

September 26, 2023
File No. 27223141.00

Mr. Mick Leat
Iowa Department of Natural Resources
Land Quality Bureau
Wallace State Office Building
502 East 9th Street
Des Moines, Iowa 50319-0034

Subject: 2023 Annual Water Quality Report
2023 Leachate Control System Performance Evaluation Report
2023 Landfill Gas Monitoring Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Dear Mick,

SCS Engineers (SCS) has completed the monitoring and evaluation for the ADM-Clinton Landfill for reporting year 2023. Our services were performed in general accordance with the requirements of the 1989 Iowa Administrative Code (IAC) 567-103 and the closure permit and subsequent amendment requirements for implementation of the Hydrologic Monitoring System Plan (HMSP). Please find enclosed a copy of the 2023 Annual Water Quality Report (AWQR), the 2023 Leachate Control System Performance Evaluation (LCSPE) Report, and the 2023 Landfill Gas Monitoring Report.

If you have any questions about this report, please contact us as noted below.

Sincerely,



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KAJ/TCB

cc: Bobby Peropat, ADM Clinton



2023 Annual Water Quality Report

ADM-Clinton Landfill
Solid Waste Permit No. 23-SDP-05-88C

Prepared for:

Archer-Daniels-Midland Company

SCS ENGINEERS

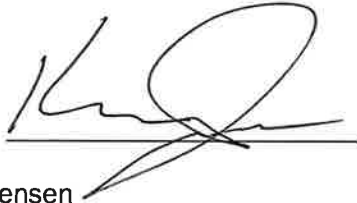
27223141.00 | September 26, 2023

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CERTIFICATION

Prepared by:



Date:

9-26-2023

Typed: Kevin Jensen

Reviewed by:



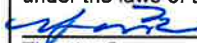
Date:

9/26/2023

Typed: Timothy C. Buelow, P.E.

Certification page (115.26(8)"d")

An annual report summarizing the effect of the facility on groundwater and surface water quality shall be submitted to the department each year. The summary is to be prepared by an engineer registered in the state of Iowa.

	I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.	
		Date: <u>9/26/2023</u>
	Timothy C. Buelow, P.E.	
	License No. 14445	
	My license renewal date is December 31, 2023.	
Pages or sheets covered by this seal:		
<u>All except Appendix B-1.</u>		

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EXECUTIVE SUMMARY

ES.1 PERIOD OF REPORT COVERAGE

SCS Engineers (SCS), on behalf of Archer-Daniels-Midland (ADM), has completed the required groundwater sampling of the ADM-Clinton Landfill (Landfill) for the calendar year 2023 reporting period. The purpose of this Annual Water Quality Report (AWQR) is to document and statistically evaluate the groundwater sampling results since the 2022 AWQR up to and including the spring and fall 2023 semiannual sampling events. This AWQR was prepared in accordance with the requirements of the 1989 Iowa Administrative Code (IAC) 567-103, the site closure permit, and subsequent correspondence and amendment requirements for implementation of the Hydrologic Monitoring System Plan (HMSP).

ES.2 REPORT PRIORITY

The following summarizes report priorities associated with groundwater compliance at the Landfill:

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

ES.3 SITE STATUS AND APPLICABLE RULES

- Landfill Status: Closed, Closure Permit.
- Types of waste accepted: Industrial.
- Applicable IAC rules: 1989 IAC 567-103.

ES.4 COMMENTS

The following summarizes points of special emphasis: None.

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1.0 ACRONYMS/ABBREVIATIONS

AL = Action Level
CCV = Continuing Calibration Verification
CL = Control Limit - Mean plus Two Standard Deviations
DNR = Iowa Department of Natural Resources
DO = Dissolved Oxygen
GWPS = Groundwater Protection Standard
GWQAP = Groundwater Quality Assessment Plan
LEL = Lower Explosive Limit
LCL = Lower Confidence Limit
LCS = Laboratory Control Sample
LN = Lognormal
M+/-2SD = Mean Plus/Minus Two Standard Deviations
MCL = EPA Maximum Contaminant Level
MDL = Method Detection Limit
N = Normal
NC = No Change
NM = Not Measured
ORP = Oxidation-Reduction Potential
PL = Prediction Limit
QA = Quality Assurance
QC = Quality Control
RL = Reporting Limit
SWS = DNR Statewide Standard for a Protected Groundwater Source
SSI = Statistically Significant Increase Above Background
SSL = Statistically Significant Level Above Groundwater Protection Standard
SSS = Site-Specific Standard (Site-Specific GWPS)
TSS = Total Suspended Solids
UCL = Upper Confidence Limit

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2.0 SITE BACKGROUND

2.1 SITE LOCATION

The ADM Clinton Landfill (Landfill) is located on the south side of Highway 30 between Beaver Channel Parkway and the Mississippi River. The Landfill is situated in the north half of Section 23, T81N, R6E, in Clinton County, Iowa.

2.2 FACILITY

The Landfill was operated by ADM from approximately 1982 to 1989. Before ADM, Clinton Corn performed filling activities at the Landfill site for an undetermined period. Fill materials placed in the Landfill have reportedly consisted of coal combustion residue, construction rubble, and river clarification solids generated during river water treatment for wet corn mill processing at the ADM plant.

Historically, fill material was placed at the Landfill site and on the properties adjoining to the northeast, northwest, and southwest. Fill material placed in these areas was of an unknown source and was not associated with ADM's landfilling activities.

2.3 GEOLOGY AND HYDROGEOLOGY OF THE SITE

In the document titled ADM – Clinton Plant Existing Fly Ash Landfill Revised Hydrogeologic Investigation Report and Hydrologic Monitoring System Plan, dated November 20, 1992 by Terracon Environmental, Inc., hereafter referred to as the 1992 Revised HIR, the following geological description was provided:

The site is situated in the valley of the Mississippi River and comprises an area considered floodplain prior to dike construction and landfill activities. Beaver Slough, an active meander arm of the Mississippi River, forms the eastern boundary of the site from northeast to the southwest. The site is located in the extreme eastern arm of a physiographic province known as the Iowa Erosional Surface (or the Iowan Surface). The Iowa Erosional Surface extends across most of northeast Iowa and is characterized by a maturely dissected pre-Illinoian glacial till plain. Typically overlying the glacial till is a Wisconsinian Age loess cover of approximately sixteen (16) feet. Topography of the region is generally undulating with low relief.

Where the site is not filled it is generally overlain with a thin layer of till. This till is encountered beneath the fill (both landfilled waste and levee fill). This layer ranges from approximately two (2) inches to ten (10) feet. The till overlies a thin spotty layer of brown sand observed in a number of borings. The thickness of this unit ranges from one (1) foot to fifteen (15) feet. Sand was observed in borings MW-1, MW-4, MW-6, MW-7, MW-10, and MW-16. Below the fill and sand unit, a weathered dolomitic limestone was encountered. The thickness of this layer was not determined as it extended beyond the deepest borings of fifty-five (55) feet.

2.4 HYDROLOGY OF THE SITE

According to the 1992 Revised HIR, the following hydrologic information was provided for the perched water table flow and potential leachate migration:

The perched water table flow inside the landfill as interpolated from monitoring well data obtained on August 16, 1991, is depicted on Figure 12, Appendix A and is radially outward from the landfill. Temporal data provided in Table 3; Appendix B indicated that this radially outward flow pattern was present during the period that water elevations were recorded. Seasonal fluctuations in the perched water elevations are most likely due to varying amounts of rainfall, surface flow infiltration and the moisture content of landfilled materials.

The largest contributor of the perched liquid during the period that the landfill was being used was most likely the river mud that remained after river water had been clarified for plant use. This river mud generally contained approximately eighty percent (80%) moisture when it was deposited in the landfill as reported in the pending CPCP for the landfill. Final moisture content of the river mud is on the order of twenty-five percent (25%). Rain and groundwater infiltration, and surface runoff into the landfill also contributed to the liquid content of the landfill during the operational life of the landfill.

The perched liquid in the landfill can generally be characterized by definition as leachate although no current chemical laboratory analytical data is available to characterize its potential impact to groundwater quality beneath the landfill. Leachate, by definition, is generated by liquid that has entered the landfill as it moves down through the landfill.

Based on the observed anisotropy (K_h/K_v) of the clay beneath the landfill, movement of the liquid through the landfill should be primarily horizontal rather than vertical. Using results of the laboratory and field hydraulic conductivity measurements of samples taken from MW-7A, the anisotropy in the clay was estimated to be on the order of 11,800/1. Based on this anisotropy and current groundwater movement at the landfill, the major potential pathway that liquid in the landfill would follow would be through the fill toward Beaver Slough. Other pathways include leachate seeps from the side slopes of the landfill. Leachate seeps have been noted at the landfill after heavy rainstorms.

The minimum five (5) foot separation as required in IAC 103.2(1)m(2) does not appear to exist at the site. Should leachate migration occur into the deeper bedrock aquifer and an impact to the groundwater beneath the landfill occurs, these occurrences should be detected in the perimeter monitoring wells during the routine post closure monitoring outlined in the Hydrologic Monitoring System Plan (HMSP), Appendix H. If problems are detected, remedial measures can be implemented by ADM.

According to the 1992 Revised HIR, the following hydrologic information was provided for the shallow clay and sand units and bedrock aquifer:

Temporal groundwater fluctuations in the shallow sand unit and in the uppermost bedrock aquifer generally vary with the Mississippi River stage with seasonal fluctuations in monitoring wells MW-11 and MW-12 due to surface runoff.

Groundwater potentiometric contour maps as interpolated from August 16, 1991, data for the shallow sand unit and the bedrock aquifer are included as Figure 13 and Figure 14, Appendix A, respectively. General horizontal groundwater flow patterns in the shallow units and the deeper bedrock beneath the landfill appear to be southeasterly across the landfill during much of the study period (3/22/91 - 8/16/91) toward Beaver Slough.

A slight northerly horizontal component of flow was noted during the April 12, 1991, and the August 16, 1991 water level measurement sampling events at the northern tip of the landfill. The flow reversal during the April 12, 1991 event was most likely due to increased surface runoff causing the water level in MW-1 to rise faster than the water level in MW-11. The flow reversal during the August 16, 1991 event was most likely due to the water level in MW-11 falling as a result of relatively low rainfall infiltration while MW-1 continued to be influenced by up-flowing recharge from the underlying bedrock unit. Figure 13, Appendix A shows this northerly flow component at the extreme northern tip of the landfill for the August 16, 1991 data. Horizontal flow reversal to the north will tend to increase leachate migration in that direction during and following prolonged periods of heavy precipitation.

Vertical movement in the units beneath the landfill along the northwestern boundary at the site appears to be generally dependent on the same factors described as influencing horizontal flow in this area (i.e. seasonal variations in rainfall and/or surface drainage through the drainage ditch). Vertical movement along the northwestern boundary appears to be generally upward along this border during most of the water level measurement events as noted in well clusters MW-11/14 and MW-12/15. This upward flow path appears to be related to a gaining reach in the drainage channel that runs northward along the perimeter of the landfill in this area.

Vertical flow reversal has been noted during the March 25, 1991, water level measurement event in well cluster MW-11/14 and during the March water level measurement events in well cluster MW-12/15. This is believed to be due to excessive rainfall or large surface drainage events such as snowmelt runoff accumulating in the drainage ditch along the northwestern boundary of the landfill and causing a downward vertical movement as evidenced by the water level in the shallow wells (MW-11 and MW-12) apparently increasing faster than the water levels in the deeper wells.

Upward vertical flow along the northwestern boundary of the landfill in the bedrock should cause a groundwater barrier along this boundary. This groundwater barrier should impede leachate migration from the landfill horizontally along much of this barrier. Leachate migration should be detected within the proposed monitoring system should detectable leachate migration occur.

Stage fluctuation in Beaver Slough is expected to influence the piezometric levels in the bedrock and overlying units on the basis of increasing hydraulic delay effect as distance from the slough increases. During high water periods, the magnitude of the downward gradient over most of the landfill should diminish and perhaps temporarily reverse given a prolonged flood event. In the northern tip of the landfill the normal upward gradient could be exaggerated. The horizontal flow path could also temporarily reverse 180 degrees with generalized flow going to the northwest across the entire site.

When the slough potentiometric level is lower than the adjoining aquifer, most of the landfill would experience vertical downward gradients, but, because of the high anisotropy, the three-dimensional flow would remain primarily horizontal toward the slough. During these periods, the northern tip of the landfill could experience a reversal to a downward vertical gradient and horizontal flow in this area could also reverse toward the southeast, back beneath the landfill toward the slough. Both of these phenomena depend almost entirely on the stage of Beaver Slough and the adjoining Mississippi River.

Notes:

1. The referenced figures and appendices contained in the above citations are not included in this report.
2. Referenced well clusters in the above citations have been renamed. Refer to Figure 4 of the 1992 ADM-Clinton Plant Existing Fly Ash Landfill Revised Hydrogeologic Investigation Report and Hydrologic Monitoring System Plan for the location of these monitoring well clusters.

3.0 FIGURES DISCUSSION

The following figures are attached.

3.1 FIGURE 1 – APPROVED MONITORING NETWORK

The Landfill property and hydrological monitoring system plan (HMSP) network is depicted in **Figure 1**. **Figure 1** indicates the locations of each monitoring well and its respective monitoring program as of the beginning of this reporting period.

3.2 FIGURE 2 – GROUNDWATER CONTOURS – UNCONSOLIDATED AQUIFER

A groundwater contour map based on water levels measured in the unconsolidated aquifer and the Landfill piezometers during the July 2023 semiannual groundwater sampling event is included as **Figure 2**. When considering only the groundwater monitoring well water levels, **Figure 2** indicates a generally southeasterly flow direction towards the Mississippi River; however, incorporation of leachate levels into the contour development as shown in **Figure 2** indicates potential mounding at several locations creating the appearance of localized areas of radial outward gradients within the fill area footprint. It should be noted that when considering the leachate elevations in the contour development, it is not known if the leachate elevations measured in the piezometers are the result of the intersection of perched leachate zones within the waste mass, a fully saturated waste mass in the vicinity of the monitoring points, or whether the leachate is in hydraulic communication with the groundwater.

3.3 FIGURE 3 – GROUNDWATER CONTOURS – BEDROCK AQUIFER

A groundwater contour map based on water levels measured in the bedrock aquifer during the July 2023 semiannual groundwater sampling event is included as **Figure 3**. **Figure 3** indicates a generally southeasterly flow direction toward the Mississippi River.

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4.0 QA/QC SUMMARY

Date indicates the date(s) of sampling.

4.1 FEBRUARY 14, 2023 (2023 SPRING SAMPLING EVENT)

Based on the QA review, no samples were rejected as unusable due to QC failures. In general, the quality of the analytical data for this sampling event does not appear to have been compromised by analytical irregularities (with the exception of the typical preservation issues that appear to be related to the basic nature of the samples) and results affected by QC anomalies are qualified with the appropriate data flags, which are listed in the laboratory report in **Appendix B-1**. Data validation documentation can be found in **Appendix B-2**.

4.2 JULY 19, 2023 (2023 FALL SAMPLING EVENT)

Based on the QA review, no samples were rejected as unusable due to QC failures. In general, the quality of the analytical data for this sampling event does not appear to have been compromised by analytical irregularities (with the exception of the typical preservation issues that appear to be related to the basic nature of the samples) and results affected by QC anomalies are qualified with the appropriate data flags, which are listed in the laboratory report in **Appendix B-1**. Data validation documentation can be found in **Appendix B-2**.

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5.0 DATA EVALUATION

Statistical analyses in accordance with requirements of the 1989 IAC 567-103.2(8)"d" were conducted for the groundwater analytical data collected during the 2023 semiannual sampling events. The statistical evaluation for samples collected during the 2023 semiannual sampling events is located in **Appendix D** of this report.

5.1 DATA EVALUATION

Groundwater monitoring for the Landfill consists of sampling from two aquifers. The unconsolidated aquifer contains two upgradient monitoring wells located on the north and northeast sides of the Landfill and eight downgradient monitoring wells; one located on the southeast side, two located along the south side, two located on the southwest side, one located on the west side, and two located on the northwest side of the Landfill. The bedrock aquifer contains two upgradient monitoring wells located on the north and northeast sides of the Landfill and six downgradient monitoring wells; one located on the southeast side, two located along the south side, two located on the southwest side, and one located on the northwest side of the Landfill.

A total of 82 control limit exceedances were detected based on spring and fall 2023 sampling results as listed in Table 1 compared to 85 control limit exceedances detected based on spring and fall 2022 sampling results reported in the 2022 AWQR, not counting total suspended solids or PAHs. Most of the control limit exceedances detected based on 2023 sampling results were attributed to the unconsolidated aquifer.

Exceedances of action or advisory levels were largely associated with arsenic, boron, cobalt, manganese, and nitrogen-ammonia as listed in **Table 9**. It should be noted that, in addition to the action or advisory level exceedances shown in **Table 9**, the action or advisory level for cobalt was exceeded in upgradient monitoring well MW-18 and the action or advisory level for manganese was exceeded in upgradient monitoring wells MW-2 and MW-18 based on a review of concentrations listed in the Summary of Groundwater Chemistry in **Appendix C**.

5.2 TRENDING IN MONITORING WELLS

Statistically significant decreasing trends at a 99% confidence level ($\alpha=0.01$) were identified in five monitoring well/constituent pairs by Mann-Kendall analysis during this reporting period. Statistically significant increasing trends at a 99% confidence level ($\alpha=0.01$) were identified in three monitoring well/constituent pairs by Mann-Kendall analysis during this reporting period. The trend analysis is included in **Attachment A** of **Appendix D** of this report. The statistically significant trends were as follows:

Monitoring Point	Constituent	Trend
MW-4	Chloride	Increasing
MW-9	Cobalt	Increasing
MW-9	Magnesium	Increasing
MW-11	Cobalt	Decreasing
MW-12	Boron	Decreasing
MW-12	Cobalt	Decreasing
MW-12	Magnesium	Decreasing
MW-12	Nitrogen-Ammonia	Decreasing

Although not necessarily statistically significant, the Mann-Kendall statistics can provide an indication of general trending in the data. Trend indications for wells in the monitoring program are shown in the table below. The statistics used to develop the general trending differ from the Mann-Kendall statistics used in the diagnostics section of the statistical evaluation in that a much lower trend threshold is applied for the general trending information ($\alpha=0.20$ versus $\alpha=0.01$). Trends classified as decreasing or increasing exhibited a statistically significant trend with 80% confidence using the most recent eight data points. Trends classified as stable did not exhibit a statistically significant trend with 80% confidence using the eight most recent data points. A summary of Mann-Kendall statistics by constituent in each monitoring point is included in **Appendix E** of this report.

Trending in Compliance Monitoring Wells					
Aquifer	Monitoring Well	Decreasing Trends	Stable Trends	Increasing Trends	Number of Constituents Evaluated
Unconsolidated Aquifer	MW-2 (u)	0.00%	100.00%	0.00%	11
	MW-18 (u)	0.00%	91.67%	8.33%	12
	MW-3	0.00%	90.91%	9.09%	11
	MW-5	9.09%	81.82%	9.09%	11
	MW-7	0.00%	63.64%	36.36%	11
	MW-9	0.00%	54.55%	45.45%	11
	MW-11	11.11%	77.78%	11.11%	18
	MW-13	8.33%	91.67%	0.00%	12
	MW-14	25.00%	66.67%	8.33%	12
	MW-16	0.00%	100.00%	0.00%	6
Bedrock Aquifer	MW-1 (u)	0.00%	85.71%	14.29%	7
	MW-17 (u)	12.50%	87.50%	0.00%	8
	MW-4	0.00%	85.71%	14.29%	7
	MW-6	30.77%	69.23%	0.00%	13
	MW-8	0.00%	75.00%	25.00%	8
	MW-10	66.67%	25.00%	8.33%	12
	MW-12	0.00%	90.91%	9.09%	11
	MW-15	0.00%	100.00%	0.00%	8
Combined	Site Wide	10.58%	78.31%	11.11%	189

(u) indicates an upgradient monitoring point.

Review of the Mann-Kendall statistics indicated that approximately 89% of the Mann-Kendall statistics were considered stable or decreasing following the 2023 annual statistical evaluation with none of the decreasing trends being pH. There were twenty-one monitoring well/constituent pairs with generally increasing trends. The monitoring well/constituent pairs with increasing trends are discussed in the following table.

Aquifer	Monitoring Well	Constituent Name	Comments
Unconsolidated Aquifer	MW-18 (u)	Chloride	Based on eight actual detections. Highest concentration of 53.6 mg/L measured in spring 2021.
	MW-3	Chloride	Based on eight actual detections. All trend concentrations were within the historical range.
	MW-5	Magnesium	Based on eight actual detections. All trend concentrations were within the historical range.
	MW-7	Arsenic	Based on eight actual detections. Highest concentration of 0.165 mg/L measured in spring 2022.
	MW-7	Boron	Based on eight actual detections. All trend concentrations were within the historical range.
	MW-7	Cobalt	Based on seven actual detections and one J flag detection. Highest concentration of 0.00975 mg/L detected in fall 2014.
	MW-7	Magnesium	Based on eight actual detections. All trend concentrations were within the historical range.
	MW-9	Arsenic	Based on eight actual detections. Highest concentration of 0.086 mg/L detected in fall 2022.
	MW-9	Chloride	Based on eight actual detections. All trend concentrations were within the historical range.
	MW-9	Cobalt	Based on five actual detections and three J flag detections. Highest concentration of 0.00547 mg/L measured in spring 2023.
	MW-9	Magnesium	Based on eight actual detections. All trend concentrations were within the historical range.
	MW-9	Manganese	Based on five actual detections and three J flag detections. Highest concentration of 1.85 mg/L measured in spring 2023.
	MW-11	Acetone	Based on two actual detections, one J flag detection, and five non-detections. Highest concentration of 17.6 ug/L measured in fall 2022.

Aquifer	Monitoring Well	Constituent Name	Comments
	MW-11	Manganese	Based on eight actual detections. All trend concentrations were within the historical range.
	MW-14	Chloride	Based on eight actual detections. Highest concentration of 493 mg/L measured in fall 2023.
Bedrock Aquifer	MW-1 (u)	Sulfate	Based on eight actual detections. All trend concentrations were within the historical range.
	MW-4	Chloride	Based on eight actual detections. Highest concentration of 197 mg/L measured in fall 2023.
	MW-8	Chloride	Based on eight actual detections. All trend concentrations were within the historical range.
	MW-8	Specific Conductance	Based on eight measurements. All measurements were within the historical range.
	MW-10	Sulfate	Based on five actual detections and three J flag detections. Highest concentration of 134 mg/L measured in spring 2023.
	MW-12	pH	Based on eight measurements. All measurements were within the historical range.

A total of 21 increasing constituent trends and no decreasing pH trends were measured at an 80% confidence level in 2023 compared to 16 increasing constituent trends and three decreasing pH trends measured at an 80% confidence level in 2022, not including TSS. It should be noted that two of the increasing trends measured at 80% confidence level in 2023 were found in upgradient monitoring wells.

6.0 RECOMMENDATIONS

6.1 SITE IMPACT ON GROUNDWATER

Groundwater analytical results during this reporting period were similar to the previous reporting period. Based on the monitoring results, the Landfill appears to be having limited impact on groundwater quality downgradient of the site. However, because of the limited extent and nature of the impacts, the stability of the concentrations in groundwater, the industrial nature of the surrounding area, and the local hydrogeologic conditions, it appears that no additional sampling or site assessment is warranted at this time.

6.2 PROPOSED MONITORING

The groundwater monitoring program is summarized in **Table 1**. No changes to the HMSP monitoring program are recommended at this time. It is recommended that sampling continue for calendar year 2024 as summarized in **Table 2**.

6.3 PROPOSED MONITORING WELL CHANGES

Monitoring well performance is summarized in **Table 4**. No proposed changes to the monitoring wells are recommended at this time.

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Tables

- 1 Monitoring Program Summary
- 2 Monitoring Program Implementation Schedule
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- 6 Summary of Well/Detected Constituent Pairs with No Immediately Preceding Control Limit Exceedances
- 7 Summary Table of Ongoing and Newly Identified Control Limit Exceedances
- 8 Summary of Groundwater Chemistry (The Summary of Groundwater Chemistry is Located in Appendix C)
- 9 Historical Control and Action Level Exceedances
- 10 Groundwater Quality Assessment Plan Trend Analysis

Table 1
Monitoring Program Summary
2023 Annual Water Quality Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Monitoring Well	Formation	Current Monitoring Program	Change for Next Sampling Event	Control Limit Exceedances	Total Number of Samples in Each Monitoring Program Since January 1, 2018		
					Routine	Supplemental	Remedial Action
Unconsolidated Aquifer							
MW-2	Formation Info Not Found	Background	None		12	-	-
MW-18	Formation Info Not Found	Background	None		12	-	-
MW-3	Formation Info Not Found	Detection	None	Boron, Chloride, Iron, Magnesium, Manganese, Specific Conductance	11	-	-
MW-5	Formation Info Not Found	Detection	None	Arsenic, Boron, COD, Chloride, Cobalt, Iron, Magnesium, Manganese, Nitrogen-Ammonia, Specific Conductance, Sulfate	11	-	-
MW-7	Formation Info Not Found	Detection	None	Arsenic, Boron, COD, Chloride, Magnesium, Nitrogen-Ammonia, Specific Conductance	11	-	-
MW-9	Formation Info Not Found	Detection	None	Arsenic, Boron, COD, Cobalt, Iron, Magnesium, Manganese, Nitrogen-Ammonia, Specific Conductance, Sulfate	11	-	-
MW-11	Formation Info Not Found	Detection	None	Arsenic, Boron, COD, Chloride, Cobalt, Iron, Magnesium, Manganese, Nitrogen-Ammonia, Specific Conductance	12	-	-
MW-13	Formation Info Not Found	Detection	None	Arsenic, Boron, COD, Iron, Magnesium, Manganese, Nitrogen-Ammonia, Specific Conductance	12	-	-
MW-14	Formation Info Not Found	Detection	None	Boron, Chloride, Magnesium, Manganese, Specific Conductance	12	-	-
MW-16	Formation Info Not Found	Detection	None		12	-	-
Bedrock Aquifer							
MW-1	Dolomitic Limestone	Background	None		12	-	-
MW-17	Dolomitic Limestone	Background	None		12	-	-
MW-4	Dolomitic Limestone	Detection	None		12	-	-
MW-6	Dolomitic Limestone	Detection	None	Arsenic, Boron, COD, Cobalt, Iron, Magnesium, Nickel, Nitrogen-Ammonia, Specific Conductance, Sulfate	12	-	-
MW-8	Dolomitic Limestone	Detection	None		12	-	-
MW-10	Dolomitic Limestone	Detection	None	Iron, Nitrogen-Ammonia, Sulfate	12	-	-
MW-12	Dolomitic Limestone	Detection	None	Arsenic, Boron, COD, Chloride, Cobalt, Iron, Magnesium, Manganese, Nitrogen-Ammonia, Specific Conductance	12	-	-
MW-15	Dolomitic Limestone	Detection	None	Magnesium, Sulfate	12	-	-

Notes: Control limit exceedances listed are based on at least one exceedance during the reporting period.

Table 2
Monitoring Program Implementation Schedule
2023 Annual Water Quality Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Regime	Monitoring Well	Recent Sampling Dates and Constituents		Upcoming Sampling Dates and Constituents	
		2/14/2023	7/19/2023	2024 Spring Event	2024 Fall Event
Unconsolidated Aquifer	MW-2 (u)	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS, Total Phenols	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS, Total Phenols
	MW-18 (u)	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS, Total Phenols	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS, Total Phenols
	MW-3	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS
	MW-5	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS
	MW-7	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS, Total phenols, bis[2-ethylhexyl]phthalate	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS, Total phenols, bis[2-ethylhexyl]phthalate
	MW-9	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS, Total phenols, bis[2-ethylhexyl]phthalate, EPA 8260 (VOCs)	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS, Total phenols, bis[2-ethylhexyl]phthalate, EPA 8260 (VOCs)
	MW-11	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS, EPA 8260 (VOCs)	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS, EPA 8260 (VOCs)
	MW-13	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS
	MW-14	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS
	MW-16	IAC 103.2(4)"e", Total Inorganics(As, B, Co, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, SO4), ORP, DO, TSS

Notes: Sampling for dissolved iron was replaced with sampling for total iron beginning in 2023.

Table 2 - continued
Monitoring Program Implementation Schedule
2023 Annual Water Quality Report
ADM-Clinton Landfill
Permit No.23-SDP-05-88C

Regime	Monitoring Well	Recent Sampling Dates and Constituents		Upcoming Sampling Dates and Constituents	
		2/14/2023	7/19/2023	2024 Spring Event	2024 Fall Event
Bedrock Aquifer	MW-1 (u)	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, Ni, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, Ni, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, Ni, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, Ni, SO4), ORP, DO, TSS
	MW-17 (u)	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, Ni, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, Ni, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, Ni, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, Ni, SO4), ORP, DO, TSS
	MW-4	IAC 103.2(4)"e", Total Inorganics(As, B, Co, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, SO4), ORP, DO, TSS
	MW-6	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, Ni, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, Ni, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, Ni, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, Ni, SO4), ORP, DO, TSS
	MW-8	IAC 103.2(4)"e", Total Inorganics(As, B, Co, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, SO4), ORP, DO, TSS
	MW-10	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS
	MW-12	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS, EPA 8260 (VOCs)	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, Mn, SO4), ORP, DO, TSS, EPA 8260 (VOCs)
	MW-15	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, SO4), ORP, DO, TSS	IAC 103.2(4)"e", Total Inorganics(As, B, Co, Mg, SO4), ORP, DO, TSS
Leachate	Wet Well	None	None	Ammonia, Kjeldahl Nitrogen, Total Phenols, TSS, TS, CBOD, Nitrate, Chloride, Sulfate, Total Cyanide, EPA 8270D (SVOC's), EPA 8260C (VOC's), Total Inorganics (Al, AR, Bo, Cd, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Zn)	None

Notes: Wet well sampled once every two years.
Sampling for dissolved iron was replaced with sampling for total iron beginning in 2023.

Table 3
Monitoring Well Maintenance and Performance Re-Evaluation Schedule
2023 Annual Water Quality Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Compliance with:	2021	2022	2023	2024
567 IAC 110.9(2)"a" high and low water levels (annually)	Completed	Completed	Included	Scheduled
567 IAC 110.9(2)"b" changes in the hydrologic setting and flow paths	Completed	Completed	Included	Scheduled
567 IAC 110.9(2)"c" well depths	Completed	Completed	Included	Scheduled
567 IAC 110.9(2)"d" well recharge rates ⁽¹⁾	Completed		Included	Scheduled

Notes:

⁽¹⁾ In-situ permeability testing was replaced with biennial well recharge rate evaluation in DNR correspondence dated January 17, 2018 (Doc# 91298).

Table 4
Monitoring Well Performance and Maintenance Summary
2023 Annual Water Quality Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Regime	Well	Top of Casing	Top of Screen	Total Depth		Date of Measurements	Maximum Depth	Initial Flow Rate (L/min)*	Recent Flow Rate (L/min)	
						7/19/2023			4/12/2017	7/19/2023 % Change
Unconsolidated Aquifer	MW-2	584.49	580.83	14.5	Groundwater Level (ft)	5.56	-1.1	0.177	0.167	-6%
					Groundwater Elevation (Ft MSL)	578.93				
					Measured Well Depth (ft)	13.4				
					Submerged screen	N				
	MW-18	584.44	577.69	17.5	Groundwater Level (ft)	5.58	0.3	0.183	0.167	-9%
					Groundwater Elevation (Ft MSL)	578.86				
					Measured Well Depth (ft)	17.8				
					Submerged screen	Y				
	MW-3	595.05	575.75	29.3	Groundwater Level (ft)	24.50	-3.2	0.138	0.158	15%
					Groundwater Elevation (Ft MSL)	570.55				
					Measured Well Depth (ft)	26.1				
					Submerged screen	N				
	MW-5	596.17	579.56	27.5	Groundwater Level (ft)	23.45	0.4	0.133	0.154	16%
					Groundwater Elevation (Ft MSL)	572.72				
					Measured Well Depth (ft)	27.9				
					Submerged screen	N				
	MW-7	595.15	575.77	30.0	Groundwater Level (ft)	24.02	0.8	0.116	0.158	36%
					Groundwater Elevation (Ft MSL)	571.13				
					Measured Well Depth (ft)	30.8				
					Submerged screen	N				
	MW-9	594.20	574.44	30.8	Groundwater Level (ft)	24.58	0.0	0.100	0.107	7%
					Groundwater Elevation (Ft MSL)	569.62				
					Measured Well Depth (ft)	30.8				
					Submerged screen	N				
	MW-11	589.82	579.82	20.0	Groundwater Level (ft)	15.80	0.0	0.116	0.175	51%
					Groundwater Elevation (Ft MSL)	574.02				
					Measured Well Depth (ft)	20.0				
					Submerged screen	N				
	MW-13	589.93	577.53	23.2	Groundwater Level (ft)	15.22	1.2	0.150	0.158	6%
					Groundwater Elevation (Ft MSL)	574.71				
					Measured Well Depth (ft)	24.4				
					Submerged screen	N				
	MW-14	587.06	580.06	17.0	Groundwater Level (ft)	10.52	1.0	0.125	0.167	33%
					Groundwater Elevation (Ft MSL)	576.54				
					Measured Well Depth (ft)	18.0				
					Submerged screen	N				
	MW-16	585.06	579.00	17.0	Groundwater Level (ft)	9.55	0.0	0.116	0.160	38%
					Groundwater Elevation (Ft MSL)	575.51				
					Measured Well Depth (ft)	17.0				
					Submerged screen	N				

Table 4 - continued
Monitoring Well Performance and Maintenance Summary
2023 Annual Water Quality Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Regime	Well	Top of Casing	Top of Screen	Total Depth		Date of Measurements	Maximum Depth	Initial Flow Rate (L/min)*	Recent Flow Rate (L/min)	
						7/19/2023			4/12/2017	7/19/2023 % Change
Bedrock Aquifer	MW-1	585.49	558.57	37.8	Groundwater Level (ft)	6.41	0.0	0.194	0.163	-16%
					Groundwater Elevation (Ft MSL)	579.08				
					Measured Well Depth (ft)	37.8				
					Submerged screen	Y				
	MW-17	582.74	557.31	37.8	Groundwater Level (ft)	6.15	-4.0	0.197	0.163	-18%
					Groundwater Elevation (Ft MSL)	576.59				
					Measured Well Depth (ft)	33.8				
					Submerged screen	Y				
	MW-4	595.30	521.02	85.1	Groundwater Level (ft)	22.95	-8.4	0.141	0.156	10%
					Groundwater Elevation (Ft MSL)	572.35				
					Measured Well Depth (ft)	76.7				
					Submerged screen	Y				
	MW-6	596.22	553.98	53.0	Groundwater Level (ft)	23.65	0.6	0.116	0.140	21%
					Groundwater Elevation (Ft MSL)	572.57				
					Measured Well Depth (ft)	53.6				
					Submerged screen	Y				
	MW-8	595.19	535.36	70.5	Groundwater Level (ft)	23.54	-5.7	0.125	0.158	27%
					Groundwater Elevation (Ft MSL)	571.65				
					Measured Well Depth (ft)	64.8				
					Submerged screen	Y				
	MW-10	594.01	556.63	48.2	Groundwater Level (ft)	23.10	-0.1	0.104	0.140	35%
					Groundwater Elevation (Ft MSL)	570.91				
					Measured Well Depth (ft)	48.1				
					Submerged screen	Y				
	MW-12	589.71	562.21	37.5	Groundwater Level (ft)	16.35	-0.2	0.122	0.171	40%
					Groundwater Elevation (Ft MSL)	573.36				
					Measured Well Depth (ft)	37.3				
					Submerged screen	Y				
	MW-15	586.43	557.93	38.5	Groundwater Level (ft)	11.02	0.5	0.123	0.163	32%
					Groundwater Elevation (Ft MSL)	575.41				
					Measured Well Depth (ft)	39.0				
					Submerged screen	Y				

Comments:

- 1) Measured well depths were less than 1.0 foot shallower than the installed depths where measured with the following exceptions:

MW-2, MW-3, MW-4, MW-8, and MW-17: These monitoring wells have consistently measured shallower than the installed depth; however, since the monitoring wells produce sufficient groundwater for sampling (with the exception of MW-3 during the fall 2023 sampling event), it is likely that the wells are functioning properly.

- 2) It should be noted that baseline recharge rates were calculated from the first semi-annual sampling event utilizing low-flow sampling apparatuses and should not be considered necessarily representative of a monitoring well's recharge rate under all water level conditions.

Table 5
Background and GWPS Summary
2023 Annual Water Quality Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Interwell Background/GWPS (Unconsolidated Aquifer: MW-2, MW-18)

Constituent	Units	Samples	Detections	Background Level	Statistical Test	Action Level	Source
Arsenic	mg/L	32	16	0.03193	M+2SD	0.01 mg/L	MCL/SWS
Boron	mg/L	32	32	0.4461	M+2SD	6 mg/L	HAL
Chemical Oxygen Demand	mg/L	126	111	50.17	M+2SD		
Chloride	mg/L	126	126	73.6	M+2SD		
Cobalt	mg/L	32	28	0.00450	M+2SD	0.0021 mg/L	SWS
Iron	mg/L	8	5	1.783	M+2SD		
Magnesium	mg/L	32	32	38.33	M+2SD		
Manganese	mg/L	32	32	1.095	M+2SD	0.3 mg/L	MCL/SWS
Nitrogen, Ammonia	mg/L	126	104	5.41	M+2SD	30.0 mg/L	HAL
pH	S.U.	126	126	6.202 - 7.891	M+/-2SD		
Specific Conductance	µS/cm	126	126	1426	M+2SD		
Sulfate	mg/L	26	26	74.36	M+2SD		

Interwell Background/GWPS (Bedrock Aquifer: MW-1, MW-17)

Constituent	Units	Samples	Detections	Background Level	Statistical Test	Action Level	Source
Arsenic	mg/L	33	4	0.00117	M+2SD	0.01 mg/L	MCL/SWS
Boron	mg/L	33	31	1.0070	M+2SD	6 mg/L	HAL
Chemical Oxygen Demand	mg/L	97	45	19.47	M+2SD		
Chloride	mg/L	96	95	224.8	M+2SD		
Cobalt	mg/L	33	17	0.000565	M+2SD	0.0021 mg/L	SWS
Iron	mg/L	8	0	0.050	M+2SD		
Magnesium	mg/L	32	32	57.84	M+2SD		
Manganese	mg/L	32	16	1.099	M+2SD	0.3 mg/L	MCL/SWS
Nickel	mg/L	30	9	0.00473	M+2SD	0.1 mg/L	SWS
Nitrogen, Ammonia	mg/L	97	15	1.32	M+2SD	30.0 mg/L	HAL
pH	S.U.	97	97	6.218 - 7.786	M+/-2SD		
Specific Conductance	µS/cm	98	98	1592	M+2SD		
Sulfate	mg/L	25	24	71.98	M+2SD		

Notes:

- 1) Background levels based on calculated control limits or reporting limit, as applicable.

Acronyms/Abbreviations:

RL = Reporting Limit	MCL = EPA Maximum Contaminant Level
GWPS = Groundwater Protection Standard	PL = Prediction Limits
SSS = Site-Specific GWPS	HAL = Health Advisory Level
SWS = Statewide Standard	DWA = Drinking Water Advisory
SD = Standard Deviation	

Comments:

- 1) **Water quality results and effectiveness of the statistical data evaluation criteria:** Statistical evaluations consist of control limits which consist of the standard deviation plus two standard deviations (plus and minus two standard deviations for pH).
- 2) **Changes to the previous statistical method during reporting period:** None.

Table 6
Summary of Well/Detected Constituent Pairs With No Immediately Preceding Control Limit Exceedances
2023 Annual Water Quality Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Spring 2023 Sampling Event

Well	Constituent	Units	Result	Background Standard
Unconsolidated Aquifer				
MW-9	Cobalt	mg/L	0.0221	0.004536
MW-9	Iron	mg/L	7.56	1.069
MW-14	Specific Conductance	µS/cm	1576	1431
Bedrock Aquifer				
MW-10	Iron	mg/L	0.209	0.05

Fall 2023 Sampling Event

Well	Constituent	Units	Result	Background Standard
Bedrock Aquifer				
MW-10	Nitrogen-Ammonia	mg/L	3.34	1.32
MW-12	Manganese	mg/L	1.15	1.099

Note: Tables include control limit exceedances identified during the 2023 sampling events that were not identified as control limit exceedances in the previous year.

Comments:

- 1) **Problems with the current HMSP network:** None.
- 2) **Schedule to implement remedies:** Not applicable.
- 3) **Alternative constituent or sample frequency changes:** None.
- 4) **Significant changes to prediction limits:** None.

Table 7
Summary Table of Ongoing and Newly Identified Control Limit Exceedances
2023 Annual Water Quality Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Key

	Denotes ongoing control limit exceedances that were identified as control limit exceedances during this reporting period and the previous reporting period at least once during each reporting period.
	Denotes newly identified control limit exceedances in the 2023 reporting period. Newly identified is defined as occurring at least once in the current reporting period but not in the immediately preceeding reporting period.

Unconsolidated Aquifer

Well	Constituent	Units	Most Recent Result	Fall 2023 Background Standard	Action Level/ Statewide Standard
MW-3	Boron	mg/L	2.29	0.4461	6
	Chloride	mg/L	223	73.6	-
	Iron	mg/L	11.7	1.783	-
	Magnesium	mg/L	71	38.33	-
	Manganese	mg/L	2.58	1.095	0.3
	Specific Conductance	µS/cm	1,747	1,426	-
MW-5	Arsenic	mg/L	0.0473	0.03193	0.01
	Boron	mg/L	16.8	0.4461	6
	COD	mg/L	94.9	50.17	-
	Chloride	mg/L	136	73.6	-
	Cobalt	mg/L	0.00558	0.004503	0.0021
	Iron	mg/L	41.3	1.783	-
	Magnesium	mg/L	423	38.33	-
	Manganese	mg/L	2.64	1.095	0.3
	Nitrogen-Ammonia	mg/L	70.9	5.413	30
	Specific Conductance	µS/cm	5,780	1,426	-
MW-7	Sulfate	mg/L	279	74.36	-
	Arsenic	mg/L	0.0914	0.03193	0.01
	Boron	mg/L	51.2	0.4461	6
	COD	mg/L	428	50.17	-
	Chloride	mg/L	173	73.6	-
	Magnesium	mg/L	487	38.33	-
	Nitrogen-Ammonia	mg/L	1,300	5.413	30
MW-9	Specific Conductance	µS/cm	11,915	1,426	-
	Arsenic	mg/L	0.0816	0.03193	0.01
	Boron	mg/L	11.6	0.4461	6
	COD	mg/L	525	50.17	-
	Cobalt	mg/L	0.00547	0.004503	0.0021
	Iron	mg/L	7.56	1.783	-
	Magnesium	mg/L	326	38.33	-
	Manganese	mg/L	1.85	1.095	0.3
	Nitrogen-Ammonia	mg/L	17.7	5.413	30
	Specific Conductance	µS/cm	7,146	1,426	-
	Sulfate	mg/L	710	74.36	-

Table 7 - continued
Summary Table of Ongoing and Newly Identified Control Limit Exceedances
2023 Annual Water Quality Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Unconsolidated Aquifer - continued

Well	Constituent	Units	Most Recent Result	Fall 2023 Background Standard	Action Level/ Statewide Standard
MW-11	Arsenic	mg/L	0.0849	0.03193	0.01
	Boron	mg/L	1.56	0.4461	6
	COD	mg/L	236	50.17	-
	Chloride	mg/L	74.6	73.6	-
	Cobalt	mg/L	0.0016	0.004503	0.0021
	Iron	mg/L	27.4	1.783	-
	Magnesium	mg/L	70.2	38.33	-
	Manganese	mg/L	1.1	1.095	0.3
	Nitrogen-Ammonia	mg/L	38.9	5.413	30
	Specific Conductance	µS/cm	2,130	1,426	-
MW-13	Arsenic	mg/L	0.113	0.03193	0.01
	Boron	mg/L	9.88	0.4461	6
	COD	mg/L	116	50.17	-
	Iron	mg/L	27.3	1.783	-
	Magnesium	mg/L	343	38.33	-
	Manganese	mg/L	2.34	1.095	0.3
	Nitrogen-Ammonia	mg/L	38.9	5.413	30
	Specific Conductance	µS/cm	638	1,426	-
MW-14	Boron	mg/L	0.966	0.4461	6
	Chloride	mg/L	493	73.6	-
	Magnesium	mg/L	113	38.33	-
	Manganese	mg/L	2.71	1.095	0.3
	Specific Conductance	µS/cm	2,377	1,426	-

Table 7 - continued
Summary Table of Ongoing and Newly Identified Control Limit Exceedances
2023 Annual Water Quality Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Bedrock Aquifer

Well	Constituent	Units	Most Recent Result	Fall 2023 Background Standard	Action Level/ Statewide Standard
MW-6	Arsenic	mg/L	0.0272	0.001173	0.01
	Boron	mg/L	16.1	1.007	6
	COD	mg/L	135	19.47	-
	Cobalt	mg/L	0.00275	0.0005646	0.0021
	Iron	mg/L	8.76	0.05	-
	Magnesium	mg/L	316	57.84	-
	Nickel	mg/L	0.0346	0.004727	-
	Nitrogen-Ammonia	mg/L	231	1.32	30
	Specific Conductance	µS/cm	4,820	1,592	-
MW-10	Sulfate	mg/L	573	71.98	-
	Iron	mg/L	0.462	0.05	-
	Nitrogen-Ammonia	mg/L	3.34	1.32	30
MW-12	Sulfate	mg/L	117	71.98	-
	Arsenic	mg/L	0.0895	0.001173	0.01
	Boron	mg/L	1.7	1.007	6
	COD	mg/L	30.5	19.47	-
	Chloride	mg/L	305	224.8	-
	Cobalt	mg/L	0.00169	0.0005646	0.0021
	Iron	mg/L	29.4	0.05	-
	Magnesium	mg/L	72.7	57.84	-
	Manganese	mg/L	1.15	1.099	0.3
	Nitrogen-Ammonia	mg/L	17.7	1.32	30
MW-15	Specific Conductance	µS/cm	1,996	1,592	-
	Magnesium	mg/L	53.6	57.84	-
	Sulfate	mg/L	89.3	71.98	-

Comments:

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

Table 8
Summary of Groundwater Chemistry
2023 Annual Water Quality Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

The Summary of Groundwater Chemistry is located in Appendix C.

Table 9
Historical Control Limit & Action Level Exceedances
2023 Annual Water Quality Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Key

	Control Limit Exceedance
X	Action Level Exceedance

Unconsolidated Aquifer

Well	Constituent	2020	2021	2022	2023
MW-3	Arsenic		X	X	X
	Boron				
	Chloride				
	Cobalt		X	X	
	Iron				
	Magnesium				
	Manganese	X	X	X	X
	Specific Conductance				
MW-5	Arsenic	X		X	X
	Boron	X	X	X	X
	COD				
	Chloride				
	Cobalt	X	X	X	X
	Iron				
	Magnesium				
	Manganese	X	X	X	X
	Nitrogen-Ammonia	X	X	X	X
	Specific Conductance				
	Sulfate				
MW-7	Arsenic	X	X	X	X
	Boron	X	X	X	X
	COD				
	Chloride				
	Cobalt	X	X	X	X
	Magnesium				
	Manganese	X	X	X	X
	Nitrogen-Ammonia	X	X	X	X
	Specific Conductance				
MW-9	Arsenic	X	X	X	X
	Benzene	X	X	X	NS
	Boron	X	X	X	X
	COD				
	Cobalt	X	X	X	X
	Iron				
	Magnesium				
	Manganese	X	X	X	X
	Nitrogen-Ammonia	X	X	X	
	Specific Conductance				
	Sulfate				
	Total Phenols				NS

NS: Not Sampled

Table 9 - continued
Historical Control Limit & Action Level Exceedances
2022 Annual Water Quality Report
ADM-Clinton Landfill
Permit No.23-SDP-05-88C

Unconsolidated Aquifer - continued

Well	Constituent	2020	2021	2022	2023
MW-11	Arsenic	X	X	X	X
	Boron				
	COD				
	Chloride				
	Cobalt	X	X	X	
	Iron				
	Magnesium				
	Manganese	X	X	X	X
	Nitrogen-Ammonia	X	X	X	X
	Specific Conductance				
MW-13	Arsenic	X	X	X	X
	Boron	X	X	X	X
	COD				
	Cobalt	X	X	X	X
	Iron				
	Magnesium				
	Manganese	X	X	X	X
	Nitrogen-Ammonia	X	X	X	X
	Specific Conductance				
MW-14	Boron				
	Chloride				
	Cobalt	X	X	X	
	Magnesium				
	Manganese	X	X	X	X
	Nitrogen-Ammonia				
	Specific Conductance				
MW-16	Boron				

Table 9 - continued
Historical Control Limit & Action Level Exceedances
2023 Annual Water Quality Report
ADM-Clinton Landfill
Permit No.23-SDP-05-88C

Bedrock Aquifer

Well	Constituent	2020	2021	2022	2023
MW-4	COD				
	Iron				
MW-6	Arsenic	X	X	X	X
	Boron	X	X	X	X
	COD				
	Chloride				
	Cobalt	X	X	X	X
	Iron				
	Magnesium				
	Manganese	X			
	Nickel				
	Nitrogen-Ammonia	X	X	X	X
	Specific Conductance				
	Sulfate				
MW-8	COD				
	Iron				
	Nitrogen-Ammonia				
MW-10	Cobalt		X		
	Iron				
	Magnesium				
	Manganese		X	X	
	Nitrogen-Ammonia				
	Specific Conductance				
	Sulfate				
MW-12	Arsenic	X	X	X	X
	Boron				
	COD				
	Chloride				
	Cobalt	X	X	X	
	Iron				
	Magnesium				
	Manganese	X	X	X	X
	Nickel				
	Nitrogen-Ammonia				
	Specific Conductance				
MW-15	Magnesium				
	Sulfate				

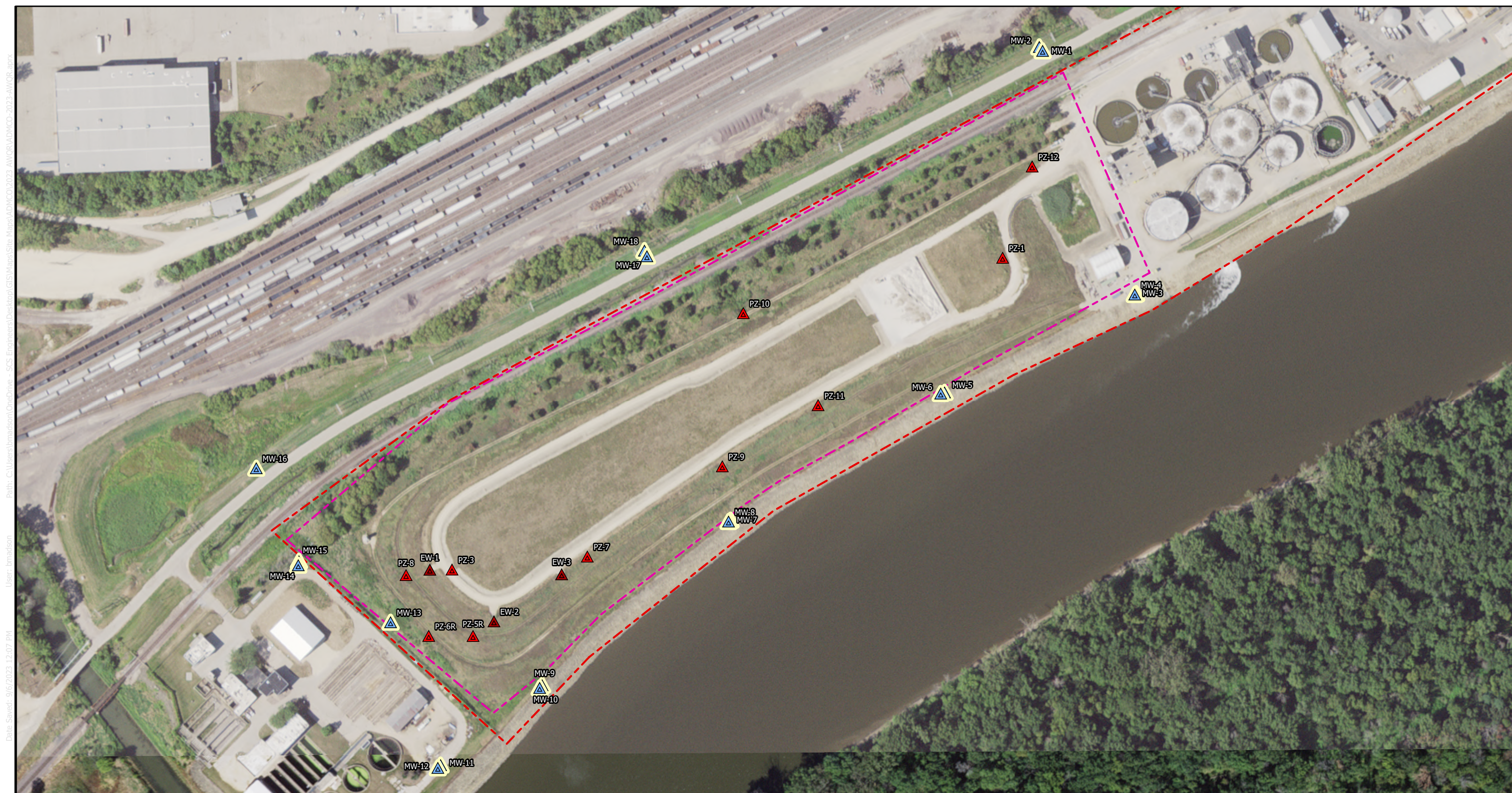
Comments: None.

Table 10
Groundwater Quality Assessment Plan Trend Analysis
2023 Annual Water Quality Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

See Appendix E for Mann-Kendall Trend Analysis

Figures

- 1 Approved Monitoring Network
- 2 Groundwater Contours – Unconsolidated Aquifer
- 3 Groundwater Contours – Bedrock Aquifer



Path: C:\Users\hmadson\OneDrive - SCS Engineers\Desktop\GIS\MapDocs\ADM Clinton Landfill\ADM Clinton Landfill.mxd
User: hmadson
Date Saved: 9/6/2023 12:07 PM



Approved Monitoring Network

Legend

- | | |
|---|---|
| HMSP Monitoring Well Location | Approximate Location of Leachate Piezometer |
| Approximate Monitoring Well Location | Approximate Waste Boundary |
| Approximate Location of Extraction Well | Approximate Property Boundary |

ADM Clinton Landfill
Clinton, Iowa
Project No: 27223141.00
Drawing Date: September 2023



Figure 1



Unconsolidated Aquifer Groundwater Contours

Legend



Path: C:\Users\hmadecol\OneDrive - SCS Engineers\Desktop\GIS\Map\Site Map\ADM\ADMCO_2022_AVI\09_2023
User: hmadecol
Date Saved: 9/6/2023 2:56 PM



Bedrock Aquifer Groundwater Contours

Legend		Approximate Bedrock Groundwater Contours Based on Field Measurements Taken on July 19, 2023	ADM Clinton Landfill Clinton, Iowa Project No: 27223141.00 Drawing Date: September 2023
Approximate Monitoring Well Location	Approximate Location of Leachate Piezometer		
Approximate Location of Extraction Well	Approximate Waste Boundary		
	Approximate Property Boundary		



Figure 3



Appendix A

Field Sampling Forms

FORM FOR GROUNDWATER SAMPLING

Project: ADMCO.23001	
Monitoring Well/Piezometer ID: MW-1	Date: 2/14/2023
Gradient: Up	Sampler: Konner Roth

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):	37.6
Initial Static Water Level (feet):	6.82
Initial Groundwater Elevation (ft-amsl):	578.67
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)	
9:24 AM	Purging start time.						
9:27 AM	11.2	5.0	1342.6	6.77	128.0		
9:30 AM	11.0	5.0	1345.1	6.77	134.3		
9:33 AM	10.3	5.0	1334.9	6.80	137.3		
9:36 AM	9.2	5.0	1324.6	6.81	139.5		
9:39 AM	8.7	5.0	1318.0	6.82	141.7		
9:42 AM	8.5	5.0	1310.9	6.83	143.3		
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.8
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	18:00
Average Purge Rate (mL/min):	100.00

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Turbidity Probe failure, turbidity measurements could not be collected. Clear color.

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO.23001		
Monitoring Well/Piezometer ID:	MW-2	Date:	2/14/2023
Gradient:	Up	Sampler:	Konner Roth

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):	13.5
Initial Static Water Level (feet):	5.86
Initial Groundwater Elevation (ft-amsl):	578.63
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)	
10:10 AM	Purging start time.						
10:13 AM	8.4	2.8	815.6	7.12	123.5		
10:16 AM	8.6	2.2	810.8	7.04	127.7		
10:19 AM	8.7	2.0	810.4	7.01	130.5		
10:22 AM	8.7	1.9	811.3	7.00	132.4		
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.8
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	150.00

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Turbidity Probe failure, turbidity measurements could not be collected. No color.

FORM FOR GROUNDWATER SAMPLING

Project: ADMCO.23001	
Monitoring Well/Piezometer ID: MW-3	Date: 2/14/2023
Gradient: Down	Sampler: Konner Roth

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):	26.2
Initial Static Water Level (feet):	22.80
Initial Groundwater Elevation (ft-amsl):	572.55
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)	
3:42 PM	Purging start time.						
3:45 PM	11.7	0.8	1767.8	7.34	31.2		
3:48 PM	11.8	0.4	1764.4	7.16	29.6		
3:51 PM	11.9	0.2	1751.5	7.09	27.8		
3:54 PM	12.1	0.2	1746.6	7.06	25.8		
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.2
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	183.33

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Turbidity Probe failure, turbidity measurements could not be collected. Liquid looked cloudy.

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO.23001		
Monitoring Well/Piezometer ID:	MW-4	Date:	2/14/2023
Gradient:	Down	Sampler:	Konner Roth

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):	75.8
Initial Static Water Level (feet):	22.59
Initial Groundwater Elevation (ft-amsl):	572.71
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)	
4:14 PM	Purging start time.						
4:17 PM	9.7	5.9	1238.3	8.20	19.9		
4:20 PM	9.4	6.1	1231.0	8.14	20.0		
4:23 PM	9.2	6.0	1231.9	8.08	21.1		
4:26 PM	9.3	5.2	1243.0	7.95	22.9		
4:29 PM	9.3	4.2	1272.7	7.77	25.7		
4:32 PM	11.4	3.2	1338.3	7.39	29.6		
4:35 PM	11.9	2.9	1364.7	7.26	30.4		
4:38 PM	11.9	2.1	1400.2	7.14	32.8		
4:41 PM	11.6	1.9	1411.8	7.08	34.6		
4:44 PM	11.4	2.0	1415.1	7.05	36.2		
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	3.0
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	33:00
Average Purge Rate (mL/min):	90.91

D. WELL MAINTENANCE

Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Turbidity Probe failure, turbidity measurements could not be collected. Cloudy color. Could not turn up speed for the pump.

FORM FOR GROUNDWATER SAMPLING

[illegible]

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO.23001		
Monitoring Well/Piezometer ID:	MW-6	Date:	2/15/2023
Gradient:	Down	Sampler:	Konner Roth

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):	54.8
Initial Static Water Level (feet):	23.18
Initial Groundwater Elevation (ft-amsl):	573.04
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)	
12:36 PM	Purging start time.						
12:39 PM	9.7	1.5	4337.8	6.98	33.5		
12:42 PM	9.8	0.4	4503.5	6.84	27.3		
12:45 PM	9.8	0.3	3934.1	6.95	11.5		
12:48 PM	9.9	0.3	2886.1	6.97	3.1		
12:51 PM	9.7	0.3	2080.0	6.94	2.6		
12:54 PM	9.8	0.3	1969.1	6.91	4.0		
12:57 PM	9.8	0.3	2008.5	6.87	7.3		
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.5
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	24:00
Average Purge Rate (mL/min):	104.17

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Turbidity Probe failure, turbidity measurements could not be collected.

FORM FOR GROUNDWATER SAMPLING

[illegible]

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO.23001		
Monitoring Well/Piezometer ID:	MW-8	Date:	2/15/2023
Gradient:	Down	Sampler:	Konner Roth

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):	65.8
Initial Static Water Level (feet):	22.29
Initial Groundwater Elevation (ft-amsl):	572.90
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)	
9:30 AM	Purging start time.						
9:33 AM	10.0	6.4	1278.3	8.13	-134.9		
9:36 AM	10.3	5.2	1210.9	7.61	-117.0		
9:39 AM	10.3	3.8	1226.3	7.26	-104.0		
9:42 AM	10.1	3.4	1226.1	7.11	-93.4		
9:45 AM	10.2	3.3	1224.0	7.04	-84.7		
9:48 AM	10.4	3.3	1222.1	7.01	-77.2		
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):	21:00
Average Purge Rate (mL/min):	114.29

D. WELL MAINTENANCE

Does the well require any future maintenance?		No
If yes, explain:		
Additional Comments:	Turbidity Probe failure, turbidity measurements could not be collected. Color was clear.	

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO.23001		
Monitoring Well/Piezometer ID:	MW-9	Date:	2/15/2023
Gradient:	Down	Sampler:	Konner Roth

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):	31.8
Initial Static Water Level (feet):	21.39
Initial Groundwater Elevation (ft-amsl):	572.81
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)	
1:18 PM	Purging start time.						
1:21 PM	8.4	0.3	7124.4	7.34	-270.4		
1:24 PM	9.0	0.1	7186.9	7.11	-330.4		
1:27 PM	9.3	0.0	7162.8	6.97	-346.4		
1:30 PM	9.3	0.0	7134.9	6.91	-355.7		
1:33 PM	9.1	0.0	7145.6	6.88	-361.8		
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.8
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	18:00
Average Purge Rate (mL/min):	100.00

D. WELL MAINTENANCE

Does the well require any future maintenance?		No
If yes, explain:		
Additional Comments:	Turbidity Probe failure, turbidity measurements could not be collected. Dark gray/black color.	

FORM FOR GROUNDWATER SAMPLING

Project: ADMCO.23001	
Monitoring Well/Piezometer ID: MW-10	Date: 2/15/2023
Gradient: Down	Sampler: Konner Roth

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):	48.3
Initial Static Water Level (feet):	21.34
Initial Groundwater Elevation (ft-amsl):	572.67
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)	
11:27 AM	Purging start time.						
11:30 AM	9.7	1.0	1260.1	7.08	-0.4		
11:33 AM	9.8	0.4	1255.3	6.90	3.8		
11:36 AM	9.6	0.3	1252.3	6.85	6.9		
11:39 AM	9.8	0.2	1248.1	6.83	8.3		
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):	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:	Turbidity Probe failure, turbidity measurements could not be collected. Had a grayish color.

FORM FOR GROUNDWATER SAMPLING

Project: ADMCO.23001	
Monitoring Well/Piezometer ID: MW-11	Date: 2/14/2023
Gradient: Down	Sampler: Konner Roth

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):	20.0
Initial Static Water Level (feet):	15.71
Initial Groundwater Elevation (ft-amsl):	574.11
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)	
1:47 PM	Purging start time.						
1:50 PM	10.7	0.6	2254.9	6.46	150.2		
1:53 PM	10.9	0.3	2269.6	6.46	130.2		
1:56 PM	10.9	0.2	2287.8	6.47	106.7		
1:59 PM	10.9	0.1	2302.0	6.47	84.2		
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.8
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	150.00

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Turbidity Probe failure, turbidity measurements could not be collected. Yellow tint.

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO.23001		
Monitoring Well/Piezometer ID:	MW-12	Date:	2/14/2023
Gradient:	Down	Sampler:	Konner Roth

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):	37.5
Initial Static Water Level (feet):	15.84
Initial Groundwater Elevation (ft-amsl):	573.87
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)	
2:20 PM	Purging start time.						
2:23 PM	11.4	0.7	2432.7	6.72	64.5		
2:26 PM	11.2	0.4	2435.0	6.67	59.6		
2:29 PM	11.0	0.3	2411.5	6.66	54.1		
2:32 PM	11.2	0.3	2399.2	6.66	46.5		
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.8
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	150.00

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Turbidity Probe failure, turbidity measurements could not be collected. Yellow tint.

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO.23001		
Monitoring Well/Piezometer ID:	MW-13	Date:	2/14/2023
Gradient:	Down	Sampler:	Konner Roth

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):	23.4
Initial Static Water Level (feet):	15.40
Initial Groundwater Elevation (ft-amsl):	574.53
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	11.7	0.9	3999.6	6.84	47.2		
3:12 PM	11.7	0.4	4012.0	6.85	31.1		
3:15 PM	11.7	0.3	4017.7	6.87	17.8		
3:18 PM	11.9	0.2	4014.2	6.87	6.8		
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):	12:00
Average Purge Rate (mL/min):	158.33

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Turbidity Probe failure, turbidity measurements could not be collected. Yellow tint.

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO.23001		
Monitoring Well/Piezometer ID:	MW-14	Date:	2/14/2023
Gradient:	Down	Sampler:	Konner Roth

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):	17.3
Initial Static Water Level (feet):	10.56
Initial Groundwater Elevation (ft-amsl):	576.50
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)	
12:30 PM	Purging start time.						
12:33 PM	10.1	0.8	1567.1	6.71	148.3		
12:36 PM	10.1	0.4	1572.4	6.69	148.0		
12:39 PM	10.1	0.3	1573.9	6.69	147.3		
12:42 PM	9.9	0.2	1575.7	6.69	146.6		
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.8
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	150.00

D. WELL MAINTENANCE

Does the well require any future maintenance?		No
If yes, explain:		
Additional Comments:	Turbidity Probe failure, turbidity measurements could not be collected. Yellow tint.	

FORM FOR GROUNDWATER SAMPLING

Project: ADMCO.23001	
Monitoring Well/Piezometer ID: MW-15	Date: 2/14/2023
Gradient: Down	Sampler: Konner Roth

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):	39.2
Initial Static Water Level (feet):	10.97
Initial Groundwater Elevation (ft-amsl):	575.46
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)	
1:02 PM	Purging start time.						
1:05 PM	11.2	8.4	1174.5	7.44	125.5		
1:08 PM	11.2	8.3	1174.4	7.42	127.5		
1:11 PM	11.2	8.2	1174.0	7.40	128.8		
1:14 PM	11.3	7.3	1198.4	7.13	133.3		
1:17 PM	11.3	6.0	1204.7	7.02	134.8		
1:20 PM	11.3	5.9	1208.4	6.99	135.9		
1:23 PM	11.1	5.8	1214.7	6.97	136.8		
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):	24:00
Average Purge Rate (mL/min):	95.83

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Turbidity Probe failure, turbidity measurements could not be collected. Clear color.

FORM FOR GROUNDWATER SAMPLING

[illegible]

FORM FOR GROUNDWATER SAMPLING

Project: ADMCO.23001	
Monitoring Well/Piezometer ID: MW-17	Date: 2/14/2023
Gradient: Up	Sampler: Konner Roth

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):	34.0
Initial Static Water Level (feet):	6.79
Initial Groundwater Elevation (ft-amsl):	575.95
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)	
10:45 AM	Purging start time.						
10:48 AM	11.0	0.8	800.0	7.14	131.0		
10:51 AM	11.2	0.4	799.8	7.13	130.9		
10:54 AM	11.0	0.3	801.5	7.13	131.0		
10:57 AM	10.6	0.2	800.6	7.14	131.2		
11:00 AM	10.8	0.2	799.3	7.13	131.3		
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):	18:00
Average Purge Rate (mL/min):	116.67

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Turbidity Probe failure, turbidity measurements could not be collected. No color.

FORM FOR GROUNDWATER SAMPLING

Project: ADMCO.23001	
Monitoring Well/Piezometer ID: MW-18	Date: 2/14/2023
Gradient: Up	Sampler: Konner Roth

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):	17.7
Initial Static Water Level (feet):	7.96
Initial Groundwater Elevation (ft-amsl):	576.48
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)	
11:19 AM	Purging start time.						
11:22 AM	9.0	0.9	746.9	7.22	137.2		
11:25 AM	9.1	0.5	748.1	7.19	138.3		
11:28 AM	9.1	0.3	747.6	7.17	138.6		
11:31 AM	9.1	0.3	747.9	7.16	138.5		
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:	Turbidity Probe failure, turbidity measurements could not be collected. Clear color.

FORM FOR GROUNDWATER SAMPLING

Project: ADMCO			
Monitoring Well/Piezometer ID: MW-1		Date: 7/19/2023	
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):	37.8
Initial Static Water Level (feet):	6.41
Initial Groundwater Elevation (ft-amsl):	579.08
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)	
3:50 PM	Purging start time.						
3:53 PM	18.1	5.2	1312.0	7.47	222.5	5.9	
3:56 PM	17.7	5.1	1313.9	7.24	216.0	9.2	
3:59 PM	17.5	5.0	1316.4	6.94	213.2	6.7	
4:02 PM	17.7	4.9	1309.6	6.89	212.0	8.0	
4:05 PM	17.6	4.9	1315.7	6.85	212.3	6.6	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.2
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	15:00
Average Purge Rate (mL/min):	146.67

D. WELL MAINTENANCE

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

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO		
Monitoring Well/Piezometer ID:	MW-2	Date:	7/19/2023
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):	13.4
Initial Static Water Level (feet):	5.56
Initial Groundwater Elevation (ft-amsl):	578.93
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)	
4:24 PM	Purging start time.						
4:27 PM	17.2	1.2	804.9	7.04	19.4	5.5	
4:30 PM	17.4	0.8	800.6	6.95	11.3	7.1	
4:33 PM	17.6	0.6	798.5	6.88	9.4	7.5	
4:36 PM	17.4	0.6	792.7	6.85	14.5	9.2	
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: ADMCO			
Monitoring Well/Piezometer ID: MW-3		Date: 7/19/2023	
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):	26.1
Initial Static Water Level (feet):	24.50
Initial Groundwater Elevation (ft-amsl):	570.55
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)	
	Purging start time.						
	Parameters stabilized, sample collected.						

Quantity of Water Removed from Well (liters):	0.0
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	
Average Purge Rate (mL/min):	0.00

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

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO		
Monitoring Well/Piezometer ID:	MW-4	Date:	7/19/2023
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):	76.7
Initial Static Water Level (feet):	22.95
Initial Groundwater Elevation (ft-amsl):	572.35
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)	
5:15 PM	Purging start time.						
5:18 PM	20.6	7.2	1145.4	7.71	145.3	4.8	
5:21 PM	19.6	7.3	1149.2	7.75	146.0	4.8	
5:24 PM	18.9	7.3	1142.8	7.76	149.0	5.0	
5:27 PM	19.1	6.5	1172.4	7.73	157.4	5.0	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.7
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	137.50

D. WELL MAINTENANCE

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

FORM FOR GROUNDWATER SAMPLING

Project: ADMCO			
Monitoring Well/Piezometer ID: MW-5		Date: 7/20/2023	
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):	27.9
Initial Static Water Level (feet):	23.45
Initial Groundwater Elevation (ft-amsl):	572.72
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)	
	Purging start time.						
	Parameters stabilized, sample collected.						

Quantity of Water Removed from Well (liters):	0.0
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	
Average Purge Rate (mL/min):	0.00

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

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO		
Monitoring Well/Piezometer ID:	MW-6	Date:	7/20/2023
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):	53.6
Initial Static Water Level (feet):	23.65
Initial Groundwater Elevation (ft-amsl):	572.57
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)	
11:09 AM	Purging start time.						
11:12 AM	23.0	1.3	3537.0	6.52	46.9	163.2	
11:15 AM	22.9	0.7	4588.1	6.56	8.5	91.4	
11:18 AM	22.9	0.6	4778.2	6.58	-0.6	44.8	
11:21 AM	23.3	0.5	4819.6	6.56	-5.0	27.9	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.0
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	83.33

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Unable to purge faster. Air coming up in tubing.

FORM FOR GROUNDWATER SAMPLING

[illegible]

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO		
Monitoring Well/Piezometer ID:	MW-8	Date:	7/20/2023
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):	64.8
Initial Static Water Level (feet):	23.54
Initial Groundwater Elevation (ft-amsl):	571.65
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)	
11:49 AM	Purging start time.						
11:52 AM	19.3	7.6	1155.8	7.76	188.8	5.7	
11:55 AM	18.7	7.7	1123.8	7.67	181.2	6.0	
11:58 AM	18.9	7.8	1116.1	7.64	178.6	6.7	
12:01 PM	18.5	7.8	1117.6	7.62	178.6	7.3	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.5
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	125.00

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Flow rate slowed significantly over time.

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO		
Monitoring Well/Piezometer ID:	MW-9	Date:	7/20/2023
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):	30.8
Initial Static Water Level (feet):	24.58
Initial Groundwater Elevation (ft-amsl):	569.62
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)	
	Purging start time.						
	Parameters stabilized, sample collected.						

Quantity of Water Removed from Well (liters):	0.0
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	
Average Purge Rate (mL/min):	0.00

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

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO		
Monitoring Well/Piezometer ID:	MW-10	Date:	7/20/2023
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):	48.1
Initial Static Water Level (feet):	23.10
Initial Groundwater Elevation (ft-amsl):	570.91
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)	
12:27 PM	Purging start time.						
12:30 PM	17.6	1.2	1304.4	6.84	15.8	300.1	
12:33 PM	17.0	0.8	1311.9	6.81	15.9	123.2	
12:36 PM	17.5	0.7	1290.8	6.77	30.4	56.3	
12:39 PM	16.9	0.6	1250.7	6.76	44.5	28.1	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.4
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	116.67

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

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO		
Monitoring Well/Piezometer ID:	MW-11	Date:	7/19/2023
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):	20.0
Initial Static Water Level (feet):	15.80
Initial Groundwater Elevation (ft-amsl):	574.02
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)	
10:46 AM	Purging start time.						
10:49 AM	18.4	1.3	2101.5	6.38	5.6	6.5	
10:52 AM	18.1	0.7	2106.3	6.37	-7.2	9.2	
10:55 AM	19.3	0.5	2120.1	6.37	-18.0	6.5	
10:58 AM	20.1	0.4	2130.1	6.36	-24.6	6.2	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.2
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	100.00

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Unable to purge faster. Air coming up in tubing.

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO		
Monitoring Well/Piezometer ID:	MW-12	Date:	7/19/2023
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):	37.3
Initial Static Water Level (feet):	16.35
Initial Groundwater Elevation (ft-amsl):	573.36
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)	
11:26 AM	Purging start time.						
11:29 AM	16.8	1.3	1989.1	6.88	-2.8	4.3	
11:32 AM	17.1	0.8	1976.2	6.68	-8.7	4.3	
11:35 AM	16.9	0.6	1981.2	6.63	-11.9	4.1	
11:38 AM	16.8	0.5	1996.2	6.61	-13.3	4.0	
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):	162.50

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

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO		
Monitoring Well/Piezometer ID:	MW-13	Date:	7/20/2023
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):	24.4
Initial Static Water Level (feet):	15.22
Initial Groundwater Elevation (ft-amsl):	574.71
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)	
1:02 PM	Purging start time.						
1:05 PM	17.2	1.2	3698.7	6.80	-28.5	5.6	
1:08 PM	16.9	0.8	3697.2	6.77	-39.7	5.0	
1:11 PM	16.9	0.6	3707.9	6.76	-44.7	5.0	
1:14 PM	17.2	0.6	638.2	6.74	-46.8	54.8	
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:	ADMCO		
Monitoring Well/Piezometer ID:	MW-14	Date:	7/19/2023
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):	18.0
Initial Static Water Level (feet):	10.52
Initial Groundwater Elevation (ft-amsl):	576.54
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)	
11:58 AM	Purging start time.						
12:01 PM	17.5	1.3	2502.9	6.59	132.3	4.4	
12:04 PM	17.4	0.8	2453.0	6.54	141.0	4.5	
12:07 PM	17.6	0.6	2431.8	6.50	147.3	4.4	
12:10 PM	17.6	0.6	2376.7	6.50	152.5	4.6	
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:	ADMCO		
Monitoring Well/Piezometer ID:	MW-15	Date:	7/19/2023
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):	39.0
Initial Static Water Level (feet):	11.02
Initial Groundwater Elevation (ft-amsl):	575.41
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)	
12:23 PM	Purging start time.						
12:26 PM	16.8	5.7	1123.9	7.00	166.8	4.7	
12:29 PM	16.9	5.5	1120.8	6.90	171.1	5.7	
12:32 PM	16.8	5.5	1113.0	6.88	174.9	6.9	
12:35 PM	16.8	5.4	1112.9	6.87	177.7	7.5	
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):	162.50

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

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO		
Monitoring Well/Piezometer ID:	MW-16	Date:	7/19/2023
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):	17.0
Initial Static Water Level (feet):	9.55
Initial Groundwater Elevation (ft-amsl):	575.51
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)	
1:45 PM	Purging start time.						
1:48 PM	18.1	1.5	818.4	7.36	281.9	41.2	
1:51 PM	18.3	1.4	800.0	7.06	256.1	21.2	
1:54 PM	18.0	1.3	799.2	6.99	237.8	19.5	
1:57 PM	17.8	1.2	804.2	6.92	223.7	18.1	
2:00 PM	17.9	1.1	805.5	6.89	213.0	14.9	
2:03 PM	17.9	1.1	809.0	6.87	204.4	12.4	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.7
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	18:00
Average Purge Rate (mL/min):	150.00

D. WELL MAINTENANCE

Does the well require any future maintenance?		No
If yes, explain:		
Additional Comments:	Installed new collection tubing.	

FORM FOR GROUNDWATER SAMPLING

Project:	ADMCO		
Monitoring Well/Piezometer ID:	MW-17	Date:	7/19/2023
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):	33.8
Initial Static Water Level (feet):	6.15
Initial Groundwater Elevation (ft-amsl):	576.59
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)	
2:26 PM	Purging start time.						
2:29 PM	18.0	1.2	763.2	7.63	214.2	5.5	
2:32 PM	17.7	0.8	763.3	7.20	202.9	5.2	
2:35 PM	17.5	0.6	763.6	7.12	193.8	5.2	
2:38 PM	17.4	0.6	764.3	7.11	186.5	5.1	
2:41 PM	17.6	0.5	767.6	7.06	180.3	6.3	
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):	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:	ADMCO		
Monitoring Well/Piezometer ID:	MW-18	Date:	7/19/2023
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):	17.8
Initial Static Water Level (feet):	5.58
Initial Groundwater Elevation (ft-amsl):	578.86
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)	
2:57 PM	Purging start time.						
3:00 PM	18.1	1.2	905.3	7.13	12.8	12.4	
3:03 PM	17.9	0.8	901.3	7.06	6.8	14.3	
3:06 PM	18.0	0.6	894.4	7.03	5.0	7.3	
3:09 PM	17.7	0.5	883.9	7.03	4.6	13.9	
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:	



Appendix B1

Laboratory Analytical Data Sheets

ANALYTICAL REPORT

PREPARED FOR

Attn: Kevin Jensen
Evora Consulting
1690 All State Court
Suite 100
West Des Moines, Iowa 50265

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JOB DESCRIPTION

ADM Clinton Landfill (Spring 2023 GW Sampling- SA)
SDG NUMBER ADMCO.23001

JOB NUMBER

310-249869-1

Eurofins Cedar Falls

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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Authorization



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Authorized for release by
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Case Narrative

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling- SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Job ID: 310-249869-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-249869-1

Comments

No additional comments.

Receipt

The samples were received on 2/16/2023 8:10 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.0° C.

HPLC/IC

Method 9056A: The following sample was diluted due to the nature of the sample matrix: MW-11 (310-249869-1). Elevated reporting limits (RLs) are provided for sulfate.

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

Metals

Method 3005A: The reference method requires samples to be preserved to a pH of <2. The following sample was received with insufficient preservation at a pH of >2: MW-11 (310-249869-1). The sample(s) was preserved to the appropriate pH in the laboratory.

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

General Chemistry

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

Sample Summary

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-249869-1	MW-11	Ground Water	02/14/23 13:47	02/16/23 08:10
310-249869-2	MW-12	Ground Water	02/14/23 14:40	02/16/23 08:10
310-249869-3	MW-14	Ground Water	02/14/23 12:30	02/16/23 08:10
310-249869-4	MW-15	Ground Water	02/14/23 13:02	02/16/23 08:10
310-249869-5	MW-17	Ground Water	02/14/23 10:45	02/16/23 08:10
310-249869-6	MW-18	Ground Water	02/14/23 11:19	02/16/23 08:10



Detection Summary

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Client Sample ID: MW-11

Lab Sample ID: 310-249869-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	108		5.00	2.25	mg/L	5		9056A	Total/NA
Arsenic	0.0512		0.00200	0.000750	mg/L	1		6020B	Total/NA
Boron	0.359		0.100	0.0580	mg/L	1		6020B	Total/NA
Cobalt	0.0221		0.000500	0.000190	mg/L	1		6020B	Total/NA
Magnesium	98.8		2.00	0.600	mg/L	4		6020B	Total/NA
Manganese	0.984		0.0100	0.00360	mg/L	1		6020B	Total/NA
Iron	56.3		0.100	0.0360	mg/L	1		6020B	Total/NA
Ammonia	33.6	F1	2.00	1.00	mg/L	10		350.1	Total/NA
Chemical Oxygen Demand	159		25.0	24.0	mg/L	5		5220D LL	Total/NA
Total Suspended Solids	44.0		30.0	10.2	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-12

Lab Sample ID: 310-249869-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	379		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	11.2		5.00	2.00	mg/L	5		9056A	Total/NA
Arsenic	0.0651		0.00200	0.000750	mg/L	1		6020B	Total/NA
Boron	2.15		0.100	0.0580	mg/L	1		6020B	Total/NA
Cobalt	0.00186		0.000500	0.000190	mg/L	1		6020B	Total/NA
Magnesium	81.2		2.00	0.600	mg/L	4		6020B	Total/NA
Manganese	0.763		0.0100	0.00360	mg/L	1		6020B	Total/NA
Iron	27.7		0.100	0.0360	mg/L	1		6020B	Total/NA
Ammonia	20.6	B	1.88	0.938	mg/L	9.38		350.1	Total/NA
Chemical Oxygen Demand	26.0		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	42.0		15.0	5.10	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-14

Lab Sample ID: 310-249869-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	220		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	35.9		5.00	2.00	mg/L	5		9056A	Total/NA
Boron	0.513		0.100	0.0580	mg/L	1		6020B	Total/NA
Cobalt	0.000822		0.000500	0.000190	mg/L	1		6020B	Total/NA
Magnesium	73.1		0.500	0.150	mg/L	1		6020B	Total/NA
Manganese	0.476		0.0100	0.00360	mg/L	1		6020B	Total/NA
Iron	0.0385	J	0.100	0.0360	mg/L	1		6020B	Total/NA
Ammonia	0.871		0.200	0.100	mg/L	1		350.1	Total/NA
Chemical Oxygen Demand	5.13		5.00	4.80	mg/L	1		5220D LL	Total/NA

Client Sample ID: MW-15

Lab Sample ID: 310-249869-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	91.4		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	91.4		5.00	2.00	mg/L	5		9056A	Total/NA
Boron	0.275		0.100	0.0580	mg/L	1		6020B	Total/NA
Magnesium	60.6		0.500	0.150	mg/L	1		6020B	Total/NA
Ammonia	0.150	J	0.200	0.100	mg/L	1		350.1	Total/NA
Total Suspended Solids	6.25		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: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Client Sample ID: MW-17

Lab Sample ID: 310-249869-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	36.9		5.00	2.25	mg/L	5			9056A	Total/NA
Sulfate	46.1		5.00	2.00	mg/L	5			9056A	Total/NA
Boron	0.508		0.100	0.0580	mg/L	1			6020B	Total/NA
Cobalt	0.000312	J	0.000500	0.000190	mg/L	1			6020B	Total/NA
Magnesium	30.2		0.500	0.150	mg/L	1			6020B	Total/NA
Manganese	0.281		0.0100	0.00360	mg/L	1			6020B	Total/NA
Nickel	0.00489	J	0.00500	0.00190	mg/L	1			6020B	Total/NA
Ammonia	0.151	J	0.200	0.100	mg/L	1			350.1	Total/NA

Client Sample ID: MW-18

Lab Sample ID: 310-249869-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	29.3		5.00	2.25	mg/L	5			9056A	Total/NA
Sulfate	48.1		5.00	2.00	mg/L	5			9056A	Total/NA
Arsenic	0.00257		0.00200	0.000750	mg/L	1			6020B	Total/NA
Boron	0.204		0.100	0.0580	mg/L	1			6020B	Total/NA
Cobalt	0.000473	J	0.000500	0.000190	mg/L	1			6020B	Total/NA
Magnesium	27.5		0.500	0.150	mg/L	1			6020B	Total/NA
Manganese	0.109		0.0100	0.00360	mg/L	1			6020B	Total/NA
Iron	0.325		0.100	0.0360	mg/L	1			6020B	Total/NA
Ammonia	0.370		0.200	0.100	mg/L	1			350.1	Total/NA
Chemical Oxygen Demand	9.91		5.00	4.80	mg/L	1			5220D LL	Total/NA
Total Suspended Solids	3.00		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: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Client Sample ID: MW-11

Lab Sample ID: 310-249869-1

Date Collected: 02/14/23 13:47

Matrix: Ground Water

Date Received: 02/16/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	108		5.00	2.25	mg/L			02/27/23 17:26	5
Sulfate	<5.00		5.00	2.00	mg/L			02/27/23 17:26	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0512		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 17:03	1
Boron	0.359		0.100	0.0580	mg/L		02/21/23 08:45	02/21/23 17:03	1
Cobalt	0.0221		0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 17:03	1
Magnesium	98.8		2.00	0.600	mg/L		02/21/23 08:45	02/23/23 15:30	4
Manganese	0.984		0.0100	0.00360	mg/L		02/21/23 08:45	02/21/23 17:03	1
Iron	56.3		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 17:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	33.6	F1	2.00	1.00	mg/L			02/20/23 12:43	10
Chemical Oxygen Demand (SM 5220D LL)	159		25.0	24.0	mg/L			02/17/23 16:27	5
Total Suspended Solids (USGS I-3765-85)	44.0		30.0	10.2	mg/L			02/16/23 11:09	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Client Sample ID: MW-12

Lab Sample ID: 310-249869-2

Date Collected: 02/14/23 14:40

Matrix: Ground Water

Date Received: 02/16/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	379		5.00	2.25	mg/L			02/27/23 17:40	5
Sulfate	11.2		5.00	2.00	mg/L			02/27/23 17:40	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0651		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 17:06	1
Boron	2.15		0.100	0.0580	mg/L		02/21/23 08:45	02/21/23 17:06	1
Cobalt	0.00186		0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 17:06	1
Magnesium	81.2		2.00	0.600	mg/L		02/21/23 08:45	02/23/23 15:33	4
Manganese	0.763		0.0100	0.00360	mg/L		02/21/23 08:45	02/21/23 17:06	1
Iron	27.7		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 17:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	20.6	B	1.88	0.938	mg/L			02/20/23 13:40	9.38
Chemical Oxygen Demand (SM 5220D LL)	26.0		5.00	4.80	mg/L			02/17/23 10:30	1
Total Suspended Solids (USGS I-3765-85)	42.0		15.0	5.10	mg/L			02/16/23 11:09	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Client Sample ID: MW-14

Date Collected: 02/14/23 12:30

Date Received: 02/16/23 08:10

Lab Sample ID: 310-249869-3

Matrix: Ground Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	220		5.00	2.25	mg/L			02/27/23 17:54	5
Sulfate	35.9		5.00	2.00	mg/L			02/27/23 17:54	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 17:20	1
Boron	0.513		0.100	0.0580	mg/L		02/21/23 08:45	02/21/23 17:20	1
Cobalt	0.000822		0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 17:20	1
Magnesium	73.1		0.500	0.150	mg/L		02/21/23 08:45	02/21/23 17:20	1
Manganese	0.476		0.0100	0.00360	mg/L		02/21/23 08:45	02/21/23 17:20	1
Iron	0.0385	J	0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 17:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.871		0.200	0.100	mg/L			02/20/23 12:46	1
Chemical Oxygen Demand (SM 5220D LL)	5.13		5.00	4.80	mg/L			02/17/23 10:30	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	0.638	mg/L			02/16/23 11:09	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Client Sample ID: MW-15

Date Collected: 02/14/23 13:02

Date Received: 02/16/23 08:10

Lab Sample ID: 310-249869-4

Matrix: Ground Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	91.4		5.00	2.25	mg/L			02/27/23 18:08	5
Sulfate	91.4		5.00	2.00	mg/L			02/27/23 18:08	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 17:23	1
Boron	0.275		0.100	0.0580	mg/L		02/21/23 08:45	02/21/23 17:23	1
Cobalt	<0.000500		0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 17:23	1
Magnesium	60.6		0.500	0.150	mg/L		02/21/23 08:45	02/21/23 17:23	1
Iron	<0.100		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 17:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.150	J	0.200	0.100	mg/L			02/20/23 12:46	1
Chemical Oxygen Demand (SM 5220D LL)	<5.00		5.00	4.80	mg/L			02/17/23 10:30	1
Total Suspended Solids (USGS I-3765-85)	6.25		1.88	0.638	mg/L			02/16/23 11:09	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Client Sample ID: MW-17

Lab Sample ID: 310-249869-5

Date Collected: 02/14/23 10:45

Matrix: Ground Water

Date Received: 02/16/23 08:10

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	36.9		5.00	2.25	mg/L			02/27/23 18:22	5
Sulfate	46.1		5.00	2.00	mg/L			02/27/23 18:22	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 17:46	1
Boron	0.508		0.100	0.0580	mg/L		02/21/23 08:45	02/23/23 15:56	1
Cobalt	0.000312	J	0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 17:46	1
Magnesium	30.2		0.500	0.150	mg/L		02/21/23 08:45	02/21/23 17:46	1
Manganese	0.281		0.0100	0.00360	mg/L		02/21/23 08:45	02/21/23 17:46	1
Nickel	0.00489	J	0.00500	0.00190	mg/L		02/21/23 08:45	02/21/23 17:46	1
Iron	<0.100		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 17:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.151	J	0.200	0.100	mg/L			02/20/23 12:48	1
Chemical Oxygen Demand (SM 5220D LL)	<5.00		5.00	4.80	mg/L			02/17/23 10:30	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	0.638	mg/L			02/16/23 11:09	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Client Sample ID: MW-18

Date Collected: 02/14/23 11:19

Date Received: 02/16/23 08:10

Lab Sample ID: 310-249869-6

Matrix: Ground Water

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	29.3		5.00	2.25	mg/L			02/27/23 18:36	5
Sulfate	48.1		5.00	2.00	mg/L			02/27/23 18:36	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00257		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 17:49	1
Boron	0.204		0.100	0.0580	mg/L		02/21/23 08:45	02/23/23 15:59	1
Cobalt	0.000473	J	0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 17:49	1
Magnesium	27.5		0.500	0.150	mg/L		02/21/23 08:45	02/21/23 17:49	1
Manganese	0.109		0.0100	0.00360	mg/L		02/21/23 08:45	02/21/23 17:49	1
Iron	0.325		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 17:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.370		0.200	0.100	mg/L			02/20/23 12:48	1
Chemical Oxygen Demand (SM 5220D LL)	9.91		5.00	4.80	mg/L			02/17/23 10:30	1
Total Suspended Solids (USGS I-3765-85)	3.00		1.88	0.638	mg/L			02/16/23 11:09	1

Definitions/Glossary

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
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.
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.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-380175/3

Matrix: Water

Analysis Batch: 380175

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00	0.450	mg/L			02/27/23 14:08	1
Sulfate	<1.00		1.00	0.400	mg/L			02/27/23 14:08	1

Lab Sample ID: LCS 310-380175/4

Matrix: Water

Analysis Batch: 380175

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.805		mg/L		98	90 - 110
Sulfate	10.0	10.20		mg/L		102	90 - 110

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-379608/1-A

Matrix: Water

Analysis Batch: 379768

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 379608

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 16:58	1
Boron	<0.100		0.100	0.0580	mg/L		02/21/23 08:45	02/21/23 16:58	1
Cobalt	<0.000500		0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 16:58	1
Magnesium	<0.500		0.500	0.150	mg/L		02/21/23 08:45	02/21/23 16:58	1
Manganese	<0.0100		0.0100	0.00360	mg/L		02/21/23 08:45	02/21/23 16:58	1
Nickel	<0.00500		0.00500	0.00190	mg/L		02/21/23 08:45	02/21/23 16:58	1
Iron	<0.100		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 16:58	1

Lab Sample ID: LCS 310-379608/2-A

Matrix: Water

Analysis Batch: 379768

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 379608

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.2110		mg/L		105	80 - 120
Boron	0.200	0.2014		mg/L		101	80 - 120
Cobalt	0.100	0.1071		mg/L		107	80 - 120
Magnesium	2.00	2.231		mg/L		112	80 - 120
Manganese	0.100	0.1038		mg/L		104	80 - 120
Nickel	0.200	0.2075		mg/L		104	80 - 120
Iron	0.200	0.2345		mg/L		117	80 - 120

Lab Sample ID: 310-249869-2 MS

Matrix: Ground Water

Analysis Batch: 379768

Client Sample ID: MW-12

Prep Type: Total/NA

Prep Batch: 379608

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.0651		0.200	0.2870		mg/L		111	75 - 125
Boron	2.15		0.200	2.526	4	mg/L		187	75 - 125
Cobalt	0.00186		0.100	0.1033		mg/L		101	75 - 125
Manganese	0.763		0.100	0.9206	4	mg/L		157	75 - 125
Nickel	0.00562		0.200	0.2100		mg/L		102	75 - 125

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QC Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

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

Lab Sample ID: 310-249869-2 MS

Matrix: Ground Water

Analysis Batch: 379768

Client Sample ID: MW-12

Prep Type: Total/NA

Prep Batch: 379608

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	27.7		0.200	29.46	4	mg/L		899	75 - 125

Lab Sample ID: 310-249869-2 MS

Matrix: Ground Water

Analysis Batch: 379940

Client Sample ID: MW-12

Prep Type: Total/NA

Prep Batch: 379608

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Magnesium	81.2		2.00	85.84	4	mg/L		231	75 - 125

Lab Sample ID: 310-249869-2 MSD

Matrix: Ground Water

Analysis Batch: 379768

Client Sample ID: MW-12

Prep Type: Total/NA

Prep Batch: 379608

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	0.0651		0.200	0.2827		mg/L		109	75 - 125	1	20
Boron	2.15		0.200	2.444	4	mg/L		146	75 - 125	3	20
Cobalt	0.00186		0.100	0.1041		mg/L		102	75 - 125	1	20
Manganese	0.763		0.100	0.9059	4	mg/L		142	75 - 125	2	20
Nickel	0.00562		0.200	0.2055		mg/L		100	75 - 125	2	20
Iron	27.7		0.200	28.78	4	mg/L		562	75 - 125	2	20

Lab Sample ID: 310-249869-2 MSD

Matrix: Ground Water

Analysis Batch: 379940

Client Sample ID: MW-12

Prep Type: Total/NA

Prep Batch: 379608

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Magnesium	81.2		2.00	81.14	4	mg/L		-4	75 - 125	6	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 310-379570/113

Matrix: Water

Analysis Batch: 379570

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.1250	J	0.200	0.100	mg/L			02/20/23 13:03	1

Lab Sample ID: MB 310-379570/86

Matrix: Water

Analysis Batch: 379570

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.200		0.200	0.100	mg/L			02/20/23 12:41	1

Eurofins Cedar Falls

QC Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 310-379570/114

Matrix: Water

Analysis Batch: 379570

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	15.6	15.25		mg/L		98	90 - 110

Lab Sample ID: LCS 310-379570/87

Matrix: Water

Analysis Batch: 379570

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	15.6	15.46		mg/L		99	90 - 110

Lab Sample ID: 310-249869-1 MS

Matrix: Ground Water

Analysis Batch: 379570

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	33.6	F1	10.0	38.38	F1	mg/L		48	90 - 110

Lab Sample ID: 310-249869-1 MSD

Matrix: Ground Water

Analysis Batch: 379570

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia	33.6	F1	10.0	41.67	F1	mg/L		81	90 - 110	8	10

Method: 5220D LL - COD

Lab Sample ID: MB 310-379446/32

Matrix: Water

Analysis Batch: 379446

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			02/17/23 10:30	1

Lab Sample ID: MB 310-379446/5

Matrix: Water

Analysis Batch: 379446

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			02/17/23 10:30	1

Lab Sample ID: LCS 310-379446/3

Matrix: Water

Analysis Batch: 379446

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	121.6		mg/L		97	85 - 115

Eurofins Cedar Falls

QC Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Method: 5220D LL - COD (Continued)

Lab Sample ID: LCS 310-379446/33

Matrix: Water

Analysis Batch: 379446

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	121.3		mg/L		97	85 - 115

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

Lab Sample ID: MB 310-379351/1

Matrix: Water

Analysis Batch: 379351

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			02/16/23 11:09	1

Lab Sample ID: LCS 310-379351/2

Matrix: Water

Analysis Batch: 379351

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

Lab Sample ID: 310-249869-1 DU

Matrix: Ground Water

Analysis Batch: 379351

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	44.0		52.00		mg/L		17	35

QC Association Summary

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

HPLC/IC

Analysis Batch: 380175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-249869-1	MW-11	Total/NA	Ground Water	9056A	
310-249869-2	MW-12	Total/NA	Ground Water	9056A	
310-249869-3	MW-14	Total/NA	Ground Water	9056A	
310-249869-4	MW-15	Total/NA	Ground Water	9056A	
310-249869-5	MW-17	Total/NA	Ground Water	9056A	
310-249869-6	MW-18	Total/NA	Ground Water	9056A	
MB 310-380175/3	Method Blank	Total/NA	Water	9056A	
LCS 310-380175/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 379608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-249869-1	MW-11	Total/NA	Ground Water	3005A	
310-249869-2	MW-12	Total/NA	Ground Water	3005A	
310-249869-3	MW-14	Total/NA	Ground Water	3005A	
310-249869-4	MW-15	Total/NA	Ground Water	3005A	
310-249869-5	MW-17	Total/NA	Ground Water	3005A	
310-249869-6	MW-18	Total/NA	Ground Water	3005A	
MB 310-379608/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-379608/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-249869-2 MS	MW-12	Total/NA	Ground Water	3005A	
310-249869-2 MSD	MW-12	Total/NA	Ground Water	3005A	

Analysis Batch: 379768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-249869-1	MW-11	Total/NA	Ground Water	6020B	379608
310-249869-2	MW-12	Total/NA	Ground Water	6020B	379608
310-249869-3	MW-14	Total/NA	Ground Water	6020B	379608
310-249869-4	MW-15	Total/NA	Ground Water	6020B	379608
310-249869-5	MW-17	Total/NA	Ground Water	6020B	379608
310-249869-6	MW-18	Total/NA	Ground Water	6020B	379608
MB 310-379608/1-A	Method Blank	Total/NA	Water	6020B	379608
LCS 310-379608/2-A	Lab Control Sample	Total/NA	Water	6020B	379608
310-249869-2 MS	MW-12	Total/NA	Ground Water	6020B	379608
310-249869-2 MSD	MW-12	Total/NA	Ground Water	6020B	379608

Analysis Batch: 379940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-249869-1	MW-11	Total/NA	Ground Water	6020B	379608
310-249869-2	MW-12	Total/NA	Ground Water	6020B	379608
310-249869-5	MW-17	Total/NA	Ground Water	6020B	379608
310-249869-6	MW-18	Total/NA	Ground Water	6020B	379608
310-249869-2 MS	MW-12	Total/NA	Ground Water	6020B	379608
310-249869-2 MSD	MW-12	Total/NA	Ground Water	6020B	379608

General Chemistry

Analysis Batch: 379351

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-249869-1	MW-11	Total/NA	Ground Water	I-3765-85	

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QC Association Summary

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

General Chemistry (Continued)

Analysis Batch: 379351 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-249869-2	MW-12	Total/NA	Ground Water	I-3765-85	
310-249869-3	MW-14	Total/NA	Ground Water	I-3765-85	
310-249869-4	MW-15	Total/NA	Ground Water	I-3765-85	
310-249869-5	MW-17	Total/NA	Ground Water	I-3765-85	
310-249869-6	MW-18	Total/NA	Ground Water	I-3765-85	
MB 310-379351/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-379351/2	Lab Control Sample	Total/NA	Water	I-3765-85	
310-249869-1 DU	MW-11	Total/NA	Ground Water	I-3765-85	

Analysis Batch: 379446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-249869-1	MW-11	Total/NA	Ground Water	5220D LL	
310-249869-2	MW-12	Total/NA	Ground Water	5220D LL	
310-249869-3	MW-14	Total/NA	Ground Water	5220D LL	
310-249869-4	MW-15	Total/NA	Ground Water	5220D LL	
310-249869-5	MW-17	Total/NA	Ground Water	5220D LL	
310-249869-6	MW-18	Total/NA	Ground Water	5220D LL	
MB 310-379446/32	Method Blank	Total/NA	Water	5220D LL	
MB 310-379446/5	Method Blank	Total/NA	Water	5220D LL	
LCS 310-379446/3	Lab Control Sample	Total/NA	Water	5220D LL	
LCS 310-379446/33	Lab Control Sample	Total/NA	Water	5220D LL	

Analysis Batch: 379570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-249869-1	MW-11	Total/NA	Ground Water	350.1	
310-249869-2	MW-12	Total/NA	Ground Water	350.1	
310-249869-3	MW-14	Total/NA	Ground Water	350.1	
310-249869-4	MW-15	Total/NA	Ground Water	350.1	
310-249869-5	MW-17	Total/NA	Ground Water	350.1	
310-249869-6	MW-18	Total/NA	Ground Water	350.1	
MB 310-379570/113	Method Blank	Total/NA	Water	350.1	
MB 310-379570/86	Method Blank	Total/NA	Water	350.1	
LCS 310-379570/114	Lab Control Sample	Total/NA	Water	350.1	
LCS 310-379570/87	Lab Control Sample	Total/NA	Water	350.1	
310-249869-1 MS	MW-11	Total/NA	Ground Water	350.1	
310-249869-1 MSD	MW-11	Total/NA	Ground Water	350.1	

Lab Chronicle

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Client Sample ID: MW-11

Date Collected: 02/14/23 13:47

Date Received: 02/16/23 08:10

Lab Sample ID: 310-249869-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	380175	QTZ5	EET CF	02/27/23 17:26
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 17:03
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		4	379940	ZRI4	EET CF	02/23/23 15:30
Total/NA	Analysis	350.1		10	379570	HE7K	EET CF	02/20/23 12:43
Total/NA	Analysis	5220D LL		5	379446	D7CP	EET CF	02/17/23 16:27
Total/NA	Analysis	I-3765-85		1	379351	DGU1	EET CF	02/16/23 11:09

Client Sample ID: MW-12

Date Collected: 02/14/23 14:40

Date Received: 02/16/23 08:10

Lab Sample ID: 310-249869-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	380175	QTZ5	EET CF	02/27/23 17:40
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 17:06
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		4	379940	ZRI4	EET CF	02/23/23 15:33
Total/NA	Analysis	350.1		9.38	379570	HE7K	EET CF	02/20/23 13:40
Total/NA	Analysis	5220D LL		1	379446	D7CP	EET CF	02/17/23 10:30
Total/NA	Analysis	I-3765-85		1	379351	DGU1	EET CF	02/16/23 11:09

Client Sample ID: MW-14

Date Collected: 02/14/23 12:30

Date Received: 02/16/23 08:10

Lab Sample ID: 310-249869-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	380175	QTZ5	EET CF	02/27/23 17:54
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 17:20
Total/NA	Analysis	350.1		1	379570	HE7K	EET CF	02/20/23 12:46
Total/NA	Analysis	5220D LL		1	379446	D7CP	EET CF	02/17/23 10:30
Total/NA	Analysis	I-3765-85		1	379351	DGU1	EET CF	02/16/23 11:09

Client Sample ID: MW-15

Date Collected: 02/14/23 13:02

Date Received: 02/16/23 08:10

Lab Sample ID: 310-249869-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	380175	QTZ5	EET CF	02/27/23 18:08
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 17:23

Eurofins Cedar Falls

Lab Chronicle

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Client Sample ID: MW-15

Date Collected: 02/14/23 13:02

Date Received: 02/16/23 08:10

Lab Sample ID: 310-249869-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	350.1		1	379570	HE7K	EET CF	02/20/23 12:46
Total/NA	Analysis	5220D LL		1	379446	D7CP	EET CF	02/17/23 10:30
Total/NA	Analysis	I-3765-85		1	379351	DGU1	EET CF	02/16/23 11:09

Client Sample ID: MW-17

Date Collected: 02/14/23 10:45

Date Received: 02/16/23 08:10

Lab Sample ID: 310-249869-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	380175	QTZ5	EET CF	02/27/23 18:22
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 17:46
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379940	ZRI4	EET CF	02/23/23 15:56
Total/NA	Analysis	350.1		1	379570	HE7K	EET CF	02/20/23 12:48
Total/NA	Analysis	5220D LL		1	379446	D7CP	EET CF	02/17/23 10:30
Total/NA	Analysis	I-3765-85		1	379351	DGU1	EET CF	02/16/23 11:09

Client Sample ID: MW-18

Date Collected: 02/14/23 11:19

Date Received: 02/16/23 08:10

Lab Sample ID: 310-249869-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	380175	QTZ5	EET CF	02/27/23 18:36
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 17:49
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379940	ZRI4	EET CF	02/23/23 15:59
Total/NA	Analysis	350.1		1	379570	HE7K	EET CF	02/20/23 12:48
Total/NA	Analysis	5220D LL		1	379446	D7CP	EET CF	02/17/23 10:30
Total/NA	Analysis	I-3765-85		1	379351	DGU1	EET CF	02/16/23 11:09

Laboratory References:

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

Accreditation/Certification Summary

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Laboratory: Eurofins Cedar Falls

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

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

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

Method Summary

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling-SA)

Job ID: 310-249869-1
SDG: ADMCO.23001

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
350.1	Nitrogen, Ammonia	EPA	EET CF
5220D LL	COD	SM	EET CF
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
3005A	Preparation, Total Metals	SW846	EET CF

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

USGS = "Methods For Analysis Of Water And Fluvial Sediments", USGS, 1989

Laboratory References:

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



Environment Testing
America



310-249869 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>ADM Clinton Landfill</u>			
City/State:	CITY	STATE	Project:
		<u>IA</u>	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>2/16/23</u>	<u>0810</u>	<u>R</u>
Delivery Type: ☒ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee			
☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes: Cooler ID: _____
Multiple Coolers?		☐ Yes ☒ No	If yes: Cooler # _____ of _____
Cooler Custody Seals Present?		☒ Yes ☐ No	If yes: Cooler custody seals intact? ☒ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☐ Yes ☒ No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID:		Correction Factor (°C):	
<u>T</u>		<u>+0.1</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):		Corrected Temp (°C):	
<u>0.9</u>		<u>1.0</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? ☐ Yes ☐ No			
a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



704 Enterprise Drive
Cedar Falls, Iowa 50613

319 277 2401 (phone)
515.792 7989 (fax)

SAMPLER: Konner Both

SITE NAME: ADM Clinton Landfill

ADDRESS: Clinton, IA

CITY/STATE/ZIP: Clinton, IA

TELEPHONE NUMBER: Konner Both

SIGNATURE OF SAMPLER: Konner Both

Fax:

REPORT TO: Kevin Jensen (kjensen@evora-group.com)

COMPANY NAME: Evora Consulting

PROJECT NAME: ADM Clinton Landfill (Spring 2023 GW Sampling - SA Total)

PROJECT NUMBER: ADMCO 23001

ADDRESS: 1690 All-State Court, Suite 100

CITY/STATE/ZIP: West Des Moines, IA 50265

Sample ID	Date Sampled	Time Sampled	# of Containers Shipped	Grab	Composite	Field Filtered	Preservative						Matrix					Analyze For													
							Ice	HNO ₃ (Red & White Label)	HCl (Blue & White Label)	NaOH (Orange & White Label)	H ₂ SO ₄ Plastic (Yellow & White Label)	H ₂ SO ₄ Glass (Yellow & White Label)	None (Black & White Label)	Other (Specify: _____)	Groundwater	Wastewater	Drinking Water	Sludge	Surface Water	Trip Blank	Arsenic, total	Boron, total	Cobalt, total	Magnesium, total	Manganese, total	Nickel, total	Sulfate	TSS	Iron, total	Chloride	Ammonia-Nitrogen
MW-1																		X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-2																		X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-3																		X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-4																		X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-5																		X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-6																		X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-7																		X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-8																		X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-9																		X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-10																		X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-11	2/14/23	1:47pm	9	X										X				X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-12	2/14/23	2:20pm	9	X										X				X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-13														X				X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-14	2/14/23	12:30pm	9	X										X				X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-15	2/14/23	1:02pm	9	X										X				X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-16														X				X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-17	2/14/23	10:45 am	9	X										X				X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-18	2/14/23	11:19 am	9	X										X				X	X	X	X	X	X	X	X	X	X	X	X	X	X
MW-D														X				X	X	X	X	X	X	X	X	X	X	X	X	X	X

SAMPLING COMMENTS:

SHIPPED VIA:

Requisitioned by: <u>Konner Both</u>	Date: <u>2/15/23</u>	Time: <u>10:30</u>	Received by: <u>Konner Both</u>	Date: <u>2/15/23</u>	Time: <u>15:00</u>
Received for lab by: <u>N</u>			Date: <u>2/16/23</u> Time: <u>08:10</u>		
LABORATORY COMMENTS:					

Login Sample Receipt Checklist

Client: Evora Consulting

Job Number: 310-249869-1

SDG Number: ADMCO.23001

Login Number: 249869

List Number: 1

Creator: Homolar, Dana J

List Source: Eurofins Cedar Falls

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

ANALYTICAL REPORT

PREPARED FOR

Attn: Kevin Jensen
Evora Consulting
1690 All State Court
Suite 100
West Des Moines, Iowa 50265

Generated 3/1/2023 5:26:14 PM

JOB DESCRIPTION

ADM Clinton Landfill (Spring 2023 GW Sampling)

JOB NUMBER

310-250016-1

Eurofins Cedar Falls

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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
Shirley Thompson, Client Service Manager
Shirley.Thompson@et.eurofinsus.com
(319)277-2401

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Case Narrative

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Job ID: 310-250016-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-250016-1

Comments

No additional comments.

Receipt

The samples were received on 2/17/2023 4:20 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.0° C and 0.4° C.

HPLC/IC

Method 9056A: The following samples were diluted due to the nature of the sample matrix: MW-7 (310-250016-7) and MW-13 (310-250016-11). Elevated reporting limits (RLs) are provided for sulfate.

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

Metals

Method 3005A: The reference method requires samples to be preserved to a pH of <2. The following samples were received with insufficient preservation at a pH of >2: MW-5 (310-250016-5), MW-6 (310-250016-6), MW-13 (310-250016-11) and (310-250016-A-5 DU). The sample(s) was preserved to the appropriate pH in the laboratory.

Method 3005A: The following samples were received with insufficient preservation: MW-7 (310-250016-7) and MW-9 (310-250016-9). The maximum amount of preservative was added by the laboratory, but the sample remained strongly basic. No further attempt was made to acidify the sample, as it would have diluted the sample. This does not meet regulatory requirements.

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

General Chemistry

Method 350.1: The reference method requires samples to be preserved to a pH of <2. The following sample was received with insufficient preservation at a pH of >2: MW-7 (310-250016-7). The sample(s) was preserved to the appropriate pH in the laboratory.

Methods 5220D LL, SM 5220D: The reference method requires samples to be preserved to a pH of <2. The following sample was received with insufficient preservation at a pH of >2: MW-7 (310-250016-7). The sample(s) was preserved to the appropriate pH in the laboratory.

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

Sample Summary

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-250016-1	MW-1	Ground Water	02/14/23 09:24	02/17/23 16:20
310-250016-2	MW-2	Ground Water	02/14/23 10:11	02/17/23 16:20
310-250016-3	MW-3	Ground Water	02/14/23 15:42	02/17/23 16:20
310-250016-4	MW-4	Ground Water	02/14/23 16:14	02/17/23 16:20
310-250016-5	MW-5	Ground Water	02/15/23 12:01	02/17/23 16:20
310-250016-6	MW-6	Ground Water	02/15/23 12:36	02/17/23 16:20
310-250016-7	MW-7	Ground Water	02/15/23 08:54	02/17/23 16:20
310-250016-8	MW-8	Ground Water	02/15/23 09:30	02/17/23 16:20
310-250016-9	MW-9	Ground Water	02/15/23 13:18	02/17/23 16:20
310-250016-10	MW-10	Ground Water	02/15/23 11:27	02/17/23 16:20
310-250016-11	MW-13	Ground Water	02/14/23 15:07	02/17/23 16:20
310-250016-12	MW-16	Ground Water	02/14/23 11:51	02/17/23 16:20
310-250016-13	MW-D	Ground Water	02/14/23 12:05	02/17/23 16:20

Detection Summary

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-1

Lab Sample ID: 310-250016-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	168		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	34.8		5.00	2.00	mg/L	5		9056A	Total/NA
Boron	0.125		0.100	0.0580	mg/L	1		6020B	Total/NA
Magnesium	45.8		0.500	0.150	mg/L	1		6020B	Total/NA
Ammonia	0.141	J	0.200	0.100	mg/L	1		350.1	Total/NA

Client Sample ID: MW-2

Lab Sample ID: 310-250016-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	28.4		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	26.5		5.00	2.00	mg/L	5		9056A	Total/NA
Boron	0.219		0.100	0.0580	mg/L	1		6020B	Total/NA
Magnesium	30.2		0.500	0.150	mg/L	1		6020B	Total/NA
Manganese	0.0204		0.0100	0.00360	mg/L	1		6020B	Total/NA
Ammonia	0.246		0.200	0.100	mg/L	1		350.1	Total/NA

Client Sample ID: MW-3

Lab Sample ID: 310-250016-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	223		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	21.0		5.00	2.00	mg/L	5		9056A	Total/NA
Arsenic	0.0108		0.00200	0.000750	mg/L	1		6020B	Total/NA
Boron	2.29		0.100	0.0580	mg/L	1		6020B	Total/NA
Cobalt	0.000925		0.000500	0.000190	mg/L	1		6020B	Total/NA
Magnesium	71.0		0.500	0.150	mg/L	1		6020B	Total/NA
Manganese	2.58		0.0100	0.00360	mg/L	1		6020B	Total/NA
Iron	11.7		0.100	0.0360	mg/L	1		6020B	Total/NA
Ammonia	1.60		0.200	0.100	mg/L	1		350.1	Total/NA
Chemical Oxygen Demand	25.6		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	45.0		7.50	2.55	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-4

Lab Sample ID: 310-250016-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	189		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	54.5		5.00	2.00	mg/L	5		9056A	Total/NA
Boron	0.441		0.100	0.0580	mg/L	1		6020B	Total/NA
Ammonia	0.223		0.200	0.100	mg/L	1		350.1	Total/NA
Chemical Oxygen Demand	5.06		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	3.13		1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-5

Lab Sample ID: 310-250016-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	136		20.0	9.00	mg/L	20		9056A	Total/NA
Sulfate	279		100	40.0	mg/L	100		9056A	Total/NA
Arsenic	0.0473		0.00200	0.000750	mg/L	1		6020B	Total/NA
Boron	16.8		0.700	0.406	mg/L	7		6020B	Total/NA
Cobalt	0.00558		0.000500	0.000190	mg/L	1		6020B	Total/NA
Magnesium	423		3.50	1.05	mg/L	7		6020B	Total/NA
Manganese	2.64		0.0100	0.00360	mg/L	1		6020B	Total/NA
Iron	41.3		0.100	0.0360	mg/L	1		6020B	Total/NA
Ammonia	70.9		1.88	0.938	mg/L	9.38		350.1	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-5 (Continued)

Lab Sample ID: 310-250016-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chemical Oxygen Demand	94.9		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	131		7.50	2.55	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-6

Lab Sample ID: 310-250016-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	66.2		20.0	9.00	mg/L	20		9056A	Total/NA
Sulfate	219		20.0	8.00	mg/L	20		9056A	Total/NA
Arsenic	0.00957		0.00200	0.000750	mg/L	1		6020B	Total/NA
Boron	6.95		0.700	0.406	mg/L	7		6020B	Total/NA
Cobalt	0.00236		0.000500	0.000190	mg/L	1		6020B	Total/NA
Magnesium	149		3.50	1.05	mg/L	7		6020B	Total/NA
Manganese	0.145		0.0100	0.00360	mg/L	1		6020B	Total/NA
Nickel	0.0453		0.00500	0.00190	mg/L	1		6020B	Total/NA
Iron	2.44		0.100	0.0360	mg/L	1		6020B	Total/NA
Ammonia	90.6	B	7.50	3.75	mg/L	37.5		350.1	Total/NA
Chemical Oxygen Demand	62.8		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	2240		30.0	10.2	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-7

Lab Sample ID: 310-250016-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	173		5.00	2.25	mg/L	5		9056A	Total/NA
Arsenic	0.0914		0.0400	0.0150	mg/L	20		6020B	Total/NA
Boron	51.2		2.00	1.16	mg/L	20		6020B	Total/NA
Cobalt	0.00750	J	0.0100	0.00380	mg/L	20		6020B	Total/NA
Magnesium	487		10.0	3.00	mg/L	20		6020B	Total/NA
Manganese	0.595		0.0100	0.00360	mg/L	1		6020B	Total/NA
Iron	0.499		0.100	0.0360	mg/L	1		6020B	Total/NA
Ammonia	1300		200	100	mg/L	1000		350.1	Total/NA
Chemical Oxygen Demand	428		25.0	24.0	mg/L	5		5220D LL	Total/NA
Total Suspended Solids	6.87		1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-8

Lab Sample ID: 310-250016-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	142		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	49.6		5.00	2.00	mg/L	5		9056A	Total/NA
Boron	0.448		0.100	0.0580	mg/L	1		6020B	Total/NA
Cobalt	0.000295	J	0.000500	0.000190	mg/L	1		6020B	Total/NA
Ammonia	0.112	J	0.200	0.100	mg/L	1		350.1	Total/NA
Chemical Oxygen Demand	5.06		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	3.50		1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-9

Lab Sample ID: 310-250016-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	37.3		20.0	9.00	mg/L	20		9056A	Total/NA
Sulfate	710		20.0	8.00	mg/L	20		9056A	Total/NA
Arsenic	0.0816		0.00200	0.000750	mg/L	1		6020B	Total/NA
Boron	11.6		0.400	0.232	mg/L	4		6020B	Total/NA
Cobalt	0.00547		0.000500	0.000190	mg/L	1		6020B	Total/NA
Magnesium	326		2.00	0.600	mg/L	4		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-9 (Continued)

Lab Sample ID: 310-250016-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	1.85		0.0100	0.00360	mg/L	1		6020B	Total/NA
Iron	7.56		0.100	0.0360	mg/L	1		6020B	Total/NA
Ammonia	17.7		1.88	0.938	mg/L	9.38		350.1	Total/NA
Chemical Oxygen Demand	525		25.0	24.0	mg/L	5		5220D LL	Total/NA
Total Suspended Solids	280		30.0	10.2	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-10

Lab Sample ID: 310-250016-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	47.7		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	134		5.00	2.00	mg/L	5		9056A	Total/NA
Boron	0.328		0.100	0.0580	mg/L	1		6020B	Total/NA
Cobalt	0.000238	J	0.000500	0.000190	mg/L	1		6020B	Total/NA
Magnesium	54.7		0.500	0.150	mg/L	1		6020B	Total/NA
Manganese	0.258		0.0100	0.00360	mg/L	1		6020B	Total/NA
Iron	0.209		0.100	0.0360	mg/L	1		6020B	Total/NA
Ammonia	0.217		0.200	0.100	mg/L	1		350.1	Total/NA
Chemical Oxygen Demand	8.36		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	606		15.0	5.10	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-13

Lab Sample ID: 310-250016-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	32.7		5.00	2.25	mg/L	5		9056A	Total/NA
Arsenic	0.130		0.00200	0.000750	mg/L	1		6020B	Total/NA
Boron	8.39		0.400	0.232	mg/L	4		6020B	Total/NA
Cobalt	0.00238		0.000500	0.000190	mg/L	1		6020B	Total/NA
Magnesium	274		2.00	0.600	mg/L	4		6020B	Total/NA
Manganese	2.14		0.0100	0.00360	mg/L	1		6020B	Total/NA
Iron	28.9		0.100	0.0360	mg/L	1		6020B	Total/NA
Ammonia	12.5		1.88	0.938	mg/L	9.38		350.1	Total/NA
Chemical Oxygen Demand	126		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	109		7.50	2.55	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-16

Lab Sample ID: 310-250016-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	32.5		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	40.8		5.00	2.00	mg/L	5		9056A	Total/NA
Arsenic	0.000918	J	0.00200	0.000750	mg/L	1		6020B	Total/NA
Boron	0.440		0.100	0.0580	mg/L	1		6020B	Total/NA
Iron	0.0568	J	0.100	0.0360	mg/L	1		6020B	Total/NA
Ammonia	0.159	J	0.200	0.100	mg/L	1		350.1	Total/NA
Chemical Oxygen Demand	12.3		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	8.63		1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-D

Lab Sample ID: 310-250016-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	35.3		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	41.3		5.00	2.00	mg/L	5		9056A	Total/NA
Arsenic	0.000818	J	0.00200	0.000750	mg/L	1		6020B	Total/NA
Boron	0.428		0.100	0.0580	mg/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: Evora Consulting

Job ID: 310-250016-1

Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Client Sample ID: MW-D (Continued)

Lab Sample ID: 310-250016-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	0.0638	J	0.100	0.0360	mg/L	1		6020B	Total/NA
Chemical Oxygen Demand	9.35		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	13.9		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: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-1

Lab Sample ID: 310-250016-1

Date Collected: 02/14/23 09:24

Matrix: Ground Water

Date Received: 02/17/23 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	168		5.00	2.25	mg/L			02/23/23 17:07	5
Sulfate	34.8		5.00	2.00	mg/L			02/23/23 17:07	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 17:52	1
Boron	0.125		0.100	0.0580	mg/L		02/21/23 08:45	02/23/23 16:02	1
Cobalt	<0.000500		0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 17:52	1
Magnesium	45.8		0.500	0.150	mg/L		02/21/23 08:45	02/21/23 17:52	1
Manganese	<0.0100		0.0100	0.00360	mg/L		02/21/23 08:45	02/21/23 17:52	1
Nickel	<0.00500		0.00500	0.00190	mg/L		02/21/23 08:45	02/21/23 17:52	1
Iron	<0.100		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 17:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.141	J	0.200	0.100	mg/L			02/20/23 12:51	1
Chemical Oxygen Demand (SM 5220D LL)	<5.00		5.00	4.80	mg/L			02/20/23 08:34	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	0.638	mg/L			02/20/23 11:58	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-2

Lab Sample ID: 310-250016-2

Date Collected: 02/14/23 10:11

Matrix: Ground Water

Date Received: 02/17/23 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28.4		5.00	2.25	mg/L			02/23/23 17:21	5
Sulfate	26.5		5.00	2.00	mg/L			02/23/23 17:21	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 17:54	1
Boron	0.219		0.100	0.0580	mg/L		02/21/23 08:45	02/23/23 16:04	1
Cobalt	<0.000500		0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 17:54	1
Magnesium	30.2		0.500	0.150	mg/L		02/21/23 08:45	02/21/23 17:54	1
Manganese	0.0204		0.0100	0.00360	mg/L		02/21/23 08:45	02/21/23 17:54	1
Iron	<0.100		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 17:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.246		0.200	0.100	mg/L			02/20/23 12:51	1
Chemical Oxygen Demand (SM 5220D LL)	<5.00		5.00	4.80	mg/L			02/20/23 08:34	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	0.638	mg/L			02/20/23 11:58	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-3

Lab Sample ID: 310-250016-3

Date Collected: 02/14/23 15:42

Matrix: Ground Water

Date Received: 02/17/23 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	223		5.00	2.25	mg/L			02/23/23 18:04	5
Sulfate	21.0		5.00	2.00	mg/L			02/23/23 18:04	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0108		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 17:57	1
Boron	2.29		0.100	0.0580	mg/L		02/21/23 08:45	02/23/23 16:07	1
Cobalt	0.000925		0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 17:57	1
Magnesium	71.0		0.500	0.150	mg/L		02/21/23 08:45	02/21/23 17:57	1
Manganese	2.58		0.0100	0.00360	mg/L		02/21/23 08:45	02/21/23 17:57	1
Iron	11.7		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 17:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	1.60		0.200	0.100	mg/L			02/20/23 12:53	1
Chemical Oxygen Demand (SM 5220D LL)	25.6		5.00	4.80	mg/L			02/20/23 08:34	1
Total Suspended Solids (USGS I-3765-85)	45.0		7.50	2.55	mg/L			02/20/23 11:58	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-4

Lab Sample ID: 310-250016-4

Date Collected: 02/14/23 16:14

Matrix: Ground Water

Date Received: 02/17/23 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	189		5.00	2.25	mg/L			02/23/23 18:18	5
Sulfate	54.5		5.00	2.00	mg/L			02/23/23 18:18	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 18:00	1
Boron	0.441		0.100	0.0580	mg/L		02/21/23 08:45	02/23/23 16:10	1
Cobalt	<0.000500		0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 18:00	1
Iron	<0.100		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 18:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.223		0.200	0.100	mg/L			02/20/23 12:53	1
Chemical Oxygen Demand (SM 5220D LL)	5.06		5.00	4.80	mg/L			02/27/23 08:29	1
Total Suspended Solids (USGS I-3765-85)	3.13		1.88	0.638	mg/L			02/20/23 11:58	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-5

Lab Sample ID: 310-250016-5

Date Collected: 02/15/23 12:01

Matrix: Ground Water

Date Received: 02/17/23 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	136		20.0	9.00	mg/L			02/23/23 18:32	20
Sulfate	279		100	40.0	mg/L			02/24/23 12:36	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0473		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 18:03	1
Boron	16.8		0.700	0.406	mg/L		02/21/23 08:45	02/23/23 16:04	7
Cobalt	0.00558		0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 18:03	1
Magnesium	423		3.50	1.05	mg/L		02/21/23 08:45	02/23/23 16:04	7
Manganese	2.64		0.0100	0.00360	mg/L		02/21/23 08:45	02/21/23 18:03	1
Iron	41.3		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 18:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	70.9		1.88	0.938	mg/L			02/20/23 12:54	9.38
Chemical Oxygen Demand (SM 5220D LL)	94.9		5.00	4.80	mg/L			02/27/23 08:29	1
Total Suspended Solids (USGS I-3765-85)	131		7.50	2.55	mg/L			02/20/23 11:58	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-6

Lab Sample ID: 310-250016-6

Date Collected: 02/15/23 12:36

Matrix: Ground Water

Date Received: 02/17/23 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	66.2		20.0	9.00	mg/L			02/23/23 18:46	20
Sulfate	219		20.0	8.00	mg/L			02/23/23 18:46	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00957		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 18:09	1
Boron	6.95		0.700	0.406	mg/L		02/21/23 08:45	02/23/23 16:11	7
Cobalt	0.00236		0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 18:09	1
Magnesium	149		3.50	1.05	mg/L		02/21/23 08:45	02/23/23 16:11	7
Manganese	0.145		0.0100	0.00360	mg/L		02/21/23 08:45	02/21/23 18:09	1
Nickel	0.0453		0.00500	0.00190	mg/L		02/21/23 08:45	02/21/23 18:09	1
Iron	2.44		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 18:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	90.6	B	7.50	3.75	mg/L			02/20/23 14:00	37.5
Chemical Oxygen Demand (SM 5220D LL)	62.8		5.00	4.80	mg/L			02/27/23 08:29	1
Total Suspended Solids (USGS I-3765-85)	2240		30.0	10.2	mg/L			02/20/23 11:58	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-7

Lab Sample ID: 310-250016-7

Date Collected: 02/15/23 08:54

Matrix: Ground Water

Date Received: 02/17/23 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	173		5.00	2.25	mg/L			02/23/23 19:00	5
Sulfate	<5.00		5.00	2.00	mg/L			02/23/23 19:00	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0914		0.0400	0.0150	mg/L		02/21/23 08:45	02/23/23 16:14	20
Boron	51.2		2.00	1.16	mg/L		02/21/23 08:45	02/23/23 16:14	20
Cobalt	0.00750	J	0.0100	0.00380	mg/L		02/21/23 08:45	02/23/23 16:14	20
Magnesium	487		10.0	3.00	mg/L		02/21/23 08:45	02/23/23 16:14	20
Manganese	0.595		0.0100	0.00360	mg/L		02/21/23 08:45	02/21/23 18:12	1
Iron	0.499		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 18:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	1300		200	100	mg/L			02/20/23 15:55	1000
Chemical Oxygen Demand (SM 5220D LL)	428		25.0	24.0	mg/L			02/27/23 08:29	5
Total Suspended Solids (USGS I-3765-85)	6.87		1.88	0.638	mg/L			02/20/23 11:58	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-8

Lab Sample ID: 310-250016-8

Date Collected: 02/15/23 09:30

Matrix: Ground Water

Date Received: 02/17/23 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	142		5.00	2.25	mg/L			02/23/23 19:14	5
Sulfate	49.6		5.00	2.00	mg/L			02/23/23 19:14	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 18:36	1
Boron	0.448		0.100	0.0580	mg/L		02/21/23 08:45	02/23/23 16:41	1
Cobalt	0.000295	J	0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 18:36	1
Iron	<0.100		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 18:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.112	J	0.200	0.100	mg/L			02/20/23 12:56	1
Chemical Oxygen Demand (SM 5220D LL)	5.06		5.00	4.80	mg/L			02/27/23 08:29	1
Total Suspended Solids (USGS I-3765-85)	3.50		1.88	0.638	mg/L			02/20/23 11:58	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-9

Lab Sample ID: 310-250016-9

Date Collected: 02/15/23 13:18

Matrix: Ground Water

Date Received: 02/17/23 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37.3		20.0	9.00	mg/L			02/23/23 19:28	20
Sulfate	710		20.0	8.00	mg/L			02/23/23 19:28	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0816		0.00200	0.000750	mg/L		02/21/23 08:45	02/28/23 12:02	1
Boron	11.6		0.400	0.232	mg/L		02/21/23 08:45	02/23/23 16:45	4
Cobalt	0.00547		0.000500	0.000190	mg/L		02/21/23 08:45	02/28/23 12:02	1
Magnesium	326		2.00	0.600	mg/L		02/21/23 08:45	02/28/23 12:05	4
Manganese	1.85		0.0100	0.00360	mg/L		02/21/23 08:45	02/21/23 18:39	1
Iron	7.56		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 18:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	17.7		1.88	0.938	mg/L			02/20/23 12:58	9.38
Chemical Oxygen Demand (SM 5220D LL)	525		25.0	24.0	mg/L			02/27/23 08:29	5
Total Suspended Solids (USGS I-3765-85)	280		30.0	10.2	mg/L			02/20/23 11:58	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-10

Lab Sample ID: 310-250016-10

Date Collected: 02/15/23 11:27

Matrix: Ground Water

Date Received: 02/17/23 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	47.7		5.00	2.25	mg/L			02/23/23 19:42	5
Sulfate	134		5.00	2.00	mg/L			02/23/23 19:42	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 18:42	1
Boron	0.328		0.100	0.0580	mg/L		02/21/23 08:45	02/23/23 16:48	1
Cobalt	0.000238	J	0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 18:42	1
Magnesium	54.7		0.500	0.150	mg/L		02/21/23 08:45	02/21/23 18:42	1
Manganese	0.258		0.0100	0.00360	mg/L		02/21/23 08:45	02/21/23 18:42	1
Iron	0.209		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 18:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.217		0.200	0.100	mg/L			02/20/23 12:58	1
Chemical Oxygen Demand (SM 5220D LL)	8.36		5.00	4.80	mg/L			02/27/23 08:29	1
Total Suspended Solids (USGS I-3765-85)	606		15.0	5.10	mg/L			02/20/23 11:58	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-13

Lab Sample ID: 310-250016-11

Date Collected: 02/14/23 15:07

Matrix: Ground Water

Date Received: 02/17/23 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32.7		5.00	2.25	mg/L			02/23/23 19:56	5
Sulfate	<5.00		5.00	2.00	mg/L			02/23/23 19:56	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.130		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 18:45	1
Boron	8.39		0.400	0.232	mg/L		02/21/23 08:45	02/23/23 16:51	4
Cobalt	0.00238		0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 18:45	1
Magnesium	274		2.00	0.600	mg/L		02/21/23 08:45	02/23/23 16:51	4
Manganese	2.14		0.0100	0.00360	mg/L		02/21/23 08:45	02/21/23 18:45	1
Iron	28.9		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 18:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	12.5		1.88	0.938	mg/L			02/20/23 13:00	9.38
Chemical Oxygen Demand (SM 5220D LL)	126		5.00	4.80	mg/L			02/27/23 08:29	1
Total Suspended Solids (USGS I-3765-85)	109		7.50	2.55	mg/L			02/20/23 11:58	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-16

Lab Sample ID: 310-250016-12

Date Collected: 02/14/23 11:51

Matrix: Ground Water

Date Received: 02/17/23 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32.5		5.00	2.25	mg/L			02/23/23 20:11	5
Sulfate	40.8		5.00	2.00	mg/L			02/23/23 20:11	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.000918	J	0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 18:47	1
Boron	0.440		0.100	0.0580	mg/L		02/21/23 08:45	02/23/23 16:55	1
Cobalt	<0.000500		0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 18:47	1
Iron	0.0568	J	0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 18:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	0.159	J	0.200	0.100	mg/L			02/20/23 13:01	1
Chemical Oxygen Demand (SM 5220D LL)	12.3		5.00	4.80	mg/L			02/27/23 08:29	1
Total Suspended Solids (USGS I-3765-85)	8.63		1.88	0.638	mg/L			02/20/23 11:58	1

Client Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-D

Lab Sample ID: 310-250016-13

Date Collected: 02/14/23 12:05

Matrix: Ground Water

Date Received: 02/17/23 16:20

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	35.3		5.00	2.25	mg/L			02/23/23 20:53	5
Sulfate	41.3		5.00	2.00	mg/L			02/23/23 20:53	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.000818	J	0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 18:50	1
Boron	0.428		0.100	0.0580	mg/L		02/21/23 08:45	02/23/23 16:58	1
Cobalt	<0.000500		0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 18:50	1
Iron	0.0638	J	0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 18:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	<0.200		0.200	0.100	mg/L			02/20/23 13:02	1
Chemical Oxygen Demand (SM 5220D LL)	9.35		5.00	4.80	mg/L			02/27/23 08:29	1
Total Suspended Solids (USGS I-3765-85)	13.9		1.88	0.638	mg/L			02/20/23 11:58	1

Definitions/Glossary

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

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
SQL	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: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-379954/3

Matrix: Water

Analysis Batch: 379954

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00	0.450	mg/L			02/23/23 15:57	1
Sulfate	<1.00		1.00	0.400	mg/L			02/23/23 15:57	1

Lab Sample ID: LCS 310-379954/4

Matrix: Water

Analysis Batch: 379954

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.754		mg/L		98	90 - 110
Sulfate	10.0	10.14		mg/L		101	90 - 110

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-379608/1-A

Matrix: Water

Analysis Batch: 379768

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 379608

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000750	mg/L		02/21/23 08:45	02/21/23 16:58	1
Boron	<0.100		0.100	0.0580	mg/L		02/21/23 08:45	02/21/23 16:58	1
Cobalt	<0.000500		0.000500	0.000190	mg/L		02/21/23 08:45	02/21/23 16:58	1
Magnesium	<0.500		0.500	0.150	mg/L		02/21/23 08:45	02/21/23 16:58	1
Manganese	<0.0100		0.0100	0.00360	mg/L		02/21/23 08:45	02/21/23 16:58	1
Nickel	<0.00500		0.00500	0.00190	mg/L		02/21/23 08:45	02/21/23 16:58	1
Iron	<0.100		0.100	0.0360	mg/L		02/21/23 08:45	02/21/23 16:58	1

Lab Sample ID: LCS 310-379608/2-A

Matrix: Water

Analysis Batch: 379768

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 379608

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.2110		mg/L		105	80 - 120
Boron	0.200	0.2014		mg/L		101	80 - 120
Cobalt	0.100	0.1071		mg/L		107	80 - 120
Magnesium	2.00	2.231		mg/L		112	80 - 120
Manganese	0.100	0.1038		mg/L		104	80 - 120
Nickel	0.200	0.2075		mg/L		104	80 - 120
Iron	0.200	0.2345		mg/L		117	80 - 120

Lab Sample ID: 310-250016-5 DU

Matrix: Ground Water

Analysis Batch: 379768

Client Sample ID: MW-5

Prep Type: Total/NA

Prep Batch: 379608

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.0473		0.04662		mg/L		2	20
Cobalt	0.00558		0.005456		mg/L		2	20
Manganese	2.64		2.631		mg/L		0.5	20
Nickel	0.0129		0.01279		mg/L		0.9	20
Iron	41.3		40.72		mg/L		1	20

Eurofins Cedar Falls

QC Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

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

Lab Sample ID: 310-250016-5 DU

Matrix: Ground Water

Analysis Batch: 379926

Client Sample ID: MW-5

Prep Type: Total/NA

Prep Batch: 379608

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Boron	16.8		19.12		mg/L		13	20
Magnesium	423		466.4		mg/L		10	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 310-379570/113

Matrix: Water

Analysis Batch: 379570

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.1250	J	0.200	0.100	mg/L			02/20/23 13:03	1

Lab Sample ID: MB 310-379570/86

Matrix: Water

Analysis Batch: 379570

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.200		0.200	0.100	mg/L			02/20/23 12:41	1

Lab Sample ID: LCS 310-379570/114

Matrix: Water

Analysis Batch: 379570

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	15.6	15.25		mg/L		98	90 - 110

Lab Sample ID: LCS 310-379570/87

Matrix: Water

Analysis Batch: 379570

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	15.6	15.46		mg/L		99	90 - 110

Method: 5220D LL - COD

Lab Sample ID: MB 310-379446/68

Matrix: Water

Analysis Batch: 379446

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			02/17/23 16:27	1

Lab Sample ID: LCS 310-379446/69

Matrix: Water

Analysis Batch: 379446

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	126.4		mg/L		101	85 - 115

Eurofins Cedar Falls

QC Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Method: 5220D LL - COD (Continued)

Lab Sample ID: MB 310-380005/32

Matrix: Water

Analysis Batch: 380005

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			02/27/23 08:29	1

Lab Sample ID: MB 310-380005/5

Matrix: Water

Analysis Batch: 380005

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			02/27/23 08:29	1

Lab Sample ID: MB 310-380005/60

Matrix: Water

Analysis Batch: 380005

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			02/27/23 08:29	1

Lab Sample ID: LCS 310-380005/3

Matrix: Water

Analysis Batch: 380005

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	120.3		mg/L		96	85 - 115

Lab Sample ID: LCS 310-380005/33

Matrix: Water

Analysis Batch: 380005

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	115.3		mg/L		92	85 - 115

Lab Sample ID: LCS 310-380005/63

Matrix: Water

Analysis Batch: 380005

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	122.3		mg/L		98	85 - 115

Lab Sample ID: 310-250016-6 MS

Matrix: Ground Water

Analysis Batch: 380005

Client Sample ID: MW-6

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chemical Oxygen Demand	62.8		50.0	110.4		mg/L		95	80 - 148

Lab Sample ID: 310-250016-6 MSD

Matrix: Ground Water

Analysis Batch: 380005

Client Sample ID: MW-6

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chemical Oxygen Demand	62.8		50.0	113.0		mg/L		100	80 - 148	2	10

Eurofins Cedar Falls

QC Sample Results

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

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

Lab Sample ID: MB 310-379577/1

Matrix: Water

Analysis Batch: 379577

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			02/20/23 11:58	1

Lab Sample ID: LCS 310-379577/2

Matrix: Water

Analysis Batch: 379577

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	105.0		mg/L		105	75 - 116

Lab Sample ID: 310-250016-9 DU

Matrix: Ground Water

Analysis Batch: 379577

Client Sample ID: MW-9

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	280		296.0		mg/L		6	35

Lab Sample ID: 310-250016-11 DU

Matrix: Ground Water

Analysis Batch: 379577

Client Sample ID: MW-13

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	109		111.5		mg/L		2	35

QC Association Summary

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

HPLC/IC

Analysis Batch: 379954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-250016-1	MW-1	Total/NA	Ground Water	9056A	
310-250016-2	MW-2	Total/NA	Ground Water	9056A	
310-250016-3	MW-3	Total/NA	Ground Water	9056A	
310-250016-4	MW-4	Total/NA	Ground Water	9056A	
310-250016-5	MW-5	Total/NA	Ground Water	9056A	
310-250016-5	MW-5	Total/NA	Ground Water	9056A	
310-250016-6	MW-6	Total/NA	Ground Water	9056A	
310-250016-7	MW-7	Total/NA	Ground Water	9056A	
310-250016-8	MW-8	Total/NA	Ground Water	9056A	
310-250016-9	MW-9	Total/NA	Ground Water	9056A	
310-250016-10	MW-10	Total/NA	Ground Water	9056A	
310-250016-11	MW-13	Total/NA	Ground Water	9056A	
310-250016-12	MW-16	Total/NA	Ground Water	9056A	
310-250016-13	MW-D	Total/NA	Ground Water	9056A	
MB 310-379954/3	Method Blank	Total/NA	Water	9056A	
LCS 310-379954/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 379608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-250016-1	MW-1	Total/NA	Ground Water	3005A	
310-250016-2	MW-2	Total/NA	Ground Water	3005A	
310-250016-3	MW-3	Total/NA	Ground Water	3005A	
310-250016-4	MW-4	Total/NA	Ground Water	3005A	
310-250016-5	MW-5	Total/NA	Ground Water	3005A	
310-250016-6	MW-6	Total/NA	Ground Water	3005A	
310-250016-7	MW-7	Total/NA	Ground Water	3005A	
310-250016-8	MW-8	Total/NA	Ground Water	3005A	
310-250016-9	MW-9	Total/NA	Ground Water	3005A	
310-250016-10	MW-10	Total/NA	Ground Water	3005A	
310-250016-11	MW-13	Total/NA	Ground Water	3005A	
310-250016-12	MW-16	Total/NA	Ground Water	3005A	
310-250016-13	MW-D	Total/NA	Ground Water	3005A	
MB 310-379608/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-379608/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-250016-5 DU	MW-5	Total/NA	Ground Water	3005A	

Analysis Batch: 379768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-250016-1	MW-1	Total/NA	Ground Water	6020B	379608
310-250016-2	MW-2	Total/NA	Ground Water	6020B	379608
310-250016-3	MW-3	Total/NA	Ground Water	6020B	379608
310-250016-4	MW-4	Total/NA	Ground Water	6020B	379608
310-250016-5	MW-5	Total/NA	Ground Water	6020B	379608
310-250016-6	MW-6	Total/NA	Ground Water	6020B	379608
310-250016-7	MW-7	Total/NA	Ground Water	6020B	379608
310-250016-8	MW-8	Total/NA	Ground Water	6020B	379608
310-250016-9	MW-9	Total/NA	Ground Water	6020B	379608
310-250016-10	MW-10	Total/NA	Ground Water	6020B	379608
310-250016-11	MW-13	Total/NA	Ground Water	6020B	379608

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QC Association Summary

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Metals (Continued)

Analysis Batch: 379768 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-250016-12	MW-16	Total/NA	Ground Water	6020B	379608
310-250016-13	MW-D	Total/NA	Ground Water	6020B	379608
MB 310-379608/1-A	Method Blank	Total/NA	Water	6020B	379608
LCS 310-379608/2-A	Lab Control Sample	Total/NA	Water	6020B	379608
310-250016-5 DU	MW-5	Total/NA	Ground Water	6020B	379608

Analysis Batch: 379926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-250016-5	MW-5	Total/NA	Ground Water	6020B	379608
310-250016-6	MW-6	Total/NA	Ground Water	6020B	379608
310-250016-7	MW-7	Total/NA	Ground Water	6020B	379608
310-250016-8	MW-8	Total/NA	Ground Water	6020B	379608
310-250016-9	MW-9	Total/NA	Ground Water	6020B	379608
310-250016-10	MW-10	Total/NA	Ground Water	6020B	379608
310-250016-11	MW-13	Total/NA	Ground Water	6020B	379608
310-250016-12	MW-16	Total/NA	Ground Water	6020B	379608
310-250016-13	MW-D	Total/NA	Ground Water	6020B	379608
310-250016-5 DU	MW-5	Total/NA	Ground Water	6020B	379608

Analysis Batch: 379940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-250016-1	MW-1	Total/NA	Ground Water	6020B	379608
310-250016-2	MW-2	Total/NA	Ground Water	6020B	379608
310-250016-3	MW-3	Total/NA	Ground Water	6020B	379608
310-250016-4	MW-4	Total/NA	Ground Water	6020B	379608

Analysis Batch: 380173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-250016-9	MW-9	Total/NA	Ground Water	6020B	379608
310-250016-9	MW-9	Total/NA	Ground Water	6020B	379608

General Chemistry

Analysis Batch: 379446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-250016-1	MW-1	Total/NA	Ground Water	5220D LL	
310-250016-2	MW-2	Total/NA	Ground Water	5220D LL	
310-250016-3	MW-3	Total/NA	Ground Water	5220D LL	
MB 310-379446/68	Method Blank	Total/NA	Water	5220D LL	
LCS 310-379446/69	Lab Control Sample	Total/NA	Water	5220D LL	

Analysis Batch: 379570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-250016-1	MW-1	Total/NA	Ground Water	350.1	
310-250016-2	MW-2	Total/NA	Ground Water	350.1	
310-250016-3	MW-3	Total/NA	Ground Water	350.1	
310-250016-4	MW-4	Total/NA	Ground Water	350.1	
310-250016-5	MW-5	Total/NA	Ground Water	350.1	
310-250016-6	MW-6	Total/NA	Ground Water	350.1	
310-250016-7	MW-7	Total/NA	Ground Water	350.1	
310-250016-8	MW-8	Total/NA	Ground Water	350.1	

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QC Association Summary

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

General Chemistry (Continued)

Analysis Batch: 379570 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-250016-9	MW-9	Total/NA	Ground Water	350.1	
310-250016-10	MW-10	Total/NA	Ground Water	350.1	
310-250016-11	MW-13	Total/NA	Ground Water	350.1	
310-250016-12	MW-16	Total/NA	Ground Water	350.1	
310-250016-13	MW-D	Total/NA	Ground Water	350.1	
MB 310-379570/113	Method Blank	Total/NA	Water	350.1	
MB 310-379570/86	Method Blank	Total/NA	Water	350.1	
LCS 310-379570/114	Lab Control Sample	Total/NA	Water	350.1	
LCS 310-379570/87	Lab Control Sample	Total/NA	Water	350.1	

Analysis Batch: 379577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-250016-1	MW-1	Total/NA	Ground Water	I-3765-85	
310-250016-2	MW-2	Total/NA	Ground Water	I-3765-85	
310-250016-3	MW-3	Total/NA	Ground Water	I-3765-85	
310-250016-4	MW-4	Total/NA	Ground Water	I-3765-85	
310-250016-5	MW-5	Total/NA	Ground Water	I-3765-85	
310-250016-6	MW-6	Total/NA	Ground Water	I-3765-85	
310-250016-7	MW-7	Total/NA	Ground Water	I-3765-85	
310-250016-8	MW-8	Total/NA	Ground Water	I-3765-85	
310-250016-9	MW-9	Total/NA	Ground Water	I-3765-85	
310-250016-10	MW-10	Total/NA	Ground Water	I-3765-85	
310-250016-11	MW-13	Total/NA	Ground Water	I-3765-85	
310-250016-12	MW-16	Total/NA	Ground Water	I-3765-85	
310-250016-13	MW-D	Total/NA	Ground Water	I-3765-85	
MB 310-379577/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-379577/2	Lab Control Sample	Total/NA	Water	I-3765-85	
310-250016-9 DU	MW-9	Total/NA	Ground Water	I-3765-85	
310-250016-11 DU	MW-13	Total/NA	Ground Water	I-3765-85	

Analysis Batch: 380005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-250016-4	MW-4	Total/NA	Ground Water	5220D LL	
310-250016-5	MW-5	Total/NA	Ground Water	5220D LL	
310-250016-6	MW-6	Total/NA	Ground Water	5220D LL	
310-250016-7	MW-7	Total/NA	Ground Water	5220D LL	
310-250016-8	MW-8	Total/NA	Ground Water	5220D LL	
310-250016-9	MW-9	Total/NA	Ground Water	5220D LL	
310-250016-10	MW-10	Total/NA	Ground Water	5220D LL	
310-250016-11	MW-13	Total/NA	Ground Water	5220D LL	
310-250016-12	MW-16	Total/NA	Ground Water	5220D LL	
310-250016-13	MW-D	Total/NA	Ground Water	5220D LL	
MB 310-380005/32	Method Blank	Total/NA	Water	5220D LL	
MB 310-380005/5	Method Blank	Total/NA	Water	5220D LL	
MB 310-380005/60	Method Blank	Total/NA	Water	5220D LL	
LCS 310-380005/3	Lab Control Sample	Total/NA	Water	5220D LL	
LCS 310-380005/33	Lab Control Sample	Total/NA	Water	5220D LL	
LCS 310-380005/63	Lab Control Sample	Total/NA	Water	5220D LL	
310-250016-6 MS	MW-6	Total/NA	Ground Water	5220D LL	
310-250016-6 MSD	MW-6	Total/NA	Ground Water	5220D LL	

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Lab Chronicle

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-1

Lab Sample ID: 310-250016-1

Date Collected: 02/14/23 09:24

Matrix: Ground Water

Date Received: 02/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	379954	ZRI4	EET CF	02/23/23 17:07
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 17:52
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379940	ZRI4	EET CF	02/23/23 16:02
Total/NA	Analysis	350.1		1	379570	HE7K	EET CF	02/20/23 12:51
Total/NA	Analysis	5220D LL		1	379446	D7CP	EET CF	02/20/23 08:34
Total/NA	Analysis	I-3765-85		1	379577	D7CP	EET CF	02/20/23 11:58

Client Sample ID: MW-2

Lab Sample ID: 310-250016-2

Date Collected: 02/14/23 10:11

Matrix: Ground Water

Date Received: 02/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	379954	ZRI4	EET CF	02/23/23 17:21
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 17:54
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379940	ZRI4	EET CF	02/23/23 16:04
Total/NA	Analysis	350.1		1	379570	HE7K	EET CF	02/20/23 12:51
Total/NA	Analysis	5220D LL		1	379446	D7CP	EET CF	02/20/23 08:34
Total/NA	Analysis	I-3765-85		1	379577	D7CP	EET CF	02/20/23 11:58

Client Sample ID: MW-3

Lab Sample ID: 310-250016-3

Date Collected: 02/14/23 15:42

Matrix: Ground Water

Date Received: 02/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	379954	ZRI4	EET CF	02/23/23 18:04
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 17:57
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379940	ZRI4	EET CF	02/23/23 16:07
Total/NA	Analysis	350.1		1	379570	HE7K	EET CF	02/20/23 12:53
Total/NA	Analysis	5220D LL		1	379446	D7CP	EET CF	02/20/23 08:34
Total/NA	Analysis	I-3765-85		1	379577	D7CP	EET CF	02/20/23 11:58

Client Sample ID: MW-4

Lab Sample ID: 310-250016-4

Date Collected: 02/14/23 16:14

Matrix: Ground Water

Date Received: 02/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	379954	ZRI4	EET CF	02/23/23 18:18

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Lab Chronicle

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-4

Lab Sample ID: 310-250016-4

Date Collected: 02/14/23 16:14

Matrix: Ground Water

Date Received: 02/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 18:00
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379940	ZRI4	EET CF	02/23/23 16:10
Total/NA	Analysis	350.1		1	379570	HE7K	EET CF	02/20/23 12:53
Total/NA	Analysis	5220D LL		1	380005	D7CP	EET CF	02/27/23 08:29
Total/NA	Analysis	I-3765-85		1	379577	D7CP	EET CF	02/20/23 11:58

Client Sample ID: MW-5

Lab Sample ID: 310-250016-5

Date Collected: 02/15/23 12:01

Matrix: Ground Water

Date Received: 02/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		20	379954	ZRI4	EET CF	02/23/23 18:32
Total/NA	Analysis	9056A		100	379954	ZRI4	EET CF	02/24/23 12:36
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		7	379926	A6US	EET CF	02/23/23 16:04
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 18:03
Total/NA	Analysis	350.1		9.38	379570	HE7K	EET CF	02/20/23 12:54
Total/NA	Analysis	5220D LL		1	380005	D7CP	EET CF	02/27/23 08:29
Total/NA	Analysis	I-3765-85		1	379577	D7CP	EET CF	02/20/23 11:58

Client Sample ID: MW-6

Lab Sample ID: 310-250016-6

Date Collected: 02/15/23 12:36

Matrix: Ground Water

Date Received: 02/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		20	379954	ZRI4	EET CF	02/23/23 18:46
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		7	379926	A6US	EET CF	02/23/23 16:11
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 18:09
Total/NA	Analysis	350.1		37.5	379570	HE7K	EET CF	02/20/23 14:00
Total/NA	Analysis	5220D LL		1	380005	D7CP	EET CF	02/27/23 08:29
Total/NA	Analysis	I-3765-85		1	379577	D7CP	EET CF	02/20/23 11:58

Client Sample ID: MW-7

Lab Sample ID: 310-250016-7

Date Collected: 02/15/23 08:54

Matrix: Ground Water

Date Received: 02/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	379954	ZRI4	EET CF	02/23/23 19:00

Eurofins Cedar Falls

Lab Chronicle

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-7

Lab Sample ID: 310-250016-7

Date Collected: 02/15/23 08:54

Matrix: Ground Water

Date Received: 02/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		20	379926	A6US	EET CF	02/23/23 16:14
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 18:12
Total/NA	Analysis	350.1		1000	379570	HE7K	EET CF	02/20/23 15:55
Total/NA	Analysis	5220D LL		5	380005	D7CP	EET CF	02/27/23 08:29
Total/NA	Analysis	I-3765-85		1	379577	D7CP	EET CF	02/20/23 11:58

Client Sample ID: MW-8

Lab Sample ID: 310-250016-8

Date Collected: 02/15/23 09:30

Matrix: Ground Water

Date Received: 02/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	379954	ZRI4	EET CF	02/23/23 19:14
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379926	A6US	EET CF	02/23/23 16:41
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 18:36
Total/NA	Analysis	350.1		1	379570	HE7K	EET CF	02/20/23 12:56
Total/NA	Analysis	5220D LL		1	380005	D7CP	EET CF	02/27/23 08:29
Total/NA	Analysis	I-3765-85		1	379577	D7CP	EET CF	02/20/23 11:58

Client Sample ID: MW-9

Lab Sample ID: 310-250016-9

Date Collected: 02/15/23 13:18

Matrix: Ground Water

Date Received: 02/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		20	379954	ZRI4	EET CF	02/23/23 19:28
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		4	379926	A6US	EET CF	02/23/23 16:45
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 18:39
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	380173	A6US	EET CF	02/28/23 12:02
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		4	380173	A6US	EET CF	02/28/23 12:05
Total/NA	Analysis	350.1		9.38	379570	HE7K	EET CF	02/20/23 12:58
Total/NA	Analysis	5220D LL		5	380005	D7CP	EET CF	02/27/23 08:29
Total/NA	Analysis	I-3765-85		1	379577	D7CP	EET CF	02/20/23 11:58

Eurofins Cedar Falls

Lab Chronicle

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-10

Lab Sample ID: 310-250016-10

Date Collected: 02/15/23 11:27

Matrix: Ground Water

Date Received: 02/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	379954	ZRI4	EET CF	02/23/23 19:42
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379926	A6US	EET CF	02/23/23 16:48
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 18:42
Total/NA	Analysis	350.1		1	379570	HE7K	EET CF	02/20/23 12:58
Total/NA	Analysis	5220D LL		1	380005	D7CP	EET CF	02/27/23 08:29
Total/NA	Analysis	I-3765-85		1	379577	D7CP	EET CF	02/20/23 11:58

Client Sample ID: MW-13

Lab Sample ID: 310-250016-11

Date Collected: 02/14/23 15:07

Matrix: Ground Water

Date Received: 02/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	379954	ZRI4	EET CF	02/23/23 19:56
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		4	379926	A6US	EET CF	02/23/23 16:51
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 18:45
Total/NA	Analysis	350.1		9.38	379570	HE7K	EET CF	02/20/23 13:00
Total/NA	Analysis	5220D LL		1	380005	D7CP	EET CF	02/27/23 08:29
Total/NA	Analysis	I-3765-85		1	379577	D7CP	EET CF	02/20/23 11:58

Client Sample ID: MW-16

Lab Sample ID: 310-250016-12

Date Collected: 02/14/23 11:51

Matrix: Ground Water

Date Received: 02/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	379954	ZRI4	EET CF	02/23/23 20:11
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379926	A6US	EET CF	02/23/23 16:55
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 18:47
Total/NA	Analysis	350.1		1	379570	HE7K	EET CF	02/20/23 13:01
Total/NA	Analysis	5220D LL		1	380005	D7CP	EET CF	02/27/23 08:29
Total/NA	Analysis	I-3765-85		1	379577	D7CP	EET CF	02/20/23 11:58

Client Sample ID: MW-D

Lab Sample ID: 310-250016-13

Date Collected: 02/14/23 12:05

Matrix: Ground Water

Date Received: 02/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	379954	ZRI4	EET CF	02/23/23 20:53

Eurofins Cedar Falls

Lab Chronicle

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Client Sample ID: MW-D

Lab Sample ID: 310-250016-13

Date Collected: 02/14/23 12:05

Matrix: Ground Water

Date Received: 02/17/23 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379926	A6US	EET CF	02/23/23 16:58
Total/NA	Prep	3005A			379608	DHM5	EET CF	02/21/23 08:45
Total/NA	Analysis	6020B		1	379768	ZRI4	EET CF	02/21/23 18:50
Total/NA	Analysis	350.1		1	379570	HE7K	EET CF	02/20/23 13:02
Total/NA	Analysis	5220D LL		1	380005	D7CP	EET CF	02/27/23 08:29
Total/NA	Analysis	I-3765-85		1	379577	D7CP	EET CF	02/20/23 11:58

Laboratory References:

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

Accreditation/Certification Summary

Client: Evora Consulting
Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Job ID: 310-250016-1

Laboratory: Eurofins Cedar Falls

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

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

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

Method Summary

Client: Evora Consulting

Job ID: 310-250016-1

Project/Site: ADM Clinton Landfill (Spring 2023 GW Sampling)

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
350.1	Nitrogen, Ammonia	EPA	EET CF
5220D LL	COD	SM	EET CF
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
3005A	Preparation, Total Metals	SW846	EET CF

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

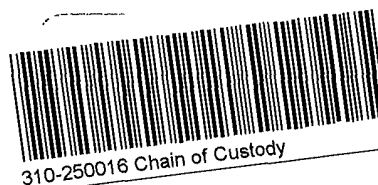
USGS = "Methods For Analysis Of Water And Fluvial Sediments", USGS, 1989

Laboratory References:

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



Environment Testing
America



Cooler/Sample Receipt and Temperature Form

Client Information			
Client: <u>Evora</u>			
City/State:	CITY	STATE	Project:
		<u>IA</u>	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>2/17/23</u>	<u>1620</u>	<u>ST</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee			
☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes: Cooler ID: _____
Multiple Coolers?		☒ Yes ☐ No	If yes: Cooler # <u>1</u> of <u>2</u>
Cooler Custody Seals Present?		☐ Yes ☒ No	If yes: Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☐ Yes ☒ No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>U</u>		Correction Factor (°C): <u>0</u>	
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.4</u>		Corrected Temp (°C): <u>0.4</u>	
Sample Container Temperature			
Container(s) used:	<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? ☐ Yes ☐ No			
a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ 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>Evora</u>			
City/State:	CITY	STATE	Project:
		<u>IA</u>	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>2/17/23</u>	<u>1620</u>	<u>ST</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes: Cooler ID:
Multiple Coolers?		☒ Yes ☐ No	If yes: Cooler # <u>2</u> of <u>2</u>
Cooler Custody Seals Present?		☐ Yes ☒ No	If yes: Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☐ Yes ☒ No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>U</u>		Correction Factor (°C): <u>0</u>	
Temp Blank Temperature: If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.0</u>		Corrected Temp (°C): <u>0.0</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? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

TestAmerica

704 Enterprise Drive
Cedar Falls Iowa 50613

319 277 2401 (phone)
515 792 7989 (fax)

Konner Both

A P R
 OFF NAME ADM Clinco Landfill
 ADDRESS
 CITY/STATE P
 TEL PHONE NUM-BER
 FAX
 SIGNATURE OF AMPI R
 Konner Both

REPORT TO: kkonner@desmoinesgroup.com
 COMPANY NAME: Evotec Consulting
 PROJECT NAME: ADM Clinco Landfill (Spring 2023 SW Sampling - SA Total)
 PROJECT NUMBER: ADMCO 23071
 AC RECS: 1600 All-State Lowr, Suite 100
 CITY/STATE ZIP: West Des Moines IA 50265

Sample ID	Collection Date	Time of Day	Location	Depth	Weather	Tide	Preservative				Matrix				Analyte For																																																																																																																																																																																																																																																											
							Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)	Chloro (B & W & C & B-1)

SHIPPING DATA
 SAMPLES COMING IN
 NAME: Konner Both
 DATE: 2/16/23
 TIME: 14:00
 SIGNATURE: [Signature]
 DATE: 2/17/23
 TIME: 11:00
 SIGNATURE: [Signature]

Login Sample Receipt Checklist

Client: Evora Consulting

Job Number: 310-250016-1

Login Number: 250016

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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

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

Generated 8/11/2023 1:30:45 PM

JOB DESCRIPTION

ADM Landfill 2023-27223141

JOB NUMBER

310-260946-1

Eurofins Cedar Falls

Job Notes

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

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

Authorization



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Authorized for release by
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Case Narrative

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Job ID: 310-260946-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-260946-1

Receipt

The samples were received on 7/21/2023 3:50 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 0.5°C, 1.1°C and 2.2°C

HPLC/IC

Method 9056A_ORGFM_28D: The following sample was diluted due to the nature of the sample matrix: MW-13 (310-260946-9). Elevated reporting limits (RLs) are provided.

Method 9056A_ORGFM_28D: The following sample was diluted due to the nature of the sample matrix: MW-11 (310-260946-7). Elevated reporting limits (RLs) are provided.

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

Metals

Method 6020B: The following sample was received with insufficient preservation: MW-6 (310-260946-4). The client was contacted and preservative was added by the laboratory, but the sample remained strongly basic. No further attempt was made to acidify the sample, as it would have diluted the sample. This does not meet regulatory requirements.

Method 6020B: Due to difficult matrix, only 10mL of sample was digested.MW-6 (310-260946-4)

Method 6020B: The reference method requires samples to be preserved to a pH of <2. The following samples were received with insufficient preservation at a pH of >2: MW-11 (310-260946-7) and MW-13 (310-260946-9). The sample(s) was preserved to the appropriate pH in the laboratory.

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

General Chemistry

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

Sample Summary

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-260946-1	MW-1	Ground Water	07/19/23 16:05	07/21/23 15:50
310-260946-2	MW-2	Ground Water	07/19/23 16:36	07/21/23 15:50
310-260946-3	MW-4	Ground Water	07/19/23 17:27	07/21/23 15:50
310-260946-4	MW-6	Ground Water	07/20/23 11:21	07/21/23 15:50
310-260946-5	MW-8	Ground Water	07/20/23 12:01	07/21/23 15:50
310-260946-6	MW-10	Ground Water	07/20/23 12:39	07/21/23 15:50
310-260946-7	MW-11	Ground Water	07/19/23 10:58	07/21/23 15:50
310-260946-8	MW-12	Ground Water	07/19/23 11:38	07/21/23 15:50
310-260946-9	MW-13	Ground Water	07/20/23 13:14	07/21/23 15:50
310-260946-10	MW-14	Ground Water	07/19/23 12:10	07/21/23 15:50
310-260946-11	MW-15	Ground Water	07/19/23 12:35	07/21/23 15:50
310-260946-12	MW-16	Ground Water	07/19/23 14:03	07/21/23 15:50
310-260946-13	MW-17	Ground Water	07/19/23 14:41	07/21/23 15:50
310-260946-14	MW-18	Ground Water	07/19/23 15:09	07/21/23 15:50
310-260946-15	MW-D	Ground Water	07/19/23 17:27	07/21/23 15:50

Detection Summary

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-1

Lab Sample ID: 310-260946-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	204		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	41.2		5.00	2.10	mg/L	5		9056A	Total/NA
Boron	0.144	F2 F1	0.100	0.0760	mg/L	1		6020B	Total/NA
Magnesium	50.8		0.500	0.150	mg/L	1		6020B	Total/NA
Chemical Oxygen Demand	5.41		5.00	4.80	mg/L	1		5220D LL	Total/NA

Client Sample ID: MW-2

Lab Sample ID: 310-260946-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	33.0		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	27.4		5.00	2.10	mg/L	5		9056A	Total/NA
Boron	0.230		0.100	0.0760	mg/L	1		6020B	Total/NA
Cobalt	0.00152		0.000500	0.000170	mg/L	1		6020B	Total/NA
Magnesium	26.3		0.500	0.150	mg/L	1		6020B	Total/NA
Manganese	1.20		0.0100	0.00360	mg/L	1		6020B	Total/NA
Iron	0.165		0.100	0.0360	mg/L	1		6020B	Total/NA
Ammonia	3.20		0.200	0.100	mg/L	1		350.1	Total/NA
Chemical Oxygen Demand	7.85		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	1.13	J	1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-4

Lab Sample ID: 310-260946-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	197		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	58.8		5.00	2.10	mg/L	5		9056A	Total/NA
Boron	0.336		0.100	0.0760	mg/L	1		6020B	Total/NA

Client Sample ID: MW-6

Lab Sample ID: 310-260946-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	176		20.0	9.00	mg/L	20		9056A	Total/NA
Sulfate	573		20.0	8.40	mg/L	20		9056A	Total/NA
Arsenic	0.0272		0.0100	0.00265	mg/L	1		6020B	Total/NA
Boron	16.1		0.500	0.380	mg/L	1		6020B	Total/NA
Cobalt	0.00275		0.00250	0.000850	mg/L	1		6020B	Total/NA
Magnesium	316		2.50	0.750	mg/L	1		6020B	Total/NA
Manganese	0.162		0.0500	0.0180	mg/L	1		6020B	Total/NA
Nickel	0.0346		0.0250	0.00950	mg/L	1		6020B	Total/NA
Iron	8.76		0.500	0.180	mg/L	1		6020B	Total/NA
Ammonia	231		200	100	mg/L	1000		350.1	Total/NA
Chemical Oxygen Demand	135		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	314		15.0	5.10	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-8

Lab Sample ID: 310-260946-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	117		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	49.9		5.00	2.10	mg/L	5		9056A	Total/NA
Boron	0.502		0.100	0.0760	mg/L	1		6020B	Total/NA
Cobalt	0.000234	J	0.000500	0.000170	mg/L	1		6020B	Total/NA
Chemical Oxygen Demand	6.11		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	3.50		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: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-10

Lab Sample ID: 310-260946-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	51.5		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	117		5.00	2.10	mg/L	5		9056A	Total/NA
Boron	0.457		0.100	0.0760	mg/L	1		6020B	Total/NA
Cobalt	0.000463	J	0.000500	0.000170	mg/L	1		6020B	Total/NA
Magnesium	55.3		0.500	0.150	mg/L	1		6020B	Total/NA
Manganese	0.283		0.0100	0.00360	mg/L	1		6020B	Total/NA
Iron	0.462		0.100	0.0360	mg/L	1		6020B	Total/NA
Ammonia	3.34		0.200	0.100	mg/L	1		350.1	Total/NA
Chemical Oxygen Demand	7.07		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	107		3.75	1.28	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-11

Lab Sample ID: 310-260946-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	74.6		5.00	2.25	mg/L	5		9056A	Total/NA
Arsenic	0.0849		0.00200	0.000530	mg/L	1		6020B	Total/NA
Boron	1.56		0.100	0.0760	mg/L	1		6020B	Total/NA
Cobalt	0.00160		0.000500	0.000170	mg/L	1		6020B	Total/NA
Magnesium	70.2		0.500	0.150	mg/L	1		6020B	Total/NA
Manganese	1.10		0.0100	0.00360	mg/L	1		6020B	Total/NA
Iron	27.4		0.100	0.0360	mg/L	1		6020B	Total/NA
Ammonia	38.9		1.88	0.938	mg/L	9.38		350.1	Total/NA
Chemical Oxygen Demand	236		50.0	48.0	mg/L	10		5220D LL	Total/NA
Total Suspended Solids	140		15.0	5.10	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-12

Lab Sample ID: 310-260946-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	305		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	10.7		5.00	2.10	mg/L	5		9056A	Total/NA
Arsenic	0.0895		0.00200	0.000530	mg/L	1		6020B	Total/NA
Boron	1.70		0.100	0.0760	mg/L	1		6020B	Total/NA
Cobalt	0.00169		0.000500	0.000170	mg/L	1		6020B	Total/NA
Magnesium	72.7		0.500	0.150	mg/L	1		6020B	Total/NA
Manganese	1.15		0.0100	0.00360	mg/L	1		6020B	Total/NA
Iron	29.4		0.100	0.0360	mg/L	1		6020B	Total/NA
Ammonia	17.7		1.88	0.938	mg/L	9.38		350.1	Total/NA
Chemical Oxygen Demand	30.5		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	64.0		15.0	5.10	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-13

Lab Sample ID: 310-260946-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	47.3		5.00	2.25	mg/L	5		9056A	Total/NA
Arsenic	0.113		0.00800	0.00212	mg/L	4		6020B	Total/NA
Boron	9.88		0.400	0.304	mg/L	4		6020B	Total/NA
Cobalt	0.00275		0.00200	0.000680	mg/L	4		6020B	Total/NA
Magnesium	343		2.00	0.600	mg/L	4		6020B	Total/NA
Manganese	2.34		0.0400	0.0144	mg/L	4		6020B	Total/NA
Iron	27.3		0.400	0.144	mg/L	4		6020B	Total/NA
Ammonia	71.1		1.88	0.938	mg/L	9.38		350.1	Total/NA
Chemical Oxygen Demand	116		5.00	4.80	mg/L	1		5220D LL	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-13 (Continued)

Lab Sample ID: 310-260946-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	97.0		15.0	5.10	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-14

Lab Sample ID: 310-260946-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	493		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	45.9		5.00	2.10	mg/L	5		9056A	Total/NA
Boron	0.966		0.400	0.304	mg/L	4		6020B	Total/NA
Cobalt	0.00119	J	0.00200	0.000680	mg/L	4		6020B	Total/NA
Magnesium	113		2.00	0.600	mg/L	4		6020B	Total/NA
Manganese	2.71		0.0400	0.0144	mg/L	4		6020B	Total/NA
Ammonia	4.69		0.200	0.100	mg/L	1		350.1	Total/NA
Chemical Oxygen Demand	15.7		5.00	4.80	mg/L	1		5220D LL	Total/NA

Client Sample ID: MW-15

Lab Sample ID: 310-260946-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	88.1		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	89.3		5.00	2.10	mg/L	5		9056A	Total/NA
Boron	0.222		0.100	0.0760	mg/L	1		6020B	Total/NA
Magnesium	53.6		0.500	0.150	mg/L	1		6020B	Total/NA
Chemical Oxygen Demand	6.41		5.00	4.80	mg/L	1		5220D LL	Total/NA

Client Sample ID: MW-16

Lab Sample ID: 310-260946-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	41.7		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	45.8		5.00	2.10	mg/L	5		9056A	Total/NA
Arsenic	0.000714	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Boron	0.368		0.100	0.0760	mg/L	1		6020B	Total/NA
Chemical Oxygen Demand	11.7		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	10.9		1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-17

Lab Sample ID: 310-260946-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	45.5		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	51.3		5.00	2.10	mg/L	5		9056A	Total/NA
Boron	0.752		0.100	0.0760	mg/L	1		6020B	Total/NA
Cobalt	0.000207	J	0.000500	0.000170	mg/L	1		6020B	Total/NA
Magnesium	29.4		0.500	0.150	mg/L	1		6020B	Total/NA
Manganese	0.00942	J	0.0100	0.00360	mg/L	1		6020B	Total/NA
Chemical Oxygen Demand	11.4		5.00	4.80	mg/L	1		5220D LL	Total/NA

Client Sample ID: MW-18

Lab Sample ID: 310-260946-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	39.7		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	57.6		5.00	2.10	mg/L	5		9056A	Total/NA
Arsenic	0.00523		0.00200	0.000530	mg/L	1		6020B	Total/NA
Boron	0.364		0.100	0.0760	mg/L	1		6020B	Total/NA
Cobalt	0.00265		0.000500	0.000170	mg/L	1		6020B	Total/NA
Magnesium	32.0		0.500	0.150	mg/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-18 (Continued)

Lab Sample ID: 310-260946-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	0.438		0.0100	0.00360	mg/L	1		6020B	Total/NA
Iron	1.88		0.100	0.0360	mg/L	1		6020B	Total/NA
Ammonia	4.52		0.200	0.100	mg/L	1		350.1	Total/NA
Chemical Oxygen Demand	28.9		5.00	4.80	mg/L	1		5220D LL	Total/NA
Total Suspended Solids	7.38		1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-D

Lab Sample ID: 310-260946-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	183		5.00	2.25	mg/L	5		9056A	Total/NA
Sulfate	57.3		5.00	2.10	mg/L	5		9056A	Total/NA
Boron	0.353		0.100	0.0760	mg/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-1

Lab Sample ID: 310-260946-1

Date Collected: 07/19/23 16:05

Matrix: Ground Water

Date Received: 07/21/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	204		5.00	2.25	mg/L			08/09/23 14:04	5
Sulfate	41.2		5.00	2.10	mg/L			08/09/23 14:04	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200	F2 F1	0.00200	0.000530	mg/L		07/25/23 09:10	08/07/23 18:49	1
Boron	0.144	F2 F1	0.100	0.0760	mg/L		07/25/23 09:10	08/07/23 18:49	1
Cobalt	<0.000500	F2 F1	0.000500	0.000170	mg/L		07/25/23 09:10	08/07/23 18:49	1
Magnesium	50.8		0.500	0.150	mg/L		07/25/23 09:10	08/07/23 18:49	1
Manganese	<0.0100	F2 F1	0.0100	0.00360	mg/L		07/25/23 09:10	08/07/23 18:49	1
Nickel	<0.00500	F2 F1	0.00500	0.00190	mg/L		07/25/23 09:10	08/07/23 18:49	1
Iron	<0.100	F2 F1	0.100	0.0360	mg/L		07/25/23 09:10	08/07/23 18:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	<0.200		0.200	0.100	mg/L			07/27/23 22:29	1
Chemical Oxygen Demand (SM 5220D LL)	5.41		5.00	4.80	mg/L			08/01/23 09:59	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	0.638	mg/L			07/25/23 09:38	1

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-2

Lab Sample ID: 310-260946-2

Date Collected: 07/19/23 16:36

Matrix: Ground Water

Date Received: 07/21/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	33.0		5.00	2.25	mg/L			08/09/23 14:17	5
Sulfate	27.4		5.00	2.10	mg/L			08/09/23 14:17	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		07/25/23 09:10	08/04/23 15:45	1
Boron	0.230		0.100	0.0760	mg/L		07/25/23 09:10	08/04/23 15:45	1
Cobalt	0.00152		0.000500	0.000170	mg/L		07/25/23 09:10	08/04/23 15:45	1
Magnesium	26.3		0.500	0.150	mg/L		07/25/23 09:10	08/04/23 15:45	1
Manganese	1.20		0.0100	0.00360	mg/L		07/25/23 09:10	08/04/23 15:45	1
Iron	0.165		0.100	0.0360	mg/L		07/25/23 09:10	08/04/23 15:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	3.20		0.200	0.100	mg/L			07/27/23 22:32	1
Chemical Oxygen Demand (SM 5220D LL)	7.85		5.00	4.80	mg/L			08/01/23 09:59	1
Total Suspended Solids (USGS I-3765-85)	1.13 J		1.88	0.638	mg/L			07/25/23 09:38	1

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-4

Lab Sample ID: 310-260946-3

Date Collected: 07/19/23 17:27

Matrix: Ground Water

Date Received: 07/21/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	197		5.00	2.25	mg/L			08/09/23 14:29	5
Sulfate	58.8		5.00	2.10	mg/L			08/09/23 14:29	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		07/25/23 09:10	08/04/23 15:47	1
Boron	0.336		0.100	0.0760	mg/L		07/25/23 09:10	08/04/23 15:47	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		07/25/23 09:10	08/04/23 15:47	1
Iron	<0.100		0.100	0.0360	mg/L		07/25/23 09:10	08/04/23 15:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	<0.200		0.200	0.100	mg/L			07/27/23 22:32	1
Chemical Oxygen Demand (SM 5220D LL)	<5.00		5.00	4.80	mg/L			08/01/23 09:59	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	0.638	mg/L			07/25/23 09:38	1

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-6

Lab Sample ID: 310-260946-4

Date Collected: 07/20/23 11:21

Matrix: Ground Water

Date Received: 07/21/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	176		20.0	9.00	mg/L			08/08/23 21:08	20
Sulfate	573		20.0	8.40	mg/L			08/08/23 21:08	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0272		0.0100	0.00265	mg/L		07/25/23 09:10	08/04/23 15:49	1
Boron	16.1		0.500	0.380	mg/L		07/25/23 09:10	08/04/23 15:49	1
Cobalt	0.00275		0.00250	0.000850	mg/L		07/25/23 09:10	08/04/23 15:49	1
Magnesium	316		2.50	0.750	mg/L		07/25/23 09:10	08/04/23 15:49	1
Manganese	0.162		0.0500	0.0180	mg/L		07/25/23 09:10	08/04/23 15:49	1
Nickel	0.0346		0.0250	0.00950	mg/L		07/25/23 09:10	08/04/23 15:49	1
Iron	8.76		0.500	0.180	mg/L		07/25/23 09:10	08/04/23 15:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	231		200	100	mg/L			07/27/23 22:33	1000
Chemical Oxygen Demand (SM 5220D LL)	135		5.00	4.80	mg/L			08/01/23 09:59	1
Total Suspended Solids (USGS I-3765-85)	314		15.0	5.10	mg/L			07/25/23 11:34	1

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-8

Lab Sample ID: 310-260946-5

Date Collected: 07/20/23 12:01

Matrix: Ground Water

Date Received: 07/21/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	117		5.00	2.25	mg/L			08/08/23 21:21	5
Sulfate	49.9		5.00	2.10	mg/L			08/08/23 21:21	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		07/25/23 09:10	08/04/23 15:51	1
Boron	0.502		0.100	0.0760	mg/L		07/25/23 09:10	08/04/23 15:51	1
Cobalt	0.000234	J	0.000500	0.000170	mg/L		07/25/23 09:10	08/04/23 15:51	1
Iron	<0.100		0.100	0.0360	mg/L		07/25/23 09:10	08/04/23 15:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	<0.200		0.200	0.100	mg/L			07/27/23 22:34	1
Chemical Oxygen Demand (SM 5220D LL)	6.11		5.00	4.80	mg/L			08/01/23 09:59	1
Total Suspended Solids (USGS I-3765-85)	3.50		1.88	0.638	mg/L			07/25/23 11:34	1

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-10

Lab Sample ID: 310-260946-6

Date Collected: 07/20/23 12:39

Matrix: Ground Water

Date Received: 07/21/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	51.5		5.00	2.25	mg/L			08/08/23 21:33	5
Sulfate	117		5.00	2.10	mg/L			08/08/23 21:33	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		07/25/23 09:10	08/04/23 15:53	1
Boron	0.457		0.100	0.0760	mg/L		07/25/23 09:10	08/04/23 15:53	1
Cobalt	0.000463	J	0.000500	0.000170	mg/L		07/25/23 09:10	08/04/23 15:53	1
Magnesium	55.3		0.500	0.150	mg/L		07/25/23 09:10	08/04/23 15:53	1
Manganese	0.283		0.0100	0.00360	mg/L		07/25/23 09:10	08/04/23 15:53	1
Iron	0.462		0.100	0.0360	mg/L		07/25/23 09:10	08/04/23 15:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	3.34		0.200	0.100	mg/L			07/27/23 22:35	1
Chemical Oxygen Demand (SM 5220D LL)	7.07		5.00	4.80	mg/L			07/27/23 21:17	1
Total Suspended Solids (USGS I-3765-85)	107		3.75	1.28	mg/L			07/25/23 11:34	1

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-11

Lab Sample ID: 310-260946-7

Date Collected: 07/19/23 10:58

Matrix: Ground Water

Date Received: 07/21/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	74.6		5.00	2.25	mg/L			08/09/23 14:41	5
Sulfate	<5.00		5.00	2.10	mg/L			08/09/23 14:41	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0849		0.00200	0.000530	mg/L		07/25/23 09:10	08/04/23 16:13	1
Boron	1.56		0.100	0.0760	mg/L		07/25/23 09:10	08/04/23 16:13	1
Cobalt	0.00160		0.000500	0.000170	mg/L		07/25/23 09:10	08/04/23 16:13	1
Magnesium	70.2		0.500	0.150	mg/L		07/25/23 09:10	08/04/23 16:13	1
Manganese	1.10		0.0100	0.00360	mg/L		07/25/23 09:10	08/04/23 16:13	1
Iron	27.4		0.100	0.0360	mg/L		07/25/23 09:10	08/04/23 16:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	38.9		1.88	0.938	mg/L			07/27/23 22:37	9.38
Chemical Oxygen Demand (SM 5220D LL)	236		50.0	48.0	mg/L			07/28/23 12:42	10
Total Suspended Solids (USGS I-3765-85)	140		15.0	5.10	mg/L			07/25/23 09:38	1

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-12

Lab Sample ID: 310-260946-8

Date Collected: 07/19/23 11:38

Matrix: Ground Water

Date Received: 07/21/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	305		5.00	2.25	mg/L			08/09/23 14:53	5
Sulfate	10.7		5.00	2.10	mg/L			08/09/23 14:53	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0895		0.00200	0.000530	mg/L		07/25/23 09:10	08/07/23 18:57	1
Boron	1.70		0.100	0.0760	mg/L		07/25/23 09:10	08/07/23 18:57	1
Cobalt	0.00169		0.000500	0.000170	mg/L		07/25/23 09:10	08/07/23 18:57	1
Magnesium	72.7		0.500	0.150	mg/L		07/25/23 09:10	08/07/23 18:57	1
Manganese	1.15		0.0100	0.00360	mg/L		07/25/23 09:10	08/07/23 18:57	1
Iron	29.4		0.100	0.0360	mg/L		07/25/23 09:10	08/07/23 18:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	17.7		1.88	0.938	mg/L			07/27/23 22:37	9.38
Chemical Oxygen Demand (SM 5220D LL)	30.5		5.00	4.80	mg/L			07/27/23 21:17	1
Total Suspended Solids (USGS I-3765-85)	64.0		15.0	5.10	mg/L			07/25/23 09:38	1

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-13

Lab Sample ID: 310-260946-9

Date Collected: 07/20/23 13:14

Matrix: Ground Water

Date Received: 07/21/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	47.3		5.00	2.25	mg/L			08/08/23 21:45	5
Sulfate	<5.00		5.00	2.10	mg/L			08/08/23 21:45	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.113		0.00800	0.00212	mg/L		07/25/23 09:10	08/07/23 19:00	4
Boron	9.88		0.400	0.304	mg/L		07/25/23 09:10	08/07/23 19:00	4
Cobalt	0.00275		0.00200	0.000680	mg/L		07/25/23 09:10	08/07/23 19:00	4
Magnesium	343		2.00	0.600	mg/L		07/25/23 09:10	08/07/23 19:00	4
Manganese	2.34		0.0400	0.0144	mg/L		07/25/23 09:10	08/07/23 19:00	4
Iron	27.3		0.400	0.144	mg/L		07/25/23 09:10	08/07/23 19:00	4

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	71.1		1.88	0.938	mg/L			07/27/23 22:39	9.38
Chemical Oxygen Demand (SM 5220D LL)	116		5.00	4.80	mg/L			07/27/23 21:17	1
Total Suspended Solids (USGS I-3765-85)	97.0		15.0	5.10	mg/L			07/25/23 11:34	1

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-14

Lab Sample ID: 310-260946-10

Date Collected: 07/19/23 12:10

Matrix: Ground Water

Date Received: 07/21/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	493		5.00	2.25	mg/L			08/09/23 15:05	5
Sulfate	45.9		5.00	2.10	mg/L			08/09/23 15:05	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00800		0.00800	0.00212	mg/L		07/25/23 09:10	08/07/23 19:02	4
Boron	0.966		0.400	0.304	mg/L		07/25/23 09:10	08/07/23 19:02	4
Cobalt	0.00119	J	0.00200	0.000680	mg/L		07/25/23 09:10	08/07/23 19:02	4
Magnesium	113		2.00	0.600	mg/L		07/25/23 09:10	08/07/23 19:02	4
Manganese	2.71		0.0400	0.0144	mg/L		07/25/23 09:10	08/07/23 19:02	4
Iron	<0.400		0.400	0.144	mg/L		07/25/23 09:10	08/07/23 19:02	4

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	4.69		0.200	0.100	mg/L			07/27/23 22:39	1
Chemical Oxygen Demand (SM 5220D LL)	15.7		5.00	4.80	mg/L			07/27/23 21:17	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	0.638	mg/L			07/25/23 09:38	1

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-15

Lab Sample ID: 310-260946-11

Date Collected: 07/19/23 12:35

Matrix: Ground Water

Date Received: 07/21/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	88.1		5.00	2.25	mg/L			08/09/23 15:17	5
Sulfate	89.3		5.00	2.10	mg/L			08/09/23 15:17	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		07/25/23 09:10	08/04/23 16:19	1
Boron	0.222		0.100	0.0760	mg/L		07/25/23 09:10	08/04/23 16:19	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		07/25/23 09:10	08/04/23 16:19	1
Magnesium	53.6		0.500	0.150	mg/L		07/25/23 09:10	08/04/23 16:19	1
Iron	<0.100		0.100	0.0360	mg/L		07/25/23 09:10	08/04/23 16:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	<0.200		0.200	0.100	mg/L			07/27/23 22:40	1
Chemical Oxygen Demand (SM 5220D LL)	6.41		5.00	4.80	mg/L			07/27/23 21:17	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	0.638	mg/L			07/25/23 09:38	1

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-16

Lab Sample ID: 310-260946-12

Date Collected: 07/19/23 14:03

Matrix: Ground Water

Date Received: 07/21/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41.7		5.00	2.25	mg/L			08/09/23 15:29	5
Sulfate	45.8		5.00	2.10	mg/L			08/09/23 15:29	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.000714	J	0.00200	0.000530	mg/L		07/25/23 09:10	08/04/23 16:23	1
Boron	0.368		0.100	0.0760	mg/L		07/25/23 09:10	08/04/23 16:23	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		07/25/23 09:10	08/04/23 16:23	1
Iron	<0.100		0.100	0.0360	mg/L		07/25/23 09:10	08/04/23 16:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	<0.200		0.200	0.100	mg/L			07/27/23 22:41	1
Chemical Oxygen Demand (SM 5220D LL)	11.7		5.00	4.80	mg/L			07/27/23 21:17	1
Total Suspended Solids (USGS I-3765-85)	10.9		1.88	0.638	mg/L			07/25/23 09:38	1

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-17

Lab Sample ID: 310-260946-13

Date Collected: 07/19/23 14:41

Matrix: Ground Water

Date Received: 07/21/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	45.5		5.00	2.25	mg/L			08/09/23 16:05	5
Sulfate	51.3		5.00	2.10	mg/L			08/09/23 16:05	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		07/25/23 09:10	08/04/23 16:26	1
Boron	0.752		0.100	0.0760	mg/L		07/25/23 09:10	08/04/23 16:26	1
Cobalt	0.000207	J	0.000500	0.000170	mg/L		07/25/23 09:10	08/04/23 16:26	1
Magnesium	29.4		0.500	0.150	mg/L		07/25/23 09:10	08/04/23 16:26	1
Manganese	0.00942	J	0.0100	0.00360	mg/L		07/25/23 09:10	08/04/23 16:26	1
Nickel	<0.00500		0.00500	0.00190	mg/L		07/25/23 09:10	08/04/23 16:26	1
Iron	<0.100		0.100	0.0360	mg/L		07/25/23 09:10	08/04/23 16:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	<0.200		0.200	0.100	mg/L			07/27/23 22:42	1
Chemical Oxygen Demand (SM 5220D LL)	11.4		5.00	4.80	mg/L			07/27/23 21:17	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	0.638	mg/L			07/25/23 09:38	1

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-18

Lab Sample ID: 310-260946-14

Date Collected: 07/19/23 15:09

Matrix: Ground Water

Date Received: 07/21/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	39.7		5.00	2.25	mg/L			08/09/23 16:18	5
Sulfate	57.6		5.00	2.10	mg/L			08/09/23 16:18	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00523		0.00200	0.000530	mg/L		07/25/23 09:10	08/04/23 16:28	1
Boron	0.364		0.100	0.0760	mg/L		07/25/23 09:10	08/04/23 16:28	1
Cobalt	0.00265		0.000500	0.000170	mg/L		07/25/23 09:10	08/04/23 16:28	1
Magnesium	32.0		0.500	0.150	mg/L		07/25/23 09:10	08/04/23 16:28	1
Manganese	0.438		0.0100	0.00360	mg/L		07/25/23 09:10	08/04/23 16:28	1
Iron	1.88		0.100	0.0360	mg/L		07/25/23 09:10	08/04/23 16:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	4.52		0.200	0.100	mg/L			07/27/23 22:42	1
Chemical Oxygen Demand (SM 5220D LL)	28.9		5.00	4.80	mg/L			07/27/23 21:17	1
Total Suspended Solids (USGS I-3765-85)	7.38		1.88	0.638	mg/L			07/25/23 09:38	1

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-D

Lab Sample ID: 310-260946-15

Date Collected: 07/19/23 17:27

Matrix: Ground Water

Date Received: 07/21/23 15:50

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	183		5.00	2.25	mg/L			08/09/23 16:30	5
Sulfate	57.3		5.00	2.10	mg/L			08/09/23 16:30	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		07/25/23 09:10	08/04/23 16:30	1
Boron	0.353		0.100	0.0760	mg/L		07/25/23 09:10	08/04/23 16:30	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		07/25/23 09:10	08/04/23 16:30	1
Iron	<0.100		0.100	0.0360	mg/L		07/25/23 09:10	08/04/23 16:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (EPA 350.1)	<0.200		0.200	0.100	mg/L			07/27/23 22:44	1
Chemical Oxygen Demand (SM 5220D LL)	<5.00		5.00	4.80	mg/L			07/27/23 21:17	1
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	0.638	mg/L			07/25/23 09:38	1

Definitions/Glossary

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD 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.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

QC Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-396099/3

Matrix: Water

Analysis Batch: 396099

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00	0.450	mg/L			08/08/23 17:19	1
Sulfate	<1.00		1.00	0.420	mg/L			08/08/23 17:19	1

Lab Sample ID: LCS 310-396099/4

Matrix: Water

Analysis Batch: 396099

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	10.13		mg/L		101	90 - 110
Sulfate	10.0	10.31		mg/L		103	90 - 110

Lab Sample ID: MB 310-396180/3

Matrix: Water

Analysis Batch: 396180

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<1.00		1.00	0.450	mg/L			08/09/23 11:03	1
Sulfate	<1.00		1.00	0.420	mg/L			08/09/23 11:03	1

Lab Sample ID: LCS 310-396180/4

Matrix: Water

Analysis Batch: 396180

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	10.0	9.298		mg/L		93	90 - 110
Sulfate	10.0	9.731		mg/L		97	90 - 110

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-394528/1-A

Matrix: Water

Analysis Batch: 395705

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 394528

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		07/25/23 09:10	08/04/23 15:34	1
Boron	<0.100		0.100	0.0760	mg/L		07/25/23 09:10	08/04/23 15:34	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		07/25/23 09:10	08/04/23 15:34	1
Magnesium	<0.500		0.500	0.150	mg/L		07/25/23 09:10	08/04/23 15:34	1
Manganese	<0.0100		0.0100	0.00360	mg/L		07/25/23 09:10	08/04/23 15:34	1
Nickel	<0.00500		0.00500	0.00190	mg/L		07/25/23 09:10	08/04/23 15:34	1
Iron	<0.100		0.100	0.0360	mg/L		07/25/23 09:10	08/04/23 15:34	1

Lab Sample ID: LCS 310-394528/2-A

Matrix: Water

Analysis Batch: 395705

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 394528

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.1926		mg/L		96	80 - 120
Boron	0.200	0.2007		mg/L		100	80 - 120
Cobalt	0.100	0.09833		mg/L		98	80 - 120

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QC Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

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

Lab Sample ID: LCS 310-394528/2-A

Matrix: Water

Analysis Batch: 395705

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 394528

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Magnesium	2.00	2.065		mg/L		103	80 - 120
Manganese	0.100	0.09325		mg/L		93	80 - 120
Nickel	0.200	0.2060		mg/L		103	80 - 120
Iron	0.200	0.2321		mg/L		116	80 - 120

Lab Sample ID: 310-260946-1 MS

Matrix: Ground Water

Analysis Batch: 395841

Client Sample ID: MW-1

Prep Type: Total/NA

Prep Batch: 394528

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	<0.00200	F2 F1	0.200	0.2639	F1	mg/L		132	75 - 125
Boron	0.144	F2 F1	0.200	0.4110	F1	mg/L		134	75 - 125
Cobalt	<0.000500	F2 F1	0.100	0.1260	F1	mg/L		126	75 - 125
Magnesium	50.8		2.00	55.22	4	mg/L		223	75 - 125
Manganese	<0.0100	F2 F1	0.100	0.1324	F1	mg/L		132	75 - 125
Nickel	<0.00500	F2 F1	0.200	0.2650	F1	mg/L		133	75 - 125
Iron	<0.100	F2 F1	0.200	0.3006	F1	mg/L		150	75 - 125

Lab Sample ID: 310-260946-1 MSD

Matrix: Ground Water

Analysis Batch: 395841

Client Sample ID: MW-1

Prep Type: Total/NA

Prep Batch: 394528

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	<0.00200	F2 F1	0.200	0.1935	F2	mg/L		97	75 - 125	31	20
Boron	0.144	F2 F1	0.200	0.3331	F2	mg/L		95	75 - 125	21	20
Cobalt	<0.000500	F2 F1	0.100	0.09219	F2	mg/L		92	75 - 125	31	20
Magnesium	50.8		2.00	52.29	4	mg/L		76	75 - 125	5	20
Manganese	<0.0100	F2 F1	0.100	0.09544	F2	mg/L		95	75 - 125	32	20
Nickel	<0.00500	F2 F1	0.200	0.1951	F2	mg/L		98	75 - 125	30	20
Iron	<0.100	F2 F1	0.200	0.2051	F2	mg/L		103	75 - 125	38	20

Lab Sample ID: 310-260946-11 DU

Matrix: Ground Water

Analysis Batch: 395705

Client Sample ID: MW-15

Prep Type: Total/NA

Prep Batch: 394528

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	<0.00200		<0.00200		mg/L		NC	20
Boron	0.222		0.1974		mg/L		12	20
Cobalt	<0.000500		<0.000500		mg/L		NC	20
Magnesium	53.6		53.51		mg/L		0.2	20
Manganese	<0.0100		<0.0100		mg/L		NC	20
Nickel	<0.00500		<0.00500		mg/L		NC	20
Iron	<0.100		<0.100		mg/L		NC	20

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QC Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 310-394943/123

Matrix: Water

Analysis Batch: 394943

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	<0.200		0.200	0.100	mg/L			07/27/23 22:27	1

Lab Sample ID: LCS 310-394943/124

Matrix: Water

Analysis Batch: 394943

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	8.55	8.761		mg/L		102	90 - 110

Lab Sample ID: 310-260946-1 MS

Matrix: Ground Water

Analysis Batch: 394943

Client Sample ID: MW-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia	<0.200		1.00	0.9754		mg/L		97	90 - 110

Lab Sample ID: 310-260946-1 MSD

Matrix: Ground Water

Analysis Batch: 394943

Client Sample ID: MW-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia	<0.200		1.00	1.002		mg/L		100	90 - 110	3	10

Method: 5220D LL - COD

Lab Sample ID: MB 310-394948/32

Matrix: Water

Analysis Batch: 394948

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			07/27/23 21:17	1

Lab Sample ID: MB 310-394948/60

Matrix: Water

Analysis Batch: 394948

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			07/27/23 21:17	1

Lab Sample ID: LCS 310-394948/33

Matrix: Water

Analysis Batch: 394948

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	125.7		mg/L		100	85 - 115

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QC Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Method: 5220D LL - COD (Continued)

Lab Sample ID: LCS 310-394948/63

Matrix: Water

Analysis Batch: 394948

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	128.4		mg/L		102	85 - 115

Lab Sample ID: MB 310-395254/5

Matrix: Water

Analysis Batch: 395254

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			08/01/23 09:59	1

Lab Sample ID: LCS 310-395254/3

Matrix: Water

Analysis Batch: 395254

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	128.5		mg/L		102	85 - 115

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

Lab Sample ID: MB 310-394582/1

Matrix: Water

Analysis Batch: 394582

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			07/25/23 09:38	1

Lab Sample ID: LCS 310-394582/2

Matrix: Water

Analysis Batch: 394582

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	97.00		mg/L		97	75 - 116

Lab Sample ID: 310-260946-7 DU

Matrix: Ground Water

Analysis Batch: 394582

Client Sample ID: MW-11

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	140		143.0		mg/L		2	35

Lab Sample ID: 310-260946-8 DU

Matrix: Ground Water

Analysis Batch: 394582

Client Sample ID: MW-12

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	64.0		65.00		mg/L		2	35

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

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

Lab Sample ID: MB 310-394614/1

Matrix: Water

Analysis Batch: 394614

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			07/25/23 11:34	1

Lab Sample ID: LCS 310-394614/2

Matrix: Water

Analysis Batch: 394614

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	102.0		mg/L		102	75 - 116

QC Association Summary

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

HPLC/IC

Analysis Batch: 396099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260946-4	MW-6	Total/NA	Ground Water	9056A	
310-260946-5	MW-8	Total/NA	Ground Water	9056A	
310-260946-6	MW-10	Total/NA	Ground Water	9056A	
310-260946-9	MW-13	Total/NA	Ground Water	9056A	
MB 310-396099/3	Method Blank	Total/NA	Water	9056A	
LCS 310-396099/4	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 396180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260946-1	MW-1	Total/NA	Ground Water	9056A	
310-260946-2	MW-2	Total/NA	Ground Water	9056A	
310-260946-3	MW-4	Total/NA	Ground Water	9056A	
310-260946-7	MW-11	Total/NA	Ground Water	9056A	
310-260946-8	MW-12	Total/NA	Ground Water	9056A	
310-260946-10	MW-14	Total/NA	Ground Water	9056A	
310-260946-11	MW-15	Total/NA	Ground Water	9056A	
310-260946-12	MW-16	Total/NA	Ground Water	9056A	
310-260946-13	MW-17	Total/NA	Ground Water	9056A	
310-260946-14	MW-18	Total/NA	Ground Water	9056A	
310-260946-15	MW-D	Total/NA	Ground Water	9056A	
MB 310-396180/3	Method Blank	Total/NA	Water	9056A	
LCS 310-396180/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 394528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260946-1	MW-1	Total/NA	Ground Water	3005A	
310-260946-2	MW-2	Total/NA	Ground Water	3005A	
310-260946-3	MW-4	Total/NA	Ground Water	3005A	
310-260946-4	MW-6	Total/NA	Ground Water	3005A	
310-260946-5	MW-8	Total/NA	Ground Water	3005A	
310-260946-6	MW-10	Total/NA	Ground Water	3005A	
310-260946-7	MW-11	Total/NA	Ground Water	3005A	
310-260946-8	MW-12	Total/NA	Ground Water	3005A	
310-260946-9	MW-13	Total/NA	Ground Water	3005A	
310-260946-10	MW-14	Total/NA	Ground Water	3005A	
310-260946-11	MW-15	Total/NA	Ground Water	3005A	
310-260946-12	MW-16	Total/NA	Ground Water	3005A	
310-260946-13	MW-17	Total/NA	Ground Water	3005A	
310-260946-14	MW-18	Total/NA	Ground Water	3005A	
310-260946-15	MW-D	Total/NA	Ground Water	3005A	
MB 310-394528/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-394528/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-260946-1 MS	MW-1	Total/NA	Ground Water	3005A	
310-260946-1 MSD	MW-1	Total/NA	Ground Water	3005A	
310-260946-11 DU	MW-15	Total/NA	Ground Water	3005A	

Analysis Batch: 395705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260946-2	MW-2	Total/NA	Ground Water	6020B	394528

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QC Association Summary

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Metals (Continued)

Analysis Batch: 395705 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260946-3	MW-4	Total/NA	Ground Water	6020B	394528
310-260946-4	MW-6	Total/NA	Ground Water	6020B	394528
310-260946-5	MW-8	Total/NA	Ground Water	6020B	394528
310-260946-6	MW-10	Total/NA	Ground Water	6020B	394528
310-260946-7	MW-11	Total/NA	Ground Water	6020B	394528
310-260946-11	MW-15	Total/NA	Ground Water	6020B	394528
310-260946-12	MW-16	Total/NA	Ground Water	6020B	394528
310-260946-13	MW-17	Total/NA	Ground Water	6020B	394528
310-260946-14	MW-18	Total/NA	Ground Water	6020B	394528
310-260946-15	MW-D	Total/NA	Ground Water	6020B	394528
MB 310-394528/1-A	Method Blank	Total/NA	Water	6020B	394528
LCS 310-394528/2-A	Lab Control Sample	Total/NA	Water	6020B	394528
310-260946-11 DU	MW-15	Total/NA	Ground Water	6020B	394528

Analysis Batch: 395841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260946-1	MW-1	Total/NA	Ground Water	6020B	394528
310-260946-8	MW-12	Total/NA	Ground Water	6020B	394528
310-260946-9	MW-13	Total/NA	Ground Water	6020B	394528
310-260946-10	MW-14	Total/NA	Ground Water	6020B	394528
310-260946-1 MS	MW-1	Total/NA	Ground Water	6020B	394528
310-260946-1 MSD	MW-1	Total/NA	Ground Water	6020B	394528

General Chemistry

Analysis Batch: 394582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260946-1	MW-1	Total/NA	Ground Water	I-3765-85	
310-260946-2	MW-2	Total/NA	Ground Water	I-3765-85	
310-260946-3	MW-4	Total/NA	Ground Water	I-3765-85	
310-260946-7	MW-11	Total/NA	Ground Water	I-3765-85	
310-260946-8	MW-12	Total/NA	Ground Water	I-3765-85	
310-260946-10	MW-14	Total/NA	Ground Water	I-3765-85	
310-260946-11	MW-15	Total/NA	Ground Water	I-3765-85	
310-260946-12	MW-16	Total/NA	Ground Water	I-3765-85	
310-260946-13	MW-17	Total/NA	Ground Water	I-3765-85	
310-260946-14	MW-18	Total/NA	Ground Water	I-3765-85	
310-260946-15	MW-D	Total/NA	Ground Water	I-3765-85	
MB 310-394582/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-394582/2	Lab Control Sample	Total/NA	Water	I-3765-85	
310-260946-7 DU	MW-11	Total/NA	Ground Water	I-3765-85	
310-260946-8 DU	MW-12	Total/NA	Ground Water	I-3765-85	

Analysis Batch: 394614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260946-4	MW-6	Total/NA	Ground Water	I-3765-85	
310-260946-5	MW-8	Total/NA	Ground Water	I-3765-85	
310-260946-6	MW-10	Total/NA	Ground Water	I-3765-85	
310-260946-9	MW-13	Total/NA	Ground Water	I-3765-85	
MB 310-394614/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-394614/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

General Chemistry

Analysis Batch: 394943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260946-1	MW-1	Total/NA	Ground Water	350.1	
310-260946-2	MW-2	Total/NA	Ground Water	350.1	
310-260946-3	MW-4	Total/NA	Ground Water	350.1	
310-260946-4	MW-6	Total/NA	Ground Water	350.1	
310-260946-5	MW-8	Total/NA	Ground Water	350.1	
310-260946-6	MW-10	Total/NA	Ground Water	350.1	
310-260946-7	MW-11	Total/NA	Ground Water	350.1	
310-260946-8	MW-12	Total/NA	Ground Water	350.1	
310-260946-9	MW-13	Total/NA	Ground Water	350.1	
310-260946-10	MW-14	Total/NA	Ground Water	350.1	
310-260946-11	MW-15	Total/NA	Ground Water	350.1	
310-260946-12	MW-16	Total/NA	Ground Water	350.1	
310-260946-13	MW-17	Total/NA	Ground Water	350.1	
310-260946-14	MW-18	Total/NA	Ground Water	350.1	
310-260946-15	MW-D	Total/NA	Ground Water	350.1	
MB 310-394943/123	Method Blank	Total/NA	Water	350.1	
LCS 310-394943/124	Lab Control Sample	Total/NA	Water	350.1	
310-260946-1 MS	MW-1	Total/NA	Ground Water	350.1	
310-260946-1 MSD	MW-1	Total/NA	Ground Water	350.1	

Analysis Batch: 394948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260946-6	MW-10	Total/NA	Ground Water	5220D LL	
310-260946-7	MW-11	Total/NA	Ground Water	5220D LL	
310-260946-8	MW-12	Total/NA	Ground Water	5220D LL	
310-260946-9	MW-13	Total/NA	Ground Water	5220D LL	
310-260946-10	MW-14	Total/NA	Ground Water	5220D LL	
310-260946-11	MW-15	Total/NA	Ground Water	5220D LL	
310-260946-12	MW-16	Total/NA	Ground Water	5220D LL	
310-260946-13	MW-17	Total/NA	Ground Water	5220D LL	
310-260946-14	MW-18	Total/NA	Ground Water	5220D LL	
310-260946-15	MW-D	Total/NA	Ground Water	5220D LL	
MB 310-394948/32	Method Blank	Total/NA	Water	5220D LL	
MB 310-394948/60	Method Blank	Total/NA	Water	5220D LL	
LCS 310-394948/33	Lab Control Sample	Total/NA	Water	5220D LL	
LCS 310-394948/63	Lab Control Sample	Total/NA	Water	5220D LL	

Analysis Batch: 395254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260946-1	MW-1	Total/NA	Ground Water	5220D LL	
310-260946-2	MW-2	Total/NA	Ground Water	5220D LL	
310-260946-3	MW-4	Total/NA	Ground Water	5220D LL	
310-260946-4	MW-6	Total/NA	Ground Water	5220D LL	
310-260946-5	MW-8	Total/NA	Ground Water	5220D LL	
MB 310-395254/5	Method Blank	Total/NA	Water	5220D LL	
LCS 310-395254/3	Lab Control Sample	Total/NA	Water	5220D LL	

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Lab Chronicle

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-1

Date Collected: 07/19/23 16:05

Date Received: 07/21/23 15:50

Lab Sample ID: 310-260946-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	396180	QTZ5	EET CF	08/09/23 14:04
Total/NA	Prep	3005A			394528	KCK5	EET CF	07/25/23 09:10
Total/NA	Analysis	6020B		1	395841	A6US	EET CF	08/07/23 18:49
Total/NA	Analysis	350.1		1	394943	ZJX4	EET CF	07/27/23 22:29
Total/NA	Analysis	5220D LL		1	395254	ENB7	EET CF	08/01/23 09:59
Total/NA	Analysis	I-3765-85		1	394582	DGU1	EET CF	07/25/23 09:38

Client Sample ID: MW-2

Date Collected: 07/19/23 16:36

Date Received: 07/21/23 15:50

Lab Sample ID: 310-260946-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	396180	QTZ5	EET CF	08/09/23 14:17
Total/NA	Prep	3005A			394528	KCK5	EET CF	07/25/23 09:10
Total/NA	Analysis	6020B		1	395705	DHM5	EET CF	08/04/23 15:45
Total/NA	Analysis	350.1		1	394943	ZJX4	EET CF	07/27/23 22:32
Total/NA	Analysis	5220D LL		1	395254	ENB7	EET CF	08/01/23 09:59
Total/NA	Analysis	I-3765-85		1	394582	DGU1	EET CF	07/25/23 09:38

Client Sample ID: MW-4

Date Collected: 07/19/23 17:27

Date Received: 07/21/23 15:50

Lab Sample ID: 310-260946-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	396180	QTZ5	EET CF	08/09/23 14:29
Total/NA	Prep	3005A			394528	KCK5	EET CF	07/25/23 09:10
Total/NA	Analysis	6020B		1	395705	DHM5	EET CF	08/04/23 15:47
Total/NA	Analysis	350.1		1	394943	ZJX4	EET CF	07/27/23 22:32
Total/NA	Analysis	5220D LL		1	395254	ENB7	EET CF	08/01/23 09:59
Total/NA	Analysis	I-3765-85		1	394582	DGU1	EET CF	07/25/23 09:38

Client Sample ID: MW-6

Date Collected: 07/20/23 11:21

Date Received: 07/21/23 15:50

Lab Sample ID: 310-260946-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		20	396099	QTZ5	EET CF	08/08/23 21:08
Total/NA	Prep	3005A			394528	KCK5	EET CF	07/25/23 09:10
Total/NA	Analysis	6020B		1	395705	DHM5	EET CF	08/04/23 15:49
Total/NA	Analysis	350.1		1000	394943	ZJX4	EET CF	07/27/23 22:33
Total/NA	Analysis	5220D LL		1	395254	ENB7	EET CF	08/01/23 09:59
Total/NA	Analysis	I-3765-85		1	394614	DGU1	EET CF	07/25/23 11:34

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-8

Date Collected: 07/20/23 12:01

Date Received: 07/21/23 15:50

Lab Sample ID: 310-260946-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	396099	QTZ5	EET CF	08/08/23 21:21
Total/NA	Prep	3005A			394528	KCK5	EET CF	07/25/23 09:10
Total/NA	Analysis	6020B		1	395705	DHM5	EET CF	08/04/23 15:51
Total/NA	Analysis	350.1		1	394943	ZJX4	EET CF	07/27/23 22:34
Total/NA	Analysis	5220D LL		1	395254	ENB7	EET CF	08/01/23 09:59
Total/NA	Analysis	I-3765-85		1	394614	DGU1	EET CF	07/25/23 11:34

Client Sample ID: MW-10

Date Collected: 07/20/23 12:39

Date Received: 07/21/23 15:50

Lab Sample ID: 310-260946-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	396099	QTZ5	EET CF	08/08/23 21:33
Total/NA	Prep	3005A			394528	KCK5	EET CF	07/25/23 09:10
Total/NA	Analysis	6020B		1	395705	DHM5	EET CF	08/04/23 15:53
Total/NA	Analysis	350.1		1	394943	ZJX4	EET CF	07/27/23 22:35
Total/NA	Analysis	5220D LL		1	394948	ENB7	EET CF	07/27/23 21:17
Total/NA	Analysis	I-3765-85		1	394614	DGU1	EET CF	07/25/23 11:34

Client Sample ID: MW-11

Date Collected: 07/19/23 10:58

Date Received: 07/21/23 15:50

Lab Sample ID: 310-260946-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	396180	QTZ5	EET CF	08/09/23 14:41
Total/NA	Prep	3005A			394528	KCK5	EET CF	07/25/23 09:10
Total/NA	Analysis	6020B		1	395705	DHM5	EET CF	08/04/23 16:13
Total/NA	Analysis	350.1		9.38	394943	ZJX4	EET CF	07/27/23 22:37
Total/NA	Analysis	5220D LL		10	394948	ENB7	EET CF	07/28/23 12:42
Total/NA	Analysis	I-3765-85		1	394582	DGU1	EET CF	07/25/23 09:38

Client Sample ID: MW-12

Date Collected: 07/19/23 11:38

Date Received: 07/21/23 15:50

Lab Sample ID: 310-260946-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	396180	QTZ5	EET CF	08/09/23 14:53
Total/NA	Prep	3005A			394528	KCK5	EET CF	07/25/23 09:10
Total/NA	Analysis	6020B		1	395841	A6US	EET CF	08/07/23 18:57
Total/NA	Analysis	350.1		9.38	394943	ZJX4	EET CF	07/27/23 22:37
Total/NA	Analysis	5220D LL		1	394948	ENB7	EET CF	07/27/23 21:17
Total/NA	Analysis	I-3765-85		1	394582	DGU1	EET CF	07/25/23 09:38

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-13

Lab Sample ID: 310-260946-9

Date Collected: 07/20/23 13:14

Matrix: Ground Water

Date Received: 07/21/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	396099	QTZ5	EET CF	08/08/23 21:45
Total/NA	Prep	3005A			394528	KCK5	EET CF	07/25/23 09:10
Total/NA	Analysis	6020B		4	395841	A6US	EET CF	08/07/23 19:00
Total/NA	Analysis	350.1		9.38	394943	ZJX4	EET CF	07/27/23 22:39
Total/NA	Analysis	5220D LL		1	394948	ENB7	EET CF	07/27/23 21:17
Total/NA	Analysis	I-3765-85		1	394614	DGU1	EET CF	07/25/23 11:34

Client Sample ID: MW-14

Lab Sample ID: 310-260946-10

Date Collected: 07/19/23 12:10

Matrix: Ground Water

Date Received: 07/21/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	396180	QTZ5	EET CF	08/09/23 15:05
Total/NA	Prep	3005A			394528	KCK5	EET CF	07/25/23 09:10
Total/NA	Analysis	6020B		4	395841	A6US	EET CF	08/07/23 19:02
Total/NA	Analysis	350.1		1	394943	ZJX4	EET CF	07/27/23 22:39
Total/NA	Analysis	5220D LL		1	394948	ENB7	EET CF	07/27/23 21:17
Total/NA	Analysis	I-3765-85		1	394582	DGU1	EET CF	07/25/23 09:38

Client Sample ID: MW-15

Lab Sample ID: 310-260946-11

Date Collected: 07/19/23 12:35

Matrix: Ground Water

Date Received: 07/21/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	396180	QTZ5	EET CF	08/09/23 15:17
Total/NA	Prep	3005A			394528	KCK5	EET CF	07/25/23 09:10
Total/NA	Analysis	6020B		1	395705	DHM5	EET CF	08/04/23 16:19
Total/NA	Analysis	350.1		1	394943	ZJX4	EET CF	07/27/23 22:40
Total/NA	Analysis	5220D LL		1	394948	ENB7	EET CF	07/27/23 21:17
Total/NA	Analysis	I-3765-85		1	394582	DGU1	EET CF	07/25/23 09:38

Client Sample ID: MW-16

Lab Sample ID: 310-260946-12

Date Collected: 07/19/23 14:03

Matrix: Ground Water

Date Received: 07/21/23 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	396180	QTZ5	EET CF	08/09/23 15:29
Total/NA	Prep	3005A			394528	KCK5	EET CF	07/25/23 09:10
Total/NA	Analysis	6020B		1	395705	DHM5	EET CF	08/04/23 16:23
Total/NA	Analysis	350.1		1	394943	ZJX4	EET CF	07/27/23 22:41
Total/NA	Analysis	5220D LL		1	394948	ENB7	EET CF	07/27/23 21:17
Total/NA	Analysis	I-3765-85		1	394582	DGU1	EET CF	07/25/23 09:38

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Lab Chronicle

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Client Sample ID: MW-17

Date Collected: 07/19/23 14:41

Date Received: 07/21/23 15:50

Lab Sample ID: 310-260946-13

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	396180	QTZ5	EET CF	08/09/23 16:05
Total/NA	Prep	3005A			394528	KCK5	EET CF	07/25/23 09:10
Total/NA	Analysis	6020B		1	395705	DHM5	EET CF	08/04/23 16:26
Total/NA	Analysis	350.1		1	394943	ZJX4	EET CF	07/27/23 22:42
Total/NA	Analysis	5220D LL		1	394948	ENB7	EET CF	07/27/23 21:17
Total/NA	Analysis	I-3765-85		1	394582	DGU1	EET CF	07/25/23 09:38

Client Sample ID: MW-18

Date Collected: 07/19/23 15:09

Date Received: 07/21/23 15:50

Lab Sample ID: 310-260946-14

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	396180	QTZ5	EET CF	08/09/23 16:18
Total/NA	Prep	3005A			394528	KCK5	EET CF	07/25/23 09:10
Total/NA	Analysis	6020B		1	395705	DHM5	EET CF	08/04/23 16:28
Total/NA	Analysis	350.1		1	394943	ZJX4	EET CF	07/27/23 22:42
Total/NA	Analysis	5220D LL		1	394948	ENB7	EET CF	07/27/23 21:17
Total/NA	Analysis	I-3765-85		1	394582	DGU1	EET CF	07/25/23 09:38

Client Sample ID: MW-D

Date Collected: 07/19/23 17:27

Date Received: 07/21/23 15:50

Lab Sample ID: 310-260946-15

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		5	396180	QTZ5	EET CF	08/09/23 16:30
Total/NA	Prep	3005A			394528	KCK5	EET CF	07/25/23 09:10
Total/NA	Analysis	6020B		1	395705	DHM5	EET CF	08/04/23 16:30
Total/NA	Analysis	350.1		1	394943	ZJX4	EET CF	07/27/23 22:44
Total/NA	Analysis	5220D LL		1	394948	ENB7	EET CF	07/27/23 21:17
Total/NA	Analysis	I-3765-85		1	394582	DGU1	EET CF	07/25/23 09:38

Laboratory References:

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

Eurofins Cedar Falls

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Laboratory: Eurofins Cedar Falls

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

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

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

Method Summary

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260946-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
350.1	Nitrogen, Ammonia	EPA	EET CF
5220D LL	COD	SM	EET CF
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
3005A	Preparation, Total Metals	SW846	EET CF

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

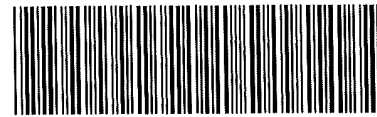
USGS = "Methods For Analysis Of Water And Fluvial Sediments", USGS, 1989

Laboratory References:

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



Environment Testing
America



310-260946 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
<u>IL</u>		<u>IL</u>	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>7/21/23</u>	<u>1550</u>	<u>SO</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee			
☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes: Cooler ID: _____
Multiple Coolers?		☒ Yes ☐ No	If yes: Cooler # <u>1</u> of <u>3</u>
Cooler Custody Seals Present?		☐ Yes ☒ No	If yes: Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☐ Yes ☒ No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>U</u>		Correction Factor (°C): <u>0</u>	
Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>2.2</u>		Corrected Temp (°C): <u>2.2</u>	
Sample Container Temperature			
Container(s) used:	<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? ☐ Yes ☐ No			
a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ 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>IL</u>		<u>IL</u>	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>7/21/23</u>	<u>1550</u>	<u>SO</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee			
☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No If yes: Cooler ID: _____			
Multiple Coolers? ☒ Yes ☐ No If yes: Cooler # <u>3</u> of <u>5</u>			
Cooler Custody Seals Present? ☐ Yes ☒ No If yes: Cooler custody seals intact? ☐ Yes ☐ No			
Sample Custody Seals Present? ☐ Yes ☒ No If yes: Sample custody seals intact? ☐ Yes ☐ No			
Trip Blank Present? ☐ Yes ☒ No If yes: Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>U</u>		Correction Factor (°C): <u>0</u>	
Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.5</u>		Corrected Temp (°C): <u>0.5</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? ☐ Yes ☐ No			
a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

Eurofins Environment Testing North Central, LLC

3019 Venture Way, Cedar Falls, Iowa 50613

Phone: 319-277-2401

Direct: 319 595-2013

SAMPLER.

505 E.A. Apps

SITE NAME.

ADM Clinton Landfill

ADDRESS

CITY/STATE/ZIP.

TELEPHONE NUMBER.

—

SIGNATURE OF SAMPLER:

295

REPORT TO

Kevin Jensen (kjensen@scsengineers.com)

COMPANY NAME-

SCS Engineers

PROJECT NAME:

ADM Landfill 2023 27223141

PROJECT NUMBER.

ADM Landfill 2023 27223141

ADDRESS-

1690 All-State Court, Suite 100

CITY/STATE/ZIP-

West Des Moines, IA 50265

[illegible]

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-260946-1

Login Number: 260946

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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

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

Generated 8/2/2023 4:23:04 PM

JOB DESCRIPTION

ADM Landfill 2023-27223141

JOB NUMBER

310-260947-1

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

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Case Narrative

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

Job ID: 310-260947-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-260947-1

Receipt

The samples were received on 7/21/2023 3:50 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 0.5°C, 1.1°C and 2.2°C

GC/MS VOA

Method 8260D: The following sample was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The sample was analyzed within the 7-day holding time specified for unpreserved samples: MW-11 (310-260947-2).

Method 8260D: The following volatiles sample was diluted due to foaming at the time of sample preparation during the original sample analysis: MW-11 (310-260947-2). Elevated reporting limits (RLs) are provided.

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-394602 recovered outside of the control limits for Vinyl chloride (-21.3%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 310-394602/4).

Method 8260D: The initial calibration verification (ICV) result for batch 310-394703 was above the upper control limit for 2,2-Dichloropropane. Sample results were non-detects, and have been reported as qualified data.

Method 8260D: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container: Trip Blank (310-260947-5).

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

GC/MS Semi VOA

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

General Chemistry

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

Sample Summary

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-260947-1	MW-2	Ground Water	07/19/23 16:05	07/21/23 15:50
310-260947-2	MW-11	Ground Water	07/19/23 10:58	07/21/23 15:50
310-260947-3	MW-12	Ground Water	07/19/23 11:38	07/21/23 15:50
310-260947-4	MW-18	Ground Water	07/19/23 15:09	07/21/23 15:50
310-260947-5	Trip Blank	Water	07/19/23 00:00	07/21/23 15:50

Detection Summary

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

Client Sample ID: MW-2

Lab Sample ID: 310-260947-1

No Detections.

Client Sample ID: MW-11

Lab Sample ID: 310-260947-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.258		0.189	0.0462	ug/L	1		8270E SIM	Total/NA
Fluorene	0.168	J	0.189	0.0406	ug/L	1		8270E SIM	Total/NA
Phenanthrene	0.175	J	0.189	0.0943	ug/L	1		8270E SIM	Total/NA

Client Sample ID: MW-12

Lab Sample ID: 310-260947-3

No Detections.

Client Sample ID: MW-18

Lab Sample ID: 310-260947-4

No Detections.

Client Sample ID: Trip Blank

Lab Sample ID: 310-260947-5

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

Client Sample ID: MW-2
Date Collected: 07/19/23 16:05
Date Received: 07/21/23 15:50

Lab Sample ID: 310-260947-1
Matrix: Ground Water

General Chemistry										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Phenols, Total (SW846 9066)	<0.0204		0.0204	0.0102	mg/L		07/26/23 09:03	07/26/23 18:17	1	

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

Client Sample ID: MW-11

Lab Sample ID: 310-260947-2

Date Collected: 07/19/23 10:58

Matrix: Ground Water

Date Received: 07/21/23 15:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<100		100	31.0	ug/L			07/26/23 04:25	10
Benzene	<5.00		5.00	2.20	ug/L			07/26/23 04:25	10
Bromobenzene	<10.0		10.0	3.40	ug/L			07/26/23 04:25	10
Bromochloromethane	<50.0		50.0	5.40	ug/L			07/26/23 04:25	10
Bromodichloromethane	<10.0		10.0	3.90	ug/L			07/26/23 04:25	10
Bromoform	<50.0		50.0	7.80	ug/L			07/26/23 04:25	10
Bromomethane	<40.0		40.0	11.0	ug/L			07/26/23 04:25	10
2-Butanone (MEK)	<100		100	21.0	ug/L			07/26/23 04:25	10
Carbon disulfide	<10.0		10.0	4.50	ug/L			07/26/23 04:25	10
Carbon tetrachloride	<20.0		20.0	6.50	ug/L			07/26/23 04:25	10
Chlorobenzene	<10.0		10.0	4.00	ug/L			07/26/23 04:25	10
Chlorodibromomethane	<50.0		50.0	7.50	ug/L			07/26/23 04:25	10
Chloroethane	<40.0		40.0	7.90	ug/L			07/26/23 04:25	10
Chloroform	<30.0		30.0	13.0	ug/L			07/26/23 04:25	10
Chloromethane	<30.0		30.0	6.10	ug/L			07/26/23 04:25	10
2-Chlorotoluene	<10.0		10.0	2.80	ug/L			07/26/23 04:25	10
4-Chlorotoluene	<10.0		10.0	2.90	ug/L			07/26/23 04:25	10
cis-1,2-Dichloroethene	<10.0		10.0	2.10	ug/L			07/26/23 04:25	10
cis-1,3-Dichloropropene	<50.0		50.0	2.50	ug/L			07/26/23 04:25	10
1,2-Dibromo-3-Chloropropane	<50.0		50.0	12.0	ug/L			07/26/23 04:25	10
1,2-Dibromoethane (EDB)	<10.0		10.0	3.40	ug/L			07/26/23 04:25	10
Dibromomethane	<10.0		10.0	3.30	ug/L			07/26/23 04:25	10
1,2-Dichlorobenzene	<10.0		10.0	3.70	ug/L			07/26/23 04:25	10
1,3-Dichlorobenzene	<10.0		10.0	3.00	ug/L			07/26/23 04:25	10
1,4-Dichlorobenzene	<10.0		10.0	2.30	ug/L			07/26/23 04:25	10
Dichlorodifluoromethane	<30.0		30.0	2.50	ug/L			07/26/23 04:25	10
1,1-Dichloroethane	<10.0		10.0	2.20	ug/L			07/26/23 04:25	10
1,2-Dichloroethane	<10.0		10.0	3.90	ug/L			07/26/23 04:25	10
1,1-Dichloroethene	<20.0		20.0	5.60	ug/L			07/26/23 04:25	10
1,2-Dichloropropane	<10.0		10.0	2.70	ug/L			07/26/23 04:25	10
1,3-Dichloropropane	<10.0		10.0	4.00	ug/L			07/26/23 04:25	10
2,2-Dichloropropane	<40.0		40.0	6.90	ug/L			07/26/23 04:25	10
1,1-Dichloropropene	<10.0		10.0	4.30	ug/L			07/26/23 04:25	10
Ethylbenzene	<10.0		10.0	3.10	ug/L			07/26/23 04:25	10
Hexachlorobutadiene	<50.0		50.0	14.0	ug/L			07/26/23 04:25	10
Hexane	<10.0		10.0	7.80	ug/L			07/26/23 04:25	10
Isopropylbenzene	<10.0		10.0	3.50	ug/L			07/26/23 04:25	10
Methylene Chloride	<50.0		50.0	17.0	ug/L			07/26/23 04:25	10
Methyl tert-butyl ether	<10.0		10.0	4.90	ug/L			07/26/23 04:25	10
Naphthalene	<50.0		50.0	30.0	ug/L			07/26/23 04:25	10
n-Butylbenzene	<10.0		10.0	4.40	ug/L			07/26/23 04:25	10
N-Propylbenzene	<10.0		10.0	3.90	ug/L			07/26/23 04:25	10
p-Isopropyltoluene	<10.0		10.0	3.30	ug/L			07/26/23 04:25	10
sec-Butylbenzene	<10.0		10.0	4.40	ug/L			07/26/23 04:25	10
Styrene	<10.0		10.0	3.70	ug/L			07/26/23 04:25	10
tert-Butylbenzene	<10.0		10.0	3.90	ug/L			07/26/23 04:25	10
1,1,1,2-Tetrachloroethane	<10.0		10.0	3.80	ug/L			07/26/23 04:25	10
1,1,2,2-Tetrachloroethane	<10.0		10.0	4.70	ug/L			07/26/23 04:25	10
Tetrachloroethene	<10.0		10.0	4.80	ug/L			07/26/23 04:25	10

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

Client Sample ID: MW-11

Lab Sample ID: 310-260947-2

Date Collected: 07/19/23 10:58

Matrix: Ground Water

Date Received: 07/21/23 15:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<10.0		10.0	4.30	ug/L			07/26/23 04:25	10
trans-1,2-Dichloroethene	<10.0		10.0	2.70	ug/L			07/26/23 04:25	10
trans-1,3-Dichloropropene	<50.0		50.0	5.60	ug/L			07/26/23 04:25	10
1,2,3-Trichlorobenzene	<50.0		50.0	9.00	ug/L			07/26/23 04:25	10
1,2,4-Trichlorobenzene	<50.0		50.0	7.50	ug/L			07/26/23 04:25	10
1,1,1-Trichloroethane	<10.0		10.0	1.90	ug/L			07/26/23 04:25	10
1,1,2-Trichloroethane	<10.0		10.0	4.50	ug/L			07/26/23 04:25	10
Trichloroethene	<10.0		10.0	4.30	ug/L			07/26/23 04:25	10
Trichlorofluoromethane	<40.0		40.0	3.80	ug/L			07/26/23 04:25	10
1,2,3-Trichloropropane	<10.0		10.0	5.90	ug/L			07/26/23 04:25	10
1,2,4-Trimethylbenzene	<10.0		10.0	4.20	ug/L			07/26/23 04:25	10
1,3,5-Trimethylbenzene	<10.0		10.0	3.70	ug/L			07/26/23 04:25	10
Vinyl chloride	<10.0		10.0	1.80	ug/L			07/26/23 04:25	10
Xylenes, Total	<30.0		30.0	4.00	ug/L			07/26/23 04:25	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		80 - 120		07/26/23 04:25	10
Dibromofluoromethane (Surr)	101		80 - 128		07/26/23 04:25	10
Toluene-d8 (Surr)	96		80 - 120		07/26/23 04:25	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.258		0.189	0.0462	ug/L		07/24/23 07:51	07/31/23 19:16	1
Acenaphthylene	<0.189		0.189	0.0594	ug/L		07/24/23 07:51	07/31/23 19:16	1
Anthracene	<0.189		0.189	0.0575	ug/L		07/24/23 07:51	07/31/23 19:16	1
Benzo[a]anthracene	<0.189		0.189	0.0811	ug/L		07/24/23 07:51	07/31/23 19:16	1
Benzo[a]pyrene	<0.189		0.189	0.113	ug/L		07/24/23 07:51	07/31/23 19:16	1
Benzo[b]fluoranthene	<0.189		0.189	0.0943	ug/L		07/24/23 07:51	07/31/23 19:16	1
Benzo[g,h,i]perylene	<0.189		0.189	0.113	ug/L		07/24/23 07:51	07/31/23 19:16	1
Benzo[k]fluoranthene	<0.189		0.189	0.104	ug/L		07/24/23 07:51	07/31/23 19:16	1
Chrysene	<0.189		0.189	0.0689	ug/L		07/24/23 07:51	07/31/23 19:16	1
Dibenz(a,h)anthracene	<0.189		0.189	0.123	ug/L		07/24/23 07:51	07/31/23 19:16	1
Fluoranthene	<0.189		0.189	0.113	ug/L		07/24/23 07:51	07/31/23 19:16	1
Fluorene	0.168 J		0.189	0.0406	ug/L		07/24/23 07:51	07/31/23 19:16	1
Indeno[1,2,3-cd]pyrene	<0.189		0.189	0.104	ug/L		07/24/23 07:51	07/31/23 19:16	1
Naphthalene	<0.472		0.472	0.245	ug/L		07/24/23 07:51	07/31/23 19:16	1
Phenanthrene	0.175 J		0.189	0.0943	ug/L		07/24/23 07:51	07/31/23 19:16	1
Pyrene	<0.189		0.189	0.0887	ug/L		07/24/23 07:51	07/31/23 19:16	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

Client Sample ID: MW-12

Lab Sample ID: 310-260947-3

Date Collected: 07/19/23 11:38

Matrix: Ground Water

Date Received: 07/21/23 15:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			07/26/23 02:36	1
Benzene	<0.500		0.500	0.220	ug/L			07/26/23 02:36	1
Bromobenzene	<1.00		1.00	0.340	ug/L			07/26/23 02:36	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			07/26/23 02:36	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			07/26/23 02:36	1
Bromoform	<5.00		5.00	0.780	ug/L			07/26/23 02:36	1
Bromomethane	<4.00		4.00	1.10	ug/L			07/26/23 02:36	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			07/26/23 02:36	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			07/26/23 02:36	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			07/26/23 02:36	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			07/26/23 02:36	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			07/26/23 02:36	1
Chloroethane	<4.00		4.00	0.790	ug/L			07/26/23 02:36	1
Chloroform	<3.00		3.00	1.30	ug/L			07/26/23 02:36	1
Chloromethane	<3.00		3.00	0.610	ug/L			07/26/23 02:36	1
2-Chlorotoluene	<1.00		1.00	0.280	ug/L			07/26/23 02:36	1
4-Chlorotoluene	<1.00		1.00	0.290	ug/L			07/26/23 02:36	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			07/26/23 02:36	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			07/26/23 02:36	1
1,2-Dibromo-3-Chloropropane	<5.00		5.00	1.20	ug/L			07/26/23 02:36	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			07/26/23 02:36	1
Dibromomethane	<1.00		1.00	0.330	ug/L			07/26/23 02:36	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			07/26/23 02:36	1
1,3-Dichlorobenzene	<1.00		1.00	0.300	ug/L			07/26/23 02:36	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			07/26/23 02:36	1
Dichlorodifluoromethane	<3.00		3.00	0.250	ug/L			07/26/23 02:36	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			07/26/23 02:36	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			07/26/23 02:36	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			07/26/23 02:36	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			07/26/23 02:36	1
1,3-Dichloropropane	<1.00		1.00	0.400	ug/L			07/26/23 02:36	1
2,2-Dichloropropane	<4.00		4.00	0.690	ug/L			07/26/23 02:36	1
1,1-Dichloropropene	<1.00		1.00	0.430	ug/L			07/26/23 02:36	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			07/26/23 02:36	1
Hexachlorobutadiene	<5.00		5.00	1.40	ug/L			07/26/23 02:36	1
Hexane	<1.00		1.00	0.780	ug/L			07/26/23 02:36	1
Isopropylbenzene	<1.00		1.00	0.350	ug/L			07/26/23 02:36	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			07/26/23 02:36	1
Methyl tert-butyl ether	<1.00		1.00	0.490	ug/L			07/26/23 02:36	1
Naphthalene	<5.00		5.00	3.00	ug/L			07/26/23 14:30	1
n-Butylbenzene	<1.00		1.00	0.440	ug/L			07/26/23 02:36	1
N-Propylbenzene	<1.00		1.00	0.390	ug/L			07/26/23 02:36	1
p-Isopropyltoluene	<1.00		1.00	0.330	ug/L			07/26/23 02:36	1
sec-Butylbenzene	<1.00		1.00	0.440	ug/L			07/26/23 02:36	1
Styrene	<1.00		1.00	0.370	ug/L			07/26/23 02:36	1
tert-Butylbenzene	<1.00		1.00	0.390	ug/L			07/26/23 02:36	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			07/26/23 02:36	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			07/26/23 02:36	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			07/26/23 02:36	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

Client Sample ID: MW-12

Lab Sample ID: 310-260947-3

Date Collected: 07/19/23 11:38

Matrix: Ground Water

Date Received: 07/21/23 15:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<1.00		1.00	0.430	ug/L			07/26/23 02:36	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			07/26/23 02:36	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			07/26/23 02:36	1
1,2,3-Trichlorobenzene	<5.00		5.00	0.900	ug/L			07/26/23 02:36	1
1,2,4-Trichlorobenzene	<5.00		5.00	0.750	ug/L			07/26/23 02:36	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			07/26/23 02:36	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			07/26/23 02:36	1
Trichloroethene	<1.00		1.00	0.430	ug/L			07/26/23 02:36	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			07/26/23 02:36	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			07/26/23 02:36	1
1,2,4-Trimethylbenzene	<1.00		1.00	0.420	ug/L			07/26/23 02:36	1
1,3,5-Trimethylbenzene	<1.00		1.00	0.370	ug/L			07/26/23 02:36	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			07/26/23 02:36	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			07/26/23 02:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		80 - 120		07/26/23 02:36	1
4-Bromofluorobenzene (Surr)	106		80 - 120		07/26/23 14:30	1
Dibromofluoromethane (Surr)	101		80 - 128		07/26/23 02:36	1
Dibromofluoromethane (Surr)	92		80 - 128		07/26/23 14:30	1
Toluene-d8 (Surr)	97		80 - 120		07/26/23 02:36	1
Toluene-d8 (Surr)	102		80 - 120		07/26/23 14:30	1

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

Client Sample ID: MW-18
Date Collected: 07/19/23 15:09
Date Received: 07/21/23 15:50

Lab Sample ID: 310-260947-4
Matrix: Ground Water

General Chemistry										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Phenols, Total (SW846 9066)	<0.0200		0.0200	0.0100	mg/L		07/26/23 09:03	07/26/23 18:15	1	

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

Client Sample ID: Trip Blank

Lab Sample ID: 310-260947-5

Date Collected: 07/19/23 00:00

Matrix: Water

Date Received: 07/21/23 15:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			07/26/23 10:34	1
Benzene	<0.500		0.500	0.220	ug/L			07/26/23 10:34	1
Bromobenzene	<1.00		1.00	0.340	ug/L			07/26/23 10:34	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			07/26/23 10:34	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			07/26/23 10:34	1
Bromoform	<5.00		5.00	0.780	ug/L			07/26/23 10:34	1
Bromomethane	<4.00		4.00	1.10	ug/L			07/26/23 10:34	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			07/26/23 10:34	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			07/26/23 10:34	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			07/26/23 10:34	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			07/26/23 10:34	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			07/26/23 10:34	1
Chloroethane	<4.00		4.00	0.790	ug/L			07/26/23 10:34	1
Chloroform	<3.00		3.00	1.30	ug/L			07/26/23 10:34	1
Chloromethane	<3.00		3.00	0.610	ug/L			07/26/23 10:34	1
2-Chlorotoluene	<1.00		1.00	0.280	ug/L			07/26/23 10:34	1
4-Chlorotoluene	<1.00		1.00	0.290	ug/L			07/26/23 10:34	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			07/26/23 10:34	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			07/26/23 10:34	1
1,2-Dibromo-3-Chloropropane	<5.00		5.00	1.20	ug/L			07/26/23 10:34	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			07/26/23 10:34	1
Dibromomethane	<1.00		1.00	0.330	ug/L			07/26/23 10:34	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			07/26/23 10:34	1
1,3-Dichlorobenzene	<1.00		1.00	0.300	ug/L			07/26/23 10:34	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			07/26/23 10:34	1
Dichlorodifluoromethane	<3.00		3.00	0.250	ug/L			07/26/23 10:34	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			07/26/23 10:34	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			07/26/23 10:34	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			07/26/23 10:34	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			07/26/23 10:34	1
1,3-Dichloropropane	<1.00		1.00	0.400	ug/L			07/26/23 10:34	1
2,2-Dichloropropane	<4.00		4.00	0.690	ug/L			07/26/23 10:34	1
1,1-Dichloropropene	<1.00		1.00	0.430	ug/L			07/26/23 10:34	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			07/26/23 10:34	1
Hexachlorobutadiene	<5.00		5.00	1.40	ug/L			07/26/23 10:34	1
Hexane	<1.00		1.00	0.780	ug/L			07/26/23 10:34	1
Isopropylbenzene	<1.00		1.00	0.350	ug/L			07/26/23 10:34	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			07/26/23 10:34	1
Methyl tert-butyl ether	<1.00		1.00	0.490	ug/L			07/26/23 10:34	1
Naphthalene	<5.00		5.00	3.00	ug/L			07/26/23 10:34	1
n-Butylbenzene	<1.00		1.00	0.440	ug/L			07/26/23 10:34	1
N-Propylbenzene	<1.00		1.00	0.390	ug/L			07/26/23 10:34	1
p-Isopropyltoluene	<1.00		1.00	0.330	ug/L			07/26/23 10:34	1
sec-Butylbenzene	<1.00		1.00	0.440	ug/L			07/26/23 10:34	1
Styrene	<1.00		1.00	0.370	ug/L			07/26/23 10:34	1
tert-Butylbenzene	<1.00		1.00	0.390	ug/L			07/26/23 10:34	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			07/26/23 10:34	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			07/26/23 10:34	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			07/26/23 10:34	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

Client Sample ID: Trip Blank

Lab Sample ID: 310-260947-5

Date Collected: 07/19/23 00:00

Matrix: Water

Date Received: 07/21/23 15:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<1.00		1.00	0.430	ug/L			07/26/23 10:34	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			07/26/23 10:34	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			07/26/23 10:34	1
1,2,3-Trichlorobenzene	<5.00		5.00	0.900	ug/L			07/26/23 10:34	1
1,2,4-Trichlorobenzene	<5.00		5.00	0.750	ug/L			07/26/23 10:34	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			07/26/23 10:34	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			07/26/23 10:34	1
Trichloroethene	<1.00		1.00	0.430	ug/L			07/26/23 10:34	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			07/26/23 10:34	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			07/26/23 10:34	1
1,2,4-Trimethylbenzene	<1.00		1.00	0.420	ug/L			07/26/23 10:34	1
1,3,5-Trimethylbenzene	<1.00		1.00	0.370	ug/L			07/26/23 10:34	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			07/26/23 10:34	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			07/26/23 10:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		80 - 120					07/26/23 10:34	1
Dibromofluoromethane (Surr)	98		80 - 128					07/26/23 10:34	1
Toluene-d8 (Surr)	101		80 - 120					07/26/23 10:34	1

Definitions/Glossary

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

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

Matrix: Ground Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (80-120)	DBFM (80-128)	TOL (80-120)
310-260947-2	MW-11	101	101	96
310-260947-3	MW-12	98	101	97
310-260947-3	MW-12	106	92	102

Surrogate Legend

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

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	BFB (80-120)	DBFM (80-128)	TOL (80-120)
310-260947-5	Trip Blank	105	98	101
LCS 310-394602/6	Lab Control Sample	101	102	99
LCS 310-394602/7	Lab Control Sample	101	107	96
LCS 310-394703/6	Lab Control Sample	94	98	100
LCS 310-394703/7	Lab Control Sample	97	95	101
MB 310-394602/5	Method Blank	102	108	96
MB 310-394703/5	Method Blank	112	96	102

Surrogate Legend

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

QC Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

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

Lab Sample ID: MB 310-394602/5

Matrix: Water

Analysis Batch: 394602

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			07/25/23 20:24	1
Benzene	<0.500		0.500	0.220	ug/L			07/25/23 20:24	1
Bromobenzene	<1.00		1.00	0.340	ug/L			07/25/23 20:24	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			07/25/23 20:24	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			07/25/23 20:24	1
Bromoform	<5.00		5.00	0.780	ug/L			07/25/23 20:24	1
Bromomethane	<4.00		4.00	1.10	ug/L			07/25/23 20:24	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			07/25/23 20:24	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			07/25/23 20:24	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			07/25/23 20:24	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			07/25/23 20:24	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			07/25/23 20:24	1
Chloroethane	<4.00		4.00	0.790	ug/L			07/25/23 20:24	1
Chloroform	<3.00		3.00	1.30	ug/L			07/25/23 20:24	1
Chloromethane	<3.00		3.00	0.610	ug/L			07/25/23 20:24	1
2-Chlorotoluene	<1.00		1.00	0.280	ug/L			07/25/23 20:24	1
4-Chlorotoluene	<1.00		1.00	0.290	ug/L			07/25/23 20:24	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			07/25/23 20:24	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			07/25/23 20:24	1
1,2-Dibromo-3-Chloropropane	<5.00		5.00	1.20	ug/L			07/25/23 20:24	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			07/25/23 20:24	1
Dibromomethane	<1.00		1.00	0.330	ug/L			07/25/23 20:24	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			07/25/23 20:24	1
1,3-Dichlorobenzene	<1.00		1.00	0.300	ug/L			07/25/23 20:24	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			07/25/23 20:24	1
Dichlorodifluoromethane	<3.00		3.00	0.250	ug/L			07/25/23 20:24	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			07/25/23 20:24	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			07/25/23 20:24	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			07/25/23 20:24	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			07/25/23 20:24	1
1,3-Dichloropropane	<1.00		1.00	0.400	ug/L			07/25/23 20:24	1
2,2-Dichloropropane	<4.00		4.00	0.690	ug/L			07/25/23 20:24	1
1,1-Dichloropropene	<1.00		1.00	0.430	ug/L			07/25/23 20:24	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			07/25/23 20:24	1
Hexachlorobutadiene	<5.00		5.00	1.40	ug/L			07/25/23 20:24	1
Hexane	<1.00		1.00	0.780	ug/L			07/25/23 20:24	1
Isopropylbenzene	<1.00		1.00	0.350	ug/L			07/25/23 20:24	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			07/25/23 20:24	1
Methyl tert-butyl ether	<1.00		1.00	0.490	ug/L			07/25/23 20:24	1
Naphthalene	<5.00		5.00	3.00	ug/L			07/25/23 20:24	1
n-Butylbenzene	<1.00		1.00	0.440	ug/L			07/25/23 20:24	1
N-Propylbenzene	<1.00		1.00	0.390	ug/L			07/25/23 20:24	1
p-Isopropyltoluene	<1.00		1.00	0.330	ug/L			07/25/23 20:24	1
sec-Butylbenzene	<1.00		1.00	0.440	ug/L			07/25/23 20:24	1
Styrene	<1.00		1.00	0.370	ug/L			07/25/23 20:24	1
tert-Butylbenzene	<1.00		1.00	0.390	ug/L			07/25/23 20:24	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			07/25/23 20:24	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			07/25/23 20:24	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

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

Lab Sample ID: MB 310-394602/5

Matrix: Water

Analysis Batch: 394602

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			07/25/23 20:24	1
Toluene	<1.00		1.00	0.430	ug/L			07/25/23 20:24	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			07/25/23 20:24	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			07/25/23 20:24	1
1,2,3-Trichlorobenzene	<5.00		5.00	0.900	ug/L			07/25/23 20:24	1
1,2,4-Trichlorobenzene	<5.00		5.00	0.750	ug/L			07/25/23 20:24	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			07/25/23 20:24	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			07/25/23 20:24	1
Trichloroethene	<1.00		1.00	0.430	ug/L			07/25/23 20:24	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			07/25/23 20:24	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			07/25/23 20:24	1
1,2,4-Trimethylbenzene	<1.00		1.00	0.420	ug/L			07/25/23 20:24	1
1,3,5-Trimethylbenzene	<1.00		1.00	0.370	ug/L			07/25/23 20:24	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			07/25/23 20:24	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			07/25/23 20:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		80 - 120		07/25/23 20:24	1
Dibromofluoromethane (Surr)	108		80 - 128		07/25/23 20:24	1
Toluene-d8 (Surr)	96		80 - 120		07/25/23 20:24	1

Lab Sample ID: LCS 310-394602/6

Matrix: Water

Analysis Batch: 394602

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	40.0	41.49		ug/L		104	50 - 150
Benzene	20.0	17.71		ug/L		89	73 - 122
Bromobenzene	20.0	19.50		ug/L		97	67 - 124
Bromochloromethane	20.0	20.14		ug/L		101	68 - 132
Bromodichloromethane	20.0	18.85		ug/L		94	72 - 121
Bromoform	20.0	19.84		ug/L		99	55 - 129
2-Butanone (MEK)	40.0	38.11		ug/L		95	50 - 150
Carbon disulfide	20.0	16.96		ug/L		85	58 - 131
Carbon tetrachloride	20.0	19.92		ug/L		100	67 - 132
Chlorobenzene	20.0	18.56		ug/L		93	69 - 121
Chlorodibromomethane	20.0	20.38		ug/L		102	69 - 122
Chloroform	20.0	18.98		ug/L		95	72 - 120
2-Chlorotoluene	20.0	18.92		ug/L		95	66 - 122
4-Chlorotoluene	20.0	18.89		ug/L		94	65 - 122
cis-1,2-Dichloroethene	20.0	18.45		ug/L		92	74 - 120
cis-1,3-Dichloropropene	20.0	19.26		ug/L		96	71 - 126
1,2-Dibromo-3-Chloropropane	20.0	20.75		ug/L		104	50 - 150
1,2-Dibromoethane (EDB)	20.0	20.46		ug/L		102	73 - 125
Dibromomethane	20.0	19.56		ug/L		98	72 - 123
1,2-Dichlorobenzene	20.0	18.80		ug/L		94	68 - 120
1,3-Dichlorobenzene	20.0	19.48		ug/L		97	67 - 123
1,4-Dichlorobenzene	20.0	18.39		ug/L		92	67 - 120

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QC Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

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

Lab Sample ID: LCS 310-394602/6

Matrix: Water

Analysis Batch: 394602

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethane	20.0	18.12		ug/L		91	71 - 123
1,2-Dichloroethane	20.0	19.41		ug/L		97	70 - 124
1,1-Dichloroethene	20.0	18.82		ug/L		94	61 - 129
1,2-Dichloropropane	20.0	18.20		ug/L		91	73 - 121
1,3-Dichloropropane	20.0	18.86		ug/L		94	72 - 124
2,2-Dichloropropane	20.0	21.31		ug/L		107	50 - 150
1,1-Dichloropropene	20.0	19.21		ug/L		96	70 - 131
Ethylbenzene	20.0	17.83		ug/L		89	69 - 122
Hexachlorobutadiene	20.0	19.48		ug/L		97	49 - 150
Hexane	20.0	18.39		ug/L		92	35 - 150
Isopropylbenzene	20.0	18.56		ug/L		93	66 - 126
Methylene Chloride	20.0	18.22		ug/L		91	50 - 150
Methyl tert-butyl ether	20.0	20.78		ug/L		104	68 - 127
Naphthalene	20.0	20.53		ug/L		103	50 - 150
n-Butylbenzene	20.0	18.34		ug/L		92	54 - 138
N-Propylbenzene	20.0	18.53		ug/L		93	65 - 127
p-Isopropyltoluene	20.0	18.30		ug/L		91	61 - 128
sec-Butylbenzene	20.0	18.99		ug/L		95	62 - 132
Styrene	20.0	18.96		ug/L		95	67 - 125
tert-Butylbenzene	20.0	18.99		ug/L		95	64 - 127
1,1,1,2-Tetrachloroethane	20.0	19.93		ug/L		100	68 - 123
1,1,2,2-Tetrachloroethane	20.0	19.05		ug/L		95	64 - 124
Tetrachloroethene	20.0	19.94		ug/L		100	69 - 131
Toluene	20.0	18.24		ug/L		91	72 - 121
trans-1,2-Dichloroethene	20.0	18.79		ug/L		94	68 - 125
trans-1,3-Dichloropropene	20.0	19.91		ug/L		100	68 - 124
1,2,3-Trichlorobenzene	20.0	19.56		ug/L		98	50 - 150
1,2,4-Trichlorobenzene	20.0	19.37		ug/L		97	61 - 124
1,1,1-Trichloroethane	20.0	20.12		ug/L		101	71 - 128
1,1,2-Trichloroethane	20.0	20.18		ug/L		101	70 - 124
Trichloroethene	20.0	18.84		ug/L		94	73 - 126
1,2,3-Trichloropropane	20.0	21.14		ug/L		106	64 - 125
1,2,4-Trimethylbenzene	20.0	18.91		ug/L		95	65 - 125
1,3,5-Trimethylbenzene	20.0	19.01		ug/L		95	65 - 124
Xylenes, Total	40.0	36.95		ug/L		92	68 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	102		80 - 128
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: LCS 310-394602/7

Matrix: Water

Analysis Batch: 394602

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	14.24		ug/L		71	24 - 150
Chloroethane	20.0	16.11		ug/L		81	51 - 137

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QC Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

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

Lab Sample ID: LCS 310-394602/7

Matrix: Water

Analysis Batch: 394602

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloromethane	20.0	15.19		ug/L		76	37 - 150
Dichlorodifluoromethane	20.0	22.54		ug/L		113	37 - 150
Trichlorofluoromethane	20.0	20.88		ug/L		104	56 - 144
Vinyl chloride	20.0	17.06		ug/L		85	57 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	107		80 - 128
Toluene-d8 (Surr)	96		80 - 120

Lab Sample ID: MB 310-394703/5

Matrix: Water

Analysis Batch: 394703

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			07/26/23 09:24	1
Benzene	<0.500		0.500	0.220	ug/L			07/26/23 09:24	1
Bromobenzene	<1.00		1.00	0.340	ug/L			07/26/23 09:24	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			07/26/23 09:24	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			07/26/23 09:24	1
Bromoform	<5.00		5.00	0.780	ug/L			07/26/23 09:24	1
Bromomethane	<4.00		4.00	1.10	ug/L			07/26/23 09:24	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			07/26/23 09:24	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			07/26/23 09:24	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			07/26/23 09:24	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			07/26/23 09:24	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			07/26/23 09:24	1
Chloroethane	<4.00		4.00	0.790	ug/L			07/26/23 09:24	1
Chloroform	<3.00		3.00	1.30	ug/L			07/26/23 09:24	1
Chloromethane	<3.00		3.00	0.610	ug/L			07/26/23 09:24	1
2-Chlorotoluene	<1.00		1.00	0.280	ug/L			07/26/23 09:24	1
4-Chlorotoluene	<1.00		1.00	0.290	ug/L			07/26/23 09:24	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			07/26/23 09:24	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			07/26/23 09:24	1
1,2-Dibromo-3-Chloropropane	<5.00		5.00	1.20	ug/L			07/26/23 09:24	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			07/26/23 09:24	1
Dibromomethane	<1.00		1.00	0.330	ug/L			07/26/23 09:24	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			07/26/23 09:24	1
1,3-Dichlorobenzene	<1.00		1.00	0.300	ug/L			07/26/23 09:24	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			07/26/23 09:24	1
Dichlorodifluoromethane	<3.00		3.00	0.250	ug/L			07/26/23 09:24	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			07/26/23 09:24	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			07/26/23 09:24	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			07/26/23 09:24	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			07/26/23 09:24	1
1,3-Dichloropropane	<1.00		1.00	0.400	ug/L			07/26/23 09:24	1
2,2-Dichloropropane	<4.00		4.00	0.690	ug/L			07/26/23 09:24	1
1,1-Dichloropropene	<1.00		1.00	0.430	ug/L			07/26/23 09:24	1

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QC Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

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

Lab Sample ID: MB 310-394703/5

Matrix: Water

Analysis Batch: 394703

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<1.00		1.00	0.310	ug/L			07/26/23 09:24	1
Hexachlorobutadiene	<5.00		5.00	1.40	ug/L			07/26/23 09:24	1
Hexane	<1.00		1.00	0.780	ug/L			07/26/23 09:24	1
Isopropylbenzene	<1.00		1.00	0.350	ug/L			07/26/23 09:24	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			07/26/23 09:24	1
Methyl tert-butyl ether	<1.00		1.00	0.490	ug/L			07/26/23 09:24	1
Naphthalene	<5.00		5.00	3.00	ug/L			07/26/23 09:24	1
n-Butylbenzene	<1.00		1.00	0.440	ug/L			07/26/23 09:24	1
N-Propylbenzene	<1.00		1.00	0.390	ug/L			07/26/23 09:24	1
p-Isopropyltoluene	<1.00		1.00	0.330	ug/L			07/26/23 09:24	1
sec-Butylbenzene	<1.00		1.00	0.440	ug/L			07/26/23 09:24	1
Styrene	<1.00		1.00	0.370	ug/L			07/26/23 09:24	1
tert-Butylbenzene	<1.00		1.00	0.390	ug/L			07/26/23 09:24	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			07/26/23 09:24	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			07/26/23 09:24	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			07/26/23 09:24	1
Toluene	<1.00		1.00	0.430	ug/L			07/26/23 09:24	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			07/26/23 09:24	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			07/26/23 09:24	1
1,2,3-Trichlorobenzene	<5.00		5.00	0.900	ug/L			07/26/23 09:24	1
1,2,4-Trichlorobenzene	<5.00		5.00	0.750	ug/L			07/26/23 09:24	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			07/26/23 09:24	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			07/26/23 09:24	1
Trichloroethene	<1.00		1.00	0.430	ug/L			07/26/23 09:24	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			07/26/23 09:24	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			07/26/23 09:24	1
1,2,4-Trimethylbenzene	<1.00		1.00	0.420	ug/L			07/26/23 09:24	1
1,3,5-Trimethylbenzene	<1.00		1.00	0.370	ug/L			07/26/23 09:24	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			07/26/23 09:24	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			07/26/23 09:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112		80 - 120		07/26/23 09:24	1
Dibromofluoromethane (Surr)	96		80 - 128		07/26/23 09:24	1
Toluene-d8 (Surr)	102		80 - 120		07/26/23 09:24	1

Lab Sample ID: LCS 310-394703/6

Matrix: Water

Analysis Batch: 394703

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	40.0	49.45		ug/L		124	50 - 150
Benzene	20.0	20.73		ug/L		104	73 - 122
Bromobenzene	20.0	19.68		ug/L		98	67 - 124
Bromochloromethane	20.0	20.21		ug/L		101	68 - 132
Bromodichloromethane	20.0	19.48		ug/L		97	72 - 121
Bromoform	20.0	16.12		ug/L		81	55 - 129
2-Butanone (MEK)	40.0	44.93		ug/L		112	50 - 150

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

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

Lab Sample ID: LCS 310-394703/6

Matrix: Water

Analysis Batch: 394703

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon disulfide	20.0	20.20		ug/L		101	58 - 131
Carbon tetrachloride	20.0	18.43		ug/L		92	67 - 132
Chlorobenzene	20.0	20.05		ug/L		100	69 - 121
Chlorodibromomethane	20.0	19.93		ug/L		100	69 - 122
Chloroform	20.0	19.59		ug/L		98	72 - 120
2-Chlorotoluene	20.0	21.09		ug/L		105	66 - 122
4-Chlorotoluene	20.0	20.81		ug/L		104	65 - 122
cis-1,2-Dichloroethene	20.0	19.76		ug/L		99	74 - 120
cis-1,3-Dichloropropene	20.0	20.63		ug/L		103	71 - 126
1,2-Dibromo-3-Chloropropane	20.0	20.21		ug/L		101	50 - 150
1,2-Dibromoethane (EDB)	20.0	21.85		ug/L		109	73 - 125
Dibromomethane	20.0	20.75		ug/L		104	72 - 123
1,2-Dichlorobenzene	20.0	20.34		ug/L		102	68 - 120
1,3-Dichlorobenzene	20.0	19.99		ug/L		100	67 - 123
1,4-Dichlorobenzene	20.0	20.40		ug/L		102	67 - 120
1,1-Dichloroethane	20.0	21.65		ug/L		108	71 - 123
1,2-Dichloroethane	20.0	20.06		ug/L		100	70 - 124
1,1-Dichloroethene	20.0	19.92		ug/L		100	61 - 129
1,2-Dichloropropane	20.0	22.17		ug/L		111	73 - 121
1,3-Dichloropropane	20.0	22.42		ug/L		112	72 - 124
2,2-Dichloropropane	20.0	21.94		ug/L		110	50 - 150
1,1-Dichloropropene	20.0	20.78		ug/L		104	70 - 131
Ethylbenzene	20.0	20.66		ug/L		103	69 - 122
Hexachlorobutadiene	20.0	20.03		ug/L		100	49 - 150
Hexane	20.0	25.05		ug/L		125	35 - 150
Isopropylbenzene	20.0	20.95		ug/L		105	66 - 126
Methylene Chloride	20.0	20.45		ug/L		102	50 - 150
Methyl tert-butyl ether	20.0	22.94		ug/L		115	68 - 127
Naphthalene	20.0	20.32		ug/L		102	50 - 150
n-Butylbenzene	20.0	23.30		ug/L		117	54 - 138
N-Propylbenzene	20.0	22.19		ug/L		111	65 - 127
p-Isopropyltoluene	20.0	22.17		ug/L		111	61 - 128
sec-Butylbenzene	20.0	22.27		ug/L		111	62 - 132
Styrene	20.0	20.83		ug/L		104	67 - 125
tert-Butylbenzene	20.0	21.22		ug/L		106	64 - 127
1,1,1,2-Tetrachloroethane	20.0	19.76		ug/L		99	68 - 123
1,1,2,2-Tetrachloroethane	20.0	21.98		ug/L		110	64 - 124
Tetrachloroethene	20.0	20.41		ug/L		102	69 - 131
Toluene	20.0	20.34		ug/L		102	72 - 121
trans-1,2-Dichloroethene	20.0	20.14		ug/L		101	68 - 125
trans-1,3-Dichloropropene	20.0	21.02		ug/L		105	68 - 124
1,2,3-Trichlorobenzene	20.0	20.24		ug/L		101	50 - 150
1,2,4-Trichlorobenzene	20.0	20.19		ug/L		101	61 - 124
1,1,1-Trichloroethane	20.0	19.40		ug/L		97	71 - 128
1,1,2-Trichloroethane	20.0	22.09		ug/L		110	70 - 124
Trichloroethene	20.0	19.01		ug/L		95	73 - 126
1,2,3-Trichloropropane	20.0	23.58		ug/L		118	64 - 125
1,2,4-Trimethylbenzene	20.0	22.19		ug/L		111	65 - 125
1,3,5-Trimethylbenzene	20.0	21.33		ug/L		107	65 - 124

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

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

Lab Sample ID: LCS 310-394703/6

Matrix: Water

Analysis Batch: 394703

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Xylenes, Total	40.0	40.99		ug/L		102	68 - 124
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	94		80 - 120				
Dibromofluoromethane (Surr)	98		80 - 128				
Toluene-d8 (Surr)	100		80 - 120				

Lab Sample ID: LCS 310-394703/7

Matrix: Water

Analysis Batch: 394703

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	7.835		ug/L		39	24 - 150
Chloroethane	20.0	22.72		ug/L		114	51 - 137
Chloromethane	20.0	20.45		ug/L		102	37 - 150
Dichlorodifluoromethane	20.0	18.56		ug/L		93	37 - 150
Trichlorofluoromethane	20.0	21.80		ug/L		109	56 - 144
Vinyl chloride	20.0	21.34		ug/L		107	57 - 136
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	97		80 - 120				
Dibromofluoromethane (Surr)	95		80 - 128				
Toluene-d8 (Surr)	101		80 - 120				

Method: 9066 - Phenolics, Total Recoverable

Lab Sample ID: MB 310-394731/1-A

Matrix: Water

Analysis Batch: 394815

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 394731

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenols, Total	<0.0200		0.0200	0.0100	mg/L		07/26/23 09:03	07/26/23 18:11	1

Lab Sample ID: LCS 310-394731/2-A

Matrix: Water

Analysis Batch: 394815

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 394731

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phenols, Total	0.100	0.09739		mg/L		97	90 - 110

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

GC/MS VOA

Analysis Batch: 394602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260947-2	MW-11	Total/NA	Ground Water	8260D	
310-260947-3	MW-12	Total/NA	Ground Water	8260D	
MB 310-394602/5	Method Blank	Total/NA	Water	8260D	
LCS 310-394602/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-394602/7	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 394703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260947-3	MW-12	Total/NA	Ground Water	8260D	
310-260947-5	Trip Blank	Total/NA	Water	8260D	
MB 310-394703/5	Method Blank	Total/NA	Water	8260D	
LCS 310-394703/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-394703/7	Lab Control Sample	Total/NA	Water	8260D	

GC/MS Semi VOA

Prep Batch: 394413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260947-2	MW-11	Total/NA	Ground Water	3510C	

Analysis Batch: 395086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260947-2	MW-11	Total/NA	Ground Water	8270E SIM	394413

General Chemistry

Prep Batch: 394731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260947-1	MW-2	Total/NA	Ground Water	Distill/Phenol	
310-260947-4	MW-18	Total/NA	Ground Water	Distill/Phenol	
MB 310-394731/1-A	Method Blank	Total/NA	Water	Distill/Phenol	
LCS 310-394731/2-A	Lab Control Sample	Total/NA	Water	Distill/Phenol	

Analysis Batch: 394815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-260947-1	MW-2	Total/NA	Ground Water	9066	394731
310-260947-4	MW-18	Total/NA	Ground Water	9066	394731
MB 310-394731/1-A	Method Blank	Total/NA	Water	9066	394731
LCS 310-394731/2-A	Lab Control Sample	Total/NA	Water	9066	394731

Lab Chronicle

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

Client Sample ID: MW-2

Date Collected: 07/19/23 16:05

Date Received: 07/21/23 15:50

Lab Sample ID: 310-260947-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	Distill/Phenol			394731	A3GU	EET CF	07/26/23 09:03
Total/NA	Analysis	9066		1	394815	ZJX4	EET CF	07/26/23 18:17

Client Sample ID: MW-11

Date Collected: 07/19/23 10:58

Date Received: 07/21/23 15:50

Lab Sample ID: 310-260947-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		10	394602	WSE8	EET CF	07/26/23 04:25
Total/NA	Prep	3510C			394413	Y6AF	EET CF	07/24/23 07:51
Total/NA	Analysis	8270E SIM		1	395086	L0FS	EET CF	07/31/23 19:16

Client Sample ID: MW-12

Date Collected: 07/19/23 11:38

Date Received: 07/21/23 15:50

Lab Sample ID: 310-260947-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	394602	WSE8	EET CF	07/26/23 02:36
Total/NA	Analysis	8260D		1	394703	WSE8	EET CF	07/26/23 14:30

Client Sample ID: MW-18

Date Collected: 07/19/23 15:09

Date Received: 07/21/23 15:50

Lab Sample ID: 310-260947-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	Distill/Phenol			394731	A3GU	EET CF	07/26/23 09:03
Total/NA	Analysis	9066		1	394815	ZJX4	EET CF	07/26/23 18:15

Client Sample ID: Trip Blank

Date Collected: 07/19/23 00:00

Date Received: 07/21/23 15:50

Lab Sample ID: 310-260947-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	394703	WSE8	EET CF	07/26/23 10:34

Laboratory References:

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

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

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
8260D		Ground Water	1,2,3-Trichlorobenzene
8260D		Ground Water	1,2,4-Trichlorobenzene
8260D		Ground Water	Bromobenzene
8260D		Ground Water	Hexane
8260D		Ground Water	p-Isopropyltoluene
8260D		Ground Water	sec-Butylbenzene
8260D		Ground Water	tert-Butylbenzene
8260D		Water	1,2,3-Trichlorobenzene
8260D		Water	1,2,4-Trichlorobenzene
8260D		Water	Bromobenzene
8260D		Water	Hexane
8260D		Water	p-Isopropyltoluene
8260D		Water	sec-Butylbenzene
8260D		Water	tert-Butylbenzene

Method Summary

Client: SCS Engineers
Project/Site: ADM Landfill 2023-27223141

Job ID: 310-260947-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
8270E SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	EET CF
9066	Phenolics, Total Recoverable	SW846	EET CF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF
Distill/Phenol	Distillation, Phenolics	None	EET CF

Protocol References:

None = None

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



310-260947 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY <u>SCS</u>	STATE <u>W</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>7/21/23</u>	TIME <u>1550</u>	Received By: <u>SO</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No If yes: Cooler ID: _____			
Multiple Coolers? ☒ Yes ☐ No If yes: Cooler # <u>1</u> of <u>5</u>			
Cooler Custody Seals Present? ☐ Yes ☒ No If yes: Cooler custody seals intact? ☐ Yes ☐ No			
Sample Custody Seals Present? ☐ Yes ☒ No If yes: Sample custody seals intact? ☐ Yes ☐ No			
Trip Blank Present? ☐ Yes ☒ No If yes: Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID <u>U</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>22</u>		Corrected Temp (°C): <u>22</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? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ 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>NY</u>		<u>NY</u>	
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>7/21/23</u>	<u>1:50</u>	<u>SO</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes: Cooler ID: _____
Multiple Coolers?		☒ Yes ☐ No	If yes: Cooler # <u>2</u> of <u>3</u>
Cooler Custody Seals Present?		☐ Yes ☒ No	If yes: Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☒ Yes ☐ No	If yes: Which VOA samples are in cooler? ↓
<u>NO other vials - plastics + mL6, mL8, mL10, mL13</u>			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID:		Correction Factor (°C):	
<u>U</u>		<u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):		Corrected Temp (°C):	
<u>11</u>		<u>11</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? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ 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:
Receipt Information			
Date/Time Received:	DATE	TIME	Received By:
	<u>7/21/23</u>	<u>1:55</u>	<u>SO</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No If yes: Cooler ID: _____			
Multiple Coolers? ☒ Yes ☐ No If yes: Cooler # <u>3</u> of <u>5</u>			
Cooler Custody Seals Present? ☐ Yes ☒ No If yes: Cooler custody seals intact? ☐ Yes ☐ No			
Sample Custody Seals Present? ☐ Yes ☒ No If yes: Sample custody seals intact? ☐ Yes ☐ No			
Trip Blank Present? ☐ Yes ☐ No If yes: Which VOA samples are in cooler? ↓			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>U</u>		Correction Factor (°C): <u>0</u>	
Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>0.5</u>		Corrected Temp (°C): <u>0.5</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? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ 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?) ☐ Yes ☐ No			
NOTE. If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

Eurofins Environment Testing North Central, LLC
 3019 Venture Way, Cedar Falls, Iowa 50613
 Phone 319-277-2401
 Direct 319-595-2013

SAMPLER: <u>SCS Engineers</u>	REPORT TO: <u>Kevin Jensen (kjensen@scsengineers.com)</u>
SITE NAME: <u>ADM Clinton Landfill</u>	COMPANY NAME: <u>SCS Engineers</u>
ADDRESS: _____	PROJECT NAME: <u>ADM Landfill 2023 - 27223141</u>
CITY/STATE/ZIP: _____	PROJECT NUMBER: <u>ADM Landfill 2023 - 27223141</u>
TELEPHONE NUMBER: _____	ADDRESS: <u>1690 All-State Court, Suite 100</u>
SIGNATURE OF SAMPLER: <u>Scott Stahl</u>	CITY/STATE/ZIP: <u>West Des Moines, IA 50265</u>

Sample ID	Date Sampled	Time Sampled	# of Containers Shipped	Composite	Field Filtered	Preservative							Matrix							Analyze For						
						Ice	HNO ₃ (Red & White Label)	HCl (Blue & White Label)	NaOH (Orange & White Label)	H ₂ SO ₄ Plastic (Yellow & White Label)	H ₂ SO ₄ Glass (Yellow & White Label)	None (Black & White Label)	Other (Specify)	Groundwater	Wastewater	Drinking Water	Sludge	Surface Water	Trip Blank	Total Phenols	Bis (2-ethylhexyl)phthalate	EPA 8260 VOCs	EPA 8310 PAHs	Trip Blank		
MW-2	7-1-21	10:05	X			X								X						X	X					
MW-7														X						X	X					
MW-9														X						X	X					
MW-11	7-1-21	10:50	X			X								X						X	X					
MW-12	7-1-21	11:30	X			X								X						X	X					
MW-18	7-1-21	13:09	X			X								X						X	X					
Trip Blank														X					X	X	X			X		

SAMPLING COMMENTS: _____				SHIPPED VIA: _____			
Requisitioned by: <u>Scott Stahl</u>	Date: <u>7/21/2023</u>	Received by: <u>[Signature]</u>	Date: <u>7/21/2023</u>	Time: <u>10:40</u>	Requisitioned by: _____	Date: _____	Time: _____
Received for Lab by: <u>ST</u>				LABORATORY COMMENTS: _____			

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-260947-1

Login Number: 260947

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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Appendix B2

Data Validation

Completed by: Kevin Jensen
 Lab Report Date: 3/1/2023
 Site Name: ADM-Clinton Landfill
 Lab Report Number: 310-249869-1

OK NO N/A NOTES

Sample Collection and Sample Handling

Chain of Custody

Temperature

Preservation

Condition

Reporting Limits

Case Narrative

Holding Times

X			
X			
X			Method 3005A: The reference method requires samples to be preserved to a pH of <2. The following sample was received with insufficient preservation at a pH of >2: MW-11 (310-249869-1). The sample was preserved to the appropriate pH in the laboratory.
X			
	X		Method 9056A: The following sample was diluted due to the nature of the sample matrix: MW-11 (310-249869-1). Elevated reporting limits were provided for sulfate.
X			
X			

Analytical Sensitivity and Blanks

Method Blank Detections

Trip Blank Detections

	X		Ammonia was detected in the method blank for analysis batch 379570.
		X	

Accuracy

ICV/CCV

LCS/LCSD

MS/MSD

Surrogates (organics only)

X			
X			
	X		MSD results were above the recovery limit for Boron, Manganese, and Iron associated with analysis batch 379768. MS & MSD results were below the recovery limit for ammonia associated with analysis batch 379570.
X			

Precision

QA/QC Sample RPDs

Field Duplicates

X			
		X	

Completed by: Kevin Jensen
 Lab Report Date: 3/1/2023
 Site Name: ADM-Clinton Landfill
 Lab Report Number: 310-250016-1

OK NO N/A NOTES

Sample Collection and Sample Handling

Chain of Custody

Temperature

Preservation

Condition

Reporting Limits

Case Narrative

Holding Times

Analytical Sensitivity and Blanks

Method Blank Detections

Trip Blank Detections

Accuracy

ICV/CCV

LCS/LCSD

MS/MSD

Surrogates (organics only)

Precision

QA/QC Sample RPDs

Field Duplicates

X			
X			
	X		Method 3005A: The reference method requires samples to be preserved to a pH of <2. The following samples were received with insufficient preservation at a pH of >2: MW-5 (310-250016-5), MW-6 (310-250016-6), MW-13 (310-250016-11) and (310-250016-A-5 DU). The samples were preserved to the appropriate pH in the laboratory. Method 3005A: The following samples were received with insufficient preservation: MW-7 (310-250016-7) and MW-9 (310-250016-9). The maximum amount of preservative was added by the laboratory, but the samples remained strongly basic. No further attempt was made to acidify the samples, as it would have diluted the samples. This does not meet regulatory requirements. Methods 5220D LL, SM 5220D, 350.1: The reference method requires samples to be preserved to a pH of <2. The following sample was received with insufficient preservation at a pH of >2: MW-7 (310-250016-7). The sample was preserved to the appropriate pH in the laboratory.
X			
	X		Method 9056A: The following samples were diluted due to the nature of the sample matrix: MW-7 (310-250016-7) and MW-13 (310-250016-11). Elevated reporting limits were provided for sulfate
X			
X			
	X		Ammonia was detected in the method blank for analysis batch 379570.
		X	
X			
X			
X			
X			
X			The duplicate sample was collected from MW-16 during the spring 2023 sampling event. All parameters had <50% relative difference. Constituents with J flag concentrations were not considered for the duplicate sample comparisons.

Completed by: Kevin Jensen

Lab Report Date: 8/2/2023

Site Name: ADM-Clinton Landfill

Lab Report Number: 310-260947-1

OK NO N/A NOTES

Sample Collection and Sample Handling

Chain of Custody

Temperature

Preservation

Condition

Reporting Limits

Case Narrative

Holding Times

Analytical Sensitivity and Blanks

Method Blank Detections

Trip Blank Detections

Accuracy

ICV/CCV

LCS/LCSD

MS/MSD

Surrogates (organics only)

Precision

QA/QC Sample RPDs

Field Duplicates

X			
X			
X			Method 8260D: The following sample was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The sample was analyzed within the 7-day holding time specified for unpreserved samples: MW-11 (310-260947-2).
	X		Method 8260D: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container: Trip Blank (310-260947-5).
	X		Method 8260D: The following volatiles sample was diluted due to foaming at the time of sample preparation during the original sample analysis: MW-11 (310-260947-2). Elevated reporting limits were provided.
X			
X			

X			
X			No Detections

	X		Method 8260D: The continuing calibration verification (CCV) associated with batch 310-394602 was recovered outside of the control limits for Vinyl chloride (-21.3%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 310-394602/4).
X			
X			
X			

X			
		X	

Completed by: Kevin Jensen

Lab Report Date: 8/11/2023

Site Name: ADM-Clinton Landfill

Lab Report Number: 310-260946-1

OK NO N/A NOTES

Sample Collection and Sample Handling

Chain of Custody

Temperature

Preservation

Condition

Reporting Limits

Case Narrative

Holding Times

Analytical Sensitivity and Blanks

Method Blank Detections

Trip Blank Detections

Accuracy

ICV/CCV

LCS/LCSD

MS/MSD

Surrogates (organics only)

Precision

QA/QC Sample RPDs

Field Duplicates

X			
X			
	X		Method 6020B: The reference method requires samples to be preserved to a pH of <2. The following samples were received with insufficient preservation at a pH of >2: MW-11 (310-260946-7) and MW-13 (310-260946-9). The sample(s) was preserved to the appropriate pH in the laboratory. Method 6020B: The following sample was received with insufficient preservation: MW-6 (310-260946-4). Preservative was added by the laboratory, but the sample remained strongly basic. No further attempt was made to acidify the sample, as it would have diluted the sample. This does not meet regulatory requirements.
X			
	X		Method 9056A_ORGFM_28D: The following samples were diluted due to the nature of the sample matrix: MW-11 (310-260946-7) and MW-13 (310-260946-9). Elevated reporting limits are provided.
X			
X			

X			
		X	

X			
X			
	X		MS results were above the recovery limits for Arsenic, Boron, Cobalt, Manganese, Nickel, and Iron associated with analysis batch 395841.
X			

	X		RPDs were above the limit for Arsenic, Boron, Cobalt, Manganese, Nickel, and Iron associated with analysis batch 395841.
X			The duplicate sample was collected from MW-4 during the fall 2023 sampling event. All parameters had <50% relative difference. Constituents with J flag concentrations were not considered for the duplicate sample comparisons.



Appendix C

Summary of Groundwater Chemistry

Summary of Groundwater Chemistry
Archer Daniels Midland Landfill (Closed) - 23-SDP-05-88C

Appendix C - Summary of Groundwater Chemistry

SCS ENGINEERS

Summary of Groundwater Chemistry
Archer Daniels Midland Landfill (Closed) - 23-SDP-05-88C

	Sample Date	MW-1 UPG	MW-2 UPG	MW-17 UPG	MW-18 UPG	MW-3 DNG	MW-4 DNG	MW-5 DNG	MW-6 DNG	MW-7 DNG	MW-8 DNG	MW-9 DNG	MW-10 DNG	MW-11 DNG	MW-12 DNG	MW-13 DNG	MW-14 DNG	MW-15 DNG	MW-16 DNG	WET_WELL DNG
Total Metals Constituents																				
Nickel, mg/L (CAS NO - 7440-02-0)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.06
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.06
	10/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.459
	10/1/2014	<0.005	N/A	<0.01	N/A	N/A	N/A	N/A	0.172	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2015	<0.005	N/A	<0.005	N/A	N/A	N/A	N/A	0.162	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/12/2016	<0.005	N/A	0.00219*	N/A	N/A	N/A	N/A	<0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0492
	10/5/2017	N/A	0.00479*	0.00467*	N/A	N/A	N/A	N/A	0.0033*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/9/2018	N/A	0.00493*	0.00303*	N/A	N/A	N/A	N/A	0.0077	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/10/2018	<0.002	N/A	0.00248	N/A	N/A	N/A	N/A	0.065	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0373
	3/27/2019	<0.005	N/A	0.00183*	N/A	N/A	N/A	N/A	0.143	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/10/2019	<0.005	N/A	<0.005	N/A	N/A	N/A	N/A	0.0405	N/A	N/A	N/A	N/A	0.0148	0.00874	N/A	0.0272	<0.005	N/A	N/A
	3/2/2020	<0.005	N/A	<0.005	N/A	N/A	N/A	N/A	0.0572	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/16/2020	<0.005	N/A	<0.005	N/A	N/A	N/A	N/A	0.105	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0294
	3/15/2022	<0.005	N/A	<0.005	N/A	N/A	N/A	N/A	0.065	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/4/2021	<0.005	N/A	0.00432*	N/A	N/A	N/A	N/A	0.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/17/2021	<0.005	N/A	0.00494*	N/A	N/A	N/A	N/A	0.0623	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0337*
	3/15/2022	<0.005	N/A	0.00308*	N/A	N/A	N/A	N/A	0.0633	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/14/2023	<0.005	N/A	0.00489*	N/A	N/A	N/A	N/A	0.0453	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/19/2023	<0.005	N/A	<0.005	N/A	N/A	N/A	N/A	0.0346	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Selenium, mg/L (CAS NO - 7782-49-2)																				
Zinc, mg/L (CAS NO - 7440-66-6)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.05
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.00366
	10/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.633
	10/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.604
	10/1/2014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0134	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	0.0534	<0.01	<0.01	N/A	0.29
	10/1/2015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0124	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0236	<0.01	0.0192	<0.01	<0.01	N/A
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.05
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0212
	8/16/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.08
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.14
Total Suspended Solids, mg/L (CAS NO - TSS)																				
	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4130
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	168
	10/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2530
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35
	10/5/2017	0.75*	2.13	0.75*	37.5	76.5	<1.88	98.9	<1.88	1.38*	<1.88	3.5	26	132	102	108	3	<1.88	144	N/A
	5/9/2018	1*	1.5*	1.5*	4.62	84	<1.88	96	11.5	1.75*	<1.88	3*	45.5	154	31	70	<1.88	<1.88	3.38	N/A
	9/10/2018	<1.88	1.5*	<1.88	15.2	68	<1.88	60.7	7.17	1.5*	<1.88	4.33*	3.13	55.7	45.7	95.7	<1.88	<1.88	<1.88	35
	3/27/2019	0.75*	<1.88	<1.88	9.87	81	0.875*	93	473	14	<1.88	7.2	27.4	167	101	91.8	<1.88	1.38*	1.5*	N/A
	9/10/2019	<1.88	3.38	<1.88	19.1	32.8	<1.88	87.9	146	0.75*	<1.88	1.63*	19	122	94	103	3.25	<1.88	<1.88	N/A
	3/2/2020	<1.88	1.25*	<1.88	16.5	31	0.75*	112	1290	<3	0.75*	2.67*	27.5	97	73.7	96	20.1	1*	22.5	N/A
	8/16/2020	<1.88	1*	<1.88	4.88	33.1	<1.88	108	549	1*	1.75*	103	52.5	132	91.5	90.5	6.75	6.87	2.63	29.3
	5/4/2021	<1.88	1*	4.62	25.7	50.8	0.75*	94	185	<1.88	0.875*	4.8	92.1	136	85.2	88.3	<1.88	<1.88	2	N/A
	8/17/2021	<1.88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	<1.88	<1.88	1.63*	5.67	52	<1.88	108	110	<1.88	<1.88	3	96.7	124	68	96	<1.88	<1.88	27.3	N/A
	8/9/2022	<1.88	1.38*	<1.88	13	74	3.75	104	1160	5.67	<1.88	3*	88	140	76	99	<1.88	<1.88	3.5	N/A
	2/14/2023	<1.88	<1.88	<1.88	3	45	3.13	131	2240	6.87	3.5	280	606	44	42	109	<1.88	6.25	13.9	N/A
	7/19/2023	<1.88	1.13*	<1.88	7.38	N/A	<1.88	N/A	314	N/A	3.5	N/A	107	140	64	97	<1.88	<1.88	10.9	N/A
	7/19/2023	N/A	N/A	N/A	N/A	N/A	<1.88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

Denotes Detection.

Denotes Confirmed Outlier. Statistically Excluded.

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

Summary of Groundwater Chemistry
Archer Daniels Midland Landfill (Closed) - 23-SDP-05-88C

Appendix C - Summary of Groundwater Chemistry

Appendix C - Summary of Groundwater Chemistry

SCS ENGINEERS

Summary of Groundwater Chemistry
Archer Daniels Midland Landfill (Closed) - 23-SDP-05-88C

Appendix I VOC Constituents	Sample Date	MW-1 UPG	MW-2 UPG	MW-17 UPG	MW-18 UPG	MW-3 DNG	MW-4 DNG	MW-5 DNG	MW-6 DNG	MW-7 DNG	MW-8 DNG	MW-9 DNG	MW-10 DNG	MW-11 DNG	MW-12 DNG	MW-13 DNG	MW-14 DNG	MW-15 DNG	MW-16 DNG	WET_WELL DNG
1,4-Dichlorobenzene, ug/L (CAS NO - 106-46-7)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 155
	10/2/2013	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 15
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	10/5/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 10
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 10
	9/10/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 10	< 1	N/A	N/A	N/A	N/A	< 101
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 1	N/A	N/A	N/A	N/A	< 10
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 123
	8/17/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	8/9/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	7/19/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2300
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	764
	10/2/2013	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	1.06*	8.76*	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	< 0.47	369
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20.7*
	10/5/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.18*	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	2.34*	< 10	N/A	N/A	N/A	< 100
	9/10/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 100	< 100	< 10	N/A	N/A	N/A	N/A	N/A
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 100	< 100	< 100	N/A	N/A	N/A	N/A	< 100
	8/17/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 100	< 100	< 100	N/A	N/A	N/A	N/A	N/A
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 100
	8/9/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.14*	2.51*	< 10	N/A	N/A	N/A	N/A	N/A
	7/19/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 100	< 10	< 10	N/A	N/A	N/A	N/A	N/A
2-Hexanone, ug/L (CAS NO - 591-78-6)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1000
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.53*
	10/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.42*
4-Methyl-2-Pentanone, ug/L (CAS NO - 108-10-1)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.2
	10/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1640
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	329
	10/2/2013	< 1.79	< 1.79	< 1.79	< 1.79	< 1.79	< 1.79	< 1.79	< 1.79	9.29*	< 1.79	3.52*	< 1.79	6.08*	2.5*	< 1.79	< 1.79	< 1.79	< 1.79	284
Acetone, ug/L (CAS NO - 67-64-1)	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 100
	10/5/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.27*	N/A	13	4.82*	N/A	N/A	N/A	< 100
	9/10/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 100	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 100	< 100	< 100	N/A	N/A	N/A	N/A	41.3*
	8/17/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 100	< 100	< 100	N/A	N/A	N/A	N/A	N/A
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 100
	8/9/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7.15*	17.6	5.31*	N/A	N/A	N/A	N/A	N/A
	7/19/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 100	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1000
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.53
	10/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5.3
Acrylonitrile, ug/L (CAS NO - 107-13-1)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1000
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.53
	10/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5.3

SCS ENGINEERS

Summary of Groundwater Chemistry
Archer Daniels Midland Landfill (Closed) - 23-SDP-05-88C

Appendix I VOC Constituents	Sample Date	MW-1 UPG	MW-2 UPG	MW-17 UPG	MW-18 UPG	MW-3 DNG	MW-4 DNG	MW-5 DNG	MW-6 DNG	MW-7 DNG	MW-8 DNG	MW-9 DNG	MW-10 DNG	MW-11 DNG	MW-12 DNG	MW-13 DNG	MW-14 DNG	MW-15 DNG	MW-16 DNG	WET WELL DNG
Benzene, ug/L (CAS NO - 71-43-2)	6/7/1993	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<1	<1	<1	<1	<1	<1	<1	N/A
	9/14/1993	<1	<1	<1	<1	<1	<1	<1	<5	<5	<1	8	<1	<1	<2	<5	<2	<1	<1	N/A
	12/8/1993	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	<2	<5	<2	<2	<1	N/A
	3/22/1994	<1	<1	<1	<1	<1	<1	<1	<2.5	<2.5	<1	<1	<1	<0.5	<2	<5	<2	<2	<1	N/A
	9/10/1994	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A	21	N/A	N/A	<5	N/A	N/A	N/A	N/A	N/A
	3/16/1995	N/A	N/A	N/A	<2	N/A	N/A	N/A	N/A	N/A	N/A	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/26/1995	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A	14.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/13/1996	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A	11.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/10/1996	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A	12.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/19/1997	N/A	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A	N/A	<0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/10/1997	N/A	N/A	N/A	<0.5	N/A	N/A	N/A	N/A	N/A	N/A	14.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/19/1998	N/A	N/A	N/A	<0.5	N/A	N/A	N/A	N/A	N/A	N/A	16.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/1998	N/A	N/A	N/A	<0.5	N/A	N/A	N/A	N/A	N/A	N/A	14.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/18/1999	N/A	N/A	N/A	<0.5	N/A	N/A	N/A	N/A	N/A	N/A	<25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/27/2000	N/A	N/A	N/A	N/A	<1	<1	<1	<1	<1	N/A	19	N/A	<1	<1	<1	<1	N/A	N/A	N/A
	10/10/2000	<1	<1	<1	<1	<1	<1	<1	<1	<1	N/A	13	<1	<1	<1	<1	<1	<1	N/A	N/A
	10/17/2001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/24/2003	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/5/2005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/17/2006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/17/2006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2007	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/9/2007	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/14/2008	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/23/2008	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/14/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/9/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/26/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/13/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/27/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/24/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.11
	10/2/2013	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	7.66	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<1.1
	10/1/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25.5*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5
	10/5/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9	N/A	<0.5	<0.5	N/A	N/A	N/A	N/A	N/A
	5/9/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<2	<2	N/A	N/A	N/A	N/A	N/A
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13	N/A	<0.5	<0.5	N/A	N/A	N/A	N/A	<5
	9/10/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12	N/A	<5	<0.5	N/A	N/A	N/A	N/A	N/A
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.3	N/A	<5	<5	N/A	N/A	N/A	N/A	<5
	8/17/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.6	N/A	<5	<5	N/A	N/A	N/A	N/A	N/A
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5
	8/9/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12.8	N/A	<0.5	<0.5	N/A	N/A	N/A	N/A	N/A
	7/19/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	<0.5	N/A	N/A	N/A	N/A	N/A
Bromochloromethane, ug/L (CAS NO - 74-97-5)	10/2/2013	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	N/A
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50
	10/5/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	N/A	<5	<5	N/A	N/A	N/A	N/A	N/A
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	N/A	<5	<5	N/A	N/A	N/A	N/A	<50
	9/10/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	N/A	<5	<5	N/A	N/A	N/A	N/A	N/A
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	N/A	<50	<50	N/A	N/A	N/A	N/A	<50
	8/17/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	N/A	<50	<50	N/A	N/A	N/A	N/A	N/A
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	N/A	N/A	N/A	N/A	<50
	8/9/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5	N/A	<5	<5	N/A	N/A	N/A	N/A	N/A
	7/19/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<50	<5	N/A	N/A	N/A	N/A	N/A
Bromodichloromethane, ug/L (CAS NO - 75-27-4)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<200
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.12
	10/2/2013	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<1.2
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/5/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A	<1	<1	N/A	N/A	N/A	N/A	N/A
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A	<1	<1	N/A	N/A	N/A	N/A	N/A
	9/10/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A	<1	<1	N/A	N/A	N/A	N/A	N/A
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10	N/A	<10	<10	N/A	N/A	N/A	N/A	<10
	8/17/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10	N/A	<10	<10	N/A	N/A	N/A	N/A	<10
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10	N/A	N/A	N/A	N/A	<10
	8/9/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A	<1	<1	N/A	N/A	N/A	N/A	N/A
	7/19/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10	<1	<1	N/A	N/A	N/A	N/A

Summary of Groundwater Chemistry
Archer Daniels Midland Landfill (Closed) - 23-SDP-05-88C

Appendix C - Summary of Groundwater Chemistry

Summary of Groundwater Chemistry
Archer Daniels Midland Landfill (Closed) - 23-SDP-05-88C

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Archer Daniels Midland Landfill (Closed) - 23-SDP-05-88C

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.

Summary of Groundwater Chemistry
Archer Daniels Midland Landfill (Closed) - 23-SDP-05-88C

Appendix C - Summary of Groundwater Chemistry

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Summary of Groundwater Chemistry
Archer Daniels Midland Landfill (Closed) - 23-SDP-05-88C

Other Constituents	Sample Date	MW-1 UPG	MW-2 UPG	MW-17 UPG	MW-18 UPG	MW-3 DNG	MW-4 DNG	MW-5 DNG	MW-6 DNG	MW-7 DNG	MW-8 DNG	MW-9 DNG	MW-10 DNG	MW-11 DNG	MW-12 DNG	MW-13 DNG	MW-14 DNG	MW-15 DNG	MW-16 DNG	WET_WELL DNG
2,4-Dichlorophenol, ug/L (CAS NO - 120-83-2)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 153
	10/2/2013	< 0.152	< 0.152	< 0.153	< 0.152	< 0.163	< 0.152	< 0.153	< 0.152	< 0.152	< 0.15	< 0.152	< 0.152	< 0.161	< 0.15	< 0.155	< 0.158	< 0.152	< 0.153	< 10
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 123
2,4-Dimethylphenol, ug/L (CAS NO - 105-67-9)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.14
	10/2/2013	< 0.212	< 0.212	< 0.214	< 0.212	< 0.228	< 0.212	< 0.214	< 0.212	< 0.212	< 0.21	4.31*	< 0.212	< 0.226	< 0.21	< 0.216	< 0.221	< 0.212	< 0.214	< 21
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
2,4-Dinitrophenol, ug/L (CAS NO - 51-28-5)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3190
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 13.7
	10/2/2013	< 1.35	< 1.35	< 1.37	< 1.35	< 1.46	< 1.35	< 1.37	< 1.35	< 1.35	< 1.34	< 1.35	< 1.35	< 1.44	< 1.34	< 1.38	< 1.41	< 1.35	< 1.37	< 134
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 202
2,4-Dinitrotoluene, ug/L (CAS NO - 121-14-2)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 247
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20
	10/2/2013	< 0.192	< 0.192	< 0.194	< 0.192	< 0.207	< 0.192	< 0.194	< 0.192	< 0.192	< 0.19	< 0.192	< 0.192	< 0.204	< 0.19	< 0.196	< 0.2	< 0.192	< 0.194	< 194
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
2,6-Dinitrotoluene, ug/L (CAS NO - 606-20-2)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.45
	10/2/2013	< 0.242	< 0.242	< 0.245	< 0.242	< 0.261	< 0.242	< 0.245	< 0.242	< 0.242	< 0.24	< 0.242	< 0.242	< 0.258	< 0.24	< 0.247	< 0.253	< 0.242	< 0.245	209*
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 245
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
2-Chloronaphthalene, ug/L (CAS NO - 91-58-7)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.35
	10/2/2013	< 0.232	< 0.232	< 0.235	< 0.232	< 0.25	< 0.232	< 0.235	< 0.232	< 0.232	< 0.23	< 0.232	< 0.232	< 0.247	< 0.23	< 0.237	< 0.242	< 0.232	< 0.235	< 23
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
2-Chlorophenol, ug/L (CAS NO - 95-57-8)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 153
	10/2/2013	< 0.152	< 0.152	< 0.153	< 0.152	< 0.163	< 0.152	< 0.153	< 0.152	< 0.152	< 0.15	< 0.152	< 0.152	< 0.161	< 0.15	< 0.155	< 0.158	< 0.152	< 0.153	< 15
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
2-Methylnaphthalene, ug/L (CAS NO - 91-57-6)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
	10/2/2013	< 0.152	< 0.152	< 0.153	< 0.152	< 0.163	< 0.152	< 0.153	< 0.152	< 0.152	< 0.15	< 0.152	< 0.152	< 0.161	< 0.15	< 0.155	< 0.158	< 0.152	< 0.153	< 10
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
2-Methylphenol, ug/L (CAS NO - 95-48-7)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.363*
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.32*
	10/2/2013	< 0.152	< 0.152	< 0.153	< 0.152	< 0.163	< 0.152	< 0.153	< 0.152	< 0.152	< 0.15	< 0.152	< 0.152	< 0.161	< 0.15	< 0.155	< 0.158	< 0.152	< 0.153	< 10
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
2-Nitroaniline, ug/L (CAS NO - 88-74-4)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
	10/2/2013	< 0.152	< 0.152	< 0.153	< 0.152	< 0.163	< 0.152	< 0.153	< 0.152	< 0.152	< 0.15	< 0.152	< 0.152	< 0.161	< 0.15	< 0.155	< 0.158	< 0.152	< 0.153	< 10
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
2-Nitrophenol, ug/L (CAS NO - 88-75-5)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 163
	10/2/2013	< 0.162	< 0.162	< 0.163	< 0.162	< 0.174	< 0.162	< 0.163	< 0.162	< 0.162	< 0.16	< 0.162	< 0.162	< 0.172	< 0.16	< 0.165	< 0.168	< 0.162	< 0.163	< 10
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
3,3-Dichlorobenzidine, ug/L (CAS NO - 91-94-1)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4.69
	10/2/2013	< 0.465	< 0.465	< 0.469	< 0.465	< 0.5	< 0.465	< 0.469	< 0.465	< 0.465	< 0.46	< 0.465	< 0.465	< 0.495	< 0.46	< 0.474	< 0.484	< 0.465	< 0.469	< 50
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101

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Summary of Groundwater Chemistry
Archer Daniels Midland Landfill (Closed) - 23-SDP-05-88C

Other Constituents	Sample Date	MW-1 UPG	MW-2 UPG	MW-17 UPG	MW-18 UPG	MW-3 DNG	MW-4 DNG	MW-5 DNG	MW-6 DNG	MW-7 DNG	MW-8 DNG	MW-9 DNG	MW-10 DNG	MW-11 DNG	MW-12 DNG	MW-13 DNG	MW-14 DNG	MW-15 DNG	MW-16 DNG	WET_WELL DNG
3/4-Methylphenol, ug/L (CAS NO - T-34MP)	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 105	N/A	N/A	N/A	N/A	N/A	N/A	103
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	103
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<123
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10
3-Nitroaniline, ug/L (CAS NO - 99-09-2)	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<101
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<123
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10
	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<22.7
4,6-Dinitro-2-methylphenol, ug/L (CAS NO - 534-52-1)	10/2/2013	< 2.24	< 2.24	< 2.27	< 2.24	< 2.41	< 2.24	< 2.27	< 2.24	< 2.24	< 2.22	< 2.24	< 2.24	< 2.39	< 2.22	< 2.29	< 2.34	< 2.24	< 2.27	<22.7
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<101
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<123
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10
4-Bromophenyl phenyl ether, ug/L (CAS NO - 101-55-3)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<2.96
	10/2/2013	< 0.293	< 0.293	< 0.296	< 0.293	< 0.315	< 0.293	< 0.296	< 0.293	< 0.293	< 0.29	< 0.293	< 0.293	< 0.312	< 0.29	< 0.299	< 0.305	< 0.293	< 0.296	<10
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<101
4-Chloro-3-methylphenol, ug/L (CAS NO - 59-50-7)	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<123
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10
	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1.94
	10/2/2013	< 0.192	< 0.192	< 0.194	< 0.192	< 0.207	< 0.192	< 0.194	< 0.192	< 0.192	< 0.19	< 0.192	< 0.192	< 0.204	< 0.19	< 0.196	< 0.2	< 0.192	< 0.194	<10
4-Chloroaniline, ug/L (CAS NO - 106-47-8)	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<101
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<123
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10
	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1600
4-Chlorophenyl phenyl ether, ug/L (CAS NO - 7005-72-3)	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1.43
	10/2/2013	< 0.141	< 0.141	< 0.143	< 0.141	< 0.152	< 0.141	< 0.143	< 0.141	< 0.141	< 0.14	< 0.141	< 0.141	< 0.151	< 0.14	< 0.144	< 0.147	< 0.141	< 0.143	<10
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<101
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<123
4-Nitrophenol, ug/L (CAS NO - 100-02-7)	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10
	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1.22
	10/2/2013	< 0.121	< 0.121	< 0.122	< 0.121	< 0.13	< 0.121	< 0.122	< 0.121	< 0.121	< 0.12	< 0.121	< 0.121	< 0.129	< 0.12	< 0.124	< 0.126	< 0.121	< 0.122	<10
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10
Acenaphthene, ug/L (CAS NO - 83-32-9)	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<101
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<123
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10
	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<0.0224
4-Nitroaniline, ug/L (CAS NO - 100-01-6)	10/2/2013	< 0.0222	< 0.0222	< 0.0222	< 0.0222	< 0.0222	< 0.0222	< 0.0224	< 0.0222	< 0.0222	< 0.0227	< 0.022	< 0.0224	< 0.0222	< 0.0222	< 0.0224	< 0.022	< 0.0222	< 0.0224	< 0.2
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	104	N/A	< 0.98	N/A	< 0.98	N/A	N/A	N/A	N/A
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.03	N/A	< 1	N/A	N/A	N/A	N/A
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.01	N/A	< 1.14	N/A	N/A	N/A	<101
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.08	N/A	< 1.08	N/A	N/A	N/A	N/A
4-Nitrophenol, ug/L (CAS NO - 100-02-7)	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.108	N/A	0.358	N/A	N/A	N/A	<123
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.105	N/A	0.157	N/A	N/A	N/A	N/A
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<10
	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.204	N/A	0.483	N/A	N/A	N/A	N/A
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.258	N/A	N/A	N/A	N/A

Summary of Groundwater Chemistry
Archer Daniels Midland Landfill (Closed) - 23-SDP-05-88C

Appendix C - Summary of Groundwater Chemistry

SCS ENGINEERS

Summary of Groundwater Chemistry
Archer Daniels Midland Landfill (Closed) - 23-SDP-05-88C

Other Constituents	Sample Date	MW-1 UPG	MW-2 UPG	MW-17 UPG	MW-18 UPG	MW-3 DNG	MW-4 DNG	MW-5 DNG	MW-6 DNG	MW-7 DNG	MW-8 DNG	MW-9 DNG	MW-10 DNG	MW-11 DNG	MW-12 DNG	MW-13 DNG	MW-14 DNG	MW-15 DNG	MW-16 DNG	WET_WELL DNG
Benzo [g,h,i] perylene, ug/L (CAS NO - 191-24-2)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.00816
	10/2/2013	< 0.00808	< 0.00808	< 0.00808	< 0.00808	< 0.00808	< 0.00808	< 0.00816	< 0.00808	< 0.00808	< 0.00825	< 0.008	< 0.00816	< 0.00808	< 0.00808	< 0.00816	< 0.008	< 0.00808	< 0.00816	< 0.08
	4/25/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.196	N/A	< 0.196	< 0.196	N/A	N/A	N/A	N/A	N/A
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	10/5/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.205	N/A	< 0.2	N/A	N/A	N/A	N/A	N/A	N/A
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.203	N/A	< 0.227	N/A	N/A	N/A	N/A	N/A	< 101
	9/10/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.215	N/A	< 0.215	N/A	N/A	N/A	N/A	N/A	N/A
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.108	N/A	< 0.106	N/A	N/A	N/A	N/A	N/A	< 123
	8/17/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.105	N/A	< 0.106	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	8/9/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.204	N/A	< 0.185	N/A	N/A	N/A	N/A	N/A	N/A
	7/19/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.189	N/A	N/A	N/A	N/A	N/A	N/A
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.00714
	10/2/2013	< 0.00707	< 0.00707	< 0.00707	< 0.00707	< 0.00707	< 0.00707	< 0.00714	< 0.00707	< 0.00707	< 0.00722	< 0.007	< 0.00714	< 0.00707	< 0.00707	< 0.00714	< 0.007	< 0.00707	< 0.00714	< 0.07
Benzo [k] fluoranthene, ug/L (CAS NO - 207-08-9)	4/25/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.137	N/A	< 0.137	< 0.137	N/A	N/A	N/A	N/A	N/A
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	10/5/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.144	N/A	< 0.14	N/A	N/A	N/A	N/A	N/A	N/A
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.142	N/A	< 0.159	N/A	N/A	N/A	N/A	N/A	< 101
	9/10/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.215	N/A	< 0.215	N/A	N/A	N/A	N/A	N/A	N/A
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.108	N/A	< 0.106	N/A	N/A	N/A	N/A	N/A	< 123
	8/17/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.105	N/A	< 0.106	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	8/9/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.204	N/A	< 0.185	N/A	N/A	N/A	N/A	N/A	N/A
	7/19/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.189	N/A	N/A	N/A	N/A	N/A	N/A
Benzyl alcohol, ug/L (CAS NO - 100-51-6)	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 123
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1600
Bis[2-chloroethoxy]methane, ug/L (CAS NO - 111-91-1)	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.65
	10/2/2013	< 0.263	< 0.263	< 0.263	< 0.263	< 0.283	< 0.263	< 0.265	< 0.263	< 0.263	< 0.26	< 0.263	< 0.263	< 0.28	< 0.26	< 0.268	< 0.274	< 0.263	< 0.265	< 2.6
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 123
Bis[2-chloroethyl]ether, ug/L (CAS NO - 111-44-4)	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	93.3*
	10/2/2013	< 0.182	< 0.182	< 0.184	< 0.182	< 0.196	< 0.182	< 0.184	< 0.182	< 0.182	< 0.18	< 0.182	< 0.182	< 0.194	< 0.18	< 0.186	< 0.189	< 0.182	< 0.184	< 18
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
Bis[2-chloroisopropyl]ether, ug/L (CAS NO - 108-60-1)	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 123
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.84
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 18
Bis[2-ethylhexyl]phthalate, ug/L (CAS NO - 117-81-7)	10/2/2013	< 0.182	< 0.182	< 0.184	< 0.182	< 0.196	< 0.182	< 0.184	< 0.182	< 0.182	< 0.18	< 0.182	< 0.182	< 0.194	< 0.18	< 0.186	< 0.189	< 0.182	< 0.184	< 18
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 123
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
Butyl benzyl phthalate, ug/L (CAS NO - 85-68-7)	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3.98
	10/2/2013	1.28*	2.91*	4.25*	0.502*	0.431*	13.5	19	11.9	17.5	10.9	11.9	10.9	1.12*	0.575*	12.4	0.433*	4.74*	0.851*	3.9
	10/1/2014	< 0.39	< 0.39	< 0.39	< 0.39	N/A	< 0.39	< 0.39	< 0.39	< 0.406	N/A	< 0.402	< 0.39	N/A	N/A	< 0.39	N/A	N/A	N/A	< 39
	10/1/2015	1.97*	2.42*	3.42*	2.43*	N/A	0.887*	6.55*	< 0.394	14.2	N/A	1.45*	< 0.398	N/A	N/A	1.32*	N/A	N/A	N/A	< 101
	10/12/2016	0.885*	0.831*	0.86*	0.853*	N/A	0.873*	0.93*	0.843*	< 104	N/A	< 105	0.891*	N/A	N/A	0.908*	N/A	N/A	N/A	1.26*
	10/5/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.91*	N/A	0.892*	N/A	N/A	N/A	N/A	N/A	N/A
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 52.6	N/A	< 10	N/A	N/A	N/A	N/A	N/A	< 101
	9/10/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.5	N/A	2.44*	N/A	N/A	N/A	N/A	N/A	N/A
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 12.3	N/A	< 12.3	N/A	N/A	N/A	N/A	N/A	< 123
	8/17/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.8	N/A	< 10.6	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	8/9/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	10/23/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1600
	4/2/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3.47
	10/2/2013	< 0.343	< 0.343	< 0.347	< 0.343	< 0.37	< 0.343	< 0.347	< 0.343	< 0.343	< 0.34	< 0.343	< 0.343	< 0.366	< 0.34	< 0.351	< 0.358	< 0.343	< 0.347	0.676*
	10/12/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
	9/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 101
	8/26/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 123
	3/15/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10

Summary of Groundwater Chemistry
Archer Daniels Midland Landfill (Closed) - 23-SDP-05-88C

Appendix C - Summary of Groundwater Chemistry



Appendix D

Statistical Report

Attachment A

Trend Test ($\alpha=0.01$)

Trend Test

Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM Printed 8/25/2023, 3:36 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>
Acenaphthene (ug/L)	MW-11	-0.03124	-12	-21	No	8	50	0.01	NP
Acenaphthylene (ug/L)	MW-11	-0.1345	-11	-21	No	8	75	0.01	NP
Acetone (ug/L)	MW-11	3.541	14	21	No	8	62.5	0.01	NP
Arsenic (mg/L)	MW-11	-0.0005423	-2	-21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-12	-0.0104	-12	-21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-13	-0.008334	-8	-21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-14	-0.00007505	-6	-21	No	8	62.5	0.01	NP
Arsenic (mg/L)	MW-18 (bg)	-0.008606	-12	-21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-3	0.002394	12	21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-5	0.002348	4	21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-6	0.002579	6	21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-7	0.02426	18	21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-9	0.01519	14	21	No	8	0	0.01	NP
Boron (mg/L)	MW-1 (bg)	0.00572	4	21	No	8	0	0.01	NP
Boron (mg/L)	MW-10	-0.07124	-6	-21	No	8	0	0.01	NP
Boron (mg/L)	MW-11	0.06128	10	21	No	8	25	0.01	NP
Boron (mg/L)	MW-12	-0.5615	-26	-21	Yes	8	0	0.01	NP
Boron (mg/L)	MW-13	-0.3267	-12	-21	No	8	0	0.01	NP
Boron (mg/L)	MW-14	-0.2453	-20	-21	No	8	0	0.01	NP
Boron (mg/L)	MW-15	0.001665	2	21	No	8	12.5	0.01	NP
Boron (mg/L)	MW-16	-0.01779	-8	-21	No	8	0	0.01	NP
Boron (mg/L)	MW-17 (bg)	-0.04711	-8	-21	No	8	0	0.01	NP
Boron (mg/L)	MW-18 (bg)	-0.05586	-12	-21	No	8	0	0.01	NP
Boron (mg/L)	MW-2 (bg)	-0.01853	-11	-21	No	8	0	0.01	NP
Boron (mg/L)	MW-3	-0.2845	-8	-21	No	8	0	0.01	NP
Boron (mg/L)	MW-4	-0.01173	-4	-21	No	8	0	0.01	NP
Boron (mg/L)	MW-5	0.2416	11	21	No	8	0	0.01	NP
Boron (mg/L)	MW-6	-0.9239	-14	-21	No	8	0	0.01	NP
Boron (mg/L)	MW-7	2.828	21	21	No	8	0	0.01	NP
Boron (mg/L)	MW-8	-0.03937	-8	-21	No	8	0	0.01	NP
Boron (mg/L)	MW-9	0.1538	4	21	No	8	0	0.01	NP
Carbon Disulfide (ug/L)	MW-11	0.2814	5	21	No	8	50	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-1 (bg)	-0.01132	-6	-21	No	8	50	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-10	0.6276	5	21	No	8	37.5	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-11	-36.21	-8	-21	No	8	0	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-12	-12.14	-16	-21	No	8	0	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-13	-0.2264	-1	-21	No	8	0	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-14	-3.149	-8	-21	No	8	12.5	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-15	0	1	21	No	8	75	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-16	0.4261	2	21	No	8	12.5	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-17 (bg)	0	4	21	No	8	50	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-18 (bg)	-6.648	-12	-21	No	8	12.5	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-2 (bg)	-0.2258	-5	-21	No	8	37.5	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-3	0.6771	4	21	No	8	0	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-4	0	-2	-21	No	8	50	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-5	-0.6636	0	21	No	8	12.5	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-6	-19.89	-7	-21	No	8	0	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-7	-91.17	-10	-21	No	8	0	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-8	0.467	3	21	No	8	25	0.01	NP
Chemical Oxygen Demand (mg/L)	MW-9	20.02	6	21	No	8	0	0.01	NP

Trend Test

Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM Printed 8/25/2023, 3:36 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>
Chloride (mg/L)	MW-1 (bg)	0.4684	2	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-10	0.7402	4	21	No	8	12.5	0.01	NP
Chloride (mg/L)	MW-11	1.592	6	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-12	-44.18	-20	-21	No	8	0	0.01	NP
Chloride (mg/L)	MW-13	1.012	11	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-14	85.81	14	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-15	1.75	10	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-16	1.831	10	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-17 (bg)	2.231	10	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-18 (bg)	3.788	16	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-2 (bg)	4.022	6	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-3	11.81	16	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-4	16.47	26	21	Yes	8	0	0.01	NP
Chloride (mg/L)	MW-5	2.847	7	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-6	-3.436	0	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-7	-2.007	-6	-21	No	8	0	0.01	NP
Chloride (mg/L)	MW-8	13.94	20	21	No	8	0	0.01	NP
Chloride (mg/L)	MW-9	4.171	18	21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-10	0.00002983	2	21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-11	-0.008178	-22	-21	Yes	8	0	0.01	NP
Cobalt (mg/L)	MW-12	-0.00027	-24	-21	Yes	8	0	0.01	NP
Cobalt (mg/L)	MW-13	0.00006972	8	21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-14	-0.002642	-14	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-18 (bg)	-0.0003519	-10	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-2 (bg)	0.00003638	3	21	No	8	25	0.01	NP
Cobalt (mg/L)	MW-3	-0.000603	-12	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-5	0.00001607	2	21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-6	-0.001106	-12	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-7	0.0004834	14	21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-9	0.0004835	22	21	Yes	8	0	0.01	NP
Fluoranthene (ug/L)	MW-11	-0.01485	-11	-21	No	8	75	0.01	NP
Fluorene (ug/L)	MW-11	-0.01779	-6	-21	No	8	12.5	0.01	NP
Iron (mg/L)	MW-10	0.03418	5	8	No	4	50	0.01	NP
Iron (mg/L)	MW-11	-3.672	-4	-8	No	4	0	0.01	NP
Iron (mg/L)	MW-12	-0.6722	-2	-8	No	4	0	0.01	NP
Iron (mg/L)	MW-13	-1.555	-4	-8	No	4	0	0.01	NP
Iron (mg/L)	MW-14	-0.0108	-2	-8	No	4	25	0.01	NP
Iron (mg/L)	MW-15	-0.006418	-3	-8	No	4	75	0.01	NP
Iron (mg/L)	MW-18 (bg)	0.03255	0	8	No	4	0	0.01	NP
Iron (mg/L)	MW-2 (bg)	0.006532	3	8	No	4	75	0.01	NP
Iron (mg/L)	MW-6	0.4907	2	8	No	4	0	0.01	NP
Iron (mg/L)	MW-8	0	-1	-8	No	4	75	0.01	NP
Magnesium (mg/L)	MW-1 (bg)	1.77	4	21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-10	3.11	10	21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-11	-1.058	-4	-21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-12	-12.45	-26	-21	Yes	8	0	0.01	NP
Magnesium (mg/L)	MW-13	-9.735	-5	-21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-14	0.099	0	21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-15	2.111	7	21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-17 (bg)	0.03051	0	21	No	8	0	0.01	NP

Trend Test

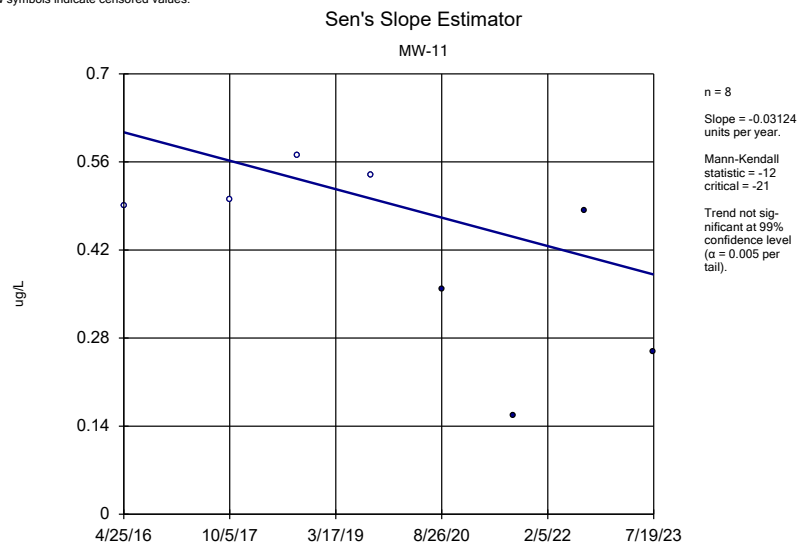
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM Printed 8/25/2023, 3:36 PM

<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>
Magnesium (mg/L)	MW-18 (bg)	-1.216	-10	-21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-2 (bg)	1.099	8	21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-3	-1.108	-2	-21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-5	26	18	21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-6	-17.35	-8	-21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-7	65.03	16	21	No	8	0	0.01	NP
Magnesium (mg/L)	MW-9	29.93	26	21	Yes	8	0	0.01	NP
Manganese (mg/L)	MW-10	0.04302	6	21	No	8	0	0.01	NP
Manganese (mg/L)	MW-11	0.1267	18	21	No	8	0	0.01	NP
Manganese (mg/L)	MW-12	-0.1216	-14	-21	No	8	0	0.01	NP
Manganese (mg/L)	MW-13	0.02486	2	21	No	8	0	0.01	NP
Manganese (mg/L)	MW-14	-0.3424	-6	-21	No	8	0	0.01	NP
Manganese (mg/L)	MW-17 (bg)	0.01114	2	21	No	8	12.5	0.01	NP
Manganese (mg/L)	MW-18 (bg)	0.01175	0	21	No	8	0	0.01	NP
Manganese (mg/L)	MW-2 (bg)	0.02349	2	21	No	8	0	0.01	NP
Manganese (mg/L)	MW-3	0.3271	4	21	No	8	0	0.01	NP
Manganese (mg/L)	MW-5	-0.1233	-6	-21	No	8	0	0.01	NP
Manganese (mg/L)	MW-6	-0.06107	-18	-21	No	8	0	0.01	NP
Manganese (mg/L)	MW-7	0.03667	10	21	No	8	0	0.01	NP
Manganese (mg/L)	MW-9	0.175	19	21	No	8	0	0.01	NP
Nickel (mg/L)	MW-6	-0.01358	-14	-21	No	8	0	0.01	NP
Nitrogen, Ammonia (mg/L)	MW-10	-0.2167	-10	-21	No	8	12.5	0.01	NP
Nitrogen, Ammonia (mg/L)	MW-11	0.8414	12	21	No	8	0	0.01	NP
Nitrogen, Ammonia (mg/L)	MW-12	-3.763	-22	-21	Yes	8	0	0.01	NP
Nitrogen, Ammonia (mg/L)	MW-13	-1.423	-6	-21	No	8	0	0.01	NP
Nitrogen, Ammonia (mg/L)	MW-14	-1.986	-18	-21	No	8	0	0.01	NP
Nitrogen, Ammonia (mg/L)	MW-18 (bg)	-0.8179	-6	-21	No	8	12.5	0.01	NP
Nitrogen, Ammonia (mg/L)	MW-2 (bg)	-0.1703	-6	-21	No	8	12.5	0.01	NP
Nitrogen, Ammonia (mg/L)	MW-3	0.1375	8	21	No	8	0	0.01	NP
Nitrogen, Ammonia (mg/L)	MW-4	0	5	21	No	8	75	0.01	NP
Nitrogen, Ammonia (mg/L)	MW-5	-2.845	-17	-21	No	8	0	0.01	NP
Nitrogen, Ammonia (mg/L)	MW-6	-8.737	-12	-21	No	8	0	0.01	NP
Nitrogen, Ammonia (mg/L)	MW-7	27.77	10	21	No	8	0	0.01	NP
Nitrogen, Ammonia (mg/L)	MW-8	0	0	21	No	8	50	0.01	NP
Nitrogen, Ammonia (mg/L)	MW-9	-12.94	-8	-21	No	8	0	0.01	NP
pH (S.U.)	MW-1 (bg)	0.01973	6	21	No	8	0	0.01	NP
pH (S.U.)	MW-10	0.007766	2	21	No	8	0	0.01	NP
pH (S.U.)	MW-11	-0.01485	-4	-21	No	8	0	0.01	NP
pH (S.U.)	MW-12	0.03744	14	21	No	8	0	0.01	NP
pH (S.U.)	MW-13	-0.004703	-2	-21	No	8	0	0.01	NP
pH (S.U.)	MW-14	-0.08362	-11	-21	No	8	0	0.01	NP
pH (S.U.)	MW-15	0.007679	1	21	No	8	0	0.01	NP
pH (S.U.)	MW-16	-0.03551	-6	-21	No	8	0	0.01	NP
pH (S.U.)	MW-17 (bg)	0.03088	4	21	No	8	0	0.01	NP
pH (S.U.)	MW-18 (bg)	-0.02474	-6	-21	No	8	0	0.01	NP
pH (S.U.)	MW-2 (bg)	0.004264	1	21	No	8	0	0.01	NP
pH (S.U.)	MW-3	-0.06487	-11	-21	No	8	0	0.01	NP
pH (S.U.)	MW-4	-0.09364	-4	-21	No	8	0	0.01	NP
pH (S.U.)	MW-5	-0.02005	-9	-21	No	8	0	0.01	NP
pH (S.U.)	MW-6	0.01014	2	21	No	8	0	0.01	NP

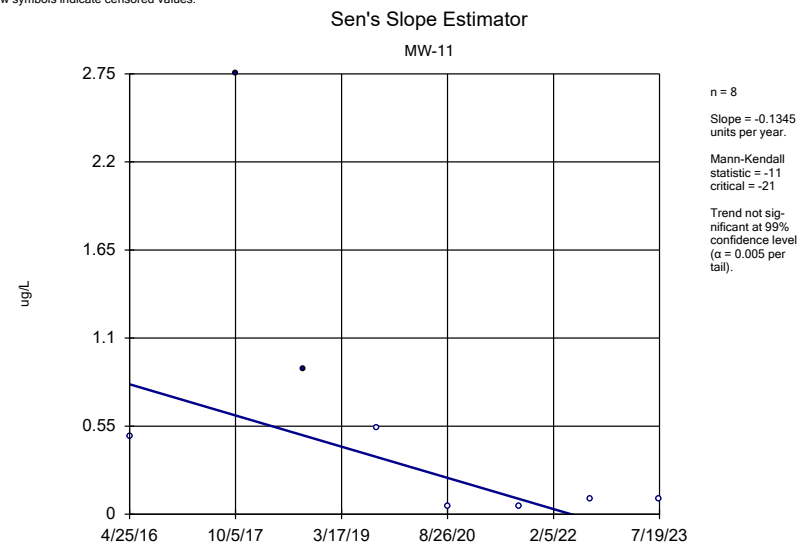
Trend Test

Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM Printed 8/25/2023, 3:36 PM

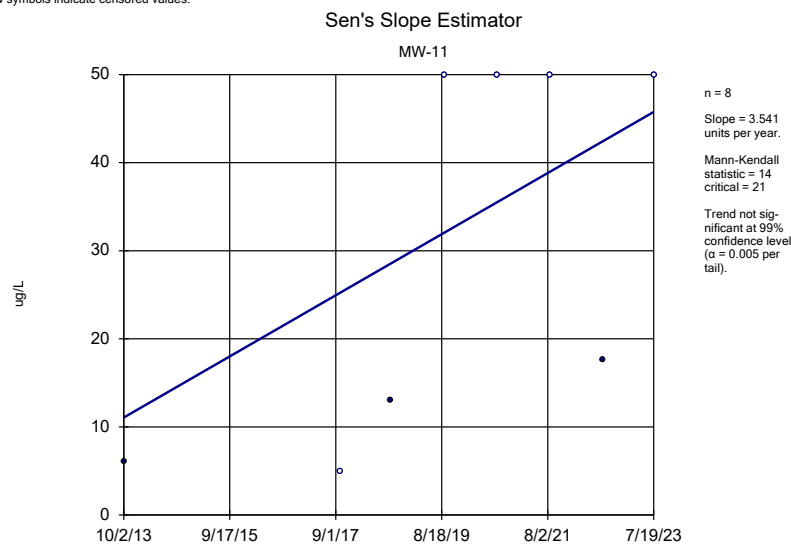
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Alpha</u>	<u>Method</u>
pH (S.U.)	MW-7	-0.00905	-3	-21	No	8	0	0.01	NP
pH (S.U.)	MW-8	-0.04788	-3	-21	No	8	0	0.01	NP
pH (S.U.)	MW-9	0.05641	4	21	No	8	0	0.01	NP
Phenanthrene (ug/L)	MW-11	-0.1191	-14	-21	No	8	37.5	0.01	NP
Specific Conductance (umhos/cm)	MW-1 (bg)	-13.59	-4	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-10	-2.988	0	21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-11	-13.49	-4	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-12	-271.5	-20	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-13	-232.8	-16	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-14	211.1	6	21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-15	14.18	6	21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-16	-24.96	-12	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-17 (bg)	-20.27	-14	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-18 (bg)	-14.19	-12	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-2 (bg)	-1.804	-2	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-3	-13.23	-4	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-4	7.751	6	21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-5	93.43	4	21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-6	-100.6	-14	-21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-7	314.5	4	21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-8	21.5	14	21	No	8	0	0.01	NP
Specific Conductance (umhos/cm)	MW-9	12.58	0	21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-1 (bg)	0.9783	15	21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-10	5.823	13	21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-12	2.441	11	21	No	8	25	0.01	NP
Sulfate (mg/L)	MW-13	0	-9	-21	No	8	75	0.01	NP
Sulfate (mg/L)	MW-14	-2.336	-4	-21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-15	-2.423	-10	-21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-16	-0.5701	-4	-21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-17 (bg)	-0.8729	-2	-21	No	8	12.5	0.01	NP
Sulfate (mg/L)	MW-18 (bg)	4.149	12	21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-2 (bg)	-1.013	-2	-21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-3	-0.8558	-5	-21	No	8	37.5	0.01	NP
Sulfate (mg/L)	MW-4	1.362	12	21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-5	66.94	10	21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-6	-5.04	-2	-21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-7	-1.718	-12	-21	No	8	50	0.01	NP
Sulfate (mg/L)	MW-8	-0.9155	-10	-21	No	8	0	0.01	NP
Sulfate (mg/L)	MW-9	19.57	8	21	No	8	0	0.01	NP



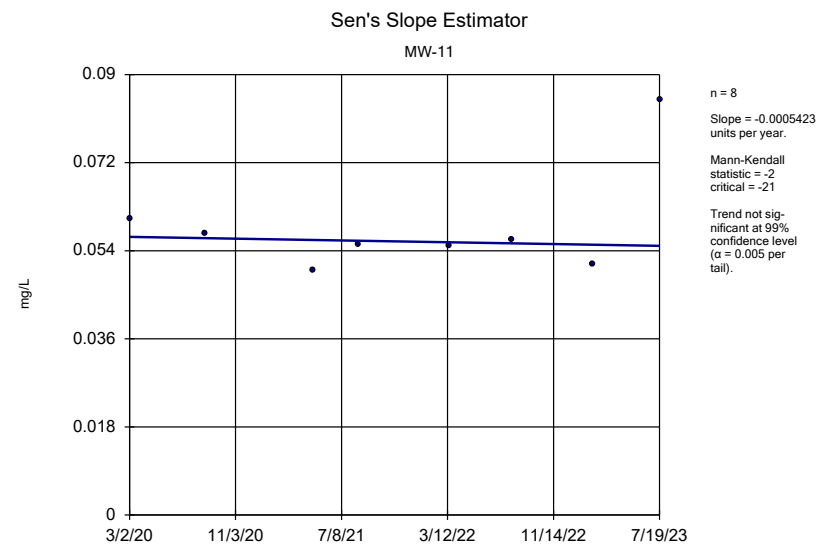
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



Constituent: Acenaphthylene Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



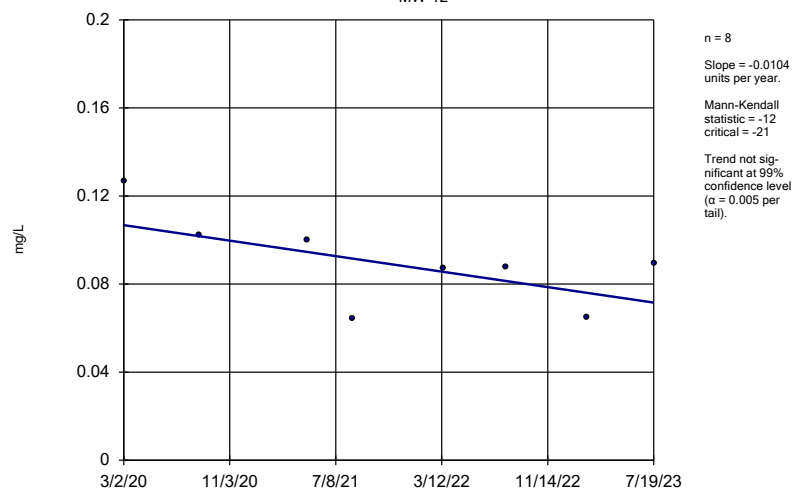
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



Constituent: Arsenic Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

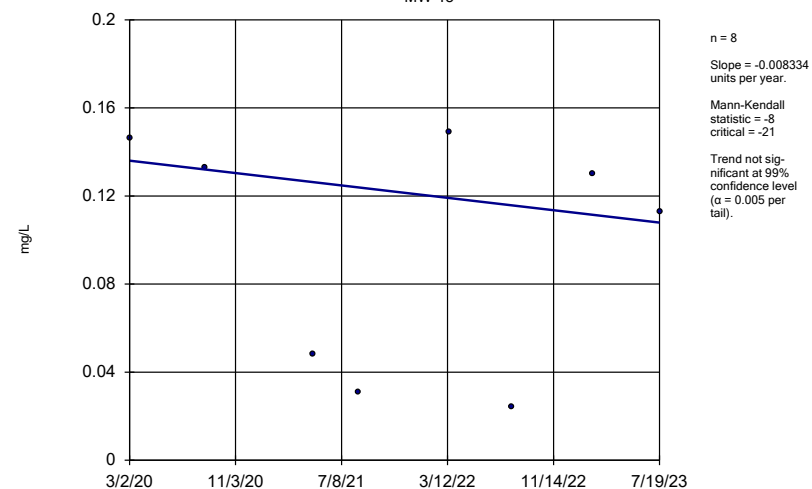
MW-12



Constituent: Arsenic Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

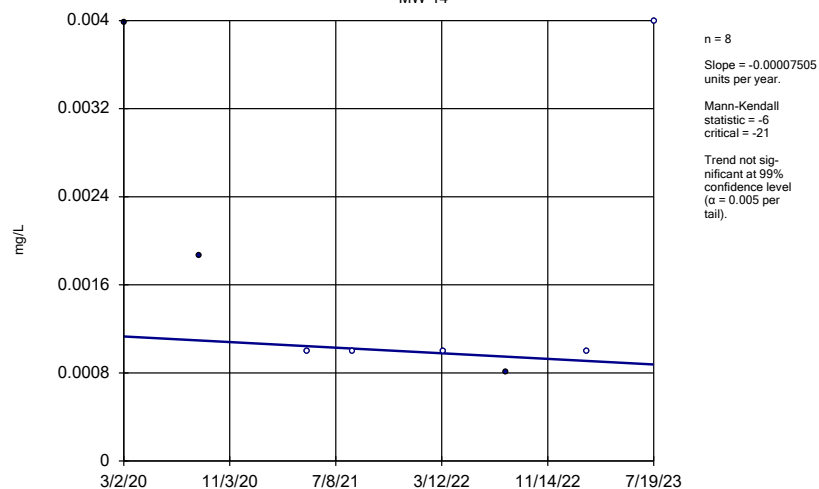
MW-13



Constituent: Arsenic Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

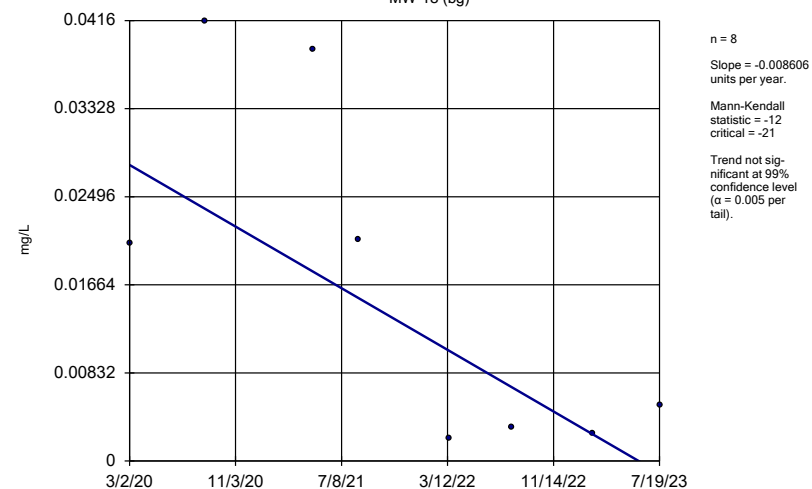
MW-14



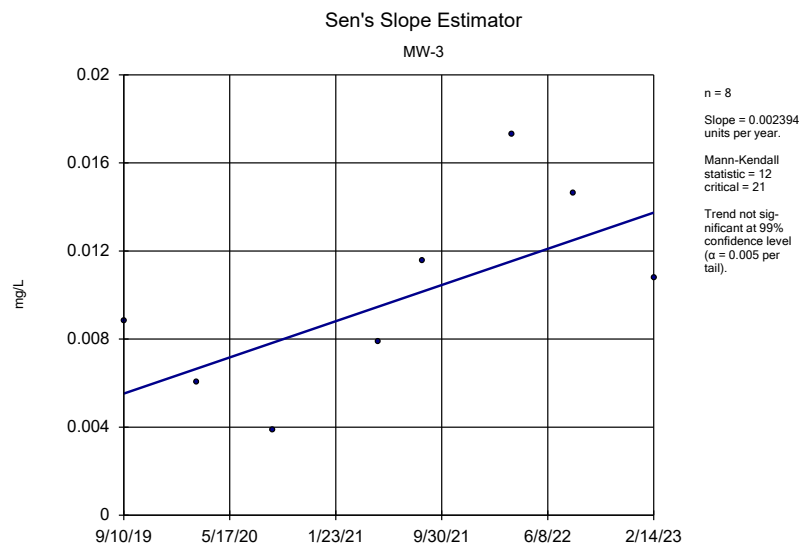
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Sen's Slope Estimator

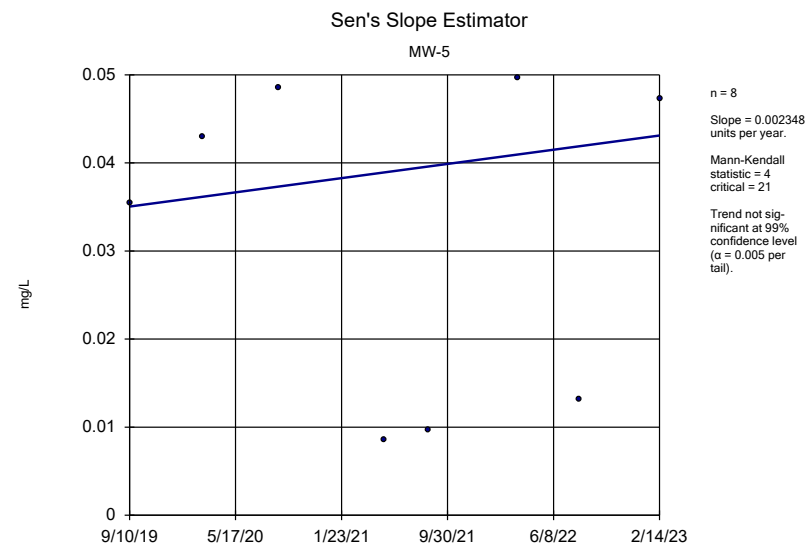
MW-18 (bg)



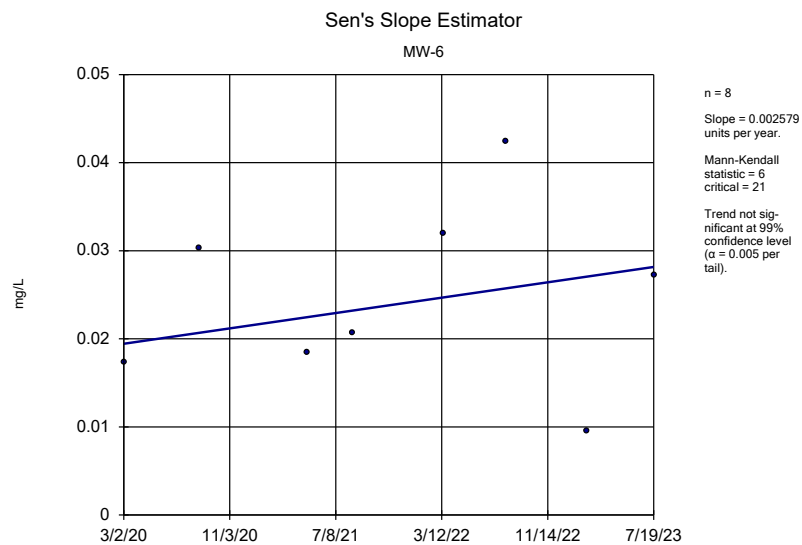
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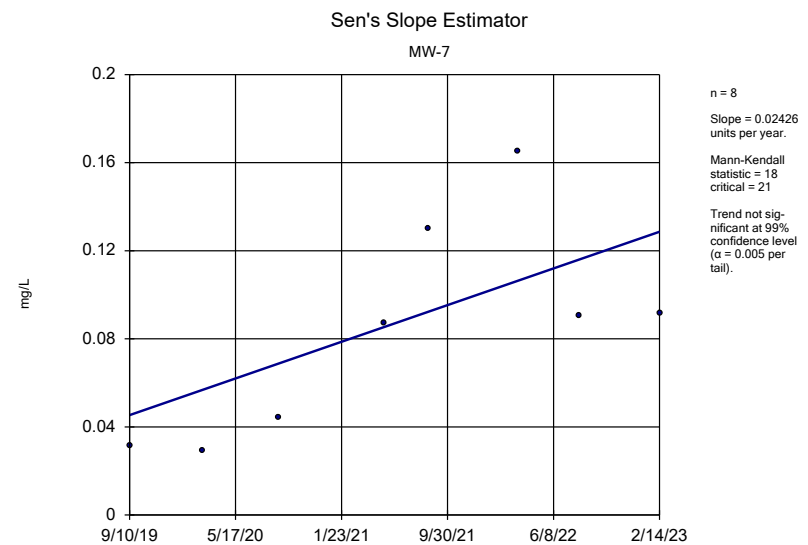
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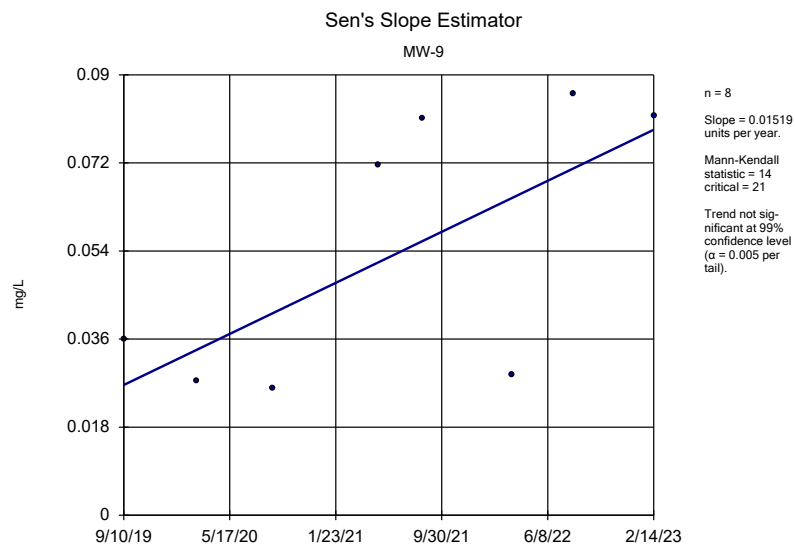
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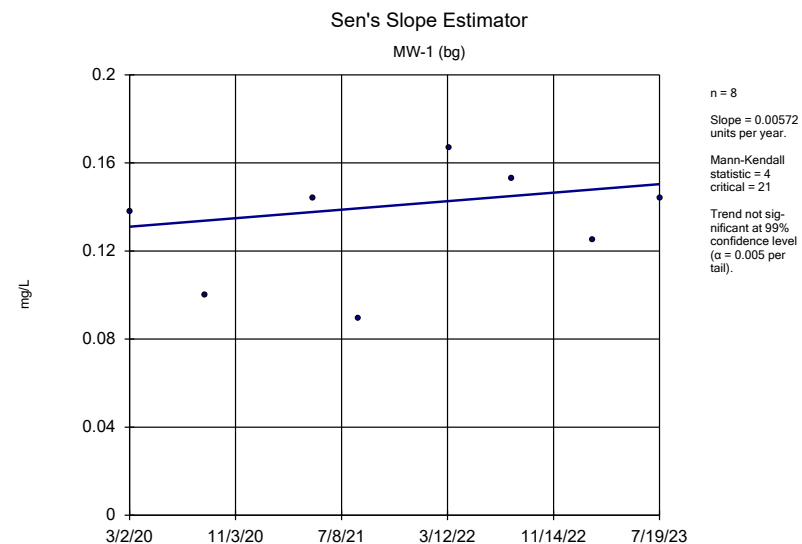
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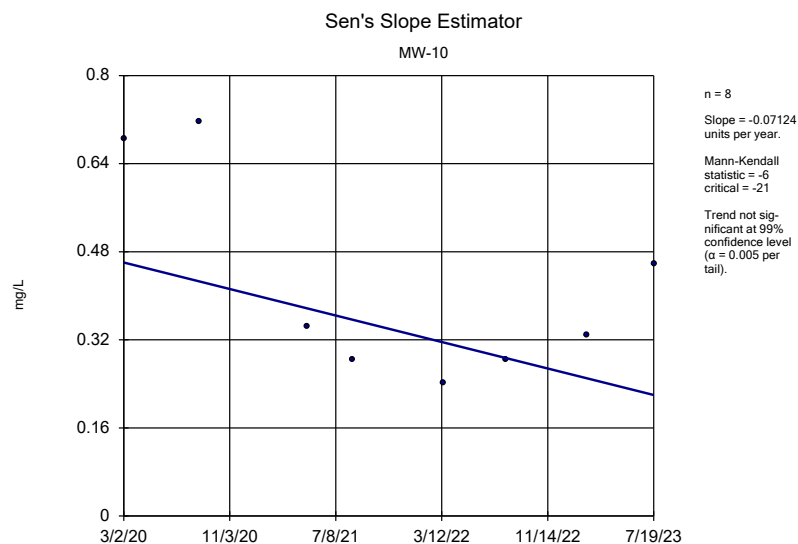
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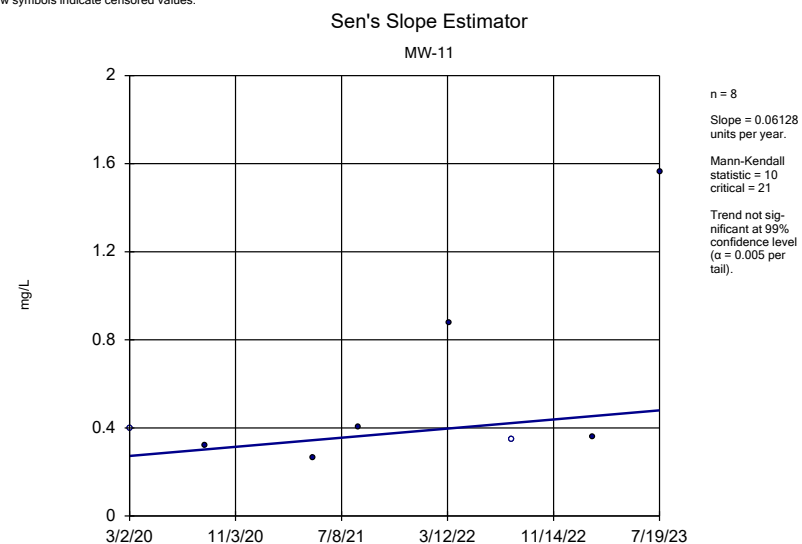
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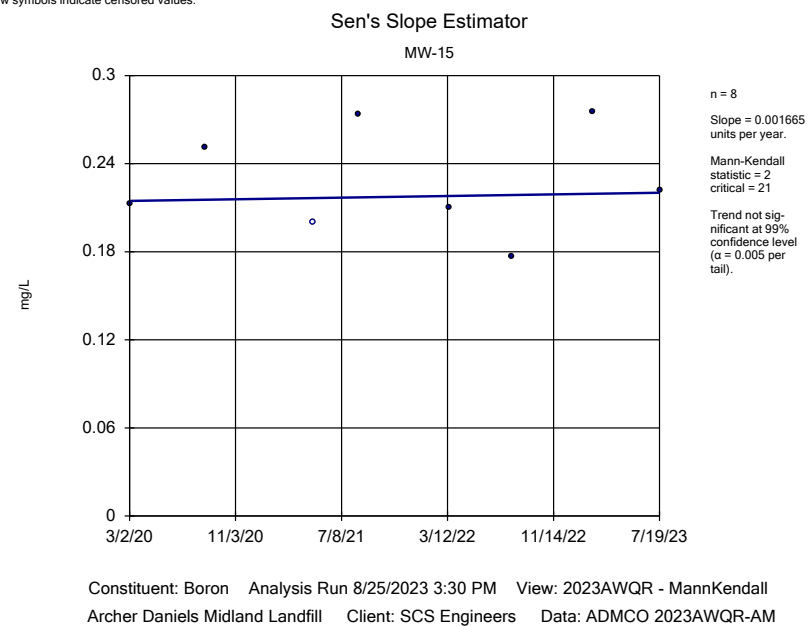
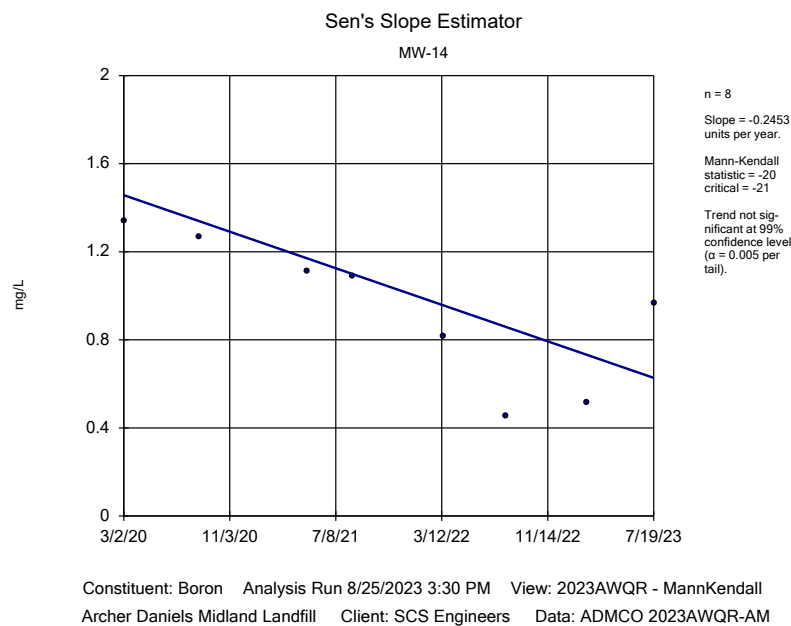
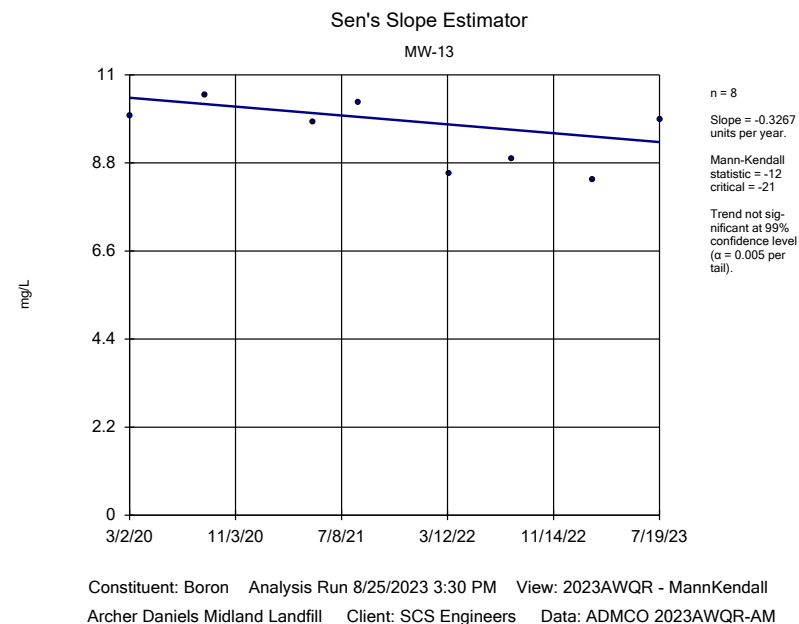
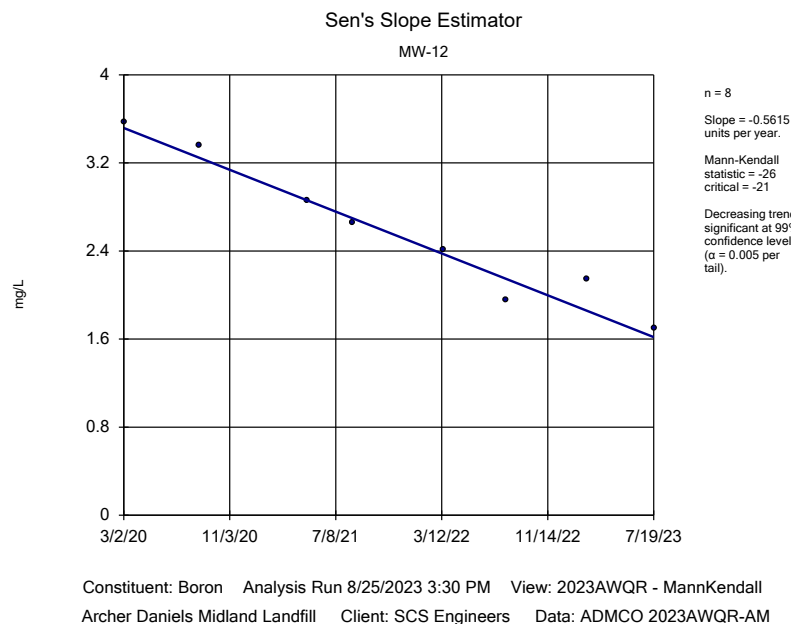
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

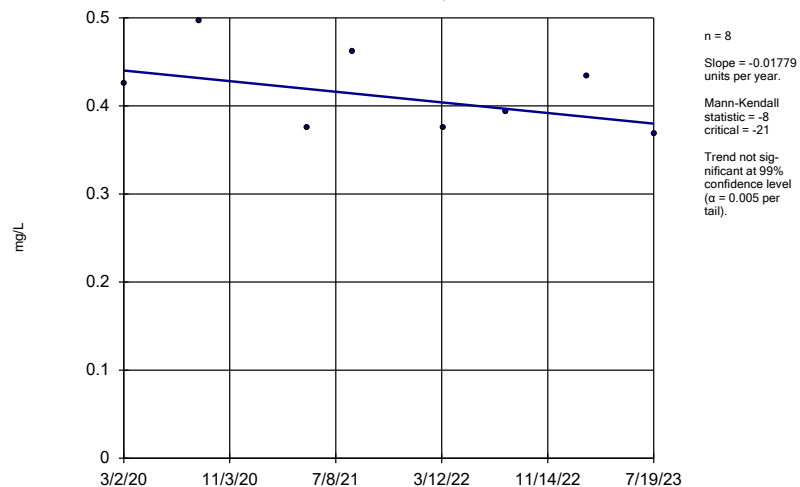


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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



Sen's Slope Estimator

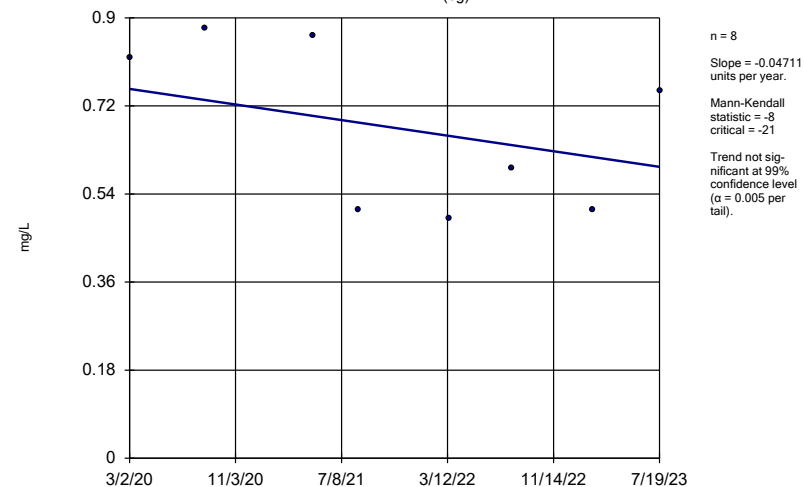
MW-16



Constituent: Boron Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

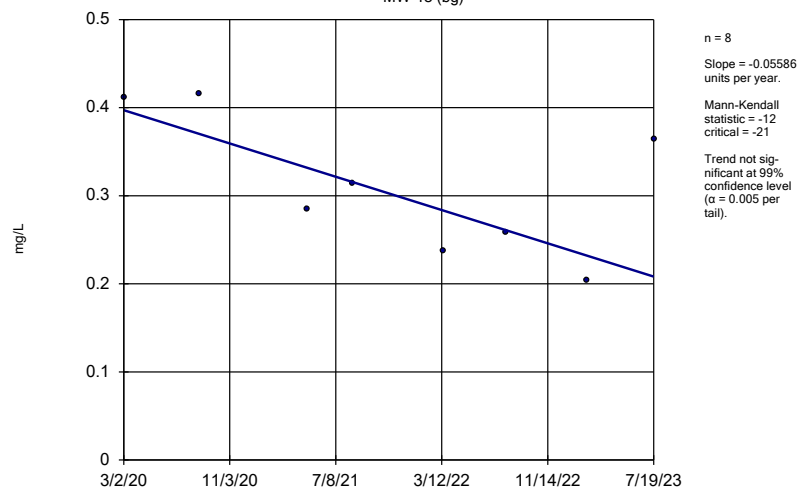
MW-17 (bg)



Constituent: Boron Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

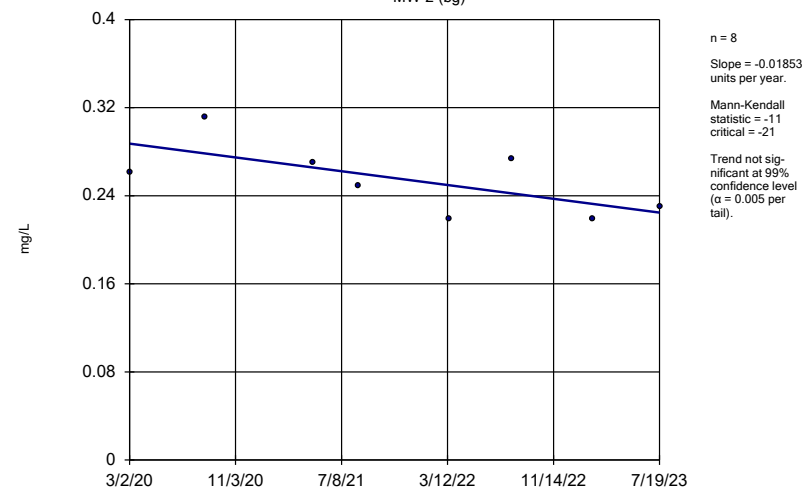
MW-18 (bg)



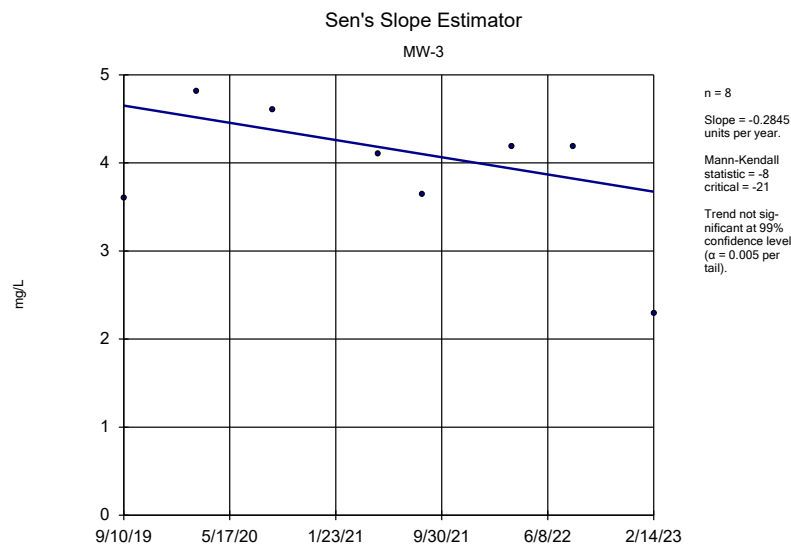
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

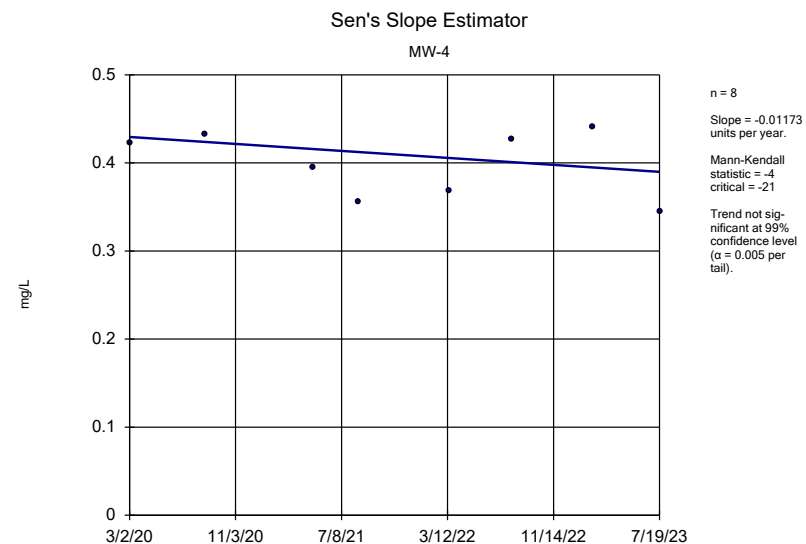
MW-2 (bg)



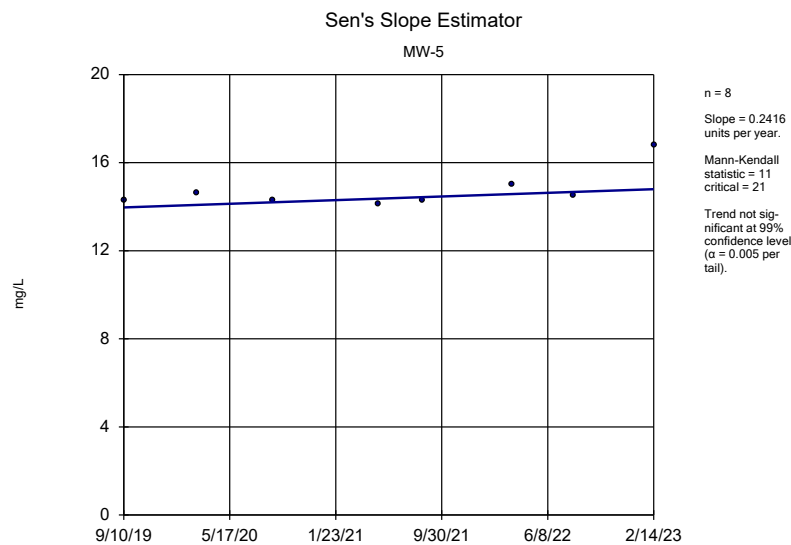
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



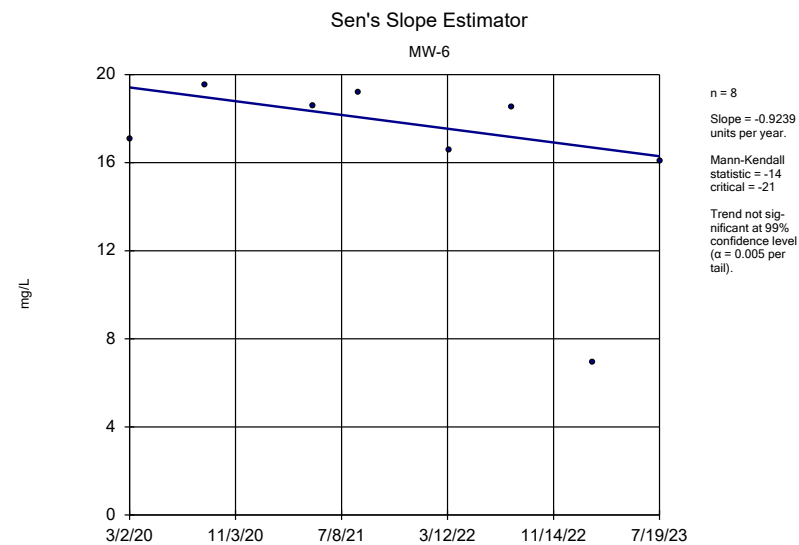
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



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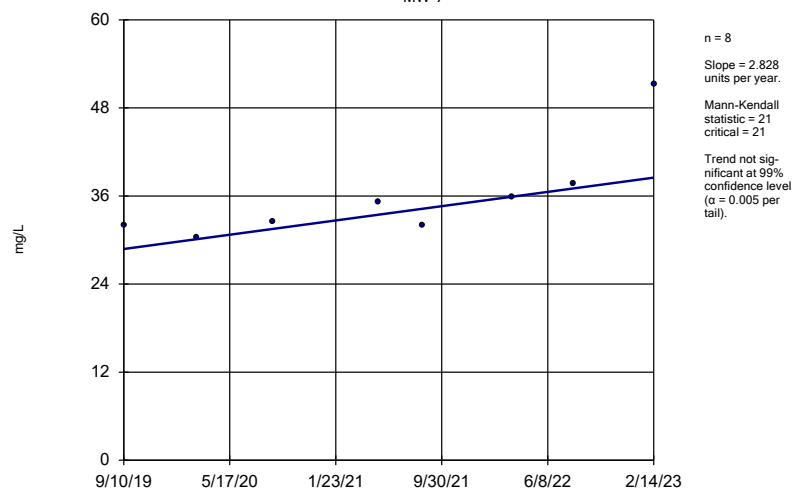
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Constituent: Boron Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

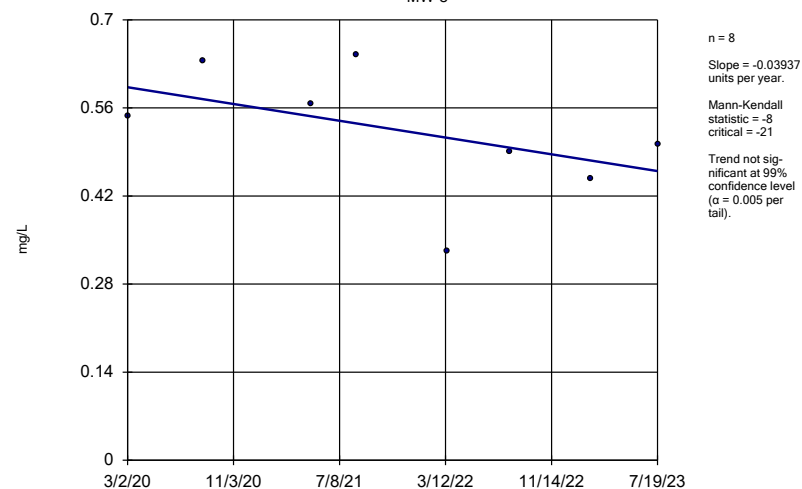
MW-7



Constituent: Boron Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

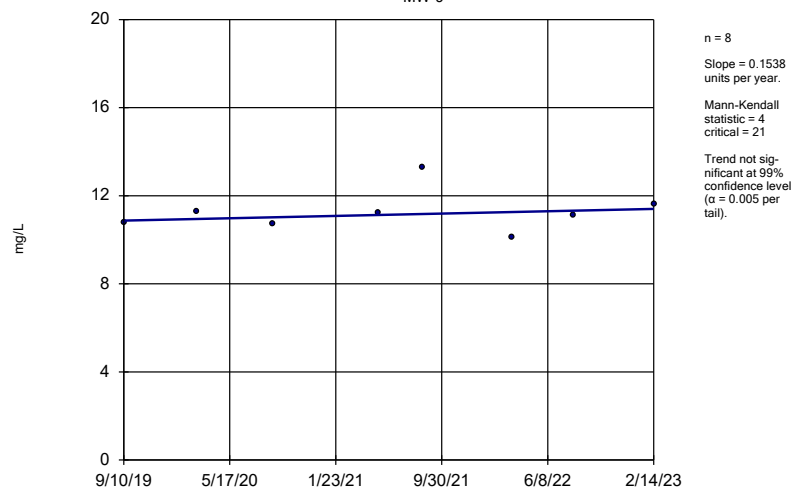
MW-8



Constituent: Boron Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

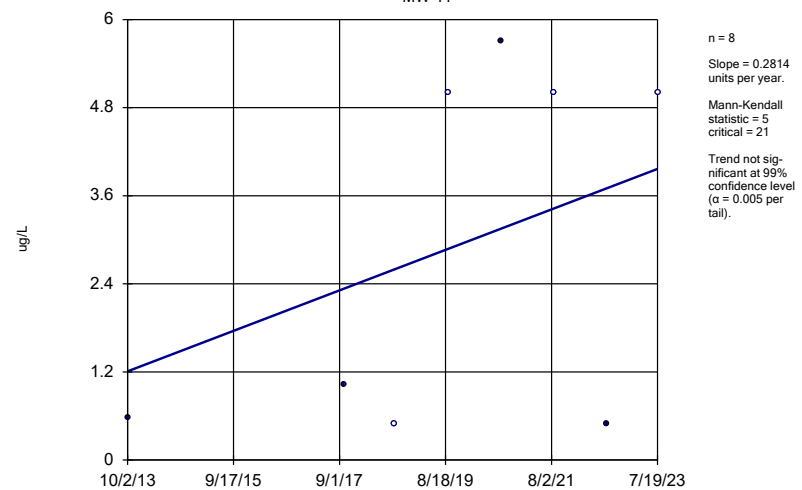
MW-9



Constituent: Boron Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

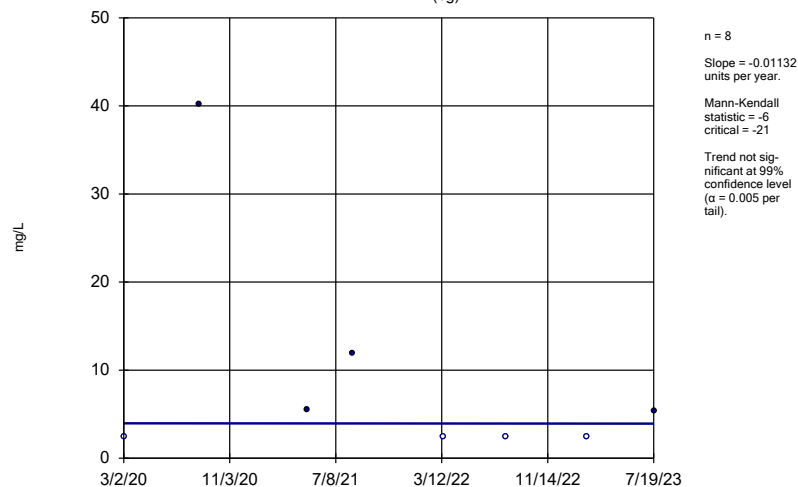
MW-11



Constituent: Carbon Disulfide Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

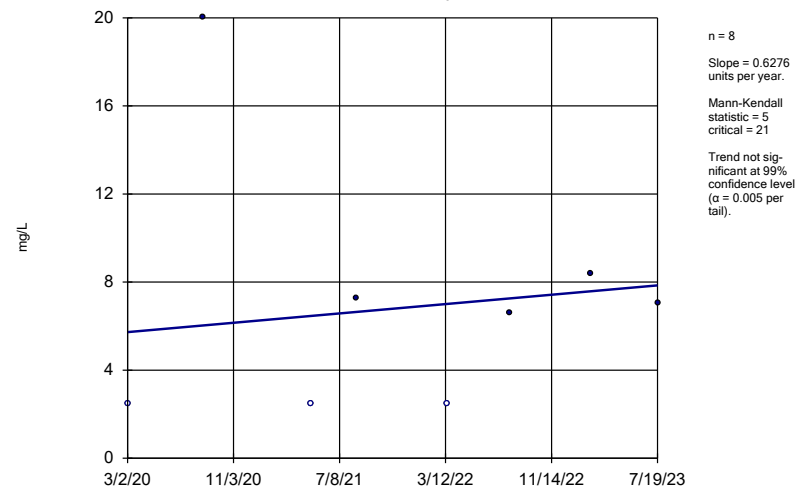
MW-1 (bg)



Constituent: Chemical Oxygen Demand Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKenda
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

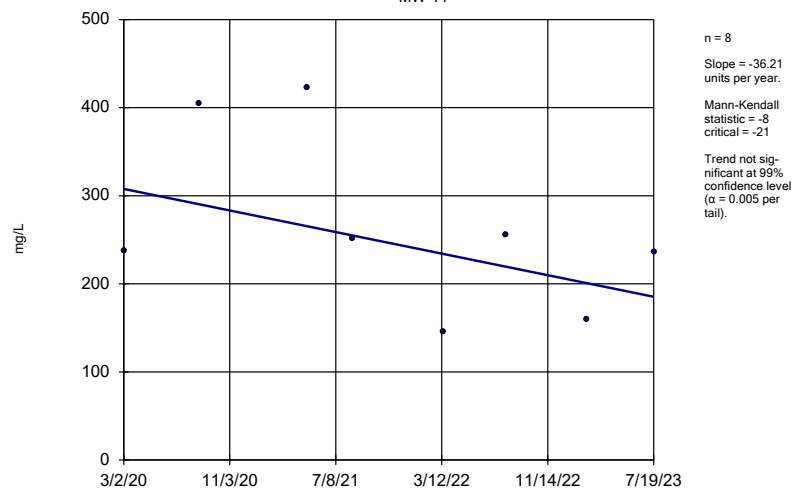
MW-10



Constituent: Chemical Oxygen Demand Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKenda
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

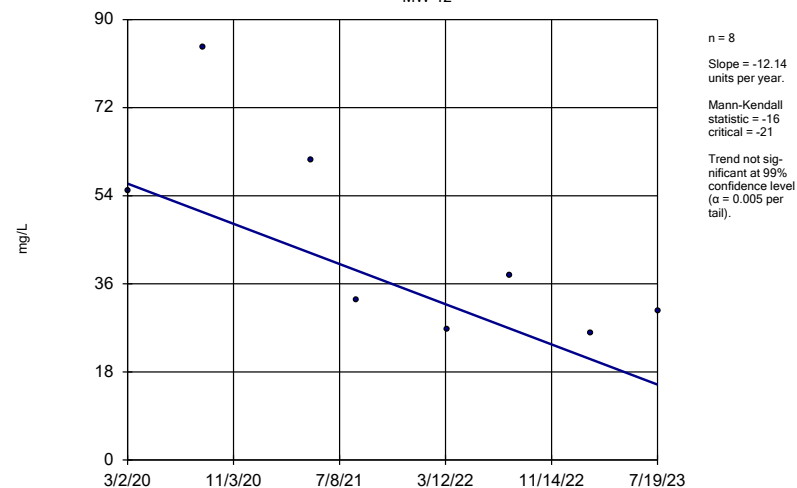
MW-11



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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

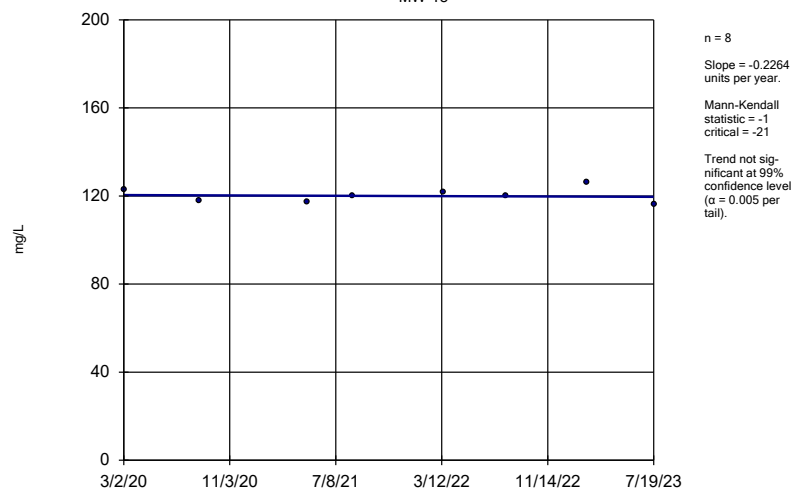
MW-12



Constituent: Chemical Oxygen Demand Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKenda
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

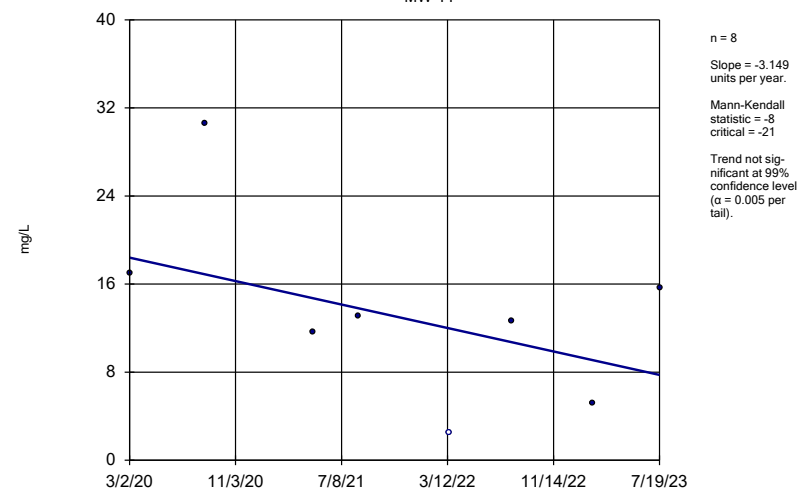
MW-13



Constituent: Chemical Oxygen Demand Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKenda
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Sen's Slope Estimator

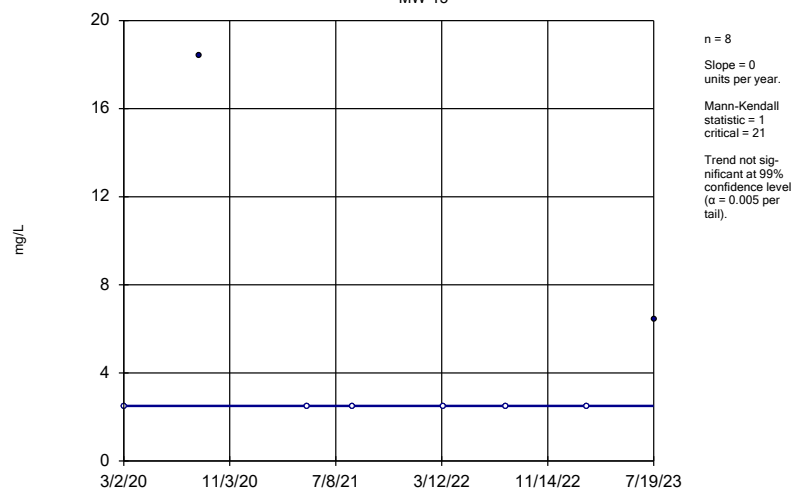
MW-14



Constituent: Chemical Oxygen Demand Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKenda
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

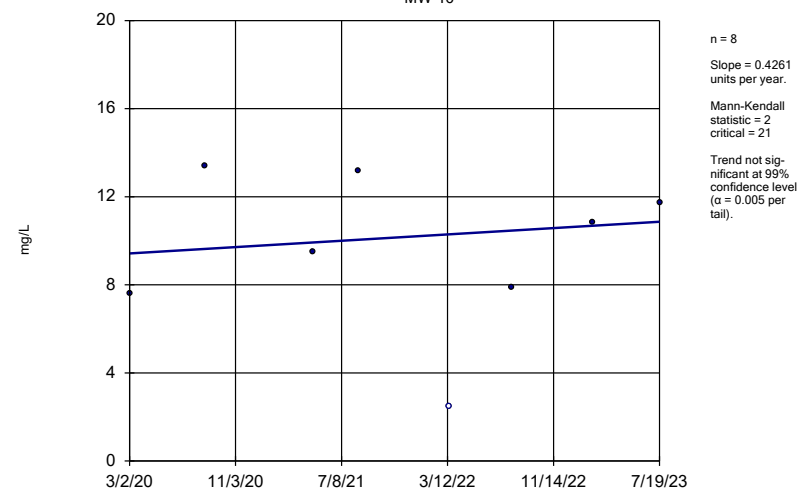
MW-15



Constituent: Chemical Oxygen Demand Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKenda
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

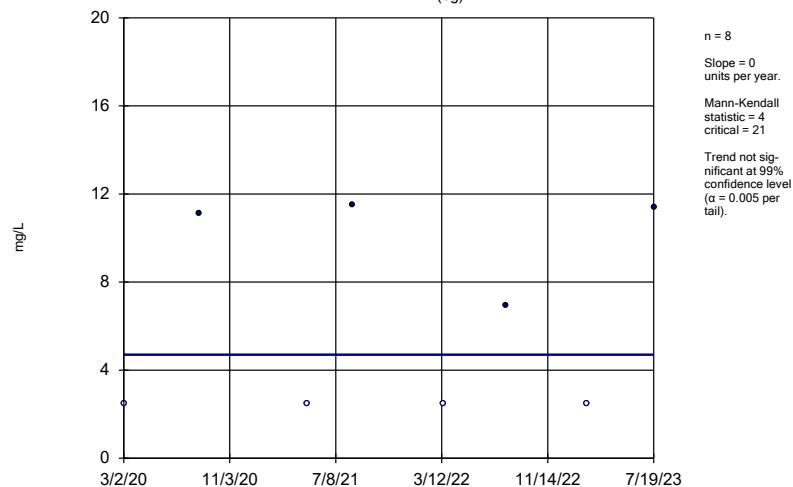
MW-16



Constituent: Chemical Oxygen Demand Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKenda
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

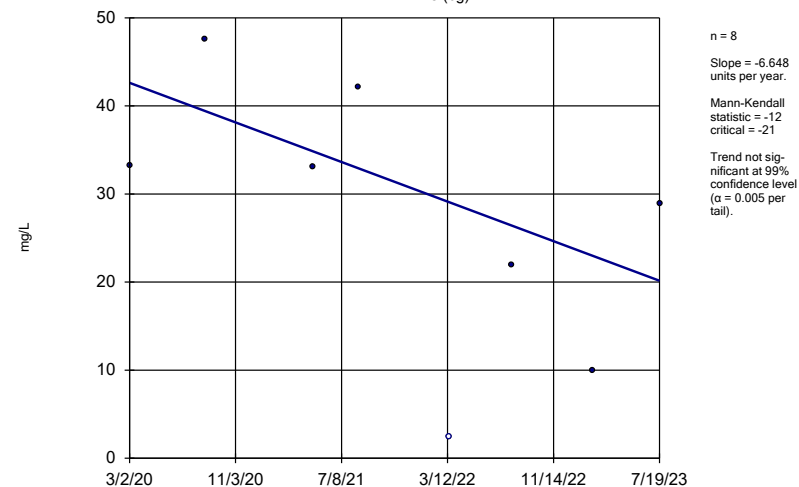
MW-17 (bg)



Constituent: Chemical Oxygen Demand Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKenda
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

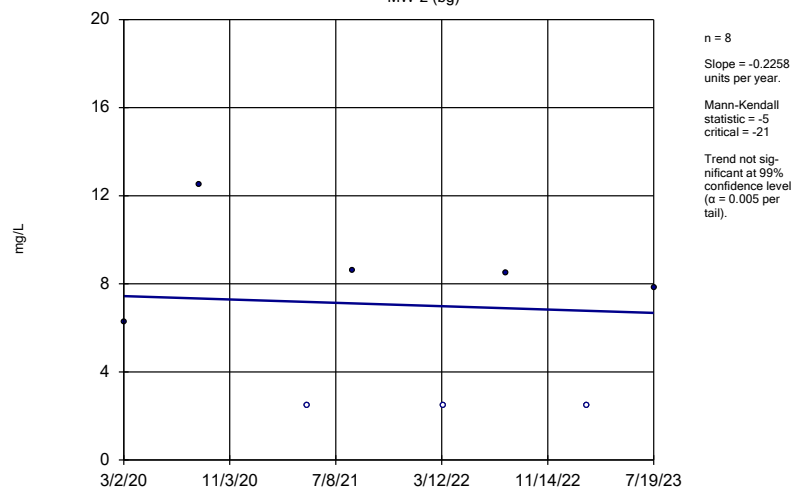
MW-18 (bg)



Constituent: Chemical Oxygen Demand Analysis Run 8/25/2023 3:30 PM View: 2023AWQR - MannKenda
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

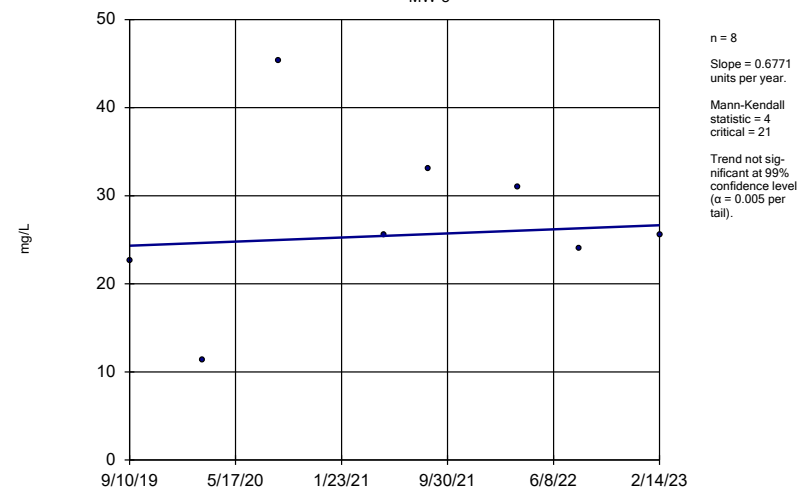
MW-2 (bg)



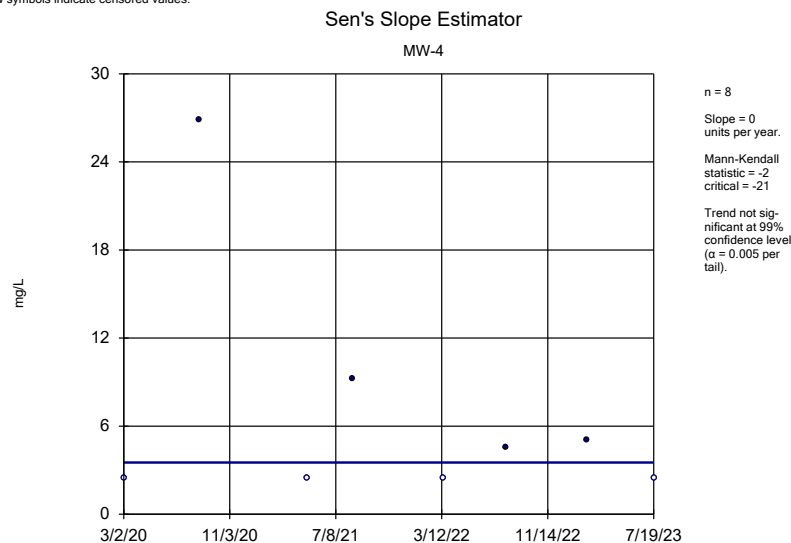
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

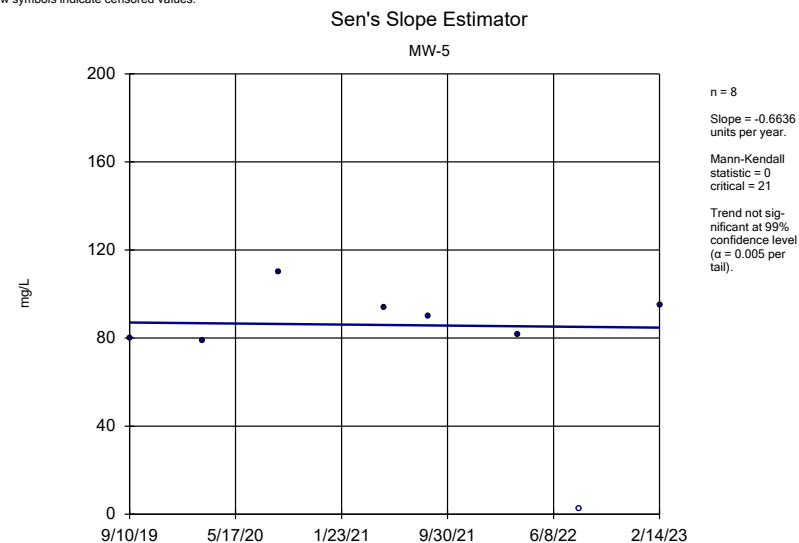
MW-3



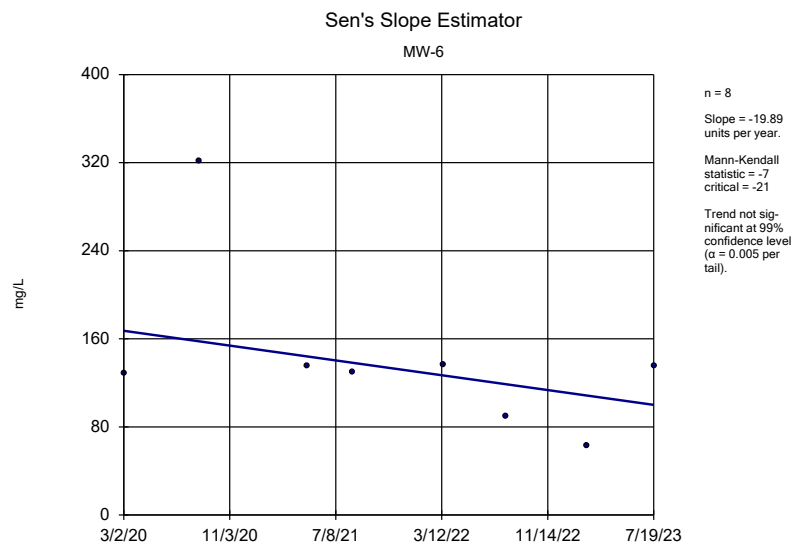
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



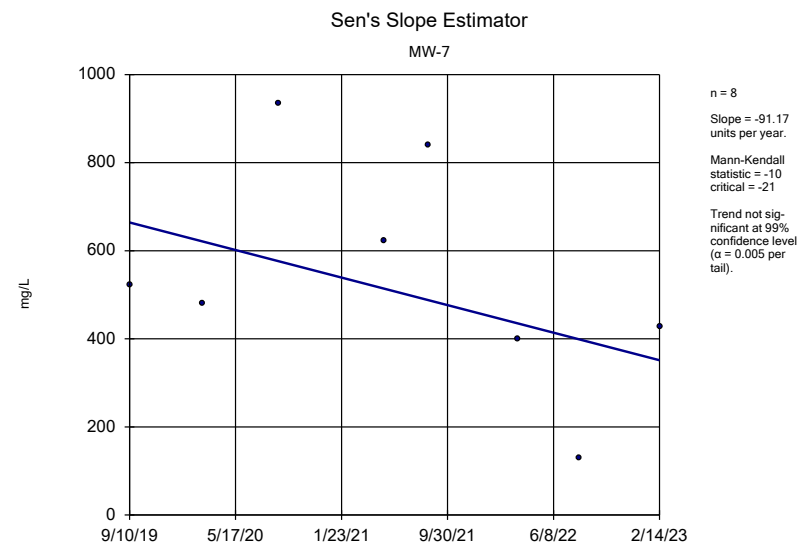
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



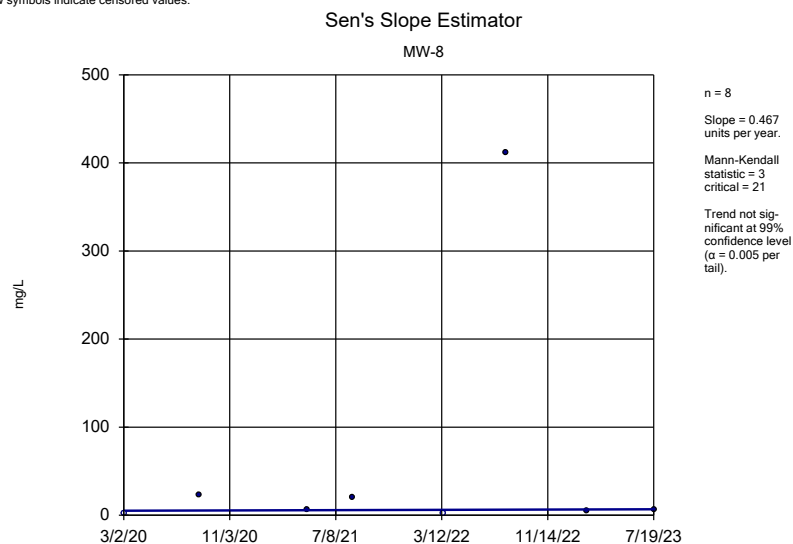
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



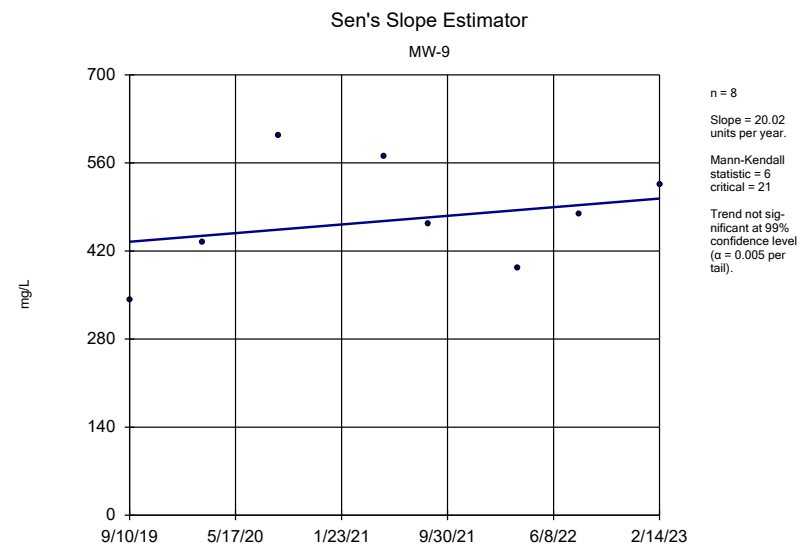
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



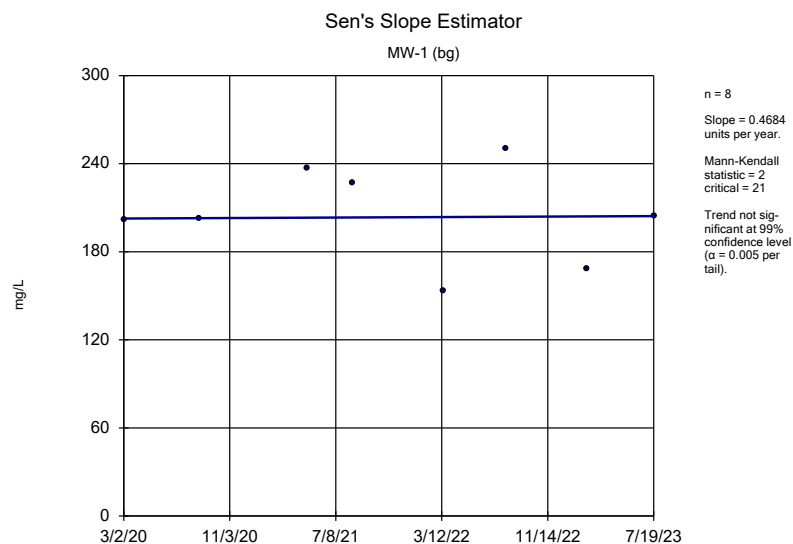
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



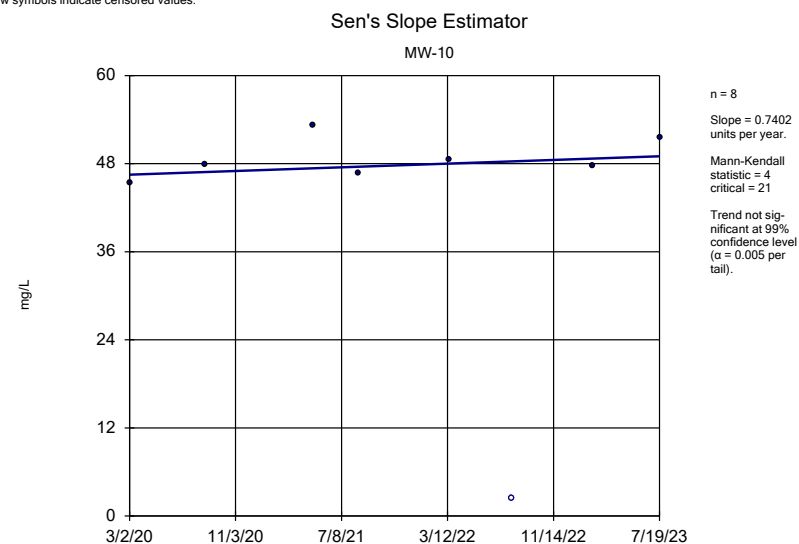
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



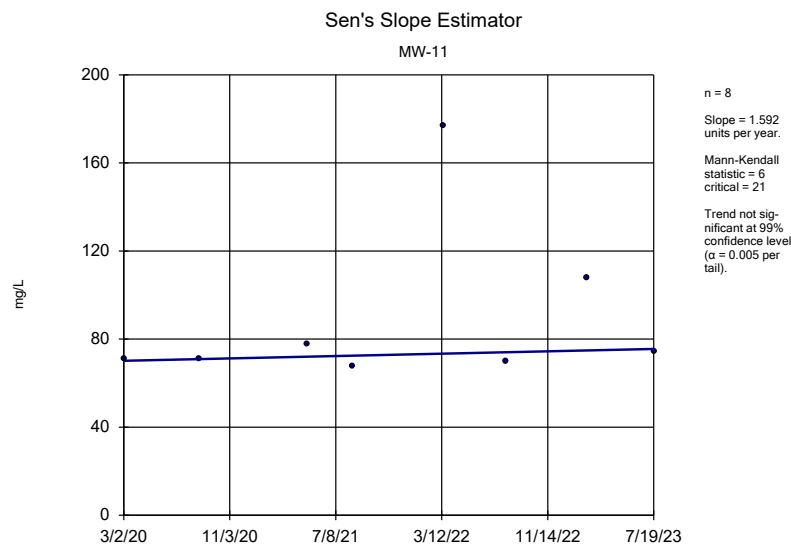
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



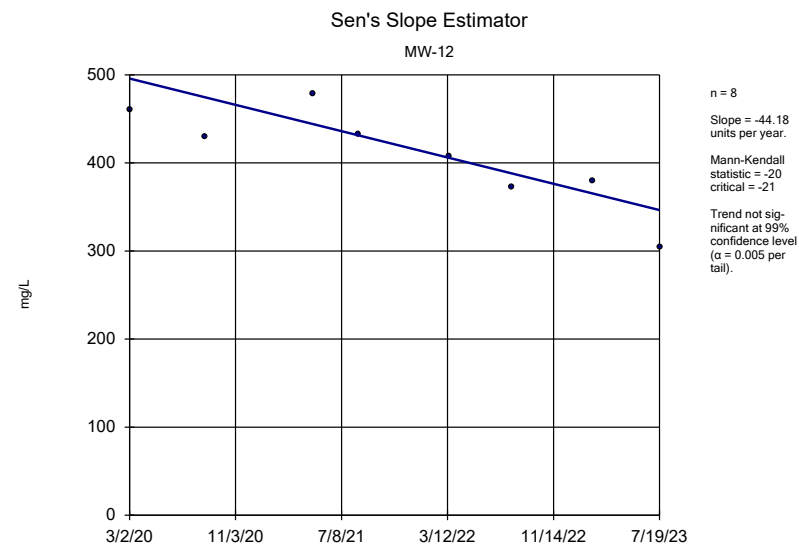
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



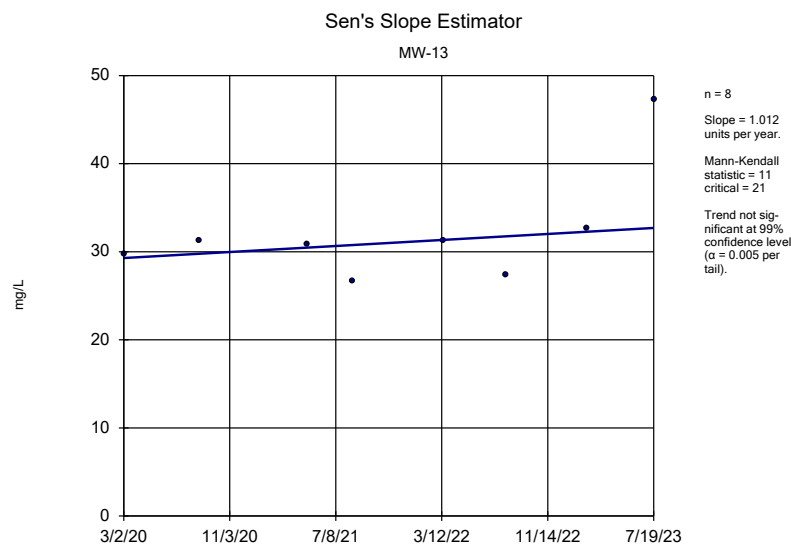
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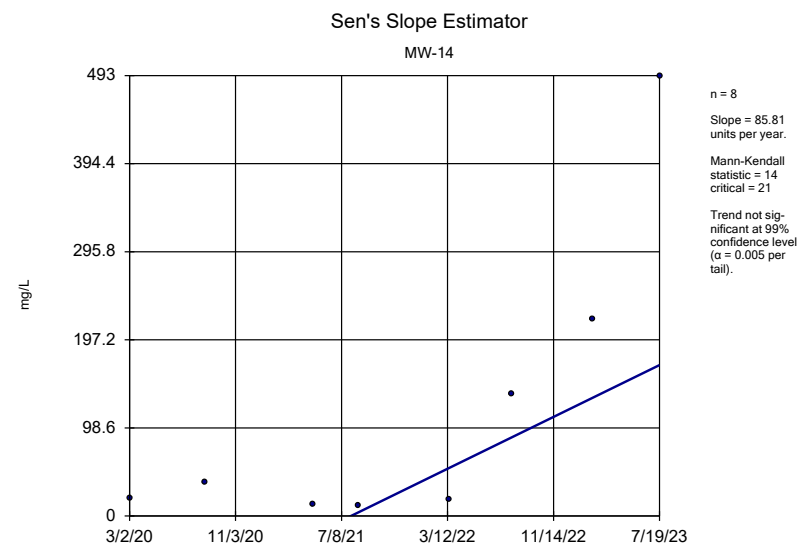
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



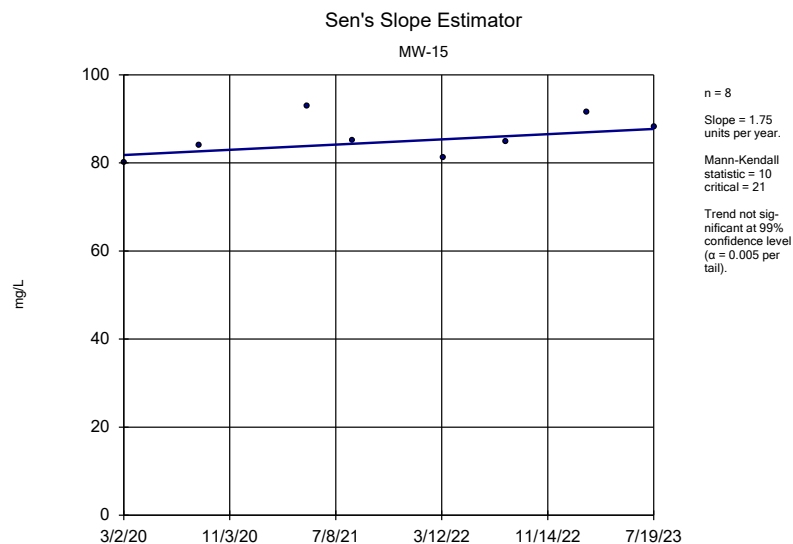
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



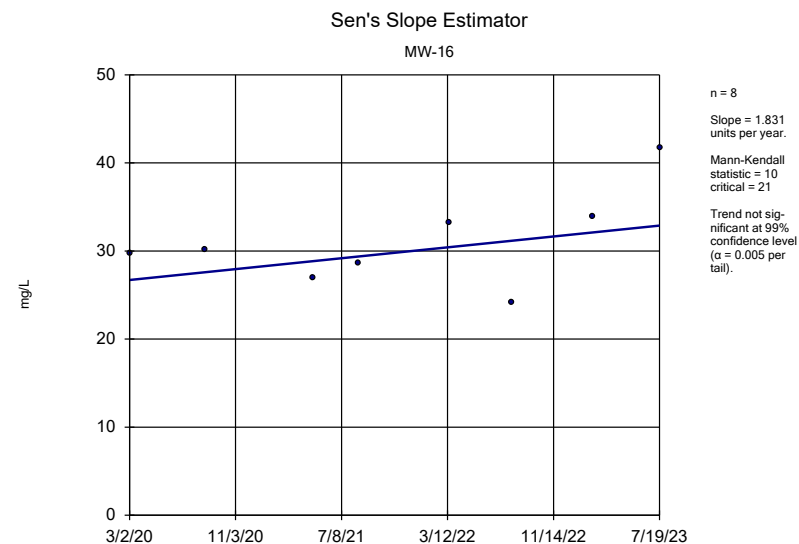
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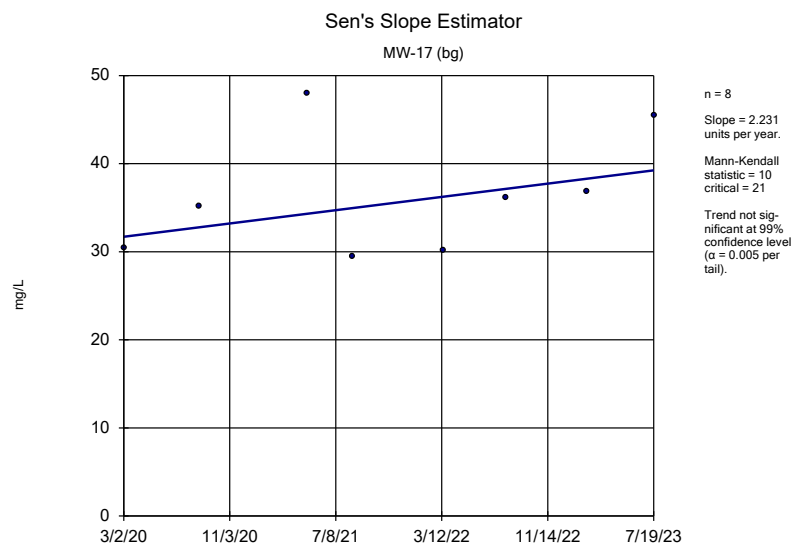
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



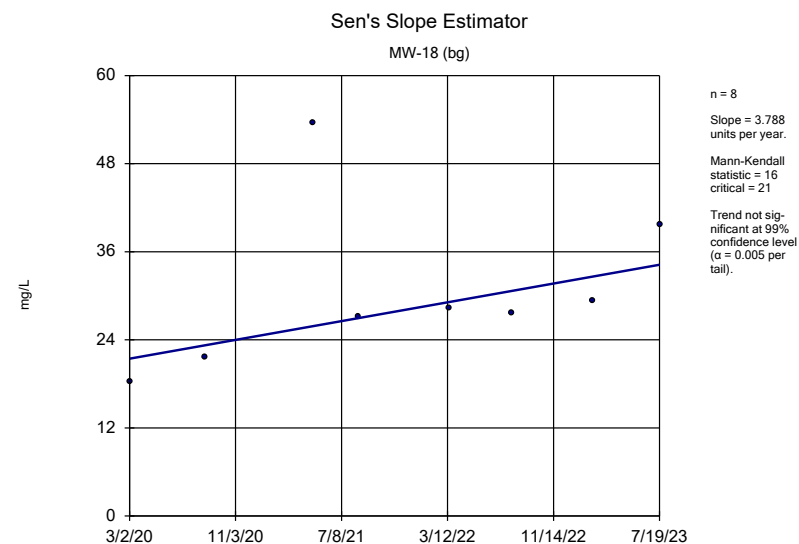
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



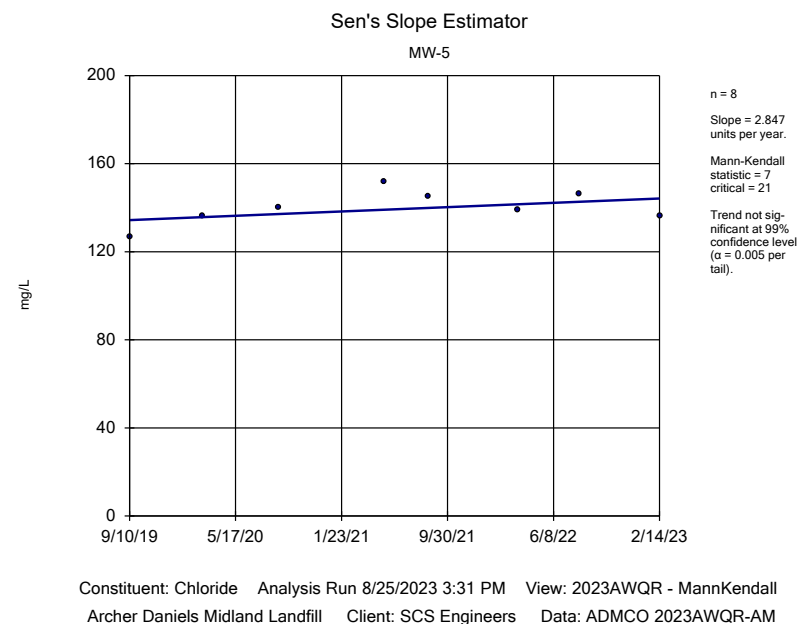
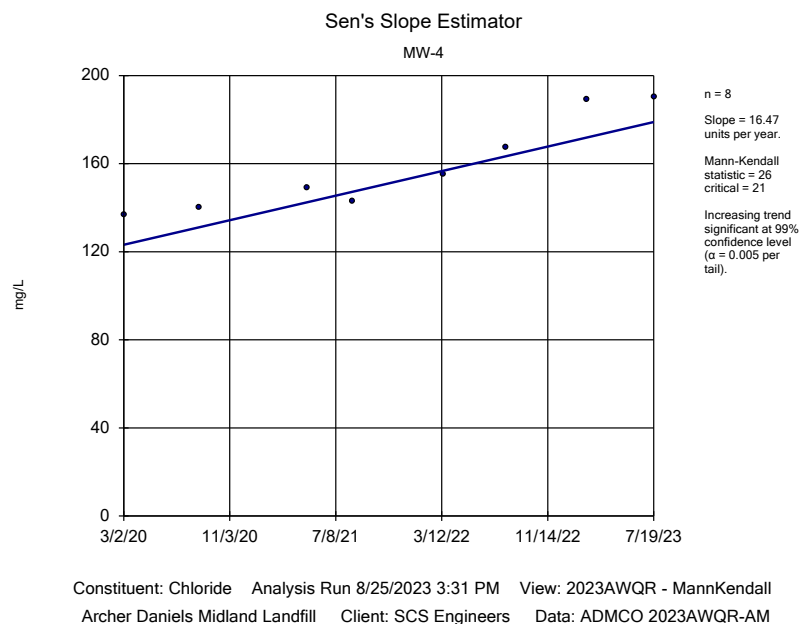
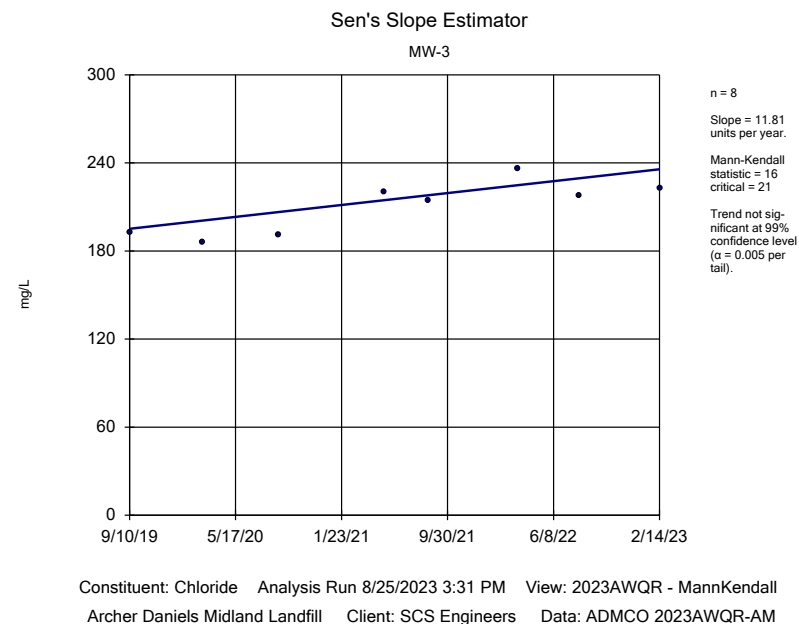
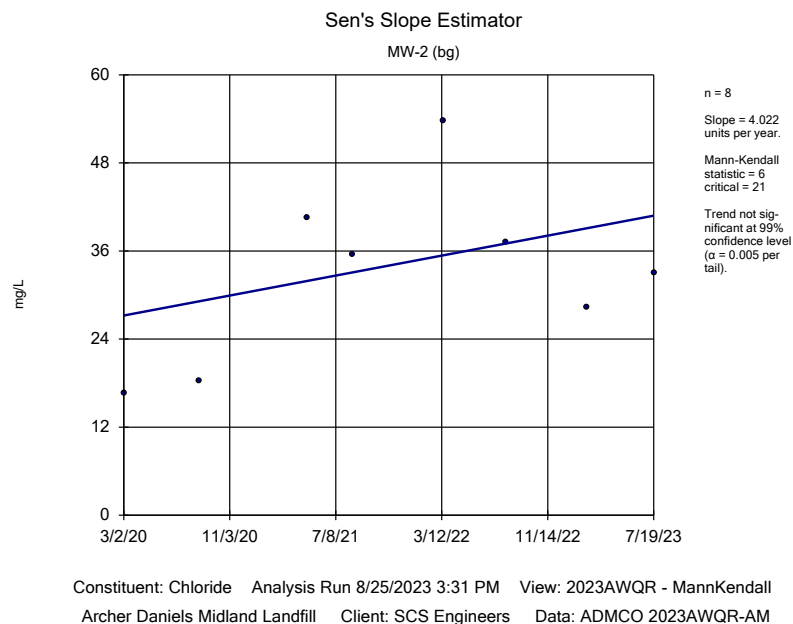
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

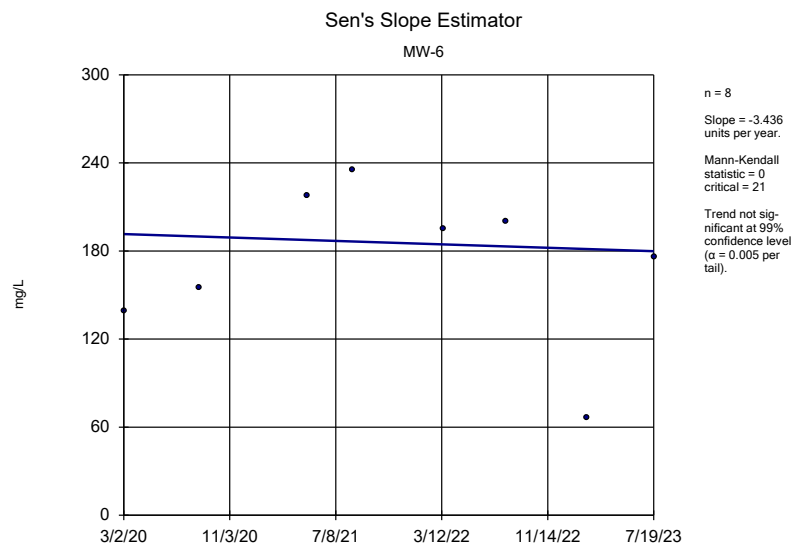


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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

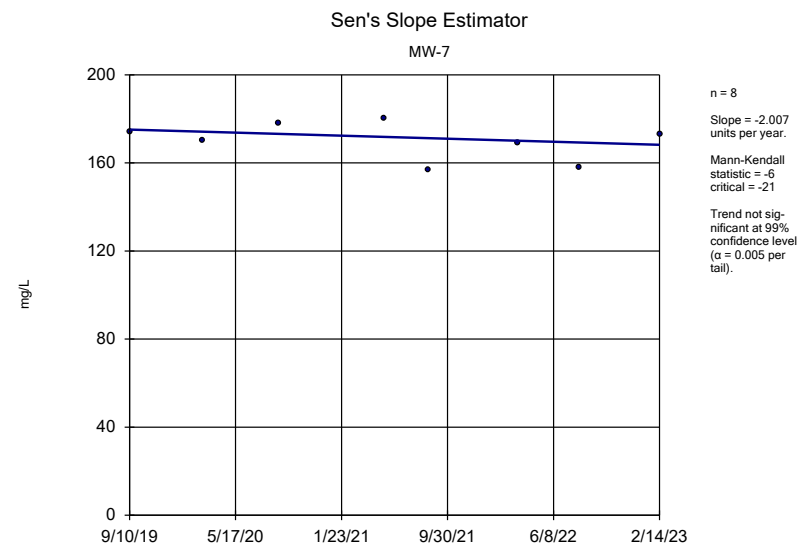


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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

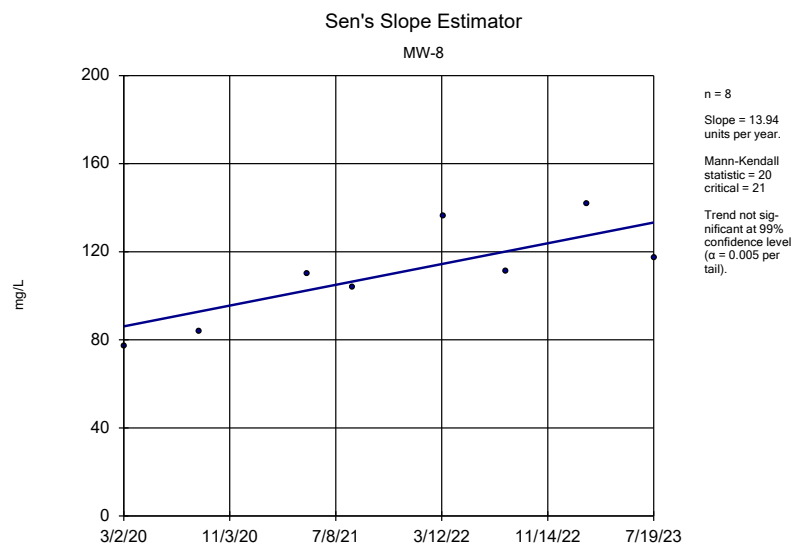




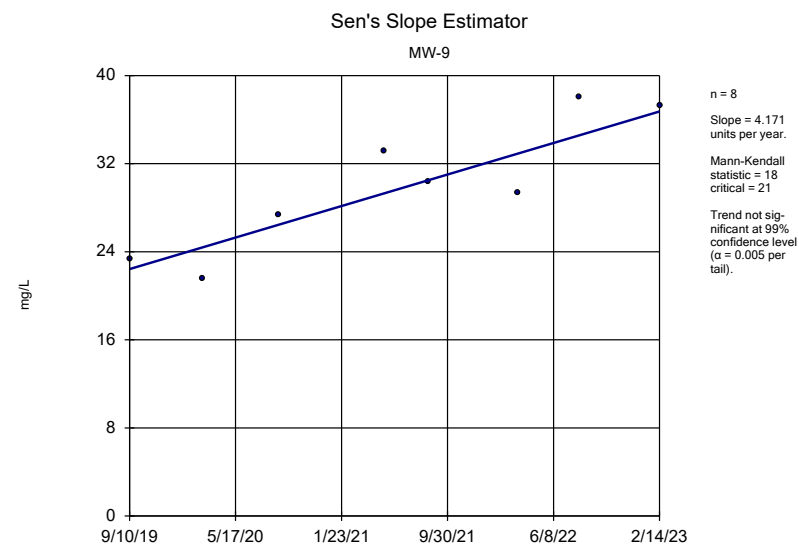
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



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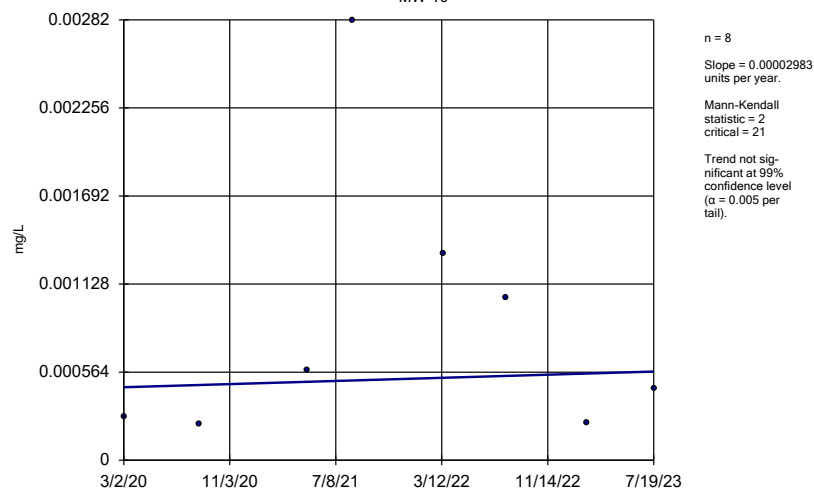
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



Constituent: Chloride Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

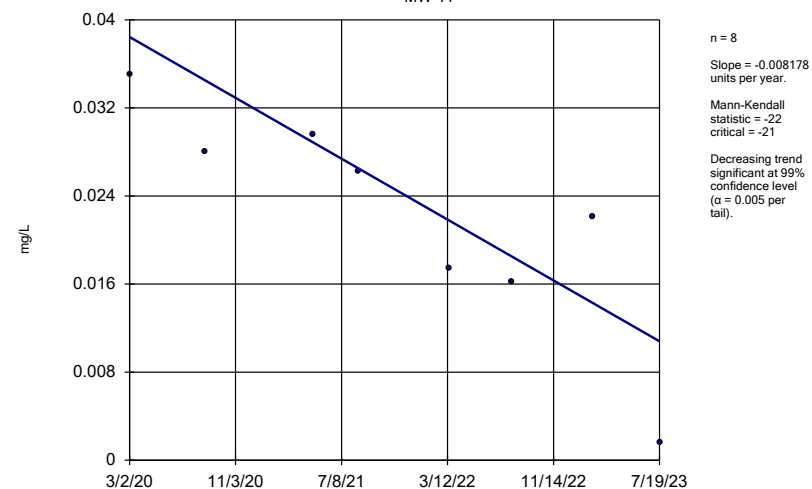
MW-10



Constituent: Cobalt Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

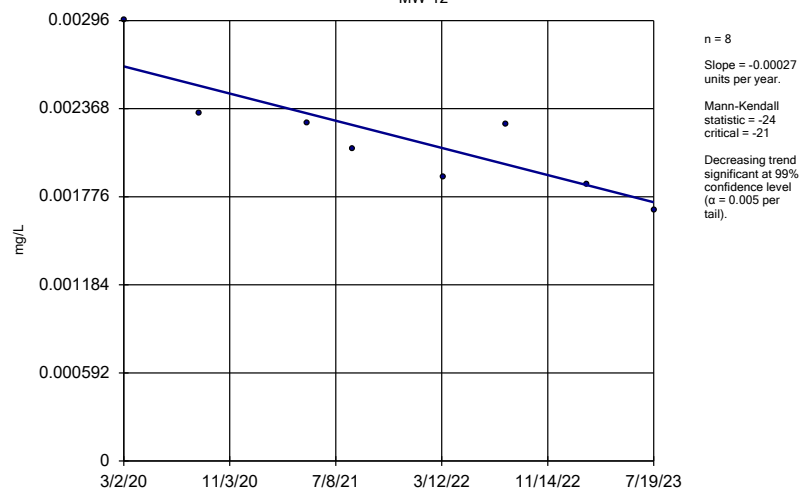
MW-11



Constituent: Cobalt Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

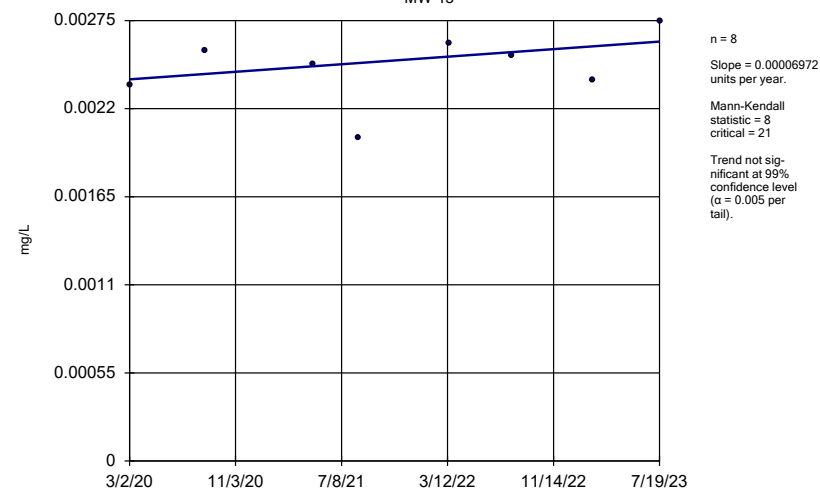
MW-12



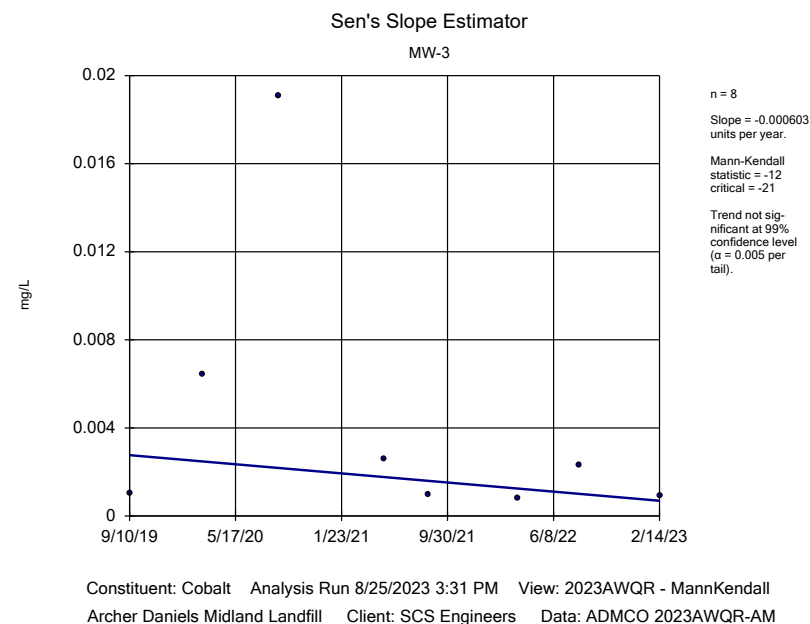
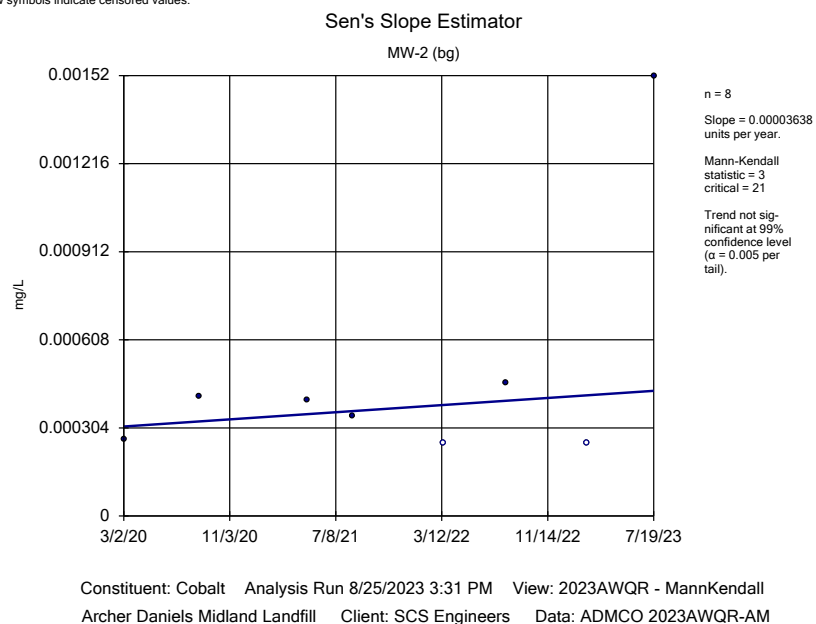
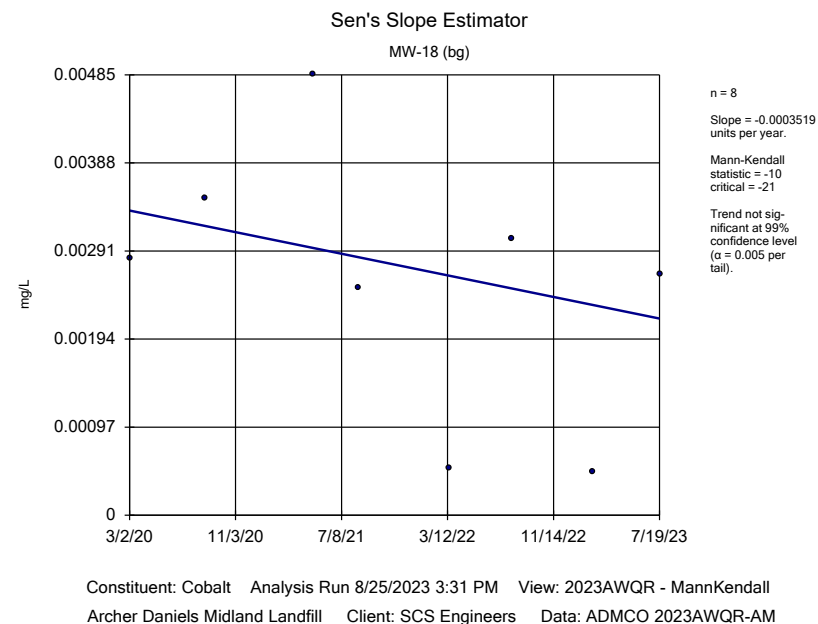
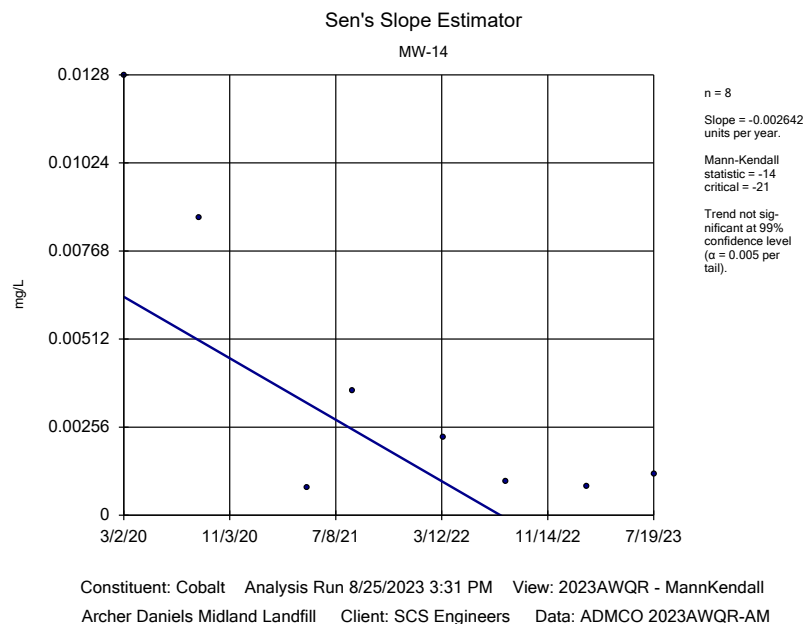
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

MW-13

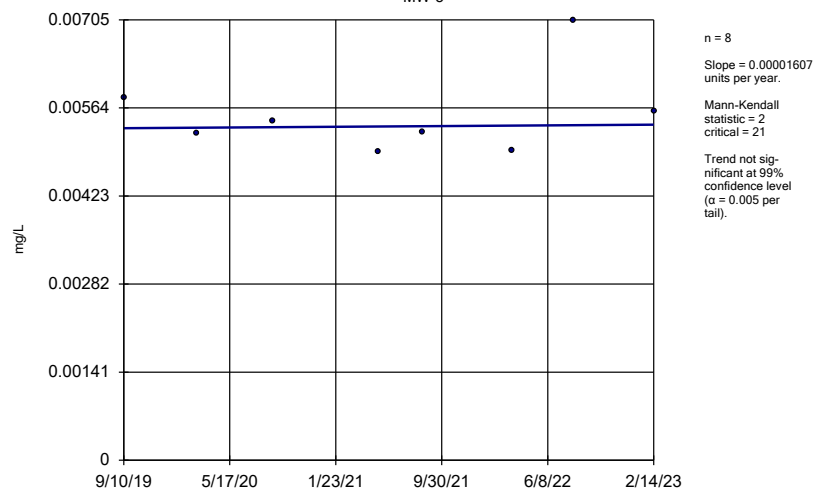


Constituent: Cobalt Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



Sen's Slope Estimator

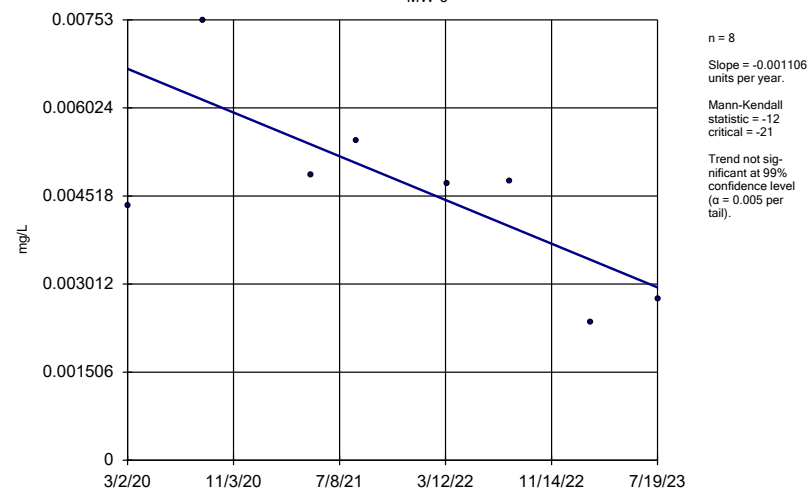
MW-5



Constituent: Cobalt Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

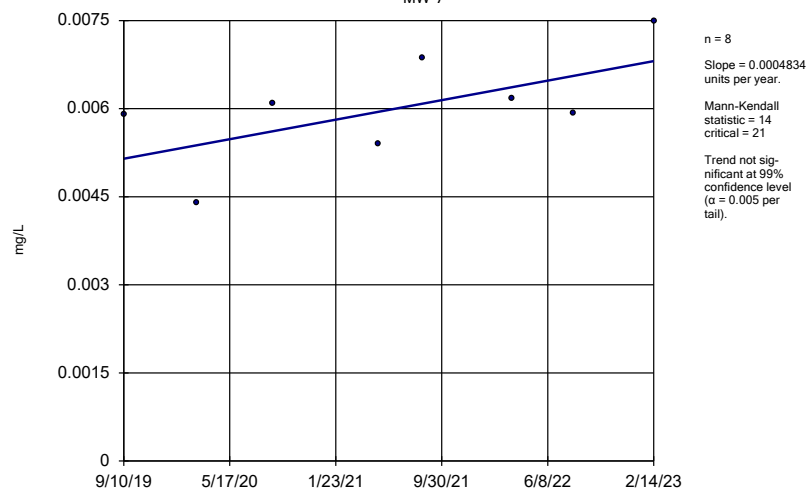
MW-6



Constituent: Cobalt Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

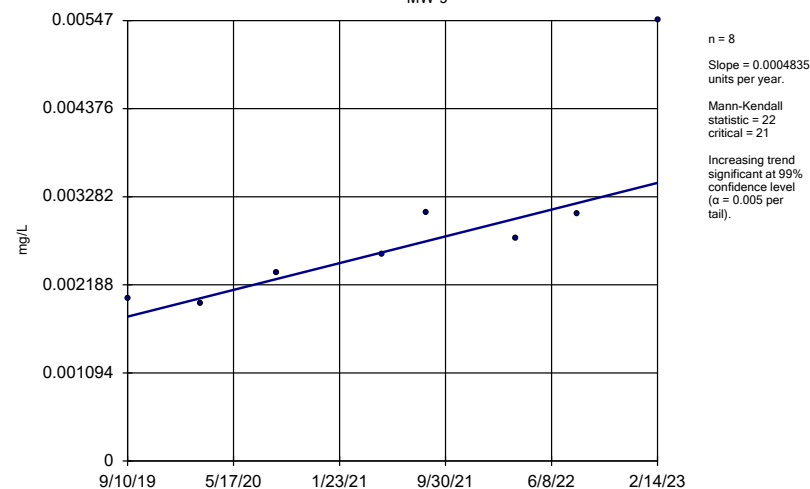
MW-7



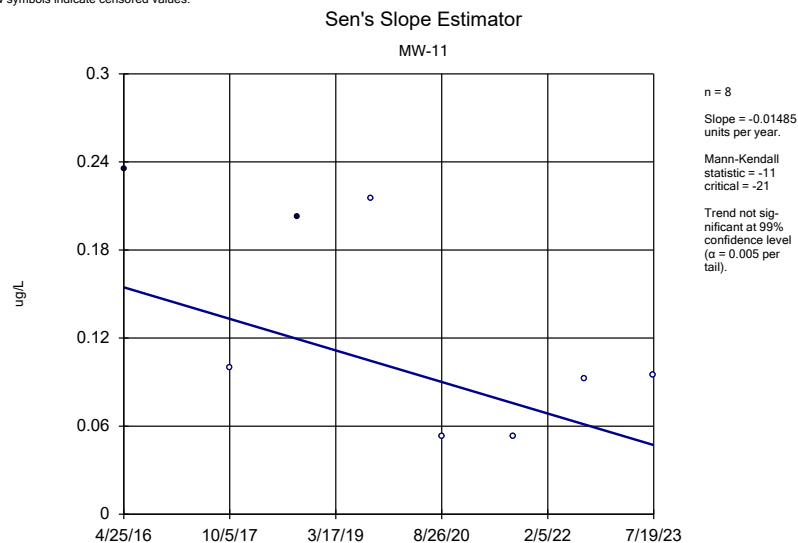
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

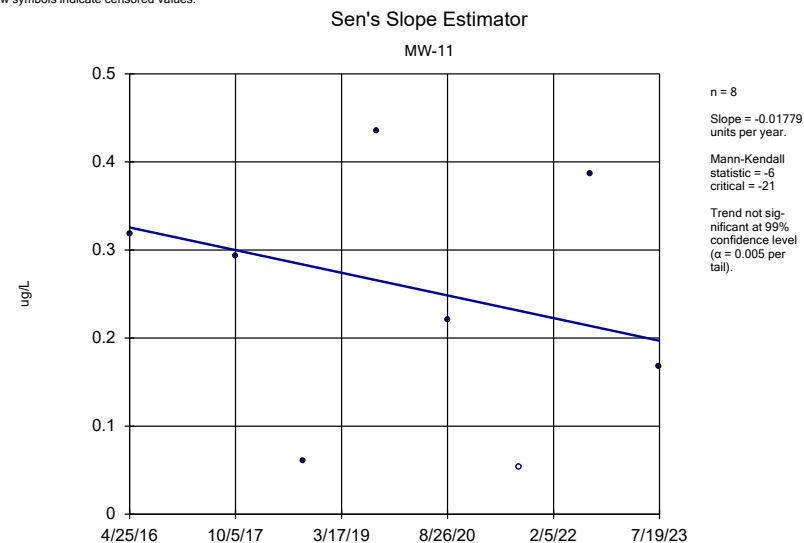
MW-9



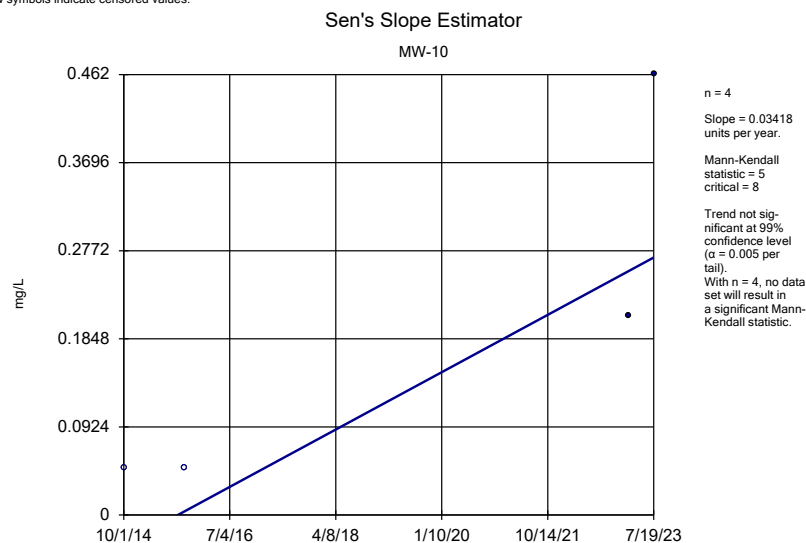
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



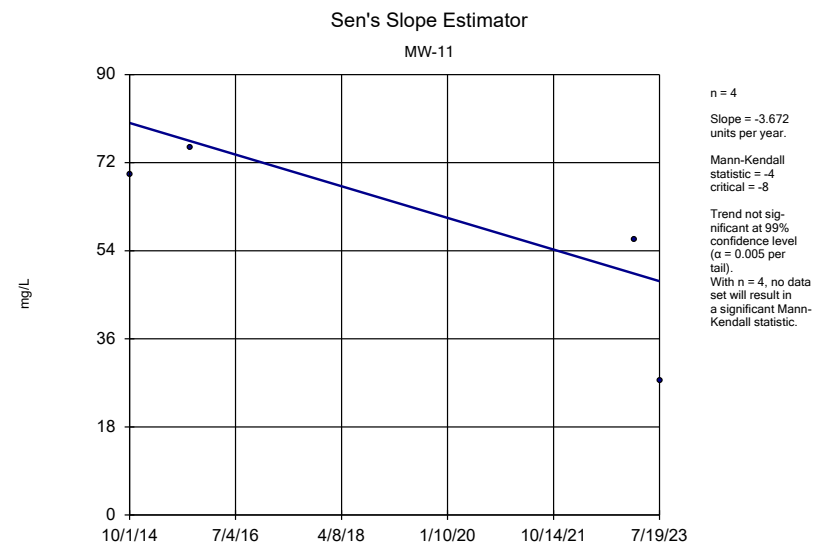
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



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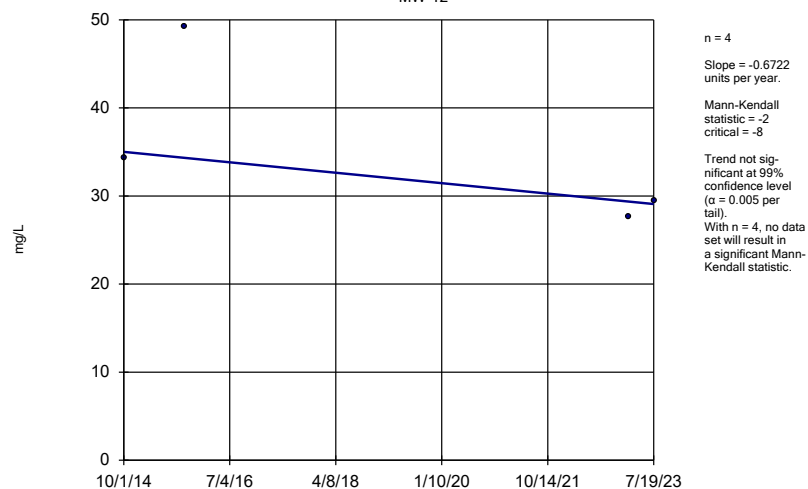
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



Constituent: Iron Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

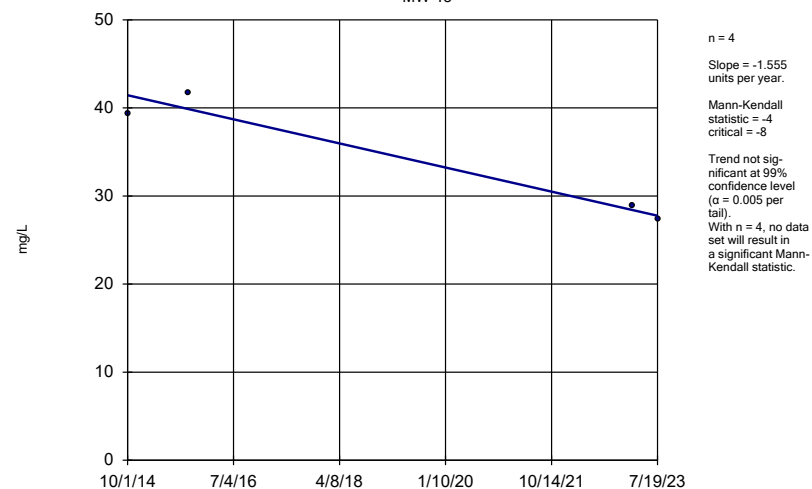
MW-12



Constituent: Iron Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

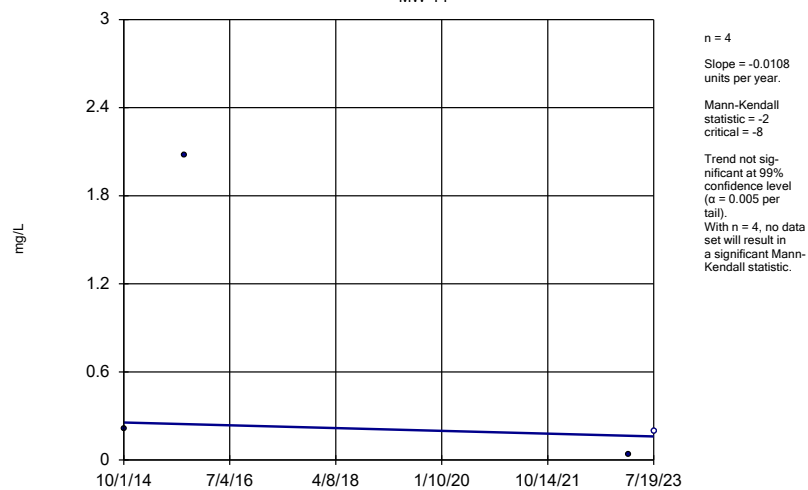
MW-13



Constituent: Iron Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

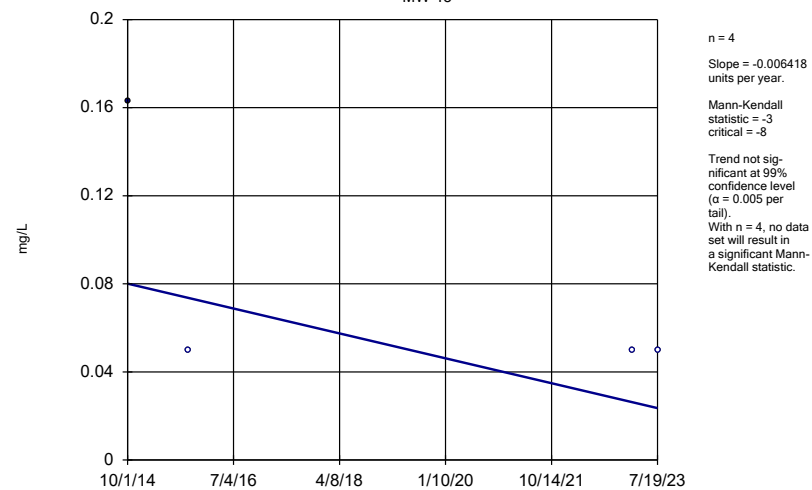
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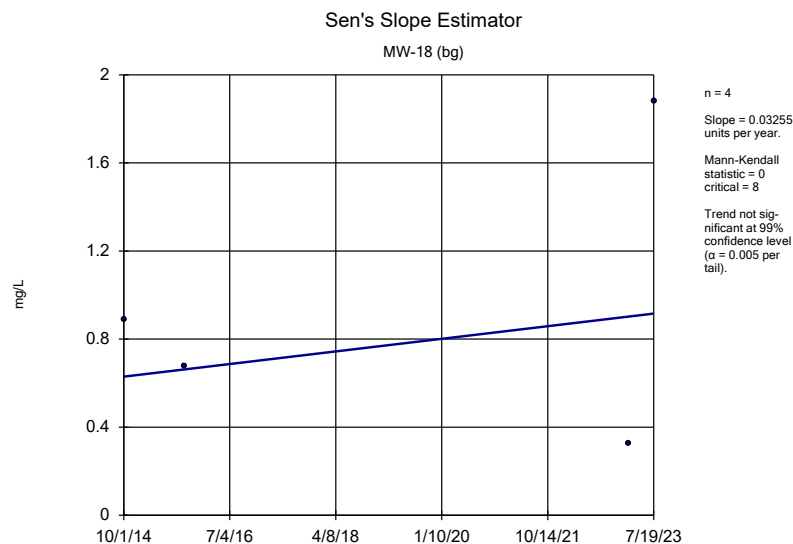
Constituent: Iron Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

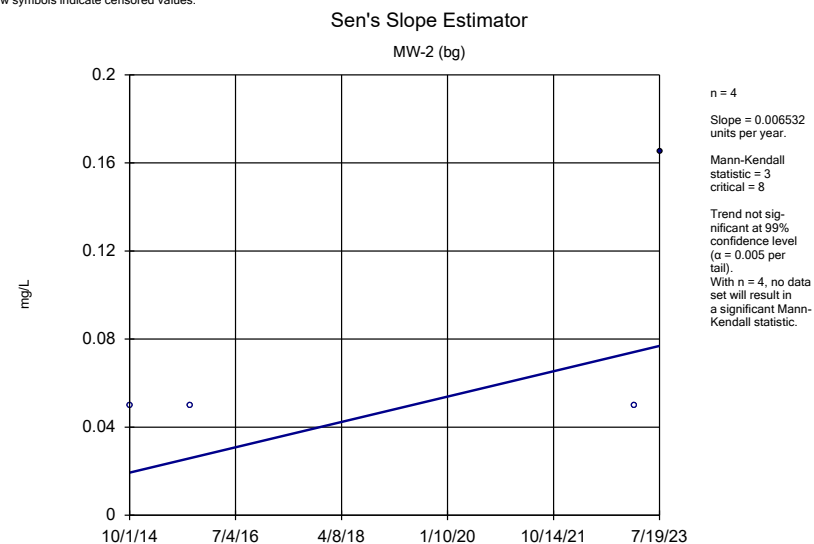
MW-15



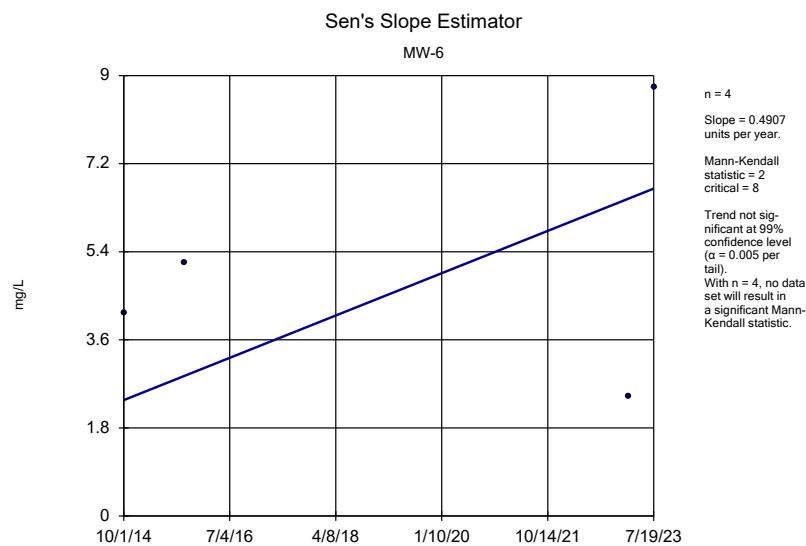
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



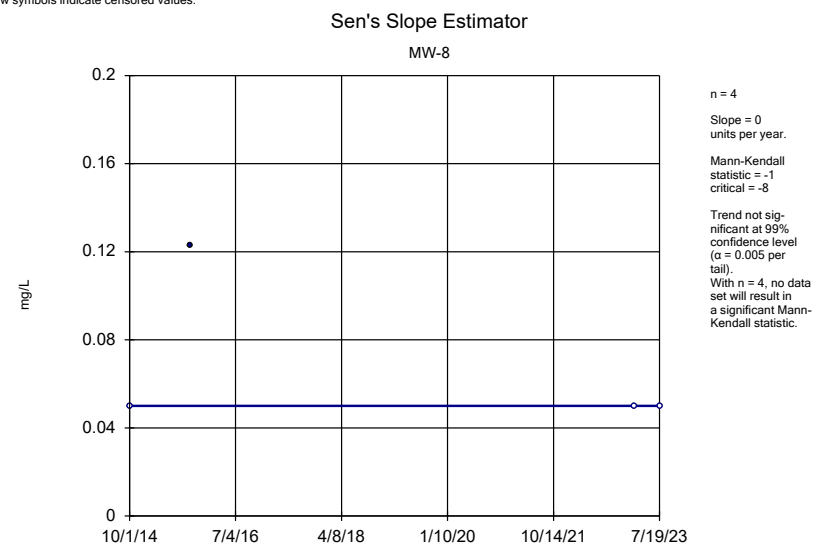
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



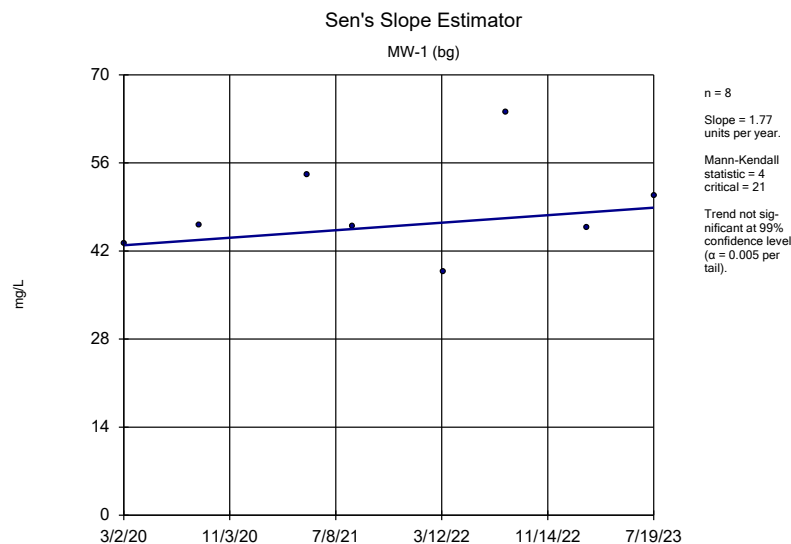
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



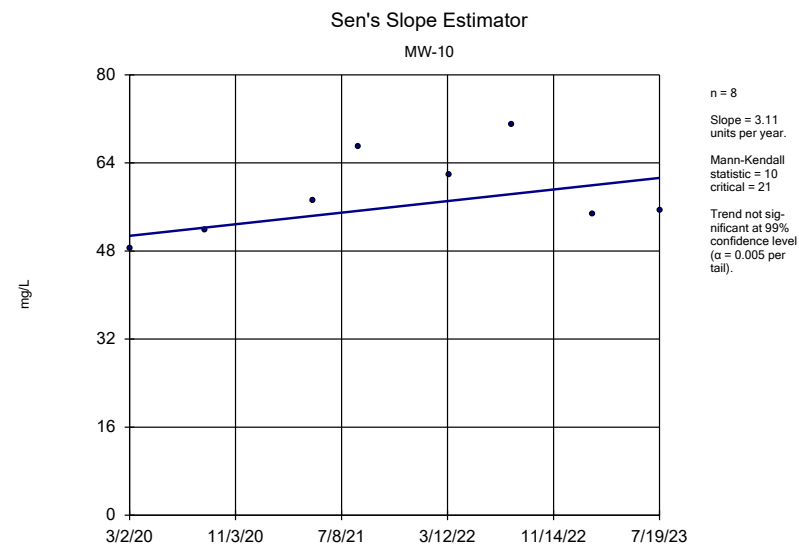
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



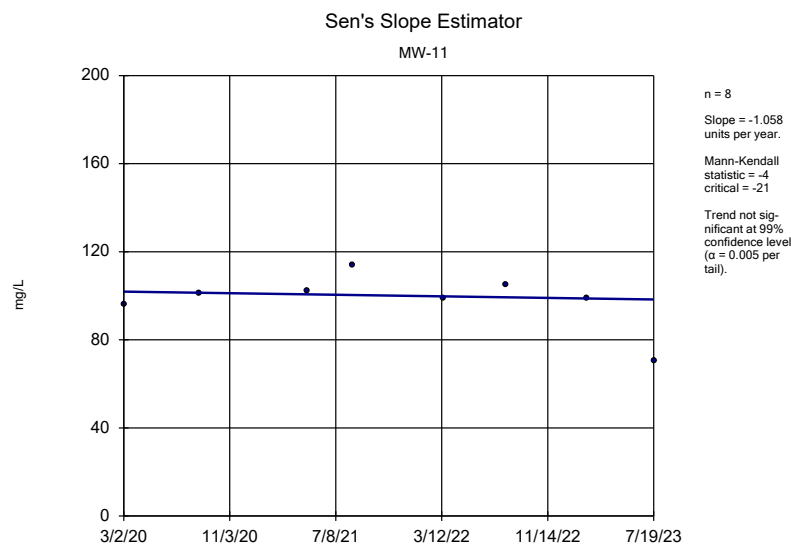
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



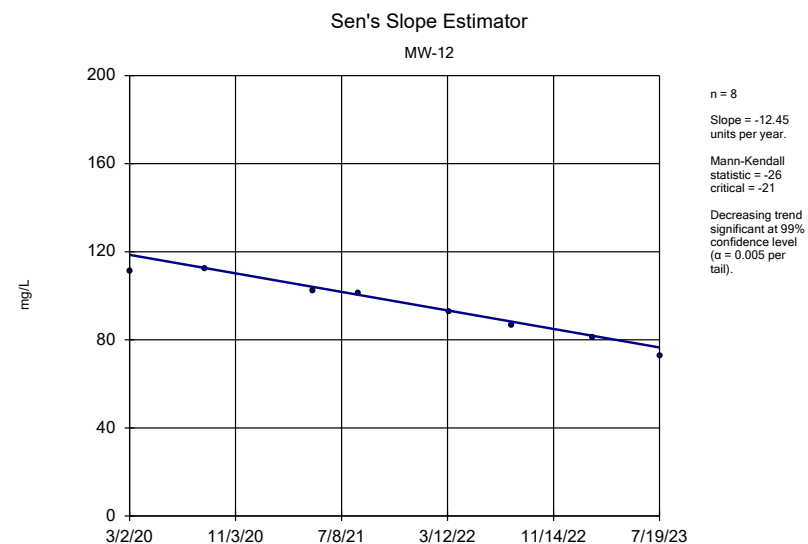
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



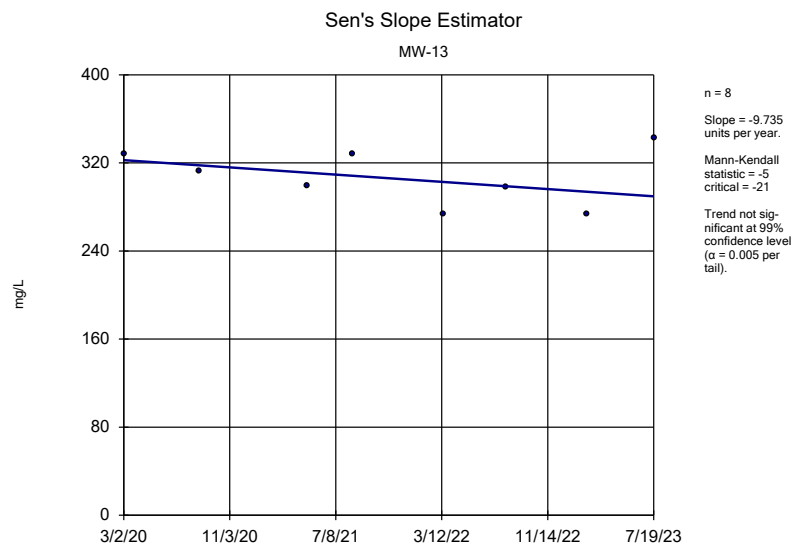
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



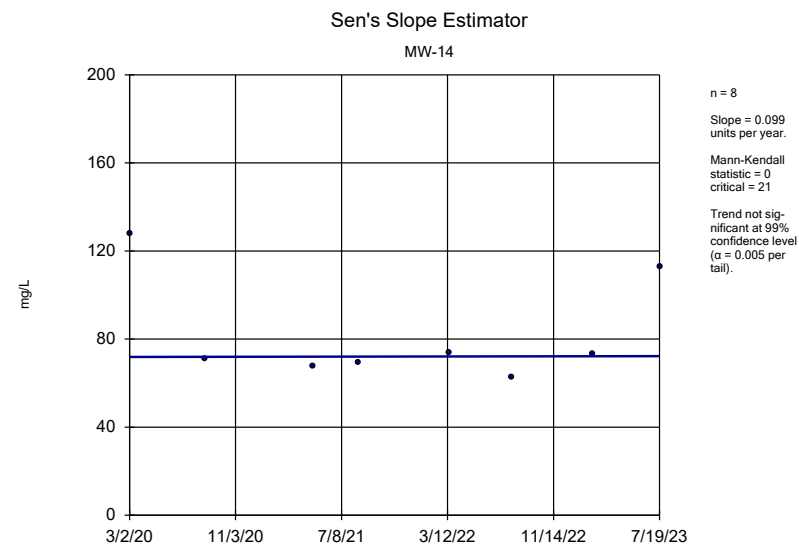
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



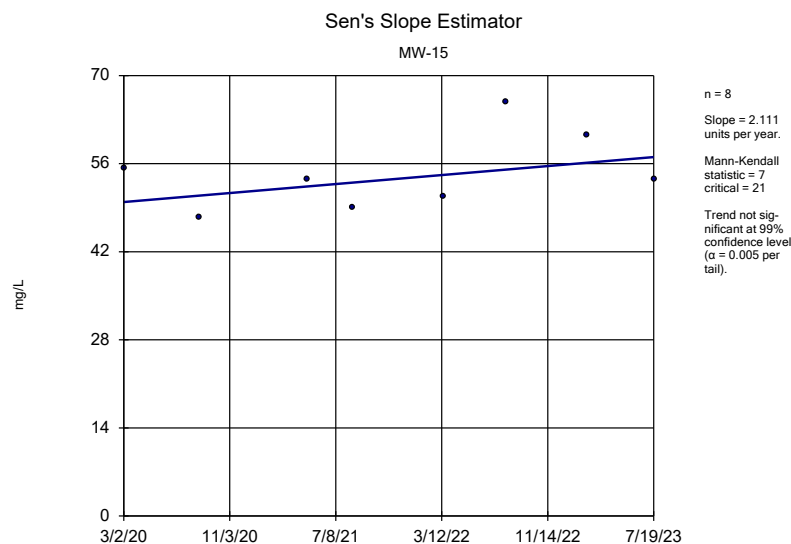
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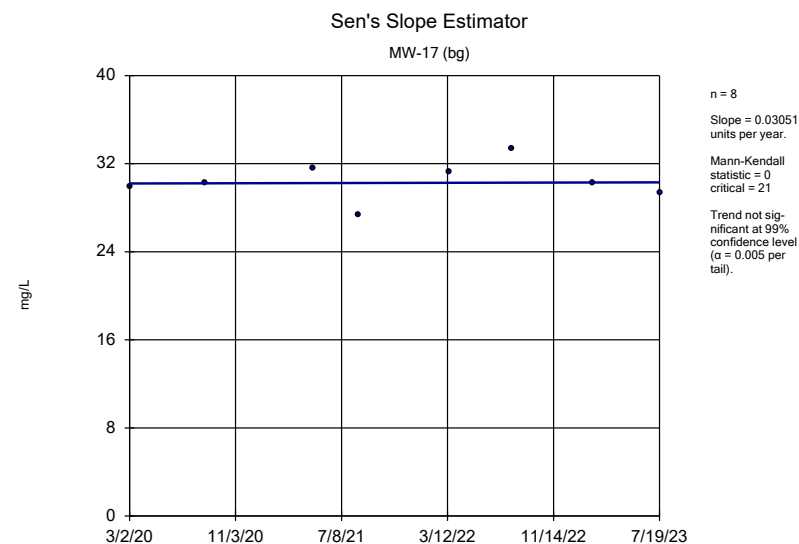
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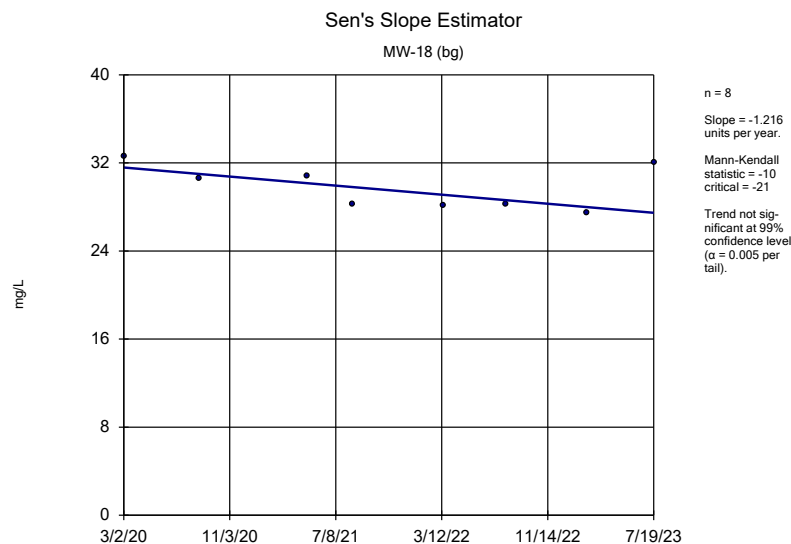
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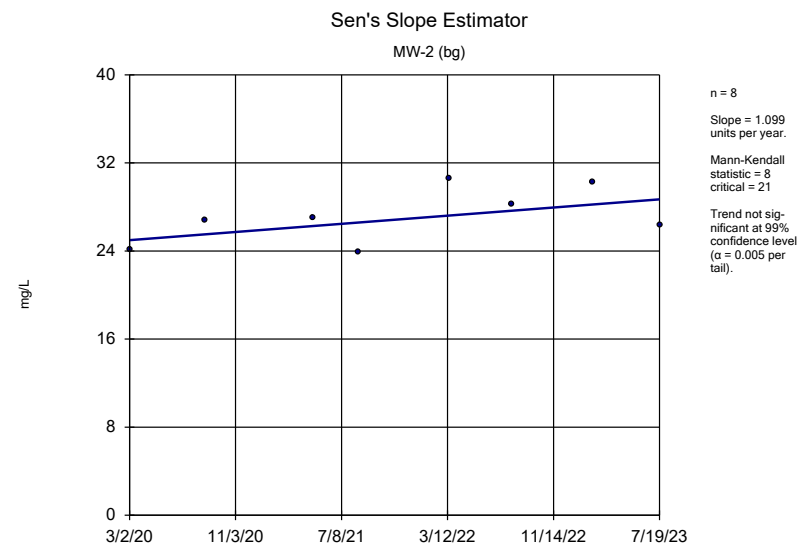
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



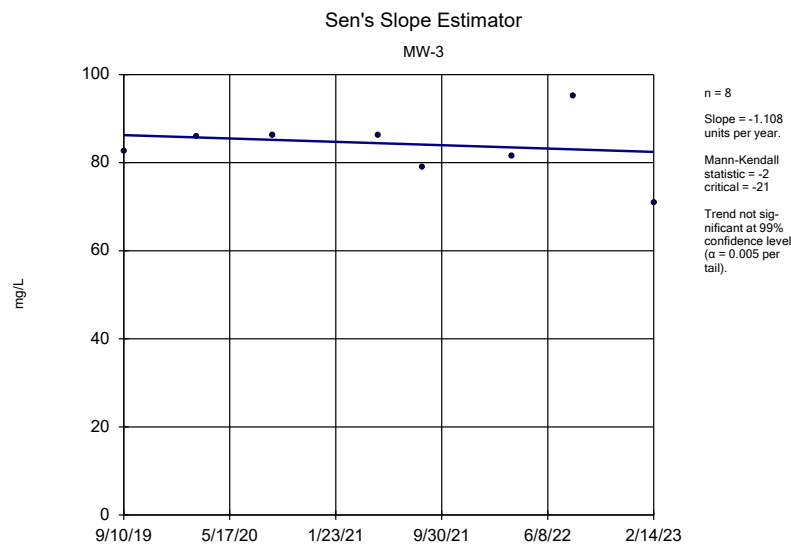
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



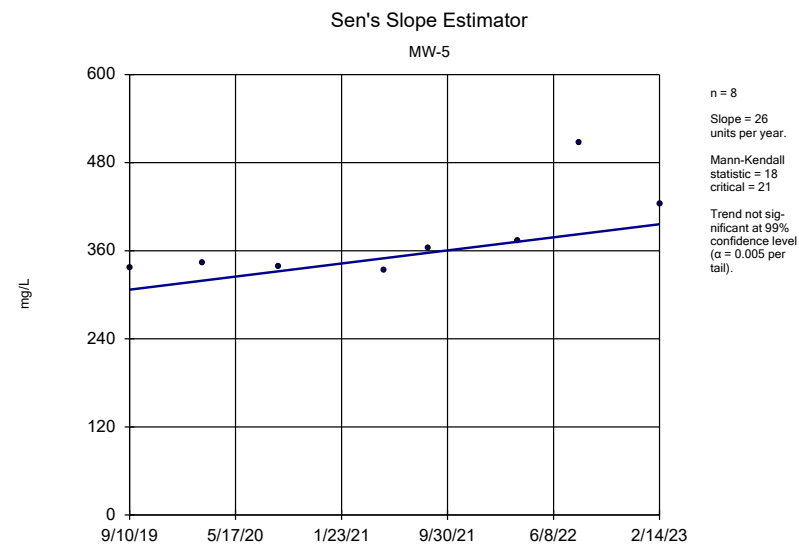
Constituent: Magnesium Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



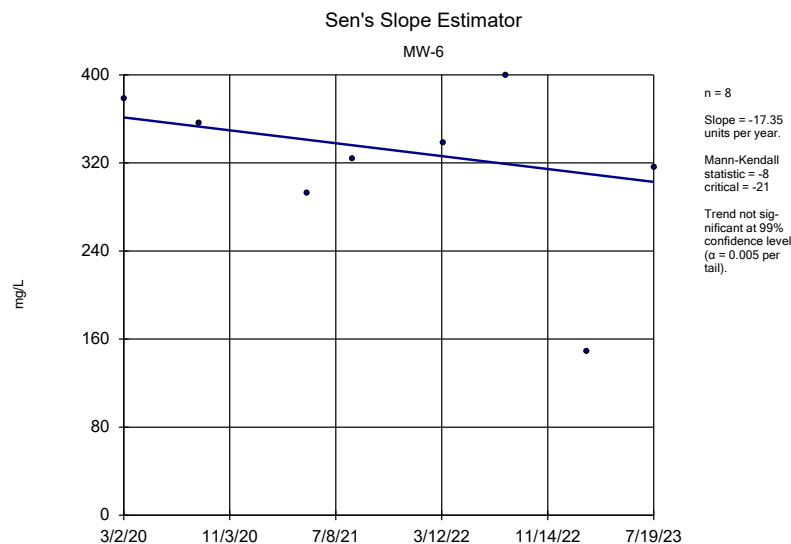
Constituent: Magnesium Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



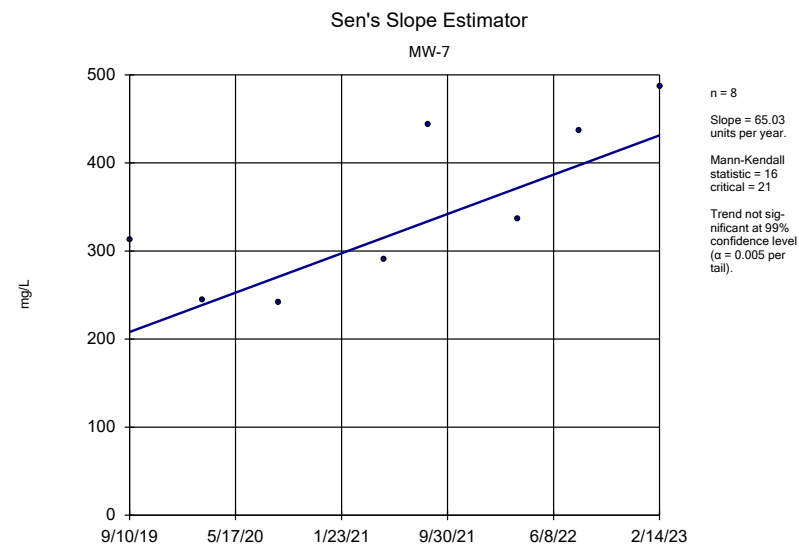
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



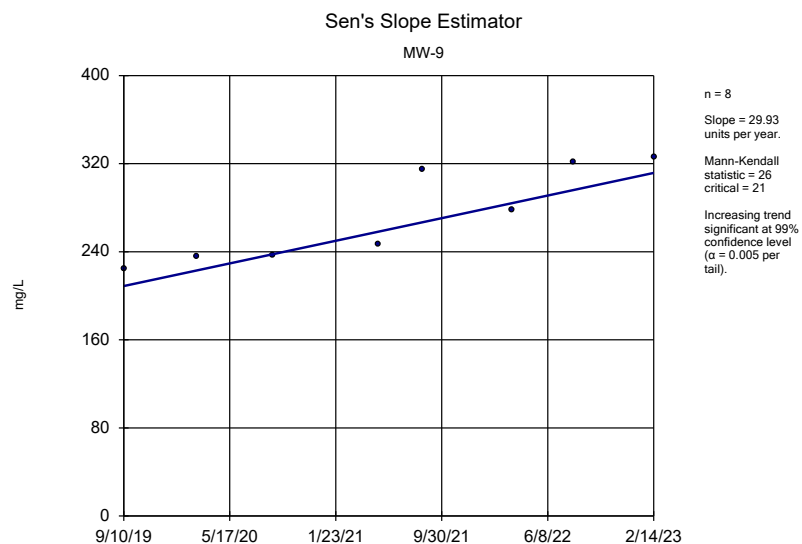
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



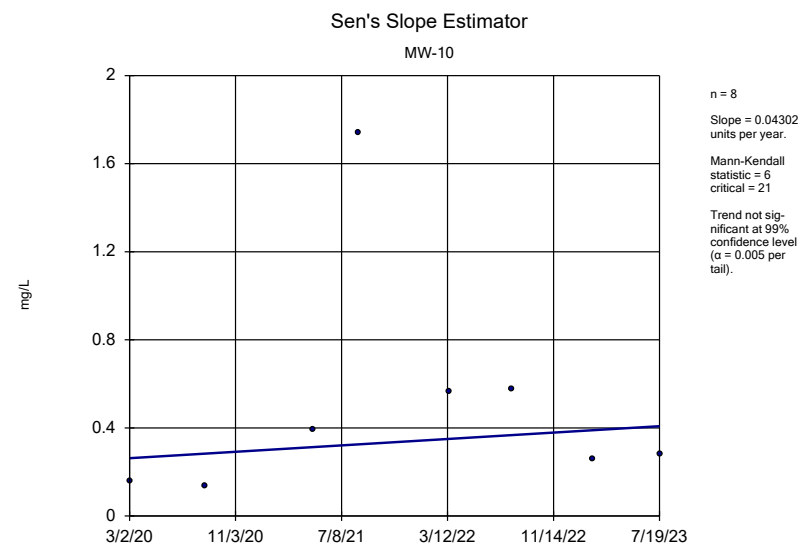
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



Constituent: Magnesium Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



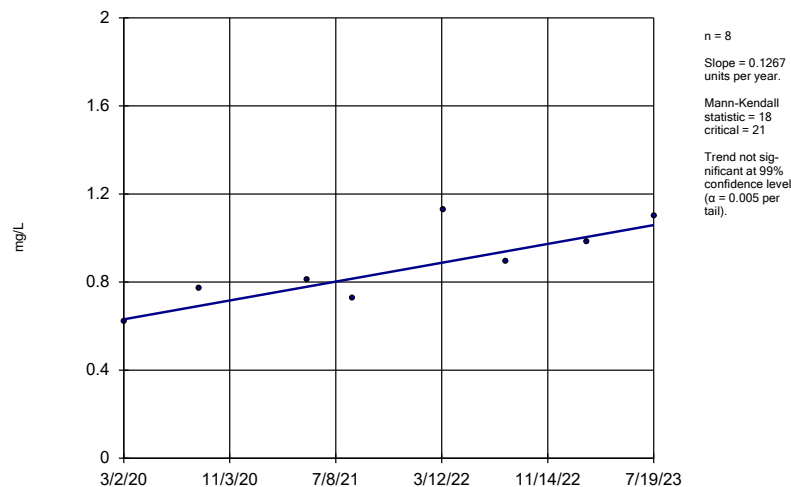
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



Constituent: Manganese Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

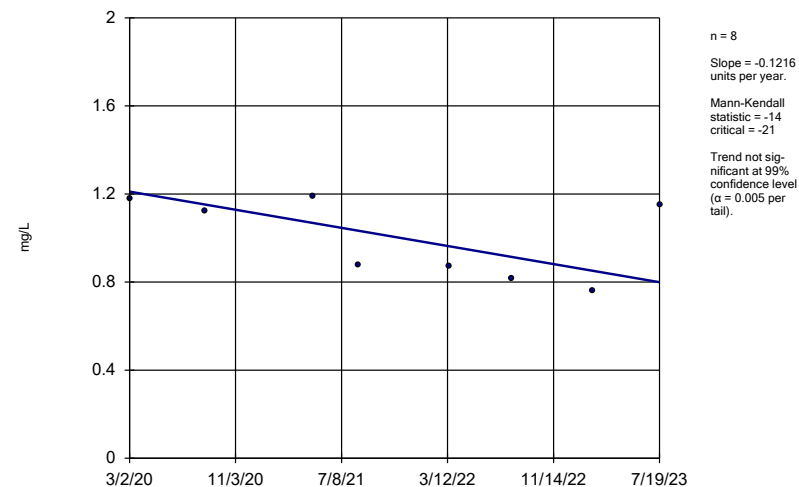
MW-11



Constituent: Manganese Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

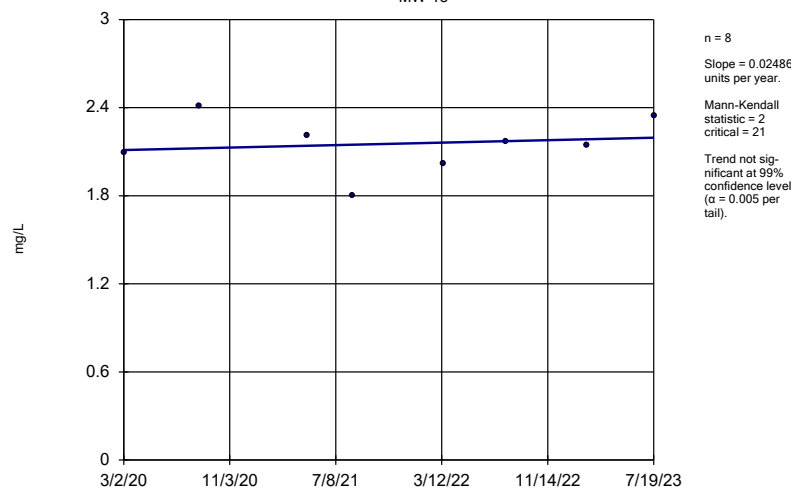
MW-12



Constituent: Manganese Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

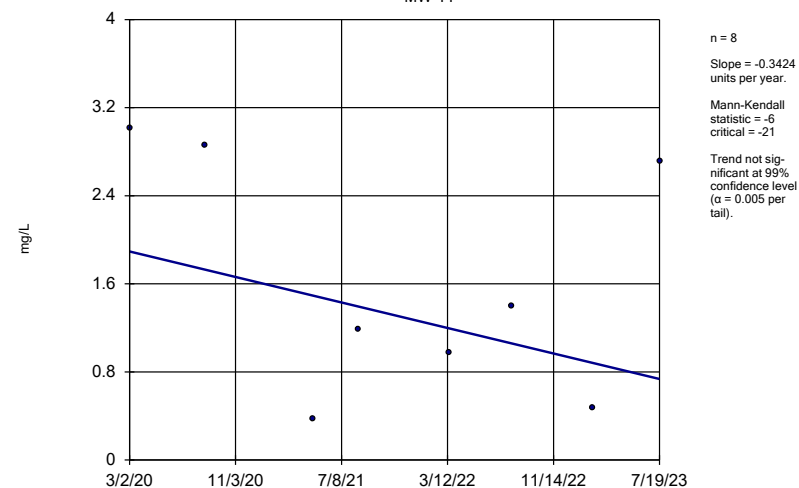
MW-13



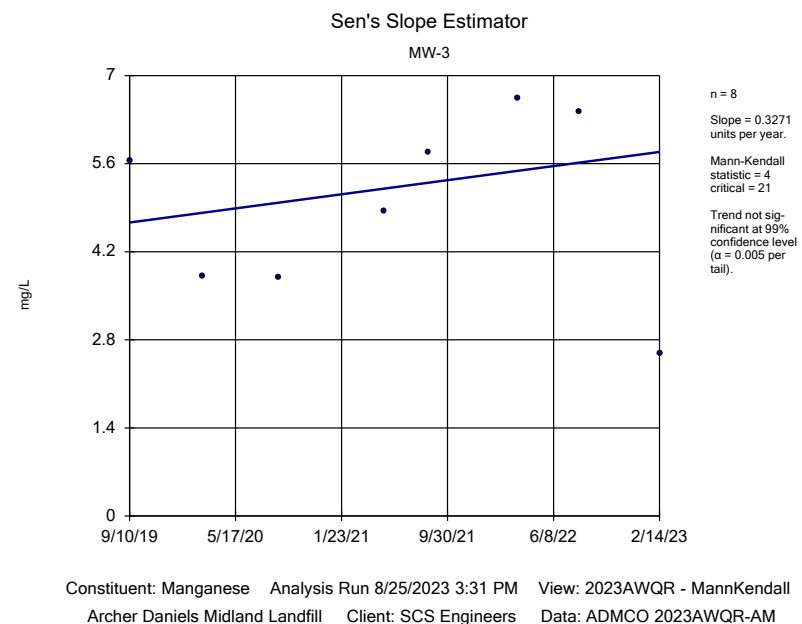
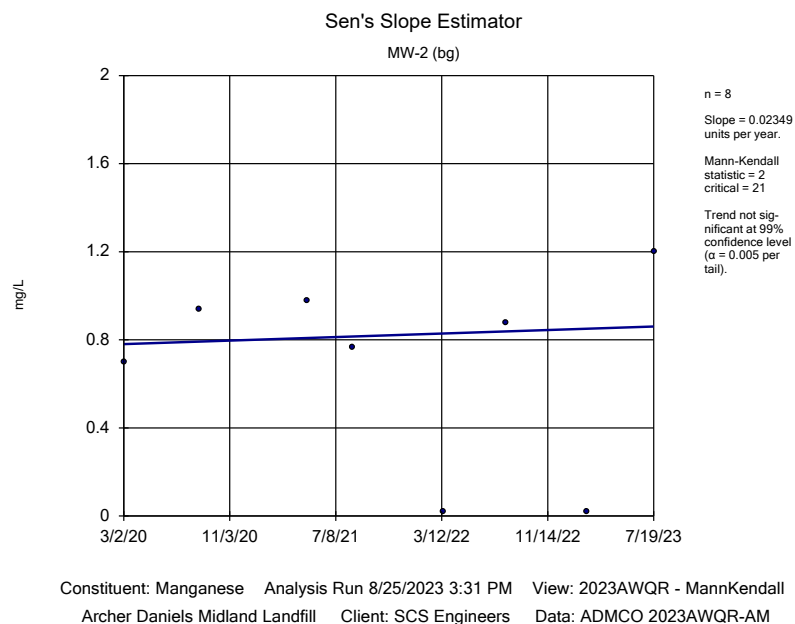
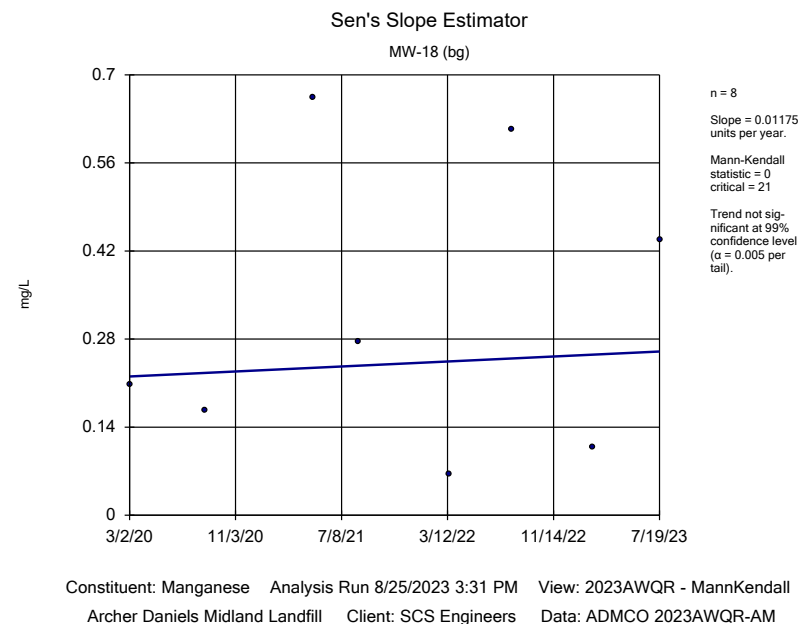
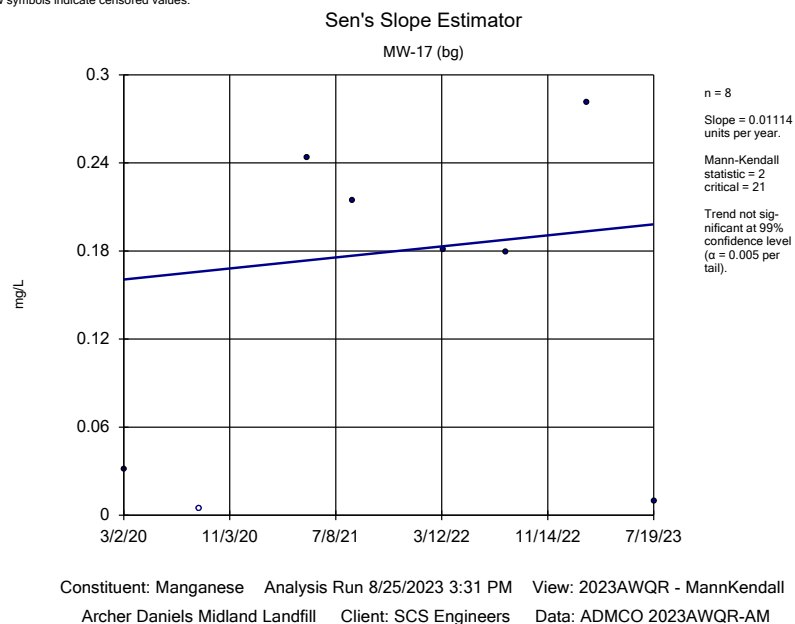
Constituent: Manganese Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

MW-14

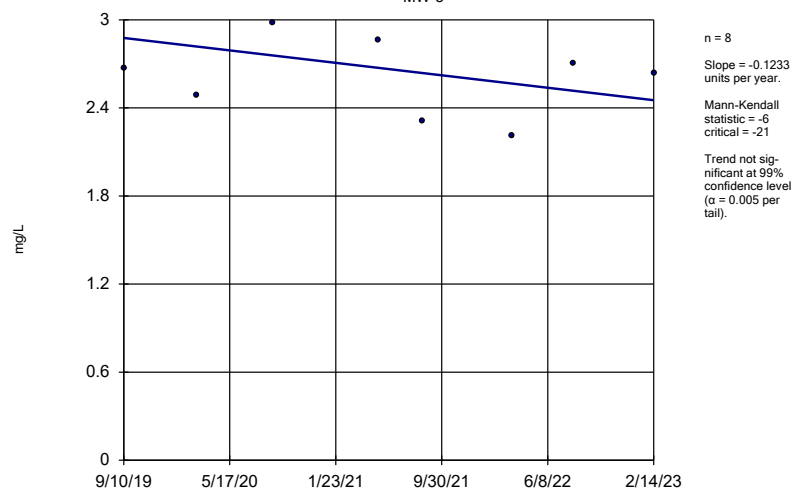


Constituent: Manganese Analysis Run 8/25/2023 3:31 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



Sen's Slope Estimator

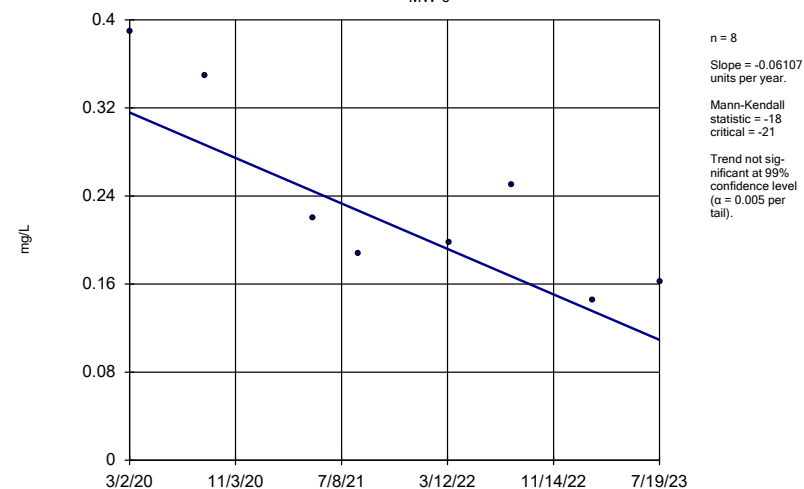
MW-5



Constituent: Manganese Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

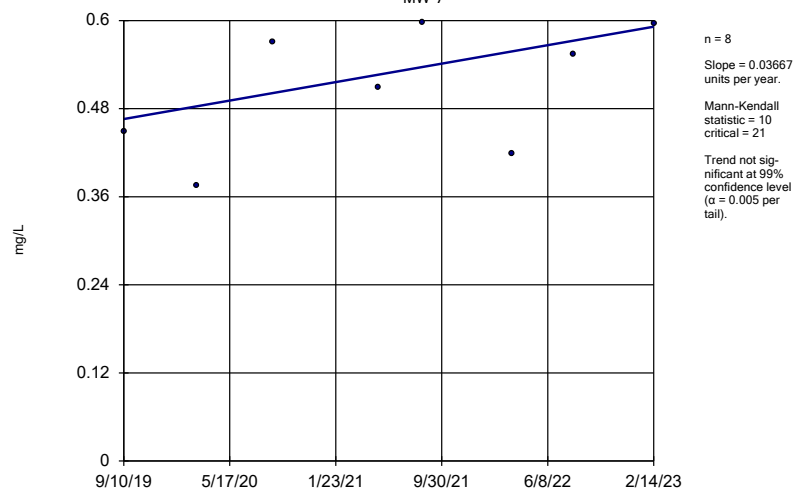
MW-6



Constituent: Manganese Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

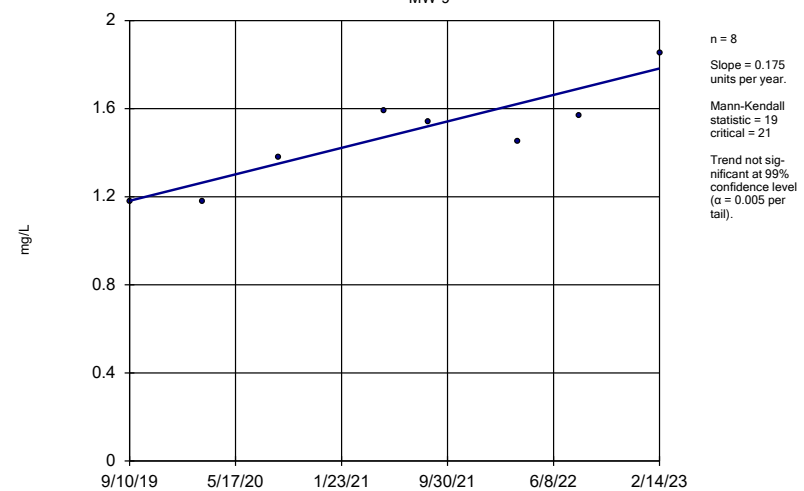
MW-7



Constituent: Manganese Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

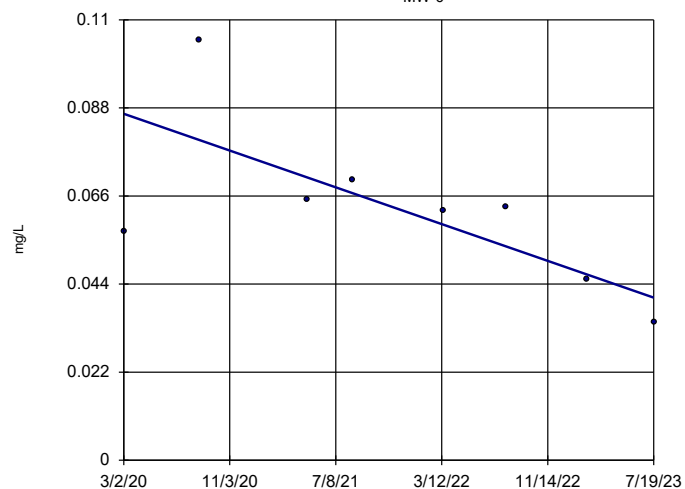
MW-9



Constituent: Manganese Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

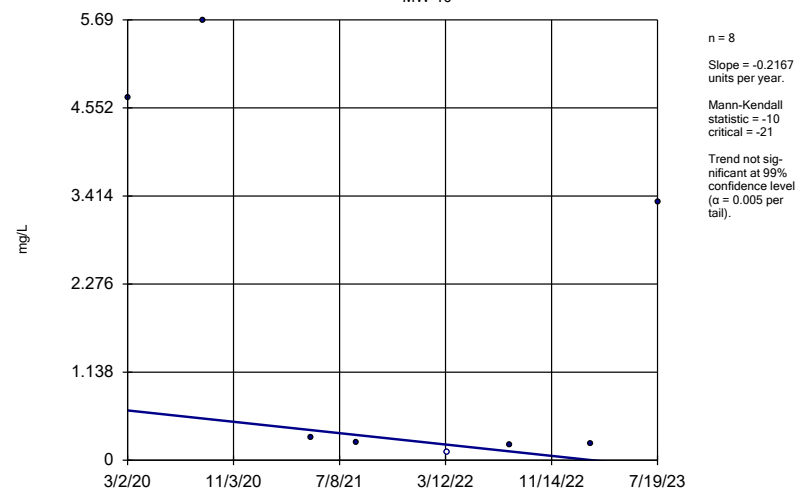
MW-6



Constituent: Nickel Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

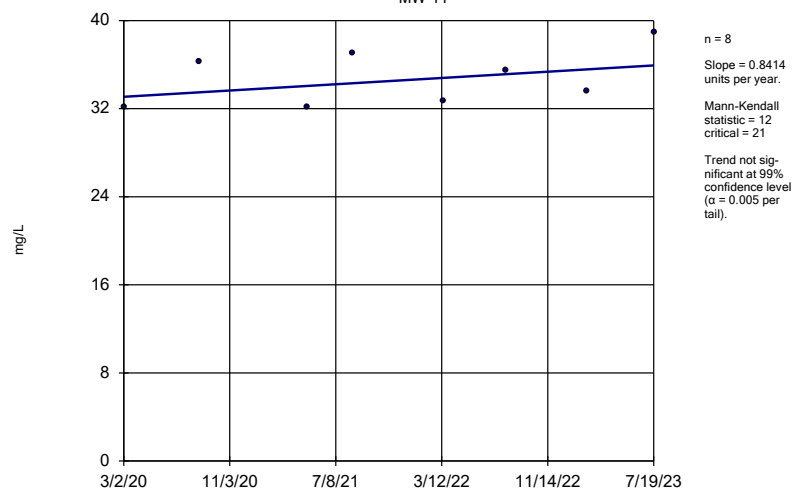
MW-10



Constituent: Nitrogen, Ammonia Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

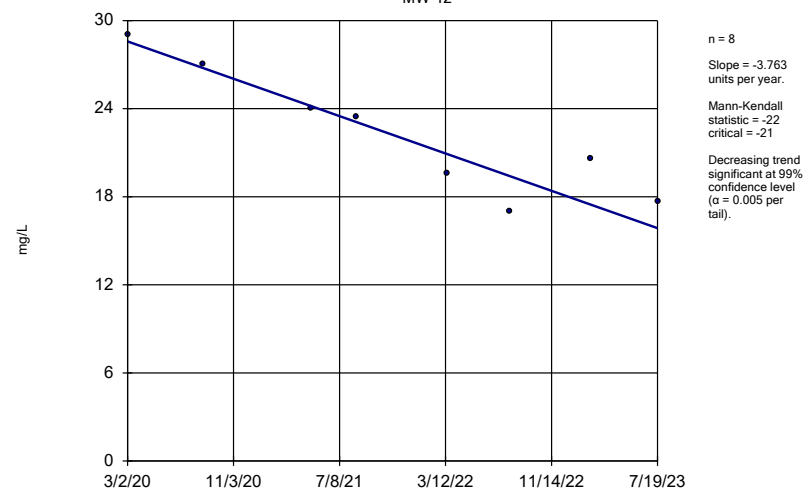
MW-11



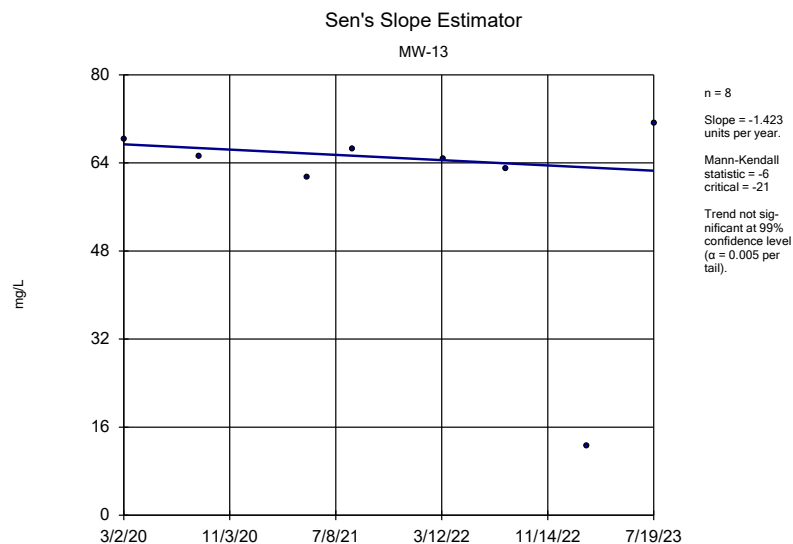
Constituent: Nitrogen, Ammonia Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

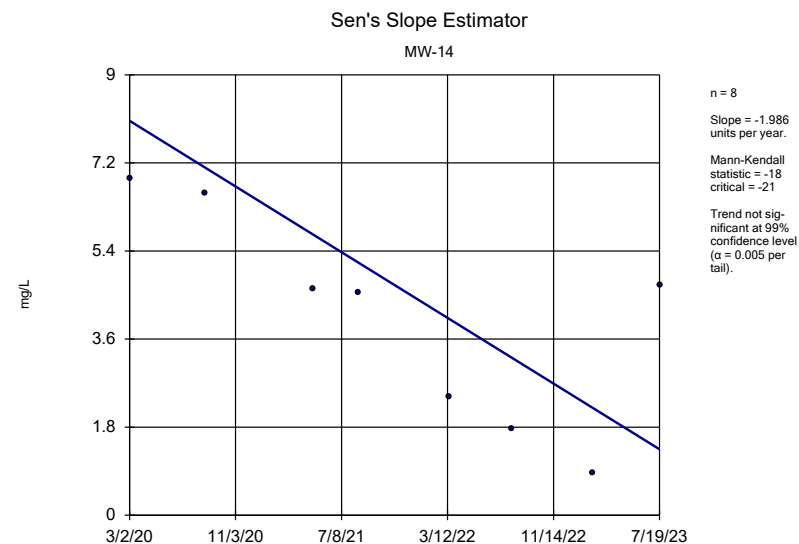
MW-12



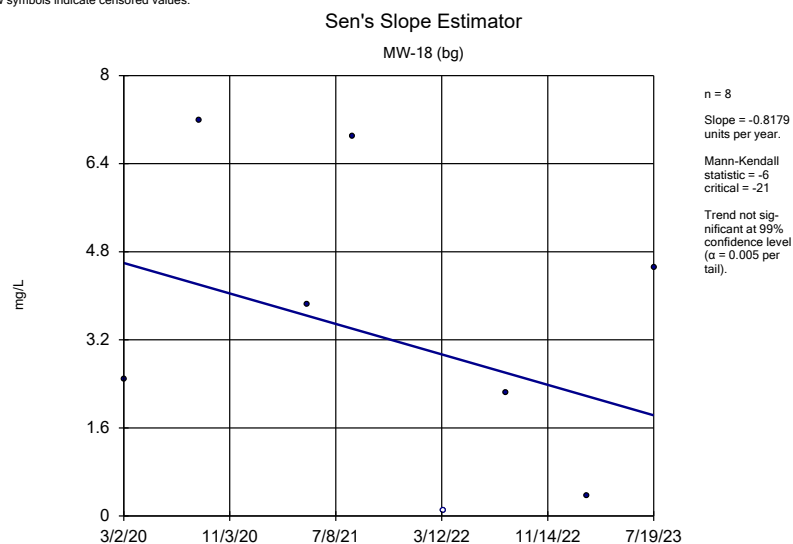
Constituent: Nitrogen, Ammonia Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



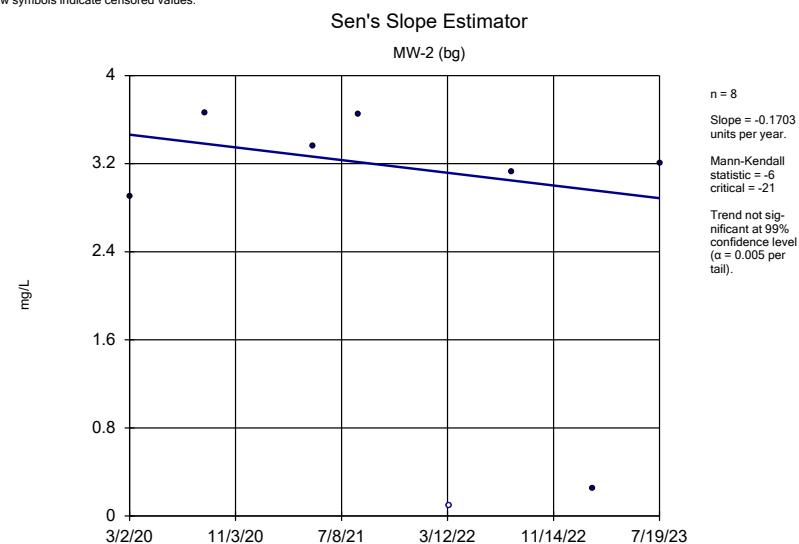
Constituent: Nitrogen, Ammonia Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



Constituent: Nitrogen, Ammonia Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



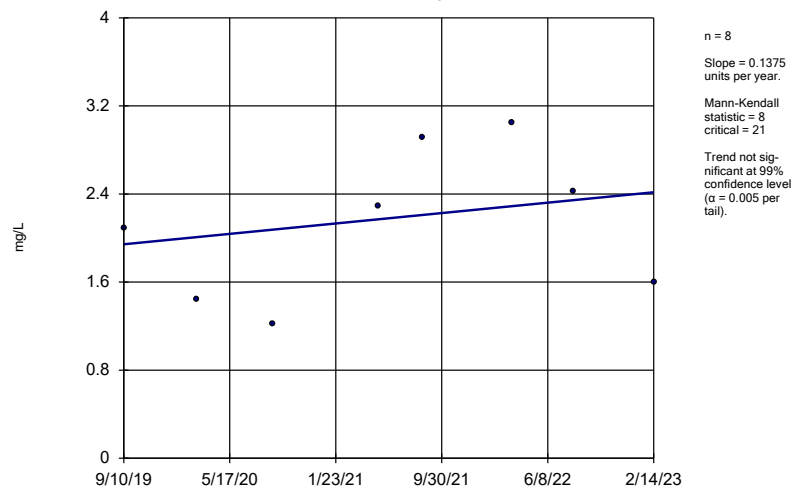
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



Constituent: Nitrogen, Ammonia Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

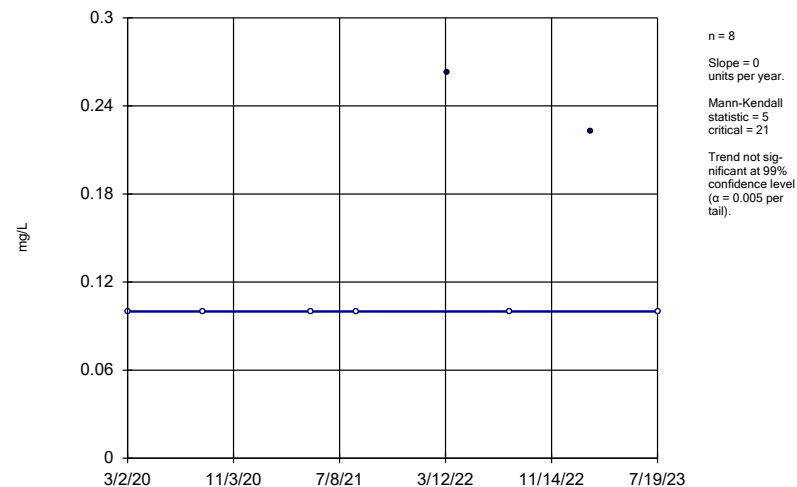
MW-3



Constituent: Nitrogen, Ammonia Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

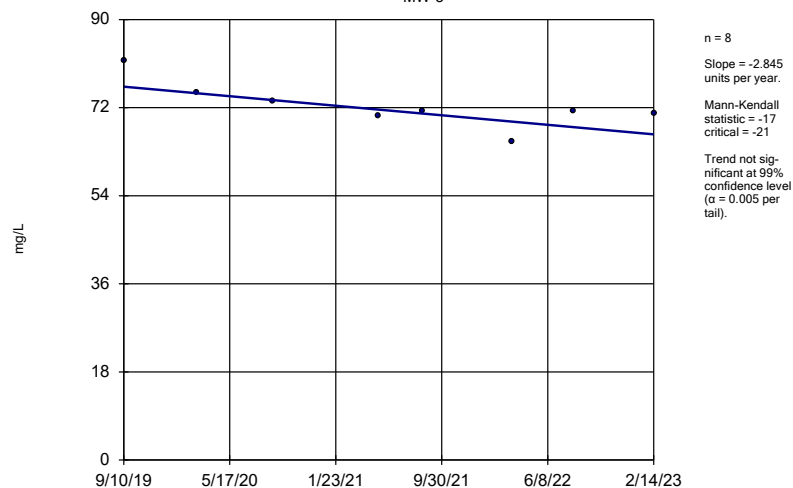
MW-4



Constituent: Nitrogen, Ammonia Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

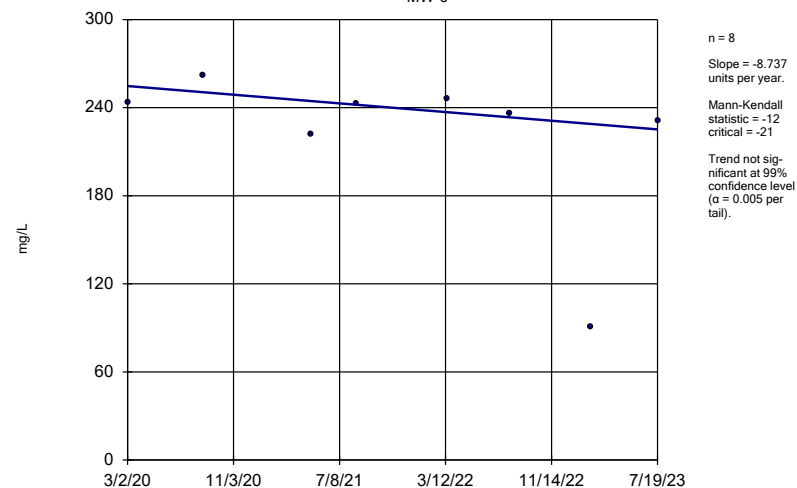
MW-5



Constituent: Nitrogen, Ammonia Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

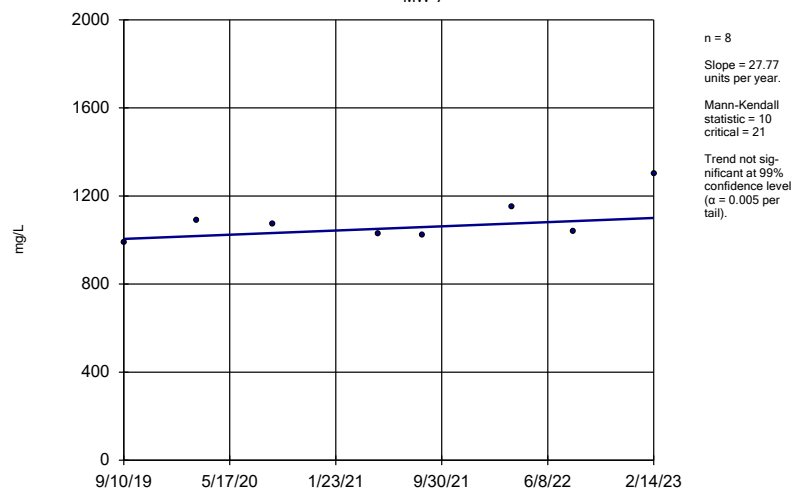
MW-6



Constituent: Nitrogen, Ammonia Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

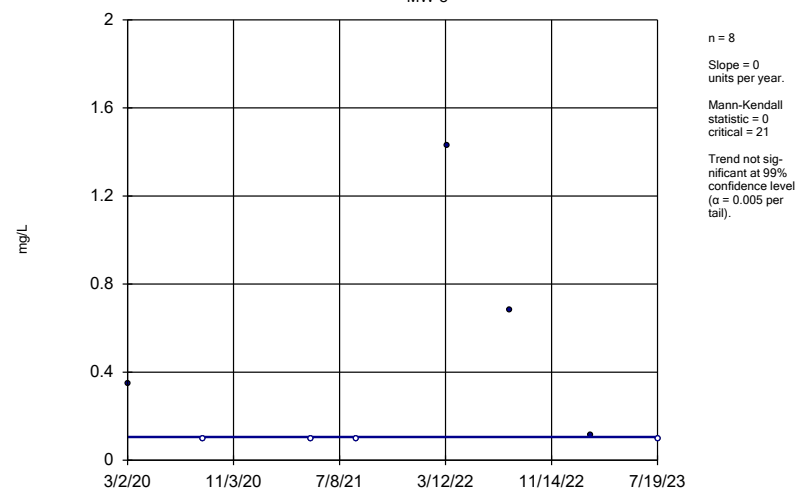
MW-7



Constituent: Nitrogen, Ammonia Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

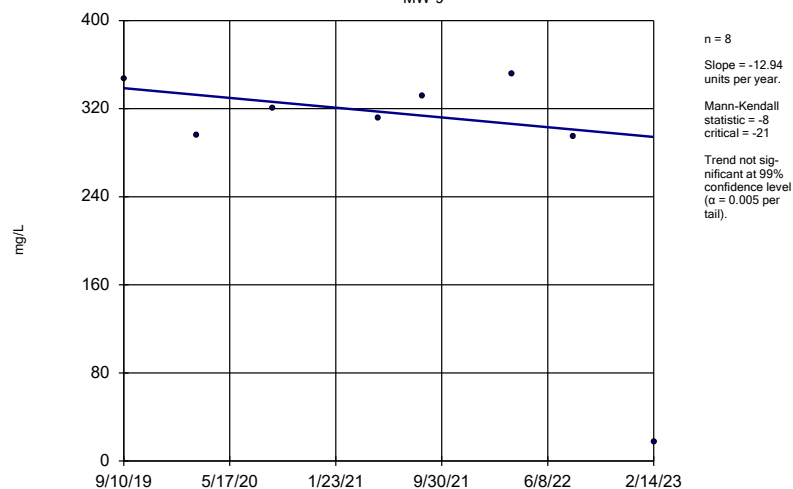
MW-8



Constituent: Nitrogen, Ammonia Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

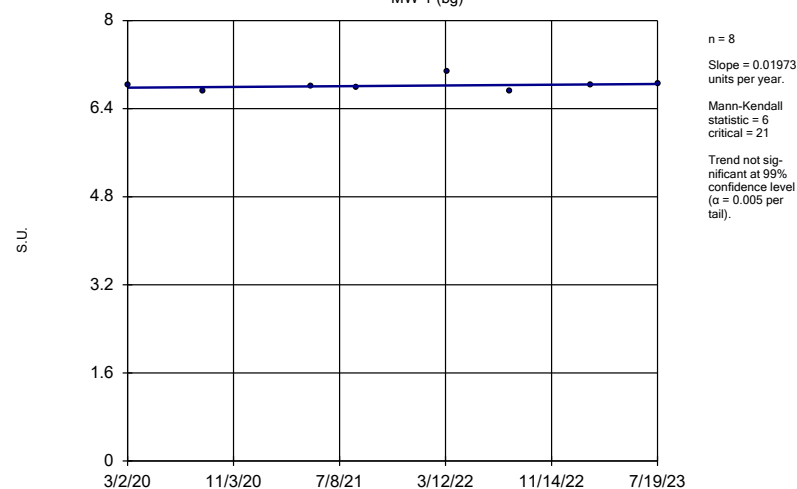
MW-9



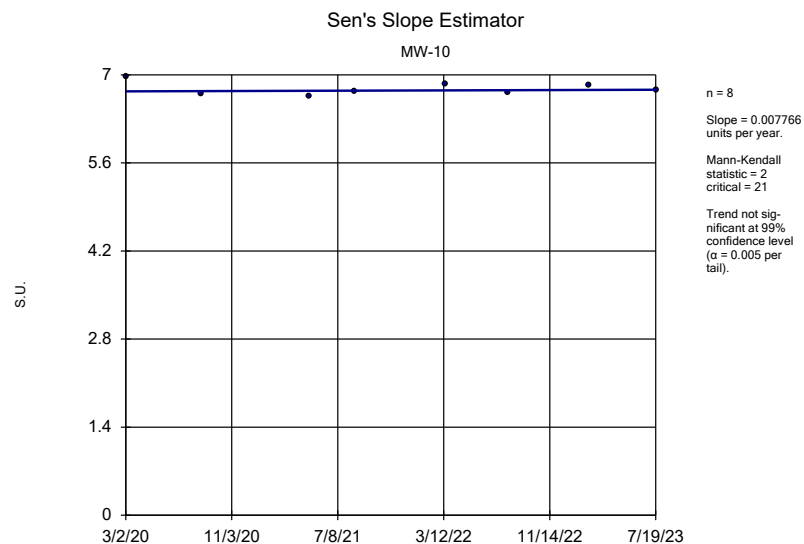
Constituent: Nitrogen, Ammonia Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

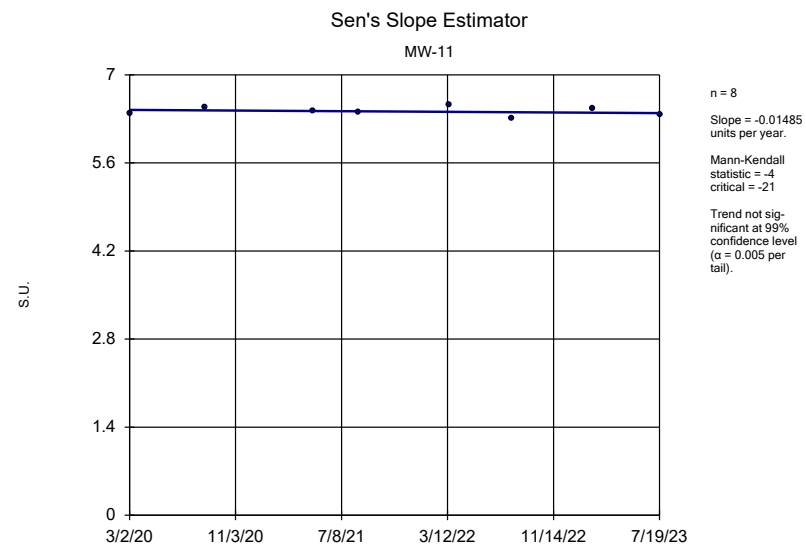
MW-1 (bg)



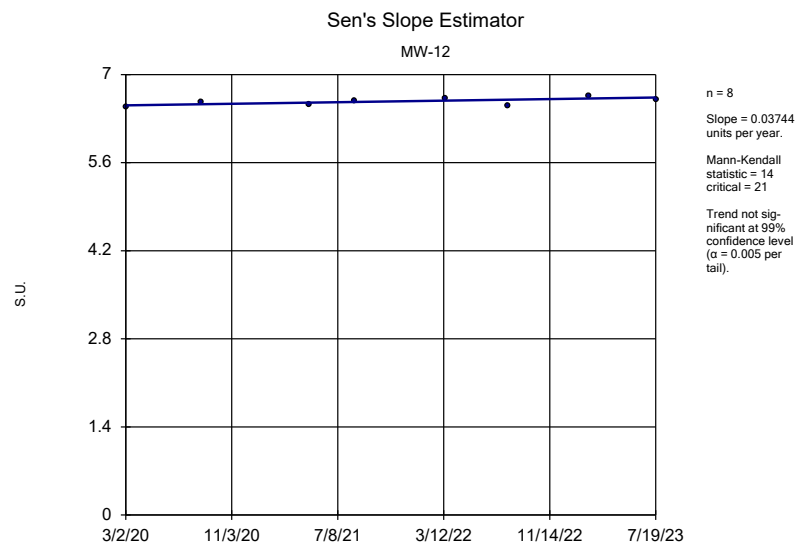
Constituent: pH Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



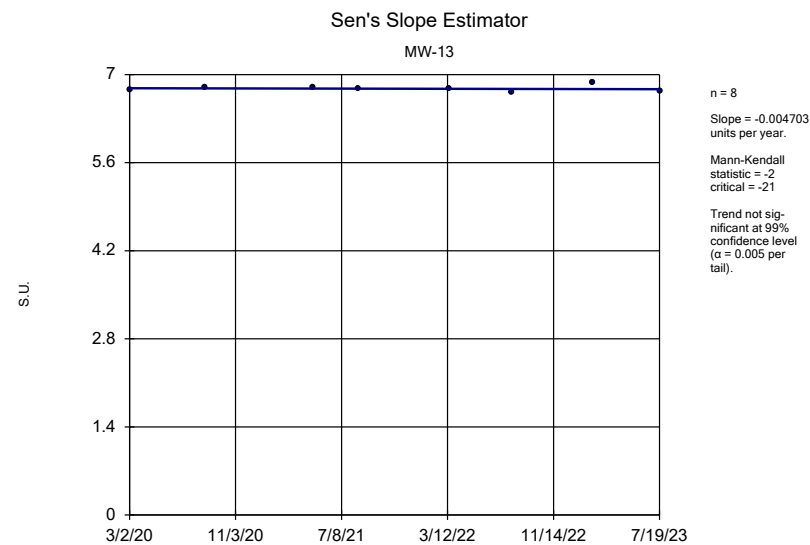
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



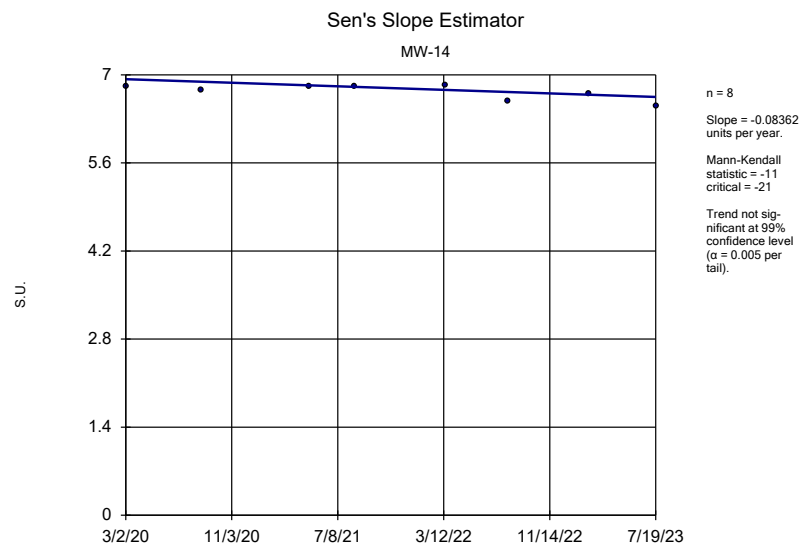
Constituent: pH Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



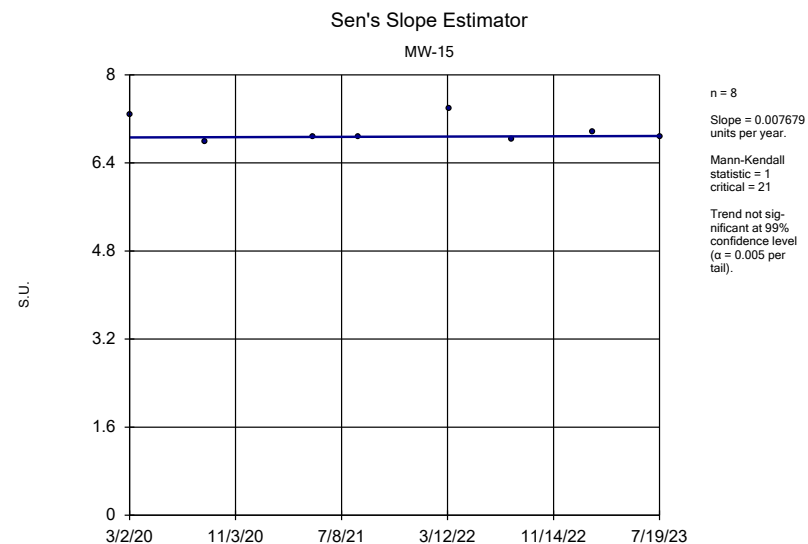
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



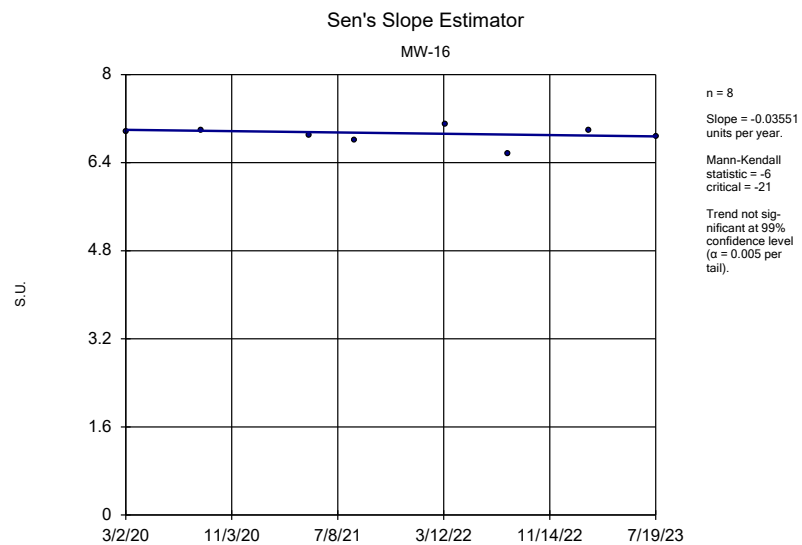
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



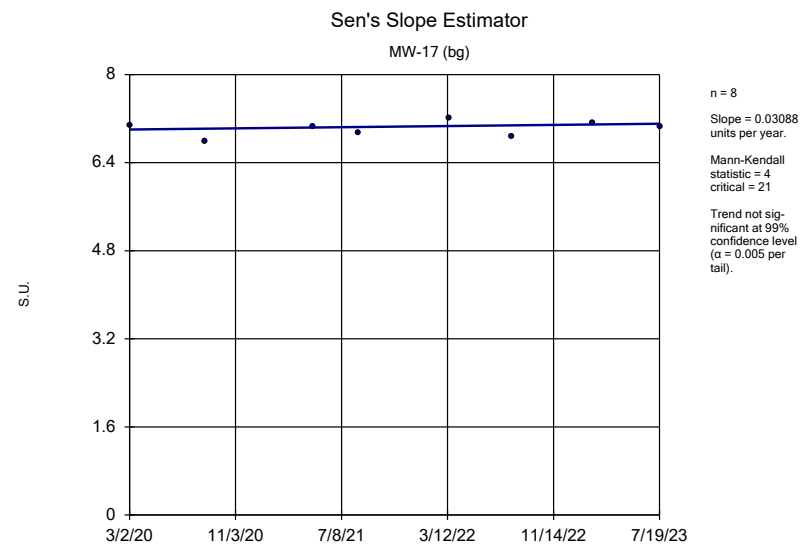
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



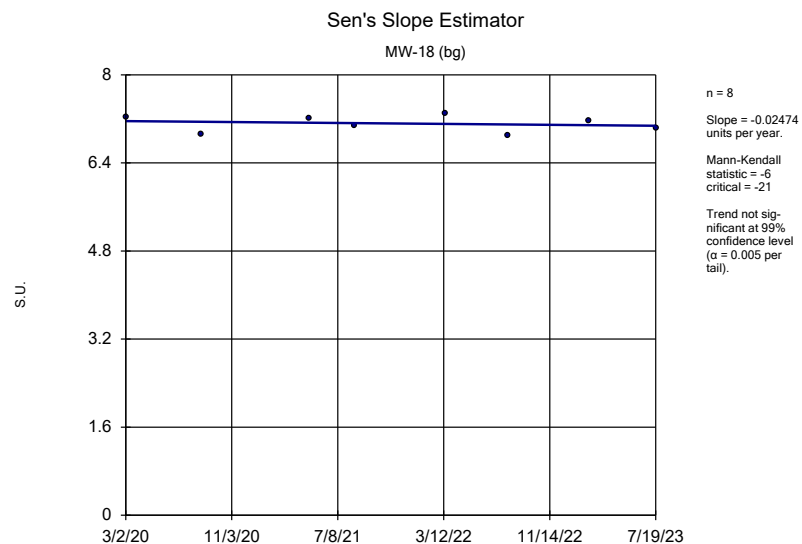
Constituent: pH Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



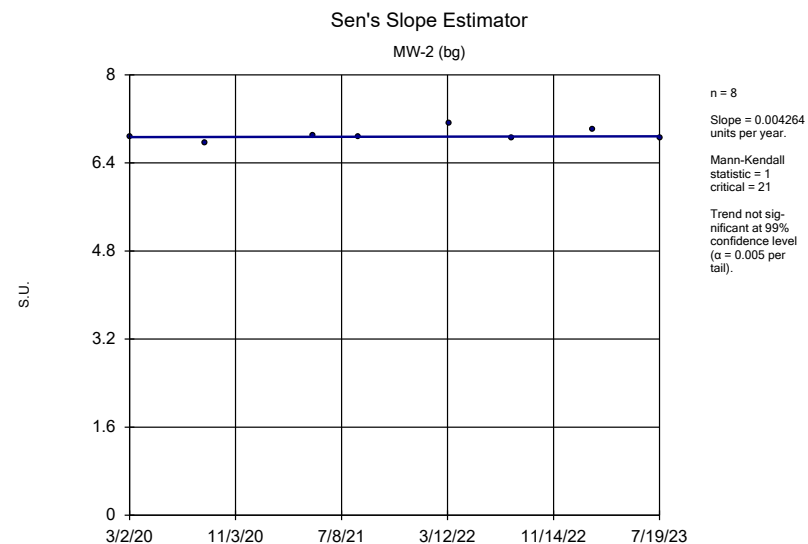
Constituent: pH Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



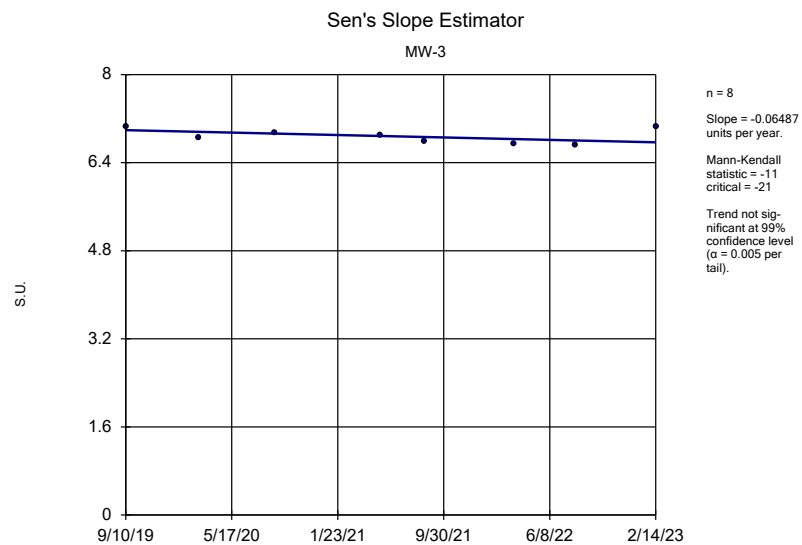
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



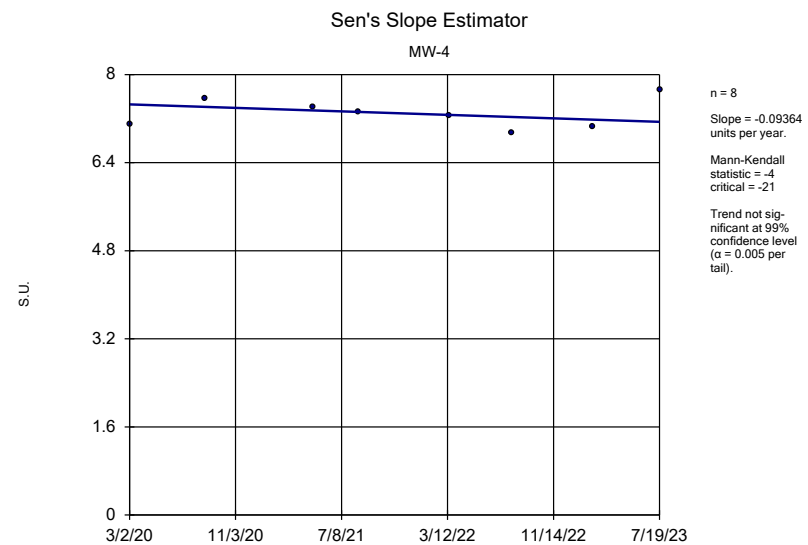
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



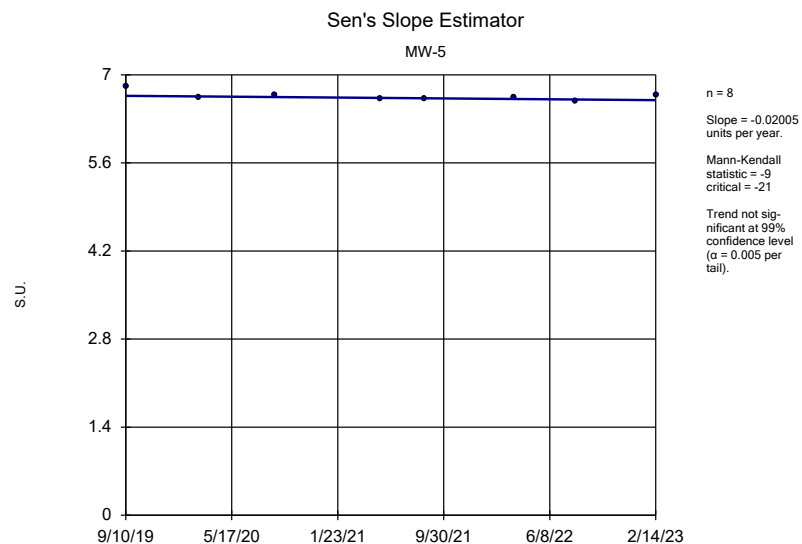
Constituent: pH Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



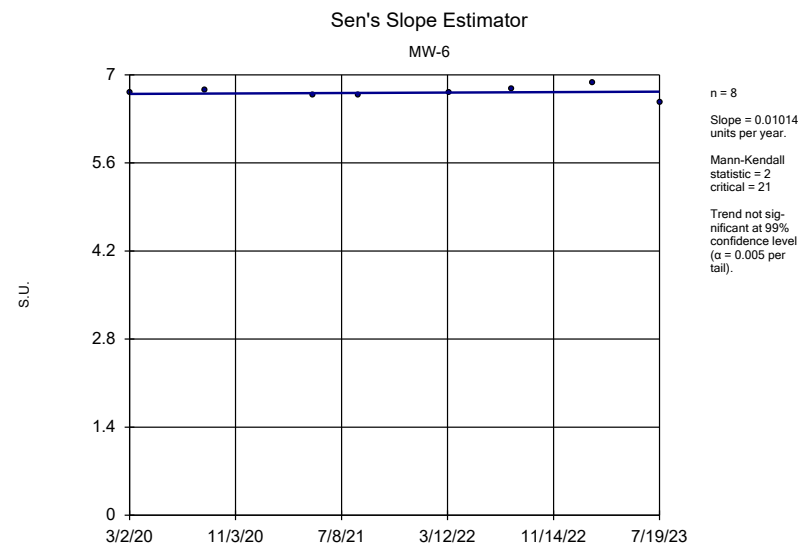
Constituent: pH Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



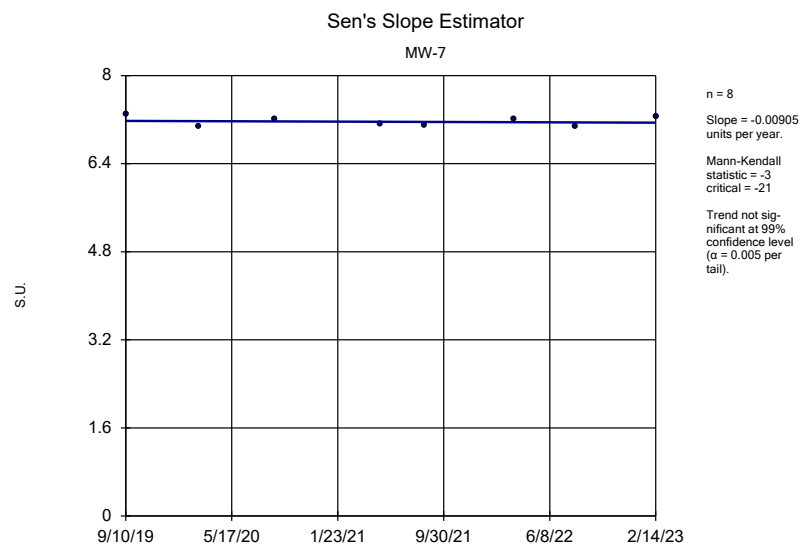
Constituent: pH Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



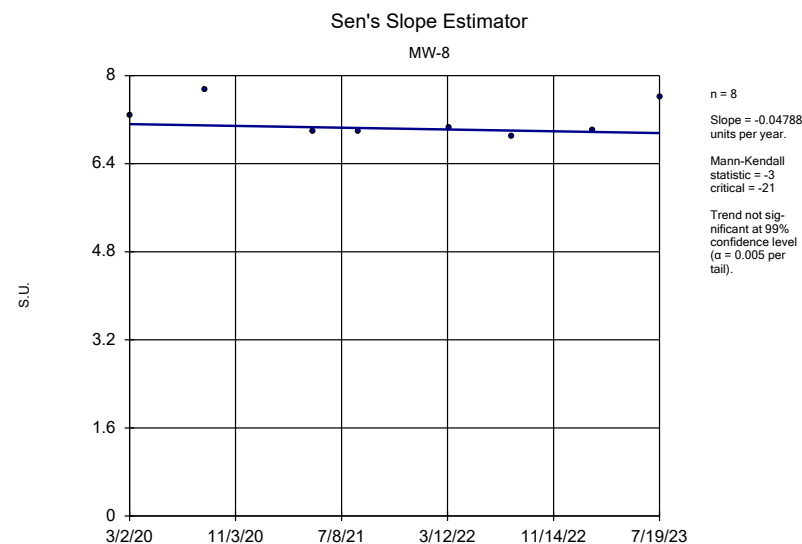
Constituent: pH Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



Constituent: pH Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



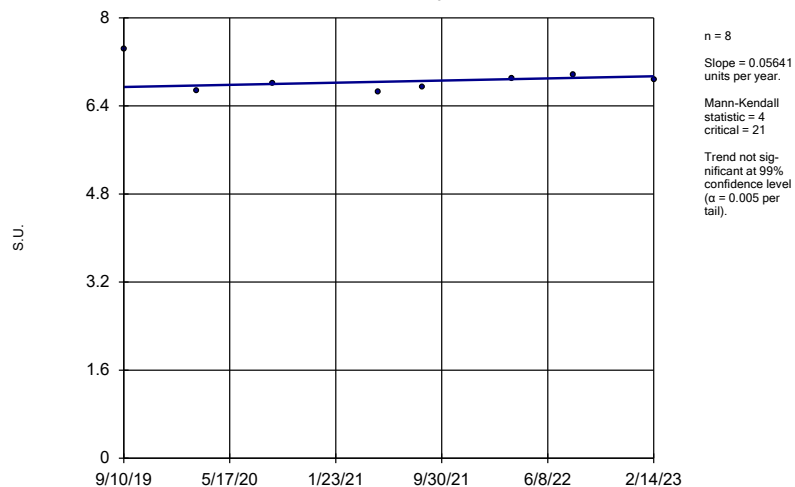
Constituent: pH Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



Constituent: pH Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

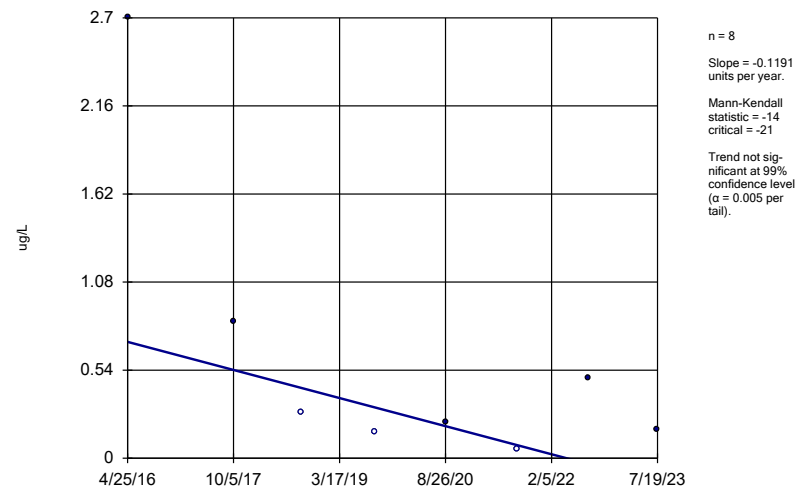
MW-9



Constituent: pH Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

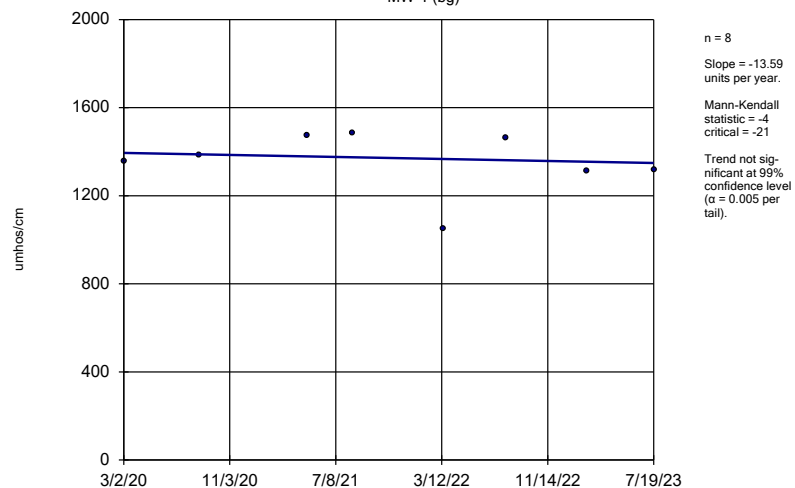
MW-11



Constituent: Phenanthrene Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

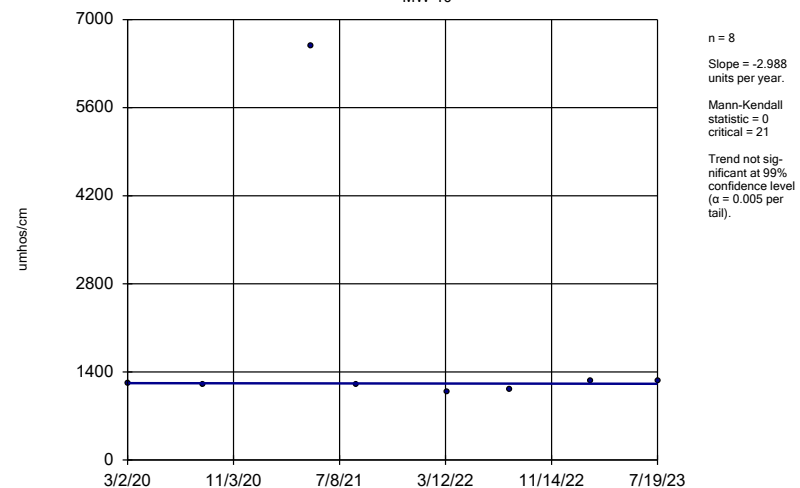
MW-1 (bg)



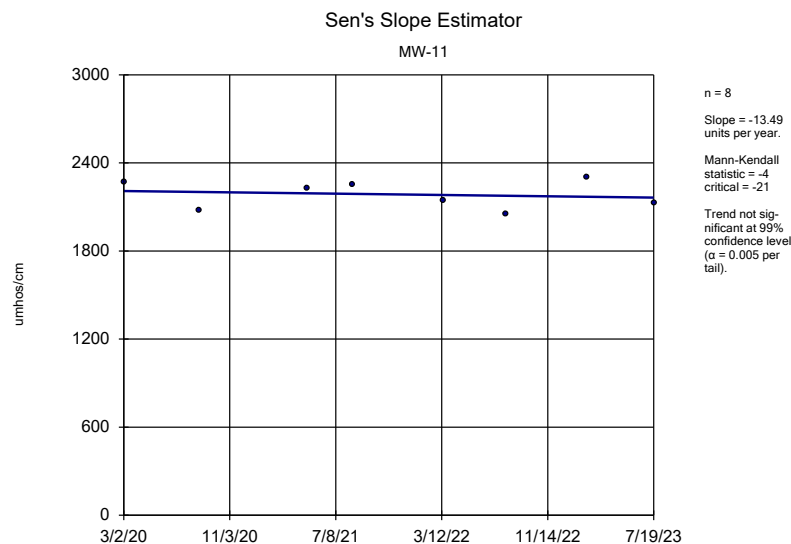
Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

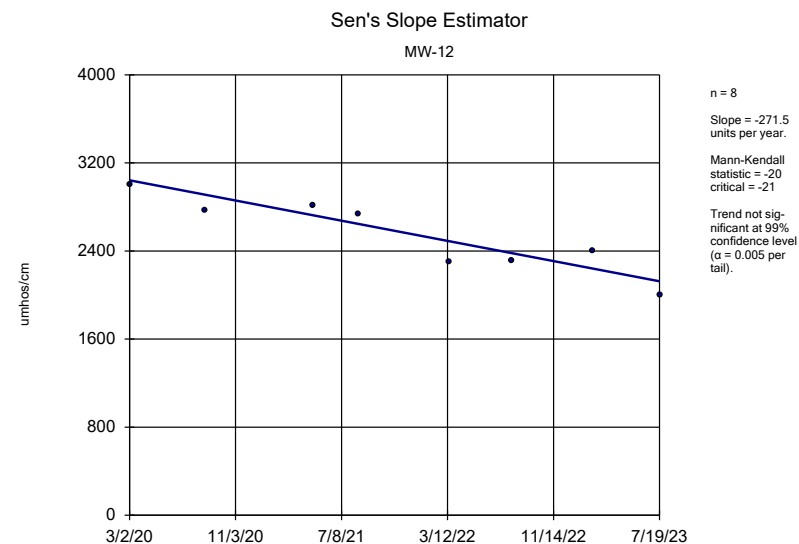
MW-10



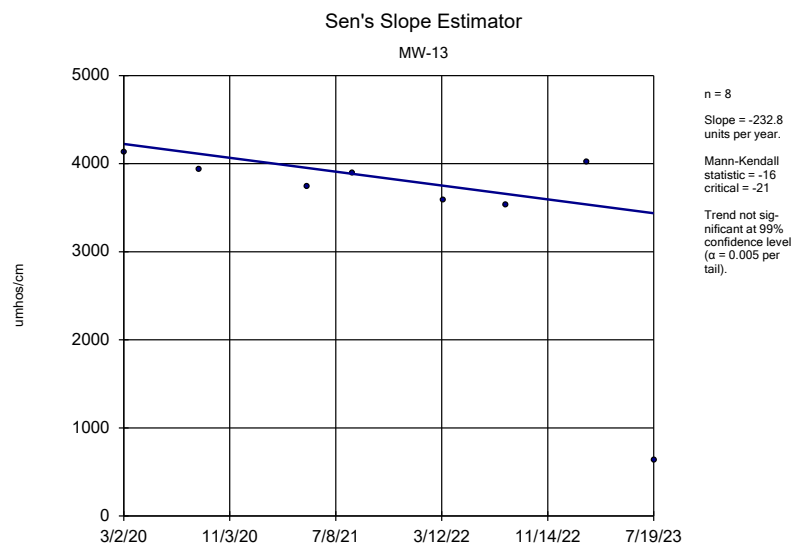
Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



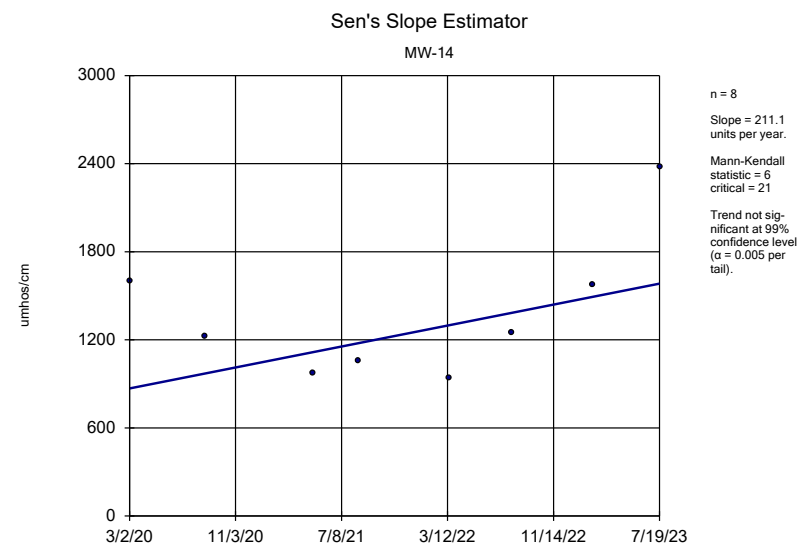
Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



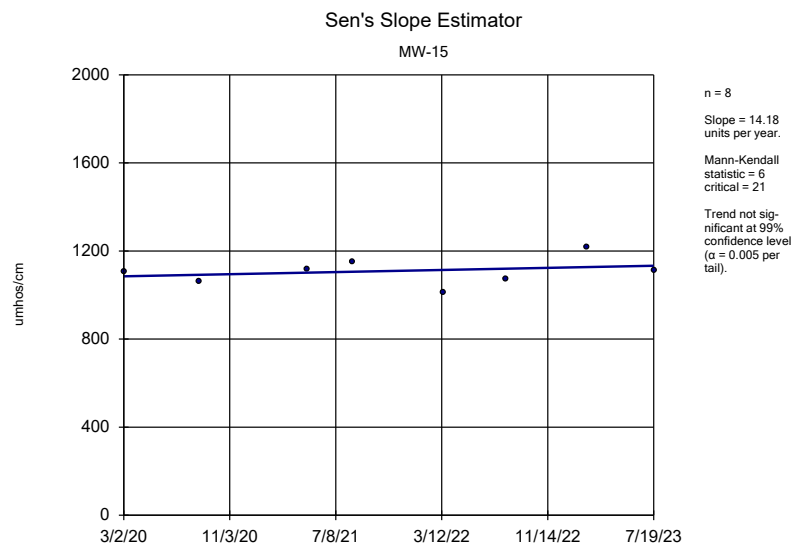
Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



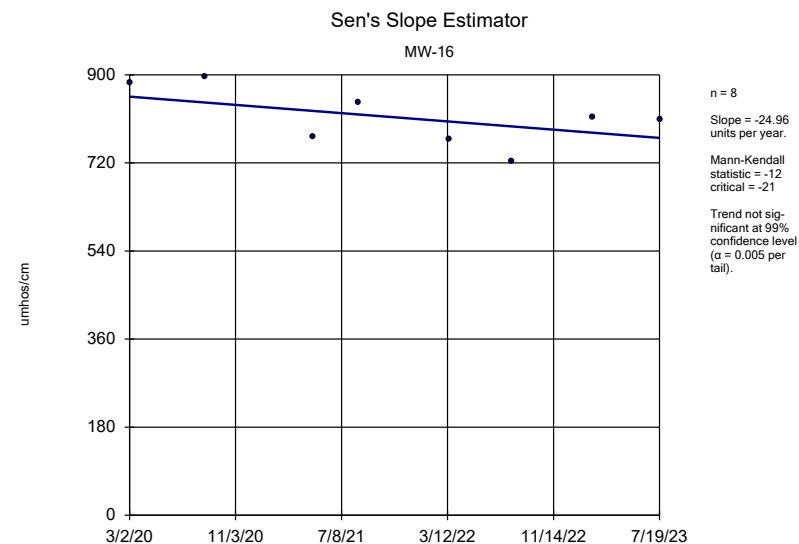
Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



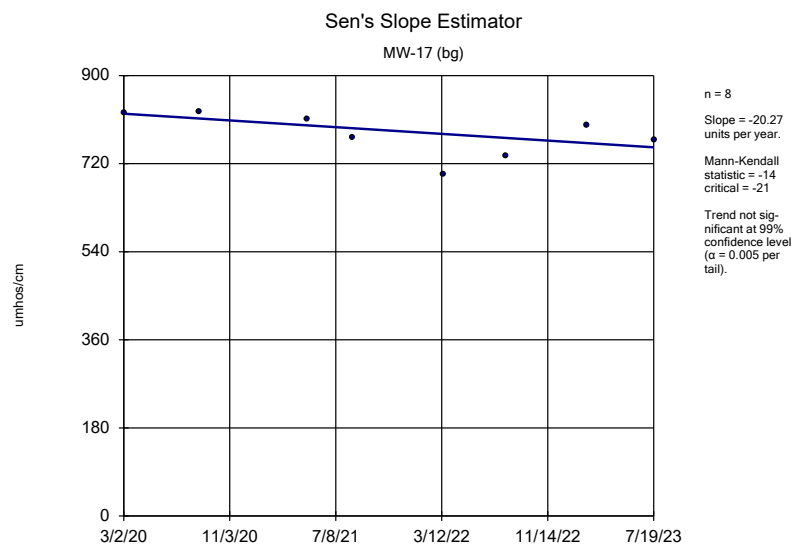
Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



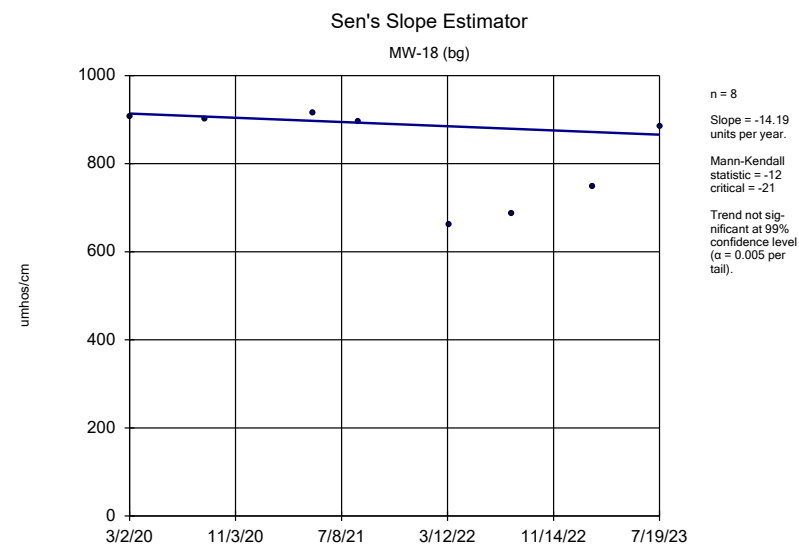
Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



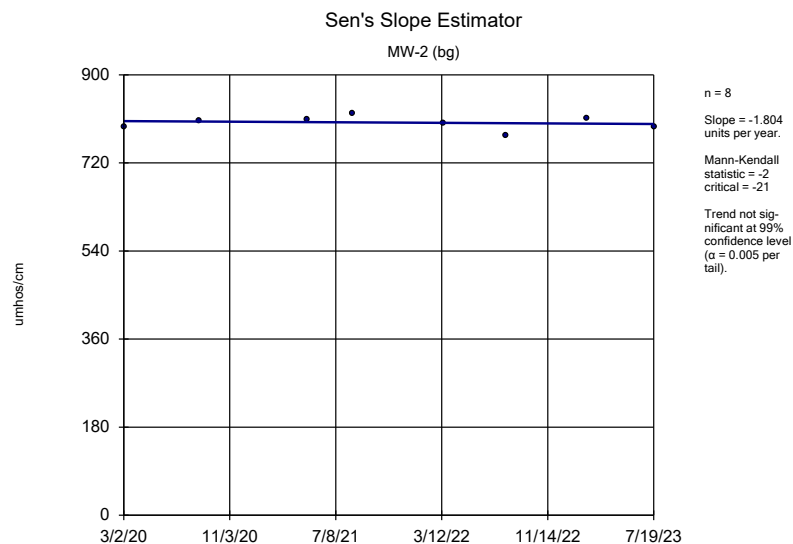
Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



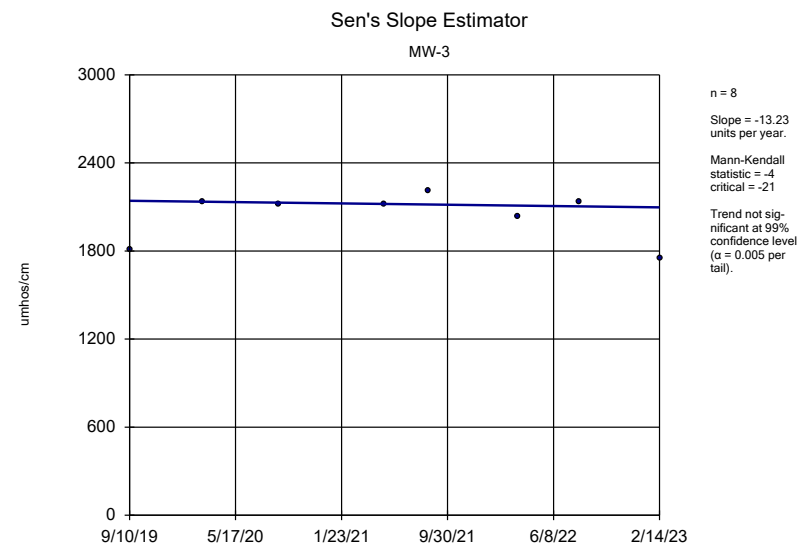
Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



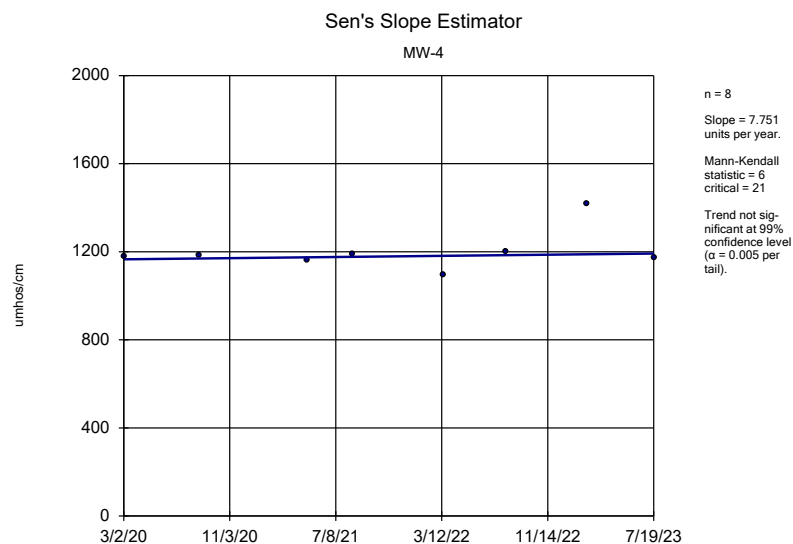
Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



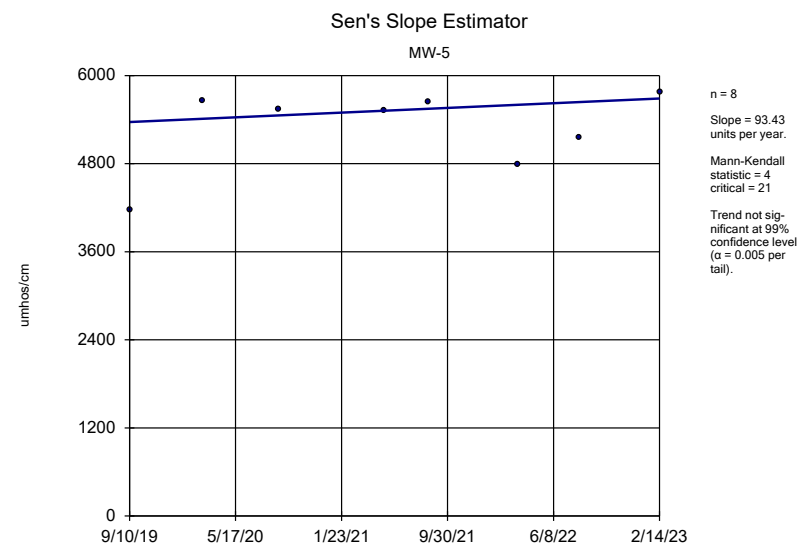
Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



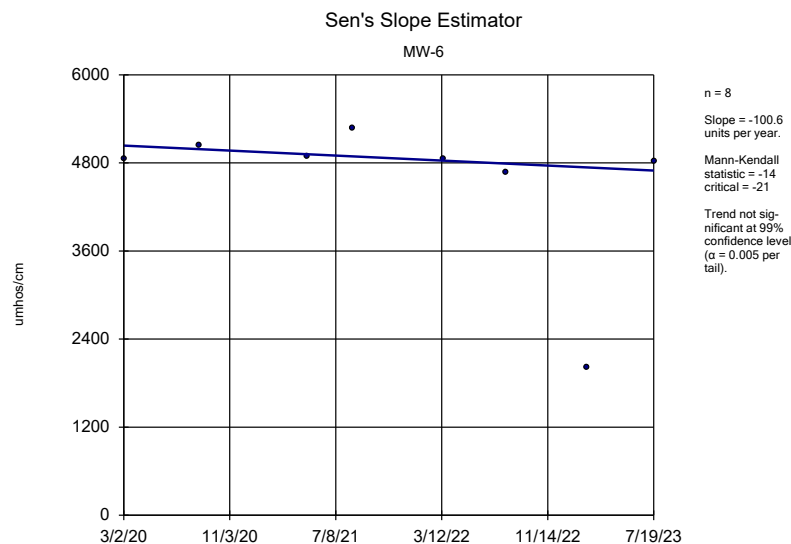
Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



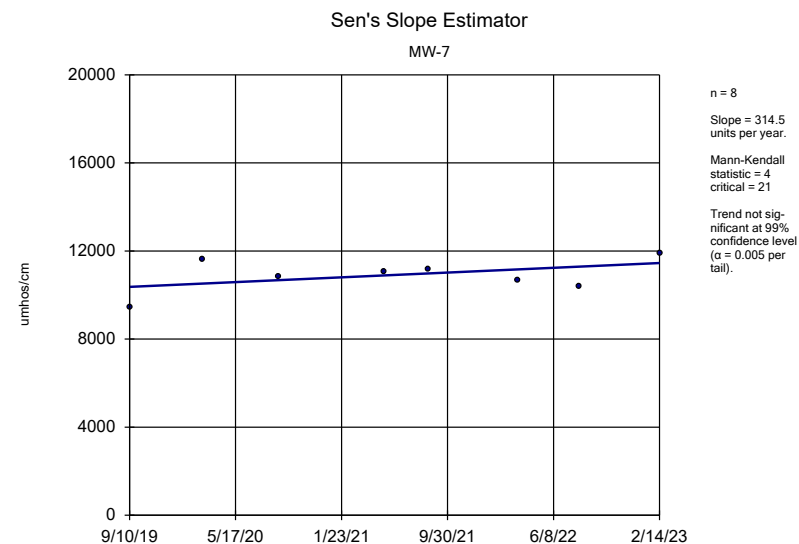
Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



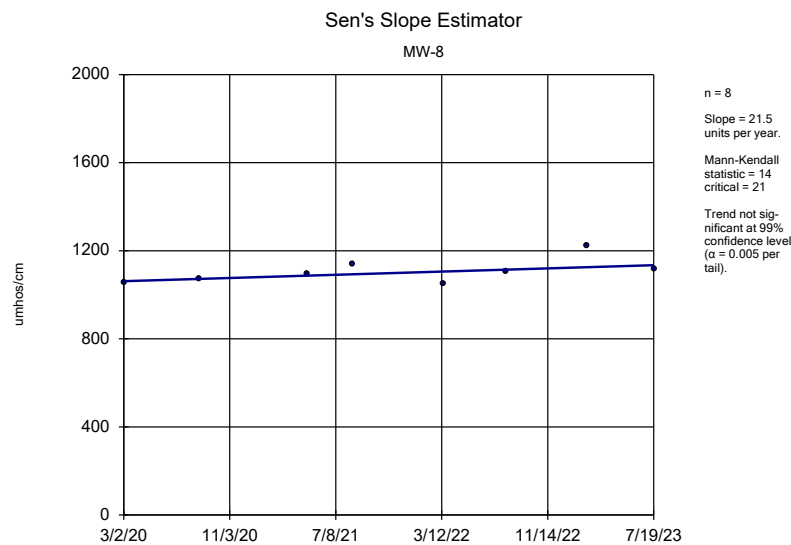
Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



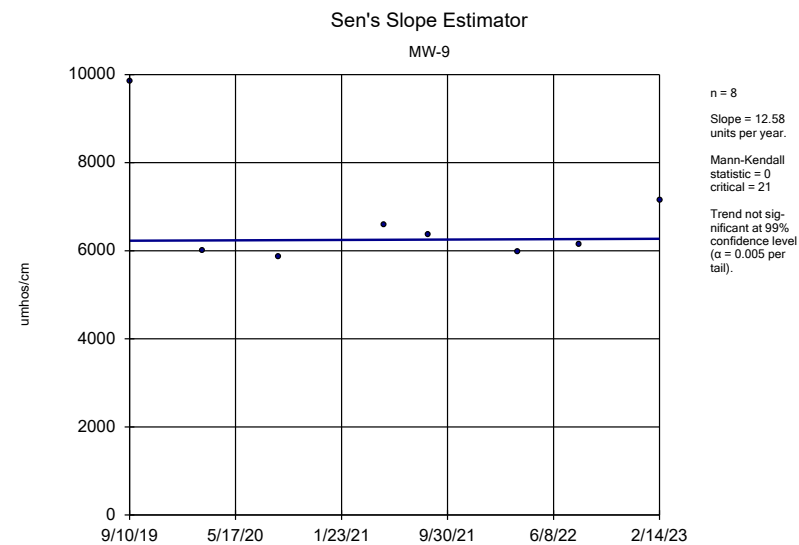
Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



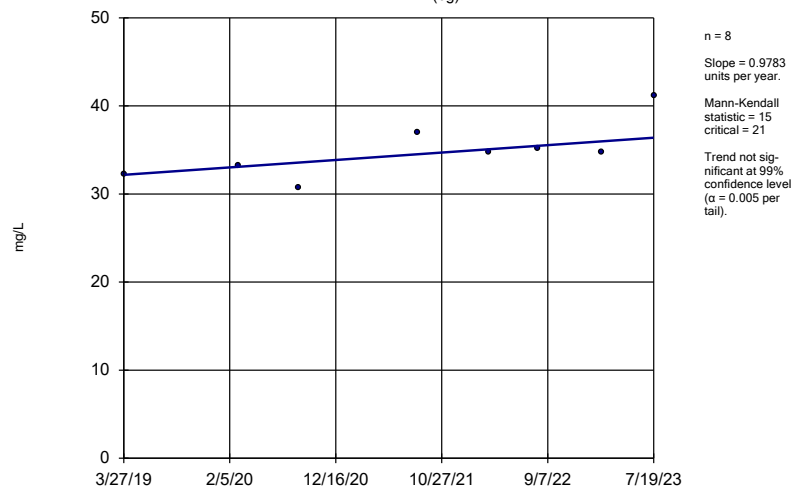
Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



Constituent: Specific Conductance Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

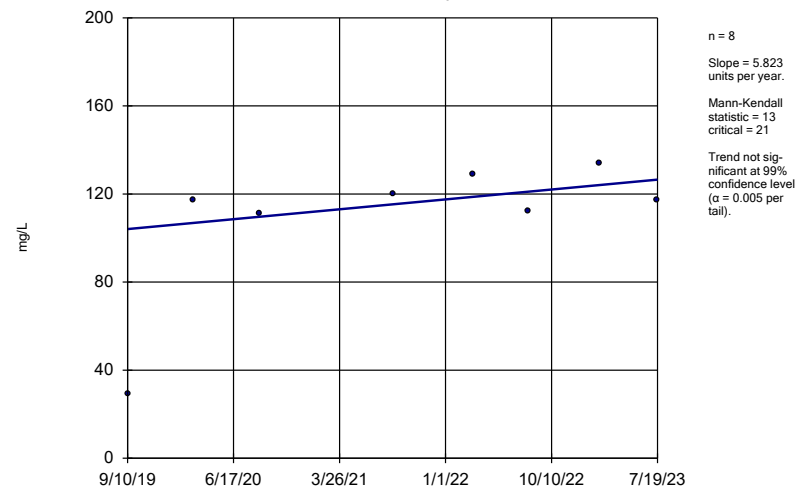
MW-1 (bg)



Constituent: Sulfate Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

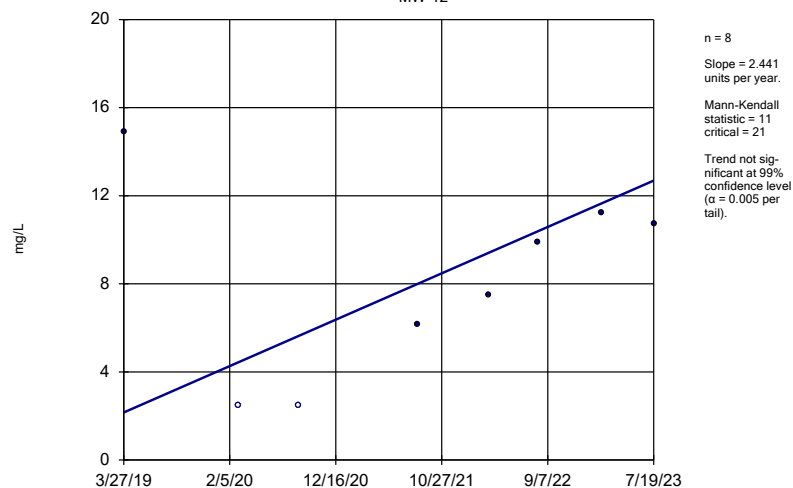
MW-10



Constituent: Sulfate Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

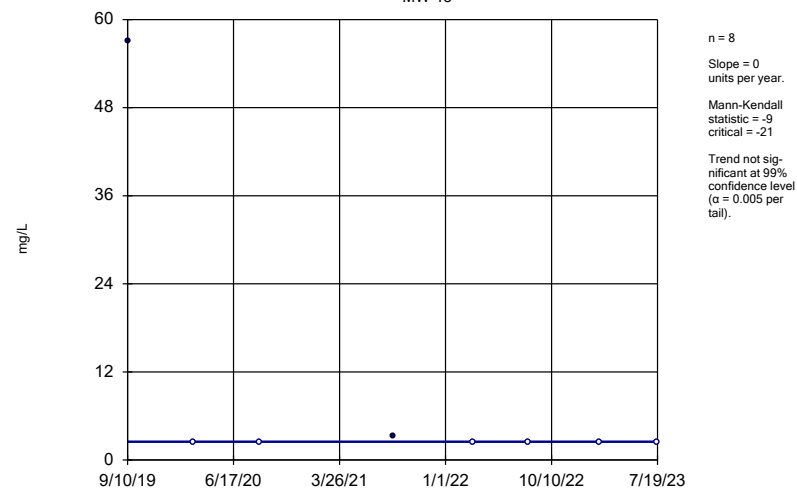
MW-12



Constituent: Sulfate Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

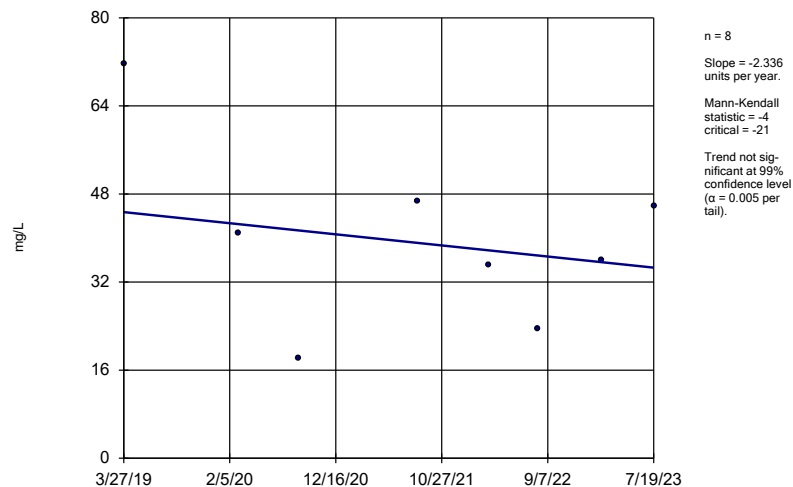
MW-13



Constituent: Sulfate Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

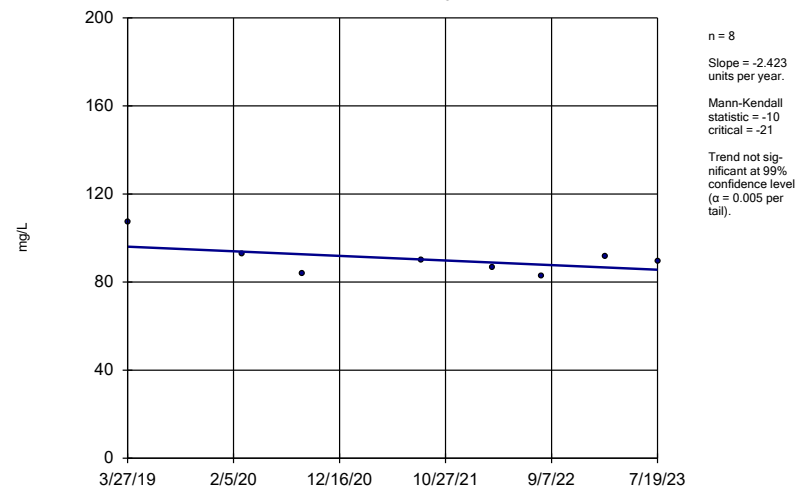
MW-14



Constituent: Sulfate Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

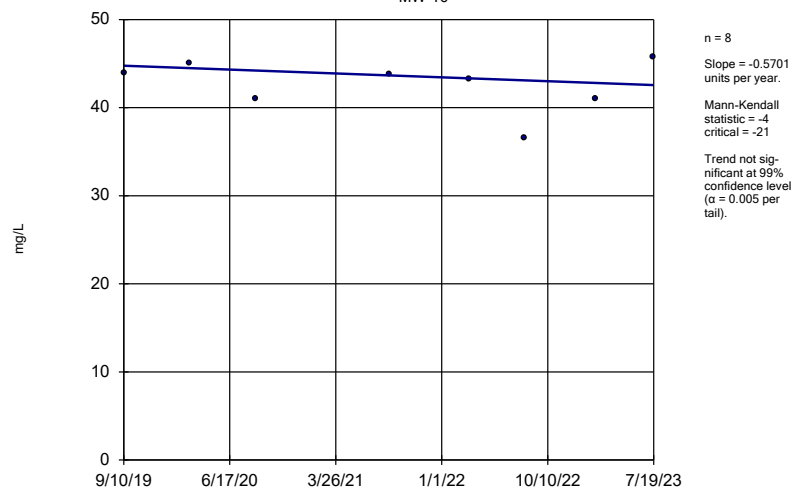
MW-15



Constituent: Sulfate Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

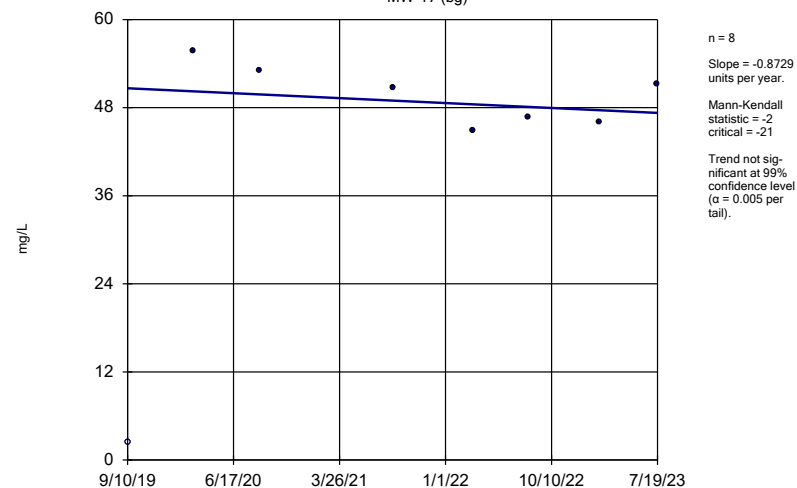
MW-16



Constituent: Sulfate Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

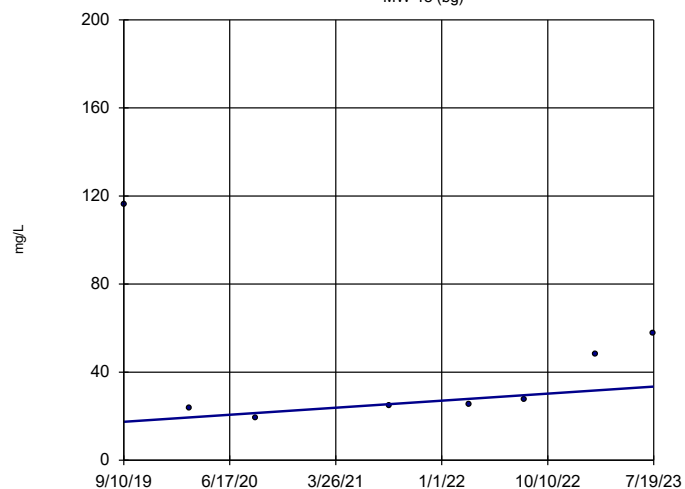
MW-17 (bg)



Constituent: Sulfate Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

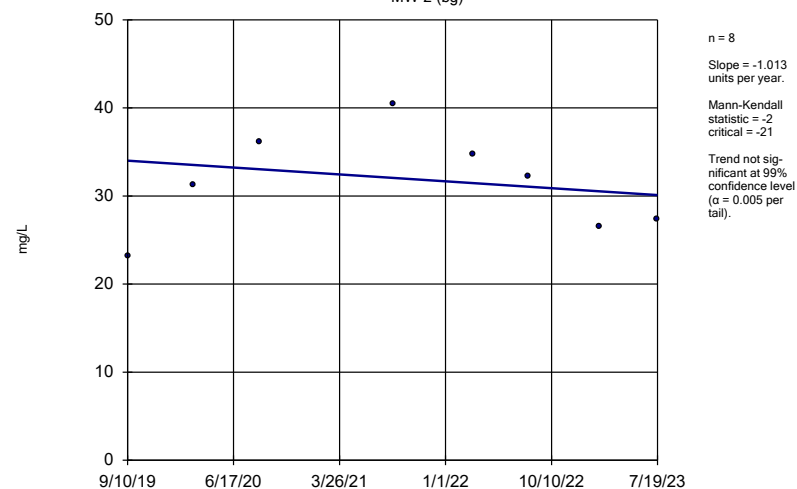
MW-18 (bg)



Constituent: Sulfate Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

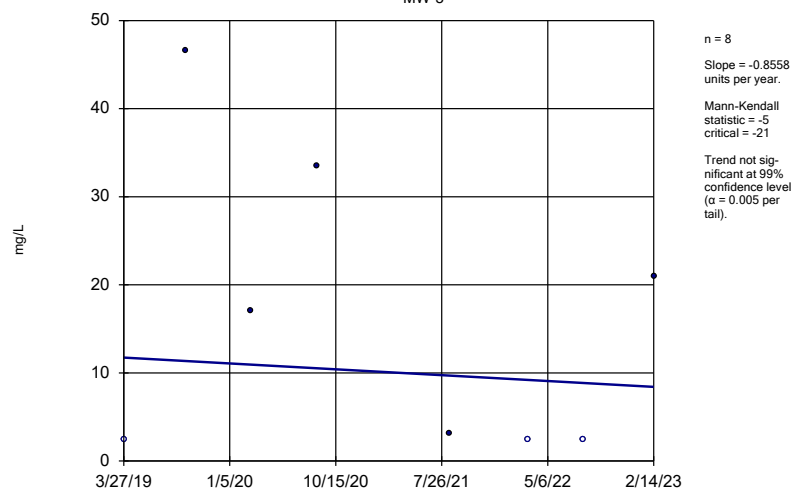
MW-2 (bg)



Constituent: Sulfate Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

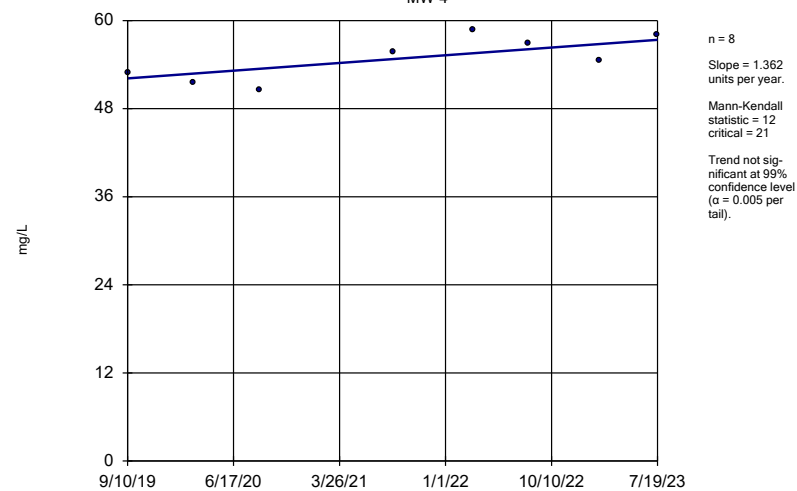
MW-3



Constituent: Sulfate Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

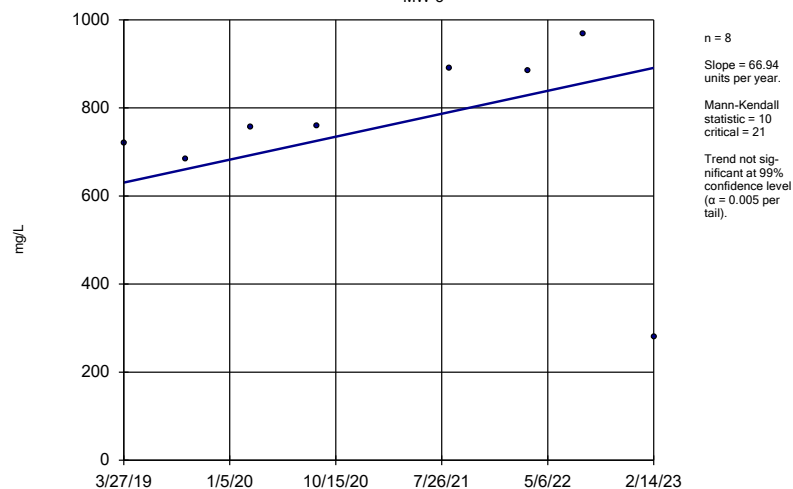
MW-4



Constituent: Sulfate Analysis Run 8/25/2023 3:32 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

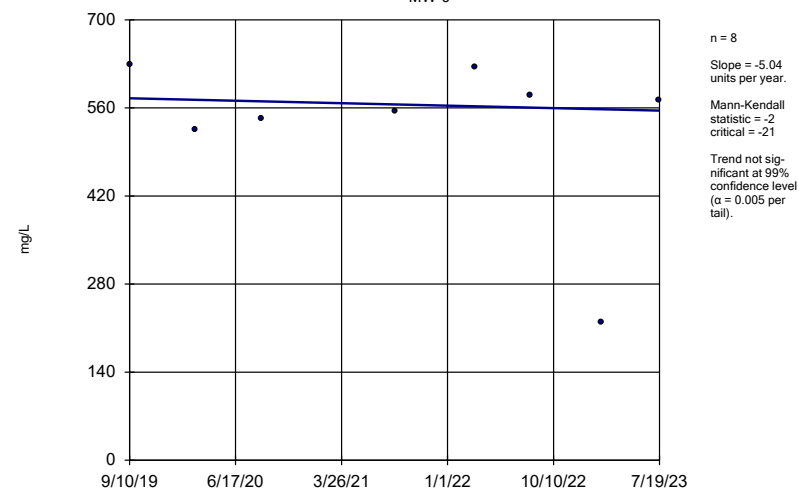
MW-5



Constituent: Sulfate Analysis Run 8/25/2023 3:33 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

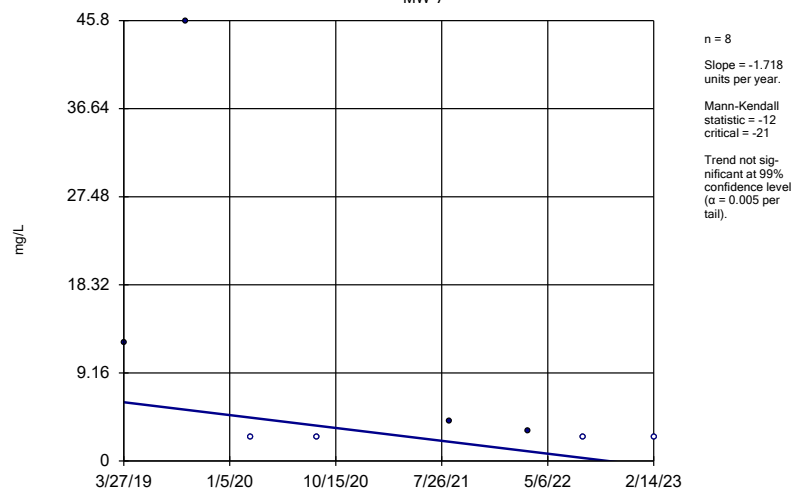
MW-6



Constituent: Sulfate Analysis Run 8/25/2023 3:33 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

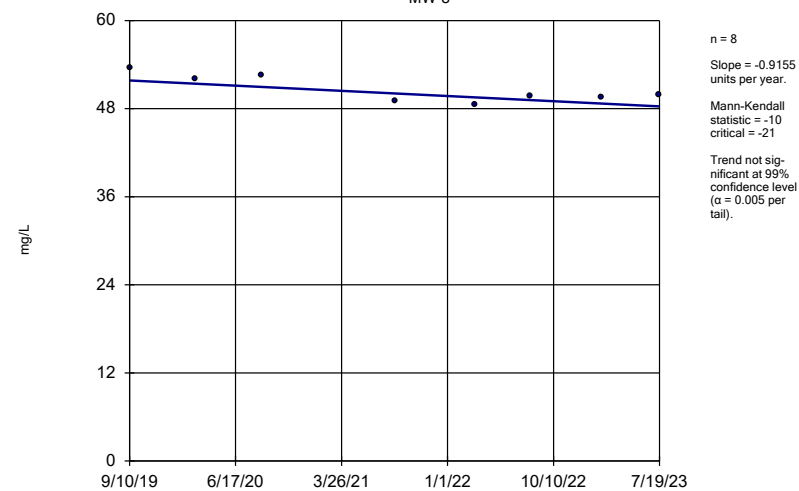
MW-7



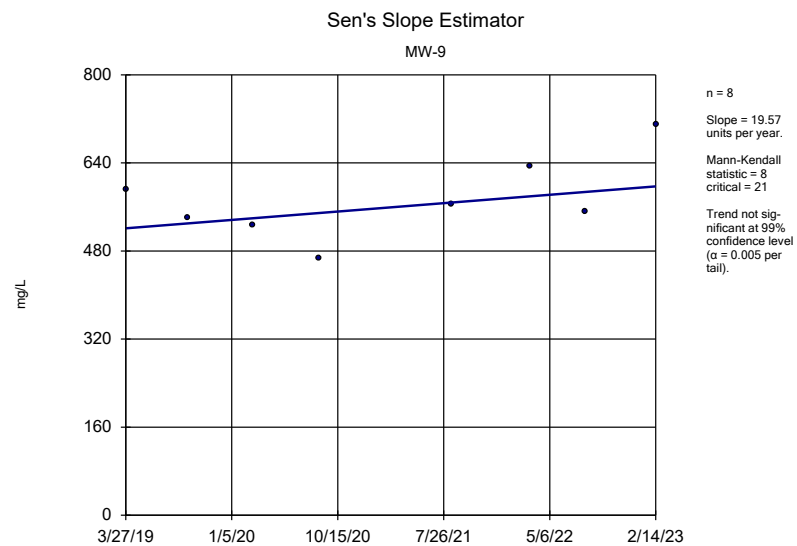
Constituent: Sulfate Analysis Run 8/25/2023 3:33 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Sen's Slope Estimator

MW-8



Constituent: Sulfate Analysis Run 8/25/2023 3:33 PM View: 2023AWQR - MannKendall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM



Constituent: Sulfate Analysis Run 8/25/2023 3:33 PM View: 2023AWQR - MannKendall
 Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO 2023AWQR-AM

Attachment B

Control Limits

Control Limit

Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas Printed 8/25/2023, 12:35 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>
Arsenic (mg/L)	MW-11	0.03292	n/a	2/14/2023	0.0512	Yes	30	50
Arsenic (mg/L)	MW-13	0.03292	n/a	2/14/2023	0.13	Yes	30	50
Arsenic (mg/L)	MW-16	0.03292	n/a	2/14/2023	0.000868J	No	30	50
Arsenic (mg/L)	MW-3	0.03292	n/a	2/14/2023	0.0108	No	30	50
Arsenic (mg/L)	MW-5	0.03292	n/a	2/14/2023	0.0473	Yes	30	50
Arsenic (mg/L)	MW-7	0.03292	n/a	2/14/2023	0.0914	Yes	30	50
Arsenic (mg/L)	MW-9	0.03292	n/a	2/14/2023	0.0816	Yes	30	50
Boron (mg/L)	MW-11	0.4471	n/a	2/14/2023	0.359	No	30	0
Boron (mg/L)	MW-13	0.4471	n/a	2/14/2023	8.39	Yes	30	0
Boron (mg/L)	MW-14	0.4471	n/a	2/14/2023	0.513	Yes	30	0
Boron (mg/L)	MW-16	0.4471	n/a	2/14/2023	0.434	No	30	0
Boron (mg/L)	MW-3	0.4471	n/a	2/14/2023	2.29	Yes	30	0
Boron (mg/L)	MW-5	0.4471	n/a	2/14/2023	16.8	Yes	30	0
Boron (mg/L)	MW-7	0.4471	n/a	2/14/2023	51.2	Yes	30	0
Boron (mg/L)	MW-9	0.4471	n/a	2/14/2023	11.6	Yes	30	0
Chemical Oxygen Demand (mg/L)	MW-11	50.32	n/a	2/14/2023	159	Yes	124	12.1
Chemical Oxygen Demand (mg/L)	MW-13	50.32	n/a	2/14/2023	126	Yes	124	12.1
Chemical Oxygen Demand (mg/L)	MW-14	50.32	n/a	2/14/2023	5.13	No	124	12.1
Chemical Oxygen Demand (mg/L)	MW-16	50.32	n/a	2/14/2023	10.83	No	124	12.1
Chemical Oxygen Demand (mg/L)	MW-3	50.32	n/a	2/14/2023	25.6	No	124	12.1
Chemical Oxygen Demand (mg/L)	MW-5	50.32	n/a	2/14/2023	94.9	Yes	124	12.1
Chemical Oxygen Demand (mg/L)	MW-7	50.32	n/a	2/14/2023	428	Yes	124	12.1
Chemical Oxygen Demand (mg/L)	MW-9	50.32	n/a	2/14/2023	525	Yes	124	12.1
Chloride (mg/L)	MW-11	73.75	n/a	2/14/2023	108	Yes	124	0
Chloride (mg/L)	MW-13	73.75	n/a	2/14/2023	32.7	No	124	0
Chloride (mg/L)	MW-14	73.75	n/a	2/14/2023	220	Yes	124	0
Chloride (mg/L)	MW-16	73.75	n/a	2/14/2023	33.9	No	124	0
Chloride (mg/L)	MW-3	73.75	n/a	2/14/2023	223	Yes	124	0
Chloride (mg/L)	MW-5	73.75	n/a	2/14/2023	136	Yes	124	0
Chloride (mg/L)	MW-7	73.75	n/a	2/14/2023	173	Yes	124	0
Chloride (mg/L)	MW-9	73.75	n/a	2/14/2023	37.3	No	124	0
Cobalt (mg/L)	MW-11	0.004536	n/a	2/14/2023	0.0221	Yes	30	13.33
Cobalt (mg/L)	MW-13	0.004536	n/a	2/14/2023	0.00238	No	30	13.33
Cobalt (mg/L)	MW-14	0.004536	n/a	2/14/2023	0.000822	No	30	13.33
Cobalt (mg/L)	MW-3	0.004536	n/a	2/14/2023	0.000925	No	30	13.33
Cobalt (mg/L)	MW-5	0.004536	n/a	2/14/2023	0.00558	Yes	30	13.33
Cobalt (mg/L)	MW-7	0.004536	n/a	2/14/2023	0.0075J	No	30	13.33
Cobalt (mg/L)	MW-9	0.004536	n/a	2/14/2023	0.00547	Yes	30	13.33
Iron (mg/L)	MW-11	1.069	n/a	2/14/2023	56.3	Yes	6	50
Iron (mg/L)	MW-13	1.069	n/a	2/14/2023	28.9	Yes	6	50
Iron (mg/L)	MW-14	1.069	n/a	2/14/2023	0.0385J	No	6	50
Iron (mg/L)	MW-16	1.069	n/a	2/14/2023	0.0603J	No	6	50
Iron (mg/L)	MW-3	1.069	n/a	2/14/2023	11.7	Yes	6	50
Iron (mg/L)	MW-5	1.069	n/a	2/14/2023	41.3	Yes	6	50
Iron (mg/L)	MW-7	1.069	n/a	2/14/2023	0.499	No	6	50
Iron (mg/L)	MW-9	1.069	n/a	2/14/2023	7.56	Yes	6	50
Magnesium (mg/L)	MW-11	38.52	n/a	2/14/2023	98.8	Yes	30	0
Magnesium (mg/L)	MW-13	38.52	n/a	2/14/2023	274	Yes	30	0
Magnesium (mg/L)	MW-14	38.52	n/a	2/14/2023	73.1	Yes	30	0
Magnesium (mg/L)	MW-3	38.52	n/a	2/14/2023	71	Yes	30	0

Control Limit

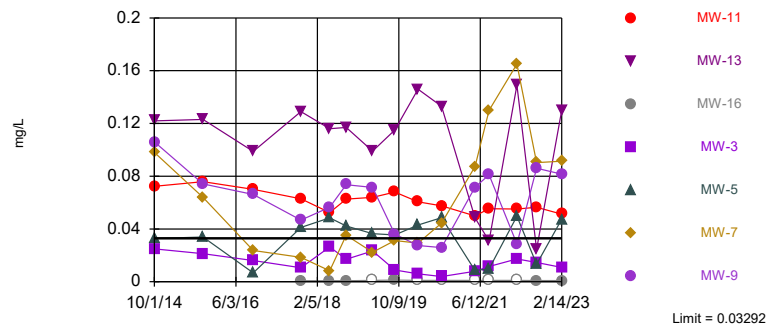
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas Printed 8/25/2023, 12:35 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>
Magnesium (mg/L)	MW-5	38.52	n/a	2/14/2023	423	Yes	30	0
Magnesium (mg/L)	MW-7	38.52	n/a	2/14/2023	487	Yes	30	0
Magnesium (mg/L)	MW-9	38.52	n/a	2/14/2023	326	Yes	30	0
Manganese (mg/L)	MW-11	1.031	n/a	2/14/2023	0.984	No	30	0
Manganese (mg/L)	MW-13	1.031	n/a	2/14/2023	2.14	Yes	30	0
Manganese (mg/L)	MW-14	1.031	n/a	2/14/2023	0.476	No	30	0
Manganese (mg/L)	MW-3	1.031	n/a	2/14/2023	2.58	Yes	30	0
Manganese (mg/L)	MW-5	1.031	n/a	2/14/2023	2.64	Yes	30	0
Manganese (mg/L)	MW-7	1.031	n/a	2/14/2023	0.595	No	30	0
Manganese (mg/L)	MW-9	1.031	n/a	2/14/2023	1.85	Yes	30	0
Nitrogen, Ammonia (mg/L)	MW-11	5.372	n/a	2/14/2023	33.6	Yes	124	17.74
Nitrogen, Ammonia (mg/L)	MW-13	5.372	n/a	2/14/2023	12.5	Yes	124	17.74
Nitrogen, Ammonia (mg/L)	MW-14	5.372	n/a	2/14/2023	0.871	No	124	17.74
Nitrogen, Ammonia (mg/L)	MW-16	5.372	n/a	2/14/2023	0.1295J	No	124	17.74
Nitrogen, Ammonia (mg/L)	MW-3	5.372	n/a	2/14/2023	1.6	No	124	17.74
Nitrogen, Ammonia (mg/L)	MW-5	5.372	n/a	2/14/2023	70.9	Yes	124	17.74
Nitrogen, Ammonia (mg/L)	MW-7	5.372	n/a	2/14/2023	1300	Yes	124	17.74
Nitrogen, Ammonia (mg/L)	MW-9	5.372	n/a	2/14/2023	17.7	Yes	124	17.74
pH (S.U.)	MW-11	7.899	6.198	2/14/2023	6.47	No	124	0
pH (S.U.)	MW-13	7.899	6.198	2/14/2023	6.87	No	124	0
pH (S.U.)	MW-14	7.899	6.198	2/14/2023	6.69	No	124	0
pH (S.U.)	MW-16	7.899	6.198	2/14/2023	6.98	No	124	0
pH (S.U.)	MW-3	7.899	6.198	2/14/2023	7.06	No	124	0
pH (S.U.)	MW-5	7.899	6.198	2/14/2023	6.68	No	124	0
pH (S.U.)	MW-7	7.899	6.198	2/14/2023	7.25	No	124	0
pH (S.U.)	MW-9	7.899	6.198	2/14/2023	6.88	No	124	0
Specific Conductance (umhos/cm)	MW-11	1431	n/a	2/14/2023	2302	Yes	124	0
Specific Conductance (umhos/cm)	MW-13	1431	n/a	2/14/2023	4014	Yes	124	0
Specific Conductance (umhos/cm)	MW-14	1431	n/a	2/14/2023	1576	Yes	124	0
Specific Conductance (umhos/cm)	MW-16	1431	n/a	2/14/2023	814.4	No	124	0
Specific Conductance (umhos/cm)	MW-3	1431	n/a	2/14/2023	1747	Yes	124	0
Specific Conductance (umhos/cm)	MW-5	1431	n/a	2/14/2023	5780	Yes	124	0
Specific Conductance (umhos/cm)	MW-7	1431	n/a	2/14/2023	11915	Yes	124	0
Specific Conductance (umhos/cm)	MW-9	1431	n/a	2/14/2023	7146	Yes	124	0
Sulfate (mg/L)	MW-14	74.21	n/a	2/14/2023	35.9	No	24	0
Sulfate (mg/L)	MW-16	74.21	n/a	2/14/2023	41.05	No	24	0
Sulfate (mg/L)	MW-3	74.21	n/a	2/14/2023	21	No	24	0
Sulfate (mg/L)	MW-5	74.21	n/a	2/14/2023	279	Yes	24	0
Sulfate (mg/L)	MW-9	74.21	n/a	2/14/2023	710	Yes	24	0

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Exceeds Limit: MW-11, MW-13, MW-5, MW-7, MW-9

Prediction Limit
Interwell Parametric



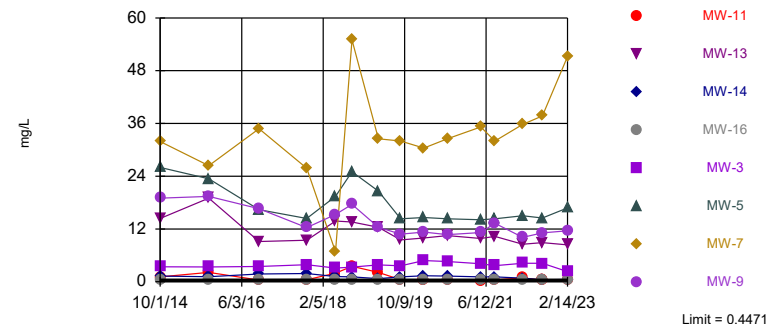
Background Data Summary: Mean=0.007637, Std. Dev.=0.01264, n=30, 50% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 7 points to limit. Assumes 6 future values. Kappa overridden to 2.

Constituent: Arsenic Analysis Run 8/25/2023 12:31 PM View: 2023AWQR - Control Limit - Unconsolidated
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Exceeds Limit: MW-13, MW-14, MW-3, MW-5, MW-7, MW-9

Prediction Limit
Interwell Parametric



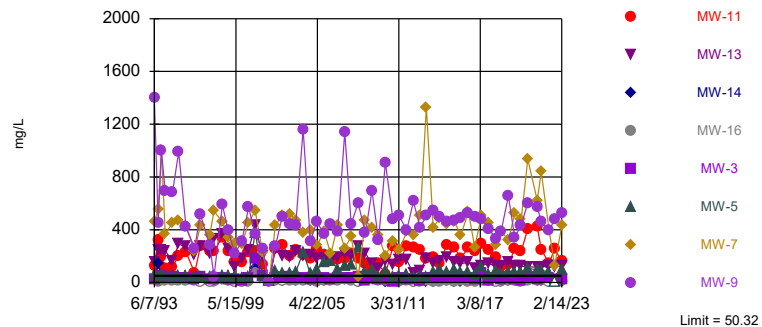
Background Data Summary: Mean=0.2967, Std. Dev.=0.07517, n=30. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 8 points to limit. Assumes 5 future values. Kappa overridden to 2.

Constituent: Boron Analysis Run 8/25/2023 12:31 PM View: 2023AWQR - Control Limit - Unconsolidated -
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Exceeds Limit: MW-11, MW-13, MW-5, MW-7, MW-9

Prediction Limit
Interwell Parametric



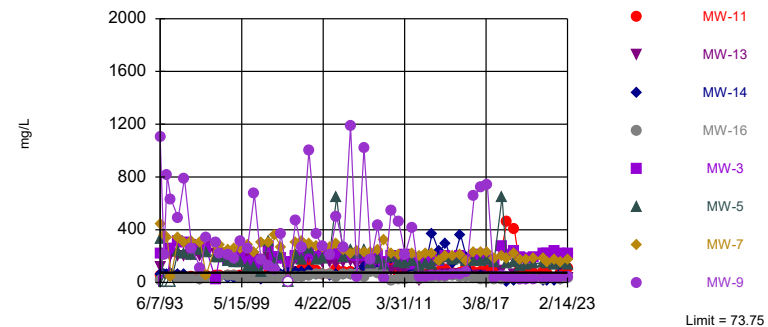
Background Data Summary: Mean=20.23, Std. Dev.=15.05, n=124, 12.1% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 8 points to limit. Assumes 5 future values. Kappa overridden to 2.

Constituent: Chemical Oxygen Demand Analysis Run 8/25/2023 12:31 PM View: 2023AWQR - Control Li
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Exceeds Limit: MW-11, MW-14, MW-3, MW-5, MW-7

Prediction Limit
Interwell Parametric



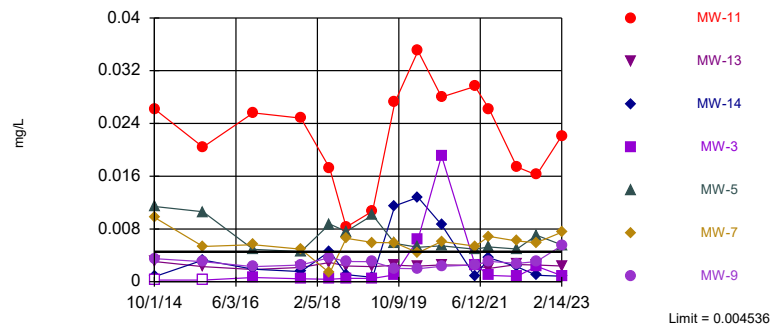
Background Data Summary: Mean=26.43, Std. Dev.=23.66, n=124. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 8 points to limit. Assumes 5 future values. Kappa overridden to 2.

Constituent: Chloride Analysis Run 8/25/2023 12:31 PM View: 2023AWQR - Control Limit - Unconsolidate
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-11, MW-5, MW-9

Prediction Limit

Interwell Parametric



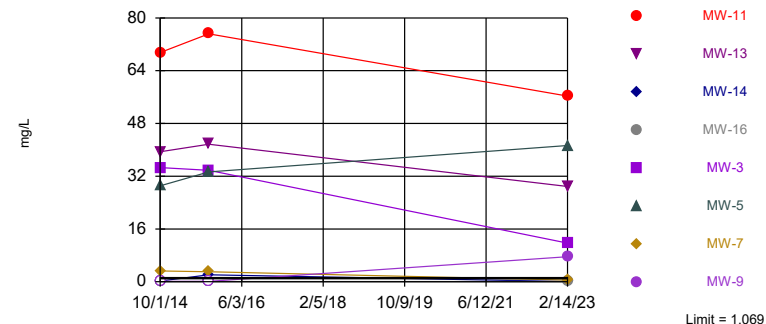
Background Data Summary: Mean=0.001463, Std. Dev.=0.001536, n=30, 13.33% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 7 points to limit. Assumes 6 future values. Kappa overridden to 2.

Constituent: Cobalt Analysis Run 8/25/2023 12:31 PM View: 2023AWQR - Control Limit - Unconsolidated
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-11, MW-13, MW-3, MW-5, MW-9

Prediction Limit

Interwell Parametric



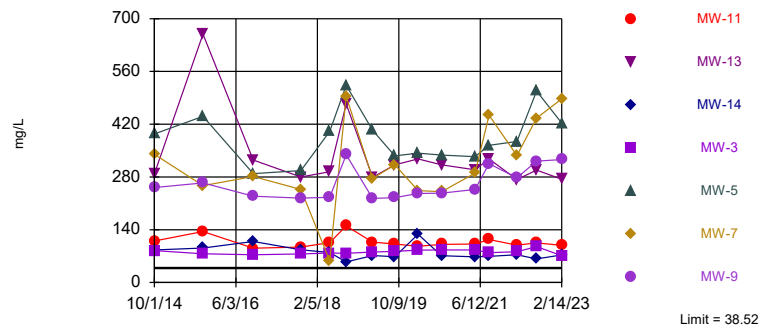
Background Data Summary: Mean=0.3398, Std. Dev.=0.3648, n=6, 50% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 8 points to limit. Assumes 5 future values. Kappa overridden to 2.

Constituent: Iron Analysis Run 8/25/2023 12:31 PM View: 2023AWQR - Control Limit - Unconsolidated - S
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-11, MW-13, MW-14, MW-3, MW-5, MW-7, MW-9

Prediction Limit

Interwell Parametric



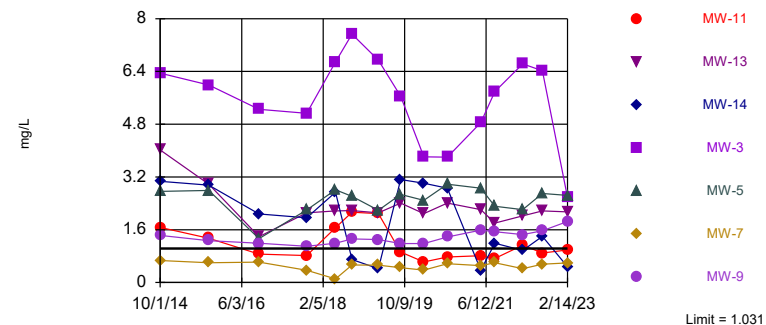
Background Data Summary: Mean=30.44, Std. Dev.=4.039, n=30. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 7 points to limit. Assumes 6 future values. Kappa overridden to 2.

Constituent: Magnesium Analysis Run 8/25/2023 12:31 PM View: 2023AWQR - Control Limit - Unconsolidated
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-13, MW-3, MW-5, MW-9

Prediction Limit

Interwell Parametric

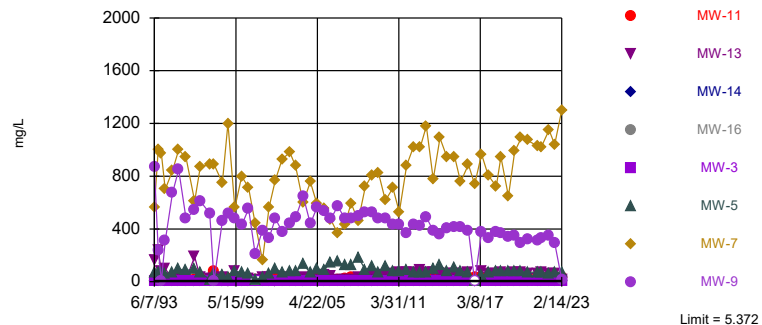


Background Data Summary: Mean=0.4467, Std. Dev.=0.2922, n=30. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 7 points to limit. Assumes 6 future values. Kappa overridden to 2.

Constituent: Manganese Analysis Run 8/25/2023 12:31 PM View: 2023AWQR - Control Limit - Unconsolidated
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-11, MW-13, MW-5, MW-7, MW-9

Prediction Limit Interwell Parametric

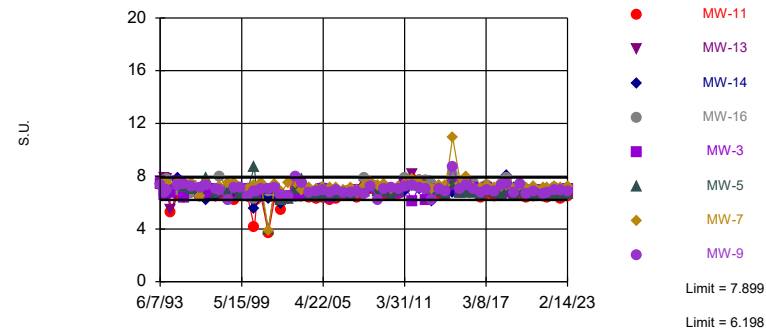


Background Data Summary: Mean=1.943, Std. Dev.=1.715, n=124, 17.74% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 8 points to limit. Assumes 5 future values. Kappa overridden to 2.

Constituent: Nitrogen, Ammonia Analysis Run 8/25/2023 12:31 PM View: 2023AWQR - Control Limit - Un
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Within Limits

Prediction Limit Interwell Parametric

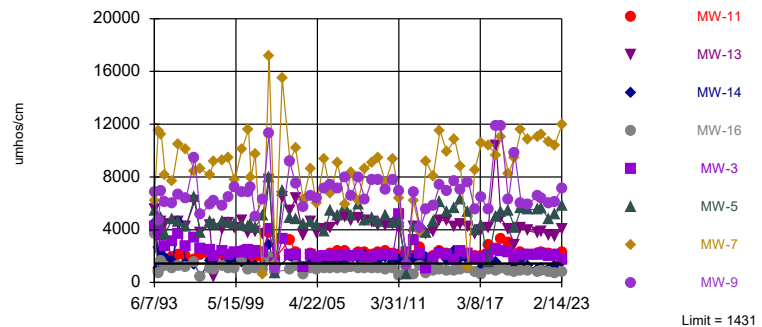


Background Data Summary: Mean=7.048, Std. Dev.=0.4254, n=124. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 8 points to limit. Assumes 5 future values. Kappa overridden to 2.

Constituent: pH Analysis Run 8/25/2023 12:31 PM View: 2023AWQR - Control Limit - Unconsolidated - Sp
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-11, MW-13, MW-14, MW-3, MW-5, MW-7, MW-9

Prediction Limit Interwell Parametric



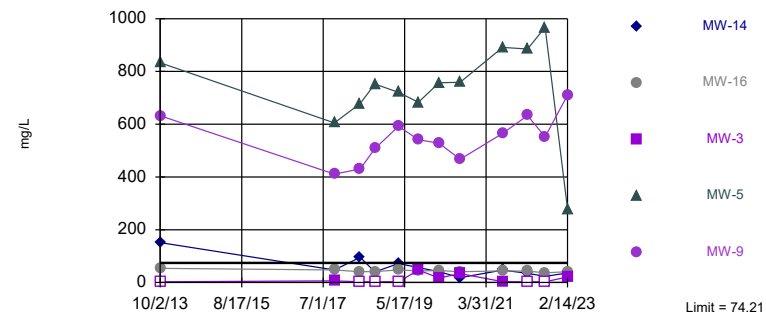
Background Data Summary: Mean=926.5, Std. Dev.=252.1, n=124. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 8 points to limit. Assumes 5 future values. Kappa overridden to 2.

Constituent: Specific Conductance Analysis Run 8/25/2023 12:31 PM View: 2023AWQR - Control Limit -
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Hollow symbols indicate censored values.

Exceeds Limit: MW-5, MW-9

Prediction Limit Interwell Parametric



Background Data Summary: Mean=34.98, Std. Dev.=19.62, n=24. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 5 points to limit. Assumes 8 future values. Kappa overridden to 2.

Constituent: Sulfate Analysis Run 8/25/2023 12:31 PM View: 2023AWQR - Control Limit - Unconsolidated
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Control Limit

Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas Printed 8/24/2023, 1:27 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>
Arsenic (mg/L)	MW-12	0.001177	n/a	2/14/2023	0.0651	Yes	30	86.67
Arsenic (mg/L)	MW-6	0.001177	n/a	2/14/2023	0.00957	Yes	30	86.67
Boron (mg/L)	MW-10	1.004	n/a	2/14/2023	0.328	No	30	3.333
Boron (mg/L)	MW-12	1.004	n/a	2/14/2023	2.15	Yes	30	3.333
Boron (mg/L)	MW-15	1.004	n/a	2/14/2023	0.275	No	30	3.333
Boron (mg/L)	MW-4	1.004	n/a	2/14/2023	0.441	No	30	3.333
Boron (mg/L)	MW-6	1.004	n/a	2/14/2023	6.95	Yes	30	3.333
Boron (mg/L)	MW-8	1.004	n/a	2/14/2023	0.448	No	30	3.333
Chemical Oxygen Demand (mg/L)	MW-10	19.53	n/a	2/14/2023	8.36	No	94	54.26
Chemical Oxygen Demand (mg/L)	MW-12	19.53	n/a	2/14/2023	26	Yes	94	54.26
Chemical Oxygen Demand (mg/L)	MW-4	19.53	n/a	2/14/2023	5.06	No	94	54.26
Chemical Oxygen Demand (mg/L)	MW-6	19.53	n/a	2/14/2023	62.8	Yes	94	54.26
Chemical Oxygen Demand (mg/L)	MW-8	19.53	n/a	2/14/2023	5.06	No	94	54.26
Chloride (mg/L)	MW-10	223.1	n/a	2/14/2023	47.7	No	93	0
Chloride (mg/L)	MW-12	223.1	n/a	2/14/2023	379	Yes	93	0
Chloride (mg/L)	MW-15	223.1	n/a	2/14/2023	91.4	No	93	0
Chloride (mg/L)	MW-4	223.1	n/a	2/14/2023	189	No	93	0
Chloride (mg/L)	MW-6	223.1	n/a	2/14/2023	66.2	No	93	0
Chloride (mg/L)	MW-8	223.1	n/a	2/14/2023	142	No	93	0
Cobalt (mg/L)	MW-12	0.0005762	n/a	2/14/2023	0.00186	Yes	30	46.67
Cobalt (mg/L)	MW-6	0.0005762	n/a	2/14/2023	0.00236	Yes	30	46.67
Iron (mg/L)	MW-10	0.05	n/a	2/14/2023	0.209	Yes	6	100
Iron (mg/L)	MW-12	0.05	n/a	2/14/2023	27.7	Yes	6	100
Iron (mg/L)	MW-6	0.05	n/a	2/14/2023	2.44	Yes	6	100
Magnesium (mg/L)	MW-10	57.57	n/a	2/14/2023	54.7	No	30	0
Magnesium (mg/L)	MW-12	57.57	n/a	2/14/2023	81.2	Yes	30	0
Magnesium (mg/L)	MW-15	57.57	n/a	2/14/2023	60.6	Yes	30	0
Magnesium (mg/L)	MW-6	57.57	n/a	2/14/2023	149	Yes	30	0
Manganese (mg/L)	MW-10	1.134	n/a	2/14/2023	0.258	No	30	50
Manganese (mg/L)	MW-12	1.134	n/a	2/14/2023	0.763	No	30	50
Manganese (mg/L)	MW-6	1.134	n/a	2/14/2023	0.145	No	30	50
Nickel (mg/L)	MW-6	0.004811	n/a	2/14/2023	0.0453	Yes	28	67.86
Nitrogen, Ammonia (mg/L)	MW-10	1.333	n/a	2/14/2023	0.217	No	94	84.04
Nitrogen, Ammonia (mg/L)	MW-12	1.333	n/a	2/14/2023	20.6	Yes	94	84.04
Nitrogen, Ammonia (mg/L)	MW-4	1.333	n/a	2/14/2023	0.223	No	94	84.04
Nitrogen, Ammonia (mg/L)	MW-6	1.333	n/a	2/14/2023	90.6	Yes	94	84.04
pH (S.U.)	MW-10	7.794	6.212	2/14/2023	6.83	No	95	0
pH (S.U.)	MW-12	7.794	6.212	2/14/2023	6.66	No	95	0
pH (S.U.)	MW-15	7.794	6.212	2/14/2023	6.97	No	95	0
pH (S.U.)	MW-4	7.794	6.212	2/14/2023	7.05	No	95	0
pH (S.U.)	MW-6	7.794	6.212	2/14/2023	6.87	No	95	0
pH (S.U.)	MW-8	7.794	6.212	2/14/2023	7.01	No	95	0
Specific Conductance (umhos/cm)	MW-10	1591	n/a	2/14/2023	1248	No	96	0
Specific Conductance (umhos/cm)	MW-12	1591	n/a	2/14/2023	2399	Yes	96	0
Specific Conductance (umhos/cm)	MW-15	1591	n/a	2/14/2023	1215	No	96	0
Specific Conductance (umhos/cm)	MW-4	1591	n/a	2/14/2023	1415	No	96	0
Specific Conductance (umhos/cm)	MW-6	1591	n/a	2/14/2023	2009	Yes	96	0
Specific Conductance (umhos/cm)	MW-8	1591	n/a	2/14/2023	1222	No	96	0
Sulfate (mg/L)	MW-10	72.74	n/a	2/14/2023	134	Yes	23	4.348
Sulfate (mg/L)	MW-12	72.74	n/a	2/14/2023	11.2	No	23	4.348

Control Limit

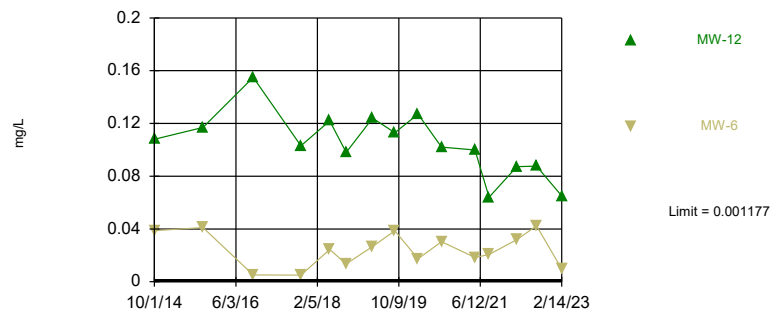
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas Printed 8/24/2023, 1:27 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>
Sulfate (mg/L)	MW-15	72.74	n/a	2/14/2023	91.4	Yes	23	4.348
Sulfate (mg/L)	MW-4	72.74	n/a	2/14/2023	54.5	No	23	4.348
Sulfate (mg/L)	MW-6	72.74	n/a	2/14/2023	219	Yes	23	4.348
Sulfate (mg/L)	MW-8	72.74	n/a	2/14/2023	49.6	No	23	4.348

Exceeds Limit: MW-12, MW-6

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=0.0009667, Std. Dev.=0.0001052, n=30, 86.67% NDs (user selected parametric test despite non-detects). Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

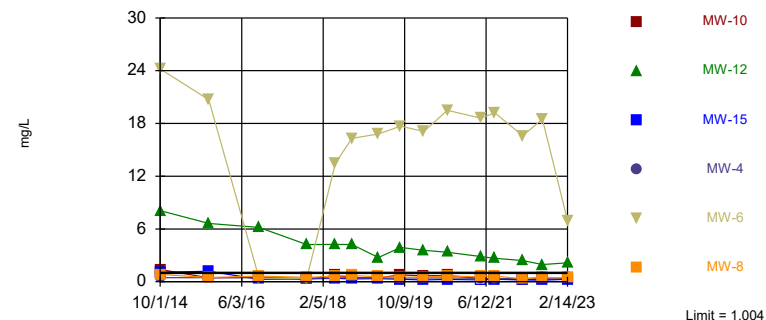
Constituent: Arsenic Analysis Run 8/24/2023 12:24 PM View: 2023AWQR - Control Limit - Bedrock - Sprin
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Hollow symbols indicate censored values.

Exceeds Limit: MW-12, MW-6

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=0.4027, Std. Dev.=0.3004, n=30, 3.333% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 6 points to limit. Assumes 7 future values. Kappa overridden to 2.

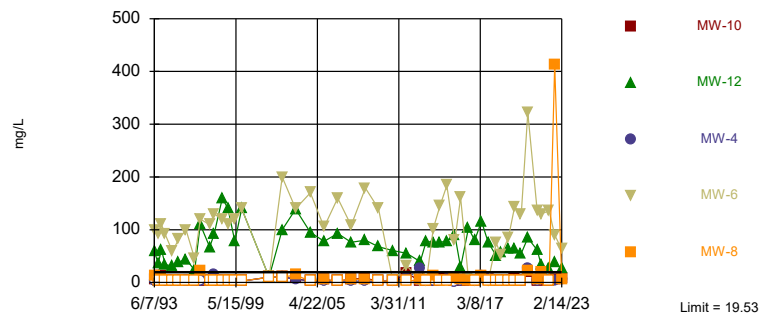
Constituent: Boron Analysis Run 8/24/2023 12:24 PM View: 2023AWQR - Control Limit - Bedrock - Spring
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Hollow symbols indicate censored values.

Exceeds Limit: MW-12, MW-6

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=6.727, Std. Dev.=6.4, n=94, 54.26% NDs (user selected parametric test despite non-detects). Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 5 points to limit. Assumes 8 future values. Kappa overridden to 2.

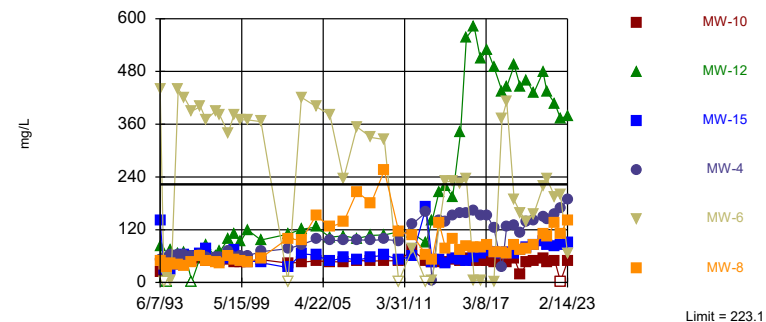
Constituent: Chemical Oxygen Demand Analysis Run 8/24/2023 12:24 PM View: 2023AWQR - Control Li
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Hollow symbols indicate censored values.

Exceeds Limit: MW-12

Prediction Limit

Interwell Parametric



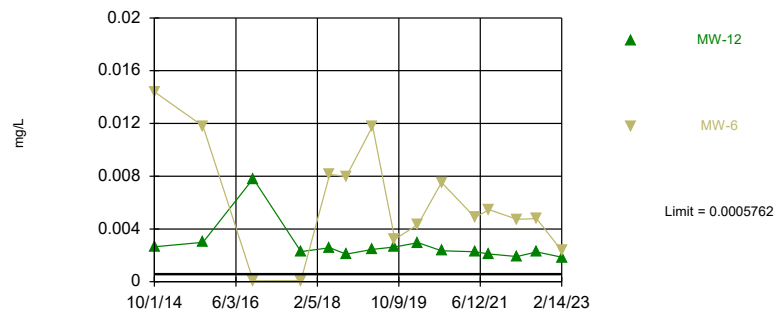
Background Data Summary: Mean=89.12, Std. Dev.=66.98, n=93. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 6 points to limit. Assumes 7 future values. Kappa overridden to 2.

Constituent: Chloride Analysis Run 8/24/2023 12:24 PM View: 2023AWQR - Control Limit - Bedrock - Sprin
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-12, MW-6

Prediction Limit

Interwell Parametric



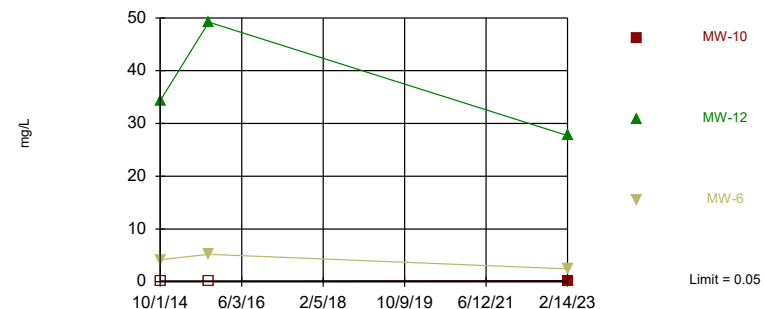
Background Data Summary: Mean=0.0002824, Std. Dev.=0.0001469, n=30, 46.67% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Cobalt Analysis Run 8/24/2023 12:24 PM View: 2023AWQR - Control Limit - Bedrock - Spring
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-10, MW-12, MW-6

Prediction Limit

Interwell Parametric



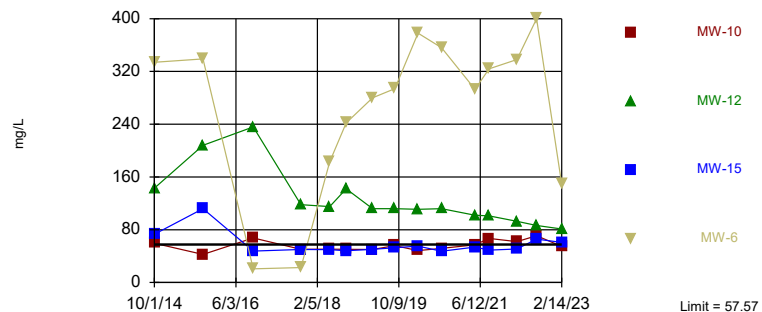
Background Data Summary: Mean=0.05, Std. Dev.=0, n=6, 100% NDs (user selected parametric test despite non-detects). Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 3 points to limit. Assumes 10 future values. Kappa overridden to 2.

Constituent: Iron Analysis Run 8/24/2023 12:24 PM View: 2023AWQR - Control Limit - Bedrock - Spring
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-12, MW-15, MW-6

Prediction Limit

Interwell Parametric



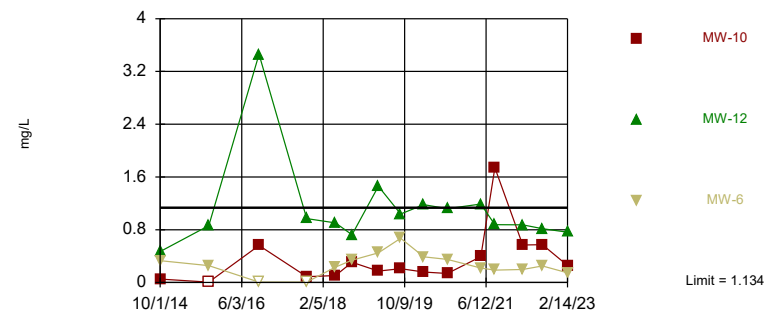
Background Data Summary: Mean=39.22, Std. Dev.=9.173, n=30. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Magnesium Analysis Run 8/24/2023 12:24 PM View: 2023AWQR - Control Limit - Bedrock -
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Within Limit

Prediction Limit

Interwell Parametric



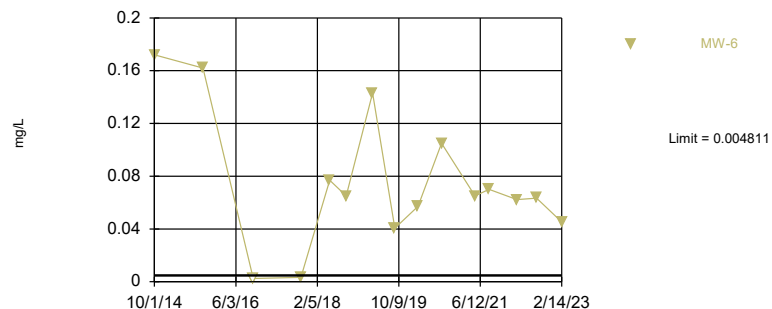
Background Data Summary: Mean=0.2527, Std. Dev.=0.4409, n=30, 50% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 3 points to limit. Assumes 10 future values. Kappa overridden to 2.

Constituent: Manganese Analysis Run 8/24/2023 12:24 PM View: 2023AWQR - Control Limit - Bedrock -
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-6

Prediction Limit

Interwell Parametric



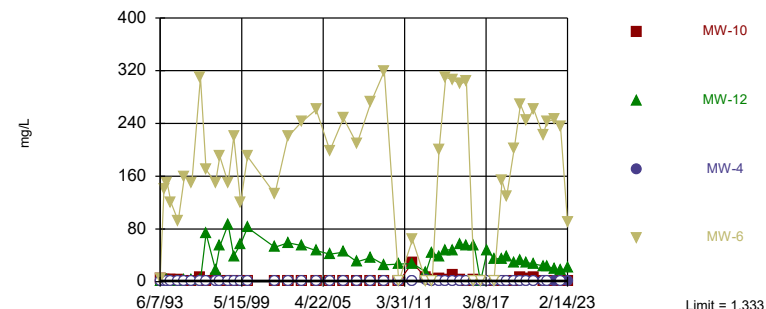
Background Data Summary: Mean=0.002855, Std. Dev.=0.0009781, n=28, 67.86% NDs (user selected parametric test despite non-detects). Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Assumes 12 future values. Kappa overridden to 2.

Constituent: Nickel Analysis Run 8/24/2023 12:24 PM View: 2023AWQR - Control Limit - Bedrock - Spring
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-12, MW-6

Prediction Limit

Interwell Parametric



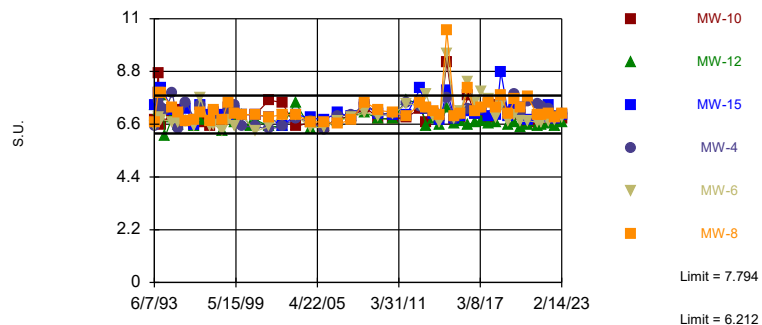
Background Data Summary: Mean=0.2729, Std. Dev.=0.5301, n=94, 84.04% NDs (user selected parametric test despite non-detects). Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Nitrogen, Ammonia Analysis Run 8/24/2023 12:24 PM View: 2023AWQR - Control Limit - Be
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Within Limits

Prediction Limit

Interwell Parametric



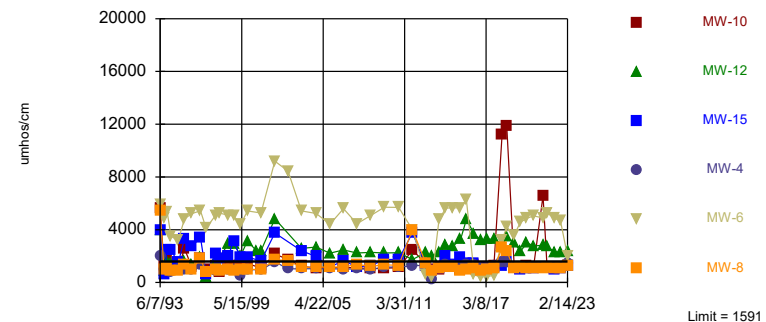
Background Data Summary: Mean=7.003, Std. Dev.=0.3956, n=95. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 6 points to limit. Assumes 7 future values. Kappa overridden to 2.

Constituent: pH Analysis Run 8/24/2023 12:24 PM View: 2023AWQR - Control Limit - Bedrock - Spring
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-12, MW-6

Prediction Limit

Interwell Parametric



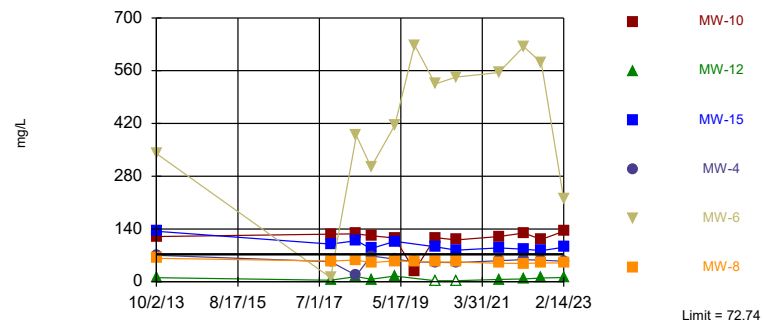
Background Data Summary: Mean=1081, Std. Dev.=255.3, n=96. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 6 points to limit. Assumes 7 future values. Kappa overridden to 2.

Constituent: Specific Conductance Analysis Run 8/24/2023 12:24 PM View: 2023AWQR - Control Limit -
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-10, MW-15, MW-6

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=42.49, Std. Dev.=15.13, n=23, 4.348% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 6 points to limit. Assumes 7 future values. Kappa overridden to 2.

Constituent: Sulfate Analysis Run 8/24/2023 12:24 PM View: 2023AWQR - Control Limit - Bedrock - Sprin
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Control Limit

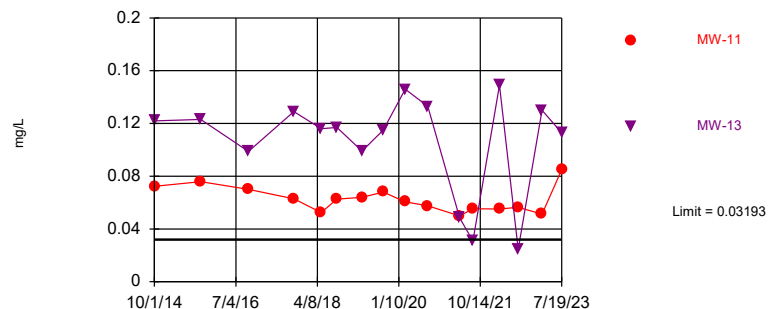
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas Printed 8/25/2023, 12:40 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>
Arsenic (mg/L)	MW-11	0.03193	n/a	7/19/2023	0.0849	Yes	32	50
Arsenic (mg/L)	MW-13	0.03193	n/a	7/19/2023	0.113	Yes	32	50
Boron (mg/L)	MW-11	0.4461	n/a	7/19/2023	1.56	Yes	32	0
Boron (mg/L)	MW-13	0.4461	n/a	7/19/2023	9.88	Yes	32	0
Boron (mg/L)	MW-14	0.4461	n/a	7/19/2023	0.966	Yes	32	0
Boron (mg/L)	MW-16	0.4461	n/a	7/19/2023	0.368	No	32	0
Chemical Oxygen Demand (mg/L)	MW-11	50.17	n/a	7/19/2023	236	Yes	126	11.9
Chemical Oxygen Demand (mg/L)	MW-13	50.17	n/a	7/19/2023	116	Yes	126	11.9
Chemical Oxygen Demand (mg/L)	MW-14	50.17	n/a	7/19/2023	15.7	No	126	11.9
Chemical Oxygen Demand (mg/L)	MW-16	50.17	n/a	7/19/2023	11.7	No	126	11.9
Chloride (mg/L)	MW-11	73.6	n/a	7/19/2023	74.6	Yes	126	0
Chloride (mg/L)	MW-13	73.6	n/a	7/19/2023	47.3	No	126	0
Chloride (mg/L)	MW-14	73.6	n/a	7/19/2023	493	Yes	126	0
Chloride (mg/L)	MW-16	73.6	n/a	7/19/2023	41.7	No	126	0
Cobalt (mg/L)	MW-11	0.004503	n/a	7/19/2023	0.0016	No	32	12.5
Cobalt (mg/L)	MW-13	0.004503	n/a	7/19/2023	0.00275	No	32	12.5
Iron (mg/L)	MW-11	1.783	n/a	7/19/2023	27.4	Yes	8	37.5
Iron (mg/L)	MW-13	1.783	n/a	7/19/2023	27.3	Yes	8	37.5
Magnesium (mg/L)	MW-11	38.33	n/a	7/19/2023	70.2	Yes	32	0
Magnesium (mg/L)	MW-13	38.33	n/a	7/19/2023	343	Yes	32	0
Magnesium (mg/L)	MW-14	38.33	n/a	7/19/2023	113	Yes	32	0
Manganese (mg/L)	MW-11	1.095	n/a	7/19/2023	1.1	Yes	32	0
Manganese (mg/L)	MW-13	1.095	n/a	7/19/2023	2.34	Yes	32	0
Manganese (mg/L)	MW-14	1.095	n/a	7/19/2023	2.71	Yes	32	0
Nitrogen, Ammonia (mg/L)	MW-11	5.413	n/a	7/19/2023	38.9	Yes	126	17.46
Nitrogen, Ammonia (mg/L)	MW-13	5.413	n/a	7/19/2023	71.1	Yes	126	17.46
Nitrogen, Ammonia (mg/L)	MW-14	5.413	n/a	7/19/2023	4.69	No	126	17.46
pH (S.U.)	MW-11	7.891	6.202	7/19/2023	6.36	No	126	0
pH (S.U.)	MW-13	7.891	6.202	7/19/2023	6.74	No	126	0
pH (S.U.)	MW-14	7.891	6.202	7/19/2023	6.5	No	126	0
pH (S.U.)	MW-16	7.891	6.202	7/19/2023	6.87	No	126	0
Specific Conductance (umhos/cm)	MW-11	1426	n/a	7/19/2023	2130	Yes	126	0
Specific Conductance (umhos/cm)	MW-13	1426	n/a	7/19/2023	638.2	No	126	0
Specific Conductance (umhos/cm)	MW-14	1426	n/a	7/19/2023	2377	Yes	126	0
Specific Conductance (umhos/cm)	MW-16	1426	n/a	7/19/2023	809	No	126	0
Sulfate (mg/L)	MW-14	74.36	n/a	7/19/2023	45.9	No	26	0
Sulfate (mg/L)	MW-16	74.36	n/a	7/19/2023	45.8	No	26	0

Exceeds Limit: MW-11, MW-13

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=0.007355, Std. Dev.=0.01229, n=32, 50% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Arsenic Analysis Run 8/25/2023 12:39 PM View: 2023AWQR - Control Limit - Unconsolidated

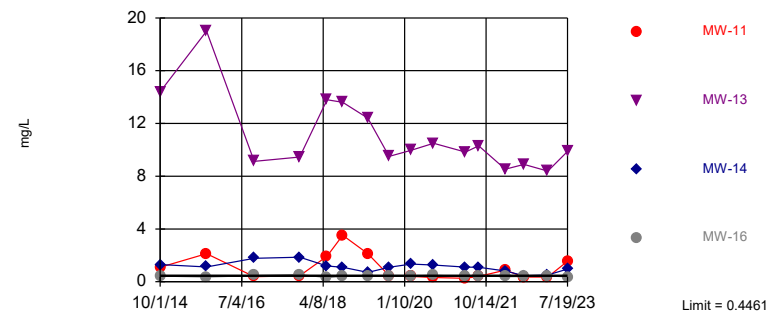
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Hollow symbols indicate censored values.

Exceeds Limit: MW-11, MW-13, MW-14

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=0.2968, Std. Dev.=0.07467, n=32. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Boron Analysis Run 8/25/2023 12:39 PM View: 2023AWQR - Control Limit - Unconsolidated -

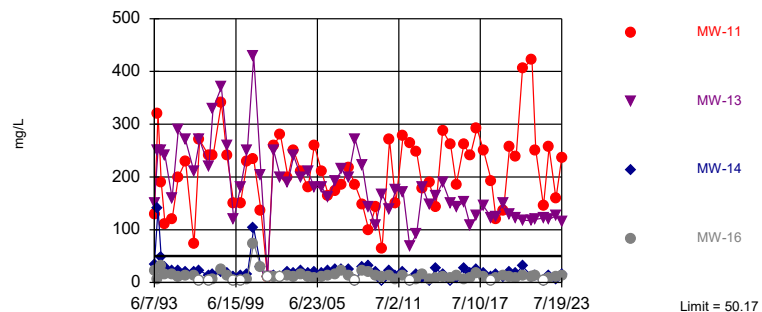
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Hollow symbols indicate censored values.

Exceeds Limit: MW-11, MW-13

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=20.2, Std. Dev.=14.99, n=126, 11.9% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Chemical Oxygen Demand Analysis Run 8/25/2023 12:39 PM View: 2023AWQR - Control Li

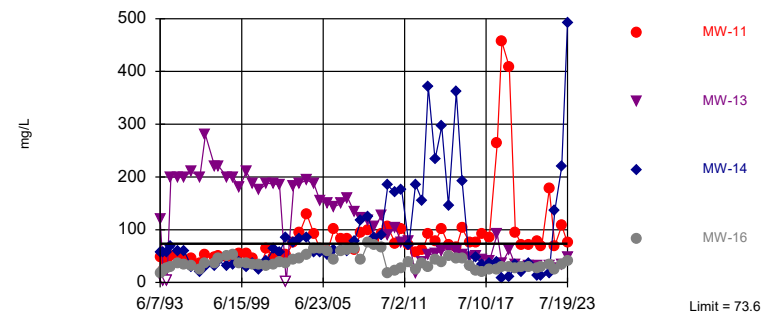
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Hollow symbols indicate censored values.

Exceeds Limit: MW-11, MW-14

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=26.59, Std. Dev.=23.5, n=126. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

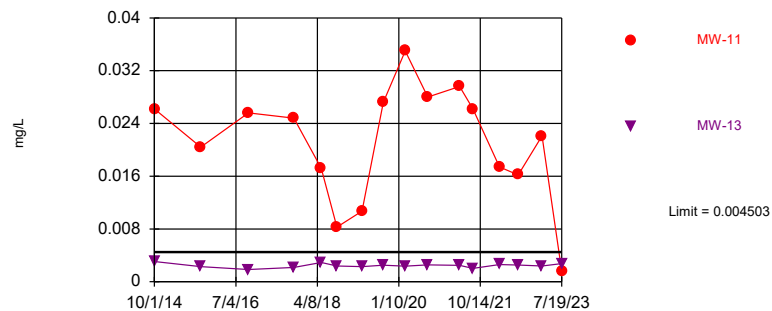
Constituent: Chloride Analysis Run 8/25/2023 12:39 PM View: 2023AWQR - Control Limit - Unconsolidate

Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Within Limit

Prediction Limit

Interwell Parametric



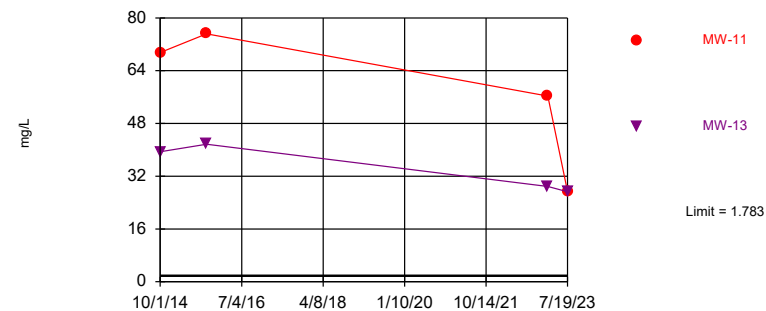
Background Data Summary: Mean=0.001502, Std. Dev.=0.001501, n=32, 12.5% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Cobalt Analysis Run 8/25/2023 12:39 PM View: 2023AWQR - Control Limit - Unconsolidated
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-11, MW-13

Prediction Limit

Interwell Parametric



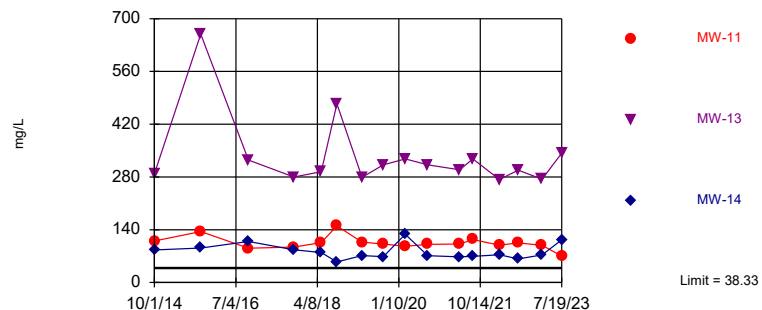
Background Data Summary: Mean=0.5105, Std. Dev.=0.6364, n=8, 37.5% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Iron Analysis Run 8/25/2023 12:39 PM View: 2023AWQR - Control Limit - Unconsolidated - F
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-11, MW-13, MW-14

Prediction Limit

Interwell Parametric



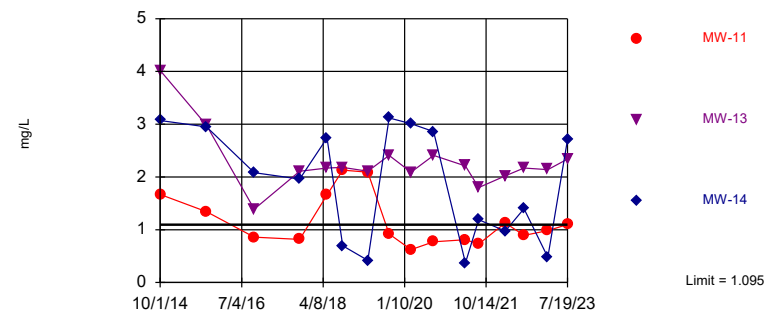
Background Data Summary: Mean=30.36, Std. Dev.=3.986, n=32. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 3 points to limit. Assumes 10 future values. Kappa overridden to 2.

Constituent: Magnesium Analysis Run 8/25/2023 12:39 PM View: 2023AWQR - Control Limit - Unconsolidated
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-11, MW-13, MW-14

Prediction Limit

Interwell Parametric

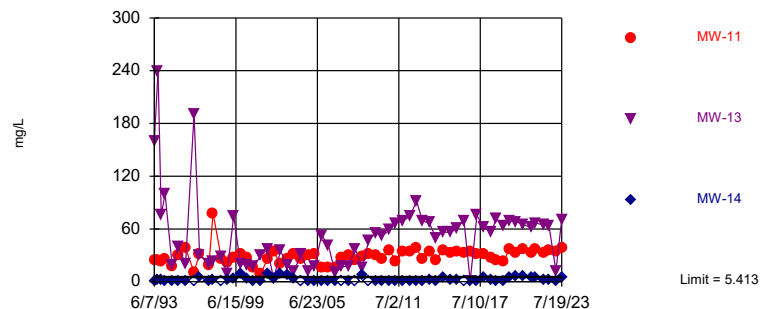


Background Data Summary: Mean=0.47, Std. Dev.=0.3124, n=32. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 3 points to limit. Assumes 10 future values. Kappa overridden to 2.

Constituent: Manganese Analysis Run 8/25/2023 12:39 PM View: 2023AWQR - Control Limit - Unconsolidated
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-11, MW-13

Prediction Limit Interwell Parametric

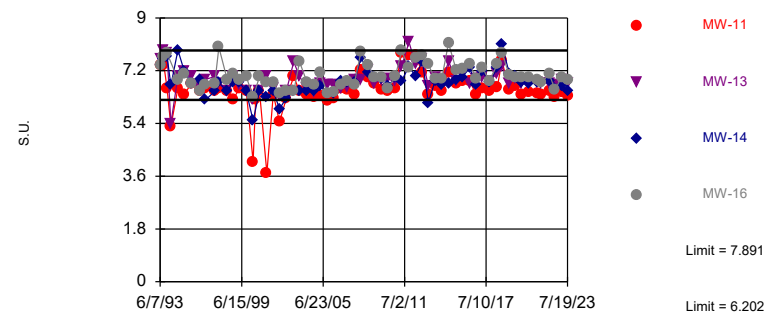


Background Data Summary: Mean=1.973, Std. Dev.=1.72, n=126, 17.46% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 3 points to limit. Assumes 10 future values. Kappa overridden to 2.

Constituent: Nitrogen, Ammonia Analysis Run 8/25/2023 12:39 PM View: 2023AWQR - Control Limit - Un
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Within Limits

Prediction Limit Interwell Parametric

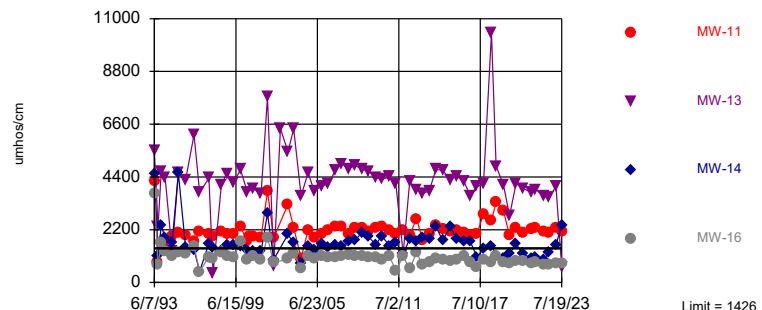


Background Data Summary: Mean=7.047, Std. Dev.=0.4223, n=126. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: pH Analysis Run 8/25/2023 12:39 PM View: 2023AWQR - Control Limit - Unconsolidated - Fa
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-11, MW-14

Prediction Limit Interwell Parametric

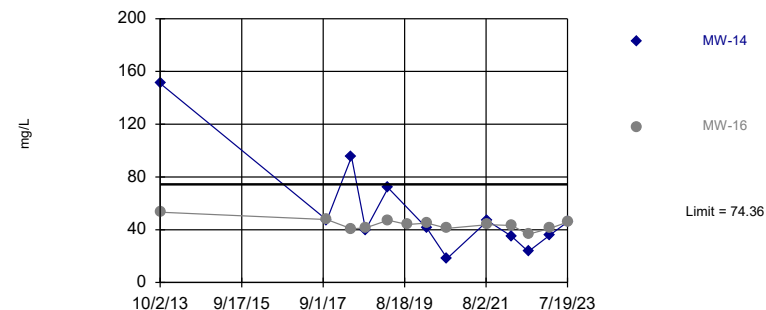


Background Data Summary: Mean=925.1, Std. Dev.=250.4, n=126. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Specific Conductance Analysis Run 8/25/2023 12:39 PM View: 2023AWQR - Control Limit -
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Within Limit

Prediction Limit Interwell Parametric



Background Data Summary: Mean=35.56, Std. Dev.=19.4, n=26. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Sulfate Analysis Run 8/25/2023 12:39 PM View: 2023AWQR - Control Limit - Unconsolidated
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Control Limit

Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas Printed 8/25/2023, 12:25 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>
Arsenic (mg/L)	MW-12	0.001173	n/a	7/19/2023	0.0895	Yes	32	87.5
Arsenic (mg/L)	MW-6	0.001173	n/a	7/19/2023	0.0272	Yes	32	87.5
Boron (mg/L)	MW-10	1.007	n/a	7/19/2023	0.457	No	32	3.125
Boron (mg/L)	MW-12	1.007	n/a	7/19/2023	1.7	Yes	32	3.125
Boron (mg/L)	MW-15	1.007	n/a	7/19/2023	0.222	No	32	3.125
Boron (mg/L)	MW-4	1.007	n/a	7/19/2023	0.3445	No	32	3.125
Boron (mg/L)	MW-6	1.007	n/a	7/19/2023	16.1	Yes	32	3.125
Boron (mg/L)	MW-8	1.007	n/a	7/19/2023	0.502	No	32	3.125
Chemical Oxygen Demand (mg/L)	MW-10	19.47	n/a	7/19/2023	7.07	No	96	53.13
Chemical Oxygen Demand (mg/L)	MW-12	19.47	n/a	7/19/2023	30.5	Yes	96	53.13
Chemical Oxygen Demand (mg/L)	MW-15	19.47	n/a	7/19/2023	6.41	No	96	53.13
Chemical Oxygen Demand (mg/L)	MW-6	19.47	n/a	7/19/2023	135	Yes	96	53.13
Chemical Oxygen Demand (mg/L)	MW-8	19.47	n/a	7/19/2023	6.11	No	96	53.13
Chloride (mg/L)	MW-10	224.8	n/a	7/19/2023	51.5	No	95	0
Chloride (mg/L)	MW-12	224.8	n/a	7/19/2023	305	Yes	95	0
Chloride (mg/L)	MW-15	224.8	n/a	7/19/2023	88.1	No	95	0
Chloride (mg/L)	MW-4	224.8	n/a	7/19/2023	190	No	95	0
Chloride (mg/L)	MW-6	224.8	n/a	7/19/2023	176	No	95	0
Chloride (mg/L)	MW-8	224.8	n/a	7/19/2023	117	No	95	0
Cobalt (mg/L)	MW-12	0.0005646	n/a	7/19/2023	0.00169	Yes	32	46.88
Cobalt (mg/L)	MW-6	0.0005646	n/a	7/19/2023	0.00275	Yes	32	46.88
Iron (mg/L)	MW-10	0.05	n/a	7/19/2023	0.462	Yes	8	100
Iron (mg/L)	MW-12	0.05	n/a	7/19/2023	29.4	Yes	8	100
Iron (mg/L)	MW-6	0.05	n/a	7/19/2023	8.76	Yes	8	100
Magnesium (mg/L)	MW-10	57.84	n/a	7/19/2023	55.3	No	32	0
Magnesium (mg/L)	MW-12	57.84	n/a	7/19/2023	72.7	Yes	32	0
Magnesium (mg/L)	MW-15	57.84	n/a	7/19/2023	53.6	No	32	0
Magnesium (mg/L)	MW-6	57.84	n/a	7/19/2023	316	Yes	32	0
Manganese (mg/L)	MW-10	1.099	n/a	7/19/2023	0.283	No	32	50
Manganese (mg/L)	MW-12	1.099	n/a	7/19/2023	1.15	Yes	32	50
Manganese (mg/L)	MW-6	1.099	n/a	7/19/2023	0.162	No	32	50
Nickel (mg/L)	MW-6	0.004727	n/a	7/19/2023	0.0346	Yes	30	70
Nitrogen, Ammonia (mg/L)	MW-10	1.32	n/a	7/19/2023	3.34	Yes	96	84.38
Nitrogen, Ammonia (mg/L)	MW-12	1.32	n/a	7/19/2023	17.7	Yes	96	84.38
Nitrogen, Ammonia (mg/L)	MW-6	1.32	n/a	7/19/2023	231	Yes	96	84.38
pH (S.U.)	MW-10	7.786	6.218	7/19/2023	6.76	No	97	0
pH (S.U.)	MW-12	7.786	6.218	7/19/2023	6.61	No	97	0
pH (S.U.)	MW-15	7.786	6.218	7/19/2023	6.87	No	97	0
pH (S.U.)	MW-4	7.786	6.218	7/19/2023	7.73	No	97	0
pH (S.U.)	MW-6	7.786	6.218	7/19/2023	6.56	No	97	0
pH (S.U.)	MW-8	7.786	6.218	7/19/2023	7.62	No	97	0
Specific Conductance (umhos/cm)	MW-10	1592	n/a	7/19/2023	1251	No	98	0
Specific Conductance (umhos/cm)	MW-12	1592	n/a	7/19/2023	1996	Yes	98	0
Specific Conductance (umhos/cm)	MW-15	1592	n/a	7/19/2023	1113	No	98	0
Specific Conductance (umhos/cm)	MW-4	1592	n/a	7/19/2023	1172	No	98	0
Specific Conductance (umhos/cm)	MW-6	1592	n/a	7/19/2023	4820	Yes	98	0
Specific Conductance (umhos/cm)	MW-8	1592	n/a	7/19/2023	1118	No	98	0
Sulfate (mg/L)	MW-10	71.98	n/a	7/19/2023	117	Yes	25	4
Sulfate (mg/L)	MW-12	71.98	n/a	7/19/2023	10.7	No	25	4
Sulfate (mg/L)	MW-15	71.98	n/a	7/19/2023	89.3	Yes	25	4

Control Limit

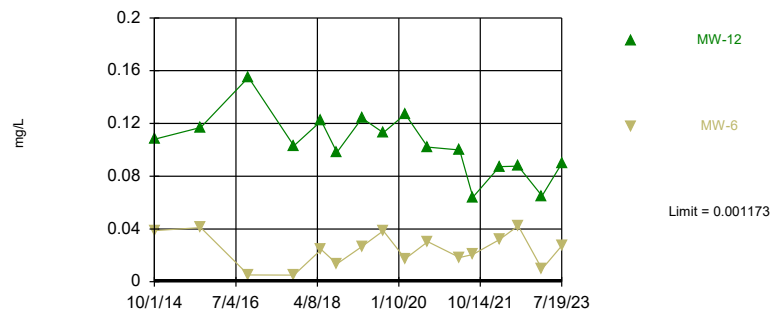
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas Printed 8/25/2023, 12:25 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>
Sulfate (mg/L)	MW-4	71.98	n/a	7/19/2023	58.05	No	25	4
Sulfate (mg/L)	MW-6	71.98	n/a	7/19/2023	573	Yes	25	4
Sulfate (mg/L)	MW-8	71.98	n/a	7/19/2023	49.9	No	25	4

Exceeds Limit: MW-12, MW-6

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=0.0009688, Std. Dev.=0.0001021, n=32, 87.5% NDs (user selected parametric test despite non-detects). Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

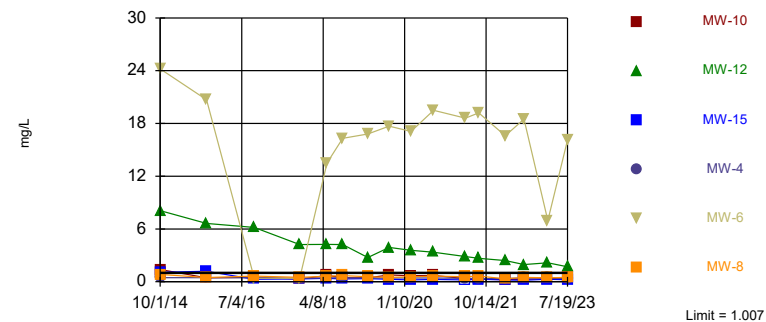
Constituent: Arsenic Analysis Run 8/25/2023 12:23 PM View: 2023AWQR - Control Limit - Bedrock - Fall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Hollow symbols indicate censored values.

Exceeds Limit: MW-12, MW-6

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=0.4056, Std. Dev.=0.3009, n=32, 3.125% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 6 points to limit. Assumes 7 future values. Kappa overridden to 2.

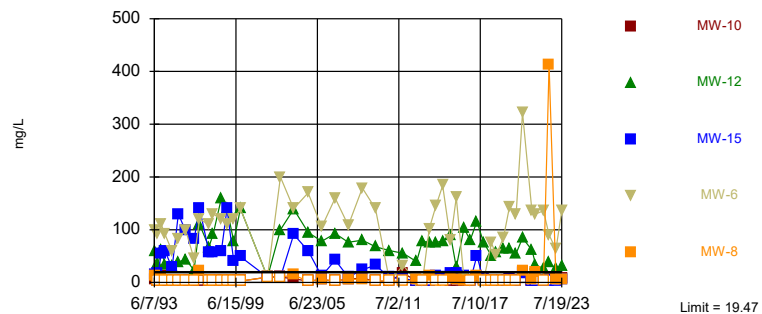
Constituent: Boron Analysis Run 8/25/2023 12:23 PM View: 2023AWQR - Control Limit - Bedrock - Fall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Hollow symbols indicate censored values.

Exceeds Limit: MW-12, MW-6

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=6.762, Std. Dev.=6.352, n=96, 53.13% NDs (user selected parametric test despite non-detects). Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 5 points to limit. Assumes 8 future values. Kappa overridden to 2.

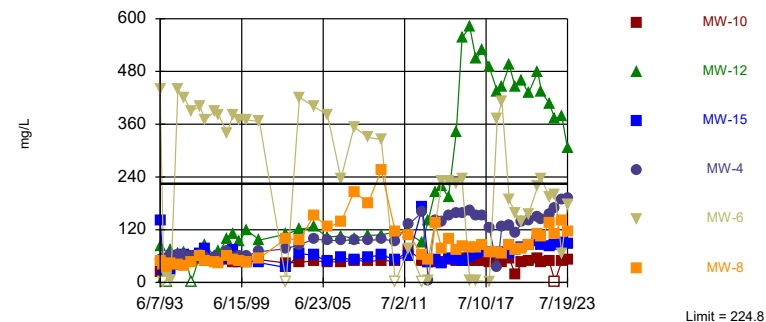
Constituent: Chemical Oxygen Demand Analysis Run 8/25/2023 12:23 PM View: 2023AWQR - Control Li
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Hollow symbols indicate censored values.

Exceeds Limit: MW-12

Prediction Limit

Interwell Parametric



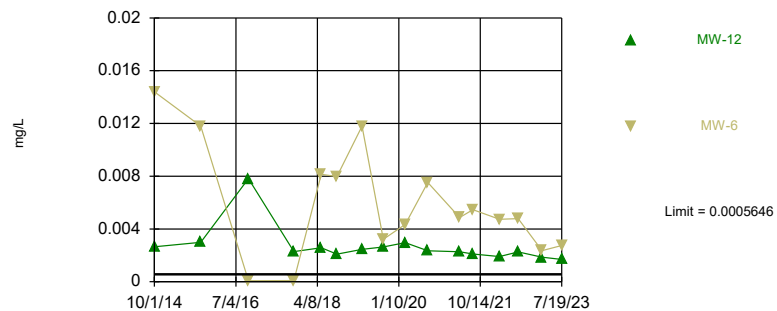
Background Data Summary: Mean=89.87, Std. Dev.=67.46, n=95. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 6 points to limit. Assumes 7 future values. Kappa overridden to 2.

Constituent: Chloride Analysis Run 8/25/2023 12:23 PM View: 2023AWQR - Control Limit - Bedrock - Fall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-12, MW-6

Prediction Limit

Interwell Parametric



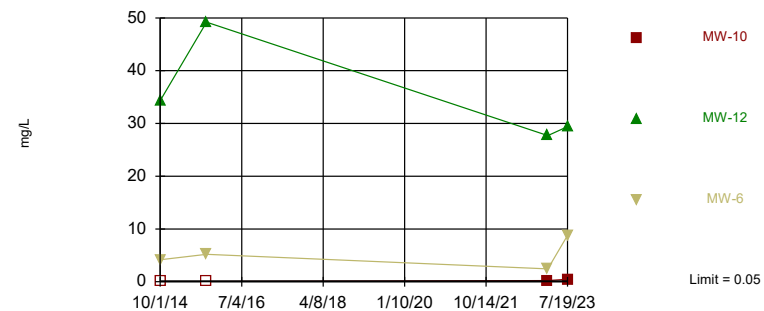
Background Data Summary: Mean=0.000279, Std. Dev.=0.0001428, n=32, 46.88% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 2 points to limit. Assumes 11 future values. Kappa overridden to 2.

Constituent: Cobalt Analysis Run 8/25/2023 12:23 PM View: 2023AWQR - Control Limit - Bedrock - Fall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-10, MW-12, MW-6

Prediction Limit

Interwell Parametric



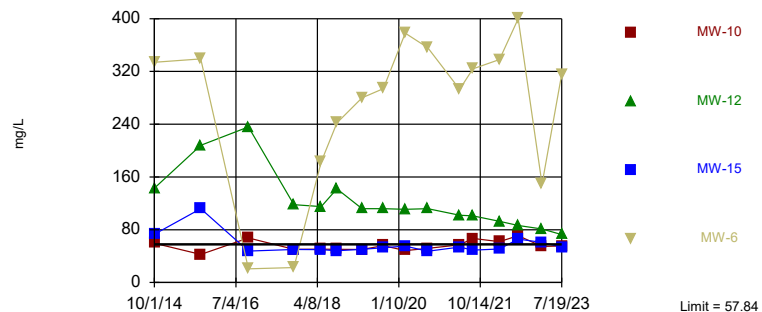
Background Data Summary: Mean=0.05, Std. Dev.=0, n=8, 100% NDs (user selected parametric test despite non-detects). Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 3 points to limit. Assumes 10 future values. Kappa overridden to 2.

Constituent: Iron Analysis Run 8/25/2023 12:23 PM View: 2023AWQR - Control Limit - Bedrock - Fall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-12, MW-6

Prediction Limit

Interwell Parametric



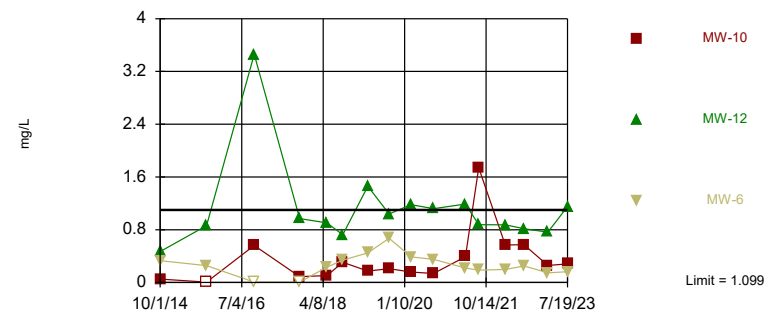
Background Data Summary: Mean=39.28, Std. Dev.=9.281, n=32. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 4 points to limit. Assumes 9 future values. Kappa overridden to 2.

Constituent: Magnesium Analysis Run 8/25/2023 12:23 PM View: 2023AWQR - Control Limit - Bedrock - F
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-12

Prediction Limit

Interwell Parametric



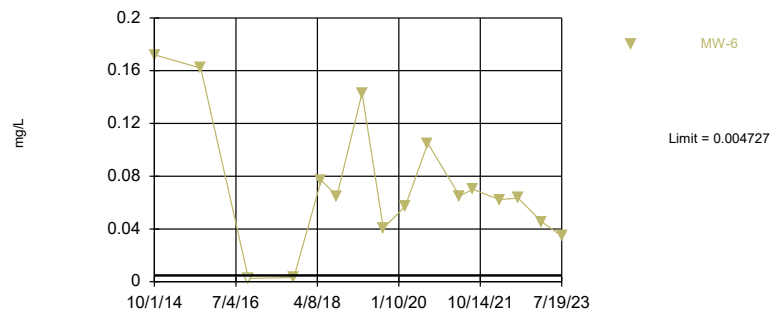
Background Data Summary: Mean=0.2374, Std. Dev.=0.4307, n=32, 50% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 3 points to limit. Assumes 10 future values. Kappa overridden to 2.

Constituent: Manganese Analysis Run 8/25/2023 12:23 PM View: 2023AWQR - Control Limit - Bedrock - F
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-6

Prediction Limit

Interwell Parametric



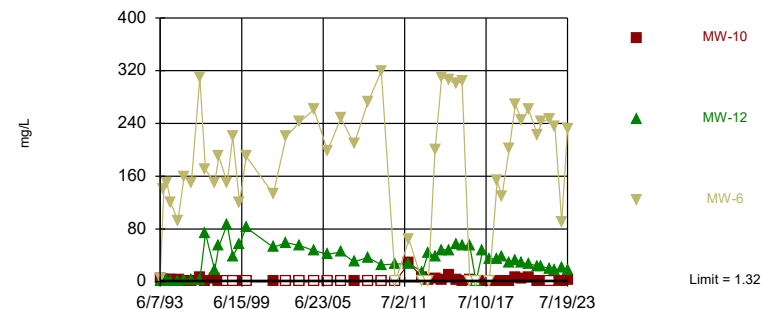
Background Data Summary: Mean=0.002831, Std. Dev.=0.000948, n=30, 70% NDs (user selected parametric test despite non-detects). Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Assumes 12 future values. Kappa overridden to 2.

Constituent: Nickel Analysis Run 8/25/2023 12:23 PM View: 2023AWQR - Control Limit - Bedrock - Fall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-10, MW-12, MW-6

Prediction Limit

Interwell Parametric



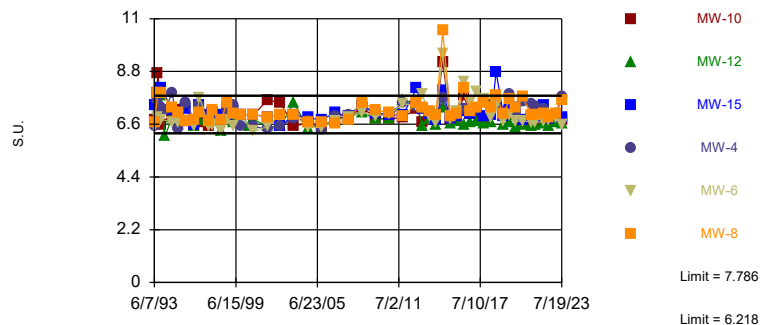
Background Data Summary: Mean=0.2693, Std. Dev.=0.5251, n=96, 84.38% NDs (user selected parametric test despite non-detects). Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 3 points to limit. Assumes 10 future values. Kappa overridden to 2.

Constituent: Nitrogen, Ammonia Analysis Run 8/25/2023 12:23 PM View: 2023AWQR - Control Limit - Be
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Within Limits

Prediction Limit

Interwell Parametric



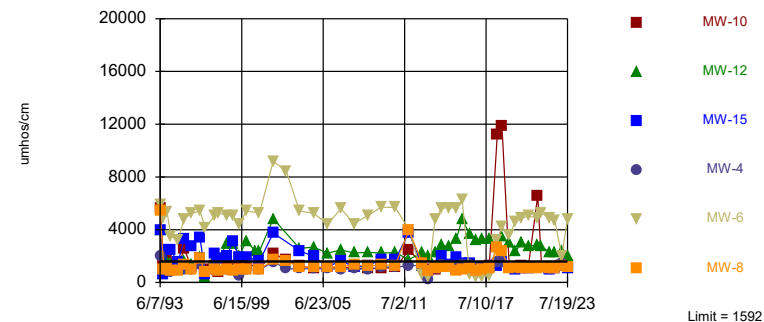
Background Data Summary: Mean=7.002, Std. Dev.=0.3919, n=97. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 6 points to limit. Assumes 7 future values. Kappa overridden to 2.

Constituent: pH Analysis Run 8/25/2023 12:23 PM View: 2023AWQR - Control Limit - Bedrock - Fall
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-12, MW-6

Prediction Limit

Interwell Parametric



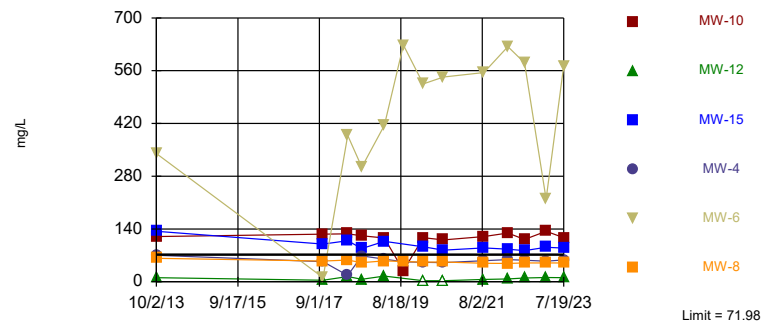
Background Data Summary: Mean=1080, Std. Dev.=255.8, n=98. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 6 points to limit. Assumes 7 future values. Kappa overridden to 2.

Constituent: Specific Conductance Analysis Run 8/25/2023 12:23 PM View: 2023AWQR - Control Limit -
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Exceeds Limit: MW-10, MW-15, MW-6

Prediction Limit

Interwell Parametric



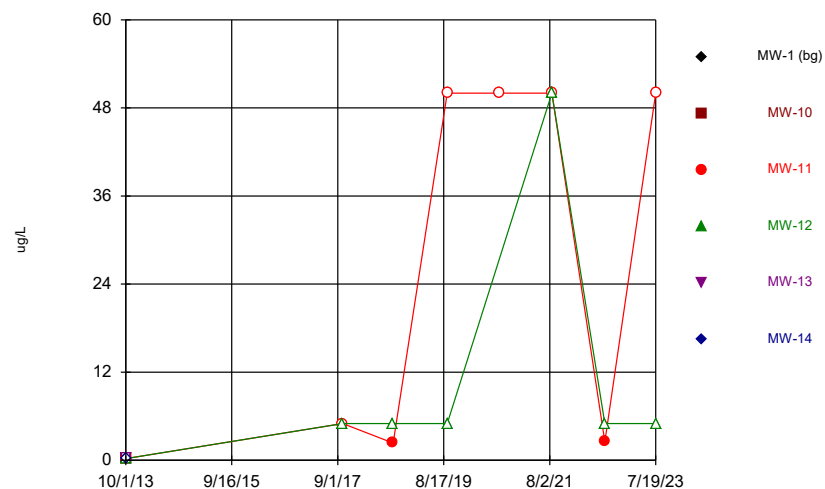
Background Data Summary: Mean=42.79, Std. Dev.=14.59, n=25, 4% NDs. Insufficient data to test for seasonality; not deseasonalized. Normality test was disabled. Comparing 6 points to limit. Assumes 7 future values. Kappa overridden to 2.



Attachment C

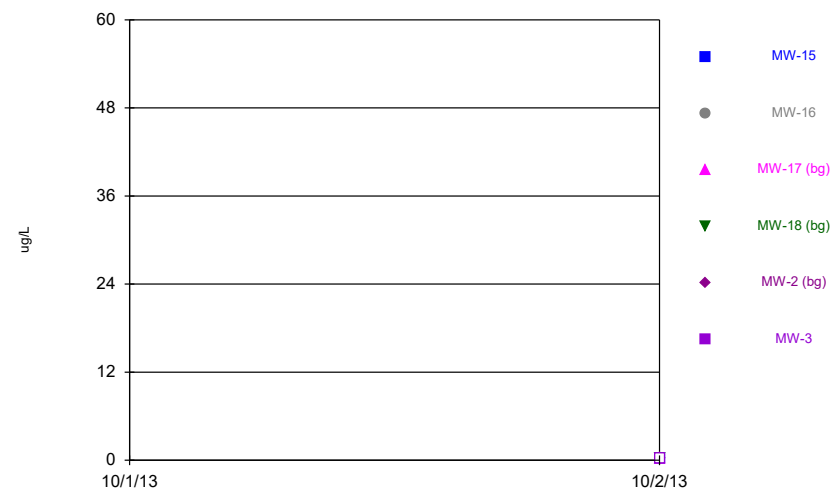
Time Series Graphs

Time Series



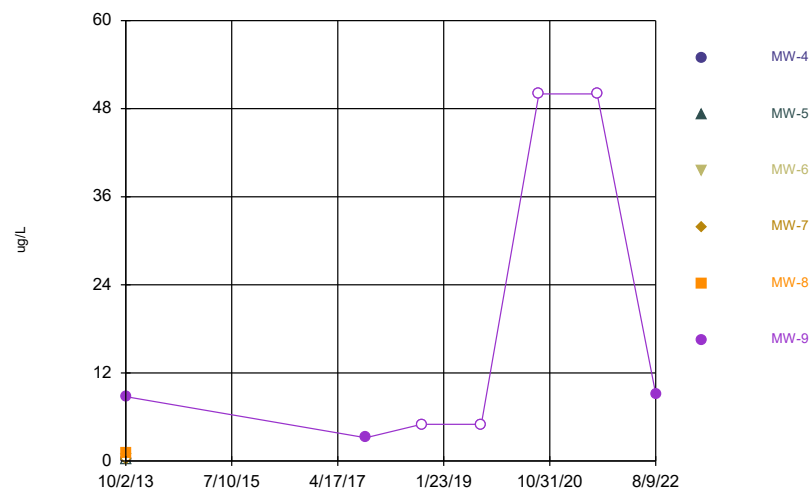
Constituent: 2-Butanone Analysis Run 8/22/2023 5:55 PM View: 2023AWQR-Time Series
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



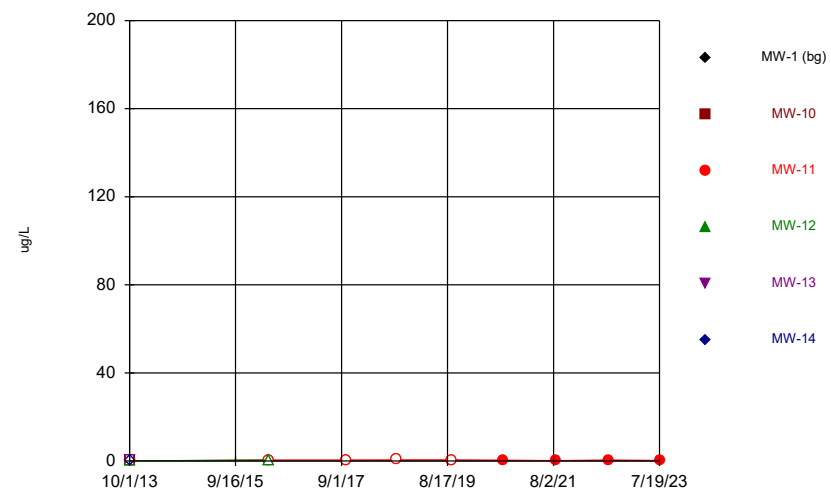
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



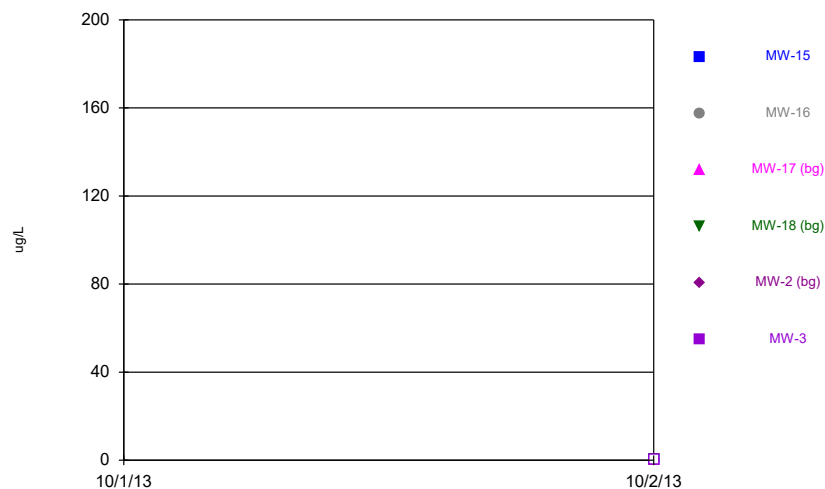
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



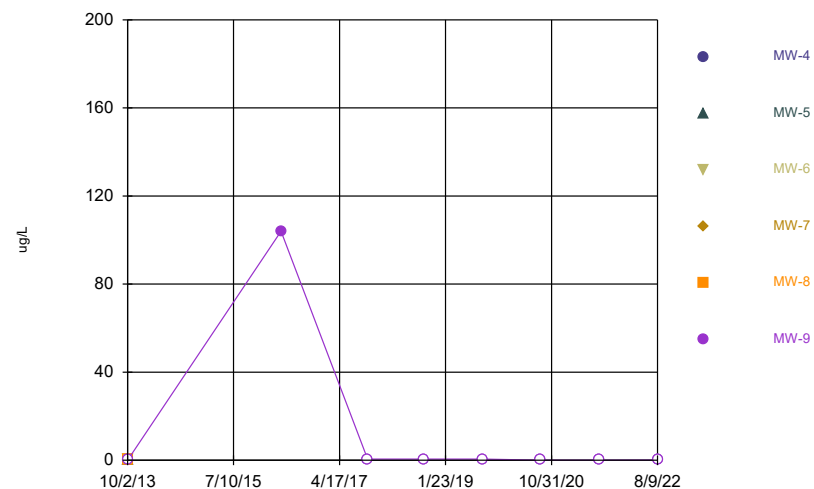
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



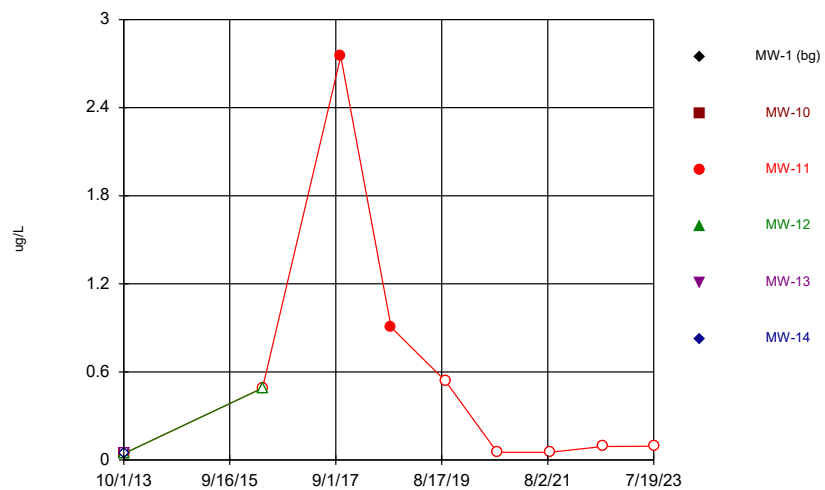
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



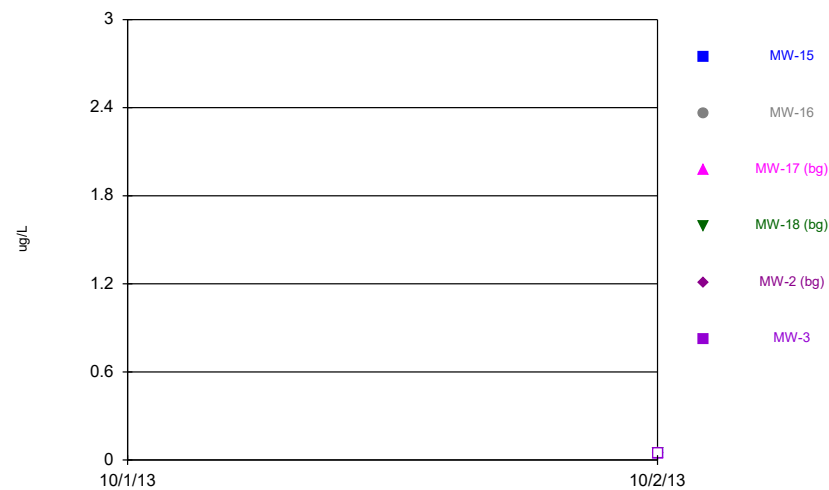
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



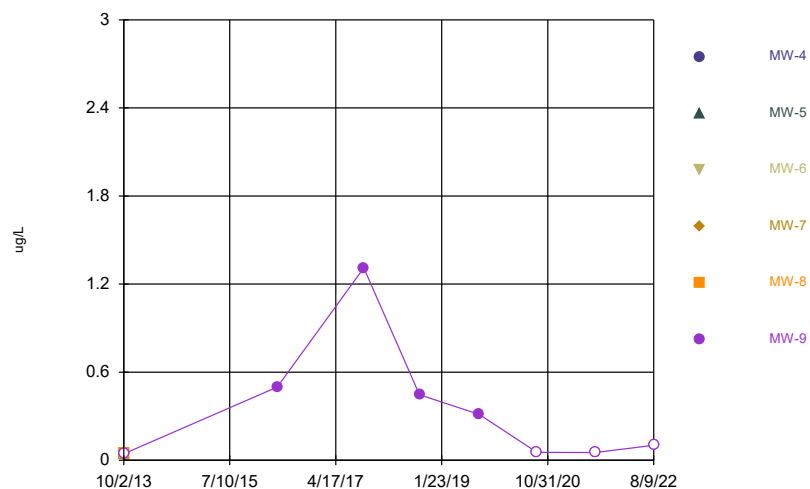
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Time Series



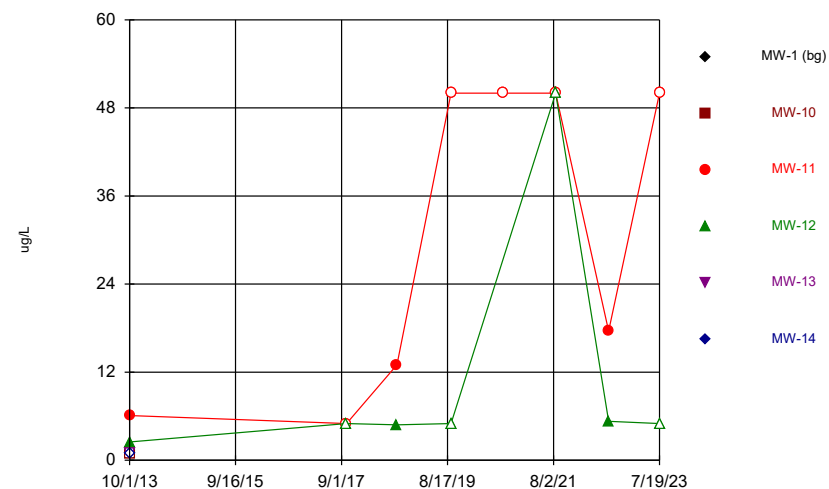
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



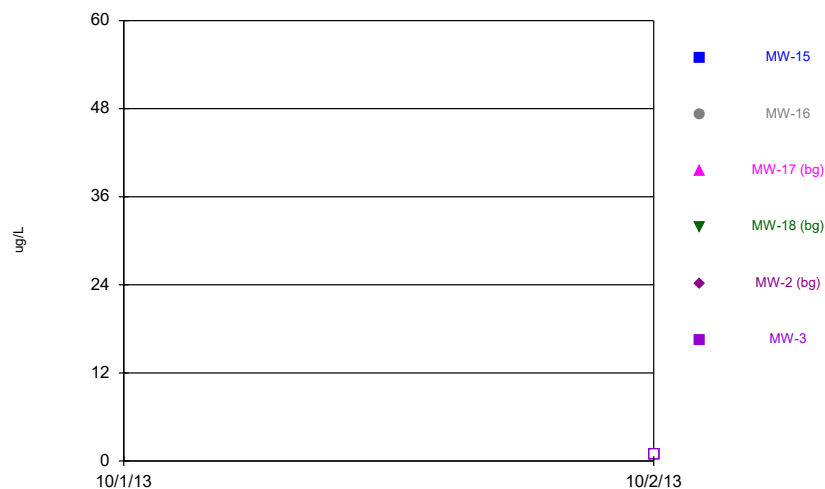
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Time Series



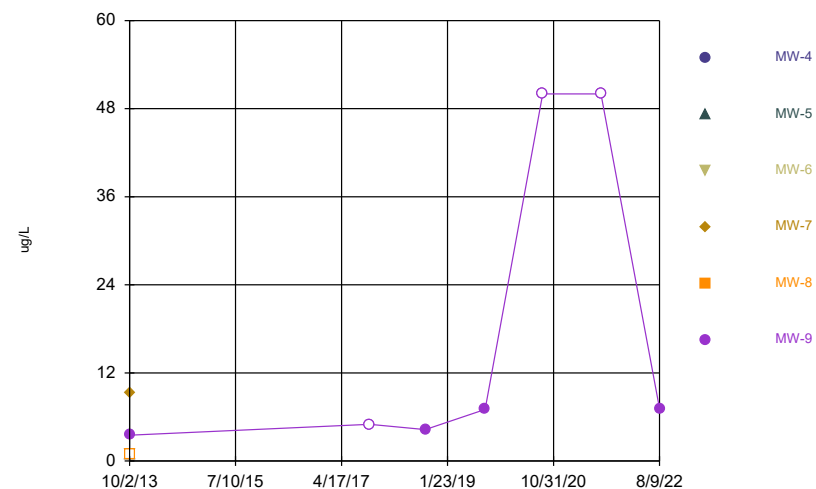
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



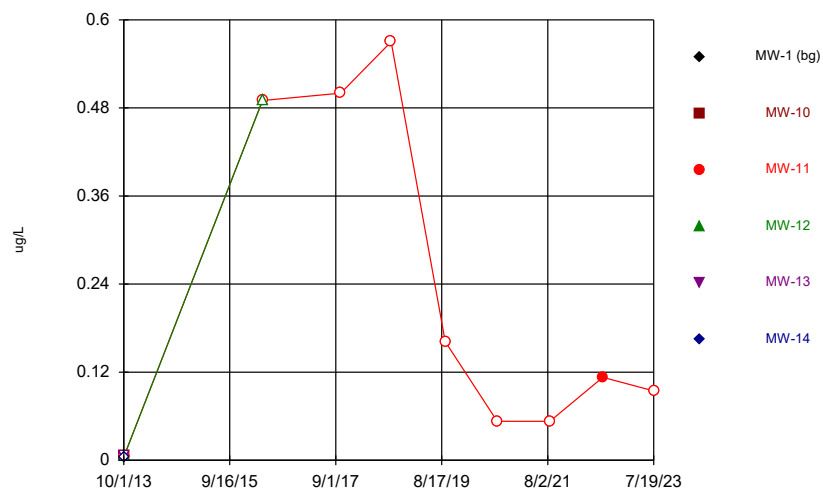
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



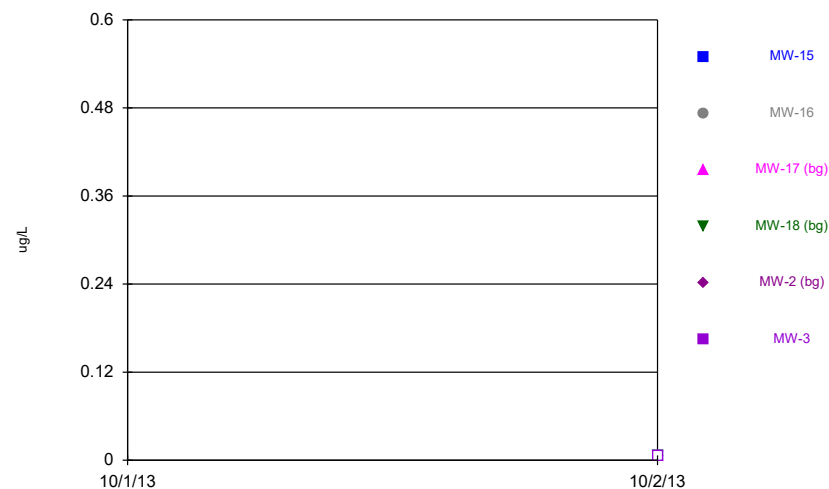
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



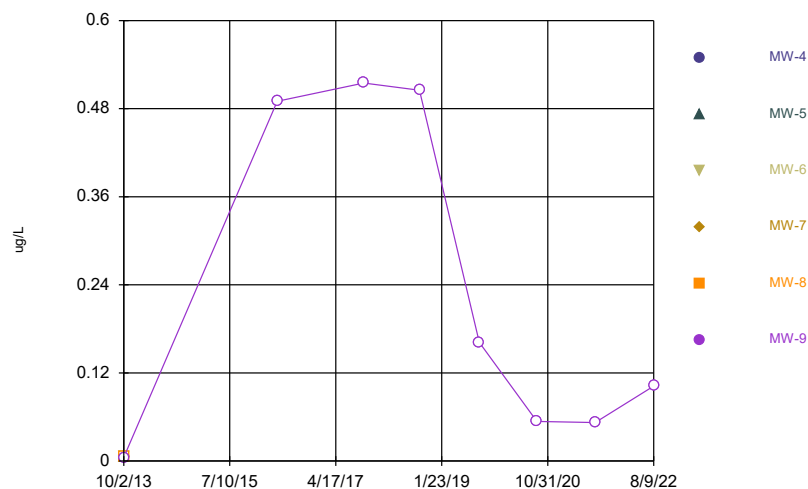
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



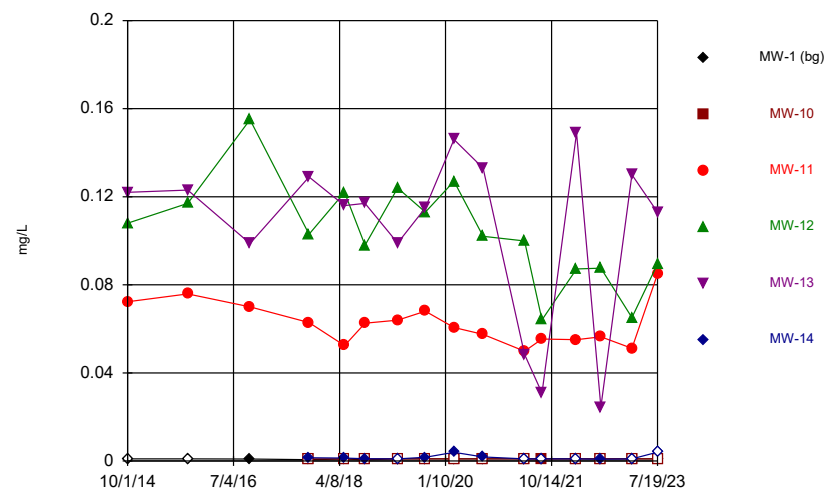
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



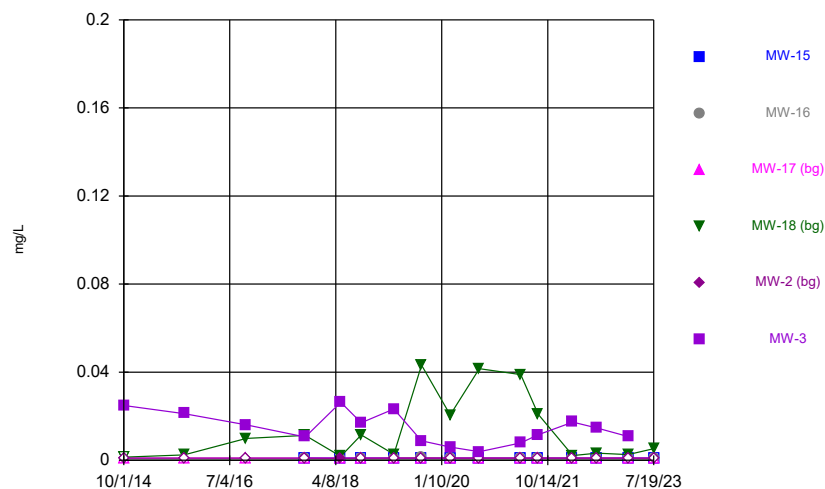
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series

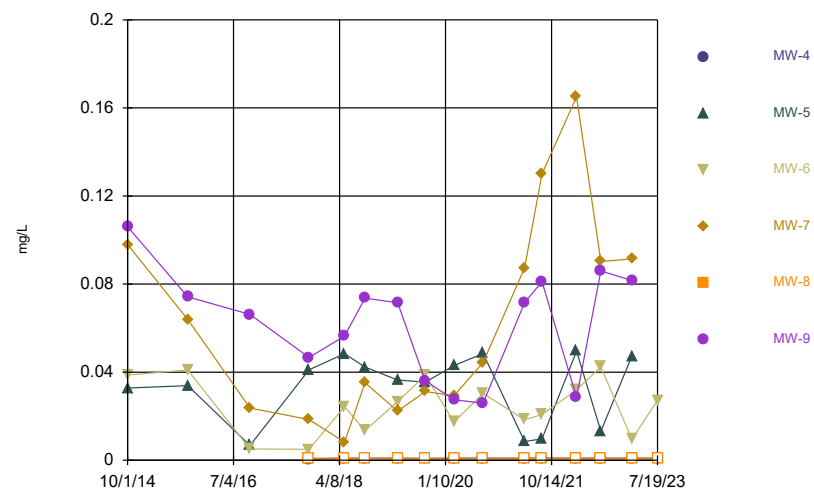


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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

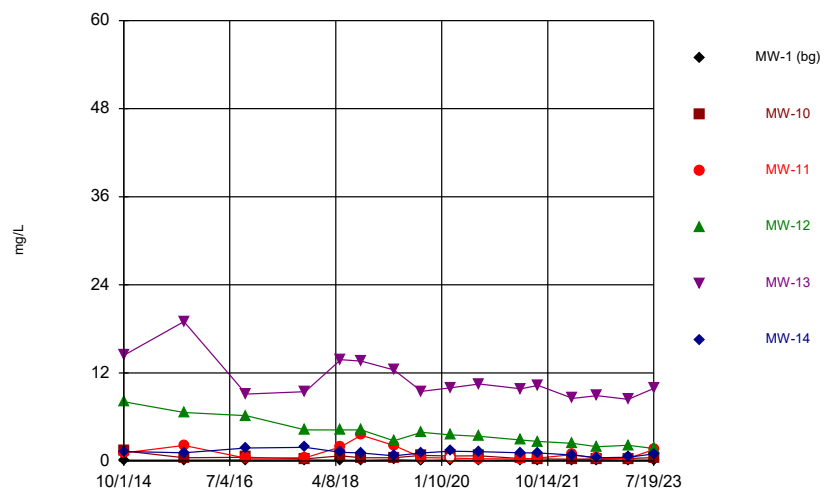
Time Series



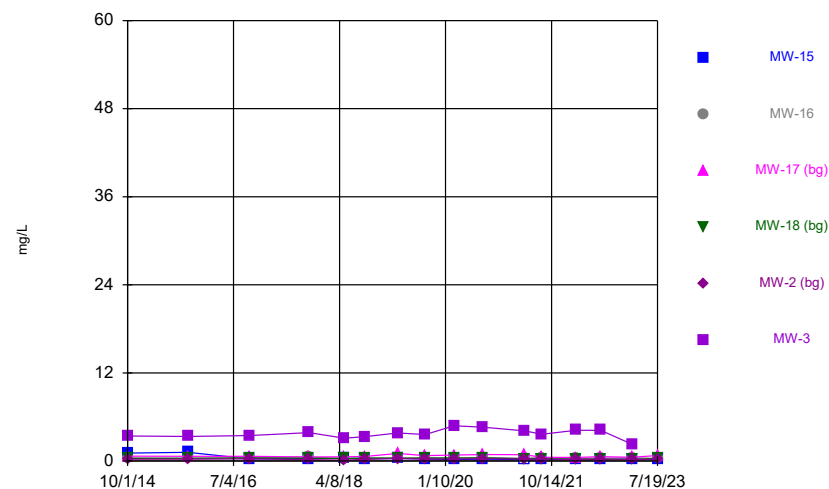
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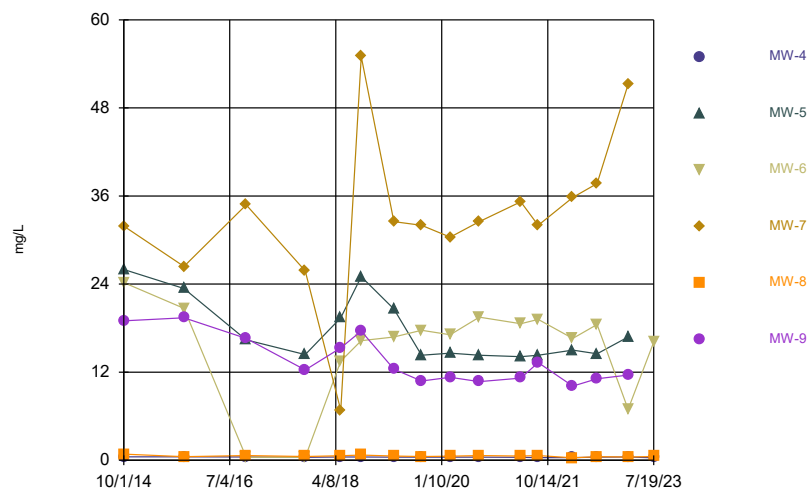
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Time Series

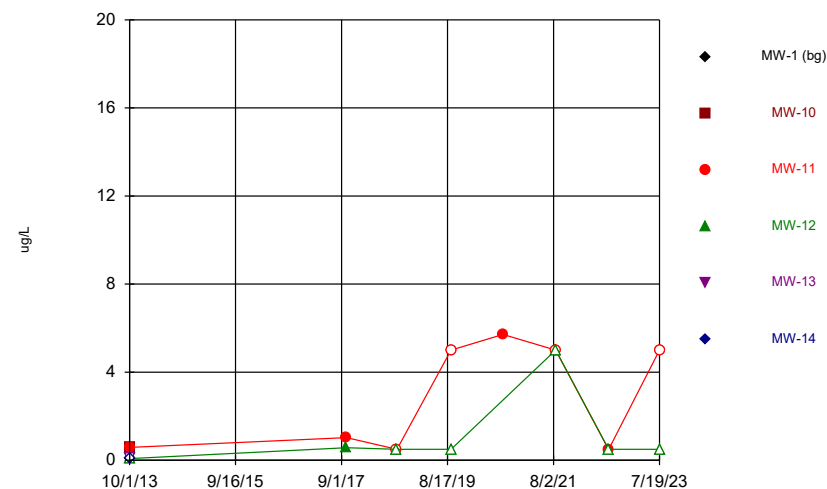


Time Series



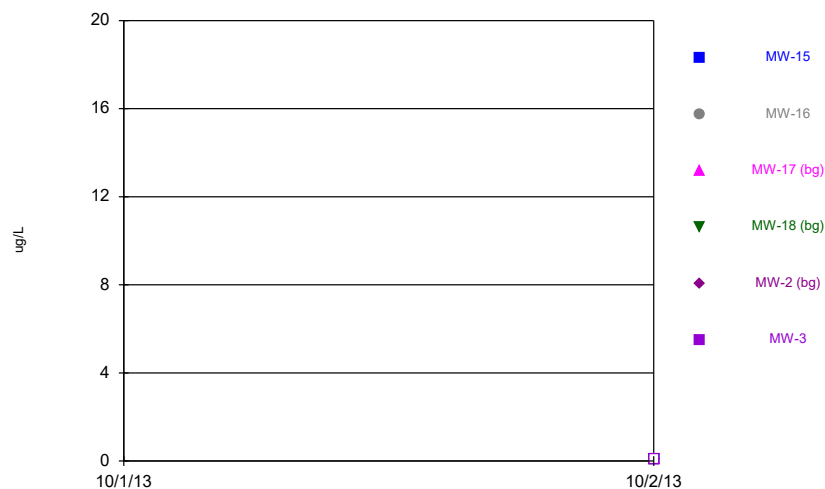
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



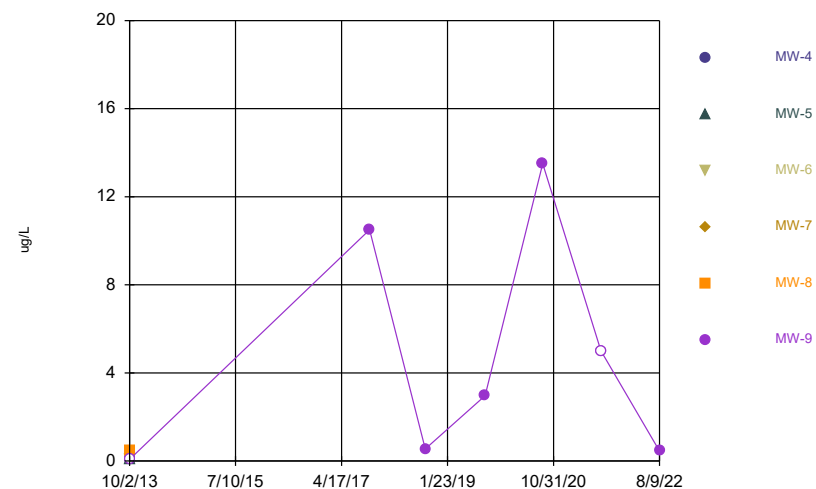
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



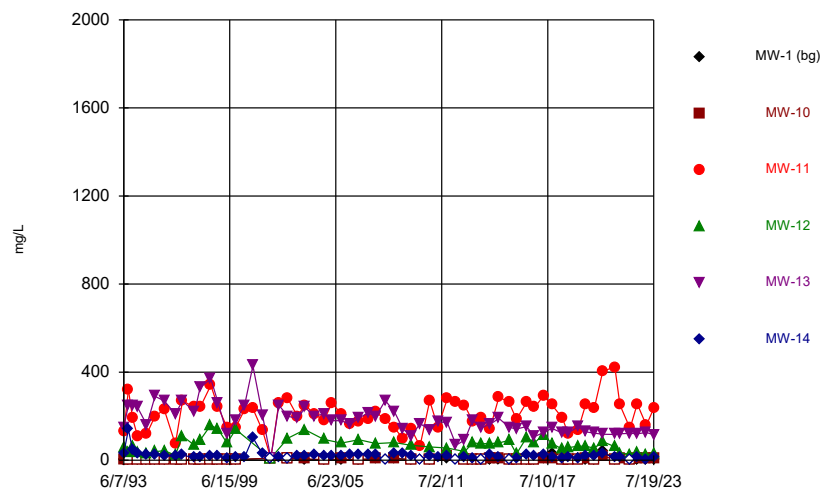
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Time Series



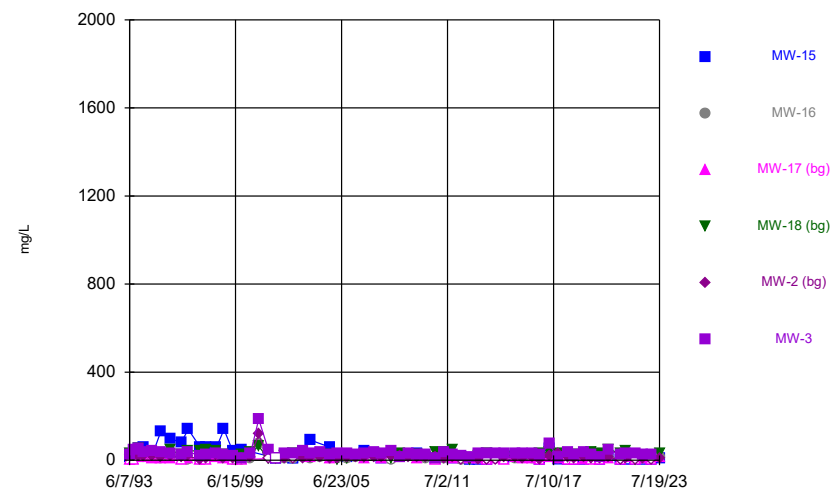
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



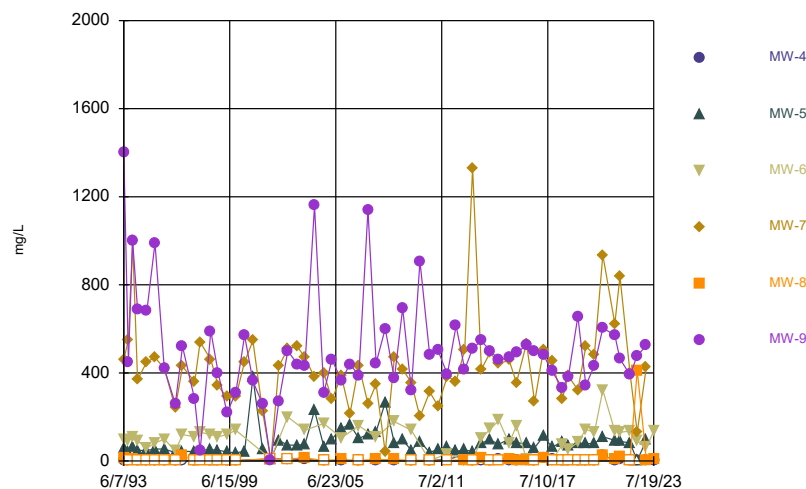
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



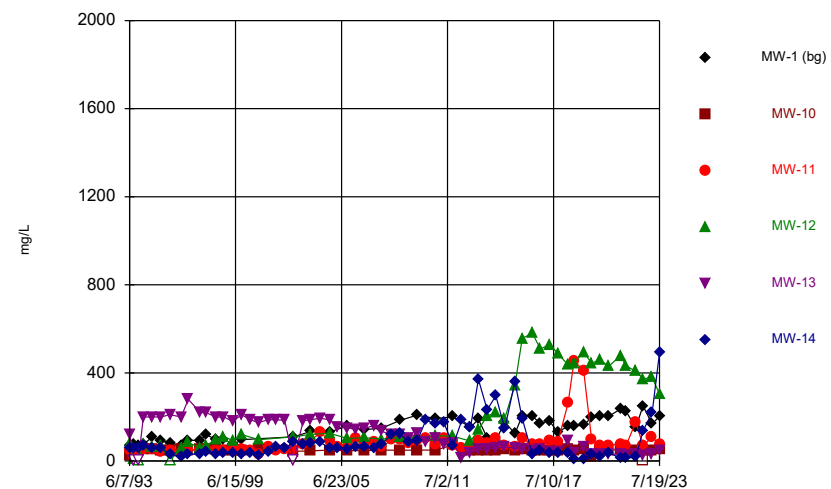
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Time Series



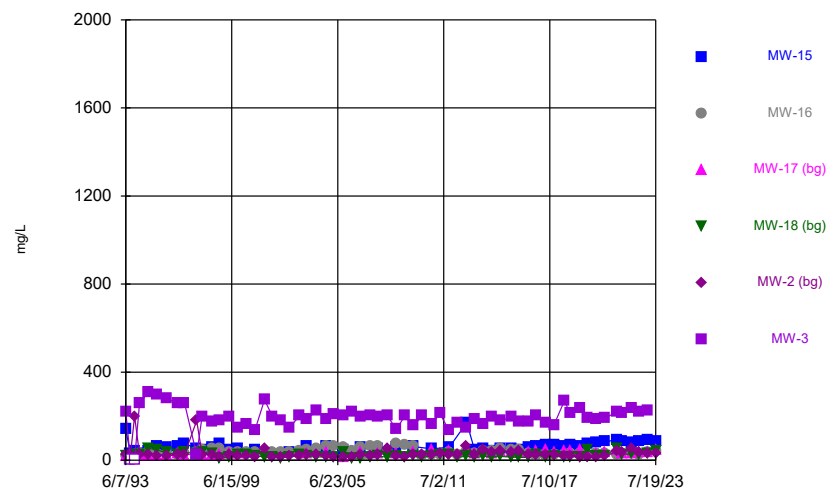
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



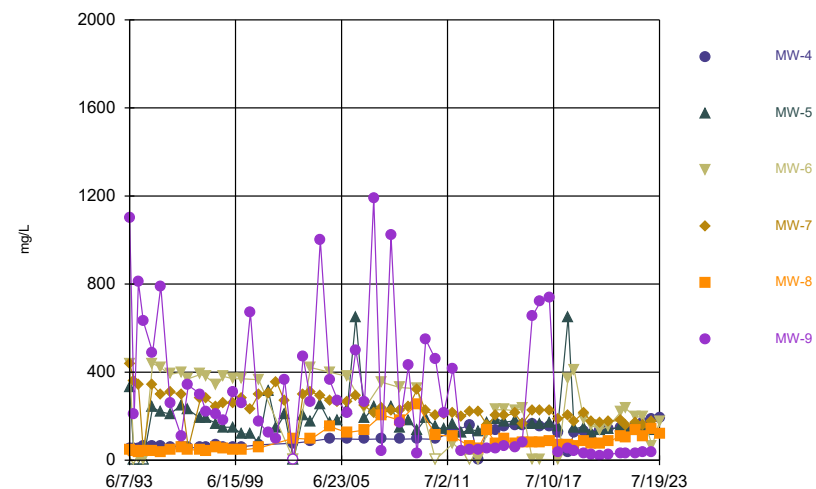
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



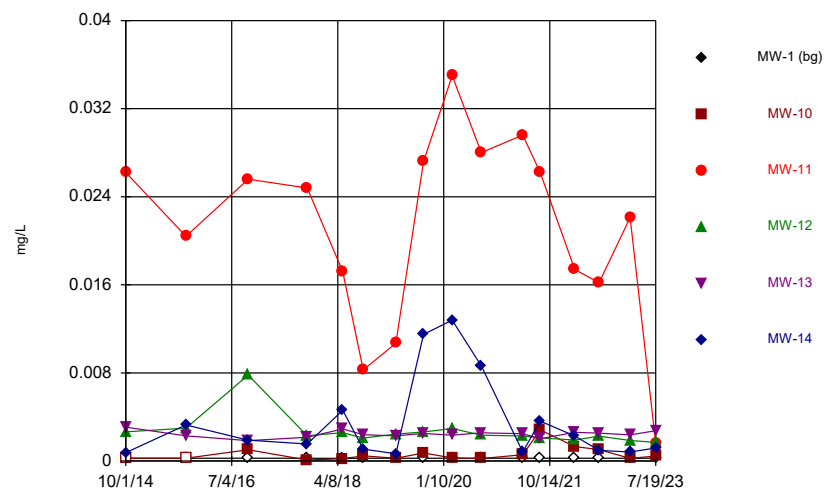
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



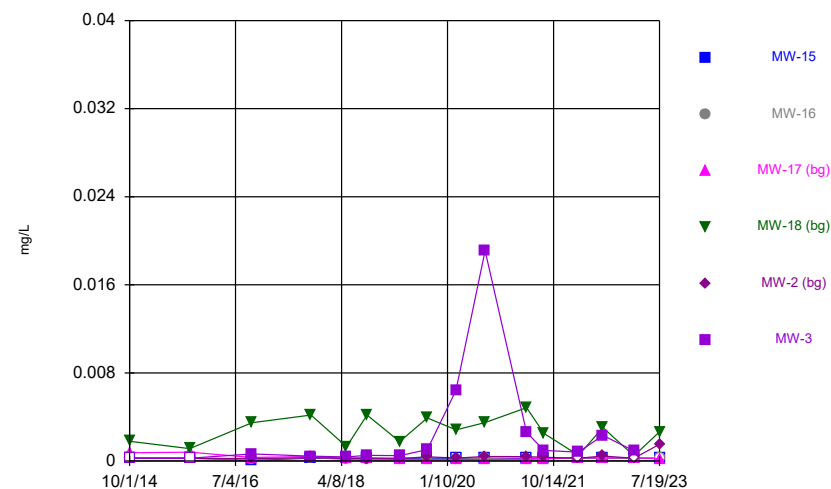
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



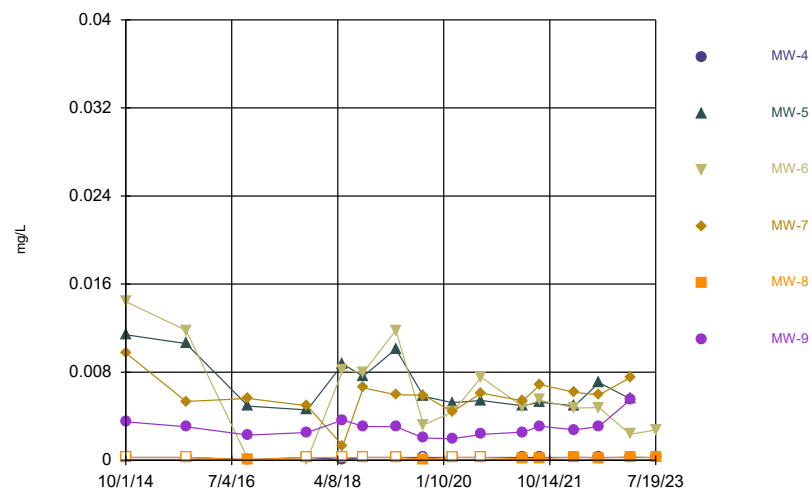
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



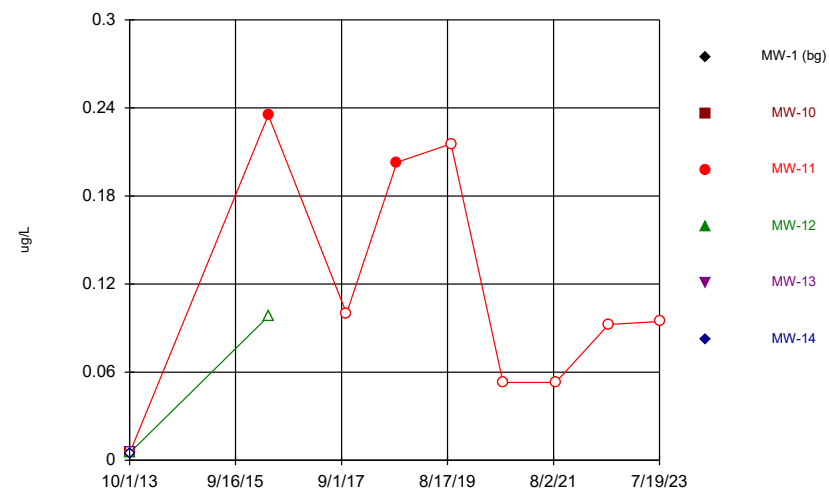
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



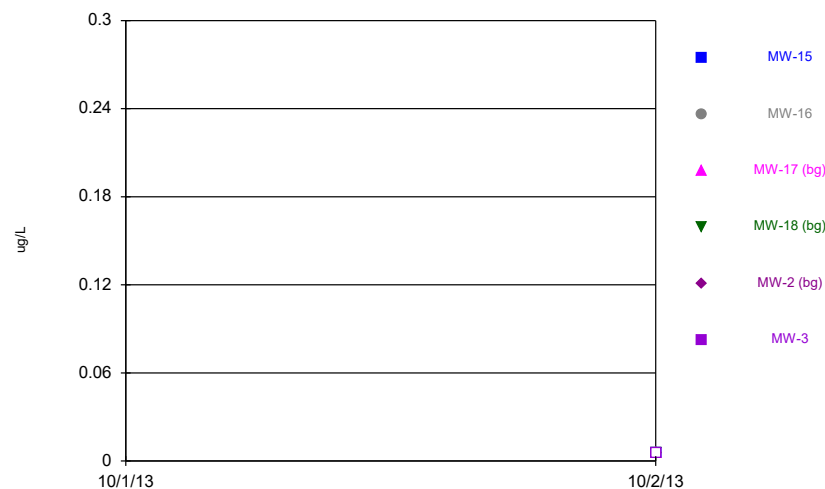
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



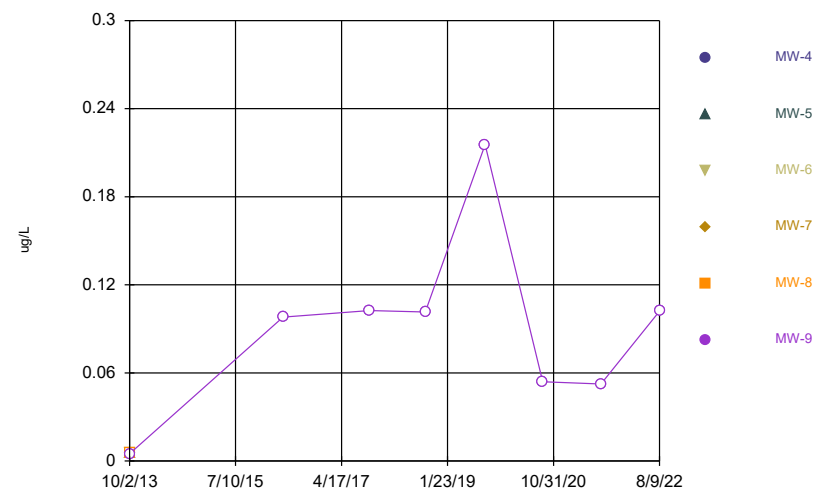
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



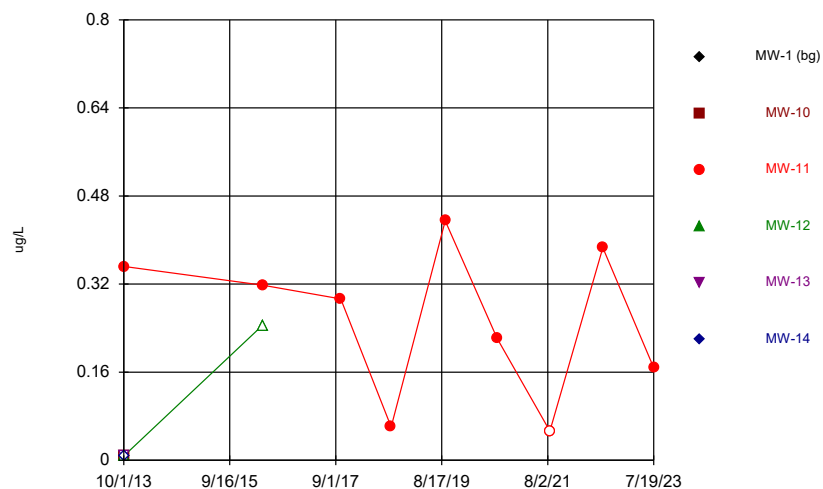
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



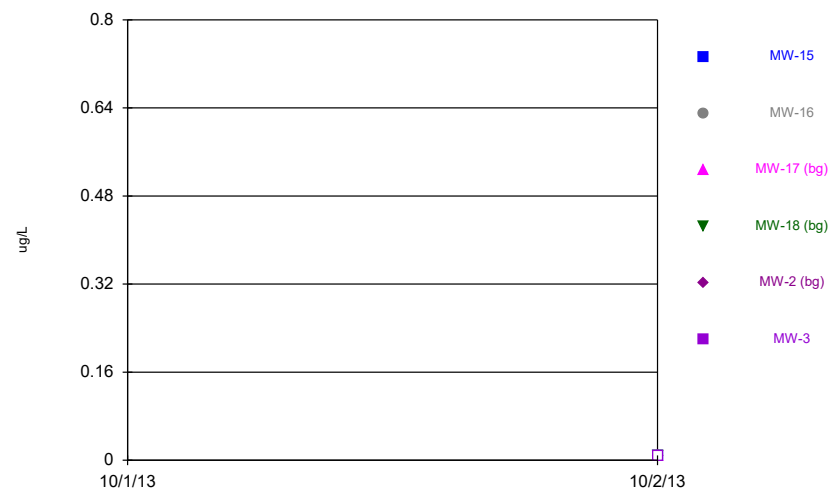
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



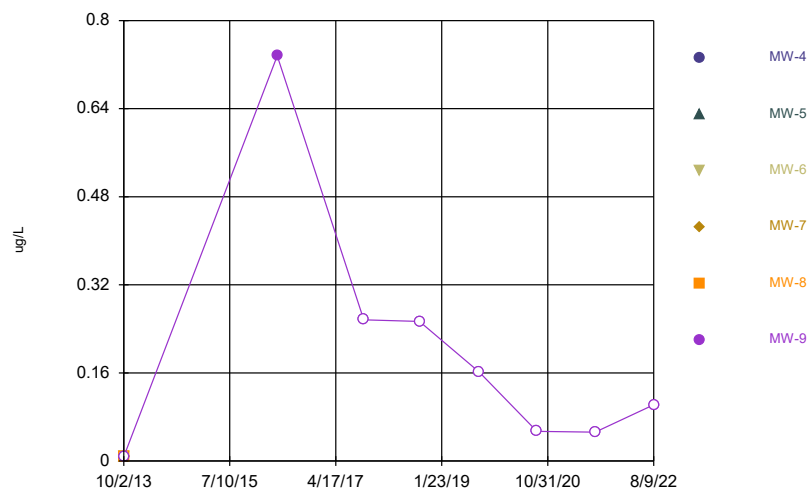
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



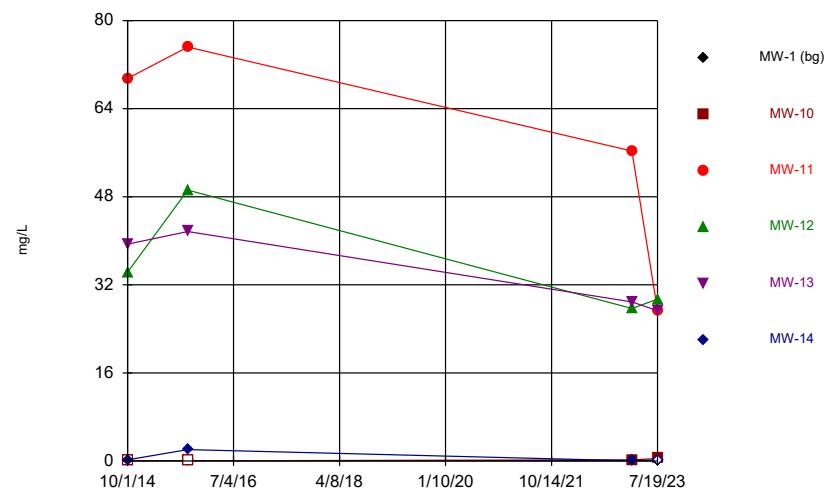
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



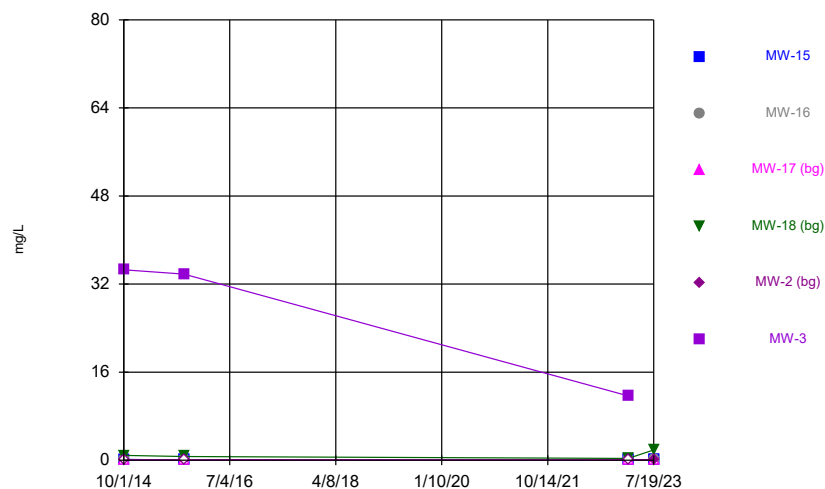
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Time Series



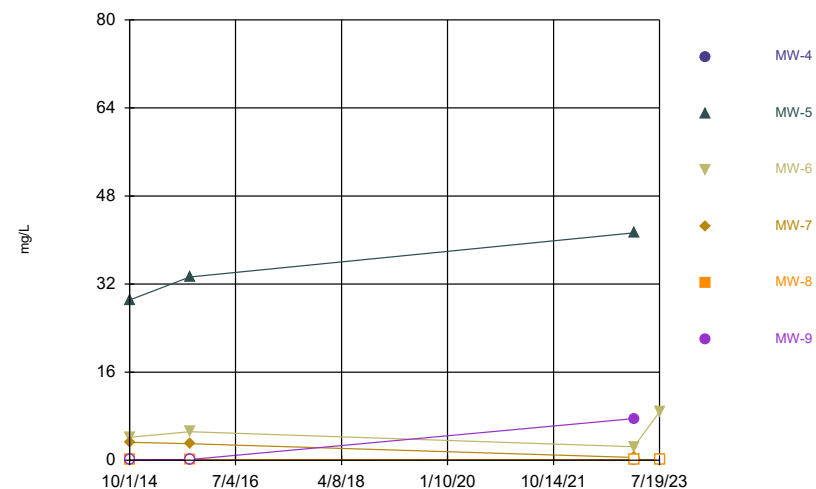
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Time Series



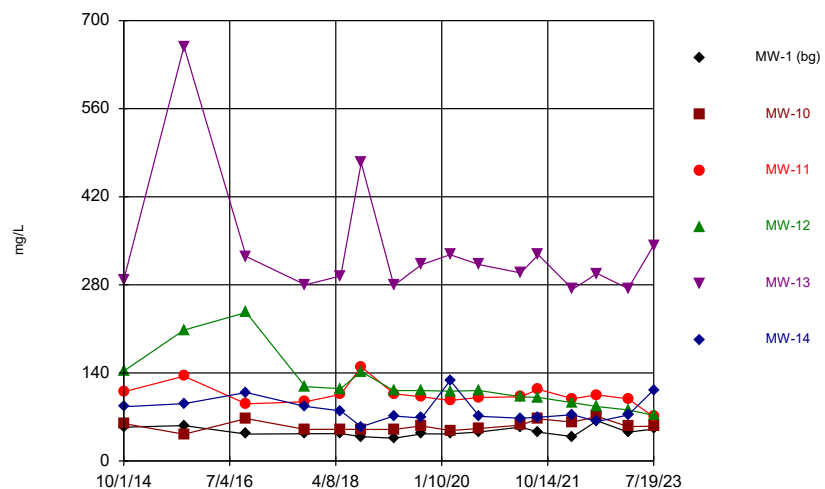
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Time Series



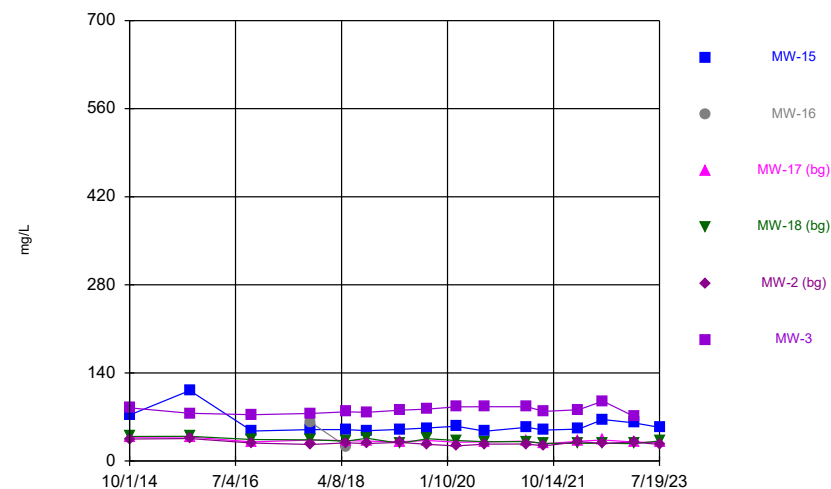
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



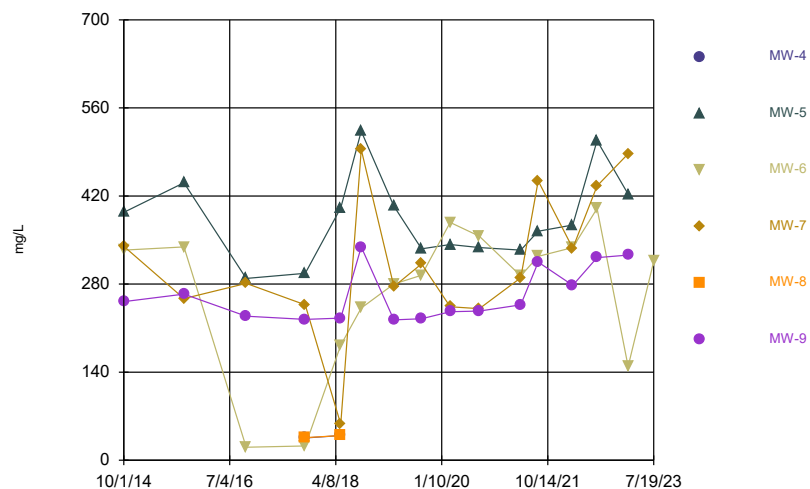
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series

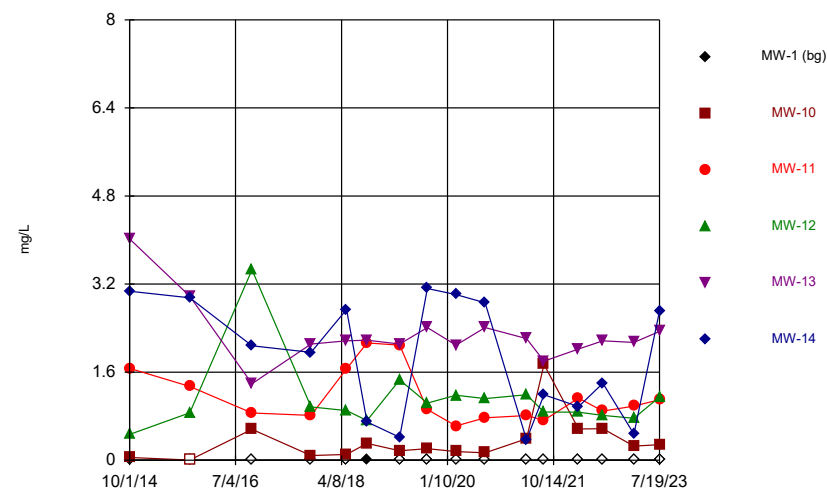


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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

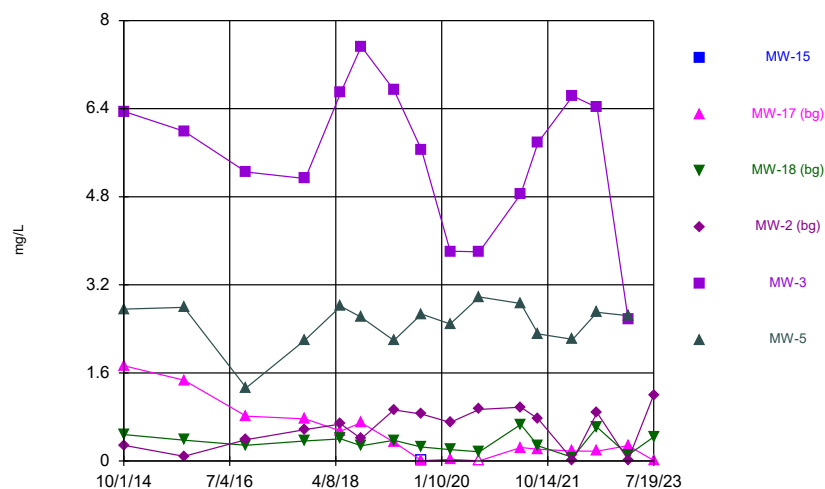
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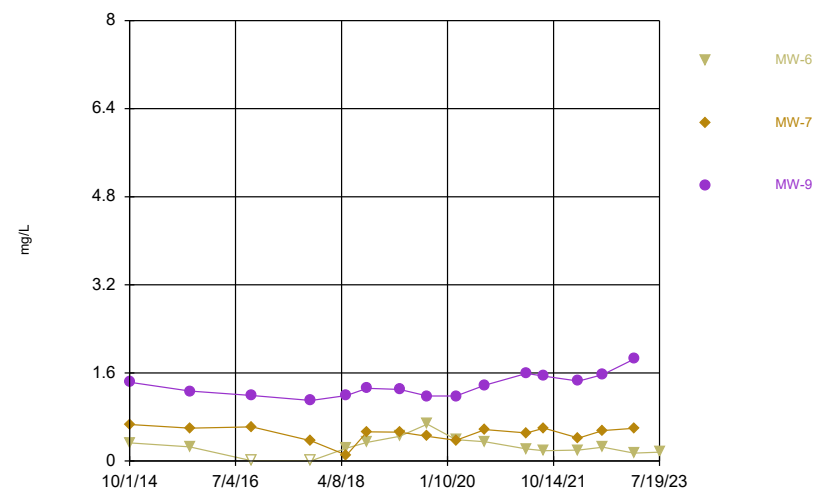
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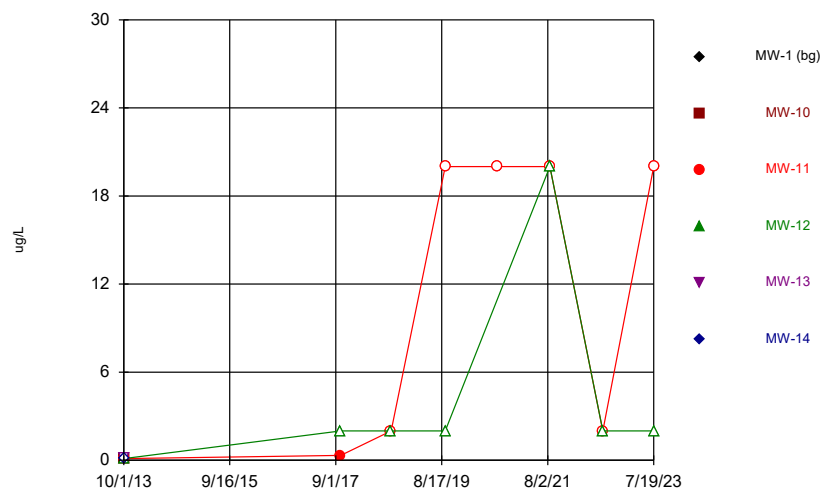
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Time Series

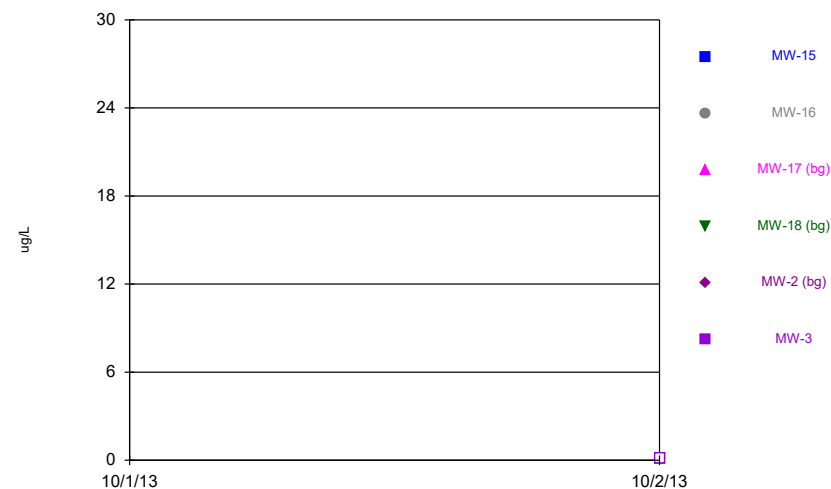


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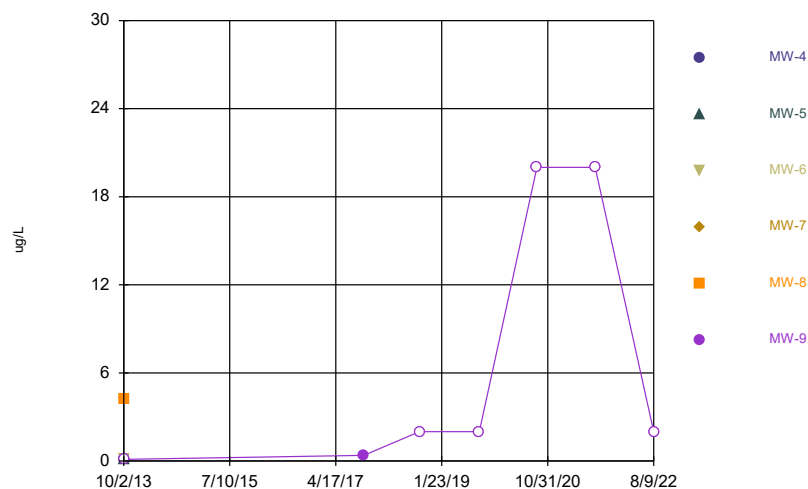
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



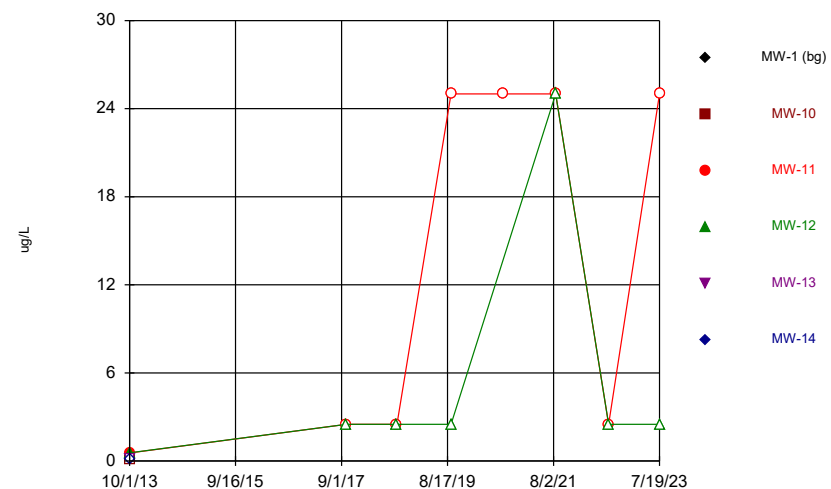
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Time Series



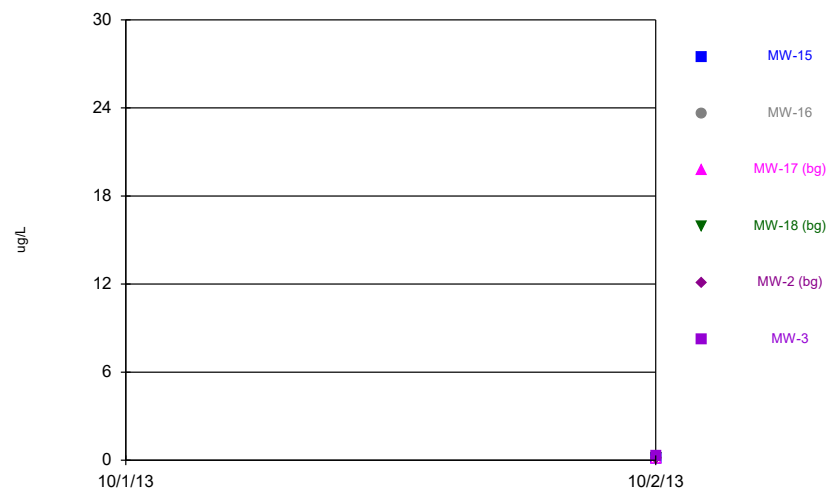
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



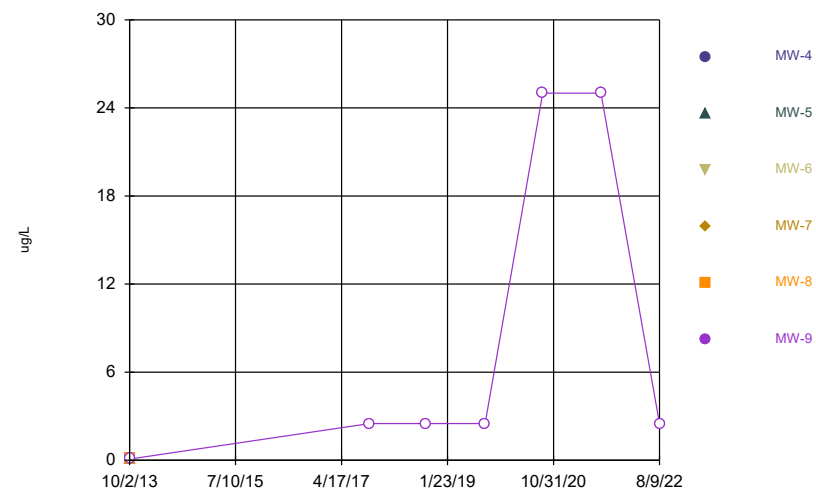
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



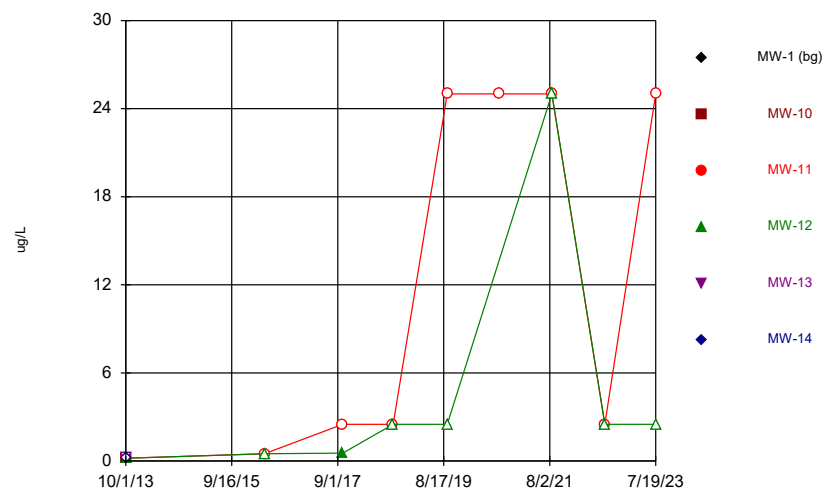
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



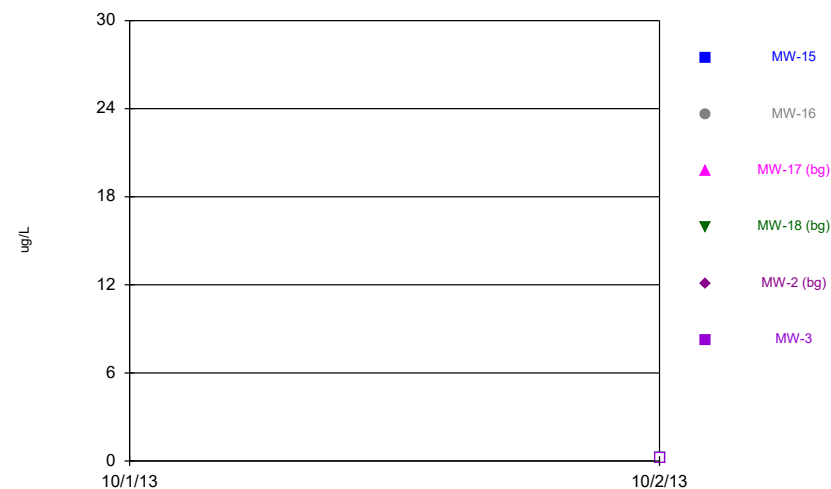
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



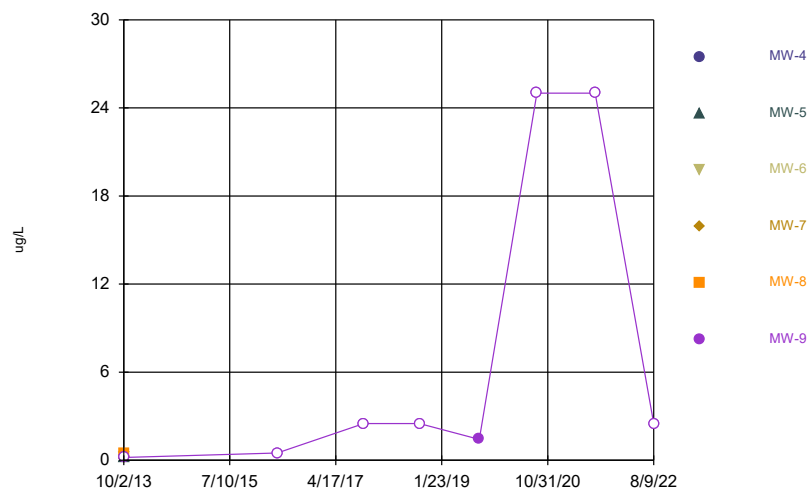
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series

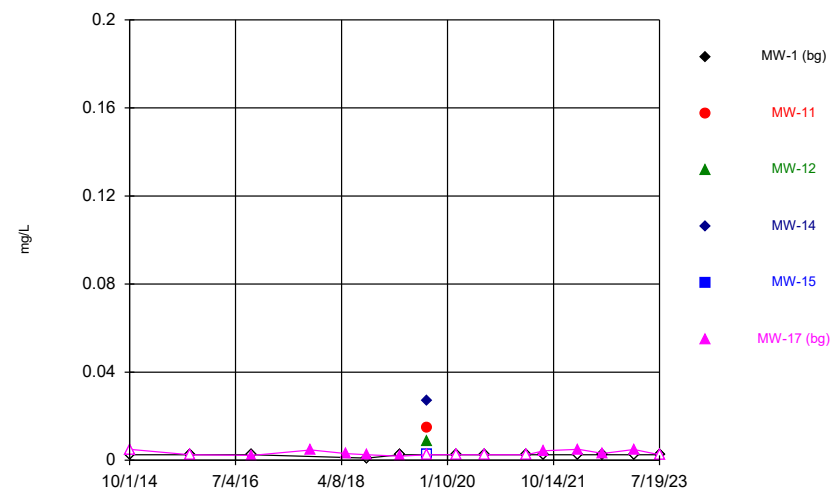


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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

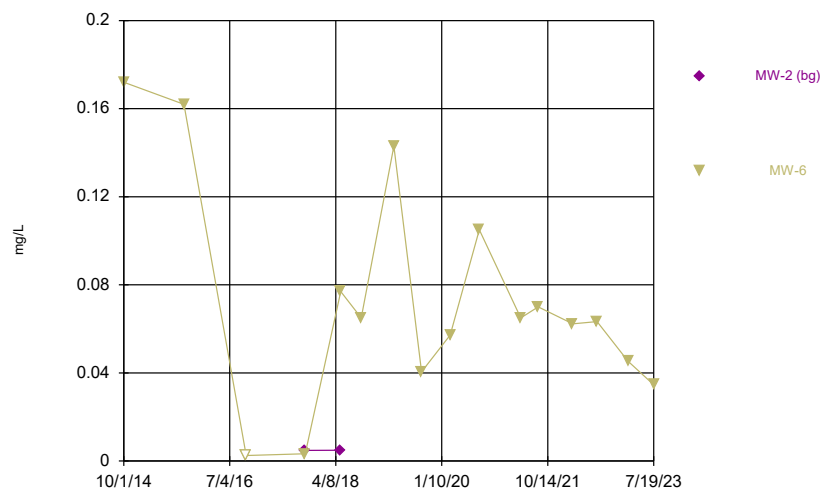
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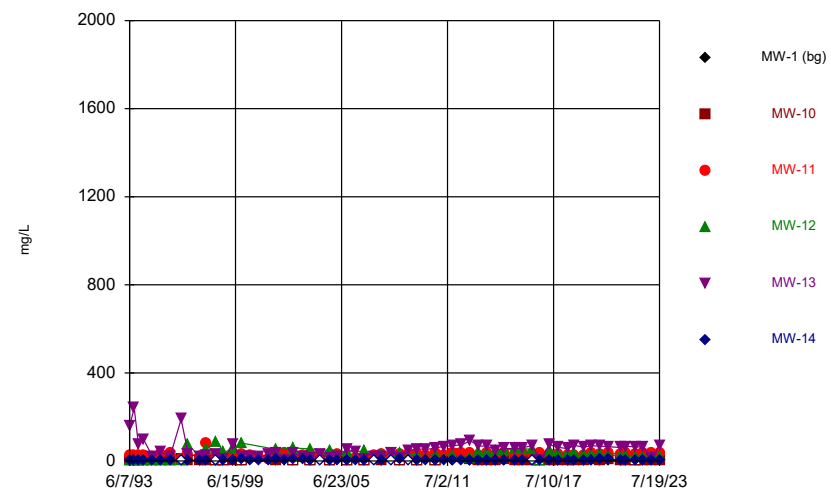
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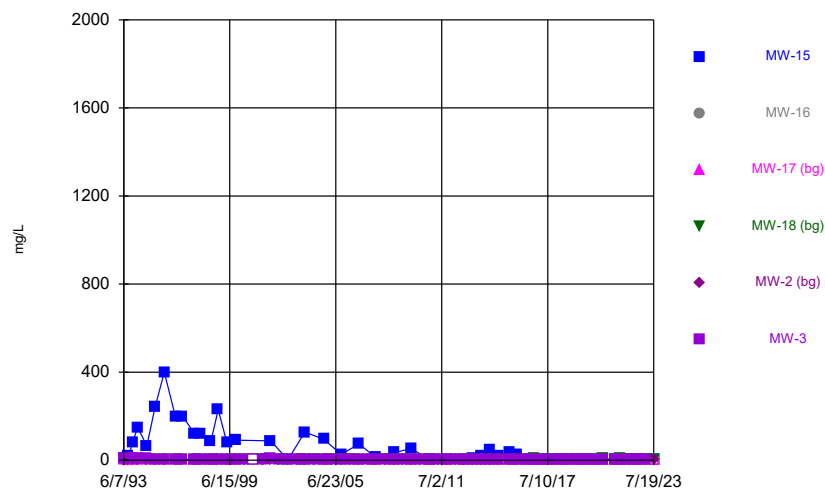
Time Series



Time Series

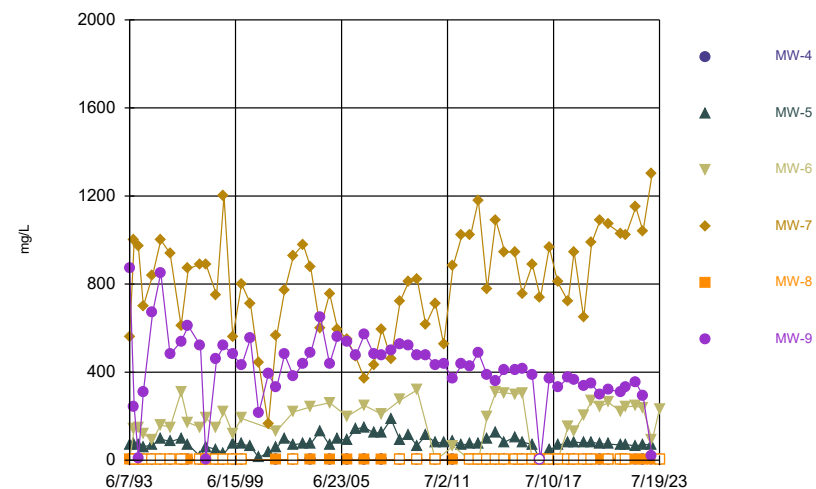


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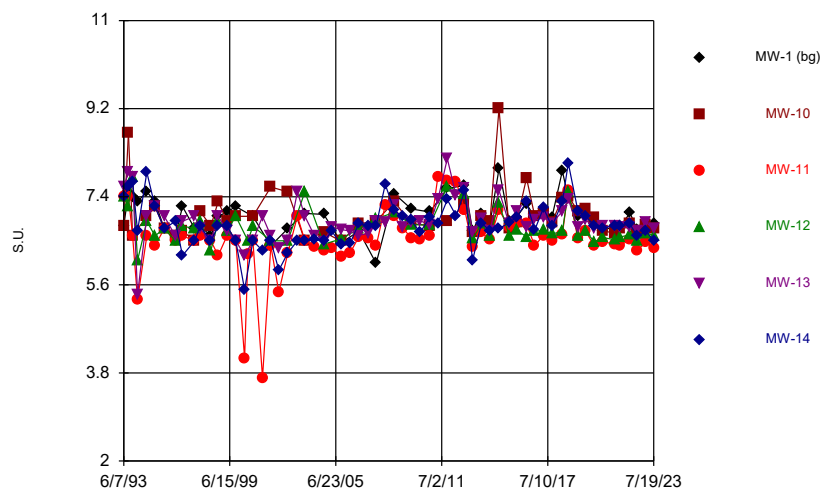
Constituent: Nitrogen, Ammonia Analysis Run 8/22/2023 5:55 PM View: 2023AWQR-Time Series
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



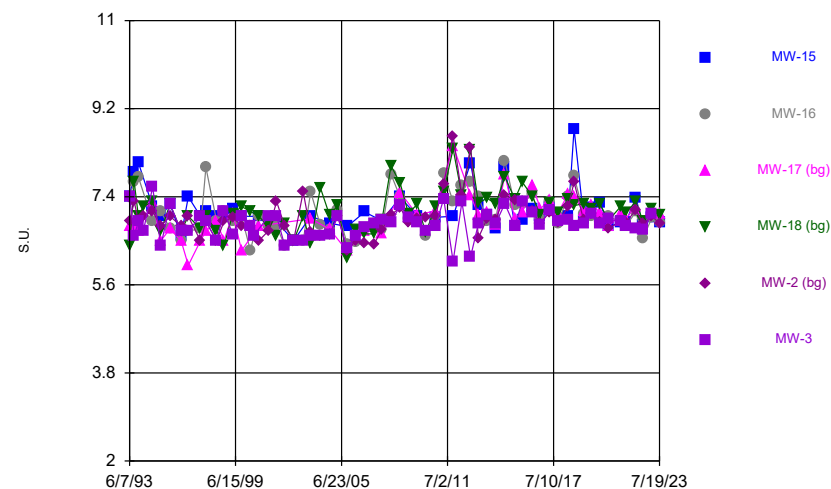
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



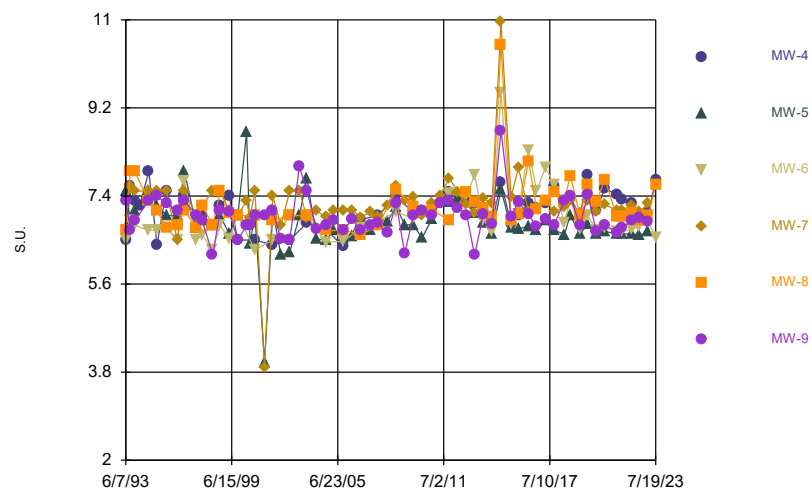
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



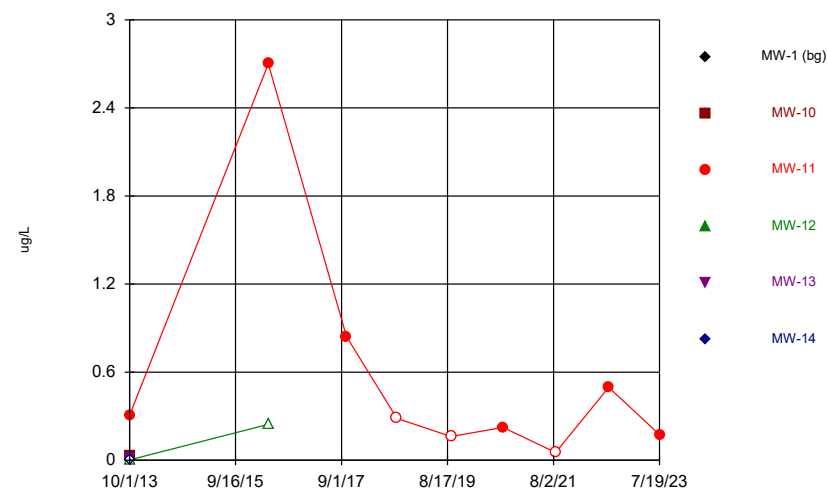
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



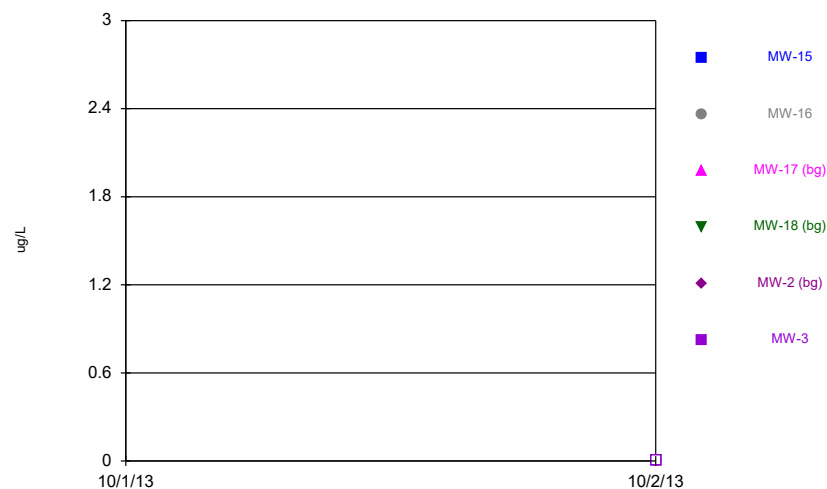
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



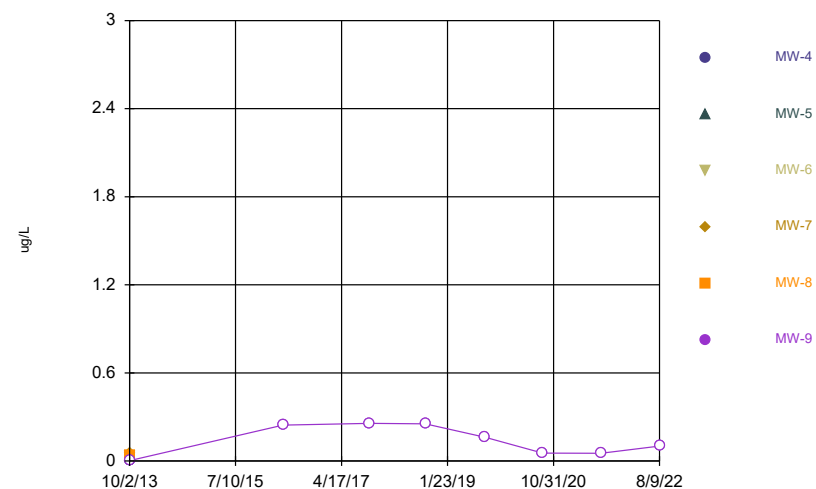
Constituent: Phenanthrene Analysis Run 8/22/2023 5:56 PM View: 2023AWQR-Time Series
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



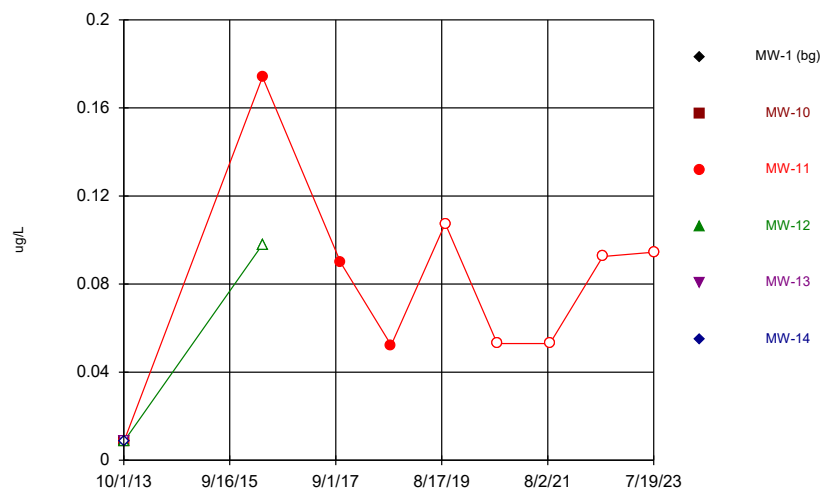
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series

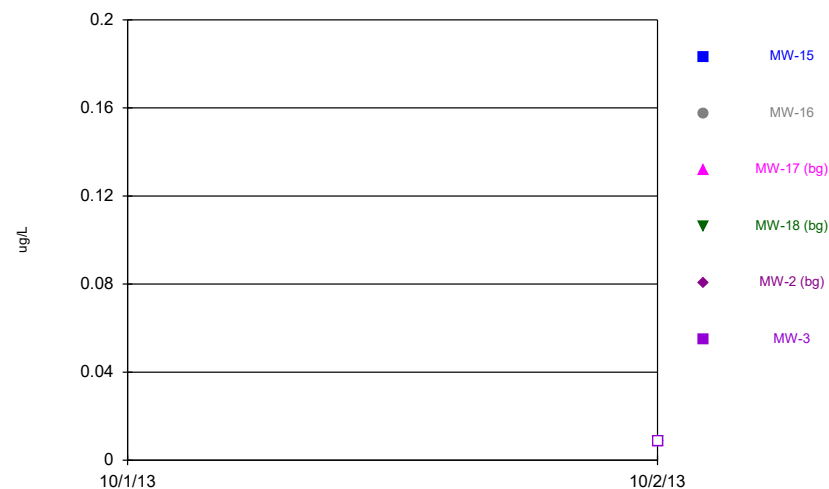


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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

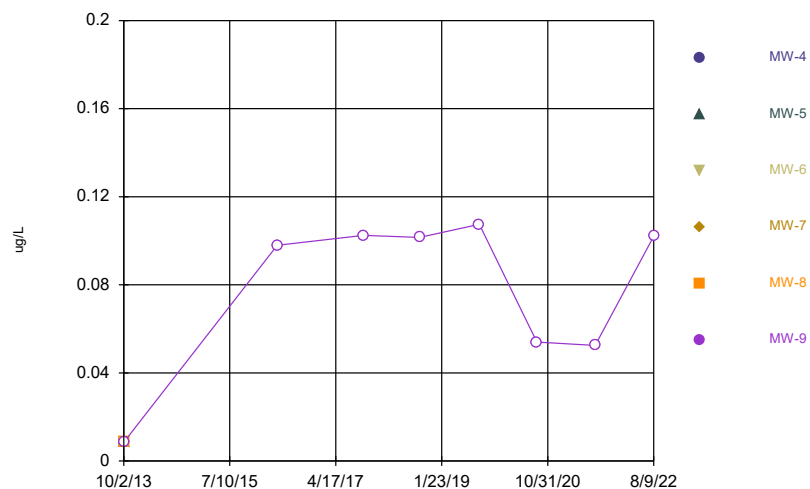
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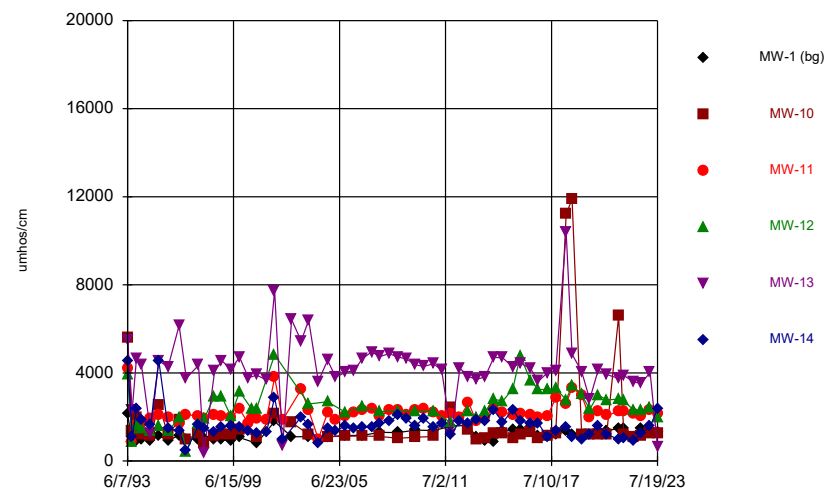
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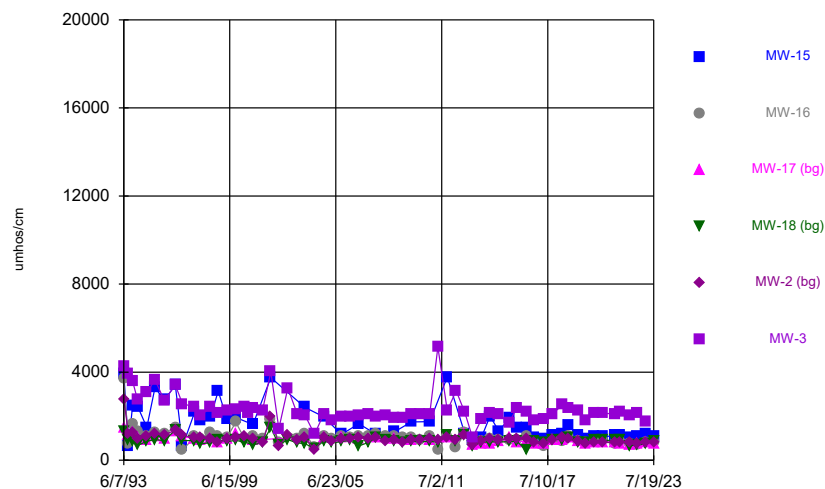
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Time Series

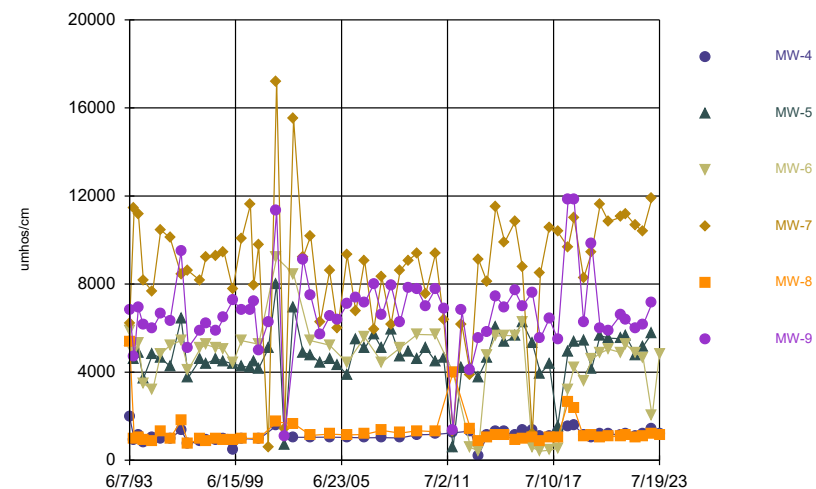


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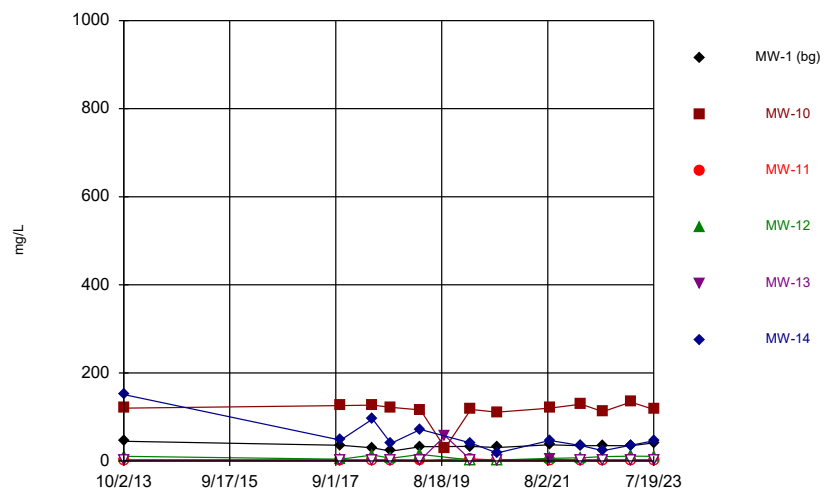
Constituent: Specific Conductance Analysis Run 8/22/2023 5:56 PM View: 2023AWQR-Time Series
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



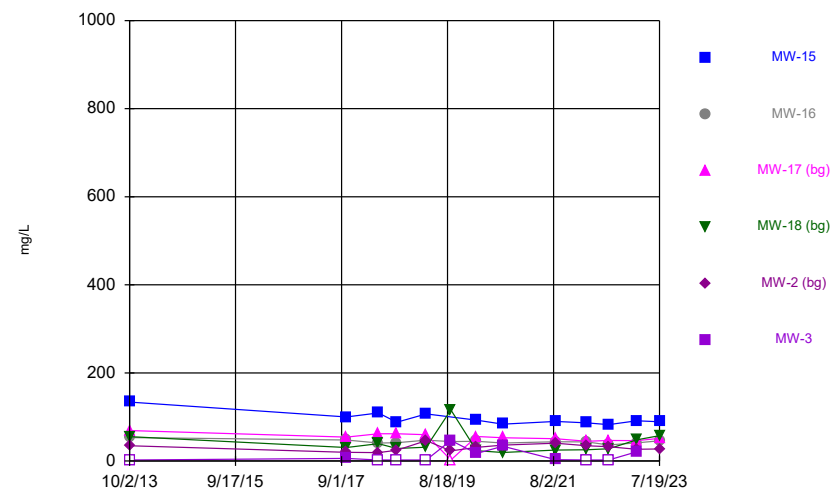
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Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



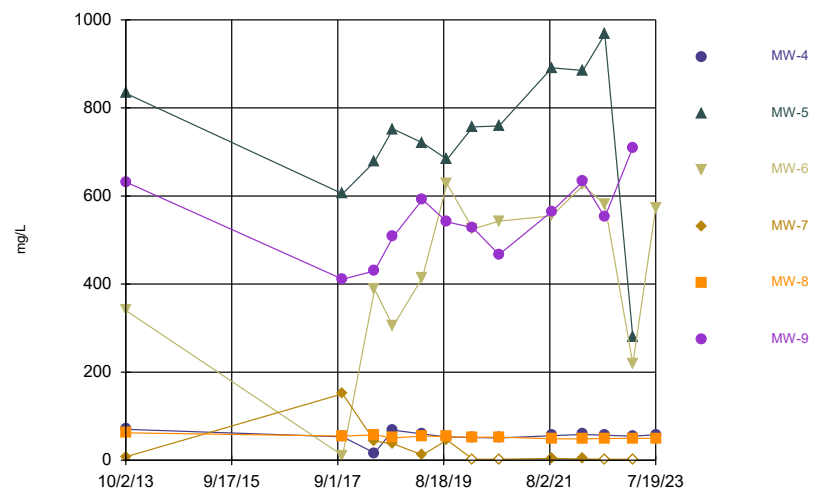
Constituent: Sulfate Analysis Run 8/22/2023 5:56 PM View: 2023AWQR-Time Series
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



Constituent: Sulfate Analysis Run 8/22/2023 5:56 PM View: 2023AWQR-Time Series
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas

Time Series



Constituent: Sulfate Analysis Run 8/22/2023 5:56 PM View: 2023AWQR-Time Series
Archer Daniels Midland Landfill Client: SCS Engineers Data: ADMCO HMSP Sanitas



Appendix E

Mann-Kendall Trend Table

Monitoring Well	Constituent Name	Calculated Statistic		
		Decreasing Trend	Stable Trend	Increasing Trend
MW-1	Boron		4	
	Chemical Oxygen Demand		-6	
	Chloride		2	
	Magnesium		4	
	pH		6	
	Specific Conductance		-4	
	Sulfate			15
MW-2	Boron		-11	
	Chemical Oxygen Demand		-5	
	Chloride		6	
	Cobalt		3	
	Iron		3	
	Magnesium		8	
	Manganese		2	
	Nitrogen, Ammonia		-6	
	pH		1	
	Specific Conductance		-2	
	Sulfate		-2	
MW-3	Arsenic		12	
	Boron		-8	
	Chemical Oxygen Demand		4	
	Chloride			16
	Cobalt		-12	
	Magnesium		-2	
	Manganese		4	
	Nitrogen, Ammonia		8	
	pH		-11	
	Specific Conductance		-4	
	Sulfate		-5	
MW-4	Boron		-4	
	Chemical Oxygen Demand		-2	
	Chloride			26
	Nitrogen, Ammonia		5	
	pH		-4	
	Specific Conductance		6	
MW-5	Sulfate		12	
	Arsenic		4	
	Boron		11	
	Chemical Oxygen Demand		0	
	Chloride		7	
	Cobalt		2	
	Magnesium			18
	Manganese		-6	
	Nitrogen, Ammonia	-17		
	pH		-9	
	Specific Conductance		4	
MW-6	Sulfate		10	
	Arsenic		6	
	Boron	-14		
	Chemical Oxygen Demand		-7	
	Chloride		0	
	Cobalt		-12	
	Iron		2	
	Magnesium		-8	
	Manganese	-18		
	Nickel	-14		
	Nitrogen, Ammonia		-12	
	pH		2	
	Specific Conductance	-14		
	Sulfate		-2	

Monitoring Well	Constituent Name	Calculated Statistic		
		Decreasing Trend	Stable Trend	Increasing Trend
MW-7	Arsenic			18
	Boron			21
	Chemical Oxygen Demand		-10	
	Chloride		-6	
	Cobalt			14
	Magnesium			16
	Manganese		10	
	Nitrogen, Ammonia		10	
	pH		-3	
	Specific Conductance		4	
	Sulfate		-12	
MW-8	Boron		-8	
	Chemical Oxygen Demand		3	
	Chloride			20
	Iron		-1	
	Nitrogen, Ammonia		0	
	pH		-3	
	Specific Conductance			14
	Sulfate		-10	
MW-9	Arsenic			14
	Boron		4	
	Chemical Oxygen Demand		6	
	Chloride			18
	Cobalt			22
	Magnesium			26
	Manganese			19
	Nitrogen, Ammonia		-8	
	pH		4	
	Specific Conductance		0	
	Sulfate		8	
MW-10	Boron		-6	
	Chemical Oxygen Demand		5	
	Chloride		4	
	Cobalt		2	
	Iron		5	
	Magnesium		10	
	Manganese		6	
	Nitrogen, Ammonia		-10	
	pH		2	
	Specific Conductance		0	
	Sulfate			13
MW-11	Acenaphthene		-12	
	Acenaphthylene		-11	
	Acetone			14
	Arsenic		-2	
	Boron		10	
	Carbon Disulfide		5	
	Chemical Oxygen Demand		-8	
	Chloride		6	
	Cobalt	-22		
	Fluoranthene		-11	
	Fluorene		-6	
	Iron		-4	
	Magnesium		-4	
	Manganese			18
	Nitrogen, Ammonia		12	
	pH		-4	
	Phenanthrene	-14		
	Specific Conductance		-4	

Monitoring Well	Constituent Name	Calculated Statistic		
		Decreasing Trend	Stable Trend	Increasing Trend
MW-12	Arsenic		-12	
	Boron	-26		
	Chemical Oxygen Demand	-16		
	Chloride	-20		
	Cobalt	-24		
	Iron		-2	
	Magnesium	-26		
	Manganese	-14		
	Nitrogen, Ammonia	-22		
	pH			14
	Specific Conductance	-20		
	Sulfate		11	
MW-13	Arsenic		-8	
	Boron		-12	
	Chemical Oxygen Demand		-1	
	Chloride		11	
	Cobalt		8	
	Iron		-4	
	Magnesium		-5	
	Manganese		2	
	Nitrogen, Ammonia		-6	
	pH		-2	
	Specific Conductance	-16		
	Sulfate		-9	
MW-14	Arsenic		-6	
	Boron	-20		
	Chemical Oxygen Demand		-8	
	Chloride			14
	Cobalt	-14		
	Iron		-2	
	Magnesium		0	
	Manganese		-6	
	Nitrogen, Ammonia	-18		
	pH		-11	
	Specific Conductance		6	
	Sulfate		-4	
MW-15	Boron		2	
	Chemical Oxygen Demand		1	
	Chloride		10	
	Iron		-3	
	Magnesium		7	
	pH		1	
	Specific Conductance		6	
MW-16	Sulfate		-10	
	Boron		-8	
	Chemical Oxygen Demand		2	
	Chloride		10	
	pH		-6	
MW-17	Specific Conductance		-12	
	Sulfate		-4	
	Boron		-8	
	Chemical Oxygen Demand		4	
	Chloride		10	
	Magnesium		0	
	Manganese		2	
	pH		4	
	Specific Conductance	-14		
	Sulfate		-2	

Monitoring Well	Constituent Name	Calculated Statistic		
		Decreasing Trend	Stable Trend	Increasing Trend
MW-18	Arsenic		-12	
	Boron		-12	
	Chemical Oxygen Demand		-12	
	Chloride			16
	Cobalt		-10	
	Iron		0	
	Magnesium		-10	
	Manganese		0	
	Nitrogen, Ammonia		-6	
	pH		-6	
	Specific Conductance		-12	
	Sulfate		12	



Appendix F

Leachate Control System Performance Evaluation Report

Table F1
Leachate Management Summary
2023 Leachate Control System Performance Evaluation Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Date of Measurement	Column in Piezometer (ft)										Discharge to Sanitary Sewer Line (gal)	Leachate Testing Results		Precipitation (in)
	PZ-1	PZ-3	PZ-5R	PZ-6R	PZ-7	PZ-8	PZ-9	PZ-10	PZ-11	PZ-12		pH (S.U.)	TKN (mg/L)	
10/5/2022	11.39	22.33	1.07	0.11	11.30	17.34	6.31	16.86	13.97	10.73		-	-	0.70
11/22/2022	Dry	23.30	0.77	-0.03	10.42	17.14	6.09	17.69	13.98	10.98	5,000	8.10	777	2.00
12/19/2022	Dry	22.72	0.01	25.00	10.34	16.69	3.53	17.54	Dry	10.36		-	-	2.40
1/12/2023	1.49	22.63	0.88	Dry	10.54	17.26	5.96	15.81	13.62	10.69		-	-	2.60
2/13/2023	7.39	23.92	1.16	-0.14	10.28	17.08	5.99	16.84	13.92	10.91	5,000	7.94	902	3.57
3/22/2023	9.48	23.13	1.85	5.07	11.25	18.45	6.16	16.58	13.97	11.47		-	-	2.03
4/5/2023	1.46	22.56	2.49	8.66	10.67	18.57	6.00	15.79	13.64	11.52		-	-	2.72
5/31/2023	3.93	3.20	Dry	3.83	10.94	18.90	7.67	17.74	Dry	11.58	5,000	8.10	940	2.44
6/20/2023	12.05	22.97	1.05	0.00	10.95	17.04	7.72	17.93	13.97	Dry		-	-	0.55
7/18/2023	11.44	22.43	-0.19	-0.99	10.45	16.83	5.45	16.40	13.82	Dry		-	-	3.75
8/17/2023	11.27	23.13	2.34	2.21	10.97	18.27	6.49	NM	14.00	10.50	5,000	8.23	807	0.30
Reporting Period Total											20,000			23.06

Notes:

- 1) Leachate column thicknesses for the reporting period generally remained consistent with historical measurements.
- 2) Historical leachate levels and graphs are provided in Attachment A.
- 3) Precipitation data for October 2022 - August 2023 obtained from [ncdc.noaa.gov](https://www.ncdc.noaa.gov).
- 4) NA - Not Available.
- 5) NM - Not Measured.

Comments:

Reporting Period: October 2022 - August 2023.

Approved Changes to Leachate Collection System: None.

Proposed Changes to Leachate Collection System: None.

Maintenance Performed on Leachate Collection System: Extraction wells were flushed and verified for proper operation on 1/11/23, 3/30/23, & 7/19/23.

Last Date of Cleaning and Inspection: July 19, 2023

Date of Next Cleaning and Inspection: Anticipated quarterly in 2024.

Volume of Leachate Recirculated: Not Applicable.

Volume of Leachate Treated Off-Site: 20,000 gallons were released to the City of Clinton POTW.

Leachate Quality Testing Results: Leachate quality testing results for the reporting period are provided in Table F1 and Appendix C.

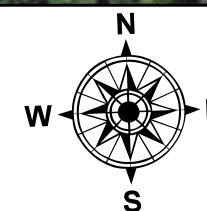


Leachate Control System

Legend

- | | | |
|---|---|-------------------------------|
| Approximate Monitoring Well Location | Approximate Location of Leachate Piezometer | Leachate Storage Tank |
| Approximate Location of Extraction Well | Approximate Location of Wet Well | Leachate Piping |
| | | Approximate Waste Boundary |
| | | Approximate Property Boundary |

ADM Clinton Landfill
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Drawing Date: September 2023



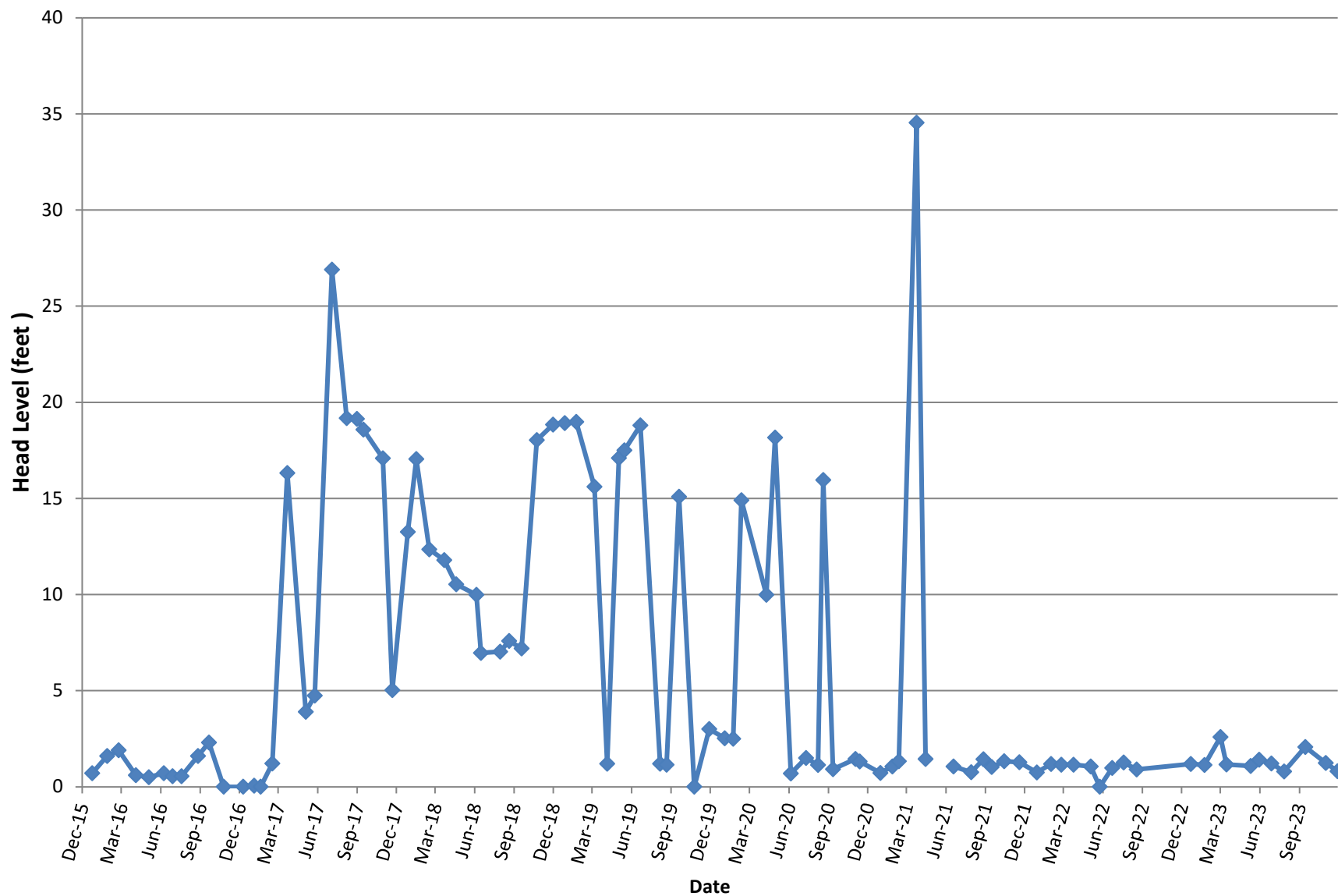
0 120 240 480 720 Feet

Figure 1

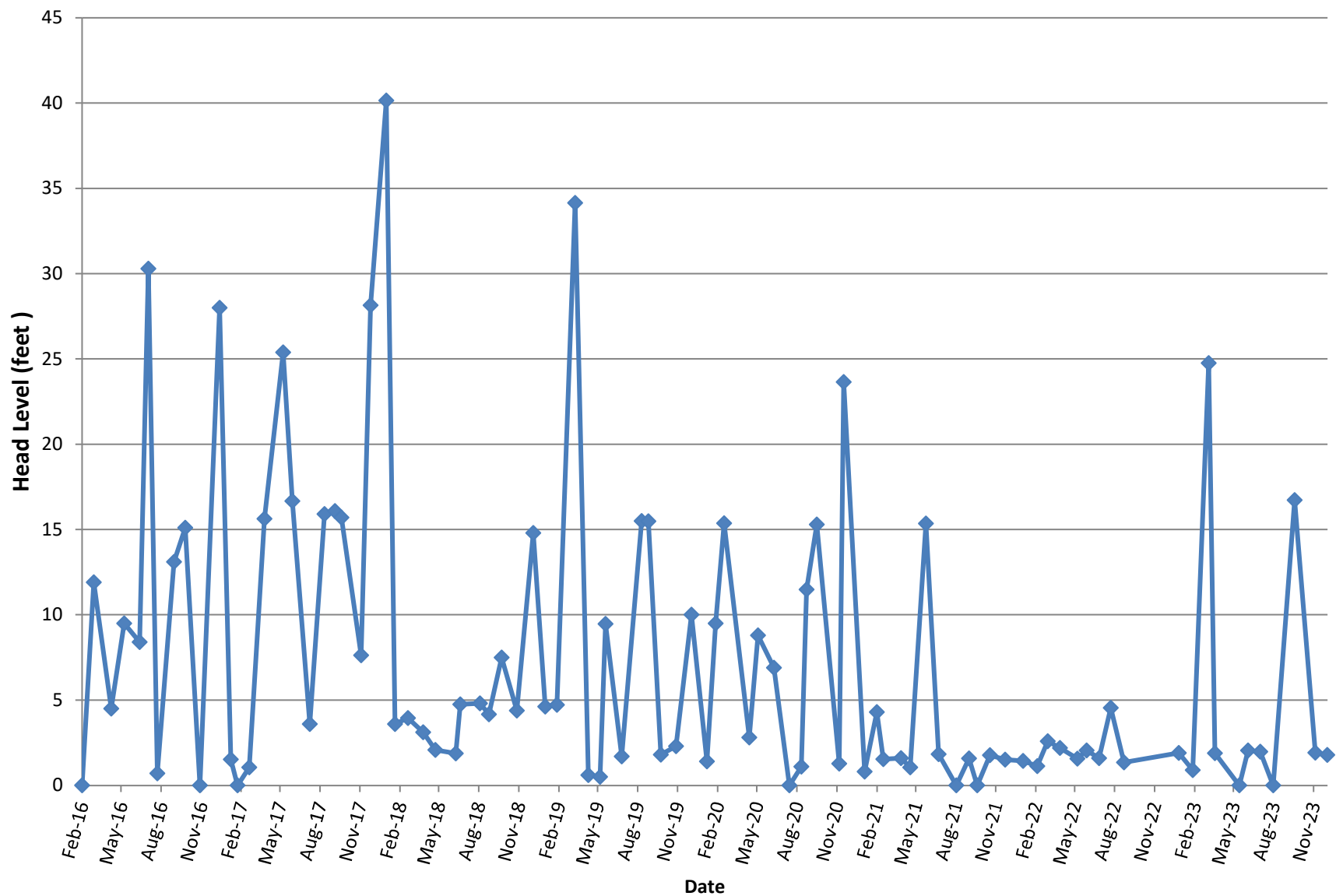
Attachment A

Historical Leachate Level Graphs

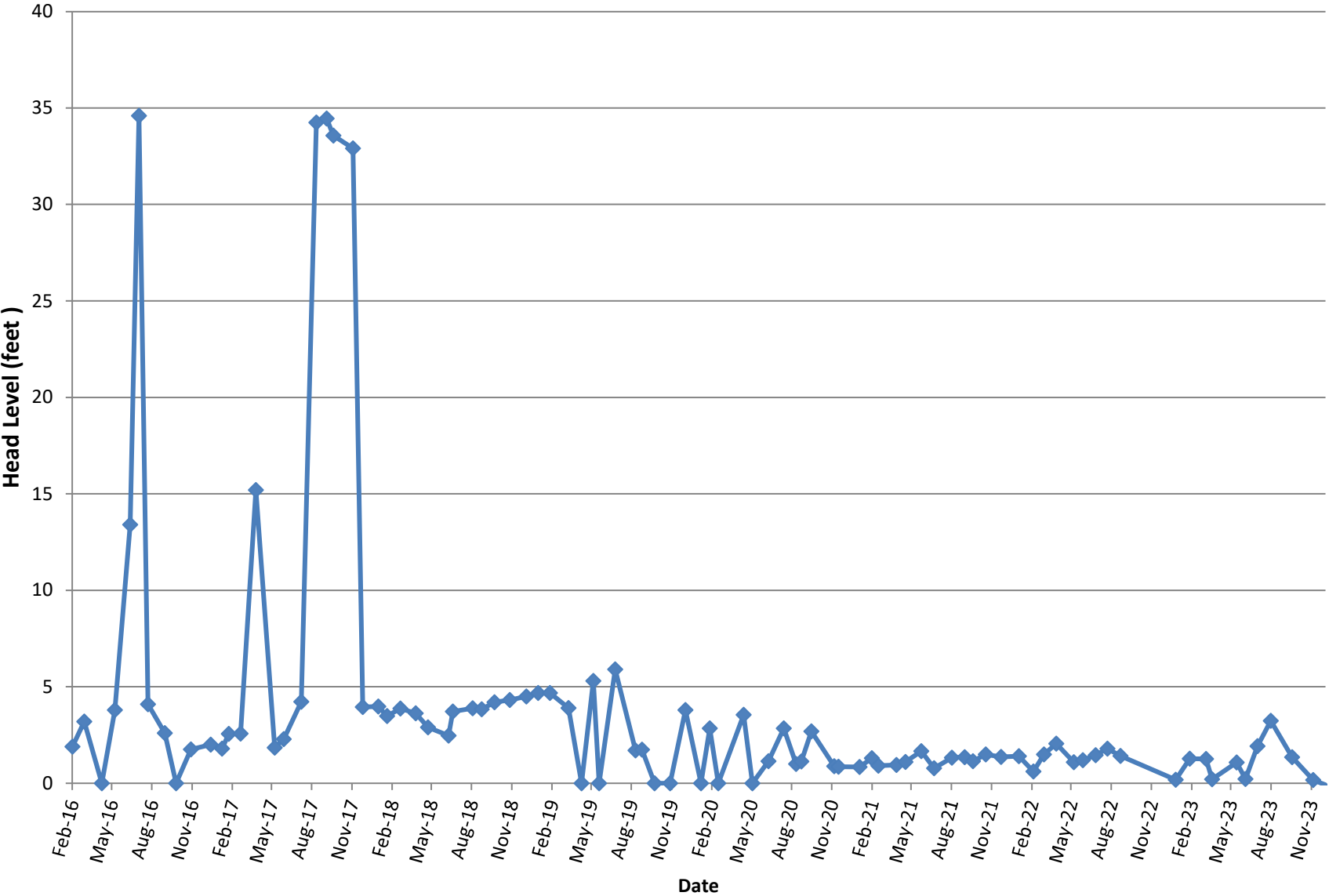
EW-1 Historical Leachate Column Thicknesses



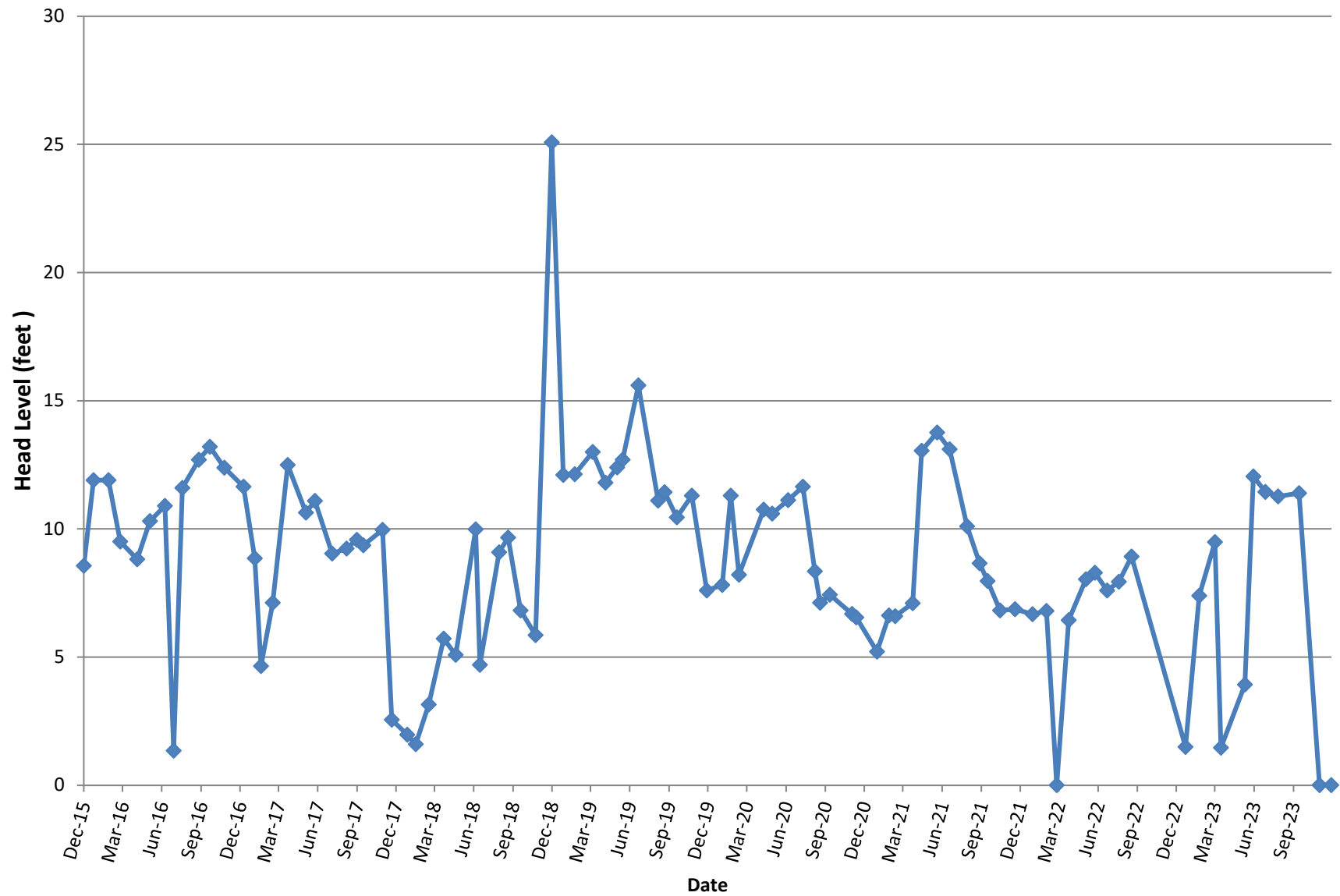
EW-2 Historical Leachate Column Thicknesses



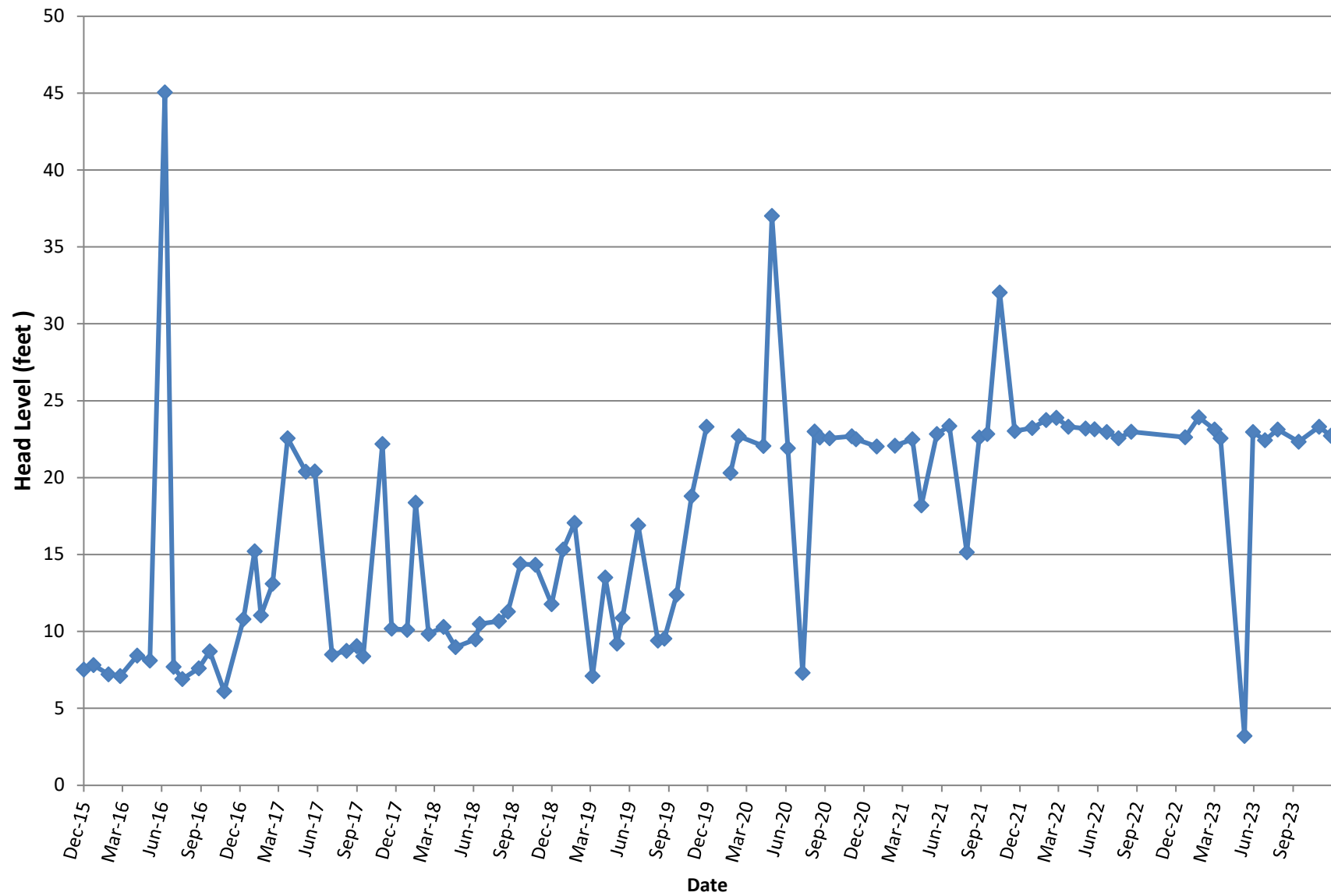
EW-3 Historical Leachate Column Thicknesses



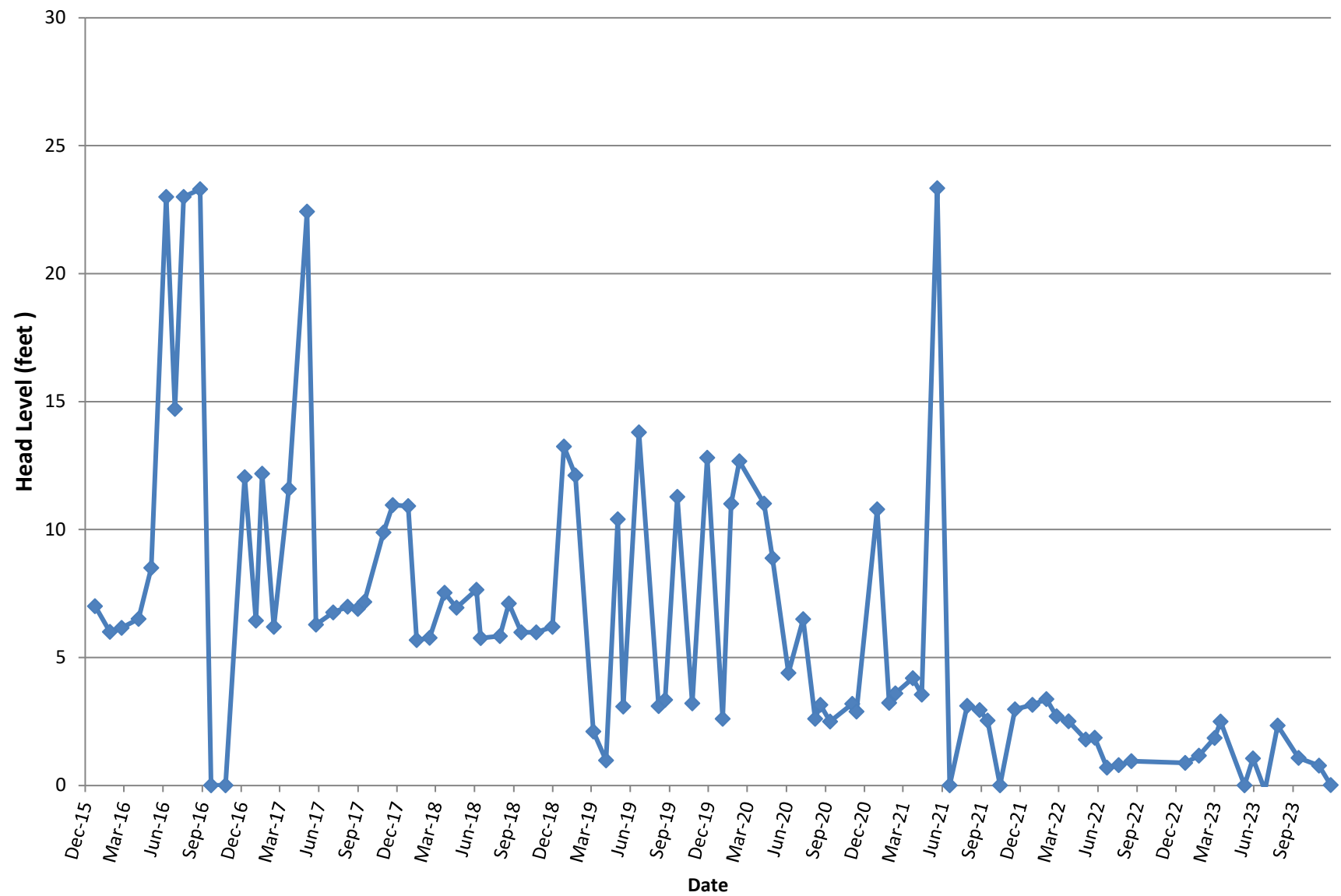
PZ-1 Historical Leachate Column Thicknesses



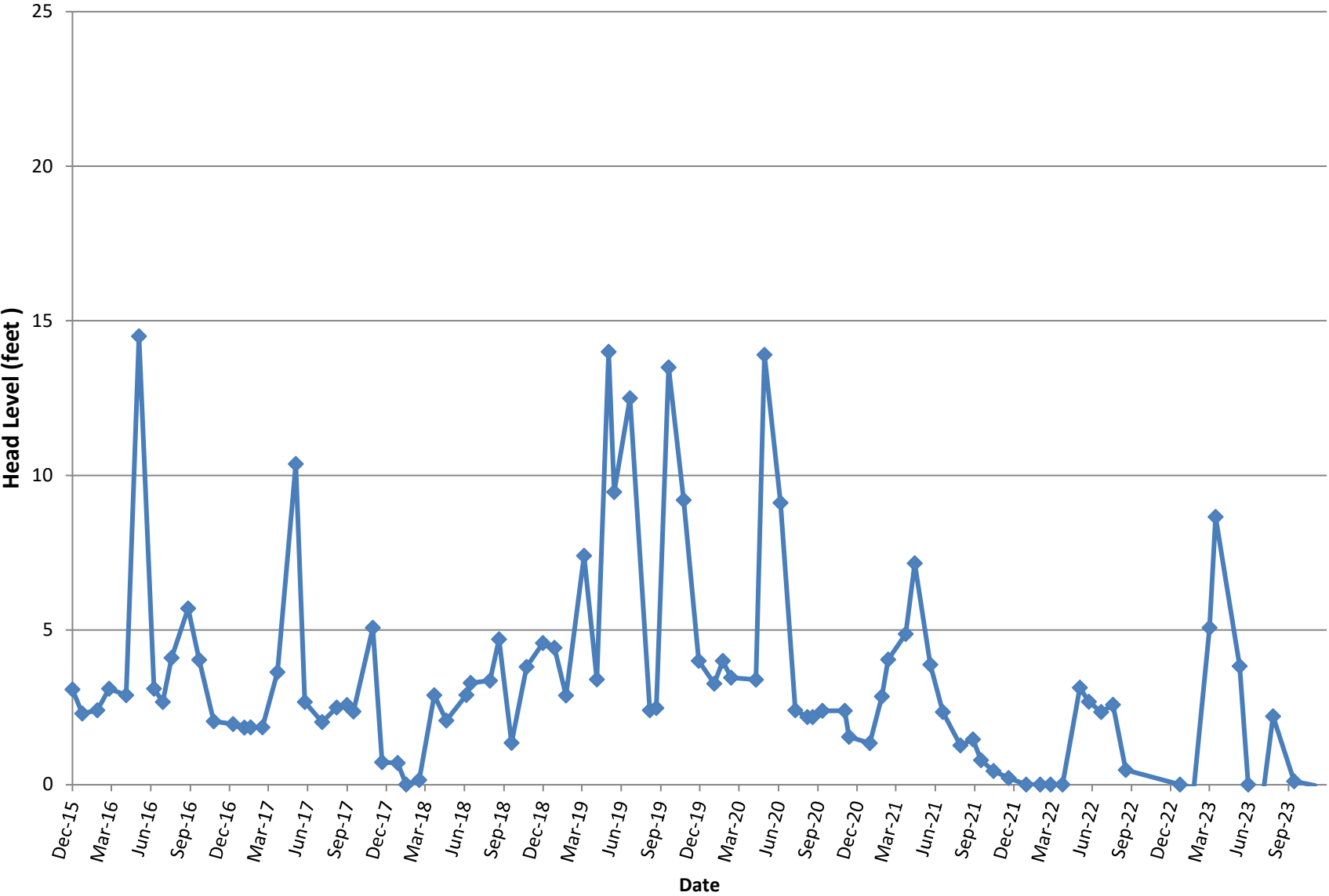
PZ-3 Historical Leachate Column Thicknesses



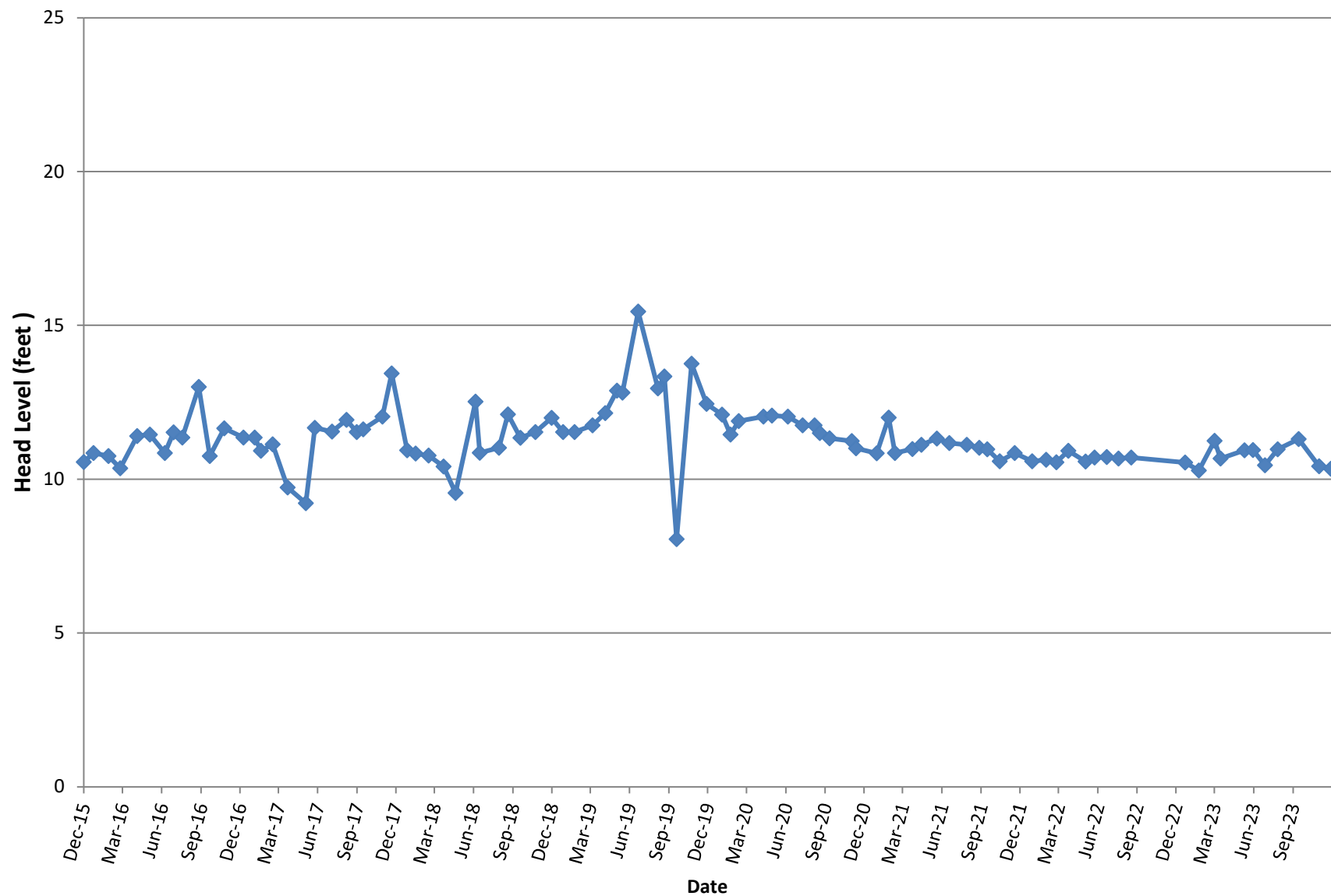
PZ-5R Historical Leachate Column Thicknesses



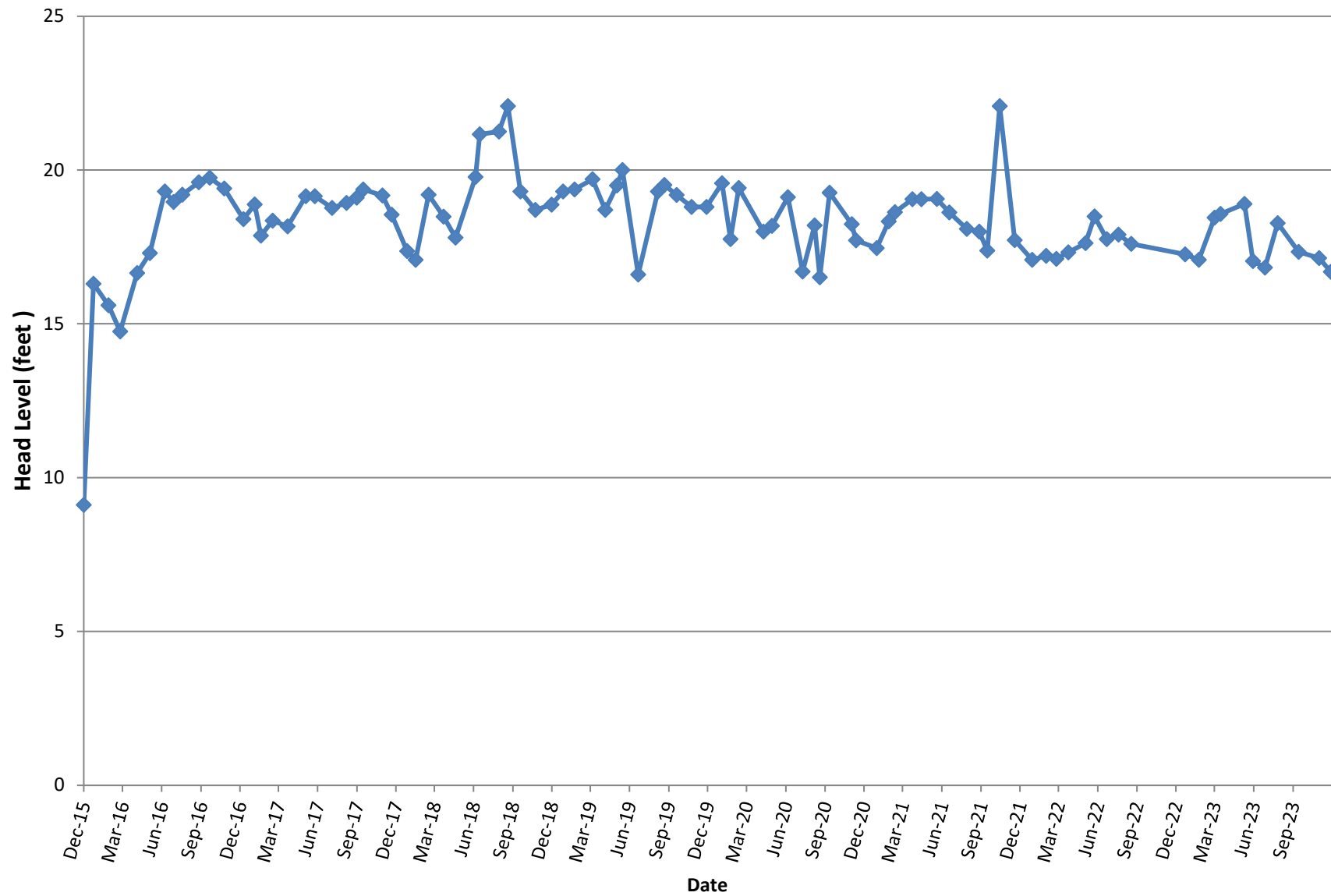
PZ-6R Historical Leachate Column Thicknesses



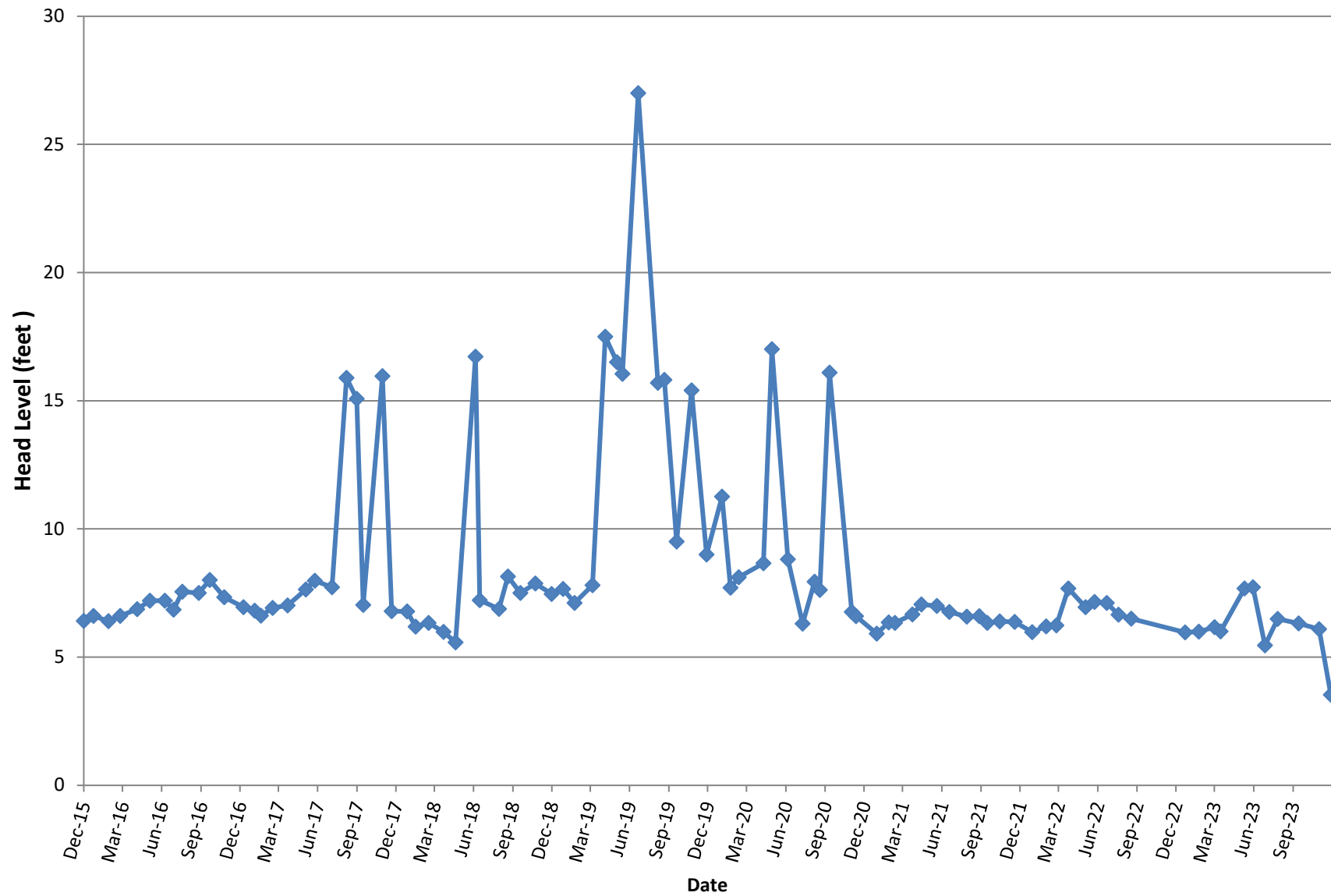
PZ-7 Historical Leachate Column Thicknesses



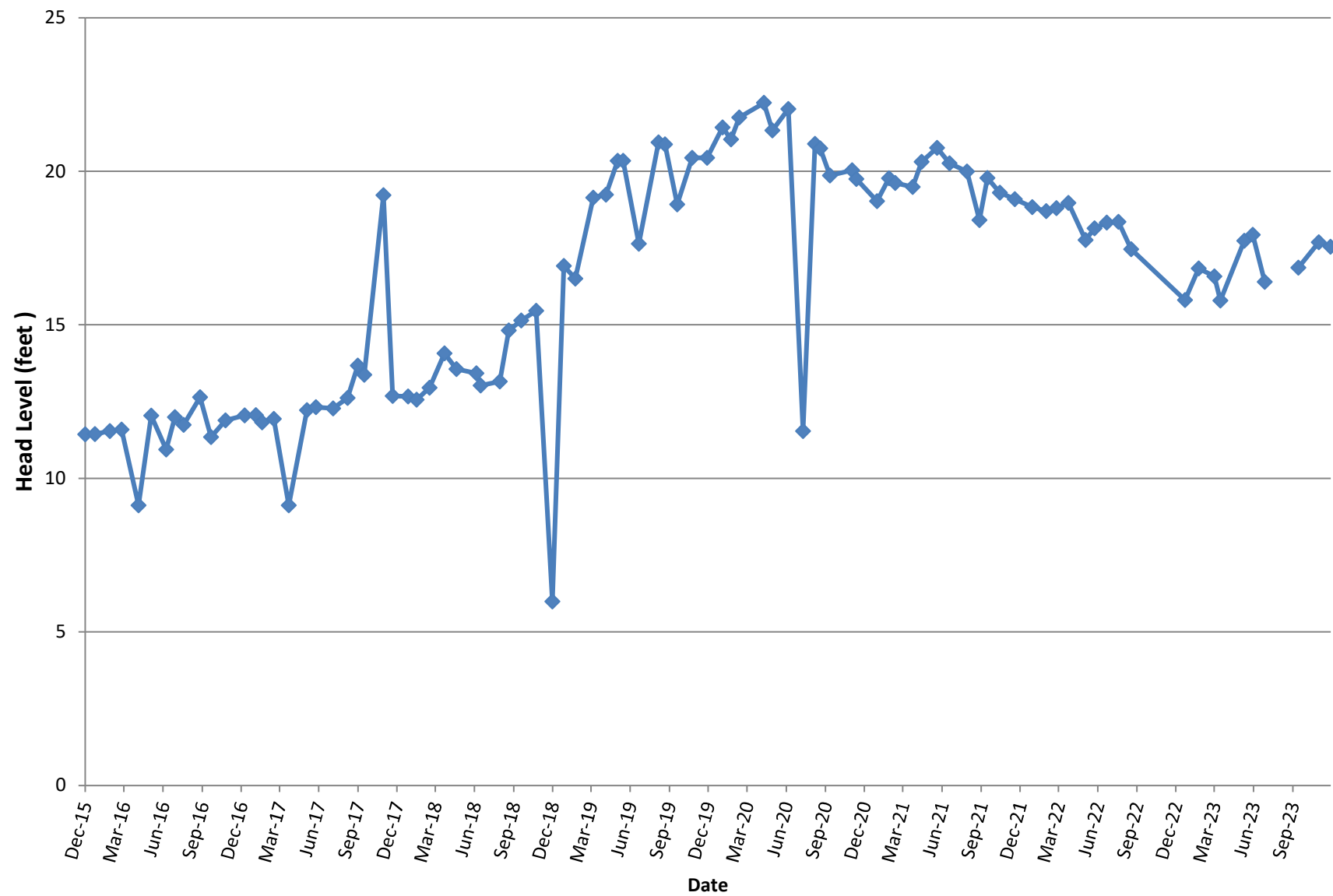
PZ-8 Historical Leachate Column Thicknesses



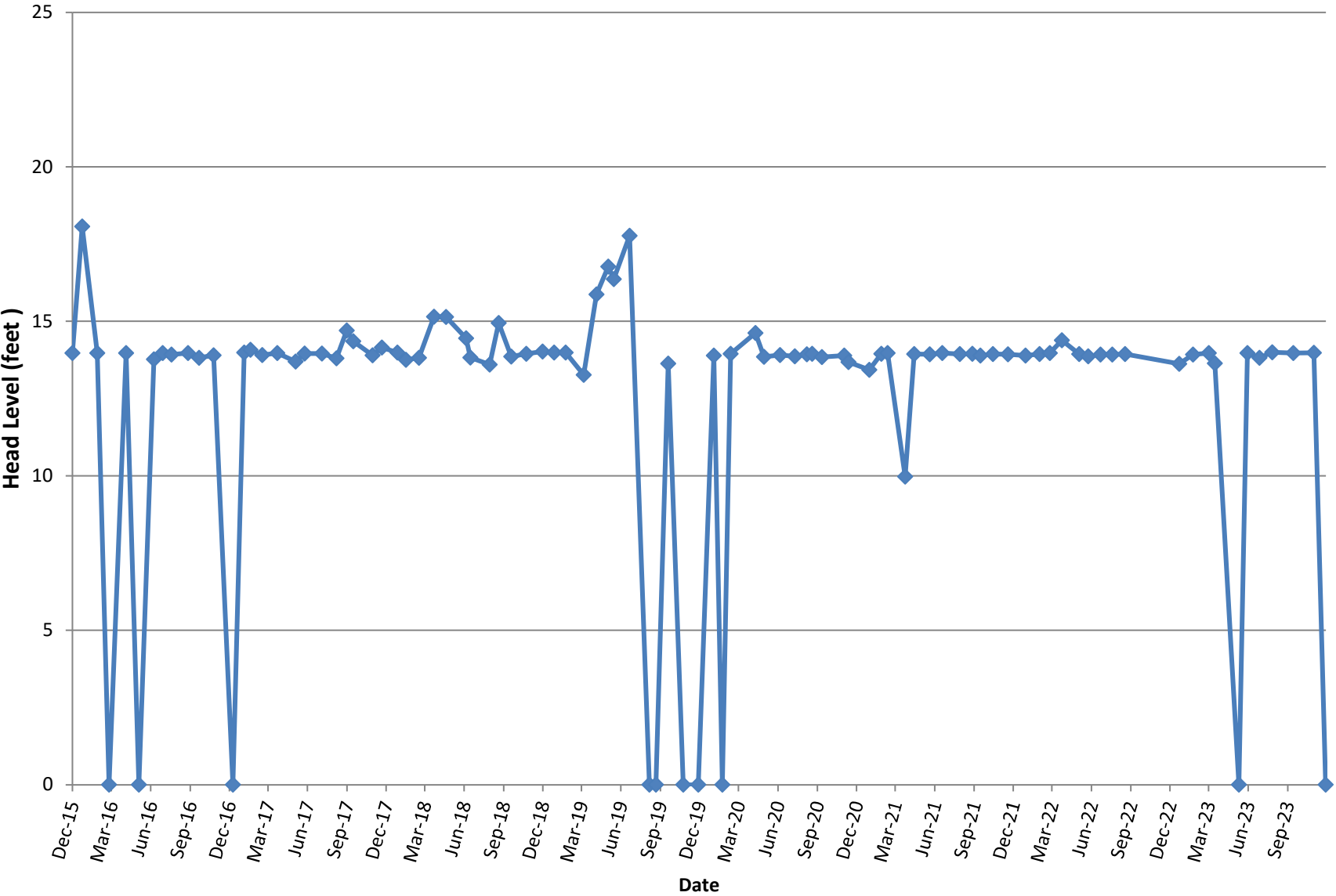
PZ-9 Historical Leachate Column Thicknesses



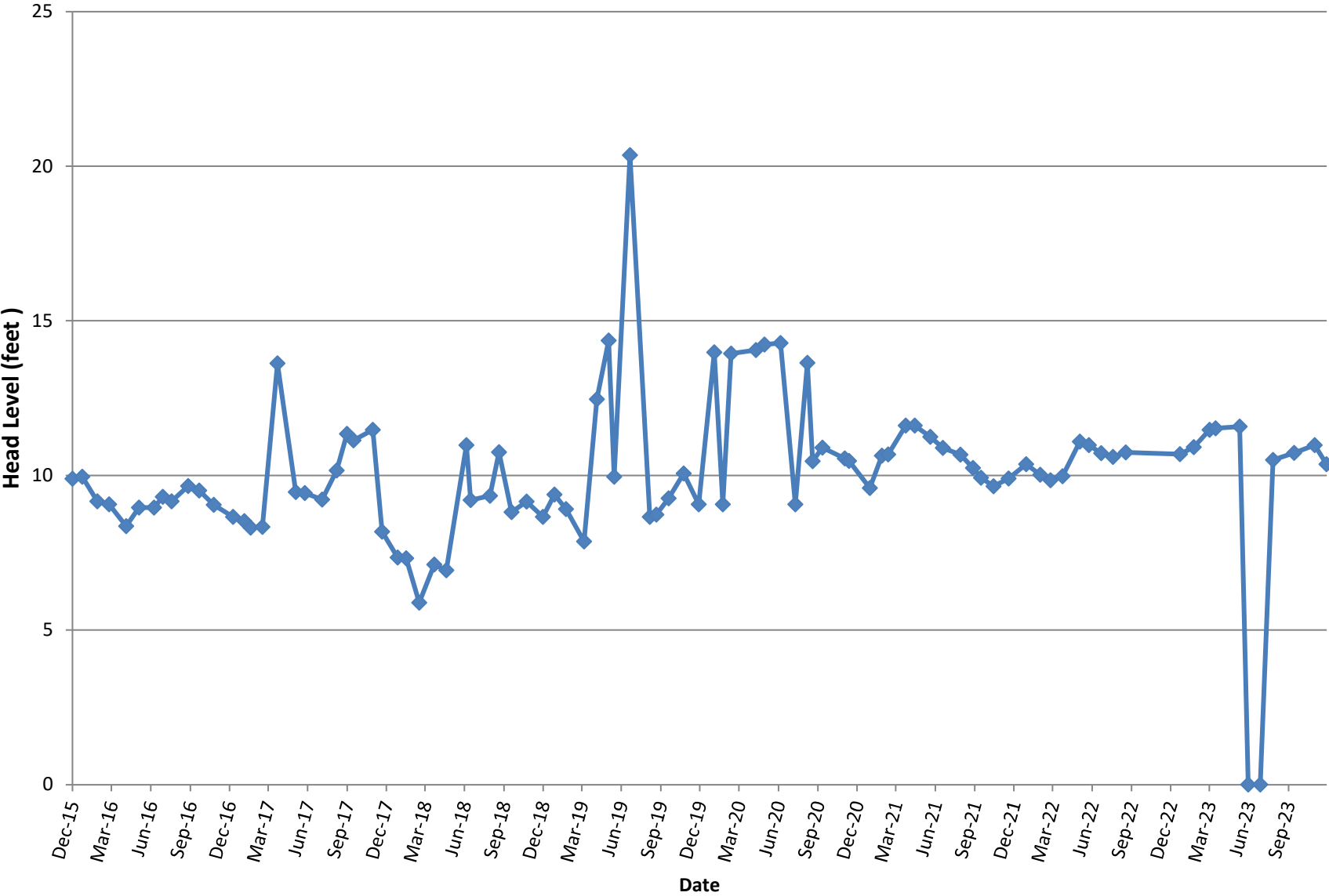
PZ-10 Historical Leachate Column Thicknesses



PZ-11 Historical Leachate Column Thicknesses



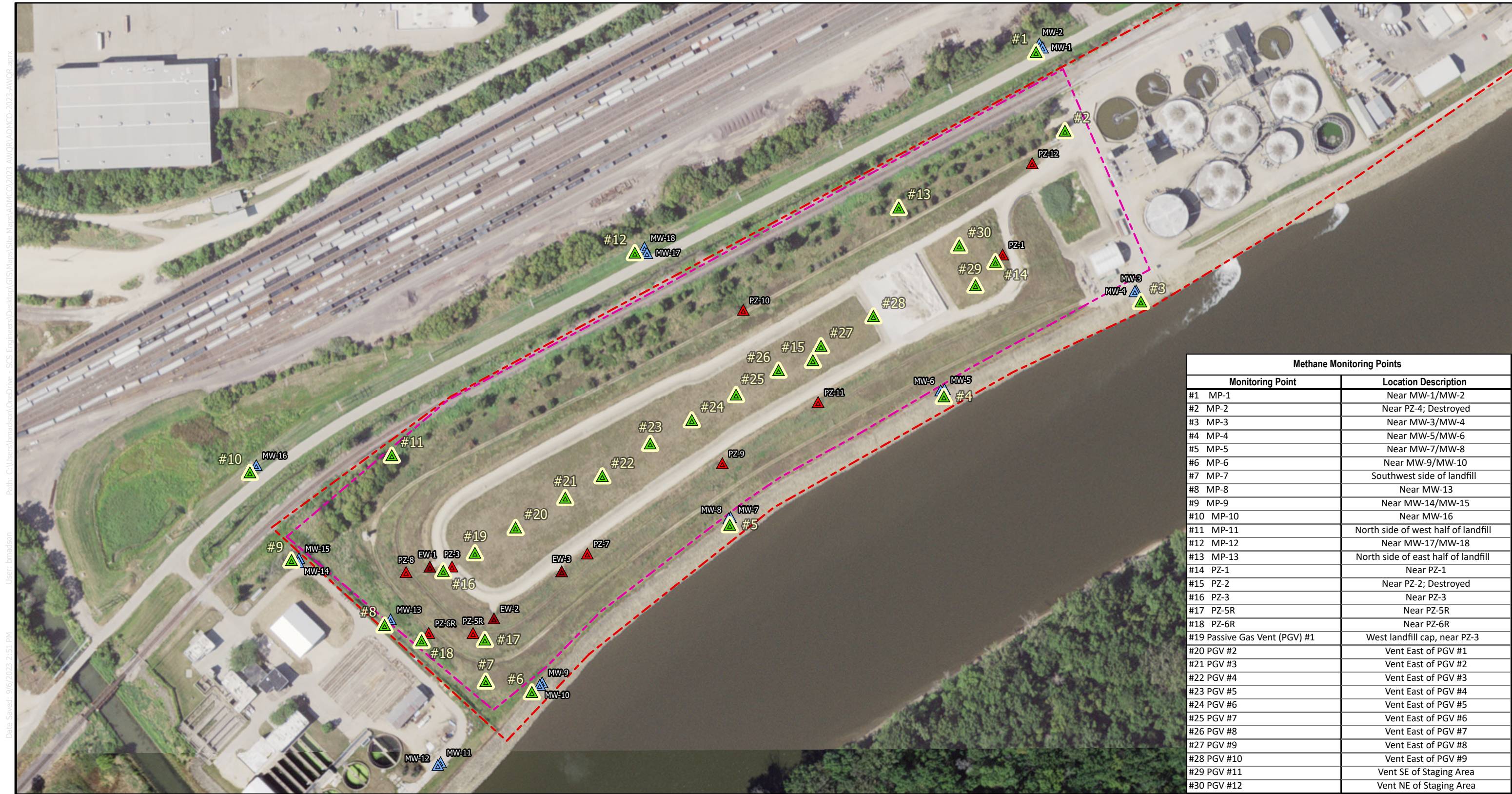
PZ-12 Historical Leachate Column Thicknesses





Appendix G

Landfill Gas Annual Report



Methane Monitoring Network

Legend

- Methane Monitoring Point
- Approximate Monitoring Well Location
- Approximate Location of Extraction Well
- Approximate Location of Leachate Piezometer
- Approximate Waste Boundary
- Approximate Property Boundary

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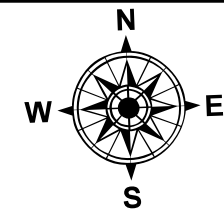


Figure 1



Table G1
Landfill Gas Monitoring Summary
2023 Landfill Gas Monitoring Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Monitoring Points			Methane Results (% LEL)	
Name	Type	Description	11/22/2022	S (Y/N)
#1	Outdoor, ambient	Near MW-1/MW-2	0%	
#2	Outdoor, ambient	Near PZ-4; Destroyed	0%	
#3	Outdoor, ambient	Near MW-3/MW-4	0%	
#4	Outdoor, ambient	Near MW-5/MW-6	0%	
#5	Outdoor, ambient	Near MW-7/MW-8	0%	
#6	Outdoor, ambient	Near MW-9/MW-10	0%	
#7	Outdoor, ambient	Southwest side of landfill	0%	
#8	Outdoor, ambient	Near MW-13	0%	
#9	Outdoor, ambient	Near MW-14/MW-15	0%	
#10	Outdoor, ambient	Near MW-16	0%	
#11	Outdoor, ambient	North side of west half of landfill	0%	
#12	Outdoor, ambient	Near MW-17/MW-18	0%	
#13	Outdoor, ambient	North side of east half of landfill	0%	
#14	Outdoor, ambient	Near PZ-1	0%	
#15	Outdoor, ambient	Near PZ-2; Destroyed	0%	
#16	Outdoor, ambient	Near PZ-3	0%	
#17	Outdoor, ambient	Near PZ-5R	0%	
#18	Outdoor, ambient	Near PZ-6R	0%	
#19	Passive Vent Opening	Western-most Passive Gas Vent (PGV), near PZ-3	24%	
#20	Passive Vent Opening	Vent East of PGV #1	100%	
#21	Passive Vent Opening	Vent East of PGV #2	100%	
#22	Passive Vent Opening	Vent East of PGV #3	100%	
#23	Passive Vent Opening	Vent East of PGV #4	39%	
#24	Passive Vent Opening	Vent East of PGV #5	60%	
#25	Passive Vent Opening	Vent East of PGV #6	100%	
#26	Passive Vent Opening	Vent East of PGV #7	100%	
#27	Passive Vent Opening	Vent East of PGV #8	89%	
#28	Passive Vent Opening	Vent East of PGV #9	100%	
#29	Passive Vent Opening	Vent SE of Staging Area	72%	
#30	Passive Vent Opening	Vent NE of Staging Area	100%	

S(Y/N) - Was screen submerged, yes or no.

Table G1 - continued
Landfill Gas Monitoring Summary
2023 Landfill Gas Monitoring Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Monitoring Points			Methane Results (% LEL)	
Name	Type	Description	2/13/2023	S (Y/N)
#1	Outdoor, ambient	Near MW-1/MW-2	0%	
#2	Outdoor, ambient	Near PZ-4; Destroyed	0%	
#3	Outdoor, ambient	Near MW-3/MW-4	0%	
#4	Outdoor, ambient	Near MW-5/MW-6	0%	
#5	Outdoor, ambient	Near MW-7/MW-8	0%	
#6	Outdoor, ambient	Near MW-9/MW-10	0%	
#7	Outdoor, ambient	Southwest side of landfill	0%	
#8	Outdoor, ambient	Near MW-13	0%	
#9	Outdoor, ambient	Near MW-14/MW-15	0%	
#10	Outdoor, ambient	Near MW-16	0%	
#11	Outdoor, ambient	North side of west half of landfill	0%	
#12	Outdoor, ambient	Near MW-17/MW-18	0%	
#13	Outdoor, ambient	North side of east half of landfill	0%	
#14	Outdoor, ambient	Near PZ-1	0%	
#15	Outdoor, ambient	Near PZ-2; Destroyed	0%	
#16	Outdoor, ambient	Near PZ-3	0%	
#17	Outdoor, ambient	Near PZ-5R	0%	
#18	Outdoor, ambient	Near PZ-6R	0%	
#19	Passive Vent Opening	Western-most Passive Gas Vent (PGV), near PZ-3	0%	
#20	Passive Vent Opening	Vent East of PGV #1	0%	
#21	Passive Vent Opening	Vent East of PGV #2	0%	
#22	Passive Vent Opening	Vent East of PGV #3	0%	
#23	Passive Vent Opening	Vent East of PGV #4	2%	
#24	Passive Vent Opening	Vent East of PGV #5	40%	
#25	Passive Vent Opening	Vent East of PGV #6	0%	
#26	Passive Vent Opening	Vent East of PGV #7	0%	
#27	Passive Vent Opening	Vent East of PGV #8	0%	
#28	Passive Vent Opening	Vent East of PGV #9	0%	
#29	Passive Vent Opening	Vent SE of Staging Area	0%	
#30	Passive Vent Opening	Vent NE of Staging Area	3%	

S(Y/N) - Was screen submerged, yes or no.

Table G1 - continued
Landfill Gas Monitoring Summary
2023 Landfill Gas Monitoring Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Monitoring Points			Methane Results (% LEL)	
Name	Type	Description	5/31/2023	S (Y/N)
#1	Outdoor, ambient	Near MW-1/MW-2	0%	
#2	Outdoor, ambient	Near PZ-4; Destroyed	0%	
#3	Outdoor, ambient	Near MW-3/MW-4	0%	
#4	Outdoor, ambient	Near MW-5/MW-6	0%	
#5	Outdoor, ambient	Near MW-7/MW-8	0%	
#6	Outdoor, ambient	Near MW-9/MW-10	0%	
#7	Outdoor, ambient	Southwest side of landfill	0%	
#8	Outdoor, ambient	Near MW-13	0%	
#9	Outdoor, ambient	Near MW-14/MW-15	0%	
#10	Outdoor, ambient	Near MW-16	0%	
#11	Outdoor, ambient	North side of west half of landfill	0%	
#12	Outdoor, ambient	Near MW-17/MW-18	0%	
#13	Outdoor, ambient	North side of east half of landfill	0%	
#14	Outdoor, ambient	Near PZ-1	0%	
#15	Outdoor, ambient	Near PZ-2; Destroyed	0%	
#16	Outdoor, ambient	Near PZ-3	0%	
#17	Outdoor, ambient	Near PZ-5R	0%	
#18	Outdoor, ambient	Near PZ-6R	0%	
#19	Passive Vent Opening	Western-most Passive Gas Vent (PGV), near PZ-3	8%	
#20	Passive Vent Opening	Vent East of PGV #1	10%	
#21	Passive Vent Opening	Vent East of PGV #2	21%	
#22	Passive Vent Opening	Vent East of PGV #3	1%	
#23	Passive Vent Opening	Vent East of PGV #4	75%	
#24	Passive Vent Opening	Vent East of PGV #5	7%	
#25	Passive Vent Opening	Vent East of PGV #6	5%	
#26	Passive Vent Opening	Vent East of PGV #7	36%	
#27	Passive Vent Opening	Vent East of PGV #8	16%	
#28	Passive Vent Opening	Vent East of PGV #9	0%	
#29	Passive Vent Opening	Vent SE of Staging Area	1%	
#30	Passive Vent Opening	Vent NE of Staging Area	8%	

S(Y/N) - Was screen submerged, yes or no.

Table G1 - continued
Landfill Gas Monitoring Summary
2023 Landfill Gas Monitoring Report
ADM-Clinton Landfill
Permit No. 23-SDP-05-88C

Monitoring Points			Methane Results (% LEL)	
Name	Type	Description	8/17/2023	S (Y/N)
#1	Outdoor, ambient	Near MW-1/MW-2	0%	
#2	Outdoor, ambient	Near PZ-4; Destroyed	0%	
#3	Outdoor, ambient	Near MW-3/MW-4	0%	
#4	Outdoor, ambient	Near MW-5/MW-6	0%	
#5	Outdoor, ambient	Near MW-7/MW-8	0%	
#6	Outdoor, ambient	Near MW-9/MW-10	0%	
#7	Outdoor, ambient	Southwest side of landfill	0%	
#8	Outdoor, ambient	Near MW-13	0%	
#9	Outdoor, ambient	Near MW-14/MW-15	0%	
#10	Outdoor, ambient	Near MW-16	0%	
#11	Outdoor, ambient	North side of west half of landfill	0%	
#12	Outdoor, ambient	Near MW-17/MW-18	0%	
#13	Outdoor, ambient	North side of east half of landfill	0%	
#14	Outdoor, ambient	Near PZ-1	0%	
#15	Outdoor, ambient	Near PZ-2; Destroyed	0%	
#16	Outdoor, ambient	Near PZ-3	0%	
#17	Outdoor, ambient	Near PZ-5R	0%	
#18	Outdoor, ambient	Near PZ-6R	0%	
#19	Passive Vent Opening	Western-most Passive Gas Vent (PGV), near PZ-3	0%	
#20	Passive Vent Opening	Vent East of PGV #1	0%	
#21	Passive Vent Opening	Vent East of PGV #2	0%	
#22	Passive Vent Opening	Vent East of PGV #3	0%	
#23	Passive Vent Opening	Vent East of PGV #4	0%	
#24	Passive Vent Opening	Vent East of PGV #5	0%	
#25	Passive Vent Opening	Vent East of PGV #6	0%	
#26	Passive Vent Opening	Vent East of PGV #7	0%	
#27	Passive Vent Opening	Vent East of PGV #8	0%	
#28	Passive Vent Opening	Vent East of PGV #9	0%	
#29	Passive Vent Opening	Vent SE of Staging Area	0%	
#30	Passive Vent Opening	Vent NE of Staging Area	0%	

S(Y/N) - Was screen submerged, yes or no.