/28/23 08:45
Total/NA	Analysis	6020B		1	392605	A6US	EET CF	07/04/23 02:03
Total/NA	Analysis	I-3765-85		1	391974	D7CP	EET CF	06/27/23 19:29

Client Sample ID: MW-7

Date Collected: 06/22/23 13:00

Date Received: 06/23/23 16:50

Lab Sample ID: 310-258897-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			391962	QTZ5	EET CF	06/28/23 08:45
Total/NA	Analysis	6020B		1	392605	A6US	EET CF	07/04/23 02:05
Total/NA	Analysis	I-3765-85		1	391974	D7CP	EET CF	06/27/23 19:29

Client Sample ID: MW-9

Date Collected: 06/23/23 12:03

Date Received: 06/23/23 16:50

Lab Sample ID: 310-258897-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			391962	QTZ5	EET CF	06/28/23 08:45
Total/NA	Analysis	6020B		1	392605	A6US	EET CF	07/04/23 02:08
Total/NA	Analysis	I-3765-85		1	391974	D7CP	EET CF	06/27/23 19:29

Lab Chronicle

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Client Sample ID: MW-10

Date Collected: 06/22/23 16:55

Date Received: 06/23/23 16:50

Lab Sample ID: 310-258897-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			391962	QTZ5	EET CF	06/28/23 08:45
Total/NA	Analysis	6020B		1	392605	A6US	EET CF	07/04/23 02:10
Total/NA	Analysis	I-3765-85		1	391974	D7CP	EET CF	06/27/23 19:29

Client Sample ID: DUP

Date Collected: 06/22/23 14:52

Date Received: 06/23/23 16:50

Lab Sample ID: 310-258897-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			391962	QTZ5	EET CF	06/28/23 08:45
Total/NA	Analysis	6020B		1	392605	A6US	EET CF	07/04/23 02:13
Total/NA	Analysis	I-3765-85		1	392032	T8GC	EET CF	06/28/23 09:49

Laboratory References:

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

Accreditation/Certification Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-23

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Method Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill

Job ID: 310-258897-1

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

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
USGS = "Methods For Analysis Of Water And Fluvial Sediments", USGS, 1989

Laboratory References:

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





Environment Testing
America



310-258897 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
		<u>IA</u>	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>6/23/23</u>	<u>1050</u>	<u>ST</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee			
<input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID:
Multiple Coolers?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler # ____ of ____
Cooler Custody Seals Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
<u>All</u>			
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>P</u>		Correction Factor (°C): <u>+0.2</u>	
Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>1.1</u>		Corrected Temp (°C): <u>1.3</u>	
Sample Container Temperature			
Container(s) used:	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



Client Information		Sampler: <i>Scott Staller</i>		Lab PM: Liechti, Meredith L	Carrier Tracking No(s): 310-81900-22840 1
Client Contact: Christine Collier		Phone: 630-277-7410		E-Mail: meredith.liechti@et.eurofins.com	COC No: 310-81900-22840 1
Company: SCS Engineers		RWSID:		Page: Page 1 of 1	
Address: 1690 All State Court, Suite 100		Due Date Requested:		Job #:	
City: West Des Moines		TAT Requested (days):		Analysis Requested	
State, Zip: IA, 50265		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		8260D - Volatile Appendix 2 Sublist	
Phone:		Purchase Order not required		8260D - Volatile Appendix 1 Sublist	
Email: ccollier@scsengineers.com		WO #:		6020A - Appendix I Metals	
Project Name: Adair County Sanitary Landfill		Project #: 31002552		Perform HSM/SD (Yes or No)	
Site:		SSOW#:		Field Filtered Sample (Yes or No)	
Sample Identification		Sample Date		Sample Time	
MW-2	6-22-23	15:47	G	Water	
MW-3	6-22-23	14:52	G	Water	
MW-6	6-22-23	13:46	G	Water	
MW-7	6-22-23	13:00	G	Water	
MW-9	6-23-23	12:03	G	Water	
MW-10	6-22-23	16:55	G	Water	
GU-2				Water	
GWD-1				Water	
DUP	6-22-23	14:52	G	Water	
Trip Blank				Water	
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Special Instructions/Note:	
Deliverable Requested I, II, III, IV, Other (specify)		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Empty Kit Relinquished by:		Date:		Method of Shipment:	
Relinquished by: <i>Scott Staller</i>		Date/Time: 06/23/23 13:40		Date/Time: 6/23/23 16:00	
Relinquished by:		Date/Time:		Date/Time:	
Relinquished by:		Date/Time:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks:	



Login Sample Receipt Checklist

Client: Adair County Sanitary Landfill

Job Number: 310-258897-1

Login Number: 258897

List Number: 1

Creator: Costello, Mackenzie K

List Source: Eurofins Cedar Falls

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



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ANALYTICAL REPORT

PREPARED FOR

Attn: DJ Luhrs
Adair County Sanitary Landfill
1645 State Hwy 25
Menlo, Iowa 50164

Generated 7/12/2023 11:49:13 AM

JOB DESCRIPTION

Adair County Sanitary Landfill Resample

JOB NUMBER

310-259408-1

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
7/12/2023 11:49:13 AM

Authorized for release by
Meredith Liechti, Service Center Manager
meredith.liechti@et.eurofinsus.com
(319)277-2401



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Case Narrative

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Job ID: 310-259408-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-259408-1

Receipt

The samples were received on 6/30/2023 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.4°C

GC/MS VOA

Method 8260D: Internal standard (ISTD) response for the following samples were outside of acceptance limits: MW-3 (310-259408-2), MW-6 (310-259408-3), MW-7 (310-259408-4), MW-9 (310-259408-5), MW-10 (310-259408-6), DUP (310-259408-7) and Trip Blank (310-259408-8). The internal standard was not associated with the target analyte.

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-392611 recovered outside of the control limits for 1,1-Dichloroethene (-22.6%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 310-392611/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-392661 recovered above the upper control limit for m,p-Xylene (33.8%D), o-Xylene (34.7%D), Xylenes, Total (34.2%D) and Ethylbenzene (23.5%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 310-392661/3).

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

Additional Comments: Re-Sampling event. Cedar Falls Lab left vials out of the fridge over the weekend on a cart for J258897. Due to temperature out of hold, client decided to cancel 8260 Method and re-sample.

Sample Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-259408-1	MW-2	Water	06/27/23 11:44	06/30/23 16:20
310-259408-2	MW-3	Water	06/27/23 12:08	06/30/23 16:20
310-259408-3	MW-6	Water	06/27/23 12:30	06/30/23 16:20
310-259408-4	MW-7	Water	06/27/23 12:54	06/30/23 16:20
310-259408-5	MW-9	Water	06/27/23 13:30	06/30/23 16:20
310-259408-6	MW-10	Water	06/27/23 13:55	06/30/23 16:20
310-259408-7	DUP	Water	06/27/23 12:08	06/30/23 16:20
310-259408-8	Trip Blank	Water	06/27/23 00:00	06/30/23 16:20

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Detection Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: MW-2

Lab Sample ID: 310-259408-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.74		0.500	0.220	ug/L	1		8260D	Total/NA

Client Sample ID: MW-3

Lab Sample ID: 310-259408-2

No Detections.

Client Sample ID: MW-6

Lab Sample ID: 310-259408-3

No Detections.

Client Sample ID: MW-7

Lab Sample ID: 310-259408-4

No Detections.

Client Sample ID: MW-9

Lab Sample ID: 310-259408-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.236	J	1.00	0.220	ug/L	1		8260D	Total/NA

Client Sample ID: MW-10

Lab Sample ID: 310-259408-6

No Detections.

Client Sample ID: DUP

Lab Sample ID: 310-259408-7

No Detections.

Client Sample ID: Trip Blank

Lab Sample ID: 310-259408-8

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: MW-2

Lab Sample ID: 310-259408-1

Date Collected: 06/27/23 11:44

Matrix: Water

Date Received: 06/30/23 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	0.380	ug/L			07/04/23 19:00	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			07/04/23 19:00	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			07/04/23 19:00	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			07/04/23 19:00	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			07/04/23 19:00	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			07/04/23 19:00	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			07/04/23 19:00	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			07/04/23 19:00	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			07/04/23 19:00	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			07/04/23 19:00	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			07/04/23 19:00	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			07/04/23 19:00	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			07/04/23 19:00	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			07/04/23 19:00	1
2-Hexanone	<10.0		10.0	2.00	ug/L			07/04/23 19:00	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			07/04/23 19:00	1
Acetone	<10.0		10.0	3.10	ug/L			07/04/23 19:00	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			07/04/23 19:00	1
Benzene	1.74		0.500	0.220	ug/L			07/04/23 19:00	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			07/04/23 19:00	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			07/04/23 19:00	1
Bromoform	<5.00		5.00	0.780	ug/L			07/04/23 19:00	1
Bromomethane	<4.00		4.00	1.10	ug/L			07/04/23 19:00	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			07/04/23 19:00	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			07/04/23 19:00	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			07/04/23 19:00	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			07/04/23 19:00	1
Chloroethane	<4.00		4.00	0.790	ug/L			07/04/23 19:00	1
Chloroform	<3.00		3.00	1.30	ug/L			07/04/23 19:00	1
Chloromethane	<3.00		3.00	0.610	ug/L			07/04/23 19:00	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			07/04/23 19:00	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			07/04/23 19:00	1
Dibromomethane	<1.00		1.00	0.330	ug/L			07/04/23 19:00	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			07/06/23 04:53	1
Iodomethane	<10.0		10.0	7.00	ug/L			07/04/23 19:00	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			07/04/23 19:00	1
Styrene	<1.00		1.00	0.370	ug/L			07/04/23 19:00	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			07/04/23 19:00	1
Toluene	<1.00		1.00	0.430	ug/L			07/04/23 19:00	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			07/04/23 19:00	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			07/04/23 19:00	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			07/04/23 19:00	1
Trichloroethene	<1.00		1.00	0.430	ug/L			07/04/23 19:00	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			07/04/23 19:00	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			07/04/23 19:00	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			07/04/23 19:00	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			07/06/23 04:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	103		80 - 128		07/04/23 19:00	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: MW-2

Lab Sample ID: 310-259408-1

Date Collected: 06/27/23 11:44

Matrix: Water

Date Received: 06/30/23 16:20

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Dibromofluoromethane (Surr)</i>	108		80 - 128		07/06/23 04:53	1
<i>Toluene-d8 (Surr)</i>	99		80 - 120		07/04/23 19:00	1
<i>Toluene-d8 (Surr)</i>	98		80 - 120		07/06/23 04:53	1
<i>4-Bromofluorobenzene (Surr)</i>	117		80 - 120		07/04/23 19:00	1
<i>4-Bromofluorobenzene (Surr)</i>	98		80 - 120		07/06/23 04:53	1

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Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: MW-3

Lab Sample ID: 310-259408-2

Date Collected: 06/27/23 12:08

Matrix: Water

Date Received: 06/30/23 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	0.380	ug/L			07/04/23 02:24	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			07/04/23 02:24	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			07/04/23 02:24	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			07/04/23 02:24	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			07/04/23 02:24	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			07/04/23 02:24	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			07/04/23 02:24	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			07/04/23 02:24	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			07/04/23 02:24	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			07/04/23 02:24	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			07/04/23 02:24	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			07/04/23 02:24	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			07/04/23 02:24	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			07/04/23 02:24	1
2-Hexanone	<10.0		10.0	2.00	ug/L			07/04/23 02:24	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			07/04/23 02:24	1
Acetone	<10.0		10.0	3.10	ug/L			07/04/23 02:24	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			07/04/23 02:24	1
Benzene	<0.500		0.500	0.220	ug/L			07/04/23 02:24	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			07/04/23 02:24	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			07/04/23 02:24	1
Bromoform	<5.00		5.00	0.780	ug/L			07/04/23 02:24	1
Bromomethane	<4.00		4.00	1.10	ug/L			07/04/23 02:24	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			07/04/23 02:24	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			07/04/23 02:24	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			07/04/23 02:24	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			07/04/23 02:24	1
Chloroethane	<4.00		4.00	0.790	ug/L			07/06/23 00:31	1
Chloroform	<3.00		3.00	1.30	ug/L			07/04/23 02:24	1
Chloromethane	<3.00		3.00	0.610	ug/L			07/04/23 02:24	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			07/04/23 02:24	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			07/04/23 02:24	1
Dibromomethane	<1.00		1.00	0.330	ug/L			07/04/23 02:24	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			07/04/23 02:24	1
Iodomethane	<10.0		10.0	7.00	ug/L			07/04/23 02:24	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			07/04/23 02:24	1
Styrene	<1.00		1.00	0.370	ug/L			07/04/23 02:24	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			07/04/23 02:24	1
Toluene	<1.00		1.00	0.430	ug/L			07/04/23 02:24	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			07/04/23 02:24	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			07/04/23 02:24	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			07/04/23 02:24	1
Trichloroethene	<1.00		1.00	0.430	ug/L			07/04/23 02:24	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			07/04/23 02:24	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			07/04/23 02:24	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			07/04/23 02:24	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			07/04/23 02:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	112		80 - 128		07/04/23 02:24	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: MW-3
Date Collected: 06/27/23 12:08
Date Received: 06/30/23 16:20

Lab Sample ID: 310-259408-2
Matrix: Water

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Dibromofluoromethane (Surr)	93		80 - 128		07/06/23 00:31	1
Toluene-d8 (Surr)	94		80 - 120		07/04/23 02:24	1
Toluene-d8 (Surr)	108		80 - 120		07/06/23 00:31	1
4-Bromofluorobenzene (Surr)	97		80 - 120		07/04/23 02:24	1
4-Bromofluorobenzene (Surr)	110	*3	80 - 120		07/06/23 00:31	1

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Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: MW-6

Lab Sample ID: 310-259408-3

Date Collected: 06/27/23 12:30

Matrix: Water

Date Received: 06/30/23 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	0.380	ug/L			07/04/23 02:45	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			07/04/23 02:45	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			07/04/23 02:45	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			07/04/23 02:45	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			07/04/23 02:45	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			07/04/23 02:45	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			07/04/23 02:45	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			07/04/23 02:45	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			07/04/23 02:45	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			07/04/23 02:45	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			07/04/23 02:45	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			07/04/23 02:45	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			07/04/23 02:45	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			07/04/23 02:45	1
2-Hexanone	<10.0		10.0	2.00	ug/L			07/04/23 02:45	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			07/04/23 02:45	1
Acetone	<10.0		10.0	3.10	ug/L			07/04/23 02:45	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			07/04/23 02:45	1
Benzene	<0.500		0.500	0.220	ug/L			07/04/23 02:45	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			07/04/23 02:45	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			07/04/23 02:45	1
Bromoform	<5.00		5.00	0.780	ug/L			07/04/23 02:45	1
Bromomethane	<4.00		4.00	1.10	ug/L			07/04/23 02:45	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			07/04/23 02:45	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			07/04/23 02:45	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			07/04/23 02:45	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			07/04/23 02:45	1
Chloroethane	<4.00		4.00	0.790	ug/L			07/06/23 00:54	1
Chloroform	<3.00		3.00	1.30	ug/L			07/04/23 02:45	1
Chloromethane	<3.00		3.00	0.610	ug/L			07/04/23 02:45	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			07/04/23 02:45	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			07/04/23 02:45	1
Dibromomethane	<1.00		1.00	0.330	ug/L			07/04/23 02:45	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			07/04/23 02:45	1
Iodomethane	<10.0		10.0	7.00	ug/L			07/04/23 02:45	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			07/04/23 02:45	1
Styrene	<1.00		1.00	0.370	ug/L			07/04/23 02:45	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			07/04/23 02:45	1
Toluene	<1.00		1.00	0.430	ug/L			07/04/23 02:45	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			07/04/23 02:45	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			07/04/23 02:45	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			07/04/23 02:45	1
Trichloroethene	<1.00		1.00	0.430	ug/L			07/04/23 02:45	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			07/04/23 02:45	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			07/04/23 02:45	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			07/04/23 02:45	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			07/04/23 02:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	118		80 - 128		07/04/23 02:45	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: MW-6

Lab Sample ID: 310-259408-3

Date Collected: 06/27/23 12:30

Matrix: Water

Date Received: 06/30/23 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>
Dibromofluoromethane (Surr)	88		80 - 128		07/06/23 00:54	1
Toluene-d8 (Surr)	92		80 - 120		07/04/23 02:45	1
Toluene-d8 (Surr)	106		80 - 120		07/06/23 00:54	1
4-Bromofluorobenzene (Surr)	97		80 - 120		07/04/23 02:45	1
4-Bromofluorobenzene (Surr)	109	*3	80 - 120		07/06/23 00:54	1

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Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: MW-7

Lab Sample ID: 310-259408-4

Date Collected: 06/27/23 12:54

Matrix: Water

Date Received: 06/30/23 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	0.380	ug/L			07/04/23 03:06	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			07/04/23 03:06	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			07/04/23 03:06	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			07/04/23 03:06	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			07/04/23 03:06	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			07/04/23 03:06	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			07/04/23 03:06	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			07/04/23 03:06	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			07/04/23 03:06	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			07/04/23 03:06	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			07/04/23 03:06	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			07/04/23 03:06	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			07/04/23 03:06	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			07/04/23 03:06	1
2-Hexanone	<10.0		10.0	2.00	ug/L			07/04/23 03:06	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			07/04/23 03:06	1
Acetone	<10.0		10.0	3.10	ug/L			07/04/23 03:06	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			07/04/23 03:06	1
Benzene	<0.500		0.500	0.220	ug/L			07/04/23 03:06	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			07/04/23 03:06	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			07/04/23 03:06	1
Bromoform	<5.00		5.00	0.780	ug/L			07/04/23 03:06	1
Bromomethane	<4.00		4.00	1.10	ug/L			07/04/23 03:06	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			07/04/23 03:06	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			07/04/23 03:06	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			07/04/23 03:06	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			07/04/23 03:06	1
Chloroethane	<4.00		4.00	0.790	ug/L			07/06/23 01:18	1
Chloroform	<3.00		3.00	1.30	ug/L			07/04/23 03:06	1
Chloromethane	<3.00		3.00	0.610	ug/L			07/04/23 03:06	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			07/04/23 03:06	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			07/04/23 03:06	1
Dibromomethane	<1.00		1.00	0.330	ug/L			07/04/23 03:06	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			07/04/23 03:06	1
Iodomethane	<10.0		10.0	7.00	ug/L			07/04/23 03:06	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			07/04/23 03:06	1
Styrene	<1.00		1.00	0.370	ug/L			07/04/23 03:06	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			07/04/23 03:06	1
Toluene	<1.00		1.00	0.430	ug/L			07/04/23 03:06	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			07/04/23 03:06	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			07/04/23 03:06	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			07/04/23 03:06	1
Trichloroethene	<1.00		1.00	0.430	ug/L			07/04/23 03:06	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			07/04/23 03:06	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			07/04/23 03:06	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			07/04/23 03:06	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			07/04/23 03:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	117		80 - 128		07/04/23 03:06	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: MW-7

Lab Sample ID: 310-259408-4

Date Collected: 06/27/23 12:54

Matrix: Water

Date Received: 06/30/23 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>
Dibromofluoromethane (Surr)	89		80 - 128		07/06/23 01:18	1
Toluene-d8 (Surr)	93		80 - 120		07/04/23 03:06	1
Toluene-d8 (Surr)	106		80 - 120		07/06/23 01:18	1
4-Bromofluorobenzene (Surr)	97		80 - 120		07/04/23 03:06	1
4-Bromofluorobenzene (Surr)	107	*3	80 - 120		07/06/23 01:18	1

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: MW-9

Lab Sample ID: 310-259408-5

Date Collected: 06/27/23 13:30

Matrix: Water

Date Received: 06/30/23 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	0.380	ug/L			07/04/23 03:27	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			07/04/23 03:27	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			07/04/23 03:27	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			07/04/23 03:27	1
1,1-Dichloroethane	0.236	J	1.00	0.220	ug/L			07/04/23 03:27	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			07/04/23 03:27	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			07/04/23 03:27	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			07/04/23 03:27	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			07/04/23 03:27	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			07/04/23 03:27	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			07/04/23 03:27	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			07/04/23 03:27	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			07/04/23 03:27	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			07/04/23 03:27	1
2-Hexanone	<10.0		10.0	2.00	ug/L			07/04/23 03:27	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			07/04/23 03:27	1
Acetone	<10.0		10.0	3.10	ug/L			07/04/23 03:27	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			07/04/23 03:27	1
Benzene	<0.500		0.500	0.220	ug/L			07/04/23 03:27	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			07/04/23 03:27	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			07/04/23 03:27	1
Bromoform	<5.00		5.00	0.780	ug/L			07/04/23 03:27	1
Bromomethane	<4.00		4.00	1.10	ug/L			07/04/23 03:27	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			07/04/23 03:27	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			07/04/23 03:27	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			07/04/23 03:27	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			07/04/23 03:27	1
Chloroethane	<4.00		4.00	0.790	ug/L			07/06/23 01:41	1
Chloroform	<3.00		3.00	1.30	ug/L			07/04/23 03:27	1
Chloromethane	<3.00		3.00	0.610	ug/L			07/04/23 03:27	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			07/04/23 03:27	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			07/04/23 03:27	1
Dibromomethane	<1.00		1.00	0.330	ug/L			07/04/23 03:27	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			07/04/23 03:27	1
Iodomethane	<10.0		10.0	7.00	ug/L			07/04/23 03:27	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			07/04/23 03:27	1
Styrene	<1.00		1.00	0.370	ug/L			07/04/23 03:27	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			07/04/23 03:27	1
Toluene	<1.00		1.00	0.430	ug/L			07/04/23 03:27	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			07/04/23 03:27	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			07/04/23 03:27	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			07/04/23 03:27	1
Trichloroethene	<1.00		1.00	0.430	ug/L			07/04/23 03:27	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			07/04/23 03:27	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			07/04/23 03:27	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			07/04/23 03:27	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			07/04/23 03:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	110		80 - 128		07/04/23 03:27	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: MW-9

Lab Sample ID: 310-259408-5

Date Collected: 06/27/23 13:30

Matrix: Water

Date Received: 06/30/23 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>
Dibromofluoromethane (Surr)	88		80 - 128		07/06/23 01:41	1
Toluene-d8 (Surr)	93		80 - 120		07/04/23 03:27	1
Toluene-d8 (Surr)	106		80 - 120		07/06/23 01:41	1
4-Bromofluorobenzene (Surr)	96		80 - 120		07/04/23 03:27	1
4-Bromofluorobenzene (Surr)	110 *3		80 - 120		07/06/23 01:41	1

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: MW-10

Lab Sample ID: 310-259408-6

Date Collected: 06/27/23 13:55

Matrix: Water

Date Received: 06/30/23 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	0.380	ug/L			07/04/23 03:49	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			07/04/23 03:49	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			07/04/23 03:49	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			07/04/23 03:49	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			07/04/23 03:49	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			07/04/23 03:49	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			07/04/23 03:49	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			07/04/23 03:49	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			07/04/23 03:49	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			07/04/23 03:49	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			07/04/23 03:49	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			07/04/23 03:49	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			07/04/23 03:49	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			07/04/23 03:49	1
2-Hexanone	<10.0		10.0	2.00	ug/L			07/04/23 03:49	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			07/04/23 03:49	1
Acetone	<10.0		10.0	3.10	ug/L			07/04/23 03:49	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			07/04/23 03:49	1
Benzene	<0.500		0.500	0.220	ug/L			07/04/23 03:49	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			07/04/23 03:49	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			07/04/23 03:49	1
Bromoform	<5.00		5.00	0.780	ug/L			07/04/23 03:49	1
Bromomethane	<4.00		4.00	1.10	ug/L			07/04/23 03:49	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			07/04/23 03:49	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			07/04/23 03:49	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			07/04/23 03:49	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			07/04/23 03:49	1
Chloroethane	<4.00		4.00	0.790	ug/L			07/06/23 02:04	1
Chloroform	<3.00		3.00	1.30	ug/L			07/04/23 03:49	1
Chloromethane	<3.00		3.00	0.610	ug/L			07/04/23 03:49	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			07/04/23 03:49	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			07/04/23 03:49	1
Dibromomethane	<1.00		1.00	0.330	ug/L			07/04/23 03:49	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			07/04/23 03:49	1
Iodomethane	<10.0		10.0	7.00	ug/L			07/04/23 03:49	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			07/04/23 03:49	1
Styrene	<1.00		1.00	0.370	ug/L			07/04/23 03:49	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			07/04/23 03:49	1
Toluene	<1.00		1.00	0.430	ug/L			07/04/23 03:49	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			07/04/23 03:49	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			07/04/23 03:49	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			07/04/23 03:49	1
Trichloroethene	<1.00		1.00	0.430	ug/L			07/04/23 03:49	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			07/04/23 03:49	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			07/04/23 03:49	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			07/04/23 03:49	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			07/04/23 03:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	121		80 - 128		07/04/23 03:49	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: MW-10
Date Collected: 06/27/23 13:55
Date Received: 06/30/23 16:20

Lab Sample ID: 310-259408-6
Matrix: Water

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>
Dibromofluoromethane (Surr)	88		80 - 128		07/06/23 02:04	1
Toluene-d8 (Surr)	92		80 - 120		07/04/23 03:49	1
Toluene-d8 (Surr)	108		80 - 120		07/06/23 02:04	1
4-Bromofluorobenzene (Surr)	99		80 - 120		07/04/23 03:49	1
4-Bromofluorobenzene (Surr)	114	*3	80 - 120		07/06/23 02:04	1

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Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: DUP

Lab Sample ID: 310-259408-7

Date Collected: 06/27/23 12:08

Matrix: Water

Date Received: 06/30/23 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	0.380	ug/L			07/04/23 04:10	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			07/04/23 04:10	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			07/04/23 04:10	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			07/04/23 04:10	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			07/04/23 04:10	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			07/04/23 04:10	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			07/04/23 04:10	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			07/04/23 04:10	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			07/04/23 04:10	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			07/04/23 04:10	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			07/04/23 04:10	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			07/04/23 04:10	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			07/04/23 04:10	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			07/04/23 04:10	1
2-Hexanone	<10.0		10.0	2.00	ug/L			07/04/23 04:10	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			07/04/23 04:10	1
Acetone	<10.0		10.0	3.10	ug/L			07/04/23 04:10	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			07/04/23 04:10	1
Benzene	<0.500		0.500	0.220	ug/L			07/04/23 04:10	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			07/04/23 04:10	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			07/04/23 04:10	1
Bromoform	<5.00		5.00	0.780	ug/L			07/04/23 04:10	1
Bromomethane	<4.00		4.00	1.10	ug/L			07/04/23 04:10	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			07/04/23 04:10	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			07/04/23 04:10	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			07/04/23 04:10	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			07/04/23 04:10	1
Chloroethane	<4.00		4.00	0.790	ug/L			07/06/23 02:28	1
Chloroform	<3.00		3.00	1.30	ug/L			07/04/23 04:10	1
Chloromethane	<3.00		3.00	0.610	ug/L			07/04/23 04:10	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			07/04/23 04:10	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			07/04/23 04:10	1
Dibromomethane	<1.00		1.00	0.330	ug/L			07/04/23 04:10	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			07/04/23 04:10	1
Iodomethane	<10.0		10.0	7.00	ug/L			07/04/23 04:10	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			07/04/23 04:10	1
Styrene	<1.00		1.00	0.370	ug/L			07/04/23 04:10	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			07/04/23 04:10	1
Toluene	<1.00		1.00	0.430	ug/L			07/04/23 04:10	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			07/04/23 04:10	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			07/04/23 04:10	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			07/04/23 04:10	1
Trichloroethene	<1.00		1.00	0.430	ug/L			07/04/23 04:10	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			07/04/23 04:10	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			07/04/23 04:10	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			07/04/23 04:10	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			07/04/23 04:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	117		80 - 128		07/04/23 04:10	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: DUP

Lab Sample ID: 310-259408-7

Date Collected: 06/27/23 12:08

Matrix: Water

Date Received: 06/30/23 16:20

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	85		80 - 128		07/06/23 02:28	1
Toluene-d8 (Surr)	93		80 - 120		07/04/23 04:10	1
Toluene-d8 (Surr)	108		80 - 120		07/06/23 02:28	1
4-Bromofluorobenzene (Surr)	95		80 - 120		07/04/23 04:10	1
4-Bromofluorobenzene (Surr)	109	*3	80 - 120		07/06/23 02:28	1

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: Trip Blank

Lab Sample ID: 310-259408-8

Date Collected: 06/27/23 00:00

Matrix: Water

Date Received: 06/30/23 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	0.380	ug/L			07/03/23 22:29	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			07/03/23 22:29	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			07/03/23 22:29	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			07/03/23 22:29	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			07/03/23 22:29	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			07/03/23 22:29	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			07/03/23 22:29	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			07/03/23 22:29	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			07/03/23 22:29	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			07/03/23 22:29	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			07/03/23 22:29	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			07/03/23 22:29	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			07/03/23 22:29	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			07/03/23 22:29	1
2-Hexanone	<10.0		10.0	2.00	ug/L			07/03/23 22:29	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			07/03/23 22:29	1
Acetone	<10.0		10.0	3.10	ug/L			07/03/23 22:29	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			07/03/23 22:29	1
Benzene	<0.500		0.500	0.220	ug/L			07/03/23 22:29	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			07/03/23 22:29	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			07/03/23 22:29	1
Bromoform	<5.00		5.00	0.780	ug/L			07/03/23 22:29	1
Bromomethane	<4.00		4.00	1.10	ug/L			07/03/23 22:29	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			07/03/23 22:29	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			07/03/23 22:29	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			07/03/23 22:29	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			07/03/23 22:29	1
Chloroethane	<4.00		4.00	0.790	ug/L			07/06/23 00:07	1
Chloroform	<3.00		3.00	1.30	ug/L			07/03/23 22:29	1
Chloromethane	<3.00		3.00	0.610	ug/L			07/03/23 22:29	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			07/03/23 22:29	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			07/03/23 22:29	1
Dibromomethane	<1.00		1.00	0.330	ug/L			07/03/23 22:29	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			07/03/23 22:29	1
Iodomethane	<10.0		10.0	7.00	ug/L			07/03/23 22:29	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			07/03/23 22:29	1
Styrene	<1.00		1.00	0.370	ug/L			07/03/23 22:29	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			07/03/23 22:29	1
Toluene	<1.00		1.00	0.430	ug/L			07/03/23 22:29	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			07/03/23 22:29	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			07/03/23 22:29	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			07/03/23 22:29	1
Trichloroethene	<1.00		1.00	0.430	ug/L			07/03/23 22:29	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			07/03/23 22:29	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			07/03/23 22:29	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			07/03/23 22:29	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			07/03/23 22:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	110		80 - 128		07/03/23 22:29	1

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Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: Trip Blank

Lab Sample ID: 310-259408-8

Date Collected: 06/27/23 00:00

Matrix: Water

Date Received: 06/30/23 16:20

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Dibromofluoromethane (Surr)	90		80 - 128		07/06/23 00:07	1
Toluene-d8 (Surr)	94		80 - 120		07/03/23 22:29	1
Toluene-d8 (Surr)	109		80 - 120		07/06/23 00:07	1
4-Bromofluorobenzene (Surr)	98		80 - 120		07/03/23 22:29	1
4-Bromofluorobenzene (Surr)	110	*3	80 - 120		07/06/23 00:07	1

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Definitions/Glossary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Surrogate Summary

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

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 (80-128)	TOL (80-120)	BFB (80-120)
310-259408-1	MW-2	103	99	117
310-259408-1	MW-2	108	98	98
310-259408-2	MW-3	112	94	97
310-259408-2	MW-3	93	108	110 *3
310-259408-2 MS	MW-3	96	103	88
310-259408-2 MSD	MW-3	103	102	90
310-259408-3	MW-6	118	92	97
310-259408-3	MW-6	88	106	109 *3
310-259408-4	MW-7	117	93	97
310-259408-4	MW-7	89	106	107 *3
310-259408-5	MW-9	110	93	96
310-259408-5	MW-9	88	106	110 *3
310-259408-6	MW-10	121	92	99
310-259408-6	MW-10	88	108	114 *3
310-259408-7	DUP	117	93	95
310-259408-7	DUP	85	108	109 *3
310-259408-8	Trip Blank	110	94	98
310-259408-8	Trip Blank	90	109	110 *3
LCS 310-392478/6	Lab Control Sample	101	101	101
LCS 310-392478/7	Lab Control Sample	105	95	99
LCS 310-392512/6	Lab Control Sample	101	86	99
LCS 310-392512/7	Lab Control Sample	104	97	102
LCS 310-392611/6	Lab Control Sample	101	101	92
LCS 310-392611/7	Lab Control Sample	93	105	107
LCS 310-392661/6	Lab Control Sample	117	100	99
LCS 310-392661/7	Lab Control Sample	109	97	101
MB 310-392478/5	Method Blank	101	98	104
MB 310-392512/5	Method Blank	113	98	102
MB 310-392611/5	Method Blank	93	105	112
MB 310-392661/5	Method Blank	103	101	85

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

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

Lab Sample ID: MB 310-392478/5
Matrix: Water
Analysis Batch: 392478

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			07/03/23 20:22	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			07/03/23 20:22	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			07/03/23 20:22	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			07/03/23 20:22	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			07/03/23 20:22	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			07/03/23 20:22	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			07/03/23 20:22	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			07/03/23 20:22	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			07/03/23 20:22	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			07/03/23 20:22	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			07/03/23 20:22	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			07/03/23 20:22	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			07/03/23 20:22	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			07/03/23 20:22	1
2-Hexanone	<10.0		10.0	2.00	ug/L			07/03/23 20:22	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			07/03/23 20:22	1
Acetone	<10.0		10.0	3.10	ug/L			07/03/23 20:22	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			07/03/23 20:22	1
Benzene	<0.500		0.500	0.220	ug/L			07/03/23 20:22	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			07/03/23 20:22	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			07/03/23 20:22	1
Bromoform	<5.00		5.00	0.780	ug/L			07/03/23 20:22	1
Bromomethane	<4.00		4.00	1.10	ug/L			07/03/23 20:22	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			07/03/23 20:22	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			07/03/23 20:22	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			07/03/23 20:22	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			07/03/23 20:22	1
Chloroform	<3.00		3.00	1.30	ug/L			07/03/23 20:22	1
Chloromethane	<3.00		3.00	0.610	ug/L			07/03/23 20:22	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			07/03/23 20:22	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			07/03/23 20:22	1
Dibromomethane	<1.00		1.00	0.330	ug/L			07/03/23 20:22	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			07/03/23 20:22	1
Iodomethane	<10.0		10.0	7.00	ug/L			07/03/23 20:22	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			07/03/23 20:22	1
Styrene	<1.00		1.00	0.370	ug/L			07/03/23 20:22	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			07/03/23 20:22	1
Toluene	<1.00		1.00	0.430	ug/L			07/03/23 20:22	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			07/03/23 20:22	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			07/03/23 20:22	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			07/03/23 20:22	1
Trichloroethene	<1.00		1.00	0.430	ug/L			07/03/23 20:22	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			07/03/23 20:22	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			07/03/23 20:22	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			07/03/23 20:22	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			07/03/23 20:22	1

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

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

Lab Sample ID: MB 310-392478/5
Matrix: Water
Analysis Batch: 392478

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	101		80 - 128		07/03/23 20:22	1
Toluene-d8 (Surr)	98		80 - 120		07/03/23 20:22	1
4-Bromofluorobenzene (Surr)	104		80 - 120		07/03/23 20:22	1

Lab Sample ID: LCS 310-392478/6
Matrix: Water
Analysis Batch: 392478

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	15.58		ug/L		78	68 - 123
1,1,1-Trichloroethane	20.0	18.14		ug/L		91	71 - 128
1,1,2,2-Tetrachloroethane	20.0	17.49		ug/L		87	64 - 124
1,1,2-Trichloroethane	20.0	18.45		ug/L		92	70 - 124
1,1-Dichloroethane	20.0	18.74		ug/L		94	71 - 123
1,1-Dichloroethene	20.0	17.50		ug/L		87	61 - 129
1,2,3-Trichloropropane	20.0	18.41		ug/L		92	64 - 125
1,2-Dibromo-3-Chloropropane	20.0	17.47		ug/L		87	50 - 150
1,2-Dibromoethane (EDB)	20.0	18.14		ug/L		91	73 - 125
1,2-Dichlorobenzene	20.0	15.19		ug/L		76	68 - 120
1,2-Dichloroethane	20.0	17.93		ug/L		90	70 - 124
1,2-Dichloropropane	20.0	18.10		ug/L		90	73 - 121
1,4-Dichlorobenzene	20.0	15.04		ug/L		75	67 - 120
2-Butanone (MEK)	40.0	39.21		ug/L		98	50 - 150
2-Hexanone	40.0	39.70		ug/L		99	60 - 132
4-Methyl-2-pentanone (MIBK)	40.0	39.40		ug/L		98	62 - 130
Acetone	40.0	43.73		ug/L		109	50 - 150
Acrylonitrile	200	200.2		ug/L		100	50 - 150
Benzene	20.0	18.30		ug/L		92	73 - 122
Bromochloromethane	20.0	18.02		ug/L		90	68 - 132
Bromodichloromethane	20.0	17.02		ug/L		85	72 - 121
Bromoform	20.0	16.75		ug/L		84	55 - 129
Carbon disulfide	20.0	17.77		ug/L		89	58 - 131
Carbon tetrachloride	20.0	17.96		ug/L		90	67 - 132
Chlorobenzene	20.0	16.36		ug/L		82	69 - 121
Chlorodibromomethane	20.0	16.78		ug/L		84	69 - 122
Chloroform	20.0	17.27		ug/L		86	72 - 120
cis-1,2-Dichloroethene	20.0	17.69		ug/L		88	74 - 120
cis-1,3-Dichloropropene	20.0	17.70		ug/L		88	71 - 126
Dibromomethane	20.0	17.94		ug/L		90	72 - 123
Ethylbenzene	20.0	17.02		ug/L		85	69 - 122
Iodomethane	20.0	19.42		ug/L		97	10 - 150
Methylene Chloride	20.0	19.20		ug/L		96	50 - 150
Styrene	20.0	16.05		ug/L		80	67 - 125
Tetrachloroethene	20.0	17.77		ug/L		89	69 - 131
Toluene	20.0	17.49		ug/L		87	72 - 121
trans-1,2-Dichloroethene	20.0	17.65		ug/L		88	68 - 125
trans-1,3-Dichloropropene	20.0	17.12		ug/L		86	68 - 124
trans-1,4-Dichloro-2-butene	20.0	19.30		ug/L		96	48 - 150

Eurofins Cedar Falls

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

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

Lab Sample ID: LCS 310-392478/6
Matrix: Water
Analysis Batch: 392478

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Trichloroethene	20.0	17.26		ug/L		86	73 - 126
Vinyl acetate	40.0	37.68		ug/L		94	50 - 150
Xylenes, Total	40.0	32.17		ug/L		80	68 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	101		80 - 128
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120

Lab Sample ID: LCS 310-392478/7
Matrix: Water
Analysis Batch: 392478

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	17.73		ug/L		89	24 - 150
Chloromethane	20.0	16.17		ug/L		81	37 - 150
Trichlorofluoromethane	20.0	17.01		ug/L		85	56 - 144
Vinyl chloride	20.0	16.28		ug/L		81	57 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	105		80 - 128
Toluene-d8 (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120

Lab Sample ID: MB 310-392512/5
Matrix: Water
Analysis Batch: 392512

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			07/04/23 10:41	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			07/04/23 10:41	1
1,1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			07/04/23 10:41	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			07/04/23 10:41	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			07/04/23 10:41	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			07/04/23 10:41	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			07/04/23 10:41	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			07/04/23 10:41	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			07/04/23 10:41	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			07/04/23 10:41	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			07/04/23 10:41	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			07/04/23 10:41	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			07/04/23 10:41	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			07/04/23 10:41	1
2-Hexanone	<10.0		10.0	2.00	ug/L			07/04/23 10:41	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			07/04/23 10:41	1
Acetone	<10.0		10.0	3.10	ug/L			07/04/23 10:41	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			07/04/23 10:41	1
Benzene	<0.500		0.500	0.220	ug/L			07/04/23 10:41	1

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QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

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

Lab Sample ID: MB 310-392512/5
Matrix: Water
Analysis Batch: 392512

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromochloromethane	<5.00		5.00	0.540	ug/L			07/04/23 10:41	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			07/04/23 10:41	1
Bromoform	<5.00		5.00	0.780	ug/L			07/04/23 10:41	1
Bromomethane	<4.00		4.00	1.10	ug/L			07/04/23 10:41	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			07/04/23 10:41	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			07/04/23 10:41	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			07/04/23 10:41	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			07/04/23 10:41	1
Chloroethane	<4.00		4.00	0.790	ug/L			07/04/23 10:41	1
Chloroform	<3.00		3.00	1.30	ug/L			07/04/23 10:41	1
Chloromethane	<3.00		3.00	0.610	ug/L			07/04/23 10:41	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			07/04/23 10:41	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			07/04/23 10:41	1
Dibromomethane	<1.00		1.00	0.330	ug/L			07/04/23 10:41	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			07/04/23 10:41	1
Iodomethane	<10.0		10.0	7.00	ug/L			07/04/23 10:41	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			07/04/23 10:41	1
Styrene	<1.00		1.00	0.370	ug/L			07/04/23 10:41	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			07/04/23 10:41	1
Toluene	<1.00		1.00	0.430	ug/L			07/04/23 10:41	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			07/04/23 10:41	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			07/04/23 10:41	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			07/04/23 10:41	1
Trichloroethene	<1.00		1.00	0.430	ug/L			07/04/23 10:41	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			07/04/23 10:41	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			07/04/23 10:41	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			07/04/23 10:41	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			07/04/23 10:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	113		80 - 128		07/04/23 10:41	1
Toluene-d8 (Surr)	98		80 - 120		07/04/23 10:41	1
4-Bromofluorobenzene (Surr)	102		80 - 120		07/04/23 10:41	1

Lab Sample ID: LCS 310-392512/6
Matrix: Water
Analysis Batch: 392512

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	20.0	19.80		ug/L		99	68 - 123
1,1,1-Trichloroethane	20.0	22.45		ug/L		112	71 - 128
1,1,2,2-Tetrachloroethane	20.0	18.62		ug/L		93	64 - 124
1,1,2-Trichloroethane	20.0	18.26		ug/L		91	70 - 124
1,1-Dichloroethane	20.0	21.83		ug/L		109	71 - 123
1,1-Dichloroethene	20.0	22.22		ug/L		111	61 - 129
1,2,3-Trichloropropane	20.0	22.29		ug/L		111	64 - 125
1,2-Dibromo-3-Chloropropane	20.0	17.42		ug/L		87	50 - 150
1,2-Dibromoethane (EDB)	20.0	22.30		ug/L		112	73 - 125

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QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

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

Lab Sample ID: LCS 310-392512/6
Matrix: Water
Analysis Batch: 392512

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichlorobenzene	20.0	19.49		ug/L		97	68 - 120
1,2-Dichloroethane	20.0	21.19		ug/L		106	70 - 124
1,2-Dichloropropane	20.0	18.99		ug/L		95	73 - 121
1,4-Dichlorobenzene	20.0	20.53		ug/L		103	67 - 120
2-Butanone (MEK)	40.0	43.78		ug/L		109	50 - 150
2-Hexanone	40.0	40.68		ug/L		102	60 - 132
4-Methyl-2-pentanone (MIBK)	40.0	33.05		ug/L		83	62 - 130
Acetone	40.0	49.71		ug/L		124	50 - 150
Acrylonitrile	200	235.5		ug/L		118	50 - 150
Benzene	20.0	20.54		ug/L		103	73 - 122
Bromochloromethane	20.0	22.64		ug/L		113	68 - 132
Bromodichloromethane	20.0	19.93		ug/L		100	72 - 121
Bromoform	20.0	19.26		ug/L		96	55 - 129
Carbon disulfide	20.0	22.77		ug/L		114	58 - 131
Carbon tetrachloride	20.0	22.42		ug/L		112	67 - 132
Chlorobenzene	20.0	21.32		ug/L		107	69 - 121
Chlorodibromomethane	20.0	19.38		ug/L		97	69 - 122
Chloroform	20.0	21.64		ug/L		108	72 - 120
cis-1,2-Dichloroethene	20.0	22.27		ug/L		111	74 - 120
cis-1,3-Dichloropropene	20.0	17.30		ug/L		87	71 - 126
Dibromomethane	20.0	18.96		ug/L		95	72 - 123
Ethylbenzene	20.0	21.27		ug/L		106	69 - 122
Iodomethane	20.0	20.86		ug/L		104	10 - 150
Methylene Chloride	20.0	21.45		ug/L		107	50 - 150
Styrene	20.0	21.32		ug/L		107	67 - 125
Tetrachloroethene	20.0	21.44		ug/L		107	69 - 131
Toluene	20.0	18.99		ug/L		95	72 - 121
trans-1,2-Dichloroethene	20.0	23.40		ug/L		117	68 - 125
trans-1,3-Dichloropropene	20.0	19.32		ug/L		97	68 - 124
trans-1,4-Dichloro-2-butene	20.0	19.61		ug/L		98	48 - 150
Trichloroethene	20.0	22.42		ug/L		112	73 - 126
Vinyl acetate	40.0	44.89		ug/L		112	50 - 150
Xylenes, Total	40.0	43.86		ug/L		110	68 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	101		80 - 128
Toluene-d8 (Surr)	86		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120

Lab Sample ID: LCS 310-392512/7
Matrix: Water
Analysis Batch: 392512

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	15.77		ug/L		79	24 - 150
Chloroethane	20.0	19.86		ug/L		99	51 - 137
Chloromethane	20.0	23.68		ug/L		118	37 - 150
Trichlorofluoromethane	20.0	22.97		ug/L		115	56 - 144

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QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

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

Lab Sample ID: LCS 310-392512/7
Matrix: Water
Analysis Batch: 392512

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl chloride	20.0	20.84		ug/L		104	57 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	104		80 - 128
Toluene-d8 (Surr)	97		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120

Lab Sample ID: MB 310-392611/5
Matrix: Water
Analysis Batch: 392611

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			07/05/23 21:46	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			07/05/23 21:46	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			07/05/23 21:46	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			07/05/23 21:46	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			07/05/23 21:46	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			07/05/23 21:46	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			07/05/23 21:46	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			07/05/23 21:46	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			07/05/23 21:46	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			07/05/23 21:46	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			07/05/23 21:46	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			07/05/23 21:46	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			07/05/23 21:46	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			07/05/23 21:46	1
2-Hexanone	<10.0		10.0	2.00	ug/L			07/05/23 21:46	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			07/05/23 21:46	1
Acetone	<10.0		10.0	3.10	ug/L			07/05/23 21:46	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			07/05/23 21:46	1
Benzene	<0.500		0.500	0.220	ug/L			07/05/23 21:46	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			07/05/23 21:46	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			07/05/23 21:46	1
Bromoform	<5.00		5.00	0.780	ug/L			07/05/23 21:46	1
Bromomethane	<4.00		4.00	1.10	ug/L			07/05/23 21:46	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			07/05/23 21:46	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			07/05/23 21:46	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			07/05/23 21:46	1
Chloroethane	<4.00		4.00	0.790	ug/L			07/05/23 21:46	1
Chloroform	<3.00		3.00	1.30	ug/L			07/05/23 21:46	1
Chloromethane	<3.00		3.00	0.610	ug/L			07/05/23 21:46	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			07/05/23 21:46	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			07/05/23 21:46	1
Dibromomethane	<1.00		1.00	0.330	ug/L			07/05/23 21:46	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			07/05/23 21:46	1
Iodomethane	<10.0		10.0	7.00	ug/L			07/05/23 21:46	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			07/05/23 21:46	1
Styrene	<1.00		1.00	0.370	ug/L			07/05/23 21:46	1

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QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

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

Lab Sample ID: MB 310-392611/5
Matrix: Water
Analysis Batch: 392611

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	<1.00		1.00	0.480	ug/L			07/05/23 21:46	1
Toluene	<1.00		1.00	0.430	ug/L			07/05/23 21:46	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			07/05/23 21:46	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			07/05/23 21:46	1
Trichloroethene	<1.00		1.00	0.430	ug/L			07/05/23 21:46	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			07/05/23 21:46	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			07/05/23 21:46	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			07/05/23 21:46	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	93		80 - 128		07/05/23 21:46	1
Toluene-d8 (Surr)	105		80 - 120		07/05/23 21:46	1
4-Bromofluorobenzene (Surr)	112		80 - 120		07/05/23 21:46	1

Lab Sample ID: LCS 310-392611/6
Matrix: Water
Analysis Batch: 392611

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	18.41		ug/L		92	68 - 123
1,1,1-Trichloroethane	20.0	17.68		ug/L		88	71 - 128
1,1,2,2-Tetrachloroethane	20.0	19.62		ug/L		98	64 - 124
1,1,2-Trichloroethane	20.0	19.41		ug/L		97	70 - 124
1,1-Dichloroethane	20.0	17.69		ug/L		88	71 - 123
1,1-Dichloroethene	20.0	16.39		ug/L		82	61 - 129
1,2,3-Trichloropropane	20.0	20.03		ug/L		100	64 - 125
1,2-Dibromo-3-Chloropropane	20.0	19.60		ug/L		98	50 - 150
1,2-Dibromoethane (EDB)	20.0	18.72		ug/L		94	73 - 125
1,2-Dichlorobenzene	20.0	18.85		ug/L		94	68 - 120
1,2-Dichloroethane	20.0	18.91		ug/L		95	70 - 124
1,2-Dichloropropane	20.0	18.63		ug/L		93	73 - 121
1,4-Dichlorobenzene	20.0	18.70		ug/L		94	67 - 120
2-Butanone (MEK)	40.0	37.93		ug/L		95	50 - 150
2-Hexanone	40.0	42.32		ug/L		106	60 - 132
4-Methyl-2-pentanone (MIBK)	40.0	42.00		ug/L		105	62 - 130
Acetone	40.0	45.72		ug/L		114	50 - 150
Acrylonitrile	200	178.9		ug/L		89	50 - 150
Benzene	20.0	18.59		ug/L		93	73 - 122
Bromochloromethane	20.0	18.07		ug/L		90	68 - 132
Bromodichloromethane	20.0	18.34		ug/L		92	72 - 121
Bromoform	20.0	15.50		ug/L		77	55 - 129
Carbon tetrachloride	20.0	17.71		ug/L		89	67 - 132
Chlorobenzene	20.0	17.76		ug/L		89	69 - 121
Chlorodibromomethane	20.0	17.58		ug/L		88	69 - 122
Chloroform	20.0	18.34		ug/L		92	72 - 120
cis-1,2-Dichloroethene	20.0	17.52		ug/L		88	74 - 120
cis-1,3-Dichloropropene	20.0	20.49		ug/L		102	71 - 126
Dibromomethane	20.0	18.37		ug/L		92	72 - 123

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QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

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

Lab Sample ID: LCS 310-392611/6
Matrix: Water
Analysis Batch: 392611

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	20.0	18.45		ug/L		92	69 - 122
Iodomethane	20.0	13.86		ug/L		69	10 - 150
Methylene Chloride	20.0	19.09		ug/L		95	50 - 150
Styrene	20.0	18.83		ug/L		94	67 - 125
Tetrachloroethene	20.0	15.86		ug/L		79	69 - 131
Toluene	20.0	17.90		ug/L		89	72 - 121
trans-1,2-Dichloroethene	20.0	16.81		ug/L		84	68 - 125
trans-1,3-Dichloropropene	20.0	18.45		ug/L		92	68 - 124
Trichloroethene	20.0	17.55		ug/L		88	73 - 126
Xylenes, Total	40.0	36.10		ug/L		90	68 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	101		80 - 128
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	92		80 - 120

Lab Sample ID: LCS 310-392611/7
Matrix: Water
Analysis Batch: 392611

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	9.078		ug/L		45	24 - 150
Chloroethane	20.0	19.06		ug/L		95	51 - 137
Chloromethane	20.0	18.12		ug/L		91	37 - 150
Trichlorofluoromethane	20.0	18.98		ug/L		95	56 - 144
Vinyl chloride	20.0	18.81		ug/L		94	57 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	93		80 - 128
Toluene-d8 (Surr)	105		80 - 120
4-Bromofluorobenzene (Surr)	107		80 - 120

Lab Sample ID: 310-259408-2 MS
Matrix: Water
Analysis Batch: 392611

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	<1.00		25.0	22.47		ug/L		90	52 - 130
1,1,1-Trichloroethane	<1.00		25.0	19.11		ug/L		76	49 - 130
1,1,2,2-Tetrachloroethane	<1.00		25.0	25.91		ug/L		104	51 - 130
1,1,2-Trichloroethane	<1.00		25.0	24.67		ug/L		99	56 - 130
1,1-Dichloroethane	<1.00		25.0	19.62		ug/L		78	53 - 130
1,1-Dichloroethene	<2.00		25.0	17.31		ug/L		69	39 - 130
1,2,3-Trichloropropane	<1.00		25.0	25.58		ug/L		102	50 - 130
1,2-Dibromo-3-Chloropropane	<1.20	*3	25.0	24.95		ug/L		100	45 - 150
1,2-Dibromoethane (EDB)	<0.340		25.0	22.24		ug/L		89	59 - 130
1,2-Dichlorobenzene	<1.00	*3	25.0	22.83		ug/L		91	53 - 130
1,2-Dichloroethane	<1.00		25.0	22.17		ug/L		89	57 - 130

Eurofins Cedar Falls

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

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

Lab Sample ID: 310-259408-2 MS
Matrix: Water
Analysis Batch: 392611

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichloropropane	<1.00		25.0	22.11		ug/L		88	60 - 130
1,4-Dichlorobenzene	<1.00	*3	25.0	23.52		ug/L		94	53 - 130
2-Butanone (MEK)	<10.0		50.0	43.51		ug/L		87	47 - 150
2-Hexanone	<10.0		50.0	49.18		ug/L		98	45 - 132
4-Methyl-2-pentanone (MIBK)	<10.0		50.0	51.50		ug/L		103	46 - 132
Acetone	<10.0		50.0	55.16		ug/L		110	35 - 150
Acrylonitrile	<5.00		25.0	211.0		ug/L		84	50 - 150
Benzene	<0.500		25.0	20.83		ug/L		83	47 - 130
Bromochloromethane	<5.00		25.0	19.93		ug/L		80	54 - 132
Bromodichloromethane	<1.00		25.0	21.34		ug/L		85	58 - 130
Bromoform	<5.00		25.0	19.07		ug/L		76	42 - 130
Carbon tetrachloride	<2.00		25.0	18.89		ug/L		76	45 - 132
Chlorobenzene	<1.00		25.0	22.06		ug/L		88	54 - 130
Chlorodibromomethane	<5.00		25.0	21.10		ug/L		84	53 - 130
Chloroform	<3.00		25.0	21.11		ug/L		84	55 - 130
cis-1,2-Dichloroethene	<1.00		25.0	19.38		ug/L		78	52 - 130
cis-1,3-Dichloropropene	<5.00		25.0	22.75		ug/L		91	55 - 130
Dibromomethane	<1.00		25.0	21.21		ug/L		85	61 - 130
Ethylbenzene	<1.00		25.0	21.86		ug/L		87	48 - 130
Iodomethane	<10.0		25.0	13.49		ug/L		54	10 - 150
Methylene Chloride	<5.00		25.0	20.73		ug/L		83	50 - 150
Styrene	<1.00		25.0	23.80		ug/L		95	46 - 130
Tetrachloroethene	<1.00		25.0	16.66		ug/L		67	42 - 131
Toluene	<1.00		25.0	20.37		ug/L		81	48 - 130
trans-1,2-Dichloroethene	<1.00		25.0	18.92		ug/L		76	54 - 130
trans-1,3-Dichloropropene	<5.00		25.0	19.61		ug/L		78	51 - 130
Trichloroethene	<1.00		25.0	19.25		ug/L		77	55 - 130
Xylenes, Total	<3.00		50.0	44.19		ug/L		88	44 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	96		80 - 128
Toluene-d8 (Surr)	103		80 - 120
4-Bromofluorobenzene (Surr)	88		80 - 120

Lab Sample ID: 310-259408-2 MSD
Matrix: Water
Analysis Batch: 392611

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	<1.00		25.0	21.66		ug/L		87	52 - 130	4	20
1,1,1-Trichloroethane	<1.00		25.0	18.11		ug/L		72	49 - 130	5	20
1,1,2,2-Tetrachloroethane	<1.00		25.0	25.45		ug/L		102	51 - 130	2	20
1,1,2-Trichloroethane	<1.00		25.0	23.44		ug/L		94	56 - 130	5	20
1,1-Dichloroethane	<1.00		25.0	18.60		ug/L		74	53 - 130	5	20
1,1-Dichloroethene	<2.00		25.0	15.37		ug/L		61	39 - 130	12	28
1,2,3-Trichloropropane	<1.00		25.0	25.58		ug/L		102	50 - 130	0	20
1,2-Dibromo-3-Chloropropane	<1.20	*3	25.0	25.90		ug/L		104	45 - 150	4	20
1,2-Dibromoethane (EDB)	<0.340		25.0	21.41		ug/L		86	59 - 130	4	20

Eurofins Cedar Falls

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

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

Lab Sample ID: 310-259408-2 MSD
Matrix: Water
Analysis Batch: 392611

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichlorobenzene	<1.00	*3	25.0	22.46		ug/L		90	53 - 130	2	20
1,2-Dichloroethane	<1.00		25.0	21.07		ug/L		84	57 - 130	5	21
1,2-Dichloropropane	<1.00		25.0	20.57		ug/L		82	60 - 130	7	31
1,4-Dichlorobenzene	<1.00	*3	25.0	22.36		ug/L		89	53 - 130	5	20
2-Butanone (MEK)	<10.0		50.0	45.49		ug/L		91	47 - 150	4	20
2-Hexanone	<10.0		50.0	50.37		ug/L		101	45 - 132	2	20
4-Methyl-2-pentanone (MIBK)	<10.0		50.0	51.66		ug/L		103	46 - 132	0	20
Acetone	<10.0		50.0	52.24		ug/L		104	35 - 150	5	26
Acrylonitrile	<5.00		25.0	214.1		ug/L		86	50 - 150	1	21
Benzene	<0.500		25.0	19.63		ug/L		79	47 - 130	6	20
Bromochloromethane	<5.00		25.0	20.19		ug/L		81	54 - 132	1	20
Bromodichloromethane	<1.00		25.0	21.22		ug/L		85	58 - 130	1	20
Bromoform	<5.00		25.0	19.11		ug/L		76	42 - 130	0	20
Carbon tetrachloride	<2.00		25.0	18.48		ug/L		74	45 - 132	2	20
Chlorobenzene	<1.00		25.0	20.11		ug/L		80	54 - 130	9	20
Chlorodibromomethane	<5.00		25.0	21.04		ug/L		84	53 - 130	0	20
Chloroform	<3.00		25.0	19.93		ug/L		80	55 - 130	6	20
cis-1,2-Dichloroethene	<1.00		25.0	18.12		ug/L		72	52 - 130	7	20
cis-1,3-Dichloropropene	<5.00		25.0	22.41		ug/L		90	55 - 130	2	20
Dibromomethane	<1.00		25.0	20.55		ug/L		82	61 - 130	3	20
Ethylbenzene	<1.00		25.0	19.98		ug/L		80	48 - 130	9	20
Iodomethane	<10.0		25.0	14.39		ug/L		58	10 - 150	6	35
Methylene Chloride	<5.00		25.0	20.37		ug/L		81	50 - 150	2	24
Styrene	<1.00		25.0	21.87		ug/L		87	46 - 130	8	20
Tetrachloroethene	<1.00		25.0	15.65		ug/L		63	42 - 131	6	20
Toluene	<1.00		25.0	19.27		ug/L		77	48 - 130	6	20
trans-1,2-Dichloroethene	<1.00		25.0	17.79		ug/L		71	54 - 130	6	24
trans-1,3-Dichloropropene	<5.00		25.0	20.40		ug/L		82	51 - 130	4	20
Trichloroethene	<1.00		25.0	18.46		ug/L		74	55 - 130	4	20
Xylenes, Total	<3.00		50.0	40.67		ug/L		81	44 - 130	8	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Dibromofluoromethane (Surr)	103		80 - 128
Toluene-d8 (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	90		80 - 120

Lab Sample ID: MB 310-392661/5
Matrix: Water
Analysis Batch: 392661

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			07/06/23 02:06	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			07/06/23 02:06	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			07/06/23 02:06	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			07/06/23 02:06	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			07/06/23 02:06	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			07/06/23 02:06	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			07/06/23 02:06	1

Eurofins Cedar Falls

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

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

Lab Sample ID: MB 310-392661/5
Matrix: Water
Analysis Batch: 392661

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			07/06/23 02:06	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			07/06/23 02:06	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			07/06/23 02:06	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			07/06/23 02:06	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			07/06/23 02:06	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			07/06/23 02:06	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			07/06/23 02:06	1
2-Hexanone	<10.0		10.0	2.00	ug/L			07/06/23 02:06	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			07/06/23 02:06	1
Acetone	<10.0		10.0	3.10	ug/L			07/06/23 02:06	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			07/06/23 02:06	1
Benzene	<0.500		0.500	0.220	ug/L			07/06/23 02:06	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			07/06/23 02:06	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			07/06/23 02:06	1
Bromoform	<5.00		5.00	0.780	ug/L			07/06/23 02:06	1
Bromomethane	<4.00		4.00	1.10	ug/L			07/06/23 02:06	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			07/06/23 02:06	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			07/06/23 02:06	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			07/06/23 02:06	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			07/06/23 02:06	1
Chloroethane	<4.00		4.00	0.790	ug/L			07/06/23 02:06	1
Chloroform	<3.00		3.00	1.30	ug/L			07/06/23 02:06	1
Chloromethane	<3.00		3.00	0.610	ug/L			07/06/23 02:06	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			07/06/23 02:06	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			07/06/23 02:06	1
Dibromomethane	<1.00		1.00	0.330	ug/L			07/06/23 02:06	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			07/06/23 02:06	1
Iodomethane	<10.0		10.0	7.00	ug/L			07/06/23 02:06	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			07/06/23 02:06	1
Styrene	<1.00		1.00	0.370	ug/L			07/06/23 02:06	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			07/06/23 02:06	1
Toluene	<1.00		1.00	0.430	ug/L			07/06/23 02:06	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			07/06/23 02:06	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			07/06/23 02:06	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			07/06/23 02:06	1
Trichloroethene	<1.00		1.00	0.430	ug/L			07/06/23 02:06	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			07/06/23 02:06	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			07/06/23 02:06	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			07/06/23 02:06	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			07/06/23 02:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	103		80 - 128		07/06/23 02:06	1
Toluene-d8 (Surr)	101		80 - 120		07/06/23 02:06	1
4-Bromofluorobenzene (Surr)	85		80 - 120		07/06/23 02:06	1

Eurofins Cedar Falls

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

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

Lab Sample ID: LCS 310-392661/6
Matrix: Water
Analysis Batch: 392661

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	20.0	19.98		ug/L		100	68 - 123
1,1,2,2-Tetrachloroethane	20.0	19.92		ug/L		100	64 - 124
1,1,2-Trichloroethane	20.0	18.97		ug/L		95	70 - 124
1,2,3-Trichloropropane	20.0	23.73		ug/L		119	64 - 125
1,2-Dibromo-3-Chloropropane	20.0	17.74		ug/L		89	50 - 150
1,2-Dibromoethane (EDB)	20.0	19.43		ug/L		97	73 - 125
1,2-Dichlorobenzene	20.0	19.93		ug/L		100	68 - 120
1,2-Dichloroethane	20.0	24.55		ug/L		123	70 - 124
1,2-Dichloropropane	20.0	20.82		ug/L		104	73 - 121
1,4-Dichlorobenzene	20.0	20.83		ug/L		104	67 - 120
2-Butanone (MEK)	40.0	44.92		ug/L		112	50 - 150
2-Hexanone	40.0	32.04		ug/L		80	60 - 132
4-Methyl-2-pentanone (MIBK)	40.0	36.20		ug/L		90	62 - 130
Acetone	40.0	49.16		ug/L		123	50 - 150
Acrylonitrile	200	249.9		ug/L		125	50 - 150
Bromodichloromethane	20.0	20.75		ug/L		104	72 - 121
Bromoform	20.0	20.73		ug/L		104	55 - 129
Chlorobenzene	20.0	22.05		ug/L		110	69 - 121
Chlorodibromomethane	20.0	17.87		ug/L		89	69 - 122
cis-1,3-Dichloropropene	20.0	20.01		ug/L		100	71 - 126
Dibromomethane	20.0	21.86		ug/L		109	72 - 123
Ethylbenzene	20.0	22.20		ug/L		111	69 - 122
Iodomethane	20.0	25.53		ug/L		128	10 - 150
Methylene Chloride	20.0	26.70		ug/L		134	50 - 150
Styrene	20.0	22.69		ug/L		113	67 - 125
Tetrachloroethene	20.0	22.67		ug/L		113	69 - 131
Toluene	20.0	23.25		ug/L		116	72 - 121
trans-1,3-Dichloropropene	20.0	22.63		ug/L		113	68 - 124
trans-1,4-Dichloro-2-butene	20.0	21.41		ug/L		107	48 - 150
Trichloroethene	20.0	24.40		ug/L		122	73 - 126
Vinyl acetate	40.0	49.53		ug/L		124	50 - 150
Xylenes, Total	40.0	44.82		ug/L		112	68 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	117		80 - 128
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120

Lab Sample ID: LCS 310-392661/7
Matrix: Water
Analysis Batch: 392661

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	13.97		ug/L		70	24 - 150
Chloroethane	20.0	20.22		ug/L		101	51 - 137
Chloromethane	20.0	28.46		ug/L		142	37 - 150
Trichlorofluoromethane	20.0	26.90		ug/L		135	56 - 144
Vinyl chloride	20.0	23.29		ug/L		116	57 - 136

Eurofins Cedar Falls

QC Sample Results

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

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

Lab Sample ID: LCS 310-392661/7

Matrix: Water

Analysis Batch: 392661

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	109		80 - 128
Toluene-d8 (Surr)	97		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120

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QC Association Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

GC/MS VOA

Analysis Batch: 392478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-259408-2	MW-3	Total/NA	Water	8260D	
310-259408-3	MW-6	Total/NA	Water	8260D	
310-259408-4	MW-7	Total/NA	Water	8260D	
310-259408-5	MW-9	Total/NA	Water	8260D	
310-259408-6	MW-10	Total/NA	Water	8260D	
310-259408-7	DUP	Total/NA	Water	8260D	
310-259408-8	Trip Blank	Total/NA	Water	8260D	
MB 310-392478/5	Method Blank	Total/NA	Water	8260D	
LCS 310-392478/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-392478/7	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 392512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-259408-1	MW-2	Total/NA	Water	8260D	
MB 310-392512/5	Method Blank	Total/NA	Water	8260D	
LCS 310-392512/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-392512/7	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 392611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-259408-2	MW-3	Total/NA	Water	8260D	
310-259408-3	MW-6	Total/NA	Water	8260D	
310-259408-4	MW-7	Total/NA	Water	8260D	
310-259408-5	MW-9	Total/NA	Water	8260D	
310-259408-6	MW-10	Total/NA	Water	8260D	
310-259408-7	DUP	Total/NA	Water	8260D	
310-259408-8	Trip Blank	Total/NA	Water	8260D	
MB 310-392611/5	Method Blank	Total/NA	Water	8260D	
LCS 310-392611/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-392611/7	Lab Control Sample	Total/NA	Water	8260D	
310-259408-2 MS	MW-3	Total/NA	Water	8260D	
310-259408-2 MSD	MW-3	Total/NA	Water	8260D	

Analysis Batch: 392661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-259408-1	MW-2	Total/NA	Water	8260D	
MB 310-392661/5	Method Blank	Total/NA	Water	8260D	
LCS 310-392661/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-392661/7	Lab Control Sample	Total/NA	Water	8260D	

Lab Chronicle

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: MW-2

Date Collected: 06/27/23 11:44

Date Received: 06/30/23 16:20

Lab Sample ID: 310-259408-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	392512	FE5V	EET CF	07/04/23 19:00
Total/NA	Analysis	8260D		1	392661	FE5V	EET CF	07/06/23 04:53

Client Sample ID: MW-3

Date Collected: 06/27/23 12:08

Date Received: 06/30/23 16:20

Lab Sample ID: 310-259408-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	392478	WSE8	EET CF	07/04/23 02:24
Total/NA	Analysis	8260D		1	392611	WSE8	EET CF	07/06/23 00:31

Client Sample ID: MW-6

Date Collected: 06/27/23 12:30

Date Received: 06/30/23 16:20

Lab Sample ID: 310-259408-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	392478	WSE8	EET CF	07/04/23 02:45
Total/NA	Analysis	8260D		1	392611	WSE8	EET CF	07/06/23 00:54

Client Sample ID: MW-7

Date Collected: 06/27/23 12:54

Date Received: 06/30/23 16:20

Lab Sample ID: 310-259408-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	392478	WSE8	EET CF	07/04/23 03:06
Total/NA	Analysis	8260D		1	392611	WSE8	EET CF	07/06/23 01:18

Client Sample ID: MW-9

Date Collected: 06/27/23 13:30

Date Received: 06/30/23 16:20

Lab Sample ID: 310-259408-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	392478	WSE8	EET CF	07/04/23 03:27
Total/NA	Analysis	8260D		1	392611	WSE8	EET CF	07/06/23 01:41

Client Sample ID: MW-10

Date Collected: 06/27/23 13:55

Date Received: 06/30/23 16:20

Lab Sample ID: 310-259408-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	392478	WSE8	EET CF	07/04/23 03:49
Total/NA	Analysis	8260D		1	392611	WSE8	EET CF	07/06/23 02:04

Lab Chronicle

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Client Sample ID: DUP

Date Collected: 06/27/23 12:08

Date Received: 06/30/23 16:20

Lab Sample ID: 310-259408-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	392478	WSE8	EET CF	07/04/23 04:10
Total/NA	Analysis	8260D		1	392611	WSE8	EET CF	07/06/23 02:28

Client Sample ID: Trip Blank

Date Collected: 06/27/23 00:00

Date Received: 06/30/23 16:20

Lab Sample ID: 310-259408-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	392478	WSE8	EET CF	07/03/23 22:29
Total/NA	Analysis	8260D		1	392611	WSE8	EET CF	07/06/23 00:07

Laboratory References:

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

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Accreditation/Certification Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-23

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Method Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	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.

Laboratory References:

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





Environment Testing
America



310-259408 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Adair County</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>6-30-23</u>	<u>1620</u>	<u>ce</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: _____	
Multiple Coolers?	<input 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? ↓	
Temperature Record			
Coolant:	<input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE		
Thermometer ID:	<u>W</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>6.4</u>	Corrected Temp (°C):	<u>0.4</u>
• Sample Container Temperature			
Container(s) used:	<u>CONTAINER 1</u>	<u>CONTAINER 2</u>	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

Client Information		Lab PM Luechti, Meredith L		Carrier Tracking No(s):		COC No: 310-83385-23223.1	
Client Contact: Delmar Frisbie		E-Mail: meredith.luechti@et.eurofins.com		State of Origin:		Page: Page 1 of 1	
Company: Adair County Sanitary Landfill		PMSID:		Analysis Requested		Job #:	
Address: 1645 State Hwy 25		Due Date Requested:		890D - Volatile Appendix 1 Sublet		Total Number of Containers	
City: Mentlo		TAT Requested (days):		Perform MS/MSD (Yes or No)		Field Filtered Sample (Yes or No)	
State, Zip: IA, 50164		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		890D - Volatile Appendix 1 Sublet		Preservation Codes:	
Phone:		Purchase Order not required		Field Filtered Sample (Yes or No)		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Email: adaircountylandfill@gmail.com		Project #: 31002552		Field Filtered Sample (Yes or No)		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)	
Site: Adair Co.LF Resample		SSOW#:		Field Filtered Sample (Yes or No)		Special Instructions/Note:	

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastefl, BT=tissue, A=air)	Preservation Code:
MW-2	6/27	11:44	G	Water	
MW-3	6/27	12:08	G	Water	
MW-6	6/27	12:30	G	Water	
MW-7	6/27	12:54	G	Water	
MW-9	6/27	13:30	G	Water	
MW-10	6/27	13:55	G	Water	
DUP	6/27	12:08	G	Water	
TRIPBLANK				Water	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested 1, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: *Delmar Frisbie* Date: 6/29/23 13:30 Company: JCS
 Relinquished by: _____ Date: 6/30 0800 Company: EFC
 Relinquished by: _____ Date: _____ Company: _____

Custody Seals Intact: Yes No
 Custody Seal No. _____

Special Instructions/QC Requirements:
 Return To Client Disposal By Lab Archive For _____ Months
 Method of Shipment: _____

Received by: _____ Date/Time: 6/29-23 13:30 Company: EFC
 Received by: _____ Date/Time: _____ Company: _____
 Received by: _____ Date/Time: 6/30-23 16:20 Company: _____

Cooler Temperature(s) °C and Other Remarks: _____



Login Sample Receipt Checklist

Client: Adair County Sanitary Landfill

Job Number: 310-259408-1

Login Number: 259408

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Tucker, Sarah L

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



Quantitation Limit Exceptions Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill Resample

Job ID: 310-259408-1

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

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

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ANALYTICAL REPORT

PREPARED FOR

Attn: DJ Luhrs
Adair County Sanitary Landfill
1645 State Hwy 25
Menlo, Iowa 50164

Generated 11/21/2023 3:40:44 PM

JOB DESCRIPTION

Adair County Sanitary Landfill- Fall 2023

JOB NUMBER

310-269571-1

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
11/21/2023 3:40:44 PM

Authorized for release by
Meredith Liechti, Service Center Manager
meredith.liechti@et.eurofinsus.com
(319)277-2401

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Case Narrative

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Job ID: 310-269571-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-269571-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

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

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

Receipt

The samples were received on 11/14/2023 4:30 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 1.3°C and 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.

Metals

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

General Chemistry

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

Sample Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-269571-1	MW-2	Water	11/13/23 14:50	11/14/23 16:30
310-269571-2	MW-3	Water	11/13/23 15:30	11/14/23 16:30
310-269571-3	MW-6	Water	11/13/23 13:17	11/14/23 16:30
310-269571-4	MW-7	Water	11/13/23 12:30	11/14/23 16:30
310-269571-5	MW-9	Water	11/13/23 16:15	11/14/23 16:30
310-269571-6	MW-10	Water	11/13/23 16:50	11/14/23 16:30
310-269571-7	DUP	Water	11/13/23 13:17	11/14/23 16:30
310-269571-8	Trip Blank	Water	11/13/23 00:00	11/14/23 16:30

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Detection Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: MW-2

Lab Sample ID: 310-269571-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.700		0.500	0.220	ug/L	1		8260D	Total/NA
Arsenic	0.00353		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.187		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cobalt	0.00561		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0815		0.00500	0.00190	mg/L	1		6020B	Total/NA
Vanadium	0.00121	J	0.00500	0.00110	mg/L	1		6020B	Total/NA
Total Suspended Solids	5.00	B	1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-3

Lab Sample ID: 310-269571-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0267		0.00200	0.000640	mg/L	1		6020B	Total/NA
Total Suspended Solids	9.38	B	1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-6

Lab Sample ID: 310-269571-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0406		0.00200	0.000640	mg/L	1		6020B	Total/NA
Total Suspended Solids	22.9	B	1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-7

Lab Sample ID: 310-269571-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0316		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cadmium	0.000362		0.000200	0.000100	mg/L	1		6020B	Total/NA
Cobalt	0.000328	J	0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0196		0.00500	0.00190	mg/L	1		6020B	Total/NA
Total Suspended Solids	1.25	J B	1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-9

Lab Sample ID: 310-269571-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.000534	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0675		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cobalt	0.00276		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.00709		0.00500	0.00190	mg/L	1		6020B	Total/NA
Total Suspended Solids	16.8	B	1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-10

Lab Sample ID: 310-269571-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.158		0.00200	0.000640	mg/L	1		6020B	Total/NA
Total Suspended Solids	2.88	B	1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: DUP

Lab Sample ID: 310-269571-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0498		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cadmium	0.000143	J	0.000200	0.000100	mg/L	1		6020B	Total/NA
Total Suspended Solids	15.7	B	5.00	1.70	mg/L	1		I-3765-85	Total/NA

Client Sample ID: Trip Blank

Lab Sample ID: 310-269571-8

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: MW-2

Lab Sample ID: 310-269571-1

Date Collected: 11/13/23 14:50

Matrix: Water

Date Received: 11/14/23 16:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/16/23 17:12	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/16/23 17:12	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/16/23 17:12	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/16/23 17:12	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/16/23 17:12	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/16/23 17:12	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/16/23 17:12	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/16/23 17:12	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/16/23 17:12	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/16/23 17:12	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/16/23 17:12	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/16/23 17:12	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/16/23 17:12	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/16/23 17:12	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/16/23 17:12	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/16/23 17:12	1
Acetone	<10.0		10.0	3.10	ug/L			11/16/23 17:12	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/16/23 17:12	1
Benzene	0.700		0.500	0.220	ug/L			11/16/23 17:12	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/16/23 17:12	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/16/23 17:12	1
Bromoform	<5.00		5.00	0.780	ug/L			11/16/23 17:12	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/16/23 17:12	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/16/23 17:12	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/16/23 17:12	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/16/23 17:12	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/16/23 17:12	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/16/23 17:12	1
Chloroform	<3.00		3.00	1.30	ug/L			11/16/23 17:12	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/16/23 17:12	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/16/23 17:12	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/16/23 17:12	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/16/23 17:12	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/16/23 17:12	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/16/23 17:12	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/16/23 17:12	1
Styrene	<1.00		1.00	0.370	ug/L			11/16/23 17:12	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/16/23 17:12	1
Toluene	<1.00		1.00	0.430	ug/L			11/16/23 17:12	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/16/23 17:12	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/16/23 17:12	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/16/23 17:12	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/16/23 17:12	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/16/23 17:12	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/16/23 17:12	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/16/23 17:12	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/16/23 17:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	92		80 - 128		11/16/23 17:12	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: MW-2

Lab Sample ID: 310-269571-1

Date Collected: 11/13/23 14:50

Matrix: Water

Date Received: 11/14/23 16:30

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		11/16/23 17:12	1
4-Bromofluorobenzene (Surr)	100		80 - 120		11/16/23 17:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		11/16/23 09:20	11/17/23 18:19	1
Arsenic	0.00353		0.00200	0.000530	mg/L		11/16/23 09:20	11/17/23 18:19	1
Barium	0.187		0.00200	0.000640	mg/L		11/16/23 09:20	11/17/23 18:19	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/16/23 09:20	11/17/23 18:19	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/16/23 09:20	11/17/23 18:19	1
Chromium	<0.00500		0.00500	0.00110	mg/L		11/16/23 09:20	11/17/23 18:19	1
Cobalt	0.00561		0.000500	0.000170	mg/L		11/16/23 09:20	11/17/23 18:19	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/16/23 09:20	11/17/23 18:19	1
Lead	<0.000500		0.000500	0.000240	mg/L		11/16/23 09:20	11/17/23 18:19	1
Nickel	0.0815		0.00500	0.00190	mg/L		11/16/23 09:20	11/17/23 18:19	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/16/23 09:20	11/17/23 18:19	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/16/23 09:20	11/17/23 18:19	1
Thallium	<0.00100		0.00100	0.000260	mg/L		11/16/23 09:20	11/17/23 18:19	1
Vanadium	0.00121	J	0.00500	0.00110	mg/L		11/16/23 09:20	11/17/23 18:19	1
Zinc	<0.0200		0.0200	0.00640	mg/L		11/16/23 09:20	11/17/23 18:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	5.00	B	1.88	0.638	mg/L			11/15/23 18:15	1

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: MW-3

Lab Sample ID: 310-269571-2

Date Collected: 11/13/23 15:30

Matrix: Water

Date Received: 11/14/23 16:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/16/23 17:36	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/16/23 17:36	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/16/23 17:36	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/16/23 17:36	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/16/23 17:36	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/16/23 17:36	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/16/23 17:36	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/16/23 17:36	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/16/23 17:36	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/16/23 17:36	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/16/23 17:36	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/16/23 17:36	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/16/23 17:36	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/16/23 17:36	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/16/23 17:36	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/16/23 17:36	1
Acetone	<10.0		10.0	3.10	ug/L			11/16/23 17:36	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/16/23 17:36	1
Benzene	<0.500		0.500	0.220	ug/L			11/16/23 17:36	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/16/23 17:36	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/16/23 17:36	1
Bromoform	<5.00		5.00	0.780	ug/L			11/16/23 17:36	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/16/23 17:36	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/16/23 17:36	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/16/23 17:36	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/16/23 17:36	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/16/23 17:36	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/16/23 17:36	1
Chloroform	<3.00		3.00	1.30	ug/L			11/16/23 17:36	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/16/23 17:36	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/16/23 17:36	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/16/23 17:36	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/16/23 17:36	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/16/23 17:36	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/16/23 17:36	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/16/23 17:36	1
Styrene	<1.00		1.00	0.370	ug/L			11/16/23 17:36	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/16/23 17:36	1
Toluene	<1.00		1.00	0.430	ug/L			11/16/23 17:36	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/16/23 17:36	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/16/23 17:36	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/16/23 17:36	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/16/23 17:36	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/16/23 17:36	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/16/23 17:36	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/16/23 17:36	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/16/23 17:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	94		80 - 128		11/16/23 17:36	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: MW-3

Lab Sample ID: 310-269571-2

Date Collected: 11/13/23 15:30

Matrix: Water

Date Received: 11/14/23 16:30

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		11/16/23 17:36	1
4-Bromofluorobenzene (Surr)	100		80 - 120		11/16/23 17:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		11/16/23 09:20	11/17/23 18:21	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		11/16/23 09:20	11/17/23 18:21	1
Barium	0.0267		0.00200	0.000640	mg/L		11/16/23 09:20	11/17/23 18:21	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/16/23 09:20	11/17/23 18:21	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/16/23 09:20	11/17/23 18:21	1
Chromium	<0.00500		0.00500	0.00110	mg/L		11/16/23 09:20	11/17/23 18:21	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		11/16/23 09:20	11/17/23 18:21	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/16/23 09:20	11/17/23 18:21	1
Lead	<0.000500		0.000500	0.000240	mg/L		11/16/23 09:20	11/17/23 18:21	1
Nickel	<0.00500		0.00500	0.00190	mg/L		11/16/23 09:20	11/17/23 18:21	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/16/23 09:20	11/17/23 18:21	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/16/23 09:20	11/17/23 18:21	1
Thallium	<0.00100		0.00100	0.000260	mg/L		11/16/23 09:20	11/17/23 18:21	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/16/23 09:20	11/17/23 18:21	1
Zinc	<0.0200		0.0200	0.00640	mg/L		11/16/23 09:20	11/17/23 18:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	9.38	B	1.88	0.638	mg/L			11/15/23 18:15	1

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: MW-6

Lab Sample ID: 310-269571-3

Date Collected: 11/13/23 13:17

Matrix: Water

Date Received: 11/14/23 16:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/16/23 17:59	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/16/23 17:59	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/16/23 17:59	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/16/23 17:59	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/16/23 17:59	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/16/23 17:59	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/16/23 17:59	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/16/23 17:59	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/16/23 17:59	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/16/23 17:59	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/16/23 17:59	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/16/23 17:59	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/16/23 17:59	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/16/23 17:59	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/16/23 17:59	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/16/23 17:59	1
Acetone	<10.0		10.0	3.10	ug/L			11/16/23 17:59	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/16/23 17:59	1
Benzene	<0.500		0.500	0.220	ug/L			11/16/23 17:59	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/16/23 17:59	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/16/23 17:59	1
Bromoform	<5.00		5.00	0.780	ug/L			11/16/23 17:59	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/16/23 17:59	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/16/23 17:59	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/16/23 17:59	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/16/23 17:59	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/16/23 17:59	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/16/23 17:59	1
Chloroform	<3.00		3.00	1.30	ug/L			11/16/23 17:59	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/16/23 17:59	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/16/23 17:59	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/16/23 17:59	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/16/23 17:59	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/16/23 17:59	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/16/23 17:59	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/16/23 17:59	1
Styrene	<1.00		1.00	0.370	ug/L			11/16/23 17:59	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/16/23 17:59	1
Toluene	<1.00		1.00	0.430	ug/L			11/16/23 17:59	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/16/23 17:59	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/16/23 17:59	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/16/23 17:59	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/16/23 17:59	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/16/23 17:59	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/16/23 17:59	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/16/23 17:59	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/16/23 17:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	92		80 - 128		11/16/23 17:59	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: MW-6

Lab Sample ID: 310-269571-3

Date Collected: 11/13/23 13:17

Matrix: Water

Date Received: 11/14/23 16:30

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		11/16/23 17:59	1
4-Bromofluorobenzene (Surr)	101		80 - 120		11/16/23 17:59	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		11/16/23 09:20	11/17/23 18:24	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		11/16/23 09:20	11/17/23 18:24	1
Barium	0.0406		0.00200	0.000640	mg/L		11/16/23 09:20	11/17/23 18:24	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/16/23 09:20	11/17/23 18:24	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/16/23 09:20	11/17/23 18:24	1
Chromium	<0.00500		0.00500	0.00110	mg/L		11/16/23 09:20	11/17/23 18:24	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		11/16/23 09:20	11/17/23 18:24	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/16/23 09:20	11/17/23 18:24	1
Lead	<0.000500		0.000500	0.000240	mg/L		11/16/23 09:20	11/17/23 18:24	1
Nickel	<0.00500		0.00500	0.00190	mg/L		11/16/23 09:20	11/17/23 18:24	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/16/23 09:20	11/17/23 18:24	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/16/23 09:20	11/17/23 18:24	1
Thallium	<0.00100		0.00100	0.000260	mg/L		11/16/23 09:20	11/17/23 18:24	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/16/23 09:20	11/17/23 18:24	1
Zinc	<0.0200		0.0200	0.00640	mg/L		11/16/23 09:20	11/17/23 18:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	22.9	B	1.88	0.638	mg/L			11/15/23 18:15	1

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: MW-7

Lab Sample ID: 310-269571-4

Date Collected: 11/13/23 12:30

Matrix: Water

Date Received: 11/14/23 16:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/16/23 18:23	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/16/23 18:23	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/16/23 18:23	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/16/23 18:23	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/16/23 18:23	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/16/23 18:23	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/16/23 18:23	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/16/23 18:23	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/16/23 18:23	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/16/23 18:23	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/16/23 18:23	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/16/23 18:23	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/16/23 18:23	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/16/23 18:23	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/16/23 18:23	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/16/23 18:23	1
Acetone	<10.0		10.0	3.10	ug/L			11/16/23 18:23	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/16/23 18:23	1
Benzene	<0.500		0.500	0.220	ug/L			11/16/23 18:23	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/16/23 18:23	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/16/23 18:23	1
Bromoform	<5.00		5.00	0.780	ug/L			11/16/23 18:23	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/16/23 18:23	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/16/23 18:23	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/16/23 18:23	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/16/23 18:23	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/16/23 18:23	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/16/23 18:23	1
Chloroform	<3.00		3.00	1.30	ug/L			11/16/23 18:23	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/16/23 18:23	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/16/23 18:23	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/16/23 18:23	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/16/23 18:23	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/16/23 18:23	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/16/23 18:23	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/16/23 18:23	1
Styrene	<1.00		1.00	0.370	ug/L			11/16/23 18:23	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/16/23 18:23	1
Toluene	<1.00		1.00	0.430	ug/L			11/16/23 18:23	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/16/23 18:23	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/16/23 18:23	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/16/23 18:23	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/16/23 18:23	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/16/23 18:23	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/16/23 18:23	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/16/23 18:23	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/16/23 18:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	95		80 - 128		11/16/23 18:23	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: MW-7

Lab Sample ID: 310-269571-4

Date Collected: 11/13/23 12:30

Matrix: Water

Date Received: 11/14/23 16:30

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		11/16/23 18:23	1
4-Bromofluorobenzene (Surr)	99		80 - 120		11/16/23 18:23	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		11/16/23 09:20	11/17/23 18:26	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		11/16/23 09:20	11/17/23 18:26	1
Barium	0.0316		0.00200	0.000640	mg/L		11/16/23 09:20	11/17/23 18:26	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/16/23 09:20	11/17/23 18:26	1
Cadmium	0.000362		0.000200	0.000100	mg/L		11/16/23 09:20	11/17/23 18:26	1
Chromium	<0.00500		0.00500	0.00110	mg/L		11/16/23 09:20	11/17/23 18:26	1
Cobalt	0.000328	J	0.000500	0.000170	mg/L		11/16/23 09:20	11/17/23 18:26	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/16/23 09:20	11/17/23 18:26	1
Lead	<0.000500		0.000500	0.000240	mg/L		11/16/23 09:20	11/17/23 18:26	1
Nickel	0.0196		0.00500	0.00190	mg/L		11/16/23 09:20	11/17/23 18:26	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/16/23 09:20	11/17/23 18:26	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/16/23 09:20	11/17/23 18:26	1
Thallium	<0.00100		0.00100	0.000260	mg/L		11/16/23 09:20	11/17/23 18:26	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/16/23 09:20	11/17/23 18:26	1
Zinc	<0.0200		0.0200	0.00640	mg/L		11/16/23 09:20	11/17/23 18:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	1.25	J B	1.88	0.638	mg/L			11/15/23 18:15	1

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: MW-9

Lab Sample ID: 310-269571-5

Date Collected: 11/13/23 16:15

Matrix: Water

Date Received: 11/14/23 16:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/16/23 18:46	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/16/23 18:46	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/16/23 18:46	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/16/23 18:46	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/16/23 18:46	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/16/23 18:46	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/16/23 18:46	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/16/23 18:46	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/16/23 18:46	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/16/23 18:46	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/16/23 18:46	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/16/23 18:46	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/16/23 18:46	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/16/23 18:46	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/16/23 18:46	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/16/23 18:46	1
Acetone	<10.0		10.0	3.10	ug/L			11/16/23 18:46	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/16/23 18:46	1
Benzene	<0.500		0.500	0.220	ug/L			11/16/23 18:46	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/16/23 18:46	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/16/23 18:46	1
Bromoform	<5.00		5.00	0.780	ug/L			11/16/23 18:46	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/16/23 18:46	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/16/23 18:46	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/16/23 18:46	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/16/23 18:46	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/16/23 18:46	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/16/23 18:46	1
Chloroform	<3.00		3.00	1.30	ug/L			11/16/23 18:46	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/16/23 18:46	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/16/23 18:46	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/16/23 18:46	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/16/23 18:46	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/16/23 18:46	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/16/23 18:46	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/16/23 18:46	1
Styrene	<1.00		1.00	0.370	ug/L			11/16/23 18:46	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/16/23 18:46	1
Toluene	<1.00		1.00	0.430	ug/L			11/16/23 18:46	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/16/23 18:46	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/16/23 18:46	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/16/23 18:46	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/16/23 18:46	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/16/23 18:46	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/16/23 18:46	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/16/23 18:46	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/16/23 18:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	92		80 - 128		11/16/23 18:46	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: MW-9

Lab Sample ID: 310-269571-5

Date Collected: 11/13/23 16:15

Matrix: Water

Date Received: 11/14/23 16:30

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		11/16/23 18:46	1
4-Bromofluorobenzene (Surr)	99		80 - 120		11/16/23 18:46	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		11/16/23 09:20	11/17/23 18:28	1
Arsenic	0.000534	J	0.00200	0.000530	mg/L		11/16/23 09:20	11/17/23 18:28	1
Barium	0.0675		0.00200	0.000640	mg/L		11/16/23 09:20	11/17/23 18:28	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/16/23 09:20	11/17/23 18:28	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/16/23 09:20	11/17/23 18:28	1
Chromium	<0.00500		0.00500	0.00110	mg/L		11/16/23 09:20	11/17/23 18:28	1
Cobalt	0.00276		0.000500	0.000170	mg/L		11/16/23 09:20	11/17/23 18:28	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/16/23 09:20	11/17/23 18:28	1
Lead	<0.000500		0.000500	0.000240	mg/L		11/16/23 09:20	11/17/23 18:28	1
Nickel	0.00709		0.00500	0.00190	mg/L		11/16/23 09:20	11/17/23 18:28	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/16/23 09:20	11/17/23 18:28	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/16/23 09:20	11/17/23 18:28	1
Thallium	<0.00100		0.00100	0.000260	mg/L		11/16/23 09:20	11/17/23 18:28	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/16/23 09:20	11/17/23 18:28	1
Zinc	<0.0200		0.0200	0.00640	mg/L		11/16/23 09:20	11/17/23 18:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	16.8	B	1.88	0.638	mg/L			11/15/23 18:15	1

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: MW-10

Lab Sample ID: 310-269571-6

Date Collected: 11/13/23 16:50

Matrix: Water

Date Received: 11/14/23 16:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/16/23 19:10	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/16/23 19:10	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/16/23 19:10	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/16/23 19:10	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/16/23 19:10	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/16/23 19:10	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/16/23 19:10	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/16/23 19:10	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/16/23 19:10	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/16/23 19:10	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/16/23 19:10	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/16/23 19:10	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/16/23 19:10	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/16/23 19:10	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/16/23 19:10	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/16/23 19:10	1
Acetone	<10.0		10.0	3.10	ug/L			11/16/23 19:10	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/16/23 19:10	1
Benzene	<0.500		0.500	0.220	ug/L			11/16/23 19:10	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/16/23 19:10	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/16/23 19:10	1
Bromoform	<5.00		5.00	0.780	ug/L			11/16/23 19:10	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/16/23 19:10	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/16/23 19:10	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/16/23 19:10	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/16/23 19:10	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/16/23 19:10	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/16/23 19:10	1
Chloroform	<3.00		3.00	1.30	ug/L			11/16/23 19:10	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/16/23 19:10	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/16/23 19:10	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/16/23 19:10	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/16/23 19:10	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/16/23 19:10	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/16/23 19:10	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/16/23 19:10	1
Styrene	<1.00		1.00	0.370	ug/L			11/16/23 19:10	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/16/23 19:10	1
Toluene	<1.00		1.00	0.430	ug/L			11/16/23 19:10	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/16/23 19:10	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/16/23 19:10	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/16/23 19:10	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/16/23 19:10	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/16/23 19:10	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/16/23 19:10	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/16/23 19:10	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/16/23 19:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	93		80 - 128		11/16/23 19:10	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: MW-10

Lab Sample ID: 310-269571-6

Date Collected: 11/13/23 16:50

Matrix: Water

Date Received: 11/14/23 16:30

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		11/16/23 19:10	1
4-Bromofluorobenzene (Surr)	100		80 - 120		11/16/23 19:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		11/16/23 09:20	11/17/23 18:30	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		11/16/23 09:20	11/17/23 18:30	1
Barium	0.158		0.00200	0.000640	mg/L		11/16/23 09:20	11/17/23 18:30	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/16/23 09:20	11/17/23 18:30	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/16/23 09:20	11/17/23 18:30	1
Chromium	<0.00500		0.00500	0.00110	mg/L		11/16/23 09:20	11/17/23 18:30	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		11/16/23 09:20	11/17/23 18:30	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/16/23 09:20	11/17/23 18:30	1
Lead	<0.000500		0.000500	0.000240	mg/L		11/16/23 09:20	11/17/23 18:30	1
Nickel	<0.00500		0.00500	0.00190	mg/L		11/16/23 09:20	11/17/23 18:30	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/16/23 09:20	11/17/23 18:30	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/16/23 09:20	11/17/23 18:30	1
Thallium	<0.00100		0.00100	0.000260	mg/L		11/16/23 09:20	11/17/23 18:30	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/16/23 09:20	11/17/23 18:30	1
Zinc	<0.0200		0.0200	0.00640	mg/L		11/16/23 09:20	11/17/23 18:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	2.88	B	1.88	0.638	mg/L			11/15/23 18:15	1

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: DUP

Lab Sample ID: 310-269571-7

Date Collected: 11/13/23 13:17

Matrix: Water

Date Received: 11/14/23 16:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/16/23 19:33	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/16/23 19:33	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/16/23 19:33	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/16/23 19:33	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/16/23 19:33	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/16/23 19:33	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/16/23 19:33	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/16/23 19:33	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/16/23 19:33	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/16/23 19:33	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/16/23 19:33	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/16/23 19:33	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/16/23 19:33	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/16/23 19:33	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/16/23 19:33	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/16/23 19:33	1
Acetone	<10.0		10.0	3.10	ug/L			11/16/23 19:33	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/16/23 19:33	1
Benzene	<0.500		0.500	0.220	ug/L			11/16/23 19:33	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/16/23 19:33	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/16/23 19:33	1
Bromoform	<5.00		5.00	0.780	ug/L			11/16/23 19:33	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/16/23 19:33	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/16/23 19:33	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/16/23 19:33	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/16/23 19:33	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/16/23 19:33	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/16/23 19:33	1
Chloroform	<3.00		3.00	1.30	ug/L			11/16/23 19:33	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/16/23 19:33	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/16/23 19:33	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/16/23 19:33	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/16/23 19:33	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/16/23 19:33	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/16/23 19:33	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/16/23 19:33	1
Styrene	<1.00		1.00	0.370	ug/L			11/16/23 19:33	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/16/23 19:33	1
Toluene	<1.00		1.00	0.430	ug/L			11/16/23 19:33	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/16/23 19:33	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/16/23 19:33	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/16/23 19:33	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/16/23 19:33	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/16/23 19:33	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/16/23 19:33	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/16/23 19:33	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/16/23 19:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	94		80 - 128		11/16/23 19:33	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: DUP

Lab Sample ID: 310-269571-7

Date Collected: 11/13/23 13:17

Matrix: Water

Date Received: 11/14/23 16:30

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		11/16/23 19:33	1
4-Bromofluorobenzene (Surr)	99		80 - 120		11/16/23 19:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		11/16/23 09:20	11/17/23 18:32	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		11/16/23 09:20	11/17/23 18:32	1
Barium	0.0498		0.00200	0.000640	mg/L		11/16/23 09:20	11/17/23 18:32	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/16/23 09:20	11/17/23 18:32	1
Cadmium	0.000143	J	0.000200	0.000100	mg/L		11/16/23 09:20	11/17/23 18:32	1
Chromium	<0.00500		0.00500	0.00110	mg/L		11/16/23 09:20	11/17/23 18:32	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		11/16/23 09:20	11/17/23 18:32	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/16/23 09:20	11/17/23 18:32	1
Lead	<0.000500		0.000500	0.000240	mg/L		11/16/23 09:20	11/17/23 18:32	1
Nickel	<0.00500		0.00500	0.00190	mg/L		11/16/23 09:20	11/17/23 18:32	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/16/23 09:20	11/17/23 18:32	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/16/23 09:20	11/17/23 18:32	1
Thallium	<0.00100		0.00100	0.000260	mg/L		11/16/23 09:20	11/17/23 18:32	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/16/23 09:20	11/17/23 18:32	1
Zinc	<0.0200		0.0200	0.00640	mg/L		11/16/23 09:20	11/17/23 18:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	15.7	B	5.00	1.70	mg/L			11/15/23 18:15	1

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: Trip Blank

Lab Sample ID: 310-269571-8

Date Collected: 11/13/23 00:00

Matrix: Water

Date Received: 11/14/23 16:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/16/23 16:49	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/16/23 16:49	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/16/23 16:49	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/16/23 16:49	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/16/23 16:49	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/16/23 16:49	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/16/23 16:49	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/16/23 16:49	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/16/23 16:49	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/16/23 16:49	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/16/23 16:49	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/16/23 16:49	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/16/23 16:49	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/16/23 16:49	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/16/23 16:49	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/16/23 16:49	1
Acetone	<10.0		10.0	3.10	ug/L			11/16/23 16:49	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/16/23 16:49	1
Benzene	<0.500		0.500	0.220	ug/L			11/16/23 16:49	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/16/23 16:49	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/16/23 16:49	1
Bromoform	<5.00		5.00	0.780	ug/L			11/16/23 16:49	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/16/23 16:49	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/16/23 16:49	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/16/23 16:49	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/16/23 16:49	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/16/23 16:49	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/16/23 16:49	1
Chloroform	<3.00		3.00	1.30	ug/L			11/16/23 16:49	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/16/23 16:49	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/16/23 16:49	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/16/23 16:49	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/16/23 16:49	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/16/23 16:49	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/16/23 16:49	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/16/23 16:49	1
Styrene	<1.00		1.00	0.370	ug/L			11/16/23 16:49	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/16/23 16:49	1
Toluene	<1.00		1.00	0.430	ug/L			11/16/23 16:49	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/16/23 16:49	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/16/23 16:49	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/16/23 16:49	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/16/23 16:49	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/16/23 16:49	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/16/23 16:49	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/16/23 16:49	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/16/23 16:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	93		80 - 128		11/16/23 16:49	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: Trip Blank

Lab Sample ID: 310-269571-8

Date Collected: 11/13/23 00:00

Matrix: Water

Date Received: 11/14/23 16:30

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)	100		80 - 120		11/16/23 16:49	1
4-Bromofluorobenzene (Surr)	99		80 - 120		11/16/23 16:49	1

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Definitions/Glossary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

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.
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 County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DBFM	TOL	BFB
		(80-128)	(80-120)	(80-120)
310-269571-1	MW-2	92	98	100
310-269571-2	MW-3	94	99	100
310-269571-3	MW-6	92	98	101
310-269571-4	MW-7	95	98	99
310-269571-5	MW-9	92	99	99
310-269571-6	MW-10	93	98	100
310-269571-7	DUP	94	99	99
310-269571-8	Trip Blank	93	100	99
LCS 310-406269/7	Lab Control Sample	99	99	101
LCS 310-406269/8	Lab Control Sample	93	99	101
MB 310-406269/6	Method Blank	91	99	101

Surrogate Legend

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



QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

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

Lab Sample ID: MB 310-406269/6

Matrix: Water

Analysis Batch: 406269

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/16/23 14:29	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/16/23 14:29	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/16/23 14:29	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/16/23 14:29	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/16/23 14:29	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/16/23 14:29	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/16/23 14:29	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/16/23 14:29	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/16/23 14:29	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/16/23 14:29	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/16/23 14:29	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/16/23 14:29	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/16/23 14:29	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/16/23 14:29	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/16/23 14:29	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/16/23 14:29	1
Acetone	<10.0		10.0	3.10	ug/L			11/16/23 14:29	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/16/23 14:29	1
Benzene	<0.500		0.500	0.220	ug/L			11/16/23 14:29	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/16/23 14:29	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/16/23 14:29	1
Bromoform	<5.00		5.00	0.780	ug/L			11/16/23 14:29	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/16/23 14:29	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/16/23 14:29	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/16/23 14:29	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/16/23 14:29	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/16/23 14:29	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/16/23 14:29	1
Chloroform	<3.00		3.00	1.30	ug/L			11/16/23 14:29	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/16/23 14:29	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/16/23 14:29	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/16/23 14:29	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/16/23 14:29	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/16/23 14:29	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/16/23 14:29	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/16/23 14:29	1
Styrene	<1.00		1.00	0.370	ug/L			11/16/23 14:29	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/16/23 14:29	1
Toluene	<1.00		1.00	0.430	ug/L			11/16/23 14:29	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/16/23 14:29	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/16/23 14:29	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/16/23 14:29	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/16/23 14:29	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/16/23 14:29	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/16/23 14:29	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/16/23 14:29	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/16/23 14:29	1

Eurofins Cedar Falls

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

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

Lab Sample ID: MB 310-406269/6
Matrix: Water
Analysis Batch: 406269

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

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	91		80 - 128		11/16/23 14:29	1
Toluene-d8 (Surr)	99		80 - 120		11/16/23 14:29	1
4-Bromofluorobenzene (Surr)	101		80 - 120		11/16/23 14:29	1

Lab Sample ID: LCS 310-406269/7
Matrix: Water
Analysis Batch: 406269

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	18.19		ug/L		91	68 - 123
1,1,1,1-Trichloroethane	20.0	18.29		ug/L		91	71 - 128
1,1,1,2,2-Tetrachloroethane	20.0	18.53		ug/L		93	64 - 124
1,1,1,2-Trichloroethane	20.0	19.04		ug/L		95	70 - 124
1,1-Dichloroethane	20.0	15.63		ug/L		78	71 - 123
1,1-Dichloroethane	20.0	19.20		ug/L		96	61 - 129
1,2,3-Trichloropropane	20.0	18.67		ug/L		93	64 - 125
1,2-Dibromo-3-Chloropropane	20.0	18.23		ug/L		91	50 - 150
1,2-Dibromoethane (EDB)	20.0	18.70		ug/L		94	73 - 125
1,2-Dichlorobenzene	20.0	17.90		ug/L		90	68 - 120
1,2-Dichloroethane	20.0	17.98		ug/L		90	70 - 124
1,2-Dichloropropane	20.0	18.65		ug/L		93	73 - 121
1,4-Dichlorobenzene	20.0	18.84		ug/L		94	67 - 120
2-Butanone (MEK)	40.0	40.18		ug/L		100	50 - 150
2-Hexanone	40.0	38.35		ug/L		96	60 - 132
4-Methyl-2-pentanone (MIBK)	40.0	38.90		ug/L		97	62 - 130
Acetone	40.0	40.84		ug/L		102	50 - 150
Acrylonitrile	200	193.8		ug/L		97	50 - 150
Benzene	20.0	18.62		ug/L		93	73 - 122
Bromochloromethane	20.0	21.29		ug/L		106	68 - 132
Bromodichloromethane	20.0	19.09		ug/L		95	72 - 121
Bromoform	20.0	17.80		ug/L		89	55 - 129
Carbon disulfide	20.0	18.06		ug/L		90	58 - 131
Carbon tetrachloride	20.0	19.41		ug/L		97	67 - 132
Chlorobenzene	20.0	18.01		ug/L		90	69 - 121
Chlorodibromomethane	20.0	19.15		ug/L		96	69 - 122
Chloroform	20.0	18.64		ug/L		93	72 - 120
cis-1,2-Dichloroethene	20.0	18.83		ug/L		94	74 - 120
cis-1,3-Dichloropropene	20.0	19.07		ug/L		95	71 - 126
Dibromomethane	20.0	18.46		ug/L		92	72 - 123
Ethylbenzene	20.0	18.51		ug/L		93	69 - 122
Iodomethane	20.0	11.06		ug/L		55	10 - 150
Methylene Chloride	20.0	19.23		ug/L		96	50 - 150
Styrene	20.0	18.74		ug/L		94	67 - 125
Tetrachloroethene	20.0	19.19		ug/L		96	69 - 131
Toluene	20.0	18.99		ug/L		95	72 - 121
trans-1,2-Dichloroethene	20.0	18.44		ug/L		92	68 - 125
trans-1,3-Dichloropropene	20.0	16.96		ug/L		85	68 - 124
trans-1,4-Dichloro-2-butene	20.0	11.15		ug/L		56	48 - 150

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QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

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

Lab Sample ID: LCS 310-406269/7

Matrix: Water

Analysis Batch: 406269

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Trichloroethene	20.0	18.16		ug/L		91	73 - 126
Vinyl acetate	40.0	47.59		ug/L		119	50 - 150
Xylenes, Total	40.0	36.96		ug/L		92	68 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	99		80 - 128
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120

Lab Sample ID: LCS 310-406269/8

Matrix: Water

Analysis Batch: 406269

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	13.55		ug/L		68	24 - 150
Chloroethane	20.0	16.09		ug/L		80	51 - 137
Chloromethane	20.0	17.83		ug/L		89	37 - 150
Trichlorofluoromethane	20.0	20.19		ug/L		101	56 - 144
Vinyl chloride	20.0	20.73		ug/L		104	57 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	93		80 - 128
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-406144/1-A

Matrix: Water

Analysis Batch: 406341

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 406144

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		11/16/23 09:20	11/17/23 06:54	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		11/16/23 09:20	11/17/23 06:54	1
Barium	<0.00200		0.00200	0.000640	mg/L		11/16/23 09:20	11/17/23 06:54	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/16/23 09:20	11/17/23 06:54	1
Chromium	<0.00500		0.00500	0.00110	mg/L		11/16/23 09:20	11/17/23 06:54	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		11/16/23 09:20	11/17/23 06:54	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/16/23 09:20	11/17/23 06:54	1
Lead	<0.000500		0.000500	0.000240	mg/L		11/16/23 09:20	11/17/23 06:54	1
Nickel	<0.00500		0.00500	0.00190	mg/L		11/16/23 09:20	11/17/23 06:54	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/16/23 09:20	11/17/23 06:54	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/16/23 09:20	11/17/23 06:54	1
Thallium	<0.00100		0.00100	0.000260	mg/L		11/16/23 09:20	11/17/23 06:54	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/16/23 09:20	11/17/23 06:54	1
Zinc	<0.0200		0.0200	0.00640	mg/L		11/16/23 09:20	11/17/23 06:54	1

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QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

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

Lab Sample ID: MB 310-406144/1-A
 Matrix: Water
 Analysis Batch: 406649

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 406144

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/16/23 09:20	11/20/23 13:17	1

Lab Sample ID: LCS 310-406144/2-A
 Matrix: Water
 Analysis Batch: 406341

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 406144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2158		mg/L		108	80 - 120
Arsenic	0.200	0.1976		mg/L		99	80 - 120
Barium	0.100	0.09258		mg/L		93	80 - 120
Beryllium	0.100	0.09120		mg/L		91	80 - 120
Chromium	0.100	0.09774		mg/L		98	80 - 120
Cobalt	0.100	0.09663		mg/L		97	80 - 120
Copper	0.200	0.1969		mg/L		98	80 - 120
Lead	0.200	0.2092		mg/L		105	80 - 120
Nickel	0.200	0.2136		mg/L		107	80 - 120
Selenium	0.400	0.3704		mg/L		93	80 - 120
Silver	0.100	0.1017		mg/L		102	80 - 120
Thallium	0.200	0.1775		mg/L		89	80 - 120
Vanadium	0.100	0.09457		mg/L		95	80 - 120
Zinc	0.200	0.1891		mg/L		95	80 - 120

Lab Sample ID: LCS 310-406144/2-A
 Matrix: Water
 Analysis Batch: 406649

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 406144

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cadmium	0.100	0.1061		mg/L		106	80 - 120

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

Lab Sample ID: MB 310-406147/1
 Matrix: Water
 Analysis Batch: 406147

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	2.000	J	5.00	1.70	mg/L			11/15/23 18:15	1

Lab Sample ID: LCS 310-406147/2
 Matrix: Water
 Analysis Batch: 406147

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	96.00		mg/L		96	75 - 116

QC Association Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

GC/MS VOA

Analysis Batch: 406269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269571-1	MW-2	Total/NA	Water	8260D	
310-269571-2	MW-3	Total/NA	Water	8260D	
310-269571-3	MW-6	Total/NA	Water	8260D	
310-269571-4	MW-7	Total/NA	Water	8260D	
310-269571-5	MW-9	Total/NA	Water	8260D	
310-269571-6	MW-10	Total/NA	Water	8260D	
310-269571-7	DUP	Total/NA	Water	8260D	
310-269571-8	Trip Blank	Total/NA	Water	8260D	
MB 310-406269/6	Method Blank	Total/NA	Water	8260D	
LCS 310-406269/7	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-406269/8	Lab Control Sample	Total/NA	Water	8260D	

Metals

Prep Batch: 406144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269571-1	MW-2	Total/NA	Water	3005A	
310-269571-2	MW-3	Total/NA	Water	3005A	
310-269571-3	MW-6	Total/NA	Water	3005A	
310-269571-4	MW-7	Total/NA	Water	3005A	
310-269571-5	MW-9	Total/NA	Water	3005A	
310-269571-6	MW-10	Total/NA	Water	3005A	
310-269571-7	DUP	Total/NA	Water	3005A	
MB 310-406144/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-406144/2-A	Lab Control Sample	Total/NA	Water	3005A	

Analysis Batch: 406341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-406144/1-A	Method Blank	Total/NA	Water	6020B	406144
LCS 310-406144/2-A	Lab Control Sample	Total/NA	Water	6020B	406144

Analysis Batch: 406512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269571-1	MW-2	Total/NA	Water	6020B	406144
310-269571-2	MW-3	Total/NA	Water	6020B	406144
310-269571-3	MW-6	Total/NA	Water	6020B	406144
310-269571-4	MW-7	Total/NA	Water	6020B	406144
310-269571-5	MW-9	Total/NA	Water	6020B	406144
310-269571-6	MW-10	Total/NA	Water	6020B	406144
310-269571-7	DUP	Total/NA	Water	6020B	406144

Analysis Batch: 406649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-406144/1-A	Method Blank	Total/NA	Water	6020B	406144
LCS 310-406144/2-A	Lab Control Sample	Total/NA	Water	6020B	406144

General Chemistry

Analysis Batch: 406147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269571-1	MW-2	Total/NA	Water	I-3765-85	
310-269571-2	MW-3	Total/NA	Water	I-3765-85	

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QC Association Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

General Chemistry (Continued)

Analysis Batch: 406147 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269571-3	MW-6	Total/NA	Water	I-3765-85	
310-269571-4	MW-7	Total/NA	Water	I-3765-85	
310-269571-5	MW-9	Total/NA	Water	I-3765-85	
310-269571-6	MW-10	Total/NA	Water	I-3765-85	
310-269571-7	DUP	Total/NA	Water	I-3765-85	
MB 310-406147/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-406147/2	Lab Control Sample	Total/NA	Water	I-3765-85	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Lab Chronicle

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: MW-2

Lab Sample ID: 310-269571-1

Date Collected: 11/13/23 14:50

Matrix: Water

Date Received: 11/14/23 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	406269	WSE8	EET CF	11/16/23 17:12
Total/NA	Prep	3005A			406144	KCK5	EET CF	11/16/23 09:20
Total/NA	Analysis	6020B		1	406512	A6US	EET CF	11/17/23 18:19
Total/NA	Analysis	I-3765-85		1	406147	A4XP	EET CF	11/15/23 18:15

Client Sample ID: MW-3

Lab Sample ID: 310-269571-2

Date Collected: 11/13/23 15:30

Matrix: Water

Date Received: 11/14/23 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	406269	WSE8	EET CF	11/16/23 17:36
Total/NA	Prep	3005A			406144	KCK5	EET CF	11/16/23 09:20
Total/NA	Analysis	6020B		1	406512	A6US	EET CF	11/17/23 18:21
Total/NA	Analysis	I-3765-85		1	406147	A4XP	EET CF	11/15/23 18:15

Client Sample ID: MW-6

Lab Sample ID: 310-269571-3

Date Collected: 11/13/23 13:17

Matrix: Water

Date Received: 11/14/23 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	406269	WSE8	EET CF	11/16/23 17:59
Total/NA	Prep	3005A			406144	KCK5	EET CF	11/16/23 09:20
Total/NA	Analysis	6020B		1	406512	A6US	EET CF	11/17/23 18:24
Total/NA	Analysis	I-3765-85		1	406147	A4XP	EET CF	11/15/23 18:15

Client Sample ID: MW-7

Lab Sample ID: 310-269571-4

Date Collected: 11/13/23 12:30

Matrix: Water

Date Received: 11/14/23 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	406269	WSE8	EET CF	11/16/23 18:23
Total/NA	Prep	3005A			406144	KCK5	EET CF	11/16/23 09:20
Total/NA	Analysis	6020B		1	406512	A6US	EET CF	11/17/23 18:26
Total/NA	Analysis	I-3765-85		1	406147	A4XP	EET CF	11/15/23 18:15

Client Sample ID: MW-9

Lab Sample ID: 310-269571-5

Date Collected: 11/13/23 16:15

Matrix: Water

Date Received: 11/14/23 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	406269	WSE8	EET CF	11/16/23 18:46
Total/NA	Prep	3005A			406144	KCK5	EET CF	11/16/23 09:20
Total/NA	Analysis	6020B		1	406512	A6US	EET CF	11/17/23 18:28
Total/NA	Analysis	I-3765-85		1	406147	A4XP	EET CF	11/15/23 18:15

Lab Chronicle

Client: Adair County Sanitary Landfill
 Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Client Sample ID: MW-10

Lab Sample ID: 310-269571-6

Date Collected: 11/13/23 16:50

Matrix: Water

Date Received: 11/14/23 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	406269	WSE8	EET CF	11/16/23 19:10
Total/NA	Prep	3005A			406144	KCK5	EET CF	11/16/23 09:20
Total/NA	Analysis	6020B		1	406512	A6US	EET CF	11/17/23 18:30
Total/NA	Analysis	I-3765-85		1	406147	A4XP	EET CF	11/15/23 18:15

Client Sample ID: DUP

Lab Sample ID: 310-269571-7

Date Collected: 11/13/23 13:17

Matrix: Water

Date Received: 11/14/23 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	406269	WSE8	EET CF	11/16/23 19:33
Total/NA	Prep	3005A			406144	KCK5	EET CF	11/16/23 09:20
Total/NA	Analysis	6020B		1	406512	A6US	EET CF	11/17/23 18:32
Total/NA	Analysis	I-3765-85		1	406147	A4XP	EET CF	11/15/23 18:15

Client Sample ID: Trip Blank

Lab Sample ID: 310-269571-8

Date Collected: 11/13/23 00:00

Matrix: Water

Date Received: 11/14/23 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	406269	WSE8	EET CF	11/16/23 16:49

Laboratory References:

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

Accreditation/Certification Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-23

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Method Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

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

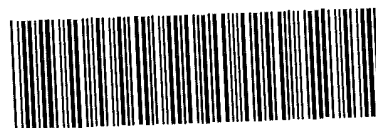
Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.
USGS = "Methods For Analysis Of Water And Fluvial Sediments", USGS, 1989

Laboratory References:

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





310-269571 Chain of Custody

Cooler/Sample Receipt and Temperature Log

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
		<u>IA</u>	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>11/14/23</u>	<u>1630</u>	<u>SC</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee			
<input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler ID: _____			
Multiple Coolers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Cooler # <u>1</u> of <u>2</u>			
Cooler Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Sample Custody Seals Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No			
Trip Blank Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Which VOA samples are in cooler? ↓			
<u>MW-2,6,3</u>			
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>P</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>13</u>		Corrected Temp (°C): <u>13</u>	
Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			





Environment Testing
America

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
		<u>IA</u>	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>11/14/23</u>	<u>1630</u>	<u>SC</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee			
<input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID:
Multiple Coolers?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler # <u>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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>P</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>1.8</u>		Corrected Temp (°C): <u>1.8</u>	
Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



Eurofins Cedar Falls

3019 Venture Way
Cedar Falls, IA 50613
Phone: 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

TestAmerica Des Moines SC
214



Environment Testing

Client Information Client Contact: Sean Marczewski Company: SCS Engineers Address: 1690 All State Court Suite 100 City: West Des Moines State, Zip: IA, 50265 Phone: [Redacted] Email: SMarczewski@scsengineers.com Project Name: Adair County Sanitary Landfill-Fall 2023 Site: [Redacted]		Lab PM: Liechti, Meredith L E-Mail: meredith.liechti@et.eurofins.com PWSID: [Redacted]		Carrier Tracking No(s): 310-86807-24272.1 State of Origin: [Redacted]		Page: Page 1 of 1 Job #: [Redacted]			
Due Date Requested: [Redacted] TAT Requested (days): [Redacted] Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No PO #: [Redacted] Purchase Order not required WO #: [Redacted]		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 6020B - Appendix I or II <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 8280D - Volatile Appendix 1 Sublist <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No L 3765_66 - Residue, Non-Filterable (TSS) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Analysis Requested Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: [Redacted]		Total Number of Containers: [Redacted] Special Instructions/Note: [Redacted]			
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Hexane, Sealed, Open-air, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Appendix I or II	8280D - Volatile Appendix 1 Sublist	L 3765_66 - Residue, Non-Filterable (TSS)
MW-2	11-13-23	14:50	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MW-3		15:30		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MW-6		13:17		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MW-7		12:30		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MW-9		16:15		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MW-10		16:50		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GU-2				Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GWD-1				Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DUP	11-13-23	13:17	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TRIPBLANK	11-13-23		G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested I, II, III, IV, Other (specify) [Redacted]									
Empty Kit Relinquished by: [Redacted] Date: [Redacted] Time: [Redacted]									
Relinquished by: [Signature] Date: 11-14-23 13:00 Company: SCS Relinquished by: [Redacted] Date: [Redacted] Company: [Redacted] Relinquished by: [Redacted] Date: [Redacted] Company: [Redacted]									
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks: [Redacted]									

Login Sample Receipt Checklist

Client: Adair County Sanitary Landfill

Job Number: 310-269571-1

Login Number: 269571

List Number: 1

Creator: Lage, Sydney

List Source: Eurofins Cedar Falls

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

Quantitation Limit Exceptions Summary


Client: Adair County Sanitary Landfill
Project/Site: Adair County Sanitary Landfill- Fall 2023

Job ID: 310-269571-1

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

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

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Appendix B-2
Data Validation

QA/QC Completed by: Sean Marczewski
 Sample Date: 6/22/2023
 Site Name: Adair County Sanitary Landfill
 Sample Delivery Group: N/A
 Project Type: Adair County Sanitary Landfill - 1st 2023 Semi-Annual Groundwater Sampling Event (Appendix I - Metals)
 Laboratory: Eurofins TestAmerica, Cedar Falls
 Lab Job ID: 310-258897-1
 Lab Report Date: 7/12/2023


	OK	NO	N/A	NOTES
Sample Collection and Sample Holding				
Chain of Custody	X			
Temperature	X			
Preservation	X			
Condition	X			
Correct Constituents Analyzed	X			
Case Narrative	X			
Holding Times	X			
Analytical Sensitivity and Blanks				
Method Blank Detections	X			
Trip Blank Detections	X			
Accuracy				
ICV/CCV	X			
LCS/LCSD	X			
MS/MSD	X			
Surrogates (organics only)	X			
Precision				
QA/QC Sample RPDs	X			
Field Duplicates	X			A field duplicate sample was collected at MW-3. RPD for analyzed parameters was <50%.

QA/QC Completed by: Sean Marczewski
 Sample Date: 6/27/2023
 Site Name: Adair County Sanitary Landfill
 Sample Delivery Group: N/A
 Project Type: Adair County Sanitary Landfill - 1st 2023 Semi-Annual Groundwater Sampling Event (Appendix I - VOCs)
 Laboratory: Eurofins TestAmerica, Cedar Falls
 Lab Job ID: 310-259408-1
 Lab Report Date: 7/12/2023

	OK	NO	N/A	NOTES
Sample Collection and Sample Holding				
Chain of Custody	X			
Temperature	X			
Preservation	X			
Condition	X			
Correct Constituents Analyzed	X			
Case Narrative	X			
Holding Times	X			
Analytical Sensitivity and Blanks				
Method Blank Detections	X			
Trip Blank Detections	X			
Accuracy				
ICV/CCV		X		The continuing calibration verification (CCV) associated with batch 310-392661 recovered above the upper control limit for m,p-Xylene (33.8%D), o-Xylene (34.7%D), Xylenes, Total (34.2%D) and Ethylbenzene (23.5%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 310-392661/3).
LCS/LCSD	X			
MS/MSD	X			
Surrogates (organics only)	X			
Precision				
QA/QC Sample RPDs	X			
Field Duplicates	X			A field duplicate sample was collected at MW-3. RPD for analyzed parameters was <50%.

QA/QC Completed by: Sean Marczewski
 Sample Date: 11/13/2023
 Site Name: Adair County Sanitary Landfill
 Sample Delivery Group: N/A
 Project Type: Adair County Sanitary Landfill - 2nd 2023 Semi-Annual Groundwater Sampling Event
 Laboratory: Eurofins TestAmerica, Cedar Falls
 Lab Job ID: 310-26957-1
 Lab Report Date: 11/21/2023

	OK	NO	N/A	NOTES
Sample Collection and Sample Holding				
Chain of Custody	X			
Temperature	X			
Preservation	X			
Condition	X			
Correct Constituents Analyzed	X			
Case Narrative	X			
Holding Times	X			
Analytical Sensitivity and Blanks				
Method Blank Detections	X			
Trip Blank Detections	X			
Accuracy				
ICV/CCV	X			
LCS/LCSD	X			
MS/MSD	X			
Surrogates (organics only)	X			
Precision				
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

Summary of Groundwater Chemistry

SCS ENGINEERS

Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Total Metals Constituents									
Antimony, mg/L (CAS NO - 7440-36-0)									
	2/5/2008	N/A	< 0.006	< 0.006	N/A	< 0.006	< 0.006	N/A	N/A
	4/21/2008	< 0.006	< 0.006	< 0.006	N/A	< 0.006	< 0.006	N/A	N/A
	6/10/2008	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.006	< 0.006	N/A	< 0.006	< 0.006	N/A	N/A
	9/5/2008	< 0.006	< 0.006	< 0.006	N/A	< 0.006	< 0.006	N/A	N/A
	9/5/2008	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A
	12/8/2008	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	N/A	N/A
	12/8/2008	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 0.006	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A
	4/13/2009	< 0.006	< 0.006	< 0.006	0.00622	< 0.006	< 0.006	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A
	8/28/2009	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	N/A	N/A
	8/28/2009	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 0.006	N/A	N/A	N/A	< 0.018	N/A	N/A
	4/21/2010	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A
	8/31/2010	< 0.006	< 0.006	< 0.006	0.00821	< 0.006	< 0.006	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 0.006	< 0.006	N/A	N/A
	2/23/2011	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A
	4/26/2011	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A
	7/25/2011	N/A	N/A	0.00651	< 0.006	0.00695	N/A	N/A	N/A
	10/11/2011	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006
	10/11/2011	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	N/A
	4/16/2012	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	N/A	N/A
	7/30/2012	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 0.006	< 0.006	0.00637	0.00734	< 0.006	0.00938	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	0.00719	N/A	N/A	N/A
	7/9/2013	< 0.006	< 0.006	< 0.006	0.00674	< 0.006	< 0.006	N/A	N/A
	7/9/2013	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 0.006	0.00352	< 0.006	0.00497	< 0.006	< 0.006	N/A	N/A
	8/7/2014	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A
	3/24/2015	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A	N/A
	10/20/2015	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	5/5/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	5/5/2016	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A
	5/16/2017	< 0.001	< 0.001	0.000232*	< 0.001	< 0.001	< 0.001	< 0.001	N/A
	10/19/2017	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A
	5/9/2018	< 0.001	< 0.001	< 0.001	< 0.001	0.000539*	< 0.001	< 0.001	N/A
	10/26/2018	N/A	0.000457*	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2020	N/A	0.000881*	N/A	N/A	N/A	N/A	N/A	N/A
	8/23/2021	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	8/23/2021	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 0.002	< 0.002	< 0.002	< 0.002	0.000795*	< 0.002	N/A	N/A
	3/15/2022	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	8/10/2022	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	6/22/2023	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A
Arsenic, mg/L (CAS NO - 7440-38-2)									
	2/5/2008	N/A	0.00315	0.00454	N/A	0.0162	0.0215	N/A	N/A
	4/21/2008	< 0.001	0.0657	0.00346	N/A	0.00269	0.00131	N/A	N/A
	6/10/2008	0.00147	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	0.0251	0.00291	N/A	0.00423	0.00363	N/A	N/A
	9/5/2008	0.0165	0.0272	0.00127	N/A	0.0184	0.00429	N/A	N/A
	9/5/2008	N/A	0.024	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	0.00148	N/A	N/A	N/A	N/A
	12/8/2008	0.00184	0.0387	0.00213	0.00978	0.00288	0.00382	N/A	N/A
	12/8/2008	N/A	0.0297	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	0.00183	N/A	N/A	0.00418	N/A	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Total Metals Constituents									
Arsenic, mg/L (CAS NO - 7440-38-2)									
	4/13/2009	< 0.001	0.0792	0.00187	0.0108	0.00191	< 0.001	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	0.00107	N/A	N/A
	8/28/2009	0.00196	0.00815	0.00393	0.00342	0.00211	0.00226	N/A	N/A
	8/28/2009	N/A	N/A	0.00431	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	0.0226	N/A	N/A	N/A	0.00531	N/A	N/A
	4/21/2010	< 0.001	0.0251	< 0.003	< 0.003	< 0.001	0.00103	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 0.003	N/A	N/A	N/A
	8/31/2010	< 0.001	0.0104	< 0.001	< 0.003	0.00224	< 0.004	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A
	2/23/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/26/2011	< 0.001	0.00578	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A
	6/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/25/2011	N/A	N/A	< 0.002	< 0.084	< 0.006	N/A	N/A	N/A
	10/11/2011	< 0.001	0.0108	< 0.002	< 0.005	< 0.002	0.0072	0.00435	0.0043
	10/11/2011	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	0.008	0.036	0.0303	0.0777	0.0117	0.0157	< 0.004	N/A
	4/16/2012	N/A	N/A	0.008	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 0.001	0.00813	0.00287	0.0215	0.00128	0.00223	N/A	N/A
	7/30/2012	0.00107	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 0.001	0.0107	0.00371	0.0128	0.00187	0.00266	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	0.00178	N/A	N/A	N/A
	7/9/2013	< 0.001	0.00776	0.00315	0.0141	0.00405	0.00641	N/A	N/A
	7/9/2013	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 0.001	0.00461	< 0.003	< 0.005	< 0.002	0.00208	N/A	N/A
	8/7/2014	< 0.001	0.00854	0.00514	0.00589	0.00412	0.00244	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	0.000587	N/A	N/A
	3/24/2015	< 0.002	0.00597	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A
	10/20/2015	< 0.002	0.00427	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A
	5/5/2016	< 0.002	0.00391	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.01
	5/5/2016	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 0.002	0.00348	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A
	5/16/2017	< 0.002	0.00433	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A
	10/19/2017	< 0.002	0.00375	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A
	5/9/2018	< 0.002	0.00348	< 0.002	< 0.002	0.001*	< 0.002	< 0.002	N/A
	10/26/2018	N/A	0.00292	N/A	N/A	0.000781*	N/A	N/A	N/A
	4/10/2019	N/A	0.00242	N/A	N/A	N/A	N/A	N/A	N/A
	10/8/2019	N/A	0.00293	N/A	N/A	0.000776*	N/A	N/A	N/A
	4/6/2020	N/A	0.00281	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2020	N/A	0.00336	N/A	N/A	N/A	N/A	N/A	N/A
	3/31/2021	N/A	0.00285	N/A	N/A	N/A	N/A	N/A	N/A
	8/23/2021	< 0.002	0.00219	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	8/23/2021	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 0.002	0.0018*	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	3/15/2022	N/A	0.00156*	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 0.002	0.00195*	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	8/10/2022	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 0.002	0.00528	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	6/22/2023	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 0.002	0.00353	< 0.002	< 0.002	< 0.002	0.000534	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A
Barium, mg/L (CAS NO - 7440-39-3)									
	2/5/2008	N/A	0.183	0.203	N/A	0.245	0.289	N/A	N/A
	4/21/2008	0.357	0.46	0.126	N/A	0.083	0.0861	N/A	N/A
	6/10/2008	0.219	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	0.252	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	0.373	0.0953	N/A	0.0804	0.121	N/A	N/A
	9/5/2008	0.445	0.423	0.146	N/A	0.262	0.192	N/A	N/A
	9/5/2008	N/A	0.426	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	0.0424	N/A	N/A	N/A	N/A
	12/8/2008	0.693	0.75	0.0832	0.162	0.0772	0.159	N/A	N/A
	12/8/2008	N/A	0.885	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	0.619	N/A	N/A	0.337	N/A	N/A	N/A	N/A
	4/13/2009	0.369	0.486	0.112	0.214	0.0868	0.148	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	0.346	N/A	N/A
	8/28/2009	0.363	0.332	0.112	0.0496	0.0933	0.117	N/A	N/A
	8/28/2009	N/A	N/A	0.107	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	0.521	N/A	N/A	N/A	0.148	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Total Metals Constituents									
Barium, mg/L (CAS NO - 7440-39-3)									
	4/21/2010	0.21	0.19	0.0879	0.0362	0.0667	0.103	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	0.0419	N/A	N/A	N/A
	8/31/2010	0.23	0.249	0.175	0.055	0.0977	0.169	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	0.0776	N/A	N/A	N/A
	4/26/2011	0.233	0.151	0.0922	0.0421	0.0728	0.128	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	0.161	N/A	N/A
	7/25/2011	N/A	N/A	< 0.03	0.127	0.112	N/A	N/A	N/A
	10/11/2011	0.346	0.228	0.0681	0.0657	0.0623	0.094	0.207	0.203
	10/11/2011	0.213	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	0.374	0.9	0.442	0.893	0.223	0.21	0.154	N/A
	4/16/2012	N/A	N/A	0.59	N/A	N/A	N/A	N/A	N/A
	7/30/2012	0.345	0.437	0.0677	0.235	0.0876	0.12	N/A	N/A
	7/30/2012	0.395	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	0.193	0.319	0.0845	0.11	0.0974	0.15	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	0.0915	N/A	N/A	N/A
	7/9/2013	0.215	0.392	0.0727	0.0611	0.0852	0.164	N/A	N/A
	7/9/2013	0.192	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	0.256	0.481	0.0622	0.0617	0.0778	0.115	N/A	N/A
	8/7/2014	0.299	0.181	0.0588	0.0414	0.0686	0.128	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	0.108	N/A	N/A
	3/24/2015	0.191	0.219	0.0396	0.0323	0.0579	0.104	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	0.0526	N/A	N/A	N/A
	10/20/2015	0.169	0.189	0.0363	0.0246	0.0466	0.0879	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	0.0899	N/A	N/A
	5/5/2016	0.175	0.17	0.0304	0.0202	0.0396	0.0763	0.0552	0.0345
	5/5/2016	N/A	N/A	0.0302	N/A	N/A	N/A	N/A	N/A
	10/14/2016	0.156	0.194	0.0306	0.0206	0.0371	0.0792	0.0521	N/A
	5/16/2017	0.175	0.258	0.0295	0.0326	0.0372	0.0749	0.0513	N/A
	10/19/2017	0.176	0.266	0.032	0.0268	0.0414	0.0832	0.0554	N/A
	5/9/2018	0.184	0.341	0.031	0.0232	0.0418	0.0763	0.051	N/A
	10/26/2018	0.183	0.304	0.0336	0.0273	0.0499	0.0856	0.0536	N/A
	4/10/2019	0.175	0.296	0.0252	0.0313	0.0311	0.0738	0.0478	N/A
	10/8/2019	0.159	0.323	0.0308	0.0299	0.0386	0.0808	0.0498	N/A
	4/6/2020	0.178	0.314	0.025	0.025	0.0318	0.0695	0.0504	N/A
	10/28/2020	0.181	0.389	0.0305	0.0296	0.0356	0.0977	N/A	N/A
	3/31/2021	0.195	0.34	0.0275	0.0212	0.0396	0.076	0.0409	N/A
	8/23/2021	0.172	0.287	0.0263	0.0246	0.0372	0.0777	N/A	N/A
	8/23/2021	0.173	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	0.176	0.29	0.0269	0.0234	0.0308	0.0623	N/A	N/A
	3/15/2022	N/A	0.28	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	0.179	0.128	0.0278	0.0234	0.0343	0.08	N/A	N/A
	8/10/2022	N/A	N/A	0.0259	N/A	N/A	N/A	N/A	N/A
	6/22/2023	0.167	0.23	0.0234	0.0191	0.0291	0.0663	N/A	N/A
	6/22/2023	N/A	N/A	0.0238	N/A	N/A	N/A	N/A	N/A
	11/13/2023	0.158	0.187	0.0267	0.0406	0.0316	0.0675	N/A	N/A
	11/13/2023	N/A	N/A	N/A	0.0498	N/A	N/A	N/A	N/A
Beryllium, mg/L (CAS NO - 7440-41-7)									
	2/5/2008	N/A	< 0.001	< 0.001	N/A	0.00118	0.00155	N/A	N/A
	4/21/2008	< 0.001	< 0.001	0.00105	N/A	< 0.001	< 0.001	N/A	N/A
	6/10/2008	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	0.00187	< 0.001	N/A	< 0.001	< 0.001	N/A	N/A
	9/5/2008	0.00155	< 0.001	< 0.001	N/A	0.00428	< 0.001	N/A	N/A
	9/5/2008	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A
	12/8/2008	0.00292	0.0048	< 0.001	0.00424	< 0.001	< 0.001	N/A	N/A
	12/8/2008	N/A	0.00452	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	0.00242	N/A	N/A	0.00492	N/A	N/A	N/A	N/A
	4/13/2009	< 0.001	0.00326	< 0.001	0.00528	0.00138	< 0.001	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	8/28/2009	0.00104	< 0.001	0.00164	0.00101	< 0.001	< 0.001	N/A	N/A
	8/28/2009	N/A	N/A	0.0011	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	0.00133	N/A	N/A	N/A	0.00108	N/A	N/A
	4/21/2010	< 0.001	< 0.001	< 0.001	< 0.001	0.00111	< 0.001	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	8/31/2010	< 0.001	< 0.001	< 0.001	0.00162	< 0.001	0.00205	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	4/26/2011	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	7/25/2011	N/A	N/A	0.0012	< 0.001	0.00135	N/A	N/A	N/A
	10/11/2011	< 0.001	< 0.001	< 0.001	0.00217	< 0.001	< 0.001	< 0.001	< 0.001

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Total Metals Constituents									
Beryllium, mg/L (CAS NO - 7440-41-7)									
	10/11/2011	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 0.004	0.0044	< 0.004	0.0052	< 0.004	< 0.004	< 0.004	N/A
	4/16/2012	N/A	N/A	< 0.004	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 0.001	0.0029	< 0.001	0.00223	< 0.001	< 0.001	N/A	N/A
	7/30/2012	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 0.001	0.0015	0.00145	0.00449	< 0.001	0.00103	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	7/9/2013	< 0.001	0.00239	< 0.001	0.00345	< 0.001	< 0.001	N/A	N/A
	7/9/2013	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	0.000398	0.00588	0.00313	0.00591	0.00228	0.000695	N/A	N/A
	8/7/2014	0.000625	0.000836	0.00139	0.00162	0.00136	0.000625	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	0.000256	N/A	N/A
	3/24/2015	< 0.001	< 0.001	0.000068	0.000063	< 0.001	< 0.001	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	10/20/2015	< 0.001	< 0.001	< 0.001	< 0.001	0.000048*	< 0.001	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	5/5/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	5/5/2016	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A
	5/16/2017	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A
	10/19/2017	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A
	5/9/2018	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A
	8/23/2021	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A
	8/23/2021	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A
	3/15/2022	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A
	8/10/2022	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A
	6/22/2023	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A
Cadmium, mg/L (CAS NO - 7440-43-9)									
	2/5/2008	N/A	0.00332	0.019	N/A	0.0026	0.00224	N/A	N/A
	4/21/2008	0.00121	0.000652	0.00152	N/A	0.000734	< 0.0005	N/A	N/A
	6/10/2008	0.00069	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	0.000887	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	0.00189	0.00103	N/A	0.00173	0.000969	N/A	N/A
	9/5/2008	0.00119	0.00115	< 0.0005	N/A	0.00346	0.000566	N/A	N/A
	9/5/2008	N/A	0.00152	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	0.00138	N/A	N/A	N/A	N/A
	12/8/2008	0.00238	0.00322	0.00111	0.00684	0.0027	0.00121	N/A	N/A
	12/8/2008	N/A	0.00362	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	0.00183	N/A	N/A	0.00908	N/A	N/A	N/A	N/A
	4/13/2009	0.00127	0.00354	0.00192	0.0103	0.00183	0.00118	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	0.00234	N/A	N/A
	8/28/2009	0.000954	0.00104	0.0037	0.00166	0.00169	0.000535	N/A	N/A
	8/28/2009	N/A	N/A	0.00284	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	0.00408	N/A	N/A	N/A	0.00121	N/A	N/A
	4/21/2010	< 0.0005	0.000822	< 0.0005	0.00158	0.00193	0.000702	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	0.000773	N/A	N/A	N/A
	8/31/2010	< 0.0005	0.000686	0.000508	0.00261	0.00144	0.00191	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	0.000972	N/A	N/A	N/A
	4/26/2011	< 0.0005	0.000853	0.00471	0.00184	0.00388	0.00161	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	0.00224	N/A	N/A
	6/15/2011	N/A	N/A	0.00417	N/A	0.00204	N/A	N/A	N/A
	7/25/2011	N/A	N/A	0.00476	< 0.0005	0.00254	N/A	N/A	N/A
	10/11/2011	0.00282	0.00102	0.0011	0.00278	0.00129	0.00366	< 0.0005	< 0.0005
	10/11/2011	0.00114	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	0.0008	0.007	0.0019	0.0101	0.0019	0.0016	< 0.0008	N/A
	4/16/2012	N/A	N/A	0.0044	N/A	N/A	N/A	N/A	N/A
	7/30/2012	0.00121	0.00219	0.00602	0.00714	0.000826	0.00283	N/A	N/A
	7/30/2012	0.00141	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 0.0005	0.0012	0.00422	0.0189	0.00129	0.0058	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	0.00105	N/A	N/A	N/A
	7/9/2013	< 0.0005	0.00187	0.00183	0.0175	0.00241	0.00176	N/A	N/A
	7/9/2013	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	0.000347	0.000928	0.00328	0.00581	0.00138	0.000659	N/A	N/A
	8/7/2014	0.000616	0.000485	0.00196	0.0033	0.00227	0.000987	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	0.000387	N/A	N/A
	3/24/2015	0.00099	0.000374	0.00119	0.000969	0.000772	< 0.0005	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Total Metals Constituents									
Cadmium, mg/L (CAS NO - 7440-43-9)									
	3/24/2015	N/A	N/A	N/A	N/A	0.000351	N/A	N/A	N/A
	10/20/2015	< 0.0005	0.000233*	< 0.0005	0.000126*	0.000429*	< 0.0005	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A
	5/5/2016	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.000232*	0.000048*	0.000072*	< 0.0005
	5/5/2016	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 0.0005	0.000055*	0.000089*	0.000074*	0.000372*	0.00009*	0.000167*	N/A
	5/16/2017	0.000062*	0.000046*	0.000112*	0.000084*	0.000428*	0.000096*	0.000056*	N/A
	10/19/2017	< 0.0005	< 0.0005	0.000046*	0.000054*	0.000441*	< 0.0005	0.000115*	N/A
	5/9/2018	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.000278*	< 0.0005	< 0.0005	N/A
	10/26/2018	N/A	N/A	N/A	N/A	0.000499*	0.000077*	0.000094*	N/A
	4/10/2019	N/A	N/A	N/A	N/A	0.000286*	N/A	N/A	N/A
	10/8/2019	N/A	N/A	N/A	N/A	0.000333	0.000089*	0.000063*	N/A
	4/6/2020	N/A	0.000105	0.000056*	0.000097*	0.000644	0.00013	0.000061*	N/A
	10/28/2020	N/A	N/A	N/A	0.000077*	0.000377	0.000143	N/A	N/A
	3/31/2021	0.000055*	0.000135	N/A	0.000053*	0.000471	0.000057*	0.000104	N/A
	8/23/2021	< 0.0001	< 0.0001	< 0.0001	0.000055	0.000358	0.000066	N/A	N/A
	8/23/2021	< 0.0001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	0.000064	< 0.0001	< 0.0001	0.00006*	0.000403	0.000202	N/A	N/A
	3/15/2022	N/A	< 0.0001	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	0.000066	0.000076*	0.000069*	0.000431	0.000383	0.000199	N/A	N/A
	8/10/2022	N/A	N/A	0.000067*	N/A	N/A	N/A	N/A	N/A
	6/22/2023	0.000372	0.000306	< 0.0002	0.000152*	0.000274	< 0.0002	N/A	N/A
	6/22/2023	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 0.0002	< 0.0002	< 0.0002	0.000143	0.000362	< 0.0002	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A
Chromium, mg/L (CAS NO - 7440-47-3)									
	2/5/2008	N/A	< 0.02	< 0.02	N/A	0.0275	0.0417	N/A	N/A
	4/21/2008	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A
	6/10/2008	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.02	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A
	9/5/2008	0.0428	< 0.02	< 0.02	N/A	0.033	< 0.02	N/A	N/A
	9/5/2008	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	0.00138	N/A	N/A	N/A	N/A
	12/8/2008	< 0.02	0.0449	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	12/8/2008	N/A	0.0646	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 0.02	N/A	N/A	< 0.1	N/A	N/A	N/A	N/A
	4/13/2009	< 0.02	< 0.02	< 0.02	< 0.04	< 0.02	< 0.02	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A
	8/28/2009	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	8/28/2009	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 0.02	N/A	N/A	N/A	< 0.02	N/A	N/A
	4/21/2010	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A
	8/31/2010	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A
	4/26/2011	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A
	7/25/2011	N/A	N/A	< 0.06	< 0.02	< 0.02	N/A	N/A	N/A
	10/11/2011	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
	10/11/2011	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 0.02	0.0434	0.051	0.103	< 0.02	< 0.02	< 0.02	N/A
	4/16/2012	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 0.02	< 0.02	< 0.02	< 0.06	< 0.02	< 0.02	N/A	N/A
	7/30/2012	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A
	7/9/2013	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	7/9/2013	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 0.02	0.00708	0.00404	0.0134	0.00404	< 0.02	N/A	N/A
	8/7/2014	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A
	3/24/2015	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	10/20/2015	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	5/5/2016	0.00047*	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.000759*
	5/5/2016	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A
	5/16/2017	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A
	10/19/2017	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Total Metals Constituents									
Chromium, mg/L (CAS NO - 7440-47-3)									
	5/9/2018	< 0.005	< 0.005	< 0.005	< 0.005	0.000828*	< 0.005	< 0.005	N/A
	10/26/2018	N/A	N/A	0.00245*	N/A	N/A	N/A	N/A	N/A
	3/31/2021	N/A	0.00115*	N/A	N/A	N/A	N/A	N/A	N/A
	8/23/2021	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	8/23/2021	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	3/15/2022	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	8/10/2022	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	6/22/2023	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A
Cobalt, mg/L (CAS NO - 7440-48-4)									
	2/5/2008	N/A	< 0.02	< 0.02	N/A	0.0344	0.0576	N/A	N/A
	4/21/2008	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A
	6/10/2008	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.02	< 0.02	N/A	< 0.02	0.0244	N/A	N/A
	9/5/2008	0.0425	< 0.02	< 0.02	N/A	0.0346	0.0403	N/A	N/A
	9/5/2008	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A
	12/8/2008	0.0546	0.0368	< 0.02	0.121	< 0.02	0.0517	N/A	N/A
	12/8/2008	N/A	0.0461	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	0.0716	N/A	N/A	0.177	N/A	N/A	N/A	N/A
	4/13/2009	0.031	< 0.02	< 0.02	0.112	0.0337	0.0279	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	0.033	N/A	N/A
	8/28/2009	0.0202	< 0.02	< 0.02	0.0305	< 0.02	< 0.02	N/A	N/A
	8/28/2009	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	0.022	N/A	N/A	N/A	0.0237	N/A	N/A
	4/21/2010	0.00729	0.00228	0.00646	0.0261	0.00879	0.0128	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	0.0344	N/A	N/A	N/A
	8/31/2010	0.00475	0.00436	0.0114	0.0294	0.0117	0.037	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	0.00589	N/A	N/A	N/A
	2/23/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/26/2011	0.00646	0.0043	0.0101	0.0323	0.013	0.0249	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	0.0164	N/A	N/A
	6/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/25/2011	N/A	N/A	0.102	0.0146	0.0252	N/A	N/A	N/A
	10/11/2011	0.0187	0.00199	< 0.00155	0.0565	0.00404	0.00383	< 0.00155	< 0.00155
	10/11/2011	0.00546	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	0.0183	0.0584	0.0123	0.17	0.0279	0.0208	< 0.001	N/A
	4/16/2012	N/A	N/A	0.0345	N/A	N/A	N/A	N/A	N/A
	7/30/2012	0.0302	0.0227	0.00458	0.0618	0.0145	0.0146	N/A	N/A
	7/30/2012	0.0211	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	0.00321	0.00986	0.0111	0.106	0.0223	0.0147	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	0.0169	N/A	N/A	N/A
	7/9/2013	0.00745	0.0197	0.00465	0.094	0.0139	0.0251	N/A	N/A
	7/9/2013	0.00271	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	0.00799	0.0235	0.0132	0.0573	0.0178	0.0121	N/A	N/A
	8/7/2014	0.0111	0.00878	0.0219	0.0502	0.0233	0.0206	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	0.0123	N/A	N/A
	3/24/2015	0.000225	0.00149	0.000499	0.00211	0.000218	0.000788	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	0.000737	N/A	N/A	N/A
	10/20/2015	0.00006*	0.000954	< 0.0005	0.000102*	0.000479*	0.00202	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	0.0045	N/A	N/A
	5/5/2016	< 0.0005	0.00153	0.000034*	0.000044*	0.000116*	0.000695	0.000274*	0.00248
	5/5/2016	N/A	N/A	0.000033*	N/A	N/A	N/A	N/A	N/A
	10/14/2016	0.000038*	0.00122	0.000124*	0.000149*	0.000324*	0.00388	0.000419*	N/A
	5/16/2017	0.000056*	0.0025	0.000199*	0.000185*	0.000193*	0.000628	0.000217*	N/A
	10/19/2017	< 0.0005	0.00134	0.000058*	< 0.0005	0.000608	0.00297	0.000183*	N/A
	5/9/2018	< 0.0005	0.00295	< 0.0005	< 0.0005	0.000208*	0.000681	0.000129*	N/A
	10/26/2018	N/A	0.00244	0.000071*	N/A	0.000707	0.00316	0.000177*	N/A
	4/10/2019	N/A	0.00313	N/A	N/A	0.00015*	0.00171	0.000172*	N/A
	10/8/2019	N/A	0.00249	N/A	N/A	0.000977	0.00185	0.000257*	N/A
	4/6/2020	N/A	0.00328	0.000124*	0.000154*	0.000366*	0.00095	0.00023*	N/A
	10/28/2020	N/A	0.00324	N/A	0.000148*	0.00195	0.00738	N/A	N/A
	3/31/2021	N/A	0.00243	N/A	N/A	0.00166	0.00168	0.000175*	N/A
	8/23/2021	< 0.0005	0.00317	0.000153	0.000193	0.000753	0.00241	N/A	N/A
	8/23/2021	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG	
Total Metals Constituents										
Cobalt, mg/L (CAS NO - 7440-48-4)	3/15/2022	< 0.0005	0.00187	< 0.0005	0.000357*	0.000711	0.000694	N/A	N/A	
	3/15/2022	N/A	0.00188	N/A	N/A	N/A	N/A	N/A	N/A	
	8/10/2022	< 0.0005	0.00452	< 0.0005	0.00023*	0.000498*	0.00401	N/A	N/A	
	8/10/2022	N/A	N/A	0.000198	N/A	N/A	N/A	N/A	N/A	
	6/22/2023	< 0.0005	0.0051	0.000192*	0.000691	0.000304*	0.00158	N/A	N/A	
	6/22/2023	N/A	N/A	0.000171*	N/A	N/A	N/A	N/A	N/A	
	11/13/2023	< 0.0005	0.00561	< 0.0005	< 0.0005	0.000328	0.00276	N/A	N/A	
	11/13/2023	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	
	Copper, mg/L (CAS NO - 7440-50-8)	2/5/2008	N/A	< 0.02	< 0.02	N/A	< 0.02	0.0406	N/A	N/A
		4/21/2008	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A
6/10/2008		< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6/10/2008		< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6/20/2008		N/A	< 0.02	< 0.02	N/A	0.0207	0.0246	N/A	N/A	
9/5/2008		0.0315	< 0.02	< 0.02	N/A	0.0272	< 0.02	N/A	N/A	
9/5/2008		N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	
9/24/2008		N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	
12/8/2008		0.0242	0.0577	< 0.02	< 0.02	< 0.02	0.0345	N/A	N/A	
12/8/2008		N/A	0.043	N/A	N/A	N/A	N/A	N/A	N/A	
2/27/2009		0.0281	N/A	N/A	< 0.1	N/A	N/A	N/A	N/A	
4/13/2009		< 0.02	0.031	< 0.02	0.0614	0.0236	< 0.02	N/A	N/A	
4/13/2009		N/A	N/A	N/A	N/A	N/A	0.023	N/A	N/A	
8/28/2009		< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A	
8/28/2009		N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	
11/13/2009		N/A	0.0241	N/A	N/A	N/A	0.0289	N/A	N/A	
4/21/2010		< 0.02	< 0.02	< 0.02	< 0.02	0.0201	< 0.02	N/A	N/A	
4/21/2010		N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	
8/31/2010		< 0.02	< 0.02	< 0.02	0.0218	< 0.02	0.048	N/A	N/A	
8/31/2010		N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	
4/26/2011		< 0.02	0.0256	0.0325	0.0415	0.0345	0.0535	N/A	N/A	
4/26/2011		N/A	N/A	N/A	N/A	N/A	0.0427	N/A	N/A	
6/15/2011		N/A	N/A	0.0279	0.0413	0.0339	N/A	N/A	N/A	
7/25/2011		N/A	N/A	< 0.06	0.0348	0.0375	N/A	N/A	N/A	
10/11/2011		< 0.02	< 0.02	< 0.02	0.0571	< 0.02	0.0241	< 0.02	< 0.02	
10/11/2011		< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
4/16/2012		< 0.02	0.0492	0.0521	0.129	< 0.02	0.0349	< 0.02	N/A	
4/16/2012		N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	
7/30/2012		< 0.02	< 0.02	< 0.02	< 0.06	< 0.02	< 0.02	N/A	N/A	
7/30/2012		< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
3/5/2013		< 0.02	< 0.02	< 0.02	0.0258	< 0.02	< 0.02	N/A	N/A	
3/5/2013		N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	
7/9/2013		< 0.02	< 0.02	< 0.02	0.0548	< 0.02	0.0327	N/A	N/A	
7/9/2013		< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2/11/2014		0.00563	< 0.02	0.0172	< 0.02	0.0778	0.0121	N/A	N/A	
8/7/2014		0.00656	< 0.02	0.0192	0.0184	0.0175	0.0179	N/A	N/A	
8/7/2014		N/A	N/A	N/A	N/A	N/A	0.00821	N/A	N/A	
3/24/2015		0.00132	0.000522	0.0025	0.00188	0.00194	0.00108	N/A	N/A	
3/24/2015		N/A	N/A	N/A	N/A	0.00215	N/A	N/A	N/A	
10/20/2015		< 0.002	0.000569*	< 0.002	0.00111*	0.00181*	< 0.002	N/A	N/A	
10/20/2015		N/A	N/A	N/A	N/A	N/A	0.000578*	N/A	N/A	
5/5/2016		< 0.005	< 0.005	< 0.005	< 0.005	0.00187*	< 0.005	< 0.005	< 0.005	
5/5/2016		N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	
10/14/2016		< 0.005	< 0.005	< 0.005	0.00198*	0.00176*	< 0.005	< 0.005	N/A	
5/16/2017		< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	
10/19/2017		< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	
5/9/2018		< 0.005	< 0.005	< 0.005	< 0.005	0.00182*	< 0.005	< 0.005	N/A	
3/31/2021	N/A	N/A	N/A	N/A	0.00155*	N/A	N/A	N/A		
8/23/2021	0.00153	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A		
8/23/2021	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
3/15/2022	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A		
3/15/2022	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A		
8/10/2022	< 0.005	< 0.005	< 0.005	0.00249*	0.00226*	< 0.005	N/A	N/A		
8/10/2022	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A		
6/22/2023	< 0.005	0.00235*	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A		
6/22/2023	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A		
11/13/2023	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A		
11/13/2023	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A		
Lead, mg/L (CAS NO - 7439-92-1)	2/5/2008	N/A	< 0.004	0.0055	N/A	0.0168	0.0195	N/A	N/A	
	4/21/2008	0.0139	< 0.004	0.0114	N/A	0.00528	< 0.004	N/A	N/A	
	6/10/2008	0.0045	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	6/10/2008	0.00644	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Total Metals Constituents									
Lead, mg/L (CAS NO - 7439-92-1)									
	6/20/2008	N/A	0.0317	0.00819	N/A	0.0107	0.00698	N/A	N/A
	9/5/2008	0.029	0.0067	< 0.004	N/A	0.0172	< 0.004	N/A	N/A
	9/5/2008	N/A	0.00507	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	0.00401	N/A	N/A	N/A	N/A
	12/8/2008	0.0205	0.035	0.0061	0.0226	0.0103	0.00796	N/A	N/A
	12/8/2008	N/A	0.0356	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	0.0334	N/A	N/A	< 0.004	N/A	N/A	N/A	N/A
	4/13/2009	0.0185	0.0383	0.0108	0.0197	0.0175	0.0122	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	0.00624	N/A	N/A
	8/28/2009	0.0109	0.0102	0.00999	0.0137	0.0103	0.00561	N/A	N/A
	8/28/2009	N/A	N/A	0.0122	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	0.0256	N/A	N/A	N/A	0.00998	N/A	N/A
	4/21/2010	0.00487	< 0.004	< 0.004	0.00839	0.0109	0.00641	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	0.0043	N/A	N/A	N/A
	8/31/2010	< 0.004	0.00941	< 0.004	0.0113	0.00584	0.0133	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	0.00945	N/A	N/A	N/A
	2/23/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/26/2011	< 0.004	< 0.004	< 0.004	0.00857	0.00631	0.00694	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	0.00546	N/A	N/A
	6/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/25/2011	N/A	N/A	0.00912	< 0.004	0.0105	N/A	N/A	N/A
	10/11/2011	0.0112	< 0.004	< 0.004	0.0145	< 0.004	0.00484	< 0.004	< 0.004
	10/11/2011	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	0.0164	0.0619	0.0393	0.106	0.0292	0.0194	< 0.004	N/A
	4/16/2012	N/A	N/A	0.0169	N/A	N/A	N/A	N/A	N/A
	7/30/2012	0.013	0.0168	0.00964	0.0242	0.00816	0.00669	N/A	N/A
	7/30/2012	0.017	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 0.004	0.0148	0.0101	0.0266	0.0111	0.00616	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	0.00648	N/A	N/A	N/A
	7/9/2013	< 0.004	0.0107	< 0.004	0.0359	0.00884	0.0119	N/A	N/A
	7/9/2013	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	0.00551	0.00718	0.00987	0.0169	0.0194	0.00482	N/A	N/A
	8/7/2014	0.0083	0.00224	0.00812	0.0236	0.0131	0.00435	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 0.004	N/A	N/A
	3/24/2015	0.000355	0.000516	0.00115	0.00191	0.000569	< 0.0005	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	0.00096	N/A	N/A	N/A
	10/20/2015	0.00012*	0.000219*	0.000098*	0.000132*	0.00025*	< 0.0005	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A
	5/5/2016	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
	5/5/2016	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 0.0005	< 0.0005	0.00023*	< 0.0005	< 0.0005	< 0.0005	< 0.0005	N/A
	5/16/2017	< 0.0005	< 0.0005	0.000441*	0.000405*	< 0.0005	< 0.0005	< 0.0005	N/A
	10/19/2017	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	N/A
	5/9/2018	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.000518	< 0.0005	< 0.0005	N/A
	10/8/2019	N/A	N/A	0.000574	N/A	N/A	N/A	N/A	N/A
	4/6/2020	N/A	N/A	N/A	N/A	N/A	N/A	0.00273	N/A
	10/28/2020	N/A	N/A	N/A	0.000202*	N/A	N/A	N/A	N/A
	3/31/2021	N/A	0.000255*	N/A	N/A	N/A	N/A	N/A	N/A
	8/23/2021	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	N/A	N/A
	8/23/2021	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	N/A	N/A
	3/15/2022	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	N/A	N/A
	8/10/2022	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A
	6/22/2023	0.00522	0.000653	< 0.0005	0.000445*	< 0.0005	< 0.0005	N/A	N/A
	6/22/2023	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A
Mercury, mg/L (CAS NO - 7439-97-6)									
	8/28/2009	N/A	< 0.0002	N/A	N/A	N/A	< 0.0002	N/A	N/A
	8/31/2010	N/A	< 0.0002	N/A	N/A	N/A	< 0.0002	N/A	N/A
	7/25/2011	N/A	N/A	< 0.0002	< 0.0002	< 0.0002	N/A	N/A	N/A
	10/11/2011	N/A	< 0.0002	N/A	N/A	N/A	< 0.0002	N/A	N/A
	7/30/2012	N/A	N/A	< 0.0002	< 0.0002	< 0.0002	N/A	N/A	N/A
	5/5/2016	N/A	< 0.0002	N/A	N/A	N/A	< 0.0002	N/A	N/A
	5/16/2017	N/A	N/A	0.000124*	0.000144*	0.000121*	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A
	3/15/2022	N/A	N/A	< 0.0002	< 0.0002	< 0.0002	N/A	N/A	N/A
Nickel, mg/L (CAS NO - 7440-02-0)									
	2/5/2008	N/A	< 0.05	< 0.05	N/A	0.0524	0.0618	N/A	N/A
	4/21/2008	< 0.05	< 0.05	< 0.05	N/A	< 0.05	< 0.05	N/A	N/A

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Summary of Groundwater Chemistry
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 Project #27223238.24

	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Total Metals Constituents									
Nickel, mg/L (CAS NO - 7440-02-0)									
	6/10/2008	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.05	< 0.05	N/A	< 0.05	< 0.05	N/A	N/A
	9/5/2008	0.0622	< 0.05	< 0.05	N/A	0.0693	< 0.05	N/A	N/A
	9/5/2008	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A
	12/8/2008	< 0.05	0.0878	< 0.05	0.0903	< 0.05	< 0.05	N/A	N/A
	12/8/2008	N/A	0.111	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 0.05	N/A	N/A	< 0.25	N/A	N/A	N/A	N/A
	4/13/2009	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A
	8/28/2009	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	N/A	N/A
	8/28/2009	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	0.0505	N/A	N/A	N/A	< 0.05	N/A	N/A
	4/21/2010	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A
	8/31/2010	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A
	4/26/2011	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A
	7/25/2011	N/A	N/A	< 0.15	< 0.05	< 0.05	N/A	N/A	N/A
	10/11/2011	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
	10/11/2011	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 0.05	0.152	0.0755	0.234	0.0555	< 0.05	< 0.05	N/A
	4/16/2012	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 0.05	0.0593	< 0.05	< 0.15	< 0.05	< 0.05	N/A	N/A
	7/30/2012	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 0.05	< 0.05	< 0.05	0.0847	< 0.05	< 0.05	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A
	7/9/2013	< 0.05	0.0651	< 0.05	0.0775	< 0.05	< 0.05	N/A	N/A
	7/9/2013	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	0.00806	0.0764	0.022	0.081	0.0321	0.018	N/A	N/A
	8/7/2014	0.012	0.0194	0.0177	0.0305	0.0262	0.0185	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	0.0129	N/A	N/A
	3/24/2015	< 0.005	0.0134	0.00296	0.0032	0.023	0.00988	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	0.0212	N/A	N/A	N/A
	10/20/2015	< 0.005	0.0126	0.00163*	0.00106*	0.0207	0.00984	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	0.01	N/A	N/A
	5/5/2016	< 0.005	0.018	0.0016*	< 0.005	0.0182	0.00712	0.00478*	0.00943
	5/5/2016	N/A	N/A	0.00156*	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 0.005	0.0154	< 0.005	< 0.005	0.0193	0.00883	0.00808	N/A
	5/16/2017	< 0.005	0.0283	0.00192*	0.00118*	0.0207	0.00564	0.00608	N/A
	10/19/2017	< 0.005	0.0148	0.00227*	0.00121*	0.0257	0.00967	0.00582	N/A
	5/9/2018	< 0.005	0.029	0.00118*	< 0.005	0.0207	0.00487*	0.0058	N/A
	10/26/2018	N/A	0.0263	0.00216*	0.00117*	0.0238	0.00961	0.00533	N/A
	4/10/2019	N/A	0.0304	0.00182*	N/A	0.0168	0.00625	0.00568	N/A
	10/8/2019	N/A	0.0255	0.00179*	N/A	0.0291	0.00996	0.00463*	N/A
	4/6/2020	N/A	0.0285	N/A	N/A	0.025	0.0041*	0.00506	N/A
	10/28/2020	N/A	0.023	0.00238*	N/A	0.0269	0.0113	N/A	N/A
	3/31/2021	N/A	0.019	N/A	N/A	0.0279	0.00605	0.00509	N/A
	8/23/2021	< 0.005	0.0228	< 0.005	< 0.005	0.0223	0.0083	N/A	N/A
	8/23/2021	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 0.005	0.0131	0.00191*	< 0.005	0.0183	0.00553	N/A	N/A
	3/15/2022	N/A	0.0136	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 0.005	0.0284	0.00253*	< 0.005	0.02	0.00908	N/A	N/A
	8/10/2022	N/A	N/A	0.00232*	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 0.005	0.00954	< 0.005	< 0.005	0.0148	0.0054	N/A	N/A
	6/22/2023	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 0.005	0.0815	< 0.005	< 0.005	0.0196	0.00709	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A
Selenium, mg/L (CAS NO - 7782-49-2)									
	2/5/2008	N/A	< 0.005	< 0.005	N/A	< 0.005	< 0.005	N/A	N/A
	4/21/2008	< 0.005	< 0.005	< 0.005	N/A	< 0.005	< 0.005	N/A	N/A
	6/10/2008	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.005	< 0.005	N/A	< 0.005	< 0.005	N/A	N/A
	9/5/2008	< 0.005	< 0.005	< 0.005	N/A	< 0.005	< 0.005	N/A	N/A
	9/5/2008	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A
	12/8/2008	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	12/8/2008	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Total Metals Constituents									
Selenium, mg/L (CAS NO - 7782-49-2)									
	2/27/2009	< 0.005	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A
	4/13/2009	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	8/28/2009	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	8/28/2009	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 0.005	N/A	N/A	N/A	< 0.005	N/A	N/A
	4/21/2010	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	8/31/2010	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	4/26/2011	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	7/25/2011	N/A	N/A	< 0.005	0.00576	< 0.005	N/A	N/A	N/A
	10/11/2011	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	10/11/2011	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 0.005	0.0052	0.0054	0.0139	< 0.005	< 0.005	< 0.005	N/A
	4/16/2012	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	7/30/2012	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	7/9/2013	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	7/9/2013	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	0.00104	0.000848	0.00146	0.00103	0.00119	0.001	N/A	N/A
	8/7/2014	0.000601	0.00195	0.00189	0.00211	0.00181	0.00169	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	0.00229	N/A	N/A
	3/24/2015	< 0.005	< 0.005	< 0.005	0.00715	< 0.005	< 0.005	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	10/20/2015	< 0.005	< 0.005	< 0.005	0.00601	< 0.005	< 0.005	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	5/5/2016	0.00091*	< 0.005	0.00116*	0.0074	0.000673*	< 0.005	0.00187*	< 0.005
	5/5/2016	N/A	N/A	0.00123*	N/A	N/A	N/A	N/A	N/A
	10/14/2016	0.000922*	< 0.005	0.000785*	0.00593	< 0.005	< 0.005	0.000639*	N/A
	5/16/2017	0.00111*	< 0.005	0.00165*	0.00695	< 0.005	< 0.005	0.00127*	N/A
	10/19/2017	< 0.005	< 0.005	< 0.005	0.00516	< 0.005	< 0.005	< 0.005	N/A
	5/9/2018	0.00114*	< 0.005	< 0.005	0.00821	0.00157*	< 0.005	< 0.005	N/A
	10/26/2018	0.00111*	N/A	0.000988*	0.00927	0.00101*	N/A	0.00226*	N/A
	4/10/2019	N/A	N/A	0.00105*	0.00566	N/A	N/A	0.00102*	N/A
	10/8/2019	N/A	N/A	N/A	0.00694	N/A	N/A	0.00171*	N/A
	4/6/2020	N/A	N/A	0.00134*	0.00687	N/A	N/A	0.00155*	N/A
	10/28/2020	N/A	N/A	0.00102*	N/A	N/A	N/A	N/A	N/A
	3/31/2021	0.00133*	0.00103*	0.00166*	0.00952	N/A	N/A	0.00146*	N/A
	8/23/2021	0.00132	< 0.005	0.00163	0.00673	< 0.005	< 0.005	N/A	N/A
	8/23/2021	0.00114	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 0.005	< 0.005	< 0.005	0.00694	< 0.005	< 0.005	N/A	N/A
	3/15/2022	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 0.005	< 0.005	< 0.005	0.00281*	< 0.005	< 0.005	N/A	N/A
	8/10/2022	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 0.005	0.00164*	< 0.005	0.00929	< 0.005	< 0.005	N/A	N/A
	6/22/2023	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A
Silver, mg/L (CAS NO - 7440-22-4)									
	2/5/2008	N/A	< 0.02	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A
	4/21/2008	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A
	6/10/2008	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.02	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A
	9/5/2008	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A
	9/5/2008	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A
	12/8/2008	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	12/8/2008	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 0.02	N/A	N/A	< 0.1	N/A	N/A	N/A	N/A
	4/13/2009	< 0.02	< 0.02	< 0.02	< 0.04	< 0.02	< 0.02	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A
	8/28/2009	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	8/28/2009	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 0.02	N/A	N/A	N/A	< 0.02	N/A	N/A
	4/21/2010	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Total Metals Constituents									
Silver, mg/L (CAS NO - 7440-22-4)									
	8/31/2010	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A
	4/26/2011	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A
	7/25/2011	N/A	N/A	< 0.06	< 0.02	< 0.02	N/A	N/A	N/A
	10/11/2011	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
	10/11/2011	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A
	4/16/2012	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 0.02	< 0.02	< 0.02	< 0.06	< 0.02	< 0.02	N/A	N/A
	7/30/2012	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A
	7/9/2013	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	7/9/2013	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	8/7/2014	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A
	3/24/2015	< 0.001	0.000078	0.00007	< 0.001	< 0.001	< 0.001	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	10/20/2015	< 0.001	< 0.001	< 0.001	0.000098*	< 0.001	< 0.001	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	5/5/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	5/5/2016	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A
	5/16/2017	< 0.001	< 0.001	0.000148*	< 0.001	< 0.001	< 0.001	< 0.001	N/A
	10/19/2017	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A
	5/9/2018	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A
	8/23/2021	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A
	8/23/2021	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A
	3/15/2022	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A
	8/10/2022	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A
	6/22/2023	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A
Thallium, mg/L (CAS NO - 7440-28-0)									
	2/5/2008	N/A	< 0.002	< 0.002	N/A	< 0.002	< 0.002	N/A	N/A
	4/21/2008	< 0.002	< 0.002	< 0.002	N/A	< 0.002	< 0.002	N/A	N/A
	6/10/2008	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.002	< 0.002	N/A	< 0.002	< 0.002	N/A	N/A
	9/5/2008	< 0.002	< 0.002	< 0.002	N/A	< 0.002	< 0.002	N/A	N/A
	9/5/2008	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A
	12/8/2008	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	12/8/2008	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 0.002	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A
	4/13/2009	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A
	8/28/2009	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	8/28/2009	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 0.002	N/A	N/A	N/A	< 0.002	N/A	N/A
	4/21/2010	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A
	8/31/2010	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A
	4/26/2011	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A
	7/25/2011	N/A	N/A	< 0.002	< 0.002	< 0.002	N/A	N/A	N/A
	10/11/2011	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
	10/11/2011	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 0.002	< 0.002	< 0.002	0.0021	< 0.002	< 0.002	< 0.002	N/A
	4/16/2012	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	7/30/2012	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A
	7/9/2013	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG	
Total Metals Constituents										
Thallium, mg/L (CAS NO - 7440-28-0)	7/9/2013	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	2/11/2014	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	
	8/7/2014	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	
	3/24/2015	< 0.001	< 0.001	0.000043	< 0.001	< 0.001	< 0.001	< 0.001	N/A	
	3/24/2015	N/A	N/A	N/A	N/A	0.000037	N/A	N/A	N/A	
	10/20/2015	< 0.001	< 0.001	< 0.001	< 0.001	0.000068*	0.000089*	N/A	N/A	
	10/20/2015	N/A	N/A	N/A	N/A	N/A	0.000103*	N/A	N/A	
	5/5/2016	< 0.001	< 0.001	< 0.001	< 0.001	0.000028*	0.000061*	< 0.001	< 0.001	
	5/5/2016	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	
	10/14/2016	< 0.001	< 0.001	< 0.001	< 0.001	0.000047*	0.000082*	< 0.001	N/A	
	5/16/2017	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	
	10/19/2017	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.000074*	< 0.001	N/A	
	5/9/2018	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	
	3/31/2021	0.00129	0.0012	N/A	N/A	N/A	N/A	N/A	N/A	
	8/23/2021	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A	
	8/23/2021	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/15/2022	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A	
	3/15/2022	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	
	8/10/2022	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A	
	8/10/2022	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	
	6/22/2023	< 0.001	0.00581	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A	
	6/22/2023	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	
	11/13/2023	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A	
	11/13/2023	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	
	Tin, mg/L (CAS NO - 7440-31-5)	8/28/2009	N/A	< 0.1	N/A	N/A	N/A	< 0.1	N/A	N/A
		8/31/2010	N/A	< 0.1	N/A	N/A	N/A	< 0.1	N/A	N/A
7/25/2011		N/A	N/A	< 0.3	< 0.1	< 0.1	N/A	N/A	N/A	
10/11/2011		N/A	< 0.1	N/A	N/A	N/A	< 0.1	N/A	N/A	
7/30/2012		N/A	N/A	< 0.1	< 0.3	< 0.1	N/A	N/A	N/A	
5/5/2016		N/A	< 0.005	N/A	N/A	N/A	< 0.005	N/A	N/A	
5/16/2017		N/A	N/A	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	
3/15/2022		N/A	N/A	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	
Vanadium, mg/L (CAS NO - 7440-62-2)										
2/5/2008		N/A	< 0.05	< 0.05	< 0.05	N/A	0.0737	0.105	N/A	N/A
4/21/2008	< 0.05	< 0.05	< 0.05	< 0.05	N/A	< 0.05	< 0.05	N/A	N/A	
6/10/2008	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6/10/2008	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6/20/2008	N/A	< 0.05	< 0.05	< 0.05	N/A	< 0.05	< 0.05	N/A	N/A	
9/5/2008	0.0958	< 0.05	< 0.05	< 0.05	N/A	0.0781	< 0.05	N/A	N/A	
9/5/2008	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
9/24/2008	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	
12/8/2008	< 0.05	0.164	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	N/A	N/A	
12/8/2008	N/A	0.126	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2/27/2009	< 0.05	N/A	N/A	< 0.25	N/A	N/A	N/A	N/A	N/A	
4/13/2009	< 0.05	< 0.05	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	N/A	N/A	
4/13/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	
8/28/2009	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	N/A	N/A	
8/28/2009	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	
11/13/2009	N/A	< 0.05	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	
4/21/2010	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	N/A	N/A	
4/21/2010	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	
8/31/2010	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	N/A	N/A	
8/31/2010	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	
2/23/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
4/26/2011	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	N/A	N/A	
4/26/2011	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	
6/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
7/25/2011	N/A	N/A	< 0.15	< 0.05	< 0.05	N/A	N/A	N/A	N/A	
10/11/2011	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
10/11/2011	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
12/2/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
4/16/2012	< 0.05	0.151	0.131	0.252	< 0.05	< 0.05	< 0.05	N/A	N/A	
4/16/2012	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	
7/30/2012	< 0.05	0.0557	< 0.05	< 0.15	< 0.05	< 0.05	< 0.05	N/A	N/A	
7/30/2012	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
3/5/2013	< 0.05	< 0.05	< 0.05	0.0856	< 0.05	< 0.05	N/A	N/A	N/A	
3/5/2013	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	
7/9/2013	< 0.05	0.0577	< 0.05	0.0879	< 0.05	< 0.05	< 0.05	N/A	N/A	
7/9/2013	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Total Metals Constituents									
Vanadium, mg/L (CAS NO - 7440-62-2)									
	2/11/2014	0.00592	0.0645	0.019	0.106	0.0304	0.00838	N/A	N/A
	8/7/2014	0.0112	0.0152	0.0226	0.0411	0.0192	0.0054	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	0.0119	N/A	N/A
	3/24/2015	0.00135	0.00183	0.00194	0.00293	0.00152	0.000557	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	0.000828	N/A	N/A	N/A
	10/20/2015	0.000893*	0.0012*	0.000776*	0.000807*	0.000982*	< 0.005	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	5/5/2016	0.000655*	0.00072*	0.000355*	0.000379*	0.00046*	< 0.005	0.000291*	0.000938*
	5/5/2016	N/A	N/A	0.000384*	N/A	N/A	N/A	N/A	N/A
	10/14/2016	0.00084*	0.000905*	0.000983*	0.000988*	0.000758*	0.000449*	0.000576*	N/A
	5/16/2017	< 0.005	0.00101*	0.000911*	< 0.005	< 0.005	< 0.005	< 0.005	N/A
	10/19/2017	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A
	5/9/2018	0.000621*	0.000744*	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A
	10/26/2018	0.000924*	0.000634*	0.000823*	0.00108*	0.00118*	N/A	0.000681*	N/A
	10/8/2019	N/A	N/A	N/A	0.000858*	N/A	N/A	N/A	N/A
	4/6/2020	0.00117*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2020	0.00116*	N/A	N/A	0.00107*	N/A	N/A	N/A	N/A
	3/31/2021	0.0012*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/23/2021	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	8/23/2021	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	3/15/2022	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	8/10/2022	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	6/22/2023	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 0.005	0.00121	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A
Zinc, mg/L (CAS NO - 7440-66-6)									
	2/5/2008	N/A	0.0392	0.0521	N/A	0.0949	0.136	N/A	N/A
	4/21/2008	0.0347	0.0311	0.0506	N/A	0.0459	0.0348	N/A	N/A
	6/10/2008	0.0528	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	0.0578	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	0.203	0.152	N/A	0.273	0.197	N/A	N/A
	9/5/2008	0.0928	0.0688	0.0477	N/A	0.144	0.065	N/A	N/A
	9/5/2008	N/A	0.0781	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	0.116	N/A	N/A	N/A	N/A
	12/8/2008	0.0947	0.198	0.0592	0.523	0.0805	0.0924	N/A	N/A
	12/8/2008	N/A	0.237	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	0.0943	N/A	N/A	2.02	N/A	N/A	N/A	N/A
	4/13/2009	0.0584	0.121	0.101	1.08	0.165	0.0561	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	0.116	N/A	N/A
	8/28/2009	0.0604	0.119	0.144	0.283	0.177	0.121	N/A	N/A
	8/28/2009	N/A	N/A	0.19	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	0.18	N/A	N/A	N/A	0.157	N/A	N/A
	4/21/2010	< 0.02	< 0.02	< 0.02	0.0392	< 0.02	< 0.02	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	0.0421	N/A	N/A	N/A
	8/31/2010	0.031	0.0621	0.0586	0.117	0.0836	0.101	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	0.0683	N/A	N/A	N/A
	4/26/2011	< 0.02	< 0.02	0.0709	0.0403	< 0.02	0.0391	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	0.0504	N/A	N/A
	7/25/2011	N/A	N/A	0.239	< 0.02	< 0.02	N/A	N/A	N/A
	10/11/2011	< 0.02	< 0.02	< 0.02	0.344	< 0.02	< 0.02	0.0207	< 0.02
	10/11/2011	0.0239	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	0.0367	0.278	0.0378	1.4	0.0454	0.0751	< 0.02	N/A
	4/16/2012	N/A	N/A	0.134	N/A	N/A	N/A	N/A	N/A
	7/30/2012	0.0459	0.0871	0.0473	0.548	< 0.02	0.0713	N/A	N/A
	7/30/2012	0.0521	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	0.0211	0.106	0.081	0.406	0.0723	0.0928	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	0.0748	N/A	N/A	N/A
	7/9/2013	0.0264	0.0891	0.0536	0.288	0.11	0.152	N/A	N/A
	7/9/2013	0.0271	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	0.078	0.257	0.262	0.478	0.25	0.222	N/A	N/A
	8/7/2014	< 0.02	0.0631	0.0639	0.0669	0.0764	0.0223	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	0.0451	N/A	N/A
	3/24/2015	< 0.01	< 0.01	< 0.01	0.00814	< 0.01	< 0.01	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A
	10/20/2015	< 0.01	< 0.01	< 0.01	< 0.01	0.0154	< 0.01	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A
	5/5/2016	< 0.01	< 0.01	< 0.01	0.012	0.0291	< 0.01	< 0.01	0.0202
	5/5/2016	N/A	N/A	0.0125	N/A	N/A	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Total Metals Constituents									
Zinc, mg/L (CAS NO - 7440-66-6)									
	10/14/2016	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	N/A
	5/16/2017	< 0.02	< 0.02	< 0.02	0.017*	< 0.02	< 0.02	< 0.02	N/A
	10/19/2017	< 0.02	< 0.02	< 0.02	0.0272	< 0.02	< 0.02	< 0.02	N/A
	5/9/2018	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A
	4/10/2019	0.0128*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/23/2021	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	8/23/2021	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	3/15/2022	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	8/10/2022	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 0.02	< 0.02	0.00654*	0.00949*	< 0.02	< 0.02	N/A	N/A
	6/22/2023	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A
Total Suspended Solids, mg/L (CAS NO - TSS)									
	2/11/2014	334	9870	3230	3200	1480	945	N/A	N/A
	8/7/2014	445	1710	2840	2250	1560	2400	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	1440	N/A	N/A
	3/24/2015	12.2	48.7	77.7	321	44.3	16.4	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	13.8	N/A	N/A	N/A
	10/20/2015	5.37	16	12.6	5.63	15	5.63	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	6.38	N/A	N/A
	5/5/2016	< 1.88	6	< 1.88	1.5*	0.875*	1.38*	< 1.88	72.8
	5/5/2016	N/A	N/A	0.625*	N/A	N/A	N/A	N/A	N/A
	10/14/2016	2.88	9.63	19.1	8.63	2.63	3.75	0.875*	N/A
	5/16/2017	2.25	18.9	33.5	21	2.25	2.38	< 1.88	N/A
	10/19/2017	< 1.88	2.75	< 1.88	1.63*	1*	0.625*	< 1.88	N/A
	5/9/2018	< 1.88	6.67	< 1.88	0.875*	0.875*	< 1.88	< 1.88	N/A
	10/26/2018	N/A	3.5	1*	0.875*	N/A	1.25*	N/A	N/A
	4/10/2019	N/A	3.38	N/A	2.13	1*	0.875*	0.75*	N/A
	10/8/2019	1*	6.4	N/A	1.13*	1.38*	5.37	1.13*	N/A
	4/6/2020	1.38*	7.5	7.63	14.5	4.25	3.5	4.63	N/A
	10/28/2020	N/A	2.75	N/A	21.3	N/A	2.63	N/A	N/A
	3/31/2021	N/A	6.25	1*	2.75	N/A	2.25	N/A	N/A
	8/23/2021	< 1.88	4.75	< 1.88	13.4	1	N/A	N/A	N/A
	8/23/2021	< 1.88	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	1.25	3.25	4.88	60	2.75	2	N/A	N/A
	3/15/2022	N/A	3.67	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	0.75	4.38	3.38	9.25	1.75	4	N/A	N/A
	8/10/2022	N/A	N/A	3.13	N/A	N/A	N/A	N/A	N/A
	6/22/2023	2.5	12.6	2.63	35.9	2	3.87	N/A	N/A
	6/22/2023	N/A	N/A	3.87	N/A	N/A	N/A	N/A	N/A
	11/13/2023	2.88	5	9.38	15.7	1.25	16.8	N/A	N/A
	11/13/2023	N/A	N/A	N/A	22.9	N/A	N/A	N/A	N/A

LEGEND

Note: * indicates 'J flag'. Detection is below the reporting limit, but greater than the MDL (Method Detection Limit). The concentration is estimated.

Denotes Detection.

Denotes Confirmed Outlier. Statistically Excluded.

Sampling performed over multiple dates is recorded on the first date sampled. Refer to field forms for exact sample date.

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
1,1,1,2-Tetrachloroethane, ug/L (CAS NO - 630-20-6)	2/5/2008	N/A	< 0.33	< 0.33	N/A	< 0.33	< 0.33	N/A	N/A
	4/21/2008	< 0.33	< 0.33	< 0.33	N/A	< 0.33	< 0.33	N/A	N/A
	6/10/2008	< 0.33	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.33	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.33	< 0.33	N/A	< 0.33	< 0.33	N/A	N/A
	9/5/2008	< 0.33	< 0.33	< 0.33	N/A	< 0.33	< 0.33	N/A	N/A
	9/5/2008	N/A	< 0.33	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	12/8/2008	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	12/8/2008	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	4/13/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	8/28/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/28/2009	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	4/21/2010	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	8/31/2010	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/26/2011	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/25/2011	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	10/11/2011	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/11/2011	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	4/16/2012	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	7/30/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	7/9/2013	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	7/9/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/7/2014	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/24/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	10/20/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
5/5/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
5/5/2016	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
10/14/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
5/16/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
10/19/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
5/9/2018	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
8/23/2021	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
8/23/2021	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
3/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
3/15/2022	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	
8/10/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
8/10/2022	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
6/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
6/22/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
11/13/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
11/13/2023	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	
1,1,1-Trichloroethane, ug/L (CAS NO - 71-55-6)	2/5/2008	N/A	< 0.19	< 0.19	N/A	< 0.19	< 0.19	N/A	N/A
	4/21/2008	< 0.19	< 0.19	< 0.19	N/A	< 0.19	< 0.19	N/A	N/A
	6/10/2008	< 0.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
1,1,1-Trichloroethane, ug/L (CAS NO - 71-55-6)	6/20/2008	N/A	< 0.19	< 0.19	N/A	< 0.19	< 0.19	N/A	N/A
	9/5/2008	< 0.19	< 0.19	< 0.19	N/A	< 0.19	< 0.19	N/A	N/A
	9/5/2008	N/A	< 0.19	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	12/8/2008	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	12/8/2008	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	4/13/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	8/28/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/28/2009	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	4/21/2010	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	8/31/2010	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/26/2011	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/25/2011	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	10/11/2011	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/11/2011	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	4/16/2012	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	7/30/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	7/9/2013	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	7/9/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/7/2014	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/24/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	10/20/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	5/5/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/5/2016	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	5/16/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
10/19/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
5/9/2018	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
8/23/2021	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
8/23/2021	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
3/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
3/15/2022	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	
8/10/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
8/10/2022	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
6/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
6/22/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
11/13/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
11/13/2023	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	
1,1,2,2-Tetrachloroethane, ug/L (CAS NO - 79-34-5)	2/5/2008	N/A	< 0.23	< 0.23	N/A	< 0.23	< 0.23	N/A	N/A
	4/21/2008	< 0.23	< 0.23	< 0.23	N/A	< 0.23	< 0.23	N/A	N/A
	6/10/2008	< 0.23	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.23	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.23	< 0.23	N/A	< 0.23	< 0.23	N/A	N/A
	9/5/2008	< 0.23	< 0.23	< 0.23	N/A	< 0.23	< 0.23	N/A	N/A
	9/5/2008	N/A	< 0.23	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
1,1,2,2-Tetrachloroethane, ug/L (CAS NO - 79-34-5)	12/8/2008	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	12/8/2008	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	4/13/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	8/28/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/28/2009	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	4/21/2010	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	8/31/2010	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/26/2011	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/25/2011	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	10/11/2011	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/11/2011	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	4/16/2012	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	7/30/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	7/9/2013	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	7/9/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/7/2014	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/24/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	10/20/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	5/5/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/5/2016	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	5/16/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	10/19/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	5/9/2018	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	8/23/2021	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/23/2021	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
3/15/2022	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	
8/10/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
8/10/2022	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
6/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
6/22/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
11/13/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
11/13/2023	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	
1,1,2-Trichloroethane, ug/L (CAS NO - 79-00-5)	2/5/2008	N/A	< 0.37	< 0.37	N/A	< 0.37	< 0.37	N/A	N/A
	4/21/2008	< 0.37	< 0.37	< 0.37	N/A	< 0.37	< 0.37	N/A	N/A
	6/10/2008	< 0.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.37	< 0.37	N/A	< 0.37	< 0.37	N/A	N/A
	9/5/2008	< 0.37	< 0.37	< 0.37	N/A	< 0.37	< 0.37	N/A	N/A
	9/5/2008	N/A	< 0.37	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	12/8/2008	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	12/8/2008	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	4/13/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG	
1,1,2-Trichloroethane, ug/L (CAS NO - 79-00-5)	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	
	8/28/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	8/28/2009	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
	11/13/2009	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	
	4/21/2010	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	4/21/2010	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	
	8/31/2010	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	8/31/2010	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	
	4/26/2011	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	
	7/25/2011	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A	
	10/11/2011	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
	10/11/2011	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	4/16/2012	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	4/16/2012	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
	7/30/2012	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	7/30/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/5/2013	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	3/5/2013	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	
	7/9/2013	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	7/9/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	2/11/2014	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	8/7/2014	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	
	3/24/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	3/24/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	
	10/20/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	
	5/5/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
	5/5/2016	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
	10/14/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	5/16/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	10/19/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	5/9/2018	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	8/23/2021	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	8/23/2021	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	3/15/2022	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	
	8/10/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	8/10/2022	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
	6/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	6/22/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
	11/13/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	11/13/2023	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	
	1,1-Dichloroethane, ug/L (CAS NO - 75-34-3)	2/5/2008	N/A	< 0.19	< 0.19	N/A	< 0.19	1.56	N/A	N/A
		4/21/2008	< 0.19	0.421	< 0.19	N/A	< 0.19	1.64	N/A	N/A
		6/10/2008	< 0.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/10/2008		< 0.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6/20/2008		N/A	0.45	< 0.19	N/A	< 0.19	1.3	N/A	N/A	
9/5/2008		< 0.19	0.38	< 0.19	N/A	< 0.19	1.23	N/A	N/A	
9/5/2008		N/A	0.39	N/A	N/A	N/A	N/A	N/A	N/A	
9/24/2008		N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	
12/8/2008		< 1	< 1	< 1	< 1	< 1	1.22	N/A	N/A	
12/8/2008		N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	
2/27/2009		< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	
4/13/2009		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
4/13/2009		N/A	N/A	N/A	N/A	N/A	1.16	N/A	N/A	
8/28/2009		< 1	< 1	< 1	< 1	< 1	1.22	N/A	N/A	
8/28/2009		N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
11/13/2009		N/A	< 1	N/A	N/A	N/A	1.23	N/A	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
1,1-Dichloroethane, ug/L (CAS NO - 75-34-3)	4/21/2010	<1	<1	<1	<1	<1	1.09	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	8/31/2010	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	4/26/2011	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	7/25/2011	N/A	N/A	<1	<1	<1	N/A	N/A	N/A
	10/11/2011	<1	<1	<1	<1	<1	<1	<1	<1
	10/11/2011	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	<1	<1	<1	<1	<1	<1	<1	N/A
	4/16/2012	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	7/30/2012	<1	<1	<1	<1	<1	<1	N/A	N/A
	7/30/2012	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	7/9/2013	<1	<1	<1	<1	<1	<1	N/A	N/A
	7/9/2013	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	<1	<1	<1	<1	<1	0.471*	N/A	N/A
	8/7/2014	<1	<1	<1	<1	<1	0.54*	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	0.573*	N/A	N/A
	3/24/2015	<1	0.425*	<1	<1	<1	0.492*	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	10/20/2015	<1	<1	<1	<1	<1	<1	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	0.561*	N/A	N/A
	5/5/2016	<1	<1	<1	<1	<1	<1	<1	<1
	5/5/2016	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	10/14/2016	<1	<1	<1	<1	<1	0.49*	<1	N/A
	5/16/2017	<1	<1	<1	<1	<1	<1	<1	N/A
	10/19/2017	<1	<1	<1	<1	<1	<1	<1	N/A
	5/9/2018	<1	<1	<1	<1	<1	0.373*	<1	N/A
	10/26/2018	N/A	N/A	N/A	N/A	N/A	0.447*	N/A	N/A
	4/10/2019	N/A	N/A	N/A	N/A	N/A	0.331*	N/A	N/A
	10/8/2019	N/A	N/A	N/A	N/A	N/A	0.434*	N/A	N/A
	10/28/2020	N/A	N/A	N/A	N/A	N/A	0.53*	N/A	N/A
	3/31/2021	N/A	N/A	N/A	N/A	N/A	0.372*	N/A	N/A
	8/23/2021	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/23/2021	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/15/2022	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	<1	<1	<1	<1	<1	0.269*	N/A	N/A
8/10/2022	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	
6/22/2023	<1	<1	<1	<1	<1	0.236*	N/A	N/A	
6/22/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	
11/13/2023	<1	<1	<1	<1	<1	<1	N/A	N/A	
11/13/2023	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	
1,1-Dichloroethene, ug/L (CAS NO - 75-35-4)	2/5/2008	N/A	< 0.37	< 0.37	N/A	< 0.37	< 0.37	N/A	N/A
	4/21/2008	< 0.37	< 0.37	< 0.37	N/A	< 0.37	< 0.37	N/A	N/A
	6/10/2008	< 0.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.37	< 0.37	N/A	< 0.37	< 0.37	N/A	N/A
	9/5/2008	< 0.37	< 0.37	< 0.37	N/A	< 0.37	< 0.37	N/A	N/A
	9/5/2008	N/A	< 0.37	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A
	12/8/2008	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	12/8/2008	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A
	4/13/2009	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	8/28/2009	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	8/28/2009	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
1,1-Dichloroethene, ug/L (CAS NO - 75-35-4)	11/13/2009	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	4/21/2010	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A
	8/31/2010	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A
	4/26/2011	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	7/25/2011	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	10/11/2011	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	10/11/2011	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	4/16/2012	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	7/30/2012	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A
	7/9/2013	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	7/9/2013	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	8/7/2014	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	3/24/2015	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A
	10/20/2015	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	5/5/2016	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	5/5/2016	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A
	5/16/2017	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A
	10/19/2017	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A
	5/9/2018	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A
	8/23/2021	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A
	8/23/2021	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A
	3/15/2022	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A
	8/10/2022	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A
	6/22/2023	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A
11/13/2023	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	
1,2,3-Trichloropropane, ug/L (CAS NO - 96-18-4)	2/5/2008	N/A	< 0.7	< 0.7	N/A	< 0.7	< 0.7	N/A	N/A
	4/21/2008	< 0.7	< 0.7	< 0.7	N/A	< 0.7	< 0.7	N/A	N/A
	6/10/2008	< 0.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.7	< 0.7	N/A	< 0.7	< 0.7	N/A	N/A
	9/5/2008	< 0.7	< 0.7	< 0.7	N/A	< 0.7	< 0.7	N/A	N/A
	9/5/2008	N/A	< 0.7	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	12/8/2008	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	12/8/2008	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	4/13/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	8/28/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/28/2009	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	4/21/2010	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	8/31/2010	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG	
1,2,3-Trichloropropane, ug/L (CAS NO - 96-18-4)	8/31/2010	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	
	4/26/2011	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	
	7/25/2011	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A	
	10/11/2011	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
	10/11/2011	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	4/16/2012	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	4/16/2012	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
	7/30/2012	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	7/30/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/5/2013	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	3/5/2013	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	
	7/9/2013	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	7/9/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	2/11/2014	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	8/7/2014	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	
	3/24/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	3/24/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	
	10/20/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	
	5/5/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
	5/5/2016	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
	10/14/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	5/16/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	10/19/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	5/9/2018	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	8/23/2021	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	8/23/2021	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	3/15/2022	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	
	8/10/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	8/10/2022	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
	6/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	6/22/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
	11/13/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	11/13/2023	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	
	1,2-Dibromo-3-Chloropropane, ug/L (CAS NO - 96-12-8)	2/5/2008	N/A	< 0.86	< 0.86	N/A	< 0.86	< 0.86	N/A	N/A
		4/21/2008	< 0.86	< 0.86	< 0.86	N/A	< 0.86	< 0.86	N/A	N/A
		6/10/2008	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/10/2008		< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6/20/2008		N/A	< 0.86	< 0.86	N/A	< 0.86	< 0.86	N/A	N/A	
9/5/2008		< 0.86	< 0.86	< 0.86	N/A	< 0.86	< 0.86	N/A	N/A	
9/5/2008		N/A	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	
9/24/2008		N/A	N/A	N/A	< 0.86	N/A	N/A	N/A	N/A	
12/8/2008		< 0.86	< 0.86	< 0.86	< 0.86	< 0.86	< 0.86	N/A	N/A	
12/8/2008		N/A	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	
2/27/2009		< 0.86	N/A	N/A	< 0.86	N/A	N/A	N/A	N/A	
4/13/2009		< 0.86	< 0.86	< 0.86	< 0.86	< 0.86	< 0.86	N/A	N/A	
4/13/2009		N/A	N/A	N/A	N/A	N/A	< 0.86	N/A	N/A	
8/28/2009		< 0.498	< 10	< 0.498	< 0.498	< 0.498	< 10	N/A	N/A	
8/28/2009		N/A	N/A	< 0.498	N/A	N/A	N/A	N/A	N/A	
11/13/2009		N/A	< 0.498	N/A	N/A	N/A	< 0.498	N/A	N/A	
4/21/2010		< 0.498	< 0.498	< 0.498	< 0.498	< 0.498	< 0.498	N/A	N/A	
4/21/2010		N/A	N/A	N/A	N/A	< 0.498	N/A	N/A	N/A	
8/31/2010		< 0.498	< 10	< 0.498	< 0.498	< 0.498	< 10	N/A	N/A	
8/31/2010		N/A	N/A	N/A	N/A	< 0.498	N/A	N/A	N/A	
4/26/2011		< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	N/A	N/A	
4/26/2011		N/A	N/A	N/A	N/A	N/A	< 0.12	N/A	N/A	
7/25/2011		N/A	N/A	< 0.12	< 0.12	< 0.12	N/A	N/A	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
1,2-Dibromo-3-Chloropropane, ug/L (CAS NO - 96-12-8)	10/11/2011	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
	10/11/2011	< 0.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	N/A
	4/16/2012	N/A	N/A	< 0.2	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	N/A
	7/30/2012	< 0.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 0.12	N/A	N/A	N/A
	7/9/2013	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	N/A
	7/9/2013	< 0.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	N/A
	8/7/2014	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	N/A	< 0.12	N/A
	3/24/2015	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A
	10/20/2015	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A
	5/5/2016	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	5/5/2016	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	5/16/2017	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	10/19/2017	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	5/9/2018	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	8/23/2021	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A
	8/23/2021	< 1.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A
	3/15/2022	N/A	< 1.2	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A
	8/10/2022	N/A	N/A	< 1.2	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A
	6/22/2023	N/A	N/A	< 1.2	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A
11/13/2023	N/A	N/A	N/A	< 1.2	N/A	N/A	N/A	N/A	
1,2-Dibromoethane [EDB], ug/L (CAS NO - 106-93-4)	2/5/2008	N/A	< 0.25	< 0.25	N/A	< 0.25	< 0.25	N/A	N/A
	4/21/2008	< 0.25	< 0.25	< 0.25	N/A	< 0.25	< 0.25	N/A	N/A
	6/10/2008	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.25	< 0.25	N/A	< 0.25	< 0.25	N/A	N/A
	9/5/2008	< 0.25	< 0.25	< 0.25	N/A	< 0.25	< 0.25	N/A	N/A
	9/5/2008	N/A	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 0.25	N/A	N/A	N/A	N/A
	12/8/2008	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	N/A	N/A
	12/8/2008	N/A	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 0.25	N/A	N/A	< 0.25	N/A	N/A	N/A	N/A
	4/13/2009	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 0.25	N/A	N/A
	8/28/2009	< 0.255	< 10	< 0.255	< 0.255	< 0.255	< 10	N/A	N/A
	8/28/2009	N/A	N/A	< 0.255	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 0.255	N/A	N/A	N/A	< 0.255	N/A	N/A
	4/21/2010	< 0.255	< 0.255	< 0.255	< 0.255	< 0.255	< 0.255	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 0.255	N/A	N/A	N/A
	8/31/2010	< 0.255	< 10	< 0.255	< 0.255	< 0.255	< 10	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 0.255	N/A	N/A	N/A
	4/26/2011	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A
	7/25/2011	N/A	N/A	< 0.13	< 0.13	< 0.13	N/A	N/A	N/A
	10/11/2011	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
	10/11/2011	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	N/A
	4/16/2012	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG	
1,2-Dibromoethane [EDB], ug/L (CAS NO - 106-93-4)	7/30/2012	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	
	7/30/2012	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/5/2013	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	
	3/5/2013	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	
	7/9/2013	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	
	7/9/2013	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	2/11/2014	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	
	8/7/2014	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	
	3/24/2015	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	
	3/24/2015	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	
	10/20/2015	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	
	5/5/2016	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	
	5/5/2016	N/A	N/A	< 0.13	N/A	N/A	N/A	N/A	N/A	
	10/14/2016	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	
	5/16/2017	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	
	10/19/2017	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	
	5/9/2018	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	
	8/23/2021	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	N/A	
	8/23/2021	< 0.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/15/2022	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	N/A	
	3/15/2022	N/A	< 0.34	N/A	N/A	N/A	N/A	N/A	N/A	
	8/10/2022	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	N/A	
	8/10/2022	N/A	N/A	< 0.34	N/A	N/A	N/A	N/A	N/A	
	6/22/2023	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	N/A	
	6/22/2023	N/A	N/A	< 0.34	N/A	N/A	N/A	N/A	N/A	
	11/13/2023	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	N/A	
	11/13/2023	N/A	N/A	N/A	< 0.34	N/A	N/A	N/A	N/A	
	1,2-Dichlorobenzene, ug/L (CAS NO - 95-50-1)	2/5/2008	N/A	< 0.21	< 0.21	N/A	< 0.21	< 0.21	N/A	N/A
		4/21/2008	< 0.21	< 0.21	< 0.21	N/A	< 0.21	< 0.21	N/A	N/A
		6/10/2008	< 0.21	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/10/2008		< 0.21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6/20/2008		N/A	< 0.21	< 0.21	N/A	< 0.21	< 0.21	N/A	N/A	
9/5/2008		< 0.21	< 0.21	< 0.21	N/A	< 0.21	< 0.21	N/A	N/A	
9/5/2008		N/A	< 0.21	N/A	N/A	N/A	N/A	N/A	N/A	
9/24/2008		N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	
12/8/2008		< 2	< 2	< 1	< 1	< 2	< 2	N/A	N/A	
12/8/2008		N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	
2/27/2009		< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	
4/13/2009		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
4/13/2009		N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	
8/28/2009		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
8/28/2009		N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
11/13/2009		N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	
4/21/2010		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
4/21/2010		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	
8/31/2010		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
8/31/2010		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	
4/26/2011		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
4/26/2011		N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	
7/25/2011		N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A	
10/11/2011		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
10/11/2011		< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
4/16/2012		< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
4/16/2012		N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
7/30/2012		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
7/30/2012		< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
3/5/2013		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
3/5/2013		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG	
1,2-Dichlorobenzene, ug/L (CAS NO - 95-50-1)	7/9/2013	<1	<1	<1	<1	<1	<1	N/A	N/A	
	7/9/2013	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	2/11/2014	<1	<1	<1	<1	<1	<1	N/A	N/A	
	8/7/2014	<1	<1	<1	<1	<1	<1	N/A	N/A	
	8/7/2014	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A	
	3/24/2015	<1	<1	<1	<1	<1	<1	N/A	N/A	
	3/24/2015	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A	
	10/20/2015	<1	<1	<1	<1	<1	<1	N/A	N/A	
	10/20/2015	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A	
	5/5/2016	<1	<1	<1	<1	<1	<1	<1	<1	
	5/5/2016	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	
	10/14/2016	<1	<1	<1	<1	<1	<1	<1	N/A	
	5/16/2017	<1	<1	<1	<1	<1	<1	<1	N/A	
	10/19/2017	<1	<1	<1	<1	<1	<1	<1	N/A	
	5/9/2018	<1	<1	<1	<1	<1	<1	<1	N/A	
	8/23/2021	<1	<1	<1	<1	<1	<1	<1	N/A	
	8/23/2021	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/15/2022	<1	<1	<1	<1	<1	<1	<1	N/A	
	3/15/2022	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A	
	8/10/2022	<1	<1	<1	<1	<1	<1	<1	N/A	
	8/10/2022	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	
	6/22/2023	<1	<1	<1	<1	<1	<1	<1	N/A	
	6/22/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	
	11/13/2023	<1	<1	<1	<1	<1	<1	<1	N/A	
	11/13/2023	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	
	1,2-Dichloroethane, ug/L (CAS NO - 107-06-2)	2/5/2008	N/A	<0.2	<0.2	N/A	<0.2	<0.2	N/A	N/A
		4/21/2008	<0.2	<0.2	<0.2	N/A	<0.2	<0.2	N/A	N/A
		6/10/2008	<0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		6/10/2008	<0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		6/20/2008	N/A	<0.2	<0.2	N/A	<0.2	<0.2	N/A	N/A
9/5/2008		<0.2	<0.2	<0.2	N/A	<0.2	<0.2	N/A	N/A	
9/5/2008		N/A	<0.2	N/A	N/A	N/A	N/A	N/A	N/A	
9/24/2008		N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	
12/8/2008		<1	<1	<1	<1	<1	<1	N/A	N/A	
12/8/2008		N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A	
2/27/2009		<1	N/A	N/A	<1	N/A	N/A	N/A	N/A	
4/13/2009		<1	<1	<1	<1	<1	<1	N/A	N/A	
4/13/2009		N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A	
8/28/2009		<1	<1	<1	<1	<1	<1	N/A	N/A	
8/28/2009		N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	
11/13/2009		N/A	<1	N/A	N/A	N/A	<1	N/A	N/A	
4/21/2010		<1	<1	<1	<1	<1	<1	N/A	N/A	
4/21/2010		N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A	
8/31/2010		<1	<1	<1	<1	<1	<1	N/A	N/A	
8/31/2010		N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A	
4/26/2011		<1	<1	<1	<1	<1	<1	N/A	N/A	
4/26/2011		N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A	
7/25/2011		N/A	N/A	<1	<1	<1	N/A	N/A	N/A	
10/11/2011		<1	<1	<1	<1	<1	<1	<1	<1	
10/11/2011		<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
4/16/2012		<1	<1	<1	<1	<1	<1	<1	N/A	
4/16/2012		N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	
7/30/2012		<1	<1	<1	<1	<1	<1	N/A	N/A	
7/30/2012		<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
3/5/2013		<1	<1	<1	<1	<1	<1	N/A	N/A	
3/5/2013		N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A	
7/9/2013		<1	<1	<1	<1	<1	<1	N/A	N/A	
7/9/2013		<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2/11/2014		<1	<1	<1	<1	<1	<1	N/A	N/A	
8/7/2014		<1	<1	<1	<1	<1	<1	N/A	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
1,2-Dichloroethane, ug/L (CAS NO - 107-06-2)	8/7/2014	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	3/24/2015	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	10/20/2015	<1	<1	<1	<1	<1	<1	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	5/5/2016	<1	<1	<1	<1	<1	<1	<1	<1
	5/5/2016	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	10/14/2016	<1	<1	<1	<1	<1	<1	<1	N/A
	5/16/2017	<1	<1	<1	<1	<1	<1	<1	N/A
	10/19/2017	<1	<1	<1	<1	<1	<1	<1	N/A
	5/9/2018	<1	<1	<1	<1	<1	<1	<1	N/A
	8/23/2021	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/23/2021	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/15/2022	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/10/2022	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	6/22/2023	<1	<1	<1	<1	<1	<1	N/A	N/A
	6/22/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	11/13/2023	<1	<1	<1	<1	<1	<1	N/A	N/A
11/13/2023	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	
1,2-Dichloropropane, ug/L (CAS NO - 78-87-5)	2/5/2008	N/A	<0.4	<0.4	N/A	<0.4	<0.4	N/A	N/A
	4/21/2008	<0.4	<0.4	<0.4	N/A	<0.4	<0.4	N/A	N/A
	6/10/2008	<0.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	<0.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	<0.4	<0.4	N/A	<0.4	<0.4	N/A	N/A
	9/5/2008	<0.4	<0.4	<0.4	N/A	<0.4	<0.4	N/A	N/A
	9/5/2008	N/A	<0.4	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A
	12/8/2008	<1	<1	<1	<1	<1	<1	N/A	N/A
	12/8/2008	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	<1	N/A	N/A	<1	N/A	N/A	N/A	N/A
	4/13/2009	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	8/28/2009	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/28/2009	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	<1	N/A	N/A	N/A	<1	N/A	N/A
	4/21/2010	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	8/31/2010	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	4/26/2011	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	7/25/2011	N/A	N/A	<1	<1	<1	N/A	N/A	N/A
	10/11/2011	<1	<1	<1	<1	<1	<1	<1	<1
	10/11/2011	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	<1	<1	<1	<1	<1	<1	<1	N/A
	4/16/2012	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	7/30/2012	<1	<1	<1	<1	<1	<1	N/A	N/A
	7/30/2012	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	7/9/2013	<1	<1	<1	<1	<1	<1	N/A	N/A
	7/9/2013	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/7/2014	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	3/24/2015	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	10/20/2015	<1	<1	<1	<1	<1	<1	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
1,2-Dichloropropane, ug/L (CAS NO - 78-87-5)	10/20/2015	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	5/5/2016	<1	<1	<1	<1	<1	<1	<1	<1
	5/5/2016	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	10/14/2016	<1	<1	<1	<1	<1	<1	<1	N/A
	5/16/2017	<1	<1	<1	<1	<1	<1	<1	N/A
	10/19/2017	<1	<1	<1	<1	<1	<1	<1	N/A
	5/9/2018	<1	<1	<1	<1	<1	<1	<1	N/A
	8/23/2021	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/23/2021	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/15/2022	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/10/2022	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	6/22/2023	<1	<1	<1	<1	<1	<1	N/A	N/A
	6/22/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	11/13/2023	<1	<1	<1	<1	<1	<1	N/A	N/A
11/13/2023	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	
1,4-Dichlorobenzene, ug/L (CAS NO - 106-46-7)	2/5/2008	N/A	0.17	<0.16	N/A	<0.16	<0.16	N/A	N/A
	4/21/2008	<0.16	<0.16	<0.16	N/A	<0.16	<0.16	N/A	N/A
	6/10/2008	<0.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	<0.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	<0.16	<0.16	N/A	<0.16	<0.16	N/A	N/A
	9/5/2008	<0.16	<0.16	<0.16	N/A	<0.16	<0.16	N/A	N/A
	9/5/2008	N/A	<0.16	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A
	12/8/2008	<2	<2	<1	<1	<2	<2	N/A	N/A
	12/8/2008	N/A	<2	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	<1	N/A	N/A	<1	N/A	N/A	N/A	N/A
	4/13/2009	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	8/28/2009	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/28/2009	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	<1	N/A	N/A	N/A	<1	N/A	N/A
	4/21/2010	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	8/31/2010	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	4/26/2011	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	7/25/2011	N/A	N/A	<1	<1	<1	N/A	N/A	N/A
	10/11/2011	<1	<1	<1	<1	<1	<1	<1	<1
	10/11/2011	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	<1	<1	<1	<1	<1	<1	<1	N/A
	4/16/2012	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	7/30/2012	<1	<1	<1	<1	<1	<1	N/A	N/A
	7/30/2012	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	7/9/2013	<1	<1	<1	<1	<1	<1	N/A	N/A
	7/9/2013	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/7/2014	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	3/24/2015	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	10/20/2015	<1	<1	<1	<1	<1	<1	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
5/5/2016	<1	<1	<1	<1	<1	<1	<1	<1	
5/5/2016	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	
10/14/2016	<1	<1	<1	<1	<1	<1	<1	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
1,4-Dichlorobenzene, ug/L (CAS NO - 106-46-7)	5/16/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	10/19/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	5/9/2018	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	8/23/2021	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/23/2021	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	3/15/2022	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/10/2022	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	6/22/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
2-Butanone, ug/L (CAS NO - 78-93-3)	2/5/2008	N/A	< 0.91	< 0.91	N/A	< 0.91	< 0.91	N/A	N/A
	4/21/2008	< 0.91	< 0.91	< 0.91	N/A	< 0.91	< 0.91	N/A	N/A
	6/10/2008	< 0.91	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.91	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.91	< 0.91	N/A	< 0.91	< 0.91	N/A	N/A
	9/5/2008	< 0.91	< 0.91	< 0.91	N/A	< 0.91	< 0.91	N/A	N/A
	9/5/2008	N/A	< 0.91	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	12/8/2008	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	12/8/2008	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	4/13/2009	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	8/28/2009	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/28/2009	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	4/21/2010	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	8/31/2010	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	4/26/2011	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	10/11/2011	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	4/16/2012	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	7/30/2012	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	7/9/2013	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	7/9/2013	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/7/2014	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/24/2015	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	10/20/2015	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	5/5/2016	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	5/5/2016	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
5/16/2017	< 10	< 10	< 10	< 10	< 10	< 10	< 10	1.6*	
10/19/2017	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	
5/9/2018	< 10	< 10	< 10	< 10	< 10	< 10	2.43*	N/A	
8/23/2021	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
2-Butanone, ug/L (CAS NO - 78-93-3)	8/23/2021	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/15/2022	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/10/2022	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	6/22/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A
2-Hexanone, ug/L (CAS NO - 591-78-6)	2/5/2008	N/A	< 1.76	< 1.76	N/A	< 1.76	< 1.76	N/A	N/A
	4/21/2008	< 1.76	< 1.76	< 1.76	N/A	< 1.76	< 1.76	N/A	N/A
	6/10/2008	< 1.76	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 1.76	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 1.76	< 1.76	N/A	< 1.76	< 1.76	N/A	N/A
	9/5/2008	< 1.76	< 1.76	< 1.76	N/A	< 1.76	< 1.76	N/A	N/A
	9/5/2008	N/A	< 1.76	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	12/8/2008	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	12/8/2008	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	4/13/2009	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	8/28/2009	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/28/2009	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	4/21/2010	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	8/31/2010	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	4/26/2011	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	10/11/2011	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	4/16/2012	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	7/30/2012	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	7/9/2013	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	7/9/2013	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/7/2014	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/24/2015	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	10/20/2015	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	5/5/2016	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	5/5/2016	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	5/16/2017	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	10/19/2017	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	5/9/2018	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	8/23/2021	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
8/23/2021	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
3/15/2022	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	
3/15/2022	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	
8/10/2022	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
2-Hexanone, ug/L (CAS NO - 591-78-6)	8/10/2022	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	6/22/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A
4-Methyl-2-Pentanone, ug/L (CAS NO - 108-10-1)	2/5/2008	N/A	< 0.31	< 0.31	N/A	< 0.31	< 0.31	N/A	N/A
	4/21/2008	< 0.31	< 0.31	< 0.31	N/A	< 0.31	< 0.31	N/A	N/A
	6/10/2008	< 0.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.31	< 0.31	N/A	< 0.31	< 0.31	N/A	N/A
	9/5/2008	< 0.31	< 0.31	< 0.31	N/A	< 0.31	< 0.31	N/A	N/A
	9/5/2008	N/A	< 0.31	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	12/8/2008	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	12/8/2008	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	4/13/2009	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	8/28/2009	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/28/2009	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	4/21/2010	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	8/31/2010	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	4/26/2011	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	10/11/2011	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	4/16/2012	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	7/30/2012	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	7/9/2013	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	7/9/2013	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/7/2014	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/24/2015	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	10/20/2015	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	5/5/2016	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	5/5/2016	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	5/16/2017	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	10/19/2017	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	5/9/2018	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	8/23/2021	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/23/2021	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/15/2022	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
8/10/2022	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	
8/10/2022	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	
6/22/2023	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	
6/22/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	
11/13/2023	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
4-Methyl-2-Pentanone, ug/L (CAS NO - 108-10-1)	11/13/2023	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A
Acetone, ug/L (CAS NO - 67-64-1)	2/5/2008	N/A	< 4.62	< 4.62	N/A	< 4.62	< 4.62	N/A	N/A
	4/21/2008	< 4.62	< 4.62	< 4.62	N/A	< 4.62	< 4.62	N/A	N/A
	6/10/2008	< 4.62	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 4.62	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 4.62	< 4.62	N/A	< 4.62	< 4.62	N/A	N/A
	9/5/2008	< 4.62	< 4.62	< 4.62	N/A	< 4.62	< 4.62	N/A	N/A
	9/5/2008	N/A	< 4.62	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	12/8/2008	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	12/8/2008	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	4/13/2009	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	8/28/2009	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/28/2009	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	4/21/2010	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	8/31/2010	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	4/26/2011	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	10/11/2011	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	4/16/2012	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	7/30/2012	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	7/9/2013	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	7/9/2013	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/7/2014	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/24/2015	3.87*	< 10	< 10	< 10	9.7*	4.93*	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	5.56*	N/A	N/A	N/A
	10/20/2015	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	5/5/2016	< 10	2.22*	< 10	< 10	< 10	< 10	< 10	< 10
	5/5/2016	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 10	< 10	< 10	< 10	< 10	3.19*	< 10	N/A
	5/16/2017	< 10	< 10	< 10	< 10	1.8*	< 10	< 10	N/A
	10/19/2017	2.32*	< 10	2.61*	2.93*	5.46*	< 10	< 10	N/A
	5/9/2018	< 10	1.85*	< 10	1.83*	2.49*	1.93*	< 10	N/A
	10/26/2018	N/A	3.14*	N/A	N/A	N/A	N/A	N/A	N/A
	8/23/2021	< 10	< 10	< 10	3.1	3.71	< 10	N/A	N/A
	8/23/2021	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/15/2022	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/10/2022	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	6/22/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A
Acrylonitrile, ug/L (CAS NO - 107-13-1)	2/5/2008	N/A	< 1.28	< 1.28	N/A	< 1.28	< 1.28	N/A	N/A
	4/21/2008	< 1.28	< 1.28	< 1.28	N/A	< 1.28	< 1.28	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Acrylonitrile, ug/L (CAS NO - 107-13-1)	6/10/2008	< 1.28	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 1.28	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 1.28	< 1.28	N/A	< 1.28	< 1.28	N/A	N/A
	9/5/2008	< 1.28	< 1.28	< 1.28	N/A	< 1.28	< 1.28	N/A	N/A
	9/5/2008	N/A	< 1.28	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	12/8/2008	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	12/8/2008	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	4/13/2009	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	8/28/2009	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/28/2009	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	4/21/2010	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	8/31/2010	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	4/26/2011	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	10/11/2011	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	4/16/2012	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	7/30/2012	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	7/9/2013	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	7/9/2013	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/7/2014	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/24/2015	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	10/20/2015	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	5/5/2016	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	5/5/2016	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
10/14/2016	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	
5/16/2017	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	
10/19/2017	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	
5/9/2018	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	
8/23/2021	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
8/23/2021	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
3/15/2022	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
3/15/2022	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	
8/10/2022	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
8/10/2022	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	
6/22/2023	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
6/22/2023	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	
11/13/2023	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
11/13/2023	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	
Benzene, ug/L (CAS NO - 71-43-2)	2/5/2008	N/A	< 0.16	< 0.16	N/A	< 0.16	< 0.16	N/A	N/A
	4/21/2008	< 0.16	< 0.16	< 0.16	N/A	< 0.16	< 0.16	N/A	N/A
	6/10/2008	< 0.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	0.16	< 0.16	N/A	< 0.16	< 0.16	N/A	N/A
	9/5/2008	< 0.16	0.4	< 0.16	N/A	< 0.16	< 0.16	N/A	N/A

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Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Benzene, ug/L (CAS NO - 71-43-2)	9/5/2008	N/A	0.45	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A
	12/8/2008	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A
	12/8/2008	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 0.5	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A
	4/13/2009	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A
	8/28/2009	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A
	8/28/2009	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 0.5	N/A	N/A	N/A	< 0.5	N/A	N/A
	4/21/2010	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A
	8/31/2010	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A
	4/26/2011	< 0.5	1.26	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A
	7/25/2011	N/A	N/A	< 0.5	< 0.5	< 0.5	N/A	N/A	N/A
	10/11/2011	< 0.5	1.89	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	10/11/2011	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 0.5	1.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A
	4/16/2012	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 0.5	2.26	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A
	7/30/2012	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A
	7/9/2013	< 0.5	1.32	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A
	7/9/2013	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 0.5	0.731	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A
	8/7/2014	< 0.5	1.44	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A
	3/24/2015	< 0.5	1.72	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A
	10/20/2015	< 0.5	3.39	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A
	5/5/2016	< 0.5	2.15	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	5/5/2016	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 0.5	3.75	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A
	5/16/2017	< 0.5	2.56	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A
	10/19/2017	< 0.5	2.48	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A
	5/9/2018	< 0.5	2.55	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A
10/26/2018	N/A	2.65	N/A	N/A	N/A	N/A	N/A	N/A	
4/10/2019	N/A	2.28	N/A	N/A	N/A	N/A	N/A	N/A	
10/8/2019	N/A	2.36	N/A	N/A	N/A	N/A	N/A	N/A	
4/6/2020	N/A	2.44	N/A	N/A	N/A	N/A	N/A	N/A	
10/28/2020	N/A	1.23	N/A	N/A	N/A	N/A	N/A	N/A	
3/31/2021	N/A	0.811	N/A	N/A	N/A	N/A	N/A	N/A	
8/23/2021	< 0.5	1.93	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A	
8/23/2021	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
3/15/2022	< 0.5	0.648	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A	
3/15/2022	N/A	0.781	N/A	N/A	N/A	N/A	N/A	N/A	
8/10/2022	< 0.5	1.67	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A	
8/10/2022	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	
6/22/2023	< 0.5	1.74	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A	
6/22/2023	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	
11/13/2023	< 0.5	0.7	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A	
11/13/2023	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	
Bromochloromethane, ug/L (CAS NO - 74-97-5)	2/5/2008	N/A	< 0.76	< 0.76	N/A	< 0.76	< 0.76	N/A	N/A
	4/21/2008	< 0.76	< 0.76	< 0.76	N/A	< 0.76	< 0.76	N/A	N/A
	6/10/2008	< 0.76	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.76	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Bromochloromethane, ug/L (CAS NO - 74-97-5)	6/20/2008	N/A	< 0.76	< 0.76	N/A	< 0.76	< 0.76	N/A	N/A
	9/5/2008	< 0.76	< 0.76	< 0.76	N/A	< 0.76	< 0.76	N/A	N/A
	9/5/2008	N/A	< 0.76	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A
	12/8/2008	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	12/8/2008	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A
	4/13/2009	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	8/28/2009	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	8/28/2009	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A
	4/21/2010	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	8/31/2010	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	4/26/2011	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	7/25/2011	N/A	N/A	< 5	< 5	< 5	N/A	N/A	N/A
	10/11/2011	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	10/11/2011	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	4/16/2012	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	7/30/2012	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	7/9/2013	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	7/9/2013	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	8/7/2014	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	3/24/2015	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	10/20/2015	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	5/5/2016	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	5/5/2016	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	5/16/2017	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A
10/19/2017	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	
5/9/2018	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	
8/23/2021	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
8/23/2021	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
3/15/2022	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
3/15/2022	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	
8/10/2022	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
8/10/2022	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	
6/22/2023	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
6/22/2023	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	
11/13/2023	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
11/13/2023	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	
Bromodichloromethane, ug/L (CAS NO - 75-27-4)	2/5/2008	N/A	< 0.2	< 0.2	N/A	< 0.2	< 0.2	N/A	N/A
	4/21/2008	< 0.2	< 0.2	< 0.2	N/A	< 0.2	< 0.2	N/A	N/A
	6/10/2008	< 0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.2	< 0.2	N/A	< 0.2	< 0.2	N/A	N/A
	9/5/2008	< 0.2	< 0.2	< 0.2	N/A	< 0.2	< 0.2	N/A	N/A
	9/5/2008	N/A	< 0.2	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A

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Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Bromodichloromethane, ug/L (CAS NO - 75-27-4)	12/8/2008	<1	<1	<1	<1	<1	<1	N/A	N/A
	12/8/2008	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	<1	N/A	N/A	<1	N/A	N/A	N/A	N/A
	4/13/2009	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	8/28/2009	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/28/2009	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	<1	N/A	N/A	N/A	<1	N/A	N/A
	4/21/2010	<4	<4	<4	<4	<4	<4	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	<4	N/A	N/A	N/A
	8/31/2010	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	4/26/2011	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	7/25/2011	N/A	N/A	<1	<1	<1	N/A	N/A	N/A
	10/11/2011	<1	<1	<1	<1	<1	<1	<1	<1
	10/11/2011	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	<1	<1	<1	<1	<1	<1	<1	N/A
	4/16/2012	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	7/30/2012	<1	<1	<1	<1	<1	<1	N/A	N/A
	7/30/2012	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	7/9/2013	<1	<1	<1	<1	<1	<1	N/A	N/A
	7/9/2013	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/7/2014	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	3/24/2015	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	10/20/2015	<1	<1	<1	<1	<1	<1	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	5/5/2016	<1	<1	<1	<1	<1	<1	<1	<1
	5/5/2016	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	10/14/2016	<1	<1	<1	<1	<1	<1	<1	N/A
	5/16/2017	<1	<1	<1	<1	<1	<1	<1	N/A
	10/19/2017	<1	<1	<1	<1	<1	<1	<1	N/A
	5/9/2018	<1	<1	<1	<1	<1	<1	<1	N/A
	8/23/2021	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/23/2021	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3/15/2022	<1	<1	<1	<1	<1	<1	N/A	N/A	
3/15/2022	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A	
8/10/2022	<1	<1	<1	<1	<1	<1	N/A	N/A	
8/10/2022	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	
6/22/2023	<1	<1	<1	<1	<1	<1	N/A	N/A	
6/22/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	
11/13/2023	<1	<1	<1	<1	<1	<1	N/A	N/A	
11/13/2023	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	
Bromoform, ug/L (CAS NO - 75-25-2)	2/5/2008	N/A	< 0.43	< 0.43	N/A	< 0.43	< 0.43	N/A	N/A
	4/21/2008	< 0.43	< 0.43	< 0.43	N/A	< 0.43	< 0.43	N/A	N/A
	6/10/2008	< 0.43	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.43	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.43	< 0.43	N/A	< 0.43	< 0.43	N/A	N/A
	9/5/2008	< 0.43	< 0.43	< 0.43	N/A	< 0.43	< 0.43	N/A	N/A
	9/5/2008	N/A	< 0.43	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A
	12/8/2008	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	12/8/2008	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A
	4/13/2009	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A

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Summary of Groundwater Chemistry
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 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Bromoform, ug/L (CAS NO - 75-25-2)	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	8/28/2009	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	8/28/2009	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A
	4/21/2010	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	8/31/2010	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	4/26/2011	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	7/25/2011	N/A	N/A	< 5	< 5	< 5	N/A	N/A	N/A
	10/11/2011	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	10/11/2011	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	4/16/2012	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	7/30/2012	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	7/9/2013	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	7/9/2013	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	8/7/2014	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	3/24/2015	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	10/20/2015	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	5/5/2016	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	5/5/2016	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	5/16/2017	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	10/19/2017	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	5/9/2018	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	8/23/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	8/23/2021	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	3/15/2022	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	8/10/2022	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
6/22/2023	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
6/22/2023	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	
11/13/2023	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
11/13/2023	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	
Bromomethane, ug/L (CAS NO - 74-83-9)	2/5/2008	N/A	< 0.48	< 0.48	N/A	< 0.48	< 0.48	N/A	N/A
	4/21/2008	< 0.48	< 0.48	< 0.48	N/A	< 0.48	< 0.48	N/A	N/A
	6/10/2008	< 0.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.48	< 0.48	N/A	< 0.48	< 0.48	N/A	N/A
	9/5/2008	< 0.48	< 0.48	< 0.48	N/A	< 0.48	< 0.48	N/A	N/A
	9/5/2008	N/A	< 0.48	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A
	12/8/2008	< 0.48	< 0.48	< 4	< 4	< 0.48	< 0.48	N/A	N/A
	12/8/2008	N/A	< 0.48	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 4	N/A	N/A	< 4	N/A	N/A	N/A	N/A
	4/13/2009	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	8/28/2009	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	8/28/2009	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 4	N/A	N/A	N/A	< 4	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Bromomethane, ug/L (CAS NO - 74-83-9)	4/21/2010	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	8/31/2010	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	4/26/2011	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	7/25/2011	N/A	N/A	< 4	< 4	< 4	N/A	N/A	N/A
	10/11/2011	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
	10/11/2011	< 50	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 50	< 50	< 50	< 50	< 50	< 50	< 50	N/A
	4/16/2012	N/A	N/A	< 50	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	7/30/2012	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	7/9/2013	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	7/9/2013	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	8/7/2014	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	3/24/2015	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	10/20/2015	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	5/5/2016	< 4	< 4	0.334*	< 4	< 4	< 4	0.335*	0.244*
	5/5/2016	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	5/16/2017	0.782*	0.536*	0.568*	0.495*	< 4	0.399*	0.416*	N/A
	10/19/2017	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	5/9/2018	< 4	0.309*	< 4	< 4	0.345*	0.547*	0.269*	N/A
	4/10/2019	N/A	1.48*	N/A	N/A	N/A	N/A	N/A	N/A
	8/23/2021	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	8/23/2021	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	3/15/2022	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	8/10/2022	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	6/22/2023	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
11/13/2023	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	
Carbon Disulfide, ug/L (CAS NO - 75-15-0)	2/5/2008	N/A	< 0.18	< 0.18	N/A	< 0.18	< 0.18	N/A	N/A
	4/21/2008	< 0.18	< 0.18	< 0.18	N/A	< 0.18	< 0.18	N/A	N/A
	6/10/2008	< 0.18	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.18	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.18	< 0.18	N/A	< 0.18	0.19	N/A	N/A
	9/5/2008	< 0.18	< 0.18	< 0.18	N/A	< 0.18	< 0.18	N/A	N/A
	9/5/2008	N/A	< 0.18	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	12/8/2008	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	12/8/2008	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	4/13/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	8/28/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/28/2009	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	4/21/2010	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	8/31/2010	< 4	< 1	< 4	< 4	< 4	< 1	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG	
Carbon Disulfide, ug/L (CAS NO - 75-15-0)	8/31/2010	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	
	4/26/2011	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	
	7/25/2011	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A	
	10/11/2011	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
	10/11/2011	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	4/16/2012	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	4/16/2012	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
	7/30/2012	< 1	< 1	< 1	8.17	< 1	< 1	N/A	N/A	
	7/30/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/5/2013	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	3/5/2013	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	
	7/9/2013	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	7/9/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	2/11/2014	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	8/7/2014	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	
	3/24/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	3/24/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	
	10/20/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	
	5/5/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
	5/5/2016	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
	10/14/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	5/16/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	10/19/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	5/9/2018	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
	8/23/2021	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	8/23/2021	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	3/15/2022	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	
	8/10/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	8/10/2022	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
	6/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	6/22/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
	11/13/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	11/13/2023	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	
	Carbon Tetrachloride, ug/L (CAS NO - 56-23-5)	2/5/2008	N/A	< 0.31	< 0.31	N/A	< 0.31	< 0.31	N/A	N/A
		4/21/2008	< 0.31	< 0.31	< 0.31	N/A	< 0.31	< 0.31	N/A	N/A
		6/10/2008	< 0.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/10/2008		< 0.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6/20/2008		N/A	< 0.31	< 0.31	N/A	< 0.31	< 0.31	N/A	N/A	
9/5/2008		< 0.31	< 0.31	< 0.31	N/A	< 0.31	< 0.31	N/A	N/A	
9/5/2008		N/A	< 0.31	N/A	N/A	N/A	N/A	N/A	N/A	
9/24/2008		N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	
12/8/2008		< 5	< 5	< 2	< 2	< 5	< 5	N/A	N/A	
12/8/2008		N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	
2/27/2009		< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	
4/13/2009		< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	
4/13/2009		N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	
8/28/2009		< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	
8/28/2009		N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	
11/13/2009		N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	
4/21/2010		< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
4/21/2010		N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	
8/31/2010		< 5	< 4	< 5	< 5	< 5	< 4	N/A	N/A	
8/31/2010		N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	
4/26/2011		< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	
4/26/2011		N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	
7/25/2011		N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Carbon Tetrachloride, ug/L (CAS NO - 56-23-5)	10/11/2011	<2	<2	<2	<2	<2	<2	<2	<2
	10/11/2011	<2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	<2	<2	<2	<2	<2	<2	<2	N/A
	4/16/2012	N/A	N/A	<2	N/A	N/A	N/A	N/A	N/A
	7/30/2012	<2	<2	<2	<2	<2	<2	<2	N/A
	7/30/2012	<2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	<2	<2	<2	<2	<2	<2	<2	N/A
	3/5/2013	N/A	N/A	N/A	N/A	<2	N/A	N/A	N/A
	7/9/2013	<2	<2	<2	<2	<2	<2	<2	N/A
	7/9/2013	<2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	<2	<2	<2	<2	<2	<2	<2	N/A
	8/7/2014	<2	<2	<2	<2	<2	<2	<2	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	<2	N/A	N/A
	3/24/2015	<2	<2	<2	<2	<2	<2	<2	N/A
	3/24/2015	N/A	N/A	N/A	N/A	<2	N/A	N/A	N/A
	10/20/2015	<2	<2	<2	<2	<2	<2	<2	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	<2	N/A	N/A
	5/5/2016	<2	<2	<2	<2	<2	<2	<2	<2
	5/5/2016	N/A	N/A	<2	N/A	N/A	N/A	N/A	N/A
	10/14/2016	<2	<2	<2	<2	<2	<2	<2	N/A
	5/16/2017	<2	<2	<2	<2	<2	<2	<2	N/A
	10/19/2017	<2	<2	<2	<2	<2	<2	<2	N/A
	5/9/2018	<2	<2	<2	<2	<2	<2	<2	N/A
	8/23/2021	<2	<2	<2	<2	<2	<2	<2	N/A
	8/23/2021	<2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	<2	<2	<2	<2	<2	<2	<2	N/A
	3/15/2022	N/A	<2	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	<2	<2	<2	<2	<2	<2	<2	N/A
	8/10/2022	N/A	N/A	<2	N/A	N/A	N/A	N/A	N/A
	6/22/2023	<2	<2	<2	<2	<2	<2	<2	N/A
	6/22/2023	N/A	N/A	<2	N/A	N/A	N/A	N/A	N/A
	11/13/2023	<2	<2	<2	<2	<2	<2	<2	N/A
11/13/2023	N/A	N/A	N/A	<2	N/A	N/A	N/A	N/A	
Chlorobenzene, ug/L (CAS NO - 108-90-7)	2/5/2008	N/A	<0.17	<0.17	N/A	<0.17	<0.17	N/A	N/A
	4/21/2008	<0.17	<0.17	<0.17	N/A	<0.17	<0.17	N/A	N/A
	6/10/2008	<0.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	<0.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	<0.17	<0.17	N/A	<0.17	<0.17	N/A	N/A
	9/5/2008	<0.17	<0.17	<0.17	N/A	<0.17	<0.17	N/A	N/A
	9/5/2008	N/A	<0.17	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A
	12/8/2008	<1	<1	<1	<1	<1	<1	N/A	N/A
	12/8/2008	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	<1	N/A	N/A	<1	N/A	N/A	N/A	N/A
	4/13/2009	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	8/28/2009	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/28/2009	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	<1	N/A	N/A	N/A	<1	N/A	N/A
	4/21/2010	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	8/31/2010	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	4/26/2011	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	7/25/2011	N/A	N/A	<1	<1	<1	N/A	N/A	N/A
	10/11/2011	<1	<1	<1	<1	<1	<1	<1	<1
	10/11/2011	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	<1	<1	<1	<1	<1	<1	<1	N/A
	4/16/2012	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
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Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Chlorobenzene, ug/L (CAS NO - 108-90-7)	7/30/2012	<1	<1	<1	<1	<1	<1	N/A	N/A
	7/30/2012	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	7/9/2013	<1	<1	<1	<1	<1	<1	N/A	N/A
	7/9/2013	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/7/2014	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	3/24/2015	<1	0.432*	<1	<1	<1	<1	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	10/20/2015	<1	1.32	<1	<1	<1	<1	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	5/5/2016	<1	<1	<1	<1	<1	<1	<1	<1
	5/5/2016	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	10/14/2016	<1	1.34	<1	<1	<1	<1	<1	N/A
	5/16/2017	<1	1.02	<1	<1	<1	<1	<1	N/A
	10/19/2017	<1	1.06	<1	<1	<1	<1	<1	N/A
	5/9/2018	<1	0.752*	<1	<1	<1	<1	<1	N/A
	10/26/2018	N/A	0.999*	N/A	N/A	N/A	N/A	N/A	N/A
	10/8/2019	N/A	1.21	N/A	N/A	N/A	N/A	N/A	N/A
	4/6/2020	N/A	1.01	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2020	N/A	0.56*	N/A	N/A	N/A	N/A	N/A	N/A
	8/23/2021	<1	0.814	<1	<1	<1	<1	N/A	N/A
	8/23/2021	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/15/2022	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	<1	0.71*	<1	<1	<1	<1	N/A	N/A
	8/10/2022	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	6/22/2023	<1	<1	<1	<1	<1	<1	N/A	N/A
	6/22/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	11/13/2023	<1	<1	<1	<1	<1	<1	N/A	N/A
11/13/2023	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	
Chlorodibromomethane, ug/L (CAS NO - 124-48-1)	2/5/2008	N/A	< 0.26	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A
	4/21/2008	< 0.26	< 0.26	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A
	6/10/2008	< 0.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.26	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A
	9/5/2008	< 0.26	< 0.26	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A
	9/5/2008	N/A	< 0.26	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A
	12/8/2008	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	12/8/2008	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A
	4/13/2009	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	8/28/2009	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	8/28/2009	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A
	4/21/2010	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	8/31/2010	< 10	< 5	< 10	< 10	< 10	< 5	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	4/26/2011	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	7/25/2011	N/A	N/A	< 5	< 5	< 5	N/A	N/A	N/A
	10/11/2011	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	10/11/2011	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	4/16/2012	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Chlorodibromomethane, ug/L (CAS NO - 124-48-1)	7/30/2012	<5	<5	<5	<5	<5	<5	N/A	N/A
	7/30/2012	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	<5	<5	<5	<5	<5	<5	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	<5	N/A	N/A	N/A
	7/9/2013	<5	<5	<5	<5	<5	<5	N/A	N/A
	7/9/2013	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	<5	<5	<5	<5	<5	<5	N/A	N/A
	8/7/2014	<5	<5	<5	<5	<5	<5	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	<5	N/A	N/A
	3/24/2015	<5	<5	<5	<5	<5	<5	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	<5	N/A	N/A	N/A
	10/20/2015	<5	<5	<5	<5	<5	<5	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	<5	N/A	N/A
	5/5/2016	<5	<5	<5	<5	<5	<5	<5	<5
	5/5/2016	N/A	N/A	<5	N/A	N/A	N/A	N/A	N/A
	10/14/2016	<5	<5	<5	<5	<5	<5	<5	N/A
	5/16/2017	<5	<5	<5	<5	<5	<5	<5	N/A
	10/19/2017	<5	<5	<5	<5	<5	<5	<5	N/A
	5/9/2018	<5	<5	<5	<5	<5	<5	<5	N/A
	8/23/2021	<5	<5	<5	<5	<5	<5	<5	N/A
	8/23/2021	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	<5	<5	<5	<5	<5	<5	N/A	N/A
	3/15/2022	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	<5	<5	<5	<5	<5	<5	N/A	N/A
	8/10/2022	N/A	N/A	<5	N/A	N/A	N/A	N/A	N/A
	6/22/2023	<5	<5	<5	<5	<5	<5	N/A	N/A
	6/22/2023	N/A	N/A	<5	N/A	N/A	N/A	N/A	N/A
	11/13/2023	<5	<5	<5	<5	<5	<5	N/A	N/A
	11/13/2023	N/A	N/A	N/A	<5	N/A	N/A	N/A	N/A
	Chloroethane, ug/L (CAS NO - 75-00-3)	2/5/2008	N/A	<0.5	<0.5	N/A	<0.5	3.79	N/A
4/21/2008		<0.5	1.43	<0.5	N/A	<0.5	2.56	N/A	N/A
6/10/2008		<0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/10/2008		<0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/20/2008		N/A	1.21	<0.5	N/A	<0.5	3.45	N/A	N/A
9/5/2008		<0.5	1.06	<0.5	N/A	<0.5	3.8	N/A	N/A
9/5/2008		N/A	1.29	N/A	N/A	N/A	N/A	N/A	N/A
9/24/2008		N/A	N/A	N/A	<4	N/A	N/A	N/A	N/A
12/8/2008		<4	<4	<4	<4	<4	<4	N/A	N/A
12/8/2008		N/A	<4	N/A	N/A	N/A	N/A	N/A	N/A
2/27/2009		<4	N/A	N/A	<4	N/A	N/A	N/A	N/A
4/13/2009		<4	<4	<4	<4	<4	<4	N/A	N/A
4/13/2009		N/A	N/A	N/A	N/A	N/A	<4	N/A	N/A
8/28/2009		<4	<4	<4	<4	<4	4.63	N/A	N/A
8/28/2009		N/A	N/A	<4	N/A	N/A	N/A	N/A	N/A
11/13/2009		N/A	<4	N/A	N/A	N/A	<4	N/A	N/A
4/21/2010		<4	<4	<4	<4	<4	4.3	N/A	N/A
4/21/2010		N/A	N/A	N/A	N/A	<4	N/A	N/A	N/A
8/31/2010		<4	<4	<4	<4	<4	<4	N/A	N/A
8/31/2010		N/A	N/A	N/A	N/A	<4	N/A	N/A	N/A
4/26/2011		<4	<4	<4	<4	<4	<4	N/A	N/A
4/26/2011		N/A	N/A	N/A	N/A	N/A	<4	N/A	N/A
7/25/2011		N/A	N/A	<4	<4	<4	N/A	N/A	N/A
10/11/2011		<4	<4	<4	<4	<4	<4	<4	<4
10/11/2011		<4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4/16/2012		<4	<4	<4	<4	<4	<4	<4	N/A
4/16/2012		N/A	N/A	<4	N/A	N/A	N/A	N/A	N/A
7/30/2012		<4	<4	<4	<4	<4	<4	N/A	N/A
7/30/2012		<4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3/5/2013		<4	<4	<4	<4	<4	<4	N/A	N/A
3/5/2013	N/A	N/A	N/A	N/A	<4	N/A	N/A	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG	
Chloroethane, ug/L (CAS NO - 75-00-3)	7/9/2013	< 4	< 4	< 4	5.29	< 4	< 4	N/A	N/A	
	7/9/2013	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	2/11/2014	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	
	8/7/2014	< 4	3.82*	< 4	< 4	< 4	1.57*	N/A	N/A	
	8/7/2014	N/A	N/A	N/A	N/A	N/A	1.42*	N/A	N/A	
	3/24/2015	< 4	3.55*	< 4	< 4	< 4	0.644*	N/A	N/A	
	3/24/2015	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	
	10/20/2015	< 4	3.84*	< 4	< 4	< 4	0.814*	N/A	N/A	
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	
	5/5/2016	< 4	3.58*	< 4	< 4	< 4	0.748*	< 4	< 4	
	5/5/2016	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	
	10/14/2016	< 4	5.53	< 4	< 4	< 4	0.854*	< 4	N/A	
	5/16/2017	< 4	3.73*	< 4	< 4	< 4	0.843*	< 4	N/A	
	10/19/2017	< 4	< 4	< 4	< 4	< 4	1.45*	< 4	N/A	
	5/9/2018	< 4	4.17	< 4	< 4	< 4	0.384*	< 4	N/A	
	10/26/2018	N/A	4.61	N/A	N/A	N/A	N/A	N/A	N/A	
	4/10/2019	N/A	2.92*	N/A	N/A	N/A	N/A	N/A	N/A	
	10/8/2019	N/A	N/A	N/A	N/A	N/A	1.2*	N/A	N/A	
	4/6/2020	N/A	1.62*	N/A	N/A	N/A	N/A	N/A	N/A	
	10/28/2020	N/A	N/A	N/A	N/A	N/A	1.16*	N/A	N/A	
	8/23/2021	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	
	8/23/2021	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/15/2022	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	
	3/15/2022	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	
	8/10/2022	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	
	8/10/2022	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	
	6/22/2023	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	
	6/22/2023	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	
	11/13/2023	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	
	11/13/2023	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	
	Chloroform, ug/L (CAS NO - 67-66-3)	2/5/2008	N/A	< 0.17	< 0.17	N/A	< 0.17	< 0.17	N/A	N/A
		4/21/2008	< 0.17	< 0.17	< 0.17	N/A	< 0.17	< 0.17	N/A	N/A
		6/10/2008	< 0.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/10/2008		< 0.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6/20/2008		N/A	< 0.17	< 0.17	N/A	< 0.17	< 0.17	N/A	N/A	
9/5/2008		< 0.17	< 0.17	< 0.17	N/A	< 0.17	< 0.17	N/A	N/A	
9/5/2008		N/A	< 0.17	N/A	N/A	N/A	N/A	N/A	N/A	
9/24/2008		N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	
12/8/2008		< 1	< 1	< 2.5	< 2.5	< 1	< 1	N/A	N/A	
12/8/2008		N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	
2/27/2009		< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	
4/13/2009		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
4/13/2009		N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	
8/28/2009		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
8/28/2009		N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
11/13/2009		N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	
4/21/2010		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
4/21/2010		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	
8/31/2010		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
8/31/2010		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	
4/26/2011		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
4/26/2011		N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	
7/25/2011		N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A	
10/11/2011		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
10/11/2011		< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
4/16/2012		< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
4/16/2012		N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
7/30/2012		< 1	< 1	< 2	< 2	< 2	< 1	N/A	N/A	
7/30/2012		< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
3/5/2013		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG	
Chloroform, ug/L (CAS NO - 67-66-3)	3/5/2013	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A	
	7/9/2013	<1	<1	<1	<1	<1	<1	N/A	N/A	
	7/9/2013	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	2/11/2014	<1	<1	<1	<1	<1	<1	N/A	N/A	
	8/7/2014	<1	<1	<1	<1	<1	<1	N/A	N/A	
	8/7/2014	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A	
	3/24/2015	<1	<1	<1	<1	<1	<1	N/A	N/A	
	3/24/2015	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A	
	10/20/2015	<1	<1	<1	<1	<1	<1	N/A	N/A	
	10/20/2015	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A	
	5/5/2016	<1	<1	<1	<1	<1	<1	<1	<1	
	5/5/2016	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	
	10/14/2016	<1	<1	<1	<1	<1	<1	<1	N/A	
	5/16/2017	<1	<1	<1	<1	<1	<1	<1	N/A	
	10/19/2017	<1	<1	<1	<1	<1	<1	<1	N/A	
	5/9/2018	<1	<1	<1	<1	<1	<1	<1	N/A	
	8/23/2021	<3	<3	<3	<3	<3	<3	<3	N/A	
	8/23/2021	<3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/15/2022	<3	<3	<3	<3	<3	<3	<3	N/A	
	3/15/2022	N/A	<3	N/A	N/A	N/A	N/A	N/A	N/A	
	8/10/2022	<3	<3	<3	<3	<3	<3	<3	N/A	
	8/10/2022	N/A	N/A	<3	N/A	N/A	N/A	N/A	N/A	
	6/22/2023	<3	<3	<3	<3	<3	<3	<3	N/A	
	6/22/2023	N/A	N/A	<3	N/A	N/A	N/A	N/A	N/A	
	11/13/2023	<3	<3	<3	<3	<3	<3	<3	N/A	
	11/13/2023	N/A	N/A	N/A	<3	N/A	N/A	N/A	N/A	
	Chloromethane, ug/L (CAS NO - 74-87-3)	2/5/2008	N/A	0.31	<0.2	N/A	<0.2	<0.2	N/A	N/A
		4/21/2008	<0.2	<0.2	<0.2	N/A	<0.2	<0.2	N/A	N/A
		6/10/2008	<0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		6/10/2008	<0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		6/20/2008	N/A	<0.2	<0.2	N/A	<0.2	0.31	N/A	N/A
		9/5/2008	<0.2	<0.2	<0.2	N/A	<0.2	<0.2	N/A	N/A
		9/5/2008	N/A	<0.2	N/A	N/A	N/A	N/A	N/A	N/A
9/24/2008		N/A	N/A	N/A	<3	N/A	N/A	N/A	N/A	
12/8/2008		<3	<3	<3	<3	<3	<3	<3	N/A	
12/8/2008		N/A	<3	N/A	N/A	N/A	N/A	N/A	N/A	
2/27/2009		<3	N/A	N/A	<3	N/A	N/A	N/A	N/A	
4/13/2009		<3	<3	<3	<3	<3	<3	<3	N/A	
4/13/2009		N/A	N/A	N/A	N/A	N/A	<3	<3	N/A	
8/28/2009		<3	<3	<3	<3	<3	<3	<3	N/A	
8/28/2009		N/A	N/A	<3	N/A	N/A	N/A	N/A	N/A	
11/13/2009		N/A	<3	N/A	N/A	N/A	<3	<3	N/A	
4/21/2010		<3	<3	<3	<3	<3	<3	<3	N/A	
4/21/2010		N/A	N/A	N/A	N/A	<3	N/A	N/A	N/A	
8/31/2010		<3	<3	<3	<3	<3	<3	<3	N/A	
8/31/2010		N/A	N/A	N/A	N/A	<3	N/A	N/A	N/A	
4/26/2011		<3	<3	<3	<3	<3	<3	<3	N/A	
4/26/2011		N/A	N/A	N/A	N/A	N/A	<3	<3	N/A	
7/25/2011		N/A	N/A	<3	<3	<3	N/A	N/A	N/A	
10/11/2011		<3	<3	<3	<3	<3	<3	<3	<3	
10/11/2011		<3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
4/16/2012		<3	<3	<3	<3	<3	<3	<3	N/A	
4/16/2012		N/A	N/A	<3	N/A	N/A	N/A	N/A	N/A	
7/30/2012		<3	<3	<4	<4	<4	<3	<3	N/A	
7/30/2012		<3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
3/5/2013		<3	<3	<3	<3	<3	<3	<3	N/A	
3/5/2013		N/A	N/A	N/A	N/A	<3	N/A	N/A	N/A	
7/9/2013		<3	<3	<3	<3	<3	<3	<3	N/A	
7/9/2013		<3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2/11/2014	<3	<3	<3	<3	<3	<3	<3	N/A		

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Chloromethane, ug/L (CAS NO - 74-87-3)	8/7/2014	<3	<3	<3	<3	<3	<3	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	<3	N/A	N/A
	3/24/2015	<3	<3	<3	<3	<3	<3	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	<3	N/A	N/A	N/A
	10/20/2015	0.435*	<3	<3	<3	<3	<3	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	<3	N/A	N/A
	5/5/2016	<3	<3	<3	<3	<3	<3	<3	<3
	5/5/2016	N/A	N/A	<3	N/A	N/A	N/A	N/A	N/A
	10/14/2016	<3	<3	<3	<3	<3	<3	<3	N/A
	5/16/2017	<3	<3	<3	<3	<3	<3	<3	N/A
	10/19/2017	<3	<3	<3	<3	<3	<3	<3	N/A
	5/9/2018	<3	<3	<3	<3	<3	<3	<3	N/A
	8/23/2021	<3	<3	<3	<3	<3	<3	N/A	N/A
	8/23/2021	<3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	<3	<3	<3	<3	<3	<3	N/A	N/A
	3/15/2022	N/A	<3	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	<3	<3	<3	<3	<3	<3	N/A	N/A
	8/10/2022	N/A	N/A	<3	N/A	N/A	N/A	N/A	N/A
	6/22/2023	<3	<3	<3	<3	<3	<3	N/A	N/A
	6/22/2023	N/A	N/A	<3	N/A	N/A	N/A	N/A	N/A
11/13/2023	<3	<3	<3	<3	<3	<3	N/A	N/A	
11/13/2023	N/A	N/A	N/A	<3	N/A	N/A	N/A	N/A	
cis-1,2-Dichloroethene, ug/L (CAS NO - 156-59-2)	2/5/2008	N/A	<0.37	<0.37	N/A	<0.37	<0.37	N/A	N/A
	4/21/2008	<0.37	1.51	<0.37	N/A	<0.37	<0.37	N/A	N/A
	6/10/2008	<0.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	<0.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	1.82	<0.37	N/A	<0.37	<0.37	N/A	N/A
	9/5/2008	<0.37	2.02	<0.37	N/A	<0.37	<0.37	N/A	N/A
	9/5/2008	N/A	1.96	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A
	12/8/2008	<1	1.04	<1	<1	<1	<1	N/A	N/A
	12/8/2008	N/A	1.07	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	<1	N/A	N/A	<1	N/A	N/A	N/A	N/A
	4/13/2009	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	8/28/2009	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/28/2009	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	<1	N/A	N/A	N/A	<1	N/A	N/A
	4/21/2010	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	8/31/2010	<1	1.45	<1	<1	<1	<1	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	4/26/2011	<1	2	<1	<1	<1	<1	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	7/25/2011	N/A	N/A	<1	<1	<1	N/A	N/A	N/A
	10/11/2011	<1	1.22	<1	<1	<1	<1	<1	<1
	10/11/2011	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	<1	<1	<1	<1	<1	<1	<1	N/A
	4/16/2012	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	7/30/2012	<1	1.73	<1	<1	<1	<1	N/A	N/A
	7/30/2012	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	7/9/2013	<1	1.51	<1	<1	<1	<1	N/A	N/A
	7/9/2013	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2/11/2014	<1	1.01	<1	<1	<1	<1	N/A	N/A	
8/7/2014	<1	1.56	<1	<1	<1	<1	N/A	N/A	
8/7/2014	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A	
3/24/2015	<1	2.67	<1	<1	<1	<1	N/A	N/A	
3/24/2015	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A	

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 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
cis-1,2-Dichloroethene, ug/L (CAS NO - 156-59-2)	10/20/2015	<1	2.1	<1	<1	<1	<1	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	5/5/2016	<1	1.82	<1	<1	<1	<1	<1	<1
	5/5/2016	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	10/14/2016	<1	1.82	<1	<1	<1	<1	<1	N/A
	5/16/2017	<1	1.15	<1	<1	<1	<1	<1	N/A
	10/19/2017	<1	0.725*	<1	<1	<1	<1	<1	N/A
	5/9/2018	<1	1.07	<1	<1	<1	<1	<1	N/A
	10/26/2018	N/A	0.723*	N/A	N/A	N/A	N/A	N/A	N/A
	4/10/2019	N/A	0.83*	N/A	N/A	N/A	N/A	N/A	N/A
	10/8/2019	N/A	0.609*	N/A	N/A	N/A	N/A	N/A	N/A
	4/6/2020	N/A	0.579*	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2020	N/A	0.361*	N/A	N/A	N/A	N/A	N/A	N/A
	8/23/2021	<1	0.386	<1	<1	<1	<1	N/A	N/A
	8/23/2021	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	<1	0.271*	<1	<1	<1	<1	N/A	N/A
	3/15/2022	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	<1	0.272*	<1	<1	<1	<1	N/A	N/A
	8/10/2022	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	6/22/2023	<1	<1	<1	<1	<1	<1	N/A	N/A
	6/22/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	11/13/2023	<1	<1	<1	<1	<1	<1	N/A	N/A
	11/13/2023	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A
cis-1,3-Dichloropropene, ug/L (CAS NO - 10061-01-5)	2/5/2008	N/A	< 0.23	< 0.23	N/A	< 0.23	< 0.23	N/A	N/A
	4/21/2008	< 0.23	< 0.23	< 0.23	N/A	< 0.23	< 0.23	N/A	N/A
	6/10/2008	< 0.23	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.23	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.23	< 0.23	N/A	< 0.23	< 0.23	N/A	N/A
	9/5/2008	< 0.23	< 0.23	< 0.23	N/A	< 0.23	< 0.23	N/A	N/A
	9/5/2008	N/A	< 0.23	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A
	12/8/2008	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	12/8/2008	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A
	4/13/2009	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	8/28/2009	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	8/28/2009	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A
	4/21/2010	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	8/31/2010	< 10	< 5	< 10	< 10	< 10	< 5	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	4/26/2011	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	7/25/2011	N/A	N/A	< 5	< 5	< 5	N/A	N/A	N/A
	10/11/2011	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	10/11/2011	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	4/16/2012	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	7/30/2012	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	7/9/2013	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	7/9/2013	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	8/7/2014	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	3/24/2015	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
cis-1,3-Dichloropropene, ug/L (CAS NO - 10061-01-5)	3/24/2015	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	10/20/2015	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	5/5/2016	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	5/5/2016	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	5/16/2017	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	10/19/2017	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	5/9/2018	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	8/23/2021	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	8/23/2021	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	3/15/2022	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	8/10/2022	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	6/22/2023	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A
	Ethylbenzene, ug/L (CAS NO - 100-41-4)	2/5/2008	N/A	< 0.25	< 0.25	N/A	< 0.25	< 0.25	N/A
4/21/2008		< 0.25	< 0.25	< 0.25	N/A	< 0.25	< 0.25	N/A	N/A
6/10/2008		< 0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/10/2008		< 0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/20/2008		N/A	< 0.25	< 0.25	N/A	< 0.25	< 0.25	N/A	N/A
9/5/2008		< 0.25	< 0.25	< 0.25	N/A	< 0.25	< 0.25	N/A	N/A
9/5/2008		N/A	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A
9/24/2008		N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
12/8/2008		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
12/8/2008		N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
2/27/2009		< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A
4/13/2009		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
4/13/2009		N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
8/28/2009		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
8/28/2009		N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
11/13/2009		N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
4/21/2010		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
4/21/2010		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
8/31/2010		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
8/31/2010		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
4/26/2011		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
4/26/2011		N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
7/25/2011		N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
10/11/2011		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
10/11/2011		< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4/16/2012		< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
4/16/2012		N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
7/30/2012		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
7/30/2012		< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3/5/2013		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
3/5/2013		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
7/9/2013		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
7/9/2013		< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2/11/2014		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
8/7/2014		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
8/7/2014		N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
3/24/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
3/24/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	
10/20/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
10/20/2015	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	
5/5/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Ethylbenzene, ug/L (CAS NO - 100-41-4)	5/5/2016	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/16/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	10/19/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	5/9/2018	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	8/23/2021	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/23/2021	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	3/15/2022	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/10/2022	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	6/22/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
Iodomethane, ug/L (CAS NO - 74-88-4)	2/5/2008	N/A	< 0.4	< 0.4	N/A	< 0.4	< 0.4	N/A	N/A
	4/21/2008	< 0.4	< 0.4	< 0.4	N/A	< 0.4	< 0.4	N/A	N/A
	6/10/2008	< 0.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.4	< 0.4	N/A	< 0.4	< 0.4	N/A	N/A
	9/5/2008	< 0.4	< 0.4	< 0.4	N/A	< 0.4	< 0.4	N/A	N/A
	9/5/2008	N/A	< 0.4	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	12/8/2008	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	12/8/2008	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	4/13/2009	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	8/28/2009	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/28/2009	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A
	4/21/2010	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	8/31/2010	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	4/26/2011	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	10/11/2011	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	4/16/2012	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	7/30/2012	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	7/9/2013	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	7/9/2013	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/7/2014	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
8/7/2014	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	
3/24/2015	< 10	4.99*	< 10	< 10	< 10	< 10	N/A	N/A	
3/24/2015	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	
10/20/2015	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	
10/20/2015	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	
5/5/2016	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
5/5/2016	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	
10/14/2016	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	
5/16/2017	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	
10/19/2017	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Iodomethane, ug/L (CAS NO - 74-88-4)	5/9/2018	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	3/31/2021	N/A	N/A	N/A	N/A	8.1*	N/A	N/A	N/A
	8/23/2021	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/23/2021	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/15/2022	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 10	8.99*	< 10	< 10	< 10	< 10	N/A	N/A
	8/10/2022	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	6/22/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	Methylene Bromide, ug/L (CAS NO - 74-95-3)	4/21/2010	< 1	< 1	< 1	< 1	< 1	< 1	N/A
4/21/2010		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
8/31/2010		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
8/31/2010		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
4/26/2011		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
4/26/2011		N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
7/25/2011		N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
10/11/2011		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
10/11/2011		< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4/16/2012		< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
4/16/2012		N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
7/30/2012		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
7/30/2012		< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3/5/2013		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
3/5/2013		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
7/9/2013		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
7/9/2013		< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2/11/2014		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
8/7/2014		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
8/7/2014		N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
3/24/2015		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
3/24/2015		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
10/20/2015		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
10/20/2015		N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
5/5/2016		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
5/5/2016		N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
10/14/2016		< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
5/16/2017		< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
10/19/2017		< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
5/9/2018		< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
8/23/2021		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
8/23/2021		< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3/15/2022		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
3/15/2022		N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
8/10/2022		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
8/10/2022		N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
6/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
6/22/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
11/13/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
11/13/2023	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	
Methylene Chloride, ug/L (CAS NO - 75-09-2)	2/5/2008	N/A	1.1	0.97	N/A	0.98	0.86	N/A	N/A
	4/21/2008	< 0.45	< 0.45	< 0.45	N/A	< 0.45	< 0.45	N/A	N/A
	6/10/2008	< 0.45	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.45	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.45	< 0.45	N/A	< 0.45	0.78	N/A	N/A
	9/5/2008	< 0.45	< 0.45	< 0.45	N/A	< 0.45	0.67	N/A	N/A
	9/5/2008	N/A	< 0.45	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG	
Methylene Chloride, ug/L (CAS NO - 75-09-2)	12/8/2008	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	12/8/2008	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	
	2/27/2009	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	
	4/13/2009	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	
	8/28/2009	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	8/28/2009	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	
	11/13/2009	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	
	4/21/2010	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	4/21/2010	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	
	8/31/2010	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	8/31/2010	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	
	4/26/2011	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	
	7/25/2011	N/A	N/A	< 5	< 5	< 5	N/A	N/A	N/A	
	10/11/2011	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	
	10/11/2011	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	4/16/2012	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	
	4/16/2012	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	
	7/30/2012	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	7/30/2012	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/5/2013	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	3/5/2013	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	
	7/9/2013	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	7/9/2013	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	2/11/2014	0.734*	< 5	< 5	< 5	< 5	0.785*	< 5	N/A	N/A
	8/7/2014	< 5	< 5	0.213*	0.607*	< 5	0.318*	N/A	N/A	
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	
	3/24/2015	< 5	0.215*	< 5	< 5	< 5	0.172*	N/A	N/A	
	3/24/2015	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	
	10/20/2015	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	
	5/5/2016	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	
	5/5/2016	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	
	10/14/2016	0.299*	0.402*	< 5	0.342*	0.212*	0.406*	0.306*	N/A	
	5/16/2017	0.319*	0.312*	0.323*	0.326*	< 5	0.408*	0.447*	N/A	
	10/19/2017	< 5	< 5	< 5	< 5	< 5	0.48*	0.218*	N/A	
	5/9/2018	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	
	8/23/2021	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	8/23/2021	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
3/15/2022	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A		
3/15/2022	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A		
8/10/2022	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A		
8/10/2022	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A		
6/22/2023	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A		
6/22/2023	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A		
11/13/2023	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A		
11/13/2023	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A		
Styrene, ug/L (CAS NO - 100-42-5)	2/5/2008	N/A	< 0.19	< 0.19	N/A	< 0.19	< 0.19	N/A	N/A	
	4/21/2008	< 0.19	< 0.19	< 0.19	N/A	< 0.19	< 0.19	N/A	N/A	
	6/10/2008	< 0.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	6/10/2008	< 0.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	6/20/2008	N/A	< 0.19	< 0.19	N/A	< 0.19	< 0.19	N/A	N/A	
	9/5/2008	< 0.19	< 0.19	< 0.19	N/A	< 0.19	< 0.19	N/A	N/A	
	9/5/2008	N/A	< 0.19	N/A	N/A	N/A	N/A	N/A	N/A	
	9/24/2008	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	
	12/8/2008	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
	12/8/2008	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	
	2/27/2009	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	
	4/13/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	

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Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Styrene, ug/L (CAS NO - 100-42-5)	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	8/28/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/28/2009	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	4/21/2010	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	8/31/2010	< 4	< 1	< 4	< 4	< 4	< 1	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	4/26/2011	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/25/2011	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	10/11/2011	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/11/2011	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	4/16/2012	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	7/30/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	7/9/2013	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	7/9/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/7/2014	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/24/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	10/20/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	5/5/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/5/2016	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	5/16/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	10/19/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	5/9/2018	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	8/23/2021	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	8/23/2021	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	3/15/2022	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/10/2022	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
6/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
6/22/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
11/13/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
11/13/2023	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	
Tetrachloroethene, ug/L (CAS NO - 127-18-4)	2/5/2008	N/A	< 0.38	< 0.38	N/A	< 0.38	< 0.38	N/A	N/A
	4/21/2008	< 0.38	< 0.38	< 0.38	N/A	< 0.38	< 0.38	N/A	N/A
	6/10/2008	< 0.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.38	< 0.38	N/A	< 0.38	< 0.38	N/A	N/A
	9/5/2008	< 0.38	< 0.38	< 0.38	N/A	< 0.38	< 0.38	N/A	N/A
	9/5/2008	N/A	< 0.38	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	12/8/2008	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	12/8/2008	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	4/13/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	8/28/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/28/2009	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
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Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Tetrachloroethene, ug/L (CAS NO - 127-18-4)	4/21/2010	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	8/31/2010	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	4/26/2011	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	7/25/2011	N/A	N/A	<1	<1	<1	N/A	N/A	N/A
	10/11/2011	<1	<1	<1	<1	<1	<1	<1	<1
	10/11/2011	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	<1	<1	<1	<1	<1	<1	<1	N/A
	4/16/2012	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	7/30/2012	<1	<1	<1	<1	<1	<1	N/A	N/A
	7/30/2012	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	7/9/2013	<1	<1	<1	<1	<1	<1	N/A	N/A
	7/9/2013	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/7/2014	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	3/24/2015	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	10/20/2015	<1	<1	<1	<1	0.243*	<1	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	5/5/2016	<1	<1	<1	<1	<1	<1	<1	<1
	5/5/2016	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	10/14/2016	<1	<1	<1	<1	<1	<1	<1	N/A
	5/16/2017	<1	<1	<1	<1	<1	<1	<1	N/A
	10/19/2017	<1	<1	<1	<1	<1	<1	<1	N/A
	5/9/2018	<1	<1	<1	<1	<1	<1	<1	N/A
	8/23/2021	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/23/2021	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/15/2022	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/10/2022	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	6/22/2023	<1	<1	<1	<1	<1	<1	N/A	N/A
	6/22/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	11/13/2023	<1	<1	<1	<1	<1	<1	N/A	N/A
	11/13/2023	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A
Toluene, ug/L (CAS NO - 108-88-3)	2/5/2008	N/A	<0.14	<0.14	N/A	<0.14	<0.14	N/A	N/A
	4/21/2008	<0.14	<0.14	<0.14	N/A	<0.14	<0.14	N/A	N/A
	6/10/2008	<0.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	<0.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	0.2	<0.14	N/A	0.19	0.14	N/A	N/A
	9/5/2008	<0.14	<0.14	<0.14	N/A	<0.14	<0.14	N/A	N/A
	9/5/2008	N/A	<0.14	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A
	12/8/2008	<1	<1	<1	<1	<1	<1	N/A	N/A
	12/8/2008	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	<1	N/A	N/A	<1	N/A	N/A	N/A	N/A
	4/13/2009	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	8/28/2009	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/28/2009	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	<1	N/A	N/A	N/A	<1	N/A	N/A
	4/21/2010	<1	<1	<1	<1	<1	<1	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	8/31/2010	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A

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Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG	
Toluene, ug/L (CAS NO - 108-88-3)	4/26/2011	<1	<1	<1	<1	<1	<1	N/A	N/A	
	4/26/2011	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A	
	7/25/2011	N/A	N/A	<1	<1	<1	N/A	N/A	N/A	
	10/11/2011	<1	<1	<1	<1	<1	<1	<1	<1	
	10/11/2011	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	4/16/2012	<1	<1	<1	<1	<1	<1	<1	N/A	
	4/16/2012	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	
	7/30/2012	<1	<1	<1	<1	<1	<1	N/A	N/A	
	7/30/2012	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/5/2013	<1	<1	<1	<1	<1	<1	N/A	N/A	
	3/5/2013	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A	
	7/9/2013	<1	<1	<1	<1	<1	<1	N/A	N/A	
	7/9/2013	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	2/11/2014	<1	<1	<1	<1	<1	<1	N/A	N/A	
	8/7/2014	<1	<1	<1	<1	<1	<1	N/A	N/A	
	8/7/2014	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A	
	3/24/2015	<1	<1	<1	<1	<1	<1	N/A	N/A	
	3/24/2015	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A	
	10/20/2015	<1	<1	<1	<1	<1	<1	N/A	N/A	
	10/20/2015	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A	
	5/5/2016	<1	<1	<1	<1	<1	<1	<1	<1	
	5/5/2016	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	
	10/14/2016	<1	<1	<1	<1	<1	<1	<1	N/A	
	5/16/2017	<1	<1	<1	<1	<1	<1	<1	N/A	
	10/19/2017	<1	<1	<1	<1	<1	<1	<1	N/A	
	5/9/2018	<1	<1	<1	<1	<1	<1	<1	N/A	
	8/23/2021	<1	<1	<1	<1	<1	<1	N/A	N/A	
	8/23/2021	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/15/2022	<1	<1	<1	<1	<1	<1	N/A	N/A	
	3/15/2022	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A	
	8/10/2022	<1	<1	<1	<1	<1	<1	N/A	N/A	
	8/10/2022	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	
	6/22/2023	<1	<1	<1	<1	<1	<1	N/A	N/A	
	6/22/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	
	11/13/2023	<1	<1	<1	<1	<1	<1	N/A	N/A	
	11/13/2023	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	
	trans-1,2-Dichloroethene, ug/L (CAS NO - 156-60-5)	2/5/2008	N/A	<0.31	<0.31	N/A	<0.31	<0.31	N/A	N/A
		4/21/2008	<0.31	<0.31	<0.31	N/A	<0.31	<0.31	N/A	N/A
		6/10/2008	<0.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		6/10/2008	<0.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/20/2008		N/A	<0.31	<0.31	N/A	<0.31	<0.31	N/A	N/A	
9/5/2008		<0.31	<0.31	<0.31	N/A	<0.31	<0.31	N/A	N/A	
9/5/2008		N/A	<0.31	N/A	N/A	N/A	N/A	N/A	N/A	
9/24/2008		N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	
12/8/2008		<1	<1	<1	<1	<1	<1	N/A	N/A	
12/8/2008		N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A	
2/27/2009		<1	N/A	N/A	<1	N/A	N/A	N/A	N/A	
4/13/2009		<1	<1	<1	<1	<1	<1	N/A	N/A	
4/13/2009		N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A	
8/28/2009		<1	<1	<1	<1	<1	<1	N/A	N/A	
8/28/2009		N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	
11/13/2009		N/A	<1	N/A	N/A	N/A	<1	N/A	N/A	
4/21/2010		<1	<1	<1	<1	<1	<1	N/A	N/A	
4/21/2010		N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A	
8/31/2010		<1	<1	<1	<1	<1	<1	N/A	N/A	
8/31/2010		N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A	
4/26/2011		<1	<1	<1	<1	<1	<1	N/A	N/A	
4/26/2011		N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A	
7/25/2011		N/A	N/A	<1	<1	<1	N/A	N/A	N/A	
10/11/2011	<1	<1	<1	<1	<1	<1	<1	<1		

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
trans-1,2-Dichloroethene, ug/L (CAS NO - 156-60-5)	10/11/2011	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	<1	<1	<1	<1	<1	<1	<1	<1
	4/16/2012	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	7/30/2012	<1	<1	<1	<1	<1	<1	N/A	N/A
	7/30/2012	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	7/9/2013	<1	<1	<1	<1	<1	<1	N/A	N/A
	7/9/2013	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/7/2014	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	3/24/2015	<1	0.221*	<1	<1	<1	<1	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	10/20/2015	<1	<1	<1	<1	<1	<1	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	5/5/2016	<1	<1	<1	<1	<1	<1	<1	<1
	5/5/2016	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	10/14/2016	<1	<1	<1	<1	<1	<1	<1	N/A
	5/16/2017	<1	<1	<1	<1	<1	<1	<1	N/A
	10/19/2017	<1	<1	<1	<1	<1	<1	<1	N/A
	5/9/2018	<1	<1	<1	<1	<1	<1	<1	N/A
	8/23/2021	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/23/2021	<1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	<1	<1	<1	<1	<1	<1	N/A	N/A
	3/15/2022	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	<1	<1	<1	<1	<1	<1	N/A	N/A
	8/10/2022	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	6/22/2023	<1	<1	<1	<1	<1	<1	N/A	N/A
	6/22/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
11/13/2023	<1	<1	<1	<1	<1	<1	N/A	N/A	
11/13/2023	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	
trans-1,3-Dichloropropene, ug/L (CAS NO - 10061-02-6)	2/5/2008	N/A	0.18	<0.17	N/A	<0.17	<0.17	N/A	N/A
	4/21/2008	<0.17	<0.17	<0.17	N/A	<0.17	<0.17	N/A	N/A
	6/10/2008	<0.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	<0.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	<0.17	<0.17	N/A	<0.17	<0.17	N/A	N/A
	9/5/2008	<0.17	<0.17	<0.17	N/A	<0.17	<0.17	N/A	N/A
	9/5/2008	N/A	<0.17	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	<5	N/A	N/A	N/A	N/A
	12/8/2008	<5	<5	<5	<5	<5	<5	N/A	N/A
	12/8/2008	N/A	<5	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	<5	N/A	N/A	<5	N/A	N/A	N/A	N/A
	4/13/2009	<5	<5	<5	<5	<5	<5	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	<5	N/A	N/A
	8/28/2009	<5	<5	<5	<5	<5	<5	N/A	N/A
	8/28/2009	N/A	N/A	<5	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	<5	N/A	N/A	N/A	<5	N/A	N/A
	4/21/2010	<5	<5	<5	<5	<5	<5	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	<5	N/A	N/A	N/A
	8/31/2010	<10	<5	<10	<10	<10	<5	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	<10	N/A	N/A	N/A
	4/26/2011	<5	<5	<5	<5	<5	<5	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	<5	N/A	N/A
	7/25/2011	N/A	N/A	<5	<5	<5	N/A	N/A	N/A
	10/11/2011	<5	<5	<5	<5	<5	<5	<5	<5
	10/11/2011	<5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	<5	<5	<5	<5	<5	<5	<5	N/A
	4/16/2012	N/A	N/A	<5	N/A	N/A	N/A	N/A	N/A
	7/30/2012	<5	<5	<5	<5	<5	<5	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG	
trans-1,3-Dichloropropene, ug/L (CAS NO - 10061-02-6)	7/30/2012	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/5/2013	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	3/5/2013	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	
	7/9/2013	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	7/9/2013	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	2/11/2014	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	8/7/2014	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	
	3/24/2015	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	3/24/2015	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	
	10/20/2015	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	
	5/5/2016	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	
	5/5/2016	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	
	10/14/2016	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	
	5/16/2017	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	
	10/19/2017	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	
	5/9/2018	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	
	8/23/2021	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	
	8/23/2021	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	3/15/2022	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	
	3/15/2022	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	
	8/10/2022	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	
	8/10/2022	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	
	6/22/2023	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	
	6/22/2023	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	
	11/13/2023	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	
	11/13/2023	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	
	trans-1,4-Dichloro-2-Butene, ug/L (CAS NO - 110-57-6)	2/5/2008	N/A	< 1.8	< 1.8	N/A	< 1.8	< 1.8	N/A	N/A
		4/21/2008	< 1.8	< 1.8	< 1.8	N/A	< 1.8	< 1.8	N/A	N/A
6/10/2008		< 1.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6/10/2008		< 1.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6/20/2008		N/A	< 1.8	< 1.8	N/A	< 1.8	< 1.8	N/A	N/A	
9/5/2008		< 1.8	< 1.8	< 1.8	N/A	< 1.8	< 1.8	N/A	N/A	
9/5/2008		N/A	< 1.8	N/A	N/A	N/A	N/A	N/A	N/A	
9/24/2008		N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	
12/8/2008		< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	
12/8/2008		N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	
2/27/2009		< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	
4/13/2009		< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	
4/13/2009		N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	
8/28/2009		< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	
8/28/2009		N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	
11/13/2009		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	
4/21/2010		< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	
4/21/2010		N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	
8/31/2010		< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	
8/31/2010		N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	
4/26/2011		< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	
4/26/2011		N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
10/11/2011		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
10/11/2011		< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
4/16/2012		< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	
4/16/2012		N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	
7/30/2012		< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	
7/30/2012		< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
3/5/2013		< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	
3/5/2013	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A		
7/9/2013	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A		

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
trans-1,4-Dichloro-2-Butene, ug/L (CAS NO - 110-57-6)	7/9/2013	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/7/2014	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/24/2015	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	10/20/2015	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	5/5/2016	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	5/5/2016	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	5/16/2017	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	10/19/2017	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	5/9/2018	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	8/23/2021	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/23/2021	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/15/2022	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/10/2022	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
6/22/2023	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	
6/22/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	
11/13/2023	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	
11/13/2023	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	
Trichloroethene, ug/L (CAS NO - 79-01-6)	2/5/2008	N/A	< 0.24	< 0.24	N/A	< 0.24	< 0.24	N/A	N/A
	4/21/2008	< 0.24	< 0.24	< 0.24	N/A	< 0.24	< 0.24	N/A	N/A
	6/10/2008	< 0.24	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.24	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.24	< 0.24	N/A	< 0.24	< 0.24	N/A	N/A
	9/5/2008	< 0.24	< 0.24	< 0.24	N/A	< 0.24	< 0.24	N/A	N/A
	9/5/2008	N/A	< 0.24	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	12/8/2008	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	12/8/2008	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	4/13/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	8/28/2009	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/28/2009	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	4/21/2010	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/31/2010	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/26/2011	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/25/2011	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	10/11/2011	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/11/2011	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	4/16/2012	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	7/30/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	7/9/2013	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	7/9/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2/11/2014	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
8/7/2014	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	
8/7/2014	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Trichloroethene, ug/L (CAS NO - 79-01-6)	3/24/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	10/20/2015	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	5/5/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/5/2016	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	5/16/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	10/19/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	5/9/2018	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	8/23/2021	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/23/2021	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	3/15/2022	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/10/2022	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	6/22/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
Trichlorofluoromethane, ug/L (CAS NO - 75-69-4)	2/5/2008	N/A	< 0.26	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A
	4/21/2008	< 0.26	< 0.26	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A
	6/10/2008	< 0.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 0.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 0.26	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A
	9/5/2008	< 0.26	< 0.26	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A
	9/5/2008	N/A	< 0.26	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A
	12/8/2008	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	12/8/2008	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 4	N/A	N/A	< 4	N/A	N/A	N/A	N/A
	4/13/2009	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	8/28/2009	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	8/28/2009	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 4	N/A	N/A	N/A	< 4	N/A	N/A
	4/21/2010	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	8/31/2010	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	4/26/2011	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	7/25/2011	N/A	N/A	< 4	< 4	< 4	N/A	N/A	N/A
	10/11/2011	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	10/11/2011	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	4/16/2012	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	7/30/2012	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	7/9/2013	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	7/9/2013	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	8/7/2014	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	3/24/2015	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	10/20/2015	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Trichlorofluoromethane, ug/L (CAS NO - 75-69-4)	5/5/2016	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	5/5/2016	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
	10/14/2016	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	5/16/2017	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	10/19/2017	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	5/9/2018	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	8/23/2021	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	8/23/2021	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	3/15/2022	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	8/10/2022	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	6/22/2023	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A
11/13/2023	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	
Vinyl Acetate, ug/L (CAS NO - 108-05-4)	2/5/2008	N/A	< 1.36	< 1.36	N/A	< 1.36	< 1.36	N/A	N/A
	4/21/2008	< 1.36	< 1.36	< 1.36	N/A	< 1.36	< 1.36	N/A	N/A
	6/10/2008	< 1.36	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/10/2008	< 1.36	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/20/2008	N/A	< 1.36	< 1.36	N/A	< 1.36	< 1.36	N/A	N/A
	9/5/2008	< 1.36	< 1.36	< 1.36	N/A	< 1.36	< 1.36	N/A	N/A
	9/5/2008	N/A	< 1.36	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2008	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A
	12/8/2008	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	12/8/2008	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	2/27/2009	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A
	4/13/2009	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	4/13/2009	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	8/28/2009	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	8/28/2009	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A
	11/13/2009	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	4/21/2010	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	4/21/2010	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A
	8/31/2010	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	8/31/2010	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A
	4/26/2011	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A
	4/26/2011	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	7/25/2011	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	10/11/2011	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	10/11/2011	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/16/2012	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	4/16/2012	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	7/30/2012	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	7/30/2012	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A
	7/9/2013	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	7/9/2013	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	8/7/2014	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	3/24/2015	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/24/2015	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	10/20/2015	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
5/5/2016	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	
5/5/2016	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	
10/14/2016	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	
5/16/2017	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Vinyl Acetate, ug/L (CAS NO - 108-05-4)	10/19/2017	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	5/9/2018	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	8/23/2021	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/23/2021	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	3/15/2022	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	8/10/2022	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	6/22/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	Vinyl Chloride, ug/L (CAS NO - 75-01-4)	2/5/2008	N/A	< 0.26	< 0.26	N/A	< 0.26	< 0.26	N/A
4/21/2008		< 0.26	< 0.26	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A
6/10/2008		< 0.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/10/2008		< 0.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/20/2008		N/A	< 0.26	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A
9/5/2008		< 0.26	< 0.26	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A
9/5/2008		N/A	< 0.26	N/A	N/A	N/A	N/A	N/A	N/A
9/24/2008		N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
12/8/2008		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
12/8/2008		N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
2/27/2009		< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A
4/13/2009		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
4/13/2009		N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
8/28/2009		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
8/28/2009		N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
11/13/2009		N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
4/21/2010		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
4/21/2010		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
8/31/2010		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
8/31/2010		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
4/26/2011		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
4/26/2011		N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
7/25/2011		N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
10/11/2011		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
10/11/2011		< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4/16/2012		< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A
4/16/2012		N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
7/30/2012		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
7/30/2012		< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3/5/2013		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
3/5/2013		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
7/9/2013		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
7/9/2013		< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2/11/2014		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
8/7/2014		< 1	0.603*	< 1	< 1	< 1	< 1	N/A	N/A
8/7/2014		N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
3/24/2015		< 1	0.821*	< 1	< 1	< 1	< 1	N/A	N/A
3/24/2015		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
10/20/2015		< 1	1.11	< 1	< 1	< 1	< 1	N/A	N/A
10/20/2015		N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
5/5/2016		< 1	0.762*	< 1	< 1	< 1	< 1	< 1	< 1
5/5/2016	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	
10/14/2016	< 1	0.885*	< 1	< 1	< 1	< 1	< 1	N/A	
5/16/2017	< 1	0.861	< 1	< 1	< 1	< 1	< 1	N/A	
10/19/2017	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	
5/9/2018	< 1	0.622*	< 1	< 1	< 1	< 1	< 1	N/A	
10/26/2018	N/A	0.752*	N/A	N/A	N/A	N/A	N/A	N/A	
8/23/2021	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Vinyl Chloride, ug/L (CAS NO - 75-01-4)	8/23/2021	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	3/15/2022	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	8/10/2022	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	8/10/2022	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	6/22/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	Xylenes, total, ug/L (CAS NO - 1330-20-7)	2/5/2008	N/A	< 0.3	< 0.3	N/A	< 0.3	< 0.3	N/A
4/21/2008		< 0.3	< 0.3	< 0.3	N/A	< 0.3	< 0.3	N/A	N/A
6/10/2008		< 0.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/10/2008		< 0.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6/20/2008		N/A	< 0.3	< 0.3	N/A	< 0.3	< 0.3	N/A	N/A
9/5/2008		< 0.3	< 0.3	< 0.3	N/A	< 0.3	< 0.3	N/A	N/A
9/5/2008		N/A	< 0.3	N/A	N/A	N/A	N/A	N/A	N/A
9/24/2008		N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A
12/8/2008		< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A
12/8/2008		N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A
2/27/2009		< 3	N/A	N/A	< 3	N/A	N/A	N/A	N/A
4/13/2009		< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A
4/13/2009		N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
8/28/2009		< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A
8/28/2009		N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A
11/13/2009		N/A	< 4	N/A	N/A	N/A	< 4	N/A	N/A
4/21/2010		< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A
4/21/2010		N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A
8/31/2010		< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A
8/31/2010		N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A
4/26/2011		< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A
4/26/2011		N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
7/25/2011		N/A	N/A	< 3	< 3	< 3	N/A	N/A	N/A
10/11/2011		< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
10/11/2011		< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4/16/2012		< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A
4/16/2012		N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A
7/30/2012		< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A
7/30/2012		< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3/5/2013		< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A
3/5/2013		N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A
7/9/2013		< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A
7/9/2013		< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2/11/2014		< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A
8/7/2014		< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A
8/7/2014		N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
3/24/2015		< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A
3/24/2015		N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A
10/20/2015		< 3	< 3	< 3	< 3	0.287*	< 3	N/A	N/A
10/20/2015		N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
5/5/2016		< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
5/5/2016		N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A
10/14/2016	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	
5/16/2017	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	
10/19/2017	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	
5/9/2018	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	
8/23/2021	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	
8/23/2021	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
3/15/2022	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	
3/15/2022	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	
8/10/2022	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Appendix I VOC Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Xylenes, total, ug/L (CAS NO - 1330-20-7)	8/10/2022	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A
	6/22/2023	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A
	6/22/2023	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A
	11/13/2023	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A
	11/13/2023	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A
M&P-Xylene, ug/L (CAS NO - 179601-23-1)	7/30/2012	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	7/30/2012	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/5/2013	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	3/5/2013	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A
	7/9/2013	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A
	7/9/2013	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/5/2016	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	5/16/2017	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	3/15/2022	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	O-Xylene, ug/L (CAS NO - 95-47-6)	7/30/2012	< 1	< 1	< 1	< 1	< 1	< 1	N/A
7/30/2012		< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3/5/2013		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
3/5/2013		N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
7/9/2013		< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A
7/9/2013		< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5/5/2016		N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
5/16/2017		N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
3/15/2022		N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A

LEGEND

Note: * indicates 'J flag'. Detection is below the reporting limit, but greater than the MDL (Method Detection Limit). The concentration is estimated.

Denotes Detection.

Denotes Confirmed Outlier. Statistically Excluded.

Sampling performed over multiple dates is recorded on the first date sampled. Refer to field forms for exact sample date.

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
1,1-Dichloropropene, ug/L (CAS NO - 563-58-6)	8/28/2009	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	8/31/2010	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	7/25/2011	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	10/11/2011	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	7/30/2012	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	5/5/2016	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	5/16/2017	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
3/15/2022	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A	
1,2,4,5-Tetrachlorobenzene, ug/L (CAS NO - 95-94-3)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
1,2,4-Trichlorobenzene, ug/L (CAS NO - 120-82-1)	8/28/2009	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A
	8/31/2010	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A
	7/25/2011	N/A	N/A	< 5	< 5	< 5	N/A	N/A	N/A
	10/11/2011	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A
	7/30/2012	N/A	N/A	< 5	< 5	< 5	N/A	N/A	N/A
	5/5/2016	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A
	5/16/2017	N/A	N/A	< 5	< 5	< 5	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
3/15/2022	N/A	N/A	< 5	< 5	< 5	N/A	N/A	N/A	
1,3,5-Trinitrobenzene, ug/L (CAS NO - 99-35-4)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
1,3-Dichlorobenzene, ug/L (CAS NO - 541-73-1)	8/28/2009	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	8/31/2010	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	7/25/2011	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	10/11/2011	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	7/30/2012	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	5/5/2016	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	5/16/2017	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
3/15/2022	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A	
1,3-Dichloropropane, ug/L (CAS NO - 142-28-9)	8/28/2009	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	8/31/2010	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	7/25/2011	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	10/11/2011	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	7/30/2012	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	5/5/2016	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	5/16/2017	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
3/15/2022	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A	
1,3-Dinitrobenzene, ug/L (CAS NO - 99-65-0)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
1,3-Dinitrobenzene, ug/L (CAS NO - 99-65-0)	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
1,4-Naphthoquinone, ug/L (CAS NO - 130-15-4)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	1,4-Phenylenediamine, ug/L (CAS NO - 106-50-3)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
1-Naphthylamine, ug/L (CAS NO - 134-32-7)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	2,2-Dichloropropane, ug/L (CAS NO - 594-20-7)	8/28/2009	N/A	< 4	N/A	N/A	N/A	< 4	N/A
8/31/2010		N/A	< 4	N/A	N/A	N/A	< 4	N/A	N/A
7/25/2011		N/A	N/A	< 4	< 4	< 4	N/A	N/A	N/A
10/11/2011		N/A	< 4	N/A	N/A	N/A	< 4	N/A	N/A
7/30/2012		N/A	N/A	< 4	< 4	< 4	N/A	N/A	N/A
5/5/2016		N/A	< 4	N/A	N/A	N/A	< 4	N/A	N/A
5/16/2017		N/A	N/A	< 4	< 4	< 4	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
3/15/2022		N/A	N/A	< 4	< 4	< 4	N/A	N/A	N/A
2,3,4,6-Tetrachlorophenol, ug/L (CAS NO - 58-90-2)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	2,4,5-T [2C], ug/L (CAS NO - 93-76-5)	8/28/2009	N/A	< 0.21	N/A	N/A	N/A	< 0.2	N/A
8/31/2010		N/A	< 0.53	N/A	N/A	N/A	< 0.5	N/A	N/A
7/25/2011		N/A	N/A	< 0.24	< 0.24	< 0.24	N/A	N/A	N/A
10/11/2011		N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
7/30/2012		N/A	N/A	< 0.43	< 0.43	< 0.43	N/A	N/A	N/A
5/5/2016		N/A	< 1.14	N/A	N/A	N/A	< 1.11	N/A	N/A
5/16/2017		N/A	N/A	< 1.03	< 1.03	< 1.03	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 1.15	N/A	N/A
3/15/2022		N/A	N/A	< 0.158	< 0.156	< 0.157	N/A	N/A	N/A
2,4,5-TP [Silvex] [2C], ug/L (CAS NO - 93-72-1)		8/28/2009	N/A	< 0.21	N/A	N/A	N/A	< 0.2	N/A
	8/31/2010	N/A	< 0.53	N/A	N/A	N/A	< 0.5	N/A	N/A
	7/25/2011	N/A	N/A	< 0.24	< 0.24	< 0.24	N/A	N/A	N/A
	10/11/2011	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	7/30/2012	N/A	N/A	< 0.29	< 0.29	< 0.29	N/A	N/A	N/A
	5/5/2016	N/A	< 1.14	N/A	N/A	N/A	< 1.11	N/A	N/A
	5/16/2017	N/A	N/A	< 1.03	< 1.03	< 1.03	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
2,4,5-TP [Silvex] [2C], ug/L (CAS NO - 93-72-1)	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 1.15	N/A	N/A
	3/15/2022	N/A	N/A	< 0.0526	< 0.052	< 0.0524	N/A	N/A	N/A
2,4,5-Trichlorophenol, ug/L (CAS NO - 95-95-4)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
2,4,6-Trichlorophenol, ug/L (CAS NO - 88-06-2)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
2,4-D [2C], ug/L (CAS NO - 94-75-7)	8/28/2009	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	8/31/2010	N/A	< 1.1	N/A	N/A	N/A	< 1	N/A	N/A
	7/25/2011	N/A	N/A	< 0.45	< 0.45	< 0.45	N/A	N/A	N/A
	10/11/2011	N/A	1.8	N/A	N/A	N/A	< 1	N/A	N/A
	4/16/2012	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	7/30/2012	N/A	1.1	< 0.47	< 0.47	< 0.47	N/A	N/A	N/A
	3/5/2013	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	7/9/2013	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	2/11/2014	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	8/7/2014	N/A	< 1.04	N/A	N/A	N/A	N/A	N/A	N/A
	3/24/2015	N/A	< 1.02	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2015	N/A	< 1.06	N/A	N/A	N/A	N/A	N/A	N/A
	5/5/2016	N/A	< 1.14	N/A	N/A	N/A	< 1.11	N/A	N/A
	5/16/2017	N/A	< 1.03	< 1.03	< 1.03	< 1.03	N/A	N/A	N/A
	10/19/2017	N/A	< 1.03	N/A	N/A	N/A	N/A	N/A	N/A
	5/9/2018	N/A	< 1.01	N/A	N/A	N/A	N/A	N/A	N/A
8/23/2021	N/A	N/A	N/A	N/A	N/A	< 1.15	N/A	N/A	
3/15/2022	N/A	N/A	< 0.632	< 0.624	< 0.629	N/A	N/A	N/A	
2,4-Dichlorophenol, ug/L (CAS NO - 120-83-2)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
2,4-Dimethylphenol, ug/L (CAS NO - 105-67-9)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
2,4-Dinitrophenol, ug/L (CAS NO - 51-28-5)	8/28/2009	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A
	8/31/2010	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A
	7/25/2011	N/A	N/A	< 20	< 20	< 20	N/A	N/A	N/A
	10/11/2011	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A
	7/30/2012	N/A	N/A	< 20	< 20	< 20	N/A	N/A	N/A
5/5/2016	N/A	< 21.5	N/A	N/A	N/A	< 22	N/A	N/A	

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
2,4-Dinitrophenol, ug/L (CAS NO - 51-28-5)	5/16/2017	N/A	N/A	< 20	< 20	< 20	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 21.3	N/A	N/A
	3/15/2022	N/A	N/A	< 20	< 20	< 20	N/A	N/A	N/A
2,4-Dinitrotoluene, ug/L (CAS NO - 121-14-2)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
2,6-Dichlorophenol, ug/L (CAS NO - 87-65-0)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
2,6-Dinitrotoluene, ug/L (CAS NO - 606-20-2)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
2-Acetylaminofluorene, ug/L (CAS NO - 53-96-3)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
2-Chloronaphthalene, ug/L (CAS NO - 91-58-7)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
2-Chlorophenol, ug/L (CAS NO - 95-57-8)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
2-Methylnaphthalene, ug/L (CAS NO - 91-57-6)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
2-Methylnaphthalene, ug/L (CAS NO - 91-57-6)	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
2-Methylphenol, ug/L (CAS NO - 95-48-7)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	2-Naphthylamine, ug/L (CAS NO - 91-59-8)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
2-Nitroaniline, ug/L (CAS NO - 88-74-4)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	2-Nitrophenol, ug/L (CAS NO - 88-75-5)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
3,3-Dichlorobenzidine, ug/L (CAS NO - 91-94-1)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 53.8	N/A	N/A	N/A	< 54.9	N/A	N/A
	5/16/2017	N/A	N/A	< 50	< 50	< 50	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	3,3-Dimethylbenzidine, ug/L (CAS NO - 119-93-7)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
3/4-Methylphenol, ug/L (CAS NO - T-34MP)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
3/4-Methylphenol, ug/L (CAS NO - T-34MP)	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
3-Chloropropene, ug/L (CAS NO - 107-05-1)	8/28/2009	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	8/31/2010	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	7/25/2011	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	10/11/2011	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	7/30/2012	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	5/5/2016	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	5/16/2017	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	3/15/2022	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	3-Methylcholanthrene, ug/L (CAS NO - 56-49-5)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
3-Nitroaniline, ug/L (CAS NO - 99-09-2)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	4,4'-DDD, ug/L (CAS NO - 72-54-8)	8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
8/31/2010		N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
7/25/2011		N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
10/11/2011		N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
7/30/2012		N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
5/5/2016		N/A	< 0.0344	N/A	N/A	N/A	< 0.0344	N/A	N/A
5/16/2017		N/A	N/A	< 0.032	< 0.032	0.00977*	N/A	N/A	N/A
10/19/2017		N/A	N/A	N/A	N/A	0.00428*	N/A	N/A	N/A
5/9/2018		N/A	N/A	N/A	N/A	< 0.0327	N/A	N/A	N/A
4/10/2019		N/A	N/A	N/A	N/A	0.00591*	N/A	N/A	N/A
10/8/2019		N/A	N/A	N/A	N/A	0.00305*	N/A	N/A	N/A
4/6/2020		N/A	N/A	N/A	N/A	0.00625*	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A
3/15/2022		N/A	N/A	< 0.064	< 0.064	< 0.064	N/A	N/A	N/A
4,4'-DDE, ug/L (CAS NO - 72-55-9)		8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	8/31/2010	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/25/2011	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	10/11/2011	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	5/5/2016	N/A	< 0.0344	N/A	N/A	N/A	< 0.0344	N/A	N/A
	5/16/2017	N/A	N/A	< 0.032	< 0.032	0.00728*	N/A	N/A	N/A
	10/19/2017	N/A	N/A	N/A	N/A	0.00287*	N/A	N/A	N/A
	5/9/2018	N/A	N/A	N/A	N/A	< 0.0327	N/A	N/A	N/A
	10/26/2018	N/A	N/A	N/A	N/A	0.0055*	N/A	N/A	N/A
	10/8/2019	N/A	N/A	N/A	N/A	0.00425*	N/A	N/A	N/A
	4/6/2020	N/A	N/A	N/A	N/A	0.00511*	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A
	3/15/2022	N/A	N/A	< 0.064	< 0.064	< 0.064	N/A	N/A	N/A
	4,4'-DDT, ug/L (CAS NO - 50-29-3)	8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
8/31/2010		N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
4,4'-DDT, ug/L (CAS NO - 50-29-3)	7/25/2011	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	10/11/2011	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	5/5/2016	N/A	< 0.0344	N/A	N/A	N/A	< 0.0344	N/A	N/A
	5/16/2017	N/A	N/A	< 0.032	< 0.032	0.0333	N/A	N/A	N/A
	10/19/2017	N/A	N/A	N/A	N/A	< 0.0323	N/A	N/A	N/A
	5/9/2018	N/A	N/A	N/A	N/A	< 0.0327	N/A	N/A	N/A
	4/6/2020	N/A	N/A	N/A	N/A	0.00634*	N/A	N/A	N/A
	10/28/2020	N/A	N/A	N/A	N/A	0.00408*	N/A	N/A	N/A
	3/31/2021	N/A	N/A	N/A	N/A	0.0097*	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A
3/15/2022	N/A	N/A	< 0.064	< 0.064	< 0.064	N/A	N/A	N/A	
4,6-Dinitro-2-methylphenol, ug/L (CAS NO - 534-52-1)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
4-Aminobiphenyl, ug/L (CAS NO - 92-67-1)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
4-Bromophenyl phenyl ether, ug/L (CAS NO - 101-55-3)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
4-Chloro-3-methylphenol, ug/L (CAS NO - 59-50-7)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
4-Chloroaniline, ug/L (CAS NO - 106-47-8)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
4-Chlorophenyl phenyl ether, ug/L (CAS NO - 7005-72-3)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
4-Chlorophenyl phenyl ether, ug/L (CAS NO - 7005-72-3)	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
4-Nitroaniline, ug/L (CAS NO - 100-01-6)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	4-Nitrophenol, ug/L (CAS NO - 100-02-7)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5-Nitro-o-toluidine, ug/L (CAS NO - 99-55-8)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	7,12-Dimethylbenz [a] anthracene, ug/L (CAS NO - 57-97-6)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Acenaphthene, ug/L (CAS NO - 83-32-9)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	Acenaphthylene, ug/L (CAS NO - 208-96-8)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Acetonitrile, mg/L (CAS NO - 75-05-8)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	18.8	20.4	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	< 10	< 10	N/A	< 10	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Acetonitrile, mg/L (CAS NO - 75-05-8)	2/8/2012	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	4/16/2012	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	4/16/2012	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	3/5/2013	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	7/9/2013	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	2/11/2014	N/A	N/A	0.197*	< 10	N/A	N/A	N/A	N/A
	8/7/2014	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	3/24/2015	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	10/20/2015	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	5/5/2016	N/A	< 10	< 10	< 10	N/A	< 10	N/A	N/A
	5/16/2017	N/A	N/A	< 10	1.65*	< 10	N/A	N/A	N/A
	5/9/2018	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
Acetophenone, ug/L (CAS NO - 98-86-2)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Acrolein, ug/L (CAS NO - 107-02-8)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Aldrin, ug/L (CAS NO - 309-00-2)	8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	8/31/2010	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/25/2011	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	10/11/2011	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	5/5/2016	N/A	< 0.0344	N/A	N/A	N/A	< 0.0344	N/A	N/A
	5/16/2017	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A
	3/15/2022	N/A	N/A	< 0.064	< 0.064	< 0.064	N/A	N/A	N/A
Anthracene, ug/L (CAS NO - 120-12-7)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Benzo [a] anthracene, ug/L (CAS NO - 56-55-3)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Benzo [a] pyrene, ug/L (CAS NO - 50-32-8)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Benzo [a] pyrene, ug/L (CAS NO - 50-32-8)	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Benzo [b] fluoranthene, ug/L (CAS NO - 205-99-2)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Benzo [g,h,i] perylene, ug/L (CAS NO - 191-24-2)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Benzo [k] fluoranthene, ug/L (CAS NO - 207-08-9)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Benzyl alcohol, ug/L (CAS NO - 100-51-6)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Alpha-BHC, ug/L (CAS NO - 319-84-6)	8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	8/31/2010	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/25/2011	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	10/11/2011	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	5/5/2016	N/A	< 0.0344	N/A	N/A	N/A	< 0.0344	N/A	N/A
	5/16/2017	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
Beta-BHC, ug/L (CAS NO - 319-85-7)	8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	8/31/2010	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/25/2011	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	10/11/2011	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	5/5/2016	N/A	< 0.0344	N/A	N/A	N/A	< 0.0344	N/A	N/A
	5/16/2017	N/A	N/A	< 0.032	< 0.032	0.00752*	N/A	N/A	N/A
	10/19/2017	N/A	N/A	N/A	N/A	< 0.0323	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A
	3/15/2022	N/A	N/A	< 0.064	< 0.064	< 0.064	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Delta-BHC, ug/L (CAS NO - 319-86-8)	8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	8/31/2010	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/25/2011	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	10/11/2011	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	5/5/2016	N/A	< 0.0344	N/A	N/A	N/A	< 0.0344	N/A	N/A
	5/16/2017	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A
	3/15/2022	N/A	N/A	< 0.064	< 0.064	< 0.064	N/A	N/A	N/A
Gamma-BHC [Lindane], ug/L (CAS NO - 58-89-9)	8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	8/31/2010	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/25/2011	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	10/11/2011	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	5/5/2016	N/A	< 0.0344	N/A	N/A	N/A	0.00243*	N/A	N/A
	5/16/2017	N/A	N/A	< 0.032	< 0.032	0.00251*	N/A	N/A	N/A
	10/19/2017	N/A	N/A	N/A	N/A	< 0.0323	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A
3/15/2022	N/A	N/A	< 0.064	< 0.064	< 0.064	N/A	N/A	N/A	
Bis[2-chloroethoxy]methane, ug/L (CAS NO - 111-91-1)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Bis[2-chloroethyl]ether, ug/L (CAS NO - 111-44-4)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Bis[2-chloroisopropyl]ether, ug/L (CAS NO - 108-60-1)	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Bis[2-ethylhexyl]phthalate, ug/L (CAS NO - 117-81-7)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	0.816*	N/A	N/A	N/A	0.833*	N/A	N/A
	5/16/2017	N/A	N/A	< 10	0.786*	0.805*	N/A	N/A	N/A
	10/19/2017	N/A	N/A	N/A	< 10.2	< 10.2	N/A	N/A	N/A
	5/9/2018	N/A	N/A	N/A	< 10.1	< 10.1	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Butyl benzyl phthalate, ug/L (CAS NO - 85-68-7)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Butyl benzyl phthalate, ug/L (CAS NO - 85-68-7)	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Chlordane, ug/L (CAS NO - 57-74-9)	8/28/2009	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	8/31/2010	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	7/25/2011	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	10/11/2011	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	7/30/2012	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	5/5/2016	N/A	< 2.15	N/A	N/A	N/A	< 2.15	N/A	N/A
	5/16/2017	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 2.11	N/A	N/A
	3/15/2022	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	Alpha-Chlordane, ug/L (CAS NO - 5103-71-9)	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A
Gamma-Chlordane, ug/L (CAS NO - 5566-34-7)	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
Chlorobenzilate, ug/L (CAS NO - 510-15-6)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	Chloroprene, ug/L (CAS NO - 126-99-8)	8/28/2009	N/A	< 1	N/A	N/A	N/A	< 1	N/A
8/31/2010		N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
7/25/2011		N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
10/11/2011		N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
7/30/2012		N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
5/5/2016		N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
5/16/2017		N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
3/15/2022		N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
Chrysene, ug/L (CAS NO - 218-01-9)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	Cyanide, mg/L (CAS NO - 57-12-5)	8/28/2009	N/A	< 0.01	N/A	N/A	N/A	< 0.01	N/A
8/31/2010		N/A	< 0.01	N/A	N/A	N/A	< 0.01	N/A	N/A
7/25/2011		N/A	N/A	< 0.01	< 0.01	< 0.01	N/A	N/A	N/A
10/11/2011		N/A	< 0.01	N/A	N/A	N/A	< 0.01	N/A	N/A
7/30/2012		N/A	N/A	< 0.01	< 0.01	< 0.01	N/A	N/A	N/A
5/5/2016		N/A	< 0.01	N/A	N/A	N/A	< 0.01	N/A	N/A
5/16/2017		N/A	N/A	< 0.01	< 0.01	< 0.01	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A
3/15/2022		N/A	N/A	< 0.01	< 0.01	< 0.01	N/A	N/A	N/A
Diallate [cis or trans], ug/L (CAS NO - 2303-16-4)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	Dibenz [a,h] anthracene, ug/L (CAS NO - 53-70-3)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Dibenz [a,h] anthracene, ug/L (CAS NO - 53-70-3)	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	0.592*	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Dibenzofuran, ug/L (CAS NO - 132-64-9)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	Dichlorodifluoromethane, ug/L (CAS NO - 75-71-8)	8/28/2009	N/A	< 3	N/A	N/A	N/A	< 3	N/A
8/31/2010		N/A	< 3	N/A	N/A	N/A	< 3	N/A	N/A
7/25/2011		N/A	N/A	< 3	< 3	< 3	N/A	N/A	N/A
10/11/2011		N/A	< 3	N/A	N/A	N/A	< 3	N/A	N/A
7/30/2012		N/A	N/A	< 3	< 3	< 3	N/A	N/A	N/A
5/5/2016		N/A	0.581*	N/A	N/A	N/A	0.274*	N/A	N/A
5/16/2017		N/A	N/A	< 3	< 3	< 3	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
3/15/2022		N/A	N/A	< 3	< 3	< 3	N/A	N/A	N/A
Dieldrin, ug/L (CAS NO - 60-57-1)		8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	8/31/2010	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/25/2011	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	10/11/2011	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	5/5/2016	N/A	< 0.0344	N/A	N/A	N/A	< 0.0344	N/A	N/A
	5/16/2017	N/A	N/A	< 0.032	< 0.032	0.00694*	N/A	N/A	N/A
	10/19/2017	N/A	N/A	N/A	N/A	< 0.0323	N/A	N/A	N/A
	5/9/2018	N/A	N/A	N/A	N/A	< 0.0327	N/A	N/A	N/A
	10/26/2018	N/A	N/A	N/A	N/A	0.00427*	N/A	N/A	N/A
	4/10/2019	N/A	N/A	N/A	N/A	0.00237*	N/A	N/A	N/A
	10/8/2019	N/A	N/A	N/A	N/A	0.0021*	N/A	N/A	N/A
	4/6/2020	N/A	N/A	N/A	N/A	0.00713*	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A
	3/15/2022	N/A	N/A	< 0.064	< 0.064	< 0.064	N/A	N/A	N/A
Diethyl phthalate, ug/L (CAS NO - 84-66-2)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	Dimethoate, ug/L (CAS NO - 60-51-5)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Dimethyl phthalate, ug/L (CAS NO - 131-11-3)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Dimethyl phthalate, ug/L (CAS NO - 131-11-3)	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Dimethylaminoazobenzene, ug/L (CAS NO - 60-11-7)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	Di-n-butyl phthalate, ug/L (CAS NO - 84-74-2)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Di-n-octyl phthalate, ug/L (CAS NO - 117-84-0)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	2.14*	N/A	N/A	N/A	< 22	N/A	N/A
	5/16/2017	N/A	N/A	< 20	< 20	1.46*	N/A	N/A	N/A
	10/19/2017	N/A	N/A	N/A	N/A	< 20.4	N/A	N/A	N/A
	5/9/2018	N/A	N/A	N/A	N/A	< 20.2	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 21.3	N/A	N/A
Dinoseb, ug/L (CAS NO - 88-85-7)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	Diphenylamine, ug/L (CAS NO - 122-39-4)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Disulfoton, ug/L (CAS NO - 298-04-4)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
Endosulfan I, ug/L (CAS NO - 959-98-8)	8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG	
Endosulfan I, ug/L (CAS NO - 959-98-8)	8/31/2010	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	
	7/25/2011	N/A	N/A	< 0.032	< 0.032	< 0.032	< 0.032	N/A	N/A	
	10/11/2011	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	
	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A	
	5/5/2016	N/A	< 0.0344	N/A	N/A	N/A	0.00283*	N/A	N/A	
	5/16/2017	N/A	N/A	< 0.032	< 0.032	0.014*	N/A	N/A	N/A	
	10/19/2017	N/A	N/A	N/A	N/A	0.0048*	N/A	N/A	N/A	
	5/9/2018	N/A	N/A	N/A	N/A	< 0.0327	N/A	N/A	N/A	
	10/26/2018	N/A	N/A	N/A	N/A	0.00521*	N/A	N/A	N/A	
	4/10/2019	N/A	N/A	N/A	N/A	0.00418*	N/A	N/A	N/A	
	10/8/2019	N/A	N/A	N/A	N/A	0.0048*	N/A	N/A	N/A	
	4/6/2020	N/A	N/A	N/A	N/A	0.00716*	N/A	N/A	N/A	
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	
	3/15/2022	N/A	N/A	< 0.064	< 0.064	< 0.064	N/A	N/A	N/A	
Endosulfan II, ug/L (CAS NO - 33213-65-9)	8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	
	8/31/2010	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	
	7/25/2011	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A	
	10/11/2011	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	
	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A	
	5/5/2016	N/A	< 0.0344	N/A	N/A	N/A	< 0.0344	N/A	N/A	
	5/16/2017	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A	
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	
	3/15/2022	N/A	N/A	< 0.064	< 0.064	< 0.064	N/A	N/A	N/A	
	Endosulfan sulfate, ug/L (CAS NO - 1031-07-8)	8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
		8/31/2010	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
		7/25/2011	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
		10/11/2011	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
		7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
5/5/2016		N/A	< 0.0344	N/A	N/A	N/A	0.0045*	N/A	N/A	
5/16/2017		N/A	N/A	< 0.032	< 0.032	0.0178*	N/A	N/A	N/A	
10/19/2017		N/A	N/A	N/A	N/A	0.00419*	N/A	N/A	N/A	
5/9/2018		N/A	N/A	N/A	N/A	0.00385*	N/A	N/A	N/A	
10/26/2018		N/A	N/A	N/A	N/A	0.00993*	N/A	N/A	N/A	
4/10/2019		N/A	N/A	N/A	N/A	0.0196*	N/A	N/A	N/A	
10/8/2019		N/A	N/A	N/A	N/A	0.006*	N/A	N/A	N/A	
10/28/2020		N/A	N/A	N/A	N/A	0.00385*	N/A	N/A	N/A	
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	
3/15/2022	N/A	N/A	< 0.064	< 0.064	< 0.064	N/A	N/A	N/A		
Endrin, ug/L (CAS NO - 72-20-8)	8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	
	8/31/2010	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	
	7/25/2011	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A	
	10/11/2011	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	
	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A	
	5/5/2016	N/A	< 0.0344	N/A	N/A	N/A	0.00424*	N/A	N/A	
	5/16/2017	N/A	N/A	< 0.032	< 0.032	0.00462*	N/A	N/A	N/A	
	10/19/2017	N/A	N/A	N/A	N/A	< 0.0323	N/A	N/A	N/A	
	5/9/2018	N/A	N/A	N/A	N/A	< 0.0327	N/A	N/A	N/A	
	10/26/2018	N/A	N/A	N/A	N/A	0.0112*	N/A	N/A	N/A	
	4/10/2019	N/A	N/A	N/A	N/A	0.0148*	N/A	N/A	N/A	
	3/31/2021	N/A	N/A	N/A	N/A	0.014*	N/A	N/A	N/A	
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	
	3/15/2022	N/A	N/A	< 0.064	< 0.064	< 0.064	N/A	N/A	N/A	
Endrin aldehyde, ug/L (CAS NO - 7421-93-4)	8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	
	8/31/2010	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	
	7/25/2011	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A	
	10/11/2011	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	
	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A	
	5/5/2016	N/A	< 0.0344	N/A	N/A	N/A	< 0.0344	N/A	N/A	
	5/16/2017	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A	
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	
	3/15/2022	N/A	N/A	< 0.064	< 0.064	< 0.064	N/A	N/A	N/A	
	Ethyl Methacrylate, ug/L (CAS NO - 97-63-2)	8/28/2009	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A

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 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Ethyl Methacrylate, ug/L (CAS NO - 97-63-2)	8/31/2010	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	7/25/2011	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	10/11/2011	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	7/30/2012	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	5/5/2016	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	5/16/2017	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	3/15/2022	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
Ethyl Methanesulfonate, ug/L (CAS NO - 62-50-0)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
Famphur, ug/L (CAS NO - 52-85-7)	8/28/2009	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A
	8/31/2010	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A
	7/25/2011	N/A	N/A	< 20	< 20	< 20	N/A	N/A	N/A
	10/11/2011	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A
	7/30/2012	N/A	N/A	< 20	< 20	< 20	N/A	N/A	N/A
	5/5/2016	N/A	< 21.5	N/A	N/A	N/A	< 22	N/A	N/A
	5/16/2017	N/A	N/A	< 20	< 20	< 20	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
Fluoranthene, ug/L (CAS NO - 206-44-0)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
Fluorene, ug/L (CAS NO - 86-73-7)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
Heptachlor, ug/L (CAS NO - 76-44-8)	8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	8/31/2010	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/25/2011	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	10/11/2011	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	5/5/2016	N/A	< 0.0344	N/A	N/A	N/A	< 0.0344	N/A	N/A
	5/16/2017	N/A	N/A	< 0.032	< 0.032	0.0109*	N/A	N/A	N/A
	10/19/2017	N/A	N/A	N/A	N/A	< 0.0323	N/A	N/A	N/A
	5/9/2018	N/A	N/A	N/A	N/A	< 0.0327	N/A	N/A	N/A
	4/6/2020	N/A	N/A	N/A	N/A	0.00678*	N/A	N/A	N/A
	3/31/2021	N/A	N/A	N/A	N/A	0.0173*	N/A	N/A	N/A
8/23/2021	N/A	N/A	N/A	N/A	N/A	0.0191	N/A	N/A	
3/15/2022	N/A	N/A	< 0.064	< 0.064	< 0.064	N/A	N/A	N/A	
Heptachlor Epoxide, ug/L (CAS NO - 1024-57-3)	8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	8/31/2010	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/25/2011	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	10/11/2011	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Heptachlor Epoxide, ug/L (CAS NO - 1024-57-3)	5/5/2016	N/A	< 0.0344	N/A	N/A	N/A	< 0.0344	N/A	N/A
	5/16/2017	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A
	3/15/2022	N/A	N/A	< 0.064	< 0.064	< 0.064	N/A	N/A	N/A
Hexachlorobenzene, ug/L (CAS NO - 118-74-1)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	Hexachlorobutadiene, ug/L (CAS NO - 87-68-3)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Hexachlorocyclopentadiene, ug/L (CAS NO - 77-47-4)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 21.5	N/A	N/A	N/A	< 22	N/A	N/A
	5/16/2017	N/A	N/A	< 20	< 20	< 20	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	Hexachloroethane, ug/L (CAS NO - 67-72-1)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Hexachloropropene, ug/L (CAS NO - 1888-71-7)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	Indeno [1,2,3-cd] pyrene, ug/L (CAS NO - 193-39-5)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Isobutanol, mg/L (CAS NO - 78-83-1)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Isobutanol, mg/L (CAS NO - 78-83-1)	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Isodrin, ug/L (CAS NO - 465-73-6)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Isophorone, ug/L (CAS NO - 78-59-1)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Isosafrole, ug/L (CAS NO - 120-58-1)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Kepone, ug/L (CAS NO - 143-50-0)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Methacrylonitrile, ug/L (CAS NO - 126-98-7)	8/28/2009	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	8/31/2010	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	7/25/2011	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	10/11/2011	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	7/30/2012	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	5/5/2016	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Methapyrilene, ug/L (CAS NO - 91-80-5)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	0.707*	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Methoxychlor, ug/L (CAS NO - 72-43-5)	8/28/2009	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	8/31/2010	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/25/2011	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Methoxychlor, ug/L (CAS NO - 72-43-5)	10/11/2011	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A
	7/30/2012	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A
	5/5/2016	N/A	< 0.0344	N/A	N/A	N/A	< 0.0344	N/A	N/A
	5/16/2017	N/A	N/A	< 0.032	< 0.032	0.0236*	N/A	N/A	N/A
	10/19/2017	N/A	N/A	N/A	N/A	< 0.0323	N/A	N/A	N/A
	5/9/2018	N/A	N/A	N/A	N/A	< 0.0327	N/A	N/A	N/A
	10/26/2018	N/A	N/A	N/A	N/A	0.00495*	N/A	N/A	N/A
	3/31/2021	N/A	N/A	N/A	N/A	0.00583*	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A
	3/15/2022	N/A	N/A	< 0.064	< 0.064	< 0.064	N/A	N/A	N/A
Methyl Methacrylate, ug/L (CAS NO - 80-62-6)	8/28/2009	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	8/31/2010	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	7/25/2011	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	10/11/2011	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	7/30/2012	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	5/5/2016	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	5/16/2017	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	3/15/2022	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	Methyl Methanesulfonate, ug/L (CAS NO - 66-27-3)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Naphthalene, ug/L (CAS NO - 91-20-3)		8/28/2009	N/A	< 5	N/A	N/A	N/A	< 5	N/A
	8/31/2010	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A
	7/25/2011	N/A	N/A	< 5	< 5	< 5	N/A	N/A	N/A
	10/11/2011	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A
	7/30/2012	N/A	N/A	< 5	< 5	< 5	N/A	N/A	N/A
	5/5/2016	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A
	5/16/2017	N/A	N/A	< 5	< 5	< 5	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	3/15/2022	N/A	N/A	< 5	< 5	< 5	N/A	N/A	N/A
	Nitrobenzene, ug/L (CAS NO - 98-95-3)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
N-Nitrosodiethylamine, ug/L (CAS NO - 55-18-5)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	N-Nitrosodimethylamine, ug/L (CAS NO - 62-75-9)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
N-Nitrosodimethylamine, ug/L (CAS NO - 62-75-9)	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	< 10	N/A	N/A
N-Nitrosodi-n-butylamine, ug/L (CAS NO - 924-16-3)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
N-Nitrosodi-n-propylamine, ug/L (CAS NO - 621-64-7)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
N-Nitrosodiphenylamine, ug/L (CAS NO - 86-30-6)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
N-Nitrosomethylethylamine, ug/L (CAS NO - 10595-95-6)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
N-Nitrosopiperidine, ug/L (CAS NO - 100-75-4)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
N-Nitrosopyrrolidine, ug/L (CAS NO - 930-55-2)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
O,O,O-Triethyl Phosphorothioate, ug/L (CAS NO - 126-68-1)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
O,O,O-Triethyl Phosphorothioate, ug/L (CAS NO - 126-68-1)	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
O-Toluidine, ug/L (CAS NO - 95-53-4)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
Parathion-Ethyl, ug/L (CAS NO - 56-38-2)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
Parathion-Methyl, ug/L (CAS NO - 298-00-0)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
PCB-1016, ug/L (CAS NO - 12674-11-2)	8/28/2009	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	8/31/2010	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	7/25/2011	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	10/11/2011	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	7/30/2012	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	5/5/2016	N/A	< 0.87	N/A	N/A	N/A	< 0.889	N/A	N/A
	5/16/2017	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A
3/15/2022	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A	
PCB-1221, ug/L (CAS NO - 11104-28-2)	8/28/2009	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	8/31/2010	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	7/25/2011	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	10/11/2011	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	7/30/2012	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	5/5/2016	N/A	< 0.87	N/A	N/A	N/A	< 0.889	N/A	N/A
	5/16/2017	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A
3/15/2022	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A	
PCB-1232, ug/L (CAS NO - 11141-16-5)	8/28/2009	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	8/31/2010	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	7/25/2011	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	10/11/2011	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	7/30/2012	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	5/5/2016	N/A	< 0.87	N/A	N/A	N/A	< 0.889	N/A	N/A
	5/16/2017	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A
3/15/2022	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A	
PCB-1242, ug/L (CAS NO - 53469-21-9)	8/28/2009	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	8/31/2010	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	7/25/2011	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	10/11/2011	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	7/30/2012	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
PCB-1242, ug/L (CAS NO - 53469-21-9)	5/5/2016	N/A	< 0.87	N/A	N/A	N/A	< 0.889	N/A	N/A
	5/16/2017	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A
	3/15/2022	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
PCB-1248, ug/L (CAS NO - 12672-29-6)	8/28/2009	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	8/31/2010	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	7/25/2011	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	10/11/2011	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	7/30/2012	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	5/5/2016	N/A	< 0.87	N/A	N/A	N/A	< 0.889	N/A	N/A
	5/16/2017	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A
	3/15/2022	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	PCB-1254, ug/L (CAS NO - 11097-69-1)	8/28/2009	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A
8/31/2010		N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
7/25/2011		N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
10/11/2011		N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
7/30/2012		N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
5/5/2016		N/A	< 0.87	N/A	N/A	N/A	< 0.889	N/A	N/A
5/16/2017		N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A
3/15/2022		N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
PCB-1260, ug/L (CAS NO - 11096-82-5)		8/28/2009	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A
	8/31/2010	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	7/25/2011	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	10/11/2011	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A
	7/30/2012	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	5/5/2016	N/A	< 0.87	N/A	N/A	N/A	< 0.889	N/A	N/A
	5/16/2017	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A
	3/15/2022	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	N/A	N/A
	Pentachlorobenzene, ug/L (CAS NO - 608-93-5)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
Pentachloronitrobenzene, ug/L (CAS NO - 82-68-8)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
Pentachlorophenol [2C], ug/L (CAS NO - 87-86-5)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	
Phenacetin, ug/L (CAS NO - 62-44-2)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A

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Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24

Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Phenacetin, ug/L (CAS NO - 62-44-2)	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Phenanthrene, ug/L (CAS NO - 85-01-8)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	Phenol, ug/L (CAS NO - 108-95-2)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Phorate, ug/L (CAS NO - 298-02-2)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	Pronamide, ug/L (CAS NO - 23950-58-5)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Propionitrile, ug/L (CAS NO - 107-12-0)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	Pyrene, ug/L (CAS NO - 129-00-0)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Safrole, ug/L (CAS NO - 94-59-7)		8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	8/31/2010	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/25/2011	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
 Adair County Sanitary Landfill (Closed) Permit # 01-SDP-01-74P
 Project #27223238.24


Other Constituents	Sample Date	MW-10 UPG	MW-2 DNG	MW-3 DNG	MW-6 DNG	MW-7 DNG	MW-9 DNG	GU-2 DNG	GWD-1 DNG
Safrole, ug/L (CAS NO - 94-59-7)	10/11/2011	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
	7/30/2012	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	5/5/2016	N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
	5/16/2017	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
	3/15/2022	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
	8/28/2009	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
Sulfide, mg/L (CAS NO - 18496-25-8)	8/31/2010	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	7/25/2011	N/A	N/A	< 0.12	< 0.12	< 0.12	N/A	N/A	N/A
	10/11/2011	N/A	1.7	N/A	N/A	N/A	1.5	N/A	N/A
	4/16/2012	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	7/30/2012	N/A	0.81	< 0.23	9.2	< 0.23	0.38	N/A	N/A
	3/5/2013	N/A	< 1	N/A	2.1	N/A	2.53	N/A	N/A
	7/9/2013	N/A	< 1	N/A	< 1	N/A	1.05	N/A	N/A
	2/11/2014	< 1	< 1	N/A	< 1	N/A	< 1	N/A	N/A
	8/7/2014	< 1	< 1	N/A	< 1	N/A	< 1	N/A	N/A
	8/7/2014	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/24/2015	< 1	< 1	N/A	< 1	N/A	< 1	N/A	N/A
	10/20/2015	N/A	< 1	N/A	< 1	N/A	< 1	N/A	N/A
	10/20/2015	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	5/5/2016	< 1	< 1	N/A	< 1	N/A	< 1	N/A	N/A
	5/16/2017	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A
	10/19/2017	< 1	< 1	N/A	N/A	N/A	< 1	N/A	N/A
	5/9/2018	< 1	< 1	N/A	< 1	N/A	6.29	N/A	N/A
	8/23/2021	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/15/2022	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	Thionazin, ug/L (CAS NO - 297-97-2)	8/28/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A
8/31/2010		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/25/2011		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
10/11/2011		N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A
7/30/2012		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
5/5/2016		N/A	< 10.8	N/A	N/A	N/A	< 11	N/A	N/A
5/16/2017		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
8/23/2021		N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A
3/15/2022		N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A
Toxaphene, ug/L (CAS NO - 8001-35-2)		8/28/2009	N/A	< 2	N/A	N/A	N/A	< 2	N/A
	8/31/2010	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	7/25/2011	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	10/11/2011	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A
	7/30/2012	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	5/5/2016	N/A	< 2.15	N/A	N/A	N/A	< 2.15	N/A	N/A
	5/16/2017	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	8/23/2021	N/A	N/A	N/A	N/A	N/A	< 2.11	N/A	N/A
	3/15/2022	N/A	N/A	< 2	< 2	< 2	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

SUMMARY OF STATISTICAL METHODOLOGY

Purpose

The purpose of this document is to provide the statistical method used in the evaluation of groundwater analytical data collected from the groundwater monitoring network of the Closed municipal solid waste landfill (MSWLF) unit at the Adair County Sanitary Landfill (Landfill).

Statistical Method

Diagnostic and Exploratory Evaluations and Tests of Assumptions

The detection monitoring statistical programs includes diagnostic and exploratory evaluations and statistical tests of assumptions, as appropriate, including the following:

- Time Series Plots
- Shapiro-Wilk test for normality
- Ohio Environmental Protection Agency (EPA) Method for identification of outliers
- Mann-Kendall/Sen's Slope trend test

Management of Non-Detect Data

Non-detect values in the dataset are managed using simple substitution or the Kaplan-Meier estimator. If less than 15% of the data are non-detects, simple substitution is used, where non-detect values are assigned a concentration of one-half ($\frac{1}{2}$) of the practical quantification limit (PQL). If greater than 15% but less than 50% of the data are non-detects, the Kaplan-Meier estimator is used to define the distribution of the dataset. If non-detects comprise greater than 50% of the available data, non-parametric statistical methods are used.

Management of Outliers

Background datasets are evaluated for outliers using the Ohio EPA Method included in the Sanitas™ statistical software program and described below, which includes the use of Dixon's, Rosner's, and Tukey's outlier tests, as appropriate based on the diagnostic tests, for the datasets that contain less than 75% of the measured concentrations below the PQL. Outliers are not confirmed unless a physical cause or explanation for the outlier is determined.

Management of Data (ND data < 75%)

If less than 75% of the background dataset is below the PQL, outliers are statistically evaluated using the following guidelines.

- A parametric dataset with $n < 20$ is evaluated with the Dixon's outlier test.
- A parametric dataset with $n \geq 20$ is evaluated with the Rosner's outlier test.
- A non-parametric dataset is evaluated with the Tukey's outlier test.

In accordance with the Ohio EPA Method, if a statistically significant outlier is not found using the above tests, but the highest value data point exceeds the second highest data point by an order of magnitude, the highest point is considered an outlier.

Management of Data (ND data \geq 75%)

If greater than or equal to 75% of the background dataset is less than the PQL, outliers are statistically evaluated using the following guidelines.

- Single detection \geq the PQL:
 - If \geq 50% of the background dataset has detections \geq the method detection limit (MDL), any value \geq two times the PQL of background is considered an outlier.
 - If $<$ 50% of the background dataset has detections \geq the MDL, any value \geq the PQL of background is considered an outlier.
- Two or more detections \geq the PQL:
 - If \geq 50% of the background dataset has detections \geq the MDL, any value \geq three times the PQL of background is considered an outlier.
 - If $<$ 50% of the background dataset has detections \geq the MDL, any value \geq two times the PQL of background is considered an outlier.

Confirmed outliers, if any, are shown in the Summary of Groundwater Chemistry included in the Annual Water Quality Report.

Detection Monitoring Statistical Program

The detection monitoring statistical program for the Landfill is defined by Iowa Administrative Code (IAC) 567-113.10(4)"g". Intrawell prediction limits with retesting were selected as the appropriate statistical method for the determination of statistically significant increases (SSIs) over background for inorganic constituents with historic detections in background. Prediction limits are established using the process below. Data from the most recent sampling event is compared to the prediction limits for the determination of SSIs.

Intrawell Prediction Limits with Retesting

- If the dataset has a normal distribution (or can be transformed to a normal distribution using Ladder of Powers), parametric intrawell prediction limits are calculated if at least five datasets have been collected from the background dataset.
- If the dataset does not have a normal distribution (and cannot be transformed to a normal distribution using Ladder of Powers) or has greater than 50% non-detects, non-parametric intrawell prediction limits are calculated if at least five datasets have been collected from the background dataset.
- If an SSI above the prediction limit is indicated, retesting samples using the 1-of-3 retesting scheme should be collected prior to the next regularly scheduled sampling event with temporal sample spacing consideration to provide samples with greater independence. If all of the retesting results are above the prediction limit, the SSI is confirmed, and the monitoring point should be placed into the assessment monitoring program. If any retesting sample concentration is below the prediction limit, the SSI is not confirmed, and the monitoring point continues in the detection monitoring program.

Updating the Background Dataset for Intrawell Prediction Limits

If no SSI is confirmed for any two-year period, the intrawell background dataset is updated using the following procedure:

- Test the new dataset for normal distribution either outright or through a transformation using Ladder of Powers using the Shapiro-Wilk test.
- Test the new dataset for statistically significant outliers using the Ohio EPA Method, and remove the confirmed outliers (see the “Management of Outliers” section).
- Test the new dataset for statistically significant trends using the Mann-Kendall/Sen’s Slope trend test. If a statistically significantly increasing trend is detected, the monitoring point will be placed into the assessment monitoring program or treated with the leachate, whichever is appropriate.
- If the dataset has a normal distribution and no statistically significant increasing trend is present, a two-sample Welch’s t-test at a 0.01 significance level is performed to compare current background to the most recent two years of detection monitoring data. If the Welch’s t-test is significant and shows that the most recent two years of concentration data appear to be increasing, the background will not be updated.
- If the dataset does not have a normal distribution and no statistically significant increasing trend is present, a two-sample non-parametric Wilcoxon rank-sum test (also known as the Mann-Whitney test) at a 0.01 significance level is performed to compare current background to the most recent two years of detection monitoring data. If the Wilcoxon rank-sum test is significant and shows that the most recent two years of concentration data appear to be increasing, the background will not be updated.
- If the Welch’s t-test or the Wilcoxon rank-sum tests are not significant, the most recent two years of detection data will be added to the intrawell background dataset.

The process will repeat every two years in which an SSI is not confirmed.

Double Quantification Method

The quasi-statistical “double quantification” method is used for constituents not detected in the background monitoring set. If a constituent is detected in the compliance dataset that has not been historically detected in the background dataset, that constituent must be retested for prior to the next regularly scheduled sampling event. If the retesting results confirm the original detection with a quantifiable detection, the SSI is confirmed, and the monitoring point must be placed into the assessment monitoring program.

Assessment Monitoring Statistical Program

Interwell Prediction Limits

Interwell prediction limits were selected as the appropriate statistical method for the determination of statistically significant increases (SSIs) over background for inorganic constituents with historical detections in background. Prediction limits are established using the process below. Data from the most recent sampling event is compared to the prediction limits for the determination of SSIs.

- If the dataset has a normal distribution (or can be transformed to a normal distribution using Ladder of Powers), parametric interwell prediction limits are calculated if at least five datasets have been collected from the background monitoring point(s).
- If the dataset does not have a normal distribution (and cannot be transformed to a normal distribution using Ladder of Powers) or has greater than 50% non-detects, nonparametric interwell prediction limits are calculated if at least five datasets have been collected from the background monitoring point(s).

Confidence Intervals or Confidence Bands

Confidence intervals or confidence bands, as appropriate, were selected as the appropriate statistical methods for comparison of the groundwater analytical data against a fixed groundwater protection standard (GWPS). In the event that a monitoring well enters into assessment monitoring, the assessment monitoring statistical evaluations will be performed using the most recent eight samples or all samples if less than eight samples are available. The confidence intervals or confidence bands used for the assessment monitoring statistical evaluation will be established using the process below. Transformation of the distribution will not be considered.

- A parametric confidence interval around a normal mean will be calculated if the dataset has a normal distribution and no statistically significant trend is present.
- A non-parametric confidence interval around a median will be calculated if the dataset does not have a normal distribution and no statistically significant trend is present.
- Non-parametric confidence bands around a Theil-Sen trend line will be calculated if the dataset has a statistically significant trend.

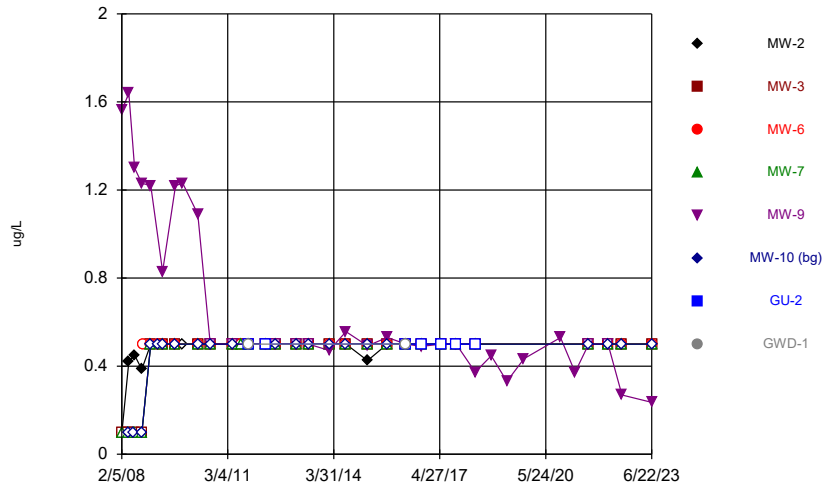
In the event that the lower confidence limit or any part of the lower confidence band, as appropriate, exceeds the GWPS, then the monitoring point is declared out of compliance, and an assessment of corrective measures (ACM) is required.

Statistical output for the reporting period statistical evaluations are included in Attachment A, Spring 2023 Statistical Evaluation Output, and Attachment B, Fall 2023 Statistical Evaluation Output.

Attachment A
Spring 2023 Statistical Evaluation Output

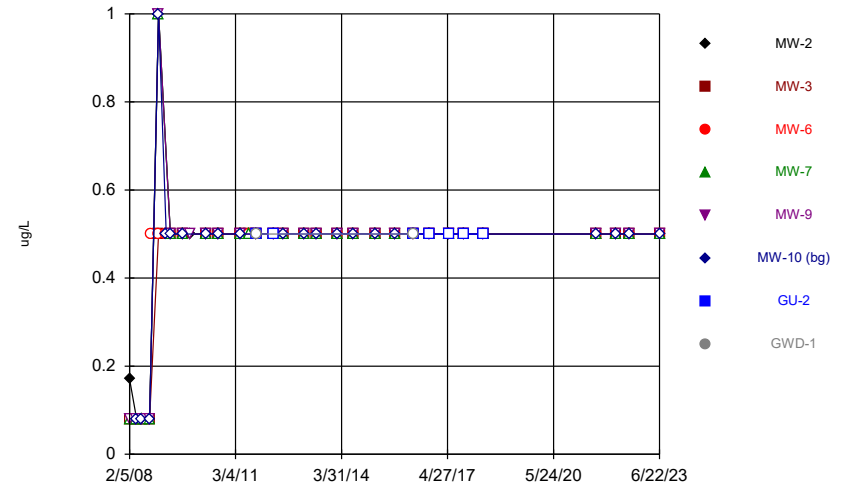
Attachment A.1
Time Series Plots

Time Series



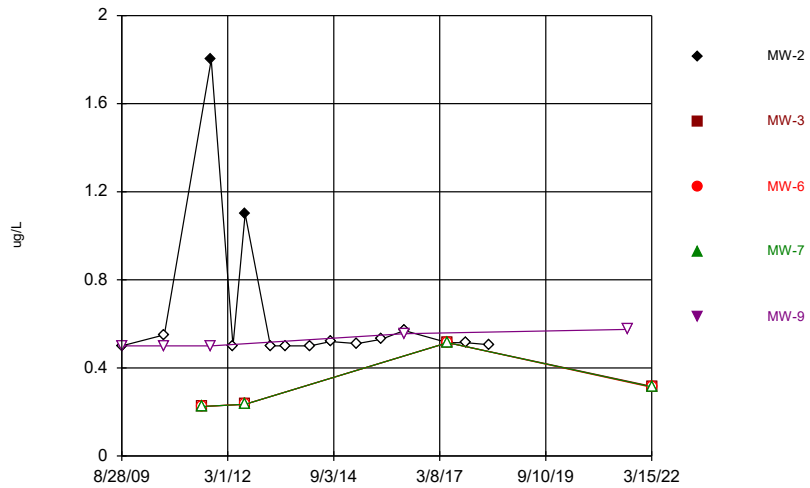
Constituent: 1,1-Dichloroethane Analysis Run 1/17/2024 4:56 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



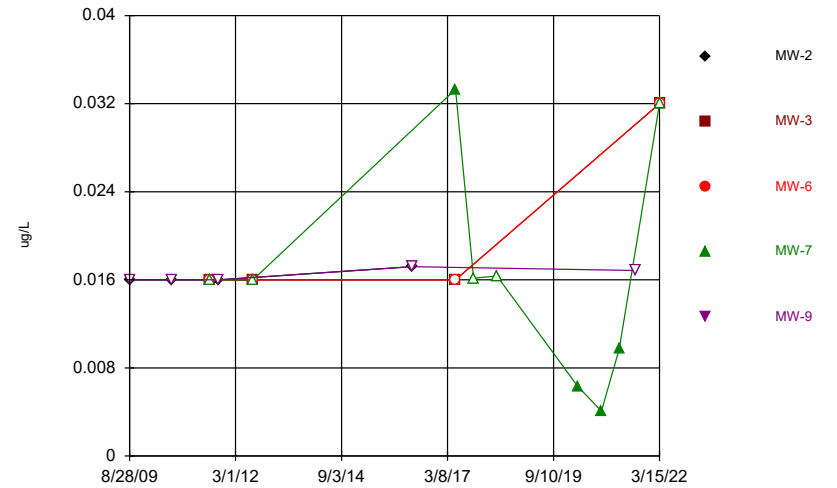
Constituent: 1,4-Dichlorobenzene Analysis Run 1/17/2024 4:56 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



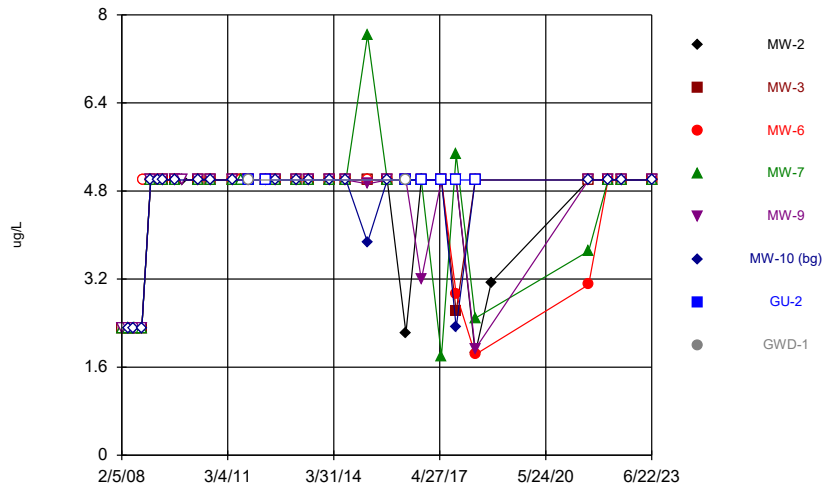
Constituent: 2,4-D Analysis Run 1/17/2024 4:56 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



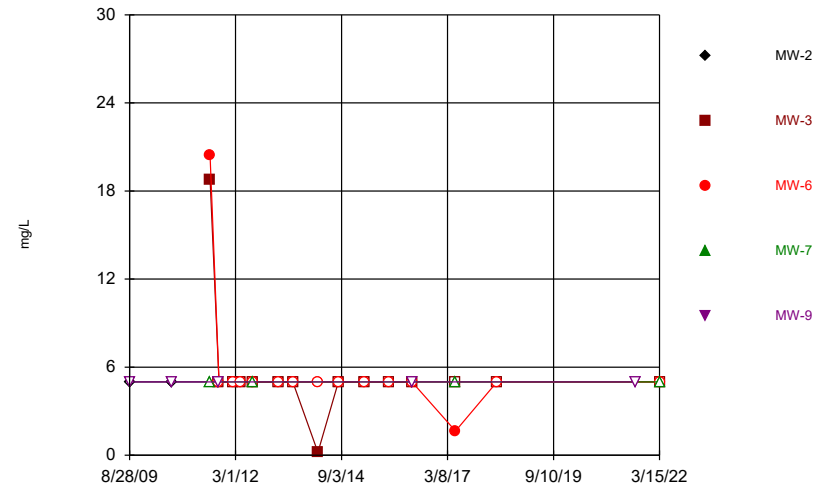
Constituent: 4,4'-DDT Analysis Run 1/17/2024 4:56 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



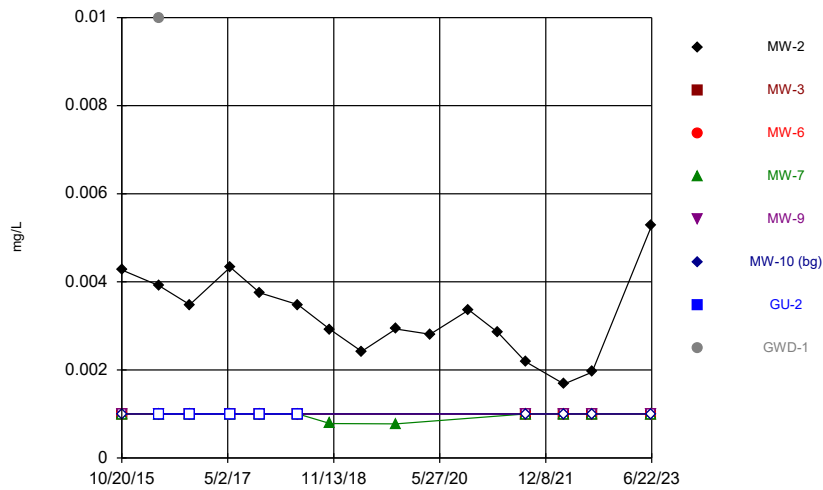
Constituent: Acetone Analysis Run 1/17/2024 4:56 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



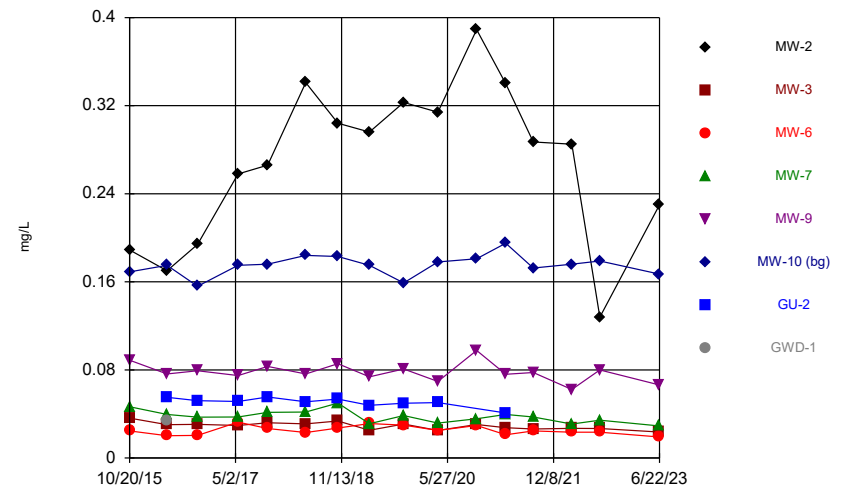
Constituent: Acetonitrile Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



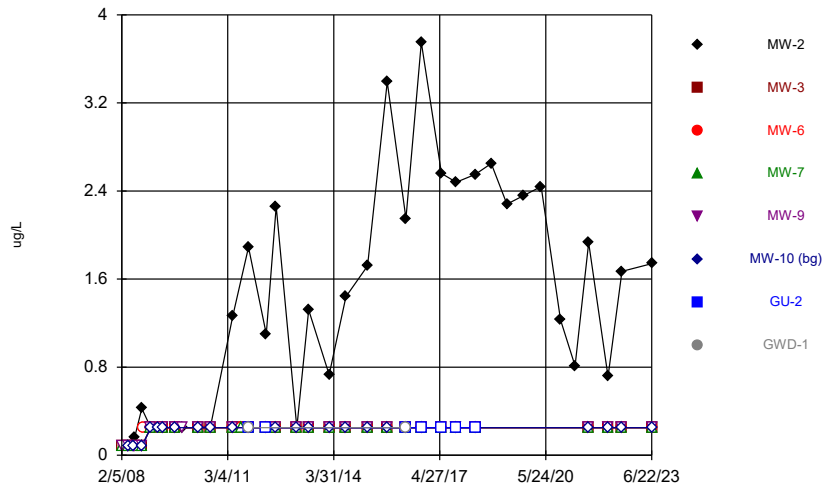
Constituent: Arsenic [total] Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



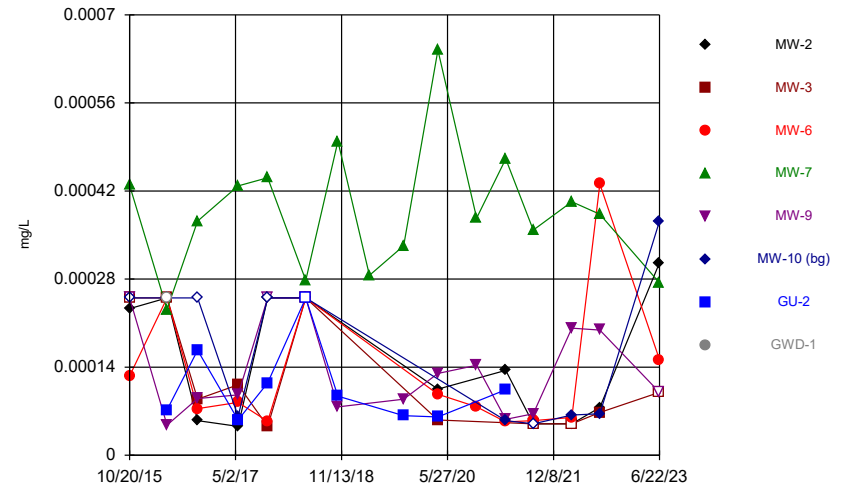
Constituent: Barium [total] Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



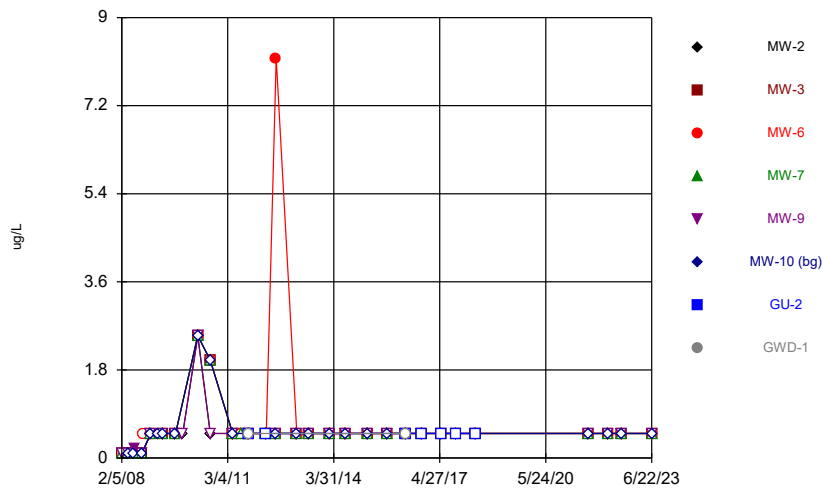
Constituent: Benzene Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



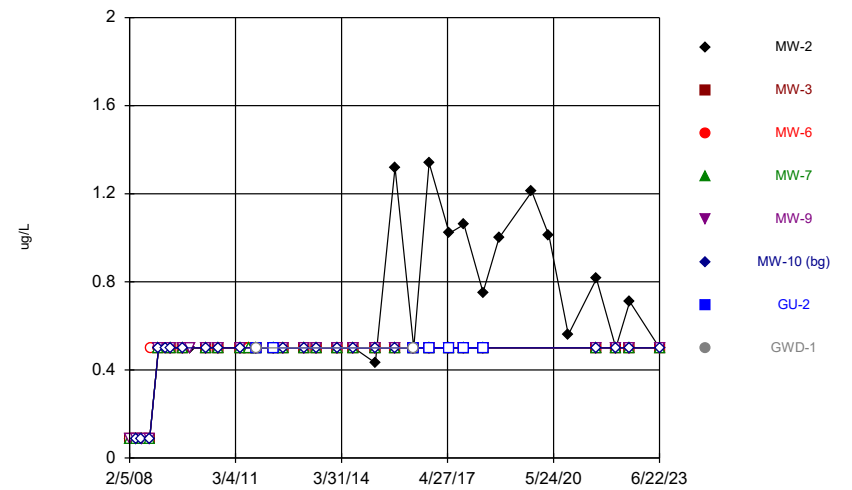
Constituent: Cadmium [total] Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



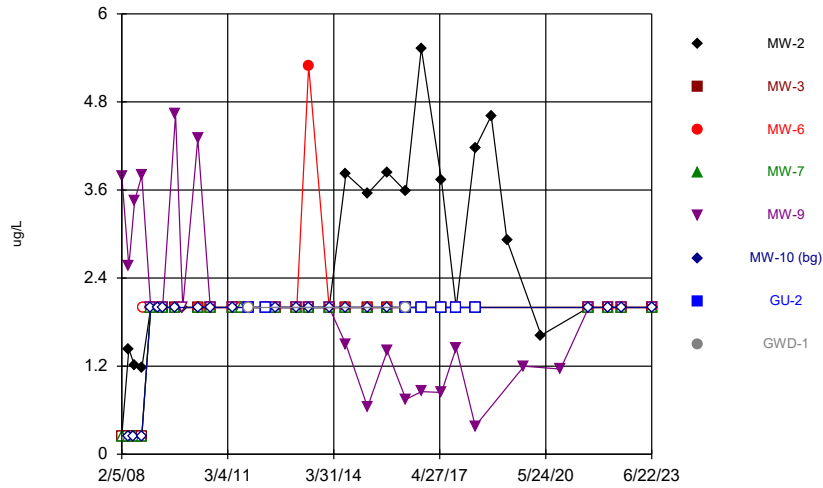
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Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



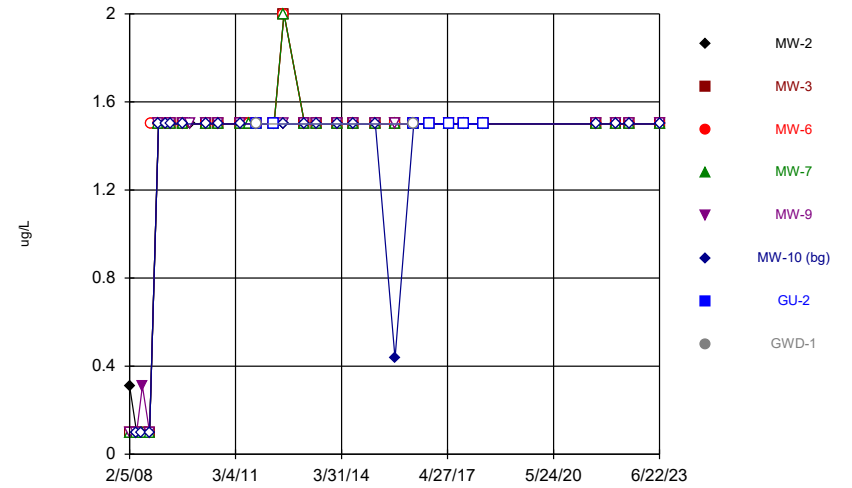
Constituent: Chlorobenzene Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



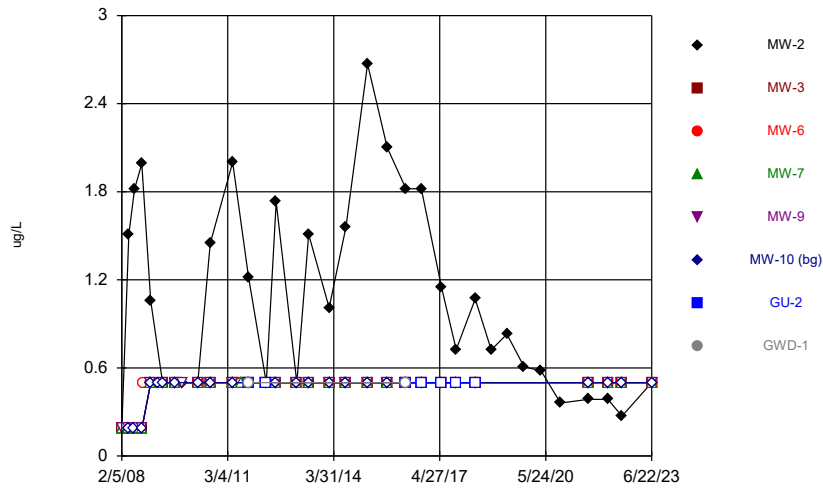
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Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



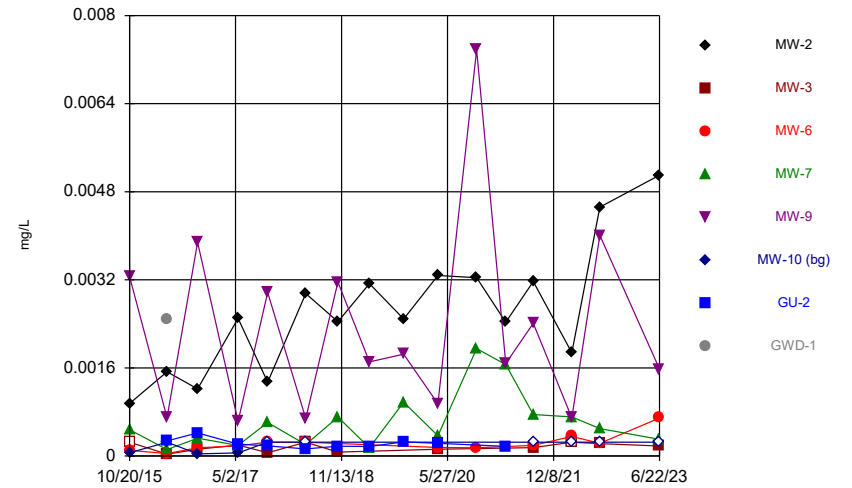
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Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



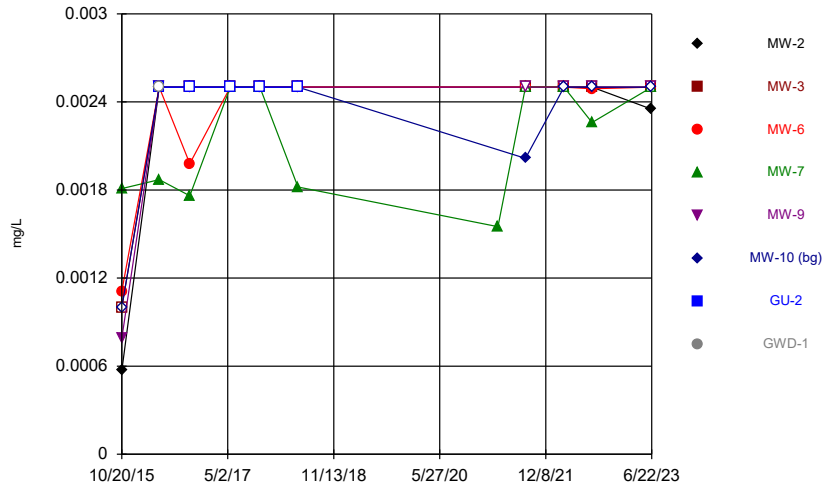
Constituent: cis-1,2-Dichloroethene Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



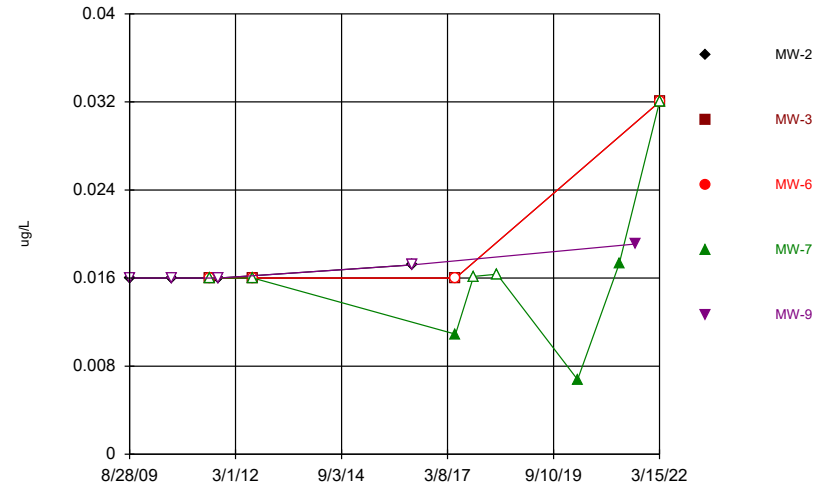
Constituent: Cobalt [total] Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



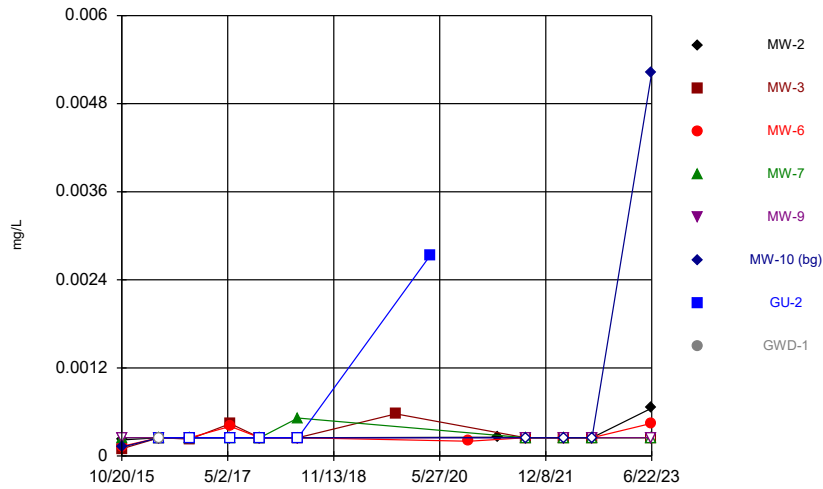
Constituent: Copper [total] Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



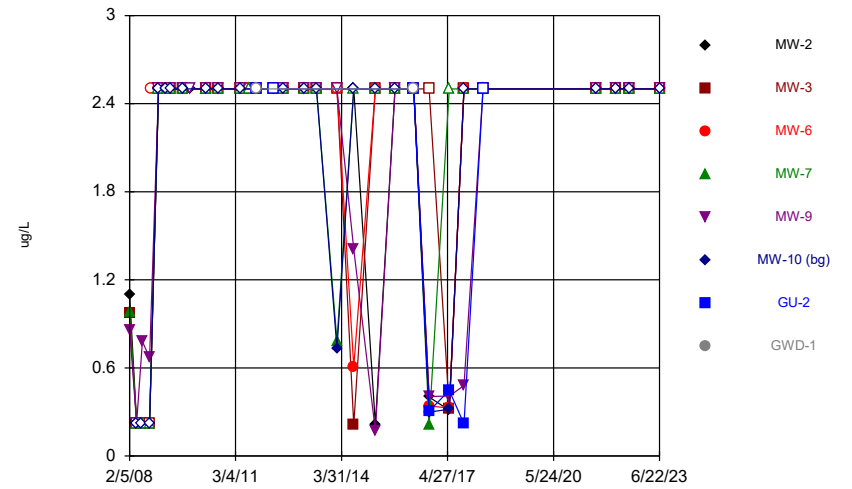
Constituent: Heptachlor Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



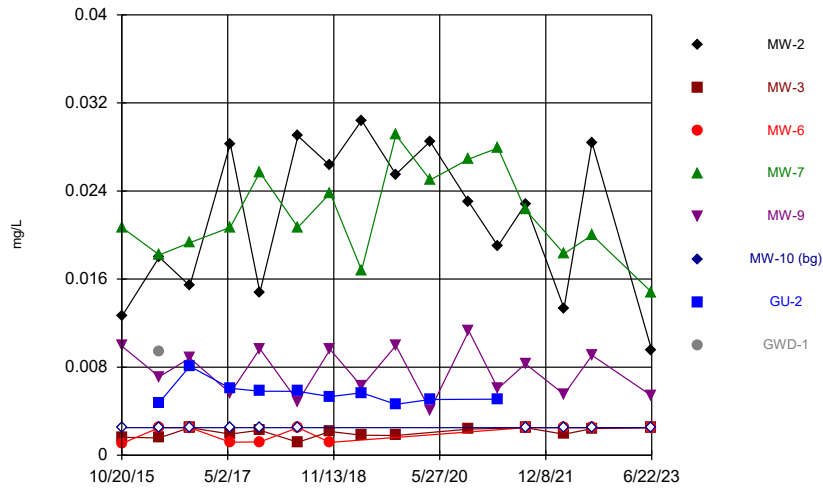
Constituent: Lead [total] Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



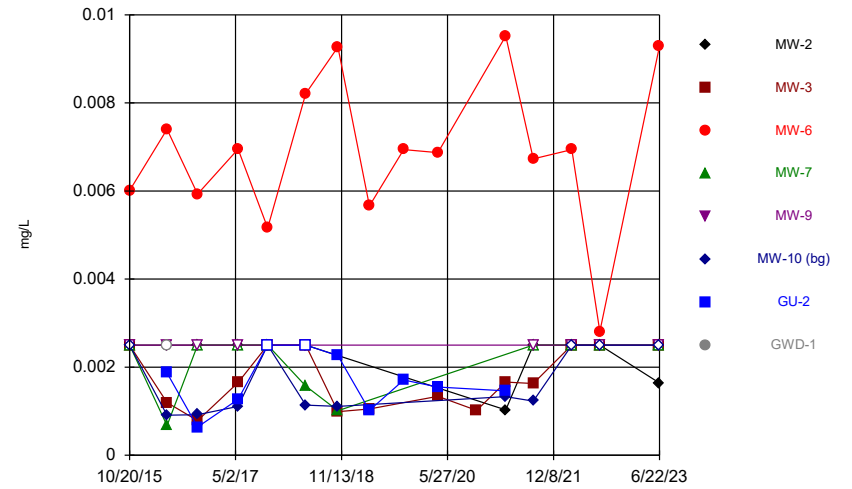
Constituent: Methylene Chloride Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



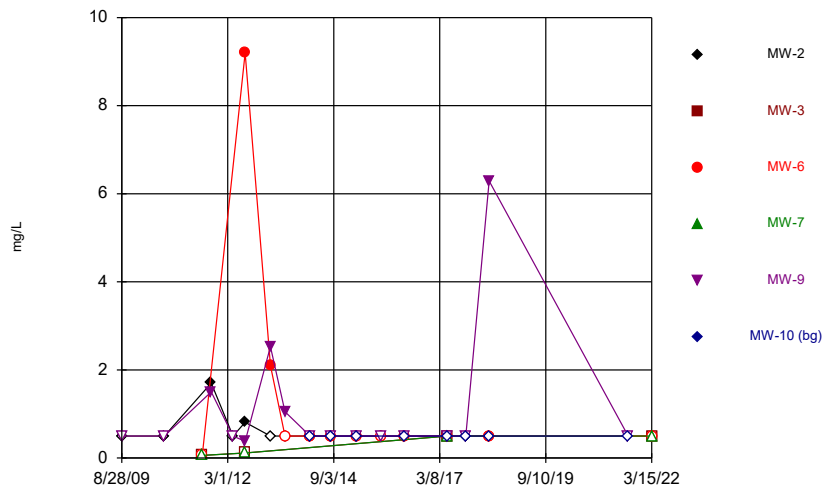
Constituent: Nickel [total] Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



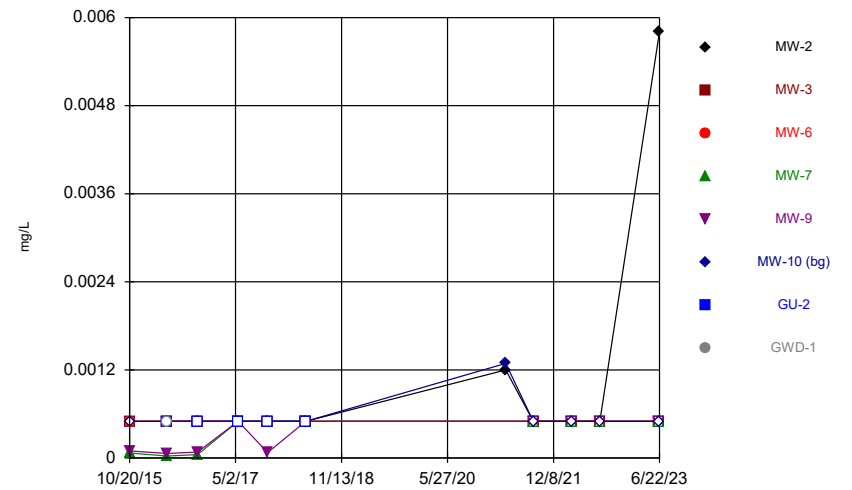
Constituent: Selenium [total] Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



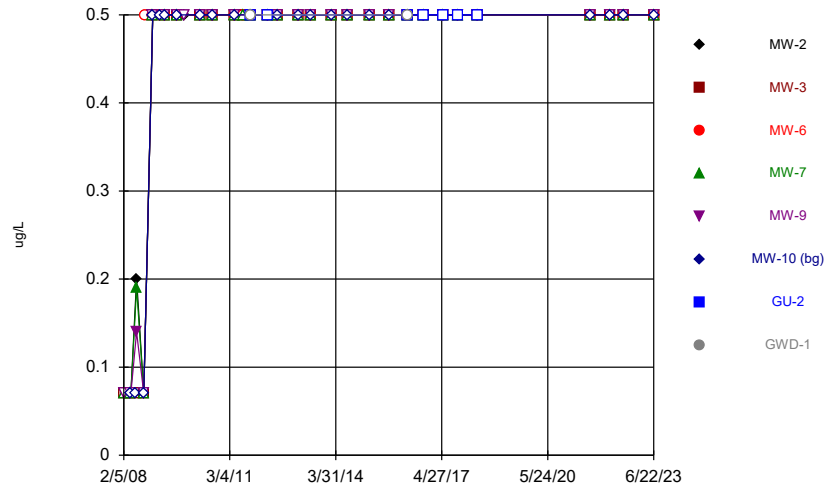
Constituent: Sulfide Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



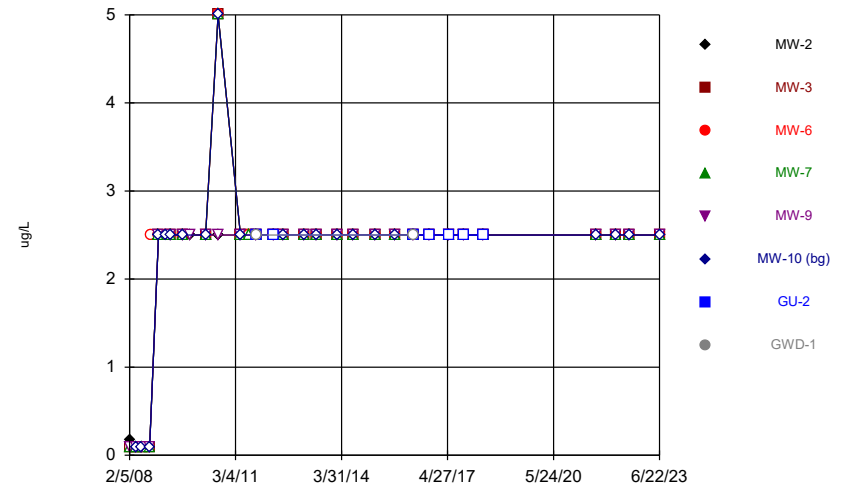
Constituent: Thallium [total] Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



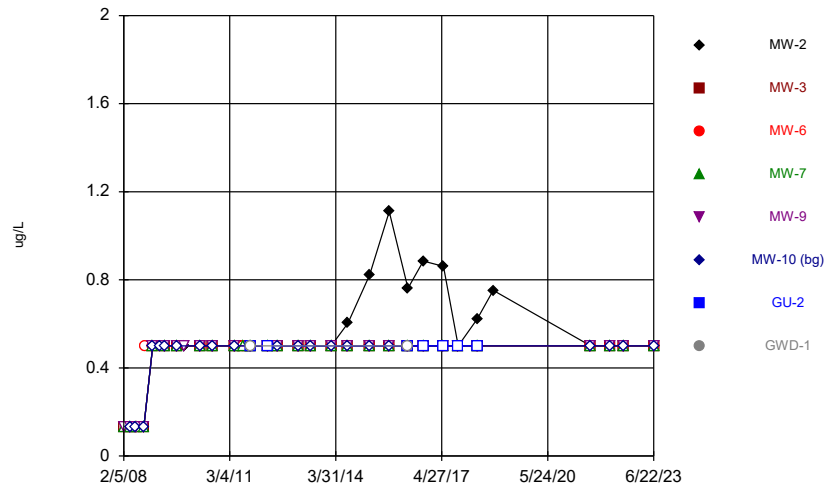
Constituent: Toluene Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



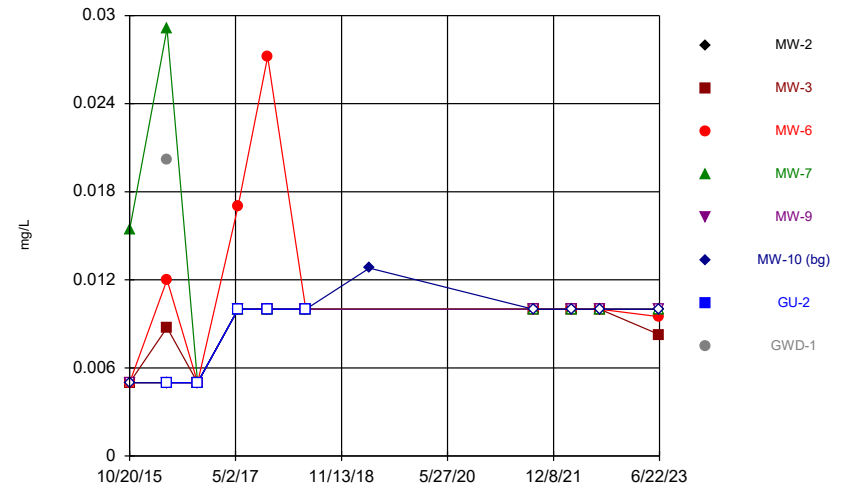
Constituent: trans-1,3-Dichloropropene Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



Constituent: Vinyl chloride Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



Constituent: Zinc [total] Analysis Run 1/17/2024 4:57 PM View: 2023SSN - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Attachment A.2

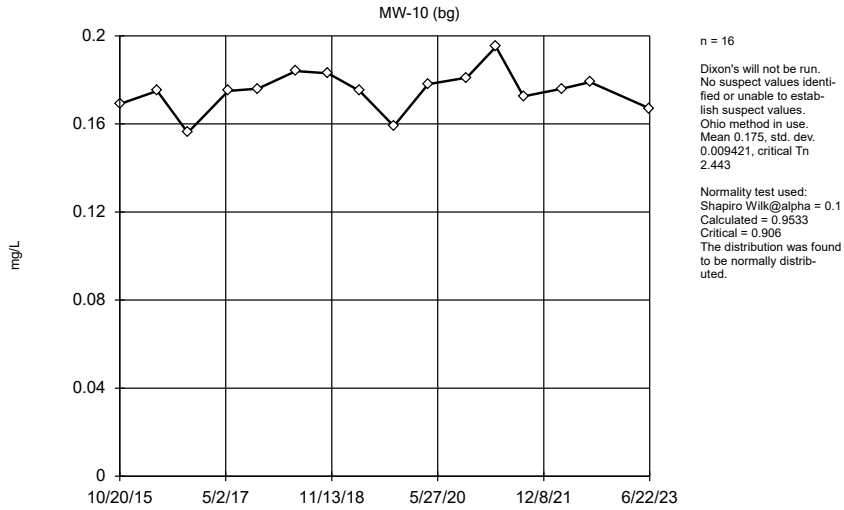
Outlier Analysis

Outlier Analysis

Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database Printed 1/18/2024, 3:12 PM

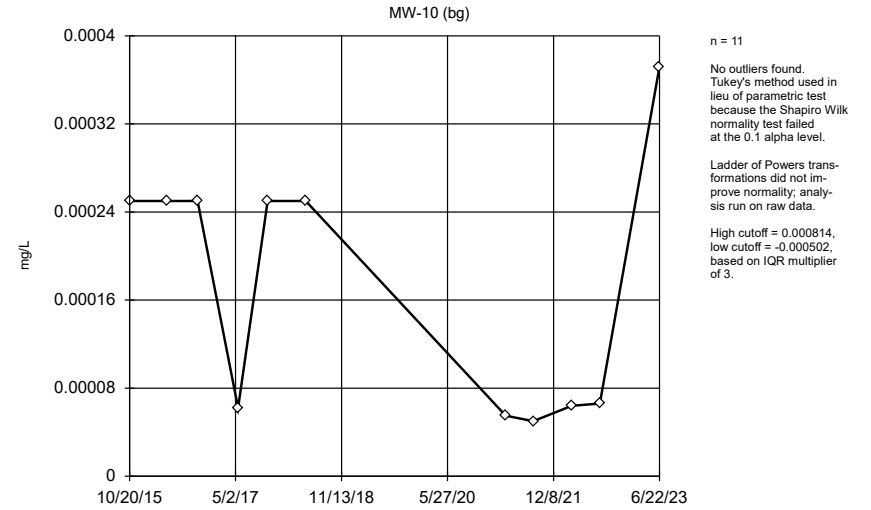
<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Date(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Normality Test</u>
Barium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	EPA/OH	0.05	16	0.175	0.009421	ShapiroWilk
Cadmium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	NP (nrm)/OH	NaN	11	0.0001745	0.0001157	ShapiroWilk
Chromium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	OH	NaN	10	0.002297	0.0006419	n/a
Cobalt [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	NP (nrm)/OH	NaN	10	0.0001904	0.00009612	ShapiroWilk
Copper [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	OH	NaN	10	0.002301	0.000482	n/a
Lead [total] (mg/L)	MW-10 (bg)	Yes	0.00522	6/22/2023	OH	NaN	10	0.000734	0.001577	n/a
Selenium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	NP (nrm)/OH	NaN	12	0.001688	0.0007258	ShapiroWilk
Thallium [total] (mg/L)	MW-10 (bg)	Yes	0.00129	3/31/2021	OH	NaN	11	0.0005718	0.0002382	n/a
Vanadium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	NP (nrm)/OH	NaN	14	0.001604	0.000822	ShapiroWilk
Zinc [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	OH	NaN	11	0.008891	0.002633	n/a

EPA Screening (suspected outliers for Dixon's Test)



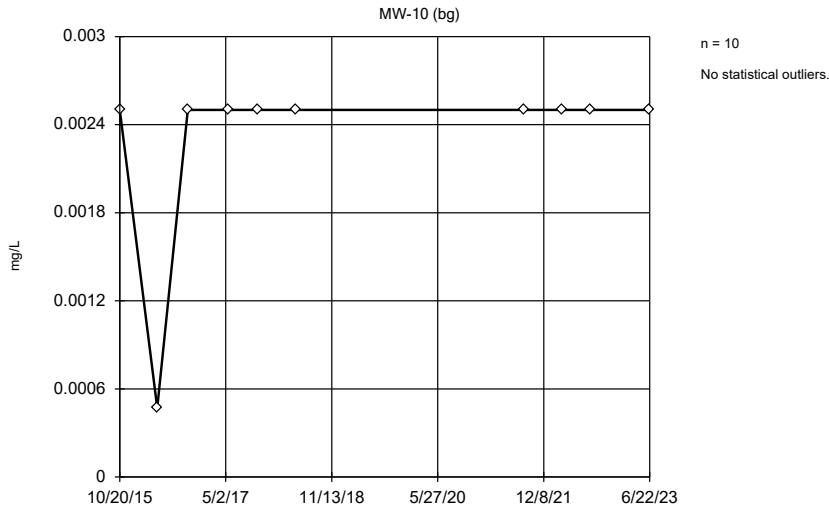
Constituent: Barium [total] Analysis Run 1/18/2024 3:11 PM View: 2023SSN - Outliers
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



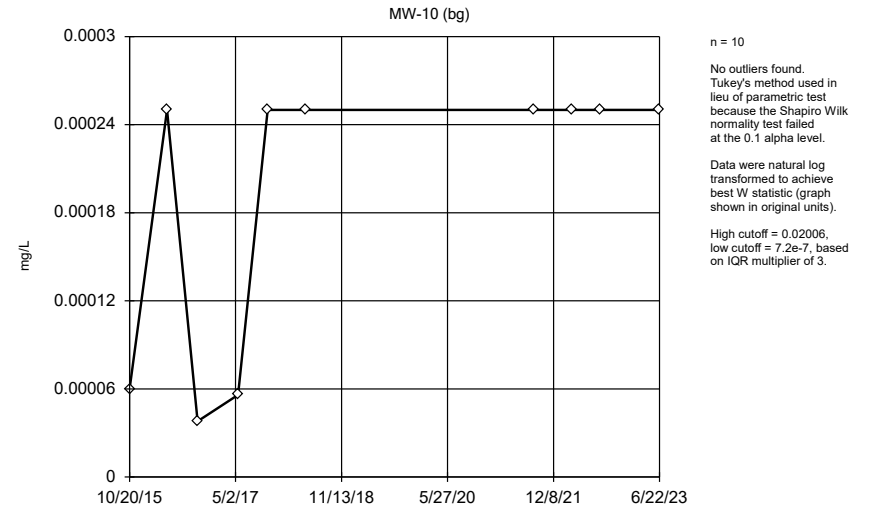
Constituent: Cadmium [total] Analysis Run 1/18/2024 3:11 PM View: 2023SSN - Outliers
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Ohio EPA 0715 Outlier Algorithm



Constituent: Chromium [total] Analysis Run 1/18/2024 3:11 PM View: 2023SSN - Outliers
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

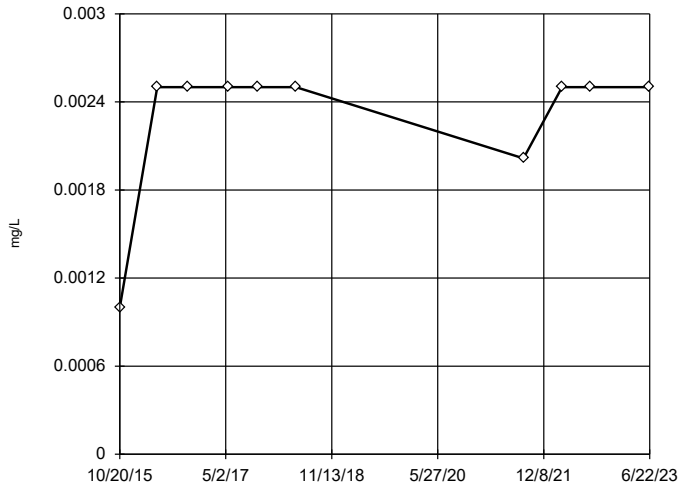
Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



Constituent: Cobalt [total] Analysis Run 1/18/2024 3:11 PM View: 2023SSN - Outliers
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Ohio EPA 0715 Outlier Algorithm

MW-10 (bg)

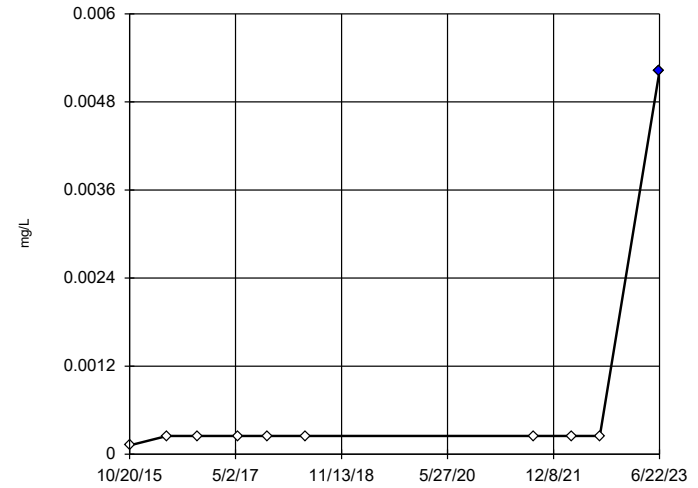


n = 10
No statistical outliers.

Constituent: Copper [total] Analysis Run 1/18/2024 3:11 PM View: 2023SSN - Outliers
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Ohio EPA 0715 Outlier Algorithm

MW-10 (bg)

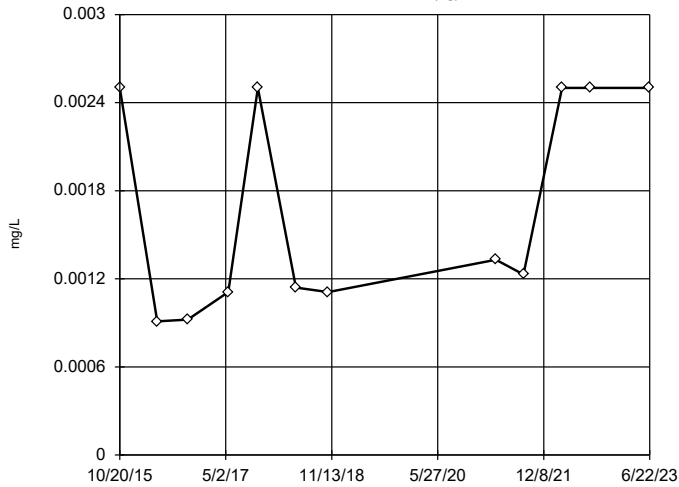


n = 10
Statistical outlier is drawn as solid. Outlier per Ohio method.

Constituent: Lead [total] Analysis Run 1/18/2024 3:11 PM View: 2023SSN - 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)

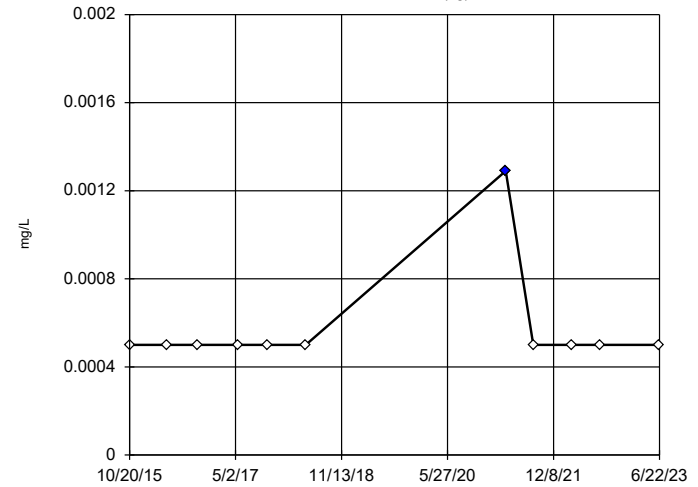


n = 12
No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.02856, low cutoff = 0.00009716, based on IQR multiplier of 3.

Constituent: Selenium [total] Analysis Run 1/18/2024 3:11 PM View: 2023SSN - Outliers
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Ohio EPA 0715 Outlier Algorithm

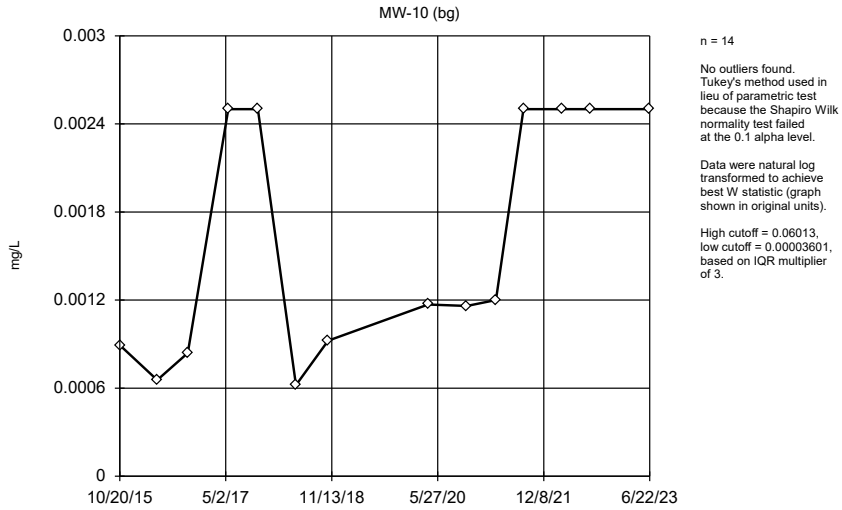
MW-10 (bg)



n = 11
Statistical outlier is drawn as solid. Outlier per Ohio method.

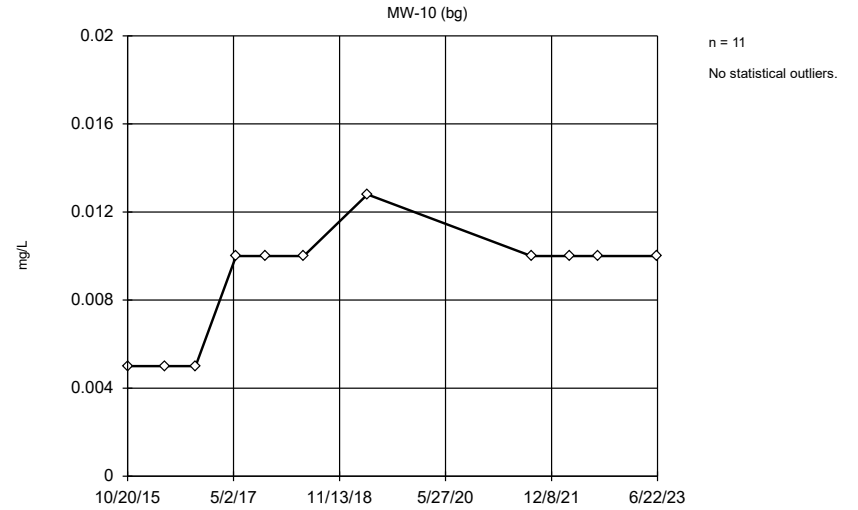
Constituent: Thallium [total] Analysis Run 1/18/2024 3:11 PM View: 2023SSN - Outliers
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm




Constituent: Vanadium [total] Analysis Run 1/18/2024 3:11 PM View: 2023SSN - Outliers
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Ohio EPA 0715 Outlier Algorithm



Constituent: Zinc [total] Analysis Run 1/18/2024 3:11 PM View: 2023SSN - Outliers
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database



Attachment A.3
Interwell Prediction Limits

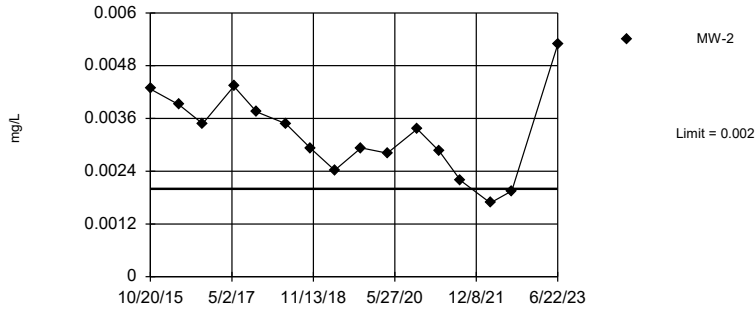
Prediction Limit

Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database Printed 1/18/2024, 2:30 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Wells	Bg Mean	Std. Dev.	%NDs	ND Adj.	Trans...	Alpha	Method
Arsenic [total] (mg/L)	MW-2	0.002	n/a	6/22/2023	0.00528	Yes	10	MW-10	n/a	n/a	100	n/a	n/a	0.01246	NP Inter (NDs) 1 of 2
Barium [total] (mg/L)	MW-2	0.1965	n/a	6/22/2023	0.23	Yes	16	MW-10	0.175	0.009421	0	None	No	0.001053	Param Inter 1 of 2
Barium [total] (mg/L)	MW-3	0.1965	n/a	6/22/2023	0.0236	No	16	MW-10	0.175	0.009421	0	None	No	0.001053	Param Inter 1 of 2
Barium [total] (mg/L)	MW-6	0.1965	n/a	6/22/2023	0.0191	No	16	MW-10	0.175	0.009421	0	None	No	0.001053	Param Inter 1 of 2
Barium [total] (mg/L)	MW-7	0.1965	n/a	6/22/2023	0.0291	No	16	MW-10	0.175	0.009421	0	None	No	0.001053	Param Inter 1 of 2
Barium [total] (mg/L)	MW-9	0.1965	n/a	6/22/2023	0.0663	No	16	MW-10	0.175	0.009421	0	None	No	0.001053	Param Inter 1 of 2
Cadmium [total] (mg/L)	MW-2	0.000372	n/a	6/22/2023	0.000306	No	11	MW-10	n/a	n/a	54.55	n/a	n/a	0.01093	NP Inter (NDs) 1 of 2
Cadmium [total] (mg/L)	MW-7	0.000372	n/a	6/22/2023	0.000274	No	11	MW-10	n/a	n/a	54.55	n/a	n/a	0.01093	NP Inter (NDs) 1 of 2
Cobalt [total] (mg/L)	MW-2	0.00025	n/a	6/22/2023	0.0051	Yes	10	MW-10	n/a	n/a	70	n/a	n/a	0.01246	NP Inter (NDs) 1 of 2
Cobalt [total] (mg/L)	MW-6	0.00025	n/a	6/22/2023	0.000691	Yes	10	MW-10	n/a	n/a	70	n/a	n/a	0.01246	NP Inter (NDs) 1 of 2
Cobalt [total] (mg/L)	MW-9	0.00025	n/a	6/22/2023	0.00158	Yes	10	MW-10	n/a	n/a	70	n/a	n/a	0.01246	NP Inter (NDs) 1 of 2
Lead [total] (mg/L)	MW-2	0.00522	n/a	6/22/2023	0.000653	No	10	MW-10	n/a	n/a	80	n/a	n/a	0.01246	NP Inter (NDs) 1 of 2
Nickel [total] (mg/L)	MW-2	0.005	n/a	6/22/2023	0.00954	Yes	10	MW-10	n/a	n/a	100	n/a	n/a	0.01246	NP Inter (NDs) 1 of 2
Nickel [total] (mg/L)	MW-7	0.005	n/a	6/22/2023	0.0148	Yes	10	MW-10	n/a	n/a	100	n/a	n/a	0.01246	NP Inter (NDs) 1 of 2
Nickel [total] (mg/L)	MW-9	0.005	n/a	6/22/2023	0.0054	Yes	10	MW-10	n/a	n/a	100	n/a	n/a	0.01246	NP Inter (NDs) 1 of 2
Selenium [total] (mg/L)	MW-6	0.0025	n/a	6/22/2023	0.00929	Yes	12	MW-10	n/a	n/a	41.67	n/a	n/a	0.009417	NP Inter (normality) 1 of 2
Thallium [total] (mg/L)	MW-2	0.00129	n/a	6/22/2023	0.00581	Yes	11	MW-10	n/a	n/a	90.91	n/a	n/a	0.01093	NP Inter (NDs) 1 of 2

Exceeds Limit: MW-2

Prediction Limit Interwell Non-parametric

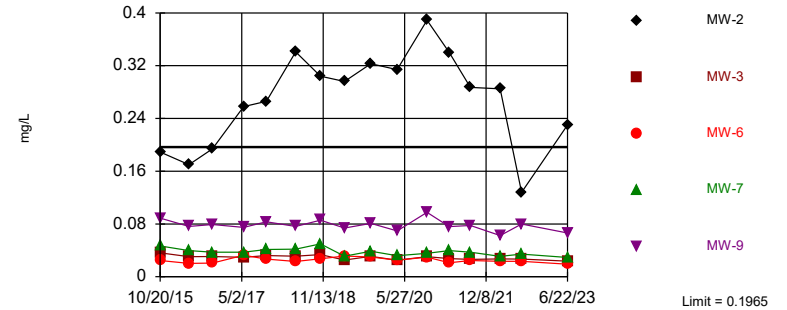


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.1178. Individual comparison alpha = 0.01246 (1 of 2). Assumes 4 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Arsenic [total] Analysis Run 1/18/2024 2:29 PM View: 2023SSN - AM PL
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Exceeds Limit: MW-2

Prediction Limit Interwell Parametric

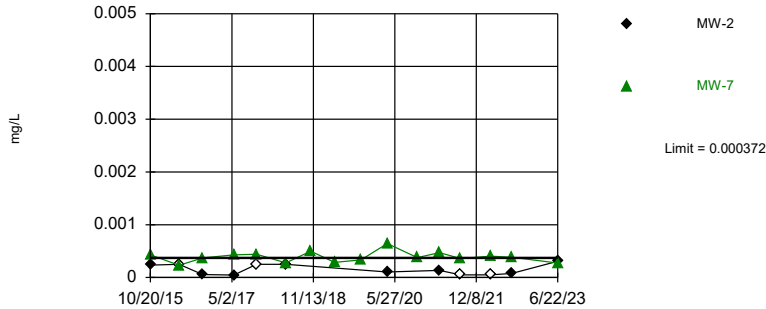


Background Data Summary: Mean=0.175, Std. Dev.=0.009421, n=16. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9533, critical = 0.844. Kappa = 2.28 (c=10, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.005254. Individual comparison alpha = 0.001053. Comparing 5 points to limit.

Constituent: Barium [total] Analysis Run 1/18/2024 2:29 PM View: 2023SSN - AM PL
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Within Limit

Prediction Limit Interwell Non-parametric

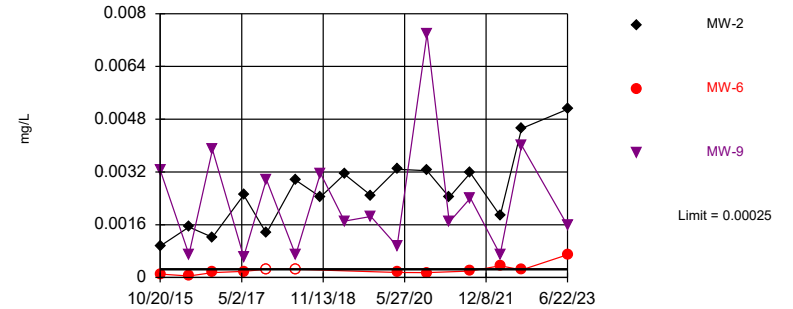


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 54.55% NDs. Annual per-constituent alpha = 0.104. Individual comparison alpha = 0.01093 (1 of 2). Comparing 2 points to limit. Assumes 3 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Cadmium [total] Analysis Run 1/18/2024 2:29 PM View: 2023SSN - AM PL
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Exceeds Limit: MW-2, MW-6, MW-9

Prediction Limit Interwell Non-parametric

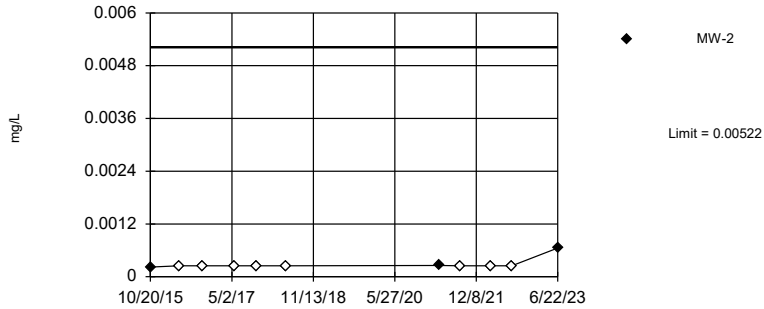


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 70% NDs. Annual per-constituent alpha = 0.1178. Individual comparison alpha = 0.01246 (1 of 2). Comparing 3 points to limit. Assumes 2 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Cobalt [total] Analysis Run 1/18/2024 2:29 PM View: 2023SSN - AM PL
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Within Limit

Prediction Limit
Interwell Non-parametric

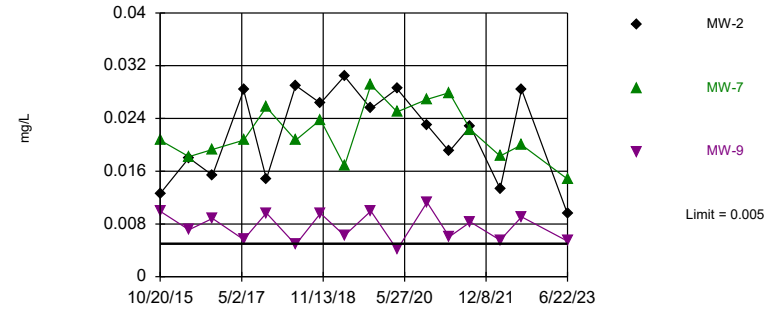


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 10 background values. 80% NDs. Annual per-constituent alpha = 0.1178. Individual comparison alpha = 0.01246 (1 of 2). Assumes 4 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Lead [total] Analysis Run 1/18/2024 2:29 PM View: 2023SSN - AM PL
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Exceeds Limit: MW-2, MW-7, MW-9

Prediction Limit
Interwell Non-parametric

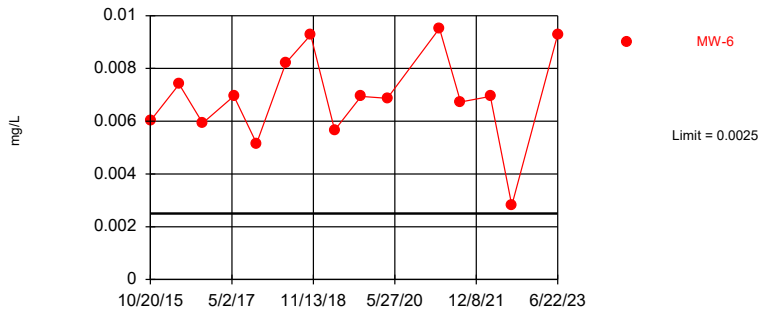


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 10) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.1178. Individual comparison alpha = 0.01246 (1 of 2). Comparing 3 points to limit. Assumes 2 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Nickel [total] Analysis Run 1/18/2024 2:29 PM View: 2023SSN - AM PL
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Exceeds Limit: MW-6

Prediction Limit
Interwell Non-parametric

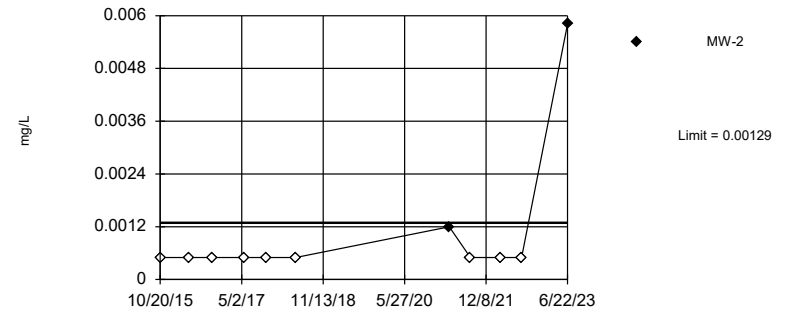


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 12 background values. 41.67% NDs. Annual per-constituent alpha = 0.09028. Individual comparison alpha = 0.009417 (1 of 2). Assumes 4 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Selenium [total] Analysis Run 1/18/2024 2:29 PM View: 2023SSN - AM PL
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

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 11 background values. 90.91% NDs. Annual per-constituent alpha = 0.104. Individual comparison alpha = 0.01093 (1 of 2). Assumes 4 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Thallium [total] Analysis Run 1/18/2024 2:29 PM View: 2023SSN - AM PL
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Attachment A.4

Sen's Slope/Mann-Kendall Trend Analysis

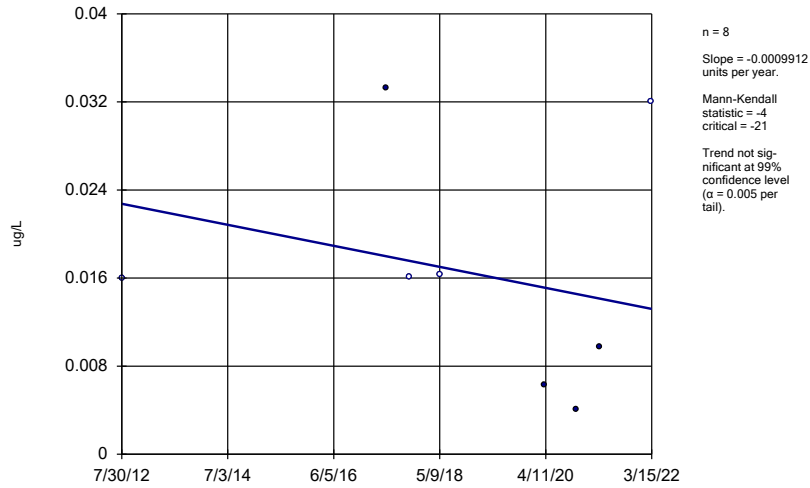
Trend Test

Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN Printed 1/18/2024, 2:41 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	4	21	No	8	62.5	0.01	NP
Acetone (ug/L)	MW-7	0.1852	6	21	No	8	50	0.01	NP
Arsenic (mg/L)	MW-2	-0.0002969	-6	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-2	-0.03721	-18	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-3	-0.001538	-14	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-6	-0.002478	-19	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-7	-0.001983	-12	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-9	-0.003478	-8	-21	No	8	0	0.01	NP
Benzene (ug/L)	MW-2	-0.2236	-8	-21	No	8	0	0.01	NP
Cadmium (mg/L)	MW-2	-0.00003085	-6	-21	No	8	50	0.01	NP
Cadmium (mg/L)	MW-6	-0.000003651	0	21	No	8	12.5	0.01	NP
Cadmium (mg/L)	MW-7	-0.00004239	-6	-21	No	8	0	0.01	NP
Cadmium (mg/L)	MW-9	0.00002098	6	21	No	8	12.5	0.01	NP
Chlorobenzene (ug/L)	MW-2	-0.1447	-17	-21	No	8	25	0.01	NP
Chloroethane (ug/L)	MW-2	-0.3508	-12	-21	No	8	50	0.01	NP
cis-1,2-Dichloroethene (ug/L)	MW-2	-0.109	-16	-21	No	8	12.5	0.01	NP
Cobalt (mg/L)	MW-2	0.0006184	6	21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-3	0.00002274	11	21	No	8	25	0.01	NP
Cobalt (mg/L)	MW-6	0.00003033	7	21	No	8	25	0.01	NP
Cobalt (mg/L)	MW-7	-0.0002347	-14	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-9	-0.00005887	-2	-21	No	8	0	0.01	NP
Heptachlor (ug/L)	MW-9	0.0002348	7	12	No	5	80	0.01	NP
Lead (mg/L)	MW-2	0	7	21	No	8	75	0.01	NP
Lead (mg/L)	MW-3	0	-7	-21	No	8	75	0.01	NP
Lead (mg/L)	MW-7	0	-1	-21	No	8	87.5	0.01	NP
Nickel (mg/L)	MW-2	-0.004276	-14	-21	No	8	0	0.01	NP
Nickel (mg/L)	MW-7	-0.003741	-20	-21	No	8	0	0.01	NP
Nickel (mg/L)	MW-9	-0.0004268	-6	-21	No	8	0	0.01	NP
Selenium (mg/L)	MW-3	0.0004058	19	21	No	8	37.5	0.01	NP
Selenium (mg/L)	MW-6	0.0002059	3	21	No	8	0	0.01	NP
Sulfide (mg/L)	MW-9	0	5	21	No	8	87.5	0.01	NP
Thallium (mg/L)	MW-2	0	7	21	No	8	75	0.01	NP
Vinyl chloride (ug/L)	MW-2	-0.02623	-12	-21	No	8	62.5	0.01	NP
Zinc (mg/L)	MW-6	-0.00004977	-6	-21	No	8	62.5	0.01	NP

Sen's Slope Estimator

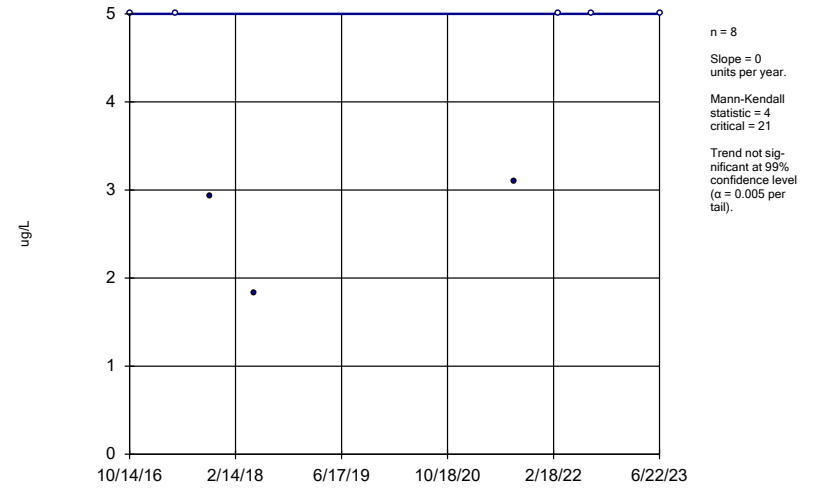
MW-7



Constituent: 4,4'-DDT Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

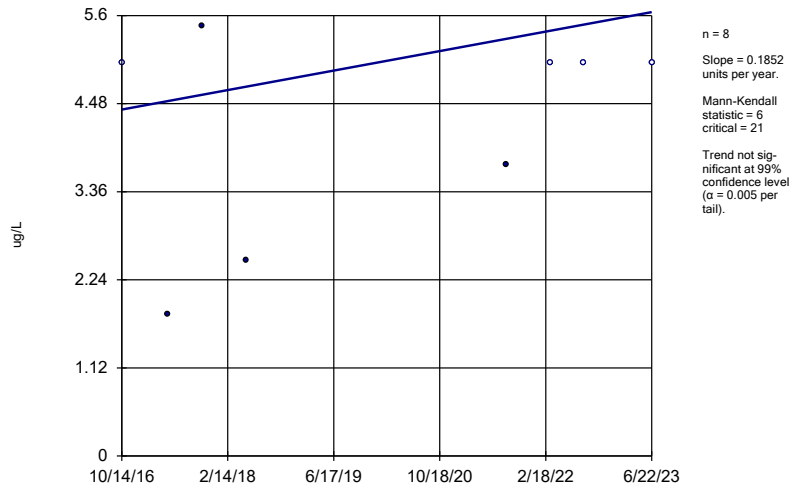
MW-6



Constituent: Acetone Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

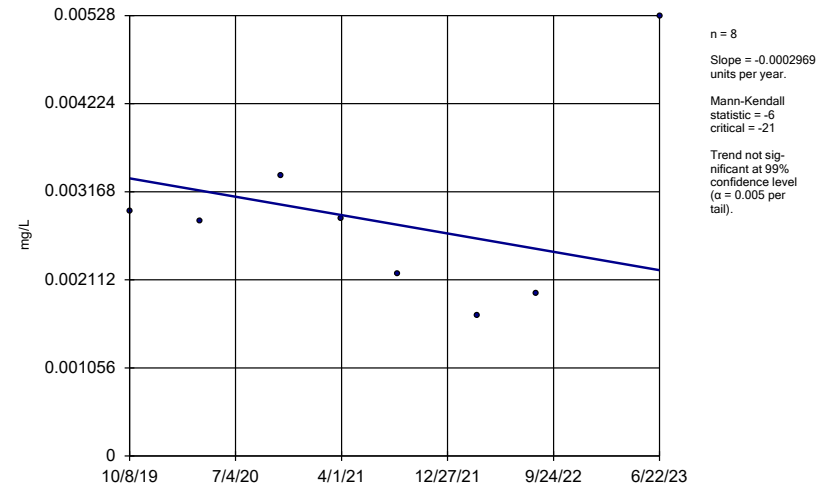
MW-7



Constituent: Acetone Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

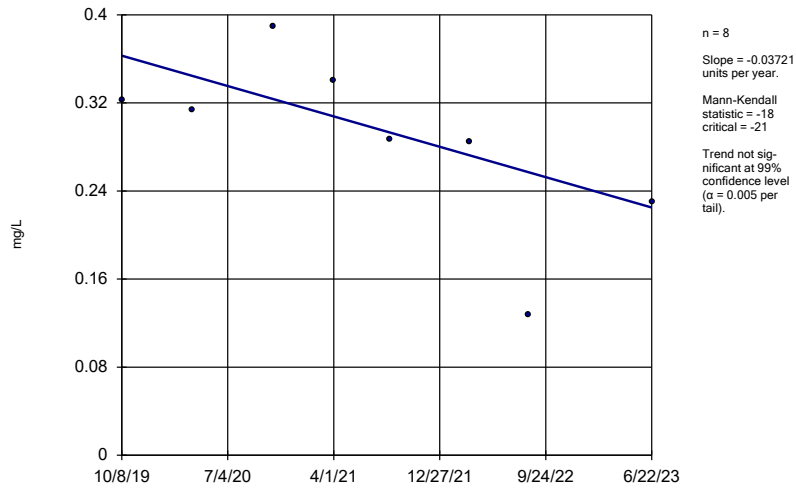
MW-2



Constituent: Arsenic Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

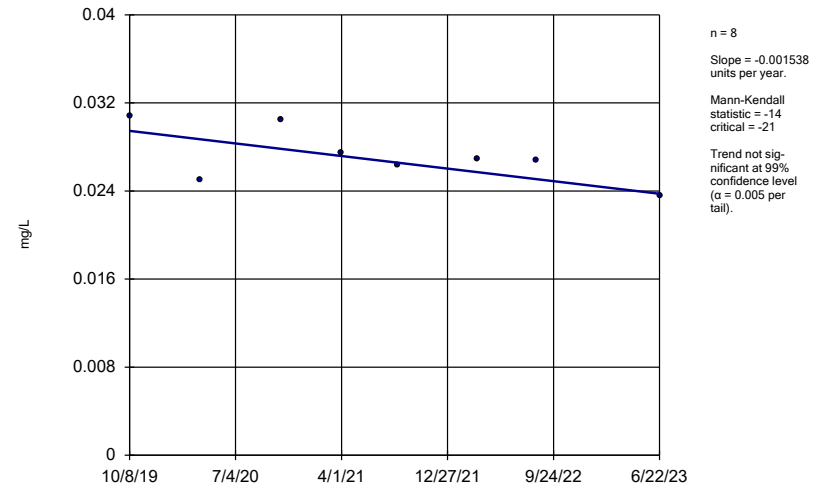
MW-2



Constituent: Barium Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

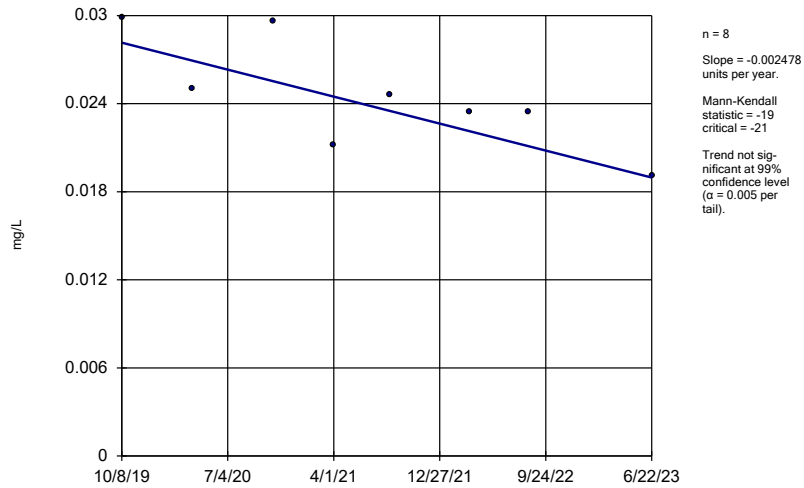
MW-3



Constituent: Barium Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

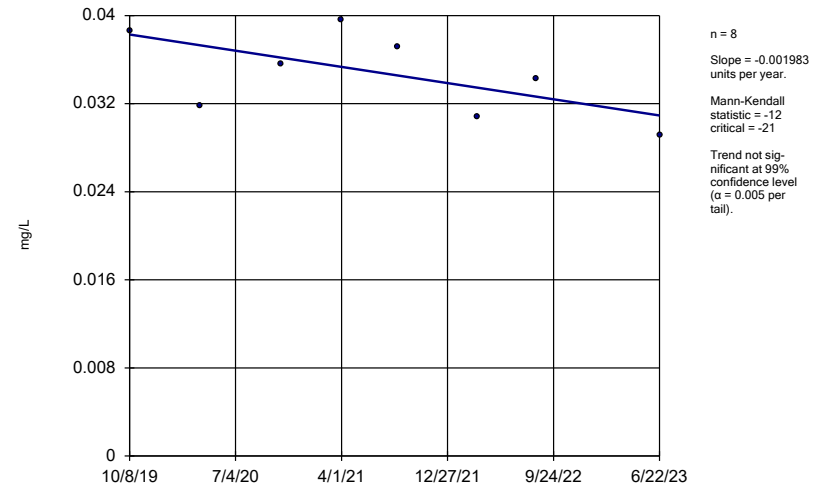
MW-6



Constituent: Barium Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

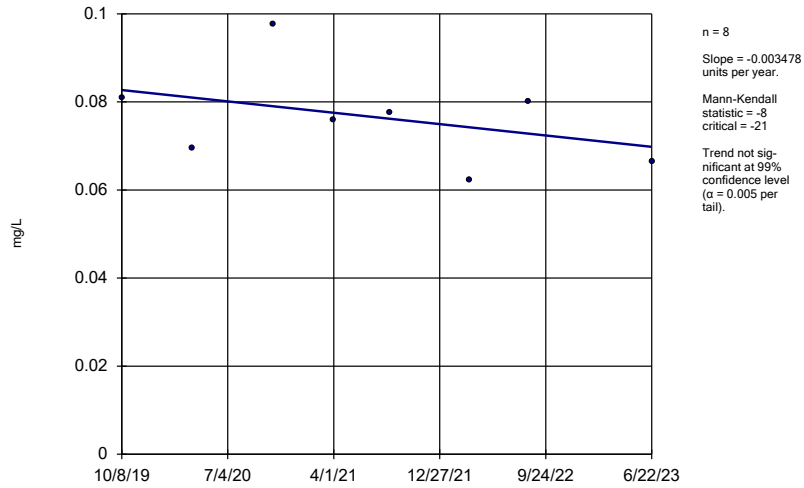
MW-7



Constituent: Barium Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

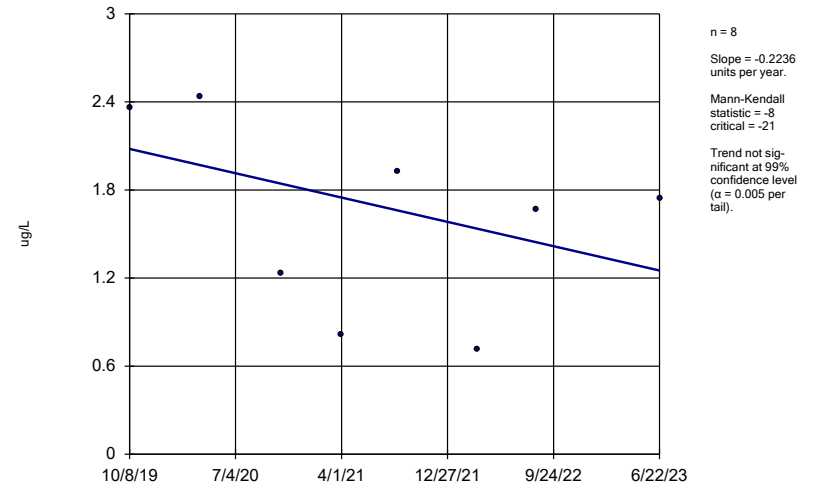
MW-9



Constituent: Barium Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
 Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

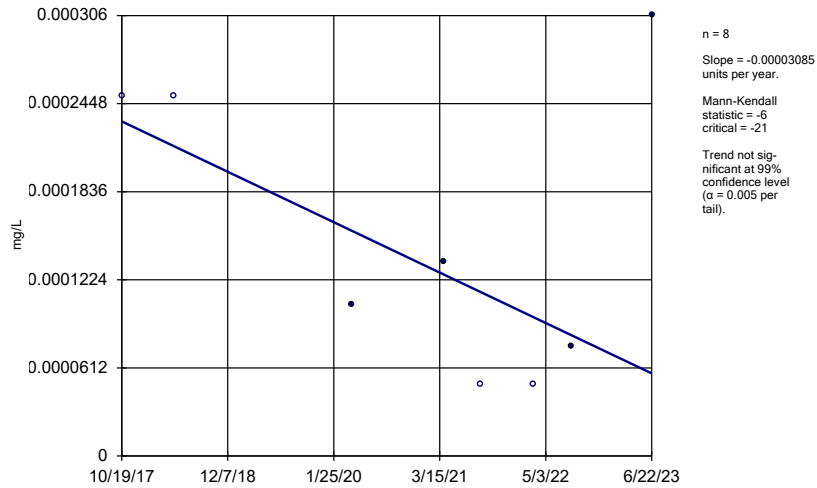
MW-2



Constituent: Benzene Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
 Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

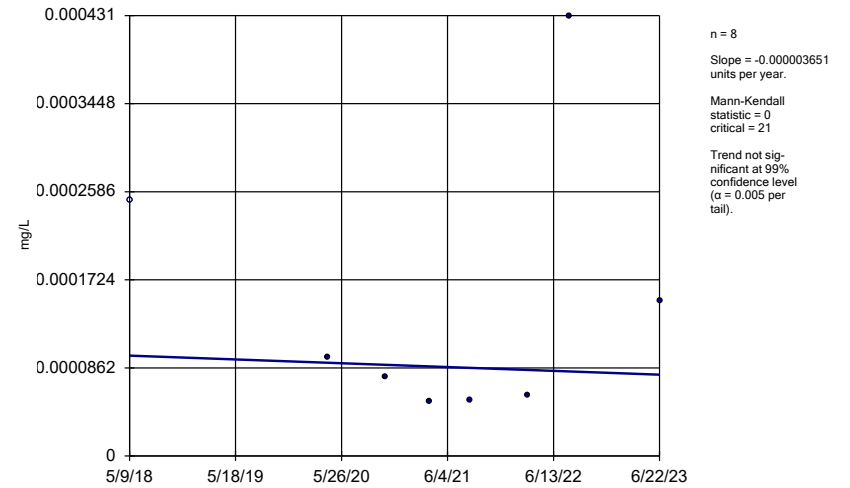
MW-2



Constituent: Cadmium Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
 Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

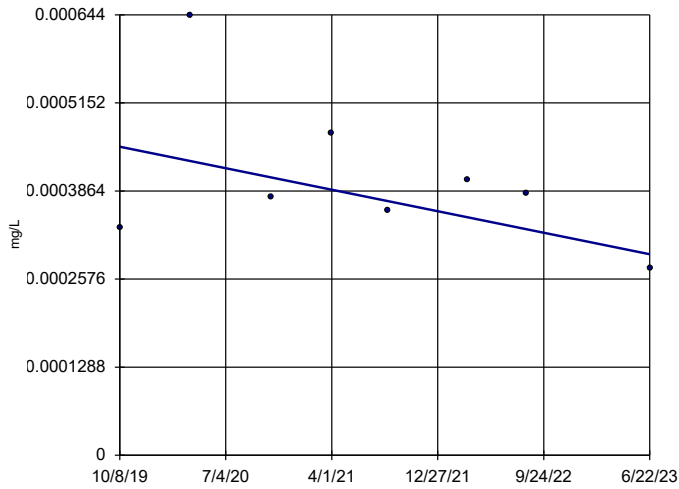
MW-6



Constituent: Cadmium Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
 Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-7

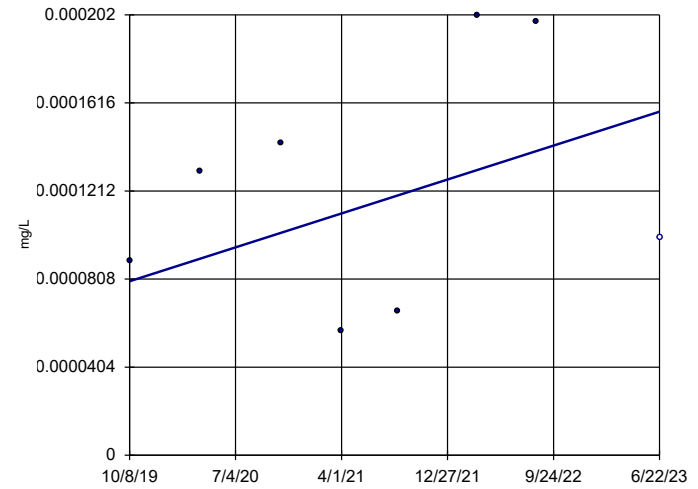


n = 8
 Slope = -0.0004239
 units per year.
 Mann-Kendall
 statistic = -6
 critical = -21
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Cadmium Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
 Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-9

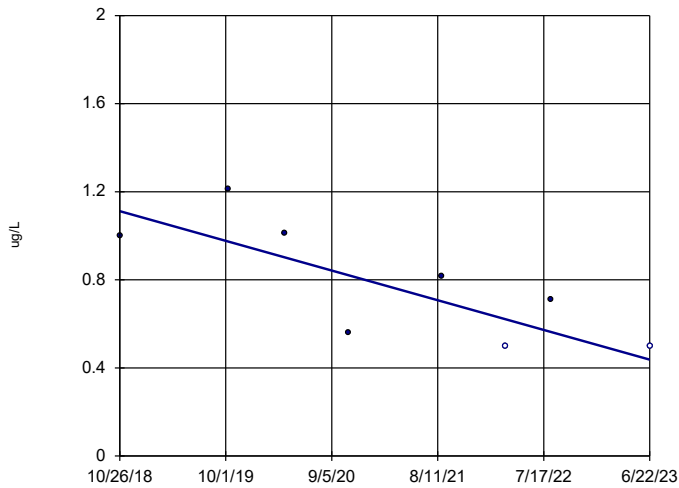


n = 8
 Slope = 0.00002098
 units per year.
 Mann-Kendall
 statistic = 6
 critical = 21
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Cadmium Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
 Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-2

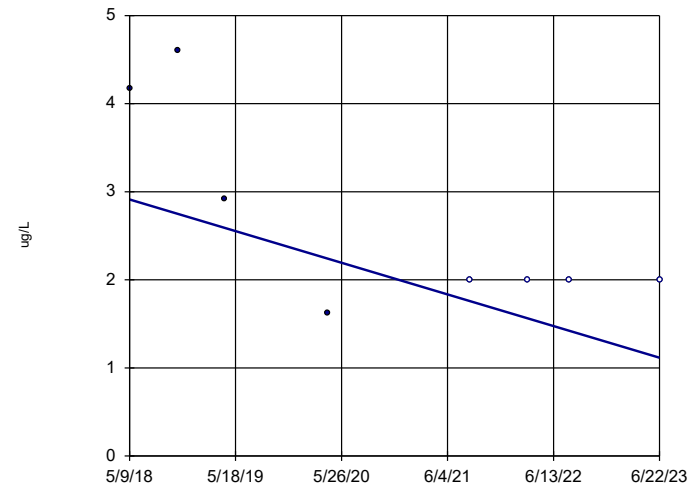


n = 8
 Slope = -0.1447
 units per year.
 Mann-Kendall
 statistic = -17
 critical = -21
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Chlorobenzene Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
 Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-2

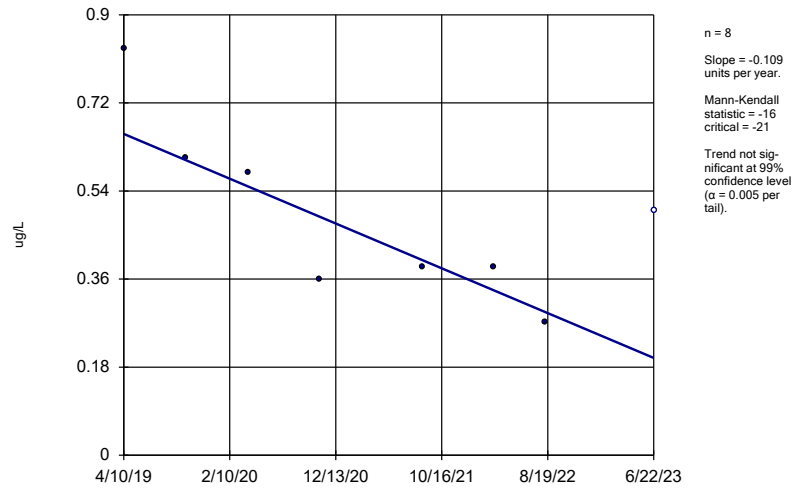


n = 8
 Slope = -0.3508
 units per year.
 Mann-Kendall
 statistic = -12
 critical = -21
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Chloroethane Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
 Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

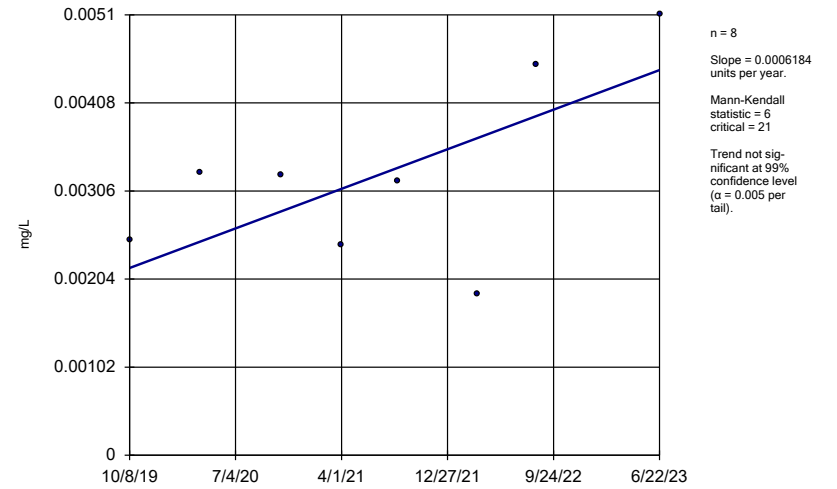
MW-2



Constituent: cis-1,2-Dichloroethene Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

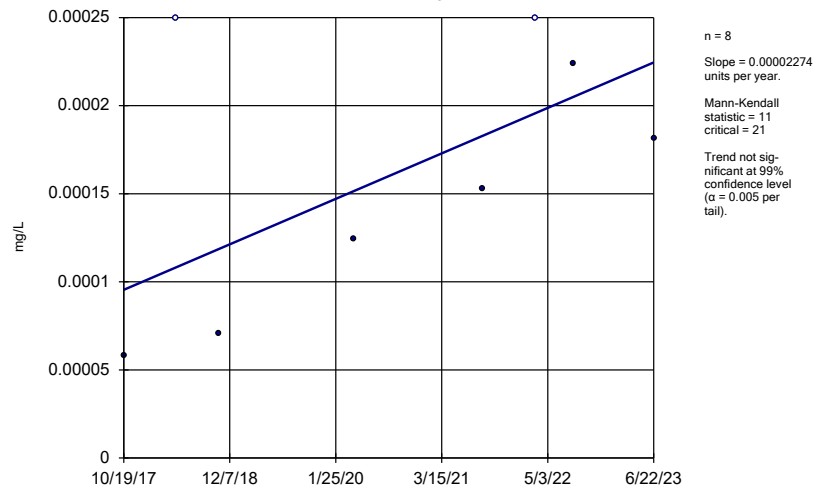
MW-2



Constituent: Cobalt Analysis Run 1/18/2024 2:40 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

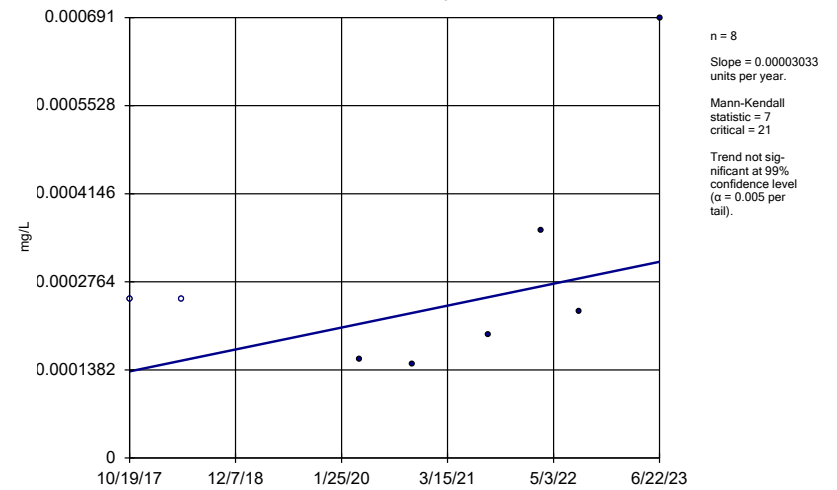
MW-3



Constituent: Cobalt Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

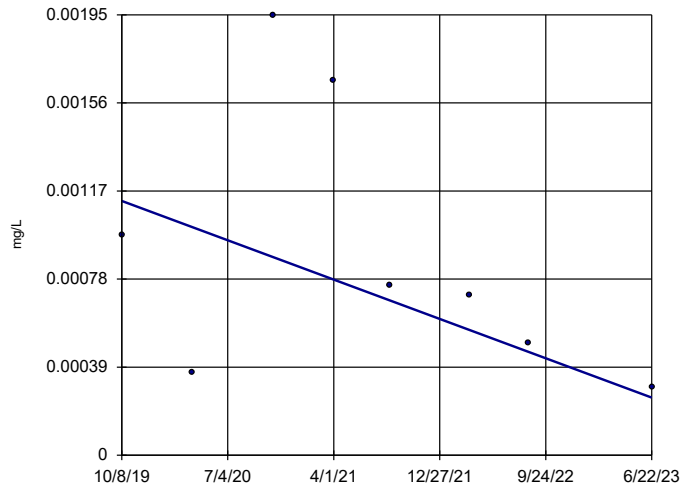
MW-6



Constituent: Cobalt Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-7

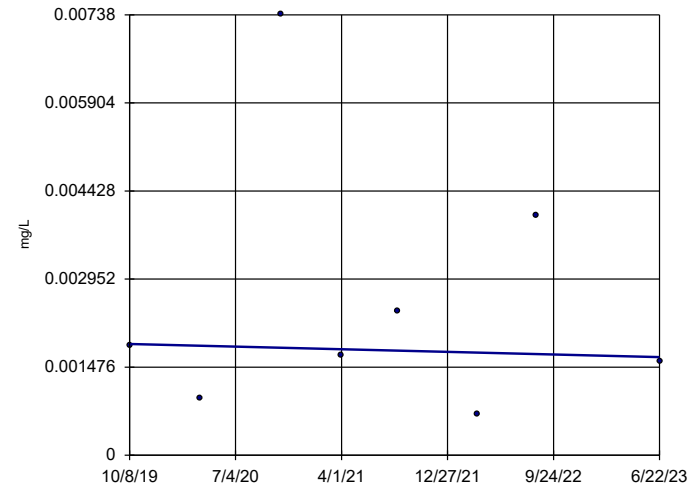


n = 8
 Slope = -0.0002347
 units per year.
 Mann-Kendall
 statistic = -14
 critical = -21
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Cobalt Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
 Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-9

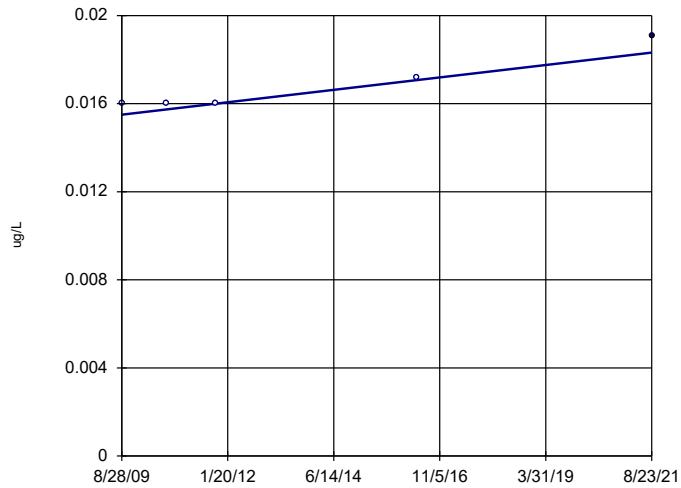


n = 8
 Slope = -0.00005887
 units per year.
 Mann-Kendall
 statistic = -2
 critical = -21
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Cobalt Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
 Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-9

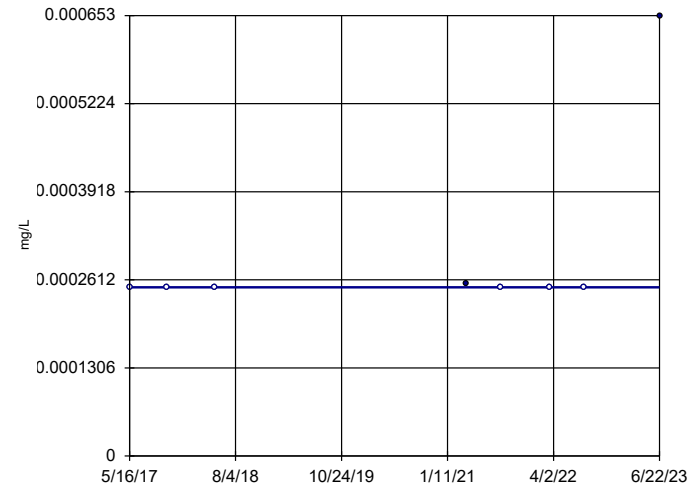


n = 5
 Slope = 0.0002348
 units per year.
 Mann-Kendall
 statistic = 7
 critical = 12
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Heptachlor Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
 Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-2

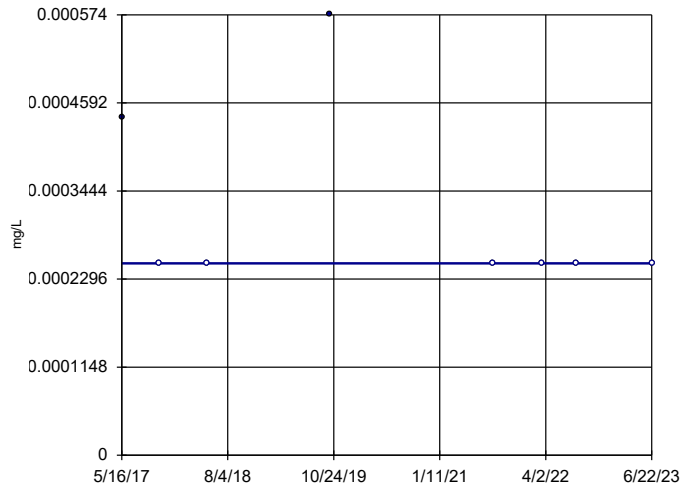


n = 8
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 7
 critical = 21
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Lead Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
 Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-3

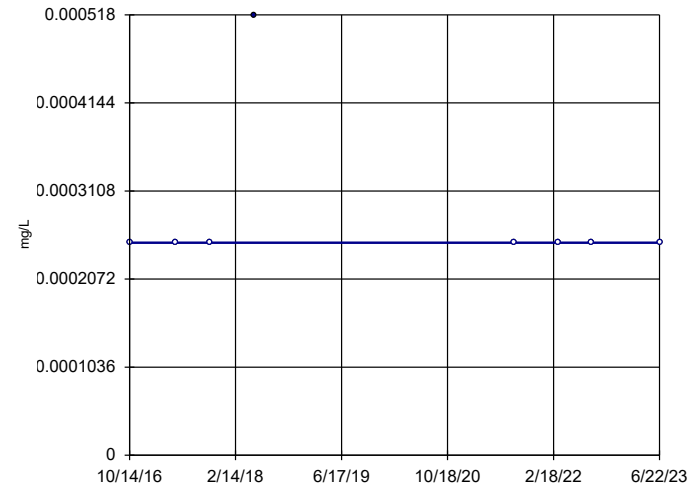


n = 8
Slope = 0
units per year.
Mann-Kendall
statistic = -7
critical = -21
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Lead Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-7

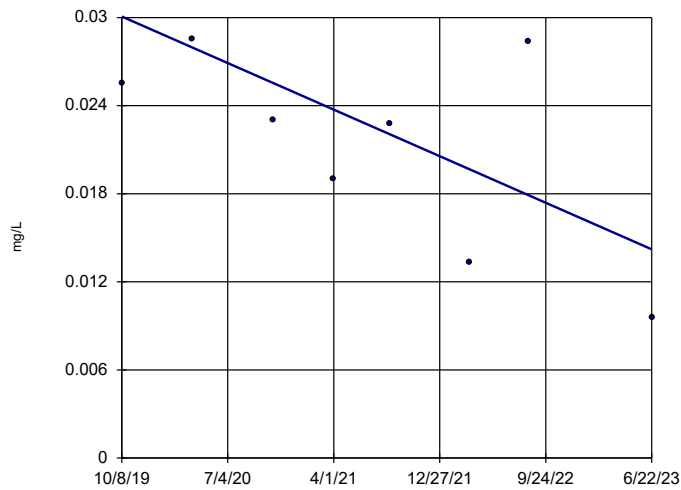


n = 8
Slope = 0
units per year.
Mann-Kendall
statistic = -1
critical = -21
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Lead Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-2

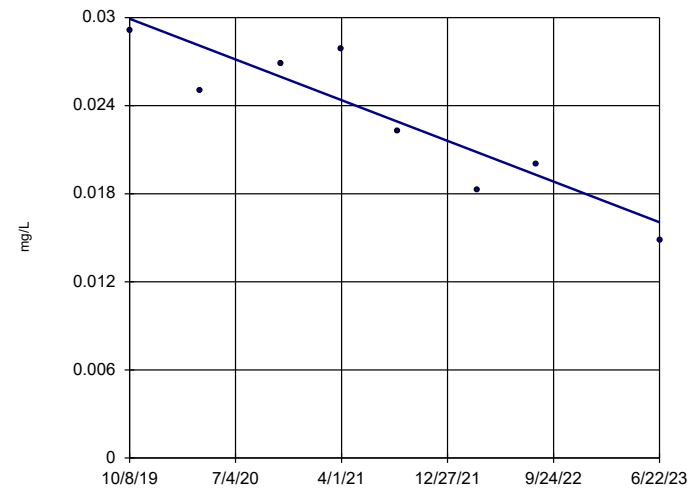


n = 8
Slope = -0.004276
units per year.
Mann-Kendall
statistic = -14
critical = -21
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Nickel Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-7

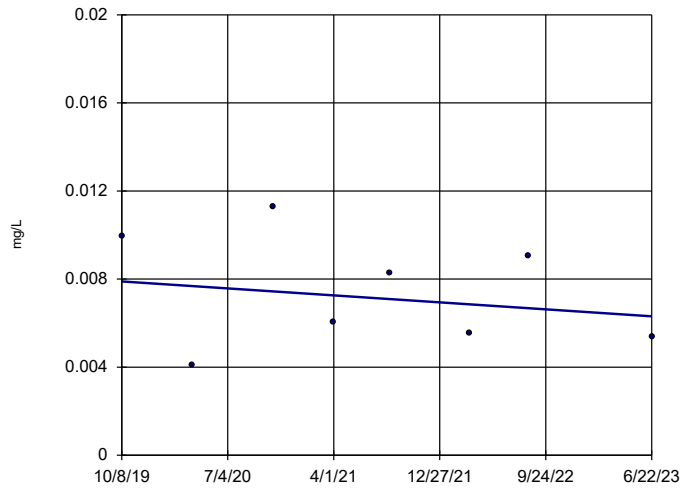


n = 8
Slope = -0.003741
units per year.
Mann-Kendall
statistic = -20
critical = -21
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Nickel Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-9

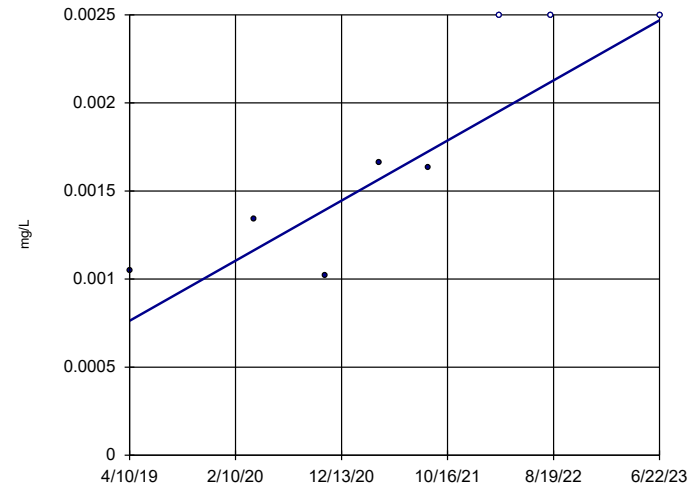


n = 8
 Slope = -0.0004268 units per year.
 Mann-Kendall statistic = -6
 critical = -21
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Nickel Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
 Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-3

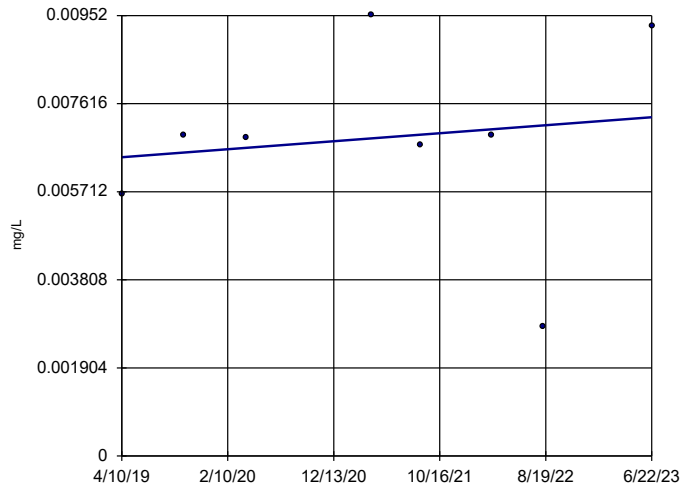


n = 8
 Slope = 0.0004058 units per year.
 Mann-Kendall statistic = 19
 critical = 21
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Selenium Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
 Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-6

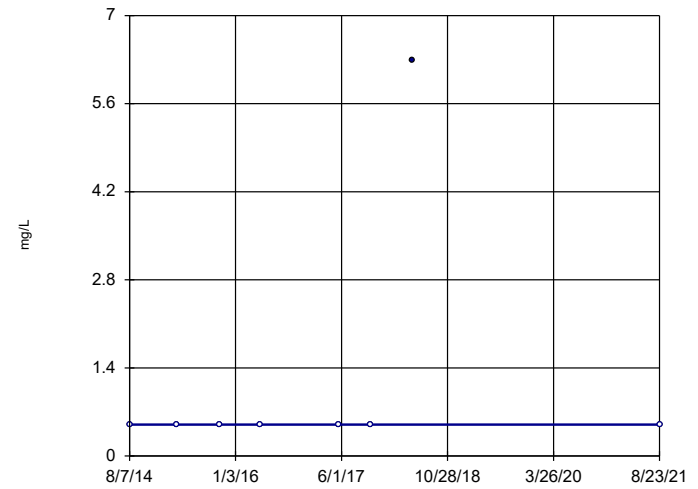


n = 8
 Slope = 0.0002059 units per year.
 Mann-Kendall statistic = 3
 critical = 21
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Selenium Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
 Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-9

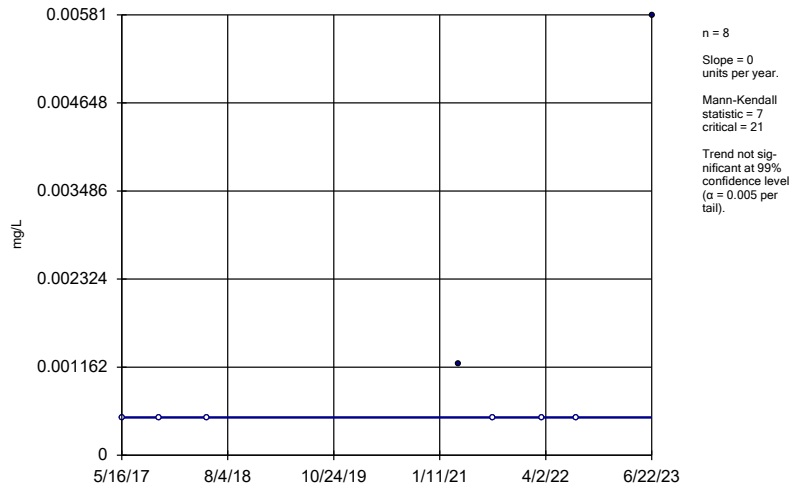


n = 8
 Slope = 0 units per year.
 Mann-Kendall statistic = 5
 critical = 21
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Sulfide Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
 Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

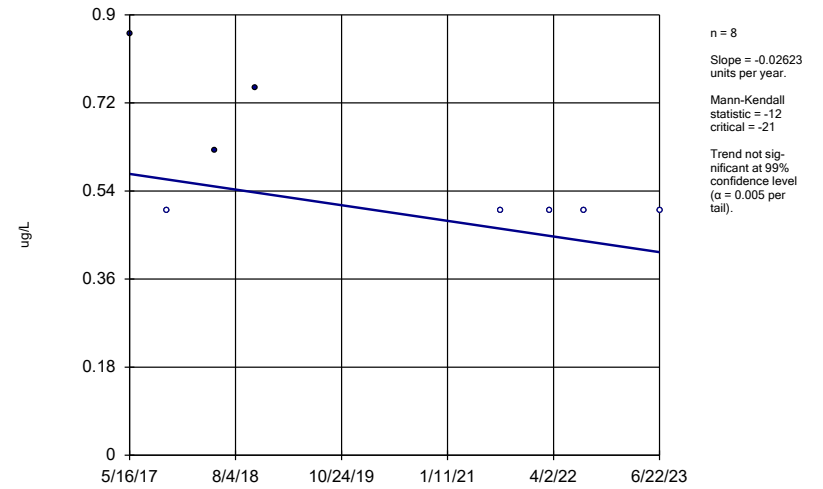
MW-2



Constituent: Thallium Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

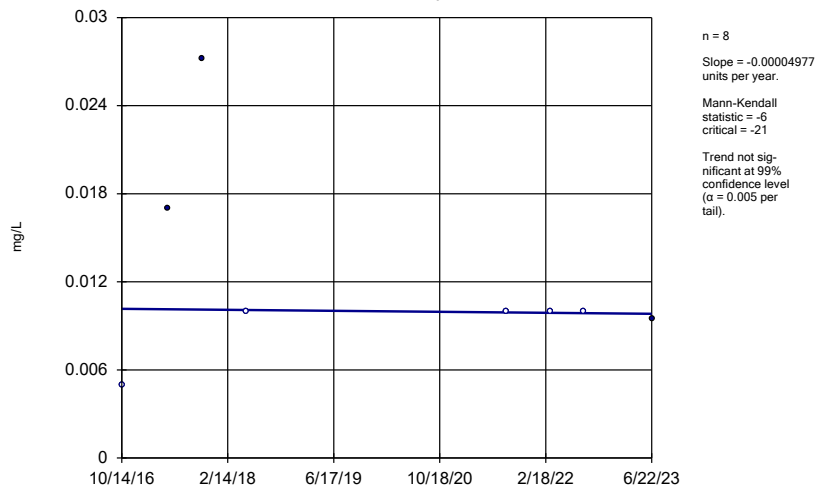
MW-2




Constituent: Vinyl chloride Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Sen's Slope Estimator

MW-6



Constituent: Zinc Analysis Run 1/18/2024 2:41 PM View: 2023SSN - Mann Kendall
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN



Attachment A.5
Confidence Interval Analysis

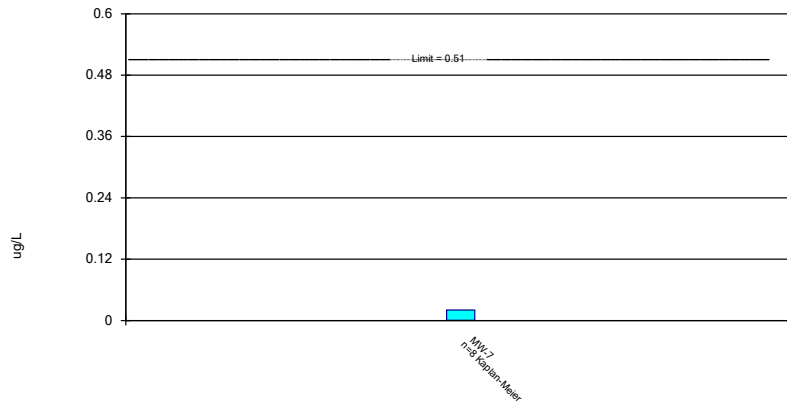
Confidence Interval

Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN Printed 1/18/2024, 2:44 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.
Acetone (ug/L)	MW-6	5	1.83	6300	No	8	62.5	No	0.004	NP (NDs)
Acetone (ug/L)	MW-7	4.838	1.892	6300	No	8	50	No	0.01	Param.
Arsenic (mg/L)	MW-2	0.004068	0.001694	0.01	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-2	0.3708	0.2032	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-3	0.0298	0.02456	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-6	0.02849	0.02056	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-7	0.03866	0.03059	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-9	0.08787	0.0647	2	No	8	0	No	0.01	Param.
Benzene (ug/L)	MW-2	2.301	0.9228	5	No	8	0	No	0.01	Param.
Cadmium (mg/L)	MW-2	0.0002159	0.00004206	0.005	No	8	50	No	0.01	Param.
Cadmium (mg/L)	MW-6	0.0002877	0.000006054	0.005	No	8	12.5	No	0.01	Param.
Cadmium (mg/L)	MW-7	0.0005237	0.000287	0.005	No	8	0	No	0.01	Param.
Cadmium (mg/L)	MW-9	0.0001823	0.00006416	0.005	No	8	12.5	No	0.01	Param.
Chlorobenzene (ug/L)	MW-2	1.076	0.6352	100	No	8	25	No	0.01	Param.
Chloroethane (ug/L)	MW-2	3.947	1.653	2800	No	8	50	No	0.01	Param.
cis-1,2-Dichloroethene (ug/L)	MW-2	0.6798	0.3008	70	No	8	12.5	No	0.01	Param.
Cobalt (mg/L)	MW-2	0.004409	0.002117	0.0021	Yes	8	0	No	0.01	Param.
Cobalt (mg/L)	MW-3	0.0001973	0.00007321	0.0021	No	8	25	No	0.01	Param.
Cobalt (mg/L)	MW-6	0.000691	0.000148	0.0021	No	8	25	No	0.004	NP (normality)
Cobalt (mg/L)	MW-7	0.001542	0.0002632	0.0021	No	8	0	No	0.01	Param.
Cobalt (mg/L)	MW-9	0.004894	0.0002446	0.0021	No	8	0	No	0.01	Param.
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	75	No	0.004	NP (NDs)
Lead (mg/L)	MW-3	0.000574	0.00025	0.015	No	8	75	No	0.004	NP (NDs)
Lead (mg/L)	MW-7	0.000518	0.00025	0.015	No	8	87.5	No	0.004	NP (NDs)
Nickel (mg/L)	MW-2	0.02856	0.01396	0.1	No	8	0	No	0.01	Param.
Nickel (mg/L)	MW-7	0.0284	0.01767	0.1	No	8	0	No	0.01	Param.
Nickel (mg/L)	MW-9	0.01017	0.004761	0.1	No	8	0	No	0.01	Param.
Selenium (mg/L)	MW-3	0.00163	0.00105	0.05	No	8	37.5	No	0.01	Param.
Selenium (mg/L)	MW-6	0.00907	0.00462	0.05	No	8	0	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	75	No	0.004	NP (NDs)
Vinyl chloride (ug/L)	MW-2	0.861	0.5	2	No	8	62.5	No	0.004	NP (NDs)
Zinc (mg/L)	MW-6	0.0272	0.005	2	No	8	62.5	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 1/18/2024 2:43 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Parametric and Non-Parametric (NP) Confidence Interval

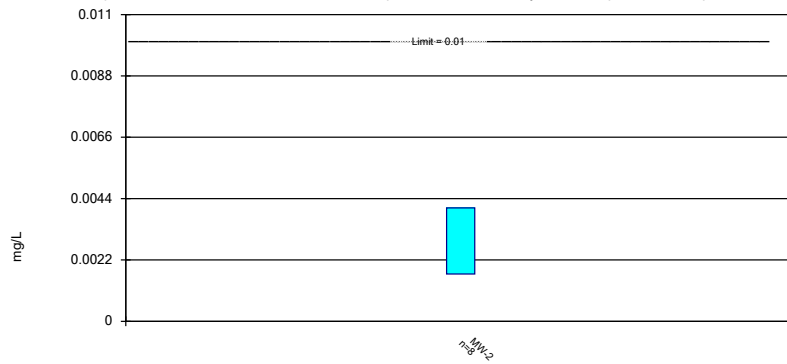
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Acetone Analysis Run 1/18/2024 2:43 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Parametric Confidence Interval

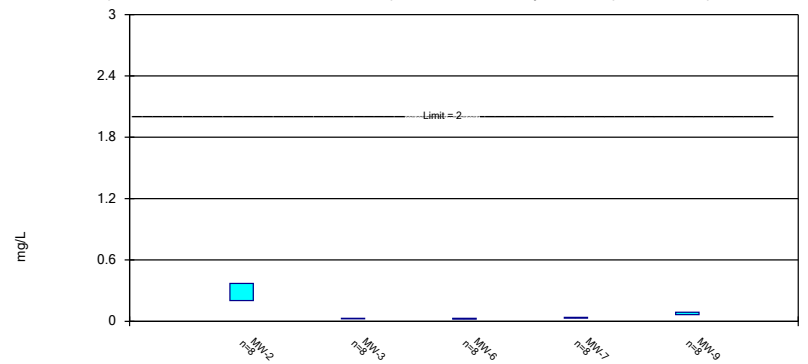
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Arsenic Analysis Run 1/18/2024 2:43 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Parametric Confidence Interval

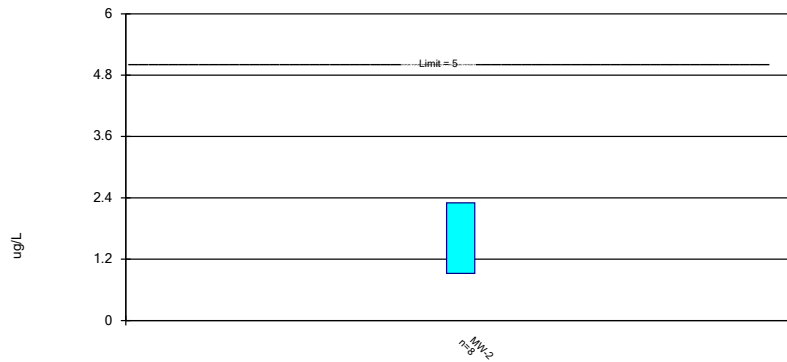
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Barium Analysis Run 1/18/2024 2:43 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Parametric Confidence Interval

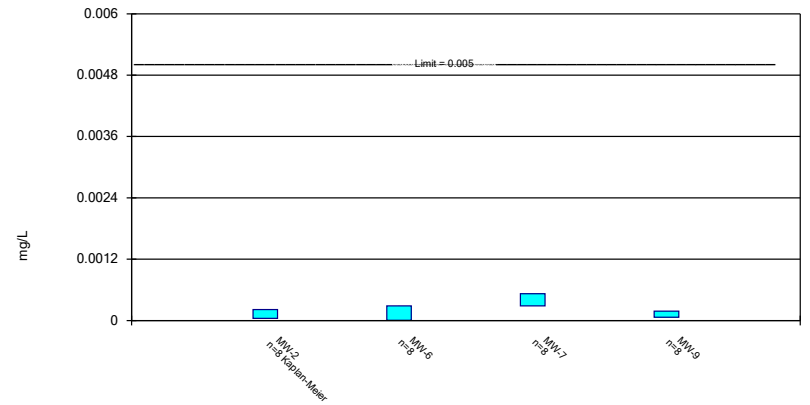
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Benzene Analysis Run 1/18/2024 2:43 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Parametric Confidence Interval

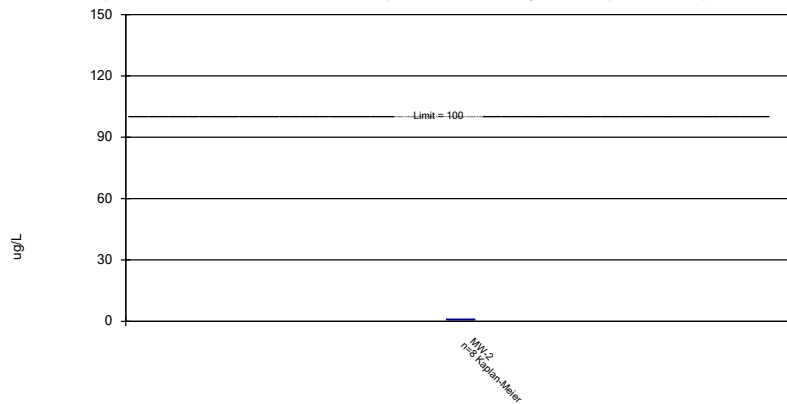
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Cadmium Analysis Run 1/18/2024 2:43 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Parametric Confidence Interval

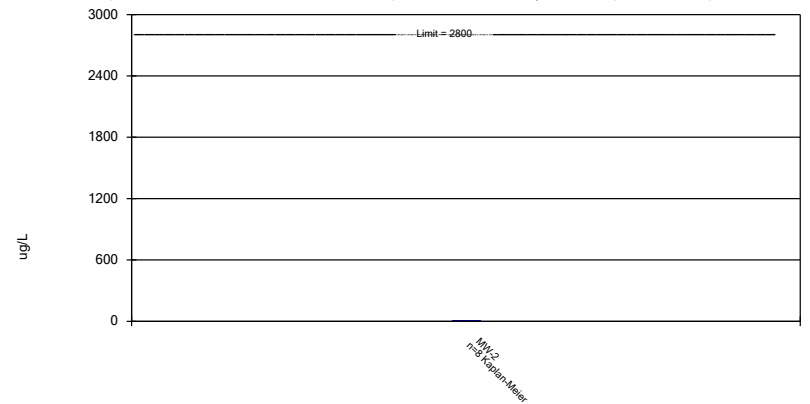
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Chlorobenzene Analysis Run 1/18/2024 2:44 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Parametric Confidence Interval

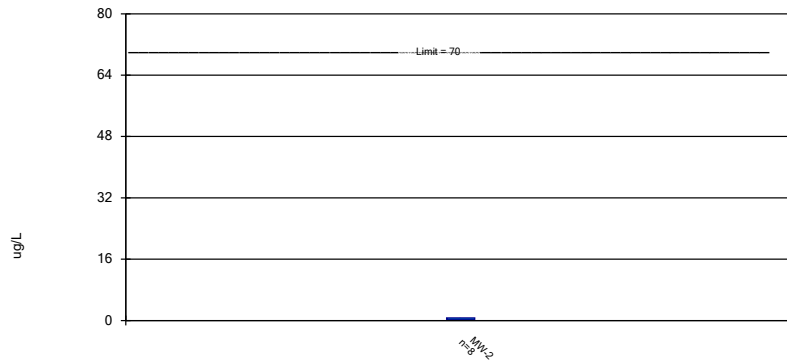
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Chloroethane Analysis Run 1/18/2024 2:44 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Parametric Confidence Interval

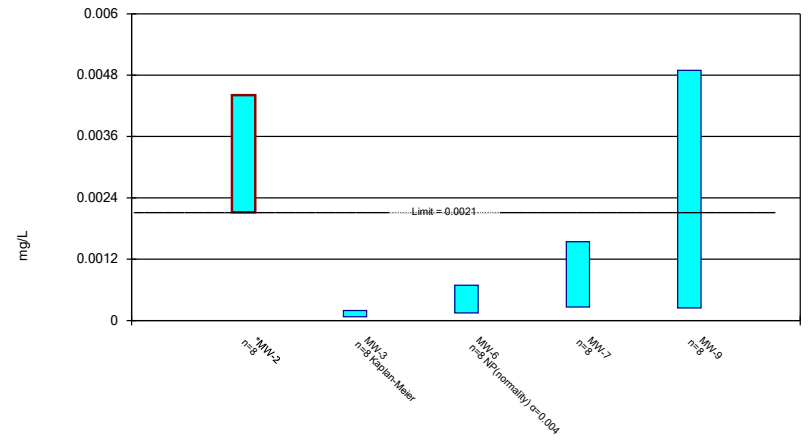
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: cis-1,2-Dichloroethene Analysis Run 1/18/2024 2:44 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Parametric and Non-Parametric (NP) Confidence Interval

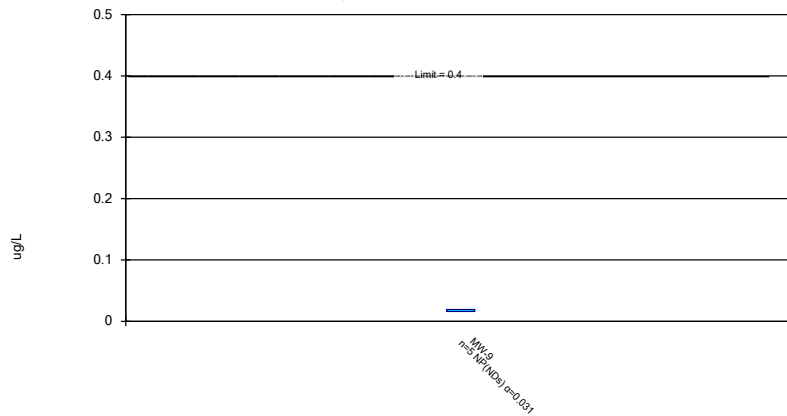
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Cobalt Analysis Run 1/18/2024 2:44 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Non-Parametric Confidence Interval

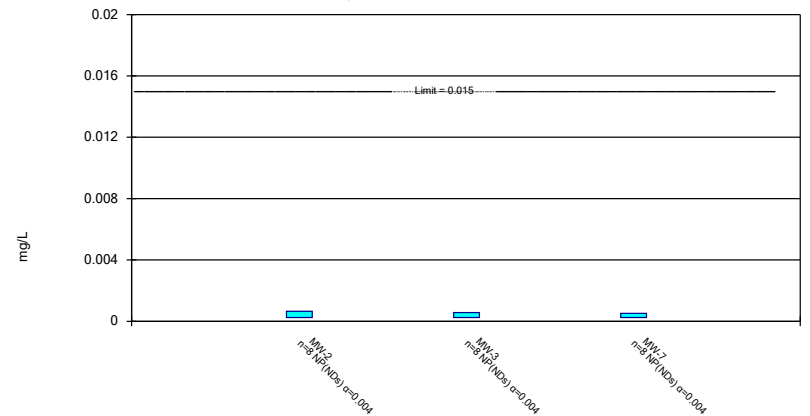
Compliance Limit is not exceeded.



Constituent: Heptachlor Analysis Run 1/18/2024 2:44 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Non-Parametric Confidence Interval

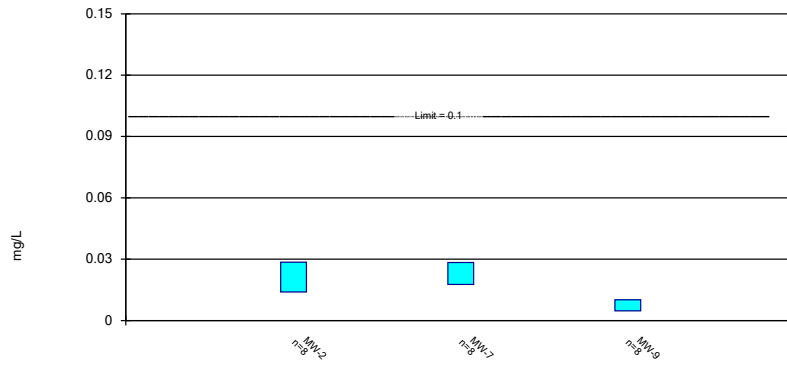
Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 1/18/2024 2:44 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Parametric Confidence Interval

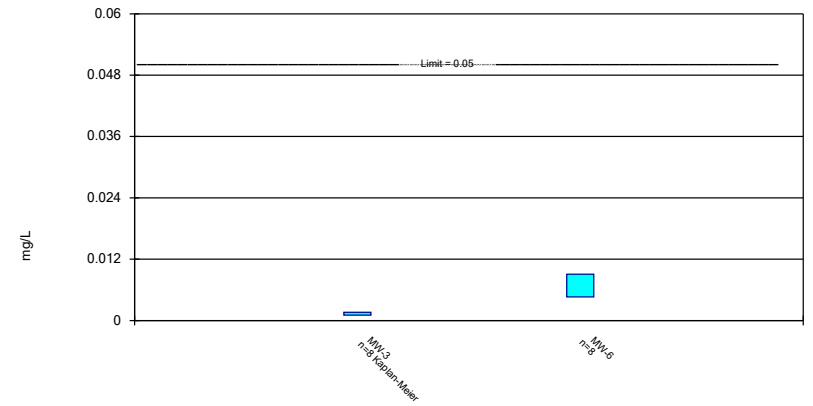
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Nickel Analysis Run 1/18/2024 2:44 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Parametric Confidence Interval

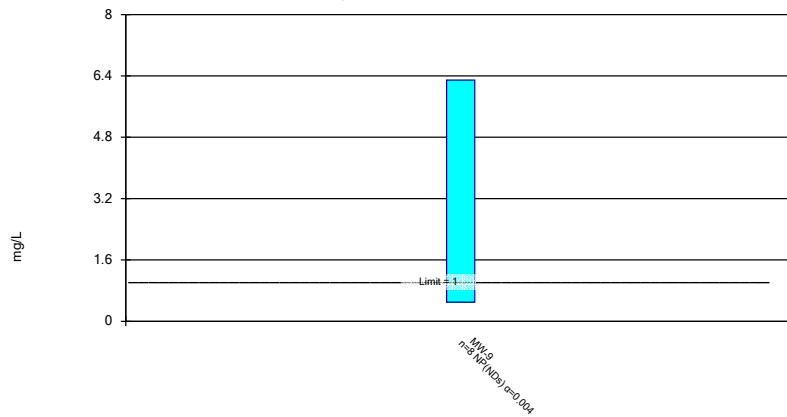
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Selenium Analysis Run 1/18/2024 2:44 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Non-Parametric Confidence Interval

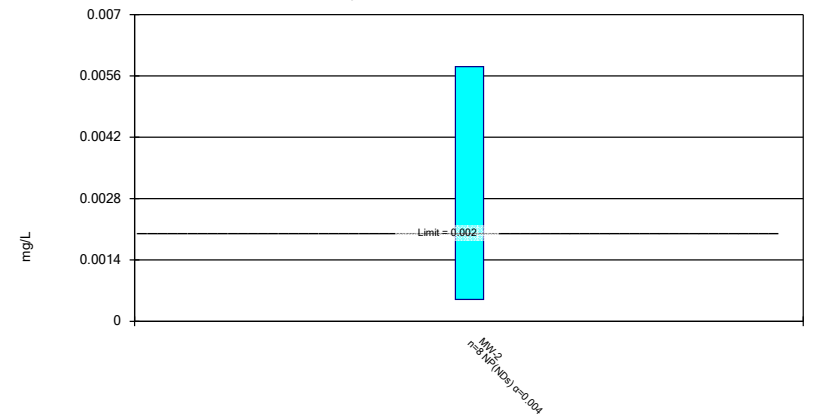
Compliance Limit is not exceeded.



Constituent: Sulfide Analysis Run 1/18/2024 2:44 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Non-Parametric Confidence Interval

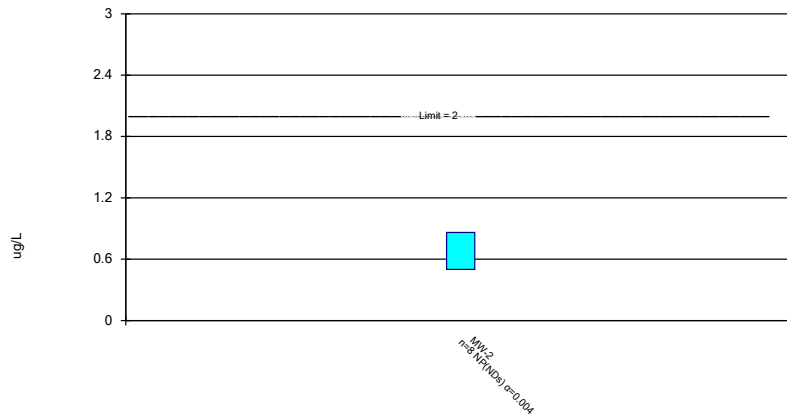
Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 1/18/2024 2:44 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Non-Parametric Confidence Interval

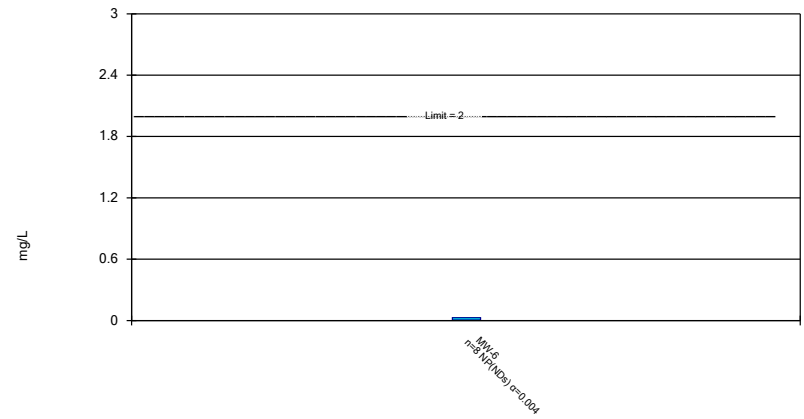
Compliance Limit is not exceeded.



Constituent: Vinyl chloride Analysis Run 1/18/2024 2:44 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

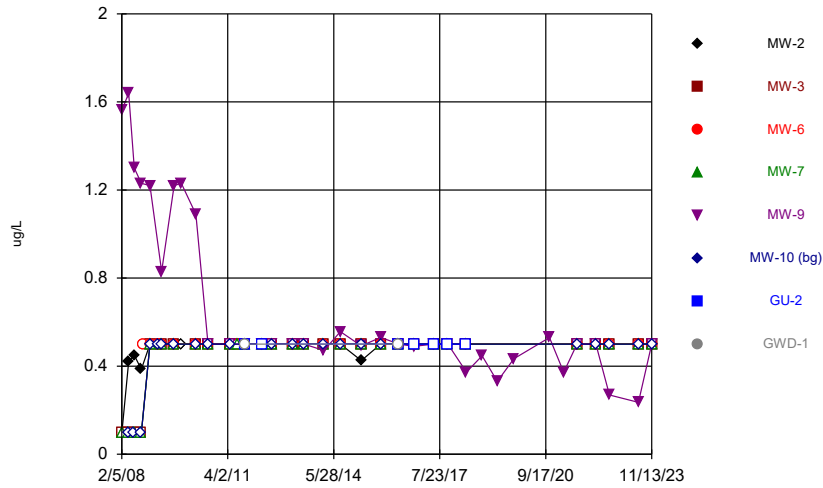


Constituent: Zinc Analysis Run 1/18/2024 2:44 PM View: 2023SSN - Confidence Interval
Adair County Sanitary Landfill Data: Adair County LF Database SGWC-AM 2023SSN

Attachment B
Fall 2023 Statistical Evaluation Output

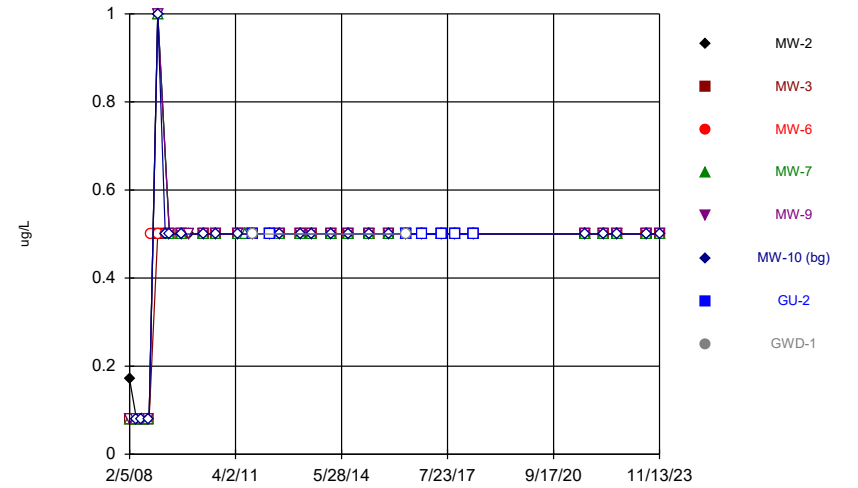
Attachment B.1
Time Series Plots

Time Series



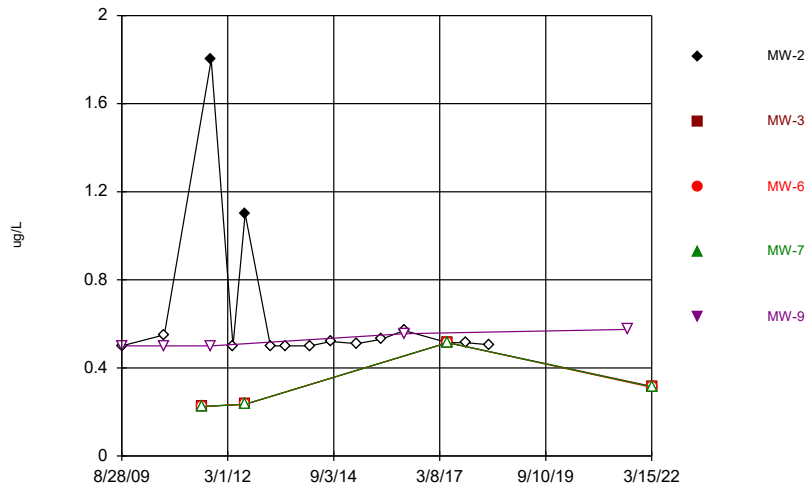
Constituent: 1,1-Dichloroethane Analysis Run 12/27/2023 5:25 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



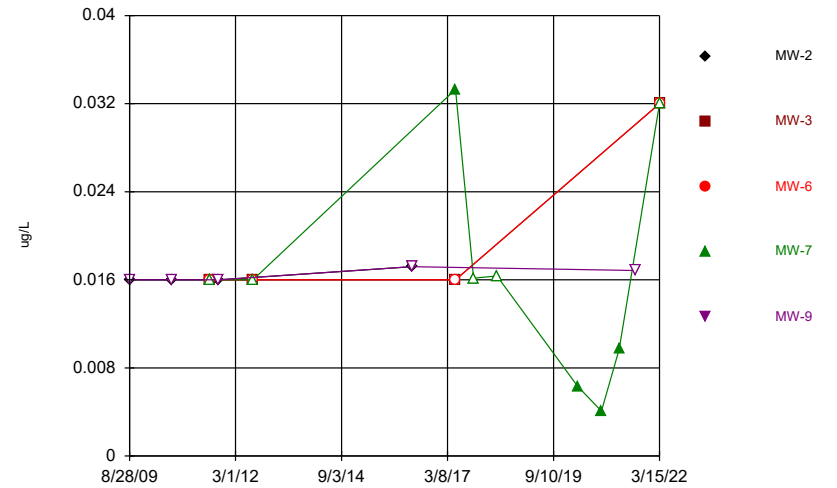
Constituent: 1,4-Dichlorobenzene Analysis Run 12/27/2023 5:25 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



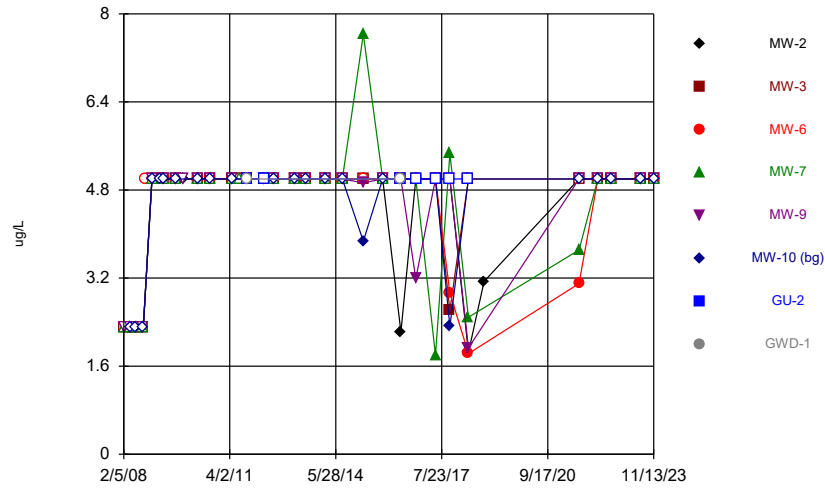
Constituent: 2,4-D Analysis Run 12/27/2023 5:25 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



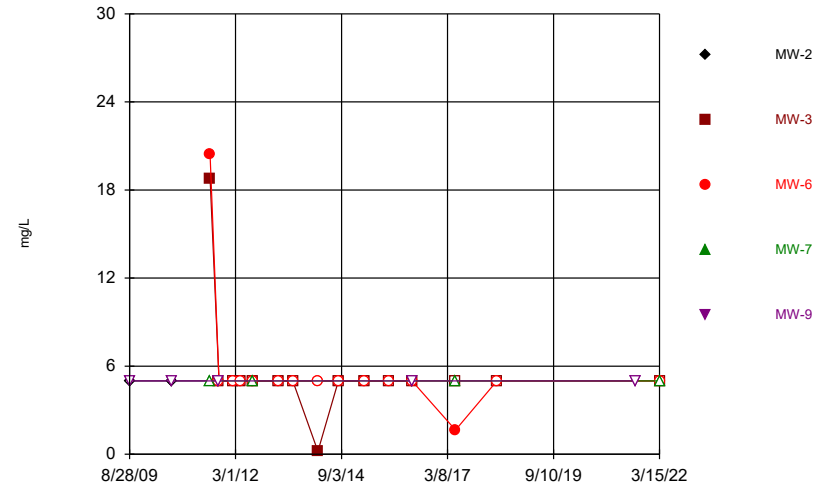
Constituent: 4,4'-DDT Analysis Run 12/27/2023 5:25 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



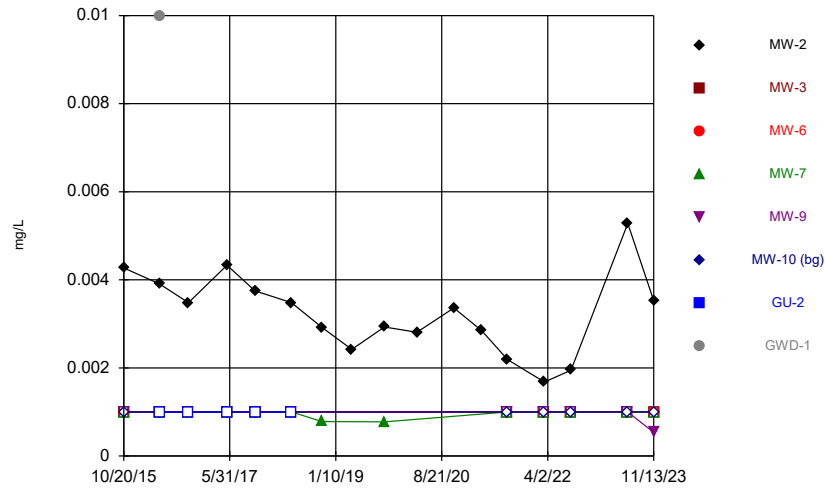
Constituent: Acetone Analysis Run 12/27/2023 5:25 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



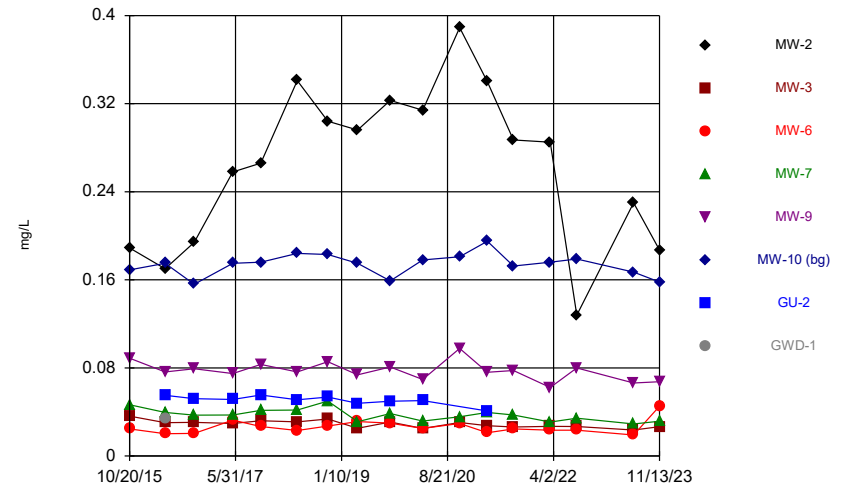
Constituent: Acetonitrile Analysis Run 12/27/2023 5:25 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



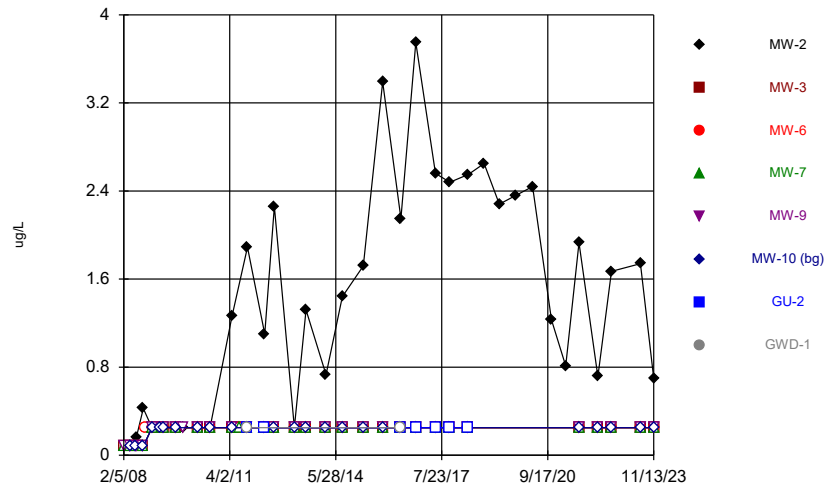
Constituent: Arsenic [total] Analysis Run 12/27/2023 5:25 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



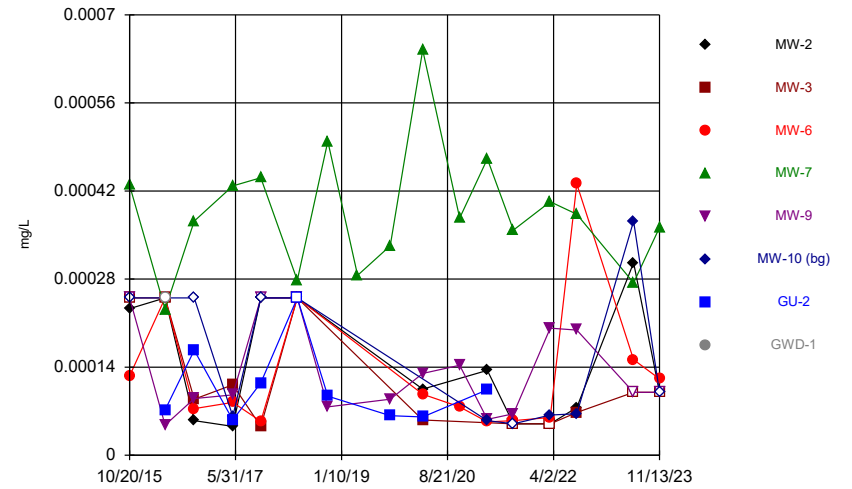
Constituent: Barium [total] Analysis Run 12/27/2023 5:25 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



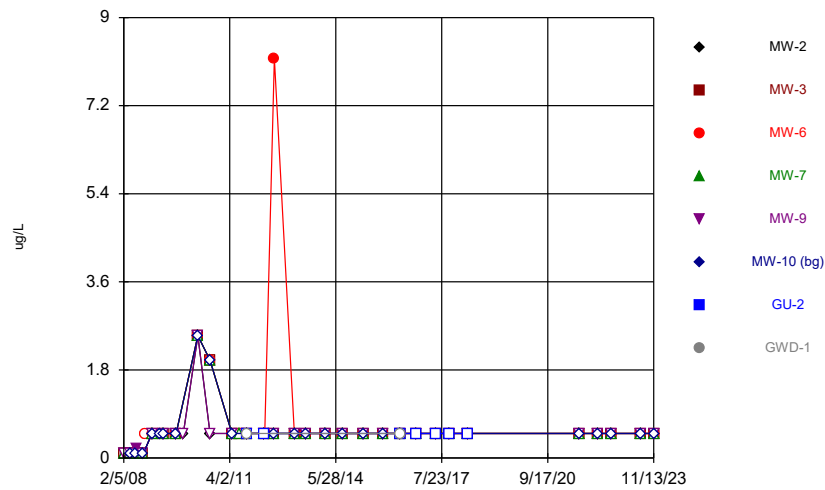
Constituent: Benzene Analysis Run 12/27/2023 5:25 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



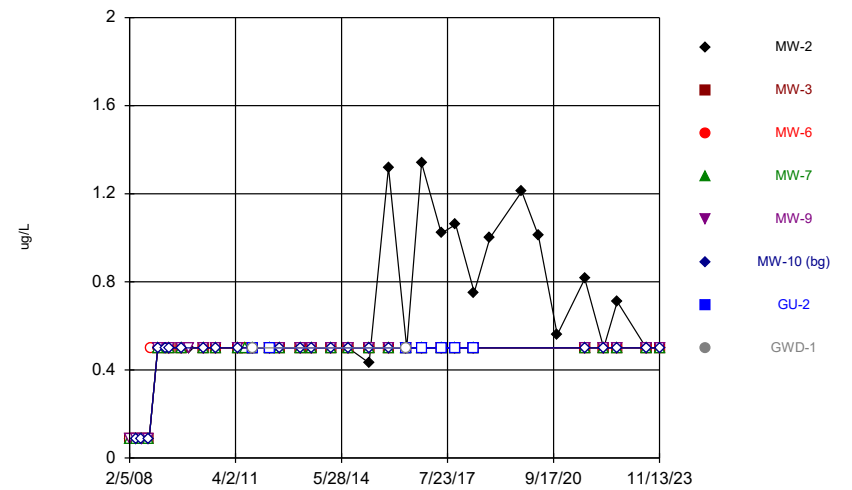
Constituent: Cadmium [total] Analysis Run 12/27/2023 5:25 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



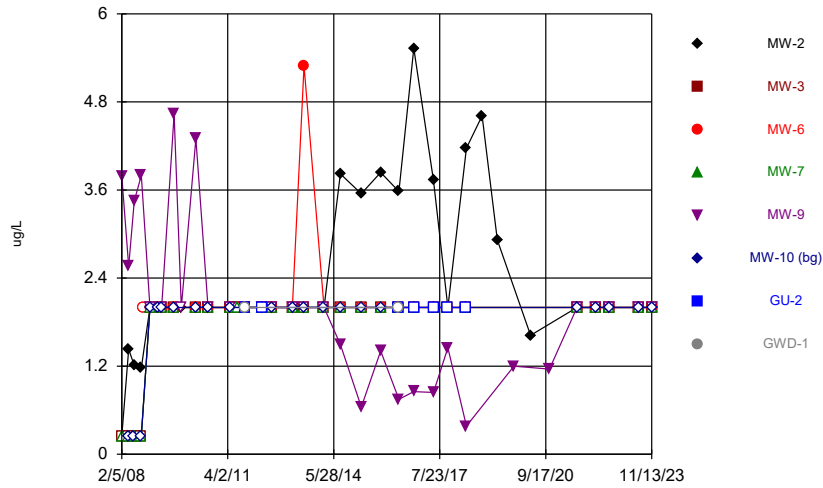
Constituent: Carbon disulfide Analysis Run 12/27/2023 5:25 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



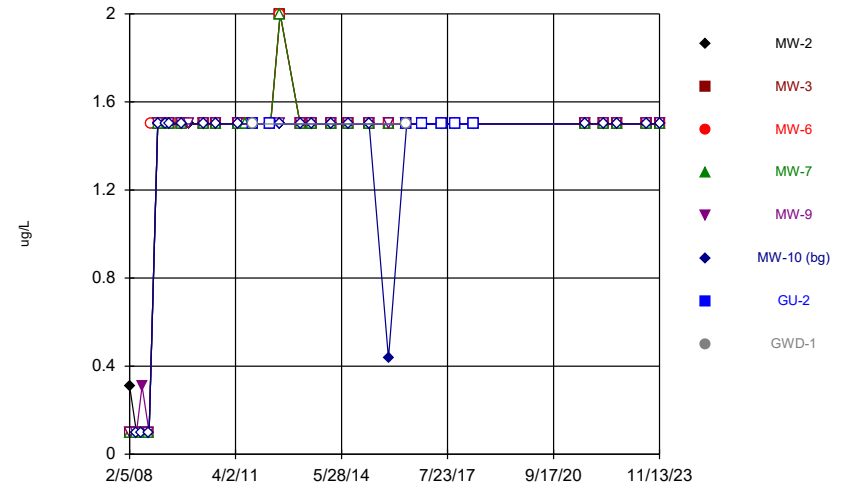
Constituent: Chlorobenzene Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



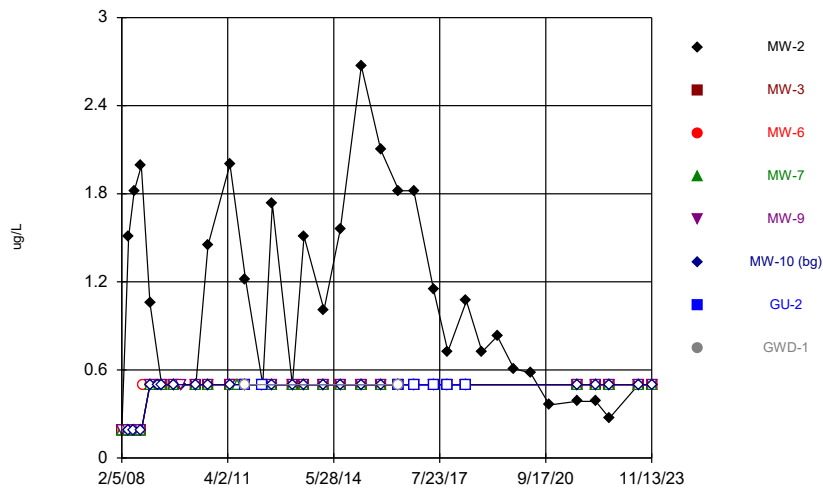
Constituent: Chloroethane Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



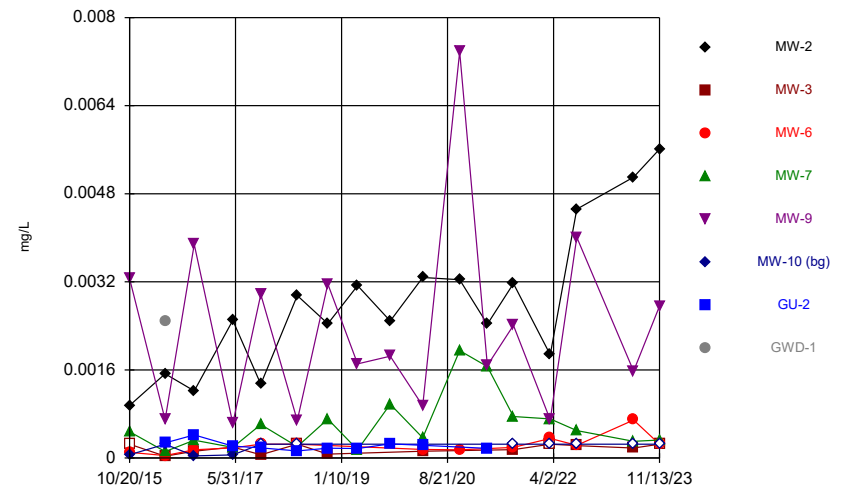
Constituent: Chloromethane Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



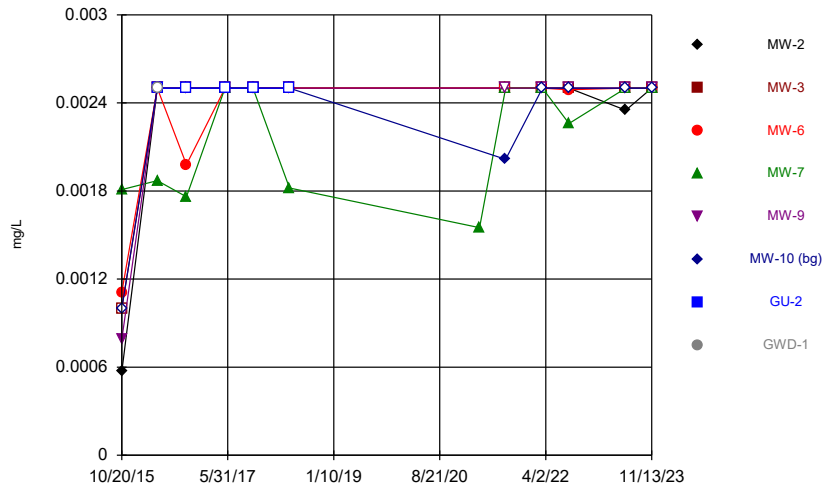
Constituent: cis-1,2-Dichloroethene Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



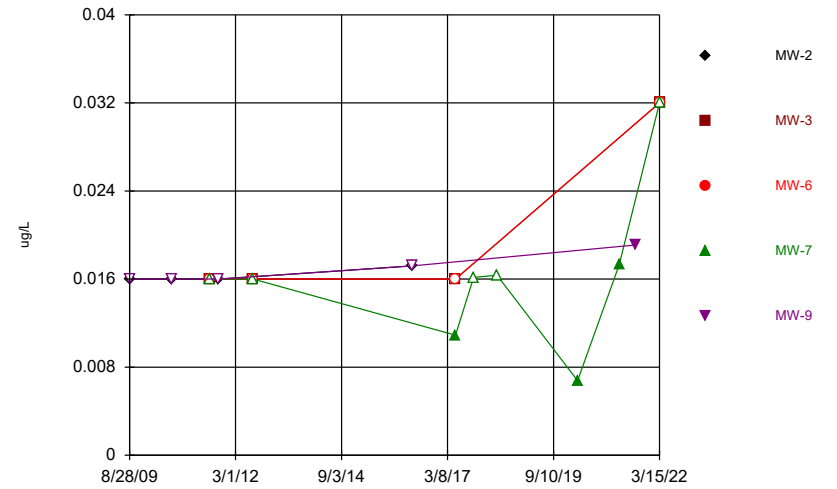
Constituent: Cobalt [total] Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



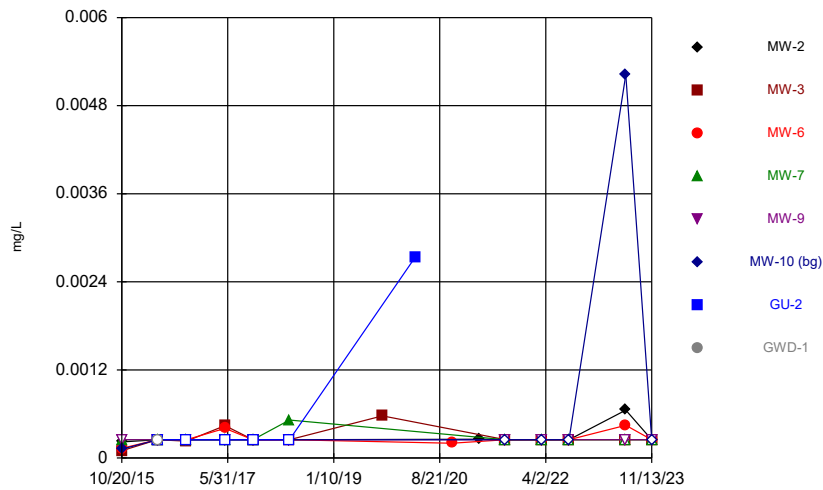
Constituent: Copper [total] Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



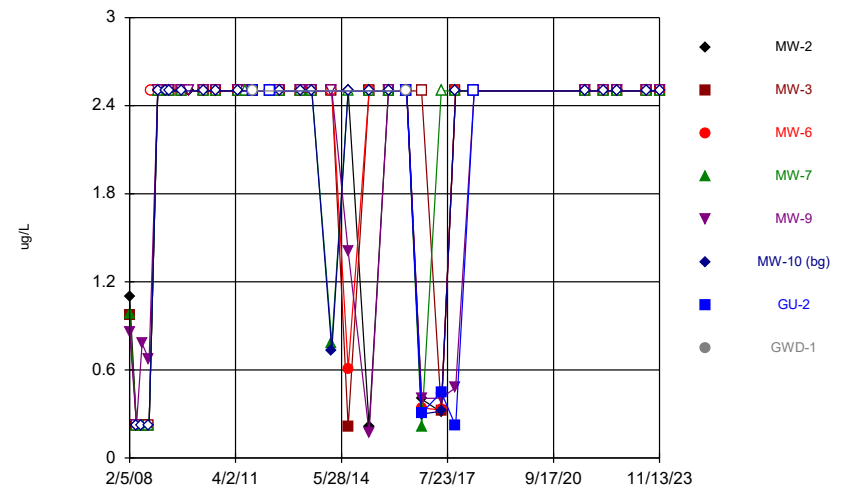
Constituent: Heptachlor Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



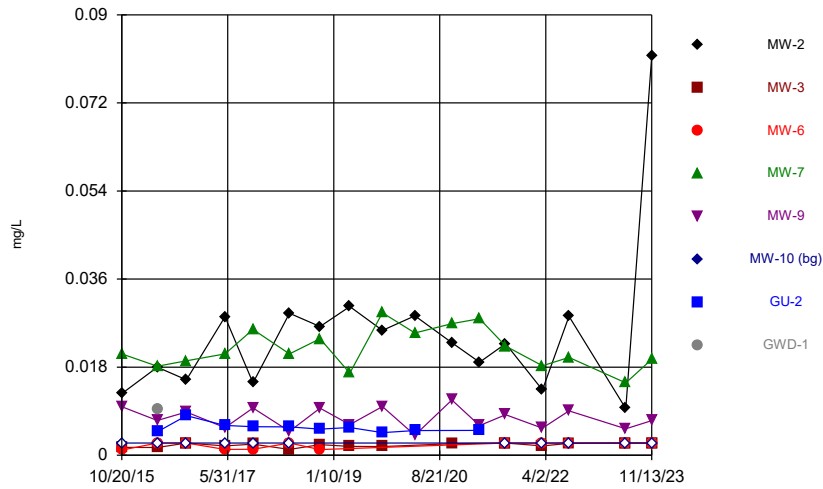
Constituent: Lead [total] Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



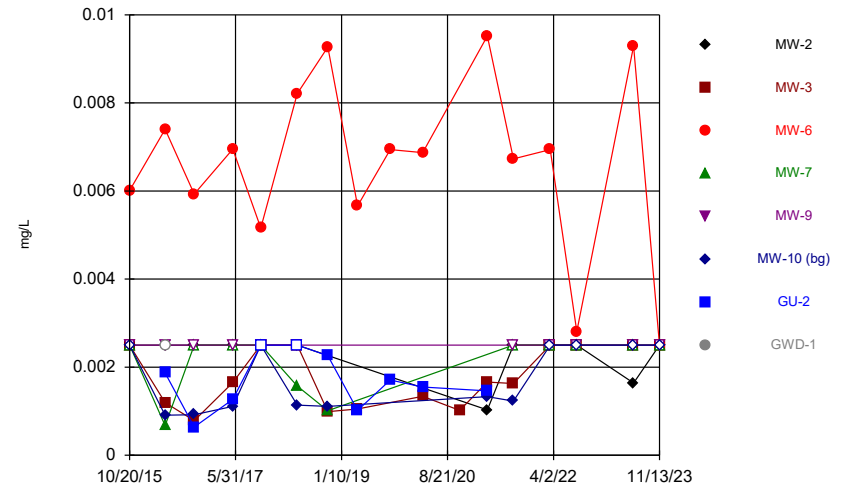
Constituent: Methylene Chloride Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



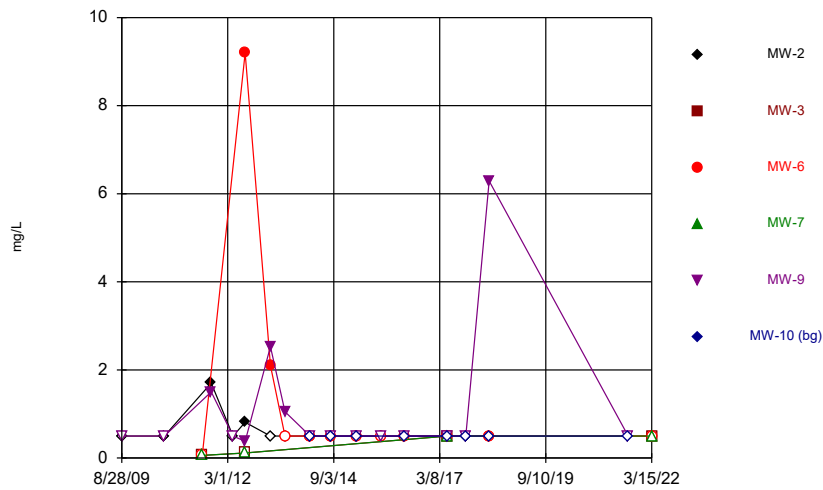
Constituent: Nickel [total] Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



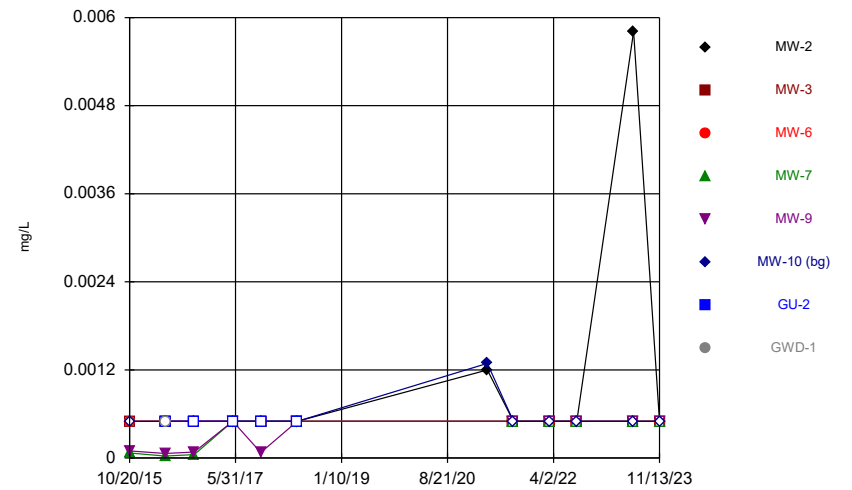
Constituent: Selenium [total] Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



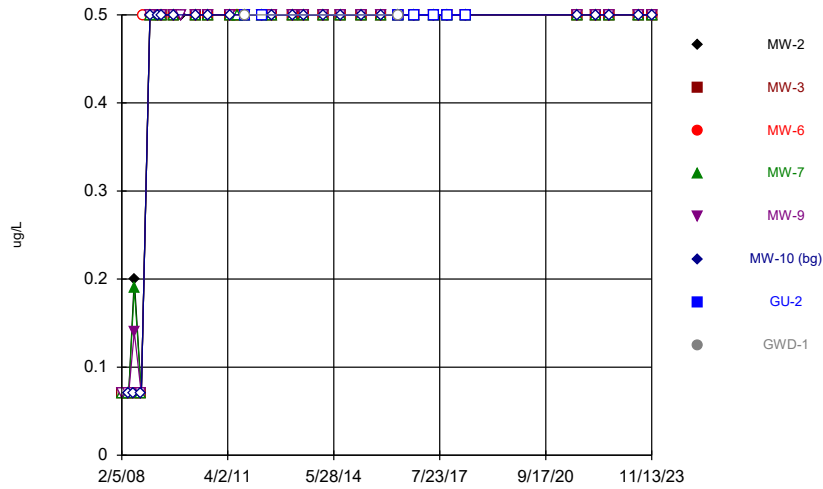
Constituent: Sulfide Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



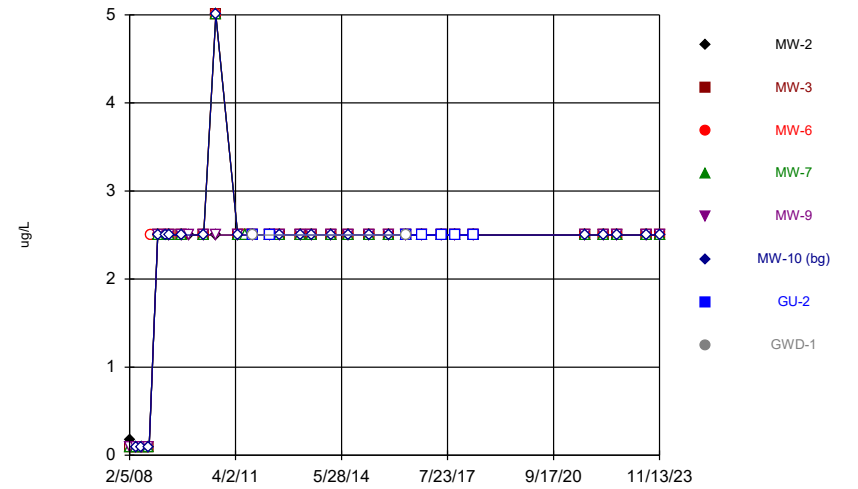
Constituent: Thallium [total] Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



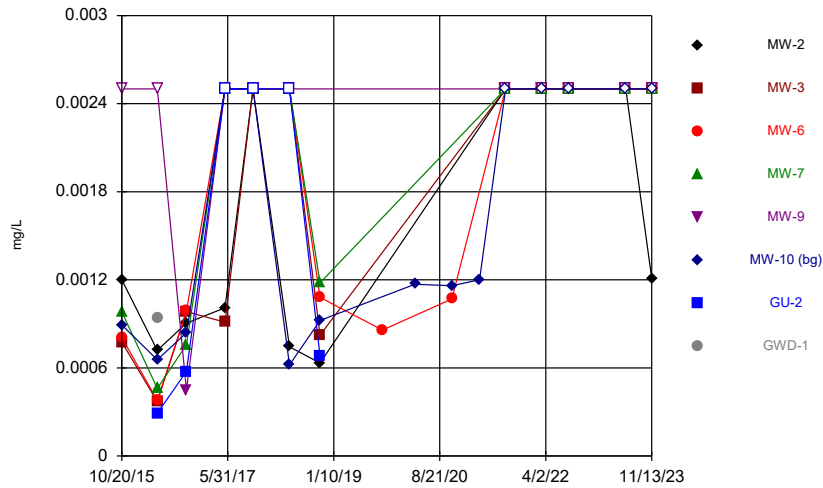
Constituent: Toluene Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



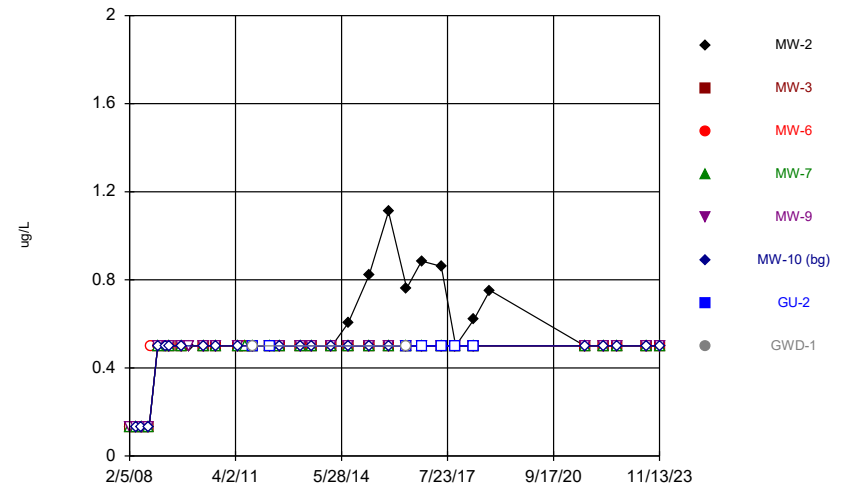
Constituent: trans-1,3-Dichloropropene Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



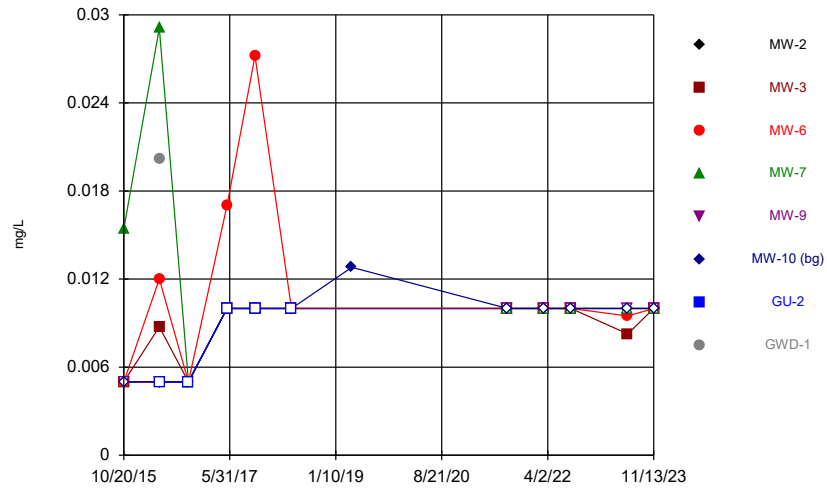
Constituent: Vanadium [total] Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



Constituent: Vinyl chloride Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Time Series



Constituent: Zinc [total] Analysis Run 12/27/2023 5:26 PM View: 2023AWQR - Time Series
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Attachment B.2

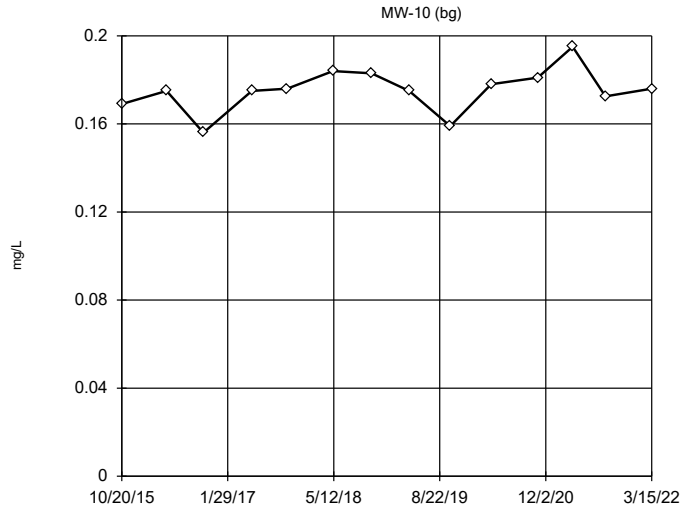
Outlier Analysis

Outlier Analysis

Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database Printed 12/29/2023, 9:58 AM

<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Date(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Normality Test</u>
Barium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	EPA/OH	0.05	14	0.1753	0.009805	ShapiroWilk
Cadmium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	NP (nrm)/OH	NaN	9	0.0001646	0.0001014	ShapiroWilk
Chromium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	OH	NaN	8	0.002246	0.0007177	n/a
Cobalt [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	NP (nrm)/OH	NaN	8	0.0001755	0.000103	ShapiroWilk
Copper [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	OH	NaN	8	0.002252	0.0005335	n/a
Lead [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	OH	NaN	8	0.0002338	0.00004596	n/a
Selenium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	NP (nrm)/OH	NaN	10	0.001525	0.0006841	ShapiroWilk
Thallium [total] (mg/L)	MW-10 (bg)	Yes	0.00129	3/31/2021	OH	NaN	9	0.0005878	0.0002633	n/a
Vanadium [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	NP (nrm)/OH	NaN	12	0.001455	0.0007927	ShapiroWilk
Zinc [total] (mg/L)	MW-10 (bg)	No	n/a	n/a	OH	NaN	9	0.008644	0.002879	n/a

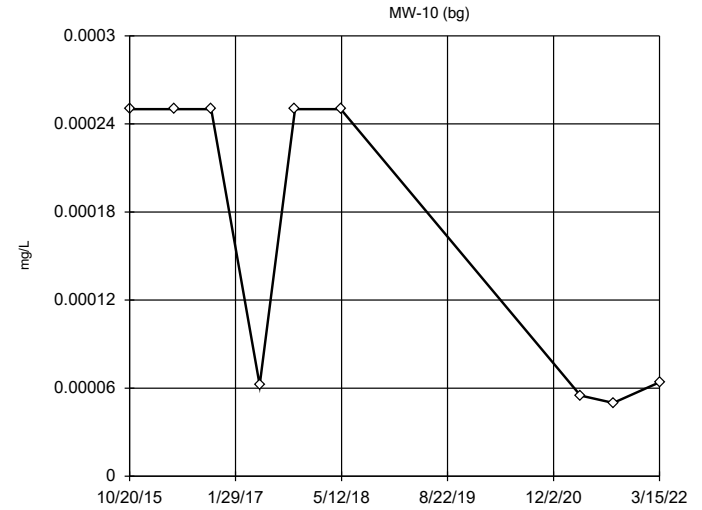
EPA Screening (suspected outliers for Dixon's Test)



n = 14
 Dixon's will not be run.
 No suspect values identified or unable to establish suspect values.
 Ohio method in use.
 Mean 0.1753, std. dev. 0.009805, critical Tn 2.371
 Normality test used:
 Shapiro Wilk@alpha = 0.1
 Calculated = 0.9369
 Critical = 0.895
 The distribution was found to be normally distributed.

Constituent: Barium [total] Analysis Run 12/29/2023 9:57 AM View: 2023AWQR - Outliers
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

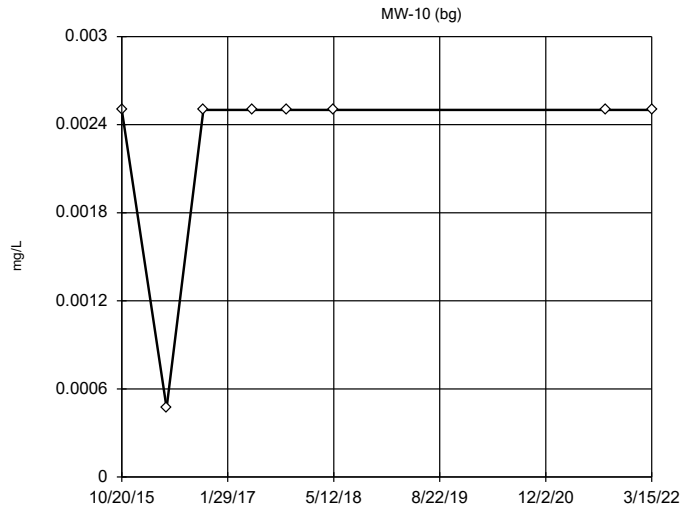
Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm



n = 9
 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 = 0.01962, low cutoff = 7.4e-7, based on IQR multiplier of 3.

Constituent: Cadmium [total] Analysis Run 12/29/2023 9:57 AM View: 2023AWQR - Outliers
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

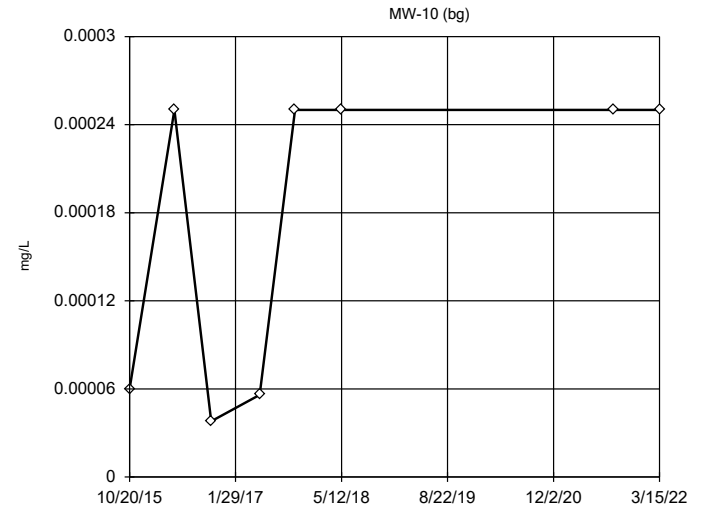
Ohio EPA 0715 Outlier Algorithm



n = 8
 No statistical outliers.

Constituent: Chromium [total] Analysis Run 12/29/2023 9:57 AM View: 2023AWQR - Outliers
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm

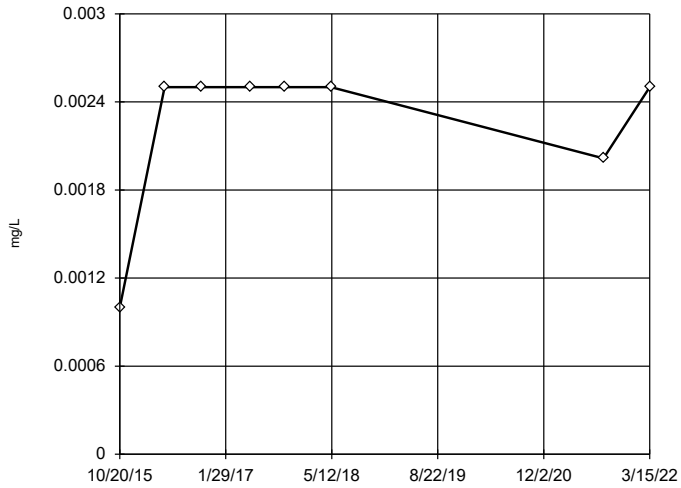


n = 8
 No outliers found.
 Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.
 Data were natural log transformed to achieve best W statistic (graph shown in original units).
 High cutoff = 0.02006, low cutoff = 7.2e-7, based on IQR multiplier of 3.

Constituent: Cobalt [total] Analysis Run 12/29/2023 9:57 AM View: 2023AWQR - Outliers
 Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Ohio EPA 0715 Outlier Algorithm

MW-10 (bg)

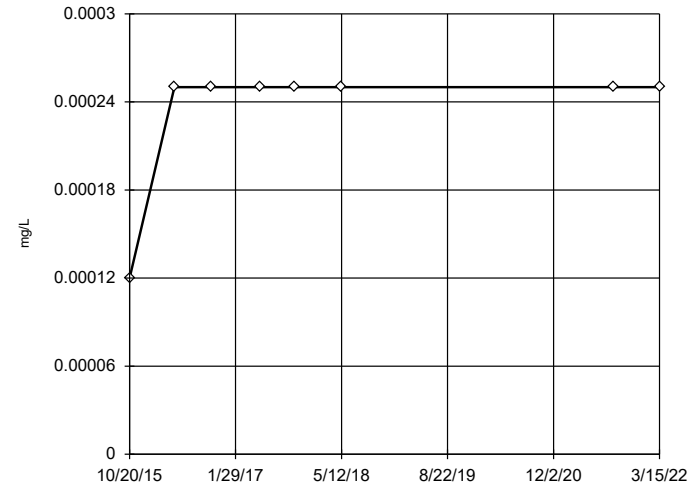


n = 8
No statistical outliers.

Constituent: Copper [total] Analysis Run 12/29/2023 9:57 AM View: 2023AWQR - Outliers
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Ohio EPA 0715 Outlier Algorithm

MW-10 (bg)

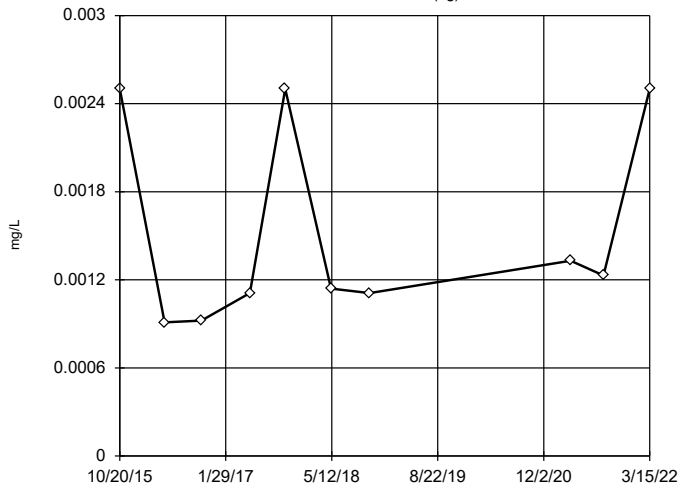


n = 8
No statistical outliers.

Constituent: Lead [total] Analysis Run 12/29/2023 9:57 AM View: 2023AWQR - 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)

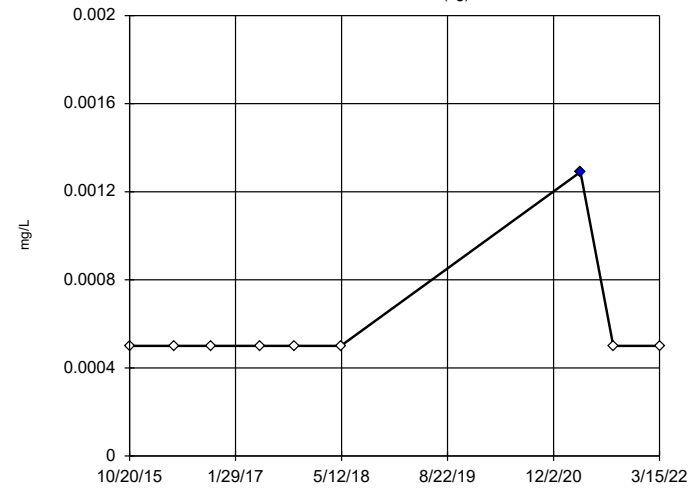


n = 10
No outliers found. Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.1 alpha level.
Data were natural log transformed to achieve best W statistic (graph shown in original units).
High cutoff = 0.03773, low cutoff = 0.00006703, based on IQR multiplier of 3.

Constituent: Selenium [total] Analysis Run 12/29/2023 9:57 AM View: 2023AWQR - Outliers
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Ohio EPA 0715 Outlier Algorithm

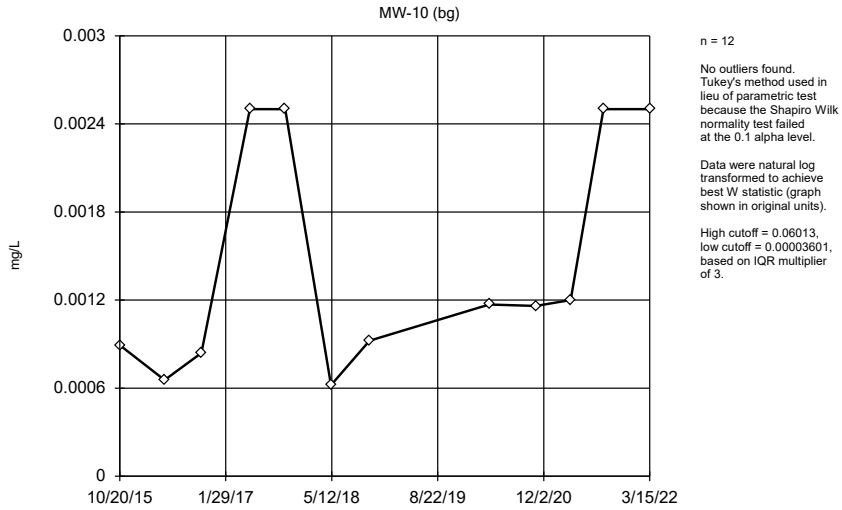
MW-10 (bg)



n = 9
Statistical outlier is drawn as solid. Outlier per Ohio method.

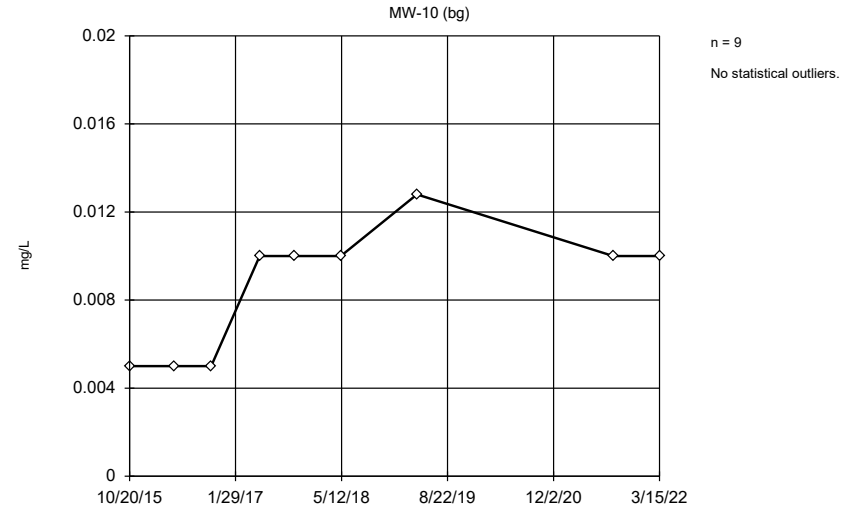
Constituent: Thallium [total] Analysis Run 12/29/2023 9:57 AM View: 2023AWQR - Outliers
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm




Constituent: Vanadium [total] Analysis Run 12/29/2023 9:57 AM View: 2023AWQR - Outliers
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Ohio EPA 0715 Outlier Algorithm



Constituent: Zinc [total] Analysis Run 12/29/2023 9:57 AM View: 2023AWQR - Outliers
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database



Attachment B.3
Interwell Prediction Limits

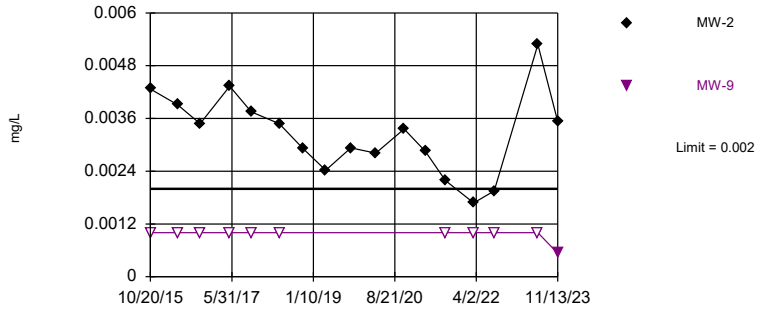
Prediction Limit

Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database Printed 12/29/2023, 11:00 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Wells	Bg Mean	Std. Dev.	%NDs	ND Adj.	Trans...	Alpha	Method
Arsenic [total] (mg/L)	MW-2	0.002	n/a	11/13/2023	0.00353	Yes	11	MW-10	n/a	n/a	100	n/a	n/a	0.01093	NP Inter (NDs) 1 of 2
Arsenic [total] (mg/L)	MW-9	0.002	n/a	11/13/2023	0.000534	No	11	MW-10	n/a	n/a	100	n/a	n/a	0.01093	NP Inter (NDs) 1 of 2
Barium [total] (mg/L)	MW-2	0.1966	n/a	11/13/2023	0.187	No	17	MW-10	0.174	0.01001	0	None	No	0.001053	Param Inter 1 of 2
Barium [total] (mg/L)	MW-3	0.1966	n/a	11/13/2023	0.0267	No	17	MW-10	0.174	0.01001	0	None	No	0.001053	Param Inter 1 of 2
Barium [total] (mg/L)	MW-6	0.1966	n/a	11/13/2023	0.0452	No	17	MW-10	0.174	0.01001	0	None	No	0.001053	Param Inter 1 of 2
Barium [total] (mg/L)	MW-7	0.1966	n/a	11/13/2023	0.0316	No	17	MW-10	0.174	0.01001	0	None	No	0.001053	Param Inter 1 of 2
Barium [total] (mg/L)	MW-9	0.1966	n/a	11/13/2023	0.0675	No	17	MW-10	0.174	0.01001	0	None	No	0.001053	Param Inter 1 of 2
Cadmium [total] (mg/L)	MW-6	0.000372	n/a	11/13/2023	0.0001215	No	12	MW-10	n/a	n/a	58.33	n/a	n/a	0.009417	NP Inter (NDs) 1 of 2
Cadmium [total] (mg/L)	MW-7	0.000372	n/a	11/13/2023	0.000362	No	12	MW-10	n/a	n/a	58.33	n/a	n/a	0.009417	NP Inter (NDs) 1 of 2
Cobalt [total] (mg/L)	MW-2	0.00025	n/a	11/13/2023	0.00561	Yes	11	MW-10	n/a	n/a	72.73	n/a	n/a	0.01093	NP Inter (NDs) 1 of 2
Cobalt [total] (mg/L)	MW-7	0.00025	n/a	11/13/2023	0.000328	Yes	11	MW-10	n/a	n/a	72.73	n/a	n/a	0.01093	NP Inter (NDs) 1 of 2
Cobalt [total] (mg/L)	MW-9	0.00025	n/a	11/13/2023	0.00276	Yes	11	MW-10	n/a	n/a	72.73	n/a	n/a	0.01093	NP Inter (NDs) 1 of 2
Nickel [total] (mg/L)	MW-2	0.005	n/a	11/13/2023	0.0815	Yes	11	MW-10	n/a	n/a	100	n/a	n/a	0.01093	NP Inter (NDs) 1 of 2
Nickel [total] (mg/L)	MW-7	0.005	n/a	11/13/2023	0.0196	Yes	11	MW-10	n/a	n/a	100	n/a	n/a	0.01093	NP Inter (NDs) 1 of 2
Nickel [total] (mg/L)	MW-9	0.005	n/a	11/13/2023	0.00709	Yes	11	MW-10	n/a	n/a	100	n/a	n/a	0.01093	NP Inter (NDs) 1 of 2
Vanadium [total] (mg/L)	MW-2	0.0025	n/a	11/13/2023	0.00121	No	15	MW-10	n/a	n/a	46.67	n/a	n/a	0.006767	NP Inter (normality) 1 of 2

Exceeds Limit: MW-2

Prediction Limit
Interwell Non-parametric

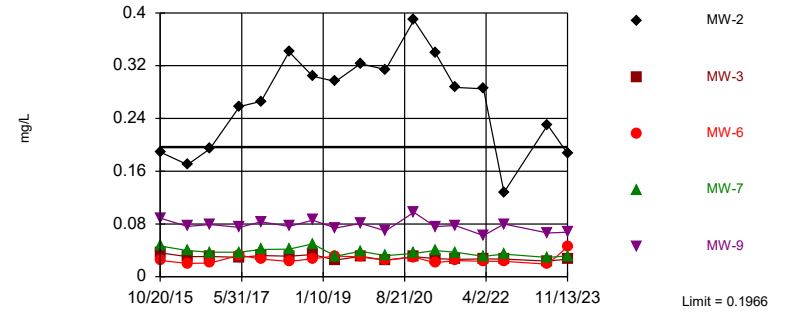


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 11) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.104. Individual comparison alpha = 0.01093 (1 of 2). Comparing 2 points to limit. Assumes 3 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Arsenic [total] Analysis Run 12/29/2023 10:59 AM View: 2023AWQR - AM PL
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Within Limit

Prediction Limit
Interwell Parametric

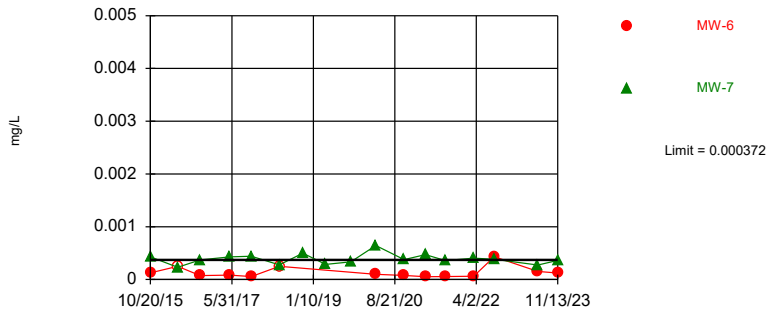


Background Data Summary: Mean=0.174, Std. Dev.=0.01001, n=17. Insufficient data to test for seasonality; not deseasonalized. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9484, critical = 0.851. Kappa = 2.255 (c=10, w=5, 1 of 2, event alpha = 0.05132). Report alpha = 0.005254. Individual comparison alpha = 0.001053. Comparing 5 points to limit.

Constituent: Barium [total] Analysis Run 12/29/2023 10:59 AM View: 2023AWQR - AM PL
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Within Limit

Prediction Limit
Interwell Non-parametric

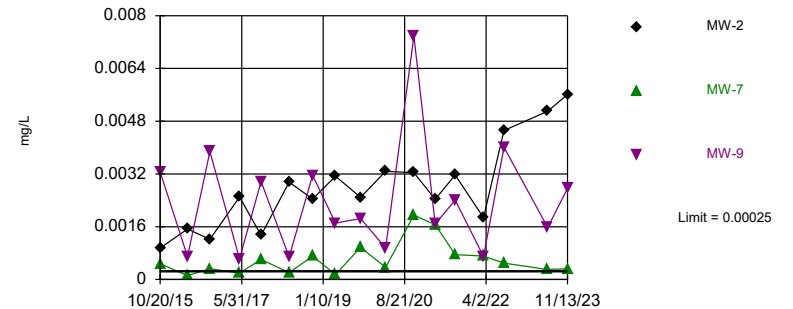


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 12 background values. 58.33% NDs. Annual per-constituent alpha = 0.09028. Individual comparison alpha = 0.009417 (1 of 2). Comparing 2 points to limit. Assumes 3 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Cadmium [total] Analysis Run 12/29/2023 10:59 AM View: 2023AWQR - AM PL
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Exceeds Limit: MW-2, MW-7, MW-9

Prediction Limit
Interwell Non-parametric

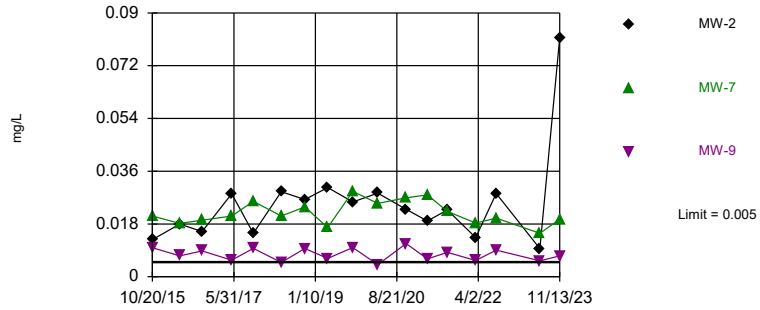


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 72.73% NDs. Annual per-constituent alpha = 0.104. Individual comparison alpha = 0.01093 (1 of 2). Comparing 3 points to limit. Assumes 2 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Cobalt [total] Analysis Run 12/29/2023 10:59 AM View: 2023AWQR - AM PL
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Exceeds Limit: MW-2, MW-7, MW-9

Prediction Limit
Interwell Non-parametric



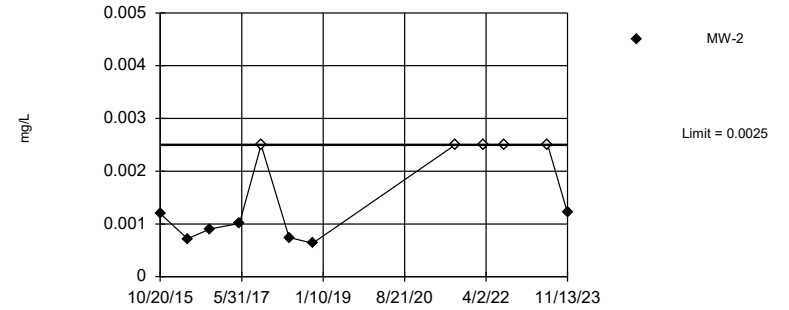
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. All background values (n = 11) were censored; limit is most recent reporting limit. Annual per-constituent alpha = 0.104. Individual comparison alpha = 0.01093 (1 of 2). Comparing 3 points to limit. Assumes 2 future values. Insufficient data to test for seasonality; data will not be deseasonalized.

Constituent: Nickel [total] Analysis Run 12/29/2023 10:59 AM View: 2023AWQR - AM PL
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Hollow symbols indicate censored values.

Within Limit

Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 15 background values. 46.67% 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: Vanadium [total] Analysis Run 12/29/2023 10:59 AM View: 2023AWQR - AM PL
Adair County Sanitary Landfill Client: Adair County Data: Adair County LF Database

Attachment B.4

Sen's Slope/Mann-Kendall Trend Analysis

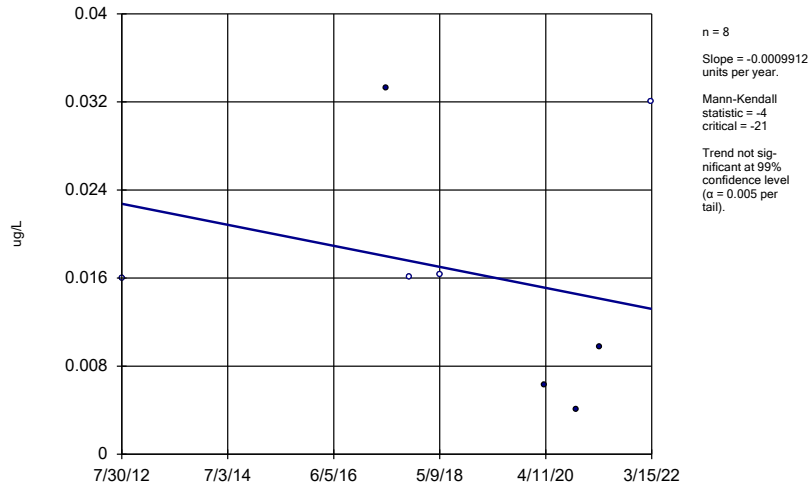
Trend Test

Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR Printed 12/29/2023, 12:09 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	0.0221	10	21	No	8	62.5	0.01	NP
Acetone (ug/L)	MW-7	0.4509	10	21	No	8	50	0.01	NP
Arsenic (mg/L)	MW-2	0.00004826	2	21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-9	0	-7	-21	No	8	87.5	0.01	NP
Barium (mg/L)	MW-2	-0.05794	-20	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-3	-0.0003706	-8	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-6	-0.0007536	-5	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-7	-0.001326	-10	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-9	-0.003477	-6	-21	No	8	0	0.01	NP
Benzene (ug/L)	MW-2	-0.1961	-10	-21	No	8	0	0.01	NP
Cadmium (mg/L)	MW-2	-0.000006876	-3	-21	No	8	50	0.01	NP
Cadmium (mg/L)	MW-6	0.00001178	8	21	No	8	0	0.01	NP
Cadmium (mg/L)	MW-7	-0.00004761	-14	-21	No	8	0	0.01	NP
Cadmium (mg/L)	MW-9	0.000007642	1	21	No	8	25	0.01	NP
Chlorobenzene (ug/L)	MW-2	-0.1504	-19	-21	No	8	37.5	0.01	NP
Chloroethane (ug/L)	MW-2	0	-8	-21	No	8	62.5	0.01	NP
cis-1,2-Dichloroethene (ug/L)	MW-2	-0.02559	-7	-21	No	8	25	0.01	NP
Cobalt (mg/L)	MW-2	0.0007099	10	21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-3	0.00002082	9	21	No	8	37.5	0.01	NP
Cobalt (mg/L)	MW-6	0.00003033	11	21	No	8	25	0.01	NP
Cobalt (mg/L)	MW-7	-0.0002549	-16	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-9	0.0001768	2	21	No	8	0	0.01	NP
Heptachlor (ug/L)	MW-9	0.0002348	7	12	No	5	80	0.01	NP
Lead (mg/L)	MW-2	0	3	21	No	8	75	0.01	NP
Lead (mg/L)	MW-3	0	-3	-21	No	8	87.5	0.01	NP
Lead (mg/L)	MW-7	0	-3	-21	No	8	87.5	0.01	NP
Nickel (mg/L)	MW-2	-0.001621	-4	-21	No	8	0	0.01	NP
Nickel (mg/L)	MW-7	-0.002959	-16	-21	No	8	0	0.01	NP
Nickel (mg/L)	MW-9	0.0001472	0	21	No	8	0	0.01	NP
Selenium (mg/L)	MW-3	0.0003841	18	21	No	8	50	0.01	NP
Selenium (mg/L)	MW-6	-0.0001936	-9	-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	3	21	No	8	75	0.01	NP
Vanadium (mg/L)	MW-2	0	2	21	No	8	62.5	0.01	NP
Zinc (mg/L)	MW-6	-0.0003399	-14	-21	No	8	62.5	0.01	NP

Sen's Slope Estimator

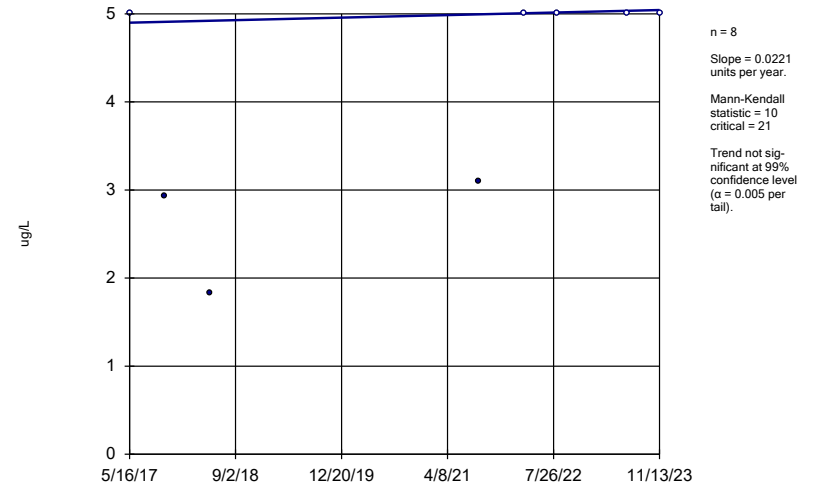
MW-7



Constituent: 4,4'-DDT Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

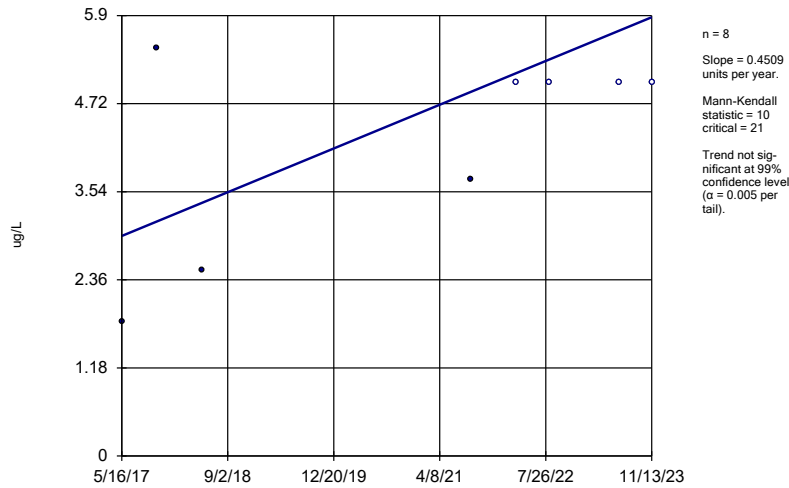
MW-6



Constituent: Acetone Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

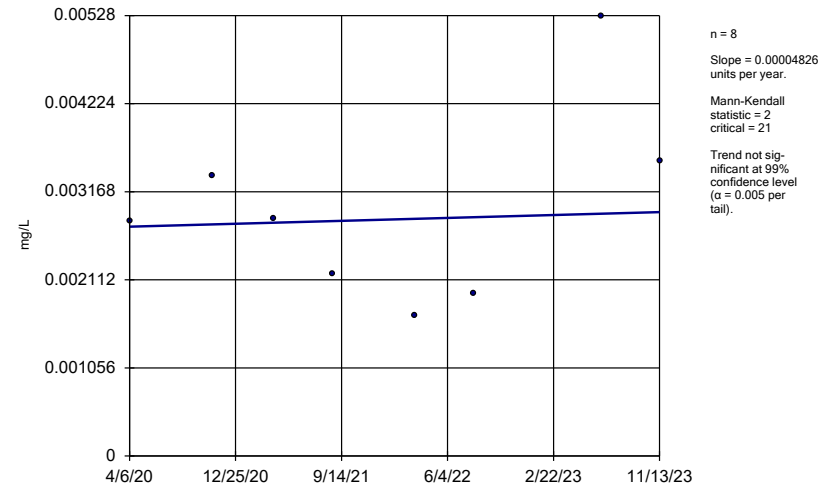
MW-7



Constituent: Acetone Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

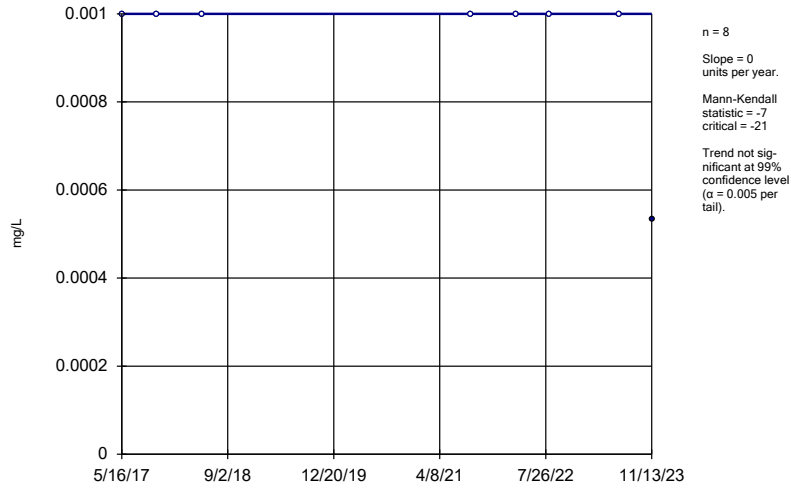
MW-2



Constituent: Arsenic Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

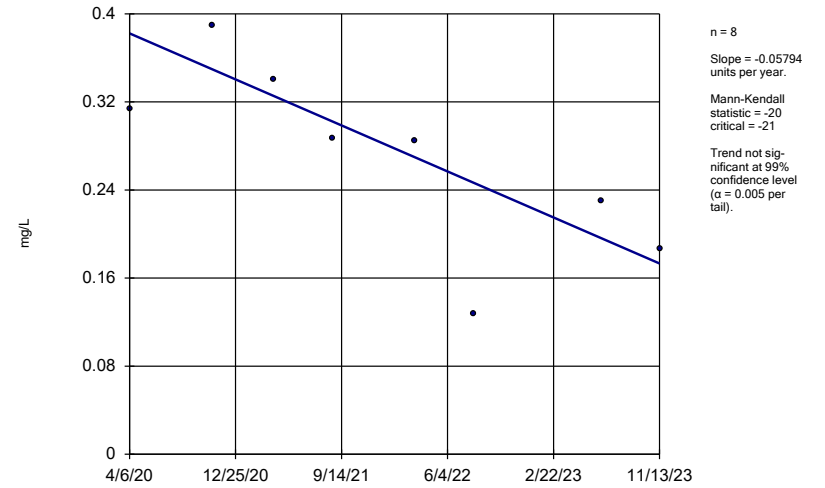
MW-9



Constituent: Arsenic Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

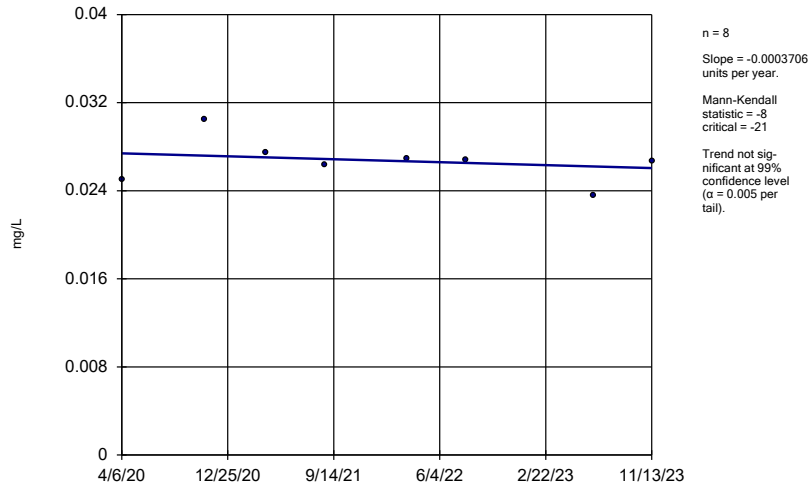
MW-2



Constituent: Barium Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

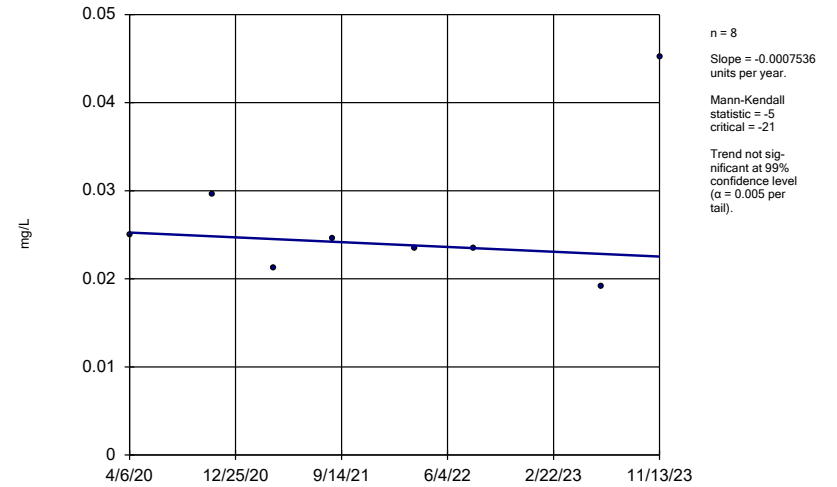
MW-3



Constituent: Barium Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

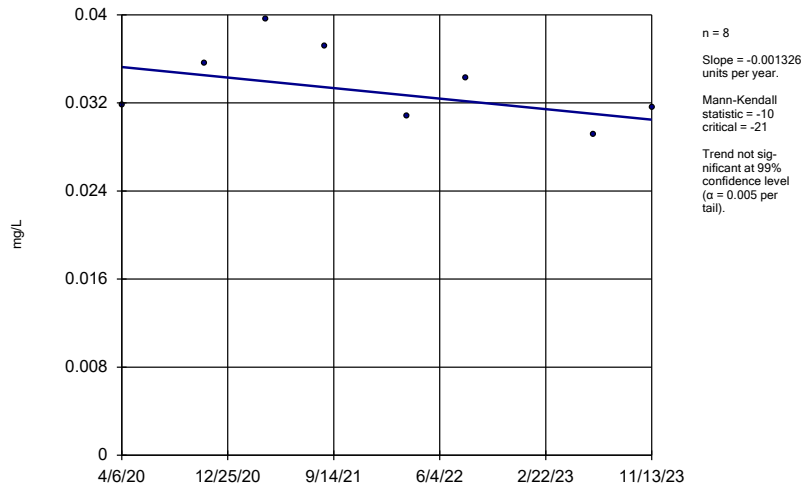
MW-6



Constituent: Barium Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

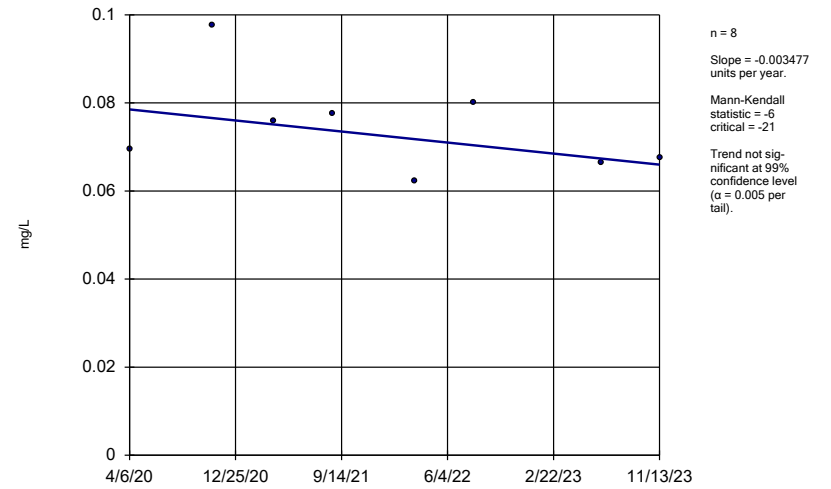
MW-7



Constituent: Barium Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

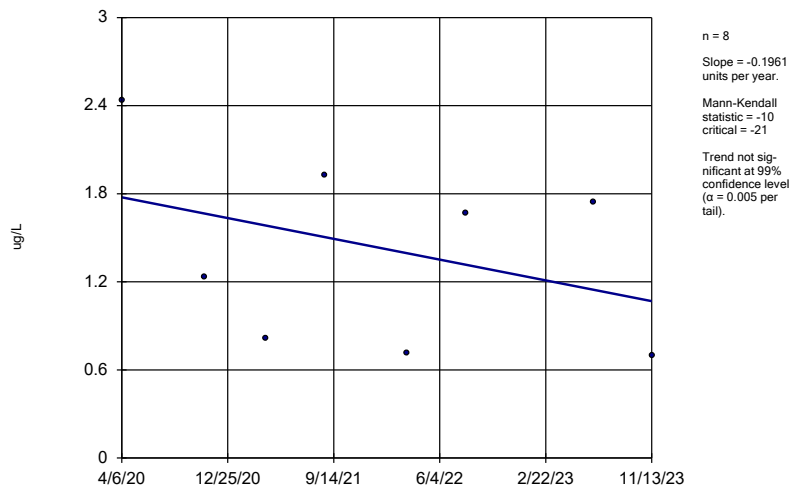
MW-9



Constituent: Barium Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

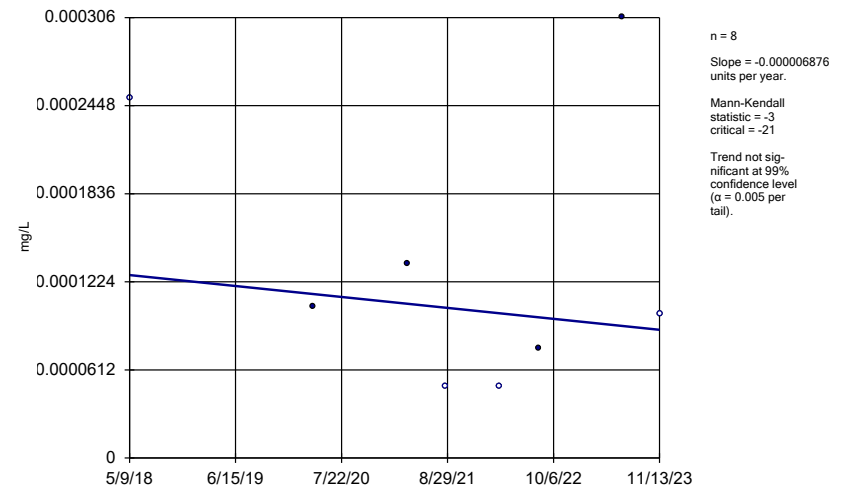
MW-2



Constituent: Benzene Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

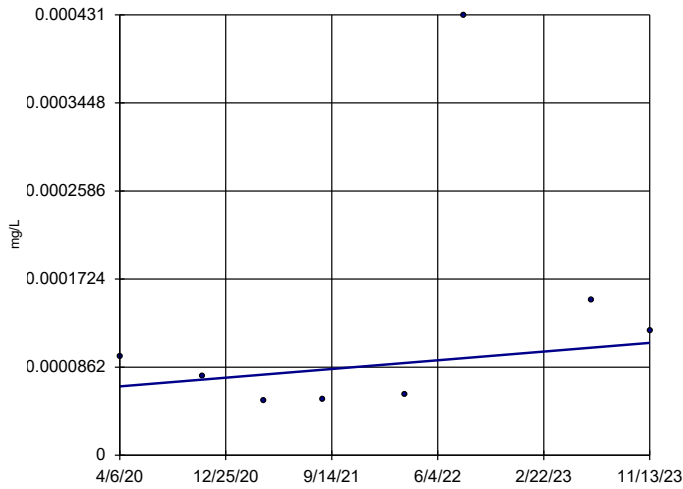
MW-2



Constituent: Cadmium Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

MW-6

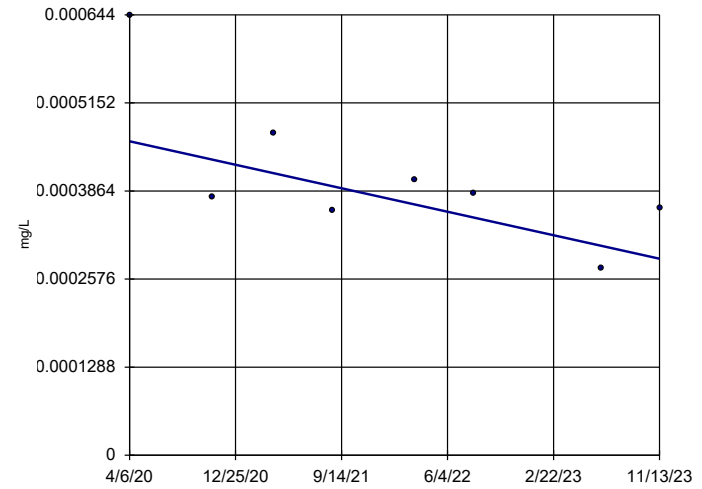


n = 8
 Slope = 0.00001178 units per year.
 Mann-Kendall statistic = 8
 critical = 21
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cadmium Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

MW-7

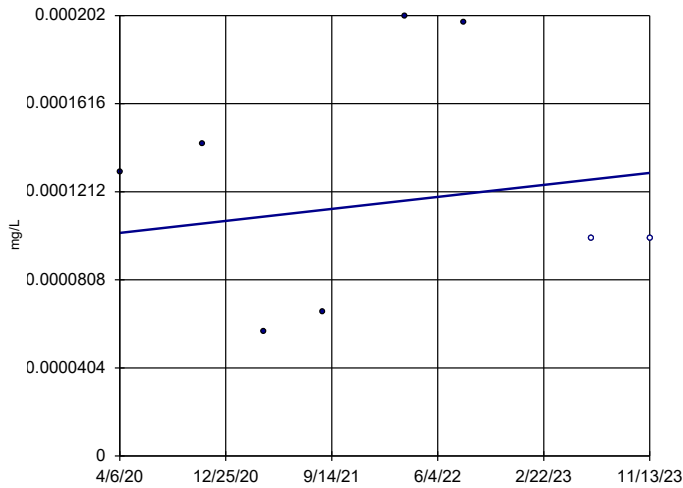


n = 8
 Slope = -0.00004761 units per year.
 Mann-Kendall statistic = -14
 critical = -21
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cadmium Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

MW-9

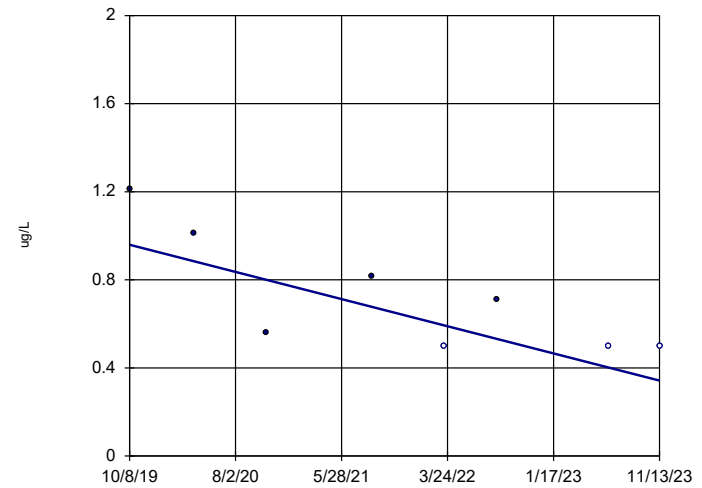


n = 8
 Slope = 0.000007642 units per year.
 Mann-Kendall statistic = 1
 critical = 21
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cadmium Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

MW-2

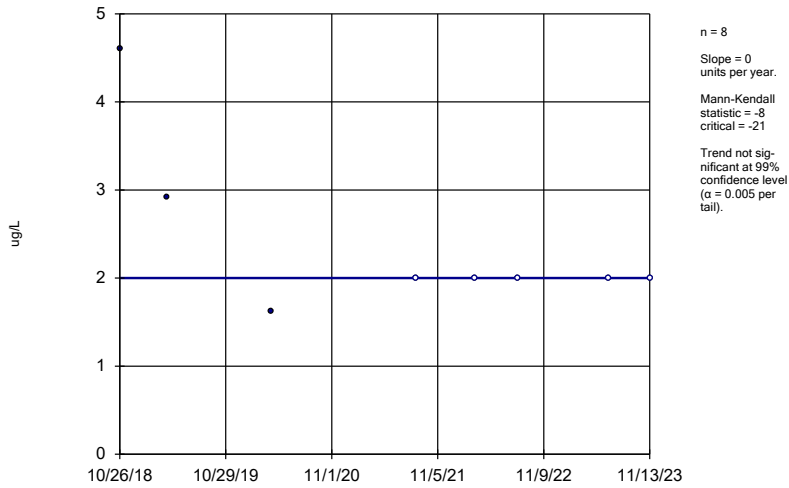


n = 8
 Slope = -0.1504 units per year.
 Mann-Kendall statistic = -19
 critical = -21
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chlorobenzene Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

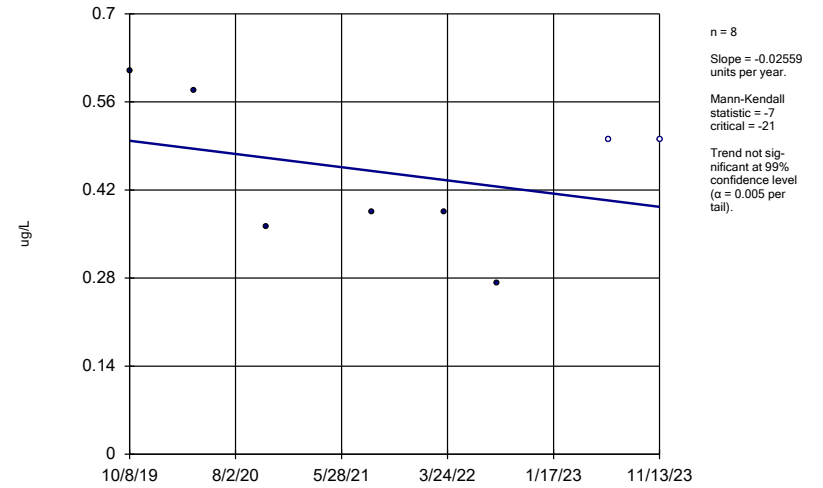
MW-2



Constituent: Chloroethane Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

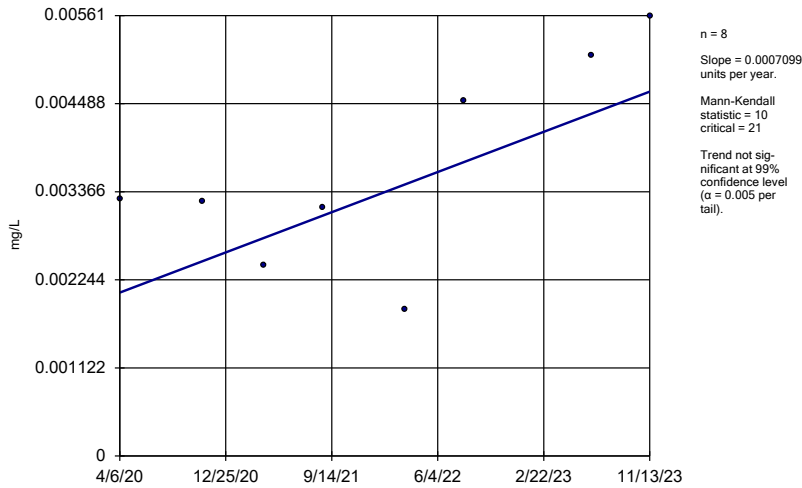
MW-2



Constituent: cis-1,2-Dichloroethene Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

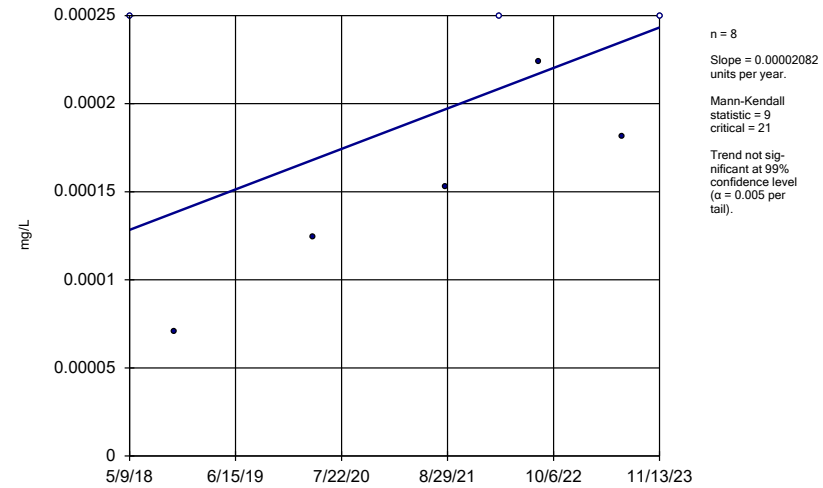
MW-2



Constituent: Cobalt Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

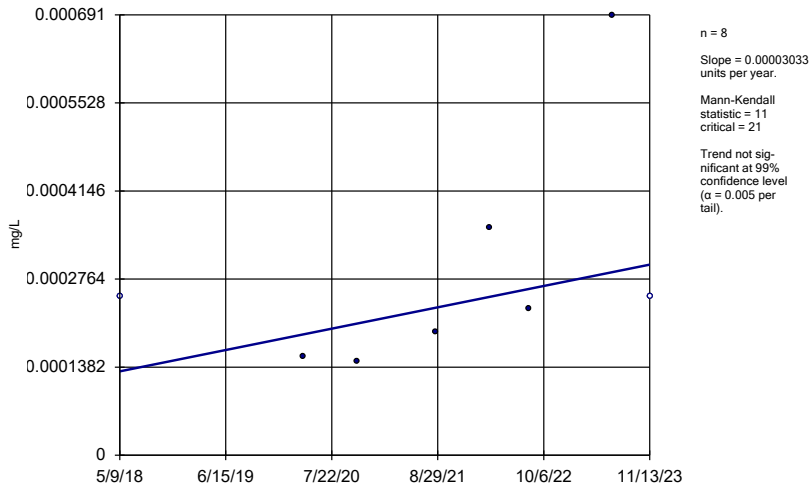
MW-3



Constituent: Cobalt Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

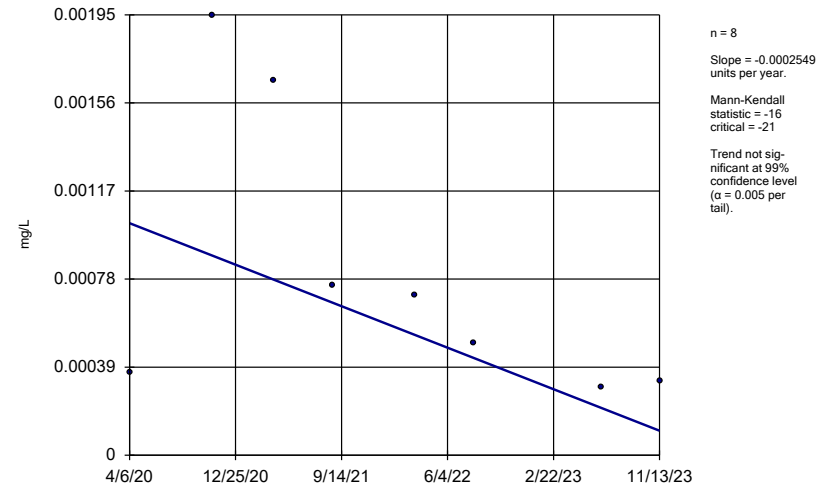
MW-6



Constituent: Cobalt Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

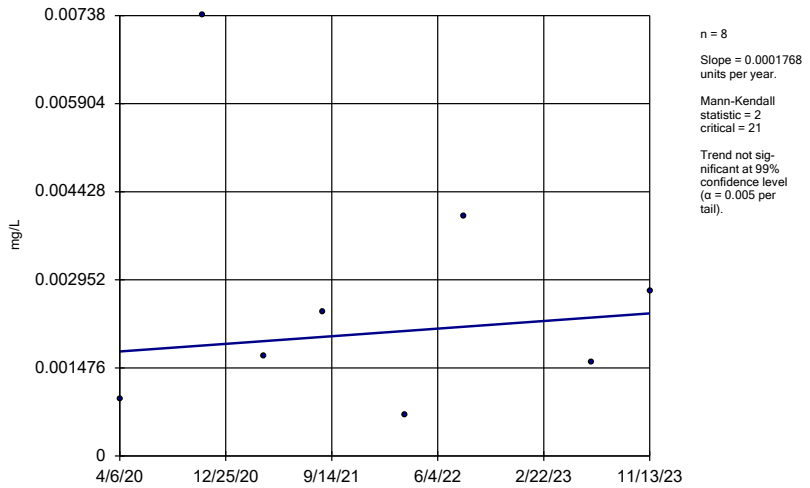
MW-7



Constituent: Cobalt Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

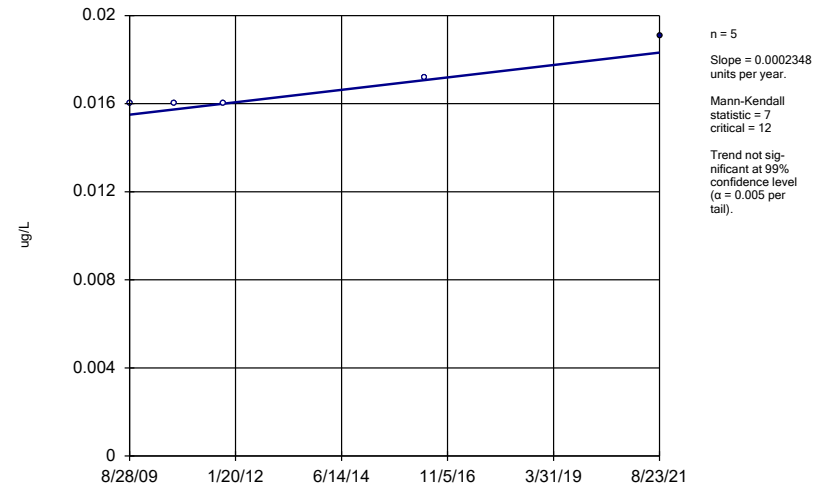
MW-9



Constituent: Cobalt Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

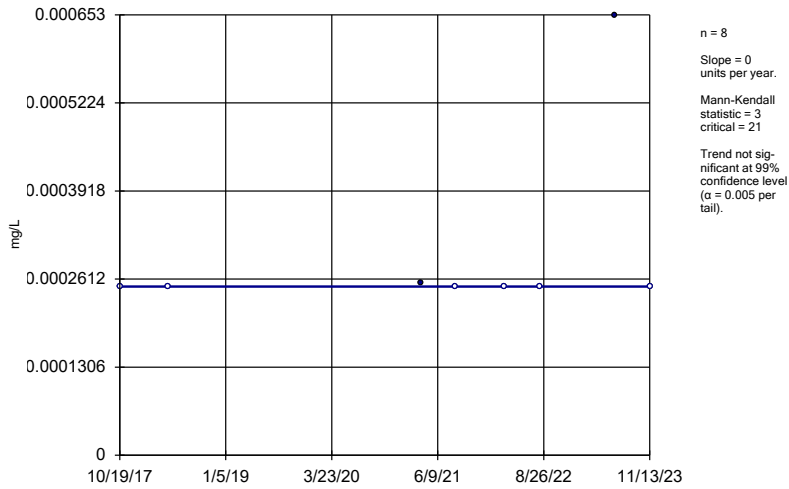
MW-9



Constituent: Heptachlor Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

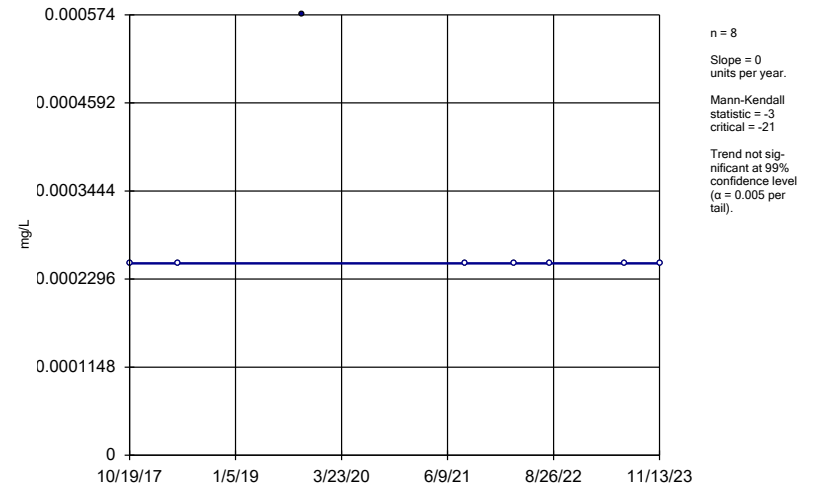
MW-2



Constituent: Lead Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

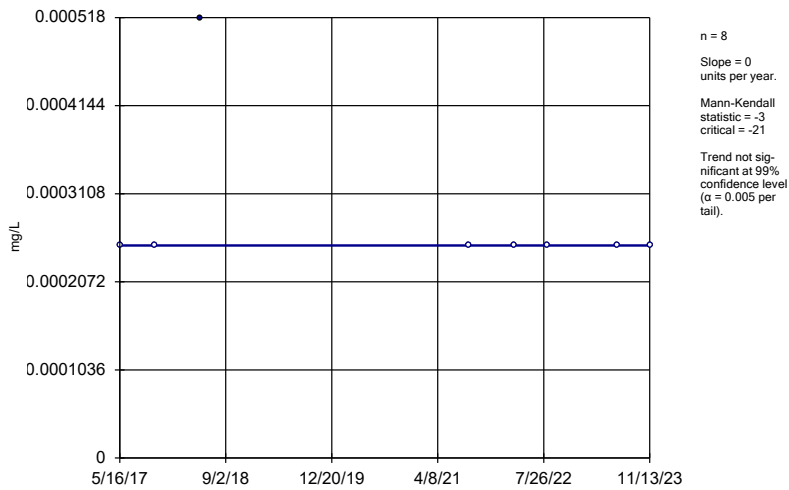
MW-3



Constituent: Lead Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

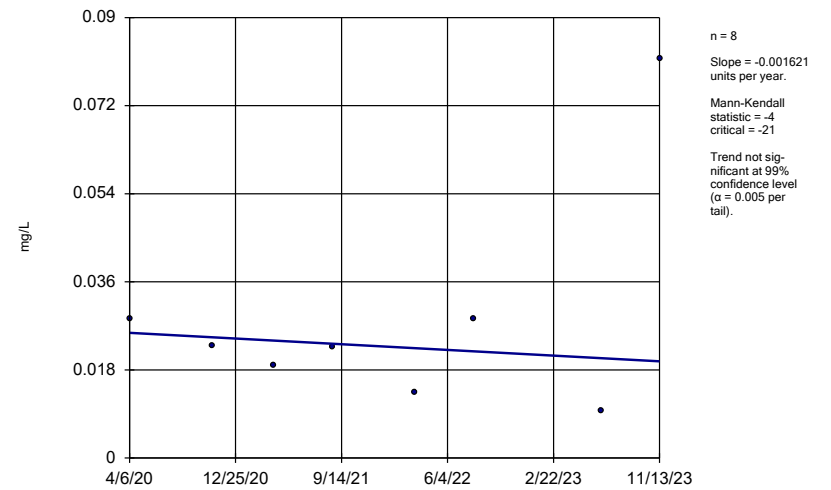
MW-7



Constituent: Lead Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

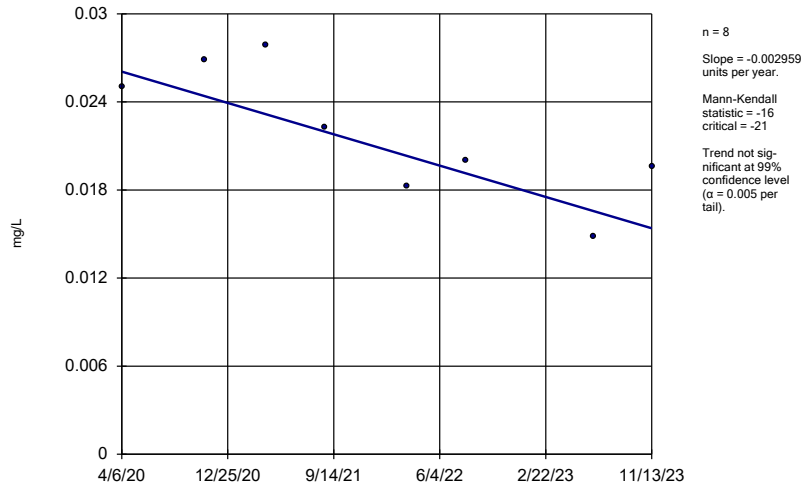
MW-2



Constituent: Nickel Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

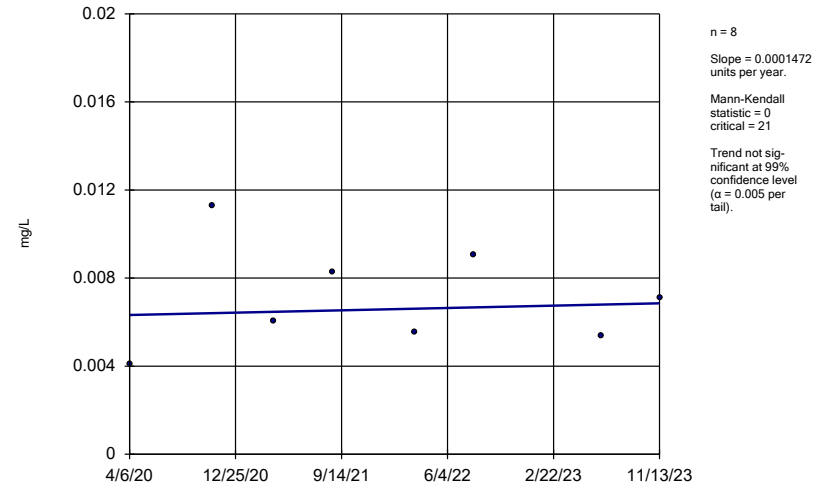
MW-7



Constituent: Nickel Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

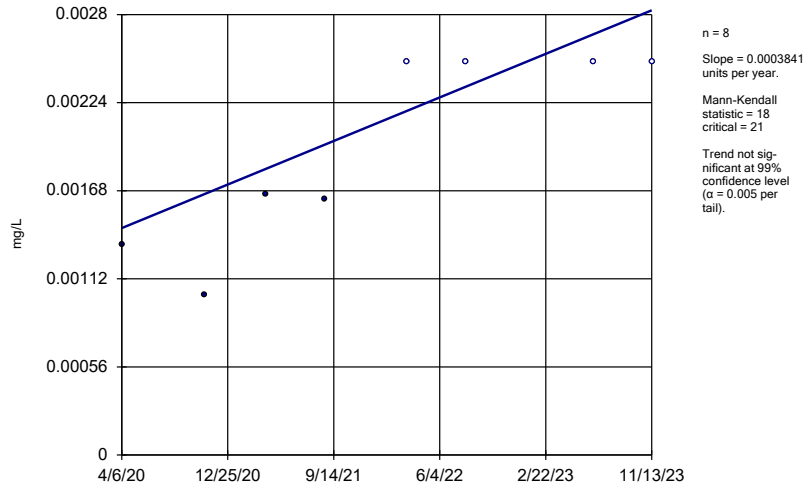
MW-9



Constituent: Nickel Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

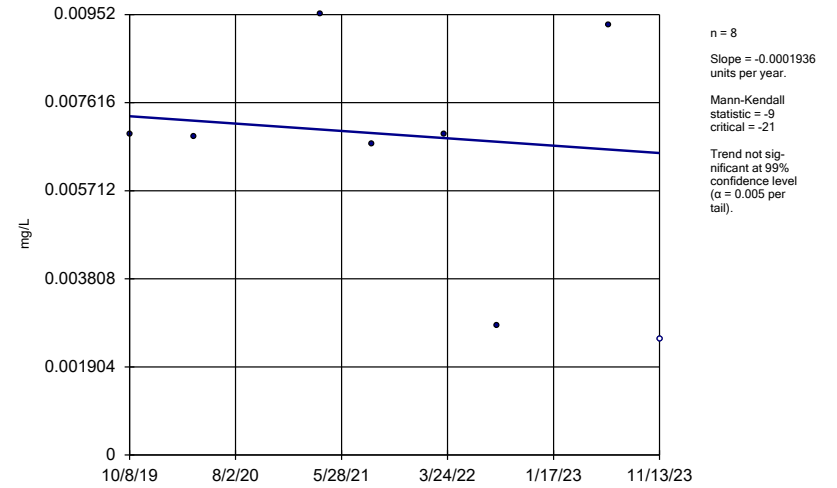
MW-3



Constituent: Selenium Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

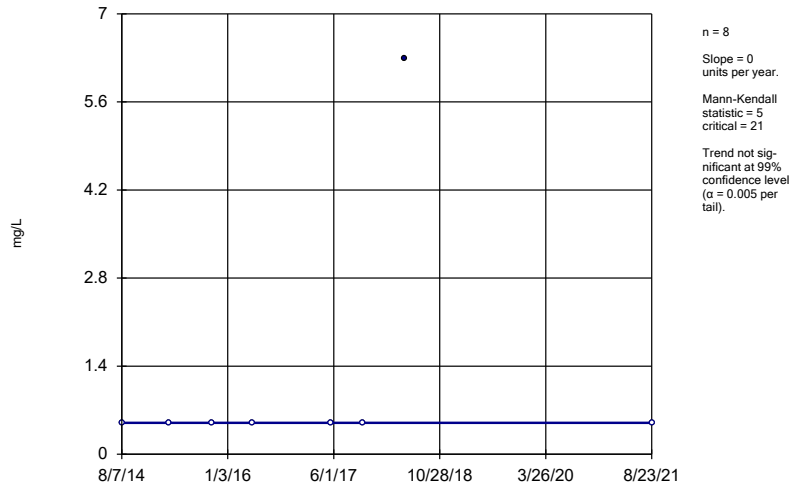
MW-6



Constituent: Selenium Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

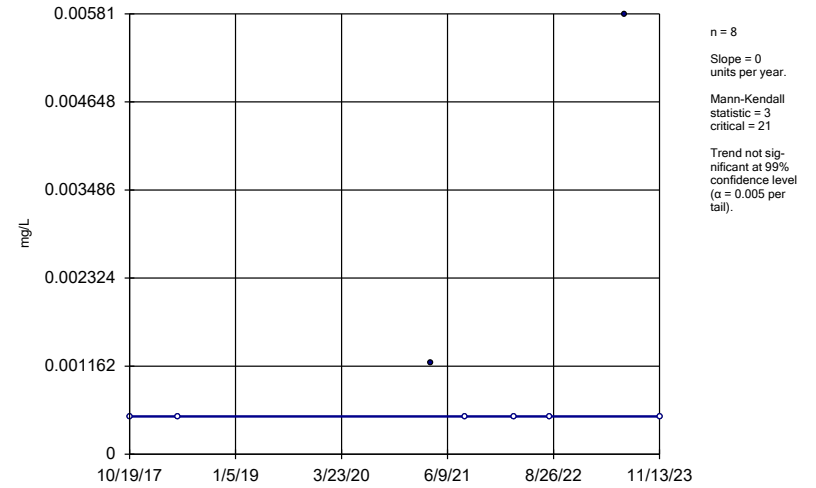
MW-9



Constituent: Sulfide Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

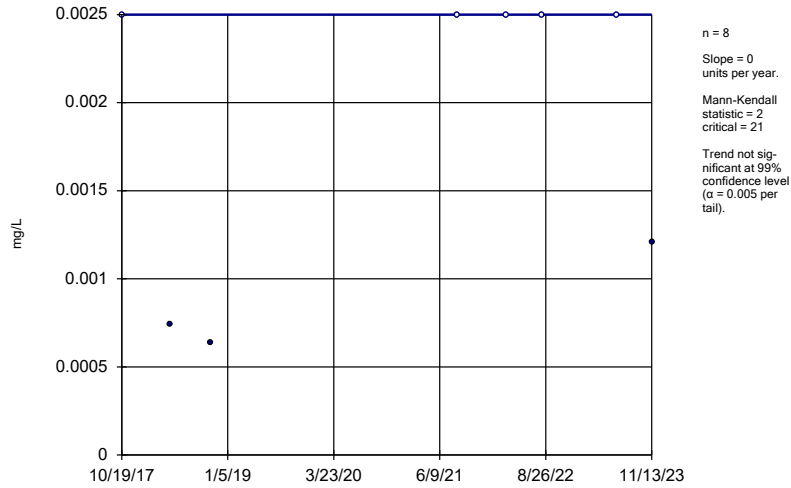
MW-2



Constituent: Thallium Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

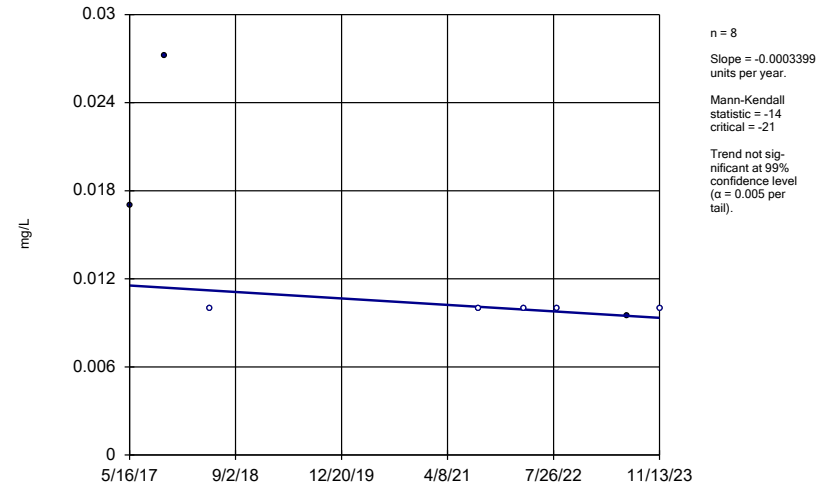
MW-2




Constituent: Vanadium Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Sen's Slope Estimator

MW-6



Constituent: Zinc Analysis Run 12/29/2023 12:01 PM View: 2023AWQR - Mann Kendall
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR



Attachment B.5
Confidence Interval Analysis

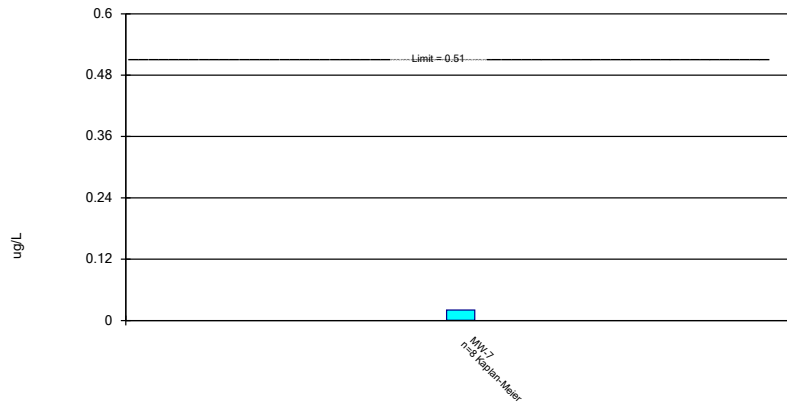
Confidence Interval

Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR Printed 1/18/2024, 1:25 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.
Acetone (ug/L)	MW-6	5	1.83	6300	No	8	62.5	No	0.004	NP (NDs)
Acetone (ug/L)	MW-7	4.838	1.892	6300	No	8	50	No	0.01	Param.
Arsenic (mg/L)	MW-2	0.004168	0.001744	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	0.3597	0.1803	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-3	0.02878	0.02456	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-6	0.0351	0.01778	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-7	0.03752	0.02998	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-9	0.08645	0.0628	2	No	8	0	No	0.01	Param.
Benzene (ug/L)	MW-2	2.085	0.7238	5	No	8	0	No	0.01	Param.
Cadmium (mg/L)	MW-2	0.000206	0.00004184	0.005	No	8	50	No	0.01	Param.
Cadmium (mg/L)	MW-6	0.000431	0.000053	0.005	No	8	0	No	0.004	NP (normality)
Cadmium (mg/L)	MW-7	0.000525	0.000293	0.005	No	8	0	No	0.01	Param.
Cadmium (mg/L)	MW-9	0.000189	0.00006979	0.005	No	8	25	No	0.01	Param.
Chlorobenzene (ug/L)	MW-2	1.018	0.5787	100	No	8	37.5	No	0.01	Param.
Chloroethane (ug/L)	MW-2	4.61	1.62	2800	No	8	62.5	No	0.004	NP (NDs)
cis-1,2-Dichloroethene (ug/L)	MW-2	0.5603	0.3038	70	No	8	25	No	0.01	Param.
Cobalt (mg/L)	MW-2	0.004409	0.002117	0.0021	Yes	8	0	No	0.01	Param.
Cobalt (mg/L)	MW-3	0.0002056	0.00009585	0.0021	No	8	37.5	No	0.01	Param.
Cobalt (mg/L)	MW-6	0.000691	0.000148	0.0021	No	8	25	No	0.004	NP (normality)
Cobalt (mg/L)	MW-7	0.001494	0.0001489	0.0021	No	8	0	No	0.01	Param.
Cobalt (mg/L)	MW-9	0.004987	0.0003786	0.0021	No	8	0	No	0.01	Param.
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	75	No	0.004	NP (NDs)
Lead (mg/L)	MW-3	0.000574	0.00025	0.015	No	8	87.5	No	0.004	NP (NDs)
Lead (mg/L)	MW-7	0.000518	0.00025	0.015	No	8	87.5	No	0.004	NP (NDs)
Nickel (mg/L)	MW-2	0.0815	0.00954	0.1	No	8	0	No	0.004	NP (normality)
Nickel (mg/L)	MW-7	0.02664	0.01706	0.1	No	8	0	No	0.01	Param.
Nickel (mg/L)	MW-9	0.009591	0.004622	0.1	No	8	0	No	0.01	Param.
Selenium (mg/L)	MW-3	0.001687	0.001138	0.05	No	8	50	No	0.01	Param.
Selenium (mg/L)	MW-6	0.009199	0.003701	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	75	No	0.004	NP (NDs)
Vanadium (mg/L)	MW-2	0.0025	0.000634	0.035	No	8	62.5	No	0.004	NP (NDs)
Zinc (mg/L)	MW-6	0.0272	0.00949	2	No	8	62.5	No	0.004	NP (NDs)

Parametric Confidence Interval

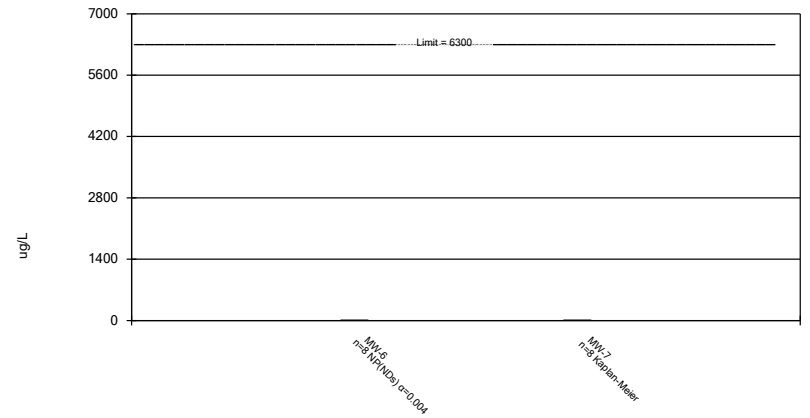
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: 4,4'-DDT Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Parametric and Non-Parametric (NP) Confidence Interval

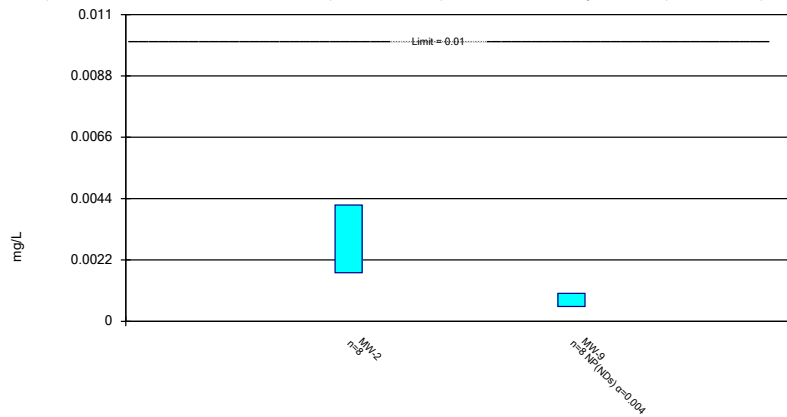
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Acetone Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Parametric and Non-Parametric (NP) Confidence Interval

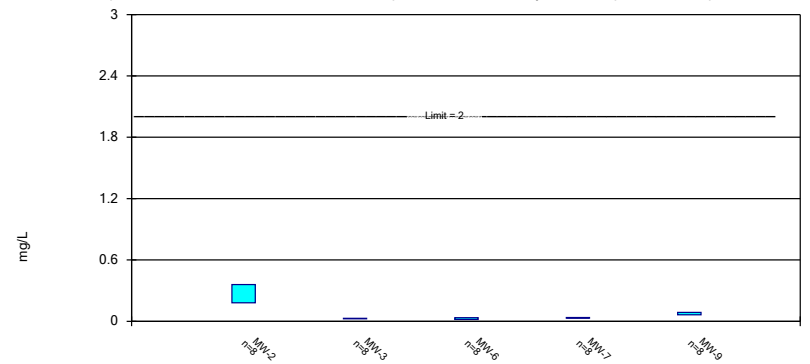
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Arsenic Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Parametric Confidence Interval

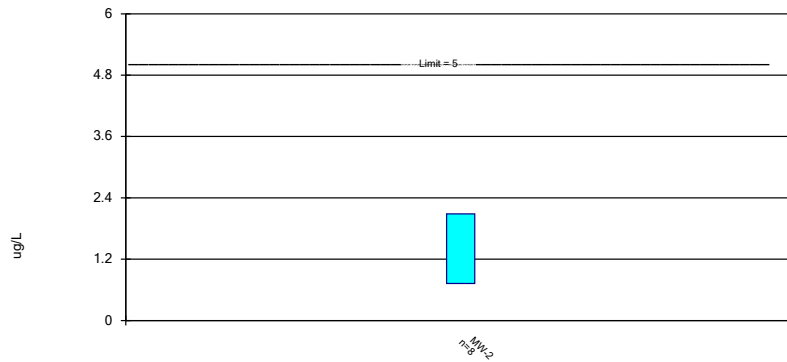
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Barium Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Parametric Confidence Interval

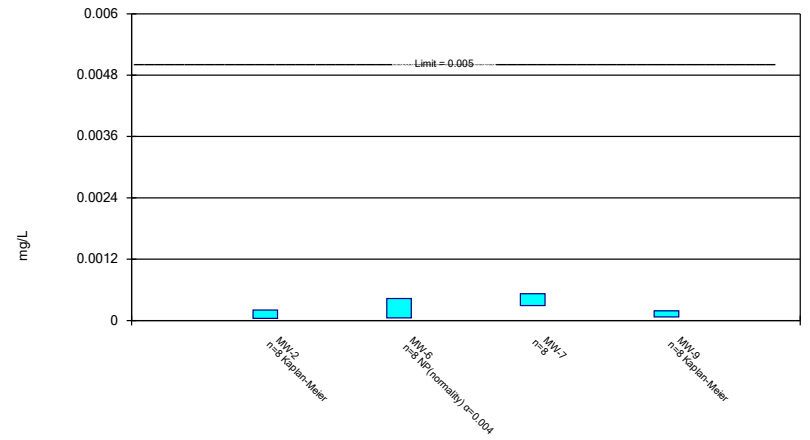
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Benzene Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Parametric and Non-Parametric (NP) Confidence Interval

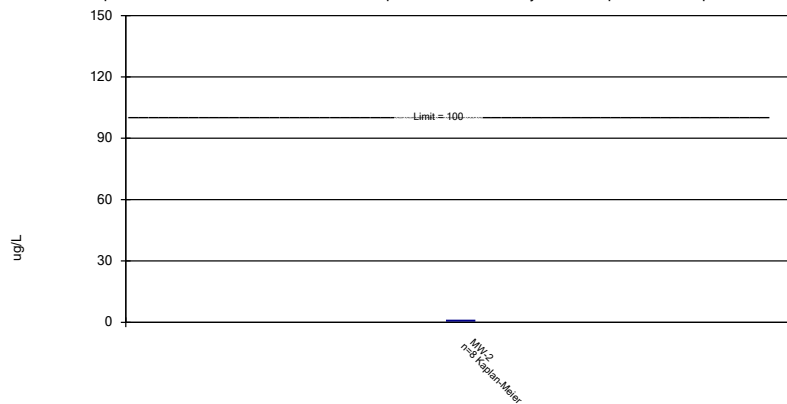
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Cadmium Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Parametric Confidence Interval

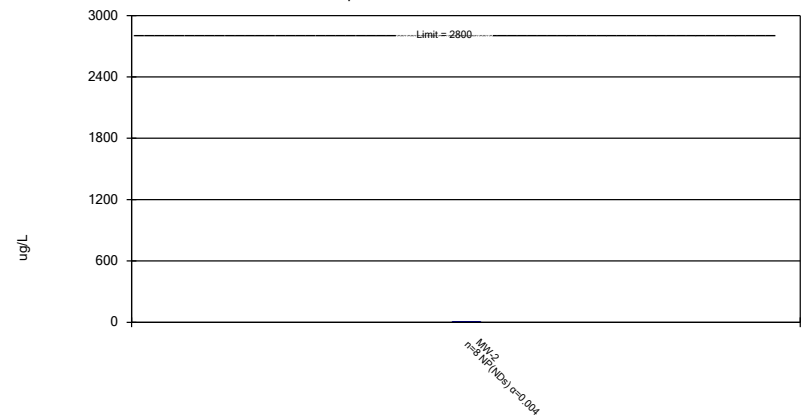
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Chlorobenzene Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Non-Parametric Confidence Interval

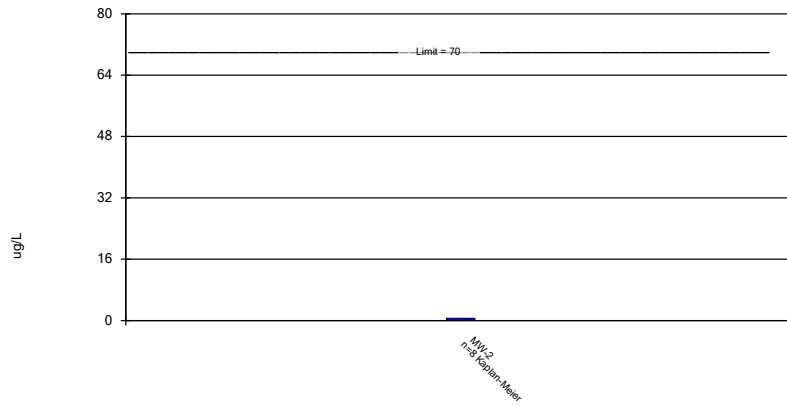
Compliance Limit is not exceeded.



Constituent: Chloroethane Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Parametric Confidence Interval

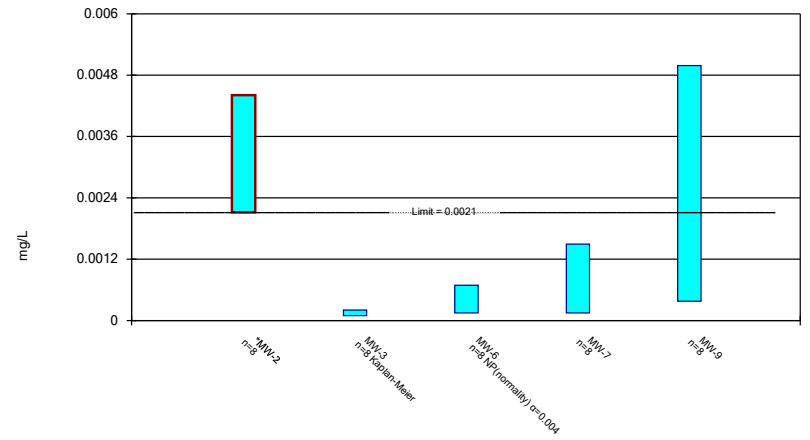
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: cis-1,2-Dichloroethene Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Inter
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Parametric and Non-Parametric (NP) Confidence Interval

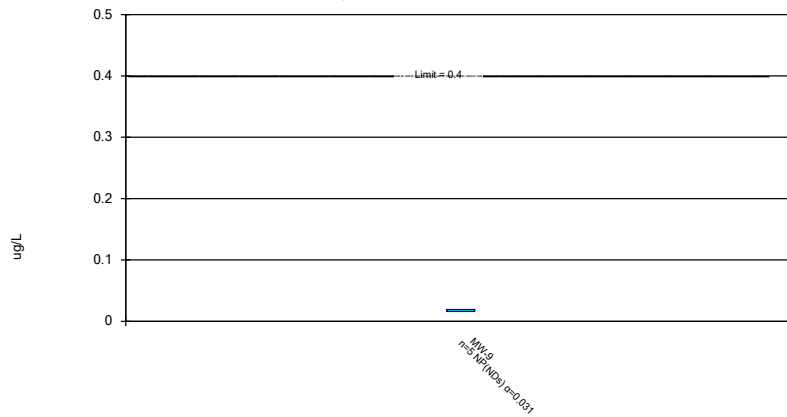
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Cobalt Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Non-Parametric Confidence Interval

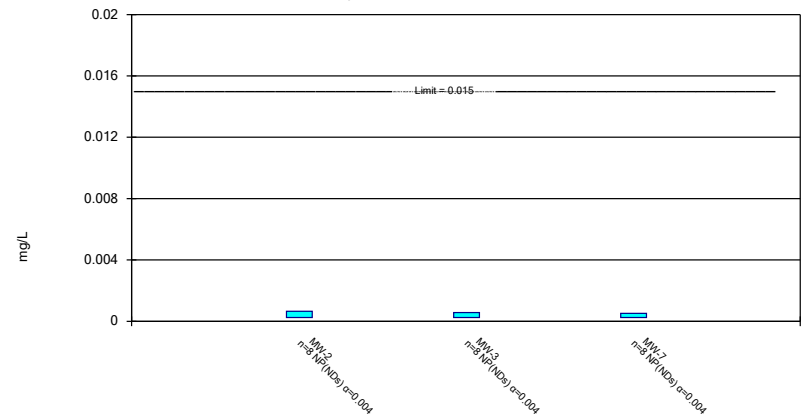
Compliance Limit is not exceeded.



Constituent: Heptachlor Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Non-Parametric Confidence Interval

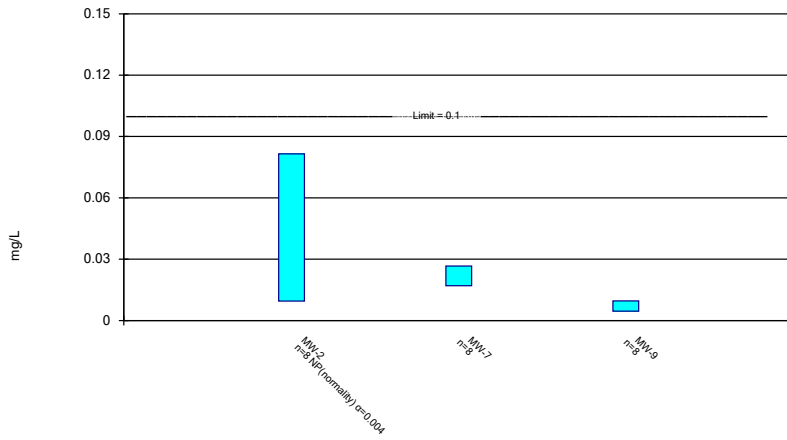
Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
 Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Parametric and Non-Parametric (NP) Confidence Interval

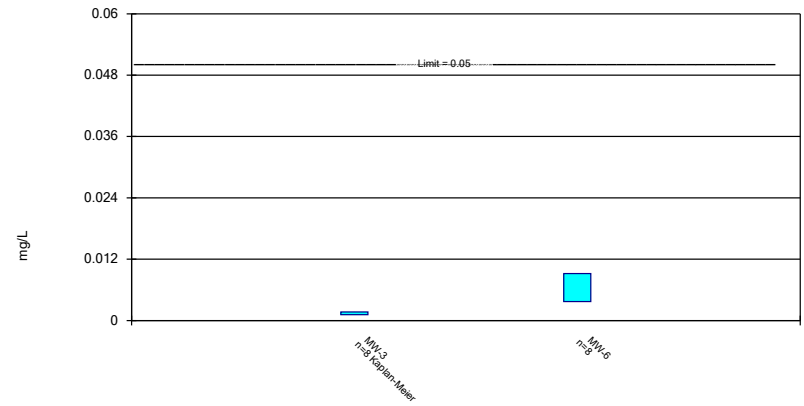
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Nickel Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Parametric Confidence Interval

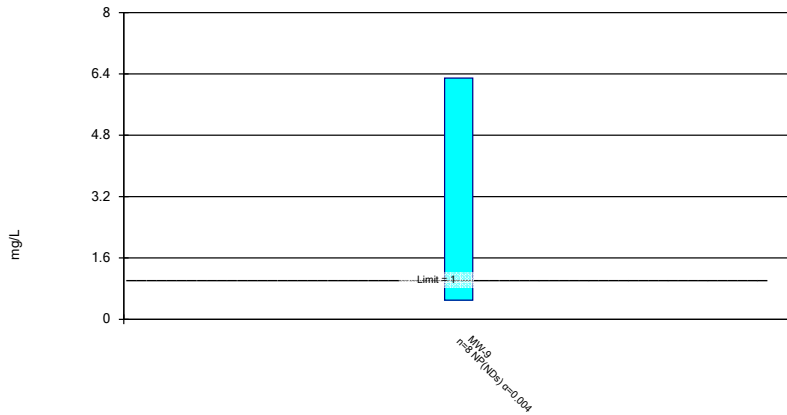
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Selenium Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Non-Parametric Confidence Interval

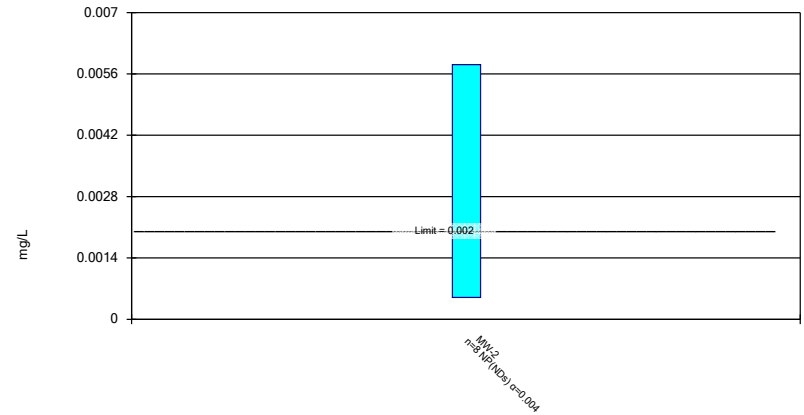
Compliance Limit is not exceeded.



Constituent: Sulfide Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Non-Parametric Confidence Interval

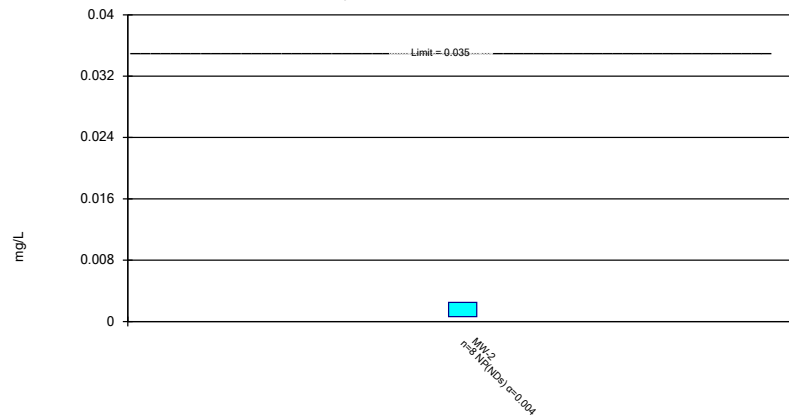
Compliance Limit is not exceeded.



Constituent: Thallium Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Non-Parametric Confidence Interval

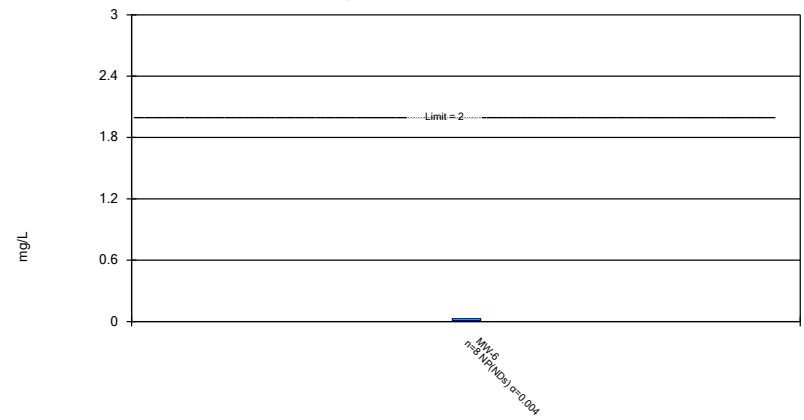
Compliance Limit is not exceeded.




Constituent: Vanadium Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Zinc Analysis Run 1/18/2024 1:24 PM View: 2023AWQR - Confidence Interval
Adair County Sanitary Landfill Client: Adair County Data: Adair GWPS Sanitas-AM 2023AWQR



Appendix E

2023 Leachate Control System Performance Evaluation Report

Adair County Sanitary Landfill (Closed) - 2023 Leachate Control System Performance Evaluation Report

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

SCS ENGINEERS

Project No. 27223238.24 | January 2024

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

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Figure 1 Leachate Control System

Tables

Table 12 Leachate Management Summary

Appendices

Appendix A Historical Leachate Head Levels Table and Chart
Appendix B 2023 Annual Leachate Analytical Report

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 1, 2023 through December 31, 2023.

The Site consists of both a lined area (Phase I 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, 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 1×10^{-7} cm/sec, overlain by a 1-foot-thick layer of drainage media consisting of sand with a minimum permeability of 1×10^{-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 called out as LPZ, with no number designation (see **Figure 1** Site Monitoring Network in the Annual Water Quality Report). The Phase 1 Cell was closed in 2012.

The unlined area of the closed Adair County Sanitary Landfill is located to the south of the Phase I Cell. Construction of the final cover, toe drain and leachate storage lagoon was completed in the last 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 2019. No issues were noted during this reporting period. The next cleaning is currently being scheduled to take place during the 2024 reporting period. No other maintenance was required or performed on the leachate control system (LCS) 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 Greenfield (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 back to 2010 shows that the 2023 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. Leachate piezometer LPZ (Phase I 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 is unknown why the leachate head levels were elevated. 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 measurement of leachate levels at the Landfill. SCS proposes performing a joint measurement event with Landfill staff to ensure accurate measurement techniques are being performed. This event will include measurements of liquid levels and total depths at each measurement point as well as evaluation of the conditions of the piezometers. After the measurement event leachate lines will

be cleaned and inspected. Further evaluation will take place if the leachate head levels continue to be elevated.

Based on the semi-annual inspection reports, Site staff have continued to maintain storm water 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 NOAA weather station USC00133438 in Greenfield, Iowa. Actual amounts at the Site could vary but there is not an 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, as it is a closed facility.

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 36,535 gallons of leachate were hauled during this reporting period. The required annual leachate sample was collected in November 2023 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.

Table 12
Leachate Management Summary
2023 Leachate Control System Performance Evaluation Report
Adair County Sanitary Landfill (Closed)
Permit No. 01-SDP-01-74C

Month	Maximum Head on Liner ⁽¹⁾ (ft)					Discharged to City of Greenfield POTW ⁽¹⁾ (gal)	Precipitation ⁽²⁾ (in)
	LW-1	LW-6	LW-7	EW-1	LPZ (Lined Cell)		
January 2023	17.7	0.6	17.9	16.7	2.4	0	2.12
February 2023	17.6	0.7	17.8	16.7	2.4	0	2.47
March 2023	17.8	0.8	17.7	16.7	2.5	0	1.08
April 2023	18.3	0.9	17.5	16.5	2.6	0	3.93
May 2023	18.3	0.9	17.5	16.5	2.6	0	1.58
June 2023	18.0	0.7	15.2	15.9	2.6	36,535	3.62
July 2023	18.0	0.8	17.6	16.5	2.6	0	2.65
August 2023	18.1	0.7	17.8	16.6	3.1	0	4.81
September 2023	18.1	0.8	17.8	16.4	2.7	0	2.37
October 2023	17.6	1.2	17.4	16.1	2.5	0	1.22
November 2023	17.5	0.7	17.3	16.0	2.6	0	0.00
December 2023	17.3	1.0	17.1	15.6	2.7	0	0.00
January 2023 - December 2023 Totals						36,535	25.85

Table Notes

⁽¹⁾ Gallons of leachate discharged and monthly leachate level measurements provided by Adair County Landfill staff.

⁽²⁾ Precipitation data obtained from NOAA weather station USC00133438 in Greenfield, IA.

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Leachate Control System

Legend		
<ul style="list-style-type: none"> ▲ Leachate Monitoring Point ▲ Cleanout ▲ Manhole — Seep Repair Pipe 	<ul style="list-style-type: none"> — Solid Leachate Pipe - - - Perforated Leachate Pipe Leachate Storage Tank ▲ Landfill Gas Monitoring Well ▲ Groundwater Underdrain Monitoring Point 	<ul style="list-style-type: none"> ▲ Monitoring Well — Stream Approximate Waste Boundary Approximate Property Boundary

Adair County Sanitary Landfill
 Adair, IA
 Project No: 27223238.24
 Drawing Date: January 2024

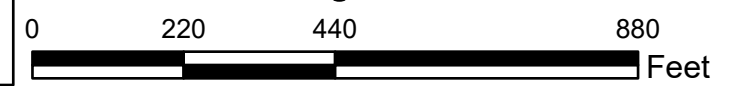
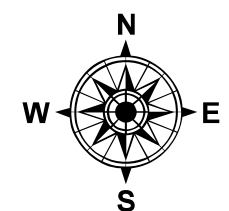


Figure 1

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)
Piezometer Depth	39.95	52.40	37.70	31.75	23.20
Date					
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)
Piezometer Depth	39.95	52.40	37.70	31.75	23.20
Date					
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
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

**Historical Leachate Head Levels
Adair County Sanitary Landfill**

Piezometer Depth	Leachate Piezometer				
	LW-1	LW-6	LW-7	EW-1	LPZ (New Cell)
Piezometer Depth	39.95	52.40	37.70	31.75	23.20
Date					
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
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

General Notes:

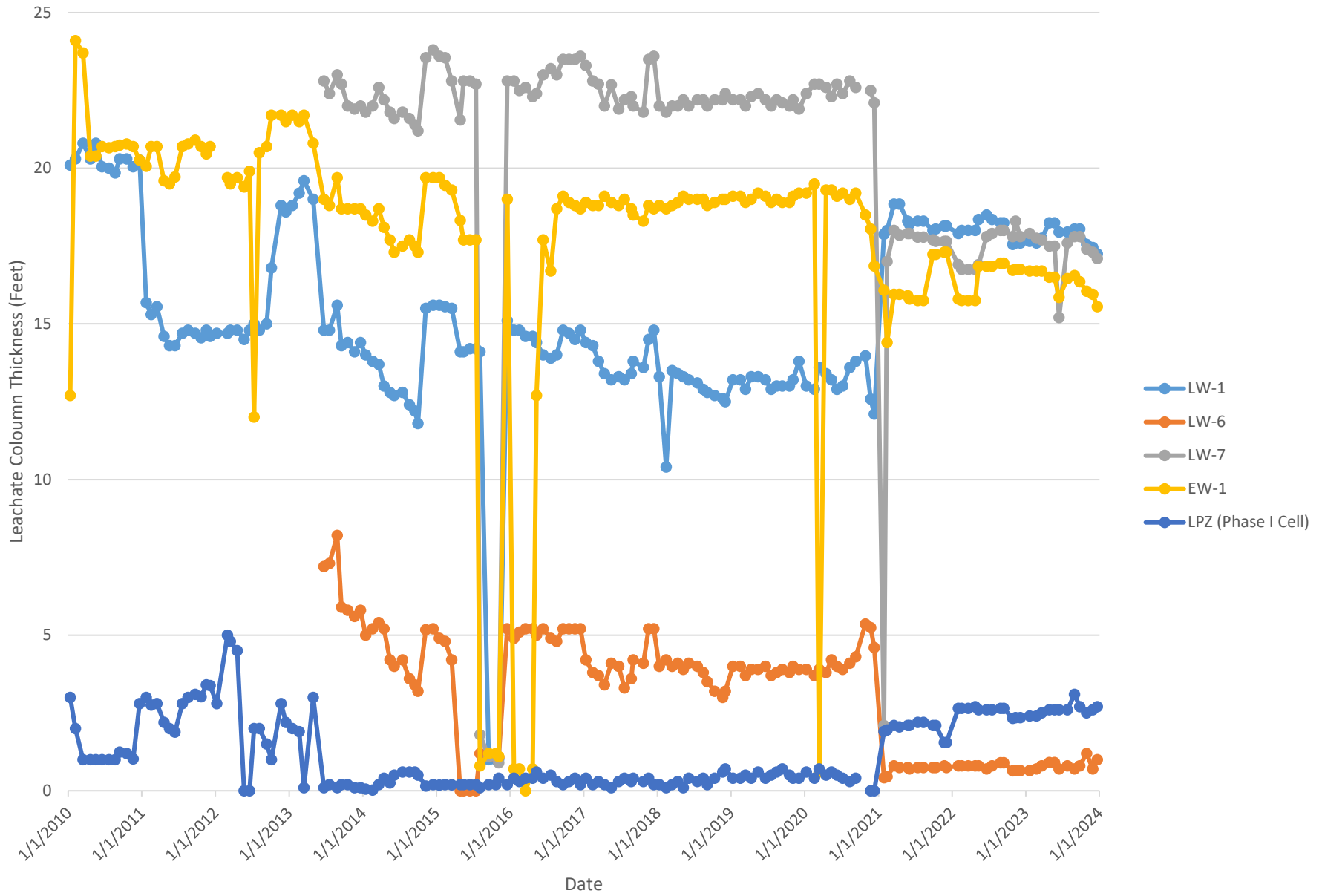
NM = Not Measured.


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 2022 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
2023 Leachate Analytical Reports



ANALYTICAL REPORT

PREPARED FOR

Attn: Kurt Reason
Adair County Sanitary Landfill
1645 State Hwy 25
Menlo, Iowa 50164

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JOB DESCRIPTION

Adair Co. Sanitary Landfill Leachate

JOB NUMBER

310-256061-1

Eurofins Cedar Falls

Job Notes

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Authorization



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Authorized for release by
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(319)277-2401



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Case Narrative

Client: Adair County Sanitary Landfill
Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-256061-1

Job ID: 310-256061-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative
310-256061-1

Receipt

The sample was received on 5/17/2023 4:20 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 15.6°C

Metals

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

General Chemistry

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

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Sample Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-256061-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-256061-1	Leachate	Water	05/17/23 09:30	05/17/23 16:20

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Detection Summary

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-256061-1

Client Sample ID: Leachate

Lab Sample ID: 310-256061-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00124	J	0.00200	0.000530	mg/L	1		200.8	Total/NA
Molybdenum	0.00126	J	0.00200	0.000910	mg/L	1		200.8	Total/NA
Nickel	0.00655		0.00500	0.00190	mg/L	1		200.8	Total/NA
Ammonia	4.49		0.500	0.220	mg/L	1		350.1	Total/NA
Nitrogen, Kjeldahl	5.35		1.00	0.550	mg/L	1		351.2	Total/NA
Total Suspended Solids	10.0		5.00	1.70	mg/L	1		I-3765-85	Total/NA
pH	7.8	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Biochemical Oxygen Demand	3.97		3.00	3.00	mg/L	1		SM 5210B	Total/NA
Chemical Oxygen Demand	63.8		25.0	24.0	mg/L	5		SM 5220D	Total/NA

This Detection Summary does not include radiochemical test results.



Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-256061-1

Client Sample ID: Leachate

Lab Sample ID: 310-256061-1

Date Collected: 05/17/23 09:30

Matrix: Water

Date Received: 05/17/23 16:20

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00124	J	0.00200	0.000530	mg/L		05/19/23 09:20	05/23/23 19:52	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		05/19/23 09:20	05/23/23 19:52	1
Chromium	<0.00500		0.00500	0.00110	mg/L		05/19/23 09:20	05/23/23 19:52	1
Copper	<0.00500		0.00500	0.00180	mg/L		05/19/23 09:20	05/23/23 19:52	1
Molybdenum	0.00126	J	0.00200	0.000910	mg/L		05/19/23 09:20	05/23/23 19:52	1
Nickel	0.00655		0.00500	0.00190	mg/L		05/19/23 09:20	05/23/23 19:52	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/19/23 09:20	05/23/23 19:52	1
Zinc	<0.0200		0.0200	0.00640	mg/L		05/19/23 09:20	05/23/23 19:52	1

Method: EPA 245.2 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200	0.000140	mg/L		05/22/23 10:51	05/23/23 12:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease) (1664A)	<5.0		5.0	4.5	mg/L		05/23/23 14:00	05/23/23 14:00	1
Ammonia (EPA 350.1)	4.49		0.500	0.220	mg/L		05/23/23 10:50	05/24/23 02:55	1
Nitrogen, Kjeldahl (EPA 351.2)	5.35		1.00	0.550	mg/L		05/18/23 06:33	05/18/23 18:59	1
Total Suspended Solids (USGS I-3765-85)	10.0		5.00	1.70	mg/L			05/18/23 11:38	1
Biochemical Oxygen Demand (SM 5210B)	3.97		3.00	3.00	mg/L			05/18/23 07:36	1
Chemical Oxygen Demand (SM 5220D)	63.8		25.0	24.0	mg/L			05/18/23 09:02	5
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	7.8	HF	0.1	0.1	SU			05/17/23 20:54	1

Definitions/Glossary

Client: Adair County Sanitary Landfill
Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-256061-1

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
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

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

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-256061-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 310-388002/1-A
 Matrix: Water
 Analysis Batch: 388492

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 388002

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.00200		0.00200	0.000530	mg/L		05/19/23 09:20	05/23/23 18:12	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		05/19/23 09:20	05/23/23 18:12	1
Chromium	<0.00500		0.00500	0.00110	mg/L		05/19/23 09:20	05/23/23 18:12	1
Copper	<0.00500		0.00500	0.00180	mg/L		05/19/23 09:20	05/23/23 18:12	1
Molybdenum	<0.00200		0.00200	0.000910	mg/L		05/19/23 09:20	05/23/23 18:12	1
Nickel	<0.00500		0.00500	0.00190	mg/L		05/19/23 09:20	05/23/23 18:12	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/19/23 09:20	05/23/23 18:12	1
Zinc	<0.0200		0.0200	0.00640	mg/L		05/19/23 09:20	05/23/23 18:12	1

Lab Sample ID: LCS 310-388002/2-A
 Matrix: Water
 Analysis Batch: 388492

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 388002

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Arsenic	0.200	0.2062		mg/L		103	85 - 115	
Cadmium	0.100	0.1036		mg/L		104	85 - 115	
Chromium	0.100	0.1041		mg/L		104	85 - 115	
Copper	0.200	0.2125		mg/L		106	85 - 115	
Molybdenum	0.200	0.1988		mg/L		99	85 - 115	
Nickel	0.200	0.2134		mg/L		107	85 - 115	
Selenium	0.400	0.3954		mg/L		99	85 - 115	
Zinc	0.200	0.1930		mg/L		96	85 - 115	

Method: 245.2 - Mercury (CVAA)

Lab Sample ID: MB 310-388222/1-A
 Matrix: Water
 Analysis Batch: 388429

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 388222

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000200		0.000200	0.000140	mg/L		05/22/23 10:50	05/23/23 11:18	1

Lab Sample ID: LCS 310-388222/2-A
 Matrix: Water
 Analysis Batch: 388429

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 388222

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Mercury	0.00167	0.001741		mg/L		104	85 - 115	

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 310-388309/1-A
 Matrix: Water
 Analysis Batch: 388417

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 388309

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
HEM (Oil & Grease)	<5.0		5.0	4.5	mg/L		05/23/23 14:00	05/23/23 14:00	1

Eurofins Cedar Falls

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-256061-1

Method: 1664A - HEM and SGT-HEM (Continued)

Lab Sample ID: LCS 310-388309/2-A
 Matrix: Water
 Analysis Batch: 388417

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 388309

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HEM (Oil & Grease)	40.0	33.80		mg/L		84	78 - 114

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 310-388378/1-A
 Matrix: Water
 Analysis Batch: 388467

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 388378

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.500		0.500	0.220	mg/L		05/23/23 10:50	05/24/23 02:33	1

Lab Sample ID: LCS 310-388378/2-A
 Matrix: Water
 Analysis Batch: 388467

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 388378

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	4.00	4.176		mg/L		104	90 - 110

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 310-387871/1-A
 Matrix: Water
 Analysis Batch: 388013

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 387871

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	<1.00		1.00	0.550	mg/L		05/18/23 06:33	05/18/23 18:49	1

Lab Sample ID: LCS 310-387871/2-A
 Matrix: Water
 Analysis Batch: 388013

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 387871

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	4.01	3.712		mg/L		93	90 - 110

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

Lab Sample ID: MB 310-387947/1
 Matrix: Water
 Analysis Batch: 387947

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	1.70	mg/L			05/18/23 11:38	1

Lab Sample ID: LCS 310-387947/2
 Matrix: Water
 Analysis Batch: 387947

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	106.0		mg/L		106	75 - 116

Eurofins Cedar Falls

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-256061-1

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-387856/1
 Matrix: Water
 Analysis Batch: 387856

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

Lab Sample ID: 310-256061-1 DU
 Matrix: Water
 Analysis Batch: 387856

Client Sample ID: Leachate
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.8	HF	7.8		SU		0.1	20

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: USB 310-387866/1
 Matrix: Water
 Analysis Batch: 387866

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			05/18/23 05:48	1

Lab Sample ID: LCS 310-387866/2
 Matrix: Water
 Analysis Batch: 387866

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	180.8		mg/L		91	85 - 115

Method: SM 5220D - COD

Lab Sample ID: MB 310-387907/32
 Matrix: Water
 Analysis Batch: 387907

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	<5.00		5.00	4.80	mg/L			05/18/23 09:02	1

Lab Sample ID: MB 310-387907/5
 Matrix: Water
 Analysis Batch: 387907

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	<5.00		5.00	4.80	mg/L			05/18/23 09:02	1

Lab Sample ID: LCS 310-387907/3
 Matrix: Water
 Analysis Batch: 387907

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	125	121.5		mg/L		97	85 - 115

QC Sample Results

Client: Adair County Sanitary Landfill
Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-256061-1

Method: SM 5220D - COD (Continued)

Lab Sample ID: LCS 310-387907/33

Matrix: Water

Analysis Batch: 387907

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	125	117.5		mg/L		94	85 - 115

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QC Association Summary

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-256061-1

Metals

Prep Batch: 388002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-256061-1	Leachate	Total/NA	Water	200.8	
MB 310-388002/1-A	Method Blank	Total/NA	Water	200.8	
LCS 310-388002/2-A	Lab Control Sample	Total/NA	Water	200.8	

Prep Batch: 388222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-256061-1	Leachate	Total/NA	Water	245.1	
MB 310-388222/1-A	Method Blank	Total/NA	Water	245.1	
LCS 310-388222/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 388429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-256061-1	Leachate	Total/NA	Water	245.2	388222
MB 310-388222/1-A	Method Blank	Total/NA	Water	245.2	388222
LCS 310-388222/2-A	Lab Control Sample	Total/NA	Water	245.2	388222

Analysis Batch: 388492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-256061-1	Leachate	Total/NA	Water	200.8	388002
MB 310-388002/1-A	Method Blank	Total/NA	Water	200.8	388002
LCS 310-388002/2-A	Lab Control Sample	Total/NA	Water	200.8	388002

General Chemistry

Analysis Batch: 387856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-256061-1	Leachate	Total/NA	Water	SM 4500 H+ B	
LCS 310-387856/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-256061-1 DU	Leachate	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 387866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-256061-1	Leachate	Total/NA	Water	SM 5210B	
USB 310-387866/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 310-387866/2	Lab Control Sample	Total/NA	Water	SM 5210B	

Prep Batch: 387871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-256061-1	Leachate	Total/NA	Water	351.2	
MB 310-387871/1-A	Method Blank	Total/NA	Water	351.2	
LCS 310-387871/2-A	Lab Control Sample	Total/NA	Water	351.2	

Analysis Batch: 387907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-256061-1	Leachate	Total/NA	Water	SM 5220D	
MB 310-387907/32	Method Blank	Total/NA	Water	SM 5220D	
MB 310-387907/5	Method Blank	Total/NA	Water	SM 5220D	
LCS 310-387907/3	Lab Control Sample	Total/NA	Water	SM 5220D	
LCS 310-387907/33	Lab Control Sample	Total/NA	Water	SM 5220D	

QC Association Summary

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-256061-1

General Chemistry

Analysis Batch: 387947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-256061-1	Leachate	Total/NA	Water	I-3765-85	
MB 310-387947/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-387947/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 388013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-256061-1	Leachate	Total/NA	Water	351.2	387871
MB 310-387871/1-A	Method Blank	Total/NA	Water	351.2	387871
LCS 310-387871/2-A	Lab Control Sample	Total/NA	Water	351.2	387871

Prep Batch: 388309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-256061-1	Leachate	Total/NA	Water	1664A	
MB 310-388309/1-A	Method Blank	Total/NA	Water	1664A	
LCS 310-388309/2-A	Lab Control Sample	Total/NA	Water	1664A	

Prep Batch: 388378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-256061-1	Leachate	Total/NA	Water	Distill/Ammonia	
MB 310-388378/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 310-388378/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 388417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-256061-1	Leachate	Total/NA	Water	1664A	388309
MB 310-388309/1-A	Method Blank	Total/NA	Water	1664A	388309
LCS 310-388309/2-A	Lab Control Sample	Total/NA	Water	1664A	388309

Analysis Batch: 388467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-256061-1	Leachate	Total/NA	Water	350.1	388378
MB 310-388378/1-A	Method Blank	Total/NA	Water	350.1	388378
LCS 310-388378/2-A	Lab Control Sample	Total/NA	Water	350.1	388378

Lab Chronicle

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-256061-1

Client Sample ID: Leachate

Lab Sample ID: 310-256061-1

Date Collected: 05/17/23 09:30

Matrix: Water

Date Received: 05/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	200.8			388002	QTZ5	EET CF	05/19/23 09:20
Total/NA	Analysis	200.8		1	388492	A6US	EET CF	05/23/23 19:52
Total/NA	Prep	245.1			388222	XXW3	EET CF	05/22/23 10:51
Total/NA	Analysis	245.2		1	388429	XXW3	EET CF	05/23/23 12:14
Total/NA	Prep	1664A			388309	A3GU	EET CF	05/23/23 14:00
Total/NA	Analysis	1664A		1	388417	A3GU	EET CF	05/23/23 14:00
Total/NA	Prep	Distill/Ammonia			388378	MQ8M	EET CF	05/23/23 10:50
Total/NA	Analysis	350.1		1	388467	ZJX4	EET CF	05/24/23 02:55
Total/NA	Prep	351.2			387871	W9YR	EET CF	05/18/23 06:33
Total/NA	Analysis	351.2		1	388013	ZJX4	EET CF	05/18/23 18:59
Total/NA	Analysis	I-3765-85		1	387947	DGU1	EET CF	05/18/23 11:38
Total/NA	Analysis	SM 4500 H+ B		1	387856	ZJX4	EET CF	05/17/23 20:54
Total/NA	Analysis	SM 5210B		1	387866	W9YR	EET CF	05/18/23 07:36
Total/NA	Analysis	SM 5220D		5	387907	ENB7	EET CF	05/18/23 09:02

Laboratory References:

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



Accreditation/Certification Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-256061-1

Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-23

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Method Summary

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-256061-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	EET CF
245.2	Mercury (CVAA)	EPA	EET CF
1664A	HEM and SGT-HEM	1664A	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 4500 H+ B	pH	SM	EET CF
SM 5210B	BOD, 5-Day	SM	EET CF
SM 5220D	COD	SM	EET CF
1664A	HEM and SGT-HEM (SPE)	1664A	EET CF
200.8	Preparation, Total Metals	EPA	EET CF
245.1	Preparation, Mercury	EPA	EET CF
351.2	Nitrogen, Total Kjeldahl	EPA	EET CF
Distill/Ammonia	Distillation, Ammonia	None	EET CF

Protocol References:

- 1664A = EPA-821-98-002
- EPA = US Environmental Protection Agency
- None = None
- 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





Environment Testing
America



310-256061 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Adair County Sanitary Landfill</u>			
City/State:	CITY	STATE	Project:
		<u>IA</u>	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>5-17-23</u>	<u>1620</u>	<u>mc</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee			
<input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: _____	
Multiple Coolers?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____	
Cooler Custody Seals Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant:	<input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE		
Thermometer ID:	<u>W</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>15.6</u>	Corrected Temp (°C):	<u>15.6</u>
• Sample Container Temperature			
Container(s) used:	<u>CONTAINER 1</u>	<u>CONTAINER 2</u>	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling?		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
a) If yes: Is there evidence that the chilling process began?		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?)		<input type="checkbox"/> Yes	<input type="checkbox"/> No
NOTE. If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

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Client Information Address: 1645 State Hwy 25 City: Menlo State, Zip: IA, 50164 Phone: Email: adaircountylandfill@gmail.com Project Name: Adair Co. Sanitary Landfill Leachate Site:			Lab PM: Liechti, Meredith L E-Mail: meredith.liechti@et.eurofins.com Carrier Tracking No(s): State of Origin:		COC No: 310-81907-18244 1 Page: Page 1 of 1 Job #:
Analysis Requested Due Date Requested: TAT Requested (days): Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No PO #: Purchase Order not required WO #: Project #: 31008083 SSO#:			Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNbO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecalhydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)		
Sample Identification Leachate Sample Date: <input checked="" type="checkbox"/> Sample Time (C=Comp, G=grab): <input checked="" type="checkbox"/> Sample Type: <input checked="" type="checkbox"/> Matrix (W=water, S=solid, O=oil, T=tissue, A=air): Preservation Code: Water			Field Filtered Sample (Yes or No): <input checked="" type="checkbox"/> Pattern MS/MSD (Yes or No): <input checked="" type="checkbox"/> 360.1, 361.2, 6220D 200.8, CWA, 246.2 1, 376, 85, SM4500_H4, SM6210B, Calo 1644 - Oil and Grease (HEM) <input checked="" type="checkbox"/> Total Number of Containers:		
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested I, II, III, IV, Other (specify)					
Empty Kit Relinquished by / Date : Relinquished by Kurt Reason Date/Time : 5-17-23 10:48 Relinquished by Date/Time : Relinquished by Date/Time : Custody Seals Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Custody Seal No. 1523619 Special Instructions/Note: <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements: Method of Shipment:					
Received by Adair Landfill Date/Time : 5-17-23 10:48 Received by Date/Time : Received by Date/Time :			Received by Date/Time : Received by Date/Time : Received by Date/Time :		



Login Sample Receipt Checklist

Client: Adair County Sanitary Landfill

Job Number: 310-256061-1

Login Number: 256061

List Number: 1

Creator: Tucker, Sarah L

List Source: Eurofins Cedar Falls

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



ANALYTICAL REPORT

PREPARED FOR

Attn: Kurt Reason
Adair County Sanitary Landfill
1645 State Hwy 25
Menlo, Iowa 50164

Generated 12/7/2023 1:27:21 PM

JOB DESCRIPTION

Adair Co. Sanitary Landfill Leachate

JOB NUMBER

310-269496-1

Eurofins Cedar Falls

Job Notes

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

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

Authorization



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Authorized for release by
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Case Narrative

Client: Adair County Sanitary Landfill
Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Job ID: 310-269496-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-269496-1

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 are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

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

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

Receipt

The samples were received on 11/13/2023 4:20 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 2.5°C

GC/MS VOA

Method 624.1_PREC: The method blank for analytical batch 310-405943 contained Bromomethane above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-analysis of samples was not performed.

Method 624.1_PREC: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container: Leachate (310-269496-1).

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

GC/MS Semi VOA

Method 625.1_PREC: The method blank for preparation batch 310-405888 and analytical batch 310-405958 contained Bis(2-ethylhexyl) phthalate, Butyl benzyl phthalate and Di-n-octyl phthalate above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

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

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

Metals

Method 1631E: The following sample was labeled as "Field Blank". The results for this sample do not match what is consistent with a field blank. The sample was analyzed twice with both results having a hit above the reporting limit.

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

General Chemistry

Method SM5210B_Calc: The USB dilution water D.O. depletion was greater than 0.2 mg/L. The associated sample results in batch 310-406011 are qualified and reported. The USB depletion was 0.51 mg/L.

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

Sample Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-269496-1	Leachate	Water	11/13/23 11:30	11/13/23 16:20
310-269496-2	Field Blank LLHg	Water	11/13/23 11:30	11/13/23 16:20

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Detection Summary

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Client Sample ID: Leachate

Lab Sample ID: 310-269496-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bis(2-ethylhexyl) phthalate	7.29	J B	10.0	5.50	ug/L	1		625.1	Total/NA
Mercury	0.00155		0.000500	0.000200	ug/L	1		1631E	Total/NA
Arsenic	0.00165	J	0.00200	0.000530	mg/L	1		200.8	Total/NA
Barium	0.0765		0.00200	0.000640	mg/L	1		200.8	Total/NA
Iron	1.46		0.100	0.0360	mg/L	1		200.8	Total/NA
Nickel	0.00733		0.00500	0.00190	mg/L	1		200.8	Total/NA
Ammonia	3.11		0.500	0.220	mg/L	1		350.1	Total/NA
Nitrogen, Kjeldahl	5.23	F1	1.00	0.550	mg/L	1		351.2	Total/NA
Total Suspended Solids	182		30.0	10.2	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	1070		50.0	34.0	mg/L	1		SM 2540C	Total/NA
pH	8.1	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Biochemical Oxygen Demand	6.38	b	3.00	3.00	mg/L	1		SM 5210B	Total/NA
Total Organic Carbon	22.4		1.00	0.470	mg/L	1		SM 5310C	Total/NA

Client Sample ID: Field Blank LLHg

Lab Sample ID: 310-269496-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.00149		0.000500	0.000200	ug/L	1		1631E	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Client Sample ID: Leachate

Lab Sample ID: 310-269496-1

Date Collected: 11/13/23 11:30

Matrix: Water

Date Received: 11/13/23 16:20

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			11/14/23 20:36	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/14/23 20:36	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/14/23 20:36	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/14/23 20:36	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/14/23 20:36	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/14/23 20:36	1
1,2-Dichloroethene, Total	<1.00		1.00	0.270	ug/L			11/14/23 20:36	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/14/23 20:36	1
1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/14/23 20:36	1
2-Chloroethyl vinyl ether	<2.00		2.00	1.70	ug/L			11/17/23 13:19	1
Benzene	<0.500		0.500	0.220	ug/L			11/14/23 20:36	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/14/23 20:36	1
Bromoform	<5.00		5.00	0.780	ug/L			11/14/23 20:36	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/14/23 20:36	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/14/23 20:36	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/14/23 20:36	1
Dibromochloromethane	<5.00		5.00	0.750	ug/L			11/14/23 20:36	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/14/23 20:36	1
Chloroform	<3.00		3.00	1.30	ug/L			11/14/23 20:36	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/14/23 20:36	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/14/23 20:36	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/14/23 20:36	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/14/23 20:36	1
Toluene	<1.00		1.00	0.430	ug/L			11/14/23 20:36	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/14/23 20:36	1
Trichloroethylene	<1.00		1.00	0.430	ug/L			11/14/23 20:36	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/14/23 20:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	94		70 - 130		11/14/23 20:36	1
Dibromofluoromethane (Surr)	105		70 - 130		11/17/23 13:19	1
Toluene-d8 (Surr)	99		70 - 130		11/14/23 20:36	1
Toluene-d8 (Surr)	95		70 - 130		11/17/23 13:19	1
4-Bromofluorobenzene (Surr)	99		70 - 130		11/14/23 20:36	1
4-Bromofluorobenzene (Surr)	106		70 - 130		11/17/23 13:19	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	<10.0		10.0	0.560	ug/L		11/14/23 08:11	11/14/23 19:29	1
1,2-Dichlorobenzene	<10.0		10.0	0.620	ug/L		11/14/23 08:11	11/14/23 19:29	1
1,3-Dichlorobenzene	<10.0		10.0	0.640	ug/L		11/14/23 08:11	11/14/23 19:29	1
1,4-Dichlorobenzene	<10.0		10.0	0.640	ug/L		11/14/23 08:11	11/14/23 19:29	1
2,4,5-Trichlorophenol	<10.0		10.0	5.30	ug/L		11/14/23 08:11	11/14/23 19:29	1
2,4,6-Trichlorophenol	<10.0		10.0	5.00	ug/L		11/14/23 08:11	11/14/23 19:29	1
2,4-Dichlorophenol	<10.0		10.0	0.850	ug/L		11/14/23 08:11	11/14/23 19:29	1
2,4-Dimethylphenol	<10.0		10.0	0.580	ug/L		11/14/23 08:11	11/14/23 19:29	1
2,4-Dinitrophenol	<20.0		20.0	13.0	ug/L		11/14/23 08:11	11/14/23 19:29	1
2,4-Dinitrotoluene	<10.0		10.0	6.40	ug/L		11/14/23 08:11	11/14/23 19:29	1
2,6-Dinitrotoluene	<10.0		10.0	0.520	ug/L		11/14/23 08:11	11/14/23 19:29	1
2-Chloronaphthalene	<10.0		10.0	0.640	ug/L		11/14/23 08:11	11/14/23 19:29	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Client Sample ID: Leachate

Lab Sample ID: 310-269496-1

Date Collected: 11/13/23 11:30

Matrix: Water

Date Received: 11/13/23 16:20

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	<10.0		10.0	0.540	ug/L		11/14/23 08:11	11/14/23 19:29	1
2-Nitrophenol	<10.0		10.0	6.80	ug/L		11/14/23 08:11	11/14/23 19:29	1
3,3'-Dichlorobenzidine	<10.0		10.0	1.40	ug/L		11/14/23 08:11	11/14/23 19:29	1
4,6-Dinitro-2-methylphenol	<10.0		10.0	6.90	ug/L		11/14/23 08:11	11/14/23 19:29	1
4-Bromophenyl phenyl ether	<10.0		10.0	0.700	ug/L		11/14/23 08:11	11/14/23 19:29	1
4-Chloro-3-methylphenol	<10.0		10.0	0.840	ug/L		11/14/23 08:11	11/14/23 19:29	1
4-Chlorophenyl phenyl ether	<10.0		10.0	0.690	ug/L		11/14/23 08:11	11/14/23 19:29	1
4-Nitrophenol	<10.0		10.0	7.60	ug/L		11/14/23 08:11	11/14/23 19:29	1
Acenaphthene	<10.0		10.0	0.640	ug/L		11/14/23 08:11	11/14/23 19:29	1
Acenaphthylene	<10.0		10.0	0.720	ug/L		11/14/23 08:11	11/14/23 19:29	1
Anthracene	<10.0		10.0	0.870	ug/L		11/14/23 08:11	11/14/23 19:29	1
Benzo[a]anthracene	<10.0		10.0	0.850	ug/L		11/14/23 08:11	11/14/23 19:29	1
Benzo[a]pyrene	<10.0		10.0	8.10	ug/L		11/14/23 08:11	11/14/23 19:29	1
Benzo[b]fluoranthene	<10.0		10.0	4.90	ug/L		11/14/23 08:11	11/14/23 19:29	1
Benzo[g,h,i]perylene	<10.0		10.0	6.30	ug/L		11/14/23 08:11	11/14/23 19:29	1
Benzo[k]fluoranthene	<10.0		10.0	2.20	ug/L		11/14/23 08:11	11/14/23 19:29	1
Benzoic acid	<100		100	17.0	ug/L		11/14/23 08:11	11/14/23 19:29	1
Benzyl alcohol	<10.0		10.0	1.30	ug/L		11/14/23 08:11	11/14/23 19:29	1
Bis(2-chloroethoxy)methane	<10.0		10.0	0.760	ug/L		11/14/23 08:11	11/14/23 19:29	1
Bis(2-chloroethyl)ether	<10.0		10.0	0.820	ug/L		11/14/23 08:11	11/14/23 19:29	1
bis (2-chloroisopropyl) ether	<10.0		10.0	0.540	ug/L		11/14/23 08:11	11/14/23 19:29	1
Bis(2-ethylhexyl) phthalate	7.29	J B	10.0	5.50	ug/L		11/14/23 08:11	11/14/23 19:29	1
Butyl benzyl phthalate	<10.0		10.0	5.40	ug/L		11/14/23 08:11	11/14/23 19:29	1
Chrysene	<10.0		10.0	0.870	ug/L		11/14/23 08:11	11/14/23 19:29	1
Dibenz(a,h)anthracene	<10.0		10.0	3.90	ug/L		11/14/23 08:11	11/14/23 19:29	1
Dibenzofuran	<10.0		10.0	0.740	ug/L		11/14/23 08:11	11/14/23 19:29	1
Diethyl phthalate	<10.0		10.0	1.70	ug/L		11/14/23 08:11	11/14/23 19:29	1
Dimethyl phthalate	<10.0		10.0	1.00	ug/L		11/14/23 08:11	11/14/23 19:29	1
Di-n-butyl phthalate	<10.0		10.0	5.60	ug/L		11/14/23 08:11	11/14/23 19:29	1
Di-n-octyl phthalate	<20.0		20.0	7.00	ug/L		11/14/23 08:11	11/14/23 19:29	1
Fluoranthene	<10.0		10.0	1.70	ug/L		11/14/23 08:11	11/14/23 19:29	1
Fluorene	<10.0		10.0	0.790	ug/L		11/14/23 08:11	11/14/23 19:29	1
Hexachlorobenzene	<10.0		10.0	0.700	ug/L		11/14/23 08:11	11/14/23 19:29	1
Hexachlorobutadiene	<10.0		10.0	0.860	ug/L		11/14/23 08:11	11/14/23 19:29	1
Hexachlorocyclopentadiene	<10.0		10.0	5.10	ug/L		11/14/23 08:11	11/14/23 19:29	1
Hexachloroethane	<10.0		10.0	0.970	ug/L		11/14/23 08:11	11/14/23 19:29	1
Indeno[1,2,3-cd]pyrene	<10.0		10.0	4.20	ug/L		11/14/23 08:11	11/14/23 19:29	1
Isophorone	<10.0		10.0	0.930	ug/L		11/14/23 08:11	11/14/23 19:29	1
Naphthalene	<10.0		10.0	6.10	ug/L		11/14/23 08:11	11/14/23 19:29	1
Nitrobenzene	<10.0		10.0	0.800	ug/L		11/14/23 08:11	11/14/23 19:29	1
N-Nitrosodi-n-propylamine	<10.0		10.0	0.920	ug/L		11/14/23 08:11	11/14/23 19:29	1
N-Nitrosodiphenylamine	<10.0		10.0	0.750	ug/L		11/14/23 08:11	11/14/23 19:29	1
Pentachlorophenol	<10.0		10.0	9.60	ug/L		11/14/23 08:11	11/14/23 19:29	1
Phenanthrene	<10.0		10.0	0.790	ug/L		11/14/23 08:11	11/14/23 19:29	1
Pyrene	<10.0		10.0	0.790	ug/L		11/14/23 08:11	11/14/23 19:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	50		25 - 110	11/14/23 08:11	11/14/23 19:29	1
Phenol-d5 (Surr)	52		21 - 110	11/14/23 08:11	11/14/23 19:29	1
Nitrobenzene-d5 (Surr)	94		45 - 129	11/14/23 08:11	11/14/23 19:29	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Client Sample ID: Leachate

Lab Sample ID: 310-269496-1

Date Collected: 11/13/23 11:30

Matrix: Water

Date Received: 11/13/23 16:20

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	91		39 - 118	11/14/23 08:11	11/14/23 19:29	1
2,4,6-Tribromophenol (Surr)	77		27 - 136	11/14/23 08:11	11/14/23 19:29	1
Terphenyl-d14 (Surr)	87		12 - 144	11/14/23 08:11	11/14/23 19:29	1

Method: EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.0627		0.0627	0.0265	ug/L		11/14/23 08:12	11/28/23 12:42	1
4,4'-DDE	<0.0627		0.0627	0.0265	ug/L		11/14/23 08:12	11/28/23 12:42	1
4,4'-DDT	<0.0627		0.0627	0.0412	ug/L		11/14/23 08:12	11/28/23 12:42	1
Aldrin	<0.0627		0.0627	0.0314	ug/L		11/14/23 08:12	11/28/23 12:42	1
beta-BHC	<0.0627		0.0627	0.0363	ug/L		11/14/23 08:12	11/28/23 12:42	1
Chlordane (technical)	<1.96		1.96	0.794	ug/L		11/14/23 08:12	11/28/23 12:42	1
delta-BHC	<0.0627		0.0627	0.0265	ug/L		11/14/23 08:12	11/28/23 12:42	1
Dieldrin	<0.0627		0.0627	0.0255	ug/L		11/14/23 08:12	11/28/23 12:42	1
Endosulfan I	<0.0627		0.0627	0.0324	ug/L		11/14/23 08:12	11/28/23 12:42	1
Endosulfan II	<0.0627		0.0627	0.0284	ug/L		11/14/23 08:12	11/28/23 12:42	1
Endosulfan sulfate	<0.0627		0.0627	0.0294	ug/L		11/14/23 08:12	11/28/23 12:42	1
Endrin	<0.0627		0.0627	0.0255	ug/L		11/14/23 08:12	11/28/23 12:42	1
Endrin aldehyde	<0.0627		0.0627	0.0284	ug/L		11/14/23 08:12	11/28/23 12:42	1
gamma-BHC (Lindane)	<0.0627		0.0627	0.0353	ug/L		11/14/23 08:12	11/28/23 12:42	1
Heptachlor	<0.0627		0.0627	0.0324	ug/L		11/14/23 08:12	11/28/23 12:42	1
Heptachlor epoxide	<0.0627		0.0627	0.0284	ug/L		11/14/23 08:12	11/28/23 12:42	1
Toxaphene	<1.96		1.96	0.676	ug/L		11/14/23 08:12	11/28/23 12:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	48		10 - 136	11/14/23 08:12	11/28/23 12:42	1
Tetrachloro-m-xylene (Surr)	57		10 - 130	11/14/23 08:12	11/28/23 12:42	1

Method: EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.784		0.784	0.167	ug/L		11/14/23 08:12	11/15/23 15:11	1
PCB-1221	<0.784		0.784	0.167	ug/L		11/14/23 08:12	11/15/23 15:11	1
PCB-1232	<0.784		0.784	0.167	ug/L		11/14/23 08:12	11/15/23 15:11	1
PCB-1242	<0.784		0.784	0.167	ug/L		11/14/23 08:12	11/15/23 15:11	1
PCB-1248	<0.784		0.784	0.108	ug/L		11/14/23 08:12	11/15/23 15:11	1
PCB-1254	<0.784		0.784	0.108	ug/L		11/14/23 08:12	11/15/23 15:11	1
PCB-1260	<0.784		0.784	0.108	ug/L		11/14/23 08:12	11/15/23 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	47		10 - 136	11/14/23 08:12	11/15/23 15:11	1
Tetrachloro-m-xylene (Surr)	74		10 - 130	11/14/23 08:12	11/15/23 15:11	1

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00155		0.000500	0.000200	ug/L		11/20/23 15:48	11/28/23 11:05	1

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00165	J	0.00200	0.000530	mg/L		11/15/23 08:55	11/17/23 04:09	1
Barium	0.0765		0.00200	0.000640	mg/L		11/15/23 08:55	11/17/23 04:09	1

Eurofins Cedar Falls

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Client Sample ID: Leachate

Lab Sample ID: 310-269496-1

Date Collected: 11/13/23 11:30

Matrix: Water

Date Received: 11/13/23 16:20

Method: EPA 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/15/23 08:55	11/17/23 04:09	1
Chromium	<0.00500		0.00500	0.00110	mg/L		11/15/23 08:55	11/17/23 04:09	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/15/23 08:55	11/17/23 04:09	1
Iron	1.46		0.100	0.0360	mg/L		11/15/23 08:55	11/20/23 14:02	1
Lead	<0.000500		0.000500	0.000240	mg/L		11/15/23 08:55	11/17/23 04:09	1
Nickel	0.00733		0.00500	0.00190	mg/L		11/15/23 08:55	11/17/23 04:09	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/15/23 08:55	11/17/23 04:09	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/15/23 08:55	11/17/23 04:09	1
Zinc	<0.0200		0.0200	0.00640	mg/L		11/15/23 08:55	11/17/23 04:09	1

Method: EPA 245.2 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200	0.000140	mg/L		11/27/23 09:04	11/27/23 15:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	3.11		0.500	0.220	mg/L		11/18/23 09:09	11/21/23 12:15	1
Nitrogen, Kjeldahl (EPA 351.2)	5.23	F1	1.00	0.550	mg/L		11/15/23 06:14	11/15/23 13:18	1
Total Suspended Solids (USGS I-3765-85)	182		30.0	10.2	mg/L			11/15/23 19:24	1
Total Dissolved Solids (SM 2540C)	1070		50.0	34.0	mg/L			11/14/23 16:17	1
Biochemical Oxygen Demand (SM 5210B)	6.38	b	3.00	3.00	mg/L			11/15/23 05:25	1
Total Organic Carbon (SM 5310C)	22.4		1.00	0.470	mg/L			12/05/23 20:21	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	8.1	HF	1.0	1.0	SU			11/13/23 19:23	1

Client Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Client Sample ID: Field Blank LLHg

Lab Sample ID: 310-269496-2

Date Collected: 11/13/23 11:30

Matrix: Water

Date Received: 11/13/23 16:20

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00149		0.000500	0.000200	ug/L		11/20/23 15:48	11/28/23 11:20	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: 310-269496-1

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.

GC/MS Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
b	Result Detected in the Unseeded Control blank (USB).
F1	MS and/or MSD recovery exceeds control limits.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Glossary

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

Surrogate Summary

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

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 (70-130)	TOL (70-130)	BFB (70-130)
310-269496-1	Leachate	94	99	99
310-269496-1	Leachate	105	95	106
LCS 310-405943/7	Lab Control Sample	99	100	100
LCS 310-405943/8	Lab Control Sample	97	100	101
LCS 310-406381/6	Lab Control Sample	97	100	101
LCS 310-406381/7	Lab Control Sample	106	95	107
MB 310-405943/6	Method Blank	96	99	102
MB 310-406381/5	Method Blank	105	95	106

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 (25-110)	PHL (21-110)	NBZ (45-129)	FBP (39-118)	TBP (27-136)	TPHL (12-144)
310-269496-1	Leachate	50	52	94	91	77	87
LCS 310-405888/2-A	Lab Control Sample	70	56	98	94	104	116
LCSD 310-405888/3-A	Lab Control Sample Dup	76	61	102	102	111	122
MB 310-405888/1-A	Method Blank	73	59	101	91	101	125

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)	
		DCB1 (10-136)	TCX1 (10-130)
310-269496-1	Leachate	48	57
LCS 310-405890/4-A	Lab Control Sample	64	66
LCSD 310-405890/5-A	Lab Control Sample Dup	58	51
MB 310-405890/1-A	Method Blank	58	59

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)
 TCX = Tetrachloro-m-xylene (Surr)

Surrogate Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCB1 (10-136)	TCX1 (10-130)
310-269496-1	Leachate	47	74
LCS 310-405890/2-A	Lab Control Sample	53	73
LCSD 310-405890/3-A	Lab Control Sample Dup	47	69
MB 310-405890/1-A	Method Blank	49	62

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene (Surr)

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 310-405943/6

Matrix: Water

Analysis Batch: 405943

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			11/14/23 15:07	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/14/23 15:07	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/14/23 15:07	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/14/23 15:07	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/14/23 15:07	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/14/23 15:07	1
1,2-Dichloroethene, Total	<1.00		1.00	0.270	ug/L			11/14/23 15:07	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/14/23 15:07	1
1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/14/23 15:07	1
Benzene	<0.500		0.500	0.220	ug/L			11/14/23 15:07	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/14/23 15:07	1
Bromoform	<5.00		5.00	0.780	ug/L			11/14/23 15:07	1
Bromomethane	1.615	J	4.00	1.10	ug/L			11/14/23 15:07	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/14/23 15:07	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/14/23 15:07	1
Dibromochloromethane	<5.00		5.00	0.750	ug/L			11/14/23 15:07	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/14/23 15:07	1
Chloroform	<3.00		3.00	1.30	ug/L			11/14/23 15:07	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/14/23 15:07	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/14/23 15:07	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/14/23 15:07	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/14/23 15:07	1
Toluene	<1.00		1.00	0.430	ug/L			11/14/23 15:07	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/14/23 15:07	1
Trichloroethylene	<1.00		1.00	0.430	ug/L			11/14/23 15:07	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/14/23 15:07	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	96		70 - 130		11/14/23 15:07	1
Toluene-d8 (Surr)	99		70 - 130		11/14/23 15:07	1
4-Bromofluorobenzene (Surr)	102		70 - 130		11/14/23 15:07	1

Lab Sample ID: LCS 310-405943/7

Matrix: Water

Analysis Batch: 405943

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	19.52		ug/L		98	70 - 130
1,1,2,2-Tetrachloroethane	20.0	18.39		ug/L		92	64 - 130
1,1,2-Trichloroethane	20.0	19.05		ug/L		95	70 - 130
1,1-Dichloroethane	20.0	16.96		ug/L		85	70 - 130
1,1-Dichloroethene	20.0	19.82		ug/L		99	61 - 130
1,2-Dichloroethane	20.0	18.36		ug/L		92	70 - 130
1,2-Dichloropropane	20.0	19.59		ug/L		98	70 - 130
1,3-Dichloropropene	40.0	36.76		ug/L		92	70 - 130
Benzene	20.0	18.90		ug/L		95	70 - 130
Bromodichloromethane	20.0	19.26		ug/L		96	70 - 130
Bromoform	20.0	18.32		ug/L		92	70 - 130

Eurofins Cedar Falls

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 310-405943/7

Matrix: Water

Analysis Batch: 405943

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon tetrachloride	20.0	20.20		ug/L		101	70 - 130
Chlorobenzene	20.0	18.35		ug/L		92	69 - 130
Dibromochloromethane	20.0	19.46		ug/L		97	70 - 130
Chloroform	20.0	18.91		ug/L		95	70 - 130
cis-1,2-Dichloroethene	20.0	19.18		ug/L		96	70 - 130
cis-1,3-Dichloropropene	20.0	19.51		ug/L		98	70 - 130
Methylene chloride	20.0	19.41		ug/L		97	60 - 140
Tetrachloroethene	20.0	19.32		ug/L		97	70 - 130
Toluene	20.0	19.03		ug/L		95	70 - 130
trans-1,2-Dichloroethene	20.0	19.23		ug/L		96	70 - 130
trans-1,3-Dichloropropene	20.0	17.25		ug/L		86	68 - 130
Trichloroethylene	20.0	18.50		ug/L		93	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	99		70 - 130
Toluene-d8 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	100		70 - 130

Lab Sample ID: LCS 310-405943/8

Matrix: Water

Analysis Batch: 405943

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	19.61		ug/L		98	24 - 150
Chloroethane	20.0	17.63		ug/L		88	51 - 137
Chloromethane	20.0	19.29		ug/L		96	37 - 150
Vinyl chloride	20.0	22.14		ug/L		111	57 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	97		70 - 130
Toluene-d8 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	101		70 - 130

Lab Sample ID: MB 310-406381/5

Matrix: Water

Analysis Batch: 406381

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/17/23 10:47	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/17/23 10:47	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/17/23 10:47	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/17/23 10:47	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/17/23 10:47	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/17/23 10:47	1
1,2-Dichloroethene, Total	<1.00		1.00	0.270	ug/L			11/17/23 10:47	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/17/23 10:47	1
1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/17/23 10:47	1
2-Chloroethyl vinyl ether	<2.00		2.00	1.70	ug/L			11/17/23 10:47	1

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QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 310-406381/5

Matrix: Water

Analysis Batch: 406381

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	<0.500		0.500	0.220	ug/L			11/17/23 10:47	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/17/23 10:47	1
Bromoform	<5.00		5.00	0.780	ug/L			11/17/23 10:47	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/17/23 10:47	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/17/23 10:47	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/17/23 10:47	1
Dibromochloromethane	<5.00		5.00	0.750	ug/L			11/17/23 10:47	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/17/23 10:47	1
Chloroform	<3.00		3.00	1.30	ug/L			11/17/23 10:47	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/17/23 10:47	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/17/23 10:47	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/17/23 10:47	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/17/23 10:47	1
Toluene	<1.00		1.00	0.430	ug/L			11/17/23 10:47	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/17/23 10:47	1
Trichloroethylene	<1.00		1.00	0.430	ug/L			11/17/23 10:47	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/17/23 10:47	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	105		70 - 130		11/17/23 10:47	1
Toluene-d8 (Surr)	95		70 - 130		11/17/23 10:47	1
4-Bromofluorobenzene (Surr)	106		70 - 130		11/17/23 10:47	1

Lab Sample ID: LCS 310-406381/6

Matrix: Water

Analysis Batch: 406381

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	18.03		ug/L		90	64 - 130
1,1,2-Trichloroethane	20.0	18.37		ug/L		92	70 - 130
1,1-Dichloroethane	20.0	18.42		ug/L		92	70 - 130
1,1-Dichloroethene	20.0	18.25		ug/L		91	61 - 130
1,2-Dichloroethane	20.0	17.60		ug/L		88	70 - 130
1,2-Dichloropropane	20.0	18.51		ug/L		93	70 - 130
1,3-Dichloropropene	40.0	39.59		ug/L		99	70 - 130
2-Chloroethyl vinyl ether	20.0	20.12		ug/L		101	50 - 150
Benzene	20.0	18.37		ug/L		92	70 - 130
Bromodichloromethane	20.0	19.25		ug/L		96	70 - 130
Bromoform	20.0	17.60		ug/L		88	70 - 130
Carbon tetrachloride	20.0	18.72		ug/L		94	70 - 130
Chlorobenzene	20.0	18.15		ug/L		91	69 - 130
Dibromochloromethane	20.0	18.58		ug/L		93	70 - 130
Chloroform	20.0	17.76		ug/L		89	70 - 130
cis-1,2-Dichloroethene	20.0	18.95		ug/L		95	70 - 130
cis-1,3-Dichloropropene	20.0	19.93		ug/L		100	70 - 130
Methylene chloride	20.0	18.79		ug/L		94	60 - 140
Tetrachloroethene	20.0	19.05		ug/L		95	70 - 130

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QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 310-406381/6
Matrix: Water
Analysis Batch: 406381

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

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Toluene	20.0	18.24		ug/L		91	70 - 130
trans-1,2-Dichloroethene	20.0	18.39		ug/L		92	70 - 130
trans-1,3-Dichloropropene	20.0	19.66		ug/L		98	68 - 130
Trichloroethylene	20.0	18.80		ug/L		94	70 - 130
Surrogate							
		LCS	LCS				
	%Recovery	Qualifier	Limits				
Dibromofluoromethane (Surr)	97		70 - 130				
Toluene-d8 (Surr)	100		70 - 130				
4-Bromofluorobenzene (Surr)	101		70 - 130				

Lab Sample ID: LCS 310-406381/7
Matrix: Water
Analysis Batch: 406381

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	14.22		ug/L		71	24 - 150
Chloroethane	20.0	17.90		ug/L		90	51 - 137
Chloromethane	20.0	15.92		ug/L		80	37 - 150
Vinyl chloride	20.0	17.38		ug/L		87	57 - 136
Surrogate							
		LCS	LCS				
	%Recovery	Qualifier	Limits				
Dibromofluoromethane (Surr)	106		70 - 130				
Toluene-d8 (Surr)	95		70 - 130				
4-Bromofluorobenzene (Surr)	107		70 - 130				

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 310-405888/1-A
Matrix: Water
Analysis Batch: 405958

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 405888

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		11/14/23 08:11	11/14/23 18:08	1
1,2-Dichlorobenzene	<10.0		10.0	0.620	ug/L		11/14/23 08:11	11/14/23 18:08	1
1,3-Dichlorobenzene	<10.0		10.0	0.640	ug/L		11/14/23 08:11	11/14/23 18:08	1
1,4-Dichlorobenzene	<10.0		10.0	0.640	ug/L		11/14/23 08:11	11/14/23 18:08	1
2,4,5-Trichlorophenol	<10.0		10.0	5.30	ug/L		11/14/23 08:11	11/14/23 18:08	1
2,4,6-Trichlorophenol	<10.0		10.0	5.00	ug/L		11/14/23 08:11	11/14/23 18:08	1
2,4-Dichlorophenol	<10.0		10.0	0.850	ug/L		11/14/23 08:11	11/14/23 18:08	1
2,4-Dimethylphenol	<10.0		10.0	0.580	ug/L		11/14/23 08:11	11/14/23 18:08	1
2,4-Dinitrophenol	<20.0		20.0	13.0	ug/L		11/14/23 08:11	11/14/23 18:08	1
2,4-Dinitrotoluene	<10.0		10.0	6.40	ug/L		11/14/23 08:11	11/14/23 18:08	1
2,6-Dinitrotoluene	<10.0		10.0	0.520	ug/L		11/14/23 08:11	11/14/23 18:08	1
2-Chloronaphthalene	<10.0		10.0	0.640	ug/L		11/14/23 08:11	11/14/23 18:08	1
2-Chlorophenol	<10.0		10.0	0.540	ug/L		11/14/23 08:11	11/14/23 18:08	1
2-Nitrophenol	<10.0		10.0	6.80	ug/L		11/14/23 08:11	11/14/23 18:08	1
3,3'-Dichlorobenzidine	<10.0		10.0	1.40	ug/L		11/14/23 08:11	11/14/23 18:08	1
4,6-Dinitro-2-methylphenol	<10.0		10.0	6.90	ug/L		11/14/23 08:11	11/14/23 18:08	1

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QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 310-405888/1-A

Matrix: Water

Analysis Batch: 405958

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 405888

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
4-Bromophenyl phenyl ether	<10.0		10.0	0.700	ug/L		11/14/23 08:11	11/14/23 18:08	1
4-Chloro-3-methylphenol	<10.0		10.0	0.840	ug/L		11/14/23 08:11	11/14/23 18:08	1
4-Chlorophenyl phenyl ether	<10.0		10.0	0.690	ug/L		11/14/23 08:11	11/14/23 18:08	1
4-Nitrophenol	<10.0		10.0	7.60	ug/L		11/14/23 08:11	11/14/23 18:08	1
Acenaphthene	<10.0		10.0	0.640	ug/L		11/14/23 08:11	11/14/23 18:08	1
Acenaphthylene	<10.0		10.0	0.720	ug/L		11/14/23 08:11	11/14/23 18:08	1
Anthracene	<10.0		10.0	0.870	ug/L		11/14/23 08:11	11/14/23 18:08	1
Benzo[a]anthracene	<10.0		10.0	0.850	ug/L		11/14/23 08:11	11/14/23 18:08	1
Benzo[a]pyrene	<10.0		10.0	8.10	ug/L		11/14/23 08:11	11/14/23 18:08	1
Benzo[b]fluoranthene	<10.0		10.0	4.90	ug/L		11/14/23 08:11	11/14/23 18:08	1
Benzo[g,h,i]perylene	<10.0		10.0	6.30	ug/L		11/14/23 08:11	11/14/23 18:08	1
Benzo[k]fluoranthene	<10.0		10.0	2.20	ug/L		11/14/23 08:11	11/14/23 18:08	1
Benzoic acid	<100		100	17.0	ug/L		11/14/23 08:11	11/14/23 18:08	1
Benzyl alcohol	<10.0		10.0	1.30	ug/L		11/14/23 08:11	11/14/23 18:08	1
Bis(2-chloroethoxy)methane	<10.0		10.0	0.760	ug/L		11/14/23 08:11	11/14/23 18:08	1
Bis(2-chloroethyl)ether	<10.0		10.0	0.820	ug/L		11/14/23 08:11	11/14/23 18:08	1
bis (2-chloroisopropyl) ether	<10.0		10.0	0.540	ug/L		11/14/23 08:11	11/14/23 18:08	1
Bis(2-ethylhexyl) phthalate	7.429	J	10.0	5.50	ug/L		11/14/23 08:11	11/14/23 18:08	1
Butyl benzyl phthalate	6.314	J	10.0	5.40	ug/L		11/14/23 08:11	11/14/23 18:08	1
Chrysene	<10.0		10.0	0.870	ug/L		11/14/23 08:11	11/14/23 18:08	1
Dibenz(a,h)anthracene	<10.0		10.0	3.90	ug/L		11/14/23 08:11	11/14/23 18:08	1
Dibenzofuran	<10.0		10.0	0.740	ug/L		11/14/23 08:11	11/14/23 18:08	1
Diethyl phthalate	<10.0		10.0	1.70	ug/L		11/14/23 08:11	11/14/23 18:08	1
Dimethyl phthalate	<10.0		10.0	1.00	ug/L		11/14/23 08:11	11/14/23 18:08	1
Di-n-butyl phthalate	<10.0		10.0	5.60	ug/L		11/14/23 08:11	11/14/23 18:08	1
Di-n-octyl phthalate	10.17	J	20.0	7.00	ug/L		11/14/23 08:11	11/14/23 18:08	1
Fluoranthene	<10.0		10.0	1.70	ug/L		11/14/23 08:11	11/14/23 18:08	1
Fluorene	<10.0		10.0	0.790	ug/L		11/14/23 08:11	11/14/23 18:08	1
Hexachlorobenzene	<10.0		10.0	0.700	ug/L		11/14/23 08:11	11/14/23 18:08	1
Hexachlorobutadiene	<10.0		10.0	0.860	ug/L		11/14/23 08:11	11/14/23 18:08	1
Hexachlorocyclopentadiene	<10.0		10.0	5.10	ug/L		11/14/23 08:11	11/14/23 18:08	1
Hexachloroethane	<10.0		10.0	0.970	ug/L		11/14/23 08:11	11/14/23 18:08	1
Indeno[1,2,3-cd]pyrene	<10.0		10.0	4.20	ug/L		11/14/23 08:11	11/14/23 18:08	1
Isophorone	<10.0		10.0	0.930	ug/L		11/14/23 08:11	11/14/23 18:08	1
Naphthalene	<10.0		10.0	6.10	ug/L		11/14/23 08:11	11/14/23 18:08	1
Nitrobenzene	<10.0		10.0	0.800	ug/L		11/14/23 08:11	11/14/23 18:08	1
N-Nitrosodi-n-propylamine	<10.0		10.0	0.920	ug/L		11/14/23 08:11	11/14/23 18:08	1
N-Nitrosodiphenylamine	<10.0		10.0	0.750	ug/L		11/14/23 08:11	11/14/23 18:08	1
Pentachlorophenol	<10.0		10.0	9.60	ug/L		11/14/23 08:11	11/14/23 18:08	1
Phenanthrene	<10.0		10.0	0.790	ug/L		11/14/23 08:11	11/14/23 18:08	1
Pyrene	<10.0		10.0	0.790	ug/L		11/14/23 08:11	11/14/23 18:08	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorophenol (Surr)	73		25 - 110	11/14/23 08:11	11/14/23 18:08	1
Phenol-d5 (Surr)	59		21 - 110	11/14/23 08:11	11/14/23 18:08	1
Nitrobenzene-d5 (Surr)	101		45 - 129	11/14/23 08:11	11/14/23 18:08	1
2-Fluorobiphenyl (Surr)	91		39 - 118	11/14/23 08:11	11/14/23 18:08	1
2,4,6-Tribromophenol (Surr)	101		27 - 136	11/14/23 08:11	11/14/23 18:08	1

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QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 310-405888/1-A

Matrix: Water

Analysis Batch: 405958

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 405888

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Terphenyl-d14 (Surr)	125		12 - 144	11/14/23 08:11	11/14/23 18:08	1

Lab Sample ID: LCS 310-405888/2-A

Matrix: Water

Analysis Batch: 405958

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 405888

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichlorobenzene	100	74.20		ug/L		74	31 - 110
1,3-Dichlorobenzene	100	72.82		ug/L		73	28 - 110
1,4-Dichlorobenzene	100	71.36		ug/L		71	28 - 110
2,4,5-Trichlorophenol	100	101.1		ug/L		101	35 - 133
2,4,6-Trichlorophenol	100	112.7		ug/L		113	37 - 139
2,4-Dichlorophenol	100	103.8		ug/L		104	41 - 124
2,4-Dimethylphenol	100	94.35		ug/L		94	32 - 120
2,4-Dinitrophenol	200	145.9		ug/L		73	10 - 138
2,4-Dinitrotoluene	100	89.24		ug/L		89	47 - 137
2,6-Dinitrotoluene	100	96.90		ug/L		97	51 - 130
2-Chloronaphthalene	100	94.39		ug/L		94	60 - 110
2-Chlorophenol	100	83.38		ug/L		83	44 - 117
2-Nitrophenol	100	117.6		ug/L		118	41 - 129
4,6-Dinitro-2-methylphenol	200	202.9		ug/L		101	22 - 143
4-Bromophenyl phenyl ether	100	112.1		ug/L		112	53 - 119
4-Chloro-3-methylphenol	100	93.54		ug/L		94	49 - 130
4-Chlorophenyl phenyl ether	100	95.10		ug/L		95	44 - 116
4-Nitrophenol	200	95.77		ug/L		48	18 - 110
Acenaphthene	100	92.35		ug/L		92	47 - 110
Acenaphthylene	100	97.13		ug/L		97	40 - 110
Anthracene	100	103.9		ug/L		104	51 - 120
Benzo[a]anthracene	100	99.63		ug/L		100	51 - 123
Benzo[a]pyrene	100	101.8		ug/L		102	48 - 125
Benzo[b]fluoranthene	100	96.73		ug/L		97	49 - 129
Benzo[g,h,i]perylene	100	112.7		ug/L		113	43 - 139
Benzo[k]fluoranthene	100	96.61		ug/L		97	47 - 130
Benzyl alcohol	100	84.43		ug/L		84	39 - 128
Bis(2-chloroethoxy)methane	100	89.17		ug/L		89	48 - 121
Bis(2-chloroethyl)ether	100	78.26		ug/L		78	43 - 123
bis (2-chloroisopropyl) ether	100	74.40		ug/L		74	36 - 123
Bis(2-ethylhexyl) phthalate	100	110.6		ug/L		111	43 - 143
Butyl benzyl phthalate	100	111.5		ug/L		111	46 - 135
Chrysene	100	97.50		ug/L		98	51 - 125
Dibenz(a,h)anthracene	100	101.2		ug/L		101	38 - 149
Dibenzofuran	100	91.20		ug/L		91	45 - 112
Diethyl phthalate	100	91.04		ug/L		91	43 - 120
Dimethyl phthalate	100	96.54		ug/L		97	43 - 120
Di-n-butyl phthalate	100	97.65		ug/L		98	50 - 120
Di-n-octyl phthalate	100	125.3		ug/L		125	34 - 146
Fluoranthene	100	92.60		ug/L		93	47 - 128

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QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 310-405888/2-A

Matrix: Water

Analysis Batch: 405958

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 405888

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Fluorene	100	89.89		ug/L		90	59 - 119	
Hexachlorobenzene	100	105.8		ug/L		106	48 - 119	
Hexachlorobutadiene	100	85.96		ug/L		86	32 - 110	
Hexachlorocyclopentadiene	100	93.37		ug/L		93	10 - 110	
Hexachloroethane	100	72.22		ug/L		72	40 - 110	
Indeno[1,2,3-cd]pyrene	100	118.6		ug/L		119	37 - 150	
Isophorone	100	90.98		ug/L		91	50 - 125	
Naphthalene	100	87.01		ug/L		87	38 - 110	
Nitrobenzene	100	92.43		ug/L		92	47 - 116	
N-Nitrosodi-n-propylamine	100	79.10		ug/L		79	45 - 130	
N-Nitrosodiphenylamine	100	107.9		ug/L		108	49 - 121	
Pentachlorophenol	200	165.0		ug/L		82	26 - 133	
Phenanthrene	100	96.56		ug/L		97	54 - 117	
Pyrene	100	117.3		ug/L		117	52 - 120	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorophenol (Surr)	70		25 - 110
Phenol-d5 (Surr)	56		21 - 110
Nitrobenzene-d5 (Surr)	98		45 - 129
2-Fluorobiphenyl (Surr)	94		39 - 118
2,4,6-Tribromophenol (Surr)	104		27 - 136
Terphenyl-d14 (Surr)	116		12 - 144

Lab Sample ID: LCSD 310-405888/3-A

Matrix: Water

Analysis Batch: 405958

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 405888

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits			
1,2,4-Trichlorobenzene	100	89.66		ug/L		90	44 - 110	2	35	
1,2-Dichlorobenzene	100	75.99		ug/L		76	31 - 110	2	35	
1,3-Dichlorobenzene	100	74.88		ug/L		75	28 - 110	3	35	
1,4-Dichlorobenzene	100	73.16		ug/L		73	28 - 110	2	35	
2,4,5-Trichlorophenol	100	99.66		ug/L		100	35 - 133	1	35	
2,4,6-Trichlorophenol	100	114.4		ug/L		114	37 - 139	2	35	
2,4-Dichlorophenol	100	102.1		ug/L		102	41 - 124	2	35	
2,4-Dimethylphenol	100	94.09		ug/L		94	32 - 120	0	35	
2,4-Dinitrophenol	200	142.8		ug/L		71	10 - 138	2	35	
2,4-Dinitrotoluene	100	90.75		ug/L		91	47 - 137	2	35	
2,6-Dinitrotoluene	100	96.80		ug/L		97	51 - 130	0	35	
2-Chloronaphthalene	100	93.17		ug/L		93	60 - 110	1	24	
2-Chlorophenol	100	82.98		ug/L		83	44 - 117	0	35	
2-Nitrophenol	100	118.7		ug/L		119	41 - 129	1	35	
4,6-Dinitro-2-methylphenol	200	200.7		ug/L		100	22 - 143	1	35	
4-Bromophenyl phenyl ether	100	111.9		ug/L		112	53 - 119	0	35	
4-Chloro-3-methylphenol	100	93.75		ug/L		94	49 - 130	0	35	
4-Chlorophenyl phenyl ether	100	92.43		ug/L		92	44 - 116	3	35	
4-Nitrophenol	200	96.60		ug/L		48	18 - 110	1	35	
Acenaphthene	100	90.62		ug/L		91	47 - 110	2	35	

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QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 310-405888/3-A

Matrix: Water

Analysis Batch: 405958

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 405888

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	RPD
		Result	Qualifier				Limits		Limit
Acenaphthylene	100	97.02		ug/L		97	40 - 110	0	35
Anthracene	100	100.5		ug/L		100	51 - 120	3	35
Benzo[a]anthracene	100	95.61		ug/L		96	51 - 123	4	35
Benzo[a]pyrene	100	95.65		ug/L		96	48 - 125	6	35
Benzo[b]fluoranthene	100	91.40		ug/L		91	49 - 129	6	35
Benzo[g,h,i]perylene	100	107.5		ug/L		107	43 - 139	5	35
Benzo[k]fluoranthene	100	95.06		ug/L		95	47 - 130	2	35
Benzyl alcohol	100	85.74		ug/L		86	39 - 128	2	35
Bis(2-chloroethoxy)methane	100	85.88		ug/L		86	48 - 121	4	35
Bis(2-chloroethyl)ether	100	77.47		ug/L		77	43 - 123	1	35
bis (2-chloroisopropyl) ether	100	74.45		ug/L		74	36 - 123	0	35
Bis(2-ethylhexyl) phthalate	100	105.2		ug/L		105	43 - 143	5	35
Butyl benzyl phthalate	100	108.1		ug/L		108	46 - 135	3	35
Chrysene	100	95.09		ug/L		95	51 - 125	3	35
Dibenz(a,h)anthracene	100	94.11		ug/L		94	38 - 149	7	35
Dibenzofuran	100	90.82		ug/L		91	45 - 112	0	35
Diethyl phthalate	100	87.82		ug/L		88	43 - 120	4	35
Dimethyl phthalate	100	94.29		ug/L		94	43 - 120	2	35
Di-n-butyl phthalate	100	95.27		ug/L		95	50 - 120	2	35
Di-n-octyl phthalate	100	115.8		ug/L		116	34 - 146	8	35
Fluoranthene	100	89.94		ug/L		90	47 - 128	3	35
Fluorene	100	87.64		ug/L		88	59 - 119	3	35
Hexachlorobenzene	100	105.2		ug/L		105	48 - 119	1	35
Hexachlorobutadiene	100	90.18		ug/L		90	32 - 110	5	35
Hexachlorocyclopentadiene	100	97.73		ug/L		98	10 - 110	5	35
Hexachloroethane	100	74.95		ug/L		75	40 - 110	4	35
Indeno[1,2,3-cd]pyrene	100	112.0		ug/L		112	37 - 150	6	35
Isophorone	100	89.03		ug/L		89	50 - 125	2	35
Naphthalene	100	85.52		ug/L		86	38 - 110	2	35
Nitrobenzene	100	91.67		ug/L		92	47 - 116	1	35
N-Nitrosodi-n-propylamine	100	80.91		ug/L		81	45 - 130	2	35
N-Nitrosodiphenylamine	100	106.3		ug/L		106	49 - 121	1	35
Pentachlorophenol	200	161.4		ug/L		81	26 - 133	2	35
Phenanthrene	100	94.57		ug/L		95	54 - 117	2	35
Pyrene	100	113.6		ug/L		114	52 - 120	3	35

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2-Fluorophenol (Surr)	76		25 - 110
Phenol-d5 (Surr)	61		21 - 110
Nitrobenzene-d5 (Surr)	102		45 - 129
2-Fluorobiphenyl (Surr)	102		39 - 118
2,4,6-Tribromophenol (Surr)	111		27 - 136
Terphenyl-d14 (Surr)	122		12 - 144

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Method: 608.3 - Organochlorine Pesticides in Water

Lab Sample ID: MB 310-405890/1-A
Matrix: Water
Analysis Batch: 407134

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 405890

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
4,4'-DDD	<0.0640		0.0640	0.0270	ug/L		11/14/23 08:12	11/28/23 12:03	1
4,4'-DDE	<0.0640		0.0640	0.0270	ug/L		11/14/23 08:12	11/28/23 12:03	1
4,4'-DDT	<0.0640		0.0640	0.0420	ug/L		11/14/23 08:12	11/28/23 12:03	1
Aldrin	<0.0640		0.0640	0.0320	ug/L		11/14/23 08:12	11/28/23 12:03	1
beta-BHC	<0.0640		0.0640	0.0370	ug/L		11/14/23 08:12	11/28/23 12:03	1
Chlordane (technical)	<2.00		2.00	0.810	ug/L		11/14/23 08:12	11/28/23 12:03	1
delta-BHC	<0.0640		0.0640	0.0270	ug/L		11/14/23 08:12	11/28/23 12:03	1
Dieldrin	<0.0640		0.0640	0.0260	ug/L		11/14/23 08:12	11/28/23 12:03	1
Endosulfan I	<0.0640		0.0640	0.0330	ug/L		11/14/23 08:12	11/28/23 12:03	1
Endosulfan II	<0.0640		0.0640	0.0290	ug/L		11/14/23 08:12	11/28/23 12:03	1
Endosulfan sulfate	<0.0640		0.0640	0.0300	ug/L		11/14/23 08:12	11/28/23 12:03	1
Endrin	<0.0640		0.0640	0.0260	ug/L		11/14/23 08:12	11/28/23 12:03	1
Endrin aldehyde	<0.0640		0.0640	0.0290	ug/L		11/14/23 08:12	11/28/23 12:03	1
gamma-BHC (Lindane)	<0.0640		0.0640	0.0360	ug/L		11/14/23 08:12	11/28/23 12:03	1
Heptachlor	<0.0640		0.0640	0.0330	ug/L		11/14/23 08:12	11/28/23 12:03	1
Heptachlor epoxide	<0.0640		0.0640	0.0290	ug/L		11/14/23 08:12	11/28/23 12:03	1
Toxaphene	<2.00		2.00	0.690	ug/L		11/14/23 08:12	11/28/23 12:03	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl (Surr)	58		10 - 136	11/14/23 08:12	11/28/23 12:03	1
Tetrachloro-m-xylene (Surr)	59		10 - 130	11/14/23 08:12	11/28/23 12:03	1

Lab Sample ID: LCS 310-405890/4-A
Matrix: Water
Analysis Batch: 407134

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 405890

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
4,4'-DDD	1.00	0.7099		ug/L		71	36 - 141
4,4'-DDE	1.00	0.6847		ug/L		68	34 - 130
4,4'-DDT	1.00	0.7149		ug/L		71	25 - 150
Aldrin	1.00	0.6077		ug/L		61	42 - 120
beta-BHC	1.00	0.7381		ug/L		74	37 - 136
delta-BHC	1.00	0.7344		ug/L		73	33 - 134
Dieldrin	1.00	0.7267		ug/L		73	39 - 130
Endosulfan I	1.00	0.6610		ug/L		66	45 - 120
Endosulfan II	1.00	0.6686		ug/L		67	14 - 120
Endosulfan sulfate	1.00	0.7959		ug/L		80	36 - 144
Endrin	1.00	0.7799		ug/L		78	39 - 140
Endrin aldehyde	1.00	0.6732		ug/L		67	32 - 137
gamma-BHC (Lindane)	1.00	0.7099		ug/L		71	36 - 132
Heptachlor	1.00	0.7414		ug/L		74	34 - 120
Heptachlor epoxide	1.00	0.7234		ug/L		72	38 - 133

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl (Surr)	64		10 - 136
Tetrachloro-m-xylene (Surr)	66		10 - 130

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Method: 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCSD 310-405890/5-A
 Matrix: Water
 Analysis Batch: 407134

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 405890

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
4,4'-DDD	1.00	0.6195		ug/L		62	36 - 141	14	35	
4,4'-DDE	1.00	0.5598		ug/L		56	34 - 130	20	35	
4,4'-DDT	1.00	0.6239		ug/L		62	25 - 150	14	35	
Aldrin	1.00	0.4814		ug/L		48	42 - 120	23	35	
beta-BHC	1.00	0.6098		ug/L		61	37 - 136	19	35	
delta-BHC	1.00	0.6305		ug/L		63	33 - 134	15	35	
Dieldrin	1.00	0.6304		ug/L		63	39 - 130	14	35	
Endosulfan I	1.00	0.5729		ug/L		57	45 - 120	14	28	
Endosulfan II	1.00	0.5936		ug/L		59	14 - 120	12	35	
Endosulfan sulfate	1.00	0.7159		ug/L		72	36 - 144	11	35	
Endrin	1.00	0.6678		ug/L		67	39 - 140	15	35	
Endrin aldehyde	1.00	0.5938		ug/L		59	32 - 137	13	35	
gamma-BHC (Lindane)	1.00	0.6003		ug/L		60	36 - 132	17	35	
Heptachlor	1.00	0.6183		ug/L		62	34 - 120	18	35	
Heptachlor epoxide	1.00	0.6223		ug/L		62	38 - 133	15	26	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl (Surr)	58		10 - 136
Tetrachloro-m-xylene (Surr)	51		10 - 130

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 310-405890/1-A
 Matrix: Water
 Analysis Batch: 406058

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 405890

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
PCB-1016	<0.800		0.800	0.170	ug/L		11/14/23 08:12	11/15/23 13:49	1
PCB-1221	<0.800		0.800	0.170	ug/L		11/14/23 08:12	11/15/23 13:49	1
PCB-1232	<0.800		0.800	0.170	ug/L		11/14/23 08:12	11/15/23 13:49	1
PCB-1242	<0.800		0.800	0.170	ug/L		11/14/23 08:12	11/15/23 13:49	1
PCB-1248	<0.800		0.800	0.110	ug/L		11/14/23 08:12	11/15/23 13:49	1
PCB-1254	<0.800		0.800	0.110	ug/L		11/14/23 08:12	11/15/23 13:49	1
PCB-1260	<0.800		0.800	0.110	ug/L		11/14/23 08:12	11/15/23 13:49	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl (Surr)	49		10 - 136	11/14/23 08:12	11/15/23 13:49	1
Tetrachloro-m-xylene (Surr)	62		10 - 130	11/14/23 08:12	11/15/23 13:49	1

Lab Sample ID: LCS 310-405890/2-A
 Matrix: Water
 Analysis Batch: 406058

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 405890

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	RPD
PCB-1016	10.0	8.133		ug/L		81	50 - 133	
PCB-1260	10.0	5.967		ug/L		60	31 - 133	

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QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Lab Sample ID: LCS 310-405890/2-A
 Matrix: Water
 Analysis Batch: 406058

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 405890

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl (Surr)	53		10 - 136
Tetrachloro-m-xylene (Surr)	73		10 - 130

Lab Sample ID: LCSD 310-405890/3-A
 Matrix: Water
 Analysis Batch: 406058

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 405890

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec		RPD	
		Result	Qualifier				Limits	RPD	Limit	
PCB-1016	10.0	7.162		ug/L		72	50 - 133	13	35	
PCB-1260	10.0	5.264		ug/L		53	31 - 133	13	35	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl (Surr)	47		10 - 136
Tetrachloro-m-xylene (Surr)	69		10 - 130

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 400-651911/3-A
 Matrix: Water
 Analysis Batch: 652002

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 651911

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000500		0.000500	0.000200	ug/L		11/27/23 16:00	11/28/23 10:42	1

Lab Sample ID: LCS 400-651911/4-A
 Matrix: Water
 Analysis Batch: 652002

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 651911

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec	
		Result	Qualifier				Limits	RPD
Mercury	0.00500	0.005319		ug/L		106	79 - 121	

Lab Sample ID: LCSD 400-651911/5-A
 Matrix: Water
 Analysis Batch: 652002

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 651911

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec		RPD	
		Result	Qualifier				Limits	RPD	Limit	
Mercury	0.00500	0.004971		ug/L		99	79 - 121	7	20	

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 310-405995/1-A
 Matrix: Water
 Analysis Batch: 406341

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 405995

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.00200		0.00200	0.000530	mg/L		11/15/23 08:55	11/16/23 16:11	1
Barium	<0.00200		0.00200	0.000640	mg/L		11/15/23 08:55	11/16/23 16:11	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/15/23 08:55	11/16/23 16:11	1
Chromium	<0.00500		0.00500	0.00110	mg/L		11/15/23 08:55	11/16/23 16:11	1

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QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 310-405995/1-A
Matrix: Water
Analysis Batch: 406341

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 405995

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Copper	<0.00500		0.00500	0.00180	mg/L		11/15/23 08:55	11/16/23 16:11	1
Iron	<0.100		0.100	0.0360	mg/L		11/15/23 08:55	11/16/23 16:11	1
Lead	<0.000500		0.000500	0.000240	mg/L		11/15/23 08:55	11/16/23 16:11	1
Nickel	<0.00500		0.00500	0.00190	mg/L		11/15/23 08:55	11/16/23 16:11	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/15/23 08:55	11/16/23 16:11	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/15/23 08:55	11/16/23 16:11	1
Zinc	<0.0200		0.0200	0.00640	mg/L		11/15/23 08:55	11/16/23 16:11	1

Lab Sample ID: LCS 310-405995/2-A
Matrix: Water
Analysis Batch: 406341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 405995

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Barium	0.100	0.09758		mg/L		98	85 - 115
Cadmium	0.100	0.1006		mg/L		101	85 - 115
Chromium	0.100	0.1009		mg/L		101	85 - 115
Copper	0.200	0.1997		mg/L		100	85 - 115
Lead	0.200	0.2067		mg/L		103	85 - 115
Nickel	0.200	0.2087		mg/L		104	85 - 115
Selenium	0.400	0.3861		mg/L		97	85 - 115
Silver	0.100	0.1033		mg/L		103	85 - 115
Zinc	0.200	0.2002		mg/L		100	85 - 115

Lab Sample ID: LCS 310-405995/2-A
Matrix: Water
Analysis Batch: 406649

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 405995

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Method: 245.2 - Mercury (CVAA)

Lab Sample ID: MB 310-407023/1-A
Matrix: Water
Analysis Batch: 407107

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 407023

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.000200		0.000200	0.000140	mg/L		11/27/23 09:03	11/27/23 15:01	1

Lab Sample ID: LCS 310-407023/2-A
Matrix: Water
Analysis Batch: 407107

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 407023

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 310-406498/1-A
 Matrix: Water
 Analysis Batch: 406809

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 406498

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.500		0.500	0.220	mg/L		11/18/23 09:09	11/21/23 12:01	1

Lab Sample ID: LCS 310-406498/2-A
 Matrix: Water
 Analysis Batch: 406809

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 406498

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	4.00	3.704		mg/L		93	90 - 110

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 310-406016/1-A
 Matrix: Water
 Analysis Batch: 406123

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 406016

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	<1.00		1.00	0.550	mg/L		11/15/23 06:14	11/15/23 13:17	1

Lab Sample ID: LCS 310-406016/2-A
 Matrix: Water
 Analysis Batch: 406123

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 406016

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	4.01	4.343		mg/L		108	90 - 110

Lab Sample ID: 310-269496-1 MS
 Matrix: Water
 Analysis Batch: 406123

Client Sample ID: Leachate
 Prep Type: Total/NA
 Prep Batch: 406016

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrogen, Kjeldahl	5.23	F1	4.01	9.736	F1	mg/L		113	90 - 110

Lab Sample ID: 310-269496-1 MSD
 Matrix: Water
 Analysis Batch: 406123

Client Sample ID: Leachate
 Prep Type: Total/NA
 Prep Batch: 406016

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrogen, Kjeldahl	5.23	F1	4.01	10.33	F1	mg/L		127	90 - 110	6	16

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

Lab Sample ID: MB 310-406153/1
 Matrix: Water
 Analysis Batch: 406153

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	1.70	mg/L			11/15/23 19:24	1

Eurofins Cedar Falls

QC Sample Results

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

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

Lab Sample ID: LCS 310-406153/2
 Matrix: Water
 Analysis Batch: 406153

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	95.00		mg/L		95	75 - 116

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

Lab Sample ID: MB 310-405989/1
 Matrix: Water
 Analysis Batch: 405989

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	34.0	mg/L			11/14/23 16:17	1

Lab Sample ID: LCS 310-405989/2
 Matrix: Water
 Analysis Batch: 405989

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	966.0		mg/L		97	90 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-405767/1
 Matrix: Water
 Analysis Batch: 405767

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 310-406011/1
 Matrix: Water
 Analysis Batch: 406011

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			11/15/23 05:06	1

Lab Sample ID: LCS 310-406011/2
 Matrix: Water
 Analysis Batch: 406011

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	208.4		mg/L		105	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 500-745454/6
 Matrix: Water
 Analysis Batch: 745454

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	<1.00		1.00	0.470	mg/L			12/05/23 17:32	1

Eurofins Cedar Falls

QC Sample Results

Client: Adair County Sanitary Landfill
Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Method: SM 5310C - TOC

Lab Sample ID: LCS 500-745454/7

Matrix: Water

Analysis Batch: 745454

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	10.0	10.07		mg/L		101	86 - 116

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QC Association Summary

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

GC/MS VOA

Analysis Batch: 405943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	624.1	
MB 310-405943/6	Method Blank	Total/NA	Water	624.1	
LCS 310-405943/7	Lab Control Sample	Total/NA	Water	624.1	
LCS 310-405943/8	Lab Control Sample	Total/NA	Water	624.1	

Analysis Batch: 406381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	624.1	
MB 310-406381/5	Method Blank	Total/NA	Water	624.1	
LCS 310-406381/6	Lab Control Sample	Total/NA	Water	624.1	
LCS 310-406381/7	Lab Control Sample	Total/NA	Water	624.1	

GC/MS Semi VOA

Prep Batch: 405888

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	625	
MB 310-405888/1-A	Method Blank	Total/NA	Water	625	
LCS 310-405888/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 310-405888/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 405958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	625.1	405888
MB 310-405888/1-A	Method Blank	Total/NA	Water	625.1	405888
LCS 310-405888/2-A	Lab Control Sample	Total/NA	Water	625.1	405888
LCSD 310-405888/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	405888

GC Semi VOA

Prep Batch: 405890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	608	
MB 310-405890/1-A	Method Blank	Total/NA	Water	608	
LCS 310-405890/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 310-405890/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 310-405890/3-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 310-405890/5-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 406058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	608.3	405890
MB 310-405890/1-A	Method Blank	Total/NA	Water	608.3	405890
LCS 310-405890/2-A	Lab Control Sample	Total/NA	Water	608.3	405890
LCSD 310-405890/3-A	Lab Control Sample Dup	Total/NA	Water	608.3	405890

Analysis Batch: 407134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	608.3	405890
MB 310-405890/1-A	Method Blank	Total/NA	Water	608.3	405890
LCS 310-405890/4-A	Lab Control Sample	Total/NA	Water	608.3	405890
LCSD 310-405890/5-A	Lab Control Sample Dup	Total/NA	Water	608.3	405890

Eurofins Cedar Falls



QC Association Summary

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Metals

Prep Batch: 405995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	200.8	
MB 310-405995/1-A	Method Blank	Total/NA	Water	200.8	
LCS 310-405995/2-A	Lab Control Sample	Total/NA	Water	200.8	

Analysis Batch: 406341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-405995/1-A	Method Blank	Total/NA	Water	200.8	405995
LCS 310-405995/2-A	Lab Control Sample	Total/NA	Water	200.8	405995

Analysis Batch: 406358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	200.8	405995

Analysis Batch: 406649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	200.8	405995
LCS 310-405995/2-A	Lab Control Sample	Total/NA	Water	200.8	405995

Prep Batch: 407023

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	245.1	
MB 310-407023/1-A	Method Blank	Total/NA	Water	245.1	
LCS 310-407023/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 407107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	245.2	407023
MB 310-407023/1-A	Method Blank	Total/NA	Water	245.2	407023
LCS 310-407023/2-A	Lab Control Sample	Total/NA	Water	245.2	407023

Prep Batch: 651911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	1631E	
310-269496-2	Field Blank LLHg	Total/NA	Water	1631E	
MB 400-651911/3-A	Method Blank	Total/NA	Water	1631E	
LCS 400-651911/4-A	Lab Control Sample	Total/NA	Water	1631E	
LCSD 400-651911/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 652002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	1631E	651911
310-269496-2	Field Blank LLHg	Total/NA	Water	1631E	651911
MB 400-651911/3-A	Method Blank	Total/NA	Water	1631E	651911
LCS 400-651911/4-A	Lab Control Sample	Total/NA	Water	1631E	651911
LCSD 400-651911/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	651911

General Chemistry

Analysis Batch: 405767

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	SM 4500 H+ B	

Eurofins Cedar Falls

QC Association Summary

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

General Chemistry (Continued)

Analysis Batch: 405767 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-405767/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 405989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	SM 2540C	
MB 310-405989/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-405989/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 406011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	SM 5210B	
USB 310-406011/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 310-406011/2	Lab Control Sample	Total/NA	Water	SM 5210B	

Prep Batch: 406016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	351.2	
MB 310-406016/1-A	Method Blank	Total/NA	Water	351.2	
LCS 310-406016/2-A	Lab Control Sample	Total/NA	Water	351.2	
310-269496-1 MS	Leachate	Total/NA	Water	351.2	
310-269496-1 MSD	Leachate	Total/NA	Water	351.2	

Analysis Batch: 406123

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	351.2	406016
MB 310-406016/1-A	Method Blank	Total/NA	Water	351.2	406016
LCS 310-406016/2-A	Lab Control Sample	Total/NA	Water	351.2	406016
310-269496-1 MS	Leachate	Total/NA	Water	351.2	406016
310-269496-1 MSD	Leachate	Total/NA	Water	351.2	406016

Analysis Batch: 406153

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	I-3765-85	
MB 310-406153/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-406153/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Prep Batch: 406498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	Distill/Ammonia	
MB 310-406498/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 310-406498/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 406809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	350.1	406498
MB 310-406498/1-A	Method Blank	Total/NA	Water	350.1	406498
LCS 310-406498/2-A	Lab Control Sample	Total/NA	Water	350.1	406498

Analysis Batch: 745454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-269496-1	Leachate	Total/NA	Water	SM 5310C	

Eurofins Cedar Falls

QC Association Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

General Chemistry (Continued)

Analysis Batch: 745454 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 500-745454/6	Method Blank	Total/NA	Water	SM 5310C	
LCS 500-745454/7	Lab Control Sample	Total/NA	Water	SM 5310C	

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Lab Chronicle

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Client Sample ID: Leachate

Lab Sample ID: 310-269496-1

Date Collected: 11/13/23 11:30

Matrix: Water

Date Received: 11/13/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	624.1		1	406381	WSE8	EET CF	11/17/23 13:19
Total/NA	Analysis	624.1		1	405943	WSE8	EET CF	11/14/23 20:36
Total/NA	Prep	625			405888	Y6AF	EET CF	11/14/23 08:11
Total/NA	Analysis	625.1		1	405958	L0FS	EET CF	11/14/23 19:29
Total/NA	Prep	608			405890	Y6AF	EET CF	11/14/23 08:12
Total/NA	Analysis	608.3		1	407134	BW2O	EET CF	11/28/23 12:42
Total/NA	Prep	608			405890	Y6AF	EET CF	11/14/23 08:12
Total/NA	Analysis	608.3		1	406058	BW2O	EET CF	11/15/23 15:11
Total/NA	Prep	1631E			651911	VLC	EET PEN	11/20/23 15:48 - 11/21/23 12:00 ¹
Total/NA	Analysis	1631E		1	652002	VLC	EET PEN	11/28/23 11:05
Total/NA	Prep	200.8			405995	KCK5	EET CF	11/15/23 08:55
Total/NA	Analysis	200.8		1	406358	A6US	EET CF	11/17/23 04:09
Total/NA	Prep	200.8			405995	KCK5	EET CF	11/15/23 08:55
Total/NA	Analysis	200.8		1	406649	A6US	EET CF	11/20/23 14:02
Total/NA	Prep	245.1			407023	NFT2	EET CF	11/27/23 09:04
Total/NA	Analysis	245.2		1	407107	NFT2	EET CF	11/27/23 15:54
Total/NA	Prep	Distill/Ammonia			406498	ENB7	EET CF	11/18/23 09:09
Total/NA	Analysis	350.1		1	406809	WZC8	EET CF	11/21/23 12:15
Total/NA	Prep	351.2			406016	W9YR	EET CF	11/15/23 06:14
Total/NA	Analysis	351.2		1	406123	WZC8	EET CF	11/15/23 13:18
Total/NA	Analysis	I-3765-85		1	406153	D7CP	EET CF	11/15/23 19:24
Total/NA	Analysis	SM 2540C		1	405989	D7CP	EET CF	11/14/23 16:17
Total/NA	Analysis	SM 4500 H+ B		1	405767	W9YR	EET CF	11/13/23 19:23
Total/NA	Analysis	SM 5210B		1	406011	W9YR	EET CF	11/15/23 05:25
Total/NA	Analysis	SM 5310C		1	745454	TR	EET CHI	12/05/23 20:21

Client Sample ID: Field Blank LLHg

Lab Sample ID: 310-269496-2

Date Collected: 11/13/23 11:30

Matrix: Water

Date Received: 11/13/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	1631E			651911	VLC	EET PEN	11/20/23 15:48 - 11/21/23 12:00 ¹
Total/NA	Analysis	1631E		1	652002	VLC	EET PEN	11/28/23 11:20

¹ 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 CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

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: 310-269496-1

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	12-01-23

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.

Analysis Method	Prep Method	Matrix	Analyte
200.8	200.8	Water	Arsenic
200.8	200.8	Water	Barium
200.8	200.8	Water	Cadmium
200.8	200.8	Water	Chromium
200.8	200.8	Water	Copper
200.8	200.8	Water	Iron
200.8	200.8	Water	Lead
200.8	200.8	Water	Nickel
200.8	200.8	Water	Selenium
200.8	200.8	Water	Silver
200.8	200.8	Water	Zinc
245.2	245.1	Water	Mercury
350.1	Distill/Ammonia	Water	Ammonia
351.2	351.2	Water	Nitrogen, Kjeldahl
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
I-3765-85		Water	Total Suspended Solids
SM 2540C		Water	Total Dissolved Solids
SM 4500 H+ B		Water	pH

Laboratory: Eurofins Chicago

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Iowa	State	082	05-01-24

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.

Analysis Method	Prep Method	Matrix	Analyte
SM 5310C		Water	Total Organic Carbon

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	06-30-24
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-00689	08-01-24
California	State	2510	06-30-24
Florida	NELAP	E81010	06-30-24
Georgia	State	E81010(FL)	06-30-24
Illinois	NELAP	200041	10-09-24

Accreditation/Certification Summary

Client: Adair County Sanitary Landfill
Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

Laboratory: Eurofins Pensacola (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Kansas	NELAP	E-10253	10-31-24
Kentucky (UST)	State	53	06-30-24
Louisiana (All)	NELAP	30976	06-30-24
Louisiana (DW)	State	LA017	12-31-23
North Carolina (WW/SW)	State	314	12-31-23
Oklahoma	NELAP	9810	08-31-24
Pennsylvania	NELAP	68-00467	01-31-24
South Carolina	State	96026	06-30-24
Tennessee	State	TN02907	06-30-24
Texas	NELAP	T104704286	09-30-24
US Fish & Wildlife	US Federal Programs	A22340	06-30-24
USDA	US Federal Programs	FLGNV23001	01-08-26
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-24
West Virginia DEP	State	136	03-31-24
West Virginia DEP	State	136	03-31-24

Method Summary

Client: Adair County Sanitary Landfill
 Project/Site: Adair Co. Sanitary Landfill Leachate

Job ID: 310-269496-1

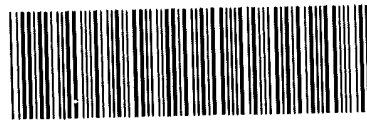
Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	EPA	EET CF
625.1	Semivolatile Organic Compounds (GC/MS)	EPA	EET CF
608.3	Organochlorine Pesticides in Water	EPA	EET CF
608.3	Polychlorinated Biphenyls (PCBs) (GC)	EPA	EET CF
1631E	Mercury, Low Level (CVAFS)	EPA	EET 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 CHI
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
Distill/Ammonia	Distillation, Ammonia	None	EET CF

Protocol References:

- EPA = US Environmental Protection Agency
- None = None
- 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 CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200
- EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001



Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SUS</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>11/13/23</u>	TIME <u>1620</u>	Received By: <u>EM</u>
Delivery Type: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input checked="" type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID:
Multiple Coolers?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler # _____ of _____
Cooler Custody Seals Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Sample Custody Seals Present?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No
Trip Blank Present?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓
<u>LL Hg sample w/ blanks</u>			
Temperature Record			
Coolant: <input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE			
Thermometer ID: <u>Y</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>25</u>		Corrected Temp (°C): <u>25</u>	
Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid)? <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



Environment Testing

Temperature Controlled



**IF THIS SHIPMENT IS DELAYED IN TRANSIT,
STORE REFRIGERATED (2° TO 8° C / 36° TO 47° F)**

TAL-0090(1016)

ORIGIN ID ALOA (319) 277-2401
SAMPLE RECEIVING
EUROFINS TESTAMERICA
3019 VENTURE WAY

SHIP DATE 14NOV23
ACTWGT 9.60 LB
CAD 0870970/CAFE3755

CEDAR FALLS, IA 50613
UNITED STATES US

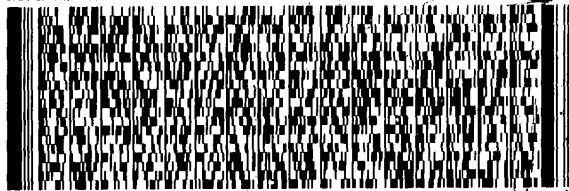
BILL SENDER

TO SHIPPING/RECEIVING
EUROFINS ENVIRONMENT TESTING SOUTHE
3355 MCLEMORE DRIVE

PENSACOLA FL 32514

(850) 474-1001
REF: S310-87107

3.400
740
78



FedEx
Express



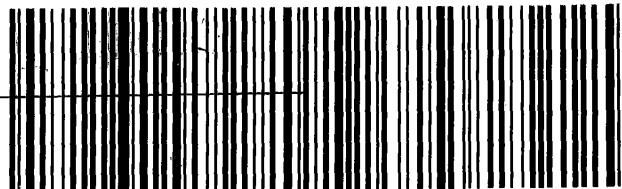
J233023051201LV

TRK# 7008 5804 1030
0201

WED - 15 NOV 10:30A
PRIORITY OVERNIGHT

XH PNSA

32514
FL-US BFM



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- 14
- 15

Eurofins Cedar Falls

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

Chain of Custody Record



eurofins | Environmental Testing

Client Information (Sub Contract Lab)		Sampler		Lab PM Liechti, Meredith L		Carrier Tracking No(s):		COC No: 310-67440 1											
Client Contact Shipping/Receiving		Phone:		E-Mail meredith.liechti@eurofins.com		State of Origin Iowa		Page Page 1 of 1											
Company Eurofins Environment Testing North Central				Accreditations Required (See note): State Program - Iowa				Job #: 310-269496-1											
Address: 2417 Bond Street, City: University Park State, Zip: IL, 60484 Phone: 708-534-5200(Tel) 708-534-5211(Fax) Email:		Due Date Requested 11/28/2023 TAT Requested (days)		Analysis Requested						Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify) Other:									
Project Name: Adair Co Sanitary Landfill Leachate Site: 310-269496 COC		PO #: WO #: Project #: 31008083 SSOW#:																	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		5310C/ (MOD) TOC		Total Number of containers		Special Instructions/Note:	
Leachate (310-269496-1)		11/13/23		11 30 Central				Water				X				3			
<p>Note: Since laboratory accreditations are subject to change Eurofins Environment Testing North Central, LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central LLC attention immediately. If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central LLC</p>																			
Possible Hazard Identification										Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)									
Unconfirmed										<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months									
Deliverable Requested I, II, III, IV, Other (specify)										Primary Deliverable Rank 2					Special Instructions/QC Requirements				
Empty Kit Relinquished by				Date		Time		Method of Shipment:											
Relinquished by:				Date/Time: 11/14/23 1230		Company:		Received by:		Date/Time: 11/15/23 1000		Company: BBPA							
Relinquished by:				Date/Time:		Company:		Received by:		Date/Time:		Company:							
Relinquished by:				Date/Time:		Company:		Received by:		Date/Time:		Company:							
Custody Seals Intact. Δ Yes Δ No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks 10.8 → 20.7															



Login Sample Receipt Checklist

Client: Adair County Sanitary Landfill

Job Number: 310-269496-1

Login Number: 269496

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Homolar, Dana J

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

Login Sample Receipt Checklist

Client: Adair County Sanitary Landfill

Job Number: 310-269496-1

Login Number: 269496

List Number: 2

Creator: Scott, Sherri L

List Source: Eurofins Chicago

List Creation: 11/15/23 01:55 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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	0.7
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.	True	



Login Sample Receipt Checklist

Client: Adair County Sanitary Landfill

Job Number: 310-269496-1

Login Number: 269496


List Number: 3

Creator: Roberts, Alexis J

List Source: Eurofins Pensacola

List Creation: 11/16/23 12:07 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	3.4°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
2023 Landfill Gas Report

Table 13
Gas Monitoring Summary
2023 Gas Monitoring Report
Adair County Sanitary Landfill (Closed)
Permit No. 01-SDP-01-74C

Monitoring Points		Methane Results (% LEL)							
		3/27/2023		6/22/2023		9/25/2023		12/21/2023	
1	Scale	0		0		0		0	
2	Scale House	0		0		0		0	
3	Recycling Center	0		0		0		0	
4	Shed has been removed	NA	X	NA	X	NA	X	NA	X
5	South Storage Shed	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	U	0	N	0	N	0	N
15	LFGW-W1	0	U	0	Y	0	Y	0	Y
16	LFGW-W2	0	U	0	N	0	N	0	N
17	LFGW-W3	0	U	0	N	0	N	0	N
18	LFG-GU01	0		0		0		0	
19	LFGW-W2W	0	U	0	N	0	N	0	N
20	LFGW-W3W	35	U	66	N	59	N	57	N

S(Y/N/U) - Was screen submerged, yes or no, blank is non-applicable, and U is unknown.

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) LFGW-W3W is a subsurface methane monitoring well located between the waste boundary and landfill gas monitoring well LFGW-W3. In accordance with IAC 567-113.9(2)"a", the methane gas concentration shall not exceed 100% of the LEL at the facility property boundary. As there was no detection in LFGW-W3, which is located east of LFGW-W3W at the property boundary, there is no evidence of offsite migration or a threat to human health and/or the environment.
- 4) Static water levels in subsurface methane monitoring points were inadvertently missed during the Q1 monitoring event.
- 5) The screen in LFGW-W1 was submerged during the Q2, Q3, and Q4 monitoring events. The maximum water column height above the top of the screen was 1.68' during the reporting period.

