

West Des Moines, IA

PROJECT: Mahaska Co, FY26 Env Comp, IA 27224360.26 DATE: 1/29/2026

SUBJECT: 2025-01-29_Mahaska County Sanitary Landfill, Binns & Stevens MSWLF Unit-62-SDP-01-74P-2025 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, and LFG Annual Report TRANSMITTAL ID: 00002

PURPOSE: For your approval VIA: Info Exchange

FROM

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TO

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

REMARKS: Good afternoon Mike-

SCS Engineers, on behalf of the Mahaska County Solid Waste Management Commission, is submitting for download the 2025 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, and Landfill Gas Annual Report for the Binns & Stevens MSWLF unit at the Mahaska County Sanitary Landfill. If you have any questions or comments regarding these reports, please contact us at the number below. Thank you.

Nathan Ohrt
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Transmittal

DATE: 1/29/2026
TRANSMITTAL ID: 00002

DESCRIPTION OF CONTENTS

QTY	DATED	TITLE	NOTES
1	1/29/2026	2025-01-29_Mahaska County Sanitary Landfill, Binns & Stevens MSWLF Unit-62-SDP-01-74P-2025 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, and LFG Annual Report.pdf	

COPIES:

Nathan Ohrt
Becky Jolly
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(SCS Engineers)

January 29, 2026
File No. 27224360.26

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

Subject: 2025 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, and Landfill Gas Annual Report
Mahaska County Sanitary Landfill
Binns & Stevens MSWLF Unit
Permit No. 62-SDP-01-74P

Dear Mike:

SCS Engineers, on behalf of the Mahaska County Solid Waste Management Commission, has completed the required groundwater monitoring and statistical evaluation for the Binns & Stevens municipal solid waste landfill (MSWLF) unit at the Mahaska County Sanitary Landfill for the year 2025. Services were performed in general accordance with Iowa Administrative Code (IAC) 567-113.10 and the current requirements for implementation of the Hydrologic Monitoring System Plan for the Binns & Stevens MSWLF unit. Please find enclosed a copy of the 2025 Annual Water Quality Report.

Additionally, evaluations of the leachate control system and gas monitoring results for the Binns & Stevens MSWLF unit are included in accordance with IAC 113.7(5)"b"(14) and 113.9(2)"d," respectively. The 2025 Leachate Control System Performance Evaluation Report and 2025 Landfill Gas Annual Report for the Binns & Stevens MSWLF unit are included as appendices to the Annual Water Quality Report.

If you have any questions regarding these reports, please contact Nathan Ohrt at (319) 331-9613.

Sincerely,



Nathan Ohrt
Senior Project Professional
SCS Engineers

NPO/TCB

Copies: Mr. Joe Farris, Mahaska County Sanitary Landfill



Timothy C. Buelow, P.E.
VP – Senior Project Advisor
SCS Engineers



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

Mahaska County Solid Waste Management Commission
Mahaska County Sanitary Landfill
Binns & Stevens MSWLF Unit
Oskaloosa, Iowa
Solid Waste Permit No. 62-SDP-01-74P

SCS ENGINEERS

27224360.26 | January 2026

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CERTIFICATION

Prepared by: _____

Date: _____

Typed: Nathan Ohrt

Reviewed by: _____

Date: _____

Typed: Timothy C. Buelow, P.E.

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

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

EXECUTIVE SUMMARY

ES.1 Period of Report Coverage

The period of report coverage is from January – December 2025 and includes the sampling events summarized in **Table 2**.

ES.2 Report Priority

The following summarizes priorities associated with groundwater compliance for the Binns & Stevens municipal solid waste landfill unit (Binns & Stevens MSWLF unit) at the Mahaska County Sanitary Landfill (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: Open.
- Types of waste accepted: MSW, C&D, Special Waste.
- Applicable IAC rules: 2009 567-113.10.

ES.4 Comments

Items of specific interest related to groundwater quality at the Binns & Stevens MSWLF unit are summarized below.

- The inorganic parameter concentrations at the Binns & Stevens MSWLF unit are impacted by acid mine drainage (AMD). A statistically significant increase (SSI) above background for inorganic parameters is indicated if a measured concentration is greater than the prediction limit using both interwell and intrawell statistical methods. An SSI for cadmium in monitoring well DW-24 was indicated during this reporting period. There were no other inorganic SSIs indicated during this reporting period.
- AMD conditions are generally stable, with approximately 28 of 42 statistical trends for AMD parameters considered stable. A discussion of the AMD conditions is included in Section 6.2.
- No statistically significant levels (SSLs) above the groundwater protection standards (GWPS) were measured for organic parameters during this reporting period.
- Ongoing SSIs, considered to be SSIs that were measured in both 2024 and 2025, were present for two organic parameters in monitoring well UW-10. New SSIs, considered to be SSIs that were measured in 2025 but not in 2024, were present for cadmium in monitoring well DW-24.
- The Landfill Gas Migration Action Plan, dated August 6, 2025 (Doc #113620), was approved by the DNR on August 20, 2025 (Doc #113697). Installation of the subsurface vents proposed in the plan is anticipated to occur in 2026.

1.0 ACRONYMS/ABBREVIATIONS

ACM = Assessment of Corrective Measures
AMD = Acid Mine Drainage
C&D = Construction and Demolition
CAMP = Corrective Action Groundwater Monitoring Program
CL = Control Limit - Mean plus Two Standard Deviations
DNR = Iowa Department of Natural Resources
DO = Dissolved Oxygen
DQR = Double Quantification Rule
GWPS = Groundwater Protection Standard
LEL = Lower Explosive Limit
LCL = Lower Confidence Limit
LN = Lognormal
MCL = EPA Maximum Contaminant Level
MSW = Municipal Solid Waste
N = Normal
NC = No Change
NM = Not Measured
NP = Non-Parametric
ORP = Oxidation-Reduction Potential
P = Parametric
PL = Prediction Limit
RL = Reporting Limit
SWS = DNR Statewide Standard for a protected groundwater source
SSI = Statistically Significant Increase above background
SSL = Statistically Significant Level above groundwater protection standard
SSS = Site-Specific Standard (Site-Specific GWPS)
TSS = Total Suspended Solids
UCL = Upper Confidence Limit
VOC = Volatile Organic Compound

2.0 SITE BACKGROUND

2.1 SITE LOCATION

The Landfill property is depicted in **Figure 1**, Approved Monitoring Network. The Landfill is located approximately five miles south of Oskaloosa, Iowa. The legal description is the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 12, Township 74N, Range 16W, in Mahaska County, Iowa.

2.2 GEOLOGY AND HYDROGEOLOGY OF THE SITE

The *Hydrologic Monitoring System Plan* dated June 1995 (Doc #96025) prepared by Terracon Environmental, Inc., described the geology and hydrogeology of the site. Excerpts from this report are included below.

The area in the vicinity of the landfill consists of moderate to high topographic relief resulting from glacial and erosional processes. The highest natural elevation at the site is approximately 780 feet and occurs in the northeast portion of the Site.

Drainage from the site generally flows to the south and east, respectively, toward an unnamed tributary of Muchakinock Creek. A drainage way is located along both the northern and eastern sides of the site. Muchakinock Creek flows into the Des Moines River approximately 3 miles southwest of the site.

As Figure 4 [not included] shows, the upper portion of the landfill generally consists of glacial deposits. These glacial deposits consist of brown sandy lean clay (oxidized till). Pennsylvanian age shale generally underlies the glacial and alluvial deposits at the site.

Figure 5 [not included] shows the undisturbed oxidized till is generally present at a depth of approximately 8 to 20 feet. The base of the oxidized till was observed at an elevation of approximately 725 feet in the western portion of the site and an approximate elevation of 730 feet in the eastern portion of the site.

In several areas across the site large spoil piles consisting of clay till and weathered shale are present. The spoil has thicknesses ranging from a few feet to over 50 feet below ground surface.

The groundwater table begins in the oxidized glacial clay till (sandy to silty lean to fat clay) to the northern portion of the sites[sic]. Beneath the till a layer of highly weathered Pennsylvanian shale bedrock unit exists across the site. Groundwater was detected within thin coal layers within the shale.

The overlying unconsolidated materials of Mahaska County generally consist of glacial clay and drift deposits of the Pleistocene glaciation. The deposits include the oxidized and unoxidized glacial clay tills. The oxidized till (sandy or silty lean to fat brown clay) has generally controlled the topography and geomorphology in the area of the landfill. The presences and thickness of the till unit varies across the county. Underlying the till layer is Pennsylvanian age bedrock. These rocks are primarily shale and generally are considered to act as an aquitard. However, there may be local deposits of sandstone and limestone which supply small yields of water. (Groundwater Resources of Mahaska County, 1980). Beneath the Pennsylvanian series rocks are the three major rock aquifers in use in the county. These deep rock aquifers are listed below in the order in which they are encountered.

- *Mississippian Aquifer*
- *Silurian-Devonian*
- *Cambro-Ordovician*

The Mississippian aquifer reportedly occurs at an elevation of approximately 600 feet near the site (Groundwater Resources of Mahaska County, 1980). The Mississippian formation was not encountered in the borings advanced at the site.

3.0 FIGURES DISCUSSION

The following figures are included in the Figures Section of this report.

3.1 FIGURE 1 - APPROVED MONITORING NETWORK

The Landfill property and the hydrologic monitoring system plan (HMSP) monitoring network are depicted in **Figure 1**. **Figure 1** indicates the respective monitoring programs of the HMSP monitoring points.

3.2 FIGURE 2 - GROUNDWATER CONTOURS

The groundwater contours in **Figure 2** were generated based on water levels measured during the October 2025 sampling event. The predominant flow direction over the majority of the landfill area is to the south-southeast in the general direction of the creek southeast of the landfill area.

4.0 STANDARDS HISTORY GRAPHS

Due to a change in methodology for preparing the standards history graphs from the previous consultant, data prior to September 2021 was removed from the graphs.

The prediction limits were below the GWPS for the Appendix I metals, or equal to the GWPS when the site-specific prediction limits exceeded the state-wide standards and the prediction limit was used as the GWPS. However, because of documented AMD impacts at the Binns & Stevens MSWLF unit, the GWPSs are not of great significance for inorganic parameters, as they likely do not fully account for AMD. Standards history graphs for the Appendix I metals are included in **Appendix H**.

5.0 QA/QC SUMMARY

The quality assurance/quality control (QA/QC) program for the Binns & Stevens MSWLF unit follows similar protocols as included in the HMSP. Data validation procedures were performed on analytical results for laboratory quality control samples and a quality assurance assessment of the data was conducted as the data were generated. The QA review procedure provided documentation of the accuracy and precision of the analytical data and confirmed that the analyses were sufficiently sensitive to detect constituents at levels below regulatory standards when technically feasible with the laboratory method utilized. SCS then conducted QA/QC data validation of the produced data, which included a review of sample handling, analytical sensitivity, blanks, accuracy, and precision. A summary of the laboratory QA/QC and data validation can be found in **Appendix B-1**, Laboratory Analytical Data Sheets, and **Appendix B-2**, Data Validation Documentation, respectively.

6.0 DATA EVALUATION AND SUMMARY

Detection and assessment monitoring statistical evaluations in accordance with the requirements of Iowa Administrative Code (IAC) 567-113.10(5) and 113.10(6) were conducted for the groundwater analytical data collected during the 2025 reporting period. The statistical evaluations for samples collected during this reporting period are located in **Appendix D**, Statistical Method and Output, of this report.

6.1 DATA EVALUATION

Groundwater monitoring for the Landfill consists of samples from monitoring wells along the downgradient perimeter of the unit and from a groundwater underdrain discharge point located downgradient of the leachate storage lagoon. Four of the monitoring wells are designated as upgradient monitoring wells to incorporate data from different areas of the Landfill property.

During this reporting period, volatile organic compounds (VOCs) benzene and 1,4-dichlorobenzene were detected in monitoring well UW-10. No VOC concentrations were above a GWPS. No SSLs were indicated for the organic parameters.

SSIs for inorganic parameters for the Binns & Stevens MSWLF unit are defined as constituent-well pairs that have an indicated SSI using both interwell and intrawell statistical methods; cadmium in monitoring well DW-24 was measured as an SSI using both methods during this reporting period. A tracking of historical SSIs and SSLs is included in Table 10.

6.2 AMD EVALUATION

The following description of AMD impact on groundwater quality at the Binns & Stevens MSWLF unit is from the 2020 Annual Water Quality Report prepared by Terracon Consultants, Inc., dated January 29, 2021 (Doc #99663).

Based on Permit Amendment 21, Iowa DNR approved the Alternative Source Demonstration indicating Acid Mine Drainage as a potential source of elevated levels of inorganic parameters. A condition of Permit Amendment 21 includes the additional sampling for the parameters Alkalinity, Aluminum, Iron, Sulfate, and pH. AMD results in low pH groundwater with some or all of the following characteristics: increased sulfate, iron, and aluminum concentrations, and low calcareous materials.

An SSI for cadmium in monitoring well DW-24 was measured using both interwell and intrawell statistical methods during this reporting period. The AMD parameters in monitoring well DW-24 are stable to increasing, indicating that the ADM influence may have increased, possibly being the reason for the SSI for cadmium.

Mann-Kendall trend evaluation at 80% confidence ($\alpha=0.2$) was performed for AMD parameters alkalinity, aluminum, iron, sulfate, and pH. Statistically significant decreasing trends were indicated for aluminum in monitoring well DW-15, iron in monitoring wells DW-15 and UW-11, pH in monitoring well PZ-14, and sulfate in monitoring wells UW-10 and UW-11. Statistically significant increasing trends were indicated for alkalinity in monitoring wells DW-8, DW-19, and UW-10, aluminum in monitoring well DW-24, iron in monitoring wells DW-24 and PZ-14, iron in monitoring well PZ-14, and pH in monitoring well UW-11.

Of the 42 analyzed trends, 28 had a Mann-Kendall statistic considered stable. Monitoring well DW-23 had only stable trends. Monitoring wells DW-8, DW-19, DW-24, and UW-21 had only stable or statistically significant increasing trends. Monitoring well DW-15 had only stable and statistically significant decreasing trends. Monitoring wells PZ-14, UW-10, and UW-11 had stable parameters and both increasing and decreasing statistically significant trends. AMD parameters appear to be generally stable, but decreasing pH concentrations in four monitoring wells may indicate groundwater conditions are deteriorating in some areas of the Landfill

A summary table of the Mann-Kendall trend evaluation for the AMD parameters is included in **Appendix G**. A summary of analytical results for the AMD parameters during this reporting period is included in **Appendix C**.

7.0 RECOMMENDATIONS

7.1 SITE IMPACT ON GROUNDWATER

There was one inorganic SSI during this reporting period for cadmium in monitoring well DW-24. No organic SSLs were indicated during this reporting period.

Acid mine drainage (AMD) conditions are generally stable, with the majority of trends for AMD parameters generally stable. AMD influence may have been the reason for the cadmium SSI in DW-24.

7.2 PROPOSED MONITORING

Anticipated groundwater sampling for the 2026 reporting period is shown in **Table 2**.

7.3 PROPOSED MONITORING WELL CHANGES

No changes are proposed at this time.

Tables

Table 1
Monitoring Program Summary Table
2025 Annual Water Quality Report
Mahaska County Sanitary Landfill - Binns & Stevens Site
Permit No. 62-SDP-01-74P

Monitoring Well	Formation ⁽¹⁾	Current Monitoring Program	Change for next sampling event	Constituents with SSLs in the 2025 Reporting Period	Constituents with SSLs	Total # of Samples in each monitoring program		
						Detection	Assessment	Corrective Action
HMSP Monitoring Points								
DW-15	Till to weathered shale	Background	No change	Not applicable	Not applicable	40		
DW-19	Till to weathered shale	Background	No change	Not applicable	Not applicable	40		
UW-11	Weathered shale	Background	No change	Not applicable	Not applicable	45		
UW-21	Clay spoil	Background	No change	Not applicable	Not applicable	34		
DW-8	Till to weathered shale	Assessment	No change	None	None		40	
DW-23	Clay spoil	Assessment	No change	None	None		33	
DW-24	Clay spoil	Detection	No change	Cadmium	Not applicable	17		
PZ-14	Till to weathered shale	Detection	No change	None	Not applicable	38		
UW-9R	Till to weathered shale	Detection	No change	None (no samples)	Not applicable	9		
UW-9RA	Till to weathered shale	Detection	No change	None (no samples)	Not applicable	0		
UW-10	Till to weathered shale	Assessment	No change	1,4-Dichlorobenzene, Benzene	None		44	
GU-1	Lagoon Underdrain	Detection	No change	None (no samples)	Not applicable	0		
Other Monitoring Points								
DW-6	Weathered till	Water Level						
DW-7	Till to weathered shale	Water Level						
PZ-7A	Weathered till	Water Level						

Notes:

(1) Obtained from screened interval on boring logs.

2) Indicated SSIs in monitoring wells in the assessment monitoring program are not retested. Therefore, the indicated SSIs in the table are not confirmed.

SSI = Statistically Significant Increase above background.

SSL = Statistically Significant Level above groundwater protection standard.

Table 2
Monitoring Program Implementation Schedule
2025 Annual Water Quality Report
Mahaska County Sanitary Landfill - Binns & Stevens Site
Permit No. 62-SDP-01-74P

Monitoring Well	Recent Sampling Dates and Constituents		Upcoming Sampling Dates and Constituents		Full Appendix II Sample Dates	
	May 2025	October 2025	1 st 2026 Semi-Annual	2 nd 2026 Semi-Annual	Previously Collected	Next Event
DW-8	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	10/1/2017, 9/20/2022	2027
UW-9R	Not sampled - Dry	Not sampled - Dry	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Not applicable	Not applicable
UW-9RA	Not sampled - Dry	Not sampled - Dry	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Not applicable	Not applicable
UW-10	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	10/1/2017, 9/21/2022	2027
UW-11	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Not applicable	Not applicable
PZ-14	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Not applicable	Not applicable
DW-15	Appendix I Metals, Alkalinity, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Not applicable	Not applicable
DW-19	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Not applicable	Not applicable
UW-21	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Not applicable	Not applicable
DW-23	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	10/1/2017, 9/22/2022	2027
DW-24	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Not applicable	Not applicable
GU-1	Not sampled - Dry	Not sampled - Dry	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Appendix I, TSS, Alkalinity, Aluminum, Iron, Sulfate	Not applicable	Not applicable

Comments:

TSS - Total Suspended Solids.

Table 3
Monitoring Well Maintenance and Performance Re-Evaluation Schedule
2025 Annual Water Quality Report
Mahaska County Sanitary Landfill - Binns & Stevens Site
Permit No. 62-SDP-01-74P

Compliance with:	Monitoring Calendar Years				
	2023	2024	2025	2026	2027
567 IAC 113.10(2)"f"(1) high and low water levels (biennial)	Completed	Completed	Included ⁽¹⁾	Scheduled	Scheduled
567 IAC 113.10(2)"f"(2) changes in the hydrologic setting and flow paths	Completed	Completed	Included ⁽²⁾	Scheduled	Scheduled
567 IAC 113.10(2)"f"(3) well depths	Completed	Completed	Included ⁽¹⁾	Scheduled	Scheduled
567 IAC 113.10(2)"f"(4) well recharge rates and chemistry		Completed		Scheduled	
Waste separation from ground water 113.6(2)"l"	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Notes:

1) See Table 4.

2) See Section 2.2 of this report.

Table 4
Monitoring Well Performance and Maintenance Summary
2025 Annual Water Quality Report
Mahaska County Sanitary Landfill - Binns & Stevens Site
Permit No. 62-SDP-01-74P

Well	Top of casing	Top of Screen	Total Depth		Date of Measurements		Maximum Depth Discrepancy (ft)
					5/2025	10/2025	
DW-8	747.43	727.5	30.4	Groundwater Level (ft)	17.98	18.39	2.2
				Groundwater Elevation (Ft MSL)	729.45	729.04	
				Measured Well Depth (ft)	28.2	28.3	
				Submerged screen	Y	Y	
UW-9R	776.95	762.6	40.4	Groundwater Level (ft)	Dry	Dry	0.3
				Groundwater Elevation (Ft MSL)	NA	NA	
				Measured Well Depth (ft)	NM	40.1	
				Submerged screen	N	N	
UW-9RA	776.10	738.6	42.5	Groundwater Level (ft)	Dry	Dry	0.0
				Groundwater Elevation (Ft MSL)	NA	NA	
				Measured Well Depth (ft)	NM	42.5	
				Submerged screen	N	N	
UW-10	760.94	746.0	27.9	Groundwater Level (ft)	12.81	12.68	2.6
				Groundwater Elevation (Ft MSL)	748.13	748.26	
				Measured Well Depth (ft)	25.3	25.3	
				Submerged screen	Y	Y	
UW-11	744.35	733.4	33.0	Groundwater Level (ft)	19.41	18.70	1.1
				Groundwater Elevation (Ft MSL)	724.94	725.65	
				Measured Well Depth (ft)	31.9	33.8	
				Submerged screen	N	N	
PZ-14	715.08	712.2	16.2	Groundwater Level (ft)	9.79	10.00	-0.6
				Groundwater Elevation (Ft MSL)	705.29	705.08	
				Measured Well Depth (ft)	16.5	16.8	
				Submerged screen	N	N	
DW-15	739.90	716.3	33.6	Groundwater Level (ft)	27.10	29.11	-0.6
				Groundwater Elevation (Ft MSL)	712.80	710.79	
				Measured Well Depth (ft)	NM	34.2	
				Submerged screen	N	N	
DW-19	740.11	722.8	27.3	Groundwater Level (ft)	12.75	15.50	-0.2
				Groundwater Elevation (Ft MSL)	727.36	724.61	
				Measured Well Depth (ft)	27.4	27.5	
				Submerged screen	Y	Y	
UW-21	756.79	726.9	39.9	Groundwater Level (ft)	34.59	33.21	1.8
				Groundwater Elevation (Ft MSL)	722.20	723.58	
				Measured Well Depth (ft)	38.1	40.3	
				Submerged screen	N	N	
DW-23	726.01	706.4	24.7	Groundwater Level (ft)	18.23	17.60	-0.3
				Groundwater Elevation (Ft MSL)	707.78	708.41	
				Measured Well Depth (ft)	25.0	25.0	
				Submerged screen	Y	Y	
DW-24	717.48	708.5	14.0	Groundwater Level (ft)	10.11	11.84	-0.3
				Groundwater Elevation (Ft MSL)	707.37	705.64	
				Measured Well Depth (ft)	14.3	14.2	
				Submerged screen	N	N	

Comments:

NA - Not Available.

NM - Not Measured.

1) The majority of measured well depths were within 2 feet of the installed depths. Although monitoring wells DW-8 and UW-10 had measured well depths different than their installed depths, samples are consistently collected. It does not appear that siltation is affecting the ability of the monitoring wells to produce samples.

Table 5
Background and GWPS Summary Tables
2025 Annual Water Quality Report
Mahaska County Sanitary Landfill - Binns & Stevens Site
Permit No. 62-SDP-01-74P

Interwell Background/GWPS (DW-15, DW-19, UW-11, and UW-21)

Constituent	Units	Samples	Detections	Min	Max	Mean	Background Level	Statistical Test	GWPS	Source
Antimony (Sb)	mg/L	113	2	0.00025 (1/2 RL)	0.005 (1/2 RL)	0.00101	0.00156	PL (NP)	0.006	MCL
Arsenic (As)	mg/L	113	38	0.000633*	0.11	0.00517	0.11	PL (NP)	0.11	SSS
Barium (Ba)	mg/L	113	113	0.00977	1.82	0.09825	1.82	PL (NP)	2	MCL
Beryllium (Be)	mg/L	113	12	0.000288*	0.0161	0.00213	0.0161	PL (NP)	0.0161	SSS
Cadmium (Cd)	mg/L	113	38	0.00005 (1/2 RL)	0.0109	0.00073	0.0109	PL (NP)	0.0109	SSS
Chromium (Cr)	mg/L	113	14	0.00146*	0.183	0.00995	0.183	PL (NP)	0.183	SSS
Cobalt (Co)	mg/L	113	92	0.0002 (1/2 RL)	1.61	0.28417	1.61	PL (NP)	1.61	SSS
Copper (Cu)	mg/L	113	35	0.002 (1/2 RL)	0.239	0.01254	0.239	PL (NP)	1.3	MCL
Lead (Pb)	mg/L	113	29	0.000243*	0.138	0.00581	0.138	PL (NP)	0.138	SSS
Nickel (Ni)	mg/L	113	77	0.00191*	1.37	0.19179	1.37	PL (NP)	1.37	SSS
Selenium (Se)	mg/L	110	16	0.002 (1/2 RL)	0.026	0.00326	0.026	PL (NP)	0.05	MCL
Silver (Ag)	mg/L	113	1	0.0005 (1/2 RL)	0.005 (1/2 RL)	0.00160	0.005	PL (NP)	0.1	SWS
Thallium (Tl)	mg/L	113	1	0.000428*	0.0025 (1/2 RL)	0.00128	0.0025	PL (NP)	0.0025	SSS
Vanadium (V)	mg/L	113	12	0.00111*	0.291	0.01545	0.291	PL (NP)	0.291	SSS
Zinc (Zn)	mg/L	113	63	0.004 (1/2 RL)	2.33	0.09676	2.33	PL (NP)	2.33	SSS

Notes:

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

* - J flag. Concentration is greater than the method detection limit but less than the reporting limit; the concentration is estimated.

Acronyms/Abbreviations:

RL = Reporting Limit

MCL = EPA Maximum Contaminant Level

DQR = Double Quantification Rule

SSS = Site-Specific GWPS

SWS = Statewide Standard

PL = Prediction Limit

GWPS = Groundwater Protection Standard (mg/L)

NP = Non-Parametric

P = Parametric

1) Water quality results and effectiveness of the statistical data evaluation criteria: The statistical evaluation is performed in accordance with the Unified Guidance and DNR requirements.

2) Changes to the previous statistical method during reporting period: None.

3) Re-sampling strategy: Retesting is performed on a 1-of-2 scheme.

4) Justification for data exclusion: None.

Table 6
Summary of Well/Detected Constituent Pairs With No Previous SSIs
2025 Annual Water Quality Report
Mahaska County Sanitary Landfill - Binns & Stevens Site
Permit No. 62-SDP-01-74P

Well	Constituent	Units	Most recent result	Background Standard
DW-24	Cadmium	mg/L	0.0181	0.0109

1) This table includes monitoring well/constituent pairs that had an SSI indicated in 2025 that was not indicated in 2024.

Comments:

- 1) Problems with the current detection network: None.
- 2) Schedule to implement remedies: None.
- 3) Alternative constituent or sample frequency changes: None.
- 4) Significant changes to calculated prediction limits: There were no significant changes to the prediction limits during this reporting period.
- 5) Resampling strategy: Retesting is performed on a 1-of-2 retesting scheme.

Table 7
Summary Table of Ongoing and Newly Identified SSIs
2025 Annual Water Quality Report
Mahaska County Sanitary Landfill - Binns & Stevens Site
Permit No. 84-SDP-01-74P

Well	Constituent	Units	Most recent result	Background Standard	Lower Confidence Limit	GWPS	Sample Dates		
							Initial Exceedance	Resample(s)	5 th background sample
DW-8	None								
UW-9R	None (no samples)								
UR-9RA	None (no samples)								
UW-10	1,4-Dichlorobenzene	µg/L	9.03	<1	5.28	75	4/8/2008	NA	12/11/2008
	Benzene	µg/L	2.74	<0.5	TS	5	4/8/2008	NA	12/11/2008
PZ-14	None								
DW-23	None								
DW-24	Cadmium	mg/L	0.0181	0.0109	Detection	0.005	5/22/2025	NA	10/23/2019

Notes:

NA - Not applicable, statistical exceedance analysis is not required for monitoring point based on monitoring program.

1) Shaded rows denote constituent/well pairs that had an SSI indicated in 2025 that was not indicated in 2024. Unshaded rows denote constituent/well pairs with SSIs indicated during both the 2024 and 2025 reporting periods.

2) Indicated SSIs in monitoring wells in the assessment monitoring program are not retested. Therefore, the indicated SSIs in the table are not confirmed.

3) "Detection" indicates the detection monitoring program. Confidence limits are not calculated for monitoring points in the detection monitoring program.

4) "TS" indicates Theil-Sen. Confidence limits are not calculated when a statistically significant trend is present.

Comments:

1) Problems with the current assessment network: None.

2) Proposed remedies: None.

3) Plume delineation strategies: Not applicable.

4) Property owner notifications: Not applicable.

Table 9
Summary of Groundwater Chemistry
2025 Annual Water Quality Report
Mahaska County Sanitary Landfill - Binns & Stevens Site
Permit No. 62-SDP-01-74P

The Reporting Period Summary of Groundwater Chemistry for Appendix II and AMD parameters is located in Appendix C.

Analytical data prior to 2025 is available in the 2024 Annual Water Quality Report dated February 27, 2025 (Doc #111963).

Table 10
Historical SSI and SSL
2025 Annual Water Quality Report
Mahaska County Sanitary Landfill - Binns & Stevens Site
Permit No. 62-SDP-01-74P

Key

	SSI - Statistically Significant Increase above background
	SSL - Statistically Significant Level above groundwater protection standard

		S p r i n g	F a l l	S p r i n g	F a l l	S p r i n g	F a l l	S p r i n g	F a l l	S p r i n g	F a l l	S p r i n g	F a l l	S p r i n g	F a l l
Well	Constituent	2019	2019	2020	2020	2021	2021	2022	2022	2023	2023	2024	2024	2025	2025
DW-8	1,1-Dichloroethane														
	cis-1,2-Dichloroethene														
UW-9R	No samples														
UW-9RA	No samples														
UW-10	Chloroethane														
	1,1-Dichloroethane														
	1,4-Dichlorobenzene														
	Benzene														
	cis-1,2-Dichloroethene														
	Vinyl Chloride														
PZ-14	None														
DW-23	None														
DW-24	Cadmium														

Comments:

- 1) Inorganic SSIs on this table were indicated using both interwell and intrawell prediction limits. A detection of a VOC was considered an SSI for the purposes of this table.
- 2) Indicated SSIs in monitoring wells in the assessment monitoring program are not retested. Therefore, the indicated SSIs in the table are not confirmed.

Table 11
Corrective Action Trend Analysis
2025 Annual Water Quality Report
Mahaska County Sanitary Landfill
Permit No. 62-SDP-01-74P

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

Figures

Appendix A
Field Sampling Forms

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)	
Monitoring Well/Piezometer ID: DW-8	Date: 5/22/2025
Gradient: Down	Sampler: Garrett Horak

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	28.2
Initial Static Water Level (feet):	17.98
Initial Groundwater Elevation (ft-amsl):	729.45
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 (NTU)	
1:35 PM	Purging start time.						
1:38 PM	13.8	0.2	6606.5	4.79	133.6	4.1	
1:41 PM	13.7	0.2	6781.9	4.97	111.3	4.0	
1:44 PM	13.8	0.2	6838.9	5.16	90.3	5.0	
1:47 PM	13.9	0.2	6833.7	5.21	83.1	6.8	
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):	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:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

[illegible]

FORM FOR GROUNDWATER SAMPLING

[illegible]

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)	
Monitoring Well/Piezometer ID: UW-10	Date: 5/22/2025
Gradient: Up	Sampler: Garrett Horak

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):	25.3
Initial Static Water Level (feet):	12.81
Initial Groundwater Elevation (ft-amsl):	748.13
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 (NTU)	
2:29 PM	Purging start time.						
2:32 PM	16.4	4.5	4917.7	6.19	0.5	177.0	
2:35 PM	13.6	0.2	4854.9	6.37	-75.6	154.2	
2:38 PM	13.6	0.2	4895.7	6.45	-82.4	197.5	
2:41 PM	13.8	0.2	4938.0	6.55	-90.4	220.2	
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:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)	
Monitoring Well/Piezometer ID: UW-11	Date: 5/22/2025
Gradient: Up	Sampler: Garrett Horak

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):	31.9
Initial Static Water Level (feet):	19.41
Initial Groundwater Elevation (ft-amsl):	724.94
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 (NTU)	
3:29 PM	Purging start time.						
3:32 PM	13.3	0.3	5144.9	6.94	-99.7	253.4	
3:35 PM	13.2	0.3	5229.0	7.00	-92.9	184.5	
3:38 PM	13.9	0.5	5239.7	6.99	-77.5	135.9	
3:41 PM	13.8	1.0	5242.0	6.92	-45.5	77.1	
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:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)	
Monitoring Well/Piezometer ID: PZ-14	Date: 5/22/2025
Gradient: Down	Sampler: Garrett Horak

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):	16.5
Initial Static Water Level (feet):	9.79
Initial Groundwater Elevation (ft-amsl):	705.29
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 (NTU)	
4:22 PM	Purging start time.						
4:25 PM	14.1	0.2	4032.9	6.37	-19.3	29.7	
4:28 PM	14.2	0.3	4029.8	6.37	-24.4	28.5	
4:31 PM	14.1	0.9	4036.0	6.40	-33.6	26.4	
4:34 PM	14.9	1.3	3971.1	6.43	-50.0	11.0	
4:37 PM	18.0	7.0	2698.6	6.66	-71.2	72.4	
4:40 PM	12.1	0.2	2761.1	6.47	-74.2	5.2	
4:43 PM	12.1	0.3	2763.6	6.47	-70.8	5.0	
4:46 PM	12.2	0.3	2763.4	6.46	-65.6	4.9	
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):	24:00
Average Purge Rate (mL/min):	125.00

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Readings taken from top of metal casing, not top of well casing. 8-10 inches from metal casing to wellhead. Color: Orange, cloudy. Odor: None

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)	
Monitoring Well/Piezometer ID: DW-15	Date: 5/22/2025
Gradient: Down	Sampler: Garrett Horak

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):	NM
Initial Static Water Level (feet):	27.10
Initial Groundwater Elevation (ft-amsl):	712.80
Equipment Used:	Dedicated Submersible

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 (NTU)	
6:45 PM	Purging start time.						
6:48 PM	11.0	0.4	3470.1	4.08	243.1	3.2	
6:51 PM	11.1	0.6	3512.5	4.18	231.1	8.7	
6:54 PM	11.2	1.3	3610.2	4.26	212.9	4.2	
6:57 PM	11.6	3.3	3911.5	4.66	163.1	6.7	
7:00 PM	12.9	0.2	4884.1	4.97	87.8	4.9	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.6
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	15:00
Average Purge Rate (mL/min):	173.33

D. WELL MAINTENANCE	
Does the well require any future maintenance? No	
If yes, explain:	
Additional Comments:	Color: Brown tint Odor: None

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)			
Monitoring Well/Piezometer ID: DW-19		Date: 5/28/2025	
Gradient: Down		Sampler: Garrett Horak	

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):	27.4
Initial Static Water Level (feet):	12.75
Initial Groundwater Elevation (ft-amsl):	727.36
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 (NTU)	
9:20 AM	Purging start time.						
9:23 AM	14.1	0.6	6286.3	5.17	53.3	48.7	
9:26 AM	14.0	0.9	6536.1	5.29	36.2	33.8	
9:29 AM	23.5	7.7	2308.4	6.76	152.4	23.4	
9:32 AM	13.4	1.4	2625.9	6.42	123.7	3.9	
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?	Yes
If yes, explain:	Overgrown/ Path needs cleared
Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)	
Monitoring Well/Piezometer ID: UW-21	Date: 5/23/2025
Gradient: Up	Sampler: Garrett Horak

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):	38.1
Initial Static Water Level (feet):	34.59
Initial Groundwater Elevation (ft-amsl):	722.20
Equipment Used:	Non-Dedicated Submersible

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 (NTU)	
10:26 AM	Purging start time.						
10:29 AM	13.3	1.6	2620.9	6.32	142.9	5.2	
10:32 AM	13.2	2.4	2623.3	6.06	178.5	22.0	
10:35 AM	13.2	8.5	2583.9	5.04	250.8	114.7	
10:38 AM	14.3	0.3	6035.7	4.98	85.5	18.4	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	NM
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	0.00

D. WELL MAINTENANCE	
Does the well require any future maintenance? Yes	
If yes, explain:	Troubleshoot pump.
Additional Comments:	Color: Clear-cloudy grey Odor: Sulfur Dedicated submersible pump did not work, used non-dedicated stainless steel pump. Well went dry during sampling. Volume water removed was not recorded.

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)	
Monitoring Well/Piezometer ID: DW-23	Date: 5/22/2025
Gradient: Down	Sampler: Garrett Horak

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):	25.0
Initial Static Water Level (feet):	18.23
Initial Groundwater Elevation (ft-amsl):	707.78
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 (NTU)	
5:20 PM	Purging start time.						
5:23 PM	12.3	2.2	2709.0	6.45	-25.2	6.2	
5:26 PM	18.0	9.3	6.2	6.98	188.7	5.7	
5:29 PM	14.2	2.7	1436.9	6.72	73.7	7.9	
5:32 PM	14.1	2.9	1439.1	6.73	84.0	8.7	
5:35 PM	14.1	3.3	1456.2	6.71	95.1	8.9	
5:38 PM	14.1	4.0	1542.3	6.63	116.0	10.1	
5:41 PM	14.4	5.5	1770.1	6.20	185.1	17.3	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	NM
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	21:00
Average Purge Rate (mL/min):	0.00

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Color: Clear-orange tint Odor: None Volume water removed was not recorded.

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)			
Monitoring Well/Piezometer ID: DW-24		Date: 5/22/2025	
Gradient: Down		Sampler: Garrett Horak	

A. MW/PIEZOMETER CONDITIONS		
Well/Piezometer Capped?	Yes	
Litter/Standing Water?	Yes	Large puddle

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	14.3
Initial Static Water Level (feet):	10.11
Initial Groundwater Elevation (ft-amsl):	707.37
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 (NTU)	
7:23 PM	Purging start time.						
7:26 PM	13.0	0.4	4868.3	4.94	70.7	4.6	
7:29 PM	13.1	0.8	4840.4	4.92	36.2	5.6	
7:32 PM	13.9	5.9	3708.7	5.59	-78.2	27.9	
7:35 PM	10.7	0.2	3039.7	3.40	298.4	3.6	
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:	Color: Clear with orange flakes Odor: None

FORM FOR SURFACE WATER SAMPLING

2nd 2021 Semi-Annual Sampling

Site Name Mahaska County Landfill (Binns & Stevens) Permit No. 62-SDP-01-74P
Surface Monitoring Point No. GU-1 Date

Name of Person Sampling

A. TYPE OF MOINITORING POINT

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

B. PURPOSE OF MONITORING POINT

Upstream
Within Landfill X
Downstream
Other

C. MONITORING POINT CONDITIONS/LOCATION

Lagoon Underdrain

Was monitoring point dry? Too little water to sample?
Was water flowing? If yes, estimate quantity (gpm)
Standing Water? If yes, estimate depth (inches)
If yes, estimate width (inches)
Was water discolored?
Does water have odor?
Was ground discolored?
Litter present?

D. FIELD MEASUREMENTS

Weather Conditions:

Time:

Field Measurements:

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

COMMENTS

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)			
Monitoring Well/Piezometer ID: DW-8		Date: 10/30/2025	
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):	28.3
Initial Static Water Level (feet):	18.39
Initial Groundwater Elevation (ft-amsl):	729.04
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 (NTU)	
9:29 AM	Purging start time.						
9:32 AM	13.2	0.7	1319.8	6.60	217.7	15.8	
9:35 AM	13.4	0.3	1280.6	6.61	118.9	12.8	
9:38 AM	13.5	0.2	1268.4	6.61	47.9	13.2	
9:41 AM	13.4	0.2	1264.7	6.61	13.1	13.2	
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:	Color-Clear Odor-None

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)			
Monitoring Well/Piezometer ID: UW-9RA		Date: 10/30/2025	
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):	42.5
Initial Static Water Level (feet):	Dry
Initial Groundwater Elevation (ft-amsl):	NA
Equipment Used:	

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 (NTU)	
	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:	Monitoring well was dry.

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)			
Monitoring Well/Piezometer ID: UW-9R		Date: 10/30/2025	
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):	40.1
Initial Static Water Level (feet):	Dry
Initial Groundwater Elevation (ft-amsl):	NA
Equipment Used:	

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 (NTU)	
	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:	Monitoring well was dry.

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)			
Monitoring Well/Piezometer ID: UW-10		Date: 10/30/2025	
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):	25.3
Initial Static Water Level (feet):	12.68
Initial Groundwater Elevation (ft-amsl):	748.26
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 (NTU)	
10:08 AM	Purging start time.						
10:11 AM	13.4	0.6	3012.7	6.26	-48.4	5.5	
10:14 AM	13.9	0.3	3030.1	6.27	-57.0	5.0	
10:17 AM	14.0	0.2	3033.7	6.28	-61.7	5.0	
10:20 AM	13.9	0.2	3035.5	6.29	-64.5	5.0	
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):	166.67

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Color-Clear with black particles Odor-Sulfur

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)			
Monitoring Well/Piezometer ID: UW-11		Date: 10/29/2025	
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):	33.8
Initial Static Water Level (feet):	18.70
Initial Groundwater Elevation (ft-amsl):	725.65
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 (NTU)	
12:53 PM	Purging start time.						
12:56 PM	15.2	0.5	4188.6	6.15	4.8	8.5	
12:59 PM	15.3	0.2	4115.4	6.16	-5.4	7.9	
1:02 PM	15.3	0.2	4111.5	6.15	-8.3	7.6	
1:05 PM	15.4	0.1	4106.9	6.15	-10.0	9.5	
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:	Color-Clear Odor-None

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)			
Monitoring Well/Piezometer ID: PZ-14		Date: 10/29/2025	
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):	16.8
Initial Static Water Level (feet):	10.00
Initial Groundwater Elevation (ft-amsl):	705.08
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 (NTU)	
11:31 AM	Purging start time.						
11:34 AM	14.7	0.8	4770.7	6.56	-116.7	37.7	
11:37 AM	15.0	0.4	4944.3	6.61	-110.3	56.2	
11:40 AM	15.3	0.3	4941.5	6.56	-105.1	85.2	
11:43 AM	15.3	0.2	4887.8	6.36	-94.6	137.2	
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:	Color-Yellow Tint Odor-Iron

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)			
Monitoring Well/Piezometer ID: DW-15		Date: 10/29/2025	
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):	34.2
Initial Static Water Level (feet):	29.11
Initial Groundwater Elevation (ft-amsl):	710.79
Equipment Used:	Dedicated Submersible

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 (NTU)	
1:29 PM	Purging start time.						
1:32 PM	12.3	0.8	510.5	6.62	9.1	33.3	
1:35 PM	12.5	0.3	483.9	6.53	23.3	52.9	
1:38 PM	12.6	0.2	487.7	6.51	28.1	40.1	
1:41 PM	12.8	0.2	492.2	6.51	26.2	35.3	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.3
Was well pumped/bailed dry?	Yes
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	191.67

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Color-Clear Odor-Sulfur Well went dry while collecting the sample.

FORM FOR GROUNDWATER SAMPLING

[illegible]

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)			
Monitoring Well/Piezometer ID: UW-21		Date: 10/29/2025	
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):	40.3
Initial Static Water Level (feet):	33.21
Initial Groundwater Elevation (ft-amsl):	723.58
Equipment Used:	Stainless Steel 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 (NTU)	
2:04 PM	Purging start time.						
2:07 PM	12.8	1.4	5260.7	3.72	169.6	46.7	
2:10 PM	13.2	1.3	5055.1	3.52	216.2	24.6	
2:13 PM	13.4	0.9	5041.3	3.43	256.8	16.9	
2:16 PM	13.5	0.7	5122.8	3.43	274.8	12.9	
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:	Color-Clear Odor-None

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)			
Monitoring Well/Piezometer ID: DW-23		Date: 10/29/2025	
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):	25.0
Initial Static Water Level (feet):	17.60
Initial Groundwater Elevation (ft-amsl):	708.41
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 (NTU)	
12:19 PM	Purging start time.						
12:22 PM	17.2	0.5	6464.0	5.15	75.5	11.2	
12:25 PM	16.2	0.2	6555.1	5.13	77.7	6.0	
12:28 PM	16.1	0.1	6552.5	5.12	80.9	5.9	
12:31 PM	16.0	0.1	6572.7	5.04	85.4	5.1	
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):	141.67

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Color-Clear Odor-None

FORM FOR GROUNDWATER SAMPLING

Project: Mahaska County Sanitary Landfill (Binns & Stevens)			
Monitoring Well/Piezometer ID: DW-24		Date: 10/29/2025	
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):	14.2
Initial Static Water Level (feet):	11.84
Initial Groundwater Elevation (ft-amsl):	705.64
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 (NTU)	
3:16 PM	Purging start time.						
3:19 PM	14.6	0.8	2987.0	3.30	207.8	14.9	
3:22 PM	14.8	0.3	3016.8	3.23	288.4	7.5	
3:25 PM	14.8	0.2	3020.9	3.23	314.5	6.2	
3:28 PM	14.8	0.2	3024.7	3.21	325.3	5.9	
Parameters stabilized, sample collected.							

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

D. WELL MAINTENANCE	
Does the well require any future maintenance?	No
If yes, explain:	
Additional Comments:	Color-Clear Odor-None

FORM FOR SURFACE WATER SAMPLING

2nd 2021 Semi-Annual Sampling

Site Name Mahaska County Landfill (Binns & Stevens)

Permit No.

62-SDP-01-74P

Surface Monitoring Point No. GU-1

Date

10-29-25

Name of Person Sampling

Honner Both

A. TYPE OF MOINITORING POINT

Stream

Road Ditch

Drainage Ditch

Open Tile

Tile with Riser

Other

X

B. PURPOSE OF MONITORING POINT

Upstream

Within Landfill

X

Downstream

Other

C. MONITORING POINT CONDITIONS/LOCATION

Lagoon Underdrain

Was monitoring point dry?

NO

Too little water to sample?

yes

Was water flowing?

NO

If yes, estimate quantity (gpm)

Standing Water?

yes

If yes, estimate depth (inches)

1 inch

If yes, estimate width (inches)

Was water discolored?

NO

Does water have odor?

NO

Was ground discolored?

NO

Litter present?

NO

D. FIELD MEASUREMENTS

Weather Conditions:

54°F, Cloudy, 15-20 mph wind

Time:

16:00

Field Measurements:

Temperature

Units

Celsius

Equipment Used

pH

Units

Standard units

Equipment Used

Spec. Conductance

Units

uS/cm

Equipment Used

COMMENTS

To little water to sample

Appendix B-1
Laboratory Analytical Data Sheets

ANALYTICAL REPORT

PREPARED FOR

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

Generated 6/9/2025 4:15:09 PM

JOB DESCRIPTION

1st 2025 B&S HMSP Sampling Event
Mahaska County Sanitary Landfill, Binns & Stevens

JOB NUMBER

310-307213-1

Eurofins Cedar Falls

Job Notes

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

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

Authorization



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Authorized for release by
Samuel Miller, Project Management Assistant I
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Case Narrative

Client: SCS Engineers
Project: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1

Job ID: 310-307213-1

Eurofins Cedar Falls

Job Narrative 310-307213-1

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

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

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

Receipt

The samples were received on 5/23/2025 4:45 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 0.3°C, 2.1°C and 2.3°C.

GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-455897 recovered outside of the control limits for Carbon disulfide (-23.2%D) and Iodomethane (-50.6%D). The LCS associated with this CCV passed CCV criteria for the affected analytes; therefore, the data have been reported. The associated sample is:(CCV 310-455897/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-455901 recovered outside of the control limits for Carbon disulfide (-23.8%D). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-455901/3).

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

HPLC/IC

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

Metals

Method 6020B: The reference method requires samples to be preserved to a pH of <2. The following samples were received with insufficient preservation at a pH of >2: UW-10 (310-307213-2) and MW-D (310-307213-10). The sample(s) was preserved to the appropriate pH in the laboratory.

Method 6020B: The initial calibration verification (ICV) result for batch 310-456906 was above the upper control limit. The affected analytes are: Antimony. Sample results were non-detects, and have been reported as qualified data.

Method 6020B: The low level continuing calibration verification (CCVL) associated with batch 310-456906 recovered above the upper control limit for Antimony. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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

General Chemistry

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

Eurofins Cedar Falls

Sample Summary

Client: SCS Engineers

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-307213-1	DW-8	Water	05/22/25 14:06	05/23/25 16:45
310-307213-2	UW-10	Water	05/22/25 14:59	05/23/25 16:45
310-307213-3	UW-11	Water	05/22/25 16:08	05/23/25 16:45
310-307213-4	PZ-14	Water	05/22/25 17:08	05/23/25 16:45
310-307213-5	DW-15	Water	05/22/25 19:09	05/23/25 16:45
310-307213-6	DW-19	Water	05/23/25 09:53	05/23/25 16:45
310-307213-7	UW-21	Water	05/23/25 06:55	05/23/25 16:45
310-307213-8	DW-23	Water	05/22/25 18:41	05/23/25 16:45
310-307213-9	DW-24	Water	05/22/25 19:52	05/23/25 16:45
310-307213-10	MW-D	Water	05/22/25 15:10	05/23/25 16:45
310-307213-11	Trip Blank 1	Water	05/22/25 00:00	05/23/25 16:45
310-307213-12	Trip Blank 2	Water	05/22/25 00:00	05/23/25 16:45
310-307213-13	Trip Blank 3	Water	05/22/25 00:00	05/23/25 16:45

Detection Summary

Client: SCS Engineers

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-8

Lab Sample ID: 310-307213-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.939	J	1.00	0.220	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.498	J	1.00	0.210	ug/L	1		8260D	Total/NA
Sulfate	297		100	42.0	mg/L	100		9056A	Total/NA
Barium	0.0272		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00383		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.00411	J	0.00500	0.00230	mg/L	1		6020B	Total/NA
Iron	2.74		0.100	0.0500	mg/L	1		6020B	Total/NA
Total Suspended Solids	8.50		3.75	2.63	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	479		5.00	2.50	mg/L	1		SM 2320B	Total/NA

Client Sample ID: UW-10

Lab Sample ID: 310-307213-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dichlorobenzene	6.87		1.00	0.230	ug/L	1		8260D	Total/NA
Acetone	3.41	J	10.0	3.10	ug/L	1		8260D	Total/NA
Benzene	2.43		0.500	0.220	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.334	J	1.00	0.210	ug/L	1		8260D	Total/NA
Vinyl chloride	0.573	J	1.00	0.180	ug/L	1		8260D	Total/NA
Sulfate	534		100	42.0	mg/L	100		9056A	Total/NA
Arsenic	0.00361		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0587		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.0360		0.000500	0.000170	mg/L	1		6020B	Total/NA
Iron	89.4		0.100	0.0500	mg/L	1		6020B	Total/NA
Total Suspended Solids	47.0		15.0	10.5	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	974		5.00	2.50	mg/L	1		SM 2320B	Total/NA

Client Sample ID: UW-11

Lab Sample ID: 310-307213-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	2100		100	42.0	mg/L	100		9056A	Total/NA
Arsenic	0.00199	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0149		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.000753		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.00566		0.00500	0.00230	mg/L	1		6020B	Total/NA
Iron	22.3		0.100	0.0500	mg/L	1		6020B	Total/NA
Total Suspended Solids	24.5		7.50	5.25	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	510		5.00	2.50	mg/L	1		SM 2320B	Total/NA

Client Sample ID: PZ-14

Lab Sample ID: 310-307213-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	1600		100	42.0	mg/L	100		9056A	Total/NA
Arsenic	0.00118	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0196		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00919		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0108	J	0.0200	0.00920	mg/L	4		6020B	Total/NA
Zinc	0.0658	J	0.0800	0.0520	mg/L	4		6020B	Total/NA
Iron	200		0.400	0.200	mg/L	4		6020B	Total/NA
Total Suspended Solids	116		30.0	21.0	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	57.1		5.00	2.50	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-15

Lab Sample ID: 310-307213-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	51.9		10.0	4.20	mg/L	10		9056A	Total/NA
Aluminum	0.0482	J	0.0500	0.0290	mg/L	1		6020B	Total/NA
Arsenic	0.00177	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.133		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cadmium	0.000107	J	0.000200	0.000100	mg/L	1		6020B	Total/NA
Cobalt	0.00173		0.000500	0.000170	mg/L	1		6020B	Total/NA
Iron	1.40		0.100	0.0500	mg/L	1		6020B	Total/NA
Total Suspended Solids	5.00		1.88	1.31	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	213		5.00	2.50	mg/L	1		SM 2320B	Total/NA

Client Sample ID: DW-19

Lab Sample ID: 310-307213-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	640		100	42.0	mg/L	100		9056A	Total/NA
Barium	0.0243		0.00200	0.000660	mg/L	1		6020B	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	332		5.00	2.50	mg/L	1		SM 2320B	Total/NA

Client Sample ID: UW-21

Lab Sample ID: 310-307213-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	5660		100	42.0	mg/L	100		9056A	Total/NA
Aluminum	2.49		0.250	0.145	mg/L	5		6020B	Total/NA
Arsenic	0.00574	J	0.0100	0.00265	mg/L	5		6020B	Total/NA
Barium	0.0107		0.0100	0.00330	mg/L	5		6020B	Total/NA
Beryllium	0.00366		0.00100	0.000330	mg/L	1		6020B	Total/NA
Chromium	0.0157		0.00500	0.00180	mg/L	1		6020B	Total/NA
Cobalt	1.45		0.00250	0.000850	mg/L	5		6020B	Total/NA
Nickel	0.842		0.0250	0.0115	mg/L	5		6020B	Total/NA
Selenium	0.0154	J	0.0250	0.00700	mg/L	5		6020B	Total/NA
Zinc	0.143		0.100	0.0650	mg/L	5		6020B	Total/NA
Iron	374		0.500	0.250	mg/L	5		6020B	Total/NA
Total Suspended Solids	30.7		5.00	3.50	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	99.4		5.00	2.50	mg/L	1		SM 2320B	Total/NA

Client Sample ID: DW-23

Lab Sample ID: 310-307213-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4-Methyl-2-pentanone (MIBK)	4.28	J	10.0	2.10	ug/L	1		8260D	Total/NA
Sulfate	3370		100	42.0	mg/L	100		9056A	Total/NA
Aluminum	1.72		0.0500	0.0290	mg/L	1		6020B	Total/NA
Arsenic	0.000990	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0117		0.00200	0.000660	mg/L	1		6020B	Total/NA
Beryllium	0.000867	J	0.00100	0.000330	mg/L	1		6020B	Total/NA
Cadmium	0.00268		0.000200	0.000100	mg/L	1		6020B	Total/NA
Cobalt	0.407		0.000500	0.000170	mg/L	1		6020B	Total/NA
Copper	0.00487	J	0.00500	0.00320	mg/L	1		6020B	Total/NA
Lead	0.000404	J	0.000500	0.000330	mg/L	1		6020B	Total/NA
Nickel	0.582		0.00500	0.00230	mg/L	1		6020B	Total/NA
Selenium	0.00349	J	0.00500	0.00140	mg/L	1		6020B	Total/NA
Zinc	0.360		0.0200	0.0130	mg/L	1		6020B	Total/NA
Iron	45.1		0.100	0.0500	mg/L	1		6020B	Total/NA
Total Suspended Solids	5.13		1.88	1.31	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

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-23 (Continued)

Lab Sample ID: 310-307213-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Alkalinity as CaCO ₃ to pH 4.5	34.5		5.00	2.50	mg/L	1		SM 2320B	Total/NA

Client Sample ID: DW-24

Lab Sample ID: 310-307213-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	2790		100	42.0	mg/L	100		9056A	Total/NA
Aluminum	49.0		0.0500	0.0290	mg/L	1		6020B	Total/NA
Arsenic	0.00334		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.00687		0.00200	0.000660	mg/L	1		6020B	Total/NA
Beryllium	0.0131		0.00100	0.000330	mg/L	1		6020B	Total/NA
Cadmium	0.0167		0.000200	0.000100	mg/L	1		6020B	Total/NA
Chromium	0.00262	J	0.00500	0.00180	mg/L	1		6020B	Total/NA
Cobalt	0.314		0.000500	0.000170	mg/L	1		6020B	Total/NA
Copper	0.00507		0.00500	0.00320	mg/L	1		6020B	Total/NA
Lead	0.000700		0.000500	0.000330	mg/L	1		6020B	Total/NA
Nickel	0.482		0.00500	0.00230	mg/L	1		6020B	Total/NA
Selenium	0.0173		0.00500	0.00140	mg/L	1		6020B	Total/NA
Thallium	0.000579	J	0.00100	0.000570	mg/L	1		6020B	Total/NA
Zinc	1.58		0.0200	0.0130	mg/L	1		6020B	Total/NA
Iron	71.9		0.100	0.0500	mg/L	1		6020B	Total/NA

Client Sample ID: MW-D

Lab Sample ID: 310-307213-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dichlorobenzene	6.43		1.00	0.230	ug/L	1		8260D	Total/NA
Acetone	4.40	J	10.0	3.10	ug/L	1		8260D	Total/NA
Benzene	2.43		0.500	0.220	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.346	J	1.00	0.210	ug/L	1		8260D	Total/NA
Vinyl chloride	0.546	J	1.00	0.180	ug/L	1		8260D	Total/NA
Sulfate	527		100	42.0	mg/L	100		9056A	Total/NA
Arsenic	0.00330		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0713		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.0298		0.000500	0.000170	mg/L	1		6020B	Total/NA
Iron	83.3		0.100	0.0500	mg/L	1		6020B	Total/NA
Total Suspended Solids	132		30.0	21.0	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO ₃ to pH 4.5	964		5.00	2.50	mg/L	1		SM 2320B	Total/NA

Client Sample ID: Trip Blank 1

Lab Sample ID: 310-307213-11

No Detections.

Client Sample ID: Trip Blank 2

Lab Sample ID: 310-307213-12

No Detections.

Client Sample ID: Trip Blank 3

Lab Sample ID: 310-307213-13

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-8

Lab Sample ID: 310-307213-1

Date Collected: 05/22/25 14:06

Matrix: Water

Date Received: 05/23/25 16:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			05/29/25 08:43	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			05/29/25 08:43	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			05/29/25 08:43	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			05/29/25 08:43	1
1,1-Dichloroethane	0.939	J	1.00	0.220	ug/L			05/29/25 08:43	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			05/29/25 08:43	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			05/29/25 08:43	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			05/29/25 08:43	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			05/29/25 08:43	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			05/29/25 08:43	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			05/29/25 08:43	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			05/29/25 08:43	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			05/29/25 08:43	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			05/29/25 08:43	1
2-Hexanone	<10.0		10.0	2.00	ug/L			05/29/25 08:43	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			05/29/25 08:43	1
Acetone	<10.0		10.0	3.10	ug/L			05/29/25 08:43	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			05/29/25 08:43	1
Benzene	<0.500		0.500	0.220	ug/L			05/29/25 08:43	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			05/29/25 08:43	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			05/29/25 08:43	1
Bromoform	<5.00		5.00	0.780	ug/L			05/29/25 08:43	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/29/25 08:43	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			05/29/25 08:43	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/29/25 08:43	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			05/29/25 08:43	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			05/29/25 08:43	1
Chloroethane	<4.00		4.00	0.790	ug/L			05/29/25 08:43	1
Chloroform	<3.00		3.00	1.30	ug/L			05/29/25 08:43	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/29/25 08:43	1
cis-1,2-Dichloroethene	0.498	J	1.00	0.210	ug/L			05/29/25 08:43	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			05/29/25 08:43	1
Dibromomethane	<1.00		1.00	0.330	ug/L			05/29/25 08:43	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			05/29/25 08:43	1
Iodomethane	<10.0		10.0	7.00	ug/L			05/29/25 08:43	1
Methylene chloride	<5.00		5.00	1.70	ug/L			05/29/25 08:43	1
Styrene	<1.00		1.00	0.370	ug/L			05/29/25 08:43	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/29/25 08:43	1
Toluene	<1.00		1.00	0.430	ug/L			05/29/25 08:43	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			05/29/25 08:43	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			05/29/25 08:43	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			05/29/25 08:43	1
Trichloroethene	<1.00		1.00	0.430	ug/L			05/29/25 08:43	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			05/29/25 08:43	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			05/29/25 08:43	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			05/29/25 08:43	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			05/29/25 08:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	109		76 - 130		05/29/25 08:43	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-8

Lab Sample ID: 310-307213-1

Date Collected: 05/22/25 14:06

Matrix: Water

Date Received: 05/23/25 16:45

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		05/29/25 08:43	1
4-Bromofluorobenzene (Surr)	97		80 - 120		05/29/25 08:43	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	297		100	42.0	mg/L			06/06/25 19:31	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0290	mg/L		05/28/25 09:20	06/06/25 14:46	1
Antimony	<0.00200	^3+ ^1+	0.00200	0.00100	mg/L		05/28/25 09:20	06/06/25 14:46	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		05/28/25 09:20	06/04/25 20:45	1
Barium	0.0272		0.00200	0.000660	mg/L		05/28/25 09:20	06/04/25 20:45	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		05/28/25 09:20	06/06/25 14:46	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		05/28/25 09:20	06/04/25 20:45	1
Chromium	<0.00500		0.00500	0.00180	mg/L		05/28/25 09:20	06/04/25 20:45	1
Cobalt	0.00383		0.000500	0.000170	mg/L		05/28/25 09:20	06/04/25 20:45	1
Copper	<0.00500		0.00500	0.00320	mg/L		05/28/25 09:20	06/04/25 20:45	1
Lead	<0.000500		0.000500	0.000330	mg/L		05/28/25 09:20	06/04/25 20:45	1
Nickel	0.00411	J	0.00500	0.00230	mg/L		05/28/25 09:20	06/06/25 14:46	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/28/25 09:20	06/06/25 14:46	1
Silver	<0.00100		0.00100	0.000500	mg/L		05/28/25 09:20	06/04/25 20:45	1
Thallium	<0.00100		0.00100	0.000570	mg/L		05/28/25 09:20	06/06/25 14:46	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		05/28/25 09:20	06/04/25 20:45	1
Zinc	<0.0200		0.0200	0.0130	mg/L		05/28/25 09:20	06/06/25 14:46	1
Iron	2.74		0.100	0.0500	mg/L		05/28/25 09:20	06/06/25 14:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	8.50		3.75	2.63	mg/L			05/27/25 10:05	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	479		5.00	2.50	mg/L			05/30/25 08:37	1

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: UW-10

Lab Sample ID: 310-307213-2

Date Collected: 05/22/25 14:59

Matrix: Water

Date Received: 05/23/25 16:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			05/29/25 09:06	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			05/29/25 09:06	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			05/29/25 09:06	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			05/29/25 09:06	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			05/29/25 09:06	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			05/29/25 09:06	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			05/29/25 09:06	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			05/29/25 09:06	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			05/29/25 09:06	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			05/29/25 09:06	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			05/29/25 09:06	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			05/29/25 09:06	1
1,4-Dichlorobenzene	6.87		1.00	0.230	ug/L			05/29/25 09:06	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			05/29/25 09:06	1
2-Hexanone	<10.0		10.0	2.00	ug/L			05/29/25 09:06	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			05/29/25 09:06	1
Acetone	3.41	J	10.0	3.10	ug/L			05/29/25 09:06	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			05/29/25 09:06	1
Benzene	2.43		0.500	0.220	ug/L			05/29/25 09:06	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			05/29/25 09:06	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			05/29/25 09:06	1
Bromoform	<5.00		5.00	0.780	ug/L			05/29/25 09:06	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/29/25 09:06	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			05/29/25 09:06	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/29/25 09:06	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			05/29/25 09:06	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			05/29/25 09:06	1
Chloroethane	<4.00		4.00	0.790	ug/L			05/29/25 09:06	1
Chloroform	<3.00		3.00	1.30	ug/L			05/29/25 09:06	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/29/25 09:06	1
cis-1,2-Dichloroethene	0.334	J	1.00	0.210	ug/L			05/29/25 09:06	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			05/29/25 09:06	1
Dibromomethane	<1.00		1.00	0.330	ug/L			05/29/25 09:06	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			05/29/25 09:06	1
Iodomethane	<10.0		10.0	7.00	ug/L			05/29/25 09:06	1
Methylene chloride	<5.00		5.00	1.70	ug/L			05/29/25 09:06	1
Styrene	<1.00		1.00	0.370	ug/L			05/29/25 09:06	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/29/25 09:06	1
Toluene	<1.00		1.00	0.430	ug/L			05/29/25 09:06	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			05/29/25 09:06	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			05/29/25 09:06	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			05/29/25 09:06	1
Trichloroethene	<1.00		1.00	0.430	ug/L			05/29/25 09:06	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			05/29/25 09:06	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			05/29/25 09:06	1
Vinyl chloride	0.573	J	1.00	0.180	ug/L			05/29/25 09:06	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			05/29/25 09:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	111		76 - 130		05/29/25 09:06	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: UW-10

Lab Sample ID: 310-307213-2

Date Collected: 05/22/25 14:59

Matrix: Water

Date Received: 05/23/25 16:45

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		80 - 120		05/29/25 09:06	1
4-Bromofluorobenzene (Surr)	100		80 - 120		05/29/25 09:06	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	534		100	42.0	mg/L			06/06/25 20:07	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0290	mg/L		05/28/25 09:20	06/06/25 14:49	1
Antimony	<0.00200	^3+ ^1+	0.00200	0.00100	mg/L		05/28/25 09:20	06/06/25 14:49	1
Arsenic	0.00361		0.00200	0.000530	mg/L		05/28/25 09:20	06/04/25 20:47	1
Barium	0.0587		0.00200	0.000660	mg/L		05/28/25 09:20	06/04/25 20:47	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		05/28/25 09:20	06/06/25 14:49	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		05/28/25 09:20	06/04/25 20:47	1
Chromium	<0.00500		0.00500	0.00180	mg/L		05/28/25 09:20	06/04/25 20:47	1
Cobalt	0.0360		0.000500	0.000170	mg/L		05/28/25 09:20	06/04/25 20:47	1
Copper	<0.00500		0.00500	0.00320	mg/L		05/28/25 09:20	06/04/25 20:47	1
Lead	<0.000500		0.000500	0.000330	mg/L		05/28/25 09:20	06/04/25 20:47	1
Nickel	<0.00500		0.00500	0.00230	mg/L		05/28/25 09:20	06/06/25 14:49	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/28/25 09:20	06/06/25 14:49	1
Silver	<0.00100		0.00100	0.000500	mg/L		05/28/25 09:20	06/04/25 20:47	1
Thallium	<0.00100		0.00100	0.000570	mg/L		05/28/25 09:20	06/06/25 14:49	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		05/28/25 09:20	06/04/25 20:47	1
Zinc	<0.0200		0.0200	0.0130	mg/L		05/28/25 09:20	06/06/25 14:49	1
Iron	89.4		0.100	0.0500	mg/L		05/28/25 09:20	06/06/25 14:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	47.0		15.0	10.5	mg/L			05/27/25 13:43	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	974		5.00	2.50	mg/L			05/30/25 08:59	1

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: UW-11

Lab Sample ID: 310-307213-3

Date Collected: 05/22/25 16:08

Matrix: Water

Date Received: 05/23/25 16:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			05/29/25 09:29	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			05/29/25 09:29	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			05/29/25 09:29	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			05/29/25 09:29	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			05/29/25 09:29	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			05/29/25 09:29	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			05/29/25 09:29	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			05/29/25 09:29	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			05/29/25 09:29	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			05/29/25 09:29	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			05/29/25 09:29	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			05/29/25 09:29	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			05/29/25 09:29	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			05/29/25 09:29	1
2-Hexanone	<10.0		10.0	2.00	ug/L			05/29/25 09:29	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			05/29/25 09:29	1
Acetone	<10.0		10.0	3.10	ug/L			05/29/25 09:29	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			05/29/25 09:29	1
Benzene	<0.500		0.500	0.220	ug/L			05/29/25 09:29	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			05/29/25 09:29	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			05/29/25 09:29	1
Bromoform	<5.00		5.00	0.780	ug/L			05/29/25 09:29	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/29/25 09:29	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			05/29/25 09:29	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/29/25 09:29	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			05/29/25 09:29	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			05/29/25 09:29	1
Chloroethane	<4.00		4.00	0.790	ug/L			05/29/25 09:29	1
Chloroform	<3.00		3.00	1.30	ug/L			05/29/25 09:29	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/29/25 09:29	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			05/29/25 09:29	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			05/29/25 09:29	1
Dibromomethane	<1.00		1.00	0.330	ug/L			05/29/25 09:29	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			05/29/25 09:29	1
Iodomethane	<10.0		10.0	7.00	ug/L			05/29/25 09:29	1
Methylene chloride	<5.00		5.00	1.70	ug/L			05/29/25 09:29	1
Styrene	<1.00		1.00	0.370	ug/L			05/29/25 09:29	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/29/25 09:29	1
Toluene	<1.00		1.00	0.430	ug/L			05/29/25 09:29	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			05/29/25 09:29	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			05/29/25 09:29	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			05/29/25 09:29	1
Trichloroethene	<1.00		1.00	0.430	ug/L			05/29/25 09:29	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			05/29/25 09:29	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			05/29/25 09:29	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			05/29/25 09:29	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			05/29/25 09:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	111		76 - 130		05/29/25 09:29	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: UW-11

Lab Sample ID: 310-307213-3

Date Collected: 05/22/25 16:08

Matrix: Water

Date Received: 05/23/25 16:45

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120		05/29/25 09:29	1
4-Bromofluorobenzene (Surr)	101		80 - 120		05/29/25 09:29	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2100		100	42.0	mg/L			06/06/25 20:19	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0290	mg/L		05/28/25 09:20	06/06/25 14:58	1
Antimony	<0.00200	^3+ ^1+	0.00200	0.00100	mg/L		05/28/25 09:20	06/06/25 14:58	1
Arsenic	0.00199	J	0.00200	0.000530	mg/L		05/28/25 09:20	06/04/25 20:50	1
Barium	0.0149		0.00200	0.000660	mg/L		05/28/25 09:20	06/04/25 20:50	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		05/28/25 09:20	06/06/25 14:58	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		05/28/25 09:20	06/04/25 20:50	1
Chromium	<0.00500		0.00500	0.00180	mg/L		05/28/25 09:20	06/04/25 20:50	1
Cobalt	0.000753		0.000500	0.000170	mg/L		05/28/25 09:20	06/04/25 20:50	1
Copper	<0.00500		0.00500	0.00320	mg/L		05/28/25 09:20	06/04/25 20:50	1
Lead	<0.000500		0.000500	0.000330	mg/L		05/28/25 09:20	06/04/25 20:50	1
Nickel	0.00566		0.00500	0.00230	mg/L		05/28/25 09:20	06/06/25 14:58	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/28/25 09:20	06/06/25 14:58	1
Silver	<0.00100		0.00100	0.000500	mg/L		05/28/25 09:20	06/04/25 20:50	1
Thallium	<0.00100		0.00100	0.000570	mg/L		05/28/25 09:20	06/06/25 14:58	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		05/28/25 09:20	06/04/25 20:50	1
Zinc	<0.0200		0.0200	0.0130	mg/L		05/28/25 09:20	06/06/25 14:58	1
Iron	22.3		0.100	0.0500	mg/L		05/28/25 09:20	06/06/25 14:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	24.5		7.50	5.25	mg/L			05/27/25 10:05	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	510		5.00	2.50	mg/L			05/30/25 09:15	1

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: PZ-14

Lab Sample ID: 310-307213-4

Date Collected: 05/22/25 17:08

Matrix: Water

Date Received: 05/23/25 16:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			05/28/25 22:13	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			05/28/25 22:13	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			05/28/25 22:13	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			05/28/25 22:13	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			05/28/25 22:13	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			05/28/25 22:13	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			05/28/25 22:13	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			05/28/25 22:13	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			05/28/25 22:13	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			05/28/25 22:13	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			05/28/25 22:13	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			05/28/25 22:13	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			05/28/25 22:13	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			05/28/25 22:13	1
2-Hexanone	<10.0		10.0	2.00	ug/L			05/28/25 22:13	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			05/28/25 22:13	1
Acetone	<10.0		10.0	3.10	ug/L			05/28/25 22:13	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			05/28/25 22:13	1
Benzene	<0.500		0.500	0.220	ug/L			05/28/25 22:13	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			05/28/25 22:13	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			05/28/25 22:13	1
Bromoform	<5.00		5.00	0.780	ug/L			05/28/25 22:13	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/28/25 22:13	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			05/28/25 22:13	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/28/25 22:13	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			05/28/25 22:13	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			05/28/25 22:13	1
Chloroethane	<4.00		4.00	0.790	ug/L			05/28/25 22:13	1
Chloroform	<3.00		3.00	1.30	ug/L			05/28/25 22:13	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/28/25 22:13	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			05/28/25 22:13	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			05/28/25 22:13	1
Dibromomethane	<1.00		1.00	0.330	ug/L			05/28/25 22:13	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			05/28/25 22:13	1
Iodomethane	<10.0		10.0	7.00	ug/L			05/28/25 22:13	1
Methylene chloride	<5.00		5.00	1.70	ug/L			05/28/25 22:13	1
Styrene	<1.00		1.00	0.370	ug/L			05/28/25 22:13	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/28/25 22:13	1
Toluene	<1.00		1.00	0.430	ug/L			05/28/25 22:13	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			05/28/25 22:13	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			05/28/25 22:13	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			05/28/25 22:13	1
Trichloroethene	<1.00		1.00	0.430	ug/L			05/28/25 22:13	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			05/28/25 22:13	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			05/28/25 22:13	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			05/28/25 22:13	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			05/28/25 22:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	111		76 - 130		05/28/25 22:13	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: PZ-14

Lab Sample ID: 310-307213-4

Date Collected: 05/22/25 17:08

Matrix: Water

Date Received: 05/23/25 16:45

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		80 - 120		05/28/25 22:13	1
4-Bromofluorobenzene (Surr)	103		80 - 120		05/28/25 22:13	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1600		100	42.0	mg/L			06/06/25 20:31	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.200		0.200	0.116	mg/L		05/28/25 09:20	06/06/25 15:01	4
Antimony	<0.00800	^3+ ^1+	0.00800	0.00400	mg/L		05/28/25 09:20	06/06/25 15:01	4
Arsenic	0.00118	J	0.00200	0.000530	mg/L		05/28/25 09:20	06/04/25 20:52	1
Barium	0.0196		0.00200	0.000660	mg/L		05/28/25 09:20	06/04/25 20:52	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		05/28/25 09:20	06/09/25 14:23	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		05/28/25 09:20	06/04/25 20:52	1
Chromium	<0.00500		0.00500	0.00180	mg/L		05/28/25 09:20	06/04/25 20:52	1
Cobalt	0.00919		0.000500	0.000170	mg/L		05/28/25 09:20	06/04/25 20:52	1
Copper	<0.00500		0.00500	0.00320	mg/L		05/28/25 09:20	06/04/25 20:52	1
Lead	<0.000500		0.000500	0.000330	mg/L		05/28/25 09:20	06/04/25 20:52	1
Nickel	0.0108	J	0.0200	0.00920	mg/L		05/28/25 09:20	06/06/25 15:01	4
Selenium	<0.0200		0.0200	0.00560	mg/L		05/28/25 09:20	06/06/25 15:01	4
Silver	<0.00100		0.00100	0.000500	mg/L		05/28/25 09:20	06/04/25 20:52	1
Thallium	<0.00400		0.00400	0.00228	mg/L		05/28/25 09:20	06/06/25 15:01	4
Vanadium	<0.00500		0.00500	0.00170	mg/L		05/28/25 09:20	06/04/25 20:52	1
Zinc	0.0658	J	0.0800	0.0520	mg/L		05/28/25 09:20	06/06/25 15:01	4
Iron	200		0.400	0.200	mg/L		05/28/25 09:20	06/06/25 15:01	4

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	116		30.0	21.0	mg/L			05/27/25 10:05	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	57.1		5.00	2.50	mg/L			05/30/25 09:26	1

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-15

Lab Sample ID: 310-307213-5

Date Collected: 05/22/25 19:09

Matrix: Water

Date Received: 05/23/25 16:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			05/28/25 22:36	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			05/28/25 22:36	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			05/28/25 22:36	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			05/28/25 22:36	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			05/28/25 22:36	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			05/28/25 22:36	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			05/28/25 22:36	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			05/28/25 22:36	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			05/28/25 22:36	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			05/28/25 22:36	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			05/28/25 22:36	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			05/28/25 22:36	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			05/28/25 22:36	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			05/28/25 22:36	1
2-Hexanone	<10.0		10.0	2.00	ug/L			05/28/25 22:36	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			05/28/25 22:36	1
Acetone	<10.0		10.0	3.10	ug/L			05/28/25 22:36	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			05/28/25 22:36	1
Benzene	<0.500		0.500	0.220	ug/L			05/28/25 22:36	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			05/28/25 22:36	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			05/28/25 22:36	1
Bromoform	<5.00		5.00	0.780	ug/L			05/28/25 22:36	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/28/25 22:36	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			05/28/25 22:36	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/28/25 22:36	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			05/28/25 22:36	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			05/28/25 22:36	1
Chloroethane	<4.00		4.00	0.790	ug/L			05/28/25 22:36	1
Chloroform	<3.00		3.00	1.30	ug/L			05/28/25 22:36	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/28/25 22:36	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			05/28/25 22:36	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			05/28/25 22:36	1
Dibromomethane	<1.00		1.00	0.330	ug/L			05/28/25 22:36	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			05/28/25 22:36	1
Iodomethane	<10.0		10.0	7.00	ug/L			05/28/25 22:36	1
Methylene chloride	<5.00		5.00	1.70	ug/L			05/28/25 22:36	1
Styrene	<1.00		1.00	0.370	ug/L			05/28/25 22:36	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/28/25 22:36	1
Toluene	<1.00		1.00	0.430	ug/L			05/28/25 22:36	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			05/28/25 22:36	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			05/28/25 22:36	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			05/28/25 22:36	1
Trichloroethene	<1.00		1.00	0.430	ug/L			05/28/25 22:36	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			05/28/25 22:36	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			05/28/25 22:36	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			05/28/25 22:36	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			05/28/25 22:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	113		76 - 130		05/28/25 22:36	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-15

Lab Sample ID: 310-307213-5

Date Collected: 05/22/25 19:09

Matrix: Water

Date Received: 05/23/25 16:45

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		80 - 120		05/28/25 22:36	1
4-Bromofluorobenzene (Surr)	99		80 - 120		05/28/25 22:36	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	51.9		10.0	4.20	mg/L			06/09/25 08:58	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.0482	J	0.0500	0.0290	mg/L		05/28/25 09:20	06/06/25 15:04	1
Antimony	<0.00200	^3+ ^1+	0.00200	0.00100	mg/L		05/28/25 09:20	06/06/25 15:04	1
Arsenic	0.00177	J	0.00200	0.000530	mg/L		05/28/25 09:20	06/06/25 15:04	1
Barium	0.133		0.00200	0.000660	mg/L		05/28/25 09:20	06/06/25 15:04	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		05/28/25 09:20	06/06/25 15:04	1
Cadmium	0.000107	J	0.000200	0.000100	mg/L		05/28/25 09:20	06/06/25 15:04	1
Chromium	<0.00500		0.00500	0.00180	mg/L		05/28/25 09:20	06/06/25 15:04	1
Cobalt	0.00173		0.000500	0.000170	mg/L		05/28/25 09:20	06/06/25 15:04	1
Copper	<0.00500		0.00500	0.00320	mg/L		05/28/25 09:20	06/06/25 15:04	1
Lead	<0.000500		0.000500	0.000330	mg/L		05/28/25 09:20	06/06/25 15:04	1
Nickel	<0.00500		0.00500	0.00230	mg/L		05/28/25 09:20	06/06/25 15:04	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/28/25 09:20	06/06/25 15:04	1
Silver	<0.00100		0.00100	0.000500	mg/L		05/28/25 09:20	06/06/25 15:04	1
Thallium	<0.00100		0.00100	0.000570	mg/L		05/28/25 09:20	06/06/25 15:04	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		05/28/25 09:20	06/06/25 15:04	1
Zinc	<0.0200		0.0200	0.0130	mg/L		05/28/25 09:20	06/06/25 15:04	1
Iron	1.40		0.100	0.0500	mg/L		05/28/25 09:20	06/06/25 15:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	5.00		1.88	1.31	mg/L			05/27/25 10:05	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	213		5.00	2.50	mg/L			05/30/25 09:33	1

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-19

Lab Sample ID: 310-307213-6

Date Collected: 05/23/25 09:53

Matrix: Water

Date Received: 05/23/25 16:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			05/29/25 09:51	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			05/29/25 09:51	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			05/29/25 09:51	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			05/29/25 09:51	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			05/29/25 09:51	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			05/29/25 09:51	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			05/29/25 09:51	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			05/29/25 09:51	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			05/29/25 09:51	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			05/29/25 09:51	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			05/29/25 09:51	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			05/29/25 09:51	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			05/29/25 09:51	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			05/29/25 09:51	1
2-Hexanone	<10.0		10.0	2.00	ug/L			05/29/25 09:51	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			05/29/25 09:51	1
Acetone	<10.0		10.0	3.10	ug/L			05/29/25 09:51	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			05/29/25 09:51	1
Benzene	<0.500		0.500	0.220	ug/L			05/29/25 09:51	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			05/29/25 09:51	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			05/29/25 09:51	1
Bromoform	<5.00		5.00	0.780	ug/L			05/29/25 09:51	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/29/25 09:51	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			05/29/25 09:51	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/29/25 09:51	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			05/29/25 09:51	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			05/29/25 09:51	1
Chloroethane	<4.00		4.00	0.790	ug/L			05/29/25 09:51	1
Chloroform	<3.00		3.00	1.30	ug/L			05/29/25 09:51	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/29/25 09:51	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			05/29/25 09:51	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			05/29/25 09:51	1
Dibromomethane	<1.00		1.00	0.330	ug/L			05/29/25 09:51	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			05/29/25 09:51	1
Iodomethane	<10.0		10.0	7.00	ug/L			05/29/25 09:51	1
Methylene chloride	<5.00		5.00	1.70	ug/L			05/29/25 09:51	1
Styrene	<1.00		1.00	0.370	ug/L			05/29/25 09:51	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/29/25 09:51	1
Toluene	<1.00		1.00	0.430	ug/L			05/29/25 09:51	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			05/29/25 09:51	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			05/29/25 09:51	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			05/29/25 09:51	1
Trichloroethene	<1.00		1.00	0.430	ug/L			05/29/25 09:51	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			05/29/25 09:51	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			05/29/25 09:51	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			05/29/25 09:51	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			05/29/25 09:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	111		76 - 130		05/29/25 09:51	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-19

Lab Sample ID: 310-307213-6

Date Collected: 05/23/25 09:53

Matrix: Water

Date Received: 05/23/25 16:45

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		80 - 120		05/29/25 09:51	1
4-Bromofluorobenzene (Surr)	100		80 - 120		05/29/25 09:51	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	640		100	42.0	mg/L			06/07/25 15:00	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0290	mg/L		05/28/25 09:20	06/06/25 15:07	1
Antimony	<0.00200	^3+ ^1+	0.00200	0.00100	mg/L		05/28/25 09:20	06/06/25 15:07	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		05/28/25 09:20	06/06/25 15:07	1
Barium	0.0243		0.00200	0.000660	mg/L		05/28/25 09:20	06/06/25 15:07	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		05/28/25 09:20	06/06/25 15:07	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		05/28/25 09:20	06/06/25 15:07	1
Chromium	<0.00500		0.00500	0.00180	mg/L		05/28/25 09:20	06/06/25 15:07	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		05/28/25 09:20	06/06/25 15:07	1
Copper	<0.00500		0.00500	0.00320	mg/L		05/28/25 09:20	06/06/25 15:07	1
Lead	<0.000500		0.000500	0.000330	mg/L		05/28/25 09:20	06/06/25 15:07	1
Nickel	<0.00500		0.00500	0.00230	mg/L		05/28/25 09:20	06/06/25 15:07	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/28/25 09:20	06/06/25 15:07	1
Silver	<0.00100		0.00100	0.000500	mg/L		05/28/25 09:20	06/06/25 15:07	1
Thallium	<0.00100		0.00100	0.000570	mg/L		05/28/25 09:20	06/06/25 15:07	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		05/28/25 09:20	06/06/25 15:07	1
Zinc	<0.0200		0.0200	0.0130	mg/L		05/28/25 09:20	06/06/25 15:07	1
Iron	<0.100		0.100	0.0500	mg/L		05/28/25 09:20	06/06/25 15:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.31	mg/L			05/27/25 13:43	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	332		5.00	2.50	mg/L			05/30/25 09:42	1

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: UW-21

Lab Sample ID: 310-307213-7

Date Collected: 05/23/25 06:55

Matrix: Water

Date Received: 05/23/25 16:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			05/29/25 10:14	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			05/29/25 10:14	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			05/29/25 10:14	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			05/29/25 10:14	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			05/29/25 10:14	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			05/29/25 10:14	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			05/29/25 10:14	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			05/29/25 10:14	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			05/29/25 10:14	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			05/29/25 10:14	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			05/29/25 10:14	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			05/29/25 10:14	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			05/29/25 10:14	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			05/29/25 10:14	1
2-Hexanone	<10.0		10.0	2.00	ug/L			05/29/25 10:14	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			05/29/25 10:14	1
Acetone	<10.0		10.0	3.10	ug/L			05/29/25 10:14	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			05/29/25 10:14	1
Benzene	<0.500		0.500	0.220	ug/L			05/29/25 10:14	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			05/29/25 10:14	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			05/29/25 10:14	1
Bromoform	<5.00		5.00	0.780	ug/L			05/29/25 10:14	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/29/25 10:14	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			05/29/25 10:14	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/29/25 10:14	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			05/29/25 10:14	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			05/29/25 10:14	1
Chloroethane	<4.00		4.00	0.790	ug/L			05/29/25 10:14	1
Chloroform	<3.00		3.00	1.30	ug/L			05/29/25 10:14	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/29/25 10:14	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			05/29/25 10:14	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			05/29/25 10:14	1
Dibromomethane	<1.00		1.00	0.330	ug/L			05/29/25 10:14	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			05/29/25 10:14	1
Iodomethane	<10.0		10.0	7.00	ug/L			05/29/25 10:14	1
Methylene chloride	<5.00		5.00	1.70	ug/L			05/29/25 10:14	1
Styrene	<1.00		1.00	0.370	ug/L			05/29/25 10:14	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/29/25 10:14	1
Toluene	<1.00		1.00	0.430	ug/L			05/29/25 10:14	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			05/29/25 10:14	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			05/29/25 10:14	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			05/29/25 10:14	1
Trichloroethene	<1.00		1.00	0.430	ug/L			05/29/25 10:14	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			05/29/25 10:14	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			05/29/25 10:14	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			05/29/25 10:14	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			05/29/25 10:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	113		76 - 130		05/29/25 10:14	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: UW-21

Lab Sample ID: 310-307213-7

Date Collected: 05/23/25 06:55

Matrix: Water

Date Received: 05/23/25 16:45

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120		05/29/25 10:14	1
4-Bromofluorobenzene (Surr)	99		80 - 120		05/29/25 10:14	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	5660		100	42.0	mg/L			06/07/25 15:37	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2.49		0.250	0.145	mg/L		05/28/25 09:20	06/06/25 15:10	5
Antimony	<0.0100	^3+ ^1+	0.0100	0.00500	mg/L		05/28/25 09:20	06/06/25 15:10	5
Arsenic	0.00574	J	0.0100	0.00265	mg/L		05/28/25 09:20	06/06/25 15:10	5
Barium	0.0107		0.0100	0.00330	mg/L		05/28/25 09:20	06/06/25 15:10	5
Beryllium	0.00366		0.00100	0.000330	mg/L		05/28/25 09:20	06/09/25 14:26	1
Cadmium	<0.00100		0.00100	0.000500	mg/L		05/28/25 09:20	06/06/25 15:10	5
Chromium	0.0157		0.00500	0.00180	mg/L		05/28/25 09:20	06/09/25 14:26	1
Cobalt	1.45		0.00250	0.000850	mg/L		05/28/25 09:20	06/06/25 15:10	5
Copper	<0.0250		0.0250	0.0160	mg/L		05/28/25 09:20	06/06/25 15:10	5
Lead	<0.00250		0.00250	0.00165	mg/L		05/28/25 09:20	06/06/25 15:10	5
Nickel	0.842		0.0250	0.0115	mg/L		05/28/25 09:20	06/06/25 15:10	5
Selenium	0.0154	J	0.0250	0.00700	mg/L		05/28/25 09:20	06/06/25 15:10	5
Silver	<0.00500		0.00500	0.00250	mg/L		05/28/25 09:20	06/06/25 15:10	5
Thallium	<0.00500		0.00500	0.00285	mg/L		05/28/25 09:20	06/06/25 15:10	5
Vanadium	<0.00500		0.00500	0.00170	mg/L		05/28/25 09:20	06/09/25 14:26	1
Zinc	0.143		0.100	0.0650	mg/L		05/28/25 09:20	06/06/25 15:10	5
Iron	374		0.500	0.250	mg/L		05/28/25 09:20	06/06/25 15:10	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	30.7		5.00	3.50	mg/L			05/27/25 13:43	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	99.4		5.00	2.50	mg/L			05/30/25 09:52	1

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-23

Lab Sample ID: 310-307213-8

Date Collected: 05/22/25 18:41

Matrix: Water

Date Received: 05/23/25 16:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			05/28/25 22:58	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			05/28/25 22:58	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			05/28/25 22:58	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			05/28/25 22:58	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			05/28/25 22:58	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			05/28/25 22:58	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			05/28/25 22:58	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			05/28/25 22:58	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			05/28/25 22:58	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			05/28/25 22:58	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			05/28/25 22:58	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			05/28/25 22:58	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			05/28/25 22:58	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			05/28/25 22:58	1
2-Hexanone	<10.0		10.0	2.00	ug/L			05/28/25 22:58	1
4-Methyl-2-pentanone (MIBK)	4.28	J	10.0	2.10	ug/L			05/28/25 22:58	1
Acetone	<10.0		10.0	3.10	ug/L			05/28/25 22:58	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			05/28/25 22:58	1
Benzene	<0.500		0.500	0.220	ug/L			05/28/25 22:58	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			05/28/25 22:58	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			05/28/25 22:58	1
Bromoform	<5.00		5.00	0.780	ug/L			05/28/25 22:58	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/28/25 22:58	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			05/28/25 22:58	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/28/25 22:58	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			05/28/25 22:58	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			05/28/25 22:58	1
Chloroethane	<4.00		4.00	0.790	ug/L			05/28/25 22:58	1
Chloroform	<3.00		3.00	1.30	ug/L			05/28/25 22:58	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/28/25 22:58	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			05/28/25 22:58	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			05/28/25 22:58	1
Dibromomethane	<1.00		1.00	0.330	ug/L			05/28/25 22:58	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			05/28/25 22:58	1
Iodomethane	<10.0		10.0	7.00	ug/L			05/28/25 22:58	1
Methylene chloride	<5.00		5.00	1.70	ug/L			05/28/25 22:58	1
Styrene	<1.00		1.00	0.370	ug/L			05/28/25 22:58	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/28/25 22:58	1
Toluene	<1.00		1.00	0.430	ug/L			05/28/25 22:58	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			05/28/25 22:58	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			05/28/25 22:58	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			05/28/25 22:58	1
Trichloroethene	<1.00		1.00	0.430	ug/L			05/28/25 22:58	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			05/28/25 22:58	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			05/28/25 22:58	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			05/28/25 22:58	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			05/28/25 22:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	115		76 - 130		05/28/25 22:58	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-23

Lab Sample ID: 310-307213-8

Date Collected: 05/22/25 18:41

Matrix: Water

Date Received: 05/23/25 16:45

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120		05/28/25 22:58	1
4-Bromofluorobenzene (Surr)	95		80 - 120		05/28/25 22:58	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	3370		100	42.0	mg/L			06/07/25 15:04	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.72		0.0500	0.0290	mg/L		05/28/25 09:20	06/06/25 15:19	1
Antimony	<0.00200	^3+ ^1+	0.00200	0.00100	mg/L		05/28/25 09:20	06/06/25 15:19	1
Arsenic	0.000990	J	0.00200	0.000530	mg/L		05/28/25 09:20	06/06/25 15:19	1
Barium	0.0117		0.00200	0.000660	mg/L		05/28/25 09:20	06/06/25 15:19	1
Beryllium	0.000867	J	0.00100	0.000330	mg/L		05/28/25 09:20	06/06/25 15:19	1
Cadmium	0.00268		0.000200	0.000100	mg/L		05/28/25 09:20	06/06/25 15:19	1
Chromium	<0.00500		0.00500	0.00180	mg/L		05/28/25 09:20	06/06/25 15:19	1
Cobalt	0.407		0.000500	0.000170	mg/L		05/28/25 09:20	06/06/25 15:19	1
Copper	0.00487	J	0.00500	0.00320	mg/L		05/28/25 09:20	06/06/25 15:19	1
Lead	0.000404	J	0.000500	0.000330	mg/L		05/28/25 09:20	06/06/25 15:19	1
Nickel	0.582		0.00500	0.00230	mg/L		05/28/25 09:20	06/06/25 15:19	1
Selenium	0.00349	J	0.00500	0.00140	mg/L		05/28/25 09:20	06/06/25 15:19	1
Silver	<0.00100		0.00100	0.000500	mg/L		05/28/25 09:20	06/06/25 15:19	1
Thallium	<0.00100		0.00100	0.000570	mg/L		05/28/25 09:20	06/06/25 15:19	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		05/28/25 09:20	06/06/25 15:19	1
Zinc	0.360		0.0200	0.0130	mg/L		05/28/25 09:20	06/06/25 15:19	1
Iron	45.1		0.100	0.0500	mg/L		05/28/25 09:20	06/06/25 15:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	5.13		1.88	1.31	mg/L			05/27/25 13:43	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	34.5		5.00	2.50	mg/L			05/30/25 09:59	1

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-24

Lab Sample ID: 310-307213-9

Date Collected: 05/22/25 19:52

Matrix: Water

Date Received: 05/23/25 16:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			05/28/25 23:21	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			05/28/25 23:21	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			05/28/25 23:21	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			05/28/25 23:21	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			05/28/25 23:21	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			05/28/25 23:21	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			05/28/25 23:21	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			05/28/25 23:21	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			05/28/25 23:21	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			05/28/25 23:21	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			05/28/25 23:21	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			05/28/25 23:21	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			05/28/25 23:21	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			05/28/25 23:21	1
2-Hexanone	<10.0		10.0	2.00	ug/L			05/28/25 23:21	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			05/28/25 23:21	1
Acetone	<10.0		10.0	3.10	ug/L			05/28/25 23:21	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			05/28/25 23:21	1
Benzene	<0.500		0.500	0.220	ug/L			05/28/25 23:21	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			05/28/25 23:21	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			05/28/25 23:21	1
Bromoform	<5.00		5.00	0.780	ug/L			05/28/25 23:21	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/28/25 23:21	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			05/28/25 23:21	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/28/25 23:21	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			05/28/25 23:21	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			05/28/25 23:21	1
Chloroethane	<4.00		4.00	0.790	ug/L			05/28/25 23:21	1
Chloroform	<3.00		3.00	1.30	ug/L			05/28/25 23:21	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/28/25 23:21	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			05/28/25 23:21	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			05/28/25 23:21	1
Dibromomethane	<1.00		1.00	0.330	ug/L			05/28/25 23:21	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			05/28/25 23:21	1
Iodomethane	<10.0		10.0	7.00	ug/L			05/28/25 23:21	1
Methylene chloride	<5.00		5.00	1.70	ug/L			05/28/25 23:21	1
Styrene	<1.00		1.00	0.370	ug/L			05/28/25 23:21	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/28/25 23:21	1
Toluene	<1.00		1.00	0.430	ug/L			05/28/25 23:21	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			05/28/25 23:21	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			05/28/25 23:21	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			05/28/25 23:21	1
Trichloroethene	<1.00		1.00	0.430	ug/L			05/28/25 23:21	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			05/28/25 23:21	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			05/28/25 23:21	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			05/28/25 23:21	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			05/28/25 23:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	112		76 - 130		05/28/25 23:21	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-24

Lab Sample ID: 310-307213-9

Date Collected: 05/22/25 19:52

Matrix: Water

Date Received: 05/23/25 16:45

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		80 - 120		05/28/25 23:21	1
4-Bromofluorobenzene (Surr)	101		80 - 120		05/28/25 23:21	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2790		100	42.0	mg/L			06/07/25 16:01	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	49.0		0.0500	0.0290	mg/L		05/28/25 09:20	06/06/25 15:22	1
Antimony	<0.00200	^3+ ^1+	0.00200	0.00100	mg/L		05/28/25 09:20	06/06/25 15:22	1
Arsenic	0.00334		0.00200	0.000530	mg/L		05/28/25 09:20	06/06/25 15:22	1
Barium	0.00687		0.00200	0.000660	mg/L		05/28/25 09:20	06/06/25 15:22	1
Beryllium	0.0131		0.00100	0.000330	mg/L		05/28/25 09:20	06/06/25 15:22	1
Cadmium	0.0167		0.000200	0.000100	mg/L		05/28/25 09:20	06/06/25 15:22	1
Chromium	0.00262	J	0.00500	0.00180	mg/L		05/28/25 09:20	06/06/25 15:22	1
Cobalt	0.314		0.000500	0.000170	mg/L		05/28/25 09:20	06/06/25 15:22	1
Copper	0.00507		0.00500	0.00320	mg/L		05/28/25 09:20	06/06/25 15:22	1
Lead	0.000700		0.000500	0.000330	mg/L		05/28/25 09:20	06/06/25 15:22	1
Nickel	0.482		0.00500	0.00230	mg/L		05/28/25 09:20	06/06/25 15:22	1
Selenium	0.0173		0.00500	0.00140	mg/L		05/28/25 09:20	06/06/25 15:22	1
Silver	<0.00100		0.00100	0.000500	mg/L		05/28/25 09:20	06/06/25 15:22	1
Thallium	0.000579	J	0.00100	0.000570	mg/L		05/28/25 09:20	06/06/25 15:22	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		05/28/25 09:20	06/06/25 15:22	1
Zinc	1.58		0.0200	0.0130	mg/L		05/28/25 09:20	06/06/25 15:22	1
Iron	71.9		0.100	0.0500	mg/L		05/28/25 09:20	06/06/25 15:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.31	mg/L			05/27/25 13:43	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	<5.00		5.00	2.50	mg/L			05/30/25 10:13	1

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: MW-D

Lab Sample ID: 310-307213-10

Date Collected: 05/22/25 15:10

Matrix: Water

Date Received: 05/23/25 16:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			05/28/25 23:43	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			05/28/25 23:43	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			05/28/25 23:43	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			05/28/25 23:43	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			05/28/25 23:43	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			05/28/25 23:43	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			05/28/25 23:43	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			05/28/25 23:43	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			05/28/25 23:43	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			05/28/25 23:43	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			05/28/25 23:43	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			05/28/25 23:43	1
1,4-Dichlorobenzene	6.43		1.00	0.230	ug/L			05/28/25 23:43	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			05/28/25 23:43	1
2-Hexanone	<10.0		10.0	2.00	ug/L			05/28/25 23:43	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			05/28/25 23:43	1
Acetone	4.40	J	10.0	3.10	ug/L			05/28/25 23:43	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			05/28/25 23:43	1
Benzene	2.43		0.500	0.220	ug/L			05/28/25 23:43	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			05/28/25 23:43	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			05/28/25 23:43	1
Bromoform	<5.00		5.00	0.780	ug/L			05/28/25 23:43	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/28/25 23:43	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			05/28/25 23:43	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/28/25 23:43	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			05/28/25 23:43	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			05/28/25 23:43	1
Chloroethane	<4.00		4.00	0.790	ug/L			05/28/25 23:43	1
Chloroform	<3.00		3.00	1.30	ug/L			05/28/25 23:43	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/28/25 23:43	1
cis-1,2-Dichloroethene	0.346	J	1.00	0.210	ug/L			05/28/25 23:43	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			05/28/25 23:43	1
Dibromomethane	<1.00		1.00	0.330	ug/L			05/28/25 23:43	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			05/28/25 23:43	1
Iodomethane	<10.0		10.0	7.00	ug/L			05/28/25 23:43	1
Methylene chloride	<5.00		5.00	1.70	ug/L			05/28/25 23:43	1
Styrene	<1.00		1.00	0.370	ug/L			05/28/25 23:43	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/28/25 23:43	1
Toluene	<1.00		1.00	0.430	ug/L			05/28/25 23:43	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			05/28/25 23:43	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			05/28/25 23:43	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			05/28/25 23:43	1
Trichloroethene	<1.00		1.00	0.430	ug/L			05/28/25 23:43	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			05/28/25 23:43	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			05/28/25 23:43	1
Vinyl chloride	0.546	J	1.00	0.180	ug/L			05/28/25 23:43	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			05/28/25 23:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	110		76 - 130		05/28/25 23:43	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: MW-D

Lab Sample ID: 310-307213-10

Date Collected: 05/22/25 15:10

Matrix: Water

Date Received: 05/23/25 16:45

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		05/28/25 23:43	1
4-Bromofluorobenzene (Surr)	100		80 - 120		05/28/25 23:43	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	527		100	42.0	mg/L			06/07/25 16:13	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0290	mg/L		05/28/25 09:20	06/06/25 15:24	1
Antimony	<0.00200	^3+ ^1+	0.00200	0.00100	mg/L		05/28/25 09:20	06/06/25 15:24	1
Arsenic	0.00330		0.00200	0.000530	mg/L		05/28/25 09:20	06/06/25 15:24	1
Barium	0.0713		0.00200	0.000660	mg/L		05/28/25 09:20	06/06/25 15:24	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		05/28/25 09:20	06/09/25 14:30	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		05/28/25 09:20	06/06/25 15:24	1
Chromium	<0.00500		0.00500	0.00180	mg/L		05/28/25 09:20	06/09/25 14:30	1
Cobalt	0.0298		0.000500	0.000170	mg/L		05/28/25 09:20	06/06/25 15:24	1
Copper	<0.00500		0.00500	0.00320	mg/L		05/28/25 09:20	06/06/25 15:24	1
Lead	<0.000500		0.000500	0.000330	mg/L		05/28/25 09:20	06/06/25 15:24	1
Nickel	<0.00500		0.00500	0.00230	mg/L		05/28/25 09:20	06/06/25 15:24	1
Selenium	<0.00500		0.00500	0.00140	mg/L		05/28/25 09:20	06/06/25 15:24	1
Silver	<0.00100		0.00100	0.000500	mg/L		05/28/25 09:20	06/06/25 15:24	1
Thallium	<0.00100		0.00100	0.000570	mg/L		05/28/25 09:20	06/06/25 15:24	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		05/28/25 09:20	06/09/25 14:30	1
Zinc	<0.0200		0.0200	0.0130	mg/L		05/28/25 09:20	06/06/25 15:24	1
Iron	83.3		0.100	0.0500	mg/L		05/28/25 09:20	06/06/25 15:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	132		30.0	21.0	mg/L			05/27/25 13:43	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	964		5.00	2.50	mg/L			05/30/25 10:17	1

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: Trip Blank 1

Lab Sample ID: 310-307213-11

Date Collected: 05/22/25 00:00

Matrix: Water

Date Received: 05/23/25 16:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			05/28/25 20:43	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			05/28/25 20:43	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			05/28/25 20:43	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			05/28/25 20:43	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			05/28/25 20:43	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			05/28/25 20:43	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			05/28/25 20:43	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			05/28/25 20:43	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			05/28/25 20:43	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			05/28/25 20:43	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			05/28/25 20:43	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			05/28/25 20:43	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			05/28/25 20:43	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			05/28/25 20:43	1
2-Hexanone	<10.0		10.0	2.00	ug/L			05/28/25 20:43	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			05/28/25 20:43	1
Acetone	<10.0		10.0	3.10	ug/L			05/28/25 20:43	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			05/28/25 20:43	1
Benzene	<0.500		0.500	0.220	ug/L			05/28/25 20:43	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			05/28/25 20:43	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/04/25 00:24	1
Bromoform	<5.00		5.00	0.780	ug/L			05/28/25 20:43	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/28/25 20:43	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			05/28/25 20:43	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/28/25 20:43	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			05/28/25 20:43	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			05/28/25 20:43	1
Chloroethane	<4.00		4.00	0.790	ug/L			05/28/25 20:43	1
Chloroform	<3.00		3.00	1.30	ug/L			05/28/25 20:43	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/28/25 20:43	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			05/28/25 20:43	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			05/28/25 20:43	1
Dibromomethane	<1.00		1.00	0.330	ug/L			05/28/25 20:43	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			05/28/25 20:43	1
Iodomethane	<10.0		10.0	7.00	ug/L			05/28/25 20:43	1
Methylene chloride	<5.00		5.00	1.70	ug/L			05/28/25 20:43	1
Styrene	<1.00		1.00	0.370	ug/L			05/28/25 20:43	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/28/25 20:43	1
Toluene	<1.00		1.00	0.430	ug/L			05/28/25 20:43	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			05/28/25 20:43	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			05/28/25 20:43	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			05/28/25 20:43	1
Trichloroethene	<1.00		1.00	0.430	ug/L			05/28/25 20:43	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			05/28/25 20:43	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			05/28/25 20:43	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			05/28/25 20:43	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			05/28/25 20:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	115		76 - 130		05/28/25 20:43	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: Trip Blank 1

Lab Sample ID: 310-307213-11

Date Collected: 05/22/25 00:00

Matrix: Water

Date Received: 05/23/25 16:45

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	109		76 - 130		06/04/25 00:24	1
Toluene-d8 (Surr)	94		80 - 120		05/28/25 20:43	1
Toluene-d8 (Surr)	92		80 - 120		06/04/25 00:24	1
4-Bromofluorobenzene (Surr)	100		80 - 120		05/28/25 20:43	1
4-Bromofluorobenzene (Surr)	103		80 - 120		06/04/25 00:24	1

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: Trip Blank 2

Lab Sample ID: 310-307213-12

Date Collected: 05/22/25 00:00

Matrix: Water

Date Received: 05/23/25 16:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			05/29/25 07:58	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			05/29/25 07:58	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			05/29/25 07:58	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			05/29/25 07:58	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			05/29/25 07:58	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			05/29/25 07:58	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			05/29/25 07:58	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			05/29/25 07:58	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			05/29/25 07:58	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			05/29/25 07:58	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			05/29/25 07:58	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			05/29/25 07:58	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			05/29/25 07:58	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			05/29/25 07:58	1
2-Hexanone	<10.0		10.0	2.00	ug/L			05/29/25 07:58	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			05/29/25 07:58	1
Acetone	<10.0		10.0	3.10	ug/L			05/29/25 07:58	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			05/29/25 07:58	1
Benzene	<0.500		0.500	0.220	ug/L			05/29/25 07:58	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			05/29/25 07:58	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			05/29/25 07:58	1
Bromoform	<5.00		5.00	0.780	ug/L			05/29/25 07:58	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/29/25 07:58	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			05/29/25 07:58	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/29/25 07:58	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			05/29/25 07:58	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			05/29/25 07:58	1
Chloroethane	<4.00		4.00	0.790	ug/L			05/29/25 07:58	1
Chloroform	<3.00		3.00	1.30	ug/L			05/29/25 07:58	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/29/25 07:58	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			05/29/25 07:58	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			05/29/25 07:58	1
Dibromomethane	<1.00		1.00	0.330	ug/L			05/29/25 07:58	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			05/29/25 07:58	1
Iodomethane	<10.0		10.0	7.00	ug/L			05/29/25 07:58	1
Methylene chloride	<5.00		5.00	1.70	ug/L			05/29/25 07:58	1
Styrene	<1.00		1.00	0.370	ug/L			05/29/25 07:58	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/29/25 07:58	1
Toluene	<1.00		1.00	0.430	ug/L			05/29/25 07:58	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			05/29/25 07:58	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			05/29/25 07:58	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			05/29/25 07:58	1
Trichloroethene	<1.00		1.00	0.430	ug/L			05/29/25 07:58	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			05/29/25 07:58	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			05/29/25 07:58	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			05/29/25 07:58	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			05/29/25 07:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	109		76 - 130		05/29/25 07:58	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: Trip Blank 2
Date Collected: 05/22/25 00:00
Date Received: 05/23/25 16:45

Lab Sample ID: 310-307213-12
Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		80 - 120		05/29/25 07:58	1
4-Bromofluorobenzene (Surr)	99		80 - 120		05/29/25 07:58	1

Client Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: Trip Blank 3

Lab Sample ID: 310-307213-13

Date Collected: 05/22/25 00:00

Matrix: Water

Date Received: 05/23/25 16:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			05/29/25 08:21	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			05/29/25 08:21	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			05/29/25 08:21	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			05/29/25 08:21	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			05/29/25 08:21	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			05/29/25 08:21	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			05/29/25 08:21	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			05/29/25 08:21	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			05/29/25 08:21	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			05/29/25 08:21	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			05/29/25 08:21	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			05/29/25 08:21	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			05/29/25 08:21	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			05/29/25 08:21	1
2-Hexanone	<10.0		10.0	2.00	ug/L			05/29/25 08:21	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			05/29/25 08:21	1
Acetone	<10.0		10.0	3.10	ug/L			05/29/25 08:21	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			05/29/25 08:21	1
Benzene	<0.500		0.500	0.220	ug/L			05/29/25 08:21	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			05/29/25 08:21	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			05/29/25 08:21	1
Bromoform	<5.00		5.00	0.780	ug/L			05/29/25 08:21	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/29/25 08:21	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			05/29/25 08:21	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/29/25 08:21	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			05/29/25 08:21	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			05/29/25 08:21	1
Chloroethane	<4.00		4.00	0.790	ug/L			05/29/25 08:21	1
Chloroform	<3.00		3.00	1.30	ug/L			05/29/25 08:21	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/29/25 08:21	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			05/29/25 08:21	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			05/29/25 08:21	1
Dibromomethane	<1.00		1.00	0.330	ug/L			05/29/25 08:21	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			05/29/25 08:21	1
Iodomethane	<10.0		10.0	7.00	ug/L			05/29/25 08:21	1
Methylene chloride	<5.00		5.00	1.70	ug/L			05/29/25 08:21	1
Styrene	<1.00		1.00	0.370	ug/L			05/29/25 08:21	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/29/25 08:21	1
Toluene	<1.00		1.00	0.430	ug/L			05/29/25 08:21	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			05/29/25 08:21	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			05/29/25 08:21	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			05/29/25 08:21	1
Trichloroethene	<1.00		1.00	0.430	ug/L			05/29/25 08:21	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			05/29/25 08:21	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			05/29/25 08:21	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			05/29/25 08:21	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			05/29/25 08:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	111		76 - 130		05/29/25 08:21	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: Trip Blank 3

Lab Sample ID: 310-307213-13

Date Collected: 05/22/25 00:00

Matrix: Water

Date Received: 05/23/25 16:45

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120		05/29/25 08:21	1
4-Bromofluorobenzene (Surr)	101		80 - 120		05/29/25 08:21	1

Definitions/Glossary

Client: SCS Engineers

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Qualifiers

GC/MS VOA

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

Metals

Qualifier	Qualifier Description
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Surrogate Summary

Client: SCS Engineers

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (76-130)	TOL (80-120)	BFB (80-120)
310-307213-1	DW-8	109	97	97
310-307213-2	UW-10	111	94	100
310-307213-3	UW-11	111	95	101
310-307213-4	PZ-14	111	93	103
310-307213-5	DW-15	113	94	99
310-307213-5 MS	DW-15	97	101	98
310-307213-5 MSD	DW-15	100	102	99
310-307213-6	DW-19	111	94	100
310-307213-7	UW-21	113	95	99
310-307213-8	DW-23	115	95	95
310-307213-9	DW-24	112	94	101
310-307213-10	MW-D	110	96	100
310-307213-11	Trip Blank 1	115	94	100
310-307213-11	Trip Blank 1	109	92	103
310-307213-12	Trip Blank 2	109	94	99
310-307213-13	Trip Blank 3	111	95	101
LCS 310-455897/7	Lab Control Sample	100	102	99
LCS 310-455897/8	Lab Control Sample	115	95	100
LCS 310-455901/7	Lab Control Sample	99	103	97
LCS 310-455901/8	Lab Control Sample	111	95	99
LCS 310-456489/7	Lab Control Sample	99	103	101
LCS 310-456489/8	Lab Control Sample	109	95	102
MB 310-455897/6	Method Blank	111	96	100
MB 310-455901/6	Method Blank	112	94	104
MB 310-456489/6	Method Blank	106	94	106

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: SCS Engineers

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: MB 310-455897/6

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 455897

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			05/28/25 19:36	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			05/28/25 19:36	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			05/28/25 19:36	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			05/28/25 19:36	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			05/28/25 19:36	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			05/28/25 19:36	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			05/28/25 19:36	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			05/28/25 19:36	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			05/28/25 19:36	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			05/28/25 19:36	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			05/28/25 19:36	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			05/28/25 19:36	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			05/28/25 19:36	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			05/28/25 19:36	1
2-Hexanone	<10.0		10.0	2.00	ug/L			05/28/25 19:36	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			05/28/25 19:36	1
Acetone	<10.0		10.0	3.10	ug/L			05/28/25 19:36	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			05/28/25 19:36	1
Benzene	<0.500		0.500	0.220	ug/L			05/28/25 19:36	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			05/28/25 19:36	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			05/28/25 19:36	1
Bromoform	<5.00		5.00	0.780	ug/L			05/28/25 19:36	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/28/25 19:36	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			05/28/25 19:36	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/28/25 19:36	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			05/28/25 19:36	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			05/28/25 19:36	1
Chloroethane	<4.00		4.00	0.790	ug/L			05/28/25 19:36	1
Chloroform	<3.00		3.00	1.30	ug/L			05/28/25 19:36	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/28/25 19:36	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			05/28/25 19:36	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			05/28/25 19:36	1
Dibromomethane	<1.00		1.00	0.330	ug/L			05/28/25 19:36	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			05/28/25 19:36	1
Iodomethane	<10.0		10.0	7.00	ug/L			05/28/25 19:36	1
Methylene chloride	<5.00		5.00	1.70	ug/L			05/28/25 19:36	1
Styrene	<1.00		1.00	0.370	ug/L			05/28/25 19:36	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/28/25 19:36	1
Toluene	<1.00		1.00	0.430	ug/L			05/28/25 19:36	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			05/28/25 19:36	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			05/28/25 19:36	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			05/28/25 19:36	1
Trichloroethene	<1.00		1.00	0.430	ug/L			05/28/25 19:36	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			05/28/25 19:36	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			05/28/25 19:36	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			05/28/25 19:36	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			05/28/25 19:36	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: MB 310-455897/6

Matrix: Water

Analysis Batch: 455897

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	111		76 - 130		05/28/25 19:36	1
Toluene-d8 (Surr)	96		80 - 120		05/28/25 19:36	1
4-Bromofluorobenzene (Surr)	100		80 - 120		05/28/25 19:36	1

Lab Sample ID: LCS 310-455897/7

Matrix: Water

Analysis Batch: 455897

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	20.0	21.09		ug/L		105	70 - 121
1,1,1-Trichloroethane	20.0	23.05		ug/L		115	69 - 130
1,1,1,2,2-Tetrachloroethane	20.0	20.37		ug/L		102	70 - 122
1,1,2-Trichloroethane	20.0	20.83		ug/L		104	75 - 121
1,1-Dichloroethane	20.0	19.13		ug/L		96	69 - 127
1,1-Dichloroethene	20.0	19.26		ug/L		96	64 - 134
1,2,3-Trichloropropane	20.0	21.17		ug/L		106	70 - 122
1,2-Dibromo-3-chloropropane	20.0	21.41		ug/L		107	62 - 132
1,2-Dibromoethane (EDB)	20.0	20.15		ug/L		101	74 - 122
1,2-Dichlorobenzene	20.0	20.92		ug/L		105	74 - 120
1,2-Dichloroethane	20.0	20.36		ug/L		102	68 - 125
1,2-Dichloropropane	20.0	20.51		ug/L		103	72 - 128
1,4-Dichlorobenzene	20.0	19.79		ug/L		99	72 - 120
2-Butanone (MEK)	40.0	39.05		ug/L		98	60 - 134
2-Hexanone	40.0	40.78		ug/L		102	62 - 139
4-Methyl-2-pentanone (MIBK)	40.0	40.45		ug/L		101	62 - 136
Acetone	40.0	42.65		ug/L		107	59 - 136
Acrylonitrile	200	187.3		ug/L		94	50 - 150
Benzene	20.0	20.07		ug/L		100	71 - 125
Bromochloromethane	20.0	22.07		ug/L		110	69 - 131
Bromodichloromethane	20.0	20.54		ug/L		103	70 - 122
Bromoform	20.0	19.10		ug/L		95	62 - 122
Carbon disulfide	20.0	18.26		ug/L		91	58 - 137
Carbon tetrachloride	20.0	23.21		ug/L		116	63 - 136
Chlorobenzene	20.0	19.55		ug/L		98	74 - 120
Chlorodibromomethane	20.0	20.80		ug/L		104	69 - 121
Chloroform	20.0	19.71		ug/L		99	72 - 122
cis-1,2-Dichloroethene	20.0	19.87		ug/L		99	72 - 123
cis-1,3-Dichloropropene	20.0	21.04		ug/L		105	72 - 123
Dibromomethane	20.0	19.46		ug/L		97	72 - 122
Ethylbenzene	20.0	20.43		ug/L		102	75 - 120
Iodomethane	20.0	11.18		ug/L		56	18 - 150
Methylene chloride	20.0	21.95		ug/L		110	72 - 128
Styrene	20.0	21.24		ug/L		106	74 - 122
Tetrachloroethene	20.0	20.17		ug/L		101	70 - 128
Toluene	20.0	20.20		ug/L		101	74 - 120
trans-1,2-Dichloroethene	20.0	19.55		ug/L		98	67 - 127
trans-1,3-Dichloropropene	20.0	18.84		ug/L		94	67 - 123
trans-1,4-Dichloro-2-butene	20.0	21.51		ug/L		108	50 - 150

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: LCS 310-455897/7

Matrix: Water

Analysis Batch: 455897

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Trichloroethene	20.0	20.96		ug/L		105	70 - 128
Vinyl acetate	40.0	37.78		ug/L		94	50 - 150
Xylenes, Total	40.0	41.76		ug/L		104	74 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	100		76 - 130
Toluene-d8 (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120

Lab Sample ID: LCS 310-455897/8

Matrix: Water

Analysis Batch: 455897

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	21.90		ug/L		109	33 - 138
Chloroethane	20.0	24.86		ug/L		124	59 - 139
Chloromethane	20.0	24.11		ug/L		121	52 - 146
Trichlorofluoromethane	20.0	28.64		ug/L		143	55 - 150
Vinyl chloride	20.0	23.35		ug/L		117	60 - 142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	115		76 - 130
Toluene-d8 (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120

Lab Sample ID: 310-307213-5 MS

Matrix: Water

Analysis Batch: 455897

Client Sample ID: DW-15

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	<1.00		25.0	24.61		ug/L		98	55 - 121
1,1,1,1-Trichloroethane	<1.00		25.0	22.64		ug/L		91	53 - 130
1,1,2,2-Tetrachloroethane	<1.00		25.0	24.66		ug/L		99	55 - 123
1,1,2-Trichloroethane	<1.00		25.0	24.62		ug/L		98	60 - 121
1,1-Dichloroethane	<1.00		25.0	19.60		ug/L		78	53 - 127
1,1-Dichloroethene	<2.00		25.0	18.74		ug/L		75	51 - 134
1,2,3-Trichloropropane	<1.00		25.0	25.29		ug/L		101	56 - 122
1,2-Dibromo-3-chloropropane	<5.00		25.0	24.24		ug/L		97	44 - 138
1,2-Dibromoethane (EDB)	<1.00		25.0	23.67		ug/L		95	60 - 122
1,2-Dichlorobenzene	<1.00		25.0	24.40		ug/L		98	60 - 120
1,2-Dichloroethane	<1.00		25.0	22.10		ug/L		88	48 - 128
1,2-Dichloropropane	<1.00		25.0	22.71		ug/L		91	59 - 128
1,4-Dichlorobenzene	<1.00		25.0	23.01		ug/L		92	58 - 120
2-Butanone (MEK)	<10.0		50.0	45.36		ug/L		91	46 - 134
2-Hexanone	<10.0		50.0	47.17		ug/L		94	46 - 141
4-Methyl-2-pentanone (MIBK)	<10.0		50.0	48.27		ug/L		97	49 - 138
Acetone	<10.0		50.0	48.98		ug/L		98	39 - 141
Acrylonitrile	<5.00		250	210.1		ug/L		84	41 - 150

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: 310-307213-5 MS

Matrix: Water

Analysis Batch: 455897

Client Sample ID: DW-15

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	<0.500		25.0	20.64		ug/L		83	48 - 125
Bromochloromethane	<5.00		25.0	22.75		ug/L		91	55 - 131
Bromodichloromethane	<1.00		25.0	23.86		ug/L		95	53 - 122
Bromoform	<5.00		25.0	23.44		ug/L		94	47 - 122
Carbon disulfide	<1.00		25.0	19.50		ug/L		78	45 - 137
Carbon tetrachloride	<2.00		25.0	22.89		ug/L		92	45 - 136
Chlorobenzene	<1.00		25.0	22.03		ug/L		88	59 - 120
Chlorodibromomethane	<5.00		25.0	23.62		ug/L		94	53 - 121
Chloroform	<3.00		25.0	20.92		ug/L		84	52 - 122
cis-1,2-Dichloroethene	<1.00		25.0	20.64		ug/L		83	51 - 123
cis-1,3-Dichloropropene	<5.00		25.0	23.85		ug/L		95	55 - 123
Dibromomethane	<1.00		25.0	21.76		ug/L		87	57 - 122
Ethylbenzene	<1.00		25.0	22.36		ug/L		89	53 - 120
Iodomethane	<10.0		25.0	12.38		ug/L		50	18 - 150
Methylene chloride	<5.00		25.0	22.16		ug/L		89	59 - 128
Styrene	<1.00		25.0	24.25		ug/L		97	50 - 125
Tetrachloroethene	<1.00		25.0	21.03		ug/L		84	51 - 128
Toluene	<1.00		25.0	21.34		ug/L		85	52 - 120
trans-1,2-Dichloroethene	<1.00		25.0	19.97		ug/L		80	53 - 127
trans-1,3-Dichloropropene	<5.00		25.0	21.00		ug/L		84	50 - 123
trans-1,4-Dichloro-2-butene	<10.0		25.0	23.63		ug/L		95	28 - 150
Trichloroethene	<1.00		25.0	21.56		ug/L		86	50 - 128
Vinyl acetate	<10.0		50.0	36.71		ug/L		73	31 - 150
Xylenes, Total	<3.00		50.0	45.99		ug/L		92	50 - 122

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	97		76 - 130
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120

Lab Sample ID: 310-307213-5 MSD

Matrix: Water

Analysis Batch: 455897

Client Sample ID: DW-15

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	<1.00		25.0	25.31		ug/L		101	55 - 121	3	20
1,1,1-Trichloroethane	<1.00		25.0	23.58		ug/L		94	53 - 130	4	20
1,1,2,2-Tetrachloroethane	<1.00		25.0	25.56		ug/L		102	55 - 123	4	20
1,1,2-Trichloroethane	<1.00		25.0	25.18		ug/L		101	60 - 121	2	20
1,1-Dichloroethane	<1.00		25.0	20.26		ug/L		81	53 - 127	3	20
1,1-Dichloroethene	<2.00		25.0	19.61		ug/L		78	51 - 134	5	20
1,2,3-Trichloropropane	<1.00		25.0	26.55		ug/L		106	56 - 122	5	21
1,2-Dibromo-3-chloropropane	<5.00		25.0	25.78		ug/L		103	44 - 138	6	24
1,2-Dibromoethane (EDB)	<1.00		25.0	24.41		ug/L		98	60 - 122	3	20
1,2-Dichlorobenzene	<1.00		25.0	24.95		ug/L		100	60 - 120	2	20
1,2-Dichloroethane	<1.00		25.0	22.91		ug/L		92	48 - 128	4	20
1,2-Dichloropropane	<1.00		25.0	23.07		ug/L		92	59 - 128	2	20
1,4-Dichlorobenzene	<1.00		25.0	22.86		ug/L		91	58 - 120	1	20

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: 310-307213-5 MSD

Matrix: Water

Analysis Batch: 455897

Client Sample ID: DW-15

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Butanone (MEK)	<10.0		50.0	50.39		ug/L		101	46 - 134	11	23
2-Hexanone	<10.0		50.0	51.19		ug/L		102	46 - 141	8	20
4-Methyl-2-pentanone (MIBK)	<10.0		50.0	53.19		ug/L		106	49 - 138	10	20
Acetone	<10.0		50.0	51.83		ug/L		104	39 - 141	6	23
Acrylonitrile	<5.00		250	217.6		ug/L		87	41 - 150	4	20
Benzene	<0.500		25.0	21.30		ug/L		85	48 - 125	3	20
Bromochloromethane	<5.00		25.0	22.75		ug/L		91	55 - 131	0	21
Bromodichloromethane	<1.00		25.0	24.44		ug/L		98	53 - 122	2	20
Bromoform	<5.00		25.0	23.87		ug/L		95	47 - 122	2	20
Carbon disulfide	<1.00		25.0	17.88		ug/L		72	45 - 137	9	24
Carbon tetrachloride	<2.00		25.0	23.76		ug/L		95	45 - 136	4	20
Chlorobenzene	<1.00		25.0	22.40		ug/L		90	59 - 120	2	20
Chlorodibromomethane	<5.00		25.0	25.10		ug/L		100	53 - 121	6	20
Chloroform	<3.00		25.0	21.22		ug/L		85	52 - 122	1	20
cis-1,2-Dichloroethene	<1.00		25.0	20.86		ug/L		83	51 - 123	1	20
cis-1,3-Dichloropropene	<5.00		25.0	24.98		ug/L		100	55 - 123	5	20
Dibromomethane	<1.00		25.0	21.77		ug/L		87	57 - 122	0	20
Ethylbenzene	<1.00		25.0	23.20		ug/L		93	53 - 120	4	20
Iodomethane	<10.0		25.0	16.20		ug/L		65	18 - 150	27	32
Methylene chloride	<5.00		25.0	22.74		ug/L		91	59 - 128	3	20
Styrene	<1.00		25.0	24.56		ug/L		98	50 - 125	1	20
Tetrachloroethene	<1.00		25.0	21.33		ug/L		85	51 - 128	1	20
Toluene	<1.00		25.0	21.78		ug/L		87	52 - 120	2	20
trans-1,2-Dichloroethene	<1.00		25.0	19.85		ug/L		79	53 - 127	1	20
trans-1,3-Dichloropropene	<5.00		25.0	21.72		ug/L		87	50 - 123	3	20
trans-1,4-Dichloro-2-butene	<10.0		25.0	24.72		ug/L		99	28 - 150	4	24
Trichloroethene	<1.00		25.0	22.32		ug/L		89	50 - 128	3	20
Vinyl acetate	<10.0		50.0	39.08		ug/L		78	31 - 150	6	25
Xylenes, Total	<3.00		50.0	47.07		ug/L		94	50 - 122	2	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Dibromofluoromethane (Surr)	100		76 - 130
Toluene-d8 (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120

Lab Sample ID: MB 310-455901/6

Matrix: Water

Analysis Batch: 455901

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			05/29/25 06:51	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			05/29/25 06:51	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			05/29/25 06:51	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			05/29/25 06:51	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			05/29/25 06:51	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			05/29/25 06:51	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			05/29/25 06:51	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			05/29/25 06:51	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: MB 310-455901/6

Matrix: Water

Analysis Batch: 455901

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			05/29/25 06:51	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			05/29/25 06:51	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			05/29/25 06:51	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			05/29/25 06:51	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			05/29/25 06:51	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			05/29/25 06:51	1
2-Hexanone	<10.0		10.0	2.00	ug/L			05/29/25 06:51	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			05/29/25 06:51	1
Acetone	<10.0		10.0	3.10	ug/L			05/29/25 06:51	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			05/29/25 06:51	1
Benzene	<0.500		0.500	0.220	ug/L			05/29/25 06:51	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			05/29/25 06:51	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			05/29/25 06:51	1
Bromoform	<5.00		5.00	0.780	ug/L			05/29/25 06:51	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/29/25 06:51	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			05/29/25 06:51	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/29/25 06:51	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			05/29/25 06:51	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			05/29/25 06:51	1
Chloroethane	<4.00		4.00	0.790	ug/L			05/29/25 06:51	1
Chloroform	<3.00		3.00	1.30	ug/L			05/29/25 06:51	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/29/25 06:51	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			05/29/25 06:51	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			05/29/25 06:51	1
Dibromomethane	<1.00		1.00	0.330	ug/L			05/29/25 06:51	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			05/29/25 06:51	1
Iodomethane	<10.0		10.0	7.00	ug/L			05/29/25 06:51	1
Methylene chloride	<5.00		5.00	1.70	ug/L			05/29/25 06:51	1
Styrene	<1.00		1.00	0.370	ug/L			05/29/25 06:51	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/29/25 06:51	1
Toluene	<1.00		1.00	0.430	ug/L			05/29/25 06:51	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			05/29/25 06:51	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			05/29/25 06:51	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			05/29/25 06:51	1
Trichloroethene	<1.00		1.00	0.430	ug/L			05/29/25 06:51	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			05/29/25 06:51	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			05/29/25 06:51	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			05/29/25 06:51	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			05/29/25 06:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	112		76 - 130		05/29/25 06:51	1
Toluene-d8 (Surr)	94		80 - 120		05/29/25 06:51	1
4-Bromofluorobenzene (Surr)	104		80 - 120		05/29/25 06:51	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: LCS 310-455901/7

Matrix: Water

Analysis Batch: 455901

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	20.0	19.85		ug/L		99	70 - 121
1,1,1-Trichloroethane	20.0	21.21		ug/L		106	69 - 130
1,1,2,2-Tetrachloroethane	20.0	19.19		ug/L		96	70 - 122
1,1,2-Trichloroethane	20.0	19.65		ug/L		98	75 - 121
1,1-Dichloroethane	20.0	17.53		ug/L		88	69 - 127
1,1-Dichloroethene	20.0	17.21		ug/L		86	64 - 134
1,2,3-Trichloropropane	20.0	20.52		ug/L		103	70 - 122
1,2-Dibromo-3-chloropropane	20.0	19.74		ug/L		99	62 - 132
1,2-Dibromoethane (EDB)	20.0	19.37		ug/L		97	74 - 122
1,2-Dichlorobenzene	20.0	19.38		ug/L		97	74 - 120
1,2-Dichloroethane	20.0	18.92		ug/L		95	68 - 125
1,2-Dichloropropane	20.0	19.08		ug/L		95	72 - 128
1,4-Dichlorobenzene	20.0	18.24		ug/L		91	72 - 120
2-Butanone (MEK)	40.0	37.74		ug/L		94	60 - 134
2-Hexanone	40.0	36.84		ug/L		92	62 - 139
4-Methyl-2-pentanone (MIBK)	40.0	37.69		ug/L		94	62 - 136
Acetone	40.0	37.57		ug/L		94	59 - 136
Acrylonitrile	200	171.4		ug/L		86	50 - 150
Benzene	20.0	18.38		ug/L		92	71 - 125
Bromochloromethane	20.0	19.65		ug/L		98	69 - 131
Bromodichloromethane	20.0	19.10		ug/L		95	70 - 122
Bromoform	20.0	18.56		ug/L		93	62 - 122
Carbon disulfide	20.0	15.98		ug/L		80	58 - 137
Carbon tetrachloride	20.0	21.13		ug/L		106	63 - 136
Chlorobenzene	20.0	18.62		ug/L		93	74 - 120
Chlorodibromomethane	20.0	19.21		ug/L		96	69 - 121
Chloroform	20.0	18.16		ug/L		91	72 - 122
cis-1,2-Dichloroethene	20.0	17.91		ug/L		90	72 - 123
cis-1,3-Dichloropropene	20.0	19.03		ug/L		95	72 - 123
Dibromomethane	20.0	17.79		ug/L		89	72 - 122
Ethylbenzene	20.0	19.18		ug/L		96	75 - 120
Iodomethane	20.0	10.55		ug/L		53	18 - 150
Methylene chloride	20.0	19.81		ug/L		99	72 - 128
Styrene	20.0	19.81		ug/L		99	74 - 122
Tetrachloroethene	20.0	18.96		ug/L		95	70 - 128
Toluene	20.0	18.33		ug/L		92	74 - 120
trans-1,2-Dichloroethene	20.0	17.99		ug/L		90	67 - 127
trans-1,3-Dichloropropene	20.0	17.24		ug/L		86	67 - 123
trans-1,4-Dichloro-2-butene	20.0	19.07		ug/L		95	50 - 150
Trichloroethene	20.0	19.46		ug/L		97	70 - 128
Vinyl acetate	40.0	34.64		ug/L		87	50 - 150
Xylenes, Total	40.0	38.66		ug/L		97	74 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	99		76 - 130
Toluene-d8 (Surr)	103		80 - 120
4-Bromofluorobenzene (Surr)	97		80 - 120

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: LCS 310-455901/8

Matrix: Water

Analysis Batch: 455901

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	15.41		ug/L		77	33 - 138
Chloroethane	20.0	16.63		ug/L		83	59 - 139
Chloromethane	20.0	16.53		ug/L		83	52 - 146
Trichlorofluoromethane	20.0	19.67		ug/L		98	55 - 150
Vinyl chloride	20.0	15.95		ug/L		80	60 - 142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	111		76 - 130
Toluene-d8 (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120

Lab Sample ID: MB 310-456489/6

Matrix: Water

Analysis Batch: 456489

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/03/25 22:31	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/03/25 22:31	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/03/25 22:31	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/03/25 22:31	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/03/25 22:31	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/03/25 22:31	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/03/25 22:31	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			06/03/25 22:31	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			06/03/25 22:31	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/03/25 22:31	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/03/25 22:31	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/03/25 22:31	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/03/25 22:31	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/03/25 22:31	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/03/25 22:31	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/03/25 22:31	1
Acetone	<10.0		10.0	3.10	ug/L			06/03/25 22:31	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			06/03/25 22:31	1
Benzene	<0.500		0.500	0.220	ug/L			06/03/25 22:31	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/03/25 22:31	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/03/25 22:31	1
Bromoform	<5.00		5.00	0.780	ug/L			06/03/25 22:31	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/03/25 22:31	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/03/25 22:31	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/03/25 22:31	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/03/25 22:31	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/03/25 22:31	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/03/25 22:31	1
Chloroform	<3.00		3.00	1.30	ug/L			06/03/25 22:31	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/03/25 22:31	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/03/25 22:31	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/03/25 22:31	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: MB 310-456489/6

Matrix: Water

Analysis Batch: 456489

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	<1.00		1.00	0.330	ug/L			06/03/25 22:31	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/03/25 22:31	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/03/25 22:31	1
Methylene chloride	<5.00		5.00	1.70	ug/L			06/03/25 22:31	1
Styrene	<1.00		1.00	0.370	ug/L			06/03/25 22:31	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/03/25 22:31	1
Toluene	<1.00		1.00	0.430	ug/L			06/03/25 22:31	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/03/25 22:31	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/03/25 22:31	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/03/25 22:31	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/03/25 22:31	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/03/25 22:31	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/03/25 22:31	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/03/25 22:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	106		76 - 130		06/03/25 22:31	1
Toluene-d8 (Surr)	94		80 - 120		06/03/25 22:31	1
4-Bromofluorobenzene (Surr)	106		80 - 120		06/03/25 22:31	1

Lab Sample ID: LCS 310-456489/7

Matrix: Water

Analysis Batch: 456489

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	20.0	20.34		ug/L		102	70 - 121
1,1,1-Trichloroethane	20.0	21.78		ug/L		109	69 - 130
1,1,2,2-Tetrachloroethane	20.0	20.50		ug/L		103	70 - 122
1,1,2-Trichloroethane	20.0	21.27		ug/L		106	75 - 121
1,1-Dichloroethane	20.0	20.31		ug/L		102	69 - 127
1,1-Dichloroethene	20.0	20.83		ug/L		104	64 - 134
1,2,3-Trichloropropane	20.0	20.67		ug/L		103	70 - 122
1,2-Dibromo-3-chloropropane	20.0	20.05		ug/L		100	62 - 132
1,2-Dibromoethane (EDB)	20.0	21.65		ug/L		108	74 - 122
1,2-Dichlorobenzene	20.0	20.00		ug/L		100	74 - 120
1,2-Dichloroethane	20.0	20.34		ug/L		102	68 - 125
1,2-Dichloropropane	20.0	22.12		ug/L		111	72 - 128
1,4-Dichlorobenzene	20.0	19.61		ug/L		98	72 - 120
2-Butanone (MEK)	40.0	45.65		ug/L		114	60 - 134
2-Hexanone	40.0	45.11		ug/L		113	62 - 139
4-Methyl-2-pentanone (MIBK)	40.0	43.20		ug/L		108	62 - 136
Acetone	40.0	43.70		ug/L		109	59 - 136
Acrylonitrile	200	219.0		ug/L		110	50 - 150
Benzene	20.0	20.47		ug/L		102	71 - 125
Bromochloromethane	20.0	21.19		ug/L		106	69 - 131
Bromodichloromethane	20.0	20.03		ug/L		100	70 - 122
Bromoform	20.0	18.19		ug/L		91	62 - 122
Carbon disulfide	20.0	20.73		ug/L		104	58 - 137

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QC Sample Results

Client: SCS Engineers

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: LCS 310-456489/7

Matrix: Water

Analysis Batch: 456489

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon tetrachloride	20.0	21.09		ug/L		105	63 - 136
Chlorobenzene	20.0	19.82		ug/L		99	74 - 120
Chlorodibromomethane	20.0	17.69		ug/L		88	69 - 121
Chloroform	20.0	19.63		ug/L		98	72 - 122
cis-1,2-Dichloroethene	20.0	20.64		ug/L		103	72 - 123
cis-1,3-Dichloropropene	20.0	18.63		ug/L		93	72 - 123
Dibromomethane	20.0	20.10		ug/L		101	72 - 122
Ethylbenzene	20.0	21.02		ug/L		105	75 - 120
Iodomethane	20.0	15.95		ug/L		80	18 - 150
Methylene chloride	20.0	22.46		ug/L		112	72 - 128
Styrene	20.0	21.54		ug/L		108	74 - 122
Tetrachloroethene	20.0	20.41		ug/L		102	70 - 128
Toluene	20.0	20.75		ug/L		104	74 - 120
trans-1,2-Dichloroethene	20.0	20.45		ug/L		102	67 - 127
trans-1,3-Dichloropropene	20.0	17.94		ug/L		90	67 - 123
trans-1,4-Dichloro-2-butene	20.0	20.25		ug/L		101	50 - 150
Trichloroethene	20.0	20.15		ug/L		101	70 - 128
Vinyl acetate	40.0	38.62		ug/L		97	50 - 150
Xylenes, Total	40.0	42.31		ug/L		106	74 - 121

Surrogate	%Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	99		76 - 130
Toluene-d8 (Surr)	103		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120

Lab Sample ID: LCS 310-456489/8

Matrix: Water

Analysis Batch: 456489

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	17.00		ug/L		85	33 - 138
Chloroethane	20.0	18.51		ug/L		93	59 - 139
Chloromethane	20.0	18.44		ug/L		92	52 - 146
Trichlorofluoromethane	20.0	18.82		ug/L		94	55 - 150
Vinyl chloride	20.0	17.99		ug/L		90	60 - 142

Surrogate	%Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	109		76 - 130
Toluene-d8 (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120

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QC Sample Results

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-456954/3
Matrix: Water
Analysis Batch: 456954

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.00		1.00	0.420	mg/L			06/06/25 15:17	1

Lab Sample ID: LCS 310-456954/4
Matrix: Water
Analysis Batch: 456954

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	10.0	10.39		mg/L		104	90 - 110

Lab Sample ID: MB 310-457009/3
Matrix: Water
Analysis Batch: 457009

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.00		1.00	0.420	mg/L			06/07/25 14:24	1

Lab Sample ID: LCS 310-457009/4
Matrix: Water
Analysis Batch: 457009

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	10.0	10.12		mg/L		101	90 - 110

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-455836/1-A
Matrix: Water
Analysis Batch: 456760

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 455836

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0290	mg/L		05/28/25 09:20	06/04/25 20:15	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		05/28/25 09:20	06/04/25 20:15	1
Barium	<0.00200		0.00200	0.000660	mg/L		05/28/25 09:20	06/04/25 20:15	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		05/28/25 09:20	06/04/25 20:15	1
Chromium	<0.00500		0.00500	0.00180	mg/L		05/28/25 09:20	06/04/25 20:15	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		05/28/25 09:20	06/04/25 20:15	1
Copper	<0.00500		0.00500	0.00320	mg/L		05/28/25 09:20	06/04/25 20:15	1
Lead	<0.000500		0.000500	0.000330	mg/L		05/28/25 09:20	06/04/25 20:15	1
Silver	<0.00100		0.00100	0.000500	mg/L		05/28/25 09:20	06/04/25 20:15	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		05/28/25 09:20	06/04/25 20:15	1
Iron	<0.100		0.100	0.0500	mg/L		05/28/25 09:20	06/04/25 20:15	1

Lab Sample ID: MB 310-455836/1-A
Matrix: Water
Analysis Batch: 456906

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 455836

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200	^3+ ^1+	0.00200	0.00100	mg/L		05/28/25 09:20	06/06/25 14:31	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		05/28/25 09:20	06/06/25 14:31	1
Nickel	<0.00500		0.00500	0.00230	mg/L		05/28/25 09:20	06/06/25 14:31	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: MB 310-455836/1-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 456906

Prep Batch: 455836

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	<0.00500		0.00500	0.00140	mg/L		05/28/25 09:20	06/06/25 14:31	1
Thallium	<0.00100		0.00100	0.000570	mg/L		05/28/25 09:20	06/06/25 14:31	1
Zinc	<0.0200		0.0200	0.0130	mg/L		05/28/25 09:20	06/06/25 14:31	1

Lab Sample ID: LCS 310-455836/2-A

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 456760

Prep Batch: 455836

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.200	0.1900		mg/L		95	80 - 120
Arsenic	0.200	0.1890		mg/L		94	80 - 120
Barium	0.100	0.09033		mg/L		90	80 - 120
Cadmium	0.100	0.09389		mg/L		94	80 - 120
Chromium	0.100	0.09074		mg/L		91	80 - 120
Cobalt	0.100	0.09107		mg/L		91	80 - 120
Copper	0.200	0.1867		mg/L		93	80 - 120
Lead	0.200	0.1822		mg/L		91	80 - 120
Silver	0.100	0.1020		mg/L		102	80 - 120
Vanadium	0.100	0.08999		mg/L		90	80 - 120
Iron	0.200	0.1832		mg/L		92	80 - 120

Lab Sample ID: LCS 310-455836/2-A

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 456906

Prep Batch: 455836

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2098	^3+ ^1+	mg/L		105	80 - 120
Beryllium	0.100	0.09435		mg/L		94	80 - 120
Nickel	0.200	0.1940		mg/L		97	80 - 120
Selenium	0.400	0.3812		mg/L		95	80 - 120
Thallium	0.100	0.09392		mg/L		94	80 - 120
Zinc	0.200	0.1915		mg/L		96	80 - 120

Lab Sample ID: 310-307213-7 DU

Client Sample ID: UW-21

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 456906

Prep Batch: 455836

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Aluminum	2.49		2.504		mg/L		0.7	20
Antimony	<0.0100	^3+ ^1+	<0.0100	^3+ ^1+	mg/L		NC	20
Arsenic	0.00574	J	0.005695	J	mg/L		0.8	20
Barium	0.0107		0.01113		mg/L		4	20
Cadmium	<0.00100		<0.00100		mg/L		NC	20
Cobalt	1.45		1.454		mg/L		0	20
Copper	<0.0250		<0.0250		mg/L		NC	20
Lead	<0.00250		<0.00250		mg/L		NC	20
Nickel	0.842		0.8374		mg/L		0.5	20
Selenium	0.0154	J	0.01321	J	mg/L		16	20
Silver	<0.00500		<0.00500		mg/L		NC	20

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QC Sample Results

Client: SCS Engineers

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: 310-307213-7 DU

Matrix: Water

Analysis Batch: 456906

Client Sample ID: UW-21

Prep Type: Total/NA

Prep Batch: 455836

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Thallium	<0.00500		<0.00500		mg/L		NC	20
Zinc	0.143		0.1468		mg/L		2	20
Iron	374		375.3		mg/L		0.3	20

Lab Sample ID: 310-307213-7 DU

Matrix: Water

Analysis Batch: 457032

Client Sample ID: UW-21

Prep Type: Total/NA

Prep Batch: 455836

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Beryllium	0.00366		0.004126		mg/L		12	20
Chromium	0.0157		0.01639		mg/L		4	20
Vanadium	<0.00500		<0.00500		mg/L		NC	20

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

Lab Sample ID: MB 310-455740/1

Matrix: Water

Analysis Batch: 455740

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.50	mg/L			05/27/25 10:05	1

Lab Sample ID: LCS 310-455740/2

Matrix: Water

Analysis Batch: 455740

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	82 - 117

Lab Sample ID: MB 310-455808/1

Matrix: Water

Analysis Batch: 455808

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.50	mg/L			05/27/25 13:43	1

Lab Sample ID: LCS 310-455808/2

Matrix: Water

Analysis Batch: 455808

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	109.0		mg/L		109	82 - 117

Lab Sample ID: 310-307213-2 DU

Matrix: Water

Analysis Batch: 455808

Client Sample ID: UW-10

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Suspended Solids	47.0		47.00		mg/L		0	35

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: 310-307213-10 DU

Client Sample ID: MW-D

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 455808

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	132		142.0		mg/L		7	35

Method: SM 2320B - Alkalinity

Lab Sample ID: LCS 310-456219/2

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 456219

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity as CaCO3 to pH 4.5	1000	998.6		mg/L		100	85 - 115

Lab Sample ID: 310-307213-1 DU

Client Sample ID: DW-8

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 456219

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity as CaCO3 to pH 4.5	479		475.7		mg/L		0.7	13

QC Association Summary

Client: SCS Engineers

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

GC/MS VOA

Analysis Batch: 455897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-307213-4	PZ-14	Total/NA	Water	8260D	
310-307213-5	DW-15	Total/NA	Water	8260D	
310-307213-8	DW-23	Total/NA	Water	8260D	
310-307213-9	DW-24	Total/NA	Water	8260D	
310-307213-10	MW-D	Total/NA	Water	8260D	
310-307213-11	Trip Blank 1	Total/NA	Water	8260D	
MB 310-455897/6	Method Blank	Total/NA	Water	8260D	
LCS 310-455897/7	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-455897/8	Lab Control Sample	Total/NA	Water	8260D	
310-307213-5 MS	DW-15	Total/NA	Water	8260D	
310-307213-5 MSD	DW-15	Total/NA	Water	8260D	

Analysis Batch: 455901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-307213-1	DW-8	Total/NA	Water	8260D	
310-307213-2	UW-10	Total/NA	Water	8260D	
310-307213-3	UW-11	Total/NA	Water	8260D	
310-307213-6	DW-19	Total/NA	Water	8260D	
310-307213-7	UW-21	Total/NA	Water	8260D	
310-307213-12	Trip Blank 2	Total/NA	Water	8260D	
310-307213-13	Trip Blank 3	Total/NA	Water	8260D	
MB 310-455901/6	Method Blank	Total/NA	Water	8260D	
LCS 310-455901/7	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-455901/8	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 456489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-307213-11	Trip Blank 1	Total/NA	Water	8260D	
MB 310-456489/6	Method Blank	Total/NA	Water	8260D	
LCS 310-456489/7	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-456489/8	Lab Control Sample	Total/NA	Water	8260D	

HPLC/IC

Analysis Batch: 456954

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-307213-1	DW-8	Total/NA	Water	9056A	
310-307213-2	UW-10	Total/NA	Water	9056A	
310-307213-3	UW-11	Total/NA	Water	9056A	
310-307213-4	PZ-14	Total/NA	Water	9056A	
MB 310-456954/3	Method Blank	Total/NA	Water	9056A	
LCS 310-456954/4	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 457009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-307213-5	DW-15	Total/NA	Water	9056A	
310-307213-6	DW-19	Total/NA	Water	9056A	
310-307213-7	UW-21	Total/NA	Water	9056A	
310-307213-8	DW-23	Total/NA	Water	9056A	
310-307213-9	DW-24	Total/NA	Water	9056A	
310-307213-10	MW-D	Total/NA	Water	9056A	

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

HPLC/IC (Continued)

Analysis Batch: 457009 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-457009/3	Method Blank	Total/NA	Water	9056A	
LCS 310-457009/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 455836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-307213-1	DW-8	Total/NA	Water	3005A	
310-307213-2	UW-10	Total/NA	Water	3005A	
310-307213-3	UW-11	Total/NA	Water	3005A	
310-307213-4	PZ-14	Total/NA	Water	3005A	
310-307213-5	DW-15	Total/NA	Water	3005A	
310-307213-6	DW-19	Total/NA	Water	3005A	
310-307213-7	UW-21	Total/NA	Water	3005A	
310-307213-8	DW-23	Total/NA	Water	3005A	
310-307213-9	DW-24	Total/NA	Water	3005A	
310-307213-10	MW-D	Total/NA	Water	3005A	
MB 310-455836/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-455836/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-307213-7 DU	UW-21	Total/NA	Water	3005A	

Analysis Batch: 456760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-307213-1	DW-8	Total/NA	Water	6020B	455836
310-307213-2	UW-10	Total/NA	Water	6020B	455836
310-307213-3	UW-11	Total/NA	Water	6020B	455836
310-307213-4	PZ-14	Total/NA	Water	6020B	455836
MB 310-455836/1-A	Method Blank	Total/NA	Water	6020B	455836
LCS 310-455836/2-A	Lab Control Sample	Total/NA	Water	6020B	455836

Analysis Batch: 456906

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-307213-1	DW-8	Total/NA	Water	6020B	455836
310-307213-2	UW-10	Total/NA	Water	6020B	455836
310-307213-3	UW-11	Total/NA	Water	6020B	455836
310-307213-4	PZ-14	Total/NA	Water	6020B	455836
310-307213-5	DW-15	Total/NA	Water	6020B	455836
310-307213-6	DW-19	Total/NA	Water	6020B	455836
310-307213-7	UW-21	Total/NA	Water	6020B	455836
310-307213-8	DW-23	Total/NA	Water	6020B	455836
310-307213-9	DW-24	Total/NA	Water	6020B	455836
310-307213-10	MW-D	Total/NA	Water	6020B	455836
MB 310-455836/1-A	Method Blank	Total/NA	Water	6020B	455836
LCS 310-455836/2-A	Lab Control Sample	Total/NA	Water	6020B	455836
310-307213-7 DU	UW-21	Total/NA	Water	6020B	455836

Analysis Batch: 457032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-307213-4	PZ-14	Total/NA	Water	6020B	455836
310-307213-7	UW-21	Total/NA	Water	6020B	455836
310-307213-10	MW-D	Total/NA	Water	6020B	455836

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Metals (Continued)

Analysis Batch: 457032 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-307213-7 DU	UW-21	Total/NA	Water	6020B	455836

General Chemistry

Analysis Batch: 455740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-307213-1	DW-8	Total/NA	Water	I-3765-85	
310-307213-3	UW-11	Total/NA	Water	I-3765-85	
310-307213-4	PZ-14	Total/NA	Water	I-3765-85	
310-307213-5	DW-15	Total/NA	Water	I-3765-85	
MB 310-455740/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-455740/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 455808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-307213-2	UW-10	Total/NA	Water	I-3765-85	
310-307213-6	DW-19	Total/NA	Water	I-3765-85	
310-307213-7	UW-21	Total/NA	Water	I-3765-85	
310-307213-8	DW-23	Total/NA	Water	I-3765-85	
310-307213-9	DW-24	Total/NA	Water	I-3765-85	
310-307213-10	MW-D	Total/NA	Water	I-3765-85	
MB 310-455808/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-455808/2	Lab Control Sample	Total/NA	Water	I-3765-85	
310-307213-2 DU	UW-10	Total/NA	Water	I-3765-85	
310-307213-10 DU	MW-D	Total/NA	Water	I-3765-85	

Analysis Batch: 456219

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-307213-1	DW-8	Total/NA	Water	SM 2320B	
310-307213-2	UW-10	Total/NA	Water	SM 2320B	
310-307213-3	UW-11	Total/NA	Water	SM 2320B	
310-307213-4	PZ-14	Total/NA	Water	SM 2320B	
310-307213-5	DW-15	Total/NA	Water	SM 2320B	
310-307213-6	DW-19	Total/NA	Water	SM 2320B	
310-307213-7	UW-21	Total/NA	Water	SM 2320B	
310-307213-8	DW-23	Total/NA	Water	SM 2320B	
310-307213-9	DW-24	Total/NA	Water	SM 2320B	
310-307213-10	MW-D	Total/NA	Water	SM 2320B	
LCS 310-456219/2	Lab Control Sample	Total/NA	Water	SM 2320B	
310-307213-1 DU	DW-8	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-8

Lab Sample ID: 310-307213-1

Date Collected: 05/22/25 14:06

Matrix: Water

Date Received: 05/23/25 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	455901	WSE8	EET CF	05/29/25 08:43
Total/NA	Analysis	9056A		100	456954	QTZ5	EET CF	06/06/25 19:31
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		1	456760	NFT2	EET CF	06/04/25 20:45
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		1	456906	ZRI4	EET CF	06/06/25 14:46
Total/NA	Analysis	I-3765-85		1	455740	E6KR	EET CF	05/27/25 10:05
Total/NA	Analysis	SM 2320B		1	456219	WZC8	EET CF	05/30/25 08:37

Client Sample ID: UW-10

Lab Sample ID: 310-307213-2

Date Collected: 05/22/25 14:59

Matrix: Water

Date Received: 05/23/25 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	455901	WSE8	EET CF	05/29/25 09:06
Total/NA	Analysis	9056A		100	456954	QTZ5	EET CF	06/06/25 20:07
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		1	456760	NFT2	EET CF	06/04/25 20:47
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		1	456906	ZRI4	EET CF	06/06/25 14:49
Total/NA	Analysis	I-3765-85		1	455808	E6KR	EET CF	05/27/25 13:43
Total/NA	Analysis	SM 2320B		1	456219	WZC8	EET CF	05/30/25 08:59

Client Sample ID: UW-11

Lab Sample ID: 310-307213-3

Date Collected: 05/22/25 16:08

Matrix: Water

Date Received: 05/23/25 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	455901	WSE8	EET CF	05/29/25 09:29
Total/NA	Analysis	9056A		100	456954	QTZ5	EET CF	06/06/25 20:19
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		1	456760	NFT2	EET CF	06/04/25 20:50
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		1	456906	ZRI4	EET CF	06/06/25 14:58
Total/NA	Analysis	I-3765-85		1	455740	E6KR	EET CF	05/27/25 10:05
Total/NA	Analysis	SM 2320B		1	456219	WZC8	EET CF	05/30/25 09:15

Client Sample ID: PZ-14

Lab Sample ID: 310-307213-4

Date Collected: 05/22/25 17:08

Matrix: Water

Date Received: 05/23/25 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	455897	WSE8	EET CF	05/28/25 22:13
Total/NA	Analysis	9056A		100	456954	QTZ5	EET CF	06/06/25 20:31

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: PZ-14

Lab Sample ID: 310-307213-4

Date Collected: 05/22/25 17:08

Matrix: Water

Date Received: 05/23/25 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		1	456760	NFT2	EET CF	06/04/25 20:52
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		1	457032	NFT2	EET CF	06/09/25 14:23
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		4	456906	ZRI4	EET CF	06/06/25 15:01
Total/NA	Analysis	I-3765-85		1	455740	E6KR	EET CF	05/27/25 10:05
Total/NA	Analysis	SM 2320B		1	456219	WZC8	EET CF	05/30/25 09:26

Client Sample ID: DW-15

Lab Sample ID: 310-307213-5

Date Collected: 05/22/25 19:09

Matrix: Water

Date Received: 05/23/25 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	455897	WSE8	EET CF	05/28/25 22:36
Total/NA	Analysis	9056A		10	457009	QTZ5	EET CF	06/09/25 08:58
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		1	456906	ZRI4	EET CF	06/06/25 15:04
Total/NA	Analysis	I-3765-85		1	455740	E6KR	EET CF	05/27/25 10:05
Total/NA	Analysis	SM 2320B		1	456219	WZC8	EET CF	05/30/25 09:33

Client Sample ID: DW-19

Lab Sample ID: 310-307213-6

Date Collected: 05/23/25 09:53

Matrix: Water

Date Received: 05/23/25 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	455901	WSE8	EET CF	05/29/25 09:51
Total/NA	Analysis	9056A		100	457009	QTZ5	EET CF	06/07/25 15:00
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		1	456906	ZRI4	EET CF	06/06/25 15:07
Total/NA	Analysis	I-3765-85		1	455808	E6KR	EET CF	05/27/25 13:43
Total/NA	Analysis	SM 2320B		1	456219	WZC8	EET CF	05/30/25 09:42

Client Sample ID: UW-21

Lab Sample ID: 310-307213-7

Date Collected: 05/23/25 06:55

Matrix: Water

Date Received: 05/23/25 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	455901	WSE8	EET CF	05/29/25 10:14
Total/NA	Analysis	9056A		100	457009	QTZ5	EET CF	06/07/25 15:37
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		1	457032	NFT2	EET CF	06/09/25 14:26
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		5	456906	ZRI4	EET CF	06/06/25 15:10

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: UW-21

Lab Sample ID: 310-307213-7

Date Collected: 05/23/25 06:55

Matrix: Water

Date Received: 05/23/25 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	I-3765-85		1	455808	E6KR	EET CF	05/27/25 13:43
Total/NA	Analysis	SM 2320B		1	456219	WZC8	EET CF	05/30/25 09:52

Client Sample ID: DW-23

Lab Sample ID: 310-307213-8

Date Collected: 05/22/25 18:41

Matrix: Water

Date Received: 05/23/25 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	455897	WSE8	EET CF	05/28/25 22:58
Total/NA	Analysis	9056A		100	457009	QTZ5	EET CF	06/07/25 15:04
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		1	456906	ZRI4	EET CF	06/06/25 15:19
Total/NA	Analysis	I-3765-85		1	455808	E6KR	EET CF	05/27/25 13:43
Total/NA	Analysis	SM 2320B		1	456219	WZC8	EET CF	05/30/25 09:59

Client Sample ID: DW-24

Lab Sample ID: 310-307213-9

Date Collected: 05/22/25 19:52

Matrix: Water

Date Received: 05/23/25 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	455897	WSE8	EET CF	05/28/25 23:21
Total/NA	Analysis	9056A		100	457009	QTZ5	EET CF	06/07/25 16:01
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		1	456906	ZRI4	EET CF	06/06/25 15:22
Total/NA	Analysis	I-3765-85		1	455808	E6KR	EET CF	05/27/25 13:43
Total/NA	Analysis	SM 2320B		1	456219	WZC8	EET CF	05/30/25 10:13

Client Sample ID: MW-D

Lab Sample ID: 310-307213-10

Date Collected: 05/22/25 15:10

Matrix: Water

Date Received: 05/23/25 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	455897	WSE8	EET CF	05/28/25 23:43
Total/NA	Analysis	9056A		100	457009	QTZ5	EET CF	06/07/25 16:13
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		1	457032	NFT2	EET CF	06/09/25 14:30
Total/NA	Prep	3005A			455836	QTZ5	EET CF	05/28/25 09:20
Total/NA	Analysis	6020B		1	456906	ZRI4	EET CF	06/06/25 15:24
Total/NA	Analysis	I-3765-85		1	455808	E6KR	EET CF	05/27/25 13:43
Total/NA	Analysis	SM 2320B		1	456219	WZC8	EET CF	05/30/25 10:17

Lab Chronicle

Client: SCS Engineers
Project/Site: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: Trip Blank 1
Date Collected: 05/22/25 00:00
Date Received: 05/23/25 16:45

Lab Sample ID: 310-307213-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	455897	WSE8	EET CF	05/28/25 20:43
Total/NA	Analysis	8260D		1	456489	WSE8	EET CF	06/04/25 00:24

Client Sample ID: Trip Blank 2
Date Collected: 05/22/25 00:00
Date Received: 05/23/25 16:45

Lab Sample ID: 310-307213-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	455901	WSE8	EET CF	05/29/25 07:58

Client Sample ID: Trip Blank 3
Date Collected: 05/22/25 00:00
Date Received: 05/23/25 16:45

Lab Sample ID: 310-307213-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	455901	WSE8	EET CF	05/29/25 08:21

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: 1st 2025 B&S HMSP Sampling Event

Job ID: 310-307213-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Laboratory: Eurofins Cedar Falls

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

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

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

Method Summary

Client: SCS Engineers

Job ID: 310-307213-1

Project/Site: 1st 2025 B&S HMSP Sampling Event

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
SM 2320B	Alkalinity	SM	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF

Protocol References:

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



310-307213 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client. <u>SCS</u>			
City/State.	CITY <u>W. Des Moines</u>	STATE <u>IA</u>	Project
Receipt Information			
Date/Time Received:	DATE <u>5-23-25</u>	TIME <u>1645</u>	Received By. <u>PH</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? ↓			
<u>DW-8, HW-4B, 10, US-ART</u>			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>A1</u>		Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>6.3</u>		Corrected Temp (°C): <u>6.3</u>	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ 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 <u>W. Des Moines</u>	STATE <u>IA</u>	Project.
Receipt Information			
Date/Time Received:	DATE <u>5-23-25</u>	TIME <u>1645</u>	Received By. <u>PH</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>VW-11, P2-14, DU-17, 19</u>			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>A4</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>2.1</u>		Corrected Temp (°C): <u>2.1</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:	<u>W. Des Moines</u>	STATE <u>IA</u>	Project.
Receipt Information			
Date/Time Received:	DATE <u>5-23-25</u>	TIME <u>1645</u>	Received By <u>PH</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>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>VW-21, DW-23, 24, MW-D, Cu-1</u>			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: ☐ NONE			
Thermometer ID: <u>A1</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>2.3</u>		Corrected Temp (°C): <u>2.3</u>	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ 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			

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-307213-1

SDG Number: Mahaska County Sanitary Landfill, Binns & Stevens

Login Number: 307213

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Collins, Charlotte G

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: Nathan Ohrt
SCS Engineers
1690 All State Court
Suite 100
West Des Moines, Iowa 50265

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JOB DESCRIPTION

Mahaska 2nd 2025 B&S HMSP
Mahaska County Sanitary Landfill, Binns & Stevens

JOB NUMBER

310-319482-1

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: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1

Job ID: 310-319482-1

Eurofins Cedar Falls

Job Narrative 310-319482-1

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

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

Receipt

The samples were received on 10/31/2025 4:50 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 -0.7°C, 0.8°C and 1.5°C.

GC/MS VOA

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

HPLC/IC

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

Metals

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

General Chemistry

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

Eurofins Cedar Falls

Sample Summary

Client: SCS Engineers

Job ID: 310-319482-1

Project/Site: Mahaska 2nd 2025 B&S HMSP

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-319482-1	DW-8	Water	10/30/25 09:41	10/31/25 16:50	Iowa
310-319482-2	UW-10	Water	10/30/25 10:33	10/31/25 16:50	Iowa
310-319482-3	UW-11	Water	10/29/25 13:18	10/31/25 16:50	Iowa
310-319482-4	PZ-14	Water	10/29/25 12:13	10/31/25 16:50	Iowa
310-319482-5	DW-15	Water	10/29/25 13:51	10/31/25 16:50	Iowa
310-319482-6	DW-19	Water	10/29/25 15:02	10/31/25 16:50	Iowa
310-319482-7	UW-21	Water	10/29/25 14:28	10/31/25 16:50	Iowa
310-319482-8	DW-23	Water	10/29/25 12:49	10/31/25 16:50	Iowa
310-319482-9	DW-24	Water	10/29/25 15:43	10/31/25 16:50	Iowa
310-319482-10	MW-D	Water	10/29/25 12:13	10/31/25 16:50	Iowa
310-319482-11	Trip Blank 1	Water	10/29/25 00:00	10/31/25 16:50	Iowa
310-319482-12	Trip Blank 2	Water	10/29/25 00:00	10/31/25 16:50	Iowa
310-319482-13	Trip Blank 3	Water	10/29/25 00:00	10/31/25 16:50	Iowa

Detection Summary

Client: SCS Engineers

Job ID: 310-319482-1

Project/Site: Mahaska 2nd 2025 B&S HMSP

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-8

Lab Sample ID: 310-319482-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.528	J	1.00	0.210	ug/L	1		8260D	Total/NA
Sulfate	228		5.00	2.10	mg/L	5		9056A	Total/NA
Arsenic	0.000871	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0330		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00360		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.00288	J	0.00500	0.00230	mg/L	1		6020B	Total/NA
Iron	5.92		0.100	0.0500	mg/L	1		6020B	Total/NA
Total Suspended Solids	24.0		5.00	3.50	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	505		5.00	2.50	mg/L	1		SM 2320B	Total/NA

Client Sample ID: UW-10

Lab Sample ID: 310-319482-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dichlorobenzene	9.03		1.00	0.230	ug/L	1		8260D	Total/NA
Acetone	3.52	J	10.0	3.10	ug/L	1		8260D	Total/NA
Benzene	2.74		0.500	0.220	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.233	J	1.00	0.210	ug/L	1		8260D	Total/NA
Sulfate	810		20.0	8.40	mg/L	20		9056A	Total/NA
Arsenic	0.00660		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0682		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.0361		0.000500	0.000170	mg/L	1		6020B	Total/NA
Iron	113		0.400	0.200	mg/L	4		6020B	Total/NA
Total Suspended Solids	136		30.0	21.0	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	953		5.00	2.50	mg/L	1		SM 2320B	Total/NA

Client Sample ID: UW-11

Lab Sample ID: 310-319482-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	2110		100	42.0	mg/L	100		9056A	Total/NA
Arsenic	0.00343		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0197		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.0688		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.280		0.00500	0.00230	mg/L	1		6020B	Total/NA
Iron	23.5		0.100	0.0500	mg/L	1		6020B	Total/NA
Total Suspended Solids	14.0		7.50	5.25	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	464		5.00	2.50	mg/L	1		SM 2320B	Total/NA

Client Sample ID: PZ-14

Lab Sample ID: 310-319482-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	1450		100	42.0	mg/L	100		9056A	Total/NA
Arsenic	0.00172	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0230		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00870		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0136		0.00500	0.00230	mg/L	1		6020B	Total/NA
Zinc	0.0574		0.0200	0.0130	mg/L	1		6020B	Total/NA
Iron	209		0.400	0.200	mg/L	4		6020B	Total/NA
Total Suspended Solids	94.0		30.0	21.0	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	36.9		5.00	2.50	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers

Job ID: 310-319482-1

Project/Site: Mahaska 2nd 2025 B&S HMSP

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-15

Lab Sample ID: 310-319482-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	53.0		5.00	2.10	mg/L	5		9056A	Total/NA
Aluminum	0.0872		0.0500	0.0290	mg/L	1		6020B	Total/NA
Arsenic	0.000633	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.125		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cadmium	0.000103	J	0.000200	0.000100	mg/L	1		6020B	Total/NA
Cobalt	0.000790		0.000500	0.000170	mg/L	1		6020B	Total/NA
Iron	0.708		0.100	0.0500	mg/L	1		6020B	Total/NA
Total Suspended Solids	30.7		5.00	3.50	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	220		5.00	2.50	mg/L	1		SM 2320B	Total/NA

Client Sample ID: DW-19

Lab Sample ID: 310-319482-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	584		100	42.0	mg/L	100		9056A	Total/NA
Antimony	0.00156	J	0.00200	0.00100	mg/L	1		6020B	Total/NA
Barium	0.0229		0.00200	0.000660	mg/L	1		6020B	Total/NA
Total Suspended Solids	8.33		5.00	3.50	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	342		5.00	2.50	mg/L	1		SM 2320B	Total/NA

Client Sample ID: UW-21

Lab Sample ID: 310-319482-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	4080		100	42.0	mg/L	100		9056A	Total/NA
Aluminum	18.6		0.0500	0.0290	mg/L	1		6020B	Total/NA
Arsenic	0.00598		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0127		0.00200	0.000660	mg/L	1		6020B	Total/NA
Beryllium	0.0161		0.00100	0.000330	mg/L	1		6020B	Total/NA
Cadmium	0.00301		0.000200	0.000100	mg/L	1		6020B	Total/NA
Chromium	0.00843		0.00500	0.00180	mg/L	1		6020B	Total/NA
Cobalt	1.53		0.00250	0.000850	mg/L	5		6020B	Total/NA
Copper	0.0353		0.00500	0.00320	mg/L	1		6020B	Total/NA
Lead	0.00362		0.000500	0.000330	mg/L	1		6020B	Total/NA
Nickel	1.37		0.00500	0.00230	mg/L	1		6020B	Total/NA
Selenium	0.0180		0.00500	0.00140	mg/L	1		6020B	Total/NA
Zinc	0.409		0.0200	0.0130	mg/L	1		6020B	Total/NA
Iron	102		0.500	0.250	mg/L	5		6020B	Total/NA
Total Suspended Solids	27.3		5.00	3.50	mg/L	1		I-3765-85	Total/NA

Client Sample ID: DW-23

Lab Sample ID: 310-319482-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	4600		100	42.0	mg/L	100		9056A	Total/NA
Aluminum	2.74		0.0500	0.0290	mg/L	1		6020B	Total/NA
Arsenic	0.00260		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0138		0.00200	0.000660	mg/L	1		6020B	Total/NA
Beryllium	0.00141		0.00100	0.000330	mg/L	1		6020B	Total/NA
Cadmium	0.00232		0.000200	0.000100	mg/L	1		6020B	Total/NA
Cobalt	1.25		0.00200	0.000680	mg/L	4		6020B	Total/NA
Lead	0.000496	J	0.000500	0.000330	mg/L	1		6020B	Total/NA
Nickel	1.15		0.00500	0.00230	mg/L	1		6020B	Total/NA
Selenium	0.00321	J	0.00500	0.00140	mg/L	1		6020B	Total/NA
Zinc	0.607		0.0200	0.0130	mg/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers

Job ID: 310-319482-1

Project/Site: Mahaska 2nd 2025 B&S HMSP

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-23 (Continued)

Lab Sample ID: 310-319482-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	219		0.400	0.200	mg/L	4		6020B	Total/NA
Total Suspended Solids	13.3		5.00	3.50	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	125		5.00	2.50	mg/L	1		SM 2320B	Total/NA

Client Sample ID: DW-24

Lab Sample ID: 310-319482-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	2070		100	42.0	mg/L	100		9056A	Total/NA
Aluminum	57.7		0.0500	0.0290	mg/L	1		6020B	Total/NA
Arsenic	0.00388		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.00722		0.00200	0.000660	mg/L	1		6020B	Total/NA
Beryllium	0.0156		0.00100	0.000330	mg/L	1		6020B	Total/NA
Cadmium	0.0181		0.000200	0.000100	mg/L	1		6020B	Total/NA
Chromium	0.00381	J	0.00500	0.00180	mg/L	1		6020B	Total/NA
Cobalt	0.358		0.000500	0.000170	mg/L	1		6020B	Total/NA
Copper	0.00749		0.00500	0.00320	mg/L	1		6020B	Total/NA
Lead	0.000842		0.000500	0.000330	mg/L	1		6020B	Total/NA
Nickel	0.622		0.00500	0.00230	mg/L	1		6020B	Total/NA
Selenium	0.0142		0.00500	0.00140	mg/L	1		6020B	Total/NA
Thallium	0.000669	J	0.00100	0.000570	mg/L	1		6020B	Total/NA
Vanadium	0.00216	J	0.00500	0.00170	mg/L	1		6020B	Total/NA
Zinc	1.99		0.0200	0.0130	mg/L	1		6020B	Total/NA
Iron	115		0.400	0.200	mg/L	4		6020B	Total/NA
Total Suspended Solids	7.00		5.00	3.50	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-D

Lab Sample ID: 310-319482-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	1470		100	42.0	mg/L	100		9056A	Total/NA
Arsenic	0.00226		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0232		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00973		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0173		0.00500	0.00230	mg/L	1		6020B	Total/NA
Zinc	0.0693		0.0200	0.0130	mg/L	1		6020B	Total/NA
Iron	244		0.400	0.200	mg/L	4		6020B	Total/NA
Total Suspended Solids	109		15.0	10.5	mg/L	1		I-3765-85	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	36.9		5.00	2.50	mg/L	1		SM 2320B	Total/NA

Client Sample ID: Trip Blank 1

Lab Sample ID: 310-319482-11

No Detections.

Client Sample ID: Trip Blank 2

Lab Sample ID: 310-319482-12

No Detections.

Client Sample ID: Trip Blank 3

Lab Sample ID: 310-319482-13

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-8

Lab Sample ID: 310-319482-1

Date Collected: 10/30/25 09:41

Matrix: Water

Date Received: 10/31/25 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/04/25 15:23	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/04/25 15:23	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/04/25 15:23	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/04/25 15:23	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/04/25 15:23	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/04/25 15:23	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/04/25 15:23	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			11/04/25 15:23	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			11/04/25 15:23	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/04/25 15:23	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/04/25 15:23	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/04/25 15:23	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/04/25 15:23	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/04/25 15:23	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/04/25 15:23	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/04/25 15:23	1
Acetone	<10.0		10.0	3.10	ug/L			11/04/25 15:23	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/04/25 15:23	1
Benzene	<0.500		0.500	0.220	ug/L			11/04/25 15:23	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/04/25 15:23	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/04/25 15:23	1
Bromoform	<5.00		5.00	0.780	ug/L			11/04/25 15:23	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/04/25 15:23	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/04/25 15:23	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/04/25 15:23	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/04/25 15:23	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/04/25 15:23	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/04/25 15:23	1
Chloroform	<3.00		3.00	1.30	ug/L			11/04/25 15:23	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/04/25 15:23	1
cis-1,2-Dichloroethene	0.528 J		1.00	0.210	ug/L			11/04/25 15:23	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/04/25 15:23	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/04/25 15:23	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/04/25 15:23	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/04/25 15:23	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/04/25 15:23	1
Styrene	<1.00		1.00	0.370	ug/L			11/04/25 15:23	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/04/25 15:23	1
Toluene	<1.00		1.00	0.430	ug/L			11/04/25 15:23	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/04/25 15:23	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/04/25 15:23	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/04/25 15:23	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/04/25 15:23	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/04/25 15:23	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/04/25 15:23	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/04/25 15:23	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/04/25 15:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	96		76 - 130		11/04/25 15:23	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-8

Lab Sample ID: 310-319482-1

Date Collected: 10/30/25 09:41

Matrix: Water

Date Received: 10/31/25 16:50

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		11/04/25 15:23	1
4-Bromofluorobenzene (Surr)	104		80 - 120		11/04/25 15:23	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	228		5.00	2.10	mg/L			11/11/25 14:00	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0290	mg/L		11/04/25 08:30	11/04/25 18:14	1
Antimony	<0.00200		0.00200	0.00100	mg/L		11/04/25 08:30	11/04/25 18:14	1
Arsenic	0.000871	J	0.00200	0.000530	mg/L		11/04/25 08:30	11/04/25 18:14	1
Barium	0.0330		0.00200	0.000660	mg/L		11/04/25 08:30	11/04/25 18:14	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/04/25 08:30	11/04/25 18:14	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/04/25 08:30	11/04/25 18:14	1
Chromium	<0.00500		0.00500	0.00180	mg/L		11/04/25 08:30	11/04/25 18:14	1
Cobalt	0.00360		0.000500	0.000170	mg/L		11/04/25 08:30	11/04/25 18:14	1
Copper	<0.00500		0.00500	0.00320	mg/L		11/04/25 08:30	11/04/25 18:14	1
Lead	<0.000500		0.000500	0.000330	mg/L		11/04/25 08:30	11/04/25 18:14	1
Nickel	0.00288	J	0.00500	0.00230	mg/L		11/04/25 08:30	11/04/25 18:14	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/04/25 08:30	11/04/25 18:14	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/04/25 08:30	11/04/25 18:14	1
Thallium	<0.00100		0.00100	0.000570	mg/L		11/04/25 08:30	11/06/25 16:53	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		11/04/25 08:30	11/04/25 18:14	1
Zinc	<0.0200		0.0200	0.0130	mg/L		11/04/25 08:30	11/04/25 18:14	1
Iron	5.92		0.100	0.0500	mg/L		11/04/25 08:30	11/04/25 18:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	24.0		5.00	3.50	mg/L			11/03/25 11:48	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	505		5.00	2.50	mg/L			11/07/25 08:56	1

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: UW-10

Lab Sample ID: 310-319482-2

Date Collected: 10/30/25 10:33

Matrix: Water

Date Received: 10/31/25 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/04/25 15:45	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/04/25 15:45	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/04/25 15:45	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/04/25 15:45	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/04/25 15:45	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/04/25 15:45	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/04/25 15:45	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			11/04/25 15:45	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			11/04/25 15:45	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/04/25 15:45	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/04/25 15:45	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/04/25 15:45	1
1,4-Dichlorobenzene	9.03		1.00	0.230	ug/L			11/04/25 15:45	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/04/25 15:45	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/04/25 15:45	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/04/25 15:45	1
Acetone	3.52	J	10.0	3.10	ug/L			11/04/25 15:45	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/04/25 15:45	1
Benzene	2.74		0.500	0.220	ug/L			11/04/25 15:45	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/04/25 15:45	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/04/25 15:45	1
Bromoform	<5.00		5.00	0.780	ug/L			11/04/25 15:45	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/04/25 15:45	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/04/25 15:45	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/04/25 15:45	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/04/25 15:45	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/04/25 15:45	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/04/25 15:45	1
Chloroform	<3.00		3.00	1.30	ug/L			11/04/25 15:45	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/04/25 15:45	1
cis-1,2-Dichloroethene	0.233	J	1.00	0.210	ug/L			11/04/25 15:45	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/04/25 15:45	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/04/25 15:45	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/04/25 15:45	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/04/25 15:45	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/04/25 15:45	1
Styrene	<1.00		1.00	0.370	ug/L			11/04/25 15:45	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/04/25 15:45	1
Toluene	<1.00		1.00	0.430	ug/L			11/04/25 15:45	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/04/25 15:45	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/04/25 15:45	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/04/25 15:45	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/04/25 15:45	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/04/25 15:45	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/04/25 15:45	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/04/25 15:45	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/04/25 15:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	98		76 - 130		11/04/25 15:45	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: UW-10

Lab Sample ID: 310-319482-2

Date Collected: 10/30/25 10:33

Matrix: Water

Date Received: 10/31/25 16:50

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		11/04/25 15:45	1
4-Bromofluorobenzene (Surr)	101		80 - 120		11/04/25 15:45	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	810		20.0	8.40	mg/L			11/11/25 14:16	20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0290	mg/L		11/04/25 08:30	11/04/25 18:16	1
Antimony	<0.00200		0.00200	0.00100	mg/L		11/04/25 08:30	11/04/25 18:16	1
Arsenic	0.00660		0.00200	0.000530	mg/L		11/04/25 08:30	11/04/25 18:16	1
Barium	0.0682		0.00200	0.000660	mg/L		11/04/25 08:30	11/04/25 18:16	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/04/25 08:30	11/04/25 18:16	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/04/25 08:30	11/04/25 18:16	1
Chromium	<0.00500		0.00500	0.00180	mg/L		11/04/25 08:30	11/04/25 18:16	1
Cobalt	0.0361		0.000500	0.000170	mg/L		11/04/25 08:30	11/04/25 18:16	1
Copper	<0.00500		0.00500	0.00320	mg/L		11/04/25 08:30	11/04/25 18:16	1
Lead	<0.000500		0.000500	0.000330	mg/L		11/04/25 08:30	11/04/25 18:16	1
Nickel	<0.00500		0.00500	0.00230	mg/L		11/04/25 08:30	11/04/25 18:16	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/04/25 08:30	11/04/25 18:16	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/04/25 08:30	11/04/25 18:16	1
Thallium	<0.00100		0.00100	0.000570	mg/L		11/04/25 08:30	11/06/25 16:56	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		11/04/25 08:30	11/04/25 18:16	1
Zinc	<0.0200		0.0200	0.0130	mg/L		11/04/25 08:30	11/04/25 18:16	1
Iron	113		0.400	0.200	mg/L		11/04/25 08:30	11/06/25 16:59	4

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	136		30.0	21.0	mg/L			11/03/25 08:29	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	953		5.00	2.50	mg/L			11/07/25 08:56	1

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: UW-11

Lab Sample ID: 310-319482-3

Date Collected: 10/29/25 13:18

Matrix: Water

Date Received: 10/31/25 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/04/25 16:07	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/04/25 16:07	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/04/25 16:07	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/04/25 16:07	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/04/25 16:07	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/04/25 16:07	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/04/25 16:07	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			11/04/25 16:07	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			11/04/25 16:07	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/04/25 16:07	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/04/25 16:07	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/04/25 16:07	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/04/25 16:07	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/04/25 16:07	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/04/25 16:07	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/04/25 16:07	1
Acetone	<10.0		10.0	3.10	ug/L			11/04/25 16:07	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/04/25 16:07	1
Benzene	<0.500		0.500	0.220	ug/L			11/04/25 16:07	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/04/25 16:07	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/04/25 16:07	1
Bromoform	<5.00		5.00	0.780	ug/L			11/04/25 16:07	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/04/25 16:07	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/04/25 16:07	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/04/25 16:07	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/04/25 16:07	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/04/25 16:07	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/04/25 16:07	1
Chloroform	<3.00		3.00	1.30	ug/L			11/04/25 16:07	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/04/25 16:07	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/04/25 16:07	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/04/25 16:07	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/04/25 16:07	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/04/25 16:07	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/04/25 16:07	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/04/25 16:07	1
Styrene	<1.00		1.00	0.370	ug/L			11/04/25 16:07	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/04/25 16:07	1
Toluene	<1.00		1.00	0.430	ug/L			11/04/25 16:07	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/04/25 16:07	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/04/25 16:07	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/04/25 16:07	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/04/25 16:07	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/04/25 16:07	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/04/25 16:07	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/04/25 16:07	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/04/25 16:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	97		76 - 130		11/04/25 16:07	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: UW-11

Lab Sample ID: 310-319482-3

Date Collected: 10/29/25 13:18

Matrix: Water

Date Received: 10/31/25 16:50

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		11/04/25 16:07	1
4-Bromofluorobenzene (Surr)	103		80 - 120		11/04/25 16:07	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2110		100	42.0	mg/L			11/11/25 14:32	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0290	mg/L		11/04/25 08:30	11/04/25 18:19	1
Antimony	<0.00200		0.00200	0.00100	mg/L		11/04/25 08:30	11/04/25 18:19	1
Arsenic	0.00343		0.00200	0.000530	mg/L		11/04/25 08:30	11/04/25 18:19	1
Barium	0.0197		0.00200	0.000660	mg/L		11/04/25 08:30	11/04/25 18:19	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/04/25 08:30	11/04/25 18:19	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/04/25 08:30	11/04/25 18:19	1
Chromium	<0.00500		0.00500	0.00180	mg/L		11/04/25 08:30	11/04/25 18:19	1
Cobalt	0.0688		0.000500	0.000170	mg/L		11/04/25 08:30	11/04/25 18:19	1
Copper	<0.00500		0.00500	0.00320	mg/L		11/04/25 08:30	11/04/25 18:19	1
Lead	<0.000500		0.000500	0.000330	mg/L		11/04/25 08:30	11/04/25 18:19	1
Nickel	0.280		0.00500	0.00230	mg/L		11/04/25 08:30	11/04/25 18:19	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/04/25 08:30	11/04/25 18:19	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/04/25 08:30	11/04/25 18:19	1
Thallium	<0.00100		0.00100	0.000570	mg/L		11/04/25 08:30	11/06/25 17:02	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		11/04/25 08:30	11/04/25 18:19	1
Zinc	<0.0200		0.0200	0.0130	mg/L		11/04/25 08:30	11/04/25 18:19	1
Iron	23.5		0.100	0.0500	mg/L		11/04/25 08:30	11/04/25 18:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	14.0		7.50	5.25	mg/L			11/03/25 08:29	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	464		5.00	2.50	mg/L			11/07/25 08:56	1

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: PZ-14

Lab Sample ID: 310-319482-4

Date Collected: 10/29/25 12:13

Matrix: Water

Date Received: 10/31/25 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/04/25 16:29	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/04/25 16:29	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/04/25 16:29	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/04/25 16:29	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/04/25 16:29	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/04/25 16:29	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/04/25 16:29	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			11/04/25 16:29	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			11/04/25 16:29	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/04/25 16:29	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/04/25 16:29	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/04/25 16:29	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/04/25 16:29	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/04/25 16:29	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/04/25 16:29	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/04/25 16:29	1
Acetone	<10.0		10.0	3.10	ug/L			11/04/25 16:29	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/04/25 16:29	1
Benzene	<0.500		0.500	0.220	ug/L			11/04/25 16:29	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/04/25 16:29	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/04/25 16:29	1
Bromoform	<5.00		5.00	0.780	ug/L			11/04/25 16:29	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/04/25 16:29	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/04/25 16:29	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/04/25 16:29	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/04/25 16:29	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/04/25 16:29	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/04/25 16:29	1
Chloroform	<3.00		3.00	1.30	ug/L			11/04/25 16:29	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/04/25 16:29	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/04/25 16:29	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/04/25 16:29	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/04/25 16:29	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/04/25 16:29	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/04/25 16:29	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/04/25 16:29	1
Styrene	<1.00		1.00	0.370	ug/L			11/04/25 16:29	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/04/25 16:29	1
Toluene	<1.00		1.00	0.430	ug/L			11/04/25 16:29	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/04/25 16:29	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/04/25 16:29	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/04/25 16:29	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/04/25 16:29	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/04/25 16:29	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/04/25 16:29	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/04/25 16:29	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/04/25 16:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	97		76 - 130		11/04/25 16:29	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: PZ-14

Lab Sample ID: 310-319482-4

Date Collected: 10/29/25 12:13

Matrix: Water

Date Received: 10/31/25 16:50

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		11/04/25 16:29	1
4-Bromofluorobenzene (Surr)	102		80 - 120		11/04/25 16:29	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1450		100	42.0	mg/L			11/11/25 14:47	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0290	mg/L		11/04/25 08:30	11/04/25 18:21	1
Antimony	<0.00200		0.00200	0.00100	mg/L		11/04/25 08:30	11/04/25 18:21	1
Arsenic	0.00172	J	0.00200	0.000530	mg/L		11/04/25 08:30	11/04/25 18:21	1
Barium	0.0230		0.00200	0.000660	mg/L		11/04/25 08:30	11/04/25 18:21	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/04/25 08:30	11/04/25 18:21	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/04/25 08:30	11/04/25 18:21	1
Chromium	<0.00500		0.00500	0.00180	mg/L		11/04/25 08:30	11/04/25 18:21	1
Cobalt	0.00870		0.000500	0.000170	mg/L		11/04/25 08:30	11/04/25 18:21	1
Copper	<0.00500		0.00500	0.00320	mg/L		11/04/25 08:30	11/04/25 18:21	1
Lead	<0.000500		0.000500	0.000330	mg/L		11/04/25 08:30	11/04/25 18:21	1
Nickel	0.0136		0.00500	0.00230	mg/L		11/04/25 08:30	11/04/25 18:21	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/04/25 08:30	11/04/25 18:21	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/04/25 08:30	11/04/25 18:21	1
Thallium	<0.00100		0.00100	0.000570	mg/L		11/04/25 08:30	11/06/25 17:05	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		11/04/25 08:30	11/04/25 18:21	1
Zinc	0.0574		0.0200	0.0130	mg/L		11/04/25 08:30	11/04/25 18:21	1
Iron	209		0.400	0.200	mg/L		11/04/25 08:30	11/06/25 17:08	4

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	94.0		30.0	21.0	mg/L			11/03/25 08:29	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	36.9		5.00	2.50	mg/L			11/07/25 08:56	1

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-15

Lab Sample ID: 310-319482-5

Date Collected: 10/29/25 13:51

Matrix: Water

Date Received: 10/31/25 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/04/25 16:52	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/04/25 16:52	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/04/25 16:52	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/04/25 16:52	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/04/25 16:52	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/04/25 16:52	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/04/25 16:52	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			11/04/25 16:52	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			11/04/25 16:52	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/04/25 16:52	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/04/25 16:52	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/04/25 16:52	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/04/25 16:52	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/04/25 16:52	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/04/25 16:52	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/04/25 16:52	1
Acetone	<10.0		10.0	3.10	ug/L			11/04/25 16:52	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/04/25 16:52	1
Benzene	<0.500		0.500	0.220	ug/L			11/04/25 16:52	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/04/25 16:52	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/04/25 16:52	1
Bromoform	<5.00		5.00	0.780	ug/L			11/04/25 16:52	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/04/25 16:52	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/04/25 16:52	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/04/25 16:52	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/04/25 16:52	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/04/25 16:52	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/04/25 16:52	1
Chloroform	<3.00		3.00	1.30	ug/L			11/04/25 16:52	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/04/25 16:52	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/04/25 16:52	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/04/25 16:52	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/04/25 16:52	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/04/25 16:52	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/04/25 16:52	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/04/25 16:52	1
Styrene	<1.00		1.00	0.370	ug/L			11/04/25 16:52	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/04/25 16:52	1
Toluene	<1.00		1.00	0.430	ug/L			11/04/25 16:52	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/04/25 16:52	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/04/25 16:52	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/04/25 16:52	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/04/25 16:52	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/04/25 16:52	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/04/25 16:52	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/04/25 16:52	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/04/25 16:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	97		76 - 130		11/04/25 16:52	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-15

Lab Sample ID: 310-319482-5

Date Collected: 10/29/25 13:51

Matrix: Water

Date Received: 10/31/25 16:50

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		11/04/25 16:52	1
4-Bromofluorobenzene (Surr)	101		80 - 120		11/04/25 16:52	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	53.0		5.00	2.10	mg/L			11/11/25 15:03	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.0872		0.0500	0.0290	mg/L		11/04/25 08:30	11/14/25 17:11	1
Antimony	<0.00200		0.00200	0.00100	mg/L		11/04/25 08:30	11/14/25 17:11	1
Arsenic	0.000633	J	0.00200	0.000530	mg/L		11/04/25 08:30	11/14/25 17:11	1
Barium	0.125		0.00200	0.000660	mg/L		11/04/25 08:30	11/14/25 17:11	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/04/25 08:30	11/14/25 17:11	1
Cadmium	0.000103	J	0.000200	0.000100	mg/L		11/04/25 08:30	11/14/25 17:11	1
Chromium	<0.00500		0.00500	0.00180	mg/L		11/04/25 08:30	11/14/25 17:11	1
Cobalt	0.000790		0.000500	0.000170	mg/L		11/04/25 08:30	11/14/25 17:11	1
Copper	<0.00500		0.00500	0.00320	mg/L		11/04/25 08:30	11/14/25 17:11	1
Lead	<0.000500		0.000500	0.000330	mg/L		11/04/25 08:30	11/14/25 17:11	1
Nickel	<0.00500		0.00500	0.00230	mg/L		11/04/25 08:30	11/14/25 17:11	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/04/25 08:30	11/14/25 17:11	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/04/25 08:30	11/14/25 17:11	1
Thallium	<0.00100		0.00100	0.000570	mg/L		11/04/25 08:30	11/14/25 17:11	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		11/04/25 08:30	11/14/25 17:11	1
Zinc	<0.0200		0.0200	0.0130	mg/L		11/04/25 08:30	11/14/25 17:11	1
Iron	0.708		0.100	0.0500	mg/L		11/04/25 08:30	11/14/25 17:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	30.7		5.00	3.50	mg/L			11/03/25 08:29	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	220		5.00	2.50	mg/L			11/07/25 09:09	1

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-19

Lab Sample ID: 310-319482-6

Date Collected: 10/29/25 15:02

Matrix: Water

Date Received: 10/31/25 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/04/25 17:14	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/04/25 17:14	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/04/25 17:14	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/04/25 17:14	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/04/25 17:14	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/04/25 17:14	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/04/25 17:14	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			11/04/25 17:14	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			11/04/25 17:14	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/04/25 17:14	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/04/25 17:14	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/04/25 17:14	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/04/25 17:14	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/04/25 17:14	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/04/25 17:14	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/04/25 17:14	1
Acetone	<10.0		10.0	3.10	ug/L			11/04/25 17:14	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/04/25 17:14	1
Benzene	<0.500		0.500	0.220	ug/L			11/04/25 17:14	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/04/25 17:14	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/04/25 17:14	1
Bromoform	<5.00		5.00	0.780	ug/L			11/04/25 17:14	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/04/25 17:14	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/04/25 17:14	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/04/25 17:14	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/04/25 17:14	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/04/25 17:14	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/04/25 17:14	1
Chloroform	<3.00		3.00	1.30	ug/L			11/04/25 17:14	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/04/25 17:14	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/04/25 17:14	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/04/25 17:14	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/04/25 17:14	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/04/25 17:14	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/04/25 17:14	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/04/25 17:14	1
Styrene	<1.00		1.00	0.370	ug/L			11/04/25 17:14	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/04/25 17:14	1
Toluene	<1.00		1.00	0.430	ug/L			11/04/25 17:14	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/04/25 17:14	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/04/25 17:14	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/04/25 17:14	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/04/25 17:14	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/04/25 17:14	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/04/25 17:14	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/04/25 17:14	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/04/25 17:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	97		76 - 130		11/04/25 17:14	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-19

Lab Sample ID: 310-319482-6

Date Collected: 10/29/25 15:02

Matrix: Water

Date Received: 10/31/25 16:50

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		11/04/25 17:14	1
4-Bromofluorobenzene (Surr)	103		80 - 120		11/04/25 17:14	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	584		100	42.0	mg/L			11/11/25 15:50	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0290	mg/L		11/04/25 08:30	11/14/25 17:18	1
Antimony	0.00156	J	0.00200	0.00100	mg/L		11/04/25 08:30	11/14/25 17:18	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		11/04/25 08:30	11/14/25 17:18	1
Barium	0.0229		0.00200	0.000660	mg/L		11/04/25 08:30	11/14/25 17:18	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/04/25 08:30	11/14/25 17:18	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/04/25 08:30	11/14/25 17:18	1
Chromium	<0.00500		0.00500	0.00180	mg/L		11/04/25 08:30	11/14/25 17:18	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		11/04/25 08:30	11/14/25 17:18	1
Copper	<0.00500		0.00500	0.00320	mg/L		11/04/25 08:30	11/14/25 17:18	1
Lead	<0.000500		0.000500	0.000330	mg/L		11/04/25 08:30	11/14/25 17:18	1
Nickel	<0.00500		0.00500	0.00230	mg/L		11/04/25 08:30	11/14/25 17:18	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/04/25 08:30	11/14/25 17:18	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/04/25 08:30	11/14/25 17:18	1
Thallium	<0.00100		0.00100	0.000570	mg/L		11/04/25 08:30	11/14/25 17:18	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		11/04/25 08:30	11/14/25 17:18	1
Zinc	<0.0200		0.0200	0.0130	mg/L		11/04/25 08:30	11/14/25 17:18	1
Iron	<0.100		0.100	0.0500	mg/L		11/04/25 08:30	11/14/25 17:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	8.33		5.00	3.50	mg/L			11/03/25 08:29	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	342		5.00	2.50	mg/L			11/07/25 09:09	1

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: UW-21

Lab Sample ID: 310-319482-7

Date Collected: 10/29/25 14:28

Matrix: Water

Date Received: 10/31/25 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/04/25 17:36	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/04/25 17:36	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/04/25 17:36	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/04/25 17:36	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/04/25 17:36	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/04/25 17:36	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/04/25 17:36	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			11/04/25 17:36	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			11/04/25 17:36	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/04/25 17:36	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/04/25 17:36	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/04/25 17:36	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/04/25 17:36	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/04/25 17:36	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/04/25 17:36	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/04/25 17:36	1
Acetone	<10.0		10.0	3.10	ug/L			11/04/25 17:36	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/04/25 17:36	1
Benzene	<0.500		0.500	0.220	ug/L			11/04/25 17:36	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/04/25 17:36	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/04/25 17:36	1
Bromoform	<5.00		5.00	0.780	ug/L			11/04/25 17:36	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/04/25 17:36	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/04/25 17:36	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/04/25 17:36	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/04/25 17:36	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/04/25 17:36	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/04/25 17:36	1
Chloroform	<3.00		3.00	1.30	ug/L			11/04/25 17:36	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/04/25 17:36	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/04/25 17:36	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/04/25 17:36	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/04/25 17:36	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/04/25 17:36	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/04/25 17:36	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/04/25 17:36	1
Styrene	<1.00		1.00	0.370	ug/L			11/04/25 17:36	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/04/25 17:36	1
Toluene	<1.00		1.00	0.430	ug/L			11/04/25 17:36	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/04/25 17:36	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/04/25 17:36	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/04/25 17:36	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/04/25 17:36	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/04/25 17:36	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/04/25 17:36	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/04/25 17:36	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/04/25 17:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	96		76 - 130		11/04/25 17:36	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: UW-21

Lab Sample ID: 310-319482-7

Date Collected: 10/29/25 14:28

Matrix: Water

Date Received: 10/31/25 16:50

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		11/04/25 17:36	1
4-Bromofluorobenzene (Surr)	103		80 - 120		11/04/25 17:36	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	4080		100	42.0	mg/L			11/11/25 16:05	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	18.6		0.0500	0.0290	mg/L		11/04/25 08:30	11/14/25 17:21	1
Antimony	<0.00200		0.00200	0.00100	mg/L		11/04/25 08:30	11/14/25 17:21	1
Arsenic	0.00598		0.00200	0.000530	mg/L		11/04/25 08:30	11/14/25 17:21	1
Barium	0.0127		0.00200	0.000660	mg/L		11/04/25 08:30	11/14/25 17:21	1
Beryllium	0.0161		0.00100	0.000330	mg/L		11/04/25 08:30	11/14/25 17:21	1
Cadmium	0.00301		0.000200	0.000100	mg/L		11/04/25 08:30	11/14/25 17:21	1
Chromium	0.00843		0.00500	0.00180	mg/L		11/04/25 08:30	11/14/25 17:21	1
Cobalt	1.53		0.00250	0.000850	mg/L		11/04/25 08:30	11/17/25 13:26	5
Copper	0.0353		0.00500	0.00320	mg/L		11/04/25 08:30	11/14/25 17:21	1
Lead	0.00362		0.000500	0.000330	mg/L		11/04/25 08:30	11/14/25 17:21	1
Nickel	1.37		0.00500	0.00230	mg/L		11/04/25 08:30	11/14/25 17:21	1
Selenium	0.0180		0.00500	0.00140	mg/L		11/04/25 08:30	11/14/25 17:21	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/04/25 08:30	11/14/25 17:21	1
Thallium	<0.00100		0.00100	0.000570	mg/L		11/04/25 08:30	11/14/25 17:21	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		11/04/25 08:30	11/14/25 17:21	1
Zinc	0.409		0.0200	0.0130	mg/L		11/04/25 08:30	11/14/25 17:21	1
Iron	102		0.500	0.250	mg/L		11/04/25 08:30	11/17/25 13:26	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	27.3		5.00	3.50	mg/L			11/03/25 08:29	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	<5.00		5.00	2.50	mg/L			11/07/25 09:09	1

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-23

Lab Sample ID: 310-319482-8

Date Collected: 10/29/25 12:49

Matrix: Water

Date Received: 10/31/25 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/04/25 00:12	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/04/25 00:12	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/04/25 00:12	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/04/25 00:12	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/04/25 00:12	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/04/25 00:12	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/04/25 00:12	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			11/04/25 00:12	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			11/04/25 00:12	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/04/25 00:12	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/04/25 00:12	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/04/25 00:12	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/04/25 00:12	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/04/25 00:12	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/04/25 00:12	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/04/25 00:12	1
Acetone	<10.0		10.0	3.10	ug/L			11/04/25 00:12	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/04/25 00:12	1
Benzene	<0.500		0.500	0.220	ug/L			11/04/25 00:12	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/04/25 00:12	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/04/25 00:12	1
Bromoform	<5.00		5.00	0.780	ug/L			11/04/25 00:12	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/04/25 00:12	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/04/25 00:12	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/04/25 00:12	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/04/25 00:12	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/04/25 00:12	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/04/25 00:12	1
Chloroform	<3.00		3.00	1.30	ug/L			11/04/25 00:12	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/04/25 00:12	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/04/25 00:12	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/04/25 00:12	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/04/25 00:12	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/04/25 00:12	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/04/25 00:12	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/04/25 00:12	1
Styrene	<1.00		1.00	0.370	ug/L			11/04/25 00:12	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/04/25 00:12	1
Toluene	<1.00		1.00	0.430	ug/L			11/04/25 00:12	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/04/25 00:12	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/04/25 00:12	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/04/25 00:12	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/04/25 00:12	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/04/25 00:12	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/04/25 00:12	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/04/25 00:12	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/04/25 00:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	96		76 - 130		11/04/25 00:12	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-23

Lab Sample ID: 310-319482-8

Date Collected: 10/29/25 12:49

Matrix: Water

Date Received: 10/31/25 16:50

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		11/04/25 00:12	1
4-Bromofluorobenzene (Surr)	104		80 - 120		11/04/25 00:12	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	4600		100	42.0	mg/L			11/11/25 16:21	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2.74		0.0500	0.0290	mg/L		11/04/25 08:30	11/14/25 17:24	1
Antimony	<0.00200		0.00200	0.00100	mg/L		11/04/25 08:30	11/14/25 17:24	1
Arsenic	0.00260		0.00200	0.000530	mg/L		11/04/25 08:30	11/14/25 17:24	1
Barium	0.0138		0.00200	0.000660	mg/L		11/04/25 08:30	11/14/25 17:24	1
Beryllium	0.00141		0.00100	0.000330	mg/L		11/04/25 08:30	11/14/25 17:24	1
Cadmium	0.00232		0.000200	0.000100	mg/L		11/04/25 08:30	11/14/25 17:24	1
Chromium	<0.00500		0.00500	0.00180	mg/L		11/04/25 08:30	11/14/25 17:24	1
Cobalt	1.25		0.00200	0.000680	mg/L		11/04/25 08:30	11/17/25 13:28	4
Copper	<0.00500		0.00500	0.00320	mg/L		11/04/25 08:30	11/14/25 17:24	1
Lead	0.000496	J	0.000500	0.000330	mg/L		11/04/25 08:30	11/14/25 17:24	1
Nickel	1.15		0.00500	0.00230	mg/L		11/04/25 08:30	11/14/25 17:24	1
Selenium	0.00321	J	0.00500	0.00140	mg/L		11/04/25 08:30	11/14/25 17:24	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/04/25 08:30	11/14/25 17:24	1
Thallium	<0.00100		0.00100	0.000570	mg/L		11/04/25 08:30	11/14/25 17:24	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		11/04/25 08:30	11/14/25 17:24	1
Zinc	0.607		0.0200	0.0130	mg/L		11/04/25 08:30	11/14/25 17:24	1
Iron	219		0.400	0.200	mg/L		11/04/25 08:30	11/17/25 13:28	4

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	13.3		5.00	3.50	mg/L			11/03/25 08:29	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	125		5.00	2.50	mg/L			11/07/25 09:11	1

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-24

Lab Sample ID: 310-319482-9

Date Collected: 10/29/25 15:43

Matrix: Water

Date Received: 10/31/25 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/04/25 00:34	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/04/25 00:34	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/04/25 00:34	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/04/25 00:34	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/04/25 00:34	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/04/25 00:34	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/04/25 00:34	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			11/04/25 00:34	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			11/04/25 00:34	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/04/25 00:34	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/04/25 00:34	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/04/25 00:34	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/04/25 00:34	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/04/25 00:34	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/04/25 00:34	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/04/25 00:34	1
Acetone	<10.0		10.0	3.10	ug/L			11/04/25 00:34	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/04/25 00:34	1
Benzene	<0.500		0.500	0.220	ug/L			11/04/25 00:34	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/04/25 00:34	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/04/25 00:34	1
Bromoform	<5.00		5.00	0.780	ug/L			11/04/25 00:34	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/04/25 00:34	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/04/25 00:34	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/04/25 00:34	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/04/25 00:34	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/04/25 00:34	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/04/25 00:34	1
Chloroform	<3.00		3.00	1.30	ug/L			11/04/25 00:34	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/04/25 00:34	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/04/25 00:34	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/04/25 00:34	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/04/25 00:34	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/04/25 00:34	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/04/25 00:34	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/04/25 00:34	1
Styrene	<1.00		1.00	0.370	ug/L			11/04/25 00:34	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/04/25 00:34	1
Toluene	<1.00		1.00	0.430	ug/L			11/04/25 00:34	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/04/25 00:34	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/04/25 00:34	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/04/25 00:34	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/04/25 00:34	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/04/25 00:34	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/04/25 00:34	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/04/25 00:34	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/04/25 00:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	95		76 - 130		11/04/25 00:34	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-24

Lab Sample ID: 310-319482-9

Date Collected: 10/29/25 15:43

Matrix: Water

Date Received: 10/31/25 16:50

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		11/04/25 00:34	1
4-Bromofluorobenzene (Surr)	102		80 - 120		11/04/25 00:34	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2070		100	42.0	mg/L			11/11/25 16:36	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	57.7		0.0500	0.0290	mg/L		11/04/25 08:30	11/14/25 17:26	1
Antimony	<0.00200		0.00200	0.00100	mg/L		11/04/25 08:30	11/14/25 17:26	1
Arsenic	0.00388		0.00200	0.000530	mg/L		11/04/25 08:30	11/14/25 17:26	1
Barium	0.00722		0.00200	0.000660	mg/L		11/04/25 08:30	11/14/25 17:26	1
Beryllium	0.0156		0.00100	0.000330	mg/L		11/04/25 08:30	11/14/25 17:26	1
Cadmium	0.0181		0.000200	0.000100	mg/L		11/04/25 08:30	11/14/25 17:26	1
Chromium	0.00381	J	0.00500	0.00180	mg/L		11/04/25 08:30	11/14/25 17:26	1
Cobalt	0.358		0.000500	0.000170	mg/L		11/04/25 08:30	11/14/25 17:26	1
Copper	0.00749		0.00500	0.00320	mg/L		11/04/25 08:30	11/14/25 17:26	1
Lead	0.000842		0.000500	0.000330	mg/L		11/04/25 08:30	11/14/25 17:26	1
Nickel	0.622		0.00500	0.00230	mg/L		11/04/25 08:30	11/14/25 17:26	1
Selenium	0.0142		0.00500	0.00140	mg/L		11/04/25 08:30	11/14/25 17:26	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/04/25 08:30	11/14/25 17:26	1
Thallium	0.000669	J	0.00100	0.000570	mg/L		11/04/25 08:30	11/14/25 17:26	1
Vanadium	0.00216	J	0.00500	0.00170	mg/L		11/04/25 08:30	11/14/25 17:26	1
Zinc	1.99		0.0200	0.0130	mg/L		11/04/25 08:30	11/14/25 17:26	1
Iron	115		0.400	0.200	mg/L		11/04/25 08:30	11/17/25 13:31	4

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	7.00		5.00	3.50	mg/L			11/03/25 08:29	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	<5.00		5.00	2.50	mg/L			11/07/25 09:11	1

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: MW-D

Lab Sample ID: 310-319482-10

Date Collected: 10/29/25 12:13

Matrix: Water

Date Received: 10/31/25 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/04/25 00:56	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/04/25 00:56	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/04/25 00:56	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/04/25 00:56	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/04/25 00:56	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/04/25 00:56	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/04/25 00:56	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			11/04/25 00:56	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			11/04/25 00:56	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/04/25 00:56	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/04/25 00:56	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/04/25 00:56	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/04/25 00:56	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/04/25 00:56	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/04/25 00:56	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/04/25 00:56	1
Acetone	<10.0		10.0	3.10	ug/L			11/04/25 00:56	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/04/25 00:56	1
Benzene	<0.500		0.500	0.220	ug/L			11/04/25 00:56	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/04/25 00:56	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/04/25 00:56	1
Bromoform	<5.00		5.00	0.780	ug/L			11/04/25 00:56	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/04/25 00:56	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/04/25 00:56	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/04/25 00:56	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/04/25 00:56	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/04/25 00:56	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/04/25 00:56	1
Chloroform	<3.00		3.00	1.30	ug/L			11/04/25 00:56	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/04/25 00:56	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/04/25 00:56	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/04/25 00:56	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/04/25 00:56	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/04/25 00:56	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/04/25 00:56	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/04/25 00:56	1
Styrene	<1.00		1.00	0.370	ug/L			11/04/25 00:56	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/04/25 00:56	1
Toluene	<1.00		1.00	0.430	ug/L			11/04/25 00:56	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/04/25 00:56	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/04/25 00:56	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/04/25 00:56	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/04/25 00:56	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/04/25 00:56	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/04/25 00:56	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/04/25 00:56	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/04/25 00:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	97		76 - 130		11/04/25 00:56	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: MW-D

Lab Sample ID: 310-319482-10

Date Collected: 10/29/25 12:13

Matrix: Water

Date Received: 10/31/25 16:50

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		11/04/25 00:56	1
4-Bromofluorobenzene (Surr)	102		80 - 120		11/04/25 00:56	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1470		100	42.0	mg/L			11/11/25 16:52	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0290	mg/L		11/04/25 08:30	11/14/25 17:29	1
Antimony	<0.00200		0.00200	0.00100	mg/L		11/04/25 08:30	11/14/25 17:29	1
Arsenic	0.00226		0.00200	0.000530	mg/L		11/04/25 08:30	11/14/25 17:29	1
Barium	0.0232		0.00200	0.000660	mg/L		11/04/25 08:30	11/14/25 17:29	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/04/25 08:30	11/14/25 17:29	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/04/25 08:30	11/14/25 17:29	1
Chromium	<0.00500		0.00500	0.00180	mg/L		11/04/25 08:30	11/14/25 17:29	1
Cobalt	0.00973		0.000500	0.000170	mg/L		11/04/25 08:30	11/14/25 17:29	1
Copper	<0.00500		0.00500	0.00320	mg/L		11/04/25 08:30	11/14/25 17:29	1
Lead	<0.000500		0.000500	0.000330	mg/L		11/04/25 08:30	11/14/25 17:29	1
Nickel	0.0173		0.00500	0.00230	mg/L		11/04/25 08:30	11/14/25 17:29	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/04/25 08:30	11/14/25 17:29	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/04/25 08:30	11/14/25 17:29	1
Thallium	<0.00100		0.00100	0.000570	mg/L		11/04/25 08:30	11/14/25 17:29	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		11/04/25 08:30	11/14/25 17:29	1
Zinc	0.0693		0.0200	0.0130	mg/L		11/04/25 08:30	11/14/25 17:29	1
Iron	244		0.400	0.200	mg/L		11/04/25 08:30	11/17/25 13:34	4

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	109		15.0	10.5	mg/L			11/03/25 08:29	1
Total Alkalinity as CaCO3 to pH 4.5 (SM 2320B)	36.9		5.00	2.50	mg/L			11/07/25 09:11	1

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: Trip Blank 1

Lab Sample ID: 310-319482-11

Date Collected: 10/29/25 00:00

Matrix: Water

Date Received: 10/31/25 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/04/25 11:18	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/04/25 11:18	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/04/25 11:18	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/04/25 11:18	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/04/25 11:18	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/04/25 11:18	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/04/25 11:18	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			11/04/25 11:18	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			11/04/25 11:18	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/04/25 11:18	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/04/25 11:18	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/04/25 11:18	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/04/25 11:18	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/04/25 11:18	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/04/25 11:18	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/04/25 11:18	1
Acetone	<10.0		10.0	3.10	ug/L			11/04/25 11:18	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/04/25 11:18	1
Benzene	<0.500		0.500	0.220	ug/L			11/04/25 11:18	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/04/25 11:18	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/04/25 11:18	1
Bromoform	<5.00		5.00	0.780	ug/L			11/04/25 11:18	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/04/25 11:18	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/04/25 11:18	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/04/25 11:18	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/04/25 11:18	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/04/25 11:18	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/04/25 11:18	1
Chloroform	<3.00		3.00	1.30	ug/L			11/04/25 11:18	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/04/25 11:18	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/04/25 11:18	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/04/25 11:18	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/04/25 11:18	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/04/25 11:18	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/04/25 11:18	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/04/25 11:18	1
Styrene	<1.00		1.00	0.370	ug/L			11/04/25 11:18	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/04/25 11:18	1
Toluene	<1.00		1.00	0.430	ug/L			11/04/25 11:18	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/04/25 11:18	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/04/25 11:18	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/04/25 11:18	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/04/25 11:18	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/04/25 11:18	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/04/25 11:18	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/04/25 11:18	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/04/25 11:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	97		76 - 130		11/04/25 11:18	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers

Job ID: 310-319482-1

Project/Site: Mahaska 2nd 2025 B&S HMSP

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: Trip Blank 1

Lab Sample ID: 310-319482-11

Date Collected: 10/29/25 00:00

Matrix: Water

Date Received: 10/31/25 16:50

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Toluene-d8 (Surr)</i>	96		80 - 120		11/04/25 11:18	1
<i>4-Bromofluorobenzene (Surr)</i>	103		80 - 120		11/04/25 11:18	1

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: Trip Blank 2

Lab Sample ID: 310-319482-12

Date Collected: 10/29/25 00:00

Matrix: Water

Date Received: 10/31/25 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/04/25 11:41	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/04/25 11:41	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/04/25 11:41	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/04/25 11:41	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/04/25 11:41	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/04/25 11:41	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/04/25 11:41	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			11/04/25 11:41	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			11/04/25 11:41	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/04/25 11:41	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/04/25 11:41	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/04/25 11:41	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/04/25 11:41	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/04/25 11:41	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/04/25 11:41	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/04/25 11:41	1
Acetone	<10.0		10.0	3.10	ug/L			11/04/25 11:41	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/04/25 11:41	1
Benzene	<0.500		0.500	0.220	ug/L			11/04/25 11:41	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/04/25 11:41	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/04/25 11:41	1
Bromoform	<5.00		5.00	0.780	ug/L			11/04/25 11:41	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/04/25 11:41	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/04/25 11:41	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/04/25 11:41	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/04/25 11:41	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/04/25 11:41	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/04/25 11:41	1
Chloroform	<3.00		3.00	1.30	ug/L			11/04/25 11:41	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/04/25 11:41	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/04/25 11:41	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/04/25 11:41	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/04/25 11:41	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/04/25 11:41	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/04/25 11:41	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/04/25 11:41	1
Styrene	<1.00		1.00	0.370	ug/L			11/04/25 11:41	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/04/25 11:41	1
Toluene	<1.00		1.00	0.430	ug/L			11/04/25 11:41	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/04/25 11:41	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/04/25 11:41	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/04/25 11:41	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/04/25 11:41	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/04/25 11:41	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/04/25 11:41	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/04/25 11:41	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/04/25 11:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	97		76 - 130		11/04/25 11:41	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers

Job ID: 310-319482-1

Project/Site: Mahaska 2nd 2025 B&S HMSP

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: Trip Blank 2

Lab Sample ID: 310-319482-12

Date Collected: 10/29/25 00:00

Matrix: Water

Date Received: 10/31/25 16:50

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		11/04/25 11:41	1
4-Bromofluorobenzene (Surr)	103		80 - 120		11/04/25 11:41	1

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: Trip Blank 3

Lab Sample ID: 310-319482-13

Date Collected: 10/29/25 00:00

Matrix: Water

Date Received: 10/31/25 16:50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/04/25 12:03	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/04/25 12:03	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/04/25 12:03	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/04/25 12:03	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/04/25 12:03	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/04/25 12:03	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/04/25 12:03	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			11/04/25 12:03	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			11/04/25 12:03	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/04/25 12:03	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/04/25 12:03	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/04/25 12:03	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/04/25 12:03	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/04/25 12:03	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/04/25 12:03	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/04/25 12:03	1
Acetone	<10.0		10.0	3.10	ug/L			11/04/25 12:03	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/04/25 12:03	1
Benzene	<0.500		0.500	0.220	ug/L			11/04/25 12:03	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/04/25 12:03	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/04/25 12:03	1
Bromoform	<5.00		5.00	0.780	ug/L			11/04/25 12:03	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/04/25 12:03	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/04/25 12:03	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/04/25 12:03	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/04/25 12:03	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/04/25 12:03	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/04/25 12:03	1
Chloroform	<3.00		3.00	1.30	ug/L			11/04/25 12:03	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/04/25 12:03	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/04/25 12:03	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/04/25 12:03	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/04/25 12:03	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/04/25 12:03	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/04/25 12:03	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/04/25 12:03	1
Styrene	<1.00		1.00	0.370	ug/L			11/04/25 12:03	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/04/25 12:03	1
Toluene	<1.00		1.00	0.430	ug/L			11/04/25 12:03	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/04/25 12:03	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/04/25 12:03	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/04/25 12:03	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/04/25 12:03	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/04/25 12:03	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/04/25 12:03	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/04/25 12:03	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/04/25 12:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	96		76 - 130		11/04/25 12:03	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: Trip Blank 3
Date Collected: 10/29/25 00:00
Date Received: 10/31/25 16:50

Lab Sample ID: 310-319482-13
Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		11/04/25 12:03	1
4-Bromofluorobenzene (Surr)	102		80 - 120		11/04/25 12:03	1

Definitions/Glossary

Client: SCS Engineers

Job ID: 310-319482-1

Project/Site: Mahaska 2nd 2025 B&S HMSP

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Qualifiers

GC/MS VOA

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

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
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

Surrogate Summary

Client: SCS Engineers

Job ID: 310-319482-1

Project/Site: Mahaska 2nd 2025 B&S HMSP

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (76-130)	TOL (80-120)	BFB (80-120)
310-319482-1	DW-8	96	99	104
310-319482-1 MS	DW-8	101	99	100
310-319482-1 MSD	DW-8	101	99	101
310-319482-2	UW-10	98	96	101
310-319482-3	UW-11	97	96	103
310-319482-4	PZ-14	97	98	102
310-319482-5	DW-15	97	97	101
310-319482-6	DW-19	97	96	103
310-319482-7	UW-21	96	97	103
310-319482-8	DW-23	96	98	104
310-319482-9	DW-24	95	98	102
310-319482-10	MW-D	97	97	102
310-319482-11	Trip Blank 1	97	96	103
310-319482-12	Trip Blank 2	97	98	103
310-319482-13	Trip Blank 3	96	97	102
LCS 310-472241/6	Lab Control Sample	102	100	102
LCS 310-472241/7	Lab Control Sample	98	98	102
LCS 310-472244/6	Lab Control Sample	103	98	100
LCS 310-472244/7	Lab Control Sample	95	98	102
MB 310-472241/5	Method Blank	96	97	104
MB 310-472244/5	Method Blank	96	96	101

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: SCS Engineers

Job ID: 310-319482-1

Project/Site: Mahaska 2nd 2025 B&S HMSP

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: MB 310-472241/5

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 472241

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/03/25 22:43	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/03/25 22:43	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/03/25 22:43	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/03/25 22:43	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/03/25 22:43	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/03/25 22:43	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/03/25 22:43	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			11/03/25 22:43	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			11/03/25 22:43	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/03/25 22:43	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/03/25 22:43	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/03/25 22:43	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/03/25 22:43	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/03/25 22:43	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/03/25 22:43	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/03/25 22:43	1
Acetone	<10.0		10.0	3.10	ug/L			11/03/25 22:43	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/03/25 22:43	1
Benzene	<0.500		0.500	0.220	ug/L			11/03/25 22:43	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/03/25 22:43	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/03/25 22:43	1
Bromoform	<5.00		5.00	0.780	ug/L			11/03/25 22:43	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/03/25 22:43	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/03/25 22:43	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/03/25 22:43	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/03/25 22:43	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/03/25 22:43	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/03/25 22:43	1
Chloroform	<3.00		3.00	1.30	ug/L			11/03/25 22:43	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/03/25 22:43	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/03/25 22:43	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/03/25 22:43	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/03/25 22:43	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/03/25 22:43	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/03/25 22:43	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/03/25 22:43	1
Styrene	<1.00		1.00	0.370	ug/L			11/03/25 22:43	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/03/25 22:43	1
Toluene	<1.00		1.00	0.430	ug/L			11/03/25 22:43	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/03/25 22:43	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/03/25 22:43	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/03/25 22:43	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/03/25 22:43	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/03/25 22:43	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/03/25 22:43	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/03/25 22:43	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/03/25 22:43	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: MB 310-472241/5

Matrix: Water

Analysis Batch: 472241

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	96		76 - 130		11/03/25 22:43	1
Toluene-d8 (Surr)	97		80 - 120		11/03/25 22:43	1
4-Bromofluorobenzene (Surr)	104		80 - 120		11/03/25 22:43	1

Lab Sample ID: LCS 310-472241/6

Matrix: Water

Analysis Batch: 472241

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	20.0	18.58		ug/L		93	70 - 121
1,1,1-Trichloroethane	20.0	17.01		ug/L		85	69 - 130
1,1,2,2-Tetrachloroethane	20.0	16.97		ug/L		85	70 - 122
1,1,2-Trichloroethane	20.0	17.63		ug/L		88	75 - 121
1,1-Dichloroethane	20.0	16.60		ug/L		83	69 - 127
1,1-Dichloroethene	20.0	17.01		ug/L		85	64 - 134
1,2,3-Trichloropropane	20.0	17.97		ug/L		90	70 - 122
1,2-Dibromo-3-chloropropane	20.0	17.10		ug/L		86	62 - 132
1,2-Dibromoethane (EDB)	20.0	17.58		ug/L		88	74 - 122
1,2-Dichlorobenzene	20.0	18.06		ug/L		90	74 - 120
1,2-Dichloroethane	20.0	16.93		ug/L		85	68 - 125
1,2-Dichloropropane	20.0	16.10		ug/L		80	72 - 128
1,4-Dichlorobenzene	20.0	17.89		ug/L		89	72 - 120
2-Butanone (MEK)	40.0	26.67		ug/L		67	60 - 134
2-Hexanone	40.0	29.31		ug/L		73	62 - 139
4-Methyl-2-pentanone (MIBK)	40.0	29.89		ug/L		75	62 - 136
Acetone	40.0	28.56		ug/L		71	59 - 136
Acrylonitrile	200	158.5		ug/L		79	50 - 150
Benzene	20.0	16.72		ug/L		84	71 - 125
Bromochloromethane	20.0	18.74		ug/L		94	69 - 131
Bromodichloromethane	20.0	16.54		ug/L		83	70 - 122
Bromoform	20.0	17.90		ug/L		90	62 - 122
Carbon disulfide	20.0	16.20		ug/L		81	58 - 137
Carbon tetrachloride	20.0	16.59		ug/L		83	63 - 136
Chlorobenzene	20.0	17.81		ug/L		89	74 - 120
Chlorodibromomethane	20.0	17.28		ug/L		86	69 - 121
Chloroform	20.0	16.89		ug/L		84	72 - 122
cis-1,2-Dichloroethene	20.0	18.04		ug/L		90	72 - 123
cis-1,3-Dichloropropene	20.0	15.80		ug/L		79	72 - 123
Dibromomethane	20.0	17.55		ug/L		88	72 - 122
Ethylbenzene	20.0	17.34		ug/L		87	75 - 120
Iodomethane	20.0	15.38		ug/L		77	18 - 150
Methylene chloride	20.0	16.09		ug/L		80	72 - 128
Styrene	20.0	18.20		ug/L		91	74 - 122
Tetrachloroethene	20.0	18.73		ug/L		94	70 - 128
Toluene	20.0	17.50		ug/L		88	74 - 120
trans-1,2-Dichloroethene	20.0	18.07		ug/L		90	67 - 127
trans-1,3-Dichloropropene	20.0	16.10		ug/L		80	67 - 123
trans-1,4-Dichloro-2-butene	20.0	15.54		ug/L		78	50 - 150

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers

Job ID: 310-319482-1

Project/Site: Mahaska 2nd 2025 B&S HMSP

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: LCS 310-472241/6

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 472241

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Trichloroethene	20.0	16.97		ug/L		85	70 - 128
Vinyl acetate	40.0	26.33		ug/L		66	50 - 150
Xylenes, Total	40.0	35.42		ug/L		89	74 - 121

Surrogate	%Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	102		76 - 130
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120

Lab Sample ID: LCS 310-472241/7

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 472241

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	18.95		ug/L		95	33 - 138
Chloroethane	20.0	19.28		ug/L		96	59 - 139
Chloromethane	20.0	18.81		ug/L		94	52 - 146
Trichlorofluoromethane	20.0	21.00		ug/L		105	55 - 150
Vinyl chloride	20.0	19.56		ug/L		98	60 - 142

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

Lab Sample ID: MB 310-472244/5

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 472244

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/04/25 09:28	1
1,1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/04/25 09:28	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/04/25 09:28	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/04/25 09:28	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/04/25 09:28	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/04/25 09:28	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/04/25 09:28	1
1,2-Dibromo-3-chloropropane	<5.00		5.00	1.20	ug/L			11/04/25 09:28	1
1,2-Dibromoethane (EDB)	<1.00		1.00	0.340	ug/L			11/04/25 09:28	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/04/25 09:28	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/04/25 09:28	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/04/25 09:28	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/04/25 09:28	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/04/25 09:28	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/04/25 09:28	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/04/25 09:28	1
Acetone	<10.0		10.0	3.10	ug/L			11/04/25 09:28	1
Acrylonitrile	<5.00		5.00	2.20	ug/L			11/04/25 09:28	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: MB 310-472244/5

Matrix: Water

Analysis Batch: 472244

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.500		0.500	0.220	ug/L			11/04/25 09:28	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/04/25 09:28	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/04/25 09:28	1
Bromoform	<5.00		5.00	0.780	ug/L			11/04/25 09:28	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/04/25 09:28	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/04/25 09:28	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/04/25 09:28	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/04/25 09:28	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/04/25 09:28	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/04/25 09:28	1
Chloroform	<3.00		3.00	1.30	ug/L			11/04/25 09:28	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/04/25 09:28	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/04/25 09:28	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/04/25 09:28	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/04/25 09:28	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/04/25 09:28	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/04/25 09:28	1
Methylene chloride	<5.00		5.00	1.70	ug/L			11/04/25 09:28	1
Styrene	<1.00		1.00	0.370	ug/L			11/04/25 09:28	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/04/25 09:28	1
Toluene	<1.00		1.00	0.430	ug/L			11/04/25 09:28	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/04/25 09:28	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/04/25 09:28	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/04/25 09:28	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/04/25 09:28	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/04/25 09:28	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/04/25 09:28	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/04/25 09:28	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/04/25 09:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	96		76 - 130		11/04/25 09:28	1
Toluene-d8 (Surr)	96		80 - 120		11/04/25 09:28	1
4-Bromofluorobenzene (Surr)	101		80 - 120		11/04/25 09:28	1

Lab Sample ID: LCS 310-472244/6

Matrix: Water

Analysis Batch: 472244

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	20.0	17.75		ug/L		89	70 - 121
1,1,1,1-Trichloroethane	20.0	16.26		ug/L		81	69 - 130
1,1,2,2-Tetrachloroethane	20.0	16.44		ug/L		82	70 - 122
1,1,2-Trichloroethane	20.0	16.70		ug/L		84	75 - 121
1,1-Dichloroethane	20.0	16.45		ug/L		82	69 - 127
1,1-Dichloroethene	20.0	16.28		ug/L		81	64 - 134
1,2,3-Trichloropropane	20.0	17.28		ug/L		86	70 - 122
1,2-Dibromo-3-chloropropane	20.0	16.14		ug/L		81	62 - 132

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QC Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: LCS 310-472244/6

Matrix: Water

Analysis Batch: 472244

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	20.0	17.20		ug/L		86	74 - 122
1,2-Dichlorobenzene	20.0	17.34		ug/L		87	74 - 120
1,2-Dichloroethane	20.0	16.60		ug/L		83	68 - 125
1,2-Dichloropropane	20.0	15.41		ug/L		77	72 - 128
1,4-Dichlorobenzene	20.0	17.25		ug/L		86	72 - 120
2-Butanone (MEK)	40.0	27.30		ug/L		68	60 - 134
2-Hexanone	40.0	28.62		ug/L		72	62 - 139
4-Methyl-2-pentanone (MIBK)	40.0	29.36		ug/L		73	62 - 136
Acetone	40.0	29.46		ug/L		74	59 - 136
Acrylonitrile	200	155.3		ug/L		78	50 - 150
Benzene	20.0	16.23		ug/L		81	71 - 125
Bromochloromethane	20.0	18.04		ug/L		90	69 - 131
Bromodichloromethane	20.0	15.87		ug/L		79	70 - 122
Bromoform	20.0	16.22		ug/L		81	62 - 122
Carbon disulfide	20.0	15.86		ug/L		79	58 - 137
Carbon tetrachloride	20.0	16.38		ug/L		82	63 - 136
Chlorobenzene	20.0	17.09		ug/L		85	74 - 120
Chlorodibromomethane	20.0	16.81		ug/L		84	69 - 121
Chloroform	20.0	16.34		ug/L		82	72 - 122
cis-1,2-Dichloroethene	20.0	17.60		ug/L		88	72 - 123
cis-1,3-Dichloropropene	20.0	14.73		ug/L		74	72 - 123
Dibromomethane	20.0	17.26		ug/L		86	72 - 122
Ethylbenzene	20.0	16.88		ug/L		84	75 - 120
Iodomethane	20.0	16.10		ug/L		80	18 - 150
Methylene chloride	20.0	15.66		ug/L		78	72 - 128
Styrene	20.0	17.39		ug/L		87	74 - 122
Tetrachloroethene	20.0	18.05		ug/L		90	70 - 128
Toluene	20.0	16.79		ug/L		84	74 - 120
trans-1,2-Dichloroethene	20.0	17.29		ug/L		86	67 - 127
trans-1,3-Dichloropropene	20.0	14.93		ug/L		75	67 - 123
trans-1,4-Dichloro-2-butene	20.0	13.06		ug/L		65	50 - 150
Trichloroethene	20.0	16.82		ug/L		84	70 - 128
Vinyl acetate	40.0	24.55		ug/L		61	50 - 150
Xylenes, Total	40.0	34.01		ug/L		85	74 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	103		76 - 130
Toluene-d8 (Surr)	98		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120

Lab Sample ID: LCS 310-472244/7

Matrix: Water

Analysis Batch: 472244

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	16.77		ug/L		84	33 - 138
Chloroethane	20.0	18.25		ug/L		91	59 - 139
Chloromethane	20.0	16.79		ug/L		84	52 - 146

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QC Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: LCS 310-472244/7

Matrix: Water

Analysis Batch: 472244

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Trichlorofluoromethane	20.0	18.57		ug/L		93	55 - 150
Vinyl chloride	20.0	17.15		ug/L		86	60 - 142

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	95		76 - 130
Toluene-d8 (Surr)	98		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120

Lab Sample ID: 310-319482-1 MS

Matrix: Water

Analysis Batch: 472244

Client Sample ID: DW-8

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	<1.00		20.0	18.87		ug/L		94	55 - 121
1,1,1,1-Trichloroethane	<1.00		20.0	17.78		ug/L		89	53 - 130
1,1,1,2,2-Tetrachloroethane	<1.00		20.0	18.45		ug/L		92	55 - 123
1,1,1,2-Trichloroethane	<1.00		20.0	18.18		ug/L		91	60 - 121
1,1-Dichloroethane	<1.00		20.0	18.75		ug/L		94	53 - 127
1,1-Dichloroethene	<2.00		20.0	17.87		ug/L		89	51 - 134
1,2,3-Trichloropropane	<1.00		20.0	19.19		ug/L		96	56 - 122
1,2-Dibromo-3-chloropropane	<5.00		20.0	17.92		ug/L		90	44 - 138
1,2-Dibromoethane (EDB)	<1.00		20.0	18.51		ug/L		93	60 - 122
1,2-Dichlorobenzene	<1.00		20.0	18.52		ug/L		93	60 - 120
1,2-Dichloroethane	<1.00		20.0	18.08		ug/L		90	48 - 128
1,2-Dichloropropane	<1.00		20.0	16.78		ug/L		84	59 - 128
1,4-Dichlorobenzene	<1.00		20.0	18.16		ug/L		91	58 - 120
2-Butanone (MEK)	<10.0		40.0	29.67		ug/L		74	46 - 134
2-Hexanone	<10.0		40.0	31.82		ug/L		80	46 - 141
4-Methyl-2-pentanone (MIBK)	<10.0		40.0	32.54		ug/L		81	49 - 138
Acetone	<10.0		40.0	33.46		ug/L		84	39 - 141
Acrylonitrile	<5.00		200	169.5		ug/L		85	41 - 150
Benzene	<0.500		20.0	17.53		ug/L		88	48 - 125
Bromochloromethane	<5.00		20.0	19.87		ug/L		99	55 - 131
Bromodichloromethane	<1.00		20.0	17.27		ug/L		86	53 - 122
Bromoform	<5.00		20.0	18.51		ug/L		93	47 - 122
Carbon disulfide	<1.00		20.0	17.87		ug/L		89	45 - 137
Carbon tetrachloride	<2.00		20.0	17.94		ug/L		90	45 - 136
Chlorobenzene	<1.00		20.0	17.88		ug/L		89	59 - 120
Chlorodibromomethane	<5.00		20.0	18.07		ug/L		90	53 - 121
Chloroform	<3.00		20.0	17.66		ug/L		88	52 - 122
cis-1,2-Dichloroethene	0.528 J		20.0	19.38		ug/L		94	51 - 123
cis-1,3-Dichloropropene	<5.00		20.0	15.44		ug/L		77	55 - 123
Dibromomethane	<1.00		20.0	18.86		ug/L		94	57 - 122
Ethylbenzene	<1.00		20.0	17.53		ug/L		88	53 - 120
Iodomethane	<10.0		20.0	15.09		ug/L		75	18 - 150
Methylene chloride	<5.00		20.0	17.44		ug/L		87	59 - 128
Styrene	<1.00		20.0	18.42		ug/L		92	50 - 125
Tetrachloroethene	<1.00		20.0	18.79		ug/L		94	51 - 128

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QC Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: 310-319482-1 MS

Matrix: Water

Analysis Batch: 472244

Client Sample ID: DW-8

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Toluene	<1.00		20.0	17.75		ug/L		89	52 - 120
trans-1,2-Dichloroethene	<1.00		20.0	19.06		ug/L		95	53 - 127
trans-1,3-Dichloropropene	<5.00		20.0	15.57		ug/L		78	50 - 123
trans-1,4-Dichloro-2-butene	<10.0		20.0	15.15		ug/L		76	28 - 150
Trichloroethene	<1.00		20.0	17.49		ug/L		87	50 - 128
Vinyl acetate	<10.0		40.0	28.58		ug/L		71	31 - 150
Xylenes, Total	<3.00		40.0	35.31		ug/L		88	50 - 122
Surrogate	MS %Recovery	MS Qualifier	Limits						
Dibromofluoromethane (Surr)	101		76 - 130						
Toluene-d8 (Surr)	99		80 - 120						
4-Bromofluorobenzene (Surr)	100		80 - 120						

Lab Sample ID: 310-319482-1 MSD

Matrix: Water

Analysis Batch: 472244

Client Sample ID: DW-8

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	<1.00		20.0	18.86		ug/L		94	55 - 121	0	20
1,1,1-Trichloroethane	<1.00		20.0	17.54		ug/L		88	53 - 130	1	20
1,1,2,2-Tetrachloroethane	<1.00		20.0	18.46		ug/L		92	55 - 123	0	20
1,1,2-Trichloroethane	<1.00		20.0	17.93		ug/L		90	60 - 121	1	20
1,1-Dichloroethane	<1.00		20.0	18.60		ug/L		93	53 - 127	1	20
1,1-Dichloroethene	<2.00		20.0	17.77		ug/L		89	51 - 134	1	20
1,2,3-Trichloropropane	<1.00		20.0	19.20		ug/L		96	56 - 122	0	21
1,2-Dibromo-3-chloropropane	<5.00		20.0	18.95		ug/L		95	44 - 138	6	24
1,2-Dibromoethane (EDB)	<1.00		20.0	18.49		ug/L		92	60 - 122	0	20
1,2-Dichlorobenzene	<1.00		20.0	19.33		ug/L		97	60 - 120	4	20
1,2-Dichloroethane	<1.00		20.0	17.87		ug/L		89	48 - 128	1	20
1,2-Dichloropropene	<1.00		20.0	16.40		ug/L		82	59 - 128	2	20
1,4-Dichlorobenzene	<1.00		20.0	18.75		ug/L		94	58 - 120	3	20
2-Butanone (MEK)	<10.0		40.0	30.48		ug/L		76	46 - 134	3	23
2-Hexanone	<10.0		40.0	31.49		ug/L		79	46 - 141	1	20
4-Methyl-2-pentanone (MIBK)	<10.0		40.0	32.78		ug/L		82	49 - 138	1	20
Acetone	<10.0		40.0	32.73		ug/L		82	39 - 141	2	23
Acrylonitrile	<5.00		200	173.0		ug/L		87	41 - 150	2	20
Benzene	<0.500		20.0	17.12		ug/L		86	48 - 125	2	20
Bromochloromethane	<5.00		20.0	19.52		ug/L		98	55 - 131	2	21
Bromodichloromethane	<1.00		20.0	17.05		ug/L		85	53 - 122	1	20
Bromoform	<5.00		20.0	18.67		ug/L		93	47 - 122	1	20
Carbon disulfide	<1.00		20.0	16.48		ug/L		82	45 - 137	8	24
Carbon tetrachloride	<2.00		20.0	17.86		ug/L		89	45 - 136	0	20
Chlorobenzene	<1.00		20.0	18.22		ug/L		91	59 - 120	2	20
Chlorodibromomethane	<5.00		20.0	17.86		ug/L		89	53 - 121	1	20
Chloroform	<3.00		20.0	17.39		ug/L		87	52 - 122	2	20
cis-1,2-Dichloroethene	0.528	J	20.0	19.31		ug/L		94	51 - 123	0	20
cis-1,3-Dichloropropene	<5.00		20.0	15.57		ug/L		78	55 - 123	1	20
Dibromomethane	<1.00		20.0	18.51		ug/L		93	57 - 122	2	20

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QC Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: 310-319482-1 MSD

Matrix: Water

Analysis Batch: 472244

Client Sample ID: DW-8

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethylbenzene	<1.00		20.0	17.98		ug/L		90	53 - 120	3	20
Iodomethane	<10.0		20.0	16.31		ug/L		82	18 - 150	8	32
Methylene chloride	<5.00		20.0	17.06		ug/L		85	59 - 128	2	20
Styrene	<1.00		20.0	18.68		ug/L		93	50 - 125	1	20
Tetrachloroethene	<1.00		20.0	19.67		ug/L		98	51 - 128	5	20
Toluene	<1.00		20.0	17.56		ug/L		88	52 - 120	1	20
trans-1,2-Dichloroethene	<1.00		20.0	18.84		ug/L		94	53 - 127	1	20
trans-1,3-Dichloropropene	<5.00		20.0	15.58		ug/L		78	50 - 123	0	20
trans-1,4-Dichloro-2-butene	<10.0		20.0	14.64		ug/L		73	28 - 150	3	24
Trichloroethene	<1.00		20.0	17.24		ug/L		86	50 - 128	1	20
Vinyl acetate	<10.0		40.0	27.92		ug/L		70	31 - 150	2	25
Xylenes, Total	<3.00		40.0	36.42		ug/L		91	50 - 122	3	20

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

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-473327/3

Matrix: Water

Analysis Batch: 473327

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<1.00		1.00	0.420	mg/L			11/11/25 10:07	1

Lab Sample ID: LCS 310-473327/4

Matrix: Water

Analysis Batch: 473327

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	10.0	9.953		mg/L		100	90 - 110

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-472275/1-A

Matrix: Water

Analysis Batch: 472467

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 472275

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0290	mg/L		11/04/25 08:30	11/04/25 17:12	1
Antimony	<0.00200		0.00200	0.00100	mg/L		11/04/25 08:30	11/04/25 17:12	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		11/04/25 08:30	11/04/25 17:12	1
Barium	<0.00200		0.00200	0.000660	mg/L		11/04/25 08:30	11/04/25 17:12	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/04/25 08:30	11/04/25 17:12	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/04/25 08:30	11/04/25 17:12	1
Chromium	<0.00500		0.00500	0.00180	mg/L		11/04/25 08:30	11/04/25 17:12	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		11/04/25 08:30	11/04/25 17:12	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: MB 310-472275/1-A

Matrix: Water

Analysis Batch: 472467

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 472275

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.00500		0.00500	0.00320	mg/L		11/04/25 08:30	11/04/25 17:12	1
Lead	<0.000500		0.000500	0.000330	mg/L		11/04/25 08:30	11/04/25 17:12	1
Nickel	<0.00500		0.00500	0.00230	mg/L		11/04/25 08:30	11/04/25 17:12	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/04/25 08:30	11/04/25 17:12	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/04/25 08:30	11/04/25 17:12	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		11/04/25 08:30	11/04/25 17:12	1
Zinc	<0.0200		0.0200	0.0130	mg/L		11/04/25 08:30	11/04/25 17:12	1
Iron	<0.100		0.100	0.0500	mg/L		11/04/25 08:30	11/04/25 17:12	1

Lab Sample ID: MB 310-472275/1-A

Matrix: Water

Analysis Batch: 472771

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 472275

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	<0.00100		0.00100	0.000570	mg/L		11/04/25 08:30	11/06/25 16:05	1

Lab Sample ID: LCS 310-472275/2-A

Matrix: Water

Analysis Batch: 472467

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 472275

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.200	0.1737		mg/L		87	80 - 120
Antimony	0.200	0.2011		mg/L		101	80 - 120
Arsenic	0.200	0.1753		mg/L		88	80 - 120
Barium	0.100	0.08543		mg/L		85	80 - 120
Beryllium	0.100	0.08421		mg/L		84	80 - 120
Cadmium	0.100	0.08420		mg/L		84	80 - 120
Chromium	0.100	0.09133		mg/L		91	80 - 120
Cobalt	0.100	0.09214		mg/L		92	80 - 120
Copper	0.200	0.1799		mg/L		90	80 - 120
Lead	0.200	0.1752		mg/L		88	80 - 120
Nickel	0.200	0.1734		mg/L		87	80 - 120
Selenium	0.400	0.3426		mg/L		86	80 - 120
Silver	0.100	0.1060		mg/L		106	80 - 120
Vanadium	0.100	0.09042		mg/L		90	80 - 120
Zinc	0.200	0.1631		mg/L		82	80 - 120
Iron	0.200	0.1817		mg/L		91	80 - 120

Lab Sample ID: LCS 310-472275/2-A

Matrix: Water

Analysis Batch: 472771

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 472275

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thallium	0.100	0.1078		mg/L		108	80 - 120

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers

Job ID: 310-319482-1

Project/Site: Mahaska 2nd 2025 B&S HMSP

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: MB 310-472276/1-A

Matrix: Water

Analysis Batch: 473706

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 472276

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.0500		0.0500	0.0290	mg/L		11/04/25 08:30	11/14/25 16:17	1
Antimony	<0.00200		0.00200	0.00100	mg/L		11/04/25 08:30	11/14/25 16:17	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		11/04/25 08:30	11/14/25 16:17	1
Barium	<0.00200		0.00200	0.000660	mg/L		11/04/25 08:30	11/14/25 16:17	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/04/25 08:30	11/14/25 16:17	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/04/25 08:30	11/14/25 16:17	1
Chromium	<0.00500		0.00500	0.00180	mg/L		11/04/25 08:30	11/14/25 16:17	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		11/04/25 08:30	11/14/25 16:17	1
Copper	<0.00500		0.00500	0.00320	mg/L		11/04/25 08:30	11/14/25 16:17	1
Lead	<0.000500		0.000500	0.000330	mg/L		11/04/25 08:30	11/14/25 16:17	1
Nickel	<0.00500		0.00500	0.00230	mg/L		11/04/25 08:30	11/14/25 16:17	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/04/25 08:30	11/14/25 16:17	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/04/25 08:30	11/14/25 16:17	1
Thallium	<0.00100		0.00100	0.000570	mg/L		11/04/25 08:30	11/14/25 16:17	1
Vanadium	<0.00500		0.00500	0.00170	mg/L		11/04/25 08:30	11/14/25 16:17	1
Zinc	<0.0200		0.0200	0.0130	mg/L		11/04/25 08:30	11/14/25 16:17	1
Iron	<0.100		0.100	0.0500	mg/L		11/04/25 08:30	11/14/25 16:17	1

Lab Sample ID: LCS 310-472276/2-A

Matrix: Water

Analysis Batch: 473706

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 472276

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aluminum	0.200	0.1945		mg/L		97	80 - 120
Antimony	0.200	0.2128		mg/L		106	80 - 120
Arsenic	0.200	0.1983		mg/L		99	80 - 120
Barium	0.100	0.09447		mg/L		94	80 - 120
Beryllium	0.100	0.1005		mg/L		100	80 - 120
Cadmium	0.100	0.09536		mg/L		95	80 - 120
Chromium	0.100	0.1013		mg/L		101	80 - 120
Cobalt	0.100	0.1048		mg/L		105	80 - 120
Copper	0.200	0.2042		mg/L		102	80 - 120
Lead	0.200	0.2038		mg/L		102	80 - 120
Nickel	0.200	0.2029		mg/L		101	80 - 120
Selenium	0.400	0.3707		mg/L		93	80 - 120
Silver	0.100	0.1163		mg/L		116	80 - 120
Thallium	0.100	0.09510		mg/L		95	80 - 120
Vanadium	0.100	0.1003		mg/L		100	80 - 120
Zinc	0.200	0.2036		mg/L		102	80 - 120
Iron	0.200	0.2176		mg/L		109	80 - 120

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

Lab Sample ID: MB 310-472181/1

Matrix: Water

Analysis Batch: 472181

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.50	mg/L			11/03/25 08:29	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

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

Lab Sample ID: LCS 310-472181/2

Matrix: Water

Analysis Batch: 472181

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	101.0		mg/L		101	82 - 117

Lab Sample ID: MB 310-472235/1

Matrix: Water

Analysis Batch: 472235

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.50	mg/L			11/03/25 11:48	1

Lab Sample ID: LCS 310-472235/2

Matrix: Water

Analysis Batch: 472235

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	100.0		mg/L		100	82 - 117

Method: SM 2320B - Alkalinity

Lab Sample ID: LCS 310-472785/1

Matrix: Water

Analysis Batch: 472785

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity as CaCO ₃ to pH 4.5	1000	1019		mg/L		102	85 - 115

Lab Sample ID: LCS 310-472785/24

Matrix: Water

Analysis Batch: 472785

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Alkalinity as CaCO ₃ to pH 4.5	1000	1021		mg/L		102	85 - 115

QC Association Summary

Client: SCS Engineers

Job ID: 310-319482-1

Project/Site: Mahaska 2nd 2025 B&S HMSP

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

GC/MS VOA

Analysis Batch: 472241

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-319482-8	DW-23	Total/NA	Water	8260D	
310-319482-9	DW-24	Total/NA	Water	8260D	
310-319482-10	MW-D	Total/NA	Water	8260D	
MB 310-472241/5	Method Blank	Total/NA	Water	8260D	
LCS 310-472241/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-472241/7	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 472244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-319482-1	DW-8	Total/NA	Water	8260D	
310-319482-2	UW-10	Total/NA	Water	8260D	
310-319482-3	UW-11	Total/NA	Water	8260D	
310-319482-4	PZ-14	Total/NA	Water	8260D	
310-319482-5	DW-15	Total/NA	Water	8260D	
310-319482-6	DW-19	Total/NA	Water	8260D	
310-319482-7	UW-21	Total/NA	Water	8260D	
310-319482-11	Trip Blank 1	Total/NA	Water	8260D	
310-319482-12	Trip Blank 2	Total/NA	Water	8260D	
310-319482-13	Trip Blank 3	Total/NA	Water	8260D	
MB 310-472244/5	Method Blank	Total/NA	Water	8260D	
LCS 310-472244/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-472244/7	Lab Control Sample	Total/NA	Water	8260D	
310-319482-1 MS	DW-8	Total/NA	Water	8260D	
310-319482-1 MSD	DW-8	Total/NA	Water	8260D	

HPLC/IC

Analysis Batch: 473327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-319482-1	DW-8	Total/NA	Water	9056A	
310-319482-2	UW-10	Total/NA	Water	9056A	
310-319482-3	UW-11	Total/NA	Water	9056A	
310-319482-4	PZ-14	Total/NA	Water	9056A	
310-319482-5	DW-15	Total/NA	Water	9056A	
310-319482-6	DW-19	Total/NA	Water	9056A	
310-319482-7	UW-21	Total/NA	Water	9056A	
310-319482-8	DW-23	Total/NA	Water	9056A	
310-319482-9	DW-24	Total/NA	Water	9056A	
310-319482-10	MW-D	Total/NA	Water	9056A	
MB 310-473327/3	Method Blank	Total/NA	Water	9056A	
LCS 310-473327/4	Lab Control Sample	Total/NA	Water	9056A	

Metals

Prep Batch: 472275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-319482-1	DW-8	Total/NA	Water	3005A	
310-319482-2	UW-10	Total/NA	Water	3005A	
310-319482-3	UW-11	Total/NA	Water	3005A	
310-319482-4	PZ-14	Total/NA	Water	3005A	
MB 310-472275/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-472275/2-A	Lab Control Sample	Total/NA	Water	3005A	

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers

Job ID: 310-319482-1

Project/Site: Mahaska 2nd 2025 B&S HMSP

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Metals

Prep Batch: 472276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-319482-5	DW-15	Total/NA	Water	3005A	
310-319482-6	DW-19	Total/NA	Water	3005A	
310-319482-7	UW-21	Total/NA	Water	3005A	
310-319482-8	DW-23	Total/NA	Water	3005A	
310-319482-9	DW-24	Total/NA	Water	3005A	
310-319482-10	MW-D	Total/NA	Water	3005A	
MB 310-472276/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-472276/2-A	Lab Control Sample	Total/NA	Water	3005A	

Analysis Batch: 472467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-319482-1	DW-8	Total/NA	Water	6020B	472275
310-319482-2	UW-10	Total/NA	Water	6020B	472275
310-319482-3	UW-11	Total/NA	Water	6020B	472275
310-319482-4	PZ-14	Total/NA	Water	6020B	472275
MB 310-472275/1-A	Method Blank	Total/NA	Water	6020B	472275
LCS 310-472275/2-A	Lab Control Sample	Total/NA	Water	6020B	472275

Analysis Batch: 472771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-319482-1	DW-8	Total/NA	Water	6020B	472275
310-319482-2	UW-10	Total/NA	Water	6020B	472275
310-319482-2	UW-10	Total/NA	Water	6020B	472275
310-319482-3	UW-11	Total/NA	Water	6020B	472275
310-319482-4	PZ-14	Total/NA	Water	6020B	472275
310-319482-4	PZ-14	Total/NA	Water	6020B	472275
MB 310-472275/1-A	Method Blank	Total/NA	Water	6020B	472275
LCS 310-472275/2-A	Lab Control Sample	Total/NA	Water	6020B	472275

Analysis Batch: 473706

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-319482-5	DW-15	Total/NA	Water	6020B	472276
310-319482-6	DW-19	Total/NA	Water	6020B	472276
310-319482-7	UW-21	Total/NA	Water	6020B	472276
310-319482-8	DW-23	Total/NA	Water	6020B	472276
310-319482-9	DW-24	Total/NA	Water	6020B	472276
310-319482-10	MW-D	Total/NA	Water	6020B	472276
MB 310-472276/1-A	Method Blank	Total/NA	Water	6020B	472276
LCS 310-472276/2-A	Lab Control Sample	Total/NA	Water	6020B	472276

Analysis Batch: 473842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-319482-7	UW-21	Total/NA	Water	6020B	472276
310-319482-8	DW-23	Total/NA	Water	6020B	472276
310-319482-9	DW-24	Total/NA	Water	6020B	472276
310-319482-10	MW-D	Total/NA	Water	6020B	472276

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

General Chemistry

Analysis Batch: 472181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-319482-2	UW-10	Total/NA	Water	I-3765-85	
310-319482-3	UW-11	Total/NA	Water	I-3765-85	
310-319482-4	PZ-14	Total/NA	Water	I-3765-85	
310-319482-5	DW-15	Total/NA	Water	I-3765-85	
310-319482-6	DW-19	Total/NA	Water	I-3765-85	
310-319482-7	UW-21	Total/NA	Water	I-3765-85	
310-319482-8	DW-23	Total/NA	Water	I-3765-85	
310-319482-9	DW-24	Total/NA	Water	I-3765-85	
310-319482-10	MW-D	Total/NA	Water	I-3765-85	
MB 310-472181/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-472181/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 472235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-319482-1	DW-8	Total/NA	Water	I-3765-85	
MB 310-472235/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-472235/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 472785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-319482-1	DW-8	Total/NA	Water	SM 2320B	
310-319482-2	UW-10	Total/NA	Water	SM 2320B	
310-319482-3	UW-11	Total/NA	Water	SM 2320B	
310-319482-4	PZ-14	Total/NA	Water	SM 2320B	
310-319482-5	DW-15	Total/NA	Water	SM 2320B	
310-319482-6	DW-19	Total/NA	Water	SM 2320B	
310-319482-7	UW-21	Total/NA	Water	SM 2320B	
310-319482-8	DW-23	Total/NA	Water	SM 2320B	
310-319482-9	DW-24	Total/NA	Water	SM 2320B	
310-319482-10	MW-D	Total/NA	Water	SM 2320B	
LCS 310-472785/1	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 310-472785/24	Lab Control Sample	Total/NA	Water	SM 2320B	

Lab Chronicle

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: DW-8

Lab Sample ID: 310-319482-1

Date Collected: 10/30/25 09:41

Matrix: Water

Date Received: 10/31/25 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	472244	FE5V	EET CF	11/04/25 15:23
Total/NA	Analysis	9056A		5	473327	HE7K	EET CF	11/11/25 14:00
Total/NA	Prep	3005A			472275	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		1	472467	NFT2	EET CF	11/04/25 18:14
Total/NA	Prep	3005A			472275	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		1	472771	NFT2	EET CF	11/06/25 16:53
Total/NA	Analysis	I-3765-85		1	472235	DGU1	EET CF	11/03/25 11:48
Total/NA	Analysis	SM 2320B		1	472785	HE7K	EET CF	11/07/25 08:56

Client Sample ID: UW-10

Lab Sample ID: 310-319482-2

Date Collected: 10/30/25 10:33

Matrix: Water

Date Received: 10/31/25 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	472244	FE5V	EET CF	11/04/25 15:45
Total/NA	Analysis	9056A		20	473327	HE7K	EET CF	11/11/25 14:16
Total/NA	Prep	3005A			472275	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		1	472467	NFT2	EET CF	11/04/25 18:16
Total/NA	Prep	3005A			472275	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		1	472771	NFT2	EET CF	11/06/25 16:56
Total/NA	Prep	3005A			472275	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		4	472771	NFT2	EET CF	11/06/25 16:59
Total/NA	Analysis	I-3765-85		1	472181	DGU1	EET CF	11/03/25 08:29
Total/NA	Analysis	SM 2320B		1	472785	HE7K	EET CF	11/07/25 08:56

Client Sample ID: UW-11

Lab Sample ID: 310-319482-3

Date Collected: 10/29/25 13:18

Matrix: Water

Date Received: 10/31/25 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	472244	FE5V	EET CF	11/04/25 16:07
Total/NA	Analysis	9056A		100	473327	HE7K	EET CF	11/11/25 14:32
Total/NA	Prep	3005A			472275	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		1	472467	NFT2	EET CF	11/04/25 18:19
Total/NA	Prep	3005A			472275	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		1	472771	NFT2	EET CF	11/06/25 17:02
Total/NA	Analysis	I-3765-85		1	472181	DGU1	EET CF	11/03/25 08:29
Total/NA	Analysis	SM 2320B		1	472785	HE7K	EET CF	11/07/25 08:56

Lab Chronicle

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: PZ-14

Lab Sample ID: 310-319482-4

Date Collected: 10/29/25 12:13

Matrix: Water

Date Received: 10/31/25 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	472244	FE5V	EET CF	11/04/25 16:29
Total/NA	Analysis	9056A		100	473327	HE7K	EET CF	11/11/25 14:47
Total/NA	Prep	3005A			472275	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		1	472467	NFT2	EET CF	11/04/25 18:21
Total/NA	Prep	3005A			472275	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		1	472771	NFT2	EET CF	11/06/25 17:05
Total/NA	Prep	3005A			472275	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		4	472771	NFT2	EET CF	11/06/25 17:08
Total/NA	Analysis	I-3765-85		1	472181	DGU1	EET CF	11/03/25 08:29
Total/NA	Analysis	SM 2320B		1	472785	HE7K	EET CF	11/07/25 08:56

Client Sample ID: DW-15

Lab Sample ID: 310-319482-5

Date Collected: 10/29/25 13:51

Matrix: Water

Date Received: 10/31/25 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	472244	FE5V	EET CF	11/04/25 16:52
Total/NA	Analysis	9056A		5	473327	HE7K	EET CF	11/11/25 15:03
Total/NA	Prep	3005A			472276	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		1	473706	ZRI4	EET CF	11/14/25 17:11
Total/NA	Analysis	I-3765-85		1	472181	DGU1	EET CF	11/03/25 08:29
Total/NA	Analysis	SM 2320B		1	472785	HE7K	EET CF	11/07/25 09:09

Client Sample ID: DW-19

Lab Sample ID: 310-319482-6

Date Collected: 10/29/25 15:02

Matrix: Water

Date Received: 10/31/25 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	472244	FE5V	EET CF	11/04/25 17:14
Total/NA	Analysis	9056A		100	473327	HE7K	EET CF	11/11/25 15:50
Total/NA	Prep	3005A			472276	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		1	473706	ZRI4	EET CF	11/14/25 17:18
Total/NA	Analysis	I-3765-85		1	472181	DGU1	EET CF	11/03/25 08:29
Total/NA	Analysis	SM 2320B		1	472785	HE7K	EET CF	11/07/25 09:09

Client Sample ID: UW-21

Lab Sample ID: 310-319482-7

Date Collected: 10/29/25 14:28

Matrix: Water

Date Received: 10/31/25 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	472244	FE5V	EET CF	11/04/25 17:36
Total/NA	Analysis	9056A		100	473327	HE7K	EET CF	11/11/25 16:05
Total/NA	Prep	3005A			472276	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		1	473706	ZRI4	EET CF	11/14/25 17:21

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: UW-21

Lab Sample ID: 310-319482-7

Date Collected: 10/29/25 14:28

Matrix: Water

Date Received: 10/31/25 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			472276	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		5	473842	NFT2	EET CF	11/17/25 13:26
Total/NA	Analysis	I-3765-85		1	472181	DGU1	EET CF	11/03/25 08:29
Total/NA	Analysis	SM 2320B		1	472785	HE7K	EET CF	11/07/25 09:09

Client Sample ID: DW-23

Lab Sample ID: 310-319482-8

Date Collected: 10/29/25 12:49

Matrix: Water

Date Received: 10/31/25 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	472241	FE5V	EET CF	11/04/25 00:12
Total/NA	Analysis	9056A		100	473327	HE7K	EET CF	11/11/25 16:21
Total/NA	Prep	3005A			472276	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		1	473706	ZRI4	EET CF	11/14/25 17:24
Total/NA	Prep	3005A			472276	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		4	473842	NFT2	EET CF	11/17/25 13:28
Total/NA	Analysis	I-3765-85		1	472181	DGU1	EET CF	11/03/25 08:29
Total/NA	Analysis	SM 2320B		1	472785	HE7K	EET CF	11/07/25 09:11

Client Sample ID: DW-24

Lab Sample ID: 310-319482-9

Date Collected: 10/29/25 15:43

Matrix: Water

Date Received: 10/31/25 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	472241	FE5V	EET CF	11/04/25 00:34
Total/NA	Analysis	9056A		100	473327	HE7K	EET CF	11/11/25 16:36
Total/NA	Prep	3005A			472276	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		1	473706	ZRI4	EET CF	11/14/25 17:26
Total/NA	Prep	3005A			472276	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		4	473842	NFT2	EET CF	11/17/25 13:31
Total/NA	Analysis	I-3765-85		1	472181	DGU1	EET CF	11/03/25 08:29
Total/NA	Analysis	SM 2320B		1	472785	HE7K	EET CF	11/07/25 09:11

Client Sample ID: MW-D

Lab Sample ID: 310-319482-10

Date Collected: 10/29/25 12:13

Matrix: Water

Date Received: 10/31/25 16:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	472241	FE5V	EET CF	11/04/25 00:56
Total/NA	Analysis	9056A		100	473327	HE7K	EET CF	11/11/25 16:52
Total/NA	Prep	3005A			472276	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		1	473706	ZRI4	EET CF	11/14/25 17:29
Total/NA	Prep	3005A			472276	RLT9	EET CF	11/04/25 08:30
Total/NA	Analysis	6020B		4	473842	NFT2	EET CF	11/17/25 13:34

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Client Sample ID: MW-D
Date Collected: 10/29/25 12:13
Date Received: 10/31/25 16:50

Lab Sample ID: 310-319482-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	I-3765-85		1	472181	DGU1	EET CF	11/03/25 08:29
Total/NA	Analysis	SM 2320B		1	472785	HE7K	EET CF	11/07/25 09:11

Client Sample ID: Trip Blank 1
Date Collected: 10/29/25 00:00
Date Received: 10/31/25 16:50

Lab Sample ID: 310-319482-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	472244	FE5V	EET CF	11/04/25 11:18

Client Sample ID: Trip Blank 2
Date Collected: 10/29/25 00:00
Date Received: 10/31/25 16:50

Lab Sample ID: 310-319482-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	472244	FE5V	EET CF	11/04/25 11:41

Client Sample ID: Trip Blank 3
Date Collected: 10/29/25 00:00
Date Received: 10/31/25 16:50

Lab Sample ID: 310-319482-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	472244	FE5V	EET CF	11/04/25 12:03

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: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1
SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Laboratory: Eurofins Cedar Falls

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

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

1
2
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15

Method Summary

Client: SCS Engineers

Project/Site: Mahaska 2nd 2025 B&S HMSP

Job ID: 310-319482-1

SDG: Mahaska County Sanitary Landfill, Binns & Stevens

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
9056A	Anions, Ion Chromatography	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
SM 2320B	Alkalinity	SM	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF

Protocol References:

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



310-319482 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>ScS</u>			
City/State:	CITY <u>W. Pes Mahes</u>	STATE <u>MA</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>10-31-16</u>	TIME <u>1650</u>	Received By: <u>PH</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? ↓
<u>DW-8, VW-10, DW-24</u>			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>CC</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>-0.7</u>		Corrected Temp (°C): <u>-0.7</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 <u>W. Des Moines</u>	STATE <u>IA</u>	Project.
Receipt Information			
Date/Time Received:	DATE <u>10-31-16</u>	TIME <u>1650</u>	Received By: <u>PH</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>UW-11, PZ-14, DW-15, MW-D</u>			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>CC</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>0.8</u>		Corrected Temp (°C): <u>0.8</u>	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ 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 <u>W. Des Moines</u>	STATE <u>IA</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>10-31-15</u>	TIME <u>1650</u>	Received By: <u>PH</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>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>DP-19, UW-21, DW-23</u>			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other _____ ☐ NONE			
Thermometer ID: <u>CC</u>		Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>1-5</u>		Corrected Temp (°C): <u>1.5</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			

Regulatory Program: ☐ DW ☐ NPDES ☒ RCRA ☐ Other

Project Manager: Nathan Oht		Site Contact: Joe Farris		Date:		COC No:	
Email: nohtn@scsengineers.com		Lab Contact: Sam Miller		Carrier:		1 of 1 COCs	
Cell: (319) 331-9613						Sampler	
SCS Engineers						For Lab Use Only: Walk-in Client Lab Sampling	
West Des Moines, IA 50265						Job / SDG No	
						Sample Specific Notes	
Project Name: Mahaska 2nd 2025 B&S HMSP							
Site: Mahaska County Sanitary Landfill, Binns & Stevens							
PO # 27224360 26							
Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	
DW-8	10-30-25	0941		G	W		
UW-9R				G	W		
US-9RA				G	W		
UW-10	10-30-25	1033		G	W		
UW-11	10-29-25	1318		G	W		
PZ-14	10-29-25	1213		G	W		
DW-15	10-29-25	1351		G	W		
DW-19	10-29-25	1502		G	W		
UW-21	10-29-25	1428		G	W		
DW-23	10-29-25	1249		G	W		
DW-24	10-29-25	1543		G	W		
MW-D	10-29-25	1213		G	W		
GU-1				G	W		
Trip Blank							
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other							
Possible Hazard Identification:							
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.							
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown							
Special Instructions/QC Requirements & Comments:							
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No		Cooler Temp. (°C) Obs'd		Therm ID No.	
Relinquished by: <i>Nathan Oht</i>		Company: SCS		Received by:		Date/Time: 10-31-25 / 1400	
Relinquished by:		Company:		Received by:		Date/Time:	
Relinquished by:		Company:		Received in Laboratory by: <i>[Signature]</i>		Date/Time: 10-31-25 / 1650	

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-319482-1

SDG Number: Mahaska County Sanitary Landfill, Binns & Stevens

Login Number: 319482

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Hirsch, Preston

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 B-2
Data Validation Documentation

Completed by: Nathan Ohrt
Date of Sampling: 5/22-23/2025
Lab Report Date: 6/9/2025
Site Name: Mahaska County Sanitary Landfill - Binns & Stevens MSWLF Unit
Project Type: HMSP - 1st 2025 Semi-Annual
Lab Report Number: 310-307213

OK NO N/A NOTES

Sample Collection and Sample Handling

Chain of Custody
Temperature

Preservation

Condition
Case Narrative
Holding Times

X			
X			
	X		Samples UW-10 and MW-D were received with insufficient preservation; the samples were preserved to the appropriate pH by the laboratory.
X			
X			
X			

Analytical Sensitivity and Blanks

Method Blank Detections
Trip Blank Detections

X			No detections.
X			No detections.

Accuracy

ICV/CCV

LCS/LCSD
MS/MSD
Surrogates (organics only)

	X		The initial calibration verification (ICV) and low level continuing calibration verification for a batch was above the upper control limit for antimony; samples were non-detect for the affected analyte and reported as qualified data. The continuing calibration verification (CCV) for multiple batches recovered outside control limits for carbon disulfide and iodomethane; the LCS passed using CCV criteria or the samples were non-detect for the affected analytes so the data was reported.
X			
X			
X			

Precision

QA/QC Sample RPDs
Field Duplicates

X			
X			The measured concentrations for sample UW-10 and duplicate sample MW-D had <50% RPD for analyzed parameters.

Completed by: Nathan Ohrt
Date of Sampling: 10/29-30/2025
Lab Report Date: 11/17/2025
Site Name: Mahaska County Sanitary Landfill - Binns & Stevens MSWLF Unit
Project Type: HMSP - 2nd 2025 Semi-Annual Sampling Event
Lab Report Number: 310-319482

OK NO N/A NOTES

Sample Collection and Sample Handling

Chain of Custody	X			
Temperature	X			
Preservation	X			
Condition	X			
Case Narrative	X			
Holding Times				

Analytical Sensitivity and Blanks

Method Blank Detections	X			No detections.
Trip Blank Detections	X			No detections.

Accuracy

ICV/CCV	X			
LCS/LCSD	X			
MS/MSD	X			
Surrogates (organics only)	X			

Precision

QA/QC Sample RPDs	X			
Field Duplicates	X			The measured concentrations for sample PZ-14 and duplicate sample MW-D had <50% RPD for analyzed parameters.

Appendix C
Reporting Period Summary of Groundwater Chemistry



Summary of Groundwater Chemistry
Mahaska County Solid Waste Management Commission - 62-SDP-01-74P

	Sample Date	DW-8 DNG	DW-15 DNG	DW-19 DNG	DW-23 DNG	DW-24 DNG	PZ-14 DNG	UW-10 DNG	UW-11 DNG	UW-21 DNG
Total Metals Constituents										
Antimony, mg/L (CAS NO - 7440-36-0)	5/22/2025	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.008	< 0.002	< 0.002	< 0.01
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A
	10/29/2025	< 0.002	< 0.002	0.00156*	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A
Arsenic, mg/L (CAS NO - 7440-38-2)	5/22/2025	< 0.002	0.00177*	< 0.002	0.00099*	0.00334	0.00118*	0.00361	0.00199*	0.00574*
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	0.0033	N/A	N/A
	10/29/2025	0.000871*	0.000633*	< 0.002	0.0026	0.00388	0.00226	0.0066	0.00343	0.00598
	10/29/2025	N/A	N/A	N/A	N/A	N/A	0.00172*	N/A	N/A	N/A
Barium, mg/L (CAS NO - 7440-39-3)	5/22/2025	0.0272	0.133	0.0243	0.0117	0.00687	0.0196	0.0713	0.0149	0.0107
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	0.0587	N/A	N/A
	10/29/2025	0.033	0.125	0.0229	0.0138	0.00722	0.0232	0.0682	0.0197	0.0127
	10/29/2025	N/A	N/A	N/A	N/A	N/A	0.023	N/A	N/A	N/A
Beryllium, mg/L (CAS NO - 7440-41-7)	5/22/2025	< 0.001	< 0.001	< 0.001	0.000867*	0.0131	< 0.001	< 0.001	< 0.001	0.00366
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	10/29/2025	< 0.001	< 0.001	< 0.001	0.00141	0.0156	< 0.001	< 0.001	< 0.001	0.0161
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
Cadmium, mg/L (CAS NO - 7440-43-9)	5/22/2025	< 0.0002	0.000107*	< 0.0002	0.00268	0.0167	< 0.0002	< 0.0002	< 0.0002	< 0.001
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A
	10/29/2025	< 0.0002	0.000103*	< 0.0002	0.00232	0.0181	< 0.0002	< 0.0002	< 0.0002	0.00301
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A
Chromium, mg/L (CAS NO - 7440-47-3)	5/22/2025	< 0.005	< 0.005	< 0.005	< 0.005	0.00262*	< 0.005	< 0.005	< 0.005	0.0157
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	10/29/2025	< 0.005	< 0.005	< 0.005	< 0.005	0.00381*	< 0.005	< 0.005	< 0.005	0.00843
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
Cobalt, mg/L (CAS NO - 7440-48-4)	5/22/2025	0.00383	0.00173	< 0.0005	0.407	0.314	0.00919	0.0298	0.000753	1.45
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	0.036	N/A	N/A
	10/29/2025	0.0036	0.00079	< 0.0005	1.25	0.358	0.00973	0.0361	0.0688	1.53
	10/29/2025	N/A	N/A	N/A	N/A	N/A	0.0087	N/A	N/A	N/A
Copper, mg/L (CAS NO - 7440-50-8)	5/22/2025	< 0.005	< 0.005	< 0.005	0.00487*	0.00507	< 0.005	< 0.005	< 0.005	< 0.025
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	10/29/2025	< 0.005	< 0.005	< 0.005	< 0.005	0.00749	< 0.005	< 0.005	< 0.005	0.0353
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
Lead, mg/L (CAS NO - 7439-92-1)	5/22/2025	< 0.0005	< 0.0005	< 0.0005	0.000404*	0.0007	< 0.0005	< 0.0005	< 0.0005	< 0.0025
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A
	10/29/2025	< 0.0005	< 0.0005	< 0.0005	0.000496*	0.000842	< 0.0005	< 0.0005	< 0.0005	0.00362
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A
Nickel, mg/L (CAS NO - 7440-02-0)	5/22/2025	0.00411*	< 0.005	< 0.005	0.582	0.482	0.0108*	< 0.005	0.00566	0.842
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	10/29/2025	0.00288*	< 0.005	< 0.005	1.15	0.622	0.0173	< 0.005	0.28	1.37
	10/29/2025	N/A	N/A	N/A	N/A	N/A	0.0136	N/A	N/A	N/A
Selenium, mg/L (CAS NO - 7782-49-2)	5/22/2025	< 0.005	< 0.005	< 0.005	0.00349*	0.0173	< 0.02	< 0.005	< 0.005	0.0154*
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	10/29/2025	< 0.005	< 0.005	< 0.005	0.00321*	0.0142	< 0.005	< 0.005	< 0.005	0.018
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
Silver, mg/L (CAS NO - 7440-22-4)	5/22/2025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	10/29/2025	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
Thallium, mg/L (CAS NO - 7440-28-0)	5/22/2025	< 0.001	< 0.001	< 0.001	< 0.001	0.000579*	< 0.004	< 0.001	< 0.001	< 0.005
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	10/29/2025	< 0.001	< 0.001	< 0.001	< 0.001	0.000669*	< 0.001	< 0.001	< 0.001	< 0.001
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
Vanadium, mg/L (CAS NO - 7440-62-2)	5/22/2025	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	10/29/2025	< 0.005	< 0.005	< 0.005	< 0.005	0.00216*	< 0.005	< 0.005	< 0.005	< 0.005
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
Zinc, mg/L (CAS NO - 7440-66-6)	5/22/2025	< 0.02	< 0.02	< 0.02	0.36	1.58	0.0658*	< 0.02	< 0.02	0.143
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A
	10/29/2025	< 0.02	< 0.02	< 0.02	0.607	1.99	0.0574	< 0.02	< 0.02	0.409
	10/29/2025	N/A	N/A	N/A	N/A	N/A	0.0693	N/A	N/A	N/A
Total Suspended Solids, mg/L (CAS NO - TSS)	5/22/2025	8.5	5	< 1.88	5.13	< 1.88	116	47	24.5	30.7
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	132	N/A	N/A
	10/29/2025	24	30.7	8.33	13.3	7	94	136	14	27.3
	10/29/2025	N/A	N/A	N/A	N/A	N/A	109	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
Mahaska County Solid Waste Management Commission - 62-SDP-01-74P

	Sample Date	DW-8 DNG	DW-15 DNG	DW-19 DNG	DW-23 DNG	DW-24 DNG	PZ-14 DNG	UW-10 DNG	UW-11 DNG	UW-21 DNG
Appendix I VOC Constituents										
1,1,1,2-Tetrachloroethane, ug/L (CAS NO - 630-20-6)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,1,1-Trichloroethane, ug/L (CAS NO - 71-55-6)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane, ug/L (CAS NO - 79-34-5)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,1,2-Trichloroethane, ug/L (CAS NO - 79-00-5)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,1-Dichloroethane, ug/L (CAS NO - 75-34-3)	5/22/2025	0.939*	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,1-Dichloroethene, ug/L (CAS NO - 75-35-4)	5/22/2025	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	10/29/2025	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A
1,2,3-Trichloropropane, ug/L (CAS NO - 96-18-4)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,2-Dibromo-3-Chloropropane, ug/L (CAS NO - 96-12-8)	5/22/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	10/29/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
1,2-Dibromoethane [EDB], ug/L (CAS NO - 106-93-4)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,2-Dichlorobenzene, ug/L (CAS NO - 95-50-1)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,2-Dichloroethane, ug/L (CAS NO - 107-06-2)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,2-Dichloropropane, ug/L (CAS NO - 78-87-5)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,4-Dichlorobenzene, ug/L (CAS NO - 106-46-7)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	6.43	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	6.87	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	9.03	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
2-Butanone, ug/L (CAS NO - 78-93-3)	5/22/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	10/29/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
2-Hexanone, ug/L (CAS NO - 591-78-6)	5/22/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	10/29/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
4-Methyl-2-Pentanone, ug/L (CAS NO - 108-10-1)	5/22/2025	< 10	< 10	< 10	4.28*	< 10	< 10	< 10	< 10	< 10
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	10/29/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
Acetone, ug/L (CAS NO - 67-64-1)	5/22/2025	< 10	< 10	< 10	< 10	< 10	< 10	4.4*	< 10	< 10
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	3.41*	N/A	N/A
	10/29/2025	< 10	< 10	< 10	< 10	< 10	< 10	3.52*	< 10	< 10
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
Acrylonitrile, ug/L (CAS NO - 107-13-1)	5/22/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	10/29/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
Benzene, ug/L (CAS NO - 71-43-2)	5/22/2025	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	2.43	< 0.5	< 0.5
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	2.43	N/A	N/A
	10/29/2025	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	2.74	< 0.5	< 0.5
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A



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	Sample Date	DW-8 DNG	DW-15 DNG	DW-19 DNG	DW-23 DNG	DW-24 DNG	PZ-14 DNG	UW-10 DNG	UW-11 DNG	UW-21 DNG
Appendix I VOC Constituents										
Bromochloromethane, ug/L (CAS NO - 74-97-5)	5/22/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	10/29/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
Bromodichloromethane, ug/L (CAS NO - 75-27-4)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Bromoform, ug/L (CAS NO - 75-25-2)	5/22/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	10/29/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
Bromomethane, ug/L (CAS NO - 74-83-9)	5/22/2025	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	10/29/2025	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
Carbon Disulfide, ug/L (CAS NO - 75-15-0)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Carbon Tetrachloride, ug/L (CAS NO - 56-23-5)	5/22/2025	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	10/29/2025	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A
Chlorobenzene, ug/L (CAS NO - 108-90-7)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Chlorodibromomethane, ug/L (CAS NO - 124-48-1)	5/22/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	10/29/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
Chloroethane, ug/L (CAS NO - 75-00-3)	5/22/2025	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	10/29/2025	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
Chloroform, ug/L (CAS NO - 67-66-3)	5/22/2025	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	10/29/2025	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A
Chloromethane, ug/L (CAS NO - 74-87-3)	5/22/2025	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	10/29/2025	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A
cis-1,2-Dichloroethene, ug/L (CAS NO - 156-59-2)	5/22/2025	0.498*	< 1	< 1	< 1	< 1	< 1	0.346*	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	0.334*	N/A	N/A
	10/29/2025	0.528*	< 1	< 1	< 1	< 1	< 1	0.233*	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
cis-1,3-Dichloropropene, ug/L (CAS NO - 10061-01-5)	5/22/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	10/29/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
Ethylbenzene, ug/L (CAS NO - 100-41-4)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Iodomethane, ug/L (CAS NO - 74-88-4)	5/22/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	10/29/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
Methylene Bromide, ug/L (CAS NO - 74-95-3)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Methylene Chloride, ug/L (CAS NO - 75-09-2)	5/22/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	10/29/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
Styrene, ug/L (CAS NO - 100-42-5)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Tetrachloroethene, ug/L (CAS NO - 127-18-4)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A

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Summary of Groundwater Chemistry
Mahaska County Solid Waste Management Commission - 62-SDP-01-74P

	Sample Date	DW-8 DNG	DW-15 DNG	DW-19 DNG	DW-23 DNG	DW-24 DNG	PZ-14 DNG	UW-10 DNG	UW-11 DNG	UW-21 DNG
Appendix I VOC Constituents										
Toluene, ug/L (CAS NO - 108-88-3)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
trans-1,2-Dichloroethene, ug/L (CAS NO - 156-60-5)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
trans-1,3-Dichloropropene, ug/L (CAS NO - 10061-02-6)	5/22/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	10/29/2025	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
trans-1,4-Dichloro-2-Butene, ug/L (CAS NO - 110-57-6)	5/22/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	10/29/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
Trichloroethene, ug/L (CAS NO - 79-01-6)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Trichlorofluoromethane, ug/L (CAS NO - 75-69-4)	5/22/2025	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	10/29/2025	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
Vinyl Acetate, ug/L (CAS NO - 108-05-4)	5/22/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	10/29/2025	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
Vinyl Chloride, ug/L (CAS NO - 75-01-4)	5/22/2025	< 1	< 1	< 1	< 1	< 1	< 1	0.573*	< 1	< 1
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	0.546*	N/A	N/A
	10/29/2025	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
Xylenes, total, ug/L (CAS NO - 1330-20-7)	5/22/2025	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	10/29/2025	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A

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

Denotes Detection.
Denotes Confirmed Outlier. Statistically Excluded.

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

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Summary of Groundwater Chemistry

Mahaska County Solid Waste Management Commission - 62-SDP-01-74P

Other Constituents	Sample Date	DW-8 DNG	DW-15 DNG	DW-19 DNG	DW-23 DNG	DW-24 DNG	PZ-14 DNG	UW-10 DNG	UW-11 DNG	UW-21 DNG
Alkalinity, Total [CaCO3], mg/L (CAS NO - TALK)	5/22/2025	479	213	332	34.5	< 5	57.1	974	510	99.4
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	964	N/A	N/A
	10/29/2025	505	220	342	125	< 5	36.9	953	464	< 5
	10/29/2025	N/A	N/A	N/A	N/A	N/A	36.9	N/A	N/A	N/A
Aluminum, mg/L (CAS NO - 7429-90-5)	5/22/2025	< 0.05	0.0482*	< 0.05	1.72	49	< 0.2	< 0.05	< 0.05	2.49
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A
	10/29/2025	< 0.05	0.0872	< 0.05	2.74	57.7	< 0.05	< 0.05	< 0.05	18.6
	10/29/2025	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A
Iron, Total, mg/L (CAS NO - 7439-89-6)	5/22/2025	2.74	1.4	< 0.1	45.1	71.9	200	89.4	22.3	374
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	83.3	N/A	N/A
	10/29/2025	5.92	0.708	< 0.1	219	115	209	113	23.5	102
	10/29/2025	N/A	N/A	N/A	N/A	N/A	244	N/A	N/A	N/A
Sulfate, mg/L (CAS NO - 14808-79-8)	5/22/2025	297	51.9	640	3370	2790	1600	534	2100	5660
	5/22/2025	N/A	N/A	N/A	N/A	N/A	N/A	527	N/A	N/A
	10/29/2025	228	53	584	4600	2070	1470	810	2110	4080
	10/29/2025	N/A	N/A	N/A	N/A	N/A	1450	N/A	N/A	N/A

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

Denotes Detection.
Denotes Confirmed Outlier. Statistically Excluded.

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

Appendix D
Statistical Method and Output

Statistical Method and Output

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

Diagnostic and Exploratory Evaluations and Tests of Assumptions

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

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

Management of Non-Detect Data

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

Management of Outliers

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

Management of Data (ND data < 75%)

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

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

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

Management of Data (ND data $\geq$ 75%)

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

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

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

Detection Monitoring Statistical Program Statistical Evaluation

Groundwater monitoring data associated with the Binns & Stevens MSWLF unit for the detection monitoring program is statistically analyzed by the diagnostic evaluations listed above and by interwell prediction limits, intrawell prediction limits, and the double quantification rule. The procedures for these evaluations are described below.

Interwell and intrawell prediction limits with retesting were selected for the determination of statistically significant increases (SSIs) over background for inorganic constituents with historical detections in background. Data from the most recent sampling event is compared to the prediction limits for the determination of SSIs.

Interwell Prediction Limits with Retesting

- If the dataset has a normal distribution (or can be transformed to a normal distribution using Ladder of Powers), parametric interwell prediction limits are calculated if at least five datasets have been collected from the background monitoring point(s).
- If the dataset does not have a normal distribution (and cannot be transformed to a normal distribution using Ladder of Powers) or has greater than 50% non-detects, nonparametric interwell prediction limits are calculated if at least five datasets have been collected from the background monitoring point(s).
- If an SSI above the prediction limit is indicated for AMD wells using both interwell and intrawell statistical methods, further evaluation will be performed regarding the impact of AMD on affected parameters.

Intrawell Prediction Limits with Retesting

- If the dataset has a normal distribution (or can be transformed to a normal distribution using Ladder of Powers), parametric intrawell prediction limits are calculated if at least six samples have been collected.
- If the dataset does not have a normal distribution (and cannot be transformed to a normal distribution using Ladder of Powers) or has greater than 50% non-detects, non-parametric intrawell prediction limits are calculated if at least six samples have been collected.
- If an SSI above the prediction limit is indicated for AMD wells using both interwell and intrawell statistical methods, further evaluation will be performed regarding the impact of AMD on affected parameters.

Updating the Background Dataset for Intrawell Prediction Limits

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

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

The process will repeat every two years in which an SSI is not confirmed.

Double Quantification Rule

The quasi-statistical “double quantification” rule is used for constituents not detected in the background monitoring points. If a constituent is detected in the compliance dataset that has not been historically detected in the background dataset, that constituent should be retested before the next regularly scheduled sampling event. If the retesting results confirm the original detection with a quantifiable detection, the SSI is confirmed, and the monitoring point is placed into the assessment monitoring program.

Assessment Monitoring Program Statistical Evaluation

The assessment monitoring statistical evaluations are performed using the most recent eight samples or all samples if less than eight samples are available. Transformation of the distribution is not considered. The analysis is performed for organic parameters for monitoring wells in the assessment monitoring program.

Confidence Intervals or Confidence Bands

- A parametric confidence interval around a normal mean is calculated if the dataset has a normal distribution and no statistically significant trend is present.
- A non-parametric confidence interval around a median is calculated if the dataset does not have a normal distribution and no statistically significant trend is present.
- Non-parametric confidence bands around a Theil-Sen trend line are calculated if the dataset has a statistically significant trend.

In the event that the lower confidence limit or any part of the lower confidence band, as appropriate, exceeds the GWPS, then the monitoring point is declared out of compliance, and an assessment of corrective measures (ACM) is required.

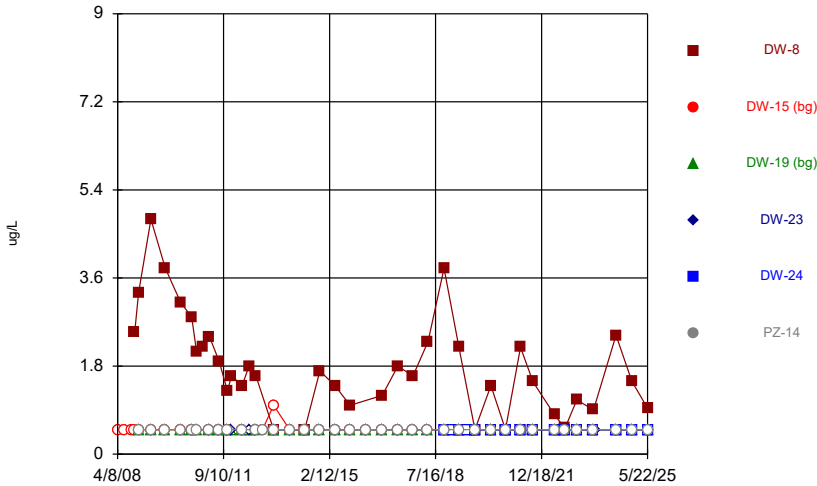
Statistical Software Output

Sanitas™ statistical software was used to perform the statistical evaluations. Statistical outputs for the 1st and 2nd 2025 statistical evaluations are included in Attachments A and B of this appendix, respectively.

Attachment A
1st 2025 Statistical Evaluation Output

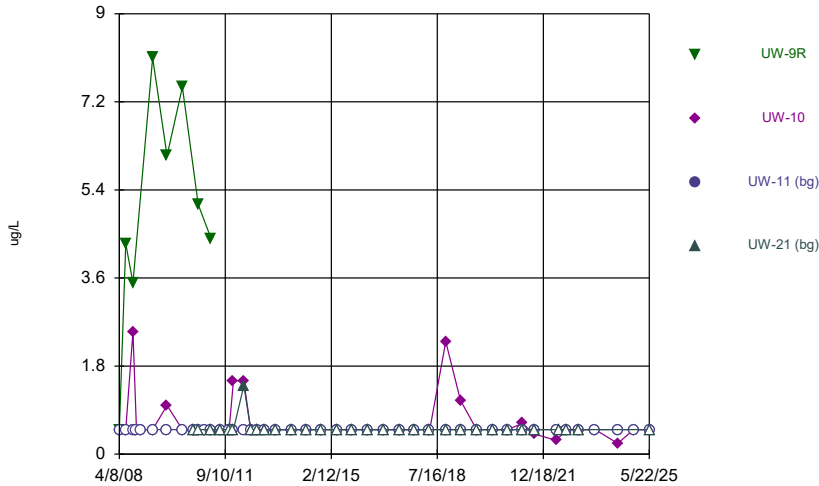
Time Series Plots

Time Series



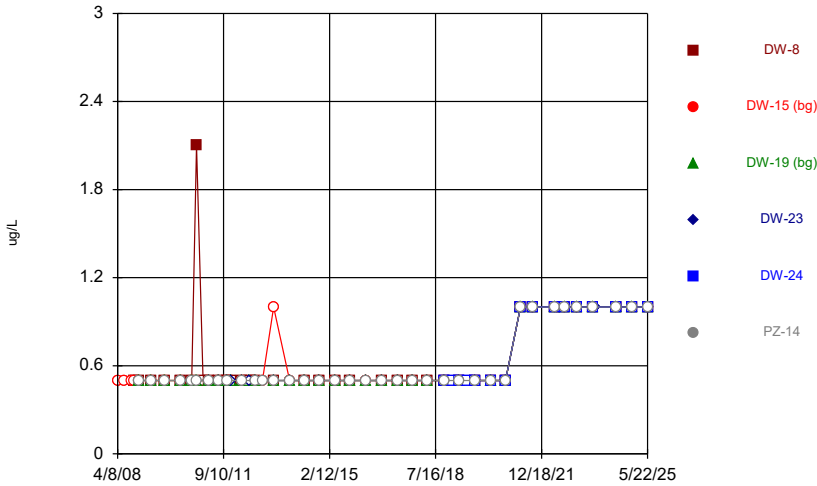
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



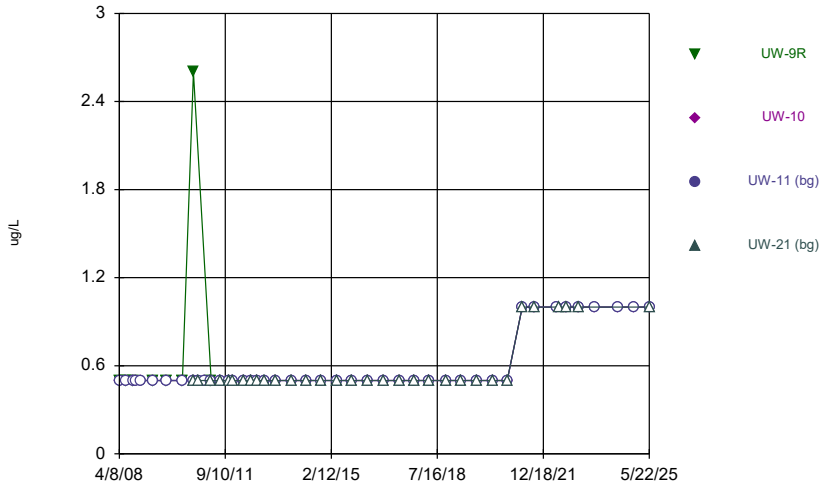
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Time Series



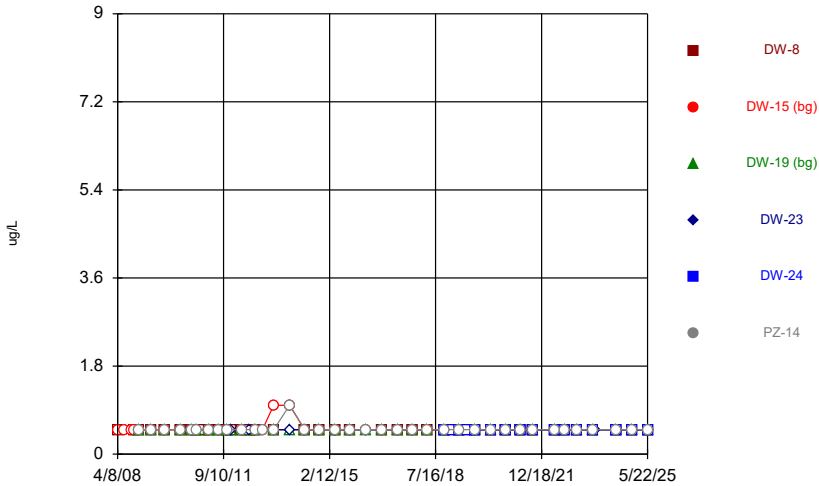
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Time Series



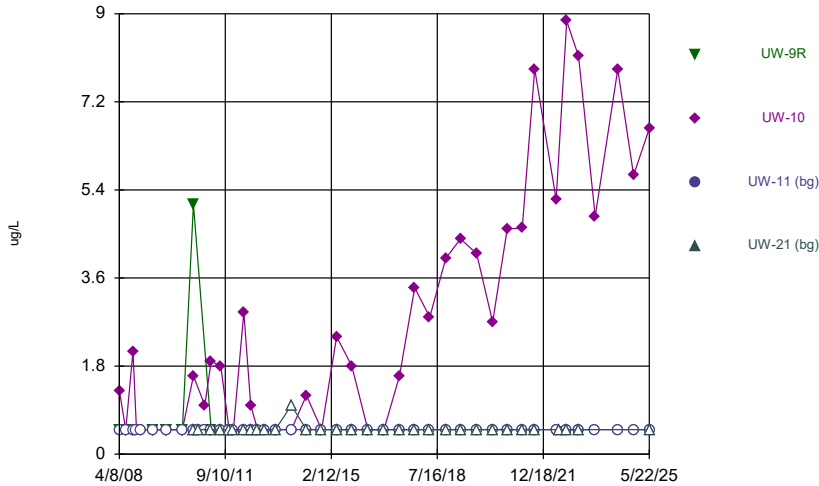
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Time Series



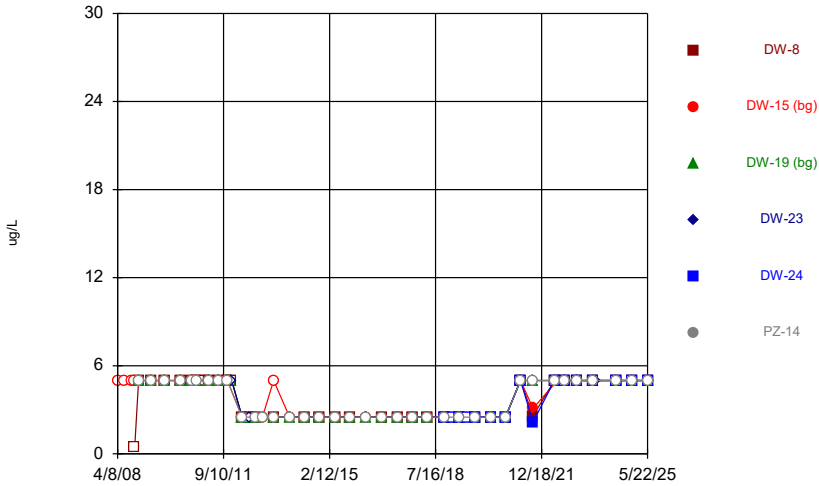
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



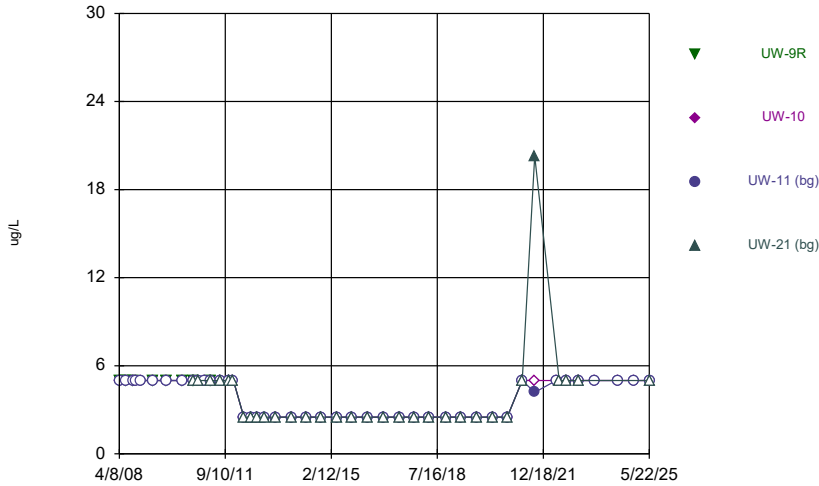
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Time Series



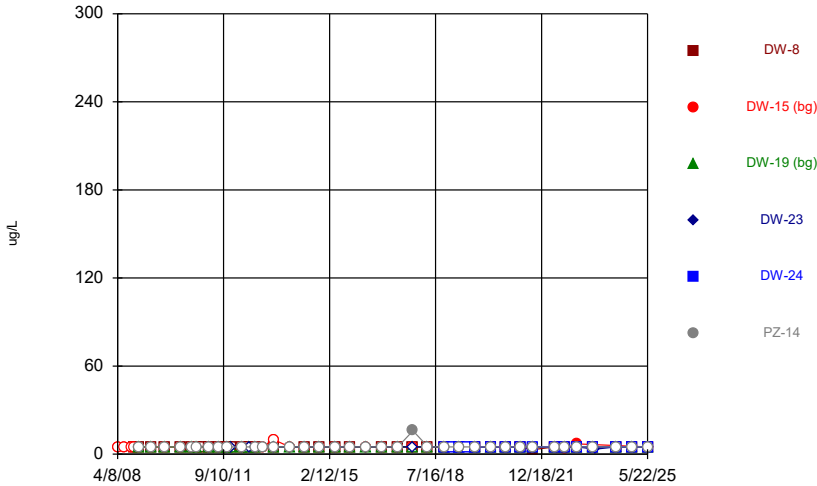
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Time Series



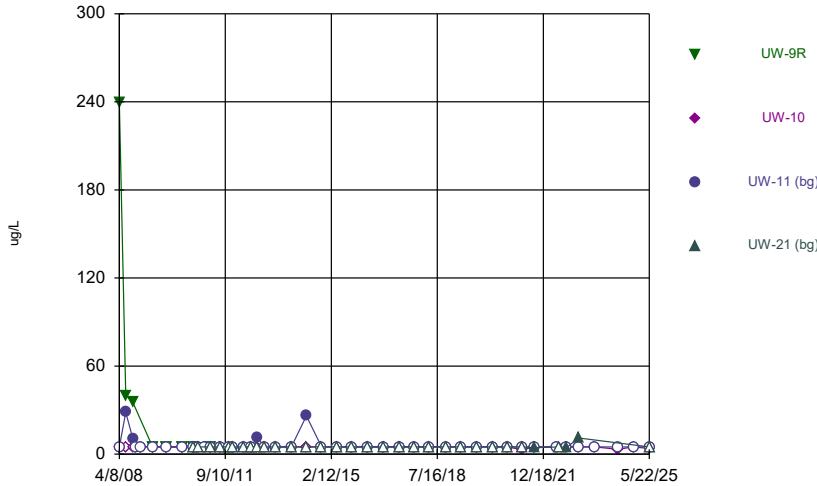
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Time Series



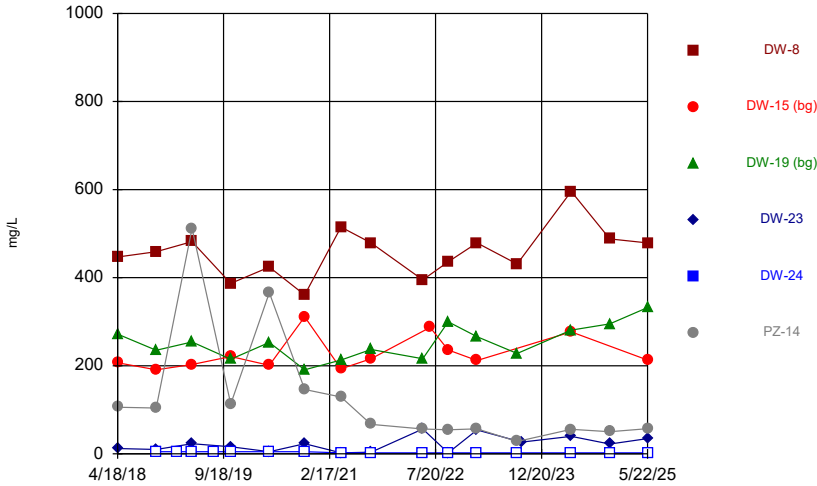
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Time Series



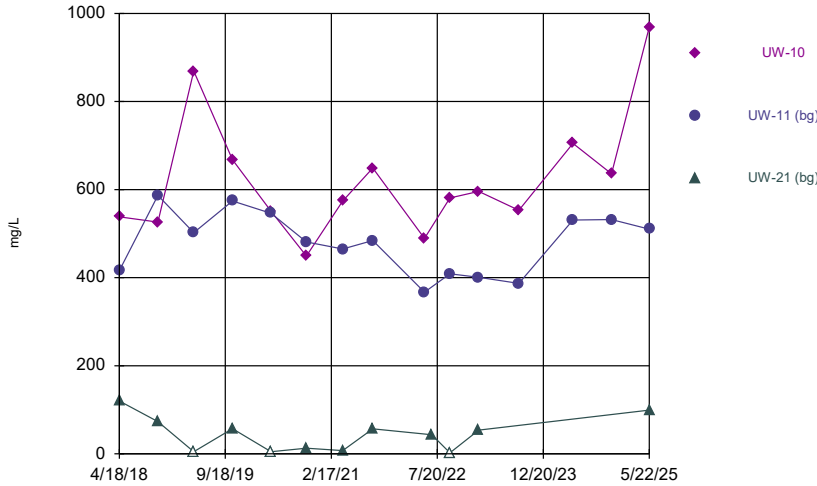
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Time Series



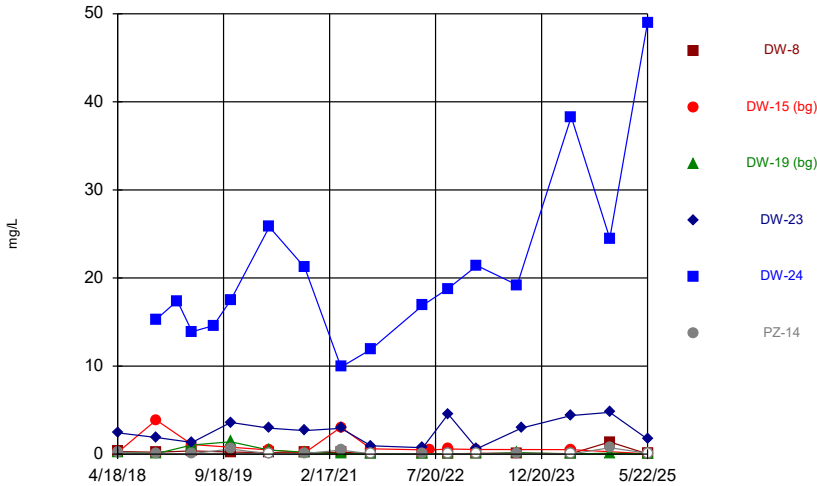
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Time Series



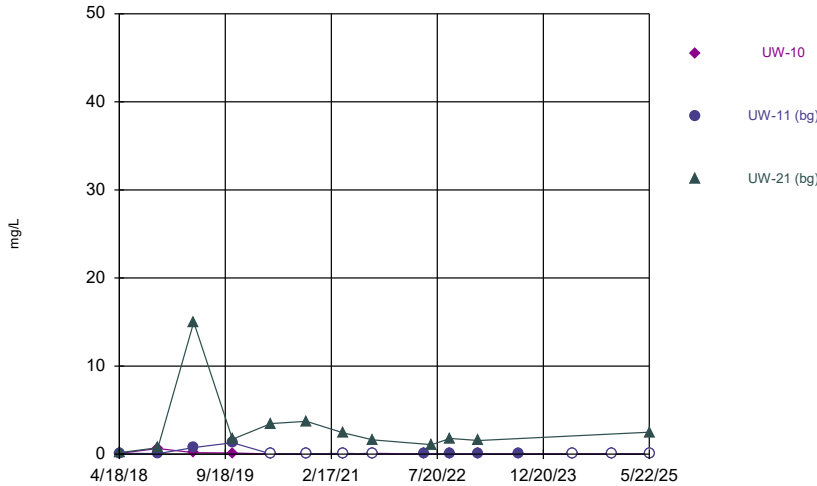
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Time Series



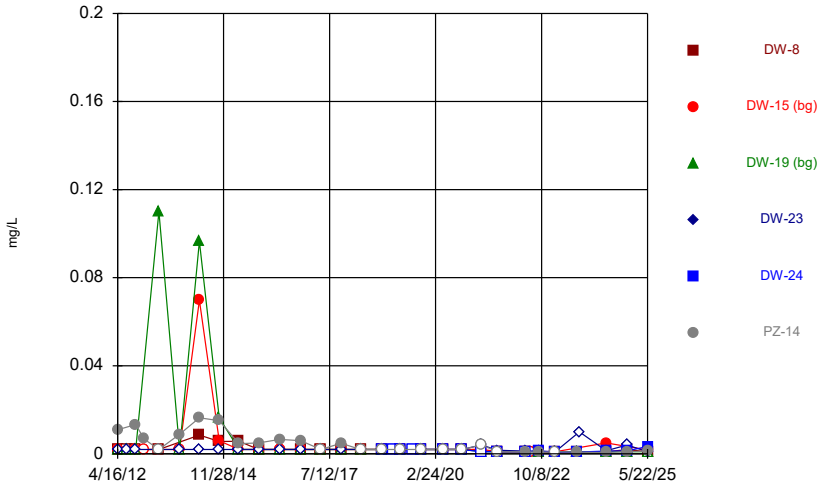
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Time Series



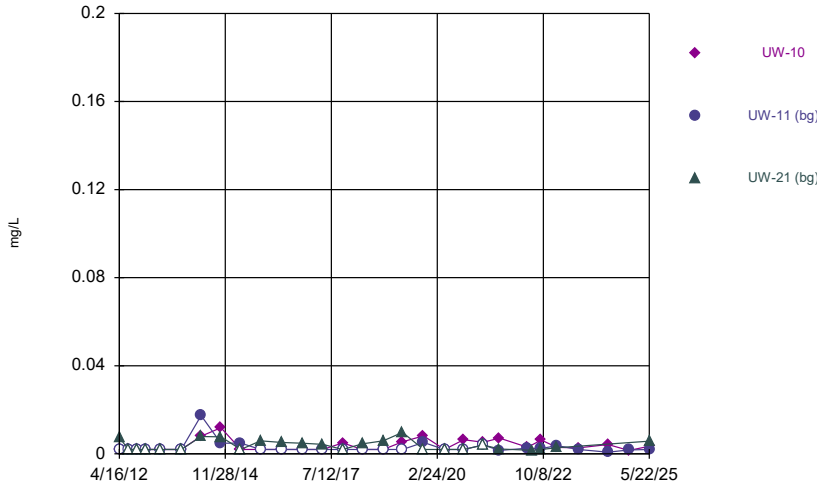
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Time Series



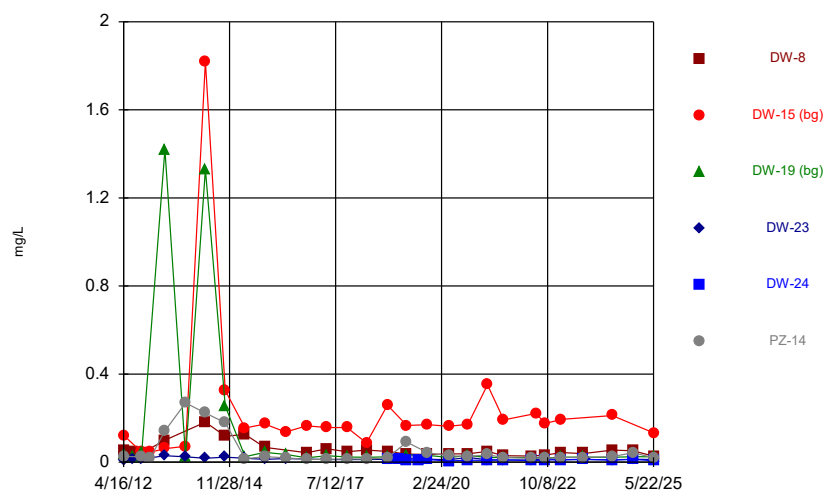
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



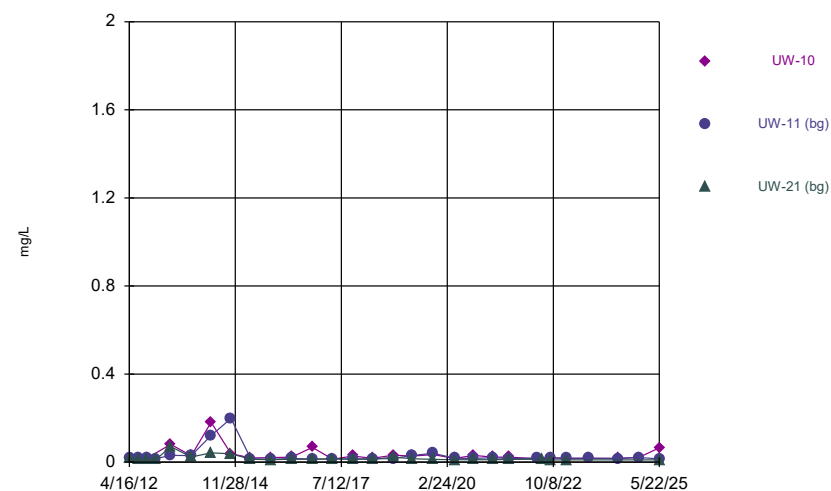
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



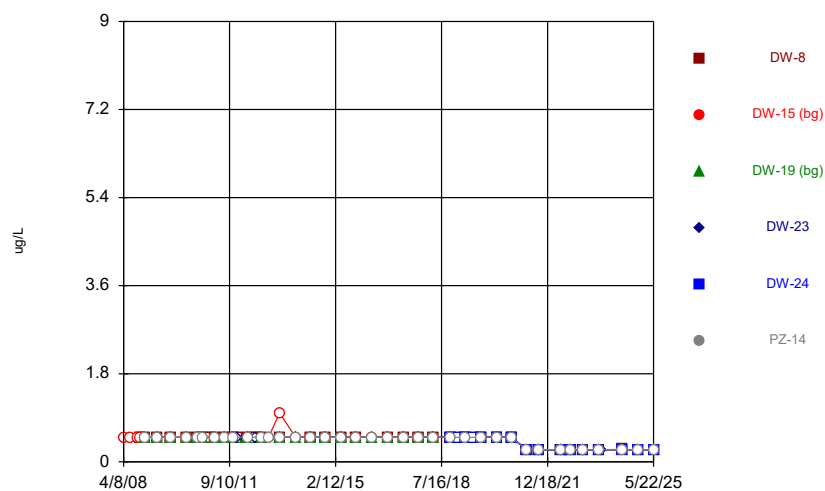
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



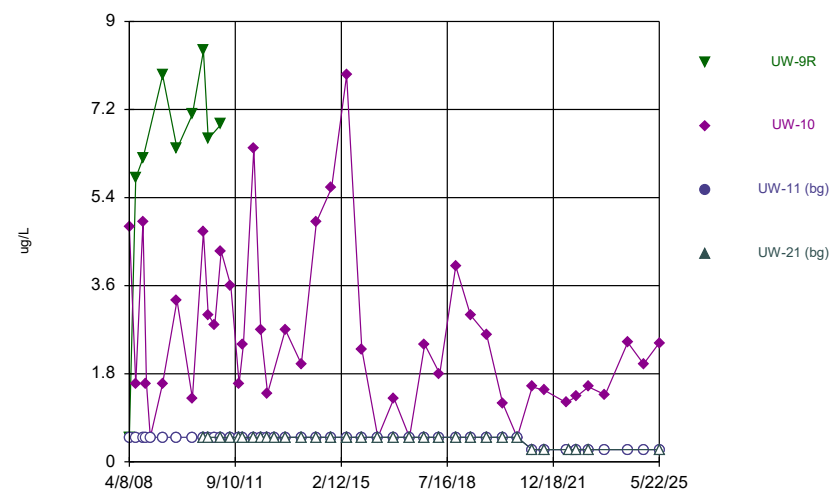
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



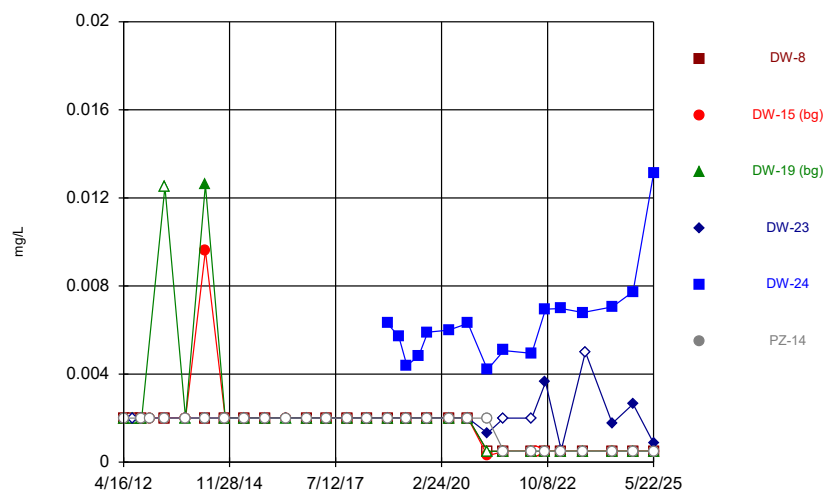
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Time Series



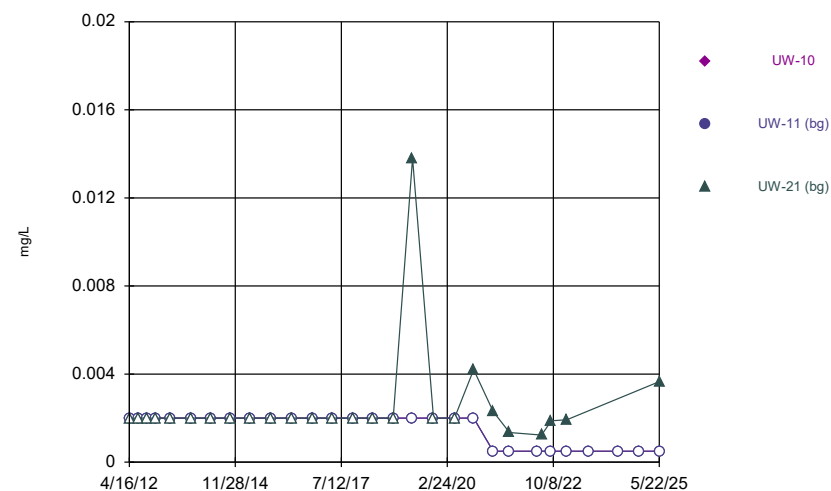
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Time Series



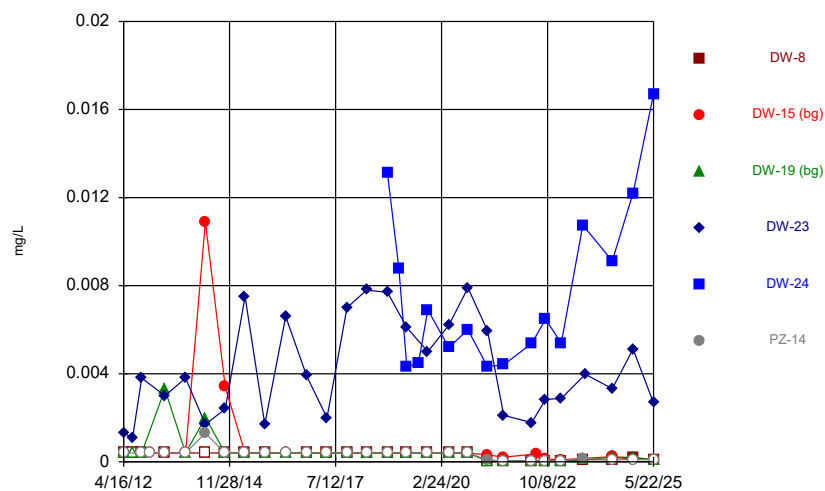
Constituent: Beryllium Analysis Run 10/23/2025 4:12 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



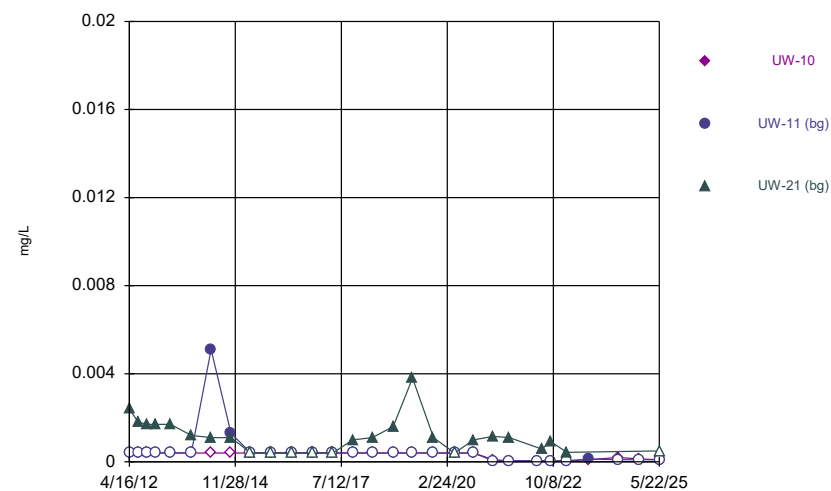
Constituent: Beryllium Analysis Run 10/23/2025 4:12 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



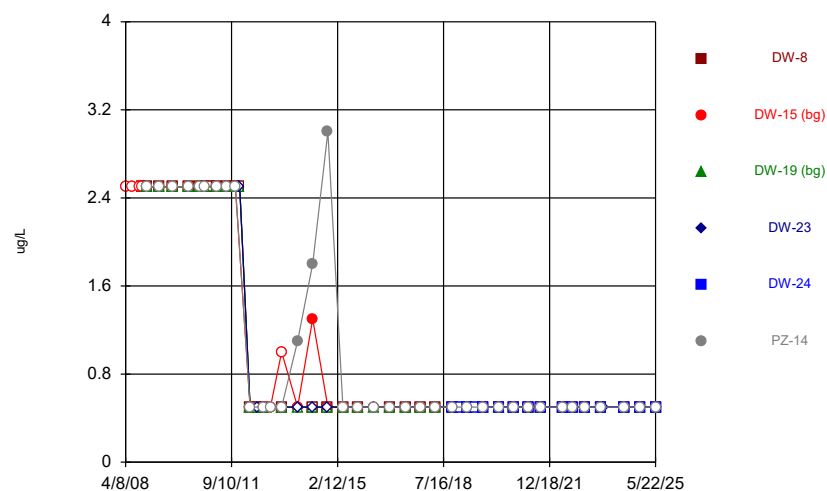
Constituent: Cadmium Analysis Run 10/23/2025 4:12 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



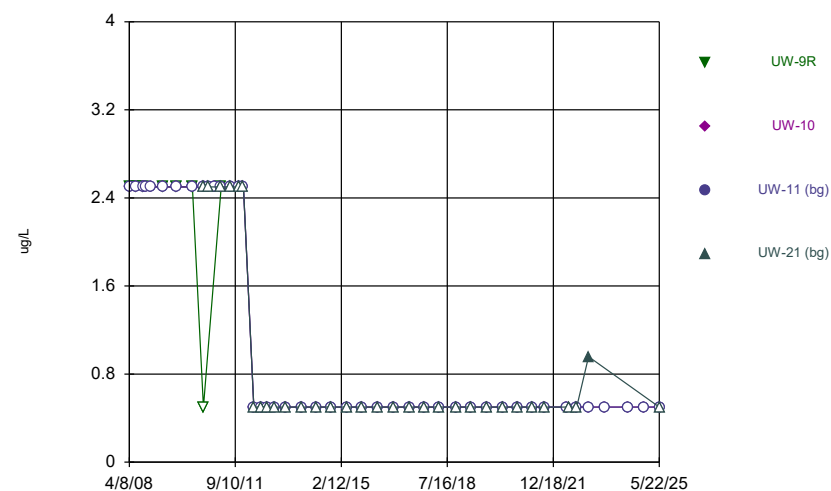
Constituent: Cadmium Analysis Run 10/23/2025 4:12 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



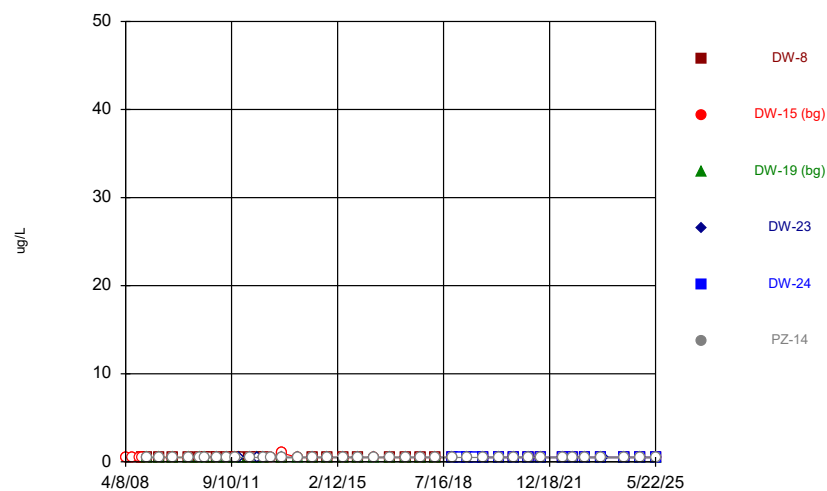
Constituent: Carbon Disulfide Analysis Run 10/23/2025 4:12 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



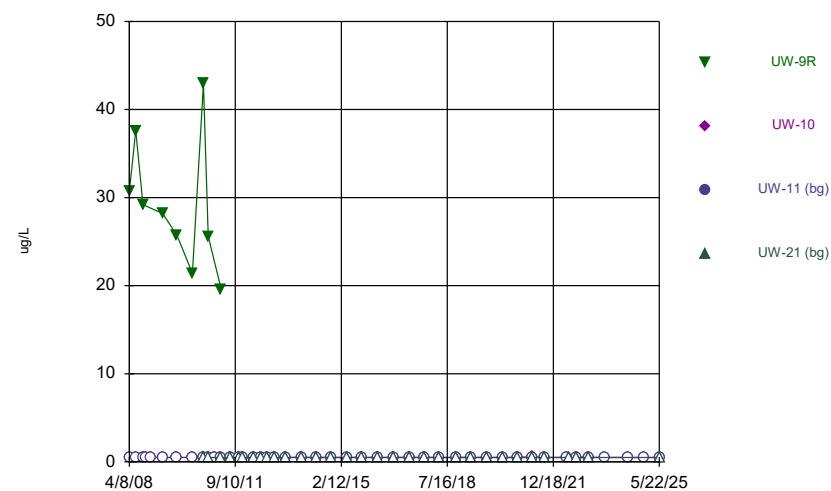
Constituent: Carbon Disulfide Analysis Run 10/23/2025 4:12 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



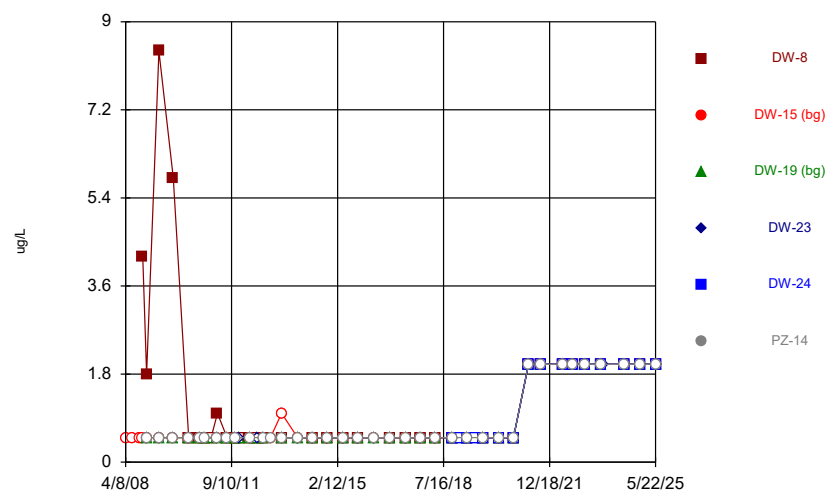
Constituent: Chlorobenzene Analysis Run 10/23/2025 4:12 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



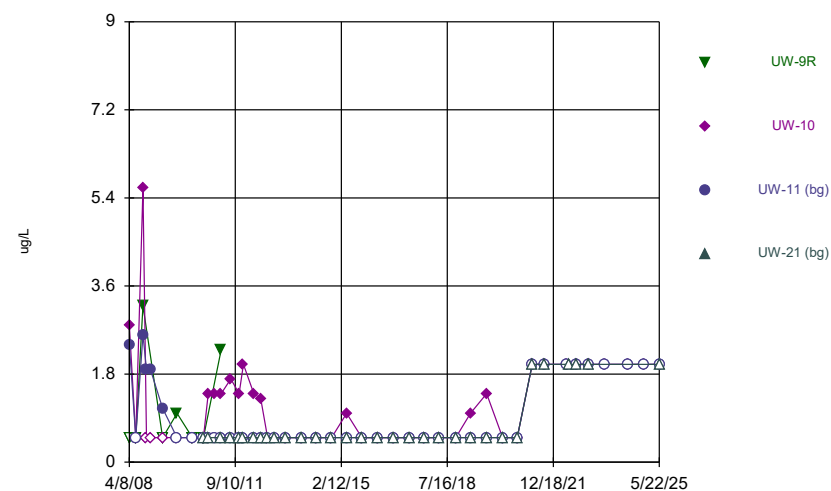
Constituent: Chlorobenzene Analysis Run 10/23/2025 4:12 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



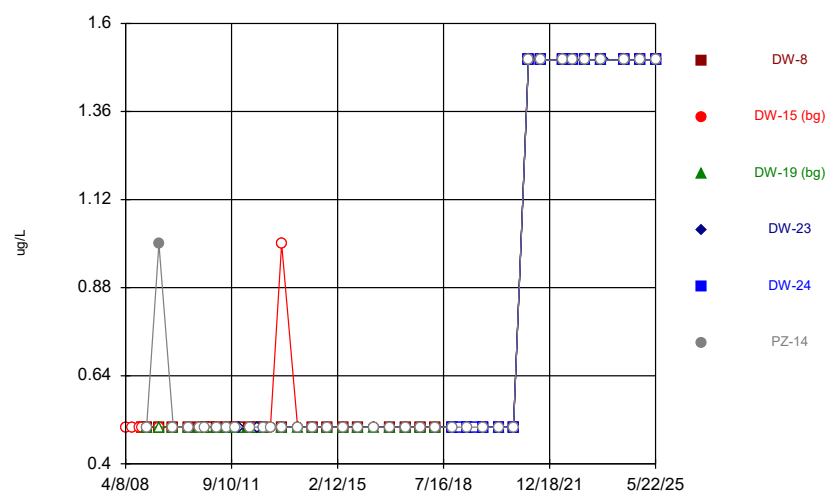
Constituent: Chloroethane Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



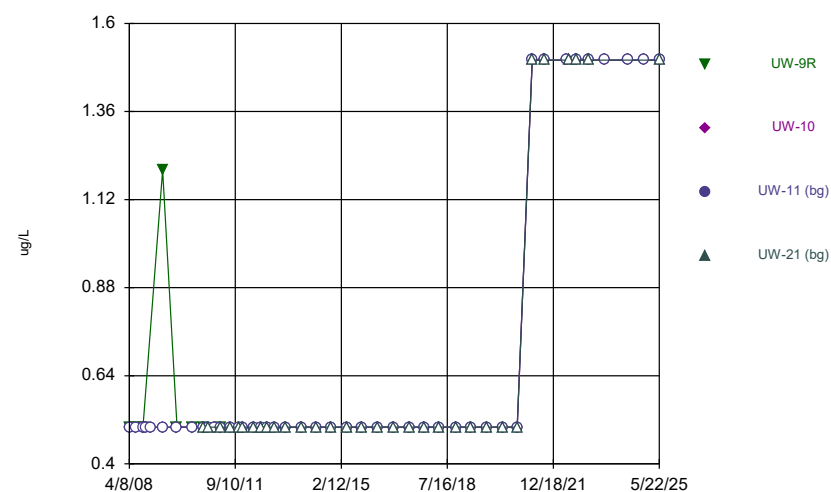
Constituent: Chloroethane Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



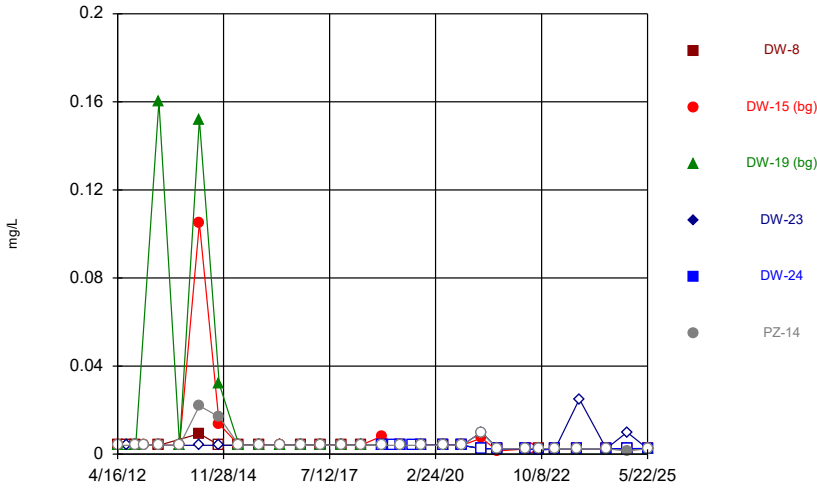
Constituent: Chloroform Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



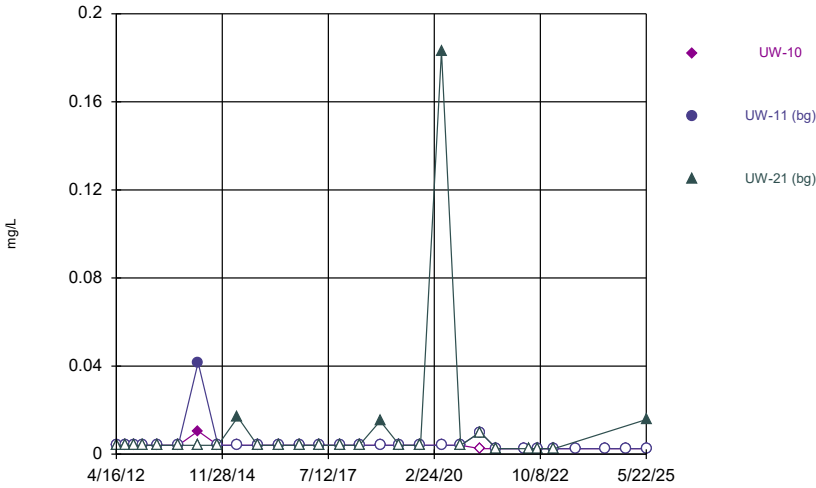
Constituent: Chloroform Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



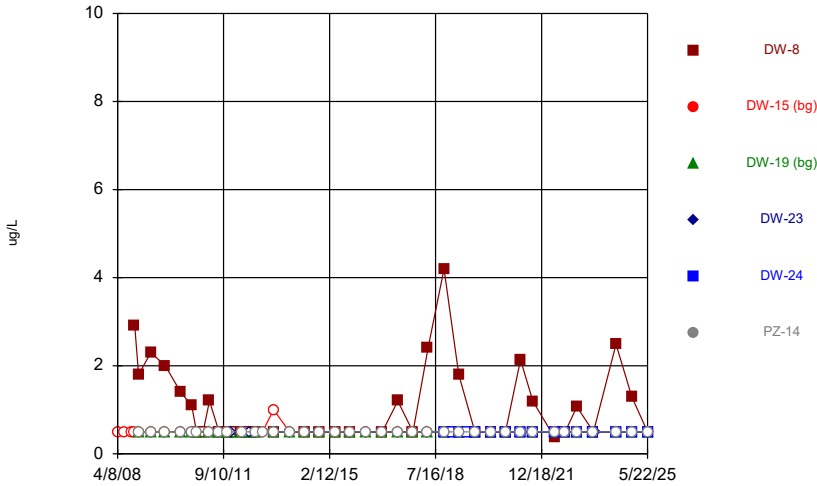
Constituent: Chromium Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



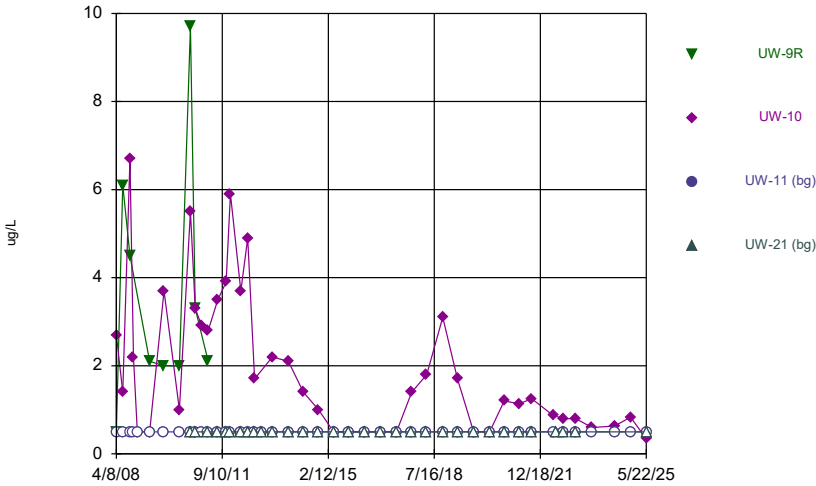
Constituent: Chromium Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



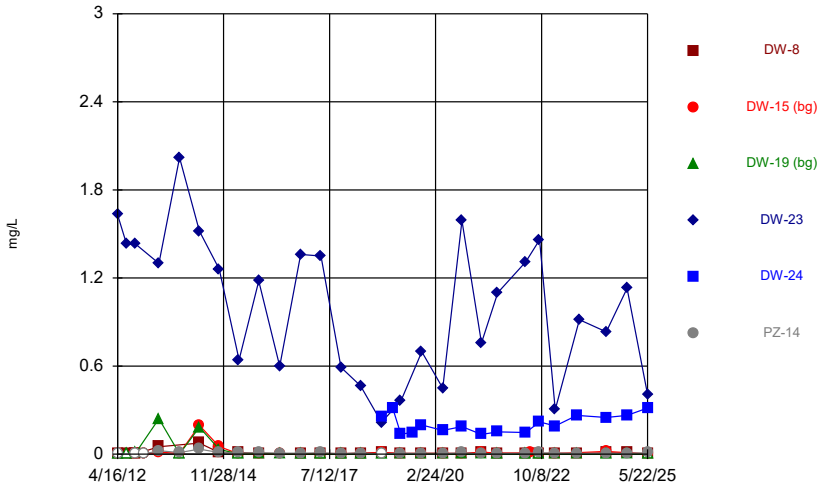
Constituent: cis-1,2-Dichloroethene Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



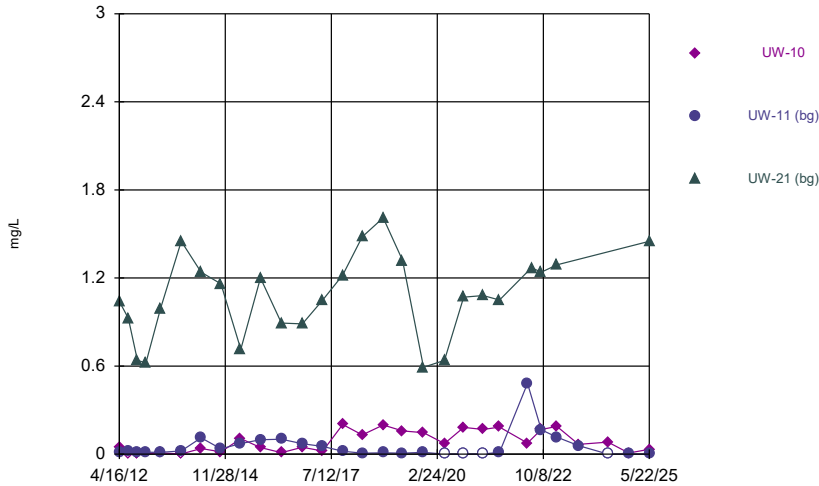
Constituent: cis-1,2-Dichloroethene Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



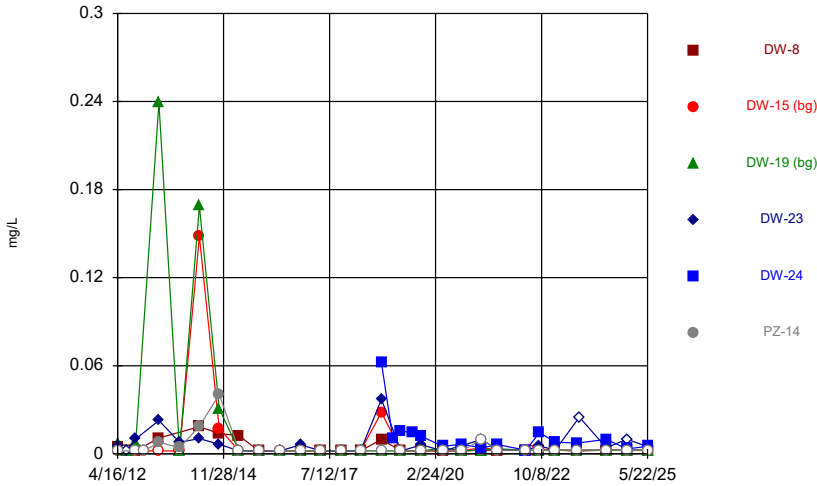
Constituent: Cobalt Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



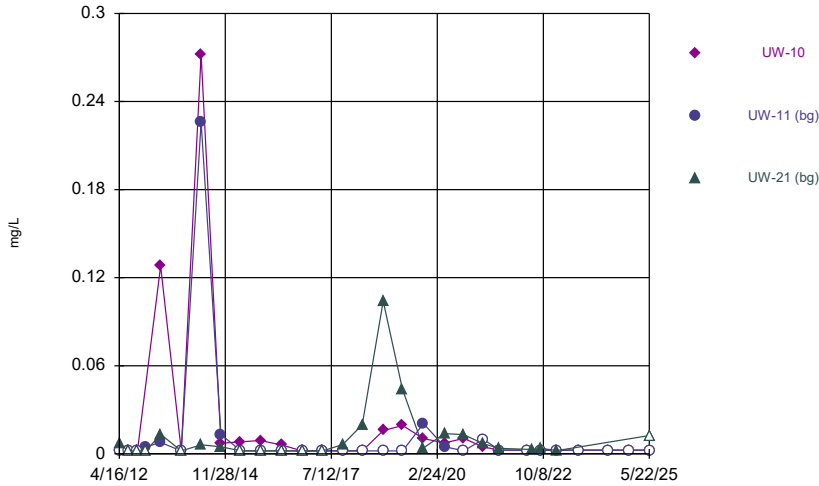
Constituent: Cobalt Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



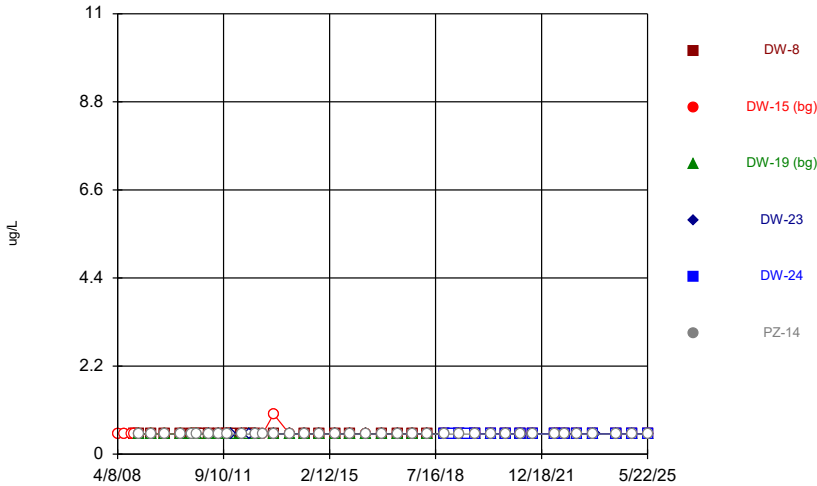
Constituent: Copper Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series

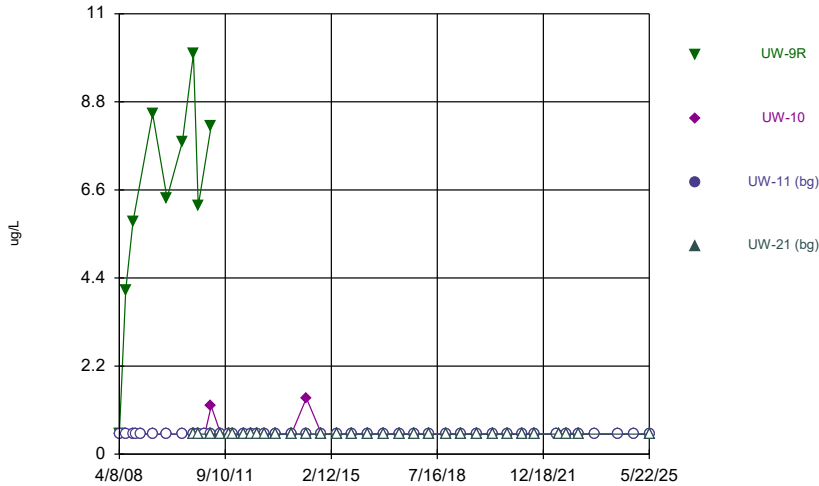


Constituent: Copper Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

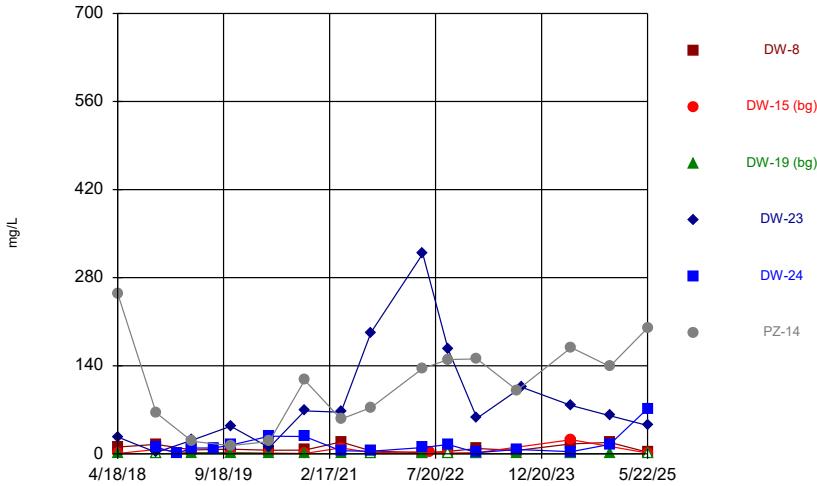
Time Series



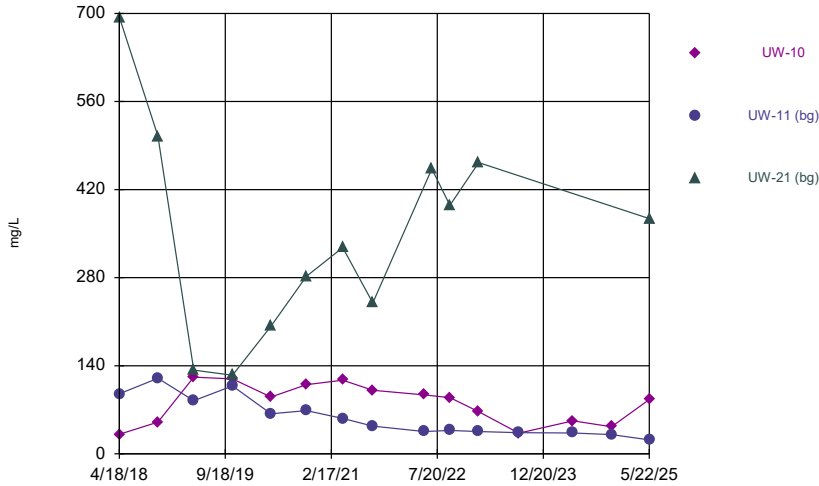
Time Series



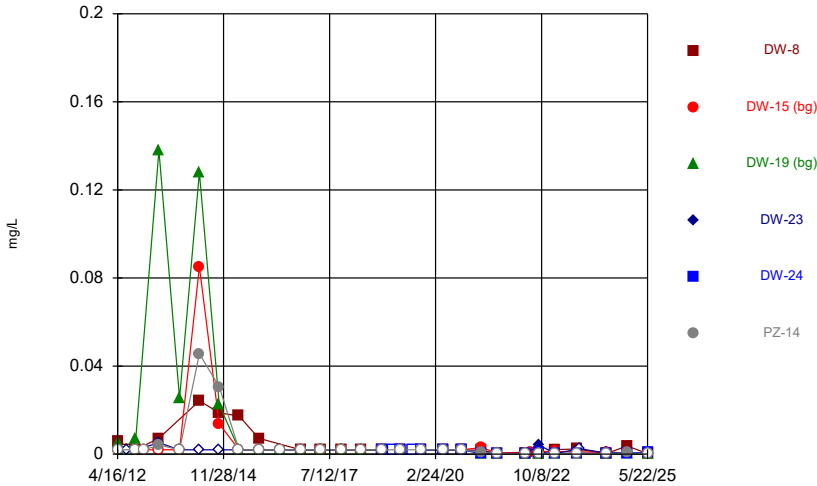
Time Series



Time Series

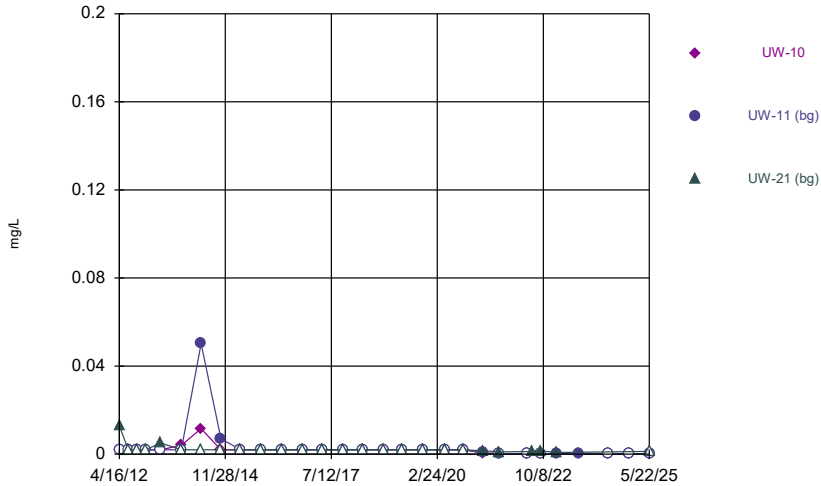


Time Series



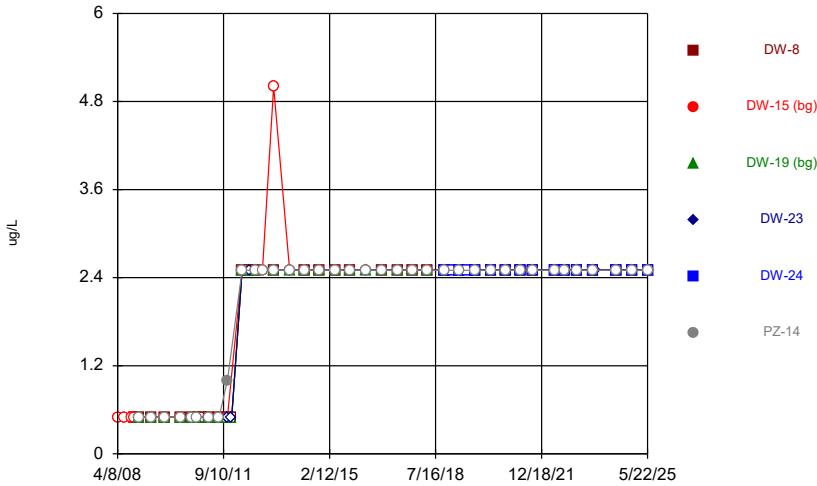
Constituent: Lead Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



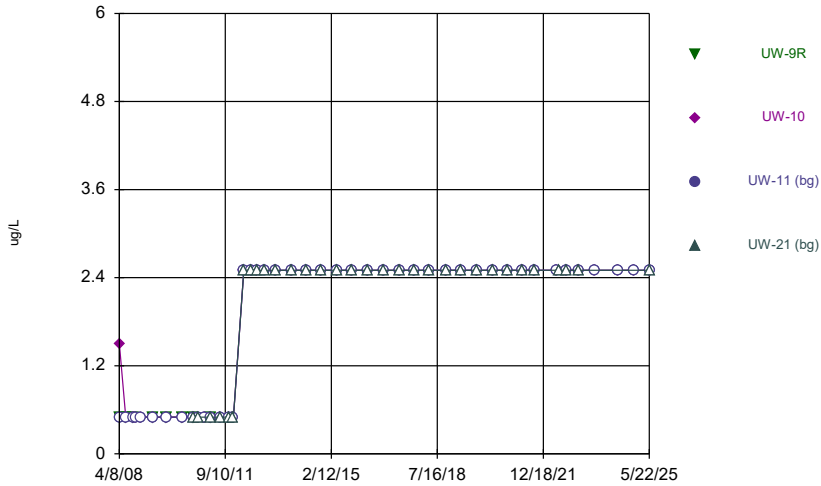
Constituent: Lead Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



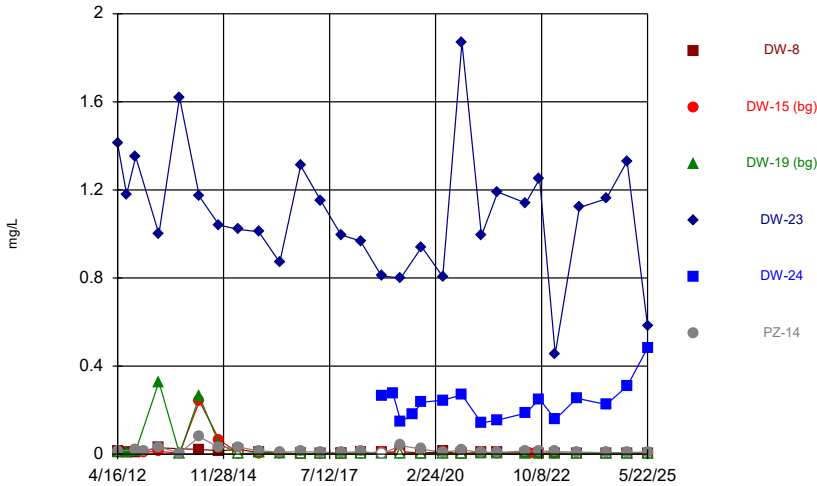
Constituent: Methylene Chloride Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



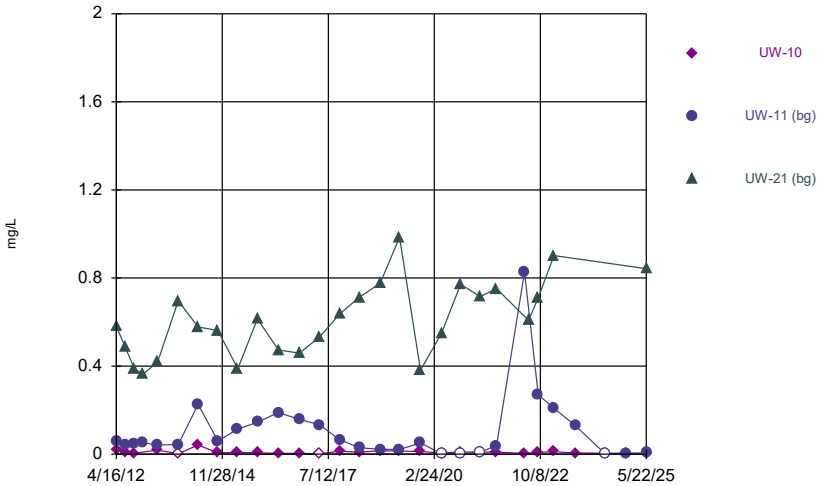
Constituent: Methylene Chloride Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



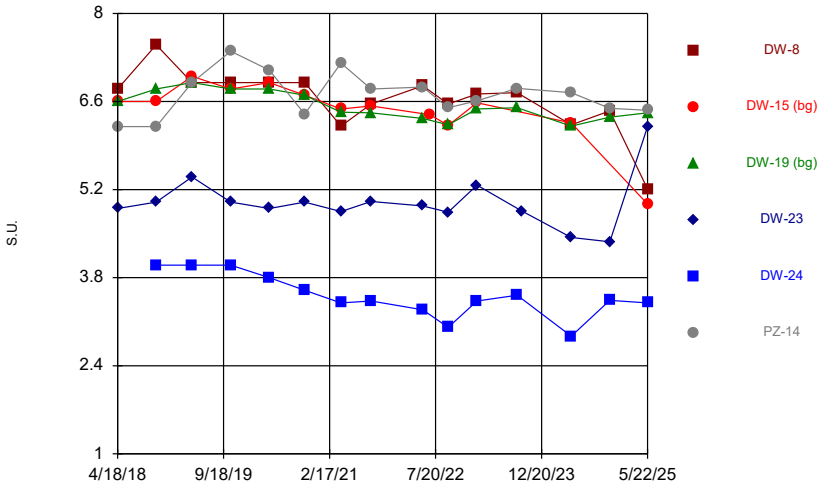
Constituent: Nickel Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



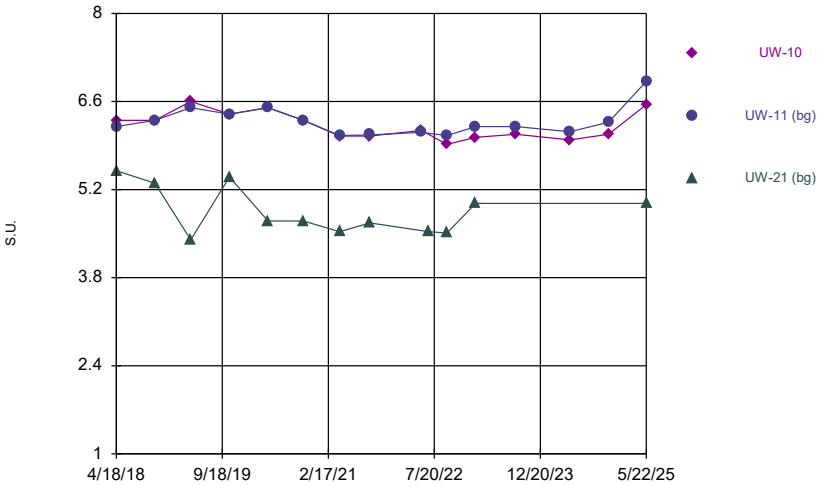
Constituent: Nickel Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



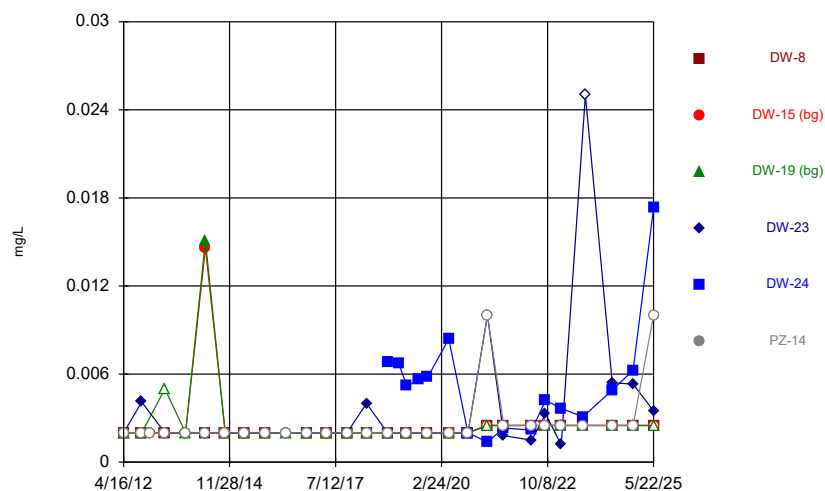
Constituent: pH Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



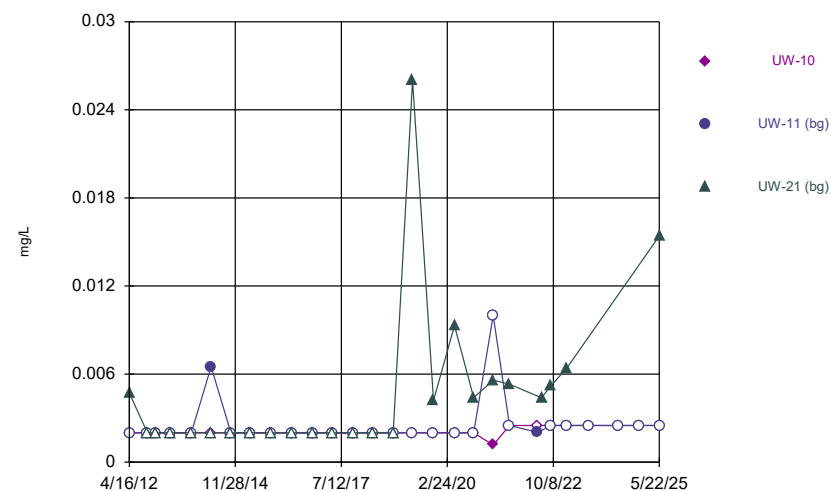
Constituent: pH Analysis Run 10/23/2025 4:13 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



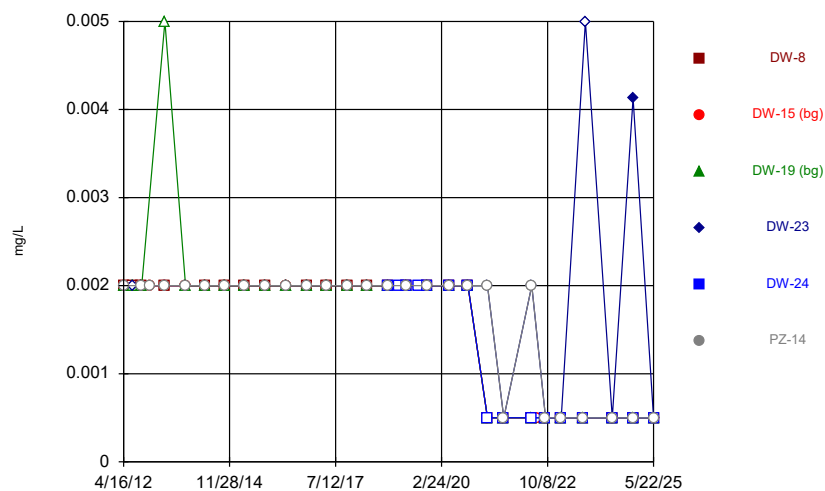
Constituent: Selenium Analysis Run 10/23/2025 4:14 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



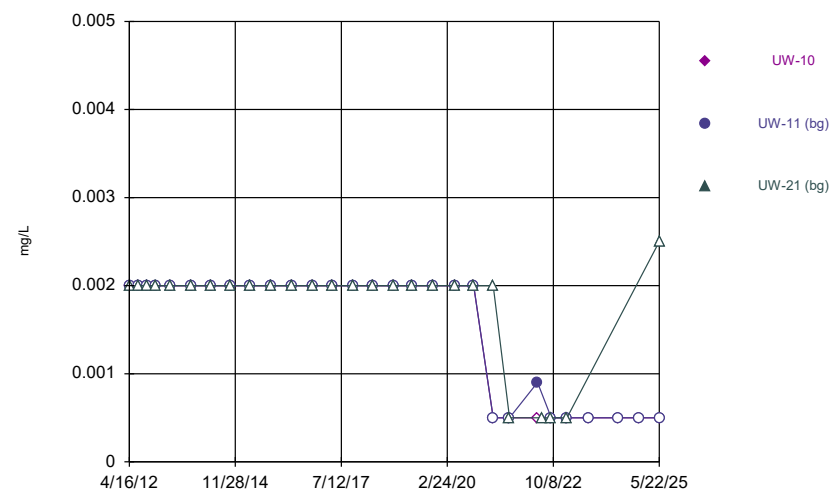
Constituent: Selenium Analysis Run 10/23/2025 4:14 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



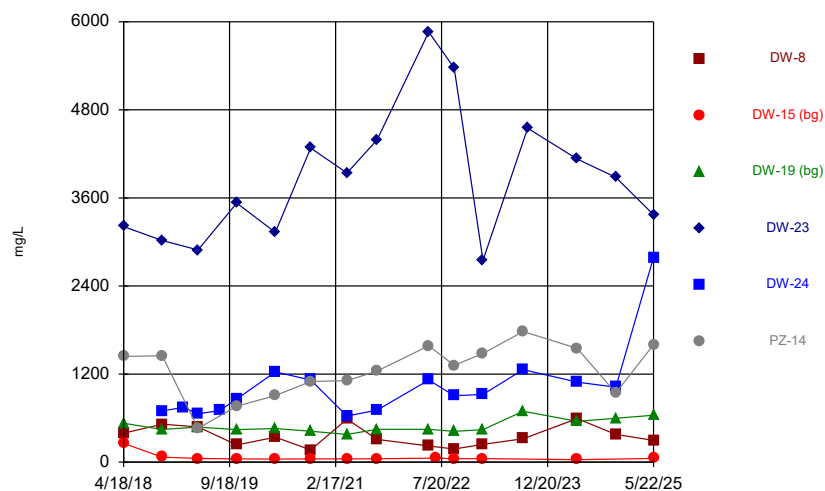
Constituent: Silver Analysis Run 10/23/2025 4:14 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series

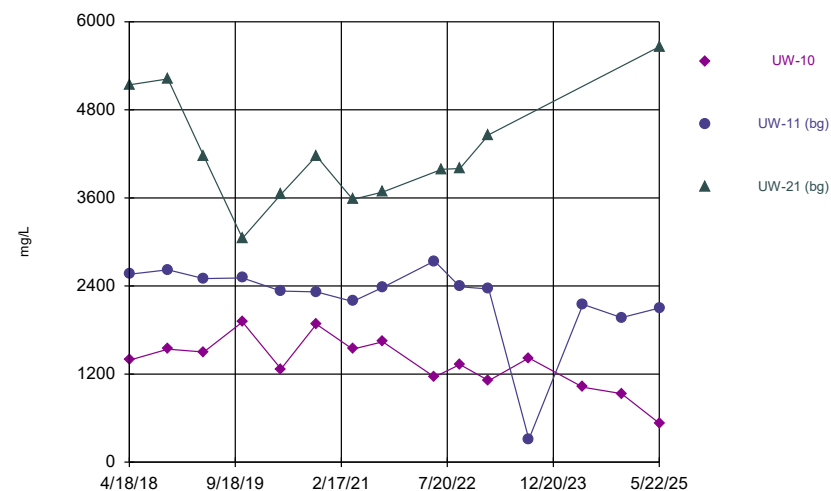


Constituent: Silver Analysis Run 10/23/2025 4:14 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

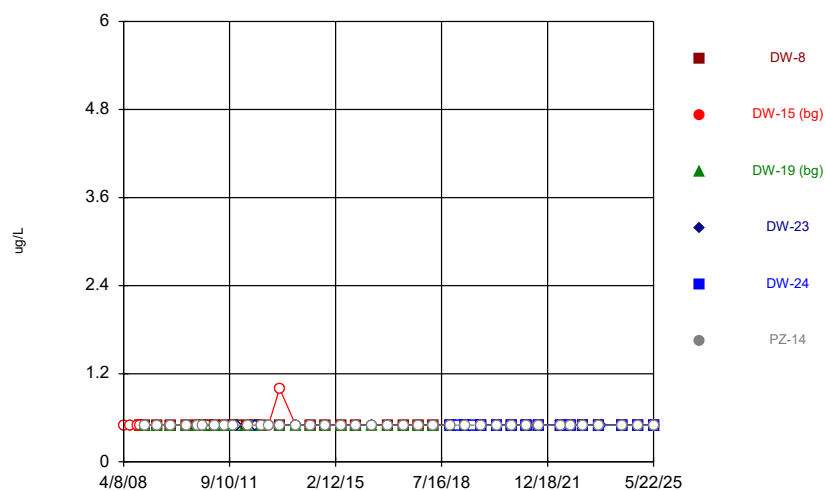
Time Series



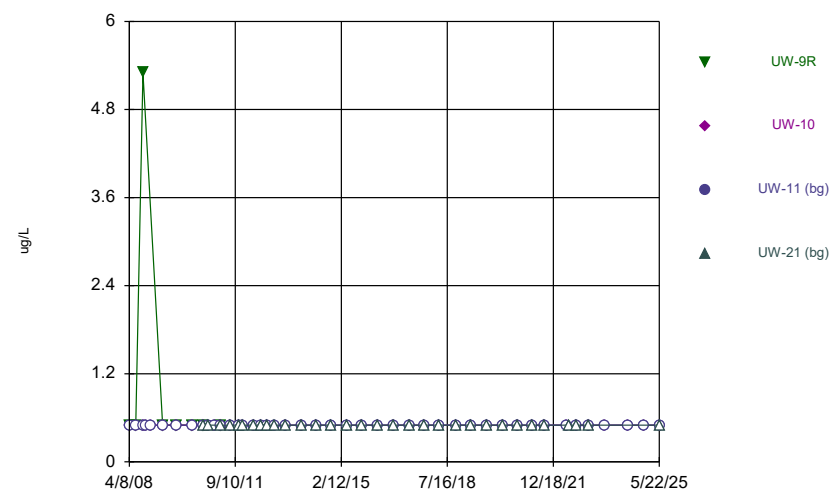
Time Series



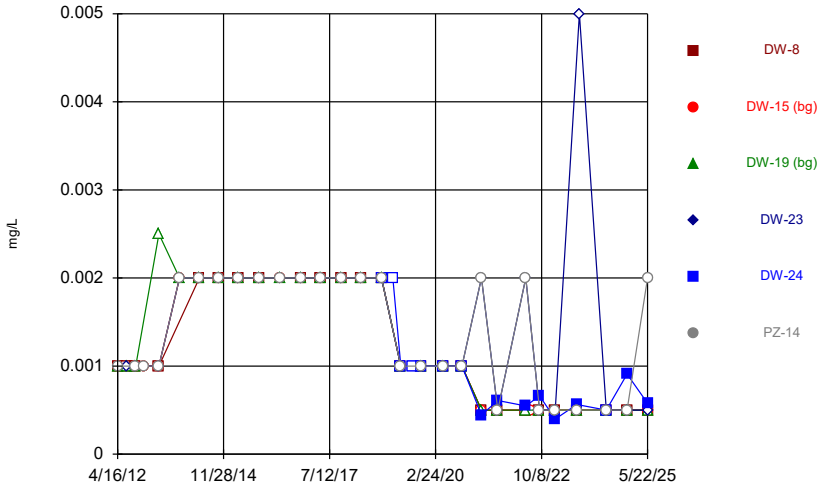
Time Series



Time Series

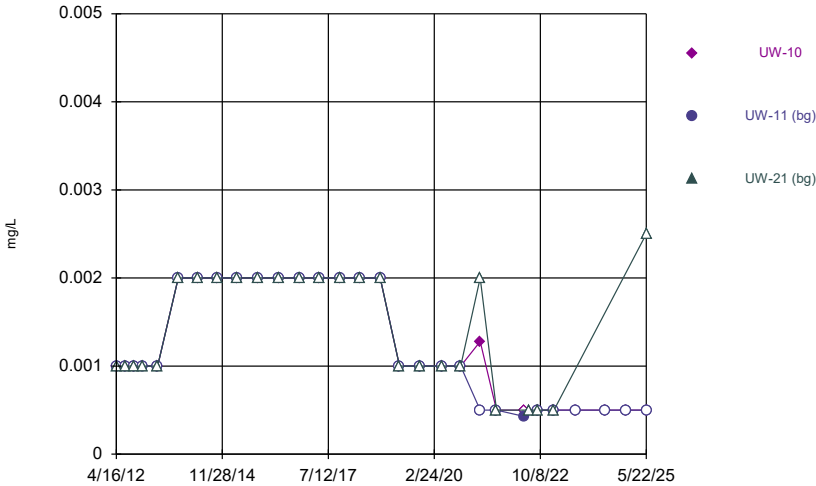


Time Series



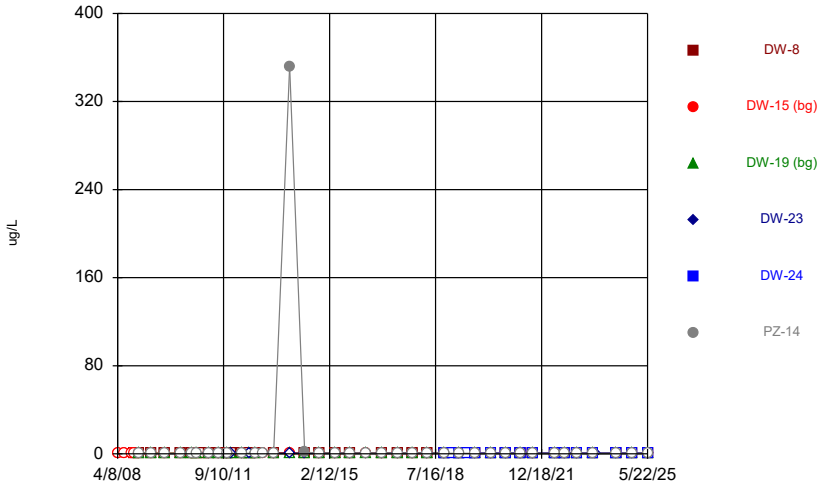
Constituent: Thallium Analysis Run 10/23/2025 4:14 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



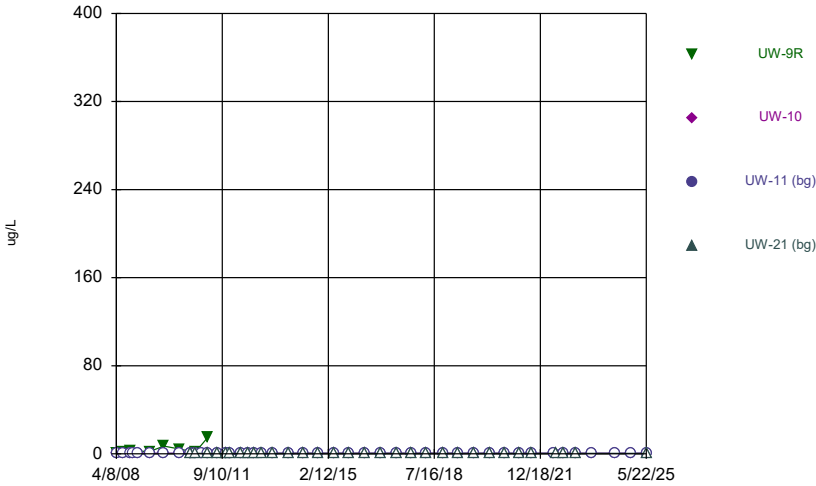
Constituent: Thallium Analysis Run 10/23/2025 4:14 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



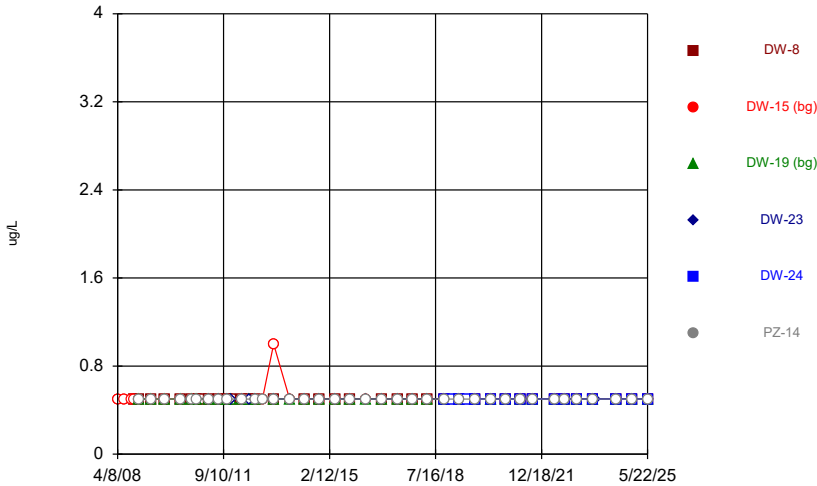
Constituent: Toluene Analysis Run 10/23/2025 4:14 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



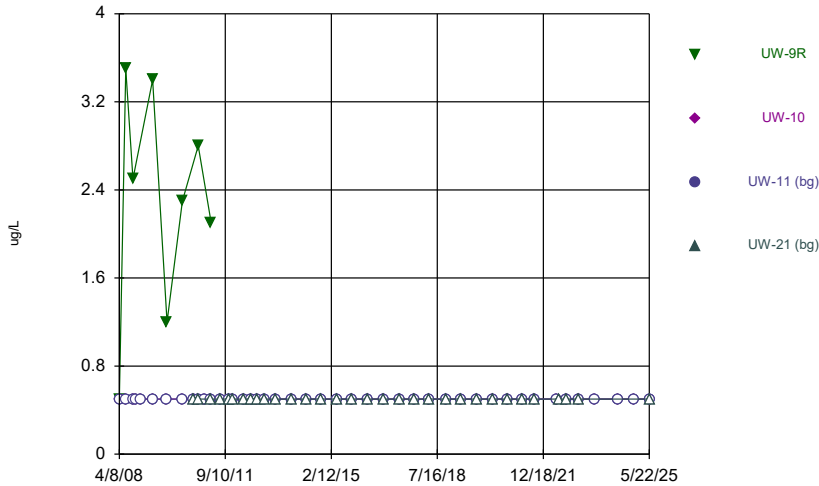
Constituent: Toluene Analysis Run 10/23/2025 4:14 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



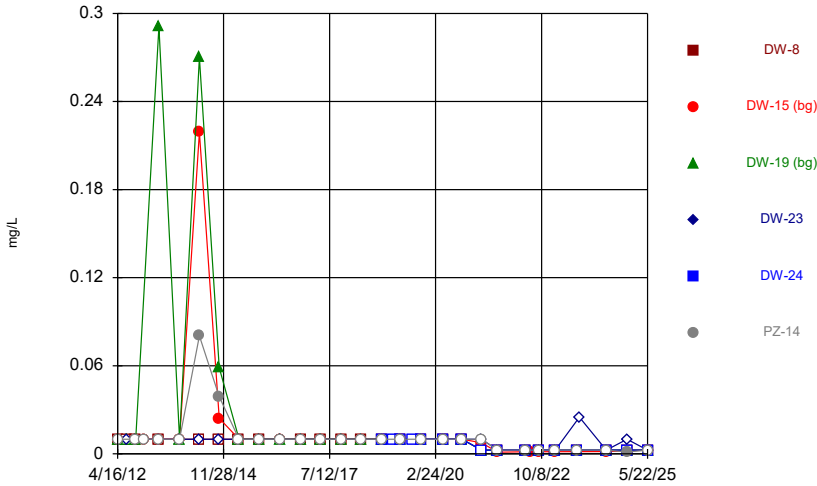
Constituent: Trichloroethene Analysis Run 10/23/2025 4:14 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



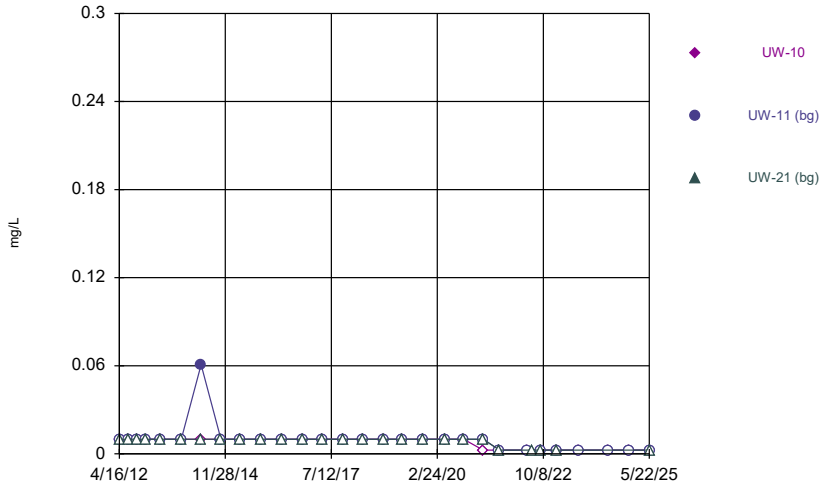
Constituent: Trichloroethene Analysis Run 10/23/2025 4:14 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



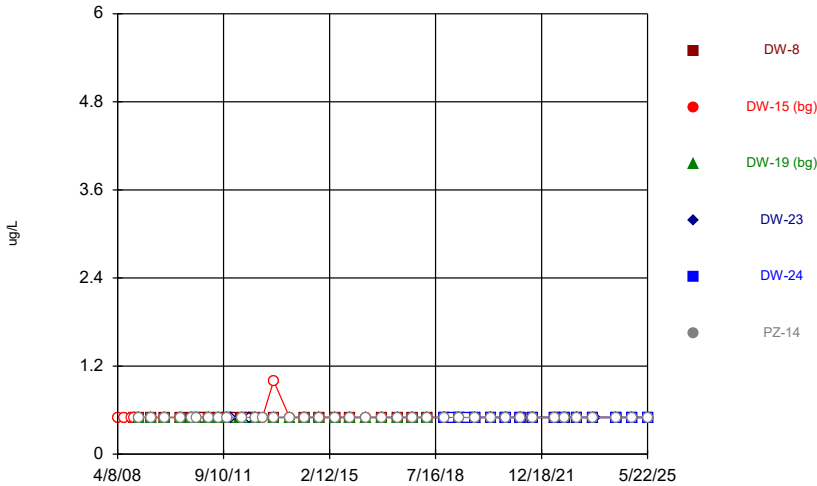
Constituent: Vanadium Analysis Run 10/23/2025 4:14 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series

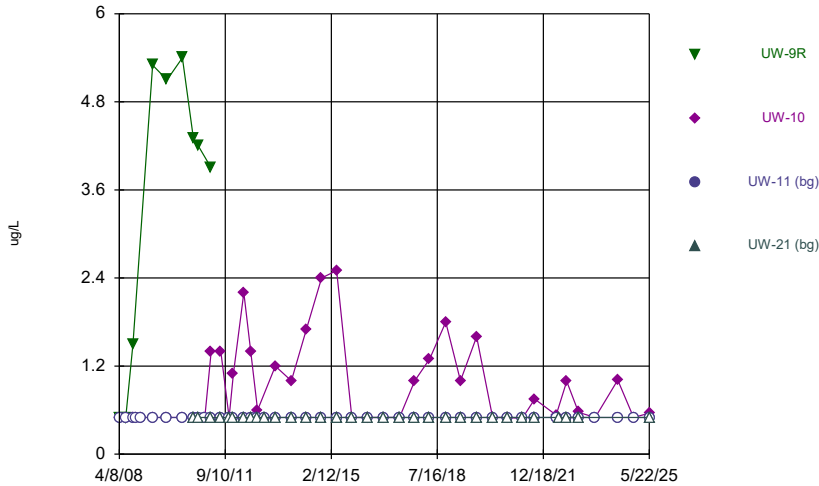


Constituent: Vanadium Analysis Run 10/23/2025 4:14 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

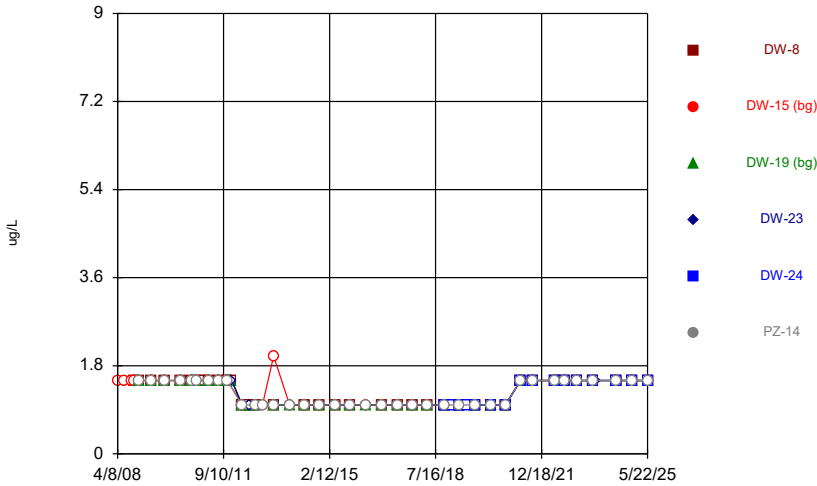
Time Series



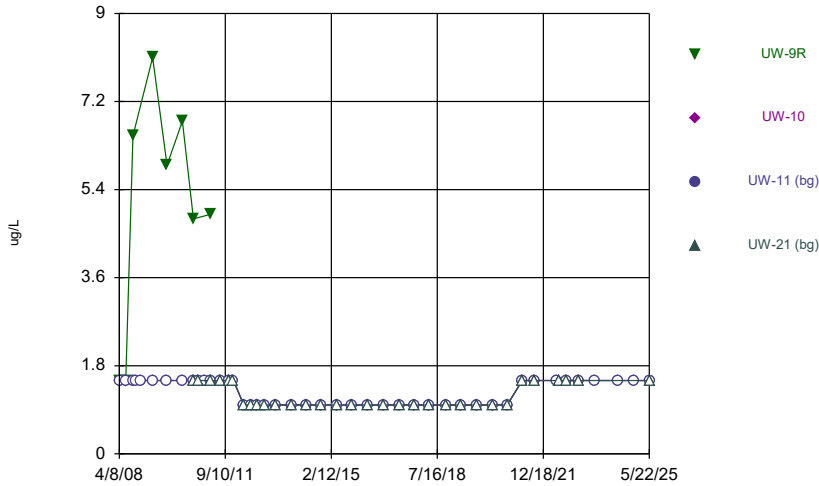
Time Series



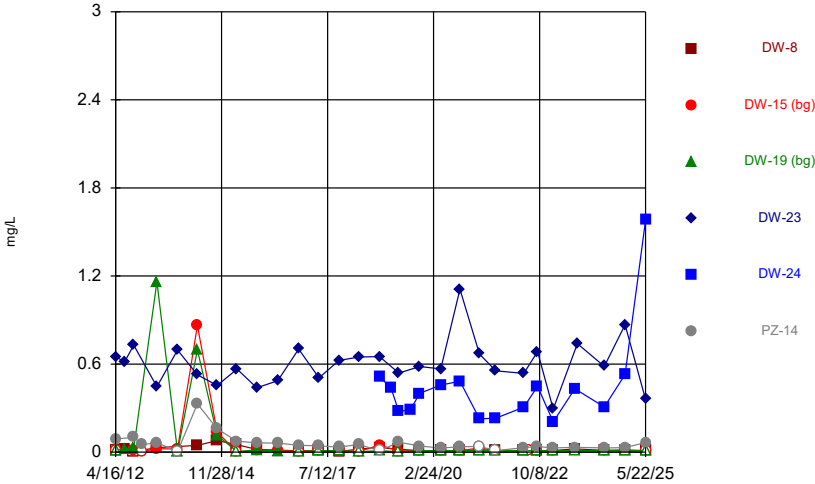
Time Series



Time Series

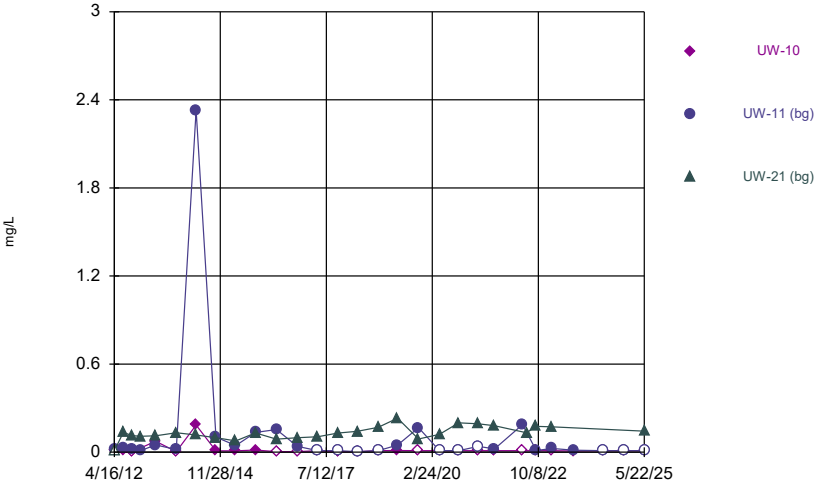


Time Series



Constituent: Zinc Analysis Run 10/23/2025 4:15 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



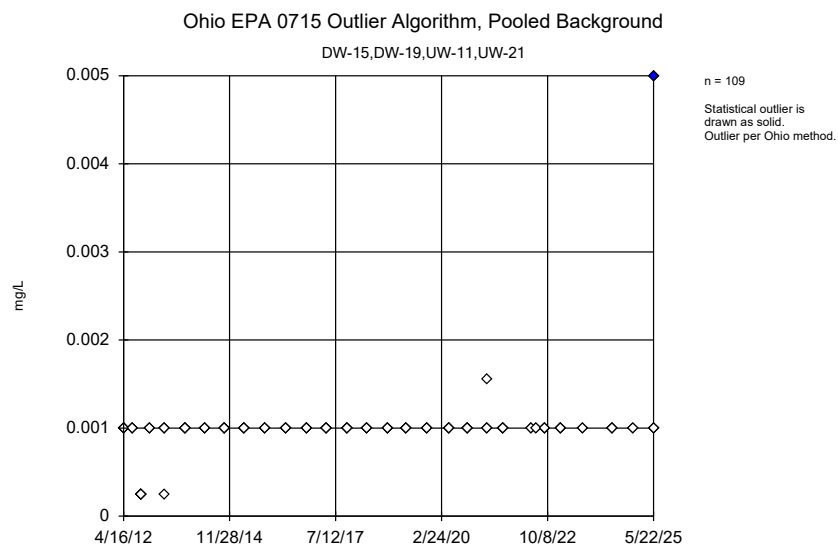
Constituent: Zinc Analysis Run 10/23/2025 4:15 PM View: 2025_SSN-Time_Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Outlier Tests Summary Table and Graphs

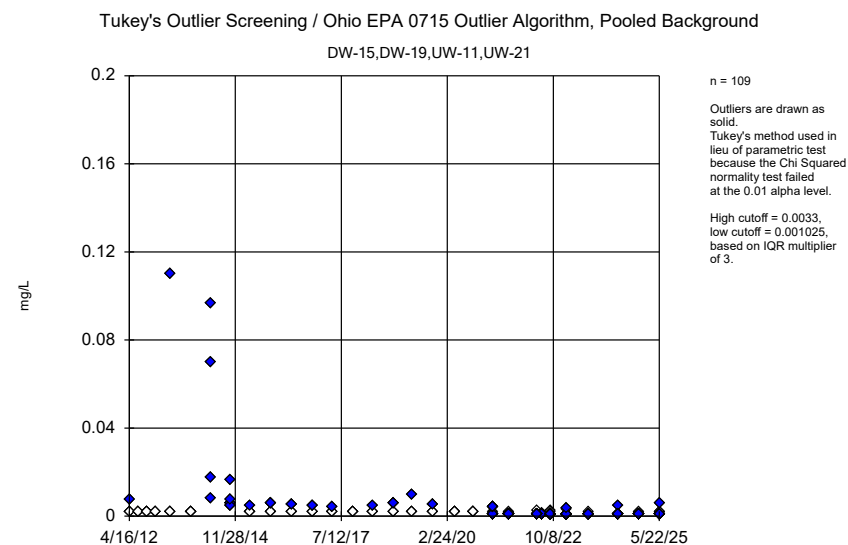
BG Outlier Analysis

Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active Printed 10/23/2025, 4:28 PM

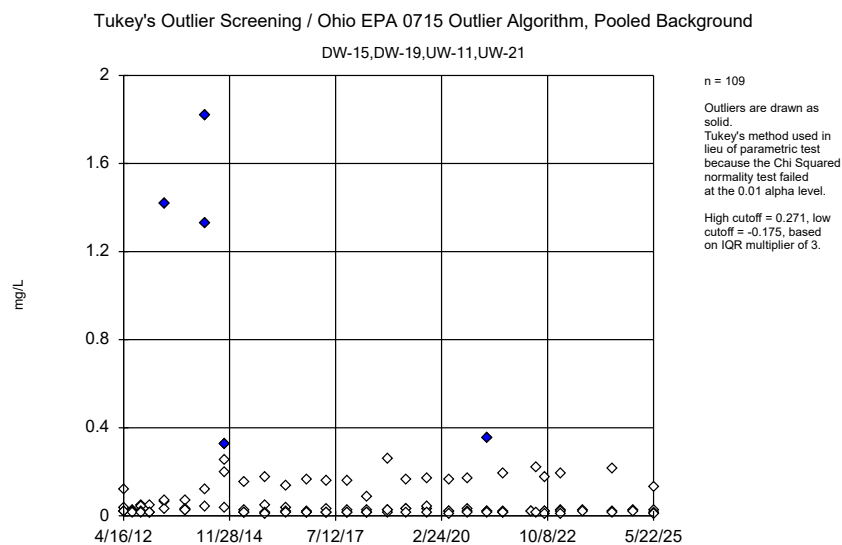
<u>Constituent</u>	<u>Well</u>	<u>Outlier</u>	<u>Value(s)</u>	<u>Date(s)</u>	<u>Method</u>	<u>Alpha</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Distribution</u>	<u>Normality Test</u>
Antimony (mg/L)	DW-15,DW-19,UW-11...	Yes	0.005	n/a w/combined bg	OH	NaN	109	0.001007	0.0004206	n/a	n/a
Arsenic (mg/L)	DW-15,DW-19,UW-11...	Yes	0.0698,0.0059,0.0059,0.0059,0.001,0.001,0.001,0.0	n/a w/combined bg	NP (nrm)/OH	NaN	109	0.00526	0.01515	unknown	ChiSquared
Barium (mg/L)	DW-15,DW-19,UW-11...	Yes	1.82,0.326,0.351,1.42,1.33	n/a w/combined bg	NP (nrm)/OH	NaN	109	0.1002	0.2542	unknown	ChiSquared
Beryllium (mg/L)	DW-15,DW-19,UW-11...	Yes	0.0138,0.0126,0.0125,0.0096	n/a w/combined bg	OH	NaN	109	0.002049	0.002119	n/a	n/a
Chromium (mg/L)	DW-15,DW-19,UW-11...	Yes	0.183,0.16,0.152,0.105,0.0416,0.0319,0.0168	n/a w/combined bg	OH	NaN	109	0.01017	0.02842	n/a	n/a
Cobalt (mg/L)	DW-15,DW-19,UW-11...	Yes	1.45,1.45,1.48,1.61	n/a w/combined bg	NP (nrm)/OH	NaN	109	0.2799	0.475	unknown	ChiSquared
Copper (mg/L)	DW-15,DW-19,UW-11...	Yes	0.148,0.0174,0.0283,0.239,0.169,0.0308,0.226,0.01	n/a w/combined bg	NP (nrm)/OH	NaN	109	0.01261	0.03834	unknown	ChiSquared
Lead (mg/L)	DW-15,DW-19,UW-11...	Yes	0.0851,0.0137,0.0051,0.0051,0.0067,0.138,0.0253,0	n/a w/combined bg	NP (nrm)/OH	NaN	109	0.005981	0.02001	unknown	ChiSquared
Selenium (mg/L)	DW-15,DW-19,UW-11...	Yes	0.026,0.0154,0.0151,0.0146,0.01,0.0093	n/a w/combined bg	OH	NaN	106	0.003148	0.003346	n/a	n/a
Silver (mg/L)	DW-15,DW-19,UW-11...	Yes	0.005	n/a w/combined bg	OH	NaN	109	0.001637	0.0007396	n/a	n/a
Thallium (mg/L)	DW-15,DW-19,UW-11...	Yes	0.0025,0.0025	n/a w/combined bg	OH	NaN	109	0.001307	0.0006567	n/a	n/a
Vanadium (mg/L)	DW-15,DW-19,UW-11...	Yes	0.291,0.27,0.219,0.0607,0.0587	n/a w/combined bg	OH	NaN	109	0.01592	0.0423	n/a	n/a
Zinc (mg/L)	DW-15,DW-19,UW-11...	Yes	0.864,1.16,0.697,2.33	n/a w/combined bg	NP (nrm)/OH	NaN	109	0.09629	0.2664	unknown	ChiSquared



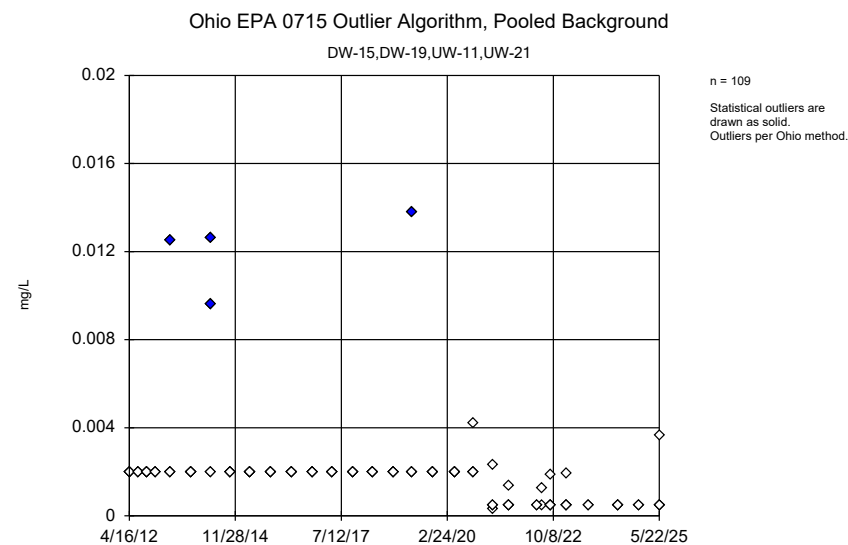
Constituent: Antimony Analysis Run 10/23/2025 4:26 PM View: 2025_SSN-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active



Constituent: Arsenic Analysis Run 10/23/2025 4:26 PM View: 2025_SSN-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

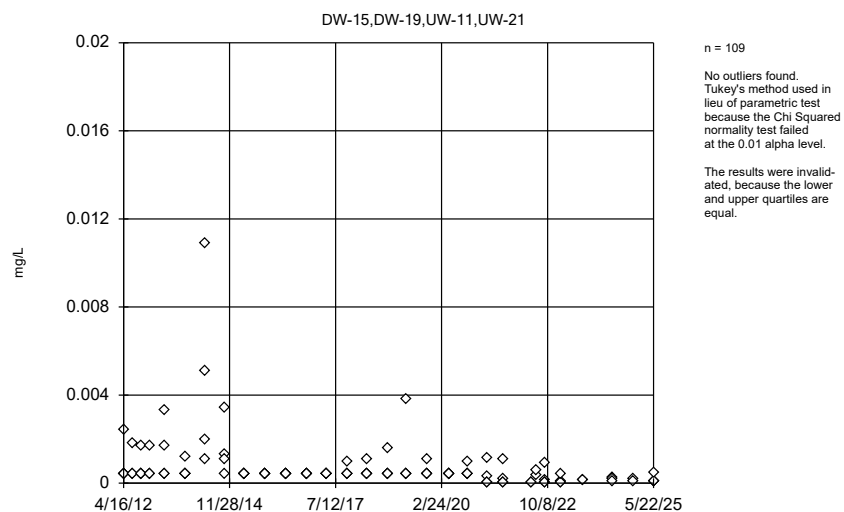


Constituent: Barium Analysis Run 10/23/2025 4:26 PM View: 2025_SSN-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active



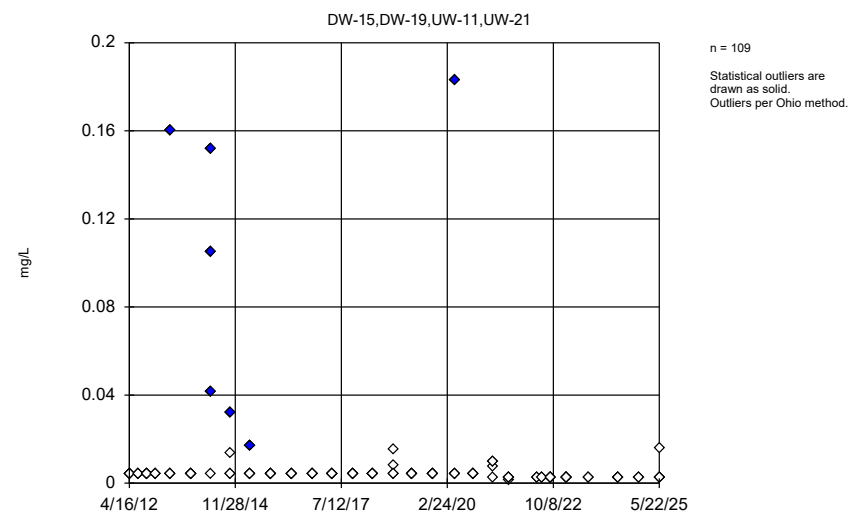
Constituent: Beryllium Analysis Run 10/23/2025 4:26 PM View: 2025_SSN-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm, Pooled Background



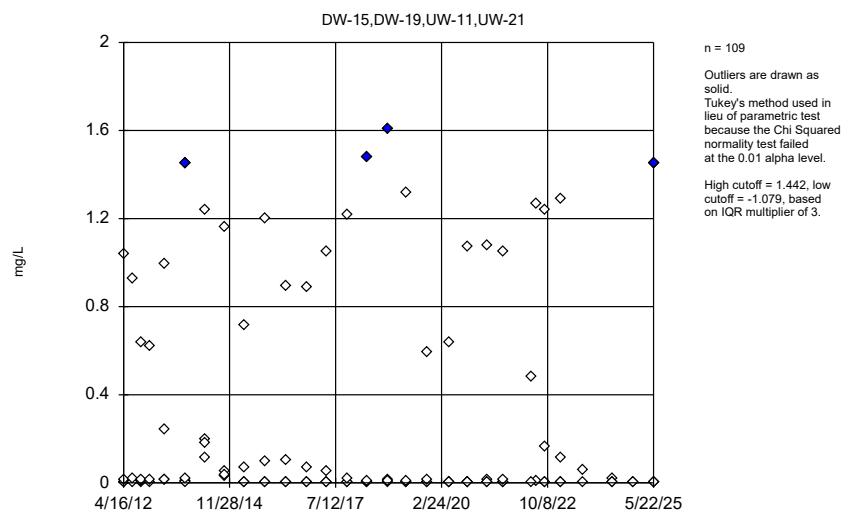
Constituent: Cadmium Analysis Run 10/23/2025 4:26 PM View: 2025_SSN-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Ohio EPA 0715 Outlier Algorithm, Pooled Background



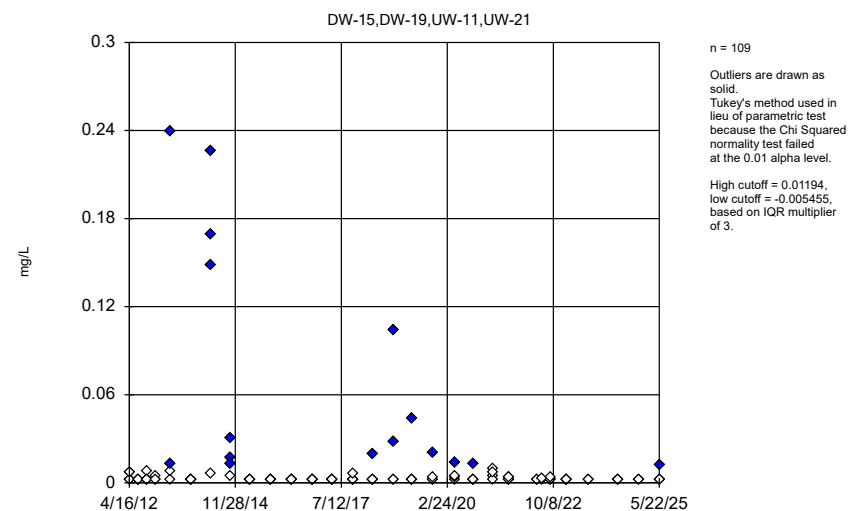
Constituent: Chromium Analysis Run 10/23/2025 4:26 PM View: 2025_SSN-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm, Pooled Background



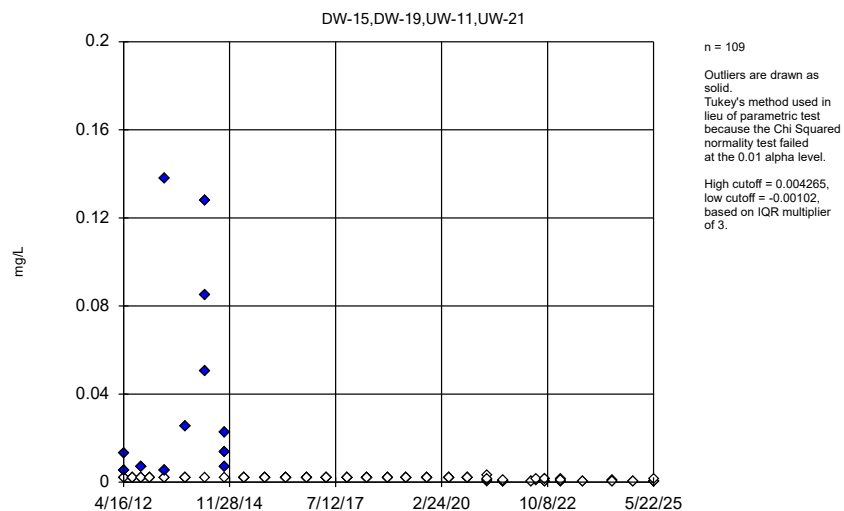
Constituent: Cobalt Analysis Run 10/23/2025 4:26 PM View: 2025_SSN-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm, Pooled Background



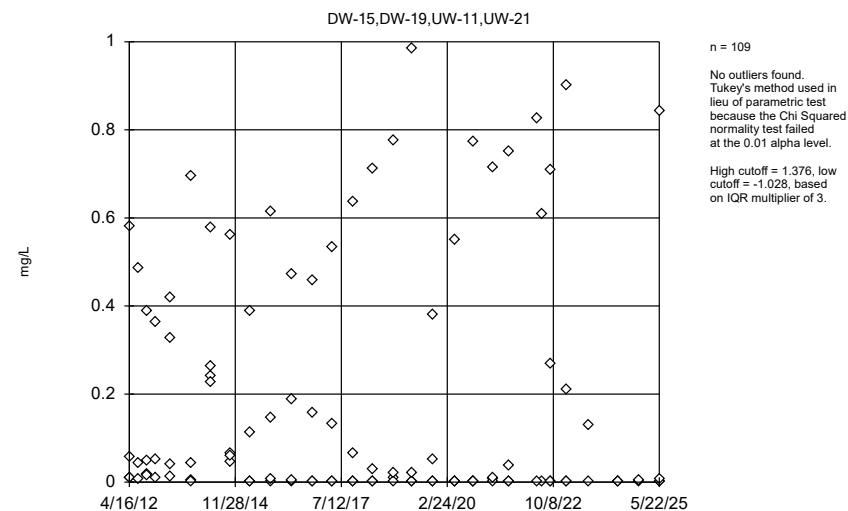
Constituent: Copper Analysis Run 10/23/2025 4:26 PM View: 2025_SSN-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm, Pooled Background



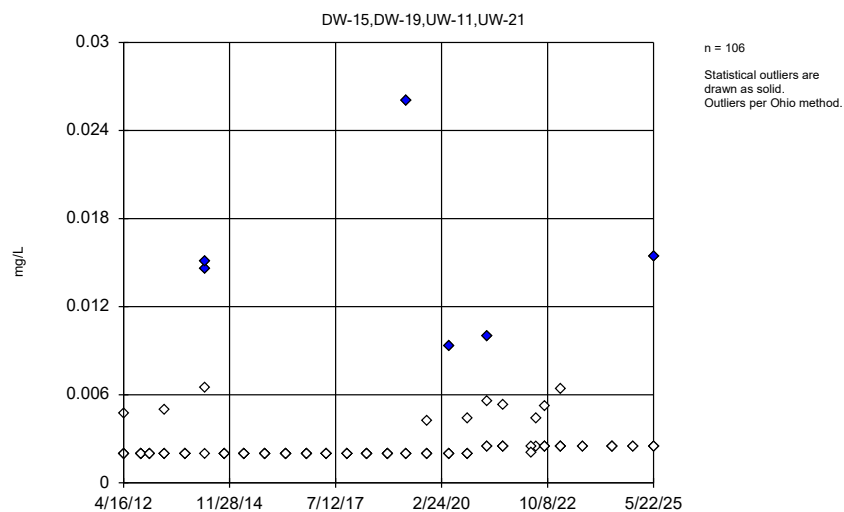
Constituent: Lead Analysis Run 10/23/2025 4:26 PM View: 2025_SSN-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm, Pooled Background



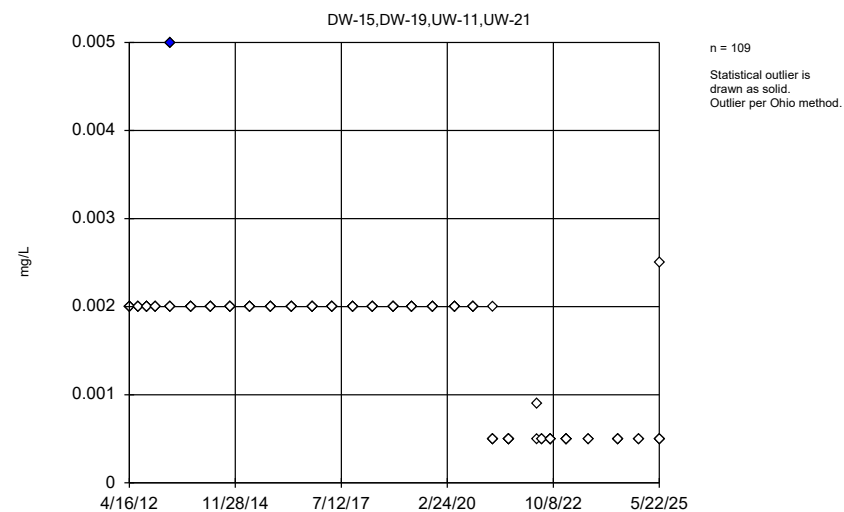
Constituent: Nickel Analysis Run 10/23/2025 4:26 PM View: 2025_SSN-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Ohio EPA 0715 Outlier Algorithm, Pooled Background

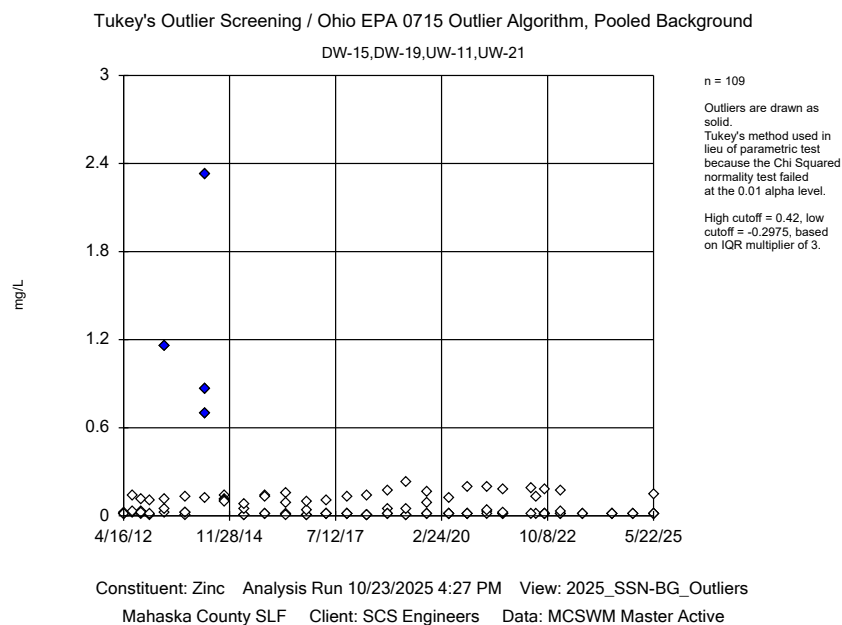
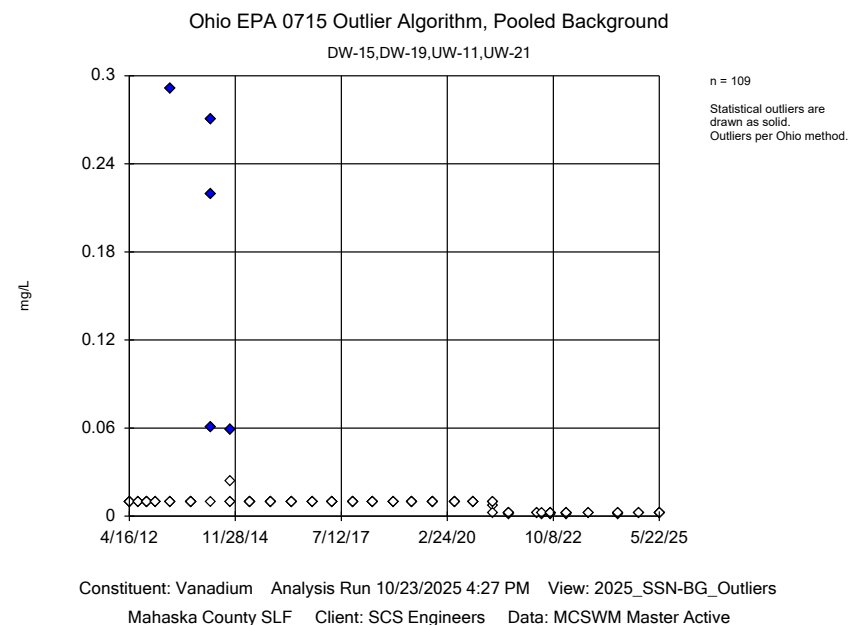
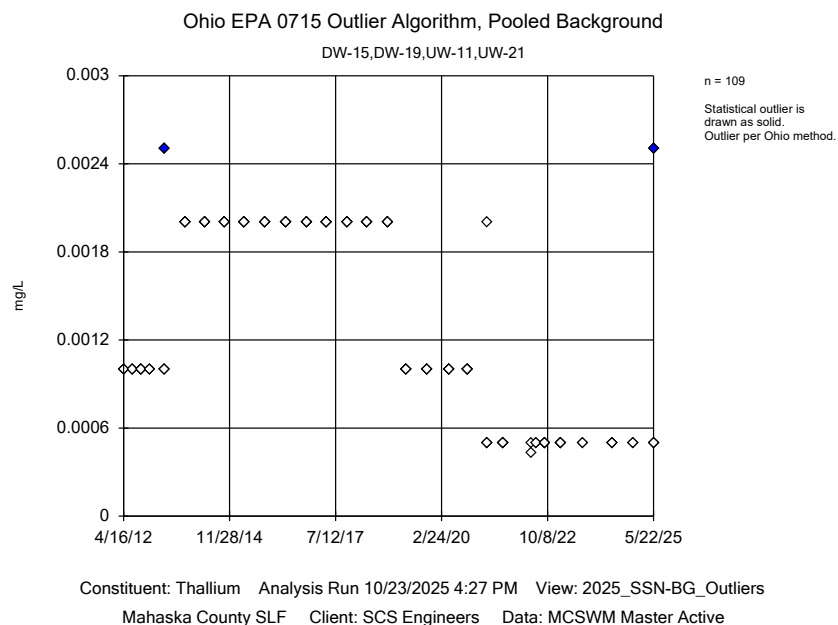


Constituent: Selenium Analysis Run 10/23/2025 4:26 PM View: 2025_SSN-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Ohio EPA 0715 Outlier Algorithm, Pooled Background



Constituent: Silver Analysis Run 10/23/2025 4:26 PM View: 2025_SSN-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active



Interwell Prediction Limit Summary Table and Graphs

Prediction Limit

Mahaska County SLF

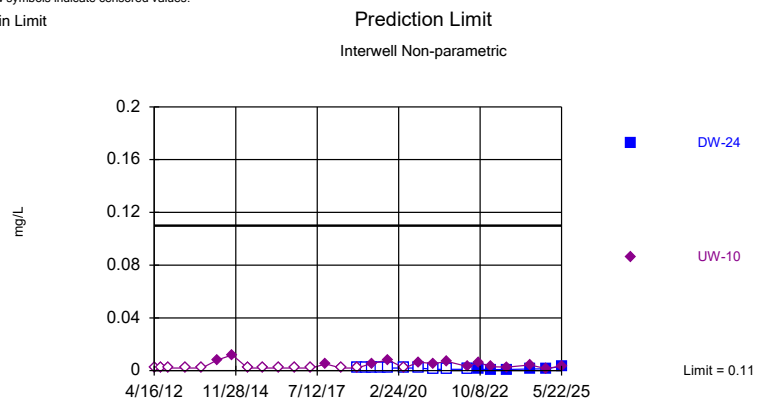
Client: SCS Engineers

Data: MCSWM Master Active

Printed 10/23/2025, 4:09 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim</u>	<u>Lower Lim</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>Bg Wells</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	DW-24	0.11	n/a	5/22/2025	0.00334	No	109	UW-11,DW-15,DW-19,UW-21	n/a	n/a	67.89	n/a	n/a	0.0001668	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	UW-10	0.11	n/a	5/22/2025	0.003455	No	109	UW-11,DW-15,DW-19,UW-21	n/a	n/a	67.89	n/a	n/a	0.0001668	NP Inter (NDs) 1 of 2
Barium (mg/L)	DW-8	1.82	n/a	5/22/2025	0.0272	No	109	UW-21,UW-11,DW-19,DW-15	n/a	n/a	0	n/a	n/a	0.0001668	NP Inter (normality) 1 of 2
Barium (mg/L)	DW-23	1.82	n/a	5/22/2025	0.0117	No	109	UW-21,UW-11,DW-19,DW-15	n/a	n/a	0	n/a	n/a	0.0001668	NP Inter (normality) 1 of 2
Barium (mg/L)	DW-24	1.82	n/a	5/22/2025	0.00687	No	109	UW-21,UW-11,DW-19,DW-15	n/a	n/a	0	n/a	n/a	0.0001668	NP Inter (normality) 1 of 2
Barium (mg/L)	PZ-14	1.82	n/a	5/22/2025	0.0196	No	109	UW-21,UW-11,DW-19,DW-15	n/a	n/a	0	n/a	n/a	0.0001668	NP Inter (normality) 1 of 2
Barium (mg/L)	UW-10	1.82	n/a	5/22/2025	0.065	No	109	UW-21,UW-11,DW-19,DW-15	n/a	n/a	0	n/a	n/a	0.0001668	NP Inter (normality) 1 of 2
Beryllium (mg/L)	DW-24	0.0138	n/a	5/22/2025	0.0131	No	109	DW-15,UW-11,DW-19,UW-21	n/a	n/a	89.91	n/a	n/a	0.0001668	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	DW-23	0.0109	n/a	5/22/2025	0.00268	No	109	DW-19,UW-11,DW-15,UW-21	n/a	n/a	66.97	n/a	n/a	0.0001668	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	DW-24	0.0109	n/a	5/22/2025	0.0167	Yes	109	DW-19,UW-11,DW-15,UW-21	n/a	n/a	66.97	n/a	n/a	0.0001668	NP Inter (NDs) 1 of 2
Cobalt (mg/L)	DW-8	1.61	n/a	5/22/2025	0.00383	No	109	UW-11,DW-19,DW-15,UW-21	n/a	n/a	18.35	n/a	n/a	0.0001668	NP Inter (normality) 1 of 2
Cobalt (mg/L)	DW-23	1.61	n/a	5/22/2025	0.407	No	109	UW-11,DW-19,DW-15,UW-21	n/a	n/a	18.35	n/a	n/a	0.0001668	NP Inter (normality) 1 of 2
Cobalt (mg/L)	DW-24	1.61	n/a	5/22/2025	0.314	No	109	UW-11,DW-19,DW-15,UW-21	n/a	n/a	18.35	n/a	n/a	0.0001668	NP Inter (normality) 1 of 2
Cobalt (mg/L)	PZ-14	1.61	n/a	5/22/2025	0.00919	No	109	UW-11,DW-19,DW-15,UW-21	n/a	n/a	18.35	n/a	n/a	0.0001668	NP Inter (normality) 1 of 2
Cobalt (mg/L)	UW-10	1.61	n/a	5/22/2025	0.0329	No	109	UW-11,DW-19,DW-15,UW-21	n/a	n/a	18.35	n/a	n/a	0.0001668	NP Inter (normality) 1 of 2
Copper (mg/L)	DW-24	0.239	n/a	5/22/2025	0.00507	No	109	DW-15,DW-19,UW-11,UW-21	n/a	n/a	68.81	n/a	n/a	0.0001668	NP Inter (NDs) 1 of 2
Lead (mg/L)	DW-24	0.138	n/a	5/22/2025	0.0007	No	109	UW-11,DW-15,DW-19,UW-21	n/a	n/a	74.31	n/a	n/a	0.0001668	NP Inter (NDs) 1 of 2
Nickel (mg/L)	DW-23	0.985	n/a	5/22/2025	0.582	No	109	DW-19,DW-15,UW-11,UW-21	n/a	n/a	31.19	n/a	n/a	0.0001668	NP Inter (normality) 1 of 2
Nickel (mg/L)	DW-24	0.985	n/a	5/22/2025	0.482	No	109	DW-19,DW-15,UW-11,UW-21	n/a	n/a	31.19	n/a	n/a	0.0001668	NP Inter (normality) 1 of 2
Selenium (mg/L)	DW-24	0.026	n/a	5/22/2025	0.0173	No	106	DW-15,DW-19,UW-11,UW-21	n/a	n/a	85.85	n/a	n/a	0.0001755	NP Inter (NDs) 1 of 2
Zinc (mg/L)	DW-23	2.33	n/a	5/22/2025	0.36	No	109	UW-11,DW-19,DW-15,UW-21	n/a	n/a	43.12	n/a	n/a	0.0001668	NP Inter (normality) 1 of 2
Zinc (mg/L)	DW-24	2.33	n/a	5/22/2025	1.58	No	109	UW-11,DW-19,DW-15,UW-21	n/a	n/a	43.12	n/a	n/a	0.0001668	NP Inter (normality) 1 of 2

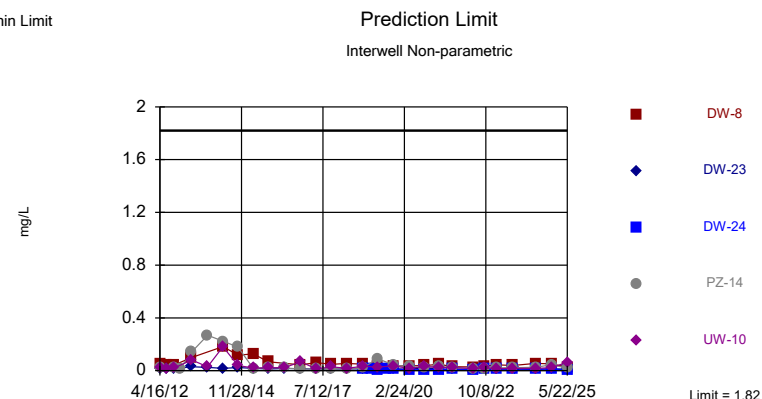
Within Limit



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 109 background values. 67.89% NDs. Annual per-constituent alpha = 0.002333. Individual comparison alpha = 0.0001668 (1 of 2). Comparing 2 points to limit. Assumes 5 future values.

Constituent: Arsenic Analysis Run 10/23/2025 4:02 PM View: 2025_SSN-DM&AM_Prediction_Limit
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

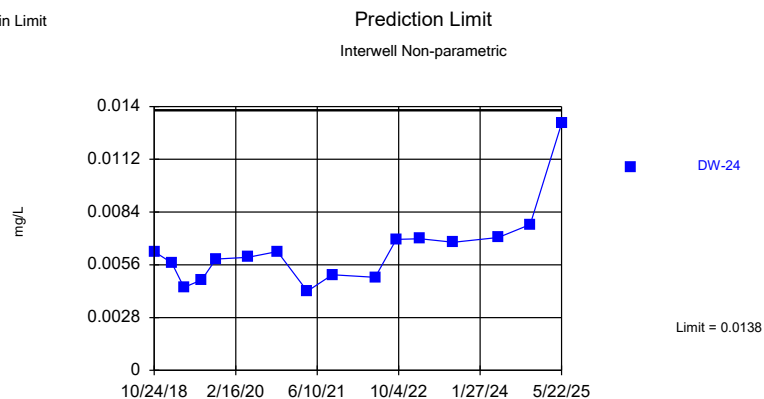
Within Limit



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 109 background values. Annual per-constituent alpha = 0.002333. Individual comparison alpha = 0.0001668 (1 of 2). Comparing 5 points to limit. Assumes 2 future values.

Constituent: Barium Analysis Run 10/23/2025 4:02 PM View: 2025_SSN-DM&AM_Prediction_Limit
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

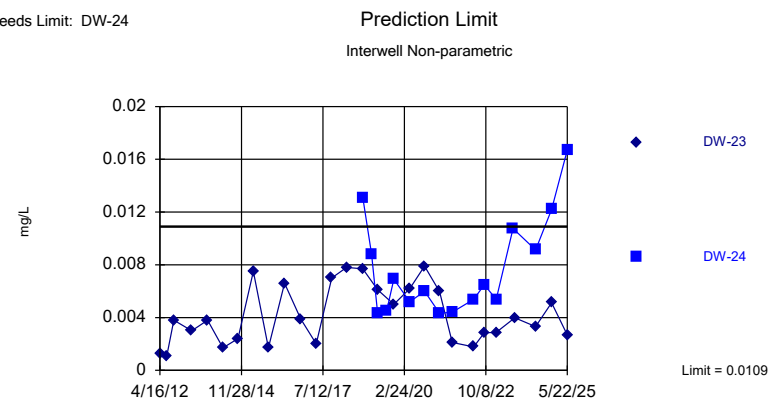
Within Limit



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 109 background values. 89.91% NDs. Annual per-constituent alpha = 0.002333. Individual comparison alpha = 0.0001668 (1 of 2). Assumes 6 future values.

Constituent: Beryllium Analysis Run 10/23/2025 4:02 PM View: 2025_SSN-DM&AM_Prediction_Limit
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Exceeds Limit: DW-24



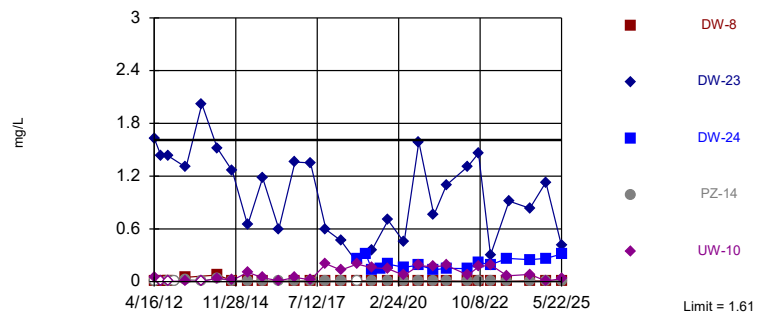
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 109 background values. 66.97% NDs. Annual per-constituent alpha = 0.002333. Individual comparison alpha = 0.0001668 (1 of 2). Comparing 2 points to limit. Assumes 5 future values.

Constituent: Cadmium Analysis Run 10/23/2025 4:02 PM View: 2025_SSN-DM&AM_Prediction_Limit
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Within Limit

Prediction Limit

Interwell Non-parametric



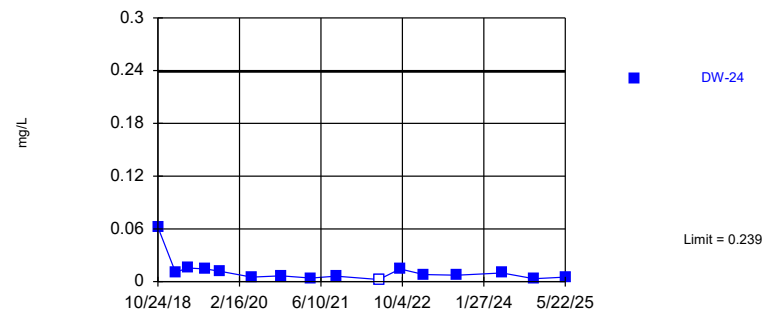
Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 109 background values. 18.35% NDs. Annual per-constituent alpha = 0.002333. Individual comparison alpha = 0.0001668 (1 of 2). Comparing 5 points to limit. Assumes 2 future values.

Constituent: Cobalt Analysis Run 10/23/2025 4:02 PM View: 2025_SSN-DM&AM_Prediction_Limit
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Within Limit

Prediction Limit

Interwell Non-parametric



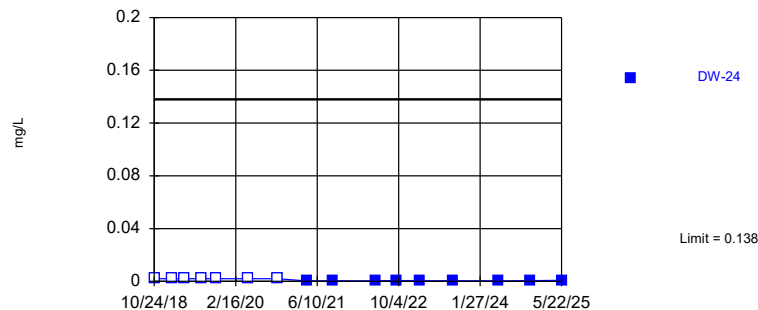
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 109 background values. 68.81% NDs. Annual per-constituent alpha = 0.002333. Individual comparison alpha = 0.0001668 (1 of 2). Assumes 6 future values.

Constituent: Copper Analysis Run 10/23/2025 4:02 PM View: 2025_SSN-DM&AM_Prediction_Limit
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Within Limit

Prediction Limit

Interwell Non-parametric



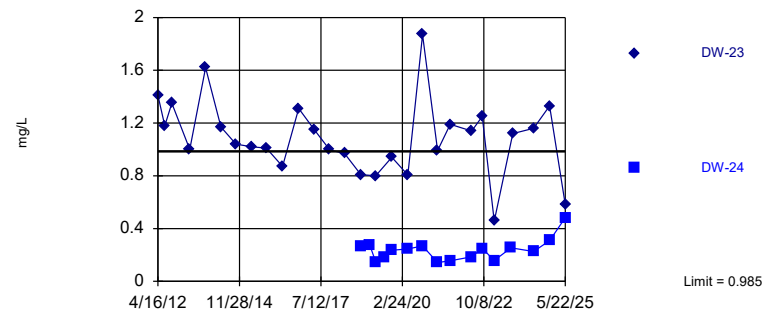
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 109 background values. 74.31% NDs. Annual per-constituent alpha = 0.002333. Individual comparison alpha = 0.0001668 (1 of 2). Assumes 6 future values.

Constituent: Lead Analysis Run 10/23/2025 4:02 PM View: 2025_SSN-DM&AM_Prediction_Limit
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Within Limit

Prediction Limit

Interwell Non-parametric

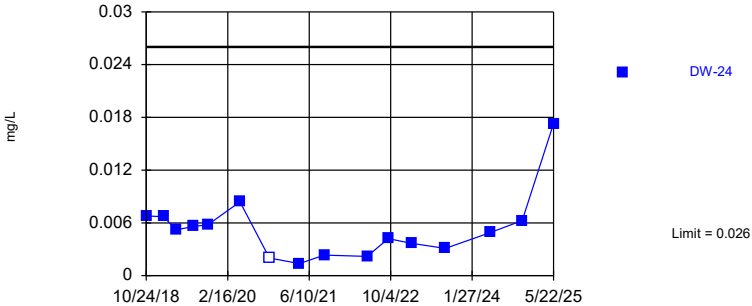


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 109 background values. 31.19% NDs. Annual per-constituent alpha = 0.002333. Individual comparison alpha = 0.0001668 (1 of 2). Comparing 2 points to limit. Assumes 5 future values.

Constituent: Nickel Analysis Run 10/23/2025 4:02 PM View: 2025_SSN-DM&AM_Prediction_Limit
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Within Limit

Prediction Limit
Interwell Non-parametric

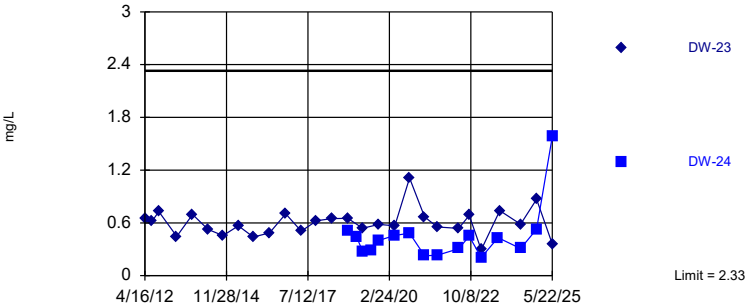


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 106 background values. 85.85% NDs. Annual per-constituent alpha = 0.002454. Individual comparison alpha = 0.0001755 (1 of 2). Assumes 6 future values.

Constituent: Selenium Analysis Run 10/23/2025 4:03 PM View: 2025_SSN-DM&AM_Prediction_Limit
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Within Limit

Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 109 background values. 43.12% NDs. Annual per-constituent alpha = 0.002333. Individual comparison alpha = 0.0001668 (1 of 2). Comparing 2 points to limit. Assumes 5 future values.

Constituent: Zinc Analysis Run 10/23/2025 4:03 PM View: 2025_SSN-DM&AM_Prediction_Limit
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Intrawell Prediction Limit Summary Table and Graphs

DW-24 Intrawell Prediction Limit

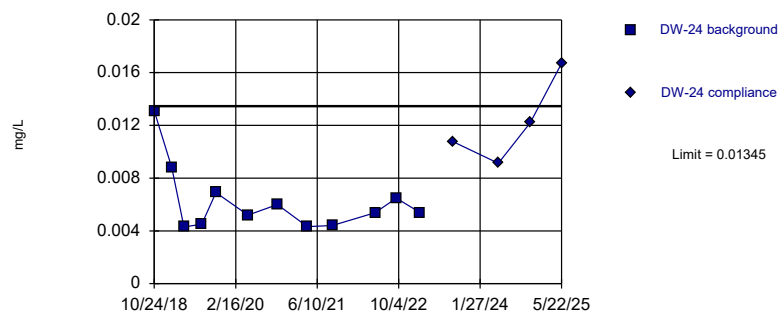
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active Printed 10/23/2025, 5:49 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim</u>	<u>Lower Lim</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>Bg Wells</u>	<u>Bg Mean</u>	<u>Std. Dev.</u>	<u>%NDs</u>	<u>ND Adj.</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cadmium (mg/L)	DW-24	0.01345	n/a	5/22/2025	0.0167	Yes	12	n/a	0.07775	0.01429	0	None	sqrt(x)	0.0006269	Param Intra 1 of 2

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=0.07775, Std. Dev.=0.01429, n=12.
 Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8091, critical = 0.805. Kappa = 2.676 (c=12, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.0006269.

Constituent: Cadmium Analysis Run 10/23/2025 5:47 PM View: 2025_SSN-IntraPL_DW-24
 Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Mann-Kendall/Sen's Slope Trend Test Summary Table and Graphs

Trend Test

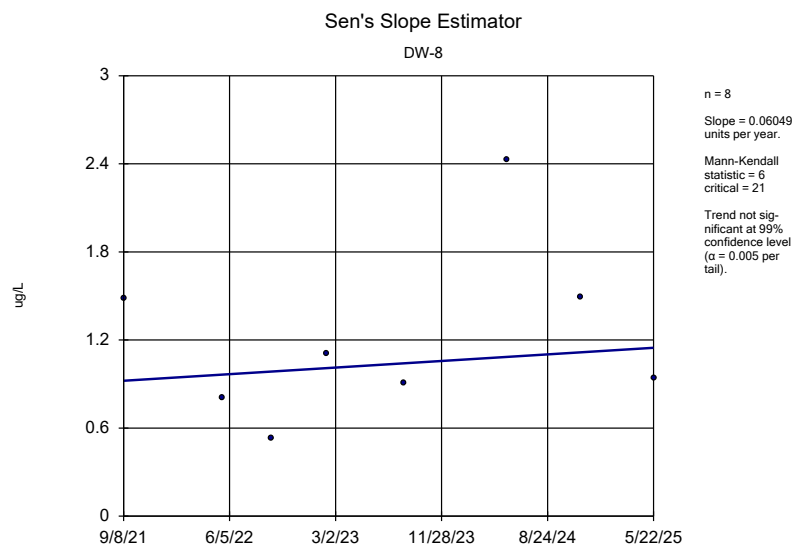
Mahaska County SLF

Client: SCS Engineers

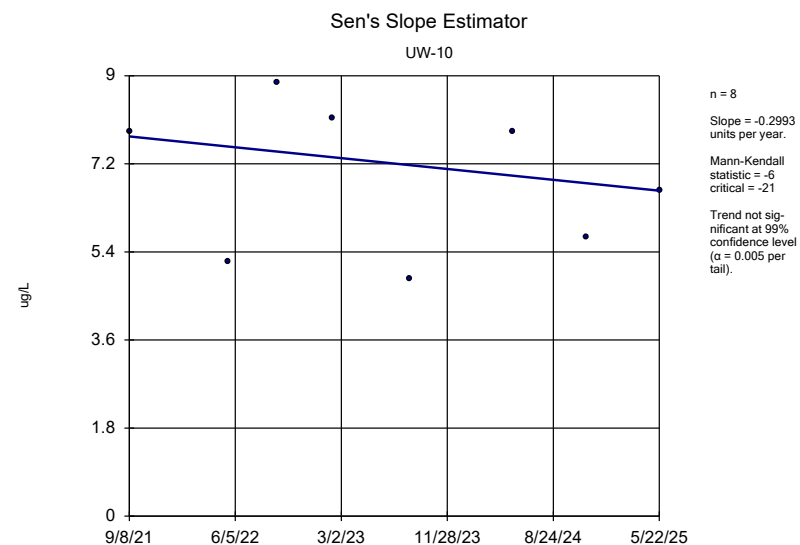
Data: MCSWM Active_AM_2025_SSN_RSTUDIO

Printed 10/23/2025, 6:30 PM

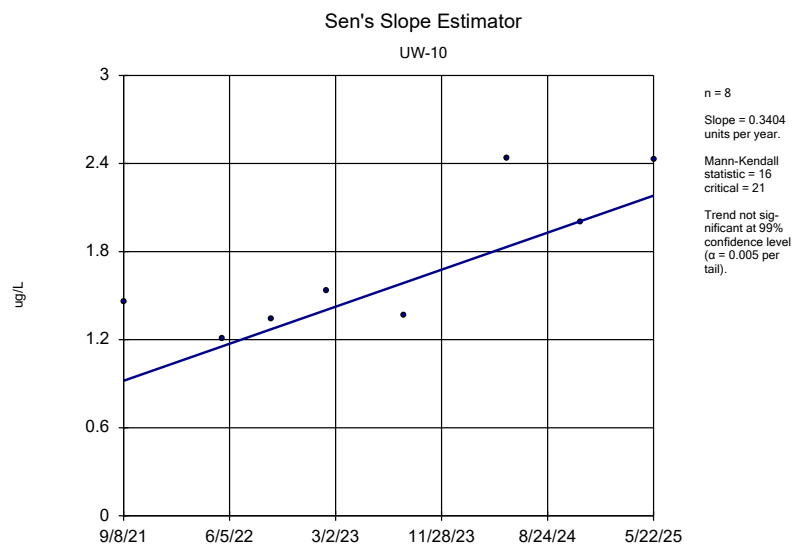
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Alpha</u>	<u>Method</u>
1,1-Dichloroethane (ug/L)	DW-8	0.06049	6	21	No	8	0	0.01	NP
1,4-Dichlorobenzene (ug/L)	UW-10	-0.2993	-6	-21	No	8	0	0.01	NP
Benzene (ug/L)	UW-10	0.3404	16	21	No	8	0	0.01	NP
cis-1,2-Dichloroethene (ug/L)	DW-8	0.03623	6	21	No	8	12.5	0.01	NP
cis-1,2-Dichloroethene (ug/L)	UW-10	-0.1744	-16	-21	No	8	0	0.01	NP
Vinyl Chloride (ug/L)	UW-10	-0.01965	-5	-21	No	8	25	0.01	NP



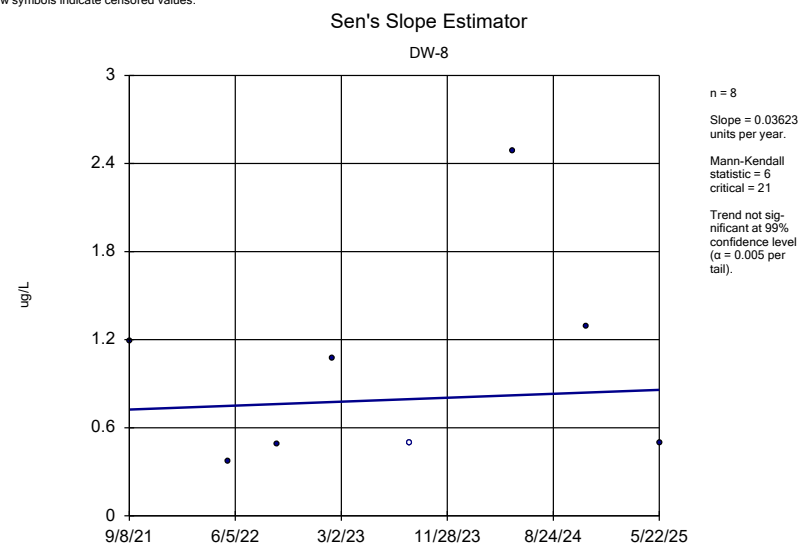
Constituent: 1,1-Dichloroethane Analysis Run 10/23/2025 6:29 PM View: 2025-SSN-Mann_Kendall
Mahaska County SLF Client: SCS Engineers Data: MCSWM Active_AM_2025_SSN_RSTUDIO



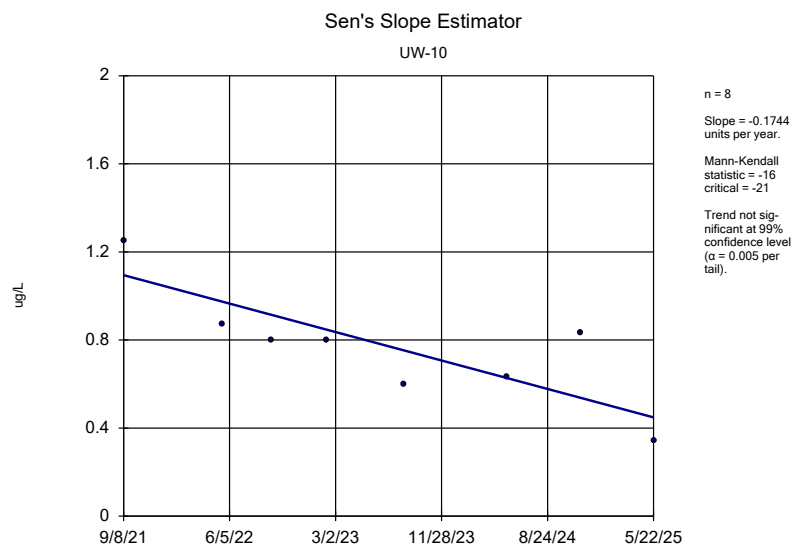
Constituent: 1,4-Dichlorobenzene Analysis Run 10/23/2025 6:29 PM View: 2025-SSN-Mann_Kendall
Mahaska County SLF Client: SCS Engineers Data: MCSWM Active_AM_2025_SSN_RSTUDIO



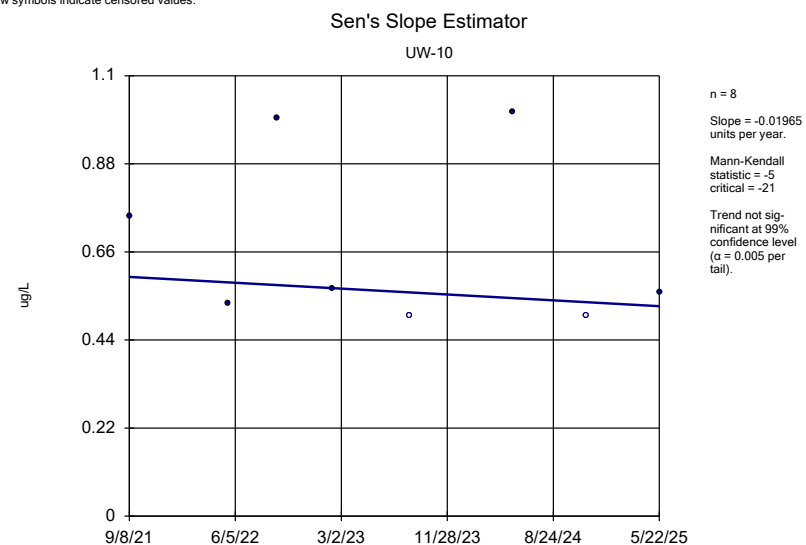
Constituent: Benzene Analysis Run 10/23/2025 6:29 PM View: 2025-SSN-Mann_Kendall
Mahaska County SLF Client: SCS Engineers Data: MCSWM Active_AM_2025_SSN_RSTUDIO



Constituent: cis-1,2-Dichloroethene Analysis Run 10/23/2025 6:29 PM View: 2025-SSN-Mann_Kendall
Mahaska County SLF Client: SCS Engineers Data: MCSWM Active_AM_2025_SSN_RSTUDIO



Constituent: cis-1,2-Dichloroethene Analysis Run 10/23/2025 6:29 PM View: 2025-SSN-Mann_Kendall
Mahaska County SLF Client: SCS Engineers Data: MCSWM Active_AM_2025_SSN_RSTUDIO



Constituent: Vinyl Chloride Analysis Run 10/23/2025 6:29 PM View: 2025-SSN-Mann_Kendall
Mahaska County SLF Client: SCS Engineers Data: MCSWM Active_AM_2025_SSN_RSTUDIO

Confidence Interval Summary Table and Graphs

Confidence Interval

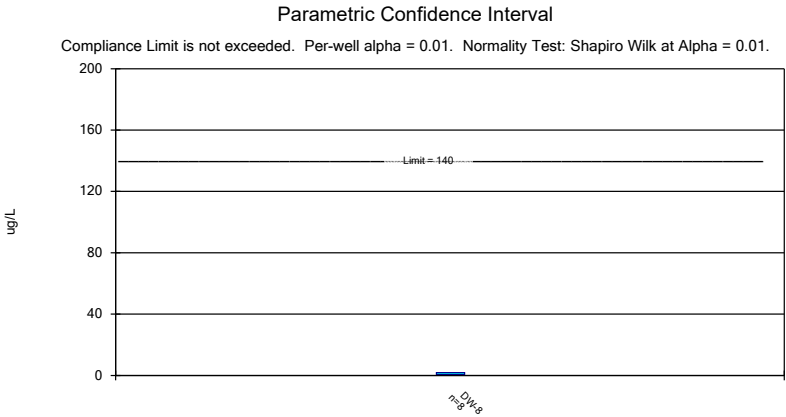
Mahaska County SLF

Client: SCS Engineers

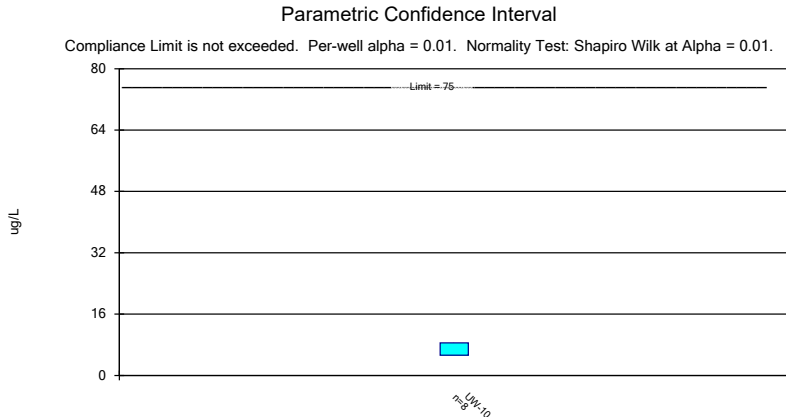
Data: MCSWM Active_AM_2025_SSN_RSTUDIO

Printed 10/23/2025, 6:37 PM

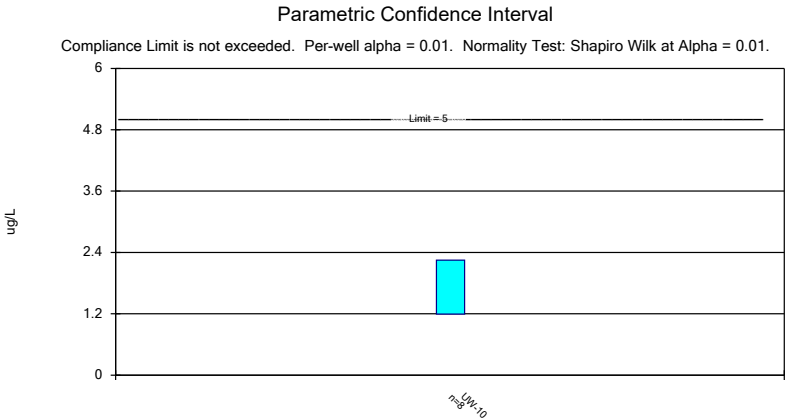
<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
1,1-Dichloroethane (ug/L)	DW-8	1.837	0.5854	140	No	8	0	No	0.01	Param.
1,4-Dichlorobenzene (ug/L)	UW-10	8.479	5.301	75	No	8	0	No	0.01	Param.
Benzene (ug/L)	UW-10	2.25	1.195	5	No	8	0	No	0.01	Param.
cis-1,2-Dichloroethene (ug/L)	DW-8	1.737	0.2389	70	No	8	12.5	No	0.01	Param.
cis-1,2-Dichloroethene (ug/L)	UW-10	1.044	0.4886	70	No	8	0	No	0.01	Param.
Vinyl Chloride (ug/L)	UW-10	0.9295	0.5145	2	No	8	25	No	0.01	Param.



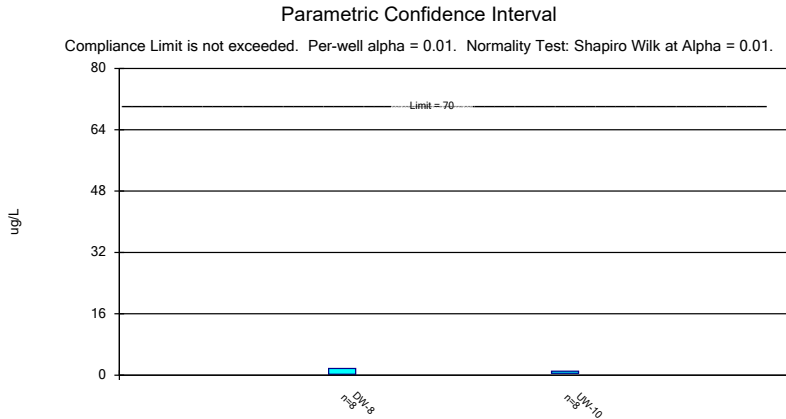
Constituent: 1,1-Dichloroethane Analysis Run 10/23/2025 6:35 PM View: 2025-SSN-Confidence_Interval
Mahaska County SLF Client: SCS Engineers Data: MCSWM Active_AM_2025_SSN_RSTUDIO



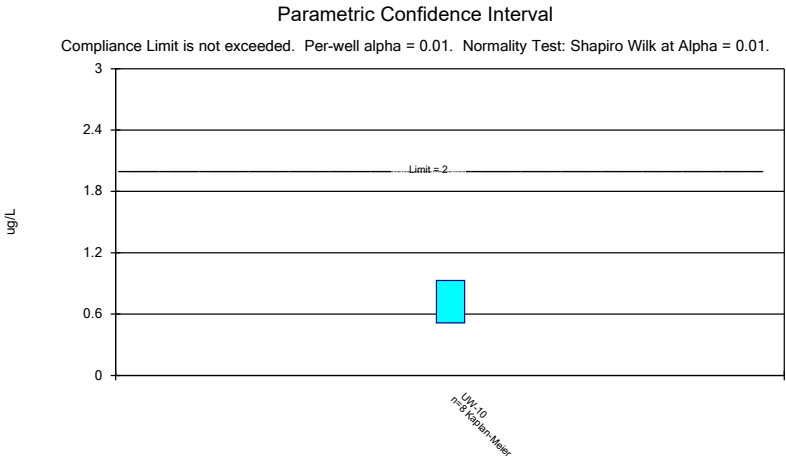
Constituent: 1,4-Dichlorobenzene Analysis Run 10/23/2025 6:35 PM View: 2025-SSN-Confidence_Interva
Mahaska County SLF Client: SCS Engineers Data: MCSWM Active_AM_2025_SSN_RSTUDIO



Constituent: Benzene Analysis Run 10/23/2025 6:35 PM View: 2025-SSN-Confidence_Interval
Mahaska County SLF Client: SCS Engineers Data: MCSWM Active_AM_2025_SSN_RSTUDIO



Constituent: cis-1,2-Dichloroethene Analysis Run 10/23/2025 6:35 PM View: 2025-SSN-Confidence_Inter
Mahaska County SLF Client: SCS Engineers Data: MCSWM Active_AM_2025_SSN_RSTUDIO

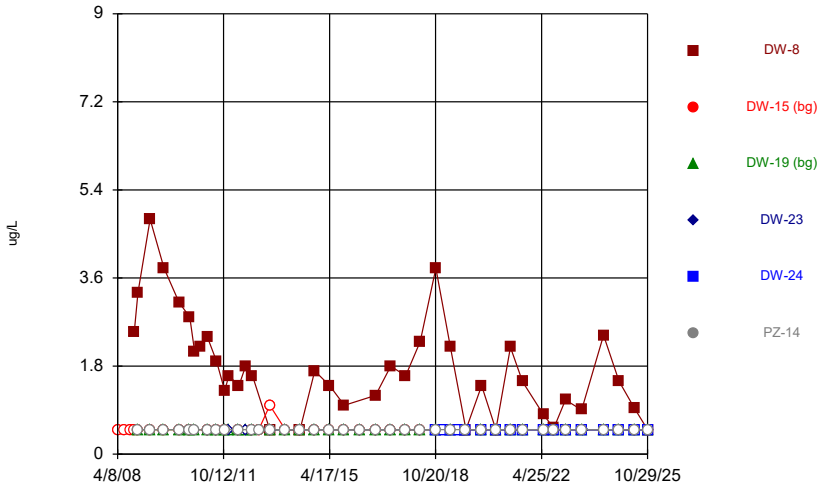


Constituent: Vinyl Chloride Analysis Run 10/23/2025 6:35 PM View: 2025-SSN-Confidence_Interval
Mahaska County SLF Client: SCS Engineers Data: MCSWM Active_AM_2025_SSN_RSTUDIO

Attachment B
2nd 2025 Statistical Evaluation Output

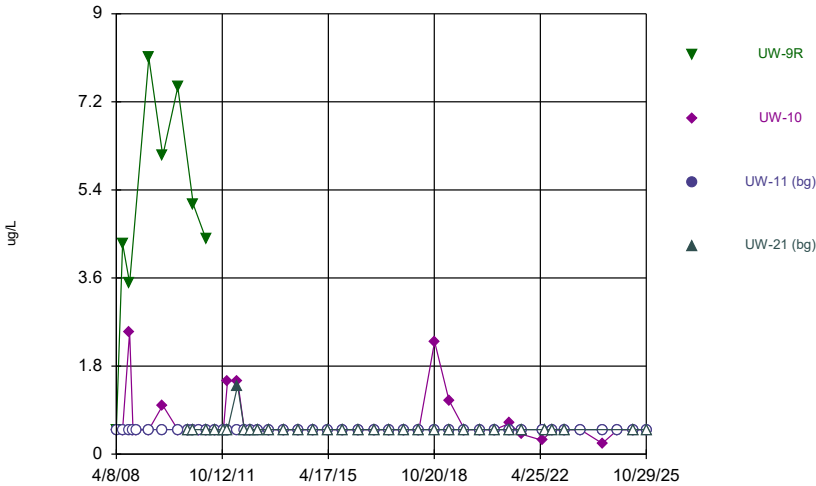
Time Series Plots

Time Series



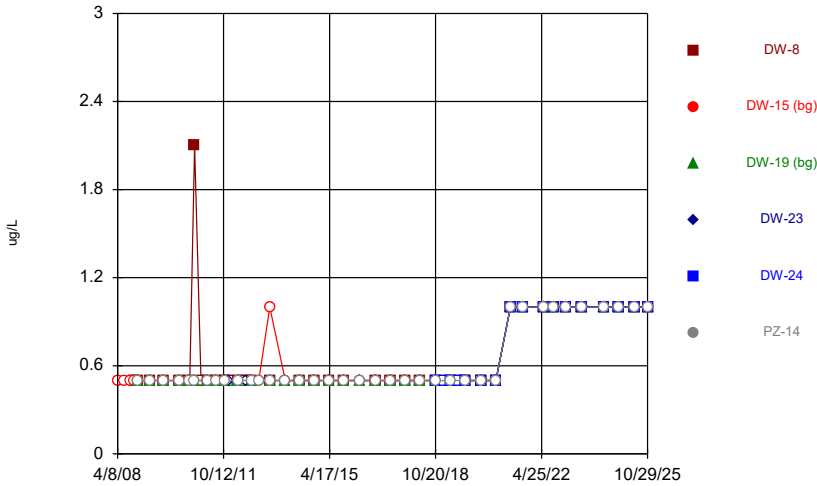
Constituent: 1,1-Dichloroethane Analysis Run 1/21/2026 3:47 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



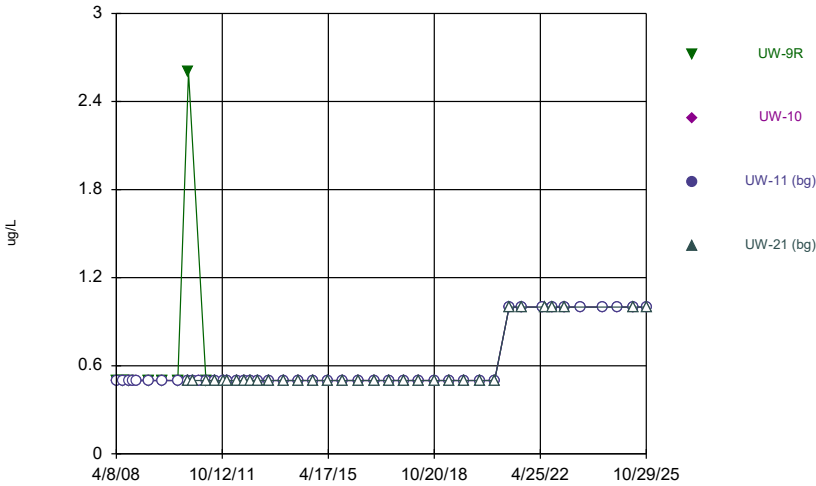
Constituent: 1,1-Dichloroethane Analysis Run 1/21/2026 3:47 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



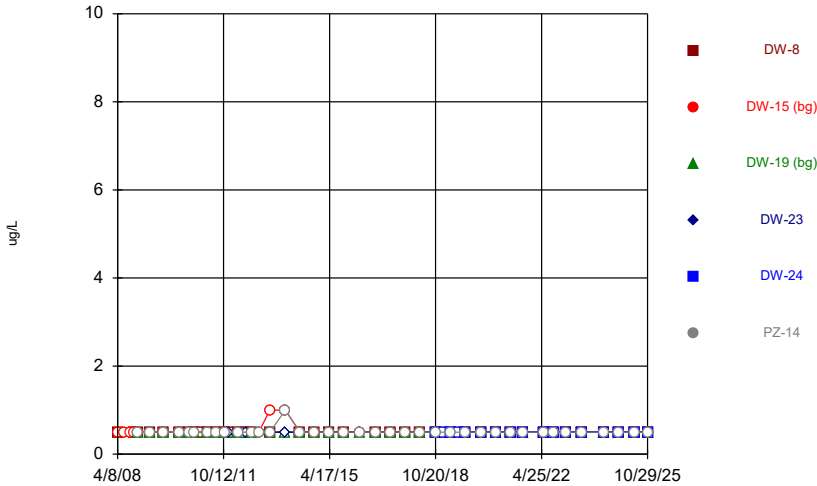
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



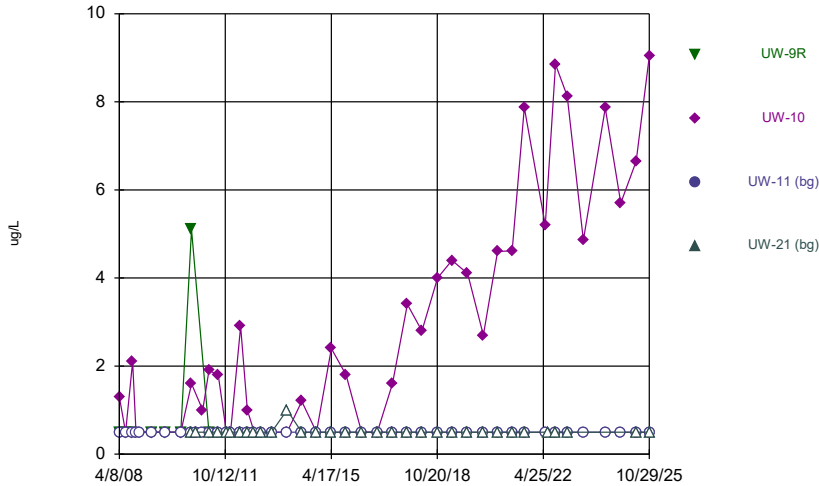
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



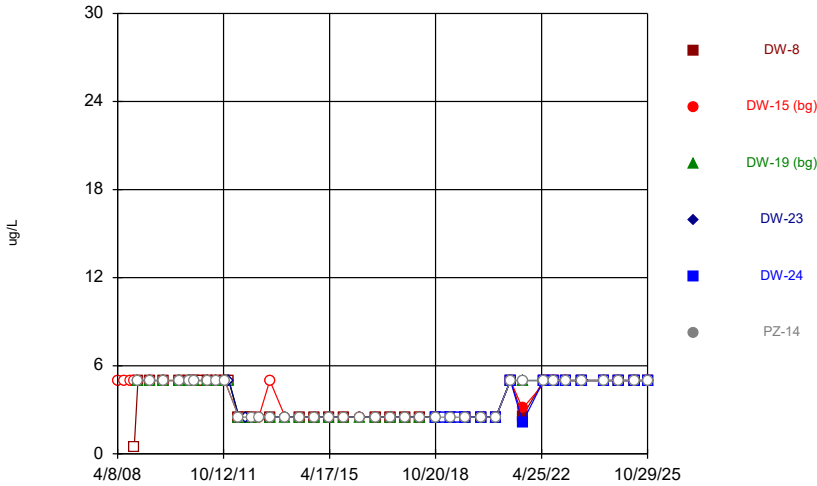
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



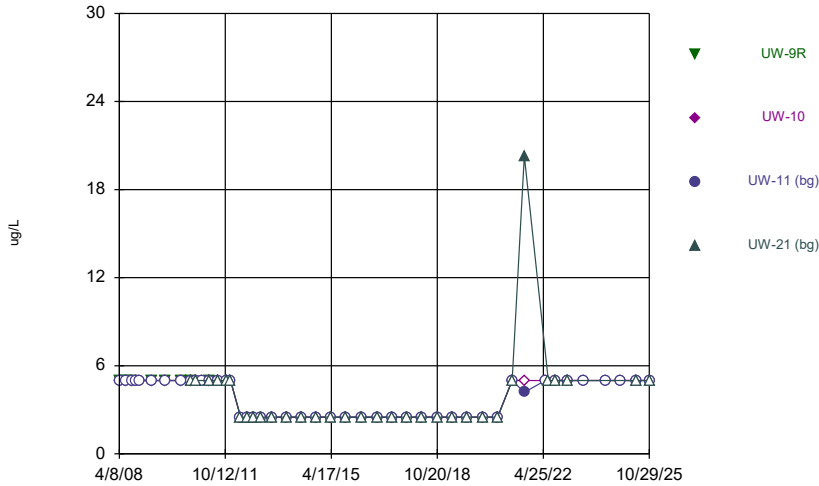
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



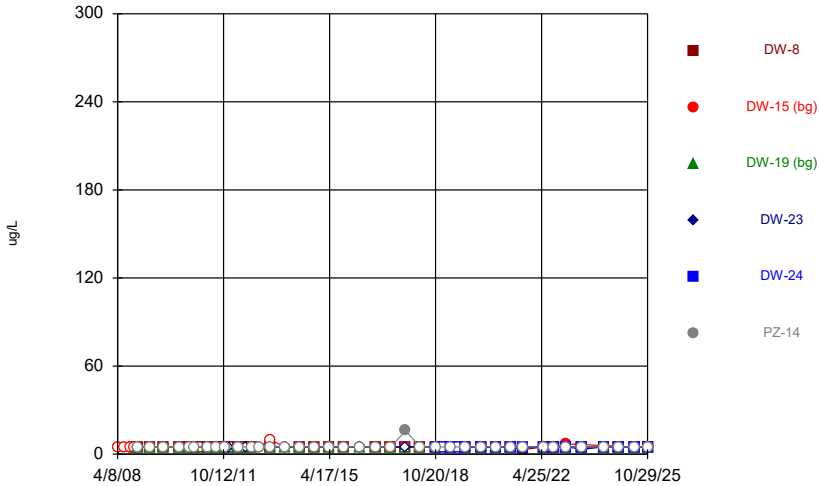
Constituent: 2-Butanone Analysis Run 1/21/2026 3:47 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



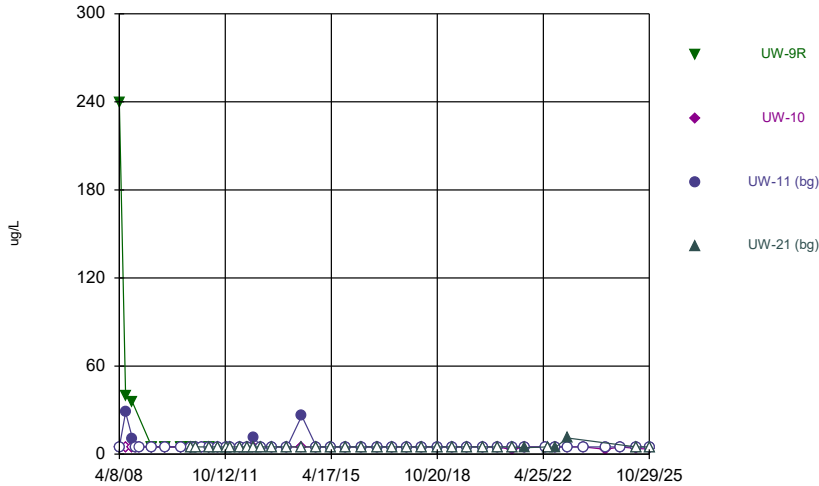
Constituent: 2-Butanone Analysis Run 1/21/2026 3:47 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



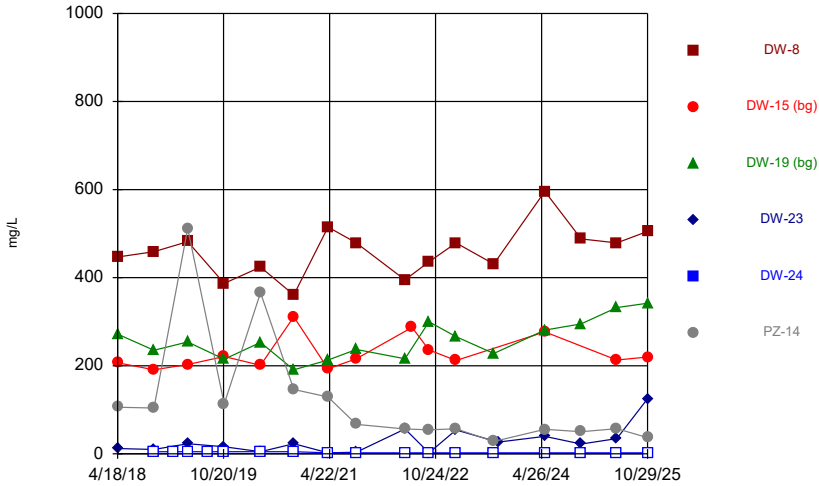
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



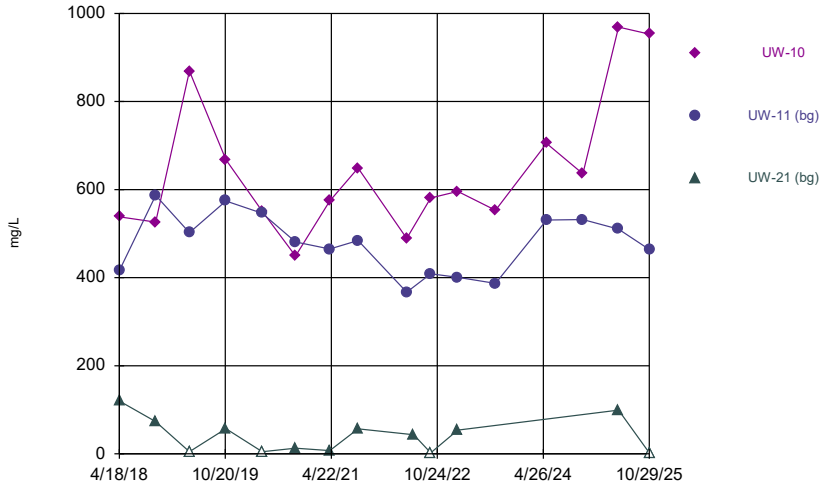
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



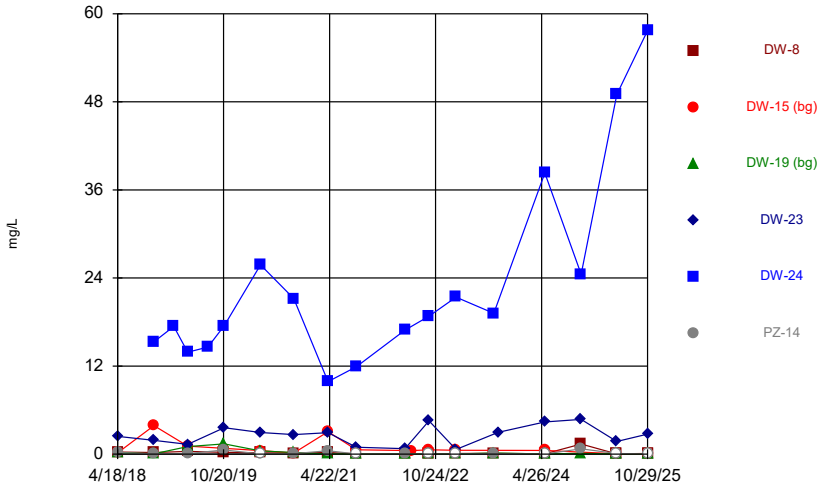
Constituent: Alkalinity, Total [CaCO3] Analysis Run 1/21/2026 3:47 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



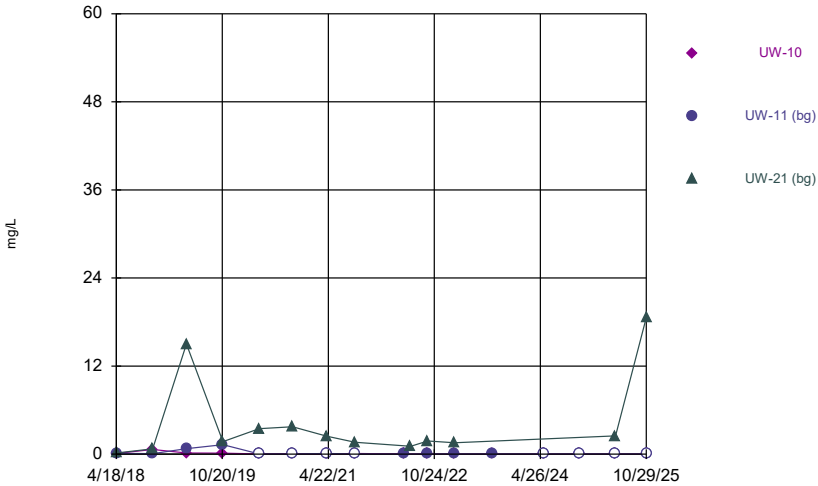
Constituent: Alkalinity, Total [CaCO3] Analysis Run 1/21/2026 3:47 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



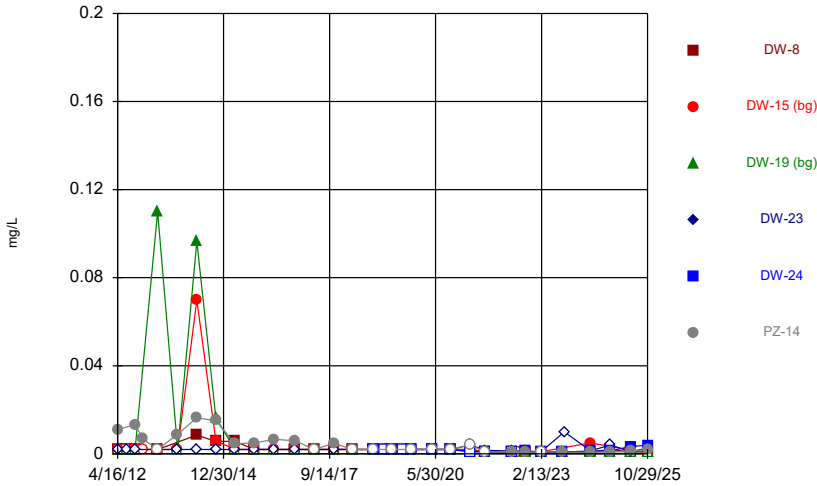
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



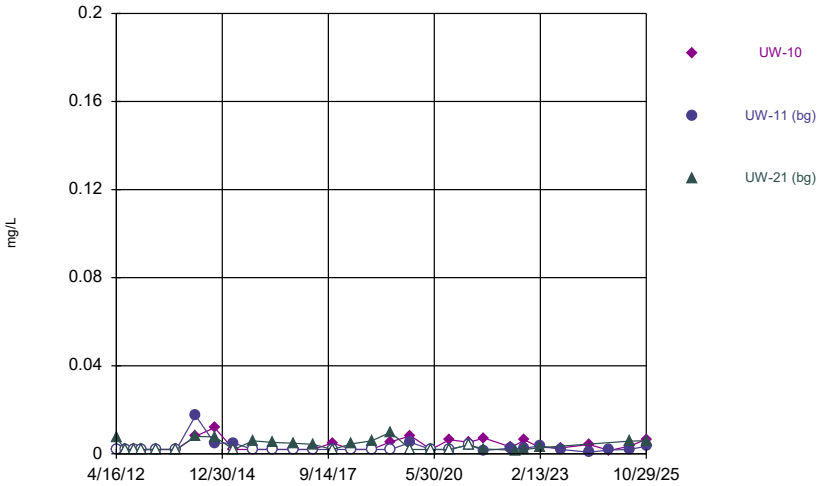
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



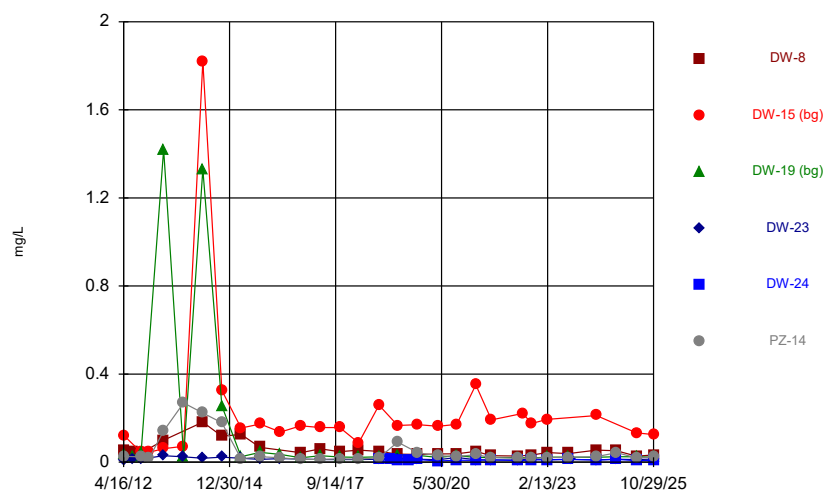
Constituent: Arsenic Analysis Run 1/21/2026 3:47 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



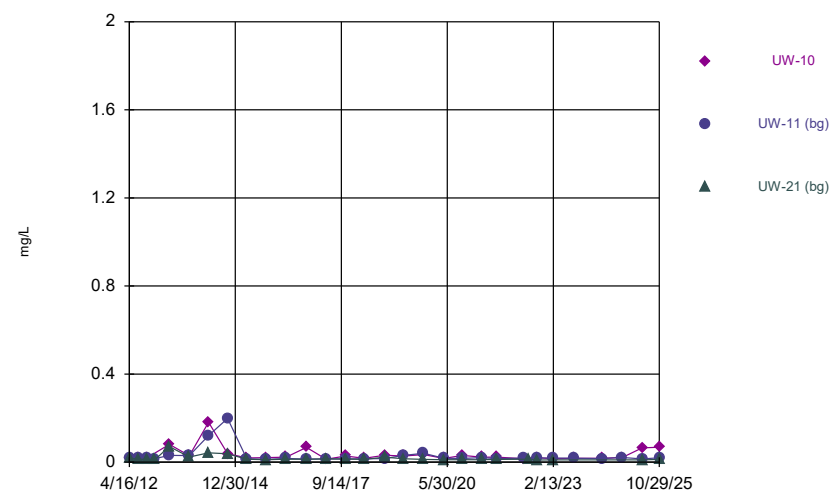
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



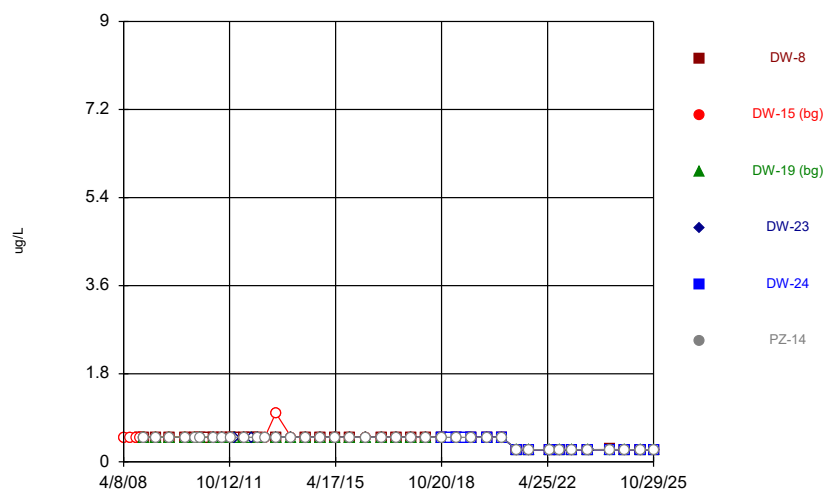
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



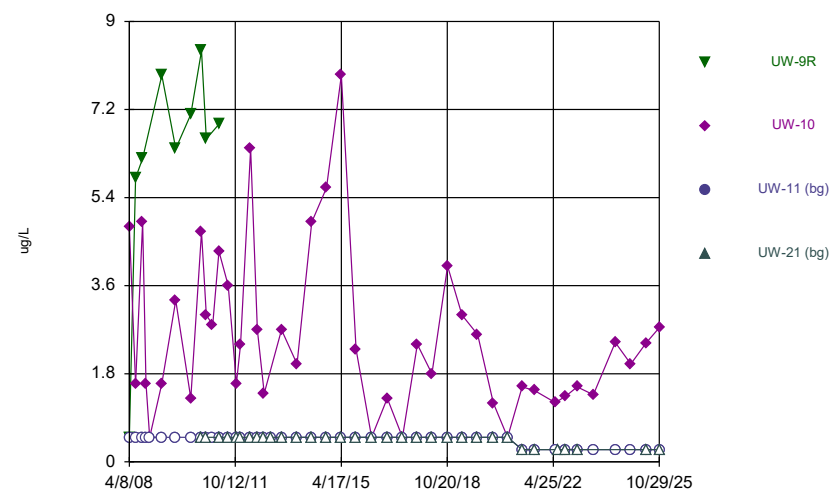
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



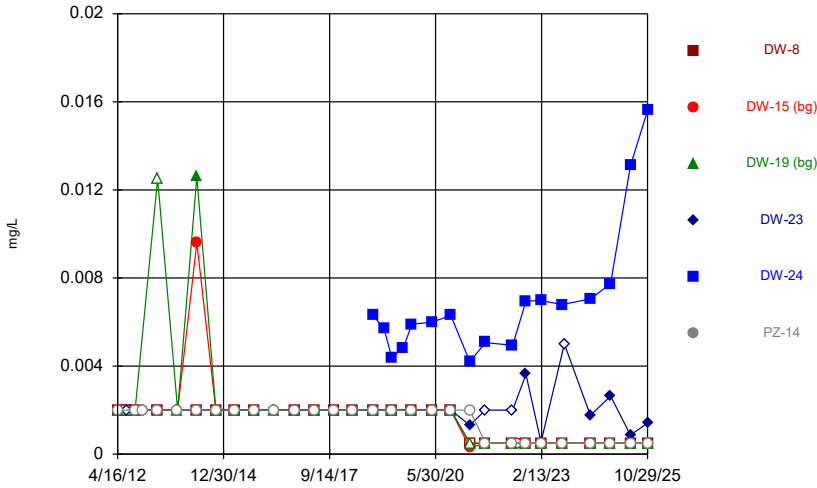
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



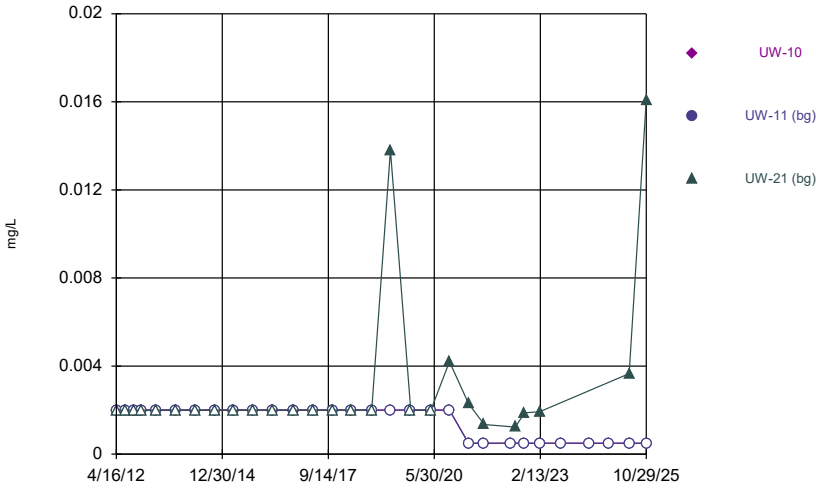
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Time Series



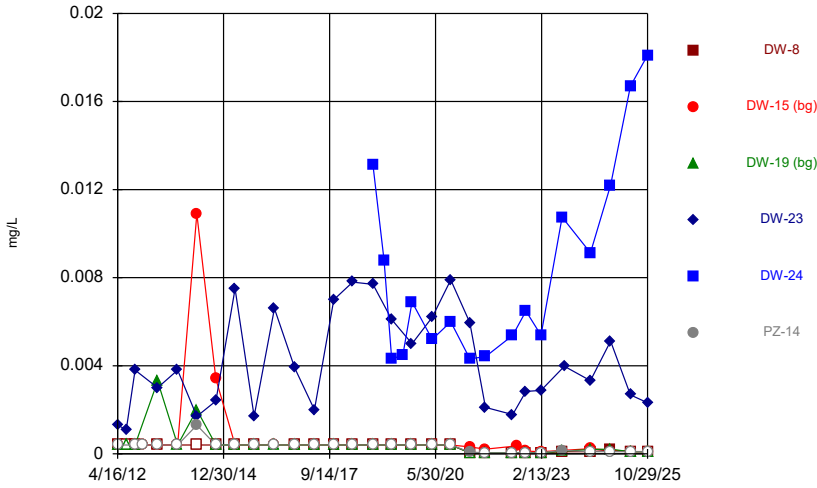
Constituent: Beryllium Analysis Run 1/21/2026 3:47 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



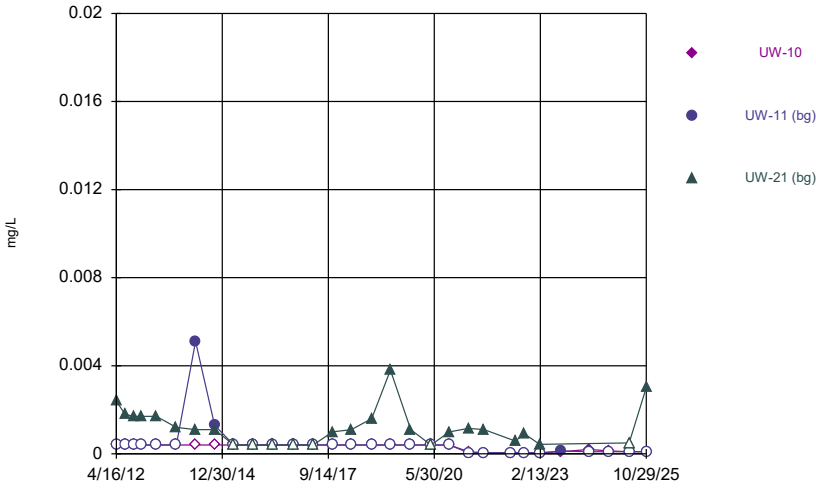
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



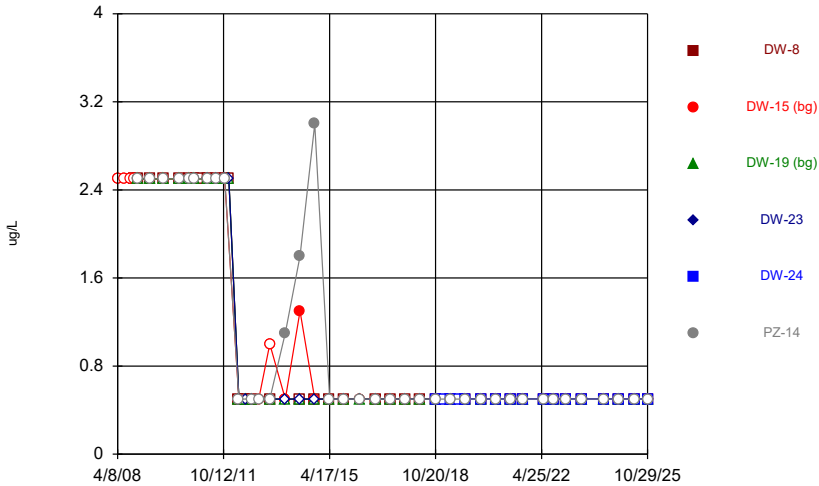
Constituent: Cadmium Analysis Run 1/21/2026 3:47 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



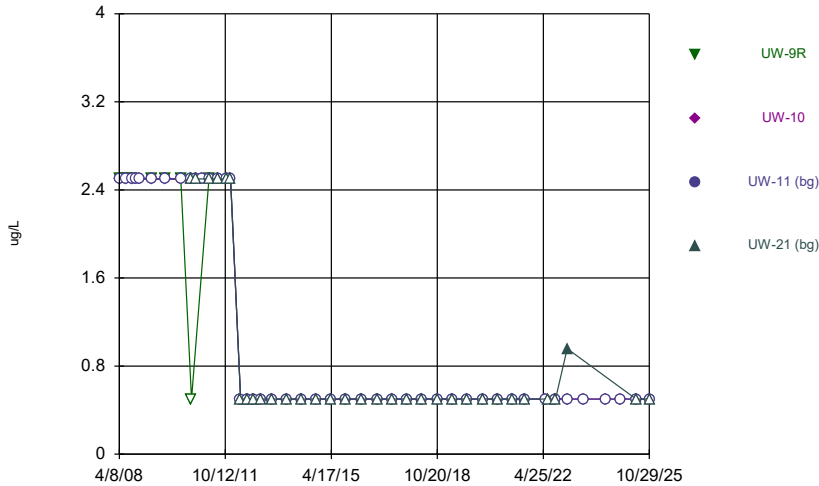
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



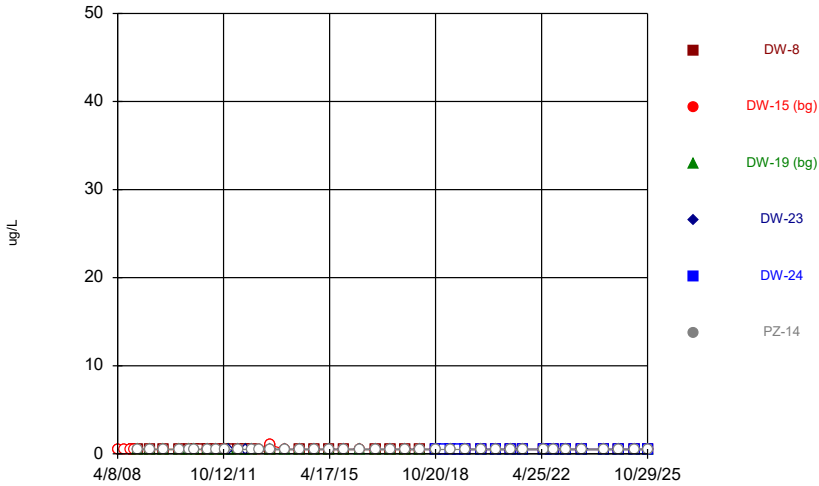
Constituent: Carbon Disulfide Analysis Run 1/21/2026 3:47 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



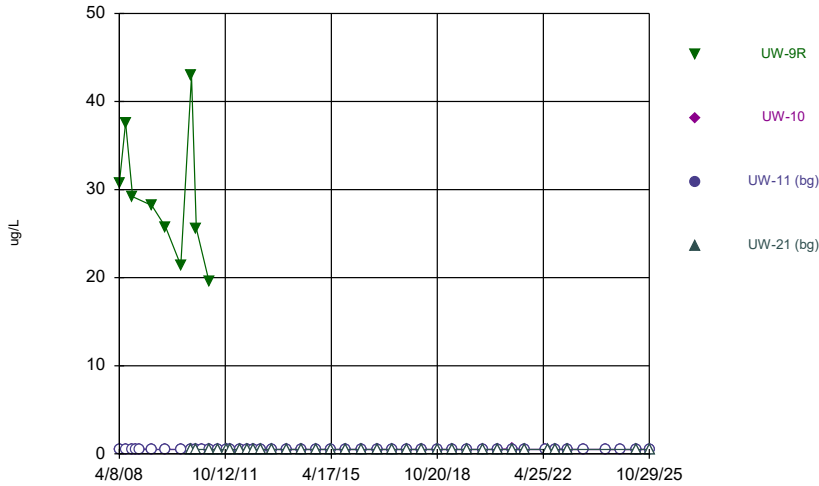
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Time Series



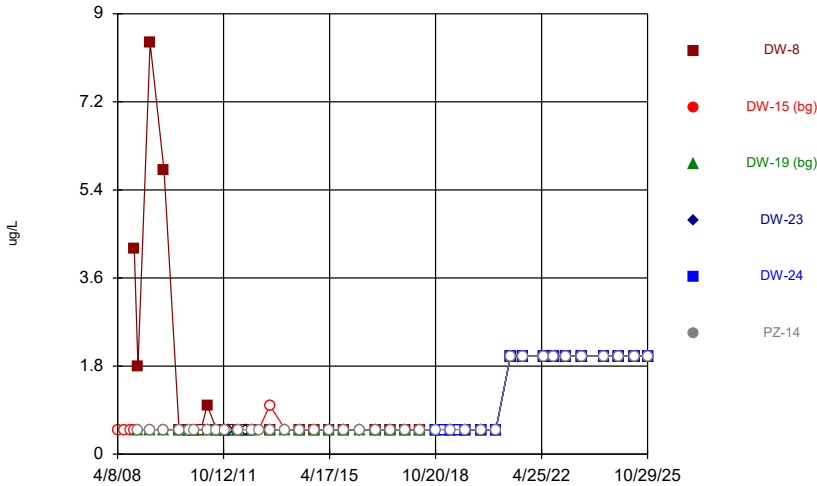
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



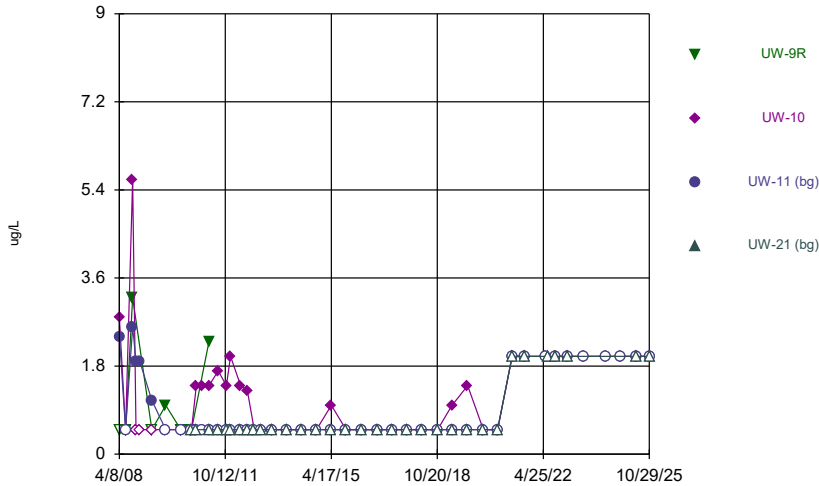
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



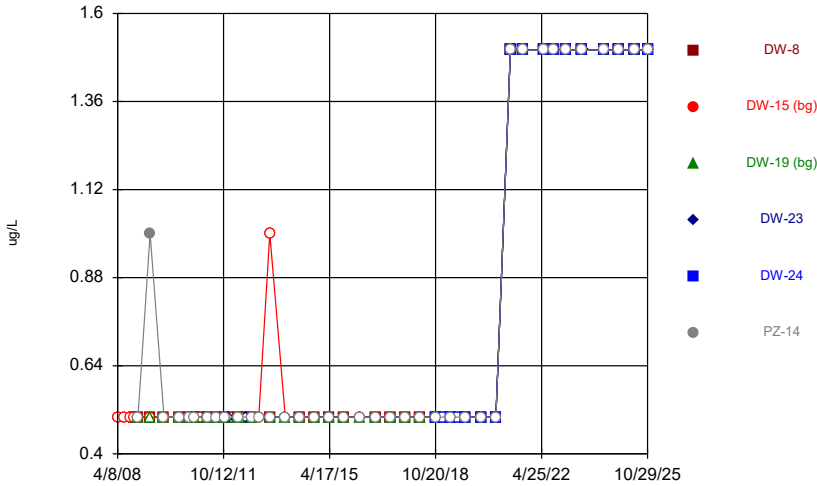
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Time Series



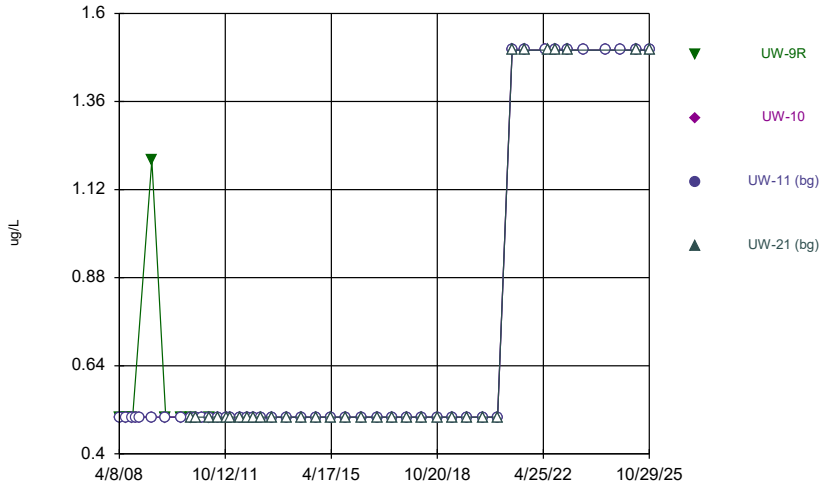
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



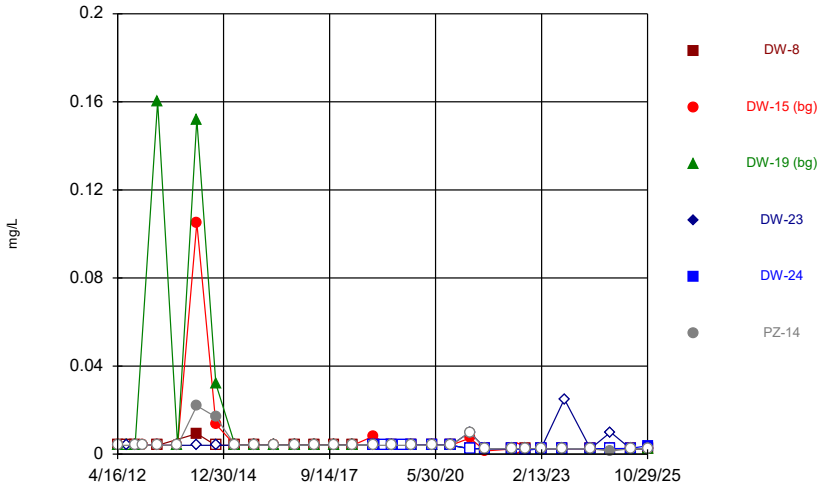
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



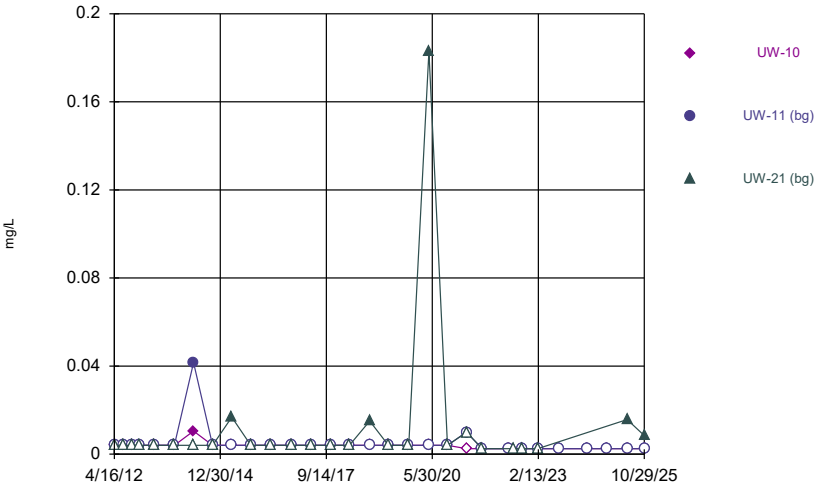
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



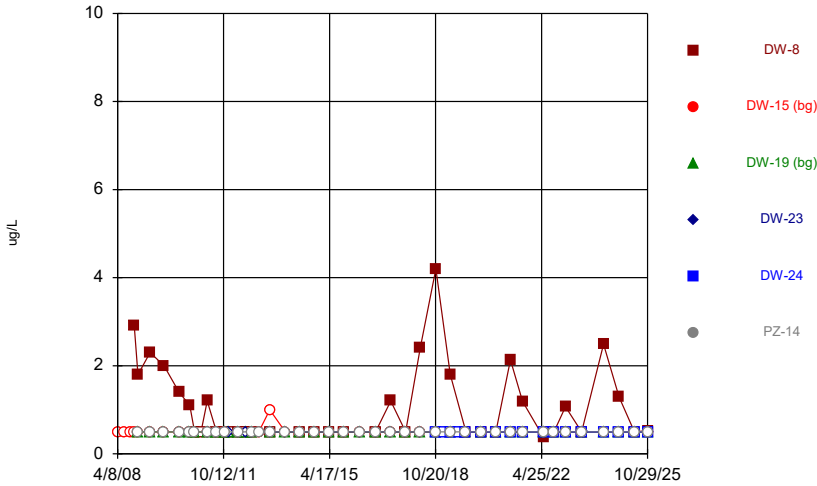
Constituent: Chromium Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



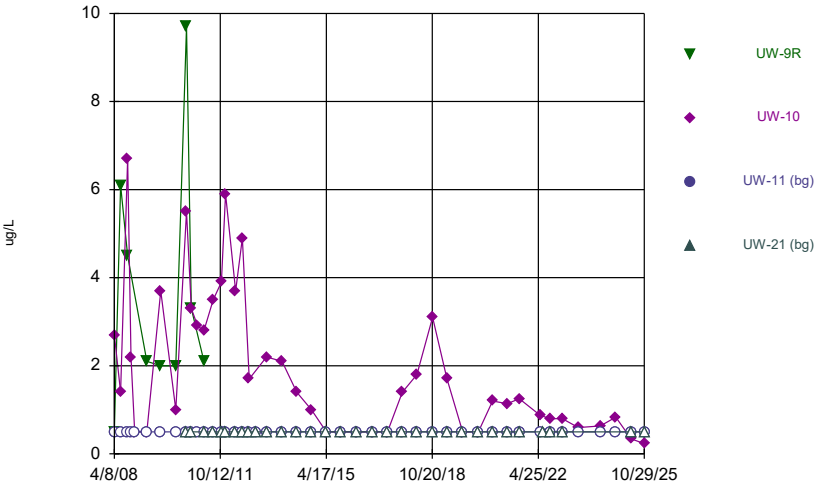
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



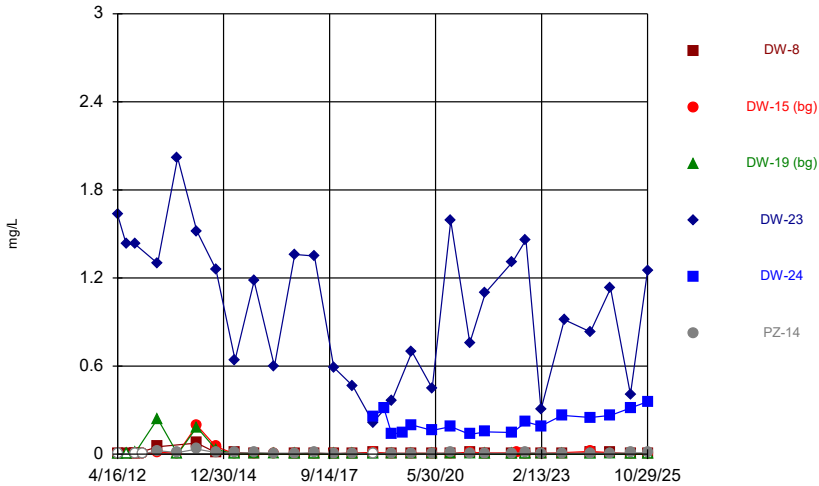
Constituent: cis-1,2-Dichloroethene Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



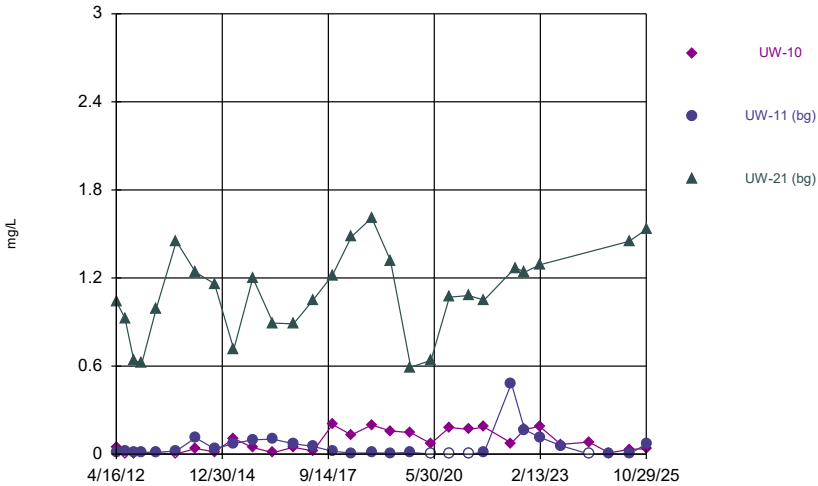
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



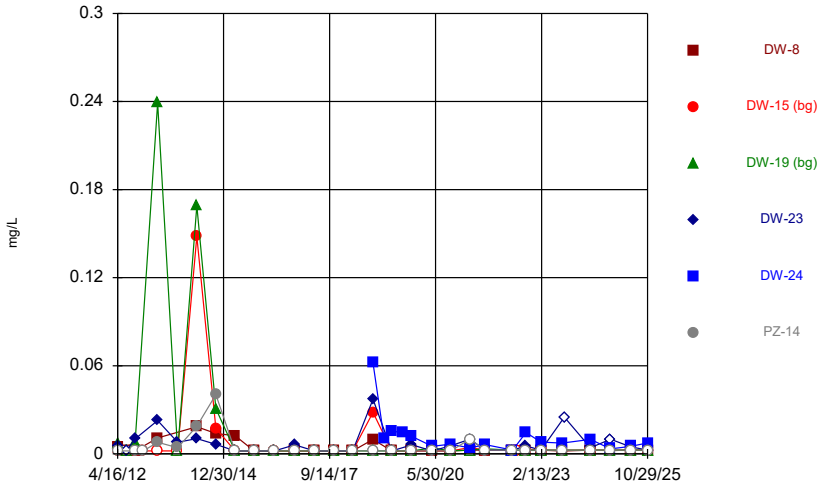
Constituent: Cobalt Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



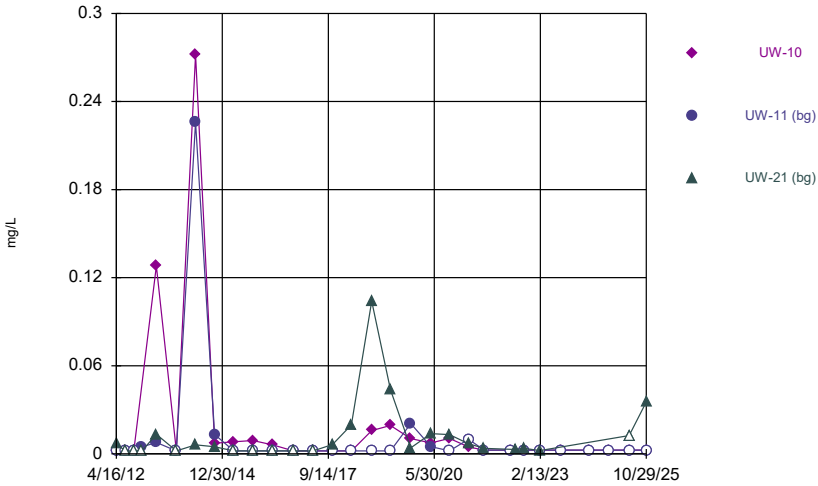
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



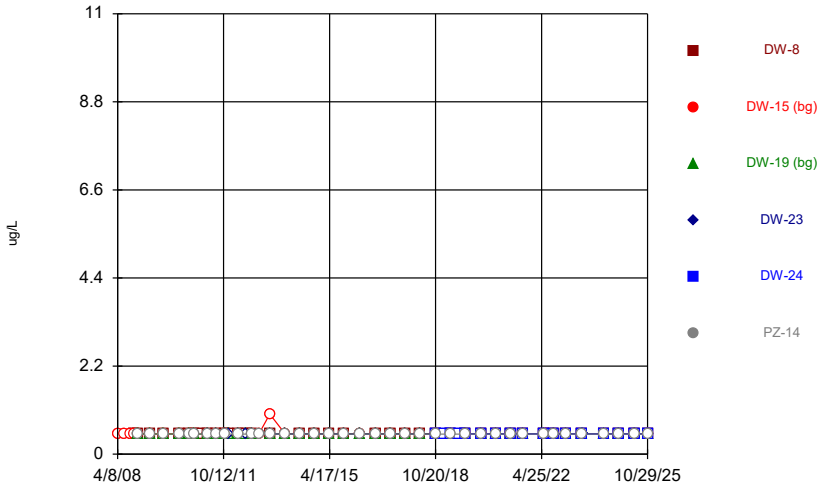
Constituent: Copper Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



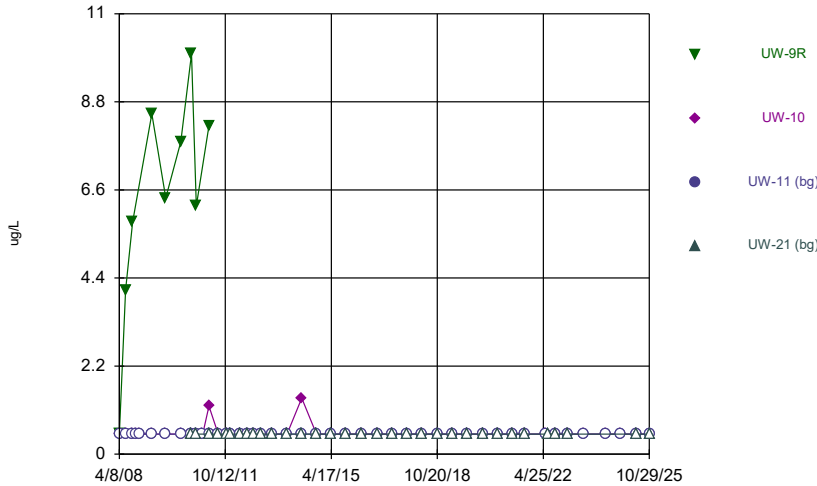
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



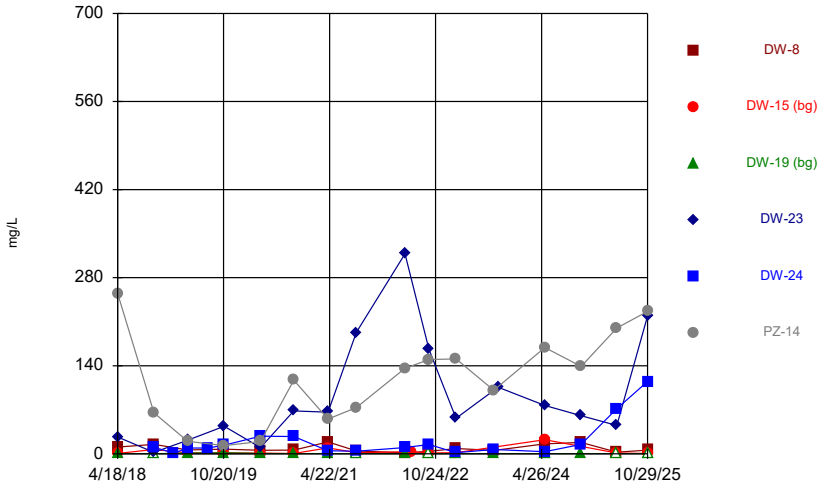
Constituent: Ethylbenzene Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



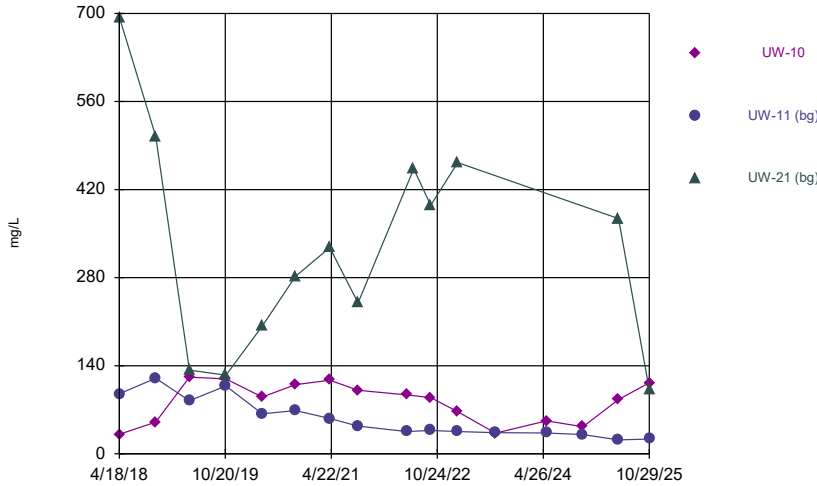
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



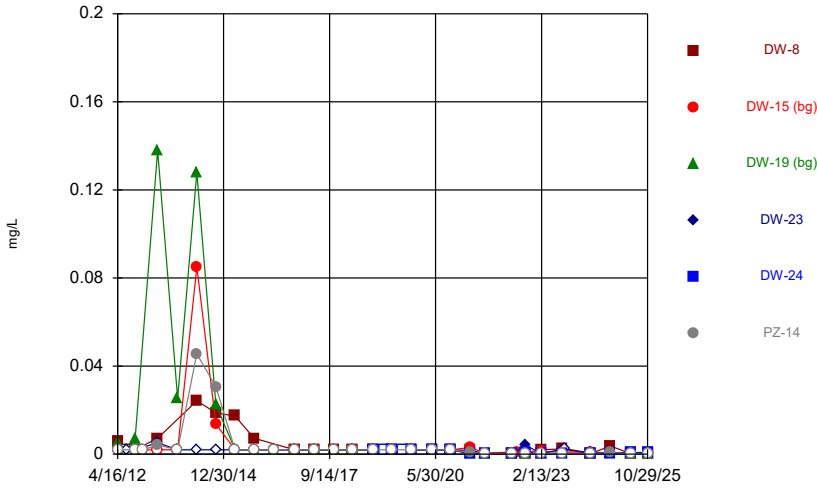
Constituent: Iron Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



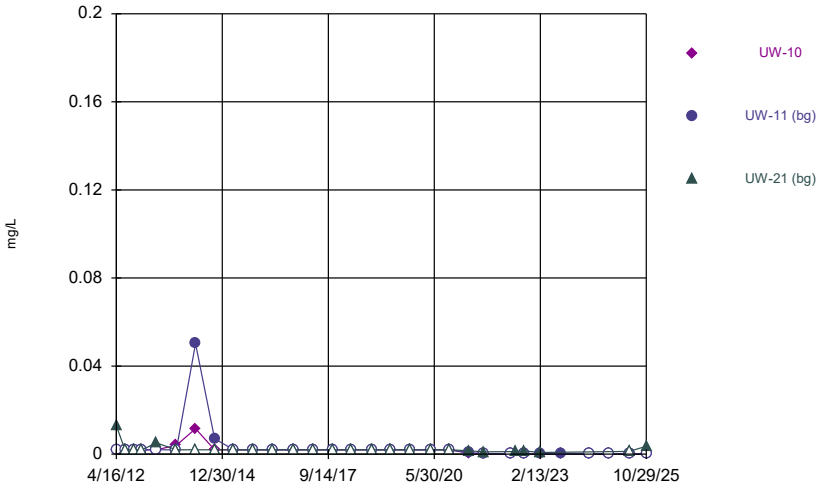
Constituent: Iron Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



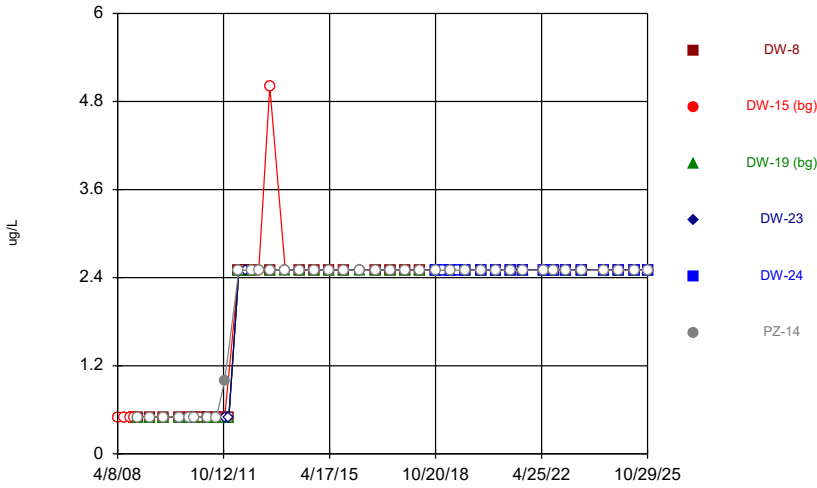
Constituent: Lead Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



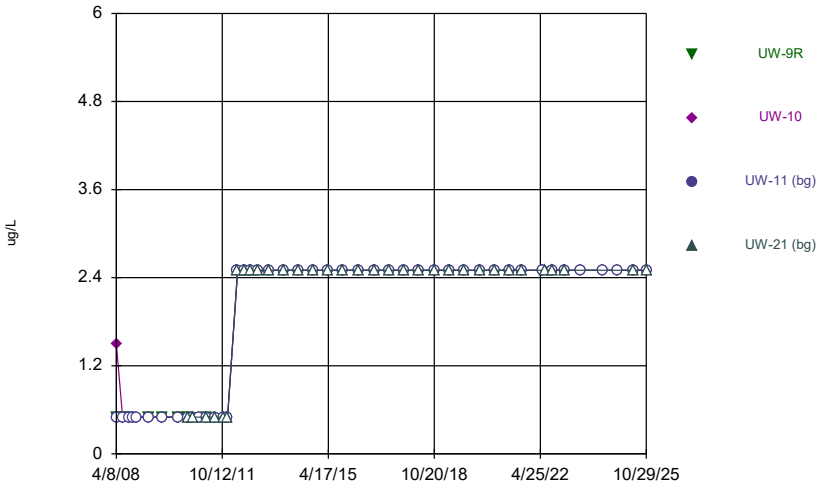
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



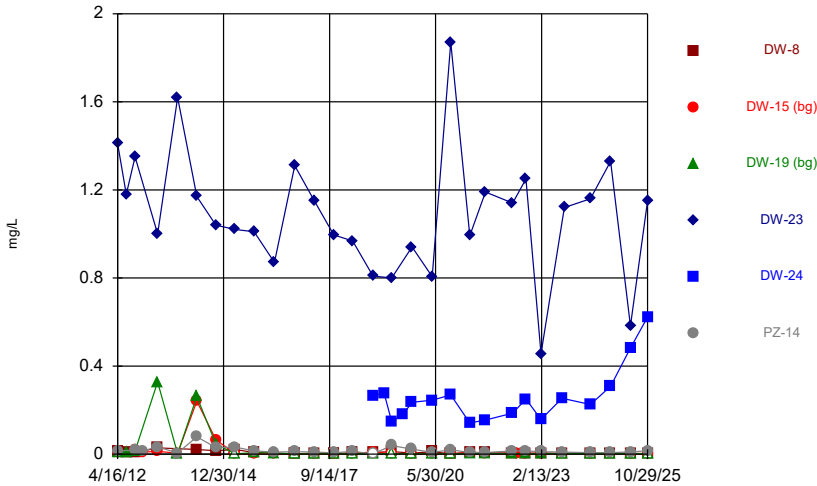
Constituent: Methylene Chloride Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



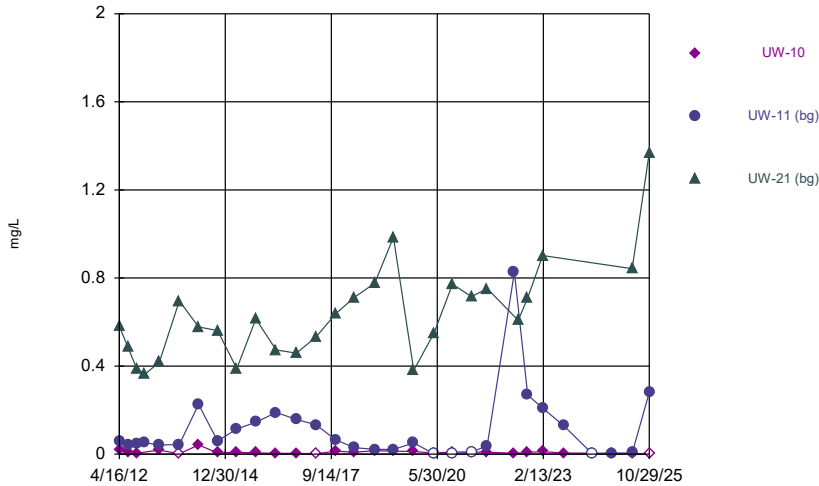
Constituent: Methylene Chloride Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



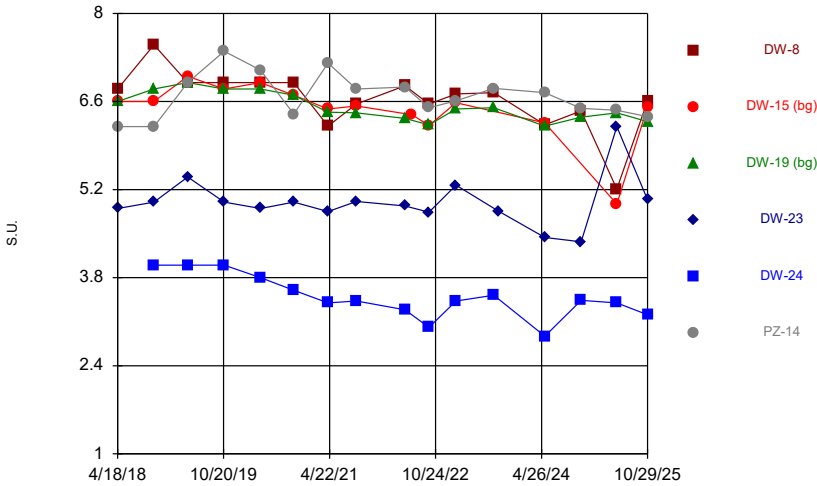
Constituent: Nickel Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



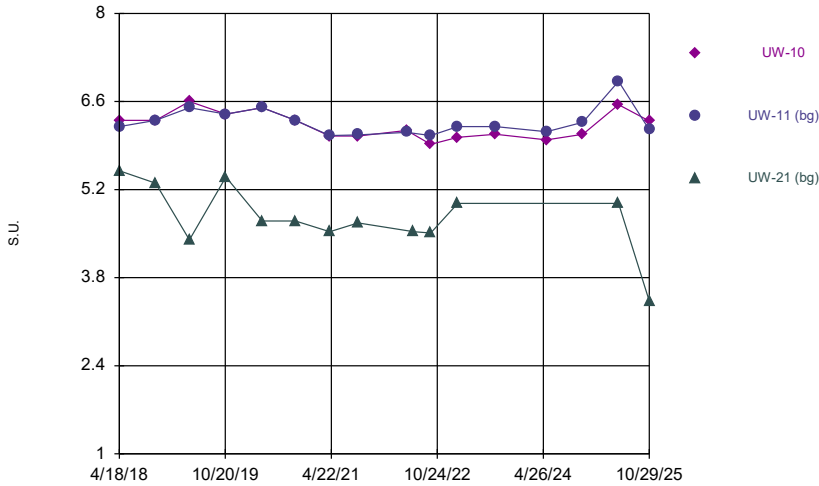
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



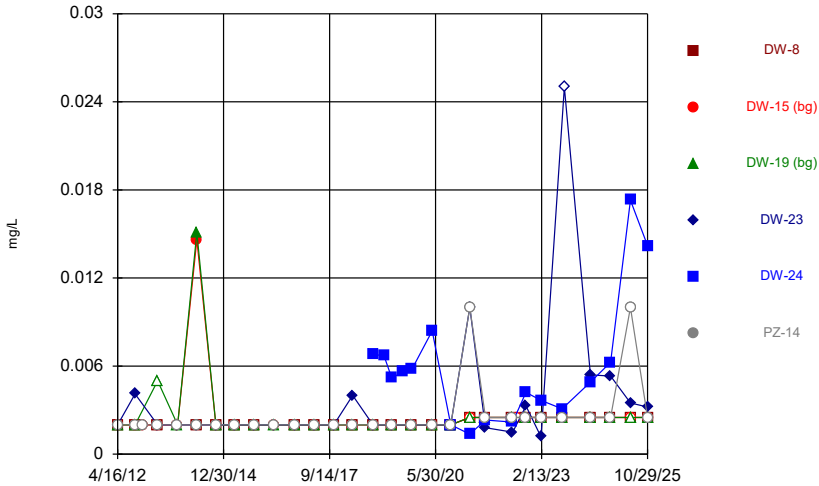
Constituent: pH Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



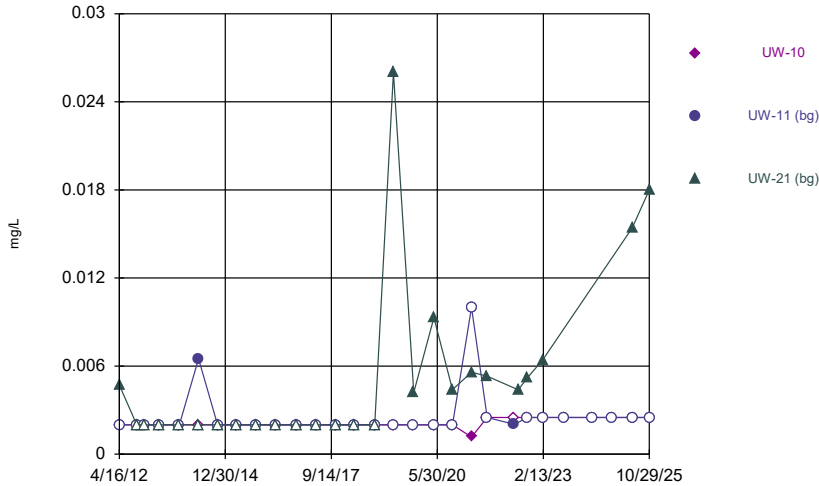
Constituent: pH Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



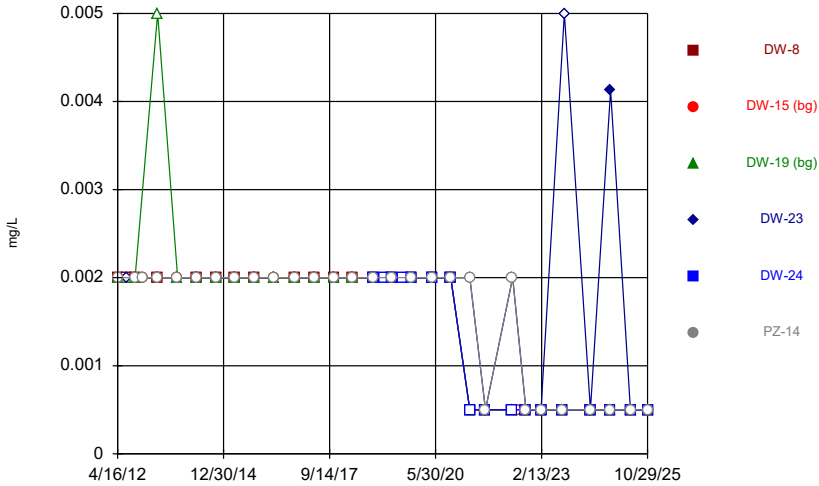
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



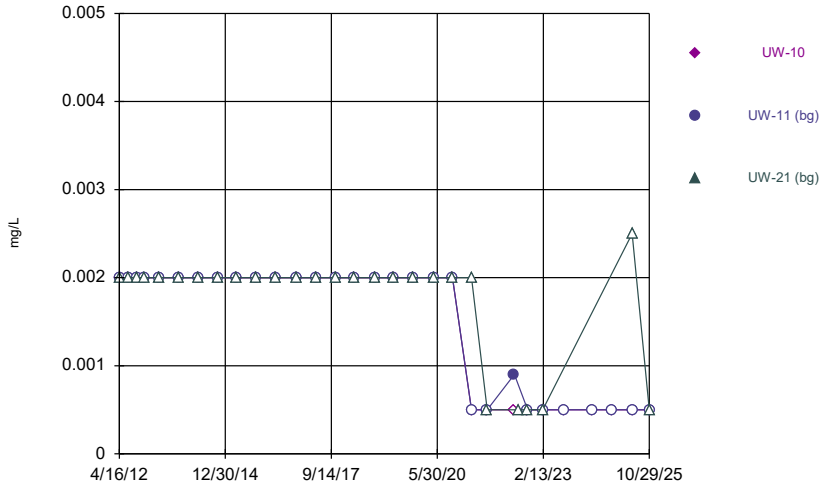
Constituent: Selenium Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



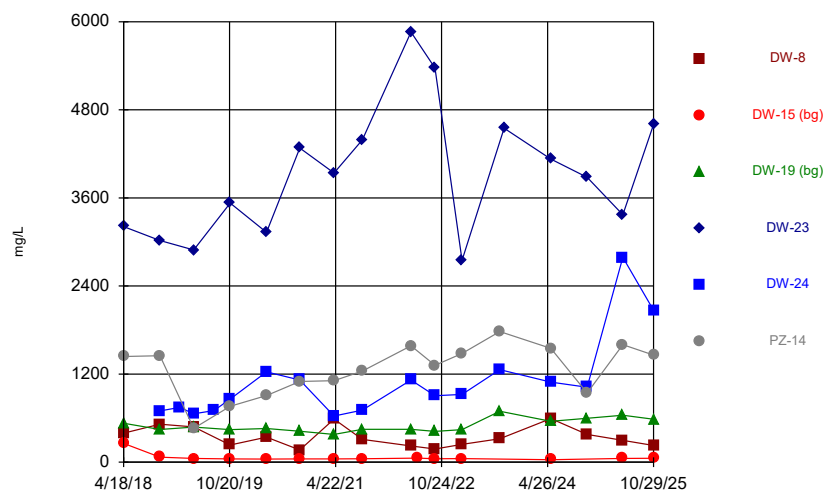
Constituent: Silver Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



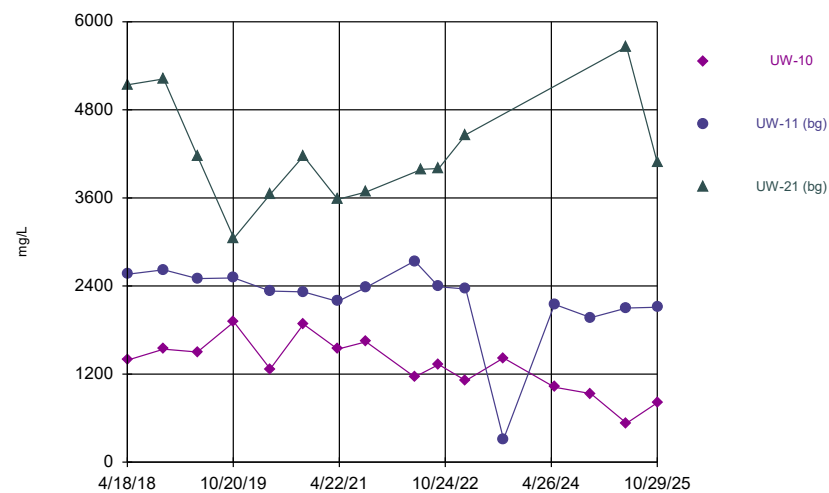
Constituent: Silver Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



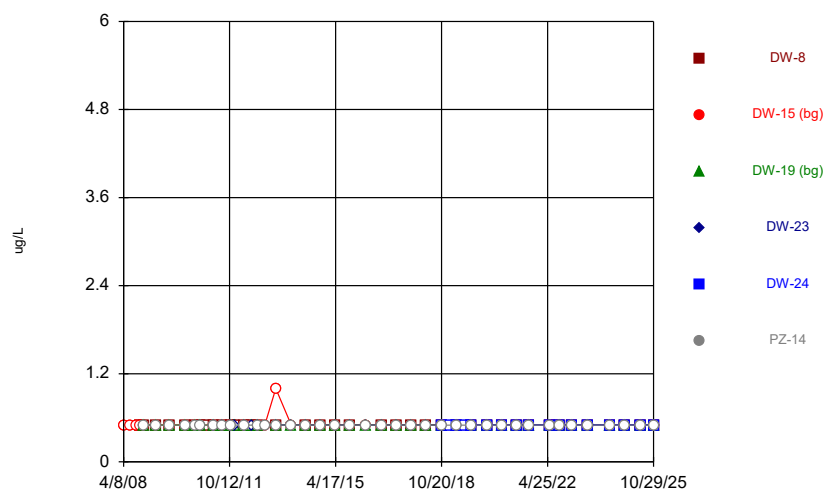
Constituent: Sulfate Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



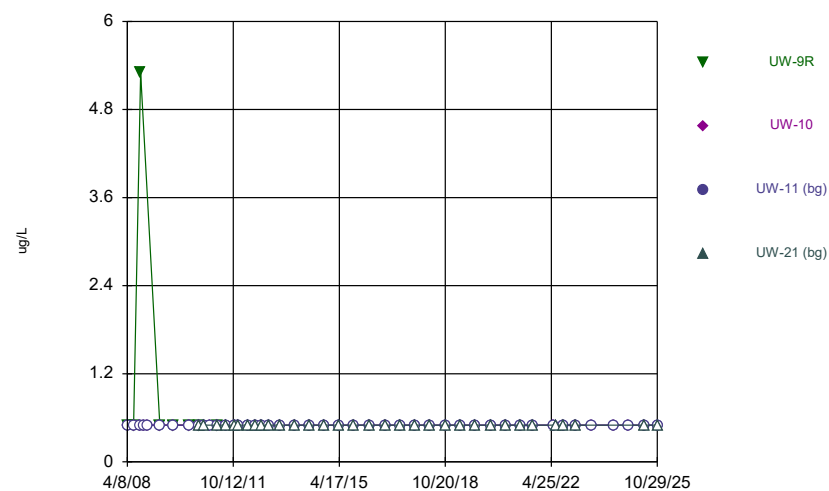
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Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



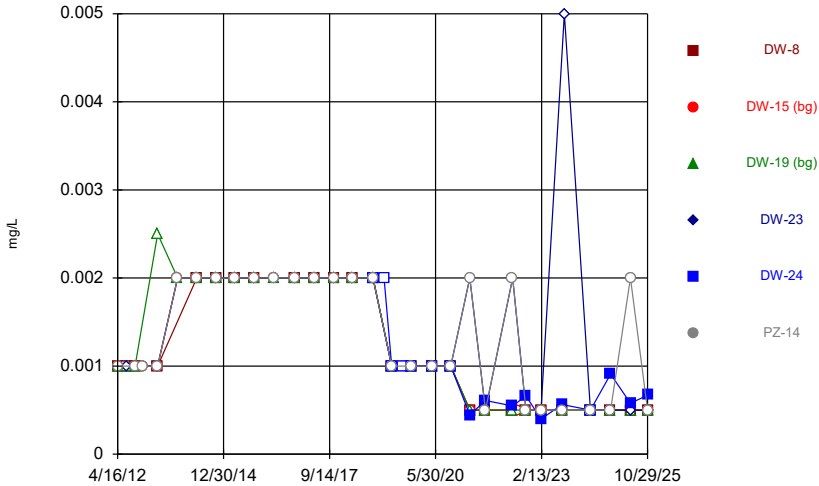
Constituent: Tetrachloroethene Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



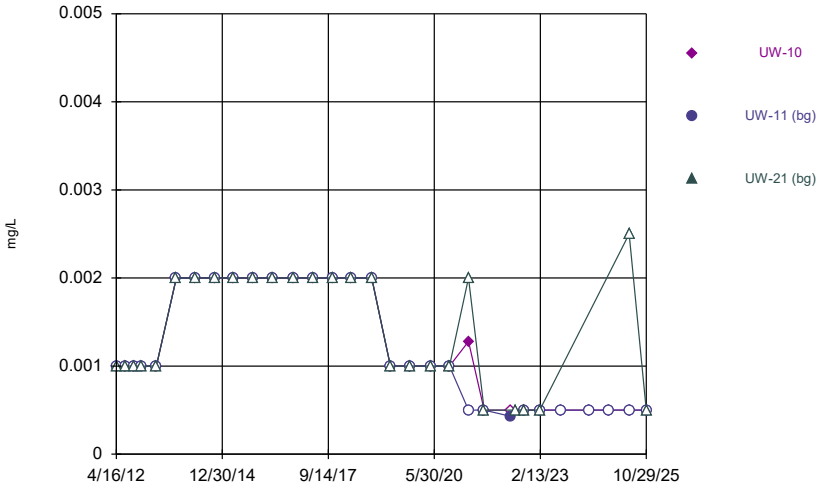
Constituent: Tetrachloroethene Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



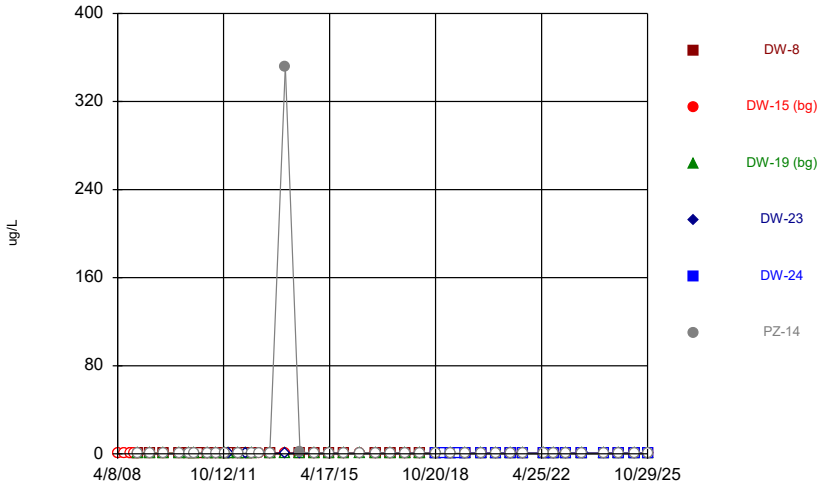
Constituent: Thallium Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



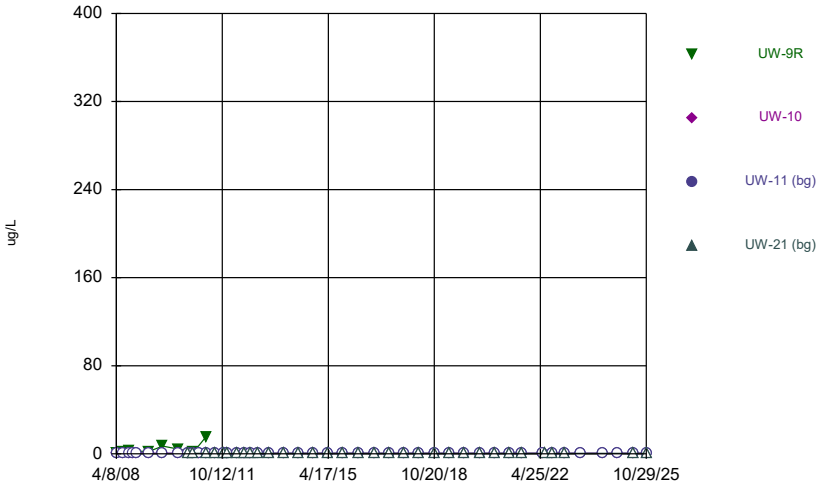
Constituent: Thallium Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



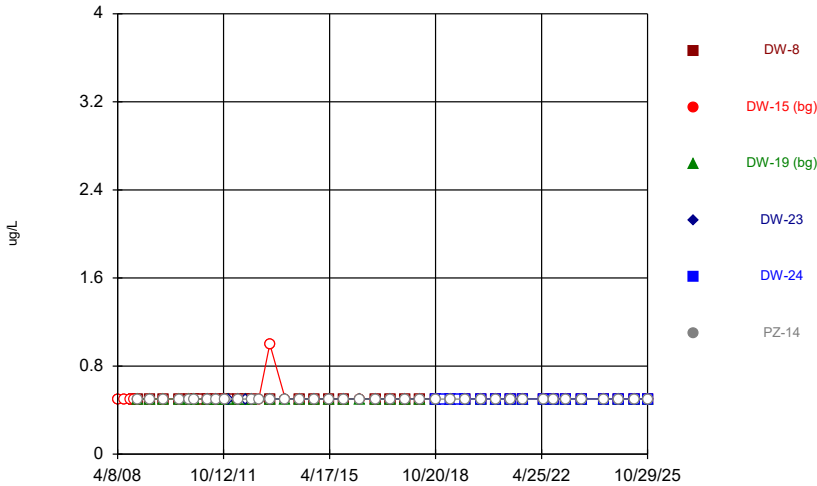
Constituent: Toluene Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series

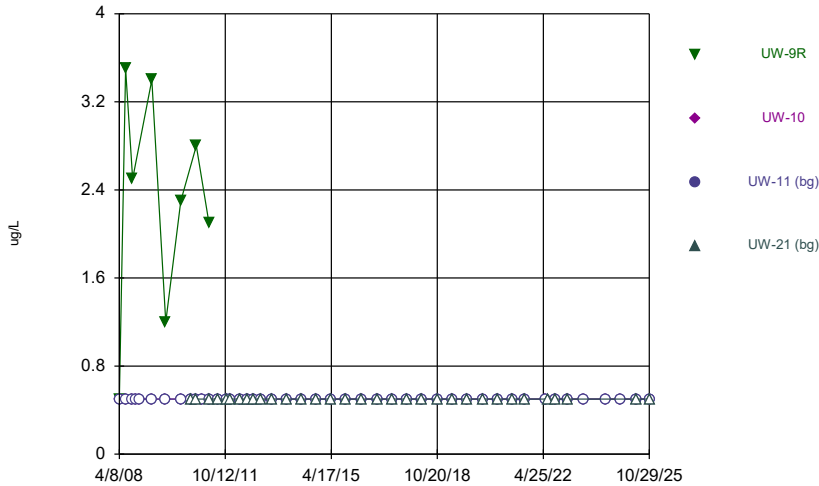


Constituent: Toluene Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

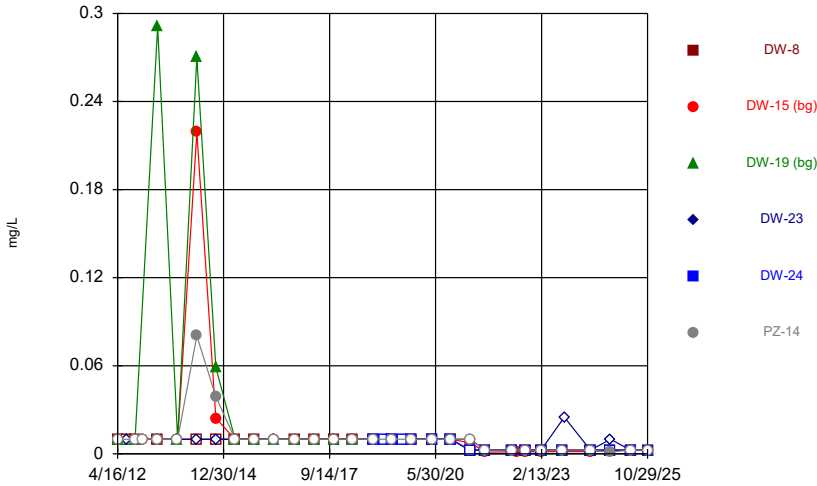
Time Series



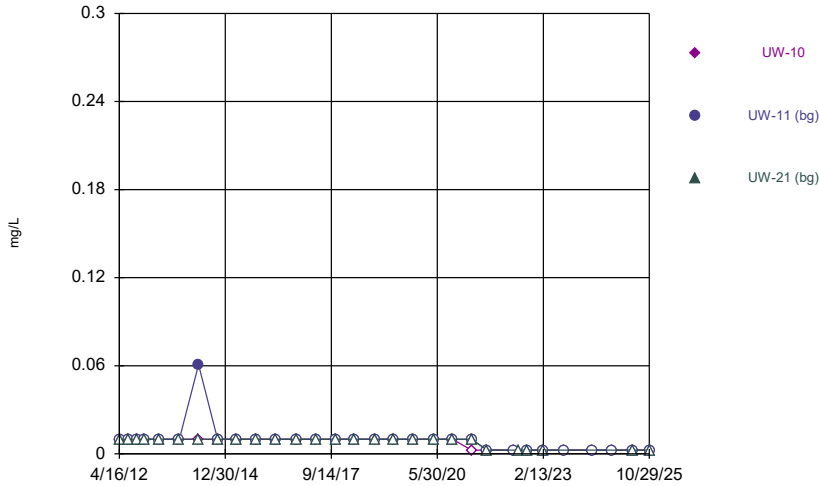
Time Series



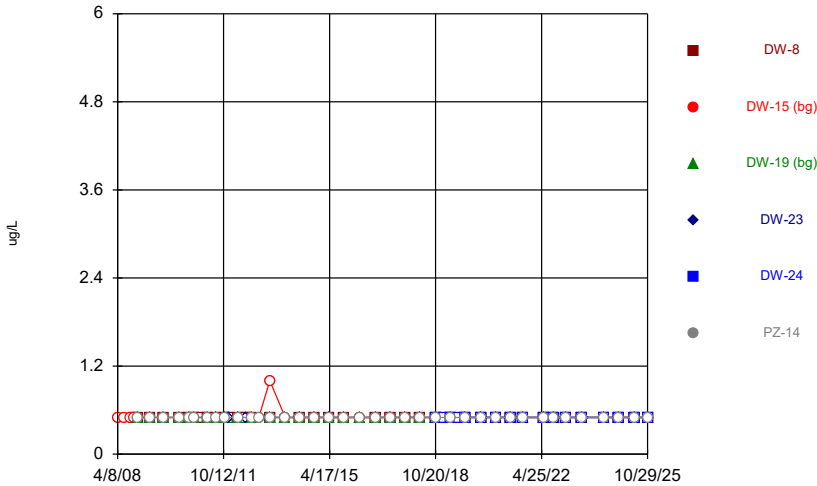
Time Series



Time Series

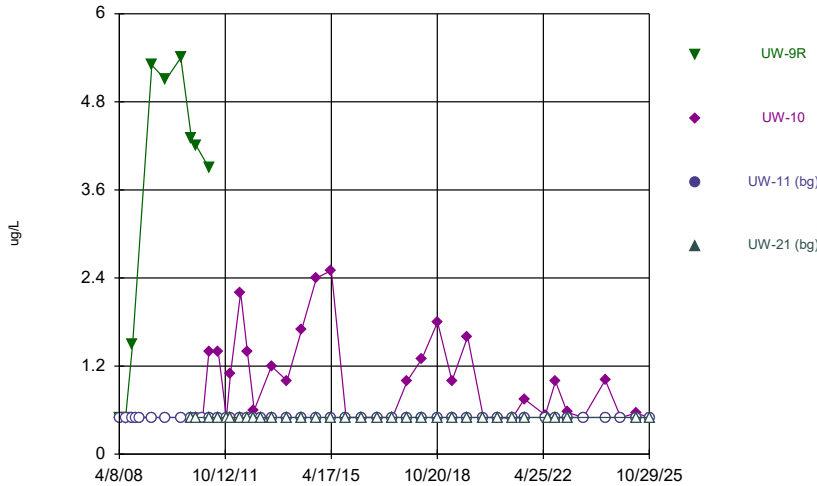


Time Series



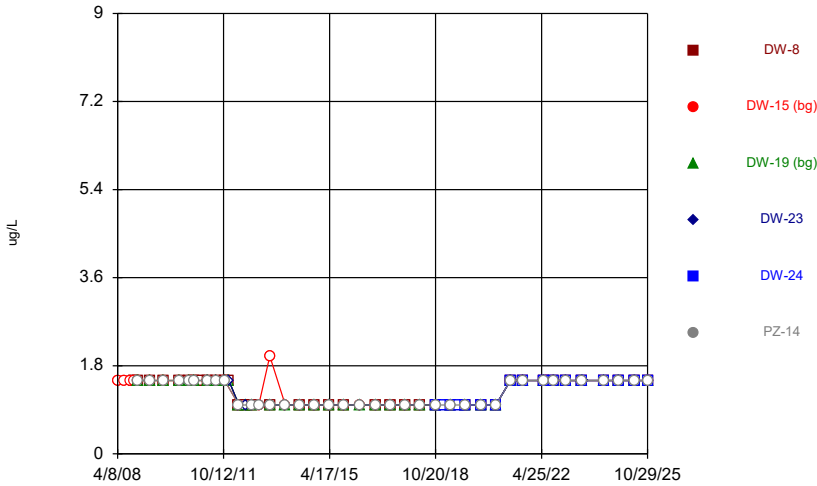
Constituent: Vinyl Chloride Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



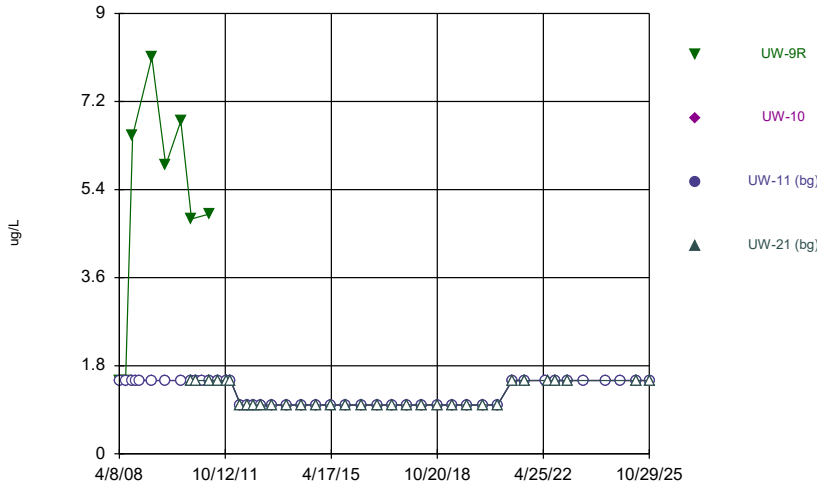
Constituent: Vinyl Chloride Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



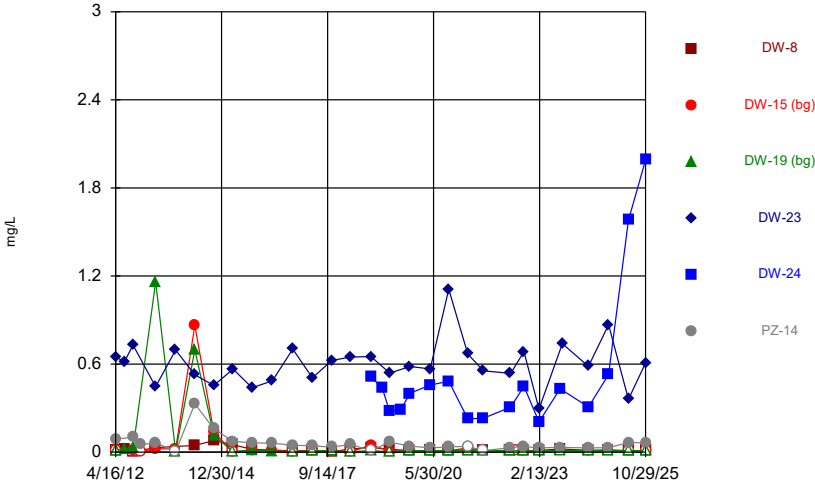
Constituent: Xylenes, total Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



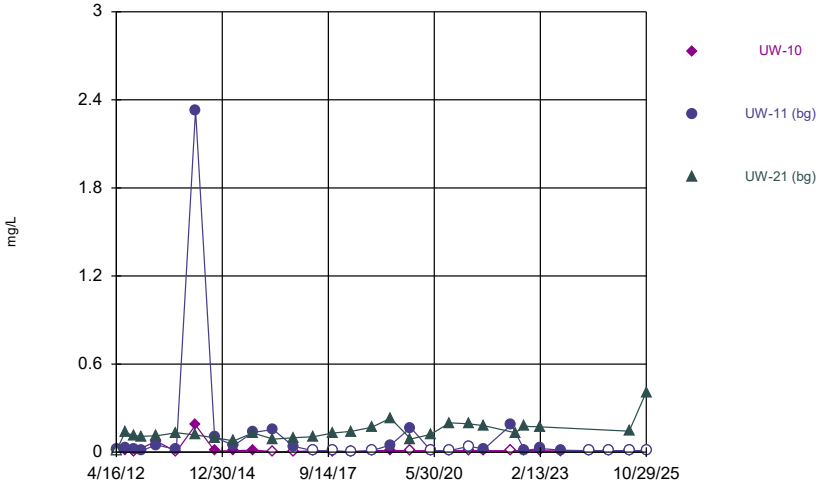
Constituent: Xylenes, total Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



Constituent: Zinc Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Time Series



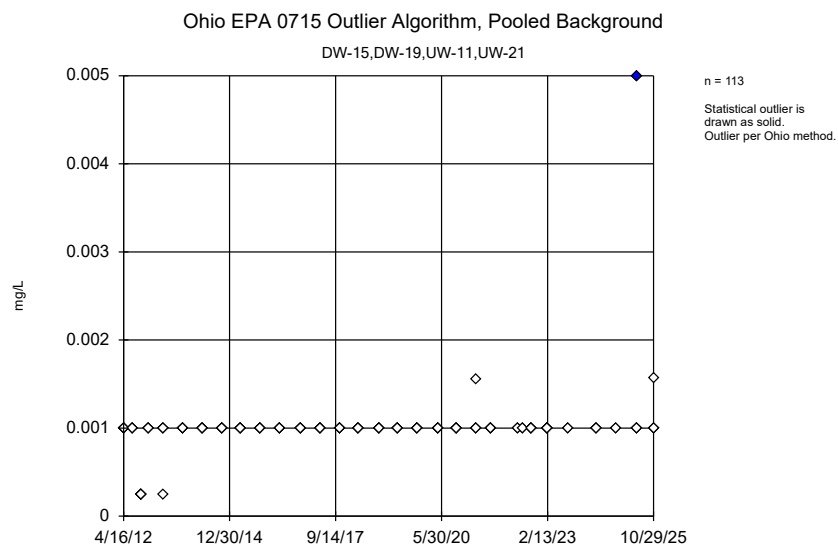
Constituent: Zinc Analysis Run 1/21/2026 3:48 PM View: 2025AWQR - Time Series
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Outlier Tests Summary Table and Graphs

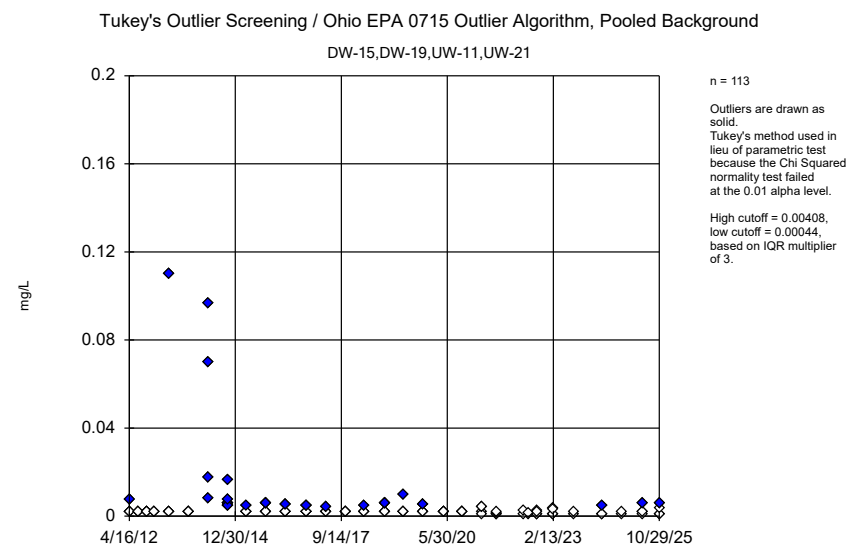
Outlier Analysis

Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active Printed 1/20/2026, 11:06 AM

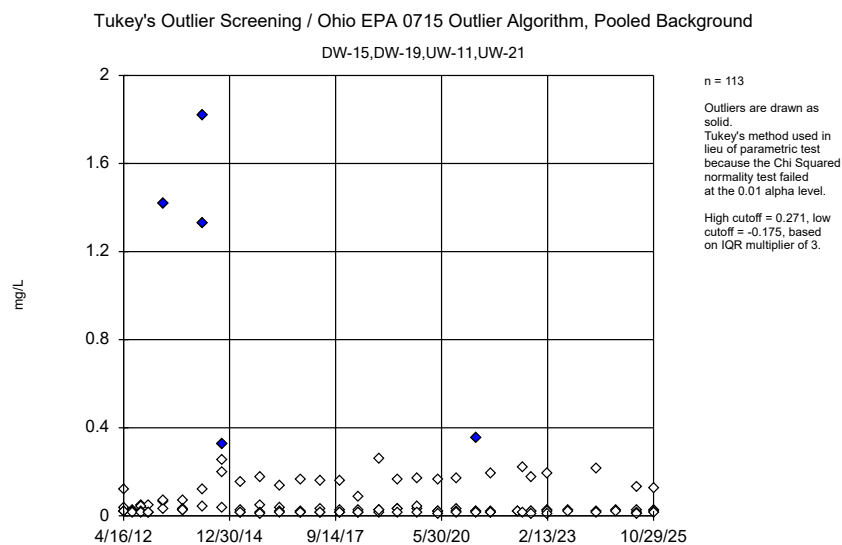
Constituent	Well	Outlier Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Antimony (mg/L)	DW-15,DW-19,UW-11...	Yes 0.005	n/a w/combined bg	OH	NaN	113	0.001012	0.0004163	n/a	n/a
Arsenic (mg/L)	DW-15,DW-19,UW-11...	Yes 0.0698,0.0059,0.0059,0.0059,0.005,0.11,0.0965,0.0	n/a w/combined bg	NP (nrm)/OH	NaN	113	0.005172	0.01489	unknown	ChiSquared
Barium (mg/L)	DW-15,DW-19,UW-11...	Yes 1.82,0.326,0.351,1.42,1.33	n/a w/combined bg	NP (nrm)/OH	NaN	113	0.09825	0.25	unknown	ChiSquared
Beryllium (mg/L)	DW-15,DW-19,UW-11...	Yes 0.0161,0.0138,0.0126,0.0125,0.0096	n/a w/combined bg	OH	NaN	113	0.002132	0.00248	n/a	n/a
Cadmium (mg/L)	DW-15,DW-19,UW-11...	Yes 0.0109,0.0034,0.000317,0.000216,0.000123,0.000101	n/a w/combined bg	NP (nrm)/OH	NaN	113	0.00073010	0.001263	unknown	ChiSquared
Chromium (mg/L)	DW-15,DW-19,UW-11...	Yes 0.183,0.16,0.152,0.105,0.0416,0.0319,0.0168	n/a w/combined bg	OH	NaN	113	0.009951	0.02793	n/a	n/a
Cobalt (mg/L)	DW-15,DW-19,UW-11...	Yes 1.45,1.45,1.48,1.61,1.53	n/a w/combined bg	NP (nrm)/OH	NaN	113	0.2842	0.483	unknown	ChiSquared
Copper (mg/L)	DW-15,DW-19,UW-11...	Yes 0.148,0.0174,0.0283,0.239,0.169,0.0308,0.226,0.01	n/a w/combined bg	NP (nrm)/OH	NaN	113	0.01254	0.03775	unknown	ChiSquared
Lead (mg/L)	DW-15,DW-19,UW-11...	Yes 0.0851,0.0137,0.0051,0.0051,0.0067,0.138,0.0253,0	n/a w/combined bg	NP (nrm)/OH	NaN	113	0.005808	0.01967	unknown	ChiSquared
Nickel (mg/L)	DW-15,DW-19,UW-11...	No n/a	n/a w/combined bg	NP (nrm)/OH	NaN	113	0.1918	0.2906	unknown	ChiSquared
Selenium (mg/L)	DW-15,DW-19,UW-11...	Yes 0.026,0.018,0.0154,0.0151,0.0146,0.01,0.0093	n/a w/combined bg	OH	NaN	110	0.003265	0.003579	n/a	n/a
Silver (mg/L)	DW-15,DW-19,UW-11...	Yes 0.005	n/a w/combined bg	OH	NaN	113	0.001596	0.0007563	n/a	n/a
Thallium (mg/L)	DW-15,DW-19,UW-11...	Yes 0.0025,0.0025	n/a w/combined bg	OH	NaN	113	0.001278	0.000662	n/a	n/a
Vanadium (mg/L)	DW-15,DW-19,UW-11...	Yes 0.291,0.27,0.219,0.0607,0.0587	n/a w/combined bg	OH	NaN	113	0.01545	0.04161	n/a	n/a
Zinc (mg/L)	DW-15,DW-19,UW-11...	Yes 0.864,1.16,0.697,2.33	n/a w/combined bg	NP (nrm)/OH	NaN	113	0.09676	0.2636	unknown	ChiSquared



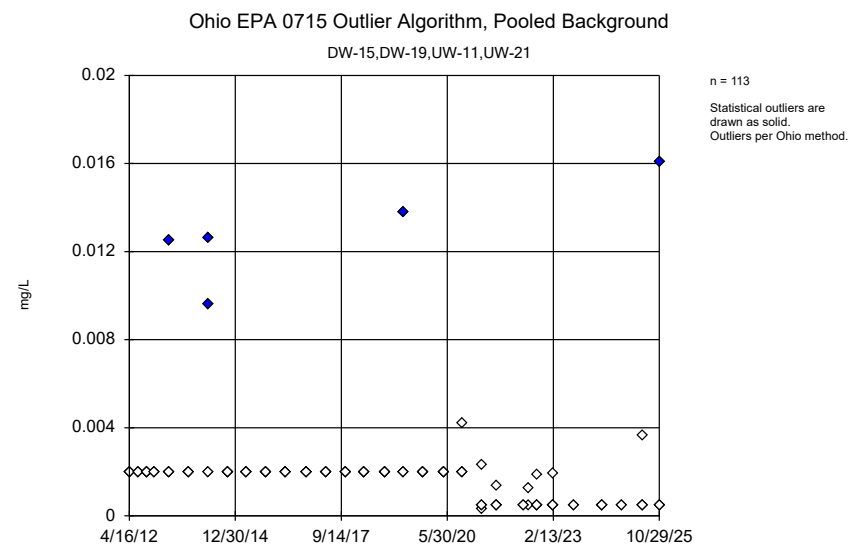
Constituent: Antimony Analysis Run 1/20/2026 11:03 AM View: 2025_AWQR-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active



Constituent: Arsenic Analysis Run 1/20/2026 11:03 AM View: 2025_AWQR-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

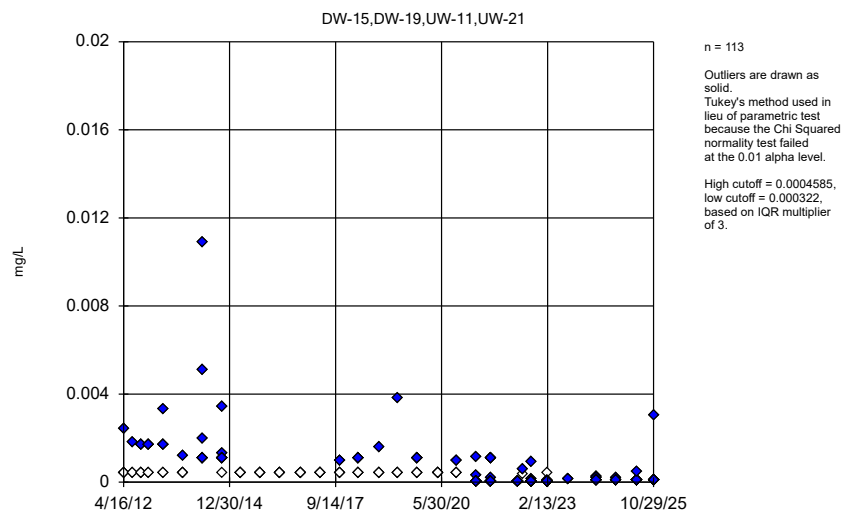


Constituent: Barium Analysis Run 1/20/2026 11:03 AM View: 2025_AWQR-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active



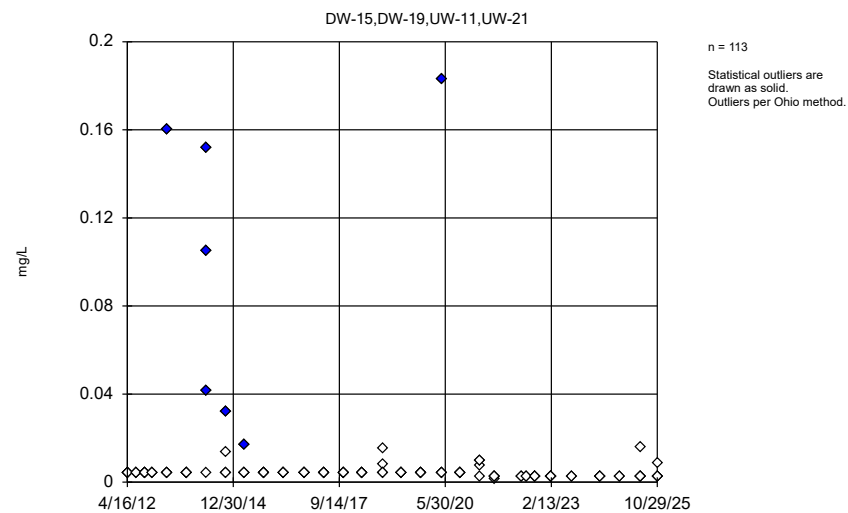
Constituent: Beryllium Analysis Run 1/20/2026 11:03 AM View: 2025_AWQR-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm, Pooled Background



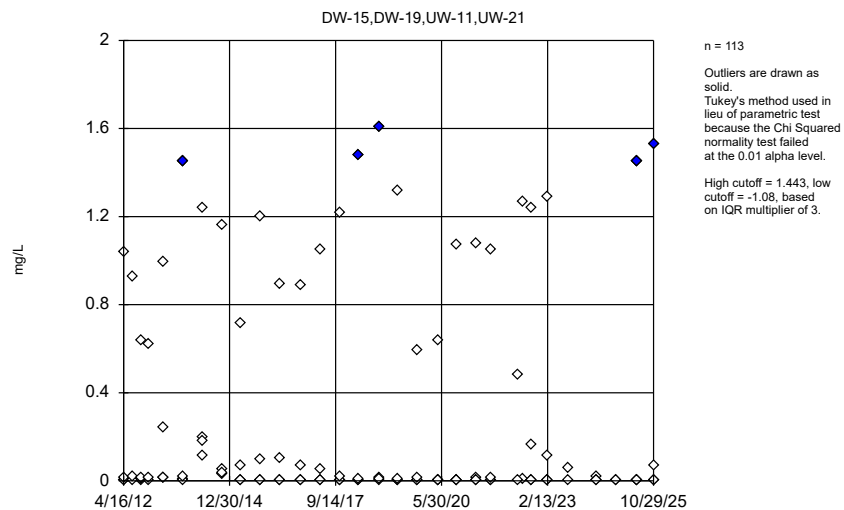
Constituent: Cadmium Analysis Run 1/20/2026 11:03 AM View: 2025_AWQR-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Ohio EPA 0715 Outlier Algorithm, Pooled Background



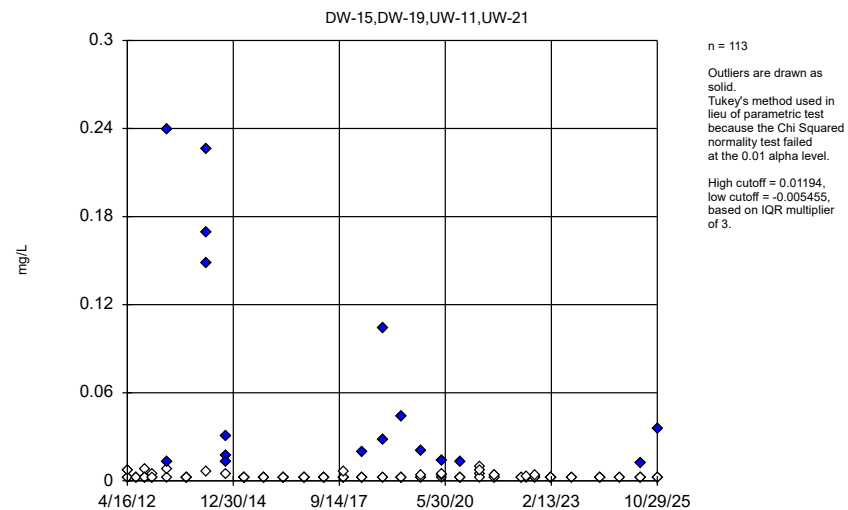
Constituent: Chromium Analysis Run 1/20/2026 11:03 AM View: 2025_AWQR-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm, Pooled Background



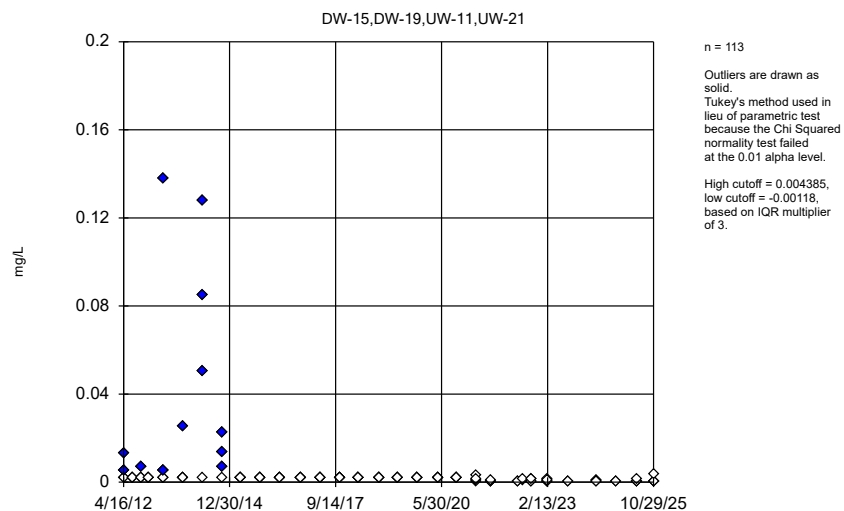
Constituent: Cobalt Analysis Run 1/20/2026 11:03 AM View: 2025_AWQR-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm, Pooled Background



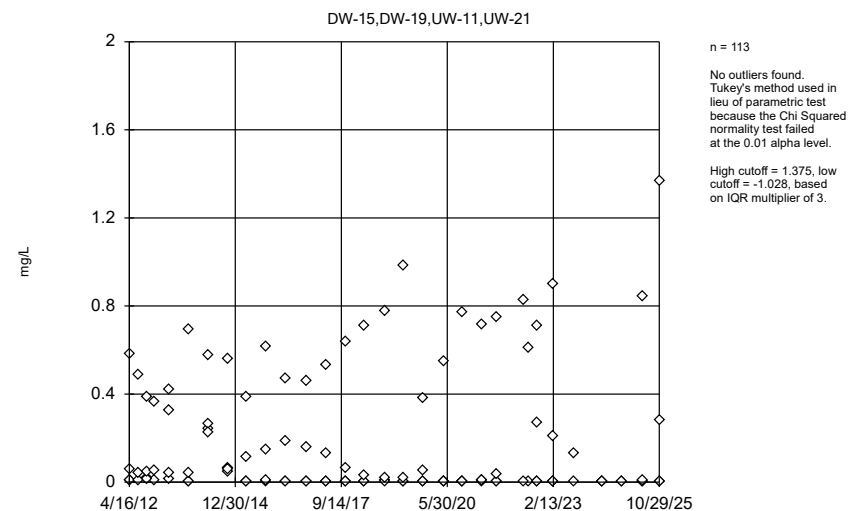
Constituent: Copper Analysis Run 1/20/2026 11:03 AM View: 2025_AWQR-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm, Pooled Background



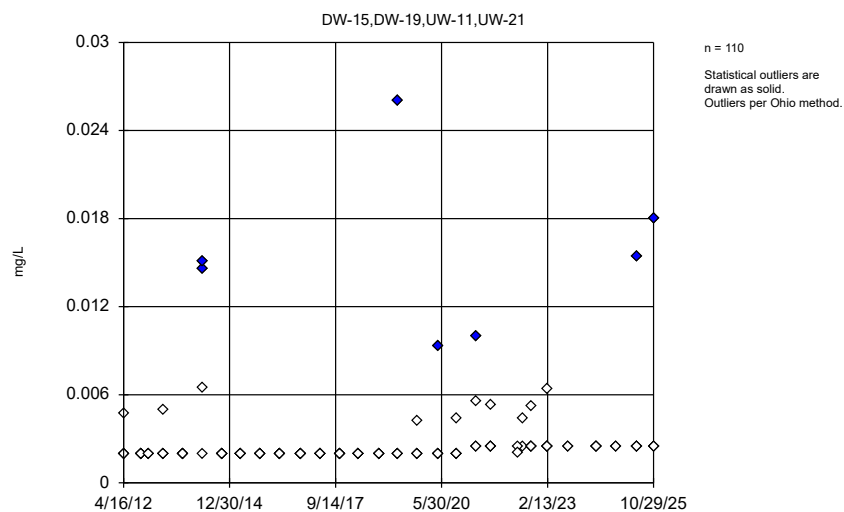
Constituent: Lead Analysis Run 1/20/2026 11:03 AM View: 2025_AWQR-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm, Pooled Background



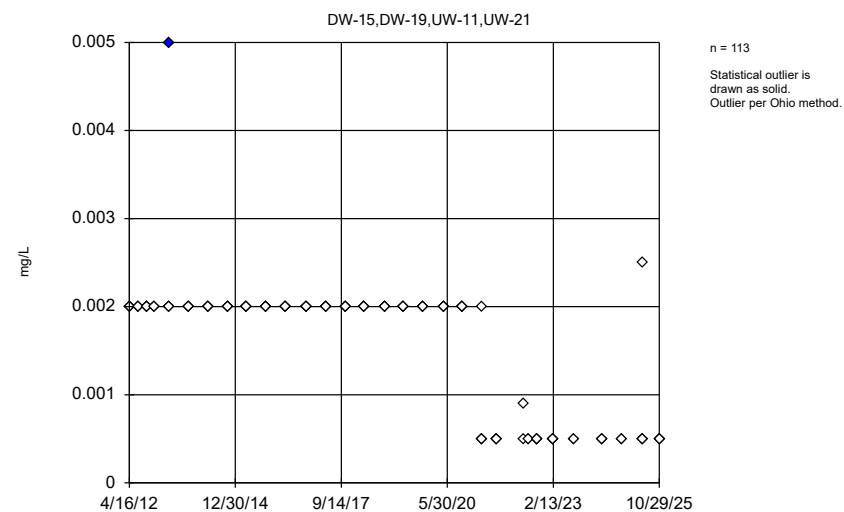
Constituent: Nickel Analysis Run 1/20/2026 11:03 AM View: 2025_AWQR-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Ohio EPA 0715 Outlier Algorithm, Pooled Background

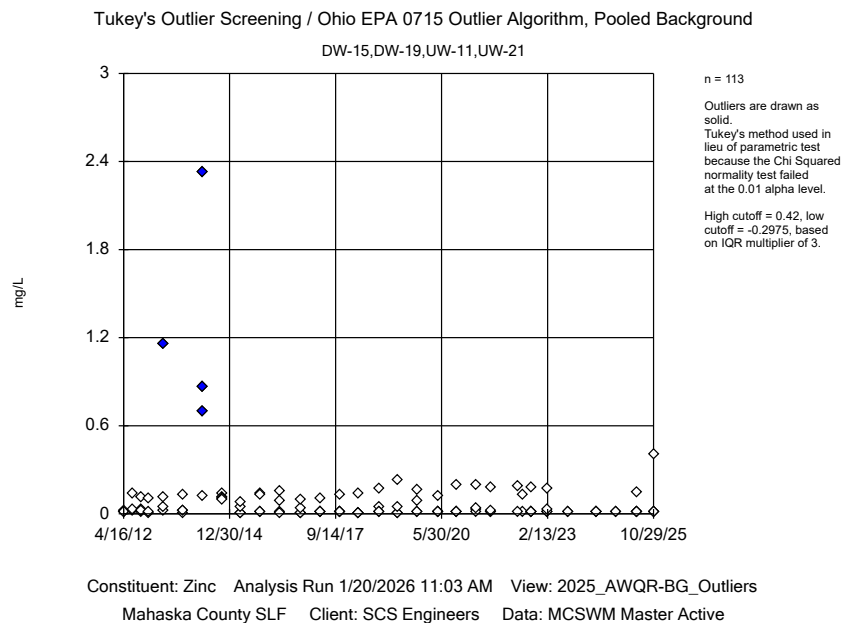
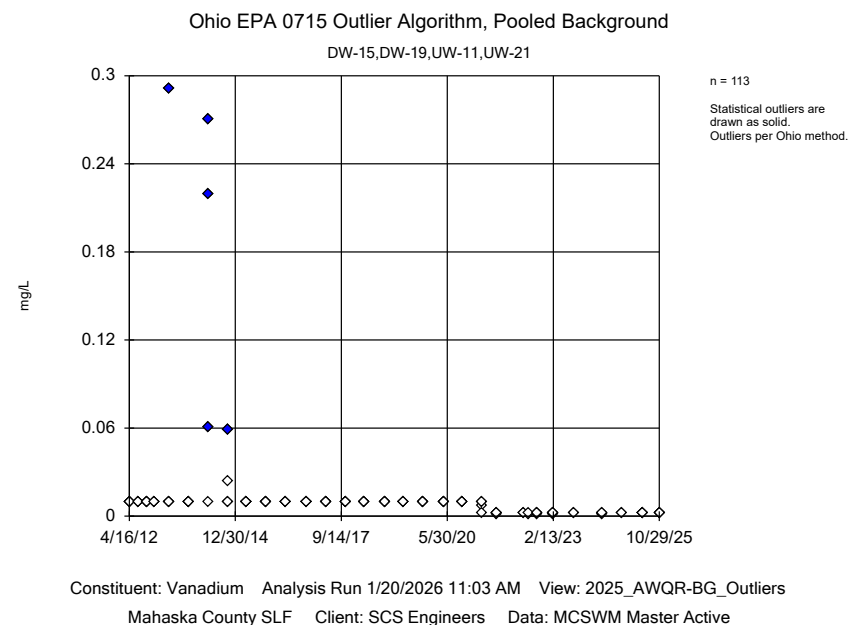
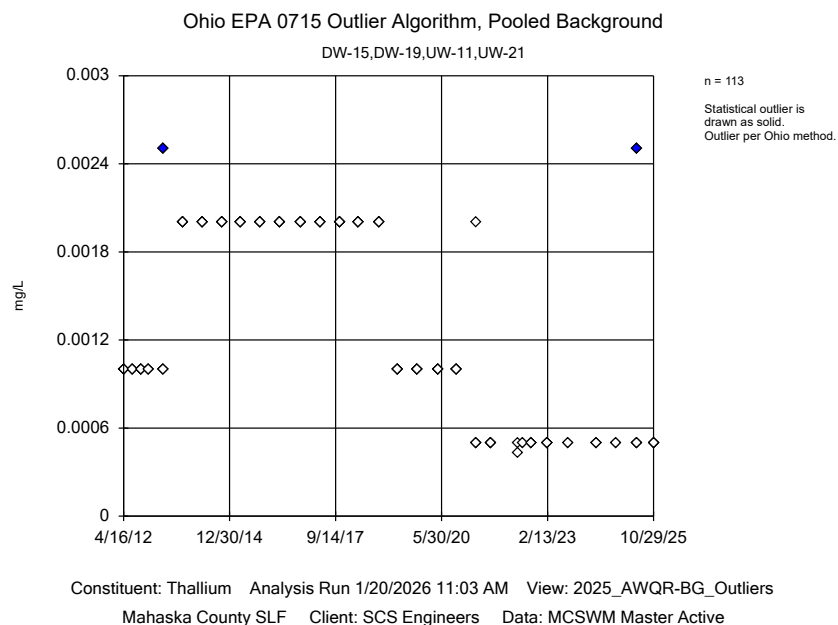


Constituent: Selenium Analysis Run 1/20/2026 11:03 AM View: 2025_AWQR-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Ohio EPA 0715 Outlier Algorithm, Pooled Background



Constituent: Silver Analysis Run 1/20/2026 11:03 AM View: 2025_AWQR-BG_Outliers
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active



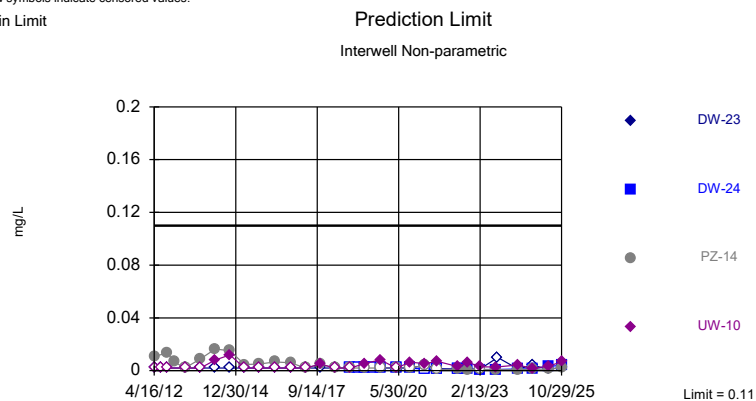
Interwell Prediction Limit Summary Table and Graphs

Prediction Limit

Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active Printed 1/20/2026, 11:37 AM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>Bg Wells</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Arsenic (mg/L)	DW-23	0.11	n/a	10/29/2025	0.0026	No	113	DW-15,UW-11,DW-19,UW-21	66.37	n/a	0.0001552	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	DW-24	0.11	n/a	10/29/2025	0.00388	No	113	DW-15,UW-11,DW-19,UW-21	66.37	n/a	0.0001552	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	PZ-14	0.11	n/a	10/29/2025	0.00199J	No	113	DW-15,UW-11,DW-19,UW-21	66.37	n/a	0.0001552	NP Inter (NDs) 1 of 2
Arsenic (mg/L)	UW-10	0.11	n/a	10/29/2025	0.0066	No	113	DW-15,UW-11,DW-19,UW-21	66.37	n/a	0.0001552	NP Inter (NDs) 1 of 2
Barium (mg/L)	DW-8	1.82	n/a	10/29/2025	0.033	No	113	UW-21,UW-11,DW-19,DW-15	0	n/a	0.0001552	NP Inter (normality) 1 of 2
Barium (mg/L)	DW-23	1.82	n/a	10/29/2025	0.0138	No	113	UW-21,UW-11,DW-19,DW-15	0	n/a	0.0001552	NP Inter (normality) 1 of 2
Barium (mg/L)	DW-24	1.82	n/a	10/29/2025	0.00722	No	113	UW-21,UW-11,DW-19,DW-15	0	n/a	0.0001552	NP Inter (normality) 1 of 2
Barium (mg/L)	PZ-14	1.82	n/a	10/29/2025	0.0231	No	113	UW-21,UW-11,DW-19,DW-15	0	n/a	0.0001552	NP Inter (normality) 1 of 2
Barium (mg/L)	UW-10	1.82	n/a	10/29/2025	0.0682	No	113	UW-21,UW-11,DW-19,DW-15	0	n/a	0.0001552	NP Inter (normality) 1 of 2
Beryllium (mg/L)	DW-23	0.0161	n/a	10/29/2025	0.00141	No	113	DW-15,UW-11,DW-19,UW-21	89.38	n/a	0.0001552	NP Inter (NDs) 1 of 2
Beryllium (mg/L)	DW-24	0.0161	n/a	10/29/2025	0.0156	No	113	DW-15,UW-11,DW-19,UW-21	89.38	n/a	0.0001552	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	DW-23	0.0109	n/a	10/29/2025	0.00232	No	113	DW-19,UW-11,DW-15,UW-21	66.37	n/a	0.0001552	NP Inter (NDs) 1 of 2
Cadmium (mg/L)	DW-24	0.0109	n/a	10/29/2025	0.0181	Yes	113	DW-19,UW-11,DW-15,UW-21	66.37	n/a	0.0001552	NP Inter (NDs) 1 of 2
Cobalt (mg/L)	DW-8	1.61	n/a	10/29/2025	0.0036	No	113	UW-11,DW-19,DW-15,UW-21	18.58	n/a	0.0001552	NP Inter (normality) 1 of 2
Cobalt (mg/L)	DW-23	1.61	n/a	10/29/2025	1.25	No	113	UW-11,DW-19,DW-15,UW-21	18.58	n/a	0.0001552	NP Inter (normality) 1 of 2
Cobalt (mg/L)	DW-24	1.61	n/a	10/29/2025	0.358	No	113	UW-11,DW-19,DW-15,UW-21	18.58	n/a	0.0001552	NP Inter (normality) 1 of 2
Cobalt (mg/L)	PZ-14	1.61	n/a	10/29/2025	0.009215	No	113	UW-11,DW-19,DW-15,UW-21	18.58	n/a	0.0001552	NP Inter (normality) 1 of 2
Cobalt (mg/L)	UW-10	1.61	n/a	10/29/2025	0.0361	No	113	UW-11,DW-19,DW-15,UW-21	18.58	n/a	0.0001552	NP Inter (normality) 1 of 2
Copper (mg/L)	DW-24	0.239	n/a	10/29/2025	0.00749	No	113	DW-15,DW-19,UW-11,UW-21	69.03	n/a	0.0001552	NP Inter (NDs) 1 of 2
Lead (mg/L)	DW-24	0.138	n/a	10/29/2025	0.000842	No	113	UW-11,DW-19,DW-15,UW-21	74.34	n/a	0.0001552	NP Inter (NDs) 1 of 2
Nickel (mg/L)	DW-23	1.37	n/a	10/29/2025	1.15	No	113	DW-19,DW-15,UW-11,UW-21	31.86	n/a	0.0001552	NP Inter (normality) 1 of 2
Nickel (mg/L)	DW-24	1.37	n/a	10/29/2025	0.622	No	113	DW-19,DW-15,UW-11,UW-21	31.86	n/a	0.0001552	NP Inter (normality) 1 of 2
Nickel (mg/L)	PZ-14	1.37	n/a	10/29/2025	0.01545	No	113	DW-19,DW-15,UW-11,UW-21	31.86	n/a	0.0001552	NP Inter (normality) 1 of 2
Selenium (mg/L)	DW-24	0.026	n/a	10/29/2025	0.0142	No	110	DW-15,DW-19,UW-11,UW-21	85.45	n/a	0.0001639	NP Inter (NDs) 1 of 2
Zinc (mg/L)	DW-23	2.33	n/a	10/29/2025	0.607	No	113	DW-19,DW-15,UW-11,UW-21	44.25	n/a	0.0001552	NP Inter (normality) 1 of 2
Zinc (mg/L)	DW-24	2.33	n/a	10/29/2025	1.99	No	113	DW-19,DW-15,UW-11,UW-21	44.25	n/a	0.0001552	NP Inter (normality) 1 of 2
Zinc (mg/L)	PZ-14	2.33	n/a	10/29/2025	0.06335	No	113	DW-19,DW-15,UW-11,UW-21	44.25	n/a	0.0001552	NP Inter (normality) 1 of 2

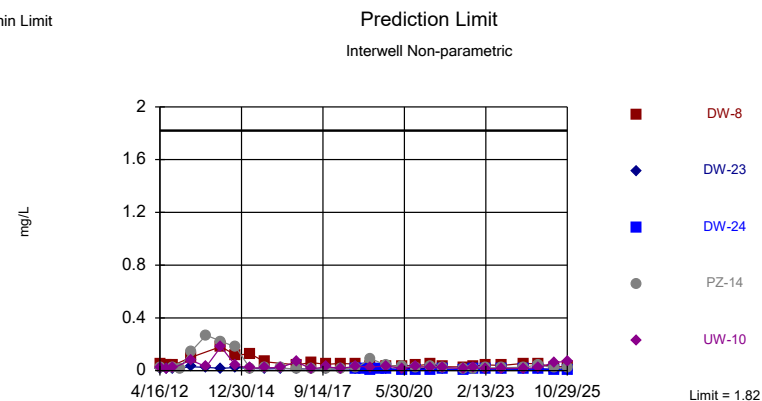
Within Limit



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 113 background values. 66.37% NDs. Annual per-constituent alpha = 0.002171. Individual comparison alpha = 0.0001552 (1 of 2). Comparing 4 points to limit. Assumes 3 future values.

Constituent: Arsenic Analysis Run 1/20/2026 11:35 AM View: 2025_AWQR_Interwell_PL
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

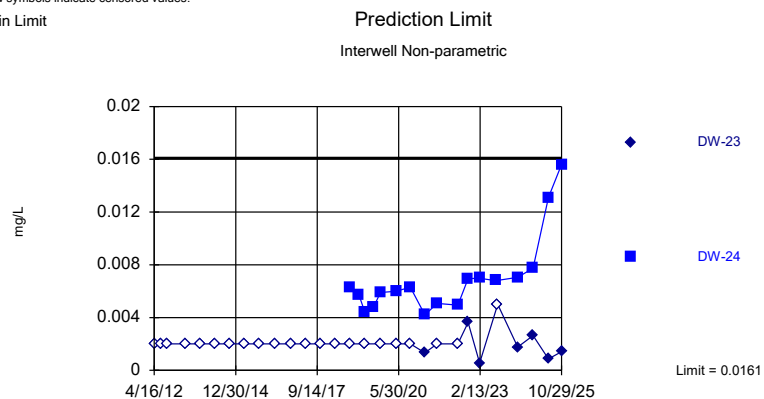
Within Limit



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 113 background values. Annual per-constituent alpha = 0.002171. Individual comparison alpha = 0.0001552 (1 of 2). Comparing 5 points to limit. Assumes 2 future values.

Constituent: Barium Analysis Run 1/20/2026 11:35 AM View: 2025_AWQR_Interwell_PL
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

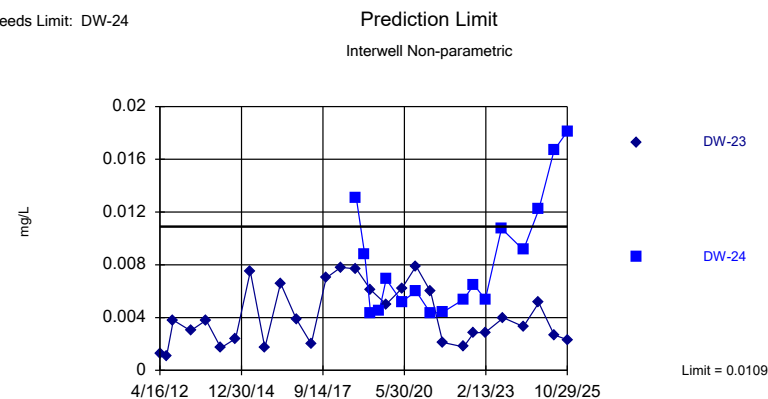
Within Limit



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 113 background values. 89.38% NDs. Annual per-constituent alpha = 0.002171. Individual comparison alpha = 0.0001552 (1 of 2). Comparing 2 points to limit. Assumes 5 future values.

Constituent: Beryllium Analysis Run 1/20/2026 11:35 AM View: 2025_AWQR_Interwell_PL
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

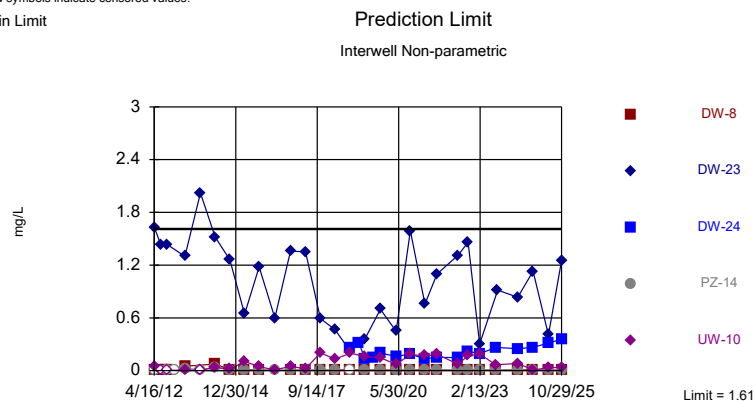
Exceeds Limit: DW-24



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 113 background values. 66.37% NDs. Annual per-constituent alpha = 0.002171. Individual comparison alpha = 0.0001552 (1 of 2). Comparing 2 points to limit. Assumes 5 future values.

Constituent: Cadmium Analysis Run 1/20/2026 11:35 AM View: 2025_AWQR_Interwell_PL
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

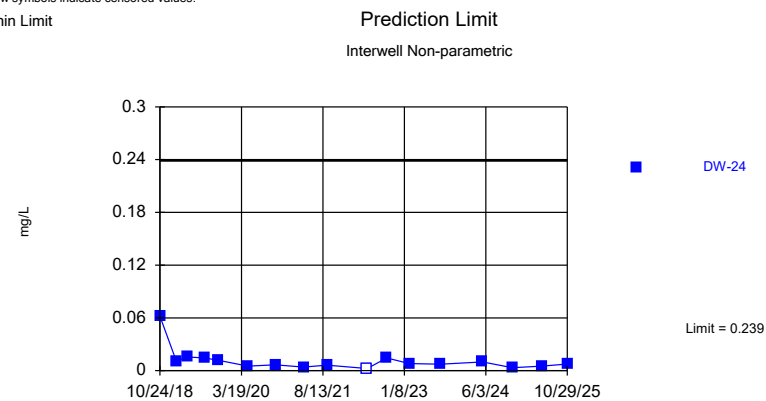
Within Limit



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 113 background values. 18.58% NDs. Annual per-constituent alpha = 0.002171. Individual comparison alpha = 0.0001552 (1 of 2). Comparing 5 points to limit. Assumes 2 future values.

Constituent: Cobalt Analysis Run 1/20/2026 11:35 AM View: 2025_AWQR_Interwell_PL
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

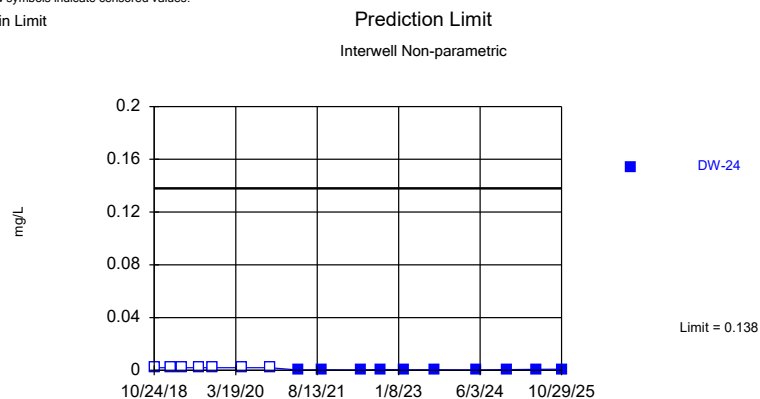
Within Limit



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 113 background values. 69.03% NDs. Annual per-constituent alpha = 0.002171. Individual comparison alpha = 0.0001552 (1 of 2). Assumes 6 future values.

Constituent: Copper Analysis Run 1/20/2026 11:35 AM View: 2025_AWQR_Interwell_PL
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

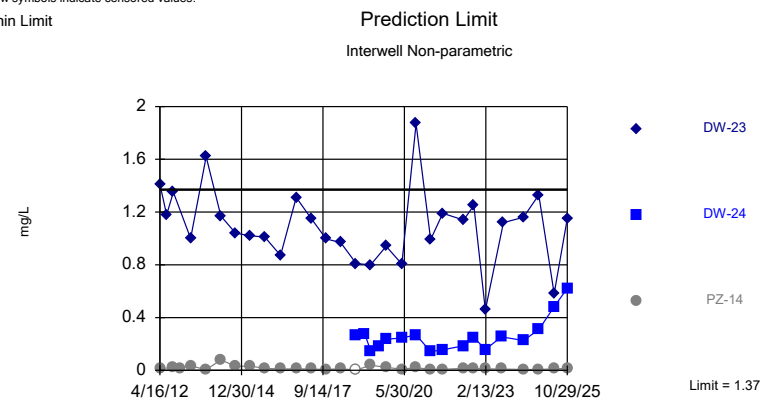
Within Limit



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 113 background values. 74.34% NDs. Annual per-constituent alpha = 0.002171. Individual comparison alpha = 0.0001552 (1 of 2). Assumes 6 future values.

Constituent: Lead Analysis Run 1/20/2026 11:35 AM View: 2025_AWQR_Interwell_PL
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Within Limit

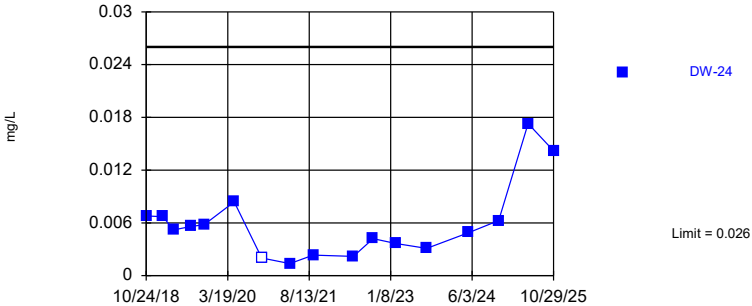


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 113 background values. 31.86% NDs. Annual per-constituent alpha = 0.002171. Individual comparison alpha = 0.0001552 (1 of 2). Comparing 3 points to limit. Assumes 4 future values.

Constituent: Nickel Analysis Run 1/20/2026 11:35 AM View: 2025_AWQR_Interwell_PL
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Within Limit

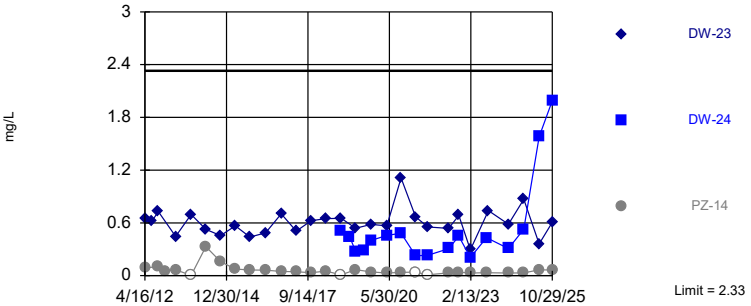
Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 110 background values. 85.45% NDs. Annual per-constituent alpha = 0.002292. Individual comparison alpha = 0.0001639 (1 of 2). Assumes 6 future values.

Within Limit

Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 113 background values. 44.25% NDs. Annual per-constituent alpha = 0.002171. Individual comparison alpha = 0.0001552 (1 of 2). Comparing 3 points to limit. Assumes 4 future values.

Intrawell Prediction Limit Summary Table and Graphs

DW-24 Intra Prediction Limit

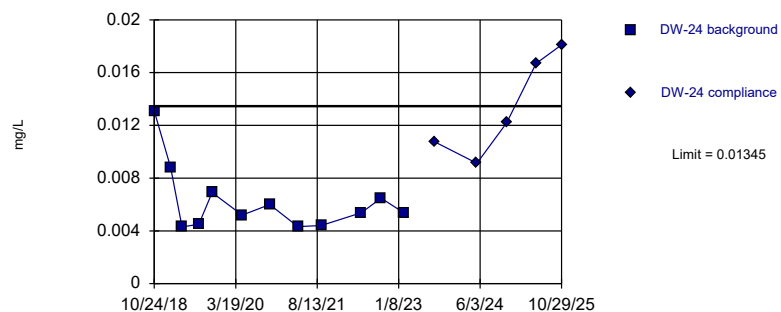
Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active Printed 1/20/2026, 12:38 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>Bg Wells</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Cadmium (mg/L)	DW-24	0.01345	n/a	10/29/2025	0.0181	Yes	12	n/a	0	sqrt(x)	0.0006269	Param Intra 1 of 2

Exceeds Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square root transformation): Mean=0.07775, Std. Dev.=0.01429, n=12.
 Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8091, critical = 0.805. Kappa = 2.676 (c=12, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.0006269.

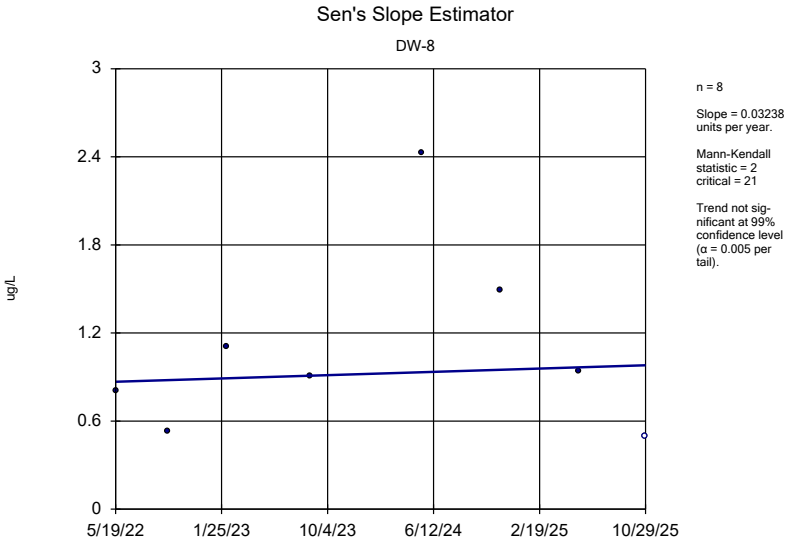
Constituent: Cadmium Analysis Run 1/20/2026 12:37 PM View: 2025 MW-24 Intra
 Mahaska County SLF Client: SCS Engineers Data: MCSWM Master Active

Mann-Kendall/Sen's Slope Trend Test Summary Table and Graphs

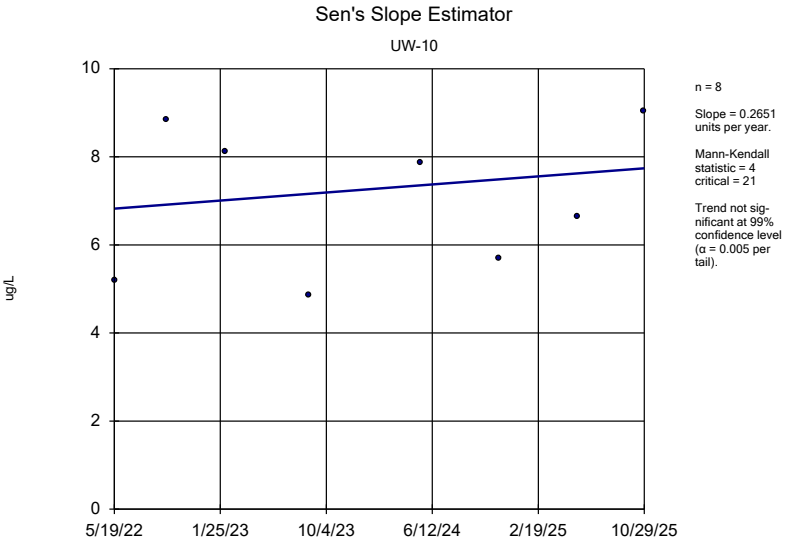
Trend Test

Mahaska County SLF Client: SCS Engineers Data: MCSWM_AM_2025_AWQR Printed 1/20/2026, 1:42 PM

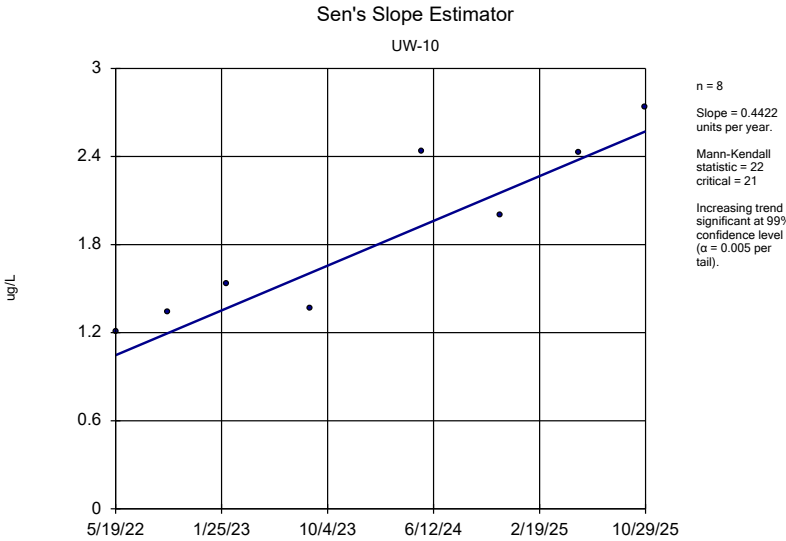
<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Alpha</u>	<u>Method</u>
1,1-Dichloroethane (ug/L)	DW-8	0.03238	2	21	No	8	12.5	0.01	NP
1,4-Dichlorobenzene (ug/L)	UW-10	0.2651	4	21	No	8	0	0.01	NP
Benzene (ug/L)	UW-10	0.4422	22	21	Yes	8	0	0.01	NP
cis-1,2-Dichloroethene (ug/L)	DW-8	0.04291	10	21	No	8	12.5	0.01	NP
Vinyl Chloride (ug/L)	UW-10	-0.01137	-7	-21	No	8	37.5	0.01	NP



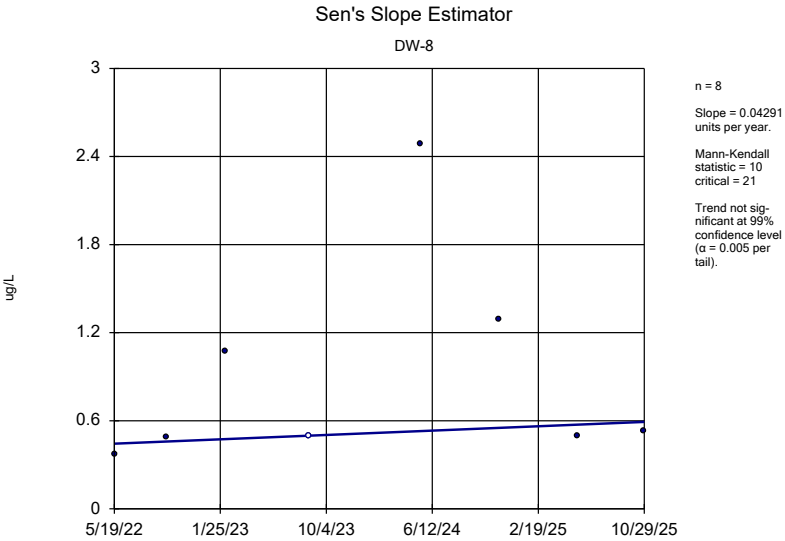
Constituent: 1,1-Dichloroethane Analysis Run 1/20/2026 1:42 PM View: 2025_AWQR-Mann_Kendall
Mahaska County SLF Client: SCS Engineers Data: MCSWM_AM_2025_AWQR



Constituent: 1,4-Dichlorobenzene Analysis Run 1/20/2026 1:42 PM View: 2025_AWQR-Mann_Kendall
Mahaska County SLF Client: SCS Engineers Data: MCSWM_AM_2025_AWQR



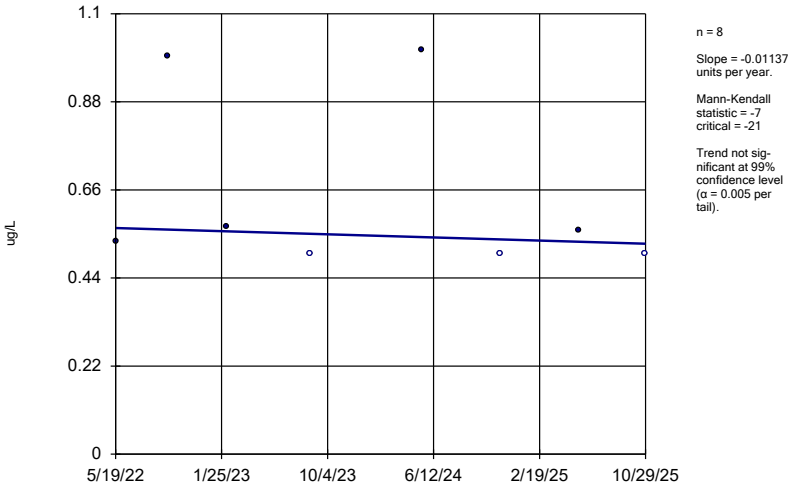
Constituent: Benzene Analysis Run 1/20/2026 1:42 PM View: 2025_AWQR-Mann_Kendall
Mahaska County SLF Client: SCS Engineers Data: MCSWM_AM_2025_AWQR



Constituent: cis-1,2-Dichloroethene Analysis Run 1/20/2026 1:42 PM View: 2025_AWQR-Mann_Kendall
Mahaska County SLF Client: SCS Engineers Data: MCSWM_AM_2025_AWQR

Sen's Slope Estimator

UW-10



Constituent: Vinyl Chloride Analysis Run 1/20/2026 1:42 PM View: 2025_AWQR-Mann_Kendall
Mahaska County SLF Client: SCS Engineers Data: MCSWM_AM_2025_AWQR

Confidence Interval Summary Table and Graphs

Confidence Interval

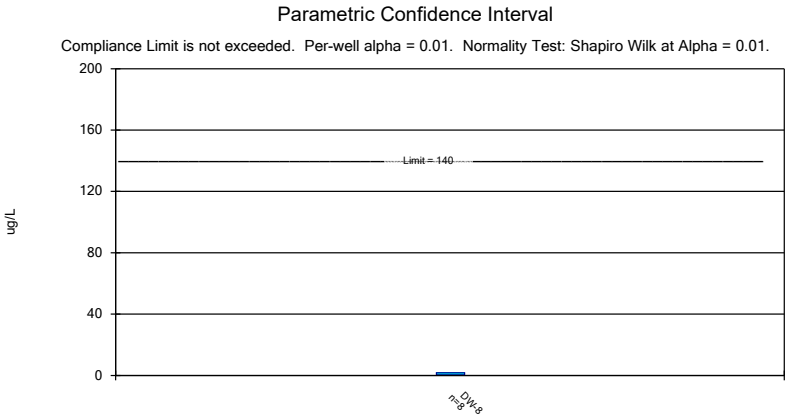
Mahaska County SLF

Client: SCS Engineers

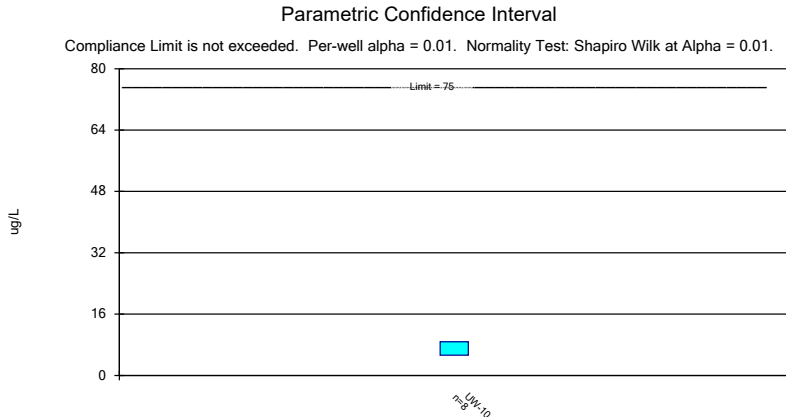
Data: MCSWM_AM_2025_AWQR

Printed 1/20/2026, 1:49 PM

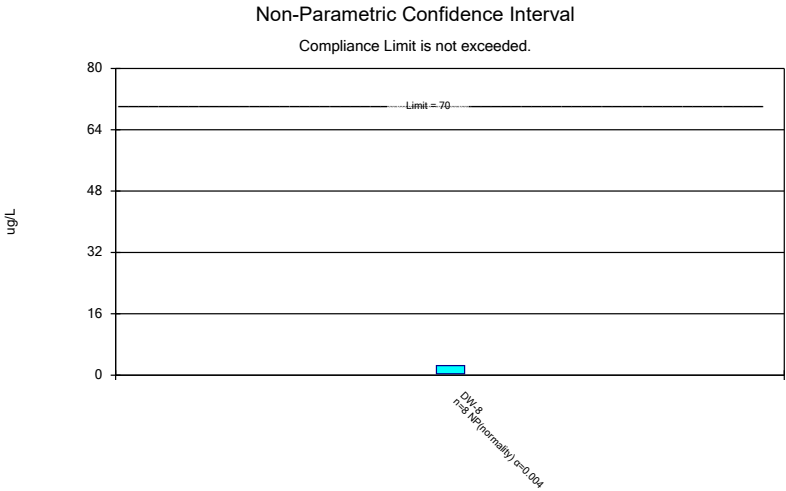
<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
1,1-Dichloroethane (ug/L)	DW-8	1.754	0.4239	140	No	8	12.5	No	0.01	Param.
1,4-Dichlorobenzene (ug/L)	UW-10	8.79	5.28	75	No	8	0	No	0.01	Param.
cis-1,2-Dichloroethene (ug/L)	DW-8	2.49	0.374	70	No	8	12.5	No	0.004	NP (normality)
Vinyl Chloride (ug/L)	UW-10	1.01	0.5	2	No	8	37.5	No	0.004	NP (normality)



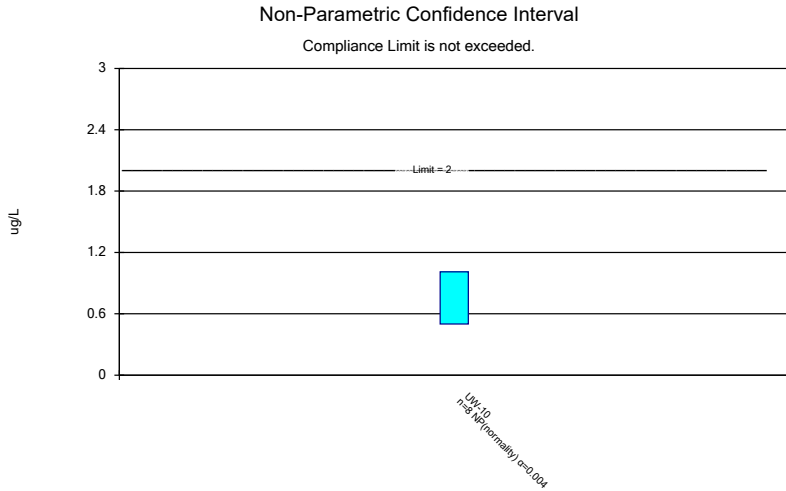
Constituent: 1,1-Dichloroethane Analysis Run 1/20/2026 1:48 PM View: 2025_AWQR-Confidence_Interva
Mahaska County SLF Client: SCS Engineers Data: MCSWM_AM_2025_AWQR



Constituent: 1,4-Dichlorobenzene Analysis Run 1/20/2026 1:48 PM View: 2025_AWQR-Confidence_Inter
Mahaska County SLF Client: SCS Engineers Data: MCSWM_AM_2025_AWQR



Constituent: cis-1,2-Dichloroethene Analysis Run 1/20/2026 1:48 PM View: 2025_AWQR-Confidence_Inte
Mahaska County SLF Client: SCS Engineers Data: MCSWM_AM_2025_AWQR



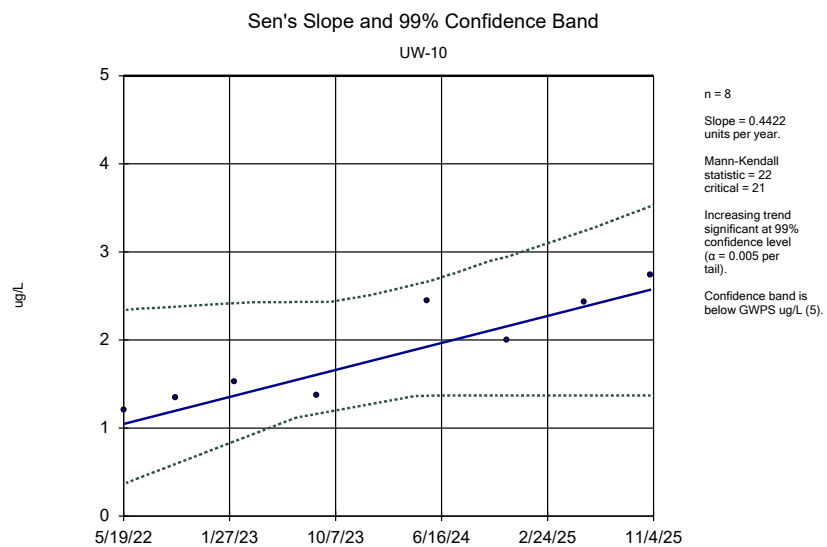
Constituent: Vinyl Chloride Analysis Run 1/20/2026 1:48 PM View: 2025_AWQR-Confidence_Interval
Mahaska County SLF Client: SCS Engineers Data: MCSWM_AM_2025_AWQR

Theil-Sen Confidence Band Summary Table and Graphs

Theil Sen/Trend Test

Mahaska County SLF Client: SCS Engineers Data: MCSWM_AM_2025_AWQR Printed 1/20/2026, 1:55 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>
Benzene (ug/L)	UW-10	0.4422	22	21	Yes	8	0	0.01	NP



Constituent: Benzene Analysis Run 1/20/2026 1:53 PM View: 2025_AWQR-Theil_Sen
Mahaska County SLF Client: SCS Engineers Data: MCSWM_AM_2025_AWQR

Appendix E
2025 Leachate Control System Performance Evaluation Report

2025 LEACHATE CONTROL SYSTEM PERFORMANCE EVALUATION REPORT

**FOR
MAHASKA COUNTY SANITARY LANDFILL
BINNS & STEVENS MSWLF UNIT**

OSKALOOSA, IOWA

SUBMITTAL DATE: JANUARY 2026

**PREPARED FOR:
MAHASKA COUNTY SOLID WASTE MANAGEMENT COMMISSION**

**PREPARED BY:
SCS ENGINEERS**

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Figures

FIGURE 1 LEACHATE CONTROL SYSTEM

Attachments

ATTACHMENT A LEACHATE MANAGEMENT SUMMARY
ATTACHMENT B HISTORICAL LEACHATE COLUMN THICKNESS TABLE AND GRAPHS
ATTACHMENT C LEACHATE SAMPLING LABORATORY ANALYTICAL DATA SHEETS

Section 1.0

Leachate Control System

SCS Engineers, on behalf of the Mahaska County Solid Waste Management Commission, has prepared this Leachate Control System Performance Evaluation Report (LCSPER) for the Binns & Stevens municipal solid waste landfill (MSWLF) unit at the Mahaska County Sanitary Landfill (Landfill). This LCSPER was prepared in general accordance with the requirements of Iowa Administrative Code (IAC) 567-113.7(5)"b"(14) and additional Iowa Department of Natural Resources (DNR) requirements specified in the Landfill's operating permit and subsequent revisions. This LCSPER describes the leachate control system, discusses maintenance activities, evaluates its effectiveness, and, if necessary, recommends additional control measures. The reporting period for this LCSPER is January - December 2025.

1.1 Location of Control System

The Landfill property and leachate monitoring points are depicted in **Figure 1**, Leachate Control System. The Landfill is located approximately five miles south of Oskaloosa, Iowa. The legal description is the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 12, Township 74N, Range 16W, in Mahaska County, Iowa.

1.1.1 Unlined Area

The leachate monitoring system in the original unlined fill area of the Binns & Stevens MSWLF unit consists of three leachate piezometers (LMEW-7, LMEW-8, and LMEW-9A). The requirement for leachate head is to maintain the lowest practical head over the landfill liner (base of landfill).

1.1.2 Clay Lined Area

The leachate collection system in the Transition Area and Cell 1 consists of a 4-foot compacted clay liner overlain by a 1-foot sand drainage layer. The Transition Area and Cell 1 slope toward collection pipes that convey the leachate to a main header line that gravity drains to the lift station installed in 2023, which is then pumped to the leachate storage lagoon. Previously, the main header line gravity drained directly to the leachate storage lagoon. Leachate head monitoring is provided by leachate piezometers LMW-10 and LMW-11R.

1.1.3 Subtitle D Area

The leachate collection system for the Subtitle D-compliant lined Cell 2 consists of a composite liner including a 4-foot layer of compacted soil, overlain with an HDPE liner and a sand drainage layer. The Cell 2 liner slopes toward collection pipes that convey leachate to the lift station, which is then pumped to the leachate storage lagoon. Leachate piezometer LMW-12 is located at the low end of Cell 2.

Subtitle D-compliant Cell 3 was constructed in 2024 with the prescriptive 2-foot layer of compacted soil overlain with an HDPE liner and a sand drainage layer. The lift station constructed near the southeast corner of Cell 3 was designed and constructed to receive flow from the Transition Area and Cells 1 and 2 via the existing pipe that previously discharged into the leachate storage lagoon. The Cell 3 leachate collection pipe discharges directly to the lift station via a separate pipe. The north-south pipe from the Transition Area and Cells 1 and 2 was connected to the lift station on October 31, 2023. Leachate piezometer LMW-13 is located near the lift station in the southeast corner of Cell 3.

The lift station conveys flow to the existing leachate storage lagoon via a pump and discharge pipe. The lift station is equipped with a 3"x 6" dual-wall pipe that allows gravity flow to the lagoon should the leachate pump fail, minimizing the chance of leachate overtopping the lift station.

The current storage consists of a leachate storage lagoon located east of Cell 3. Leachate is disposed of through recirculation and/or hauling for treatment at the Ottumwa publicly owned treatment works (POTW).

1.2 Effectiveness of the Leachate System

The Leachate Management Summary table in Attachment A provides monthly leachate column thicknesses for the unlined, clay lined, and Subtitle D areas of the Landfill. Attachment B provides a table and graphs of the leachate measurements since January 2016.

1.2.1 Unlined Area

Leachate piezometers LMEW-7 and LMEW-8 appear to be damaged. The installed depths are 50 feet below top of casing and 57 feet below top of casing, respectively (Doc #62097). Measured depths are approximately 29.4 feet for LMEW-7 and 43.6 feet for LMEW-8. Leachate had not been measured in leachate piezometers LMEW-7 and LMEW-8 since at least 2016, which indicated that leachate, if present, was below the depth of piezometer damage. However, leachate column thicknesses above the apparent level of damage were measured in LMEW-7 in November 2023 and April 2025. It is unclear if the November 2023 and April 2025 measurements were anomalous, but leachate was not encountered throughout the remainder of the 2023 or 2025 reporting periods. The leachate piezometer was dry throughout the 2024 reporting period.

Similarly to LMEW-7, although leachate piezometer LMEW-8 was dry from 2016 through the 2024 reporting period, three measurements were above the apparent level of damage during this reporting period. Measurements in January, May, and June 2025 had measured thicknesses of 14.5 feet, 15.0 feet, and 14.7 feet, respectively. Measurements from July - December 2025 were below the apparent level of damage.

The leachate thickness in leachate piezometer LMEW-9A remained stable within the historical range during this reporting period. The measured thicknesses in LMEW-9A during this reporting period ranged from 7.77 feet to 9.47 feet.

1.2.2 Clay Lined Area

Measured leachate thicknesses in leachate piezometer LMW-10 were below the compliance limit throughout his reporting period. Leachate piezometer LMW-11R was dry throughout the reporting period.

1.2.3 Subtitle D Area

Leachate piezometers LMW-12 and LMW-13 were dry and below the compliance limit throughout this reporting period, except for one measurement above the compliance limit in LMW-13 in February 2025. As the compliance limit exceedance was a single measurement, no action is recommended at this time.

1.3 Approved Changes to System

The leachate pump had an electric motor replaced in August 2025.

1.4 Proposed Changes to System

There are no proposed changes to the leachate control system at this time. SCS recommends continuing to perform the following items to maintain the effectiveness of the leachate control system:

- Continue monthly monitoring of the leachate levels as required in the facility permit.
- Maintain good vegetation over the final cover and intermediate cover over the inactive areas.

- Continue operation and maintenance of the leachate control system in accordance with the approved Leachate Control System Plan.
- Continue recording the volume of leachate disposed of at the City of Ottumwa POTW. 306,618 gallons were transported to the POTW for disposal during this reporting period. Leachate testing analytical results are included in Attachment C.
- Continue recording the volume of leachate recirculated. 760,000 gallons were recirculated during this reporting period.
- Continue cleaning the leachate collection system once every three years, or more frequently if leachate head or the volume of leachate collected indicates cleaning is necessary. Cleaning was performed in June 2022 and will be performed next in 2026.



Attachment A
Leachate Management Summary

Leachate Management Summary
2025 Annual Water Quality Report
Mahaska County Sanitary Landfill - Binns & Stevens Site
Permit No. 62-SDP-01-74P

	Unlined Cells - Column Thickness (ft)			Lined Cells - Column Thickness (ft)				Volume Recirculated (gal)	Hauled to Ottumwa POTW (gal)	Precipitation (in)
Month	LMEW-7	LMEW-8	LMEW-9A	LMW-10	LMW-11R	LMW-12	LMW-13			
January 2025	<20.6	14.50	8.37	Dry	Dry	Dry	Dry	760,000	306,618	0.65
February 2025	<20.6	<13.4	8.27	Dry	Dry	Dry	1.53			0.05
March 2025	<20.6	<13.4	8.77	Dry	Dry	Dry	Dry			1.04
April 2025	22.00	<13.4	9.27	Dry	Dry	Dry	Dry			1.83
May 2025	<20.6	15.00	9.27	Dry	Dry	Dry	Dry			0.10
June 2025	<20.6	14.70	9.47	Dry	Dry	Dry	Dry			0.12
July 2025	<20.6	<13.4	9.37	Dry	Dry	Dry	Dry			4.34
August 2025	<20.6	<13.4	8.67	Dry	Dry	Dry	Dry			1.60
September 2025	<20.6	<13.4	8.77	Dry	Dry	Dry	Dry			1.21
October 2025	<20.6	<13.4	7.77	0.75	Dry	Dry	Dry			0.93
November 2025	<20.6	<13.4	8.77	Dry	Dry	Dry	Dry			0.51
December 2025	<20.6	<13.4	7.47	0.75	Dry	Dry	Dry			0.56
Reporting Period Total Gallons								760,000	306,618	12.94

Comments:

Leachate Quality Testing Results: Leachate testing laboratory results are included in Attachment C.

1. Reporting Period: January-December 2025
2. Recommended Changes to Leachate Collection System: None.
3. Maintenance Performed on Leachate Collection System: See narrative.
4. Last Date of Cleaning and Inspection: June 2022.
5. Date for Next Cleaning and Inspection: Leachate line cleaning and inspection will be performed next in 2026.
6. Volume of Leachate Recirculated: 760,000 gallons.
7. Volume of Leachate Treated On-Site: None.
8. Volume of Leachate Treated Off-Site: 306,618 gallons.
9. Precipitation data from https://mesonet.agron.iastate.edu/ASOS/reports/mon_prec.php?network=IA_ASOS&year=2025.

Attachment B

Historical Leachate Column Thickness Tables and Graphs

Leachate Column Thickness
Binns and Stevens MSWLF Unit
Mahaska County Sanitary Landfill

Date	LMEW-7	LMEW-8	LMEW-9A	LMW-10	LMW-11R	LMW-12	LMW-13
January 2016	0.00	0.00	NI	0.00	0.00	0.00	NI
February 2016	0.00	0.00	NI	0.00	0.00	0.87	NI
March 2016	0.00	0.00	NI	0.00	0.00	0.86	NI
April 2016	0.00	0.00	NI	0.00	0.00	0.00	NI
May 2016	0.00	0.00	NI	0.00	0.00	0.88	NI
June 2016	0.00	0.00	NI	0.00	0.00	0.70	NI
July 2016	0.00	0.00	NI	0.00	0.00	1.08	NI
August 2016	0.00	0.00	NI	0.00	0.00	0.91	NI
September 2016	0.00	0.00	NI	0.00	0.00	0.82	NI
October 2016	0.00	0.00	NI	0.00	0.00	0.92	NI
November 2016	0.00	0.00	NI	0.00	0.00	NA	NI
December 2016	0.00	0.00	NI	0.00	0.00	NA	NI
January 2017	0.00	0.00	NI	0.00	0.00	NA	NI
February 2017	0.00	0.00	NI	0.00	0.00	NA	NI
March 2017	0.00	0.00	NI	0.00	0.00	NA	NI
April 2017	0.00	0.00	NI	0.00	0.00	NA	NI
May 2017	0.00	0.00	NI	0.00	0.00	0.98	NI
June 2017	0.00	0.00	NI	0.00	0.00	0.30	NI
July 2017	0.00	0.00	NI	0.00	0.00	0.00	NI
August 2017	0.00	0.00	NI	0.00	0.00	0.00	NI
September 2017	0.00	0.00	NI	0.00	0.00	0.12	NI
October 2017	0.00	0.00	NI	0.00	0.00	0.99	NI
November 2017	0.00	0.00	NI	0.00	0.00	0.78	NI
December 2017	0.00	0.00	NI	0.00	0.00	0.55	NI
January 2018	0.00	0.00	NI	0.00	0.00	0.76	NI
February 2018	0.00	0.00	NI	0.00	0.00	0.93	NI
March 2018	0.00	0.00	NI	0.00	0.00	1.18	NI
April 2018	0.00	0.00	NI	2.26	0.00	5.15	NI
May 2018	0.00	0.00	NI	0.00	0.00	5.36	NI
June 2018	0.00	0.00	NI	3.21	0.00	4.30	NI
July 2018	0.00	0.00	NI	3.35	1.67	3.69	NI
August 2018	0.00	0.00	NI	3.40	1.24	3.28	NI
September 2018	0.00	0.00	NI	3.49	4.18	4.85	NI
October 2018	0.00	0.00	NI	4.33	3.34	4.38	NI
November 2018	0.00	0.00	NI	4.22	3.59	4.09	NI
December 2018	0.00	0.00	NI	4.62	4.40	0.00	NI
January 2019	0.00	0.00	NI	0.55	0.00	1.95	NI
February 2019	0.00	0.00	NI	0.61	0.00	2.05	NI
March 2019	0.00	0.00	NI	0.62	0.00	1.85	NI
April 2019	0.00	0.00	NI	0.50	0.00	1.03	NI
May 2019	0.00	0.00	NI	0.53	0.00	NA	NI
June 2019	0.00	NA	NI	0.73	0.00	1.40	NI
July 2019	0.00	0.00	NI	1.26	0.00	1.35	NI
August 2019	0.00	0.00	NI	1.19	0.00	1.40	NI
September 2019	0.00	0.00	NI	0.53	0.00	1.05	NI
October 2019	0.00	0.00	NI	0.49	0.00	0.90	NI
November 2019	0.00	0.00	NI	0.46	0.00	0.70	NI
December 2019	0.00	0.00	NI	0.45	0.00	0.70	NI
January 2020	0.00	0.00	NI	0.47	0.00	1.00	NI
February 2020	0.00	0.00	NI	0.30	0.00	0.99	NI
March 2020	0.00	0.00	NI	0.56	0.00	1.40	NI
April 2020	0.00	0.00	NI	0.57	0.00	1.12	NI
May 2020	0.00	0.00	NI	0.45	0.00	0.84	NI
June 2020	0.00	0.00	NI	0.00	0.00	0.90	NI
July 2020	0.00	0.00	NI	0.39	0.00	0.85	NI
August 2020	0.00	0.00	NI	0.00	0.00	0.61	NI
September 2020	0.00	0.00	7.72	0.36	0.00	0.79	NI
October 2020	0.00	0.00	8.07	0.00	0.00	1.40	NI
November 2020	0.00	0.00	8.15	0.37	0.00	1.71	NI
December 2020	0.00	0.00	7.39	0.52	0.00	2.05	NI

Leachate Column Thickness
Binns and Stevens MSWLF Unit
Mahaska County Sanitary Landfill

Date	LMEW-7	LMEW-8	LMEW-9A	LMW-10	LMW-11R	LMW-12	LMW-13
January 2021	0.00	0.00	5.96	0.48	0.00	2.09	NI
February 2021	0.00	0.00	6.73	0.84	0.00	2.93	NI
March 2021	<20.6	<13.4	6.62	0.00	0.00	0.96	NI
April 2021	<20.6	<13.4	6.41	0.94	0.00	0.76	NI
May 2021	<20.6	<13.4	6.99	1.08	0.00	0.87	NI
June 2021	<20.6	<13.4	7.25	1.58	0.00	0.88	NI
July 2021	<20.6	<13.4	7.45	1.76	0.00	0.94	NI
August 2021	<20.6	<13.4	6.87	1.97	0.00	0.96	NI
September 2021	<20.6	<13.4	7.62	1.94	0.00	0.90	NI
October 2021	<20.6	<13.4	7.27	2.34	0.00	1.06	NI
November 2021	<20.6	<13.4	7.66	2.51	0.00	1.09	NI
December 2021	<20.6	<13.4	6.40	0.95	0.00	Dry	NI
January 2022	<20.6	<13.4	10.48	1.39	0.00	1.01	NI
February 2022	<20.6	<13.4	7.46	1.21	0.00	1.03	NI
March 2022	<20.6	<13.4	8.42	1.25	0.00	1.22	NI
April 2022	<20.6	<13.4	8.46	1.27	0.00	1.49	NI
May 2022	<20.6	<13.4	7.95	1.04	0.00	1.03	NI
June 2022	<20.6	<13.4	8.19	0.00	0.00	0.21	NI
July 2022	<20.6	<13.4	8.16	0.00	0.00	0.00	NI
August 2022	<20.6	<13.4	14.17	0.00	0.00	0.00	NI
September 2022	<20.6	<13.4	8.69	0.90	0.00	0.00	NI
October 2022	<20.6	<13.4	14.13	0.00	0.00	0.00	NI
November 2022	<20.6	<13.4	6.72	0.95	0.00	0.80	NI
December 2022	<20.6	<13.4	6.40	0.95	0.00	0.00	NI
January 2023	<20.6	<13.4	10.48	1.39	0.00	<0.1	NI
February 2023	<20.6	<13.4	7.46	1.21	0.00	0.00	NI
March 2023	<20.6	<13.4	8.42	1.25	0.00	<0.1	NI
April 2023	<20.6	<13.4	8.46	1.27	0.00	<0.1	NI
May 2023	<20.6	<13.4	7.95	1.04	0.00	0.00	NI
June 2023	<20.6	<13.4	8.19	0.00	0.00	0.00	NI
July 2023	<20.6	<13.4	8.16	0.00	0.00	0.00	NI
August 2023	<20.6	<13.4	14.17	0.00	0.00	0.00	NI
September 2023	<20.6	<13.4	8.69	0.90	0.00	0.00	NI
October 2023	<20.6	<13.4	14.13	0.00	0.00	0.00	NI
November 2023	24.66	<13.4	6.72	0.95	0.00	0.00	0.00
December 2023	<20.6	<13.4	6.72	0.95	0.00	0.00	0.00
January 2024	<20.6	<13.4	5.30	0.63	Dry	Dry	Dry
February 2024	<20.6	<13.4	NA*	NA*	Dry	Dry	NA*
March 2024	<20.6	<13.4	7.23	0.60	Dry	Dry	Dry
April 2024	<20.6	<13.4	8.07	0.82	Dry	Dry	Dry
May 2024	<20.6	<13.4	8.65	0.75	Dry	Dry	Dry
June 2024	<20.6	<13.4	8.59	Dry	Dry	Dry	Dry
July 2024	<20.6	<13.4	10.27	Dry	Dry	Dry	Dry
August 2024	<20.6	<13.4	9.27	Dry	Dry	Dry	Dry
September 2024	<20.6	<13.4	8.27	Dry	Dry	Dry	Dry
October 2024	<20.6	<13.4	11.67	1.90	Dry	Dry	Dry
November 2024	<20.6	<13.4	Dry	Dry	Dry	Dry	Dry
December 2024	<20.6	<13.4	7.27	Dry	Dry	Dry	Dry
January 2025	<20.6	14.50	8.37	Dry	Dry	Dry	Dry
February 2025	<20.6	<13.4	8.27	Dry	Dry	Dry	1.53
March 2025	<20.6	<13.4	8.77	Dry	Dry	Dry	Dry
April 2025	22.00	<13.4	9.27	Dry	Dry	Dry	Dry
May 2025	<20.6	15.00	9.27	Dry	Dry	Dry	Dry
June 2025	<20.6	14.70	9.47	Dry	Dry	Dry	Dry
July 2025	<20.6	<13.4	9.37	Dry	Dry	Dry	Dry
August 2025	<20.6	<13.4	8.67	Dry	Dry	Dry	Dry
September 2025	<20.6	<13.4	8.77	Dry	Dry	Dry	Dry
October 2025	<20.6	<13.4	7.77	0.75	Dry	Dry	Dry
November 2025	<20.6	<13.4	8.77	Dry	Dry	Dry	Dry
December 2025	<20.6	<13.4	7.47	0.75	Dry	Dry	Dry

NA* - Not Available. The pumps were off during the February 2024 measurement so the levels were considered not representative.

NI - Not Installed.

NA - Not Available.

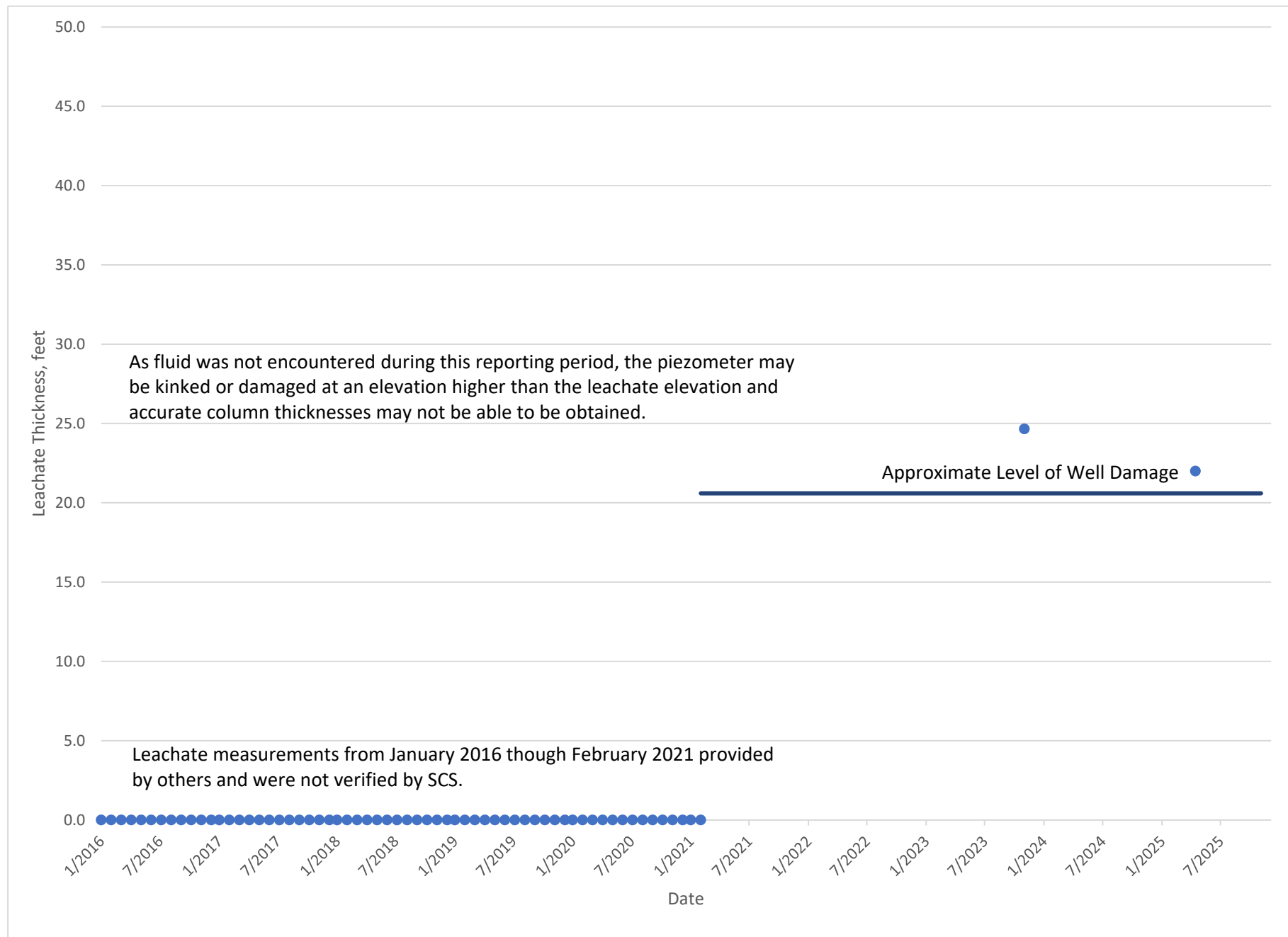
Data from January 2016 - February 2021 provided by historical documentation.

Data from March 2021 through February 2023 measured by Evora Consulting.

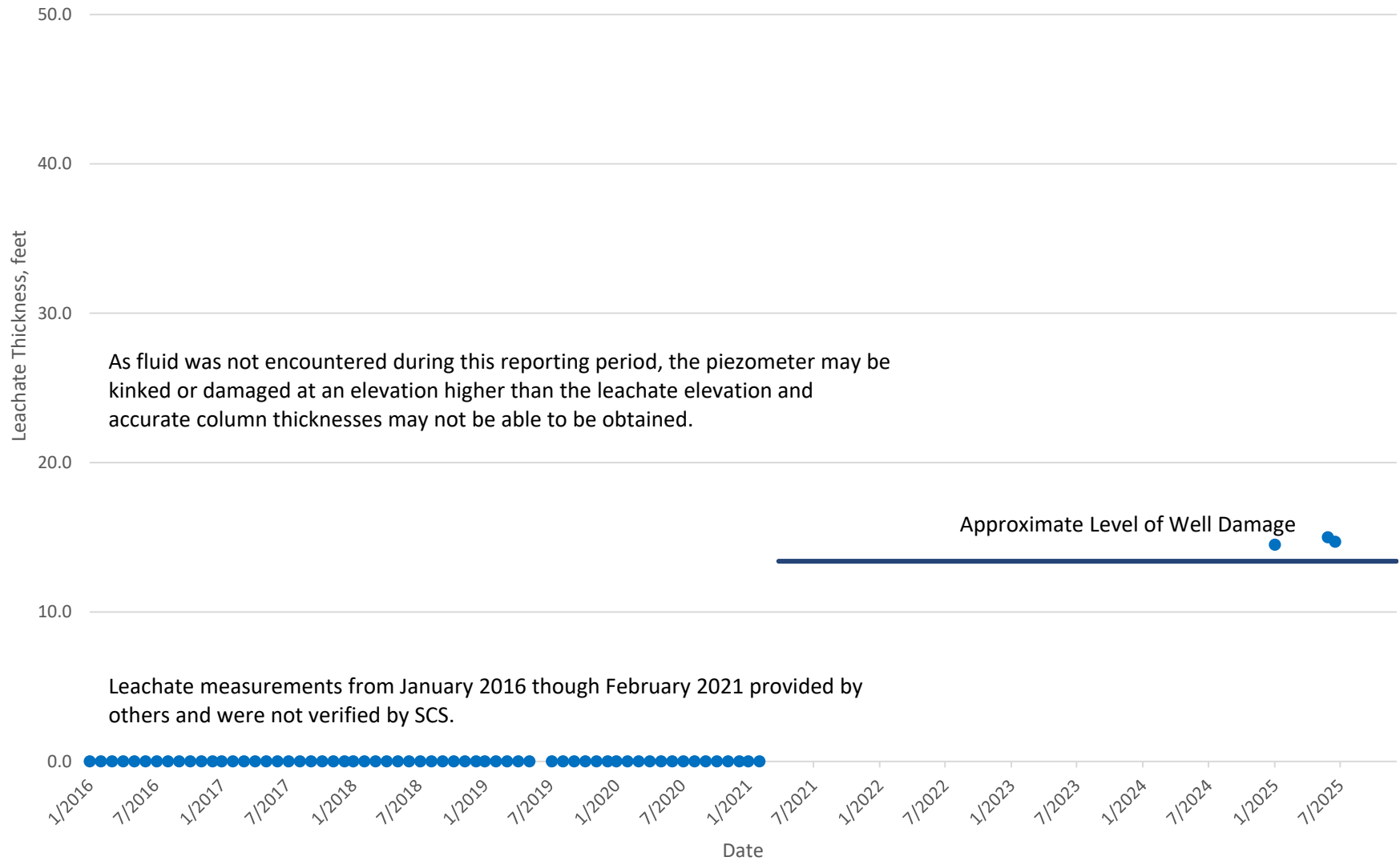
Data from March 2023 through June 2024 measured by SCS Engineers.

Data from July 2024 through December 2025 measured by facility staff.

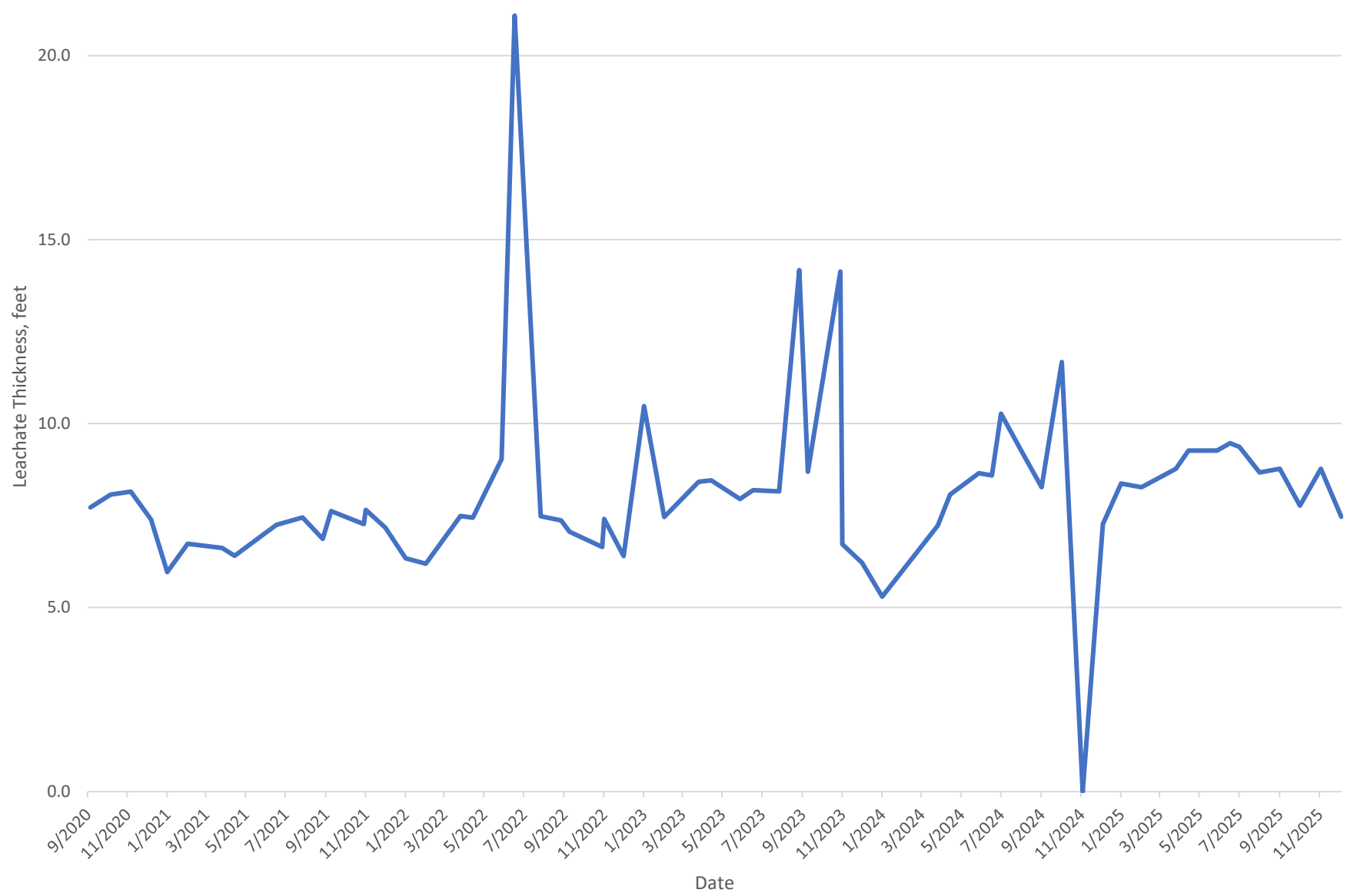
LMEW-7 and LMEW-8 appear to be damaged. See Section 1.3.1 of the narrative.



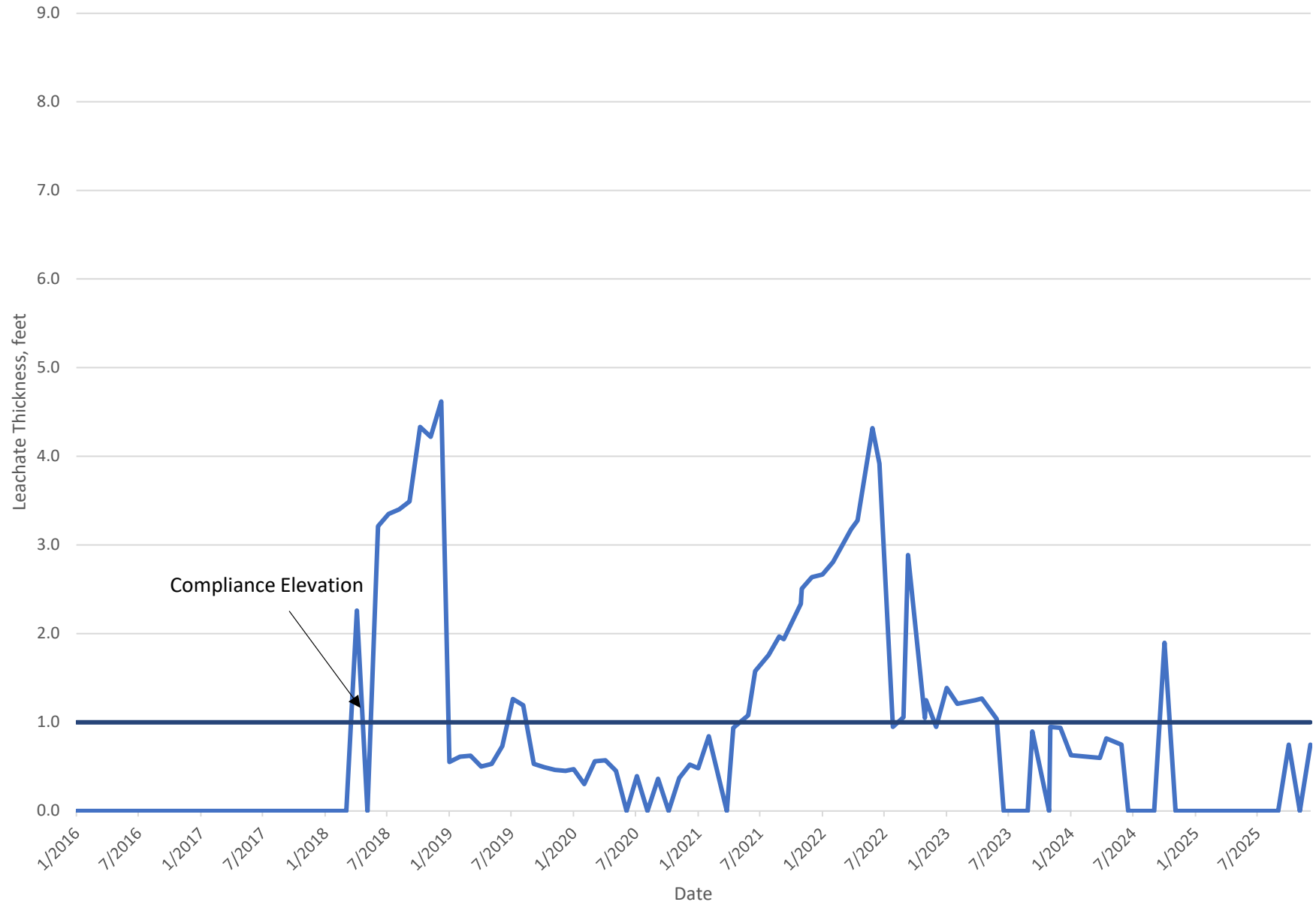
LMEW-8



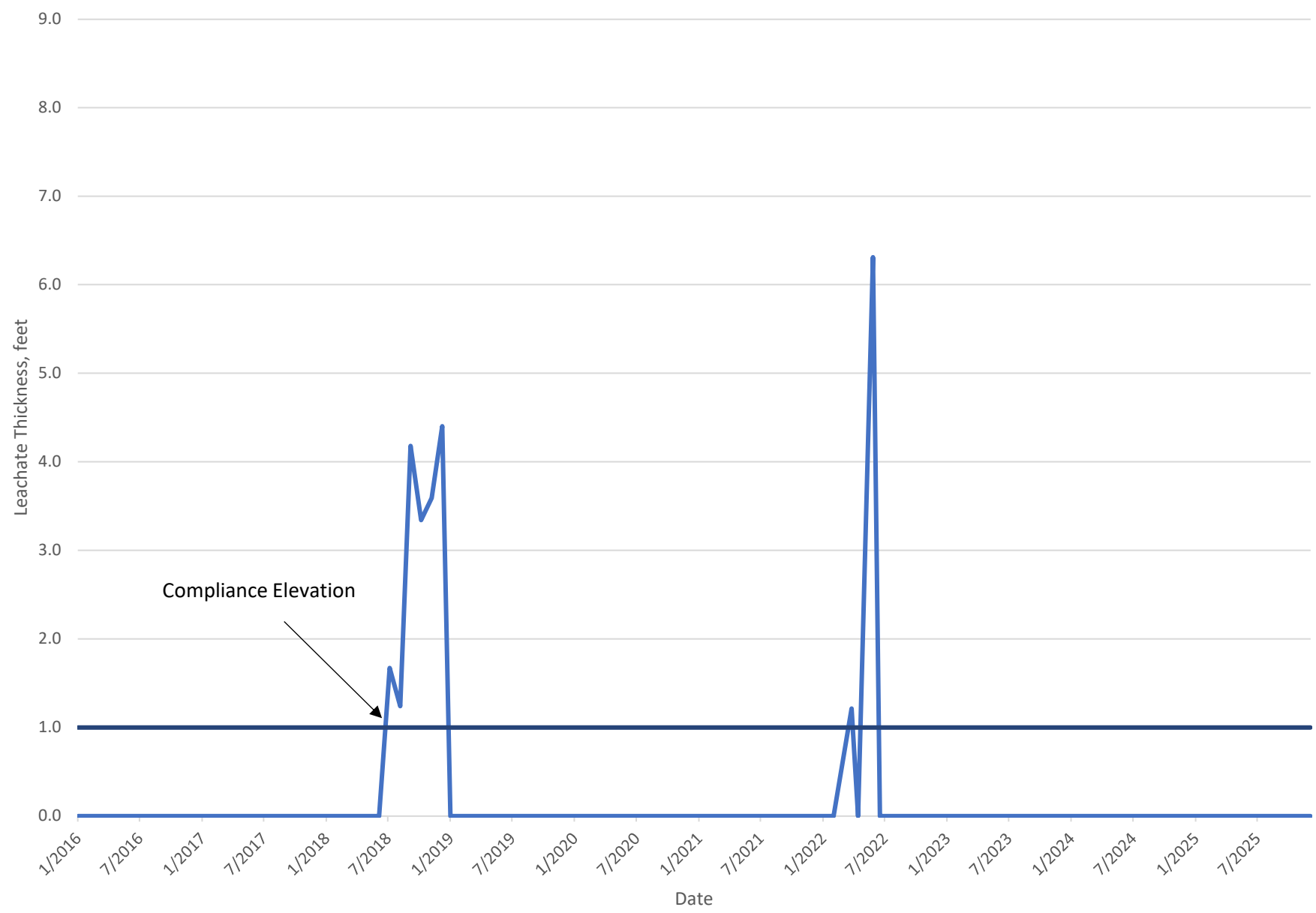
LMEW-9A



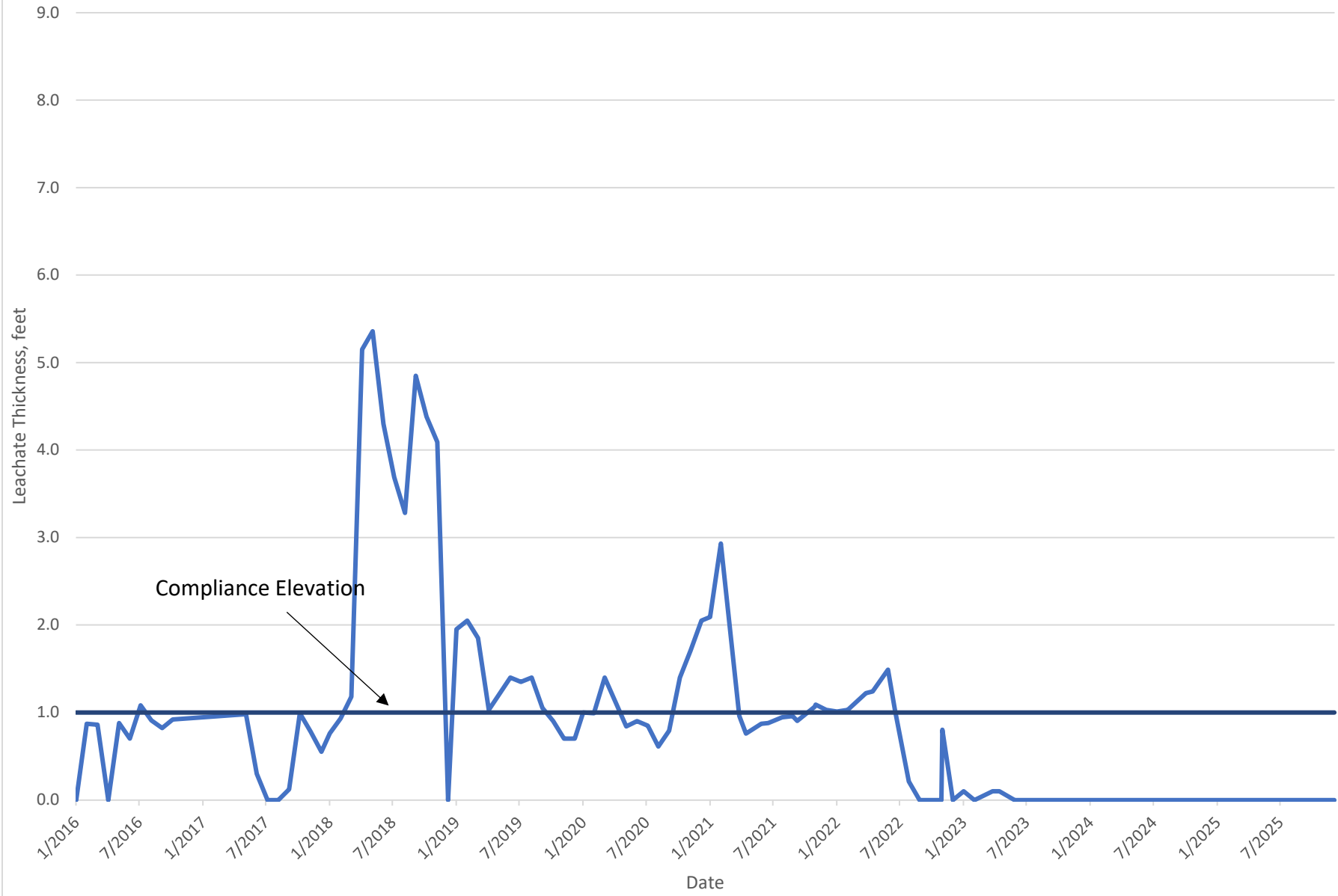
LMW-10



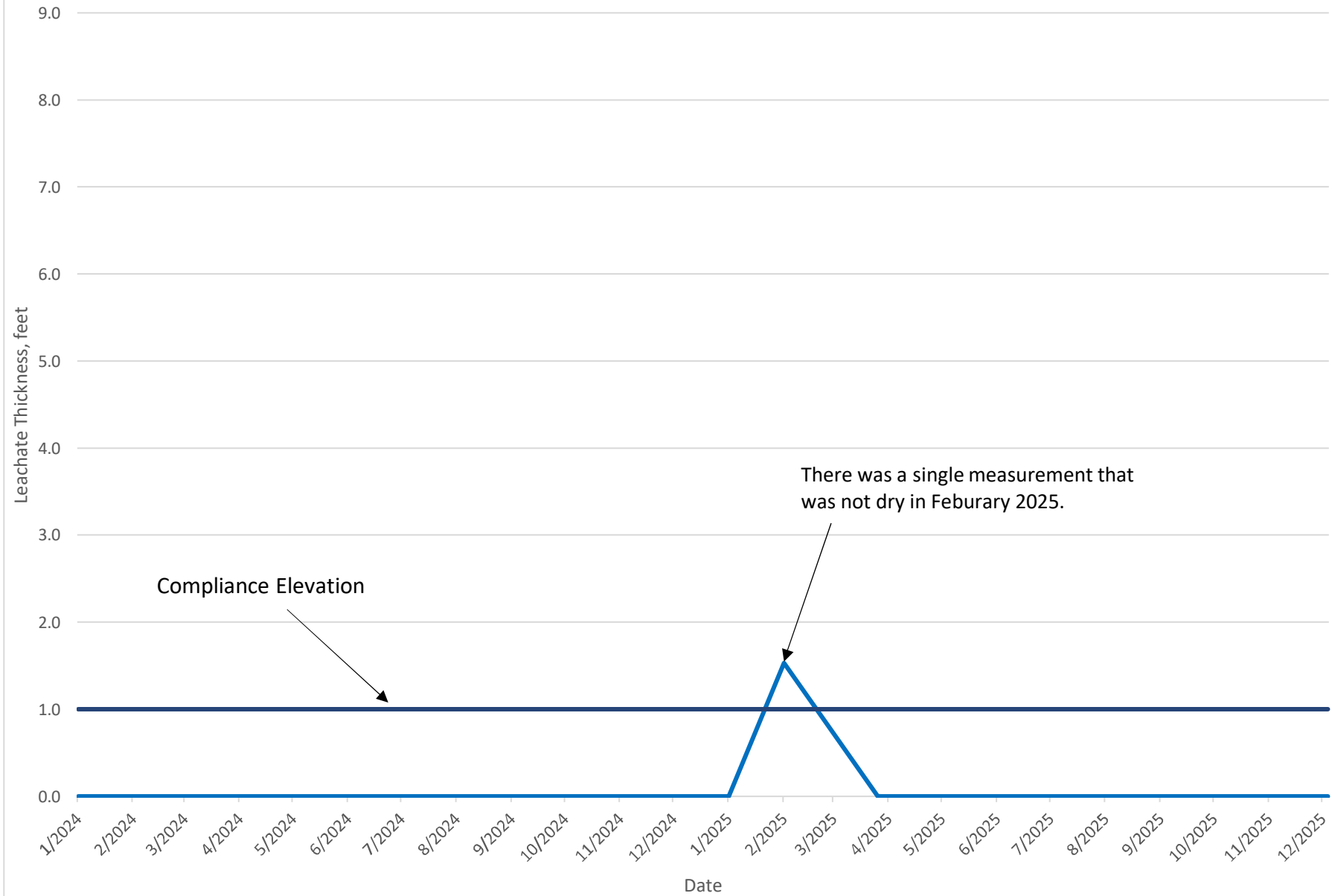
LMW-11R



LMW-12



LMW-13



Attachment C

Leachate Sampling Laboratory Analytical Data Sheets

City of Ottumwa Water Pollution Control Facility, Iowa Laboratory #257

2222 S Emma St, Ottumwa, IA 52501

Phone: (641) 683-0641 Fax: (641) 683-0647

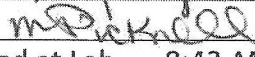
Heather Zuercher, Laboratory Supervisor

Analytical Report and Custody

Industry: Mahaska County Sanitary Landfill, Permit #013

Sample Location: Tanker Truck at WPCF with Leachate Matrix: Wastewater

Sample Date	1/7/2026	Sample Type	Grab
Sampler Start Time	8:43 AM	Sampler Finish Time	NA

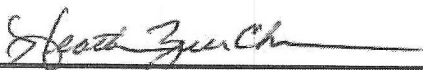
Sample Collector:	Troy Fadiga	Signature	
Lab Sample Received By:	Melissa Pickrell	Signature	
Date Received at Lab:	1/7/2026	Time Received at Lab	8:43 AM

Requested Analyses

Parameter	Method	Results	LOQ		Initials/Date/Time
* BOD-5	SM 5210 B-2016	98	2	mg/L	MP 1/14/26 1046
TSS	USGS I-3765-85	118	1	mg/L	MP 1/8/26 1111
TKN	Eurofins (Lab #007) EPA 351.2	672	RL 250	mg/L	ENB7 1/15/26 1311
pH	SM 4500 H+B-2011	7.6			TRF 1/7/2026 0852 hrs

Comments: See attached report for Oil & Grease and metals from Eurofins Cedar Falls, IA Lab #007.

* Sample volumes used to set up the BOD on 1/8/26 did not use enough oxygen. Sample was set up again on 1/14/26 past the 48 hr holding time to get a usable result.



Authorized for Release by Heather Zuercher, Lab Supervisor

Client Sample Results

Client: Ottumwa WWTP
Project/Site: Analytical Testing

Job ID: 310-323754-1

Client Sample ID: Mahaska Landfill Leachate

Lab Sample ID: 310-323754-1

Date Collected: 01/07/26 08:43

Matrix: Water

Date Received: 01/09/26 08:40

Method: EPA 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	<0.100		0.100		mg/L		01/14/26 08:34	01/19/26 12:58	5
Copper	<0.100		0.100		mg/L		01/14/26 08:34	01/19/26 12:58	5
Selenium	<0.500		0.500		mg/L		01/14/26 08:34	01/19/26 12:58	5
Zinc	<0.200		0.200		mg/L		01/14/26 08:34	01/19/26 12:58	5

Method: EPA 245.2 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		01/15/26 12:00	01/16/26 09:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total (EPA 335.4)	<0.0100		0.0100		mg/L		01/13/26 10:54	01/16/26 20:34	1
Nitrogen, Kjeldahl (EPA 351.2)	672		250		mg/L		01/15/26 05:15	01/15/26 13:11	10

Eurofins Cedar Falls

City of Ottumwa Water Pollution Control Facility, Iowa Laboratory #257

2222 S Emma St, Ottumwa, IA 52501

Phone: (641) 683-0641 Fax: (641) 683-0647

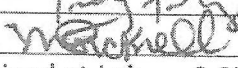
Heather Zuercher, Acting Laboratory Supervisor

Analytical Report and Custody

Industry: Mahaska County Sanitary Landfill, Permit #013

Sample Location: Tanker Truck at WPCF with Leachate

Sample Date	9/24/2025	Sample Type	Grab
Sampler Start Time	9:35 AM	Sampler Finish Time	NA

Sample Collector:	Troy Fadiga	Signature	
Lab Sample Received By:	Melissa Pickrell	Signature	
Date Received at Lab:	9/24/2025	Time Received at Lab	9:37 AM

Requested Analyses

Parameter	Method	Results	Initials/Date
BOD-5	SM 5210 B-2011	968	mg/L MP 9/24/25
TSS	USGS I-3765-85	172	mg/L HZ 9/24/25
TKN	EPA 351.2	381	mg/L ZJx4 9/29/25
pH	SM 4500 H+B	7.6	TRF 9/24/2025

Comments: See attached report for oil & grease and metals.

Client Sample Results

Client: Ottumwa WWTP
Project/Site: Analytical Testing

Job ID: 310-316507-1

Client Sample ID: Mahaska Landfill Leachate

Lab Sample ID: 310-316507-1

Date Collected: 09/24/25 09:35

Matrix: Water

Date Received: 09/25/25 08:45

Method: EPA 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.160		0.160		mg/L		10/06/25 09:00	10/07/25 11:46	2
Cadmium	<0.0400		0.0400		mg/L		10/06/25 09:00	10/07/25 11:46	2
Chromium	<0.0400		0.0400		mg/L		10/06/25 09:00	10/07/25 11:46	2
Copper	<0.0400		0.0400		mg/L		10/06/25 09:00	10/07/25 11:46	2
Lead	<0.200		0.200		mg/L		10/06/25 09:00	10/07/25 11:46	2
Molybdenum	<0.100		0.100		mg/L		10/06/25 09:00	10/07/25 11:46	2
Nickel	<0.100		0.100		mg/L		10/06/25 09:00	10/07/25 11:46	2
Selenium	<0.200		0.200		mg/L		10/06/25 09:00	10/07/25 11:46	2
Silver	<0.0400	^+	0.0400		mg/L		10/06/25 09:00	10/07/25 11:46	2
Zinc	<0.0800		0.0800		mg/L		10/06/25 09:00	10/07/25 11:46	2

Method: EPA 245.2 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		10/03/25 13:10	10/06/25 11:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease) (1664A)	<5.7		5.7		mg/L		10/03/25 14:19	10/03/25 14:19	1
Nitrogen, Kjeldahl (EPA 351.2)	381		50.0		mg/L		09/29/25 05:31	09/29/25 21:56	10

Eurofins Cedar Falls

City of Ottumwa Water Pollution Control Facility, Iowa Laboratory #257

2222 S Emma St, Ottumwa, IA 52501

Phone: (641) 683-0641 Fax: (641) 683-0647

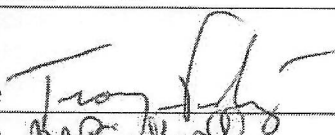
Heather Zuercher, Acting Laboratory Supervisor

Analytical Report and Custody

Industry: Mahaska County Sanitary Landfill, Permit #013

Sample Location: Tanker Truck at WPCF with Leachate

Sample Date	7/30/2025	Sample Type	Grab
Sampler Start Time	10:45 AM	Sampler Finish Time	NA

Sample Collector:	Troy Fadiga	Signature	
Lab Sample Received By:	Melissa Pickrell	Signature	
Date Received at Lab:	7/30/2025	Time Received at Lab	10:45 AM

Requested Analyses

Parameter	Method	Results	Initials/Date
BOD-5	SM 5210 B-2011	704	mg/L MP 7/31/25
TSS	USGS I-3765-85	193	mg/L MP 7/31/25
TKN	EPA 351.2	153	mg/L ZJX4 8/5/25
pH	SM 4500 H+B	7.2	TRF 7/30/2025

Comments: See attached report for oil & grease and metals.

Client Sample Results

Client: Ottumwa WWTP
Project/Site: Analytical Testing

Job ID: 310-31236

Client Sample ID: Mahaska Landfill Leachate

Lab Sample ID: 310-312364-2

Date Collected: 07/30/25 10:43

Matrix: Water

Date Received: 08/01/25 08:55

Method: EPA 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	0.0308		0.0200		mg/L		08/07/25 09:15	08/12/25 13:01	1
Copper	<0.0200		0.0200		mg/L		08/07/25 09:15	08/12/25 13:01	1
Selenium	<0.100		0.100		mg/L		08/07/25 09:15	08/12/25 13:01	1
Zinc	0.0570		0.0400		mg/L		08/07/25 09:15	08/12/25 13:01	1
Arsenic	<0.0800		0.0800		mg/L		08/07/25 09:15	08/12/25 13:01	1
Cadmium	<0.0200		0.0200		mg/L		08/07/25 09:15	08/12/25 13:01	1
Molybdenum	<0.0500		0.0500		mg/L		08/07/25 09:15	08/12/25 13:01	1
Nickel	<0.0500		0.0500		mg/L		08/07/25 09:15	08/12/25 13:01	1
Silver	<0.0200		0.0200		mg/L		08/07/25 09:15	08/12/25 13:01	1
Lead	<0.100		0.100		mg/L		08/07/25 09:15	08/12/25 13:01	1

Method: EPA 245.2 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200		mg/L		08/11/25 16:15	08/12/25 10:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease) (1664A)	<5.1		5.1		mg/L		08/04/25 22:47	08/04/25 22:47	1
Nitrogen, Kjeldahl (EPA 351.2)	153		50.0		mg/L		08/05/25 05:34	08/05/25 18:50	10

Eurofins Cedar Falls

Appendix F
2025 Landfill Gas Annual Report

Table 13
Gas Monitoring Summary
2025 Gas Monitoring Report
Mahaska County Sanitary Landfill - Binns & Stevens Site
Permit No. 62-SDP-01-74P

Monitoring Points				3/27/2025			5/21/2025			9/11/2025			10/30/2025		
No.	Name	Type	Description	% LEL	% methane	S (Y/N)	% LEL	% methane	S (Y/N)	% LEL	% methane	S (Y/N)	% LEL	% methane	S (Y/N)
#1	SG-1	Subsurface	East site boundary	0		N	0		N	0		N	2		N
#2	SG-2	Subsurface	North site boundary	0		N	>100	7	N	0		N	0		N
#3	SG-3	Subsurface	North site boundary	>100	47	N	>100	54	N	>100	60	N	>100	50	N
#4	SG-4	Subsurface	West site boundary	0		N	2		N	0		N	0		N
#5	SG-5R	Subsurface	West site boundary	0		N	1		N	0		N	50		N
#6	SG-6R	Subsurface	South of waste boundary	0		N	1		N	0		N	0		N
#7	SG-7R	Subsurface	South of waste boundary	0		N	1		N	0		N	0		N
#8	SG-8	Subsurface	East site boundary	0		N	1		N	0		N	0		N
#9	UW-9R	Subsurface	Northwest site boundary	>100	54	N	50	56	N	>100	60	N	>100	57	N
#10	UW-9RA	Subsurface	Northwest site boundary	5	0	N	60		N	>100	67	N	>100	62	N
#11	UW-10	Subsurface	North site boundary	22	54	N	3	39	N	0		N	7		N
#12	UW-10A	Subsurface	North site boundary	0		N	1		N	0		N	>100	6	N
#13	DW-8	Subsurface	West site boundary	0		N	1		N	0		N	0		N
#14	VP-1	Trench Vent	East site boundary	0			1			93			1		
#15	VP-2	Trench Vent	North of waste boundary	0			0			61			2		
#16	VP-3	Trench Vent	North of waste boundary	45			>100	19		>100	24		>100	8	
#17	VP-4	Trench Vent	North of waste boundary	>100	54		>100	53		NM			>100	26	
#18	VP-5	Trench Vent	North of waste boundary	12			1			>100	35		>100	39	
#19	VP-6	Trench Vent	North of waste boundary	>100	44		>100	30		>100	44		>100	22	
#20	VP-7	Trench Vent	North of waste boundary	>100	50		>100	72		>100	47		>100	13	
#21	VP-8	Trench Vent	West site boundary	>100	12		56			36			0		
#22	Scale House Basement	Indoor	Inside scalehouse basement	0			0			0			0		
#23	Scale Pit	Outdoor	Near scale pit	0			0			0			0		
#24	Shop	Indoor	Inside shop building	0			0			0			0		
#25	GV-1	Subsurface	South of SG-3	>100	21	N	90	0	N	>100*	50	N	>100	64	N
#26	GV-2	Subsurface	West of SG-1	>100	19	N	1		N	16		N	>100	53	N

Comments:

1) S(Y/N) - Was screen submerged, yes or no or blank is non-applicable.

2) Landfill gas control at the Binns & Stevens MSWLF unit consists of a passive landfill gas trench constructed in April 2015 located on the northern boundary of the site. Gas laterals associated with the trench were installed in August-September 2021.

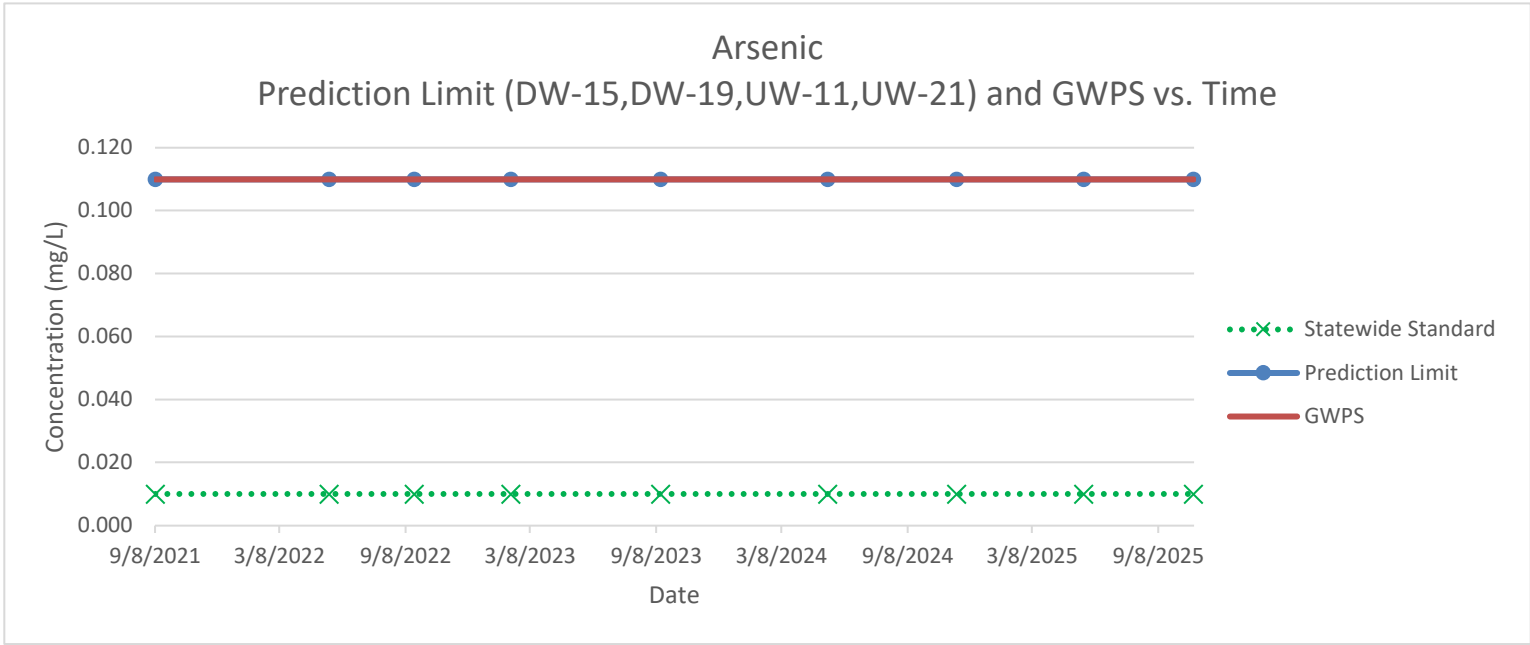
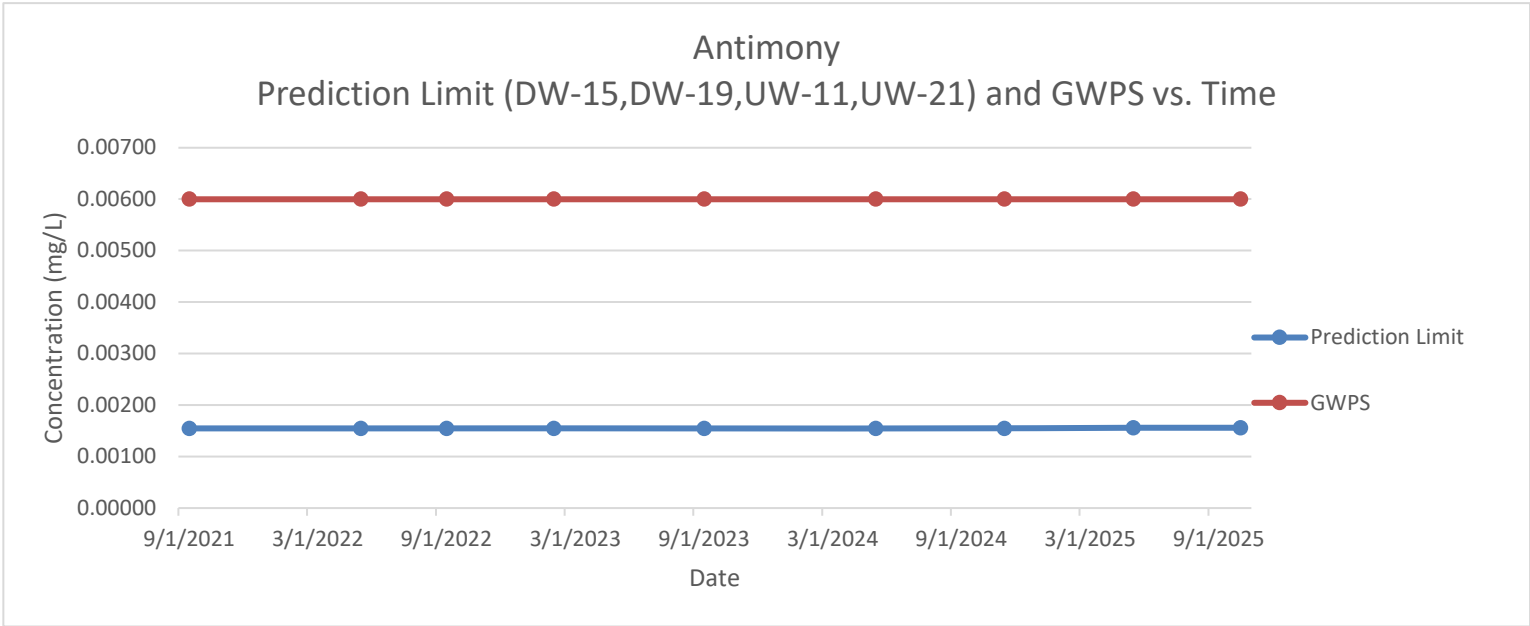
NM - Not measured due to field technician error.

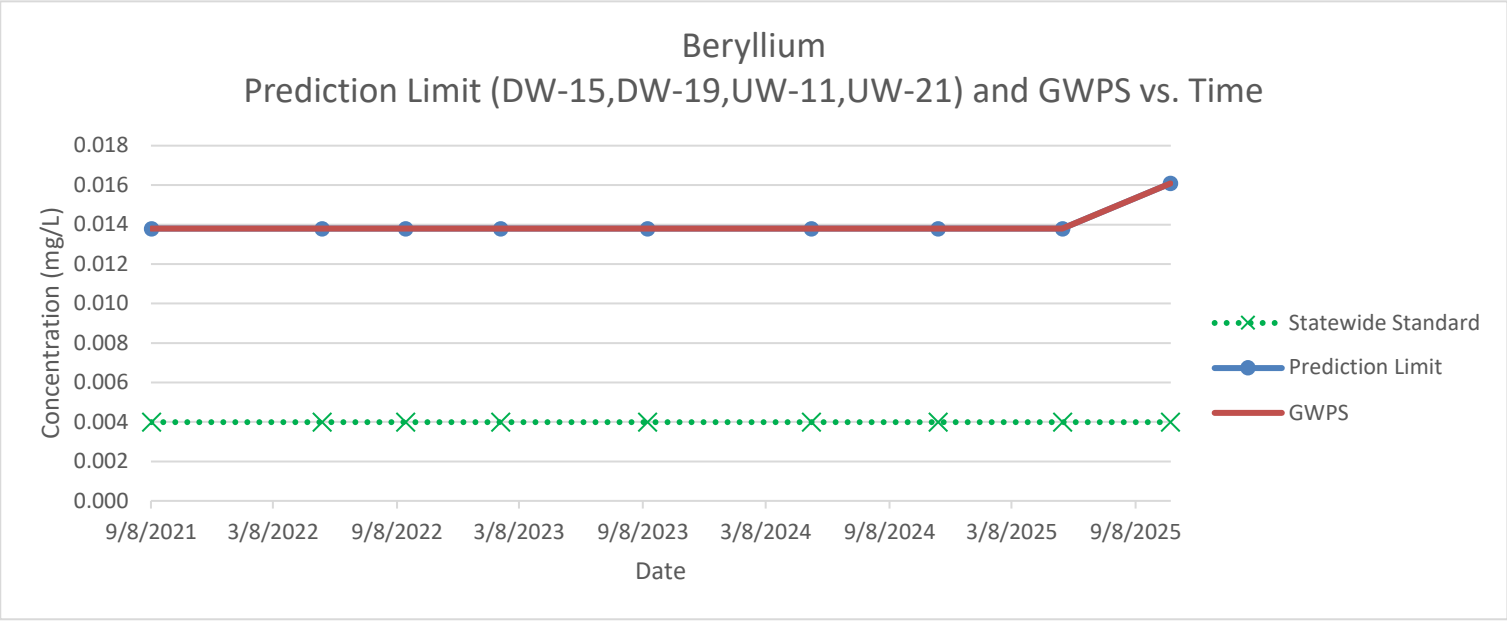
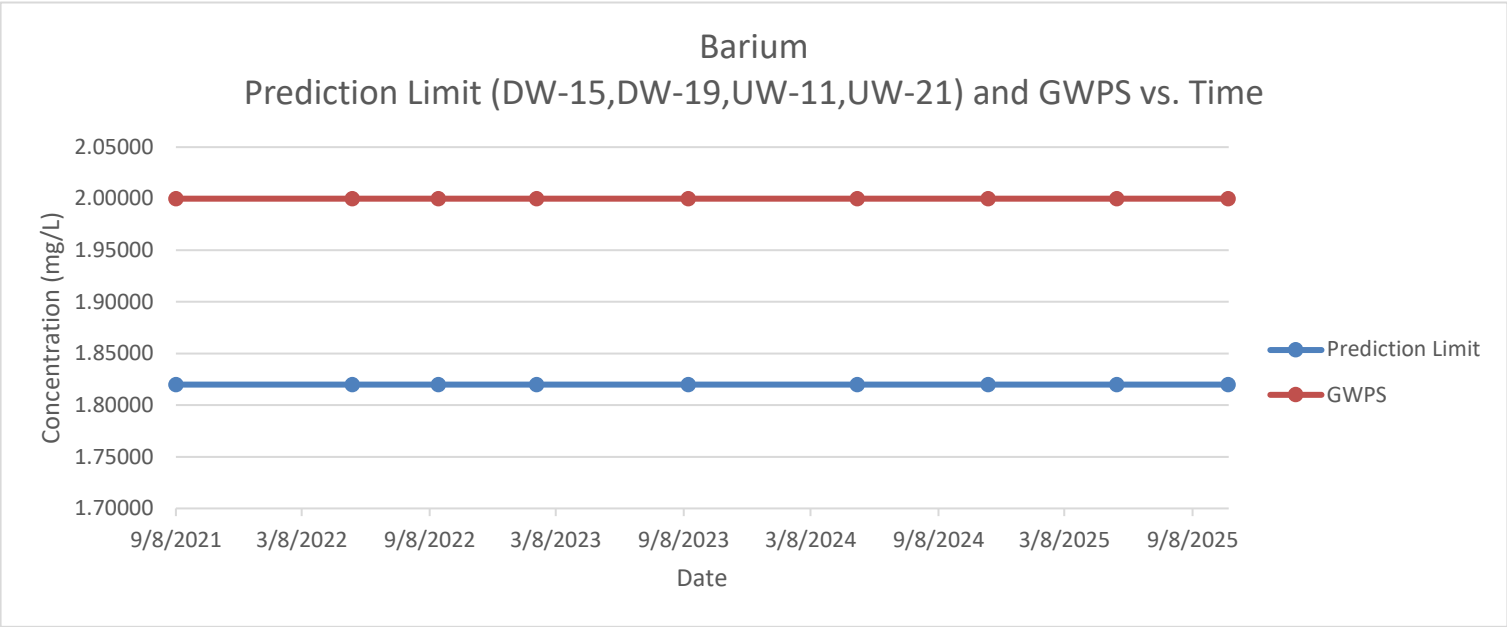
* - Ambient air at fenceline downwind of GV-1 was 1% LEL.

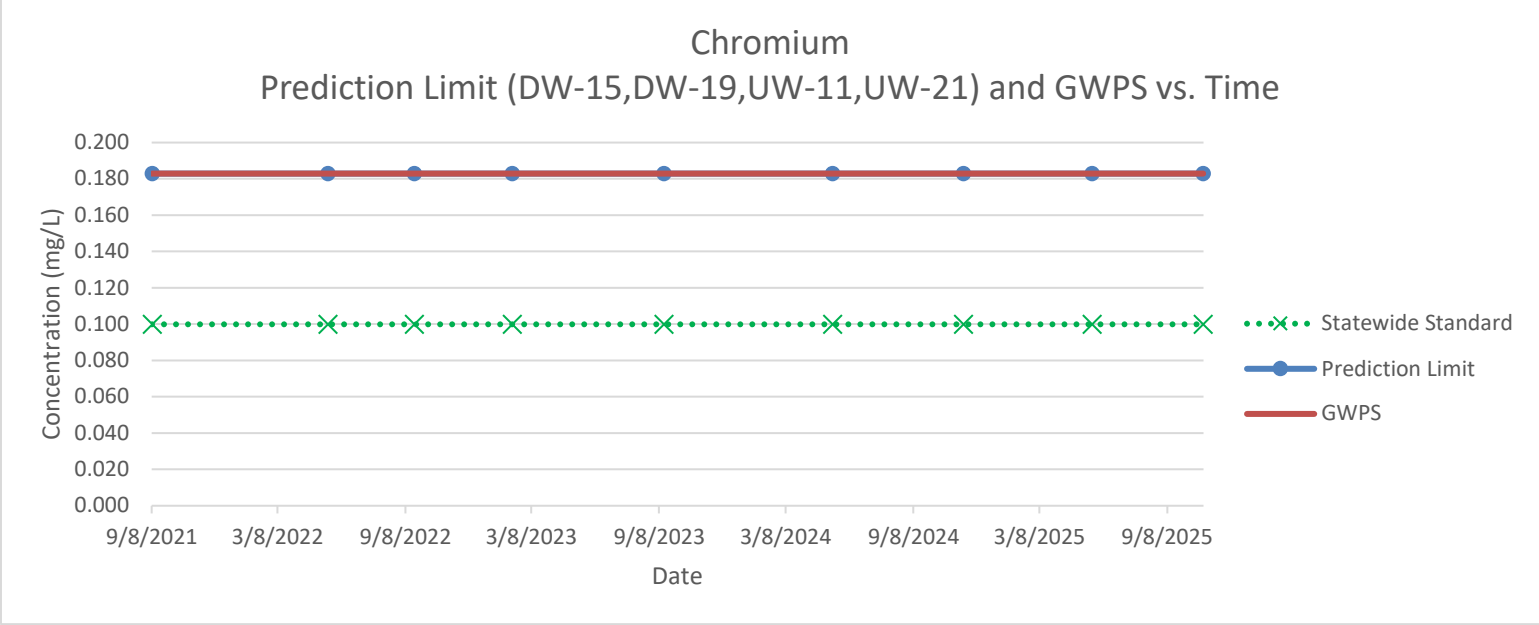
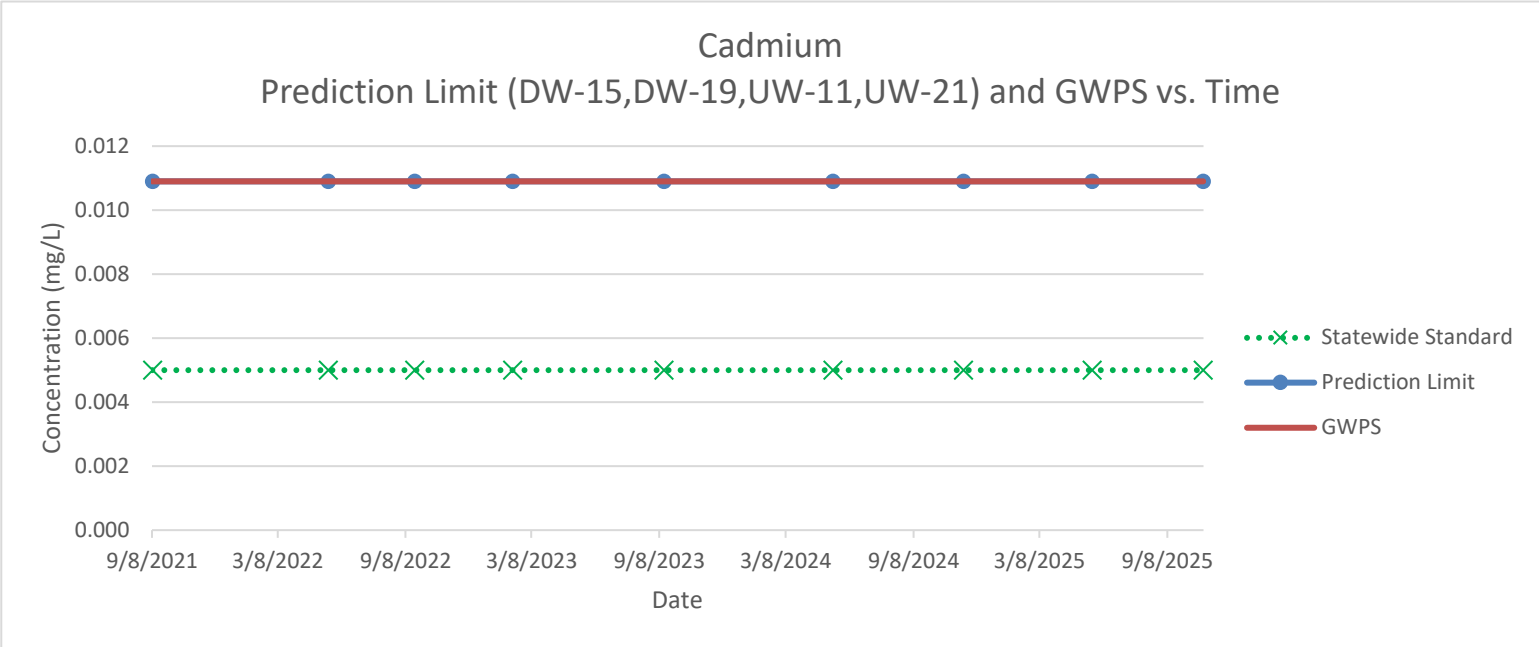
Appendix G
AMD Mann-Kendall Trend Evaluation Summary Table

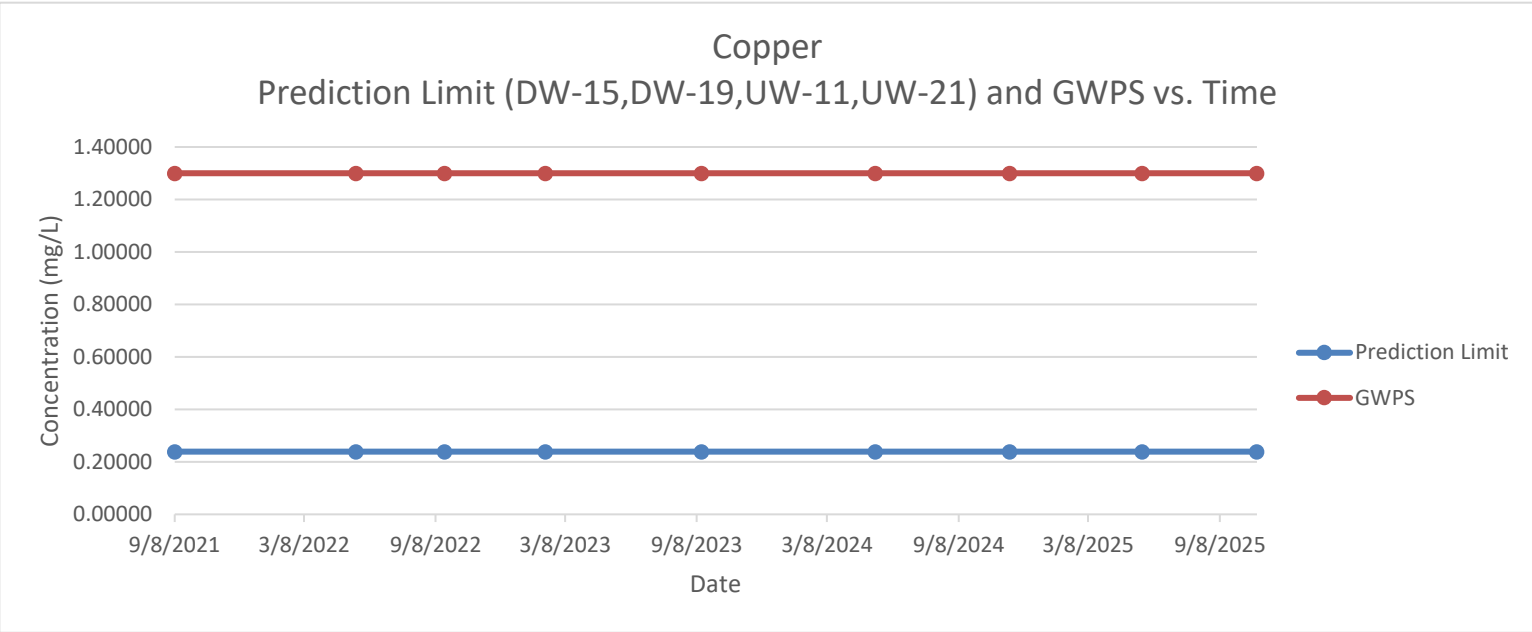
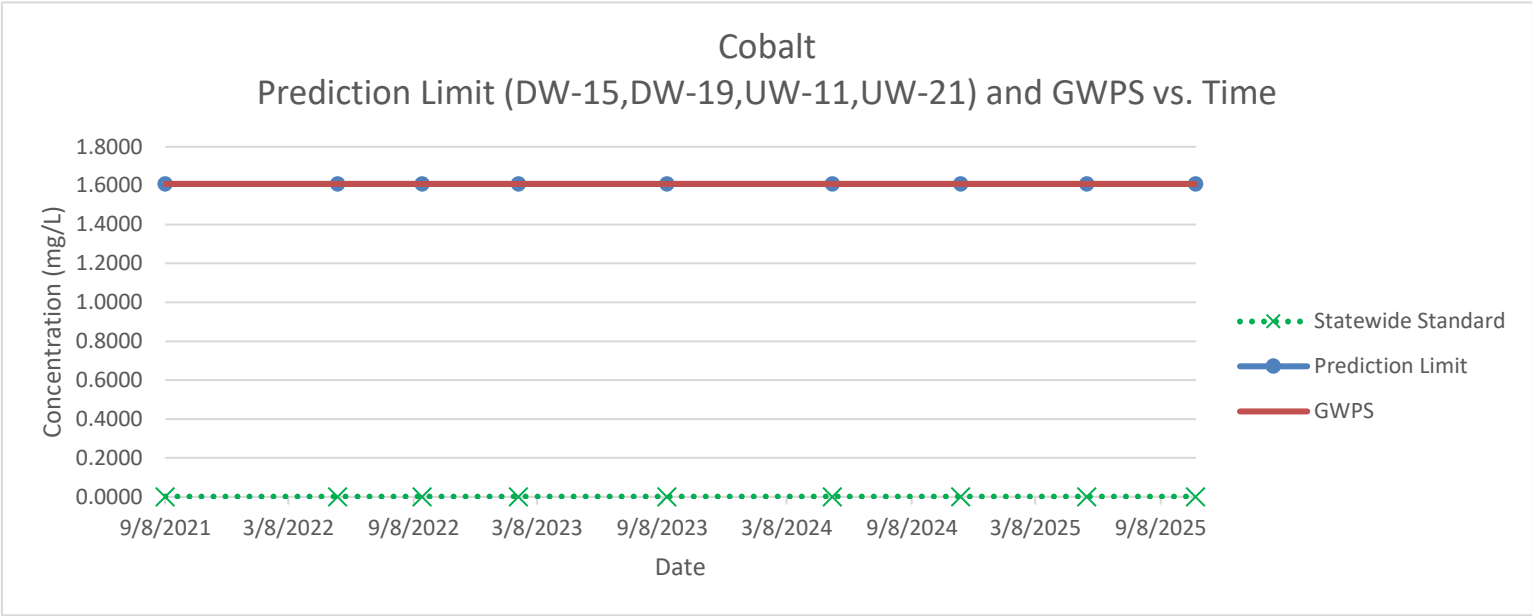
Monitoring Well	Constituent Name	Calculated Statistic		
		Decreasing Trend	Stable Trend	Increasing Trend
DW-8	Alkalinity, Total [CaCO3]			15
	Aluminum		5	
	Iron		10	
	pH		-12	
	Sulfate		8	
DW-15	Alkalinity, Total [CaCO3]		4	
	Aluminum	-20		
	Iron	-14		
	pH		-6	
	Sulfate		10	
DW-19	Alkalinity, Total [CaCO3]			18
	Aluminum		2	
	Iron		-6	
	pH		0	
	Sulfate		12	
DW-23	Alkalinity, Total [CaCO3]		2	
	Aluminum		4	
	Iron		-10	
	pH		0	
	Sulfate		-10	
DW-24	Aluminum			24
	Iron			14
	pH		0	
	Sulfate		12	
PZ-14	Alkalinity, Total [CaCO3]		-4	
	Aluminum		4	
	Iron			16
	pH	-18		
	Sulfate		-2	
UW-10	Alkalinity, Total [CaCO3]			20
	Iron		-2	
	pH		11	
	Sulfate	-18		
UW-11	Alkalinity, Total [CaCO3]		12	
	Iron	-23		
	pH			13
	Sulfate	-14		
UW-21	Alkalinity, Total [CaCO3]		1	
	Aluminum		2	
	Iron		2	
	pH		-4	
	Sulfate			14

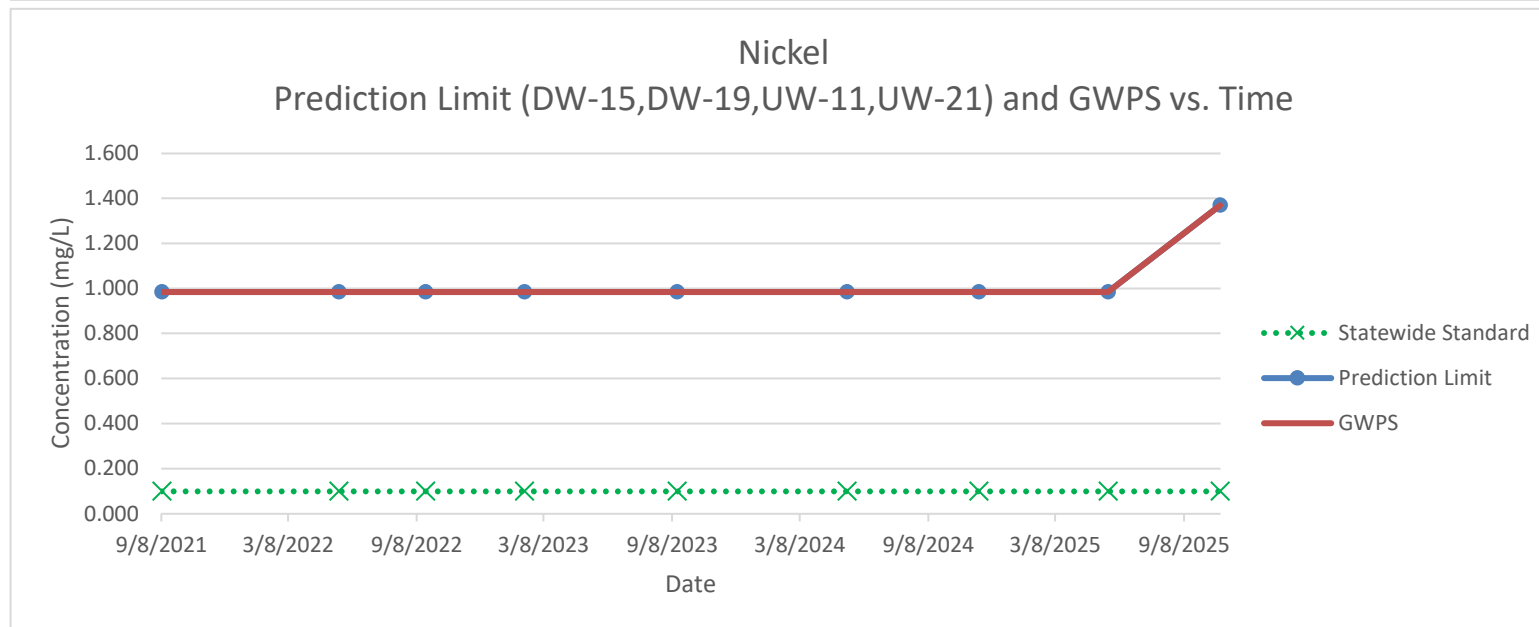
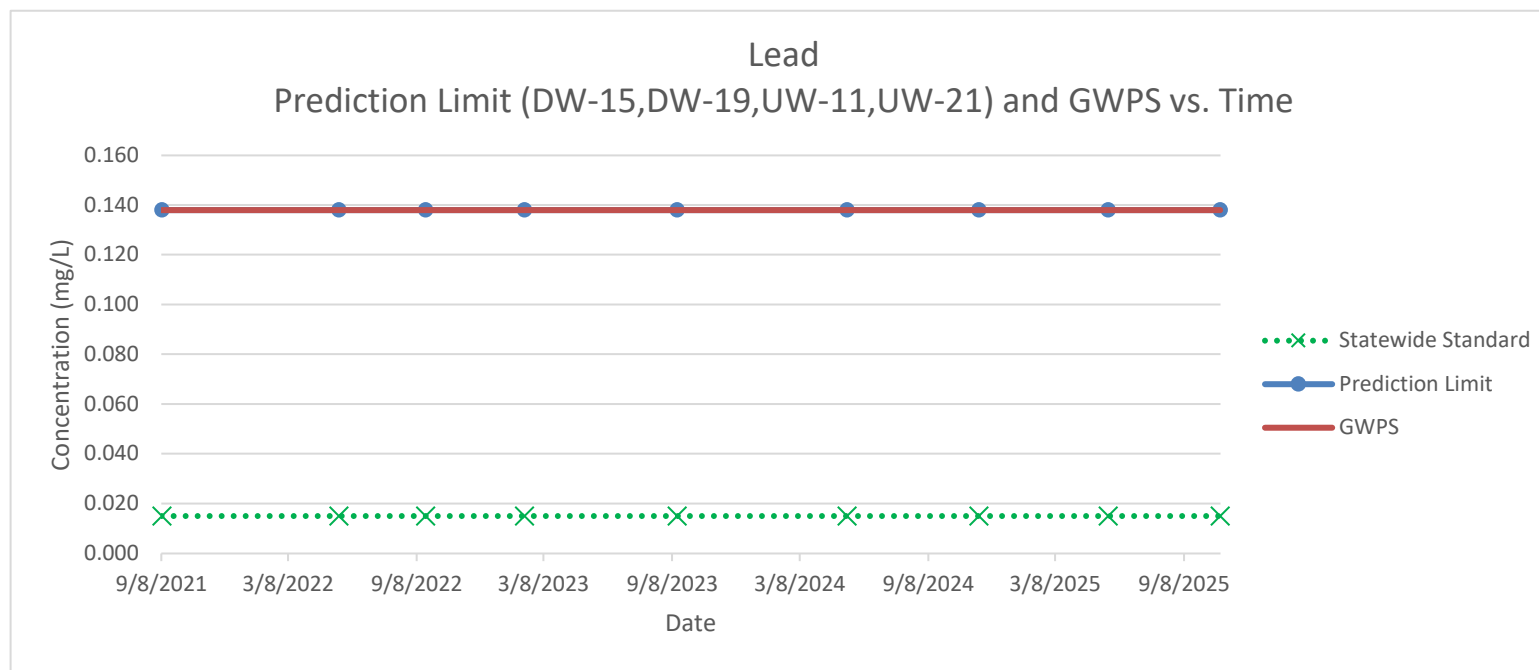
Appendix H
Standards History Graphs

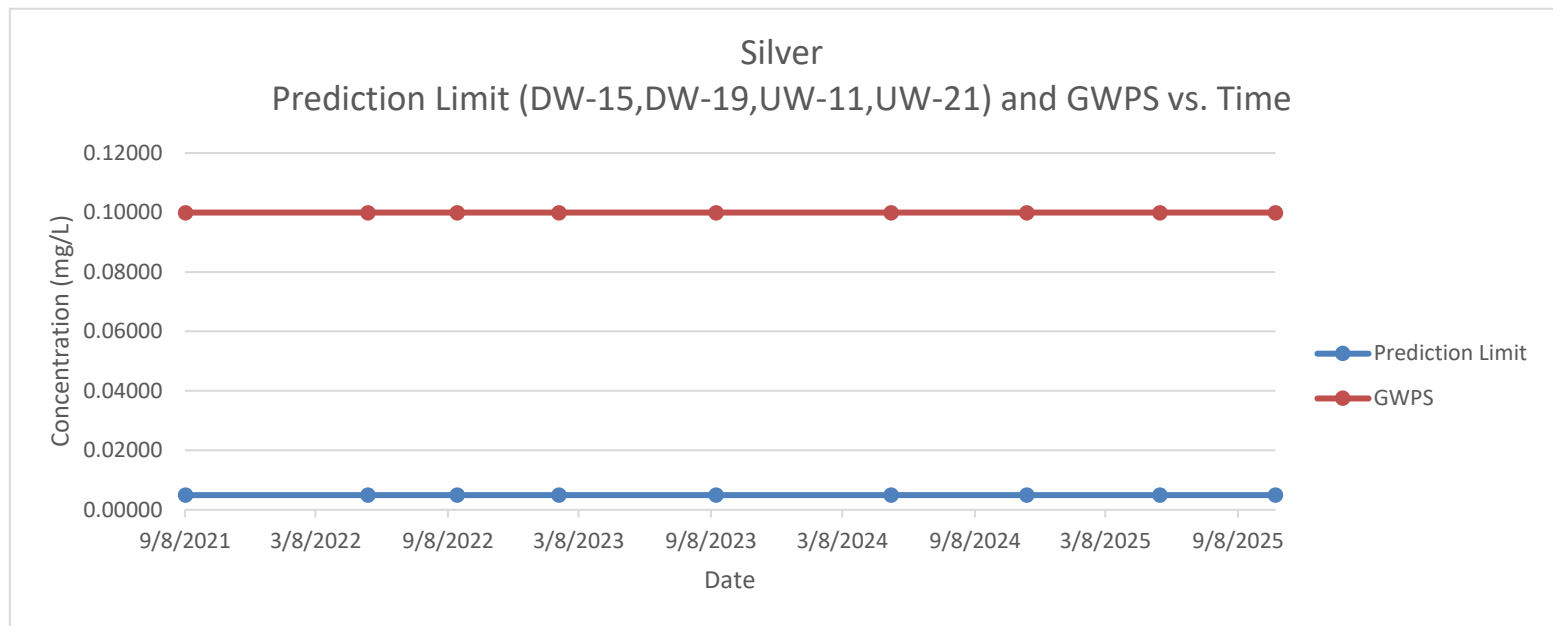
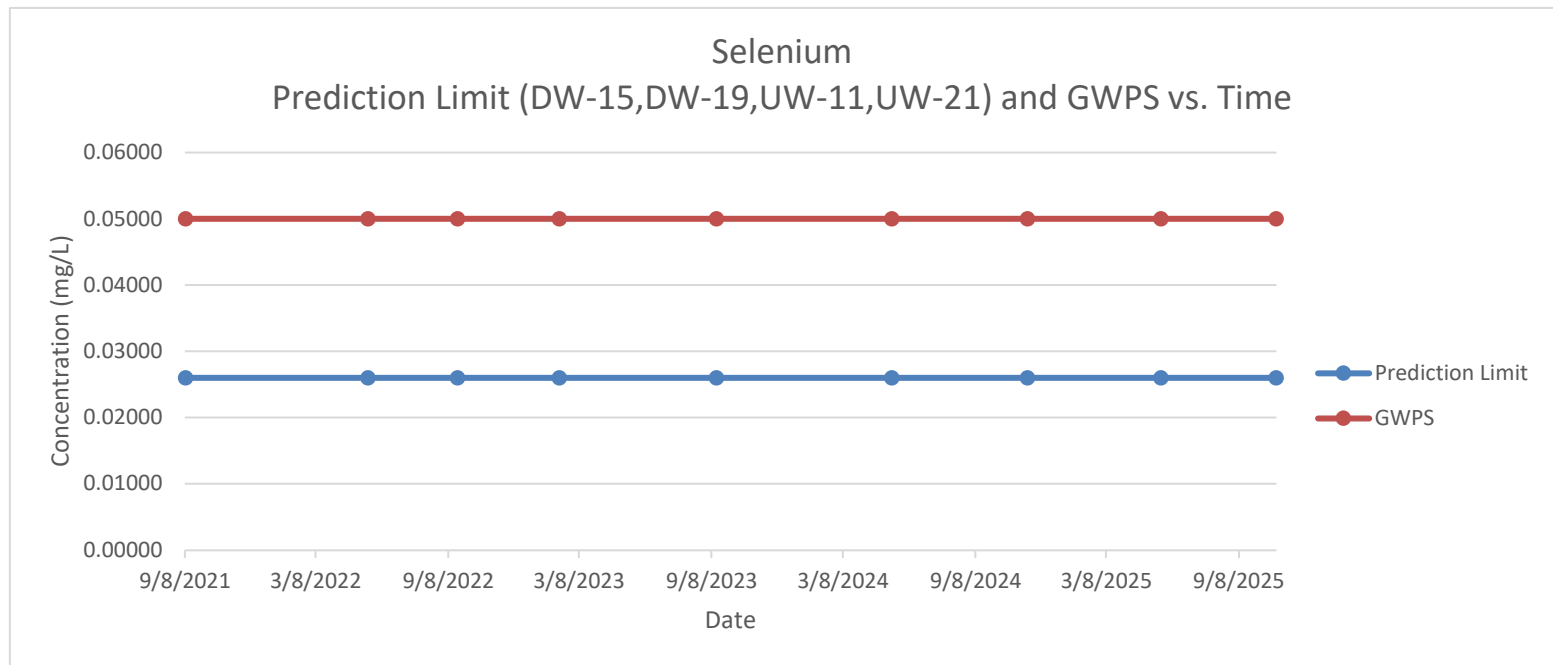


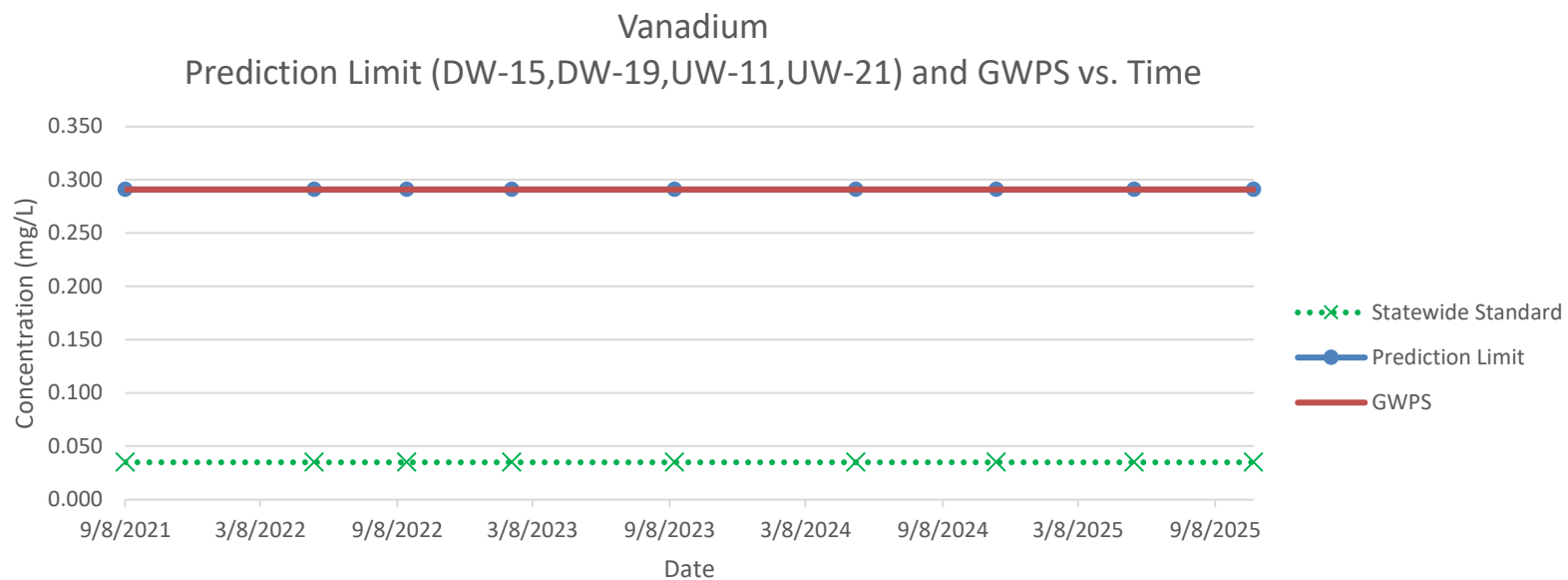
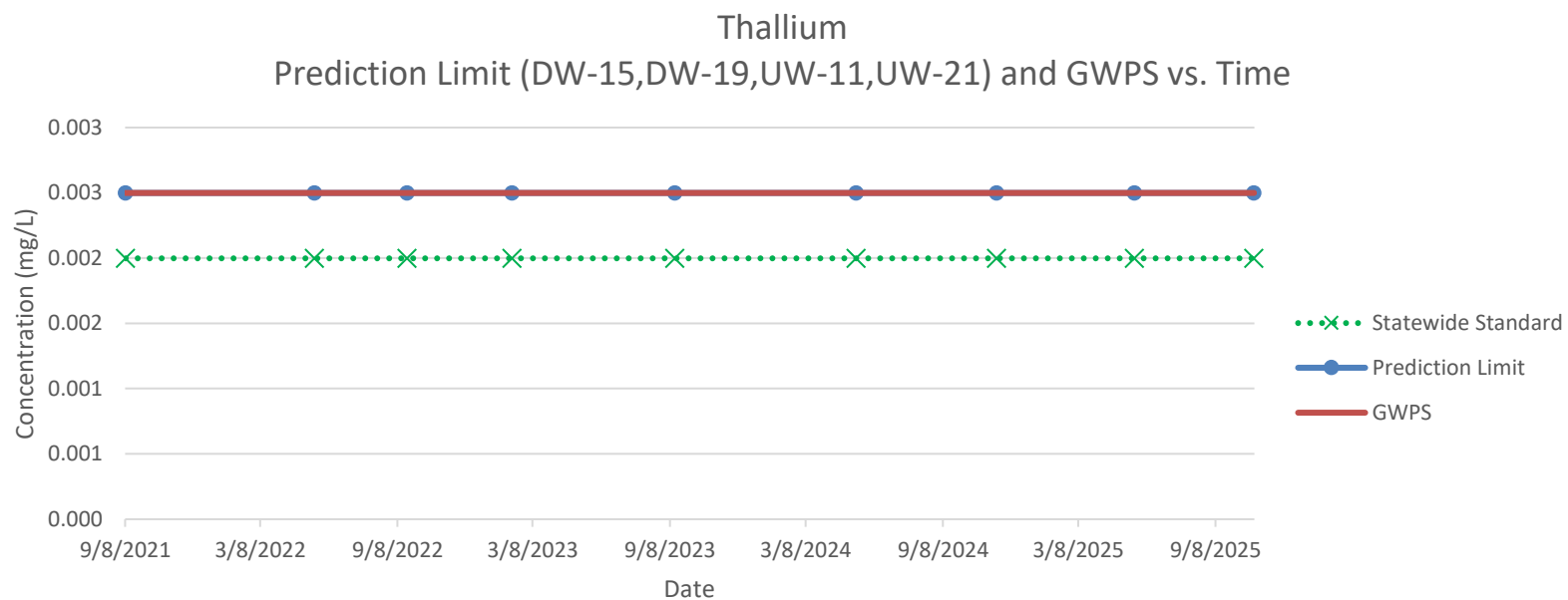












Zinc

Prediction Limit (DW-15,DW-19,UW-11,UW-21) and GWPS vs. Time

