SCS ENGINEERS

Transmittal

West Des Moines, IA

PROJECT:	Union Co,FY27 Env Comp,IA 27224311.27	DATE:	11/6/2026
SUBJECT:	Union County Sanitary Landfill - 88-SDP-01-79C - 2026 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, and Landfill Gas Annual Report	TRANSMITTAL ID:	00003
PURPOSE:	For your review and comment	VIA:	Info Exchange

FROM

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TO

NAME	COMPANY	EMAIL	PHONE
Alexis Slade		alexis.slade@dnr.iowa.gov	

REMARKS:

Good morning Alexis-

SCS Engineers, on behalf of the Prairie Solid Waste Agency, is submitting for download the 2026 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, and Landfill Gas Annual Report for the Union County Sanitary Landfill. If you have any questions or comments regarding these reports, please contact me at the number below. Thank you.

Nathan Ohrt
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Transmittal

DATE: 11/6/2026
TRANSMITTAL ID: 00003

DESCRIPTION OF CONTENTS

QTY	DATED	TITLE	NOTES
1	11/6/2026	2026-11-06_Union County Sanitary Landfill - 88-SDP-01-79C - 2026 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, and Landfill Gas Annual Report.pdf	

COPIES:

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Janeen Frey	(Prairie Solid Waste Agency)
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File No. 27224311.27

November 6, 2026

Ms. Alexis Slade
Iowa Department of Natural Resources
Land Quality Bureau
6200 Park Avenue
Des Moines, Iowa 50321

Subject: 2026 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, & Landfill Gas Annual Report
Union County Sanitary Landfill
Permit No. 88-SDP-01-79C

Dear Alexis:

SCS Engineers, on behalf of the Prairie Solid Waste Agency, has completed the water quality monitoring and assessment for the closed Union County Sanitary Landfill (Landfill) for the year 2026. The services were performed in general accordance with 567 Iowa Administrative Code (IAC) Chapter 101 and the current permit requirements for implementation of the Hydrologic Monitoring System Plan.

Additionally, evaluations of the leachate control system and gas monitoring results for the Landfill are included in accordance with the 2002 IAC 567-113.26(2)"l" and 113.26(15)"b," respectively. The 2026 Leachate Control System Performance Evaluation Report and the 2026 Landfill Gas Annual Report are included as appendices to the Annual Water Quality Report.

If you have any questions regarding this report, please contact Nathan Ohrt at the number below.

Sincerely,

Nathan Ohrt
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CC: Ms. Janeen Frey, Prairie Solid Waste Agency

2026 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, And Landfill Gas Annual Report

PRAIRIE SOLID WASTE AGENCY | Union County Sanitary Landfill

Creston, IA | Solid Waste Permit No. 88-SDP-01-79C

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Project No. 27224311.27 | November 2026

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Certification

Prepared by:  Date: 11/6/2026

Nathan Ohrt

Reviewed by:  Date: 11/6/2026

Sean Marczewski

Certification page (PE or groundwater scientist signature) **2026 IAC 567-100.2(455B, 455D)**

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 2026 and includes the sampling event summarized in **Table 2**.

ES.2 Report Priority

The following summarizes report priorities associated with groundwater compliance at the closed Union County Sanitary Landfill (Landfill):

- Department review urgency: There are no groundwater monitoring items that require review or approval by the Iowa Department of Natural Resources (DNR) at this time.
- Department review impact on rules schedule: None.
- Actions or activities on hold pending Department review or comment: None.
- Actions and/or permit amendments needed: None.

ES.3 Site Status and Applicable Rules

- Landfill Status: Closed
- Types of waste accepted: Landfill closed. Previously MSW, C&D, and special waste.
- Applicable IAC rules: 2026 567-101.102(7)*d* and 101.110(6-9), as applicable.

ES.4 Comments

- Inorganic concentrations were generally stable during this reporting period.
- One volatile organic compound (VOC) was detected during this reporting period: vinyl chloride in monitoring well MW-89-7.
- No Statistically Significant Levels (SSLs) above the Groundwater Protection Standards (GWPS) were measured during this reporting period.
- The groundwater at the Landfill appears to be generally not impacted.

Acronyms/Abbreviations

ACM = Assessment of Corrective Measures
CAMP = Corrective Action Groundwater Monitoring Program
C&D = Construction and Demolition Waste
CCV = Continuing Calibration Verification
CL = Control Limit - Mean plus Two Standard Deviations
COC = Chain of Custody
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
LCS = Laboratory Control Sample
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

1.0 Site Background

1.1 SITE LOCATION

The Landfill property is depicted in Figure 1, Approved Monitoring Network. The Landfill is located at 1774 Lark Avenue, Creston, Iowa. The Landfill property is generally within the SW ¼ of the SW ¼ of Section 12, T72N, R30W, and extends into the W ½ of the E ½ of the SE ¼ of the SW ¼ of Section 12, T72N, R30W, in Union County, Iowa.

1.2 FACILITY

Solid waste disposal at the Landfill was initiated in 1972 in the northwest portion of the property. Refuse was deposited in an eastward direction using the area fill method. Approximately 17.7 acres of the original 40-acre site received waste from residential, commercial, and industrial sources in Union, Adams, and Taylor Counties. In 2003, 5.2 acres (the southern portion of the permitted waste boundary) were closed, and in 2005, 3.5 acres (the western portion of the permitted waste boundary) were closed. The Landfill stopped accepting waste before October 1, 2007, and in 2008, the remaining approximately 9-acre area was closed in general accordance with the approved closure plan. The closure permit was issued on July 2, 2008 (Doc #25637) and the DNR incorporated the Construction Certification Report for the final closure of the Landfill into the permit documents on January 23, 2009. Prairie Solid Waste Agency now operates a transfer station at the property. The waste is hauled to the Loess Hills Regional Sanitary Landfill in Malvern, Iowa, for disposal.

1.3 GEOLOGY AND HYDROGEOLOGY OF THE SITE

The Hydrogeologic Investigation Report and Proposed Hydrologic Monitoring System Plan dated August 13, 1993, prepared by Green Environmental Services, Inc., provided the following geological description of the site:

Loess forms the uppermost strata at the site and is observed in the high wall that forms the eastern boundary of the borrow area. Loess was not encountered in any well boring. The valleys north and south of the landfill, which are separated by a ridge crest, contain alluvial deposits. The landfill is located south of the ridge, in the surface water and groundwater drainage basins that drain southward. The alluvial deposits along the southern perimeter of the landfill consist of a fining-upward sequence of stratified sediments. An upper silty unit, with discontinuous sandy layers, varies from 14 to 20 feet in thickness. An underlying silty sand and sand unit varies from 5 to 6.5 feet in thickness. In the southwest corner of the site, 7 feet of sand and gravel underlie the sand unit. The sand is continuous across the southern perimeter of the site at an elevation of 1,146 feet MSL.

Clay-rich glacial till underlies the entire landfill. The loess has been eroded off the flanks of the topographic ridge. Six leachate piezometers installed in the waste penetrated till below the waste. The till consists of clay, sandy silty clay, trace gravel to sandy clayey silt, and trace gravel composition. No intra-till sand lenses were reported with the exception of one 3 cm thick lens at a depth of 76.5 feet in the upgradient well location.

Deep sand units were noted in the upgradient and southwest downgradient well locations and likely represent an alluvial inter-till sequence. The sand is at least 17 feet thick and is sub-rounded, stratified, and leached. These sands appear to form one continuous unit. The sand

deposits coincide with the axis of the "Hatfield" buried channel that is carved into the bedrock surface. However, since the bedrock channel occurs below an elevation of 1,000 feet MSL, while the observed sand occurs at about 1,100 feet MSL, and local well logs indicate the "Hatfield" channel is in-filled with clayey material in the vicinity of the landfill, it is concluded that the deep sand is not a bedrock channel deposit.

According to the above-referenced 1993 Hydrogeologic Investigation Report:

In-situ hydraulic conductivity testing determined a permeability value range for alluvium (silt and sand) of 2.0 x 10-5 to 6.0 x 10-5 cm/sec. Values for till varied from 3 x 10-8 to 7.0 x 10-6 cm/sec. Hydraulic conductivities are lower for till in deeper wells or for till that is less weathered. The conductivities of the till range over two orders of magnitude. These results show that the alluvium and shallow weathered till function as an aquifer, while the deep, unweathered till is an aquitard. The in-situ values in the lower sand unit varied from

4.4 x 10-5 to 4.2 x 10-4 cm/sec.

The primary horizontal groundwater flow direction is southward toward the east-west oriented intermittent stream situated along the southern perimeter of the site. Horizontal water table flow gradients and flow velocities attain maximum values of 0.140 (unitless) and 0.091 feet per day, respectively, in the alluvium along the southern portion of the site. The maximum recharge flux rate in the alluvium is 0.0163 ft3/day per square foot. The large downward vertical gradient of 0.740 between the alluvium and deep sand in the south central area illustrates the minimal hydraulic connection of these two units; a situation arising from the low permeability of the intervening clay-rich till which acts as an aquitard.

The horizontal water table gradient is approximately 8.5 times greater than the vertical gradient in the alluvium in the south-central area. This demonstrates that the greatest potential for landfill impact is the horizontal migration of contaminants from the waste into the alluvium in this area.

2.0 Figures Discussion

The following figures are attached.

2.1 FIGURE 1 – APPROVED MONITORING NETWORK

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

2.2 FIGURE 2 – GROUNDWATER CONTOURS

A groundwater contour map based on water levels measured during the April 2026 sampling event is included in **Figure 2**. Groundwater flow is generally a subdued reflection of the topography, with direction primarily to the south toward the intermittent creek in the southern portion of the property. This flow direction is generally consistent with previous groundwater contour maps. It does not appear that significant changes to the hydrologic setting or flow paths have occurred. **Figure 2** also includes leachate level data, although not reflected in the groundwater contours. Based on the leachate elevations compared to the interpolated groundwater contours, it appears that leachate mounding may be occurring. However, it is not known whether the leachate elevations measured in the leachate piezometers are the result of

the intersection of perched leachate zones within the waste mass or a fully saturated waste mass in the vicinity of the monitoring point. It is also not known whether the leachate is in direct hydraulic communication with the water table or is perched above the water table within the waste mass.

3.0 Standards History Graphs

Standards history graphs for Appendix I metals are included in **Appendix E**. Standards history graphs for the following parameters are included:

- Antimony
- Arsenic
- Barium
- Beryllium
- Cadmium
- Chromium
- Cobalt
- Copper
- Lead
- Nickel
- Selenium
- Vanadium
- Zinc

Graphs for silver and thallium are not included as these parameters have not been detected above the reporting limit in the background. The prediction limits were below the associated GWPS for the included parameters.

4.0 QA/QC Summary

The quality assurance/quality control (QA/QC) program for the Landfill generally follows the protocols included in the HMSP. Data validation procedures were performed on analytical results for laboratory QC samples and a QA assessment of the data was conducted as the data was generated. The QA review procedure provides documentation of the accuracy and precision of the analytical data and confirms that the analyses are sufficiently sensitive to detect constituents at levels below regulatory standards when technically feasible with the laboratory method utilized. SCS then conducted QA/QC data validation of the produced data, which included a review of sample handling, analytical sensitivity, blanks, accuracy, and precision. The QA/QC review did not identify any data as unusable. A summary of the laboratory QA/QC and data validation can be found in **Appendices B-1**, Laboratory Analytical Data Sheets, and **B-2**, Data Validation, respectively.

5.0 Data Evaluation

Detection and assessment monitoring statistical evaluations in accordance with the requirements of IAC 567-101.110(5) and 101.110(6) were conducted for the groundwater analytical data collected during the 2026 sampling events. The statistical evaluations for the samples collected during this reporting period are located in **Appendix D** (Statistical Method and Output) of this report.

Groundwater monitoring for the Landfill consists of samples from one monitoring well to the east, one monitoring well to the west, three monitoring wells to the south, and one monitoring well south of the lagoon on the southeast side of the MSWLF unit. The background monitoring point PZ-22 is northeast of the MSWLF unit.

During the April 2026 sampling event, monitoring well MW-89-2 could not be sampled due to equipment damage. Because total depth measurements for monitoring well PZ-21 differed, it appeared the wrong well may have been sampled during the April sampling event. Monitoring wells MW-89-2 and PZ-21 were sampled in July 2026.

The sample for PZ-22 from April 2026 was considered unrepresentative due to elevated total suspended solids (TSS) and total metals concentrations, so the inorganic data was removed from statistical consideration. Data from the April 2026 PZ-21 sample, expected to be from an incorrect monitoring well, were also removed from the statistical evaluation.

Of the 14 statistically significant increases (SSIs) above background indicated during this reporting period, each of the 14 were arsenic, barium, cobalt, and nickel. Concentrations were below their respective GWPS values, except for arsenic in monitoring well MW-89-6R.

Volatile organic compounds (VOCs) were removed from the routine sampling list in 2020 for monitoring wells PZ-22, MW-89-6R, MW-21, and PZ-21 because they were infrequently detected. Vinyl chloride was detected above the reporting limit in monitoring well MW-89-7 during this reporting period; vinyl chloride has consistently been detected in MW-89-7 below the reporting limit since 2019. No VOCs were detected above the reporting limit in monitoring wells MW-89-2 or MW-89-9R during this reporting period.

5.1 TRENDING IN ASSESSMENT MONITORING WELLS

No statistically significant trends were identified by Mann-Kendall analysis during this reporting period. The trend analysis is included in the Statistical Method and Output in **Appendix D**.

Although not necessarily statistically significant, the Mann-Kendall statistics can indicate general trending in the data. Trend indications for wells in the assessment monitoring program are shown in the following table. The statistics used to develop the general trending differ from the Mann-Kendall statistics used in the diagnostics section of the statistical reports in that a much lower trend threshold is applied for the general trending information (α=0.20 versus α=0.01). Trends classified as decreasing or increasing exhibited a statistically significant trend with 80 percent confidence using the most recent eight data points. Trends classified as stable did not show a statistically significant trend with 80 percent confidence using the eight most recent data points.

Trending in Assessment Monitoring Wells				
Monitoring Well	**Decreasing Trends**	**Stable Trends**	**Increasing Trends**	**Number of Constituents Analyzed**
MW-89-2	0.0%	90.0%	10.0%	10
MW-89-6R	0.0%	80.0%	20.0%	5
MW-89-7	75.0%	25.0%	0.0%	4
MW-89-9R	0.0%	60.0%	40.0%	5
PZ-21	0.0%	100.0%	0.0%	11

Trending in Assessment Monitoring Wells				
Monitoring Well	**Decreasing Trends**	**Stable Trends**	**Increasing Trends**	**Number of Constituents Analyzed**
Site-Wide	8.6%	80%	11.4%	35

A review of the Mann-Kendall statistics indicates that over 88 percent of the Mann-Kendall statistics following the 2026 statistical evaluation were considered stable or decreasing. The increasing trends for monitoring well/constituent pairs were the following:

- **Cobalt in MW-89-2**: Cobalt in MW-89-2 had no concentrations above the site-specific GWPS since 2009.
- **Arsenic in MW-89-6R**: Arsenic in MW-89-6R had five quantified concentrations in the most recent eight samples and four of the concentrations were above the GWPS. Elevated TSS concentrations may have contributed to the elevated arsenic concentrations.
- **Arsenic and Barium in MW-89-9R**: Arsenic and barium in MW-89-9R had no concentrations above the GWPSs in the most recent eight samples.

6.0 Summary and Recommendations

6.1 SITE IMPACT ON GROUNDWATER

- Inorganic concentrations were generally stable during this reporting period.
- One VOC (vinyl chloride in monitoring well MW-89-7) was detected slightly above the reporting limit. No other VOCs were detected above a reporting limit during this reporting period.
- No SSLs above a GWPS were measured during this reporting period.
- The monitoring wells at the Landfill appear to be generally not impacted.

6.2 PROPOSED MONITORING

Monitoring during the 2027 and 2028 reporting periods is included in **Table 2**.

6.3 PROPOSED MONITORING WELL CHANGES

There are no changes to the monitoring wells proposed at this time.

TABLES

Table 1
Monitoring Program Summary Table
2026 Annual Water Quality Report
Union County Sanitary Landfill
Permit No. 88-SDP-01-79C

Monitoring Well	Formation[1]	Current Monitoring Program	Change for Next Sampling Event	Constituents with SSIs During the 2026 Reporting Period	Constituents with SSLs	Total Number of Samples in Each Monitoring Program		
						Detection	Assessment	Corrective Action
HMSP Monitoring Points								
PZ-22	Clay/Gravel	Background	No Change	Not Applicable	Not Applicable	11		
MW-89-2	Weathered Till	Assessment	No Change	Barium, Cobalt	None		29	
MW-89-6R	Silty Sand	Assessment	No Change	Arsenic, Barium, Cobalt	None		31	
MW-89-7	Weathered Till	Assessment	No Change	Arsenic, Barium, Cobalt, Nickel, Vinyl Chloride	None		33	
MW-89-9R	Sandy Silt	Assessment	No Change	Arsenic, Barium, Cobalt, Nickel	None		33	
PZ-21	Weathered Till	Assessment	No Change	Barium	None		26	
MW-21	Sandy Clay	Detection	No Change	None	Not Applicable	12		
Other Monitoring Points								
MW-18	Clay/Gravel	Water Level						
MW-19	Clay/Gravel	Water Level						
MW-20	Clay/Sand	Water Level						
Lagoon Underdrain	Not Applicable	Water Level						

Notes:

[1] Obtained from screened interval in boring logs.

SSI = Statistically Significant Increase above background.

SSL = Statistically Significant Level above groundwater protection standard.

Table 2
Monitoring Program Implementation Schedule
2026 Annual Water Quality Report
Union County Sanitary Landfill
Permit No. 88-SDP-01-79C

Monitoring Well	Recent Sampling Dates and Constituents		Upcoming Sampling Dates and Constituents		Full Appendix II Sample Dates	
	April 2026	July 2026	2027 Annual	2028 Annual	Previously Collected	Next Event
PZ-22	Metals List, TSS, Sulfide		Metals List, TSS, Sulfide	Metals List, TSS, Sulfide	Not Applicable	Not Applicable
MW-89-2	No sample (equipment failure)	Metals list, TSS	Metals List, TSS	Metals List, TSS	7/21/2009, 9/22/2014, 6/4/2019, 4/4/2024, 8/1/2025	2030
MW-89-6R	Metals List, Sulfide		Metals List, TSS	Metals List, TSS	7/21/2009, 9/22/2014, 2/25/2019, 4/4/2024	2029
MW-89-7	Metals List, TSS, Appendix I VOCs		Metals List, TSS, Appendix I VOCs	Appendix II, TSS	6/10/2008, 10/2/2013, 3/28/2018, 7/13/2023	2028
MW-89-9R	Metals List, TSS, Appendix I VOCs, Sulfide		Metals List, TSS, Appendix I VOCs, Sulfide	Appendix II, TSS	6/10/2008, 10/2/2013, 7/12/2018, 7/13/2023	2028
PZ-21	Incorrect well sampled.	Metals list, TSS	Metals List, TSS	Metals List, TSS	12/27/2010, 11/20/2015, 3/1/2017, 07/16/2020, 8/1/2025	2030
MW-21	Metals List, TSS		Metals List, TSS	Metals List, TSS	Not Applicable	Not Applicable

Notes:

TSS: Total Suspended Solids.

Metals List Includes: Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, Copper, and Nickel.

Table 3
Monitoring Well Maintenance and Performance Revaluation Schedule
2026 Annual Water Quality Report
Union County Sanitary Landfill
Permit No. 88-SDP-01-79C

Compliance with:	2024	2025	2026	2027	2028
567 IAC 101.211(2)"*a* " high and low water levels[(1)]	Completed		Included		Scheduled
567 IAC 101.211(2)"*b* " changes in the hydrologic setting and flow paths	Completed	Completed	Included	Scheduled	Scheduled
567 IAC 101.211(2)"*c* " well depths[(1)]	Completed	Completed	Included	Scheduled	Scheduled
567 IAC 101.211(2*)"d* " well recharge rates and chemistry (biennial)	Completed		Included		Scheduled
Waste separation from groundwater 101.5(2)	Completed	Completed	Included	Scheduled	Scheduled

Notes:

(1) See Table 4.

Table 4
Monitoring Well Maintenance and Performance Summary
2026 Annual Water Quality Report
Union County Sanitary Landfill
Permit No. 88-SDP-01-79C

Well	Top of Casing	Top of Screen	Total Depth		Date of Measurement	Maximum Depth	Initial Flowrate*	Recent Flowrate Rate	
					April 2026	Discrepancy (ft)	(L/min)/Date	April 2026	% Change
MW-89-2*	1207.08	1160.50	70.4	Groundwater Level (ft)	58.85	0.0	0.158 7/12/2018	0.167	6%
				Groundwater Elevation (Ft MSL)	1148.23				
				Measured Well Depth (ft)	70.4				
				Submerged Screen	N				
MW-89-6R	1168.87	1155.47	23.4	Groundwater Level (ft)	7.95	-1.1	0.150 7/12/2018	0.183	22%
				Groundwater Elevation (Ft MSL)	1160.92				
				Measured Well Depth (ft)	24.5				
				Submerged Screen	Y				
MW-89-7	1169.23	1142.50	39.1	Groundwater Level (ft)	9.64	-1.2	0.150 7/12/2018	0.167	11%
				Groundwater Elevation (Ft MSL)	1159.59				
				Measured Well Depth (ft)	40.3				
				Submerged Screen	Y				
MW-89-9R	1172.80	1164.55	18.3	Groundwater Level (ft)	8.75	-0.1	0.150 7/12/2018	0.124	-17%
				Groundwater Elevation (Ft MSL)	1164.05				
				Measured Well Depth (ft)	18.4				
				Submerged Screen	N				
PZ-21*	1190.77	1163.20	48.1	Groundwater Level (ft)	33.00	0.0	0.150 7/12/2018	0.217	45%
				Groundwater Elevation (Ft MSL)	1157.77				
				Measured Well Depth (ft)	48.1				
				Submerged Screen	N				
PZ-22	1243.51	1187.80	70.2	Groundwater Level (ft)	20.60	2.0	0.162 7/12/2018	0.158	-2%
				Groundwater Elevation (Ft MSL)	1222.91				
				Measured Well Depth (ft)	68.2				
				Submerged Screen	Y				
MW-21	1178.13	1150.15	38.3	Groundwater Level (ft)	10.49	-0.1	0.150 7/12/2018	0.158	5%
				Groundwater Elevation (Ft MSL)	1167.64				
				Measured Well Depth (ft)	38.2				
				Submerged screen	Y				

Comments:

* - Monitoring wells MW-89-2 and PZ-21 were sampled in July 2026.

1) Measured well depths were within 2.0 feet of the installed depths, so it appears siltation has not affected the ability of the wells to produce samples.

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

Groundwater Underdrain Piezometer

Well		Date of Measurement
		April 2026
NA	Bottom of Waste (feet MSL)	NA
	Groundwater Elevation (feet MSL)	Dry
	Separation Distance (feet)	>5

Comments:

Groundwater underdrain point, Lagoon Underdrain, has been continuously dry. Due to the monitoring point remaining dry with few exceptions since 2005, it is likely that greater than 5 foot separation is present. The monitoring point Lagoon Underdrain will continue to be monitored to ensure separation.

Table 5
Background and GWPS Summary Tables
2026 Annual Water Quality Report
Union County Sanitary Landfill
Permit No. 88-SDP-01-79C

Interwell Background/GWPS (PZ-22)

Constituent	Units	Samples	Detections	Min	Max	Mean	Background Level	Statistical Test	GWPS	Source
Antimony (Sb)	mg/L	11	1	0.0005 (1/2 RL)	0.004 (1/2 RL)	0.001091	0.004	PL (NP)	0.006	MCL
Arsenic (As)	mg/L	11	10	0.00205	0.00519	0.002915	0.005167	PL (P)	0.01	MCL
Barium (Ba)	mg/L	11	11	0.0104	0.0141	0.011436	0.0141	PL (NP)	2	MCL
Beryllium (Be)	mg/L	11	6	0.000404*	0.0035*	0.001060	0.003652	PL (P)	0.004	MCL
Cadmium (Cd)	mg/L	11	3	0.00005 (1/2 RL)	0.0004 (1/2 RL)	0.000172	0.0004	PL (NP)	0.005	MCL
Chromium (Cr)	mg/L	6	3	0.00108*	0.0025 (1/2 RL)	0.002028	0.003329	PL (P)	0.1	MCL
Cobalt (Co)	mg/L	11	11	0.000502	0.00309	0.001471	0.003188	PL (P)	0.01651	SSS
Copper (Cu)	mg/L	11	6	0.0025 (1/2 RL)	0.497	0.074563	0.4706	PL (P)	1.3	MCL
Lead (Pb)	mg/L	6	3	0.00025 (1/2 RL)	0.00137	0.000612	0.002033	PL (P)	0.015	MCL
Nickel (Ni)	mg/L	11	8	0.00198*	0.0109	0.005746	0.01105	PL (P)	0.1	SWS
Selenium (Se)	mg/L	6	1	0.00154*	0.01 (1/2 RL)	0.003590	0.01	PL (NP)	0.05	MCL
Silver (Ag)	mg/L	6	0	0.00025 (1/2 RL)	0.0005 (1/2 RL)	0.000458	< 0.001	DQR	0.1	SWS
Thallium (Tl)	mg/L	6	0	0.0005 (1/2 RL)	0.001 (1/2 RL)	0.000583	< 0.002	DQR	0.002	MCL
Vanadium (V)	mg/L	6	1	0.001*	0.0025 (1/2 RL)	0.002250	0.0025	PL (NP)	0.035	SWS
Zinc (Zn)	mg/L	6	5	0.01 (1/2 RL)	0.0757*	0.046700	0.1271	PL (P)	2	SWS

* Indicates a J Flag; the concentration is below the reporting limit but above the method detection limit. The concentration is estimated.

** Site-specific GWPS for cobalt approved in correspondence dated March 17, 2017 (Doc #88698).

Acronyms/Abbreviations:

GWPS = Groundwater Protection Standard
DQR = Double Quantification Rule
SSS = Site-specific GWPS
HAL = Health Advisory Level
RL = Reporting Limit
PL = Prediction Limit
MCL = EPA Maximum Contaminant Level
CL = Control Limits (mean + two standard deviations)
NP = Non-Parametric
ND = Not Determined
P = Parametric
SWS = Statewide Standard

Comments:

1) **Water quality results and effectiveness of the statistical data evaluation criteria:** Statistical evaluations consist of prediction limits and confidence intervals/confidence bands, as appropriate. Data from the background wells is not used for development of the confidence intervals or confidence bands.
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:** Comparison of inorganic and TSS concentrations indicates that TSS does in part affect the elevated inorganic concentrations present at the site prior to the change in sampling methodology which occurred during the 2015 reporting period. Inorganic data was not collected from the background monitoring point prior to the implementation of low-flow sampling.
5) Due to an elevated total suspended solids concentration, the April 2026 sample from monitorng well PZ-22 was considered unrepresentatvie and the inorganic data was removed from statistical consideration.

Table 6
Summary of Well/Detected Constituent Pairs With No Previous SSIs
2026 Annual Water Quality Report
Union County Sanitary Landfill
Permit No. 88-SDP-01-79C

Well	Constituent	Units	Most Recent Result	Background Standard
MW-89-6R	Arsenic	mg/L	0.1082	0.005167
MW-89-7	Arsenic	mg/L	0.0067	0.005167
	Nickel	mg/L	0.0118	0.01105
	Vinyl Chloride	µg/L	1.08	<1

Notes:

1) Criteria for inclusion in this table is a well/constituent pair with an SSI indicated during the 2026 reporting period and no SSI indicated during the 2025 reporting period.

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:** None.
5) **Resampling strategy**: A 1-of-2 resampling strategy was established for the Landfill.

Table 7
Summary Table of Ongoing and Newly Identified SSIs
2026 Annual Water Quality Report
Union County Sanitary Landfill
Permit No. 88-SDP-01-79C

Well	Constituent	Units	Most Recent Result	Background Standard	Lower Confidence Limit	GWPS	Sample Dates		
							Initial Exceedance	Resample(s)	5th background sample
MW-89-2	Barium	mg/L	0.0261	0.0141	0.02151	2	3/25/2020	NM	9/29/2010
	Cobalt	mg/L	0.00369	0.003188	0.0009558	0.01651	3/9/2022	NM	9/29/2010
MW-89-6R	Arsenic	mg/L	0.1082	0.005167	0.001606	0.01	4/14/2026	NM	9/29/2010
	Barium	mg/L	0.332	0.0141	0.216	2	7/13/2023	NM	9/29/2010
	Cobalt	mg/L	0.01	0.003188	0.00824	0.01651	7/13/2023	NM	9/29/2010
MW-89-7	Arsenic	mg/L	0.0067	0.005167	0.003935	0.01	4/14/2026	NM	9/29/2010
	Barium	mg/L	0.399	0.0141	0.3471	2	7/13/2023	NM	9/9/2009
	Cobalt	mg/L	0.00379	0.003188	0.003524	0.01651	7/13/2023	NM	9/9/2009
	Nickel	mg/L	0.0118	0.01105	0.009979	0.1	4/14/2026	NM	9/9/2009
	Vinyl Chloride	µg/L	1.08	<1	0.1708	2	4/14/2026	NM	9/9/2009
MW-89-9R	Arsenic	mg/L	0.00675	0.005167	0.00267	0.01	7/13/2023	NM	9/9/2009
	Barium	mg/L	0.239	0.0141	0.1286	2	7/13/2023	NM	9/9/2009
	Cobalt	mg/L	0.0129	0.003188	0.004135	0.01651	7/13/2023	NM	9/9/2009
	Nickel	mg/L	0.0146	0.01105	0.009072	0.1	7/13/2023	NM	9/9/2009
MW-21	None								3/25/2020
PZ-21	Barium	mg/L	0.0175	0.0141	0.01328	2	7/13/2023	NM	10/18/2012

Notes:

1) A single exceedance in an assessment monitoring well is recorded above as an SSI. Retesting is not performed as the monitoring wells are not in the detection monitoring program.
2) Ongoing SSI is defined as one or more indicated SSIs for a monitoring well/constituent pair in both the 2025 and 2026 reporting periods.

NM - Not Measured; Historical statistical evaluations utilized control limits to determine SSIs, therefore resampling of constituents with indicated SSIs above background was not part of the statistical methodology performed.

Shaded indicates a newly identified SSI, as defined under Table 6.

Comments:

1) **Problems with the current assessment network:** None.
2) **Proposed remedies:** None.
3) **Alternative constituent or sample frequency changes:** None.
4) **Plume delineation strategies:** Not Applicable.

Table 8
Summary Table of Ongoing and Newly Identified SSLs
2026 Annual Water Quality Report
Union County Sanitary Landfill
Permit No. 88-SDP-01-79C

Well	Constituent	Units	Most Recent Result	Upper Confidence Limit	GWPS	Initial Exceedance	Date of Most Recent Exceedance	Upper Confidence Limit Below GWPS		
								1st Year	2nd Year	3rd Year
None										

Comments:

Previous SSLs measured in monitoring wells MW-89-6R and MW-89-9R were removed in accordance with the Alternative Source Demonstration (Doc #94783) submitted March 28, 2019 and approved in DNR correspondence dated April 18, 2019 (Doc #94934). Monitoring wells MW-89-6R and MW-89-9R were placed back into the assessment monitoring program. There are no constituents currently measured at an SSL above a GWPS at the Landfill.

Table 9
Summary of Groundwater Chemistry
2026 Annual Water Quality Report
Union County Sanitary Landfill
Permit No. 88-SDP-01-79C

The Reporting Period Summary of Groundwater Chemistry Table is located in Appendix C.

Historical analytical data prior to 2025 can be found in the 2024 Annual Water Quality Report, dated 8/1/2024 (Doc #110616).

Historical analytical data for 2025 can be found in the 2025 Annual Water Quality Report, dated 12/5/2025 (Doc #115126).

Note:
Background monitoring well PZ-22 was historically sampled for IAC 567-113.2(5) parameters prior to the 2018 reporting period. Historical PZ-22 data can be found in the 2017 AWQR (Doc #90951).

Table 10
Historical SSI and SSL
2026 Annual Water Quality Report
Union County Sanitary Landfill
Permit No. 88-SDP-01-79C

Key
SSI
SSL

Well	Constituent	Spring 2020	Fall 2020	2021	2022	2023	2024[1]	2025[1]	2026[1]
MW-89-2	Barium								
	Cadmium								
	Chromium								
	Cobalt								
	Nickel								
MW-89-6R	Arsenic								
	Barium								
	Cobalt								
	Nickel								
MW-89-7	Arsenic								
	Barium								
	Cobalt								
	Nickel								
	Vinyl Chloride								
MW-89-9R	Arsenic								
	Barium								
	Cobalt								
	Nickel								
MW-21	None								
PZ-21	Barium								

Comments:

1) Prior to 2024, SSIs were only recorded for the initial confirmed SSI measurement. SSIs are not confirmed for assessment monitoring wells.
2) Previous and historical SSLs were removed as a result of the Alternative Source Demonstration submitted on March 28, 2019 (Document #94783) and approved in DNR correspondence dated April 18, 2019 (Document #94934).

Table 11
Corrective Action Trend Analysis
2026 Annual Water Quality Report
Union County Sanitary Landfill
Permit No. 88-SDP-01-79C

Well	Current SSL	Trend	Calculated S	Critical S	Total N	Projected Date to Completion*
NA						

Notes:

NA - Not Applicable; there are currently no SSLs measured in the monitoring wells at the Landfill.

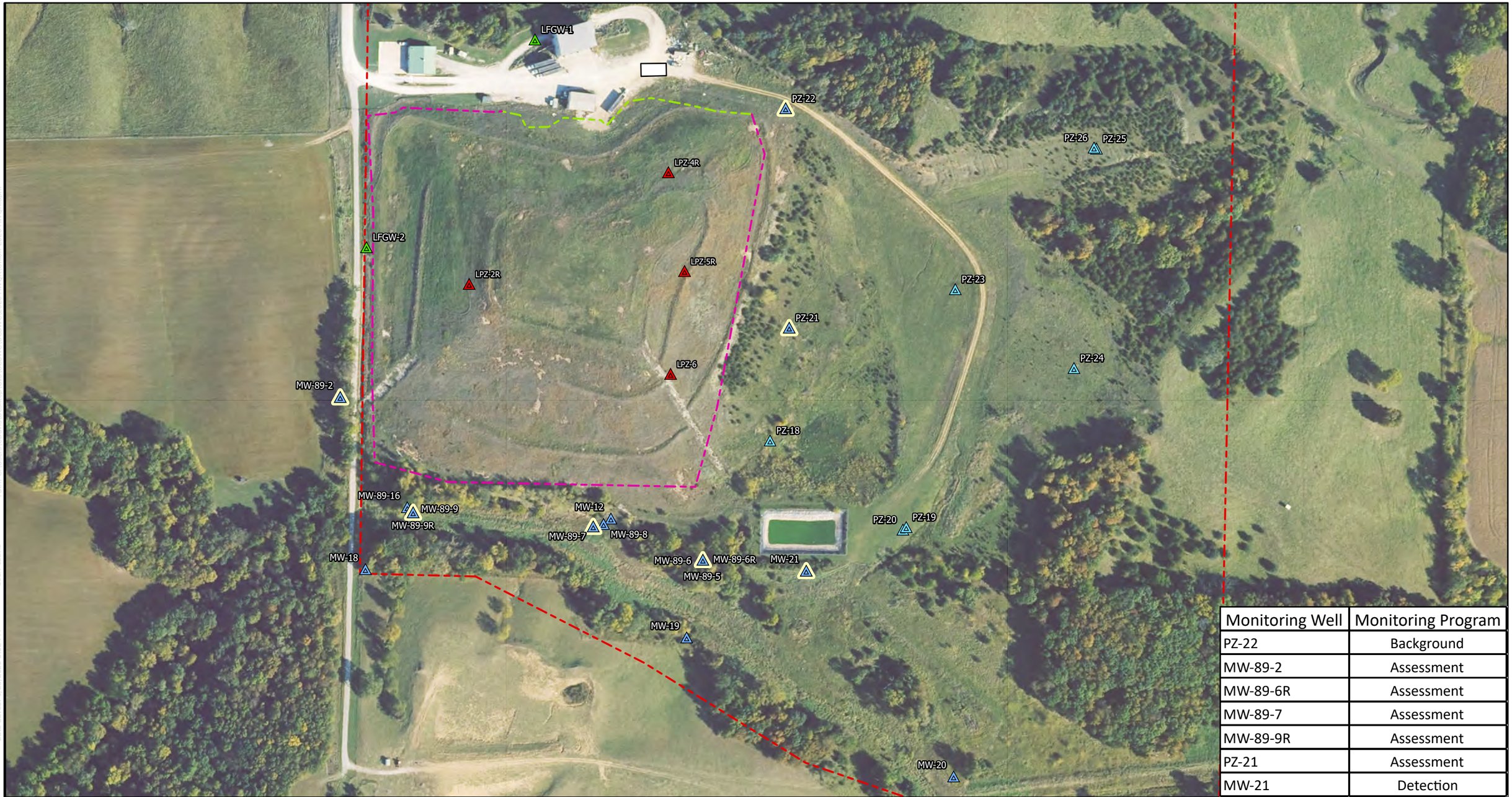
N - Number of samples utilized in statistical evaluation.

S - Mann-Kendall Statistic.

Comments:

1) An Alternative Source Demonstration was submitted on March 28, 2019 (Document #94783) and approved in DNR correspondence dated April 18, 2019 (Document #94934) which removed historical SSLs from monitoring wells MW-89-6R and MW-89-9R. Therefore, corrective action is not applicable at this time.

FIGURES



Monitoring Well	Monitoring Program
PZ-22	Background
MW-89-2	Assessment
MW-89-6R	Assessment
MW-89-7	Assessment
MW-89-9R	Assessment
PZ-21	Assessment
MW-21	Detection

SCS ENGINEERS
environmental consultants and contractors

Approved Monitoring Network

Legend

- HMSP Monitoring Well
- Approximate Leachate Monitoring Location
- Approximate Monitoring Well Location
- Approximate Groundwater Piezometer Location
- Approximate Landfill Gas Well Location
- Approximate Property Boundary
- Approximate Waste Boundary
- Located Waste Boundary

Union County Sanitary Landfill
Creston, Iowa
Project No: 27224311.27
Drawing Date: August 2026

Figure 1

N W E S

0 115 230 460 690 Feet

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, CGIAR, USGS, USDA NAIP, Iowa State University GIS Facility

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Groundwater Contours

Legend

- Approximate Contours Based on Measurments Taken on April 14, 2026
- Approximate Monitoring Well Location
- Approximate Groundwater Piezometer Location
- Approximate Landfill Gas Well Location
- Approximate Leachate Monitoring Location
- Approximate Property Boundary
- Approximate Waste Boundary
- Located Waste Boundary

Union County Sanitary Landfill
Creston, Iowa
Project No: 27224311.27
Drawing Date: August 2026

Figure 2

N W E S

0 120 240 480 720 Feet

SCS ENGINEERS
environmental consultants and contractors

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, CGIAR, USGS, USDA NAIP, Iowa State University GIS Facility

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APPENDIX A | FIELD SAMPLING FORMS

FORM FOR GROUNDWATER SAMPLING

Project:	**Union Conty Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-89-6R**	Date:	**4/14/2026**
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):	24.5
Initial Static Water Level (feet):	7.95
Initial Groundwater Elevation (ft-amsl):	1160.92
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductance (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (NTU)	
4:46 PM	Purging start time.						
4:49 PM	12.6	1.3	661.1	6.50	22.8	246.0	
4:52 PM	12.8	0.6	639.5	6.34	21.4	129.9	
4:55 PM	12.4	0.5	635.6	6.28	19.9	81.6	
4:58 PM	12.2	0.4	631.9	6.24	18.6	51.5	
	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:	Lock needed.	

Additional Comments:	Color: Orange Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Union Conty Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-89-7**	Date:	**4/14/2026**
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):	40.3
Initial Static Water Level (feet):	9.64
Initial Groundwater Elevation (ft-amsl):	1159.59
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductance (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (NTU)	
3:59 PM	Purging start time.						
4:02 PM	13.8	1.4	1327.0	6.85	98.3	16.1	
4:05 PM	13.7	0.7	1317.7	6.71	55.8	23.5	
4:08 PM	13.6	1.0	1306.2	6.67	32.1	26.4	
4:11 PM	13.4	1.9	1351.9	6.59	27.9	12.2	
	Parameters stabilized, sample collected.						

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

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

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Union Conty Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-89-9R**	Date:	**4/14/2026**
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):	18.4
Initial Static Water Level (feet):	8.75
Initial Groundwater Elevation (ft-amsl):	1164.05
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 Conductance (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (NTU)	
2:56 PM	Purging start time.						
2:59 PM	13.4	1.3	1186.3	6.91	81.8	377.3	
3:02 PM	12.9	0.7	1139.5	6.80	55.2	178.9	
3:05 PM	12.4	0.6	1147.7	6.76	35.9	118.0	
3:08 PM	12.8	0.5	1181.5	6.74	23.8	82.7	
3:11 PM	12.2	0.4	1225.7	6.73	16.6	55.8	
3:14 PM	12.8	0.4	1243.6	6.73	11.1	48.3	
	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):	21:00
Average Purge Rate (mL/min):	123.81

D. WELL MAINTENANCE

Does the well require any future maintenance?	Yes	
If yes, explain:	Lock needed.	

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Union Conty Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-21**	Date:	**4/14/2026**
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):	38.2
Initial Static Water Level (feet):	10.49
Initial Groundwater Elevation (ft-amsl):	1167.64
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 Conductance (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (NTU)	
1:09 PM	Purging start time.						
1:12 PM	13.7	6.3	2330.2	7.12	190.4	2.6	
1:15 PM	13.6	6.2	2322.3	7.13	195.1	2.5	
1:18 PM	13.6	6.2	2318.3	7.09	201.5	3.0	
1:21 PM	13.3	6.2	2308.7	7.10	205.6	2.9	
	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?	Yes	
If yes, explain:	Lock needed.	

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Union Conty Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**PZ-22**	Date:	**4/14/2026**
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):	68.2
Initial Static Water Level (feet):	20.60
Initial Groundwater Elevation (ft-amsl):	1222.91
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 Conductance (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (NTU)	
1:41 PM	Purging start time.						
1:44 PM	15.4	0.8	2924.7	6.84	137.1	23.9	
1:47 PM	14.3	0.5	2945.9	6.80	66.7	7.5	
1:50 PM	14.6	0.4	2982.8	6.76	32.2	8.7	
1:53 PM	14.2	0.3	2947.3	6.76	17.1	11.9	
	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?	Yes	
If yes, explain:	Sub pump not working	

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Union Conty Solid Waste**		
Monitoring Well/Piezometer ID:	**MW-89-2**	Date:	**7/20/2026**
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):	70.4
Initial Static Water Level (feet):	58.85
Initial Groundwater Elevation (ft-amsl):	1148.23
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 Conductance (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
3:06 PM	Purging start time.						
3:09 PM	16.06	2.47	3084.00	7.08	144.00	39.35	
3:12 PM	16.39	1.70	3077.90	6.93	123.30	43.61	
3:15 PM	16.72	1.29	3089.00	6.87	91.20	37.31	
3:18 PM	17.44	1.04	3052.70	6.83	61.90	33.02	
	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	Lock needed
If yes, explain:		

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Union Conty Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**PZ-21**	Date:	**7/20/2026**
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):	48.1
Initial Static Water Level (feet):	33.00
Initial Groundwater Elevation (ft-amsl):	1210.51
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 (FNU)	
1:56 PM	Purging start time.						
1:59 PM	18.2	0.8	3081.6	7.11	-63.2	247.9	
2:02 PM	18.6	0.7	3071.3	7.10	-75.9	167.9	
2:05 PM	18.8	0.6	3093.3	7.08	-84.6	119.1	
2:08 PM	18.6	0.6	3101.6	7.06	-90.1	87.9	
2:11 PM	19.2	0.6	3090.8	7.03	-93.3	68.7	
2:14 PM	20.2	0.6	3089.3	6.99	-95.0	53.9	
	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):	12:00
Average Purge Rate (mL/min):	216.67

D. WELL MAINTENANCE

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

Additional Comments:	Sub pump issues. Ran non-dedicated pump slowly but still ran down very quickly. Lowered pump and attempted to stabilize again. Continued to run pump as slowly as possible. Color: Clear, Odor: Sulfur

APPENDIX B-1 | LABORATORY ANALYTICAL DATA SHEETS

eurofins | Environment Testing

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

ANALYTICAL REPORT

PREPARED FOR

Attn: Nathan Ohrt
SCS Engineers
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JOB DESCRIPTION

Union 2026 Annual HMSP
2024 Annual Sampling

JOB NUMBER

310-329751-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

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Job Notes

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Authorization



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Job Narrative
310-329751-1

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 4/15/2026 4:45 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.9°C.

GC/MS VOA
Method 8260D: The continuing calibration verification (CCV) associated with batch 310-486074 recovered outside of the control limits for Bromomethane (-22%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 310-486074/4).

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

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

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

Sample Summary

Client: SCS Engineers
Job ID: 310-329751-1
Project/Site: Union 2026 Annual HMSP

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-329751-1	PZ-22	Water	04/14/26 14:07	04/15/26 16:45	Iowa
310-329751-2	MW-89-6R	Water	04/14/26 17:12	04/15/26 16:45	Iowa
310-329751-3	MW-89-7	Water	04/14/26 16:24	04/15/26 16:45	Iowa
310-329751-4	MW-89-9R	Water	04/14/26 15:22	04/15/26 16:45	Iowa
310-329751-5	PZ-21	Water	04/14/26 12:48	04/15/26 16:45	Iowa
310-329751-6	MW-21	Water	04/14/26 13:29	04/15/26 16:45	Iowa
310-329751-7	MW-D	Water	04/14/26 12:48	04/15/26 16:45	Iowa
310-329751-8	Trip Blank	Trip Blank	04/14/26 00:00	04/15/26 16:45	Iowa

Detection Summary

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-329751-1

Client Sample ID: PZ-22 — Lab Sample ID: 310-329751-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.00616		0.00200	0.00100	mg/L	1		6020B	Total/NA
Arsenic	0.0520		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0340		0.00200	0.000660	mg/L	1		6020B	Total/NA
Beryllium	0.00139		0.00100	0.000330	mg/L	1		6020B	Total/NA
Cadmium	0.000333		0.000200	0.000100	mg/L	1		6020B	Total/NA
Cobalt	0.0161		0.000500	0.000170	mg/L	1		6020B	Total/NA
Copper	0.148		0.00500	0.00320	mg/L	1		6020B	Total/NA
Nickel	0.0361		0.00500	0.00230	mg/L	1		6020B	Total/NA
Total Suspended Solids	266		30.0	16.8	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-89-6R — Lab Sample ID: 310-329751-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0182		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.332		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.0100		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.00796		0.00500	0.00230	mg/L	1		6020B	Total/NA

Client Sample ID: MW-89-7 — Lab Sample ID: 310-329751-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.465	J	1.00	0.400	ug/L	1		8260D	Total/NA
Benzene	0.242	J	0.500	0.220	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.690	J	1.00	0.550	ug/L	1		8260D	Total/NA
Vinyl chloride	1.08		1.00	0.430	ug/L	1		8260D	Total/NA
Arsenic	0.00670		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.399		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00379		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0118		0.00500	0.00230	mg/L	1		6020B	Total/NA
Total Suspended Solids	27.0		15.0	8.40	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-89-9R — Lab Sample ID: 310-329751-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00675		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.239		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.0129		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0146		0.00500	0.00230	mg/L	1		6020B	Total/NA
Total Suspended Solids	12.3		3.75	2.10	mg/L	1		I-3765-85	Total/NA

Client Sample ID: PZ-21 — Lab Sample ID: 310-329751-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.000910	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0144		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00117		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.00662		0.00500	0.00230	mg/L	1		6020B	Total/NA
Total Suspended Solids	10.4		3.33	1.87	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-21 — Lab Sample ID: 310-329751-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.00884		0.00200	0.000660	mg/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample ID: MW-21 (Continued)
Lab Sample ID: 310-329751-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	7.75		1.88	1.05	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-D
Lab Sample ID: 310-329751-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.00133	J	0.00200	0.00100	mg/L	1		6020B	Total/NA
Arsenic	0.000799	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0143		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00101		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.00656		0.00500	0.00230	mg/L	1		6020B	Total/NA
Total Suspended Solids	7.88		1.88	1.05	mg/L	1		I-3765-85	Total/NA

Client Sample ID: Trip Blank
Lab Sample ID: 310-329751-8

No Detections.

This Detection Summary does not include radiochemical test results.

Quantitation Limit Exceptions Summary

Client: SCS Engineers
Job ID: 310-329751-1
Project/Site: Union 2026 Annual HMSP

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

Method	Analyte	Matrix	Prep Type	Unit	Client RL	Lab PQL
8260D	1,2-Dibromo-3-Chloropropane	Trip Blank	Total/NA	ug/L	1.20	5.0
8260D	1,2-Dibromo-3-Chloropropane	Water	Total/NA	ug/L	1.20	5.0
8260D	1,2-Dibromoethane (EDB)	Trip Blank	Total/NA	ug/L	0.340	1.0
8260D	1,2-Dibromoethane (EDB)	Water	Total/NA	ug/L	0.340	1.0

Client: SCS Engineers
Job ID: 310-329751-1
Project/Site: Union 2026 Annual HMSP

Client Sample ID: PZ-22
Lab Sample ID: 310-329751-1
Date Collected: 04/14/26 14:07
Matrix: Water
Date Received: 04/15/26 16:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00616		0.00200	0.00100	mg/L		04/20/26 09:00	04/23/26 16:29	1
Arsenic	0.0520		0.00200	0.000530	mg/L		04/20/26 09:00	04/23/26 16:29	1
Barium	0.0340		0.00200	0.000660	mg/L		04/20/26 09:00	04/23/26 16:29	1
Beryllium	0.00139		0.00100	0.000330	mg/L		04/20/26 09:00	04/23/26 16:29	1
Cadmium	0.000333		0.000200	0.000100	mg/L		04/20/26 09:00	04/23/26 16:29	1
Cobalt	0.0161		0.000500	0.000170	mg/L		04/20/26 09:00	04/23/26 16:29	1
Copper	0.148		0.00500	0.00320	mg/L		04/20/26 09:00	04/23/26 16:29	1
Nickel	0.0361		0.00500	0.00230	mg/L		04/20/26 09:00	04/23/26 16:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide (SW846 9034)	<1.00		1.00	0.231	mg/L		04/19/26 13:08	04/19/26 13:40	1
Total Suspended Solids (USGS I-3765-85)	266		30.0	16.8	mg/L			04/17/26 11:37	1

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-329751-1

Client Sample ID: MW-89-6R
Date Collected: 04/14/26 17:12
Date Received: 04/15/26 16:45

Lab Sample ID: 310-329751-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		04/20/26 09:00	04/23/26 16:32	1
Arsenic	**0.0182**		0.00200	0.000530	mg/L		04/20/26 09:00	04/23/26 16:32	1
Barium	**0.332**		0.00200	0.000660	mg/L		04/20/26 09:00	04/23/26 16:32	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		04/20/26 09:00	04/23/26 16:32	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		04/20/26 09:00	04/23/26 16:32	1
Cobalt	**0.0100**		0.000500	0.000170	mg/L		04/20/26 09:00	04/23/26 16:32	1
Copper	<0.00500		0.00500	0.00320	mg/L		04/20/26 09:00	04/23/26 16:32	1
Nickel	**0.00796**		0.00500	0.00230	mg/L		04/20/26 09:00	04/23/26 16:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide (SW846 9034)	<1.00		1.00	0.231	mg/L		04/19/26 13:09	04/19/26 13:42	1

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-329751-1

Client Sample ID: MW-89-7
Date Collected: 04/14/26 16:24
Date Received: 04/15/26 16:45

Lab Sample ID: 310-329751-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			04/16/26 15:39	1
1,1,1-Trichloroethane	<1.00		1.00	0.420	ug/L			04/16/26 15:39	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.350	ug/L			04/16/26 15:39	1
1,1,2-Trichloroethane	<1.00		1.00	0.330	ug/L			04/16/26 15:39	1
1,1-Dichloroethane	**0.465**	**J**	1.00	0.400	ug/L			04/16/26 15:39	1
1,1-Dichloroethene	<2.00		2.00	0.460	ug/L			04/16/26 15:39	1
1,2,3-Trichloropropane	<1.00		1.00	0.430	ug/L			04/16/26 15:39	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			04/16/26 15:39	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			04/16/26 15:39	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			04/16/26 15:39	1
1,2-Dichloroethane	<1.00		1.00	0.890	ug/L			04/16/26 15:39	1
1,2-Dichloropropane	<1.00		1.00	0.380	ug/L			04/16/26 15:39	1
1,4-Dichlorobenzene	<1.00		1.00	0.490	ug/L			04/16/26 15:39	1
2-Butanone (MEK)	<10.0		10.0	3.40	ug/L			04/16/26 15:39	1
2-Hexanone	<10.0		10.0	3.80	ug/L			04/16/26 15:39	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	3.50	ug/L			04/16/26 15:39	1
Acetone	<10.0		10.0	3.80	ug/L			04/16/26 15:39	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			04/16/26 15:39	1
Benzene	**0.242**	**J**	0.500	0.220	ug/L			04/16/26 15:39	1
Bromochloromethane	<5.00		5.00	1.70	ug/L			04/16/26 15:39	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			04/16/26 15:39	1
Bromoform	<5.00		5.00	2.60	ug/L			04/16/26 15:39	1
Bromomethane	<4.00		4.00	1.10	ug/L			04/16/26 15:39	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			04/16/26 15:39	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			04/16/26 15:39	1
Chlorobenzene	<1.00		1.00	0.350	ug/L			04/16/26 15:39	1
Chlorodibromomethane	<5.00		5.00	1.50	ug/L			04/16/26 15:39	1
Chloroethane	<4.00		4.00	0.900	ug/L			04/16/26 15:39	1
Chloroform	<3.00		3.00	1.30	ug/L			04/16/26 15:39	1
Chloromethane	<3.00		3.00	0.610	ug/L			04/16/26 15:39	1
cis-1,2-Dichloroethene	**0.690**	**J**	1.00	0.550	ug/L			04/16/26 15:39	1
cis-1,3-Dichloropropene	<5.00		5.00	1.20	ug/L			04/16/26 15:39	1
Dibromomethane	<1.00		1.00	0.330	ug/L			04/16/26 15:39	1
Ethylbenzene	<1.00		1.00	0.420	ug/L			04/16/26 15:39	1
Iodomethane	<10.0		10.0	2.60	ug/L			04/16/26 15:39	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			04/16/26 15:39	1
Styrene	<1.00		1.00	0.370	ug/L			04/16/26 15:39	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			04/16/26 15:39	1
Toluene	<1.00		1.00	0.430	ug/L			04/16/26 15:39	1
trans-1,2-Dichloroethene	<1.00		1.00	0.410	ug/L			04/16/26 15:39	1
trans-1,3-Dichloropropene	<5.00		5.00	2.30	ug/L			04/16/26 15:39	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	2.40	ug/L			04/16/26 15:39	1
Trichloroethene	<1.00		1.00	0.350	ug/L			04/16/26 15:39	1
Trichlorofluoromethane	<4.00		4.00	0.470	ug/L			04/16/26 15:39	1
Vinyl acetate	<10.0		10.0	7.10	ug/L			04/16/26 15:39	1
Vinyl chloride	**1.08**		1.00	0.430	ug/L			04/16/26 15:39	1
Xylenes, Total	<3.00		3.00	1.10	ug/L			04/16/26 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*109*		*76 - 130*		*04/16/26 15:39*	*1*

Client Sample ID: MW-89-7
Date Collected: 04/14/26 16:24
Date Received: 04/15/26 16:45

Lab Sample ID: 310-329751-3
Matrix: Water

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*80 - 120*		*04/16/26 15:39*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*04/16/26 15:39*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		04/20/26 09:00	04/23/26 16:41	1
Arsenic	**0.00670**		0.00200	0.000530	mg/L		04/20/26 09:00	04/23/26 16:41	1
Barium	**0.399**		0.00200	0.000660	mg/L		04/20/26 09:00	04/23/26 16:41	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		04/20/26 09:00	04/23/26 16:41	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		04/20/26 09:00	04/23/26 16:41	1
Cobalt	**0.00379**		0.000500	0.000170	mg/L		04/20/26 09:00	04/23/26 16:41	1
Copper	<0.00500		0.00500	0.00320	mg/L		04/20/26 09:00	04/23/26 16:41	1
Nickel	**0.0118**		0.00500	0.00230	mg/L		04/20/26 09:00	04/23/26 16:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**27.0**		15.0	8.40	mg/L			04/17/26 10:21	1

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-329751-1

Client Sample ID: MW-89-9R
Date Collected: 04/14/26 15:22
Date Received: 04/15/26 16:45

Lab Sample ID: 310-329751-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			04/16/26 16:01	1
1,1,1-Trichloroethane	<1.00		1.00	0.420	ug/L			04/16/26 16:01	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.350	ug/L			04/16/26 16:01	1
1,1,2-Trichloroethane	<1.00		1.00	0.330	ug/L			04/16/26 16:01	1
1,1-Dichloroethane	<1.00		1.00	0.400	ug/L			04/16/26 16:01	1
1,1-Dichloroethene	<2.00		2.00	0.460	ug/L			04/16/26 16:01	1
1,2,3-Trichloropropane	<1.00		1.00	0.430	ug/L			04/16/26 16:01	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			04/16/26 16:01	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			04/16/26 16:01	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			04/16/26 16:01	1
1,2-Dichloroethane	<1.00		1.00	0.890	ug/L			04/16/26 16:01	1
1,2-Dichloropropane	<1.00		1.00	0.380	ug/L			04/16/26 16:01	1
1,4-Dichlorobenzene	<1.00		1.00	0.490	ug/L			04/16/26 16:01	1
2-Butanone (MEK)	<10.0		10.0	3.40	ug/L			04/16/26 16:01	1
2-Hexanone	<10.0		10.0	3.80	ug/L			04/16/26 16:01	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	3.50	ug/L			04/16/26 16:01	1
Acetone	<10.0		10.0	3.80	ug/L			04/16/26 16:01	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			04/16/26 16:01	1
Benzene	<0.500		0.500	0.220	ug/L			04/16/26 16:01	1
Bromochloromethane	<5.00		5.00	1.70	ug/L			04/16/26 16:01	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			04/16/26 16:01	1
Bromoform	<5.00		5.00	2.60	ug/L			04/16/26 16:01	1
Bromomethane	<4.00		4.00	1.10	ug/L			04/16/26 16:01	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			04/16/26 16:01	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			04/16/26 16:01	1
Chlorobenzene	<1.00		1.00	0.350	ug/L			04/16/26 16:01	1
Chlorodibromomethane	<5.00		5.00	1.50	ug/L			04/16/26 16:01	1
Chloroethane	<4.00		4.00	0.900	ug/L			04/16/26 16:01	1
Chloroform	<3.00		3.00	1.30	ug/L			04/16/26 16:01	1
Chloromethane	<3.00		3.00	0.610	ug/L			04/16/26 16:01	1
cis-1,2-Dichloroethene	<1.00		1.00	0.550	ug/L			04/16/26 16:01	1
cis-1,3-Dichloropropene	<5.00		5.00	1.20	ug/L			04/16/26 16:01	1
Dibromomethane	<1.00		1.00	0.330	ug/L			04/16/26 16:01	1
Ethylbenzene	<1.00		1.00	0.420	ug/L			04/16/26 16:01	1
Iodomethane	<10.0		10.0	2.60	ug/L			04/16/26 16:01	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			04/16/26 16:01	1
Styrene	<1.00		1.00	0.370	ug/L			04/16/26 16:01	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			04/16/26 16:01	1
Toluene	<1.00		1.00	0.430	ug/L			04/16/26 16:01	1
trans-1,2-Dichloroethene	<1.00		1.00	0.410	ug/L			04/16/26 16:01	1
trans-1,3-Dichloropropene	<5.00		5.00	2.30	ug/L			04/16/26 16:01	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	2.40	ug/L			04/16/26 16:01	1
Trichloroethene	<1.00		1.00	0.350	ug/L			04/16/26 16:01	1
Trichlorofluoromethane	<4.00		4.00	0.470	ug/L			04/16/26 16:01	1
Vinyl acetate	<10.0		10.0	7.10	ug/L			04/16/26 16:01	1
Vinyl chloride	<1.00		1.00	0.430	ug/L			04/16/26 16:01	1
Xylenes, Total	<3.00		3.00	1.10	ug/L			04/16/26 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*113*		*76 - 130*		*04/16/26 16:01*	*1*

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-329751-1

Client Sample ID: MW-89-9R
Date Collected: 04/14/26 15:22
Date Received: 04/15/26 16:45

Lab Sample ID: 310-329751-4
Matrix: Water

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 120*		*04/16/26 16:01*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*04/16/26 16:01*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		04/20/26 09:00	04/23/26 16:44	1
Arsenic	**0.00675**		0.00200	0.000530	mg/L		04/20/26 09:00	04/23/26 16:44	1
Barium	**0.239**		0.00200	0.000660	mg/L		04/20/26 09:00	04/23/26 16:44	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		04/20/26 09:00	04/23/26 16:44	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		04/20/26 09:00	04/23/26 16:44	1
Cobalt	**0.0129**		0.000500	0.000170	mg/L		04/20/26 09:00	04/23/26 16:44	1
Copper	<0.00500		0.00500	0.00320	mg/L		04/20/26 09:00	04/23/26 16:44	1
Nickel	**0.0146**		0.00500	0.00230	mg/L		04/20/26 09:00	04/23/26 16:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide (SW846 9034)	<1.00		1.00	0.231	mg/L		04/19/26 13:09	04/19/26 13:43	1
Total Suspended Solids (USGS I-3765-85)	**12.3**		3.75	2.10	mg/L			04/17/26 11:37	1

Client: SCS Engineers
Job ID: 310-329751-1
Project/Site: Union 2026 Annual HMSP

Client Sample ID: PZ-21
Lab Sample ID: 310-329751-5

Date Collected: 04/14/26 12:48
Matrix: Water
Date Received: 04/15/26 16:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		04/20/26 09:00	04/23/26 16:46	1
Arsenic	**0.000910**	**J**	0.00200	0.000530	mg/L		04/20/26 09:00	04/23/26 16:46	1
Barium	**0.0144**		0.00200	0.000660	mg/L		04/20/26 09:00	04/23/26 16:46	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		04/20/26 09:00	04/23/26 16:46	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		04/20/26 09:00	04/23/26 16:46	1
Cobalt	**0.00117**		0.000500	0.000170	mg/L		04/20/26 09:00	04/23/26 16:46	1
Copper	<0.00500		0.00500	0.00320	mg/L		04/20/26 09:00	04/23/26 16:46	1
Nickel	**0.00662**		0.00500	0.00230	mg/L		04/20/26 09:00	04/23/26 16:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**10.4**		3.33	1.87	mg/L			04/17/26 10:21	1

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-329751-1

Client Sample ID: MW-21
Date Collected: 04/14/26 13:29
Date Received: 04/15/26 16:45

Lab Sample ID: 310-329751-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		04/20/26 09:00	04/23/26 16:49	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		04/20/26 09:00	04/23/26 16:49	1
Barium	**0.00884**		0.00200	0.000660	mg/L		04/20/26 09:00	04/23/26 16:49	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		04/20/26 09:00	04/23/26 16:49	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		04/20/26 09:00	04/23/26 16:49	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		04/20/26 09:00	04/23/26 16:49	1
Copper	<0.00500		0.00500	0.00320	mg/L		04/20/26 09:00	04/23/26 16:49	1
Nickel	<0.00500		0.00500	0.00230	mg/L		04/20/26 09:00	04/23/26 16:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**7.75**		1.88	1.05	mg/L			04/17/26 10:21	1

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-329751-1

Client Sample ID: MW-D

Date Collected: 04/14/26 12:48
Date Received: 04/15/26 16:45

Lab Sample ID: 310-329751-7

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00133	J	0.00200	0.00100	mg/L		04/20/26 09:00	04/23/26 16:52	1
Arsenic	0.000799	J	0.00200	0.000530	mg/L		04/20/26 09:00	04/23/26 16:52	1
Barium	0.0143		0.00200	0.000660	mg/L		04/20/26 09:00	04/23/26 16:52	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		04/20/26 09:00	04/23/26 16:52	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		04/20/26 09:00	04/23/26 16:52	1
Cobalt	0.00101		0.000500	0.000170	mg/L		04/20/26 09:00	04/23/26 16:52	1
Copper	<0.00500		0.00500	0.00320	mg/L		04/20/26 09:00	04/23/26 16:52	1
Nickel	0.00656		0.00500	0.00230	mg/L		04/20/26 09:00	04/23/26 16:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	7.88		1.88	1.05	mg/L			04/17/26 10:21	1

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-329751-1

Client Sample ID: Trip Blank

Date Collected: 04/14/26 00:00
Date Received: 04/15/26 16:45

Lab Sample ID: 310-329751-8

Matrix: Trip Blank

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			04/16/26 13:27	1
1,1,1-Trichloroethane	<1.00		1.00	0.420	ug/L			04/16/26 13:27	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.350	ug/L			04/16/26 13:27	1
1,1,2-Trichloroethane	<1.00		1.00	0.330	ug/L			04/16/26 13:27	1
1,1-Dichloroethane	<1.00		1.00	0.400	ug/L			04/16/26 13:27	1
1,1-Dichloroethene	<2.00		2.00	0.460	ug/L			04/16/26 13:27	1
1,2,3-Trichloropropane	<1.00		1.00	0.430	ug/L			04/16/26 13:27	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			04/16/26 13:27	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			04/16/26 13:27	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			04/16/26 13:27	1
1,2-Dichloroethane	<1.00		1.00	0.890	ug/L			04/16/26 13:27	1
1,2-Dichloropropane	<1.00		1.00	0.380	ug/L			04/16/26 13:27	1
1,4-Dichlorobenzene	<1.00		1.00	0.490	ug/L			04/16/26 13:27	1
2-Butanone (MEK)	<10.0		10.0	3.40	ug/L			04/16/26 13:27	1
2-Hexanone	<10.0		10.0	3.80	ug/L			04/16/26 13:27	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	3.50	ug/L			04/16/26 13:27	1
Acetone	<10.0		10.0	3.80	ug/L			04/16/26 13:27	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			04/16/26 13:27	1
Benzene	<0.500		0.500	0.220	ug/L			04/16/26 13:27	1
Bromochloromethane	<5.00		5.00	1.70	ug/L			04/16/26 13:27	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			04/16/26 13:27	1
Bromoform	<5.00		5.00	2.60	ug/L			04/16/26 13:27	1
Bromomethane	<4.00		4.00	1.10	ug/L			04/16/26 13:27	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			04/16/26 13:27	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			04/16/26 13:27	1
Chlorobenzene	<1.00		1.00	0.350	ug/L			04/16/26 13:27	1
Chlorodibromomethane	<5.00		5.00	1.50	ug/L			04/16/26 13:27	1
Chloroethane	<4.00		4.00	0.900	ug/L			04/16/26 13:27	1
Chloroform	<3.00		3.00	1.30	ug/L			04/16/26 13:27	1
Chloromethane	<3.00		3.00	0.610	ug/L			04/16/26 13:27	1
cis-1,2-Dichloroethene	<1.00		1.00	0.550	ug/L			04/16/26 13:27	1
cis-1,3-Dichloropropene	<5.00		5.00	1.20	ug/L			04/16/26 13:27	1
Dibromomethane	<1.00		1.00	0.330	ug/L			04/16/26 13:27	1
Ethylbenzene	<1.00		1.00	0.420	ug/L			04/16/26 13:27	1
Iodomethane	<10.0		10.0	2.60	ug/L			04/16/26 13:27	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			04/16/26 13:27	1
Styrene	<1.00		1.00	0.370	ug/L			04/16/26 13:27	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			04/16/26 13:27	1
Toluene	<1.00		1.00	0.430	ug/L			04/16/26 13:27	1
trans-1,2-Dichloroethene	<1.00		1.00	0.410	ug/L			04/16/26 13:27	1
trans-1,3-Dichloropropene	<5.00		5.00	2.30	ug/L			04/16/26 13:27	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	2.40	ug/L			04/16/26 13:27	1
Trichloroethene	<1.00		1.00	0.350	ug/L			04/16/26 13:27	1
Trichlorofluoromethane	<4.00		4.00	0.470	ug/L			04/16/26 13:27	1
Vinyl acetate	<10.0		10.0	7.10	ug/L			04/16/26 13:27	1
Vinyl chloride	<1.00		1.00	0.430	ug/L			04/16/26 13:27	1
Xylenes, Total	<3.00		3.00	1.10	ug/L			04/16/26 13:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*107*		*76 - 130*		*04/16/26 13:27*	*1*

Client Sample ID: Trip Blank
Lab Sample ID: 310-329751-8
Date Collected: 04/14/26 00:00
Matrix: Trip Blank
Date Received: 04/15/26 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		04/16/26 13:27	1
4-Bromofluorobenzene (Surr)	108		80 - 120		04/16/26 13:27	1

Qualifiers

GC/MS VOA

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

Metals

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

Glossary

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

Surrogate Summary

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-329751-1

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

Matrix: Trip Blank — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(76-130)	(80-120)	(80-120)
310-329751-8	Trip Blank	107	96	108

Surrogate Legend

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

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

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(76-130)	(80-120)	(80-120)
310-329751-3	MW-89-7	109	99	106
310-329751-4	MW-89-9R	113	98	105
LCS 310-486074/6	Lab Control Sample	99	99	100
LCS 310-486074/7	Lab Control Sample	106	98	104
MB 310-486074/5	Method Blank	106	101	101

Surrogate Legend

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

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

Lab Sample ID: MB 310-486074/5
Matrix: Water
Analysis Batch: 486074

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			04/16/26 10:31	1
1,1,1-Trichloroethane	<1.00		1.00	0.420	ug/L			04/16/26 10:31	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.350	ug/L			04/16/26 10:31	1
1,1,2-Trichloroethane	<1.00		1.00	0.330	ug/L			04/16/26 10:31	1
1,1-Dichloroethane	<1.00		1.00	0.400	ug/L			04/16/26 10:31	1
1,1-Dichloroethene	<2.00		2.00	0.460	ug/L			04/16/26 10:31	1
1,2,3-Trichloropropane	<1.00		1.00	0.430	ug/L			04/16/26 10:31	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			04/16/26 10:31	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			04/16/26 10:31	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			04/16/26 10:31	1
1,2-Dichloroethane	<1.00		1.00	0.890	ug/L			04/16/26 10:31	1
1,2-Dichloropropane	<1.00		1.00	0.380	ug/L			04/16/26 10:31	1
1,4-Dichlorobenzene	<1.00		1.00	0.490	ug/L			04/16/26 10:31	1
2-Butanone (MEK)	<10.0		10.0	3.40	ug/L			04/16/26 10:31	1
2-Hexanone	<10.0		10.0	3.80	ug/L			04/16/26 10:31	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	3.50	ug/L			04/16/26 10:31	1
Acetone	<10.0		10.0	3.80	ug/L			04/16/26 10:31	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			04/16/26 10:31	1
Benzene	<0.500		0.500	0.220	ug/L			04/16/26 10:31	1
Bromochloromethane	<5.00		5.00	1.70	ug/L			04/16/26 10:31	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			04/16/26 10:31	1
Bromoform	<5.00		5.00	2.60	ug/L			04/16/26 10:31	1
Bromomethane	<4.00		4.00	1.10	ug/L			04/16/26 10:31	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			04/16/26 10:31	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			04/16/26 10:31	1
Chlorobenzene	<1.00		1.00	0.350	ug/L			04/16/26 10:31	1
Chlorodibromomethane	<5.00		5.00	1.50	ug/L			04/16/26 10:31	1
Chloroethane	<4.00		4.00	0.900	ug/L			04/16/26 10:31	1
Chloroform	<3.00		3.00	1.30	ug/L			04/16/26 10:31	1
Chloromethane	<3.00		3.00	0.610	ug/L			04/16/26 10:31	1
cis-1,2-Dichloroethene	<1.00		1.00	0.550	ug/L			04/16/26 10:31	1
cis-1,3-Dichloropropene	<5.00		5.00	1.20	ug/L			04/16/26 10:31	1
Dibromomethane	<1.00		1.00	0.330	ug/L			04/16/26 10:31	1
Ethylbenzene	<1.00		1.00	0.420	ug/L			04/16/26 10:31	1
Iodomethane	<10.0		10.0	2.60	ug/L			04/16/26 10:31	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			04/16/26 10:31	1
Styrene	<1.00		1.00	0.370	ug/L			04/16/26 10:31	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			04/16/26 10:31	1
Toluene	<1.00		1.00	0.430	ug/L			04/16/26 10:31	1
trans-1,2-Dichloroethene	<1.00		1.00	0.410	ug/L			04/16/26 10:31	1
trans-1,3-Dichloropropene	<5.00		5.00	2.30	ug/L			04/16/26 10:31	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	2.40	ug/L			04/16/26 10:31	1
Trichloroethene	<1.00		1.00	0.350	ug/L			04/16/26 10:31	1
Trichlorofluoromethane	<4.00		4.00	0.470	ug/L			04/16/26 10:31	1
Vinyl acetate	<10.0		10.0	7.10	ug/L			04/16/26 10:31	1
Vinyl chloride	<1.00		1.00	0.430	ug/L			04/16/26 10:31	1
Xylenes, Total	<3.00		3.00	1.10	ug/L			04/16/26 10:31	1

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

Lab Sample ID: MB 310-486074/5
Matrix: Water
Analysis Batch: 486074

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	*106*		*76 - 130*		*04/16/26 10:31*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*04/16/26 10:31*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*04/16/26 10:31*	*1*

Lab Sample ID: LCS 310-486074/6
Matrix: Water
Analysis Batch: 486074

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	18.43		ug/L		92	70 - 121
1,1,1-Trichloroethane	20.0	20.07		ug/L		100	69 - 130
1,1,2,2-Tetrachloroethane	20.0	19.49		ug/L		97	70 - 122
1,1,2-Trichloroethane	20.0	19.53		ug/L		98	75 - 121
1,1-Dichloroethane	20.0	19.30		ug/L		97	69 - 127
1,1-Dichloroethene	20.0	19.40		ug/L		97	64 - 134
1,2,3-Trichloropropane	20.0	21.22		ug/L		106	70 - 122
1,2-Dibromo-3-Chloropropane	20.0	22.17		ug/L		111	62 - 132
1,2-Dibromoethane (EDB)	20.0	18.66		ug/L		93	74 - 122
1,2-Dichlorobenzene	20.0	18.97		ug/L		95	74 - 120
1,2-Dichloroethane	20.0	19.25		ug/L		96	68 - 125
1,2-Dichloropropane	20.0	19.09		ug/L		95	72 - 128
1,4-Dichlorobenzene	20.0	18.78		ug/L		94	72 - 120
2-Butanone (MEK)	40.0	43.36		ug/L		108	60 - 134
2-Hexanone	40.0	41.02		ug/L		103	62 - 139
4-Methyl-2-pentanone (MIBK)	40.0	40.99		ug/L		102	62 - 136
Acetone	40.0	38.53		ug/L		96	59 - 136
Acrylonitrile	200	206.6		ug/L		103	50 - 150
Benzene	20.0	19.35		ug/L		97	71 - 125
Bromochloromethane	20.0	19.21		ug/L		96	69 - 131
Bromodichloromethane	20.0	18.41		ug/L		92	70 - 122
Bromoform	20.0	18.06		ug/L		90	62 - 122
Carbon disulfide	20.0	19.57		ug/L		98	58 - 137
Carbon tetrachloride	20.0	19.88		ug/L		99	63 - 136
Chlorobenzene	20.0	19.44		ug/L		97	74 - 120
Chlorodibromomethane	20.0	17.65		ug/L		88	69 - 121
Chloroform	20.0	19.65		ug/L		98	72 - 122
cis-1,2-Dichloroethene	20.0	19.33		ug/L		97	72 - 123
cis-1,3-Dichloropropene	20.0	19.63		ug/L		98	72 - 123
Dibromomethane	20.0	20.25		ug/L		101	72 - 122
Ethylbenzene	20.0	20.79		ug/L		104	75 - 120
Iodomethane	20.0	12.88		ug/L		64	18 - 150
Methylene Chloride	20.0	20.53		ug/L		103	72 - 128
Styrene	20.0	20.23		ug/L		101	74 - 122
Tetrachloroethene	20.0	19.04		ug/L		95	70 - 128
Toluene	20.0	19.21		ug/L		96	74 - 120
trans-1,2-Dichloroethene	20.0	20.16		ug/L		101	67 - 127
trans-1,3-Dichloropropene	20.0	18.50		ug/L		93	67 - 123
trans-1,4-Dichloro-2-butene	20.0	20.55		ug/L		103	50 - 150

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

Lab Sample ID: LCS 310-486074/6
Matrix: Water
Analysis Batch: 486074

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	19.72		ug/L		99	70 - 128
Vinyl acetate	40.0	41.06		ug/L		103	50 - 150
Xylenes, Total	40.0	40.59		ug/L		101	74 - 121

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

Lab Sample ID: LCS 310-486074/7
Matrix: Water
Analysis Batch: 486074

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	18.63		ug/L		93	59 - 139
Chloromethane	20.0	19.16		ug/L		96	52 - 146
Trichlorofluoromethane	20.0	18.81		ug/L		94	55 - 150
Vinyl chloride	20.0	19.27		ug/L		96	60 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*106*		*76 - 130*
Toluene-d8 (Surr)	*98*		*80 - 120*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-486242/1-A
Matrix: Water
Analysis Batch: 486902

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 486242

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		04/20/26 09:00	04/23/26 16:12	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		04/20/26 09:00	04/23/26 16:12	1
Barium	<0.00200		0.00200	0.000660	mg/L		04/20/26 09:00	04/23/26 16:12	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		04/20/26 09:00	04/23/26 16:12	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		04/20/26 09:00	04/23/26 16:12	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		04/20/26 09:00	04/23/26 16:12	1
Copper	<0.00500		0.00500	0.00320	mg/L		04/20/26 09:00	04/23/26 16:12	1
Nickel	<0.00500		0.00500	0.00230	mg/L		04/20/26 09:00	04/23/26 16:12	1

Lab Sample ID: LCS 310-486242/2-A
Matrix: Water
Analysis Batch: 486902

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 486242

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2009		mg/L		100	80 - 120
Arsenic	0.200	0.1871		mg/L		94	80 - 120
Barium	0.100	0.09772		mg/L		98	80 - 120

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

Lab Sample ID: LCS 310-486242/2-A
Matrix: Water
Analysis Batch: 486902

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 486242

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Beryllium	0.100	0.1089		mg/L		109	80 - 120
Cadmium	0.100	0.09697		mg/L		97	80 - 120
Cobalt	0.100	0.1028		mg/L		103	80 - 120
Copper	0.200	0.2174		mg/L		109	80 - 120
Nickel	0.200	0.2198		mg/L		110	80 - 120

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

Lab Sample ID: MB 310-486221/1
Matrix: Water
Analysis Batch: 486221

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	2.80	mg/L			04/17/26 10:21	1

Lab Sample ID: LCS 310-486221/2
Matrix: Water
Analysis Batch: 486221

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	107.0		mg/L		107	82 - 117

Lab Sample ID: MB 310-486245/1
Matrix: Water
Analysis Batch: 486245

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	2.80	mg/L			04/17/26 11:37	1

Lab Sample ID: LCS 310-486245/2
Matrix: Water
Analysis Batch: 486245

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	111.0		mg/L		111	82 - 117

Lab Sample ID: 310-329751-1 DU
Matrix: Water
Analysis Batch: 486245

Client Sample ID: PZ-22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	266		246.0		mg/L		8	35

GC/MS VOA

Analysis Batch: 486074

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-329751-3	MW-89-7	Total/NA	Water	8260D	
310-329751-4	MW-89-9R	Total/NA	Water	8260D	
310-329751-8	Trip Blank	Total/NA	Trip Blank	8260D	
MB 310-486074/5	Method Blank	Total/NA	Water	8260D	
LCS 310-486074/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-486074/7	Lab Control Sample	Total/NA	Water	8260D	

Metals

Prep Batch: 486242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-329751-1	PZ-22	Total/NA	Water	3005A	
310-329751-2	MW-89-6R	Total/NA	Water	3005A	
310-329751-3	MW-89-7	Total/NA	Water	3005A	
310-329751-4	MW-89-9R	Total/NA	Water	3005A	
310-329751-5	PZ-21	Total/NA	Water	3005A	
310-329751-6	MW-21	Total/NA	Water	3005A	
310-329751-7	MW-D	Total/NA	Water	3005A	
MB 310-486242/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-486242/2-A	Lab Control Sample	Total/NA	Water	3005A	

Analysis Batch: 486902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-329751-1	PZ-22	Total/NA	Water	6020B	486242
310-329751-2	MW-89-6R	Total/NA	Water	6020B	486242
310-329751-3	MW-89-7	Total/NA	Water	6020B	486242
310-329751-4	MW-89-9R	Total/NA	Water	6020B	486242
310-329751-5	PZ-21	Total/NA	Water	6020B	486242
310-329751-6	MW-21	Total/NA	Water	6020B	486242
310-329751-7	MW-D	Total/NA	Water	6020B	486242
MB 310-486242/1-A	Method Blank	Total/NA	Water	6020B	486242
LCS 310-486242/2-A	Lab Control Sample	Total/NA	Water	6020B	486242

General Chemistry

Analysis Batch: 486221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-329751-3	MW-89-7	Total/NA	Water	I-3765-85	
310-329751-5	PZ-21	Total/NA	Water	I-3765-85	
310-329751-6	MW-21	Total/NA	Water	I-3765-85	
310-329751-7	MW-D	Total/NA	Water	I-3765-85	
MB 310-486221/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-486221/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 486245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-329751-1	PZ-22	Total/NA	Water	I-3765-85	
310-329751-4	MW-89-9R	Total/NA	Water	I-3765-85	
MB 310-486245/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-486245/2	Lab Control Sample	Total/NA	Water	I-3765-85	
310-329751-1 DU	PZ-22	Total/NA	Water	I-3765-85	

QC Association Summary

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-329751-1

General Chemistry

Prep Batch: 862204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-329751-1	PZ-22	Total/NA	Water	9030B	
310-329751-2	MW-89-6R	Total/NA	Water	9030B	
310-329751-4	MW-89-9R	Total/NA	Water	9030B	

Analysis Batch: 862205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-329751-1	PZ-22	Total/NA	Water	9034	862204
310-329751-2	MW-89-6R	Total/NA	Water	9034	862204
310-329751-4	MW-89-9R	Total/NA	Water	9034	862204

Lab Chronicle

Client: SCS Engineers
Job ID: 310-329751-1
Project/Site: Union 2026 Annual HMSP

Client Sample ID: PZ-22
Lab Sample ID: 310-329751-1
Date Collected: 04/14/26 14:07
Matrix: Water
Date Received: 04/15/26 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			486242	F8JX	EET CF	04/20/26 09:00
Total/NA	Analysis	6020B		1	486902	NFT2	EET CF	04/23/26 16:29
Total/NA	Prep	9030B			862204	TR	EET CHI	04/19/26 13:08 - 04/19/26 13:09 [1]
Total/NA	Analysis	9034		1	862205	TR	EET CHI	04/19/26 13:40 - 04/19/26 13:42 [1]
Total/NA	Analysis	I-3765-85		1	486245	DGU1	EET CF	04/17/26 11:37

Client Sample ID: MW-89-6R
Lab Sample ID: 310-329751-2
Date Collected: 04/14/26 17:12
Matrix: Water
Date Received: 04/15/26 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			486242	F8JX	EET CF	04/20/26 09:00
Total/NA	Analysis	6020B		1	486902	NFT2	EET CF	04/23/26 16:32
Total/NA	Prep	9030B			862204	TR	EET CHI	04/19/26 13:09 - 04/19/26 13:09 [1]
Total/NA	Analysis	9034		1	862205	TR	EET CHI	04/19/26 13:42 - 04/19/26 13:43 [1]

Client Sample ID: MW-89-7
Lab Sample ID: 310-329751-3
Date Collected: 04/14/26 16:24
Matrix: Water
Date Received: 04/15/26 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	486074	WSE8	EET CF	04/16/26 15:39
Total/NA	Prep	3005A			486242	F8JX	EET CF	04/20/26 09:00
Total/NA	Analysis	6020B		1	486902	NFT2	EET CF	04/23/26 16:41
Total/NA	Analysis	I-3765-85		1	486221	DGU1	EET CF	04/17/26 10:21

Client Sample ID: MW-89-9R
Lab Sample ID: 310-329751-4
Date Collected: 04/14/26 15:22
Matrix: Water
Date Received: 04/15/26 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	486074	WSE8	EET CF	04/16/26 16:01
Total/NA	Prep	3005A			486242	F8JX	EET CF	04/20/26 09:00
Total/NA	Analysis	6020B		1	486902	NFT2	EET CF	04/23/26 16:44
Total/NA	Prep	9030B			862204	TR	EET CHI	04/19/26 13:09 - 04/19/26 13:10 [1]
Total/NA	Analysis	9034		1	862205	TR	EET CHI	04/19/26 13:43 - 04/19/26 13:45 [1]
Total/NA	Analysis	I-3765-85		1	486245	DGU1	EET CF	04/17/26 11:37

Client Sample ID: PZ-21
Lab Sample ID: 310-329751-5
Date Collected: 04/14/26 12:48
Matrix: Water
Date Received: 04/15/26 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			486242	F8JX	EET CF	04/20/26 09:00
Total/NA	Analysis	6020B		1	486902	NFT2	EET CF	04/23/26 16:46

Lab Chronicle

Client: SCS Engineers
Job ID: 310-329751-1
Project/Site: Union 2026 Annual HMSP

Client Sample ID: PZ-21
Lab Sample ID: 310-329751-5
Date Collected: 04/14/26 12:48
Matrix: Water
Date Received: 04/15/26 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	486221	DGU1	EET CF	04/17/26 10:21

Client Sample ID: MW-21
Lab Sample ID: 310-329751-6
Date Collected: 04/14/26 13:29
Matrix: Water
Date Received: 04/15/26 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			486242	F8JX	EET CF	04/20/26 09:00
Total/NA	Analysis	6020B		1	486902	NFT2	EET CF	04/23/26 16:49
Total/NA	Analysis	I-3765-85		1	486221	DGU1	EET CF	04/17/26 10:21

Client Sample ID: MW-D
Lab Sample ID: 310-329751-7
Date Collected: 04/14/26 12:48
Matrix: Water
Date Received: 04/15/26 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			486242	F8JX	EET CF	04/20/26 09:00
Total/NA	Analysis	6020B		1	486902	NFT2	EET CF	04/23/26 16:52
Total/NA	Analysis	I-3765-85		1	486221	DGU1	EET CF	04/17/26 10:21

Client Sample ID: Trip Blank
Lab Sample ID: 310-329751-8
Date Collected: 04/14/26 00:00
Matrix: Trip Blank
Date Received: 04/15/26 16:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	486074	WSE8	EET CF	04/16/26 13:27

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

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

EET CHI = Eurofins Chicago, 18410 Crossing Drive, Suite E, Tinley Park, IL 60487, TEL (708)534-5200

Accreditation/Certification Summary

Client: SCS Engineers
Job ID: 310-329751-1
Project/Site: Union 2026 Annual HMSP

Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-27

Laboratory: Eurofins Chicago

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	082	05-01-28

Method Summary

Client: SCS Engineers
Job ID: 310-329751-1
Project/Site: Union 2026 Annual HMSP

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	EET CHI
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	SW846	EET CHI

Protocol References:

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

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

Laboratory References:

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

EET CHI = Eurofins Chicago, 18410 Crossing Drive, Suite E, Tinley Park, IL 60487, TEL (708)534-5200

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310-329751 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 4.15.26 | TIME 1645 | Received By: PH

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☑ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler?	☑ Yes ☐ No	*If yes:* Cooler ID.
Multiple Coolers?	☐ Yes ☑ No	*If yes:* Cooler # ____ of ____
Cooler Custody Seals Present?	☐ Yes ☑ No	*If yes:* Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present?	☐ Yes ☑ No	*If yes:* Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?	☑ Yes ☐ No	*If yes:* Which VOA samples are in cooler? ↓

All

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: BB | Correction Factor (°C): 0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 3.9 | Corrected Temp (°C): 3.9

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

Eurofins TestAmerica, Cedar Falls
2026 Annual and Q2 Structure Methane

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

Chain of Custody Record

eurofins

Regulatory Program: ☐ DW ☐ NPDES ☑ RCRA ☐ Other

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

Client Contact	Project Manager: Nathan Ohrt	Site Contact: Janeen Frey	Date	COC No.
Nathan Ohrt	Email: nohrt@scsengineers.com	Lab Contact: Sam Miller	Carrier:	1 of 1 COCs
SCS Engineers	Cell: 319-331-9613			Sampler:
1690 All State Court, Suite 100	Analysis Turnaround Time			For Lab Use Only:
West Des Moines, Iowa 50265	☐ CALENDAR DAYS ☐ WORKING DAYS			Walk-in Client:
	Other:			Lab Sampling
Project Name: Union 2026 Annual HMSP	☐ 2 weeks			
Site: Union County Sanitary Landfill	☐ 1 week			Job / SDG No.
P O # 27224311 26	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Metals List	Appendix I VOCs	Sulfide	Total Suspended Solids	Trip Blank	Sample Specific Notes
PZ-22	4-14	1407	G	GW		N	N	X		X	X		
MW-89-2		—	G	GW		N	N	X			X		NO Sample
MW-89-6R		1712	G	GW		N	N	X		X			
MW-89-7		1624	G	GW		N	N	X	X		X		
MW-89-9R		1522	G	GW		N	N	X	X	X	X		
PZ-21		1248	G	GW		N	N	X			X		
MW-21		1329	G	GW		N	N	X			X		
MW-D		1248	G	GW		N	N	X			X		
Trip Blank												X	

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

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

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments. "Metals List" includes antimony, arsenic, barium, beryllium, cadmium, cobalt, copper, and nickel

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No		Cooler Temp (°C) Obs'd _____ Corr'd _____		Therm ID No _____
Relinquished by: Garrett Horak	Company: SCS	Date/Time: 4-15 1106	Received by:	Company: Eurofins	Date/Time: 4-15-26 1106
Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Relinquished by	Company:	Date/Time	Received in Laboratory by:	Company	Date/Time: 4.15.26 1645

Form No. CA-C-WI-002, Rev 4.23, dated 4/16/2019

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

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Miller Samuel	Carrier Tracking No(s): N/A	COC No: 310-93190.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Samuel.Miller@et.eurofinsus.com	State of Origin: Iowa	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): State Program Iowa		Job #: 310-329751-1
Address: 18410 Crossing Drive, Suite E,	Due Date Requested: 4/29/2026			Preservation Codes
City: Tinley Park	TAT Requested (days): N/A			
State, Zip: IL, 60487				
Phone: 708-534-5200(Tel) 708-534-5211(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Union 2026 Annual HMSP	Project #: 31003073			
Site: 310-SCS Union County landfill	SSOW#: N/A			Other: N/A

Analysis Requested

310-329751 COC

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9034_Calc/9030BSulfide, Acid soluble and Insoluble	9034_Calc/9030BSulfide	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
PZ-22 (310-329751 1)	4/14/26	14:07 Central	G	Water			X		1	
MW-89-6R (310-329751-2)	4/14/26	17:12 Central	G	Water				X	1	
MW-89-9R (310-329751-4)	4/14/26	15:22 Central	G	Water				X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I II III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		4/16/26 1120			4/17/26 0900	EUTA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: 11+10 USW

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-329751-1

SDG Number:

Login Number: 329751

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Homolar, Dana J

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

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-329751-1
SDG Number:

Login Number: 329751
List Number: 2
Creator: Babayode, Daniel

List Source: Eurofins Chicago
List Creation: 04/17/26 01:40 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

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

Generated 8/12/2026 11:03:15 AM

JOB DESCRIPTION

Union 2026 Annual HMSP
Union County Sanitary Landfill
2024 Annual Sampling

JOB NUMBER

310-336952-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

my EOL

Job Notes

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

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

Authorization



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

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Job Narrative
310-336952-1

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 7/21/2026 4:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.9°C.

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

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

Sample Summary

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-336952-1
SDG: Union County Sanitary Landfill

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-336952-1	MW-89-2	Water	07/20/26 14:30	07/21/26 16:15	Iowa
310-336952-2	PZ-21	Water	07/20/26 15:18	07/21/26 16:15	Iowa

Detection Summary

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-336952-1
SDG: Union County Sanitary Landfill

Client Sample ID: MW-89-2 — Lab Sample ID: 310-336952-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00223		0.00100	0.000232	mg/L	1		6020B	Total Recoverable
Barium	0.0261		0.00250	0.00139	mg/L	1		6020B	Total Recoverable
Cadmium	0.000186	J	0.000500	0.000167	mg/L	1		6020B	Total Recoverable
Cobalt	0.00369		0.00100	0.000402	mg/L	1		6020B	Total Recoverable
Copper	0.00270		0.00200	0.000497	mg/L	1		6020B	Total Recoverable
Nickel	0.00729		0.00200	0.000625	mg/L	1		6020B	Total Recoverable
Total Suspended Solids	19.3		5.00	2.80	mg/L	1		I-3765-85	Total/NA

Client Sample ID: PZ-21 — Lab Sample ID: 310-336952-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00126		0.00100	0.000232	mg/L	1		6020B	Total Recoverable
Barium	0.0175		0.00250	0.00139	mg/L	1		6020B	Total Recoverable
Cobalt	0.00261		0.00100	0.000402	mg/L	1		6020B	Total Recoverable
Copper	0.00576		0.00200	0.000497	mg/L	1		6020B	Total Recoverable
Nickel	0.0107		0.00200	0.000625	mg/L	1		6020B	Total Recoverable
Total Suspended Solids	35.7		5.00	2.80	mg/L	1		I-3765-85	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-336952-1
SDG: Union County Sanitary Landfill

Client Sample ID: MW-89-2

Date Collected: 07/20/26 14:30
Date Received: 07/21/26 16:15

Lab Sample ID: 310-336952-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100	0.000933	mg/L		07/29/26 11:00	08/07/26 18:23	1
Arsenic	**0.00223**		0.00100	0.000232	mg/L		07/29/26 11:00	08/07/26 18:23	1
Barium	**0.0261**		0.00250	0.00139	mg/L		07/29/26 11:00	08/07/26 18:23	1
Beryllium	<0.000400		0.000400	0.000236	mg/L		07/29/26 11:00	08/07/26 18:23	1
Cadmium	**0.000186**	**J**	0.000500	0.000167	mg/L		07/29/26 11:00	08/07/26 18:23	1
Cobalt	**0.00369**		0.00100	0.000402	mg/L		07/29/26 11:00	08/07/26 18:23	1
Copper	**0.00270**		0.00200	0.000497	mg/L		08/10/26 14:42	08/11/26 20:06	1
Nickel	**0.00729**		0.00200	0.000625	mg/L		07/29/26 11:00	08/07/26 18:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**19.3**		5.00	2.80	mg/L			07/22/26 09:57	1

Client Sample Results

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-336952-1
SDG: Union County Sanitary Landfill

Client Sample ID: PZ-21

Date Collected: 07/20/26 15:18
Date Received: 07/21/26 16:15

Lab Sample ID: 310-336952-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100	0.000933	mg/L		07/29/26 11:00	08/07/26 18:25	1
Arsenic	**0.00126**		0.00100	0.000232	mg/L		07/29/26 11:00	08/07/26 18:25	1
Barium	**0.0175**		0.00250	0.00139	mg/L		07/29/26 11:00	08/07/26 18:25	1
Beryllium	<0.000400		0.000400	0.000236	mg/L		07/29/26 11:00	08/07/26 18:25	1
Cadmium	<0.000500		0.000500	0.000167	mg/L		07/29/26 11:00	08/07/26 18:25	1
Cobalt	**0.00261**		0.00100	0.000402	mg/L		07/29/26 11:00	08/07/26 18:25	1
Copper	**0.00576**		0.00200	0.000497	mg/L		08/10/26 14:42	08/11/26 20:30	1
Nickel	**0.0107**		0.00200	0.000625	mg/L		07/29/26 11:00	08/07/26 18:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**35.7**		5.00	2.80	mg/L			07/22/26 09:57	1

Qualifiers

Metals

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

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

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 500-877134/1-A
Matrix: Water
Analysis Batch: 878643

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 877134

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00100	0.000933	mg/L		07/29/26 11:00	08/07/26 17:29	1
Arsenic	<0.00100		0.00100	0.000232	mg/L		07/29/26 11:00	08/07/26 17:29	1
Barium	<0.00250		0.00250	0.00139	mg/L		07/29/26 11:00	08/07/26 17:29	1
Beryllium	<0.000400		0.000400	0.000236	mg/L		07/29/26 11:00	08/07/26 17:29	1
Cadmium	<0.000500		0.000500	0.000167	mg/L		07/29/26 11:00	08/07/26 17:29	1
Cobalt	<0.00100		0.00100	0.000402	mg/L		07/29/26 11:00	08/07/26 17:29	1
Nickel	<0.00200		0.00200	0.000625	mg/L		07/29/26 11:00	08/07/26 17:29	1

Lab Sample ID: LCS 500-877134/2-A
Matrix: Water
Analysis Batch: 878643

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 877134

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.1964		mg/L		98	80 - 120
Arsenic	0.100	0.09438		mg/L		94	80 - 120
Barium	0.500	0.4874		mg/L		97	80 - 120
Beryllium	0.0500	0.04761		mg/L		95	80 - 120
Cadmium	0.0500	0.04992		mg/L		100	80 - 120
Cobalt	0.500	0.5130		mg/L		103	80 - 120
Nickel	0.500	0.4784		mg/L		96	80 - 120

Lab Sample ID: MB 500-878821/1-A
Matrix: Water
Analysis Batch: 879071

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 878821

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	<0.00200		0.00200	0.000497	mg/L		08/10/26 14:42	08/11/26 20:01	1

Lab Sample ID: LCS 500-878821/2-A
Matrix: Water
Analysis Batch: 879071

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 878821

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Copper	0.250	0.2318		mg/L		93	80 - 120

Lab Sample ID: 310-336952-1 MS
Matrix: Water
Analysis Batch: 879071

Client Sample ID: MW-89-2
Prep Type: Total Recoverable
Prep Batch: 878821

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Copper	0.00270		0.250	0.2325		mg/L		92	75 - 125

Lab Sample ID: 310-336952-1 MSD
Matrix: Water
Analysis Batch: 879071

Client Sample ID: MW-89-2
Prep Type: Total Recoverable
Prep Batch: 878821

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Copper	0.00270		0.250	0.2403		mg/L		95	75 - 125	3	20

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

Lab Sample ID: 310-336952-1 DU
Matrix: Water
Analysis Batch: 879071

Client Sample ID: MW-89-2
Prep Type: Total Recoverable
Prep Batch: 878821

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Copper	0.00270			0.002229		mg/L				19	20

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

Lab Sample ID: MB 310-495249/1
Matrix: Water
Analysis Batch: 495249

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	2.80	mg/L			07/22/26 09:57	1

Lab Sample ID: LCS 310-495249/2
Matrix: Water
Analysis Batch: 495249

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Suspended Solids			100	102.0		mg/L		102	82 - 117		

Metals

Prep Batch: 877134

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-336952-1	MW-89-2	Total Recoverable	Water	3005A	
310-336952-2	PZ-21	Total Recoverable	Water	3005A	
MB 500-877134/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-877134/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 878643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-336952-1	MW-89-2	Total Recoverable	Water	6020B	877134
310-336952-2	PZ-21	Total Recoverable	Water	6020B	877134
MB 500-877134/1-A	Method Blank	Total Recoverable	Water	6020B	877134
LCS 500-877134/2-A	Lab Control Sample	Total Recoverable	Water	6020B	877134

Prep Batch: 878821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-336952-1	MW-89-2	Total Recoverable	Water	3005A	
310-336952-2	PZ-21	Total Recoverable	Water	3005A	
MB 500-878821/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 500-878821/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
310-336952-1 MS	MW-89-2	Total Recoverable	Water	3005A	
310-336952-1 MSD	MW-89-2	Total Recoverable	Water	3005A	
310-336952-1 DU	MW-89-2	Total Recoverable	Water	3005A	

Analysis Batch: 879071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-336952-1	MW-89-2	Total Recoverable	Water	6020B	878821
310-336952-2	PZ-21	Total Recoverable	Water	6020B	878821
MB 500-878821/1-A	Method Blank	Total Recoverable	Water	6020B	878821
LCS 500-878821/2-A	Lab Control Sample	Total Recoverable	Water	6020B	878821
310-336952-1 MS	MW-89-2	Total Recoverable	Water	6020B	878821
310-336952-1 MSD	MW-89-2	Total Recoverable	Water	6020B	878821
310-336952-1 DU	MW-89-2	Total Recoverable	Water	6020B	878821

General Chemistry

Analysis Batch: 495249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-336952-1	MW-89-2	Total/NA	Water	I-3765-85	
310-336952-2	PZ-21	Total/NA	Water	I-3765-85	
MB 310-495249/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-495249/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Lab Chronicle

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-336952-1
SDG: Union County Sanitary Landfill

Client Sample ID: MW-89-2

Lab Sample ID: 310-336952-1

Date Collected: 07/20/26 14:30
Matrix: Water
Date Received: 07/21/26 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			878821	SG	EET CHI	08/10/26 14:42 - 08/10/26 20:42 [1]
Total Recoverable	Analysis	6020B		1	879071	S1Z	EET CHI	08/11/26 20:06
Total Recoverable	Prep	3005A			877134	AC	EET CHI	07/29/26 11:00 - 07/29/26 17:00 [1]
Total Recoverable	Analysis	6020B		1	878643	S1Z	EET CHI	08/07/26 18:23
Total/NA	Analysis	I-3765-85		1	495249	KNJC	EET CF	07/22/26 09:57

Client Sample ID: PZ-21

Lab Sample ID: 310-336952-2

Date Collected: 07/20/26 15:18
Matrix: Water
Date Received: 07/21/26 16:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			878821	SG	EET CHI	08/10/26 14:42 - 08/10/26 20:42 [1]
Total Recoverable	Analysis	6020B		1	879071	S1Z	EET CHI	08/11/26 20:30
Total Recoverable	Prep	3005A			877134	AC	EET CHI	07/29/26 11:00 - 07/29/26 17:00 [1]
Total Recoverable	Analysis	6020B		1	878643	S1Z	EET CHI	08/07/26 18:25
Total/NA	Analysis	I-3765-85		1	495249	KNJC	EET CF	07/22/26 09:57

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

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

EET CHI = Eurofins Chicago, 18410 Crossing Drive, Suite E, Tinley Park, IL 60487, TEL (708)534-5200

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-336952-1
SDG: Union County Sanitary Landfill

Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-27

Laboratory: Eurofins Chicago

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	082	05-01-28

Method Summary

Client: SCS Engineers
Project/Site: Union 2026 Annual HMSP

Job ID: 310-336952-1
SDG: Union County Sanitary Landfill

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

Protocol References:

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

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

Laboratory References:

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

EET CHI = Eurofins Chicago, 18410 Crossing Drive, Suite E, Tinley Park, IL 60487, TEL (708)534-5200

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310-336952 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: SCS Engr			
City/State: CITY West Des Moines	STATE IA	Project: 31003073	
Receipt Information			
Date/Time Received: DATE 07/21/20	TIME 1615	Received By: CJ	
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☑ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☑ Yes ☐ No	*If yes:* Cooler ID:		
Multiple Coolers? ☐ Yes ☑ No	*If yes:* Cooler # _____ of _____		
Cooler Custody Seals Present? ☐ Yes ☑ No	*If yes:* Cooler custody seals intact? ☐ Yes ☐ No		
Sample Custody Seals Present? ☐ Yes ☑ No	*If yes:* Sample custody seals intact? ☐ Yes ☐ No		
Trip Blank Present? ☐ Yes ☑ No	*If yes:* Which VOA samples are in cooler? ↓		
Temperature Record			
Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE			
Thermometer ID: AA	Correction Factor (°C): 0		
• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): 0.7	Corrected Temp (°C): 0.7		
• **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			
*did not receive Trip Blank			

Eurofins TestAmerica, Cedar Falls
3019 Venture Way

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

Chain of Custody Record

eurofins Environment Testing TestAmerica

Regulatory Program. ☐ DW ☐ NPDES ☐ RCRA ☐ Other

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

Client Contact	Project Manager: Nathan Ohrt	Site Contact: Janeen Frey	Date	COC No
Nathan Ohrt	Email nohrt@scsengineers com	Lab Contact: Sam Miller	Carrier:	1 of 1 COCs
SCS Engineers	Cell 319-331-9613			Sampler:
1690 All State Court, Suite 100	Analysis Turnaround Time			For Lab Use Only:
West Des Moines, Iowa 50265	☐ CALENDAR DAYS ☐ WORKING DAYS			Walk-in Client:
	Other:			Lab Sampling
Project Name Union 2026 Annual HMSP	☐ 2 weeks			
Site Union County Sanitary Landfill	☐ 1 week			Job / SDG No
P O # 27224311 26	☐ 2 days ☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	Metals List	Total Suspended Solids	Trip Blank	Sample Specific Notes.
MW-89-2	7-20	1430	G	GW		N	N	X	X		
PZ-21	7-20	1518	G	GW		N	N	X	X		
Trip Blank										X	

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

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

☐ Return to Client ☑ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments "Metals List" includes antimony, arsenic, barium, beryllium, cadmium, cobalt, copper, and nickel.

☐ Yes ☐ No

Relinquished by	Company	Date/Time	Received	Company	Date/Time
Garrett Hovis	SCS	9:20 7-21	[redacted]	[redacted]	[redacted]
Relinquished by:	Company:	Date/Time	Received in Laboratory by: CG	Company: EET	Date/Time: 07/21/20 1605

Form No. CA-C-WI-002, Rev. 4.23, dated 4/16/2019

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

Chain of Custody Record

eurofins |

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Miller Samuel	Carrier Tracking No(s): N/A	COC No: 310-96706.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Samuel.Miller@et.eurofinsus.com	State of Origin: Iowa	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): State Program Iowa		Job #: 310-336952-1
Address: 18410 Crossing Drive, Suite E	Due Date Requested: 7/31/2026			
City: Tinley Park	TAT Requested (days): N/A			
State, Zip: IL 60487				
Phone: 708-534-5200(Tel) 708-534-5211(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Union 2026 Annual HMSP	Project #: 31003073			
Site: 310-SCS Union County landfill	SSOW#: N/A			

310-336952 COC

Analysis Requested

Preservation Codes.

Other: N/A

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3005A Metals List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-89-2 (310-336952-1)	7/20/26	14:30 Central	G	Water			X	1	
PZ-21 (310-336952-2)	7/20/26	15:18 Central	G	Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II III IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Brian Tu	7/22/24 1450			7/23/26 1120	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: 3.5-3.4

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-336952-1
SDG Number: Union County Sanitary Landfill

Login Number: 336952
List Number: 1
Creator: Schaufenbuel, Erin

List Source: Eurofins Cedar Falls

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

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-336952-1
SDG Number: Union County Sanitary Landfill

Login Number: 336952
List Number: 2
Creator: Scott, Sherri L

List Source: Eurofins Chicago
List Creation: 07/23/26 01:40 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

APPENDIX B-2 | DATA VALIDATION

Completed by: Nathan Ohrt
Date of Sampling: 4/14/2026
Lab Report Date: 4/24/2026
Site Name: Union County Sanitary Landfill
Project Type: HMSP - Annual
Lab Report Number: 310-32975

	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	X			
Analytical Sensitivity and Blanks				
Method Blank Detections	X			No detections.
Trip Blank Detections	X			No detections.
Accuracy				
ICV/CCV		X		The continuing calibration verification (CCV) recovered outside the control limits for bromomethane; the associated samples were non-detect for the affected analytes so the data was reported.
LCS/LCSD	X			
MS/MSD	X			
Surrogates (organics only)	X			
Precision				
QA/QC Sample RPDs	X			
Field Duplicates	X			Sample PZ-21 and duplicate sample MW-D had <50% RPD for the analyzed parameters.

Completed by:	Nathan Ohrt
Date of Sampling:	7/20/2026
Lab Report Date:	8/12/2026
Site Name:	Union County Sanitary Landfill
Project Type:	HMSP - Annual
Lab Report Number:	310-336952

	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	X			
Analytical Sensitivity and Blanks				
Method Blank Detections	X			No detections.
Trip Blank Detections			X	
Accuracy				
ICV/CCV	X			
LCS/LCSD	X			
MS/MSD	X			
Surrogates (organics only)	X			
Precision				
QA/QC Sample RPDs	X			
Field Duplicates			X	

APPENDIX C | REPORTING PERIOD SUMMARY OF GROUNDWATER CHEMISTRY

SCS ENGINEERS

Summary of Groundwater Chemistry
Union County Sanitary Landfill - 88-SDP-01-79C

Total Metals Constituents	Sample Date	PZ-22 UPG	MW-21 DNG	MW-89-2 DNG	MW-89-6R DNG	MW-89-7 DNG	MW-89-9R DNG	PZ-21 DNG
Antimony, mg/L (CAS NO - 7440-36-0)	4/14/2026	0.00616	< 0.002	N/A	< 0.002	< 0.002	< 0.002	0.00133*
	4/14/2026	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002
	7/20/2026	N/A	N/A	< 0.001	N/A	N/A	N/A	< 0.001
Arsenic, mg/L (CAS NO - 7440-38-2)	4/14/2026	0.052	< 0.002	N/A	**0.0182**	**0.0067**	**0.00675**	0.00091*
	4/14/2026	N/A	N/A	N/A	N/A	N/A	N/A	0.000799*
	7/20/2026	N/A	N/A	**0.00223**	N/A	N/A	N/A	**0.00126**
Barium, mg/L (CAS NO - 7440-39-3)	4/14/2026	0.034	**0.00884**	N/A	**0.332**	**0.399**	**0.239**	0.0143
	4/14/2026	N/A	N/A	N/A	N/A	N/A	N/A	0.0144
	7/20/2026	N/A	N/A	**0.0261**	N/A	N/A	N/A	**0.0175**
Beryllium, mg/L (CAS NO - 7440-41-7)	4/14/2026	0.00139	< 0.001	N/A	< 0.001	< 0.001	< 0.001	< 0.001
	4/14/2026	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001
	7/20/2026	N/A	N/A	< 0.0004	N/A	N/A	N/A	< 0.0004
Cadmium, mg/L (CAS NO - 7440-43-9)	4/14/2026	0.000333	< 0.0002	N/A	< 0.0002	< 0.0002	< 0.0002	< 0.0002
	4/14/2026	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002
	7/20/2026	N/A	N/A	0.000186*	N/A	N/A	N/A	< 0.0005
Cobalt, mg/L (CAS NO - 7440-48-4)	4/14/2026	0.0161	< 0.0005	N/A	**0.01**	**0.00379**	**0.0129**	0.00101
	4/14/2026	N/A	N/A	N/A	N/A	N/A	N/A	0.00117
	7/20/2026	N/A	N/A	**0.00369**	N/A	N/A	N/A	**0.00261**
Copper, mg/L (CAS NO - 7440-50-8)	4/14/2026	0.148	< 0.005	N/A	< 0.005	< 0.005	< 0.005	< 0.005
	4/14/2026	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005
	7/20/2026	N/A	N/A	**0.0027**	N/A	N/A	N/A	**0.00576**
Nickel, mg/L (CAS NO - 7440-02-0)	4/14/2026	0.0361	< 0.005	N/A	**0.00796**	**0.0118**	**0.0146**	0.00656
	4/14/2026	N/A	N/A	N/A	N/A	N/A	N/A	0.00662
	7/20/2026	N/A	N/A	**0.00729**	N/A	N/A	N/A	**0.0107**
Total Suspended Solids, mg/L (CAS NO - TSS)	4/14/2026	266	**7.75**	N/A	N/A	**27**	**12.3**	7.88
	4/14/2026	N/A	N/A	N/A	N/A	N/A	N/A	10.4
	7/20/2026	N/A	N/A	**19.3**	N/A	N/A	N/A	**35.7**

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

Denotes Detection.
Denotes Confirmed Outlier. Statistically Excluded.

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

SCS ENGINEERS

Summary of Groundwater Chemistry
Union County Sanitary Landfill - 88-SDP-01-79C

Appendix I VOC Constituents	Sample Date	PZ-22 UPG	MW-21 DNG	MW-89-2 DNG	MW-89-6R DNG	MW-89-7 DNG	MW-89-9R DNG	PZ-21 DNG
1,1,1,2-Tetrachloroethane, ug/L (CAS NO - 630-20-6)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
1,1,1-Trichloroethane, ug/L (CAS NO - 71-55-6)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
1,1,2,2-Tetrachloroethane, ug/L (CAS NO - 79-34-5)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
1,1,2-Trichloroethane, ug/L (CAS NO - 79-00-5)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
1,1-Dichloroethane, ug/L (CAS NO - 75-34-3)	4/14/2026	N/A	N/A	N/A	N/A	0.465*	< 1	N/A
1,1-Dichloroethene, ug/L (CAS NO - 75-35-4)	4/14/2026	N/A	N/A	N/A	N/A	< 2	< 2	N/A
1,2,3-Trichloropropane, ug/L (CAS NO - 96-18-4)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
1,2-Dibromo-3-Chloropropane, ug/L (CAS NO - 96-12-8)	4/14/2026	N/A	N/A	N/A	N/A	< 1.2	< 1.2	N/A
1,2-Dibromoethane [EDB], ug/L (CAS NO - 106-93-4)	4/14/2026	N/A	N/A	N/A	N/A	< 0.34	< 0.34	N/A
1,2-Dichlorobenzene, ug/L (CAS NO - 95-50-1)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
1,2-Dichloroethane, ug/L (CAS NO - 107-06-2)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
1,2-Dichloropropane, ug/L (CAS NO - 78-87-5)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
1,4-Dichlorobenzene, ug/L (CAS NO - 106-46-7)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
2-Butanone, ug/L (CAS NO - 78-93-3)	4/14/2026	N/A	N/A	N/A	N/A	< 10	< 10	N/A
2-Hexanone, ug/L (CAS NO - 591-78-6)	4/14/2026	N/A	N/A	N/A	N/A	< 10	< 10	N/A
4-Methyl-2-Pentanone, ug/L (CAS NO - 108-10-1)	4/14/2026	N/A	N/A	N/A	N/A	< 10	< 10	N/A
Acetone, ug/L (CAS NO - 67-64-1)	4/14/2026	N/A	N/A	N/A	N/A	< 10	< 10	N/A
Acrylonitrile, ug/L (CAS NO - 107-13-1)	4/14/2026	N/A	N/A	N/A	N/A	< 10	< 10	N/A
Benzene, ug/L (CAS NO - 71-43-2)	4/14/2026	N/A	N/A	N/A	N/A	0.242*	< 0.5	N/A
Bromochloromethane, ug/L (CAS NO - 74-97-5)	4/14/2026	N/A	N/A	N/A	N/A	< 5	< 5	N/A
Bromodichloromethane, ug/L (CAS NO - 75-27-4)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
Bromoform, ug/L (CAS NO - 75-25-2)	4/14/2026	N/A	N/A	N/A	N/A	< 5	< 5	N/A
Bromomethane, ug/L (CAS NO - 74-83-9)	4/14/2026	N/A	N/A	N/A	N/A	< 4	< 4	N/A
Carbon Disulfide, ug/L (CAS NO - 75-15-0)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
Carbon Tetrachloride, ug/L (CAS NO - 56-23-5)	4/14/2026	N/A	N/A	N/A	N/A	< 2	< 2	N/A
Chlorobenzene, ug/L (CAS NO - 108-90-7)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
Chlorodibromomethane, ug/L (CAS NO - 124-48-1)	4/14/2026	N/A	N/A	N/A	N/A	< 5	< 5	N/A
Chloroethane, ug/L (CAS NO - 75-00-3)	4/14/2026	N/A	N/A	N/A	N/A	< 4	< 4	N/A
Chloroform, ug/L (CAS NO - 67-66-3)	4/14/2026	N/A	N/A	N/A	N/A	< 3	< 3	N/A
Chloromethane, ug/L (CAS NO - 74-87-3)	4/14/2026	N/A	N/A	N/A	N/A	< 3	< 3	N/A
cis-1,2-Dichloroethene, ug/L (CAS NO - 156-59-2)	4/14/2026	N/A	N/A	N/A	N/A	0.69*	< 1	N/A
cis-1,3-Dichloropropene, ug/L (CAS NO - 10061-01-5)	4/14/2026	N/A	N/A	N/A	N/A	< 5	< 5	N/A
Ethylbenzene, ug/L (CAS NO - 100-41-4)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
Iodomethane, ug/L (CAS NO - 74-88-4)	4/14/2026	N/A	N/A	N/A	N/A	< 10	< 10	N/A
Methylene Bromide, ug/L (CAS NO - 74-95-3)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
Methylene Chloride, ug/L (CAS NO - 75-09-2)	4/14/2026	N/A	N/A	N/A	N/A	< 5	< 5	N/A
Styrene, ug/L (CAS NO - 100-42-5)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
Tetrachloroethene, ug/L (CAS NO - 127-18-4)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
Toluene, ug/L (CAS NO - 108-88-3)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
trans-1,2-Dichloroethene, ug/L (CAS NO - 156-60-5)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
trans-1,3-Dichloropropene, ug/L (CAS NO - 10061-02-6)	4/14/2026	N/A	N/A	N/A	N/A	< 5	< 5	N/A
trans-1,4-Dichloro-2-Butene, ug/L (CAS NO - 110-57-6)	4/14/2026	N/A	N/A	N/A	N/A	< 10	< 10	N/A
Trichloroethene, ug/L (CAS NO - 79-01-6)	4/14/2026	N/A	N/A	N/A	N/A	< 1	< 1	N/A
Trichlorofluoromethane, ug/L (CAS NO - 75-69-4)	4/14/2026	N/A	N/A	N/A	N/A	< 4	< 4	N/A
Vinyl Acetate, ug/L (CAS NO - 108-05-4)	4/14/2026	N/A	N/A	N/A	N/A	< 10	< 10	N/A
Vinyl Chloride, ug/L (CAS NO - 75-01-4)	4/14/2026	N/A	N/A	N/A	N/A	1.08	< 1	N/A
Xylenes, total, ug/L (CAS NO - 1330-20-7)	4/14/2026	N/A	N/A	N/A	N/A	< 3	< 3	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

Union County Sanitary Landfill - 88-SDP-01-79C

Other Constituents	Sample Date	PZ-22 UPG	MW-21 DNG	MW-89-2 DNG	MW-89-6R DNG	MW-89-7 DNG	MW-89-9R DNG	PZ-21 DNG
Sulfide, mg/L (CAS NO - 18496-25-8)	4/14/2026	< 1	N/A	N/A	< 1	N/A	< 1	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 provide the statistical evaluation of groundwater analytical data collected from the groundwater monitoring network of the closed Union County Sanitary Landfill (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 (½) 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 ≥ 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 ≥ the PQL:
  - If ≥ 50% of the background dataset has detections ≥ the method detection limit (MDL), any value ≥ two times the PQL of background is considered an outlier.
  - If < 50% of the background dataset has detections ≥ the MDL, any value ≥ the PQL of background is considered an outlier.
- Two or more detections ≥ the PQL:
  - If ≥ 50% of the background dataset has detections ≥ the MDL, any value ≥ three times the PQL of background is considered an outlier.
  - If < 50% of the background dataset has detections ≥ the MDL, any value ≥ two times the PQL of background is considered an outlier.

Confirmed outliers, if any, are shown in the Reporting Period Summary of Groundwater Chemistry included in the Annual Water Quality Report. Confirmed outliers are also shown in the historical analytical data prior to 2025, which can be found in the 2024 Annual Water Quality Report, dated 8/1/2024 (Doc #110616). Data from 2025 can be found in the 2025 Annual Water Quality Report, dated 12/5/2025 (Doc #115126).

Detection Monitoring Statistical Program

The detection monitoring statistical program for the Landfill is defined by Iowa Administrative Code (IAC) 567-101.110(4)"g". Interwell prediction limits with retesting were selected as the appropriate statistical method for the determination of statistically significant increases (SSIs) over background for inorganic constituents with historical detections in background. Prediction limits are established using the process below. Data from the most recent sampling event is compared to the prediction limits for the determination of SSIs.

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.
- 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.
- If an SSI above the prediction limit is indicated, retesting samples using the 1-of-2 retesting scheme are collected prior to the next regularly scheduled sampling event with temporal sample spacing consideration to provide samples with greater independence. If the retesting results are above the prediction limit, the SSI is confirmed, and the monitoring well is placed into the assessment monitoring program.

Double Quantification Method

The quasi-statistical "double quantification" method is used for constituents not detected in the background monitoring points. If a constituent is detected in the compliance dataset that has not been historically detected in the background dataset, that constituent is 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 Statistical Program

Confidence intervals or confidence bands, as appropriate, were selected as the appropriate statistical methods for comparison of the groundwater analytical data against a fixed groundwater protection standard (GWPS). The assessment monitoring statistical evaluations were performed using the most recent eight samples or all samples if less than eight samples were available. The confidence intervals or confidence bands used for the assessment monitoring statistical evaluation are established using the process below. Transformation of the distribution is not considered.

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.

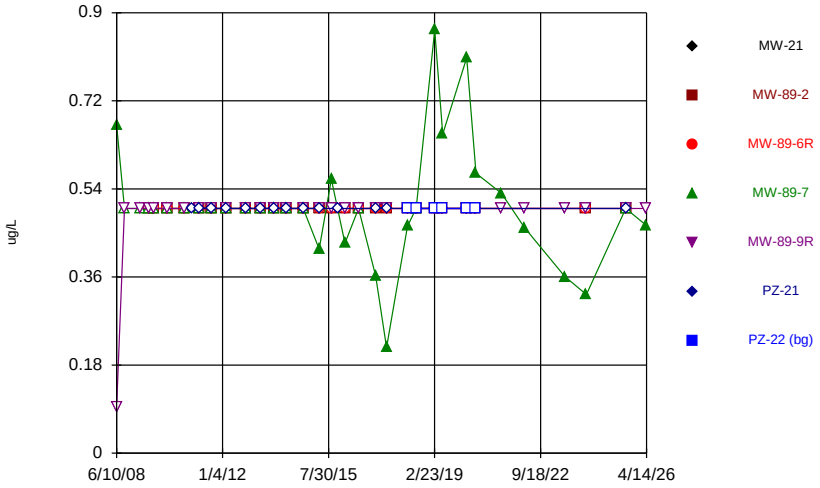
Statistical Software Output

Sanitas™ statistical software is used to perform the statistical evaluations. The statistical output for the 2026 statistical evaluation is attached to this appendix.

Time Series Plots

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

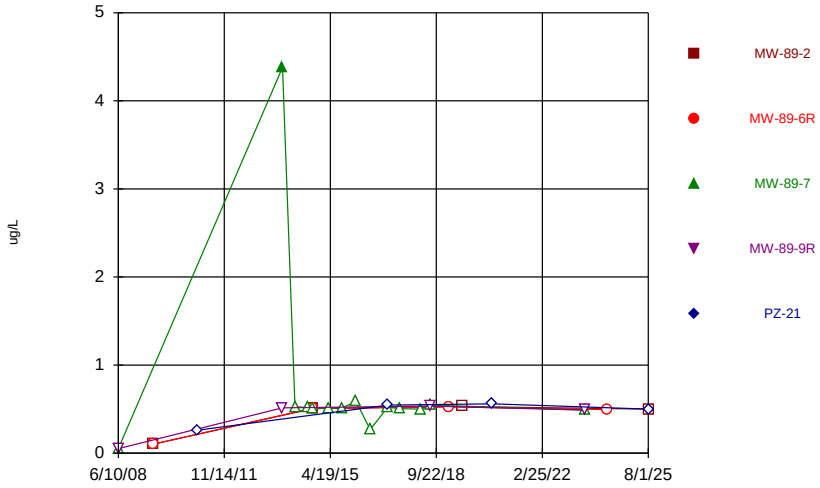
Time Series



Constituent: 1,1-Dichloroethane Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

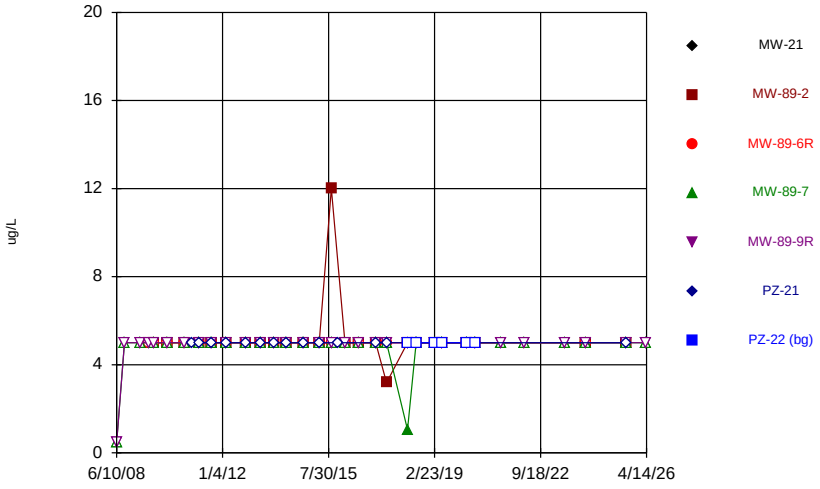
Time Series



Constituent: 2,4,5-T [2C] Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

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Hollow symbols indicate censored values.

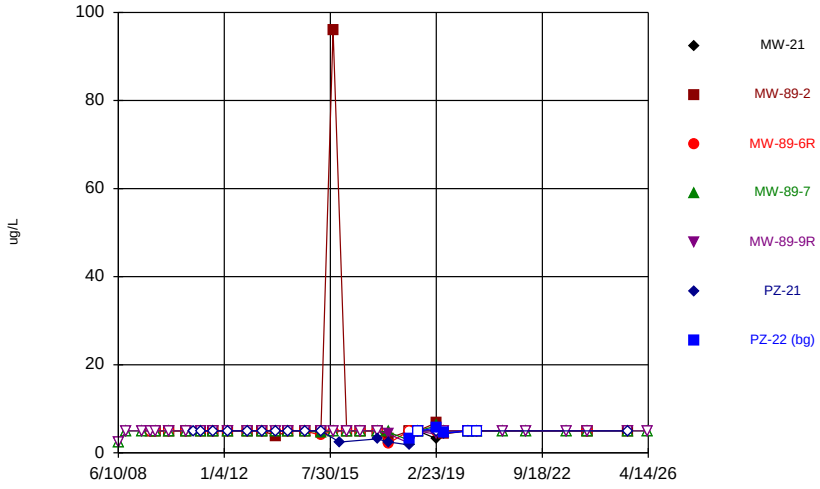
Time Series



Constituent: 2-Butanone Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

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Hollow symbols indicate censored values.

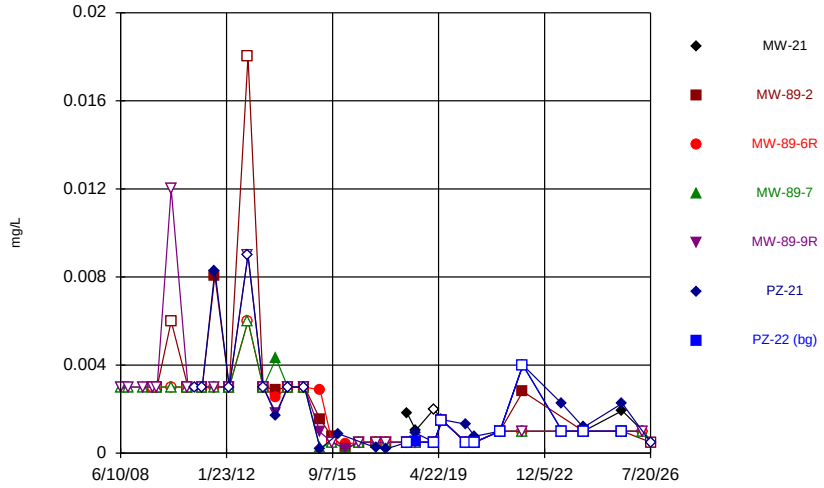
Time Series



Constituent: Acetone Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

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Hollow symbols indicate censored values.

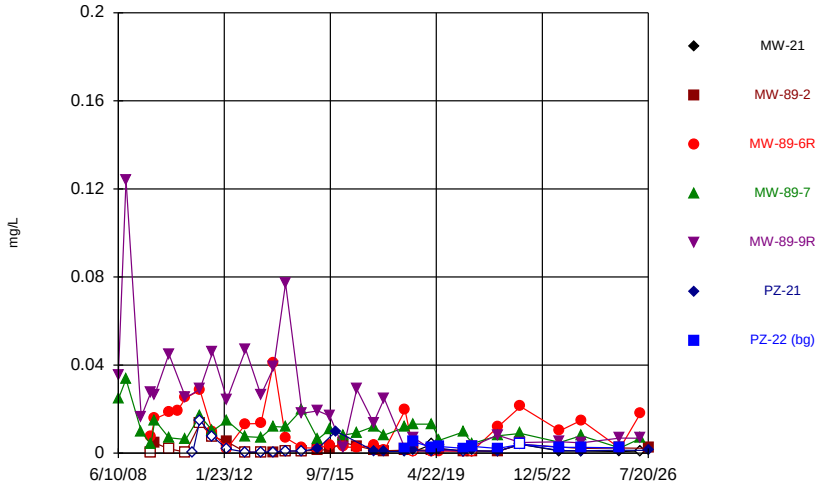
Time Series



Constituent: Antimony Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

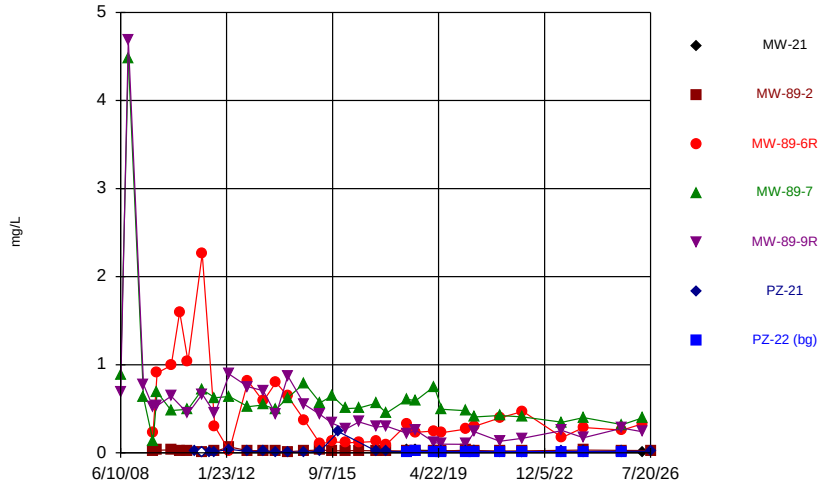
Time Series



Constituent: Arsenic Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

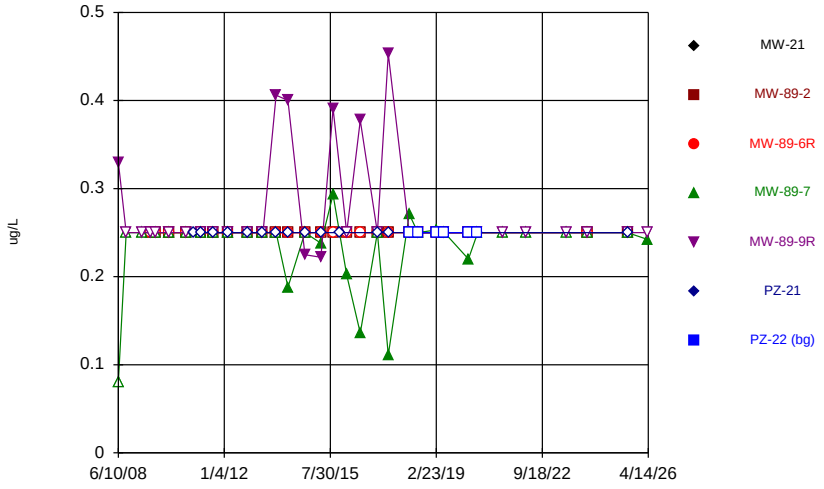
Time Series



Constituent: Barium Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

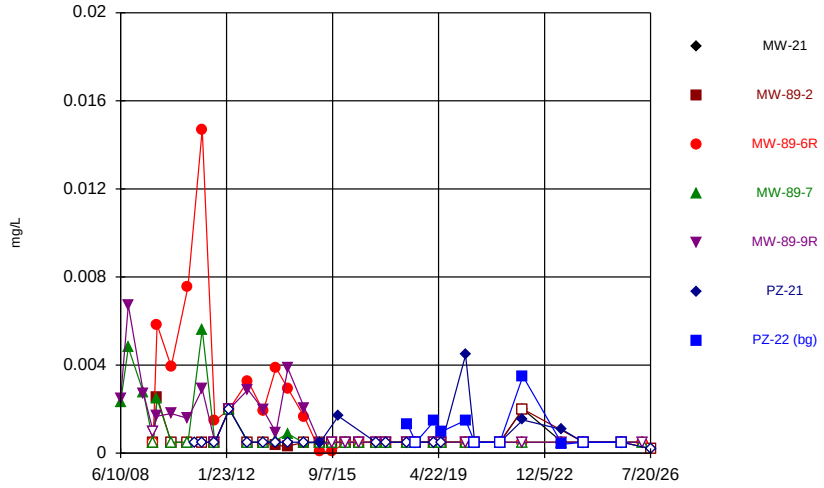
Time Series



Constituent: Benzene Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

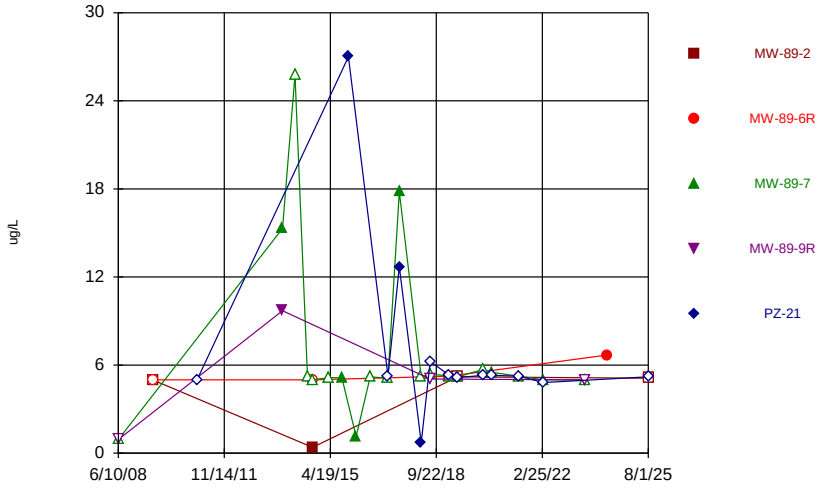
Time Series



Constituent: Beryllium Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

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Hollow symbols indicate censored values.

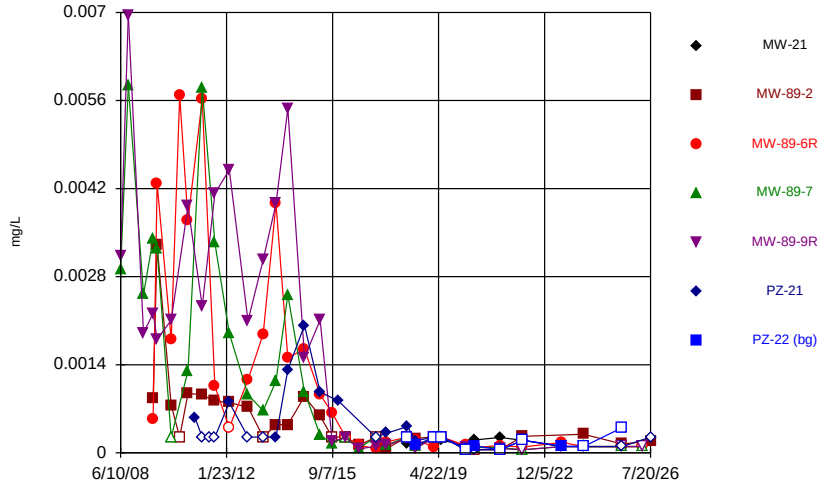
Time Series



Constituent: Bis[2-ethylhexyl]phthalate Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Serie
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

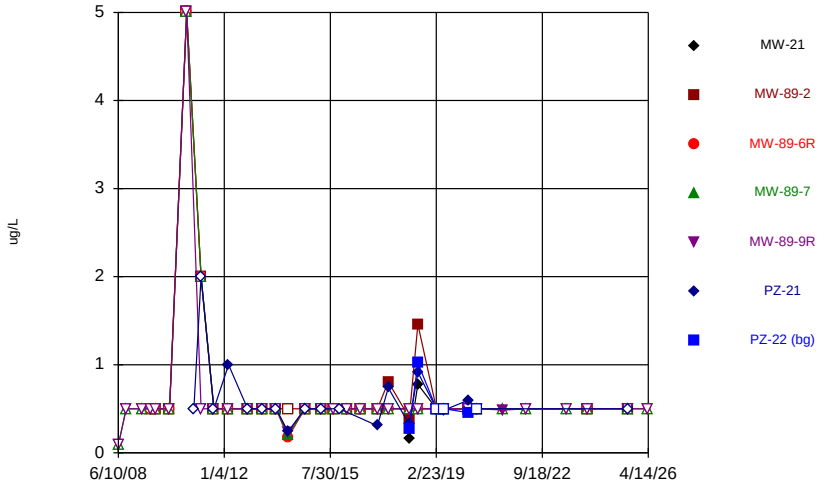
Time Series



Constituent: Cadmium Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

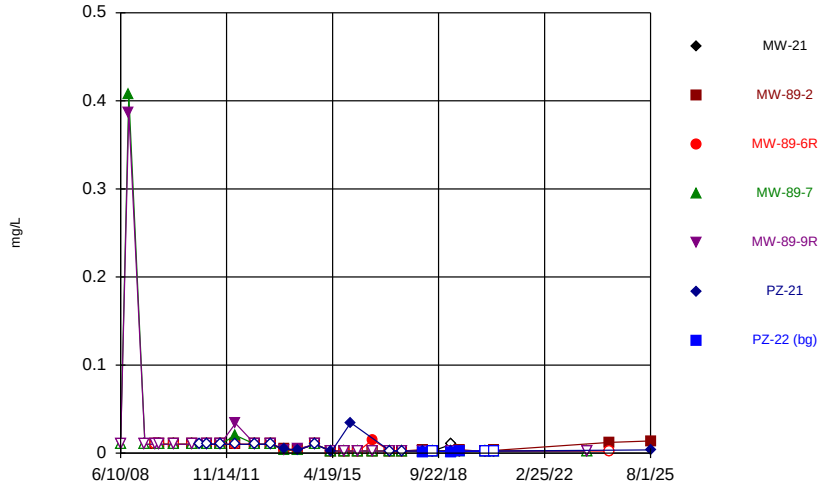
Time Series



Constituent: Carbon disulfide Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

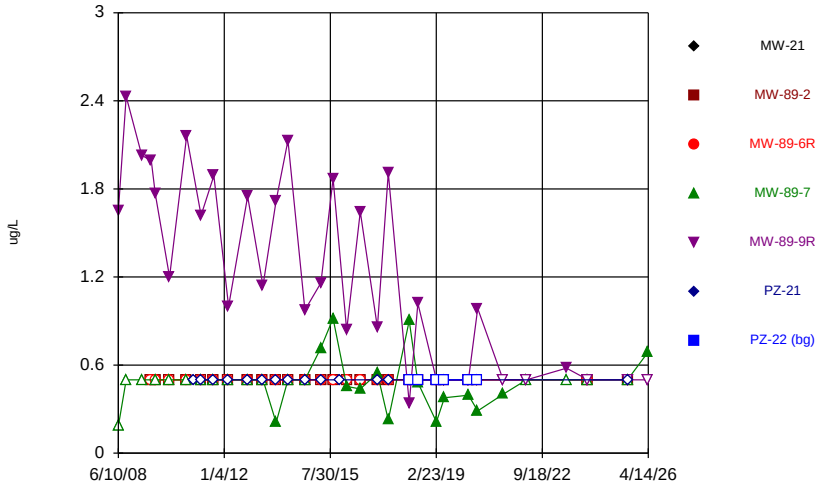
Time Series



Constituent: Chromium Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

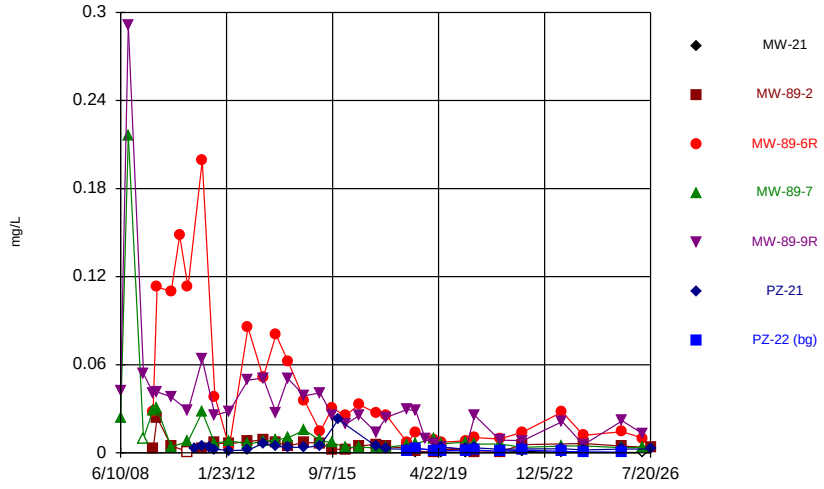
Time Series



Constituent: cis-1,2-Dichloroethene Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

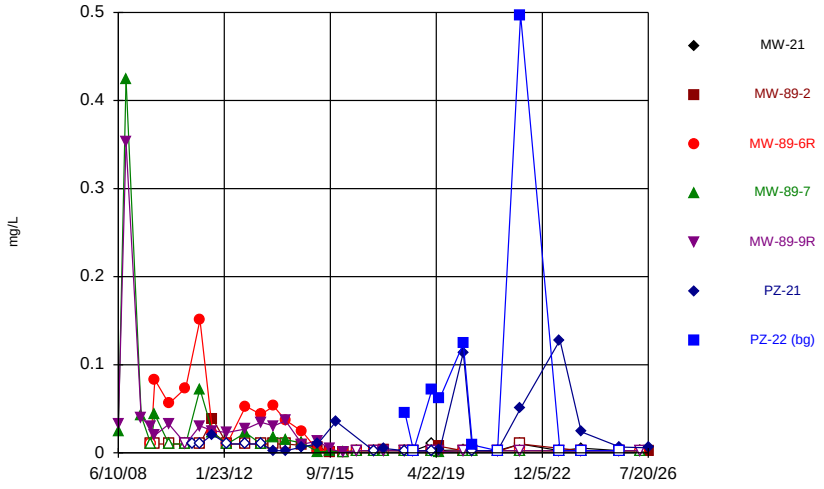
Time Series



Constituent: Cobalt Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

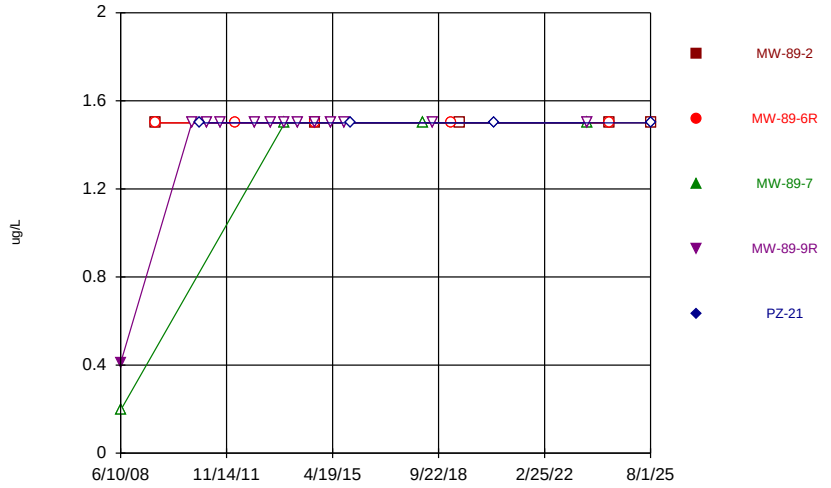
Time Series



Constituent: Copper Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

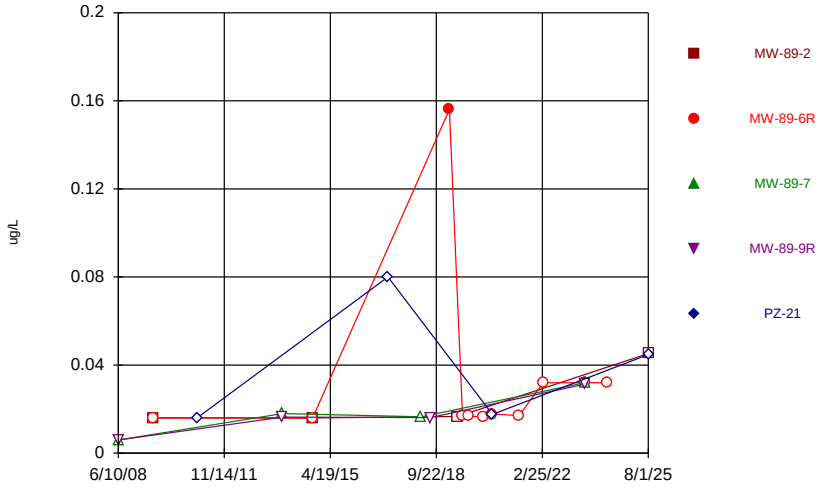
Time Series



Constituent: Dichlorodifluoromethane Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

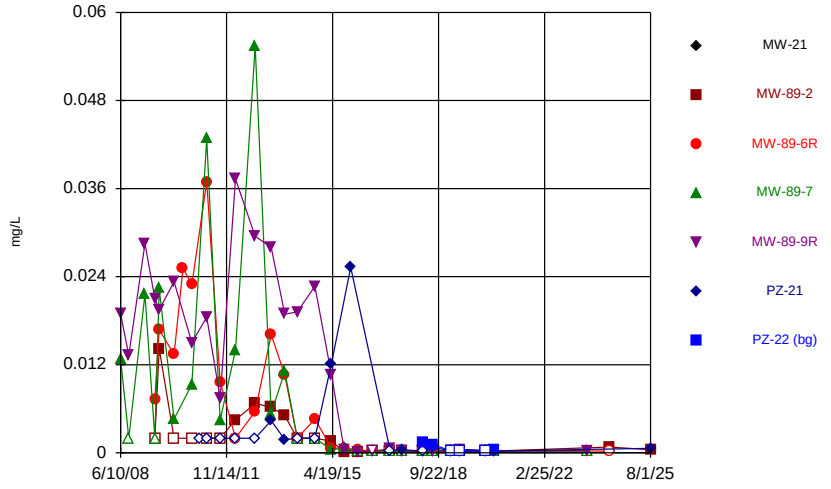
Time Series



Constituent: Endrin aldehyde Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

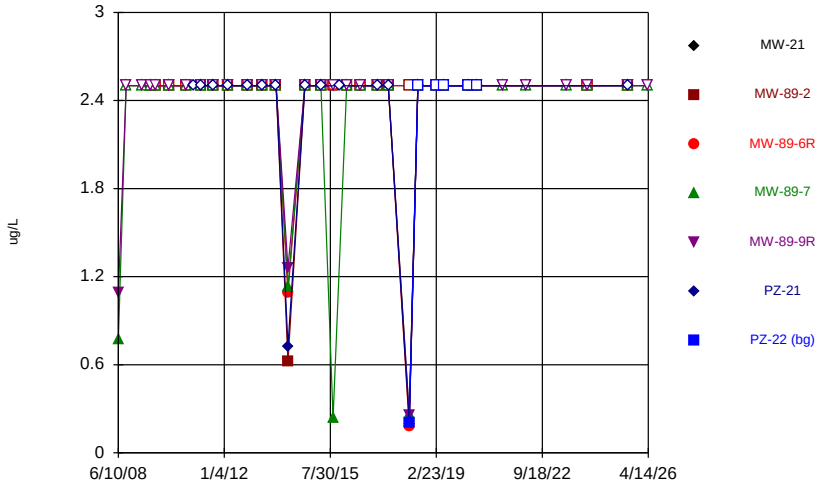
Time Series



Constituent: Lead Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

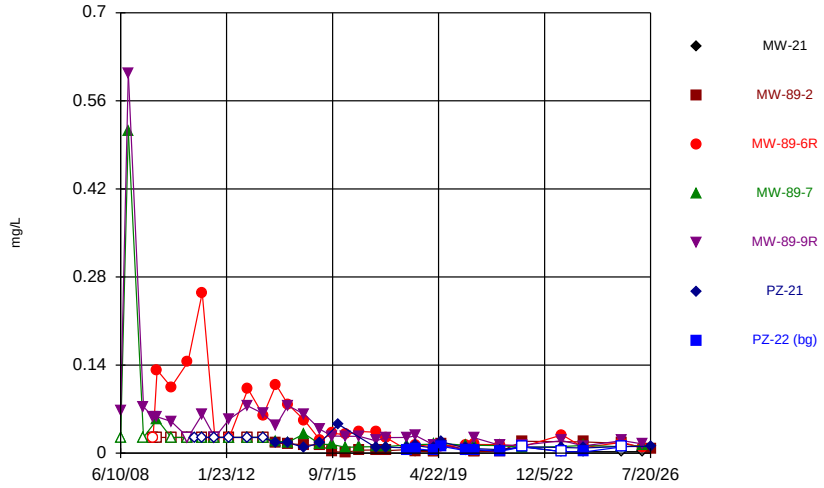
Time Series



Constituent: Methylene Chloride Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

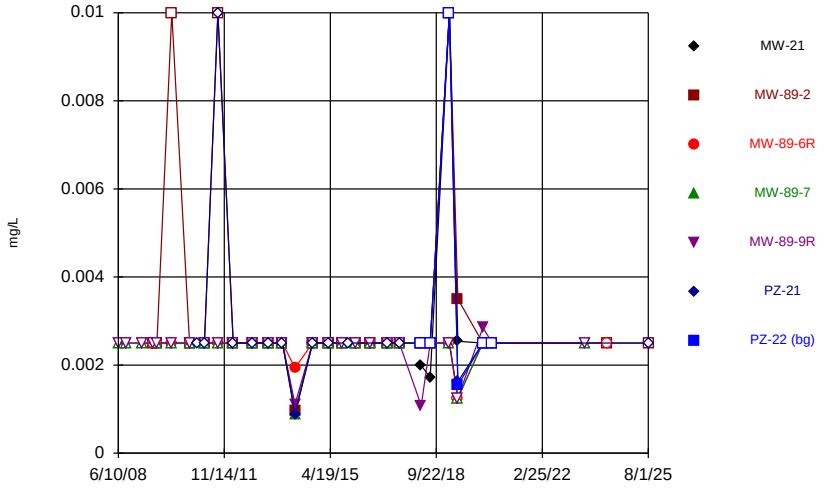
Time Series



Constituent: Nickel Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

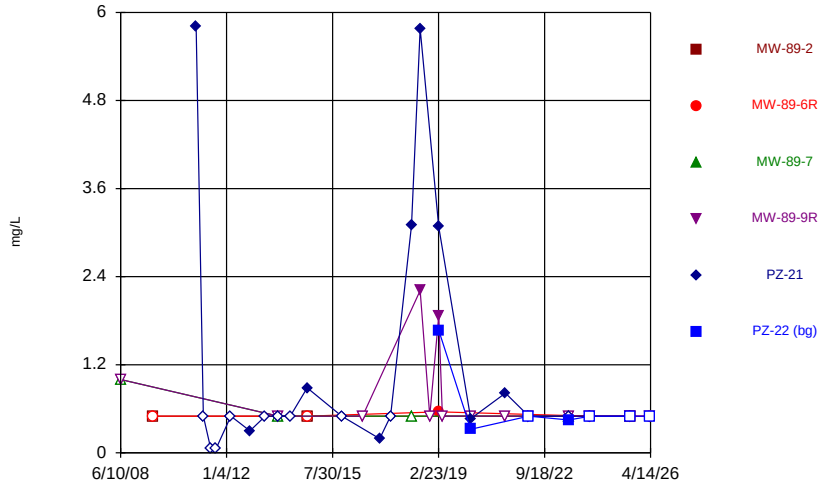
Time Series



Constituent: Selenium Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

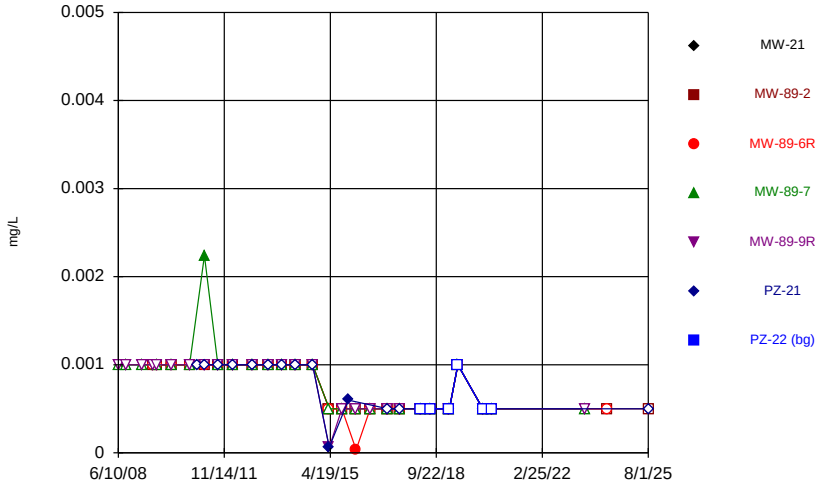
Time Series



Constituent: Sulfide Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

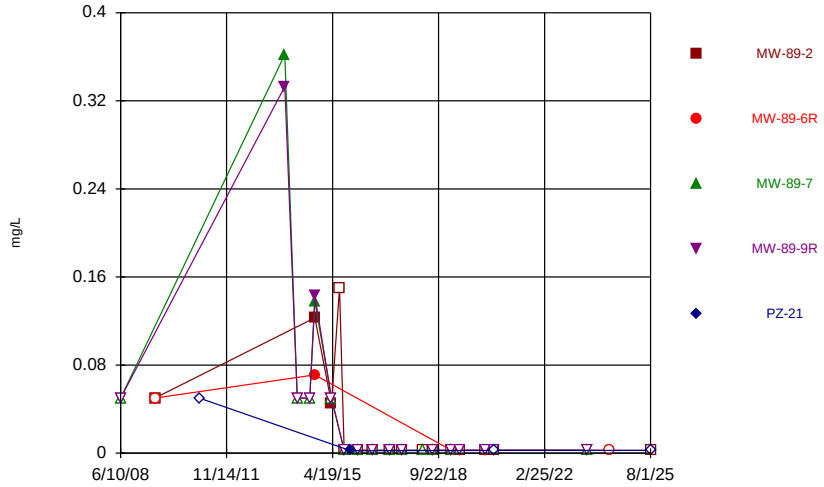
Time Series



Constituent: Thallium Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

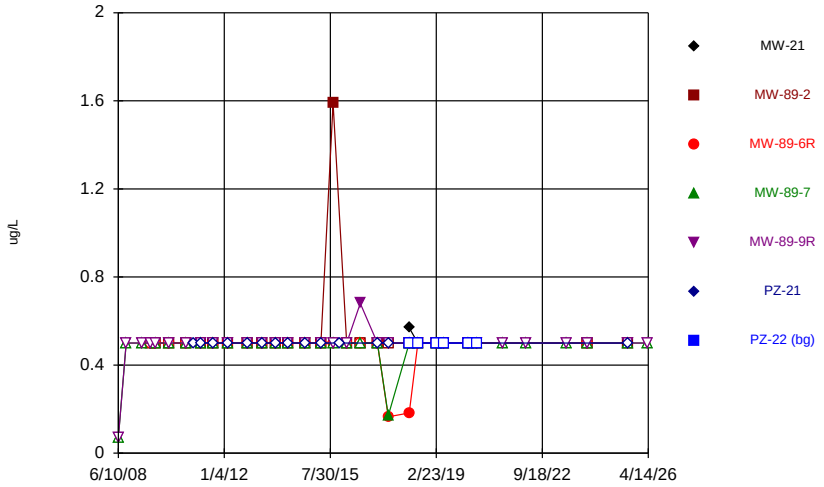
Time Series



Constituent: Tin Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

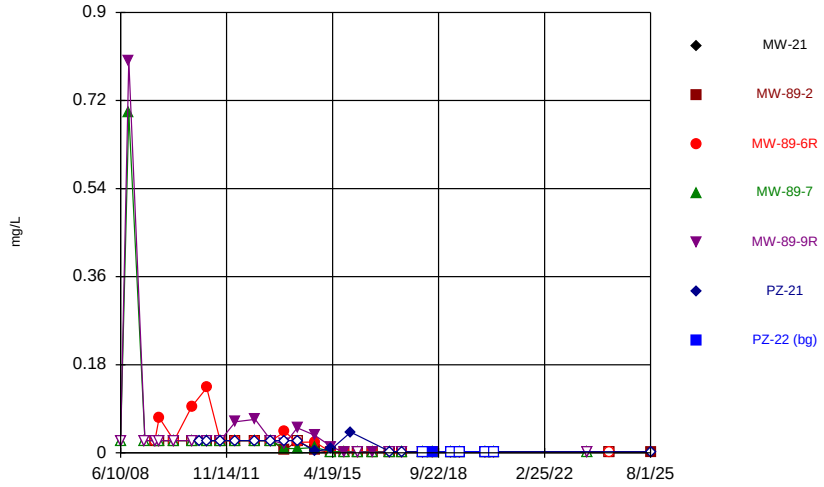
Time Series



Constituent: Toluene Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

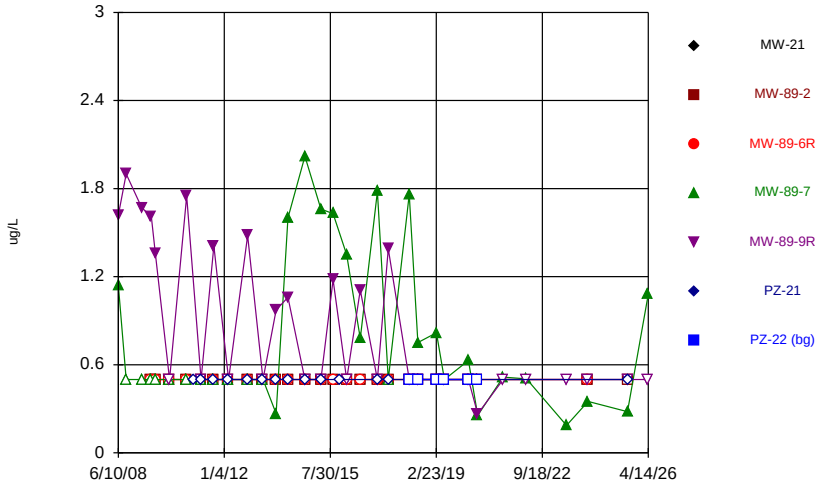
Time Series



Constituent: Vanadium Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

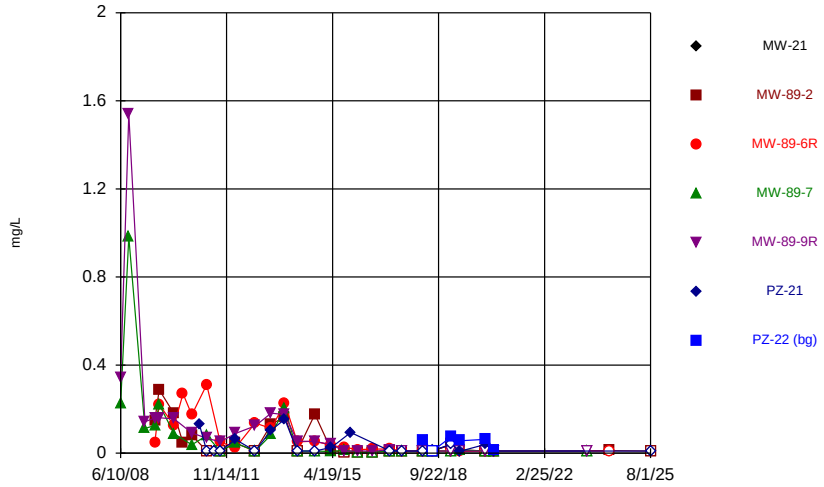
Time Series



Constituent: Vinyl chloride Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Zinc Analysis Run 9/18/2026 11:33 AM View: 2026_AWQR-Time_Series

Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Outliers Test Summary Table and Graphs

BG Outlier Analysis

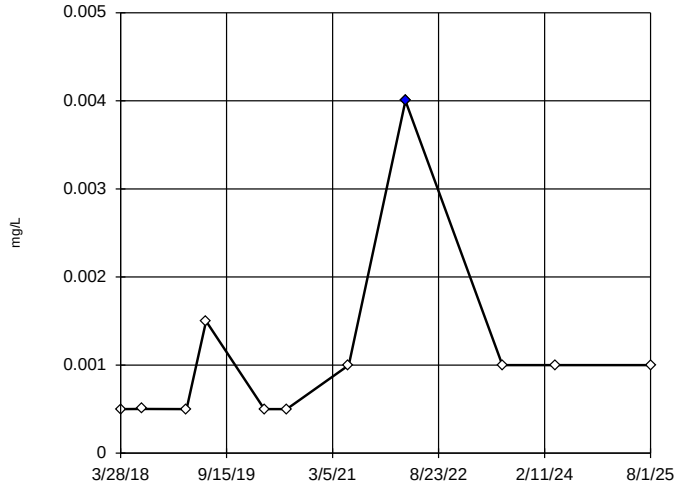
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master Printed 9/18/2026, 10:54 AM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Antimony (mg/L)	**PZ-22 (bg)**	**Yes**	**0.004**	**3/9/2022**	**Dixon`s**	**0.01**	**11**	**0.001091**	**0.00102**	**normal**	**ShapiroWilk**
Arsenic (mg/L)	PZ-22 (bg)	No	n/a	n/a	EPA 1989	0.05	11	0.002915	0.0009308	normal	ShapiroWilk
Barium (mg/L)	PZ-22 (bg)	No	n/a	n/a	NP (nrm)	NaN	11	0.01144	0.001311	unknown	ShapiroWilk
Beryllium (mg/L)	PZ-22 (bg)	No	n/a	n/a	EPA 1989	0.05	11	0.00106	0.0009144	ln(x)	ShapiroWilk
Cadmium (mg/L)	PZ-22 (bg)	No	n/a	n/a	EPA 1989	0.05	11	0.0001717	0.000108	normal	ShapiroWilk
Chromium (mg/L)	PZ-22 (bg)	No	n/a	n/a	EPA 1989	0.05	6	0.002028	0.0006642	normal	ShapiroWilk
Cobalt (mg/L)	PZ-22 (bg)	No	n/a	n/a	EPA 1989	0.05	11	0.001471	0.0007097	normal	ShapiroWilk
Copper (mg/L)	PZ-22 (bg)	No	n/a	n/a	EPA 1989	0.05	11	0.07456	0.1457	ln(x)	ShapiroWilk
Lead (mg/L)	PZ-22 (bg)	No	n/a	n/a	EPA 1989	0.05	6	0.0006123	0.00051	normal	ShapiroWilk
Nickel (mg/L)	PZ-22 (bg)	No	n/a	n/a	EPA 1989	0.05	11	0.005746	0.003243	normal	ShapiroWilk
Selenium (mg/L)	PZ-22 (bg)	n/a	n/a	n/a	EPA 1989	0.05	6	0.00359	0.003164	unknown	ShapiroWilk
Vanadium (mg/L)	PZ-22 (bg)	No	n/a	n/a	NP (nrm)	NaN	6	0.00225	0.0006124	unknown	ShapiroWilk
Zinc (mg/L)	PZ-22 (bg)	No	n/a	n/a	EPA 1989	0.05	6	0.0467	0.02762	normal	ShapiroWilk

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Dixon's Outlier Test

PZ-22 (bg)



n = 11

Statistical outlier is drawn as solid.
Testing for 1 high outlier.
Mean = 0.001091.
Std. Dev. = 0.00102.
<0.008: c = 0.8571
tabl = 0.679.
Alpha = 0.01.

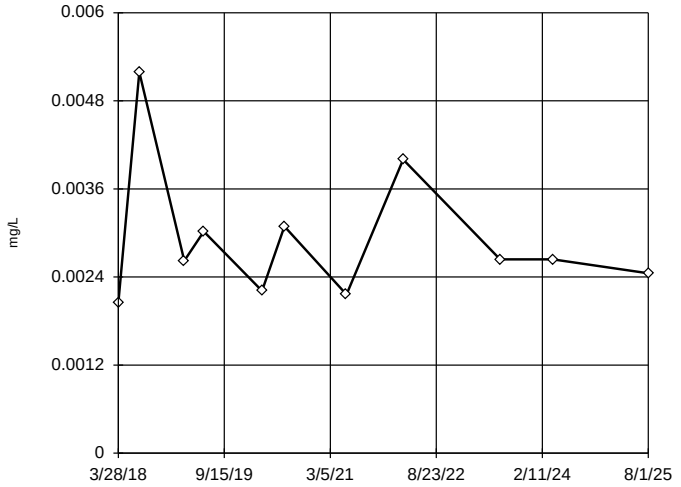
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.7813
Critical = 0.781
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Antimony Analysis Run 9/18/2026 10:50 AM View: 2026_AWQR-BG_Outliers
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

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EPA Screening (suspected outliers for Dixon's Test)

PZ-22 (bg)



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.002915, std. dev. 0.0009308, critical Tn 2.234

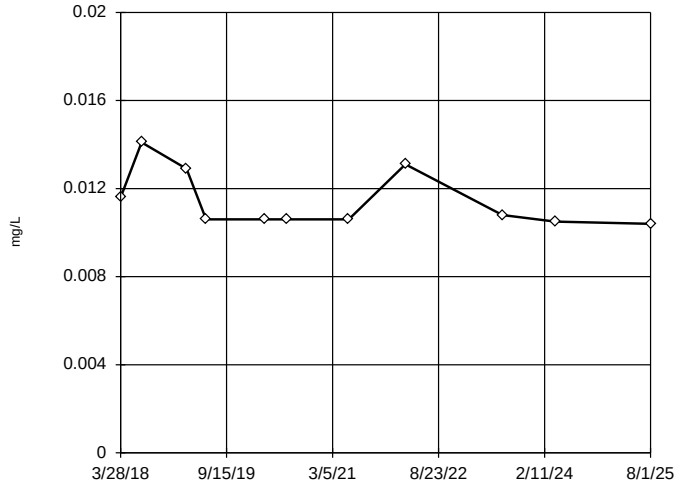
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.8108
Critical = 0.792
The distribution was found to be normally distributed.

Constituent: Arsenic Analysis Run 9/18/2026 10:50 AM View: 2026_AWQR-BG_Outliers
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

Tukey's Outlier Screening

PZ-22 (bg)



n = 11

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

Data were natural log transformed to achieve best W statistic (graph shown in original units).

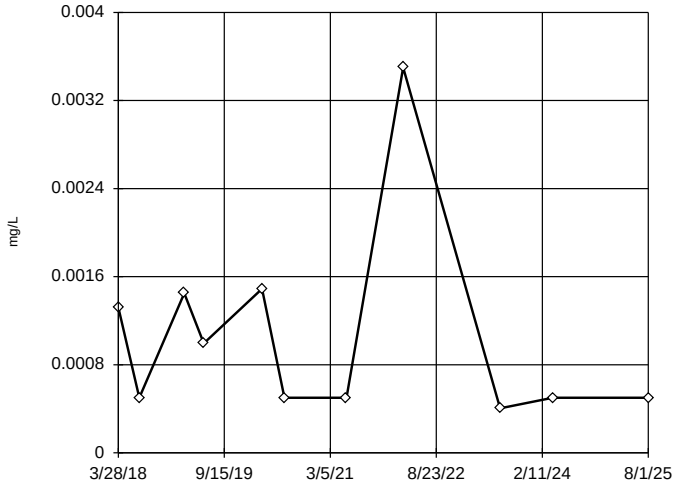
High cutoff = 0.02325, low cutoff = 0.005881, based on IQR multiplier of 3.

Constituent: Barium Analysis Run 9/18/2026 10:50 AM View: 2026_AWQR-BG_Outliers
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

EPA Screening (suspected outliers for Dixon's Test)

PZ-22 (bg)



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.00106, std. dev. 0.0009144, critical Tn 2.234

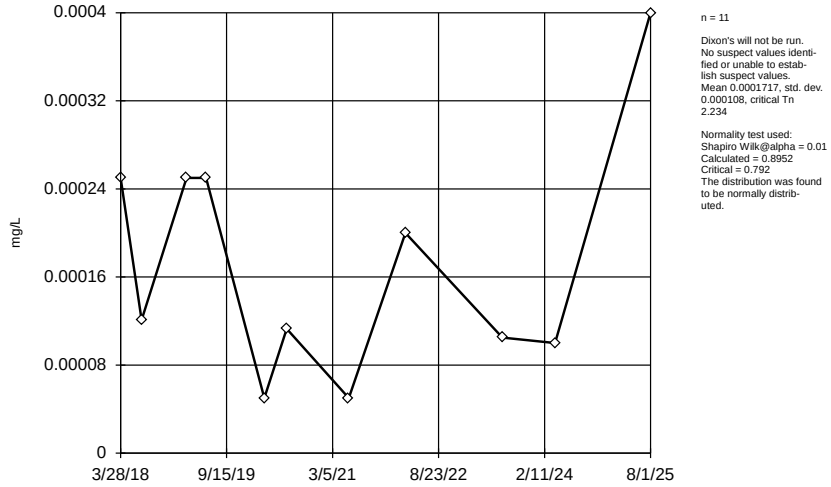
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.8363
Critical = 0.792 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Beryllium Analysis Run 9/18/2026 10:50 AM View: 2026_AWQR-BG_Outliers
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

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EPA Screening (suspected outliers for Dixon's Test)

PZ-22 (bg)



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.0001717, std. dev. 0.000108, critical Tn 2.234

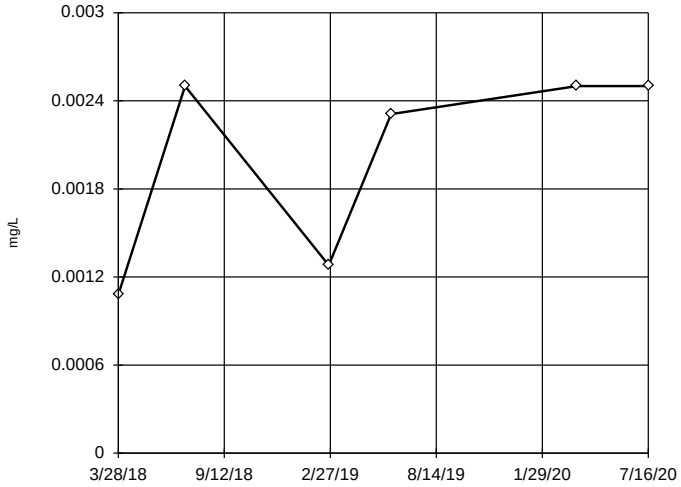
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.8952
Critical = 0.792
The distribution was found to be normally distributed.

Constituent: Cadmium Analysis Run 9/18/2026 10:50 AM View: 2026_AWQR-BG_Outliers
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

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EPA Screening (suspected outliers for Dixon's Test)

PZ-22 (bg)



n = 6

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.002028, std. dev. 0.0006642, critical Tn 1.822

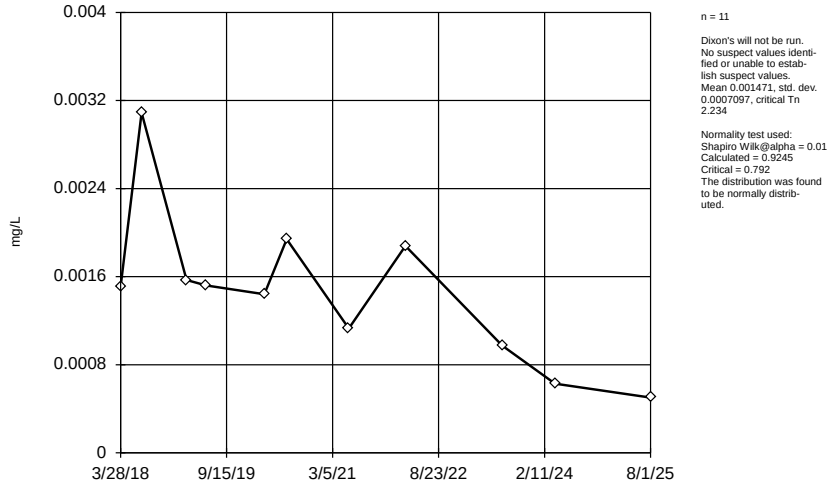
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.7336
Critical = 0.713
The distribution was found to be normally distributed.

Constituent: Chromium Analysis Run 9/18/2026 10:50 AM View: 2026_AWQR-BG_Outliers
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

EPA Screening (suspected outliers for Dixon's Test)

PZ-22 (bg)



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.001471, std. dev. 0.0007097, critical Tn 2.234

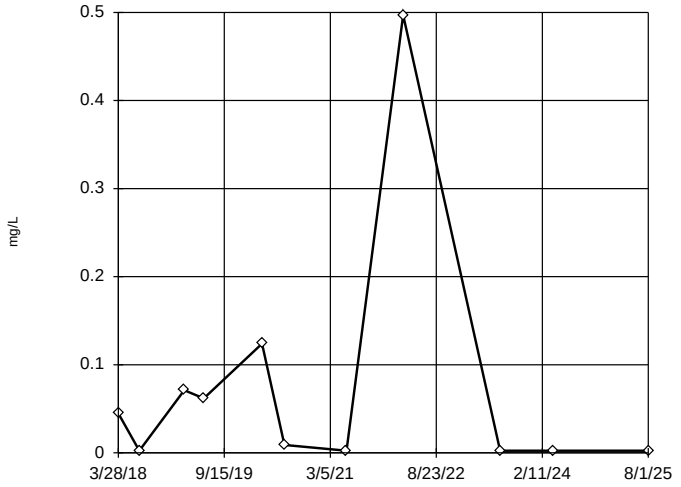
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9245
Critical = 0.792
The distribution was found to be normally distributed.

Constituent: Cobalt Analysis Run 9/18/2026 10:50 AM View: 2026_AWQR-BG_Outliers
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

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EPA Screening (suspected outliers for Dixon's Test)

PZ-22 (bg)



n = 11

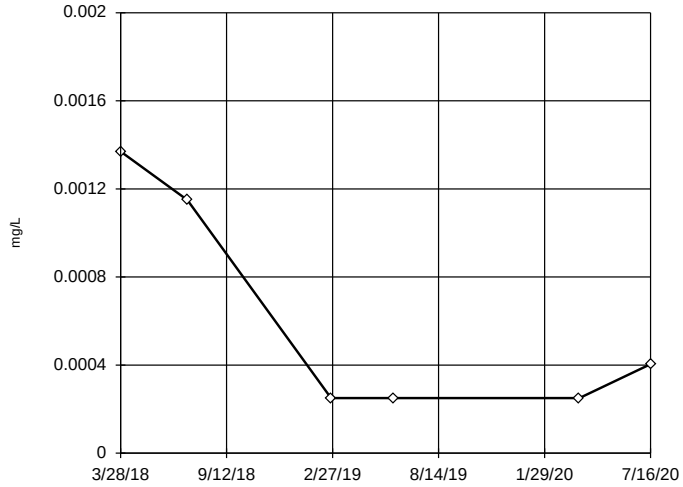
Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.07456, std. dev. 0.1457, critical Tn 2.234

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.833
Critical = 0.792 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Copper Analysis Run 9/18/2026 10:50 AM View: 2026_AWQR-BG_Outliers
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

EPA Screening (suspected outliers for Dixon's Test)

PZ-22 (bg)



n = 6

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.0006123, std. dev. 0.00051, critical Tn 1.822

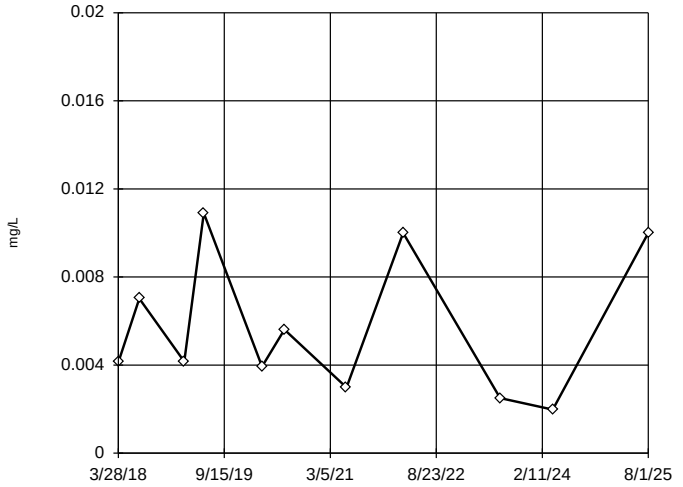
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.748
Critical = 0.713
The distribution was found to be normally distributed.

Constituent: Lead Analysis Run 9/18/2026 10:50 AM View: 2026_AWQR-BG_Outliers
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

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EPA Screening (suspected outliers for Dixon's Test)

PZ-22 (bg)



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.005746, std. dev. 0.003243, critical Tn 2.234

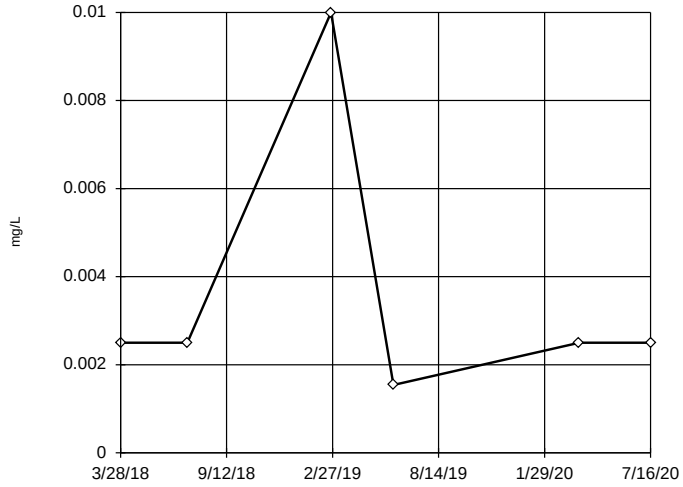
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.8785
Critical = 0.792
The distribution was found to be normally distributed.

Constituent: Nickel Analysis Run 9/18/2026 10:50 AM View: 2026_AWQR-BG_Outliers
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

EPA Screening (suspected outliers for Dixon's Test)

PZ-22 (bg)



n = 6

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.00359, std. dev. 0.003164, critical Tn 1.822. After removing suspect data: mean 0.002308, std. dev. 0.0004293, Tn 1.672.

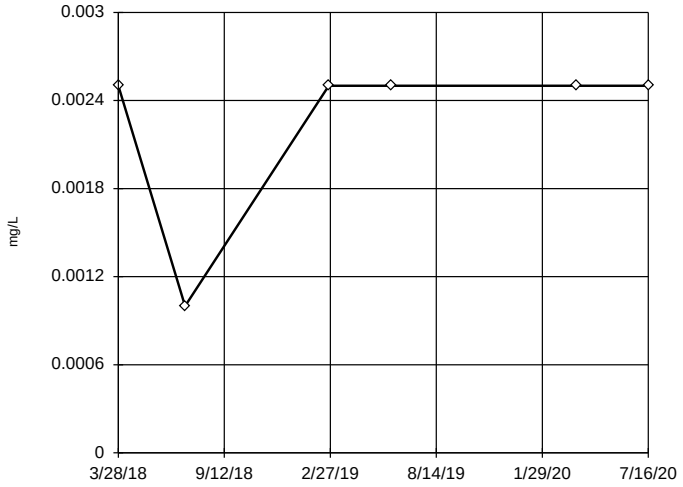
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.7162
Critical = 0.713 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Selenium Analysis Run 9/18/2026 10:50 AM View: 2026_AWQR-BG_Outliers
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

Tukey's Outlier Screening

PZ-22 (bg)



n = 6

No outliers found.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

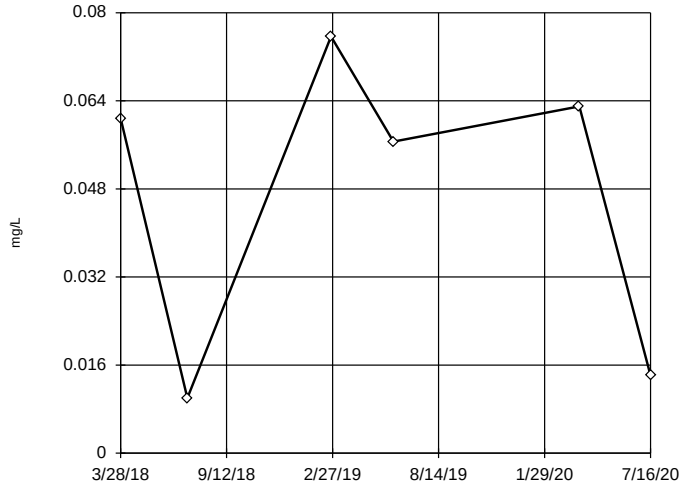
Ladder of Powers transformations did not improve normality; analysis run on raw data.

High cutoff = 0.00475, low cutoff = -0.0005, based on IQR multiplier of 3.

Constituent: Vanadium Analysis Run 9/18/2026 10:50 AM View: 2026_AWQR-BG_Outliers
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

EPA Screening (suspected outliers for Dixon's Test)

PZ-22 (bg)



n = 6

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Mean 0.0467, std. dev. 0.02762, critical Tn 1.822

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.8324
Critical = 0.713
The distribution was found to be normally distributed.

Constituent: Zinc Analysis Run 9/18/2026 10:50 AM View: 2026_AWQR-BG_Outliers

Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Prediction Limits Summary Table and Graphs

Prediction Limit

Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master Printed 9/18/2026, 11:16 AM

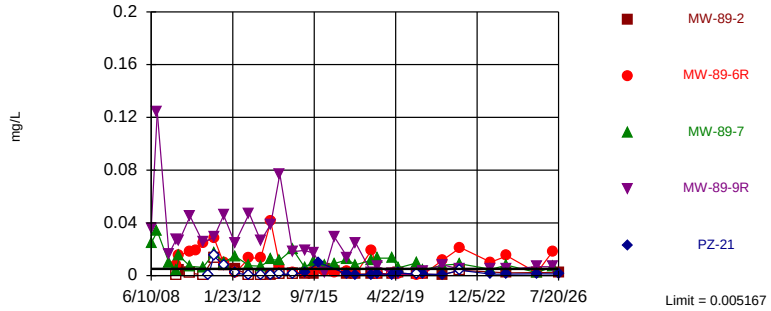
Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Wells	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	MW-89-2	0.005167	n/a	7/20/2026	0.00223	No	11	PZ-22	0.002915	0.0009308	9.091	None	No	0.00135	Param Inter 1 of 2
Arsenic (mg/L)	**MW-89-6R**	**0.005167**	**n/a**	**4/14/2026**	**0.0182**	**Yes**	**11**	**PZ-22**	**0.002915**	**0.0009308**	**9.091**	**None**	**No**	**0.00135**	**Param Inter 1 of 2**
Arsenic (mg/L)	**MW-89-7**	**0.005167**	**n/a**	**4/14/2026**	**0.0067**	**Yes**	**11**	**PZ-22**	**0.002915**	**0.0009308**	**9.091**	**None**	**No**	**0.00135**	**Param Inter 1 of 2**
Arsenic (mg/L)	**MW-89-9R**	**0.005167**	**n/a**	**4/14/2026**	**0.00675**	**Yes**	**11**	**PZ-22**	**0.002915**	**0.0009308**	**9.091**	**None**	**No**	**0.00135**	**Param Inter 1 of 2**
Arsenic (mg/L)	PZ-21	0.005167	n/a	7/20/2026	0.00126	No	11	PZ-22	0.002915	0.0009308	9.091	None	No	0.00135	Param Inter 1 of 2
Barium (mg/L)	MW-21	0.0141	n/a	4/14/2026	0.00884	No	11	PZ-22	n/a	n/a	0	n/a	n/a	0.01166	NP Inter (normality) 1 of 2
Barium (mg/L)	**MW-89-2**	**0.0141**	**n/a**	**7/20/2026**	**0.0261**	**Yes**	**11**	**PZ-22**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.01166**	**NP Inter (normality) 1 of 2**
Barium (mg/L)	**MW-89-6R**	**0.0141**	**n/a**	**4/14/2026**	**0.332**	**Yes**	**11**	**PZ-22**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.01166**	**NP Inter (normality) 1 of 2**
Barium (mg/L)	**MW-89-7**	**0.0141**	**n/a**	**4/14/2026**	**0.399**	**Yes**	**11**	**PZ-22**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.01166**	**NP Inter (normality) 1 of 2**
Barium (mg/L)	**MW-89-9R**	**0.0141**	**n/a**	**4/14/2026**	**0.239**	**Yes**	**11**	**PZ-22**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.01166**	**NP Inter (normality) 1 of 2**
Barium (mg/L)	**PZ-21**	**0.0141**	**n/a**	**7/20/2026**	**0.0175**	**Yes**	**11**	**PZ-22**	**n/a**	**n/a**	**0**	**n/a**	**n/a**	**0.01166**	**NP Inter (normality) 1 of 2**
Cobalt (mg/L)	**MW-89-2**	**0.003188**	**n/a**	**7/20/2026**	**0.00369**	**Yes**	**11**	**PZ-22**	**0.001471**	**0.0007097**	**0**	**None**	**No**	**0.00135**	**Param Inter 1 of 2**
Cobalt (mg/L)	**MW-89-6R**	**0.003188**	**n/a**	**4/14/2026**	**0.01**	**Yes**	**11**	**PZ-22**	**0.001471**	**0.0007097**	**0**	**None**	**No**	**0.00135**	**Param Inter 1 of 2**
Cobalt (mg/L)	**MW-89-7**	**0.003188**	**n/a**	**4/14/2026**	**0.00379**	**Yes**	**11**	**PZ-22**	**0.001471**	**0.0007097**	**0**	**None**	**No**	**0.00135**	**Param Inter 1 of 2**
Cobalt (mg/L)	**MW-89-9R**	**0.003188**	**n/a**	**4/14/2026**	**0.0129**	**Yes**	**11**	**PZ-22**	**0.001471**	**0.0007097**	**0**	**None**	**No**	**0.00135**	**Param Inter 1 of 2**
Cobalt (mg/L)	PZ-21	0.003188	n/a	7/20/2026	0.00261	No	11	PZ-22	0.001471	0.0007097	0	None	No	0.00135	Param Inter 1 of 2
Copper (mg/L)	MW-89-2	0.4706	n/a	7/20/2026	0.0027	No	11	PZ-22	0.3199	0.1893	45.45	Kaplan-Meier	x^(1/3)	0.00135	Param Inter 1 of 2
Copper (mg/L)	PZ-21	0.4706	n/a	7/20/2026	0.00576	No	11	PZ-22	0.3199	0.1893	45.45	Kaplan-Meier	x^(1/3)	0.00135	Param Inter 1 of 2
Nickel (mg/L)	MW-89-2	0.01105	n/a	7/20/2026	0.00729	No	11	PZ-22	0.004905	0.002542	27.27	Kaplan-Meier	No	0.00135	Param Inter 1 of 2
Nickel (mg/L)	MW-89-6R	0.01105	n/a	4/14/2026	0.00796	No	11	PZ-22	0.004905	0.002542	27.27	Kaplan-Meier	No	0.00135	Param Inter 1 of 2
Nickel (mg/L)	**MW-89-7**	**0.01105**	**n/a**	**4/14/2026**	**0.0118**	**Yes**	**11**	**PZ-22**	**0.004905**	**0.002542**	**27.27**	**Kaplan-Meier**	**No**	**0.00135**	**Param Inter 1 of 2**
Nickel (mg/L)	**MW-89-9R**	**0.01105**	**n/a**	**4/14/2026**	**0.0146**	**Yes**	**11**	**PZ-22**	**0.004905**	**0.002542**	**27.27**	**Kaplan-Meier**	**No**	**0.00135**	**Param Inter 1 of 2**
Nickel (mg/L)	PZ-21	0.01105	n/a	7/20/2026	0.0107	No	11	PZ-22	0.004905	0.002542	27.27	Kaplan-Meier	No	0.00135	Param Inter 1 of 2

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Hollow symbols indicate censored values.

Exceeds Limit: MW-89-6R, MW-89-7, MW-89-9R

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=0.002915, Std. Dev.=0.0009308, n=11, 9.091% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8108, critical = 0.792. Kappa = 2.419 (c=13, w=6, 1 of 2, event alpha = 0.1). Report alpha = 0.008072. Individual comparison alpha = 0.00135. Comparing 5 points to limit. Assumes 1 future value.

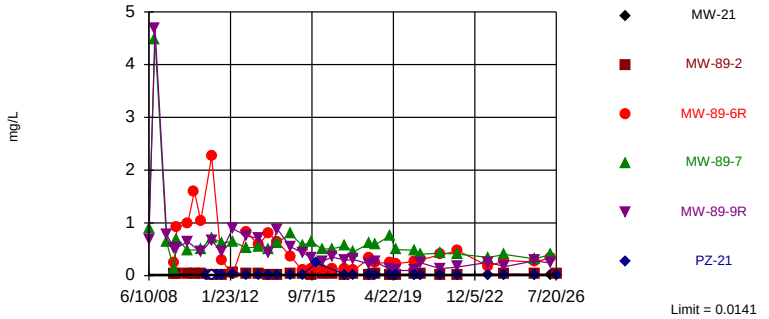
Constituent: Arsenic Analysis Run 9/18/2026 11:15 AM View: 2026AWQR_Interwell PL
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

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Hollow symbols indicate censored values.

Exceeds Limit: MW-89-2, MW-89-6R, MW-89-7, MW-89-9R, PZ-21

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 11 background values. Annual per-constituent alpha = 0.06795. Individual comparison alpha = 0.01166 (1 of 2). Comparing 6 points to limit.

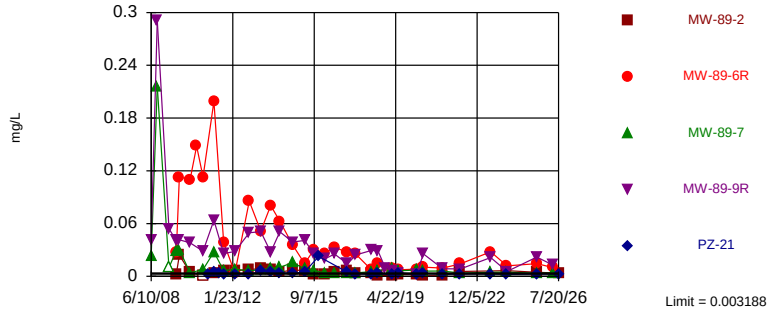
Constituent: Barium Analysis Run 9/18/2026 11:15 AM View: 2026AWQR_Interwell PL
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

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Hollow symbols indicate censored values.

Exceeds Limit: MW-89-2, MW-89-6R, MW-89-7, MW-89-9R

Prediction Limit

Interwell Parametric



Background Data Summary: Mean=0.001471, Std. Dev.=0.0007097, n=11. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9245, critical = 0.792. Kappa = 2.419 (c=13, w=6, 1 of 2, event alpha = 0.1). Report alpha = 0.008072. Individual comparison alpha = 0.00135. Comparing 5 points to limit. Assumes 1 future value.

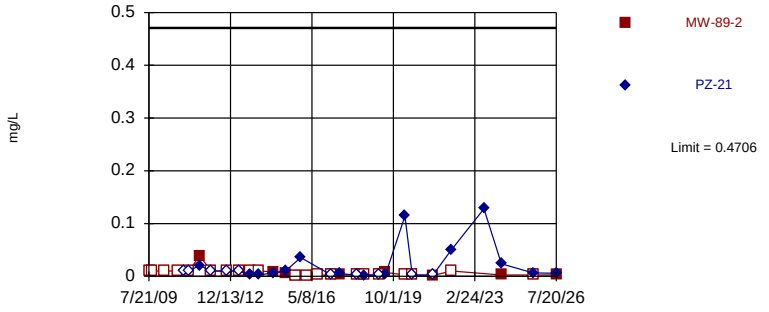
Constituent: Cobalt Analysis Run 9/18/2026 11:15 AM View: 2026AWQR_Interwell PL
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

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Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Parametric



Background Data Summary (based on cube root transformation) (after Kaplan-Meier Adjustment): Mean=0.3199, Std. Dev.=0.1893, n=11, 45.45% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8086, critical = 0.792. Kappa = 2.419 (c=13, w=6, 1 of 2, event alpha = 0.1). Report alpha = 0.008072. Individual comparison alpha = 0.00135. Comparing 2 points to limit. Assumes 4 future values.

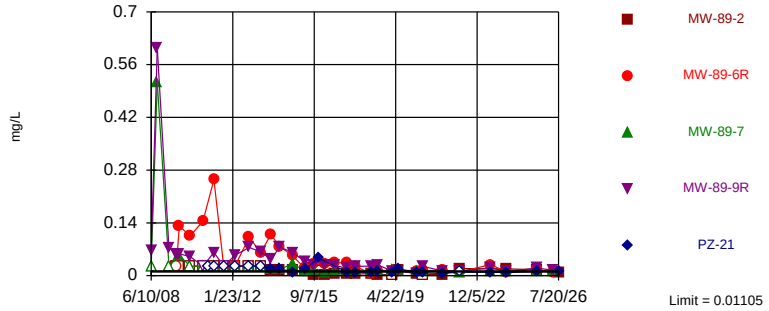
Constituent: Copper Analysis Run 9/18/2026 11:15 AM View: 2026AWQR_Interwell PL
Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

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Hollow symbols indicate censored values.

Exceeds Limit: MW-89-7, MW-89-9R

Prediction Limit

Interwell Parametric



Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.004905, Std. Dev.=0.002542, n=11, 27.27% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8785, critical = 0.792. Kappa = 2.419 (c=13, w=6, 1 of 2, event alpha = 0.1). Report alpha = 0.008072. Individual comparison alpha = 0.00135. Comparing 5 points to limit. Assumes 1 future value.

Constituent: Nickel Analysis Run 9/18/2026 11:15 AM View: 2026AWQR_Interwell PL

Union County Sanitary Landfill Client: SCS Engineers Data: Sanitas UCSWC - master

Sen’s Slope/Mann-Kendall Trend Test Summary Table and Graphs

Trend Test

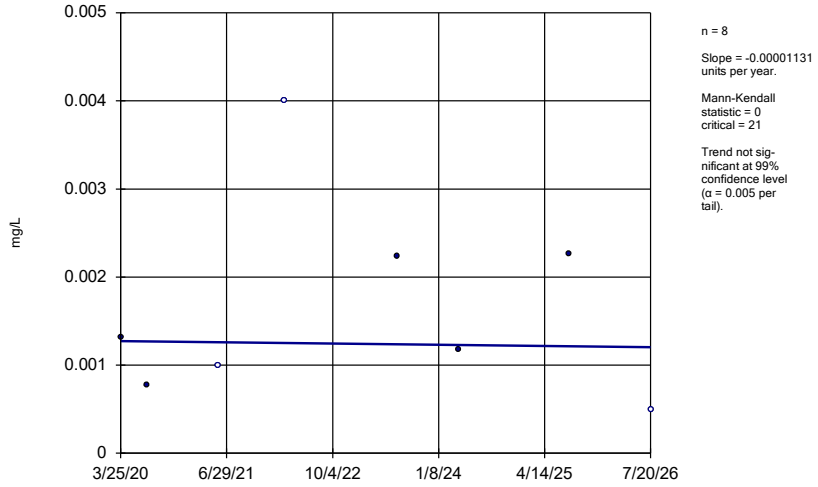
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR Printed 9/9/2026, 12:04 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Alpha	Method
Antimony (mg/L)	PZ-21	-0.00001131	0	21	No	8	37.5	0.01	NP
Arsenic (mg/L)	MW-89-2	0.0001234	9	21	No	8	12.5	0.01	NP
Arsenic (mg/L)	MW-89-6R	0.002222	12	21	No	8	12.5	0.01	NP
Arsenic (mg/L)	MW-89-7	-0.0004368	-8	-21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-89-9R	0.0006541	12	21	No	8	12.5	0.01	NP
Arsenic (mg/L)	PZ-21	0.00004236	10	21	No	8	25	0.01	NP
Barium (mg/L)	MW-89-2	0.0004946	4	21	No	8	0	0.01	NP
Barium (mg/L)	MW-89-6R	0.001206	0	21	No	8	0	0.01	NP
Barium (mg/L)	MW-89-7	-0.01522	-19	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-89-9R	0.02004	15	21	No	8	0	0.01	NP
Barium (mg/L)	PZ-21	0.0004487	8	21	No	8	0	0.01	NP
Beryllium (mg/L)	PZ-21	-0.0002826	-14	-21	No	8	62.5	0.01	NP
Cadmium (mg/L)	MW-89-2	0.00001212	7	21	No	8	50	0.01	NP
Cadmium (mg/L)	MW-89-6R	0	-1	-21	No	8	37.5	0.01	NP
Carbon disulfide (ug/L)	MW-89-2	0	1	21	No	8	75	0.01	NP
Carbon disulfide (ug/L)	PZ-21	-0.009148	-3	-21	No	8	37.5	0.01	NP
Chromium (mg/L)	MW-89-2	0.001334	12	21	No	8	12.5	0.01	NP
Cobalt (mg/L)	MW-89-2	0.0003907	10	21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-89-6R	0.0008386	10	21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-89-7	-0.0004731	-16	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-89-9R	0.0008477	4	21	No	8	0	0.01	NP
Cobalt (mg/L)	PZ-21	-0.00003007	-4	-21	No	8	0	0.01	NP
Copper (mg/L)	MW-89-2	0	-1	-21	No	8	50	0.01	NP
Copper (mg/L)	PZ-21	-0.004357	-3	-21	No	8	25	0.01	NP
Lead (mg/L)	MW-89-2	0.00001238	10	21	No	8	62.5	0.01	NP
Lead (mg/L)	PZ-21	0	1	21	No	8	37.5	0.01	NP
Nickel (mg/L)	MW-89-2	0.0002875	4	21	No	8	12.5	0.01	NP
Nickel (mg/L)	MW-89-6R	-0.0006266	-6	-21	No	8	0	0.01	NP
Nickel (mg/L)	MW-89-7	-0.0002017	-12	-21	No	8	0	0.01	NP
Nickel (mg/L)	MW-89-9R	0.0004118	4	21	No	8	0	0.01	NP
Nickel (mg/L)	PZ-21	0.0004914	14	21	No	8	12.5	0.01	NP
Selenium (mg/L)	MW-89-2	0	-5	-21	No	8	87.5	0.01	NP
Sulfide (mg/L)	PZ-21	-0.2733	-12	-21	No	8	50	0.01	NP
Vinyl chloride (ug/L)	MW-89-7	-0.01868	-2	-21	No	8	0	0.01	NP
Zinc (mg/L)	PZ-21	0	0	21	No	8	62.5	0.01	NP

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Sen's Slope Estimator

PZ-21



n = 8

Slope = -0.00001131 units per year.

Mann-Kendall statistic = 0
critical = 21

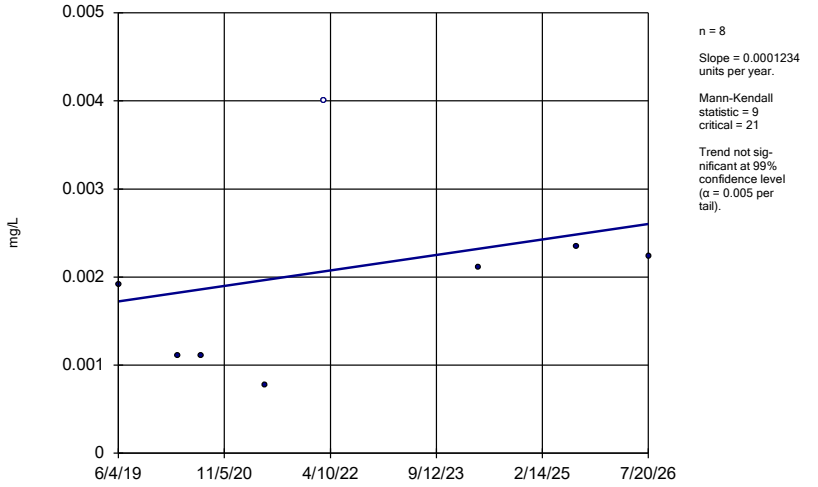
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Antimony Analysis Run 9/9/2026 11:41 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-89-2



n = 8

Slope = 0.0001234 units per year.

Mann-Kendall statistic = 9
critical = 21

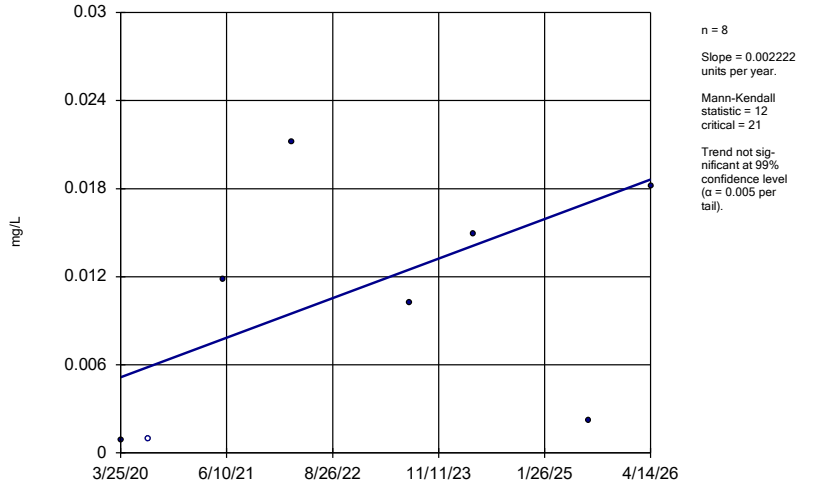
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Arsenic Analysis Run 9/9/2026 11:41 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-89-6R



n = 8

Slope = 0.002222 units per year.

Mann-Kendall statistic = 12
critical = 21

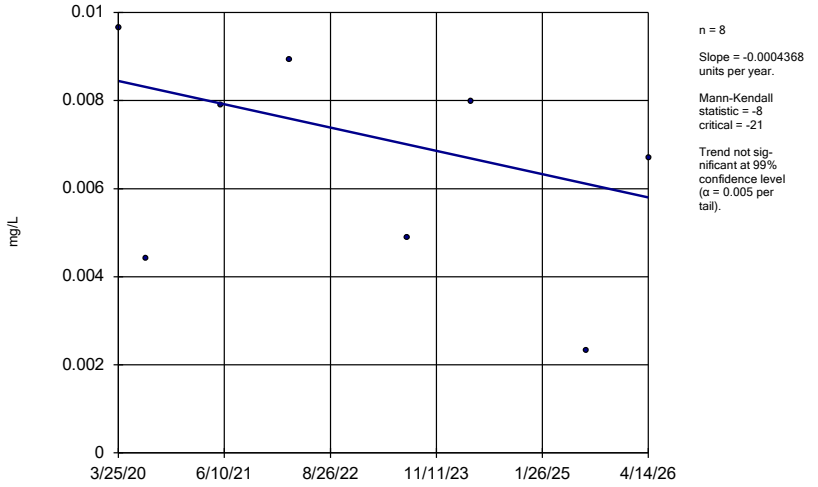
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Arsenic Analysis Run 9/9/2026 11:41 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Sen's Slope Estimator

MW-89-7



n = 8

Slope = -0.0004368 units per year.

Mann-Kendall statistic = -8
critical = -21

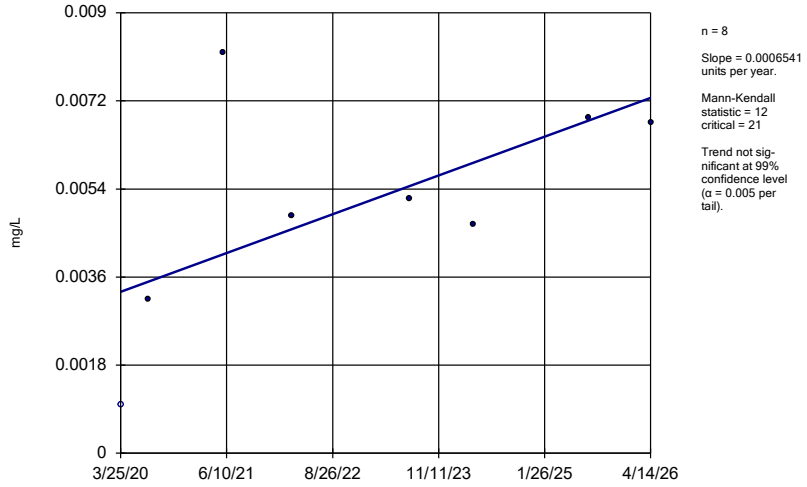
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Arsenic Analysis Run 9/9/2026 11:41 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-89-9R



n = 8

Slope = 0.0006541 units per year.

Mann-Kendall statistic = 12
critical = 21

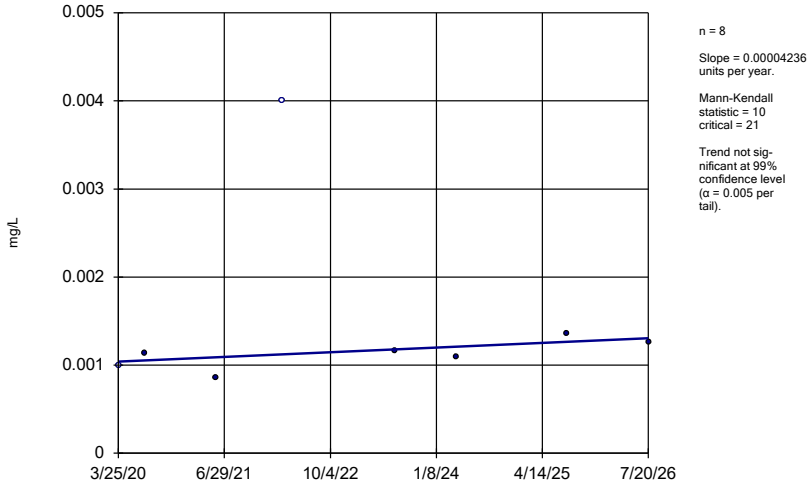
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Arsenic Analysis Run 9/9/2026 11:41 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Hollow symbols indicate censored values.

Sen's Slope Estimator

PZ-21



n = 8

Slope = 0.00004236 units per year.

Mann-Kendall statistic = 10
critical = 21

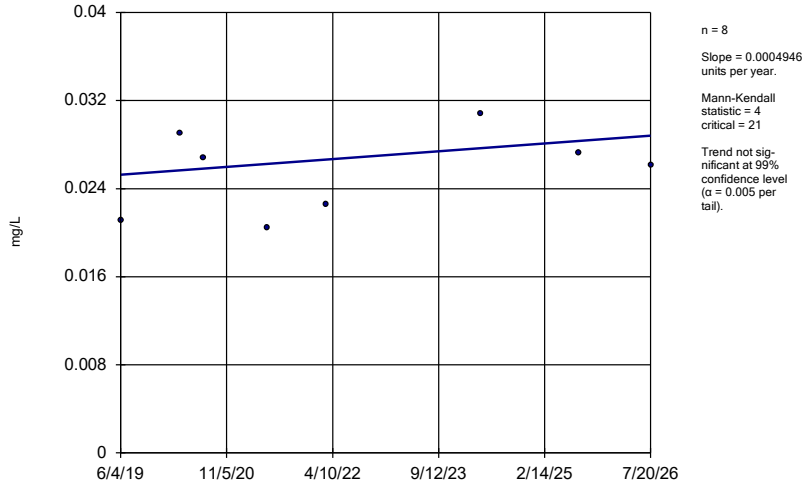
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Arsenic Analysis Run 9/9/2026 11:41 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Sen's Slope Estimator

MW-89-2



n = 8

Slope = 0.0004946 units per year.

Mann-Kendall statistic = 4
critical = 21

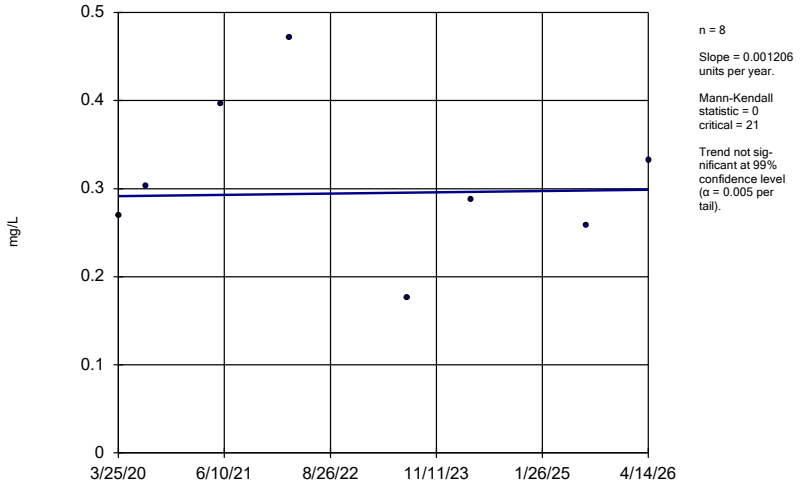
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Barium Analysis Run 9/9/2026 11:41 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Sen's Slope Estimator

MW-89-6R



n = 8

Slope = 0.001206 units per year.

Mann-Kendall statistic = 0
critical = 21

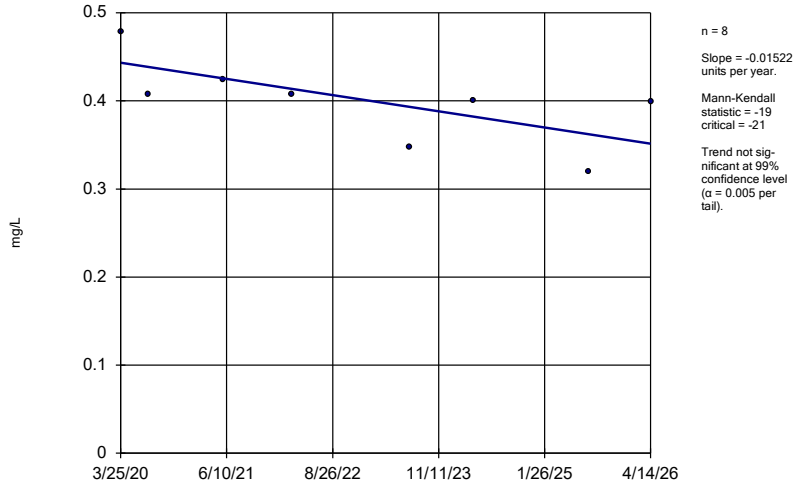
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Barium Analysis Run 9/9/2026 11:41 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Sen's Slope Estimator

MW-89-7



n = 8

Slope = -0.01522 units per year.

Mann-Kendall statistic = -19 critical = -21

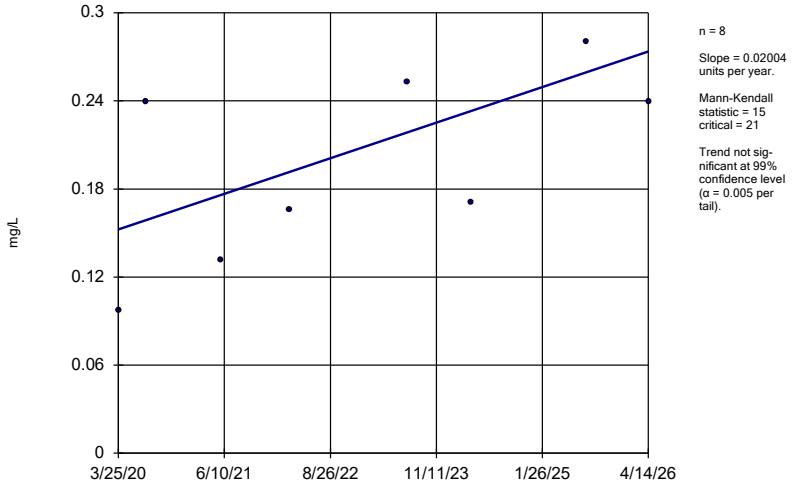
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Barium Analysis Run 9/9/2026 11:41 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Sen's Slope Estimator

MW-89-9R



n = 8

Slope = 0.02004 units per year.

Mann-Kendall statistic = 15 critical = 21

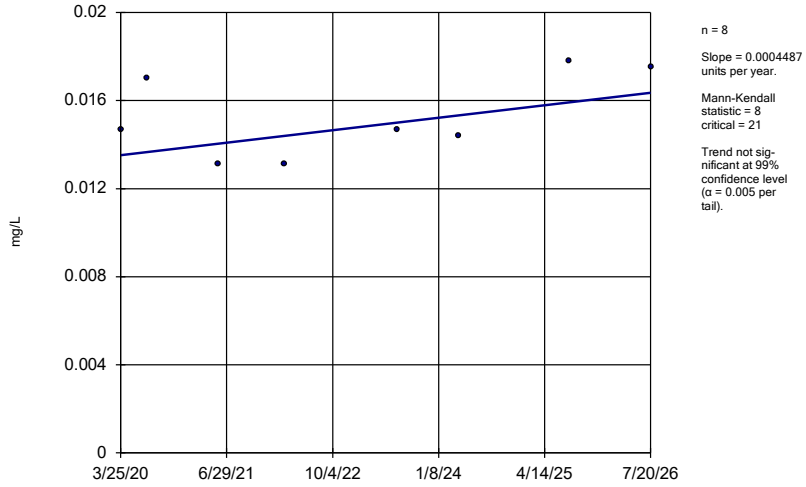
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Barium Analysis Run 9/9/2026 11:41 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Sen's Slope Estimator

PZ-21



n = 8

Slope = 0.0004487 units per year.

Mann-Kendall statistic = 8 critical = 21

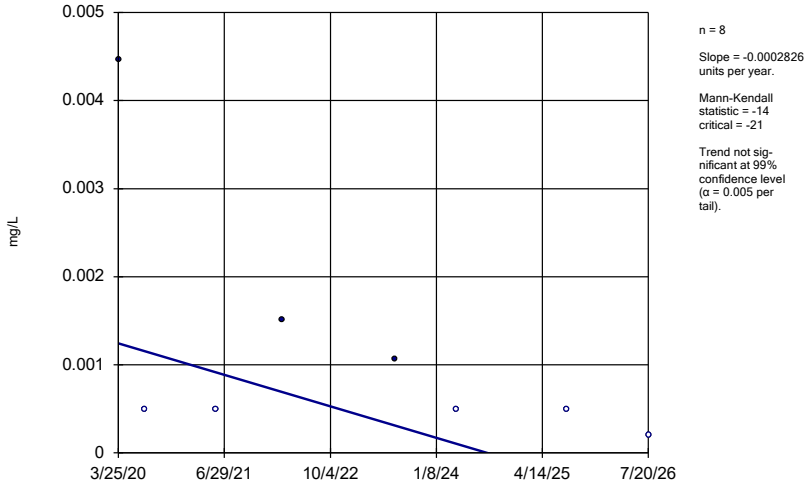
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Barium Analysis Run 9/9/2026 11:41 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Hollow symbols indicate censored values.

Sen's Slope Estimator

PZ-21



n = 8

Slope = -0.0002826 units per year.

Mann-Kendall statistic = -14 critical = -21

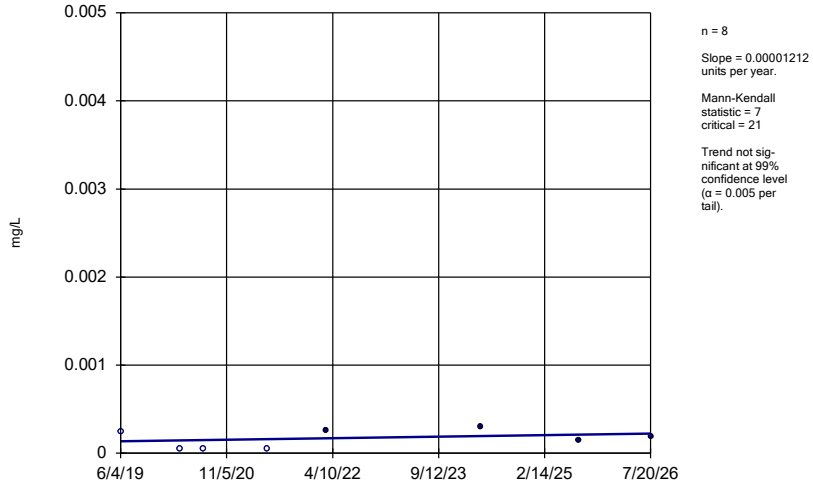
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Beryllium Analysis Run 9/9/2026 11:41 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-89-2



n = 8

Slope = 0.00001212 units per year.

Mann-Kendall statistic = 7
critical = 21

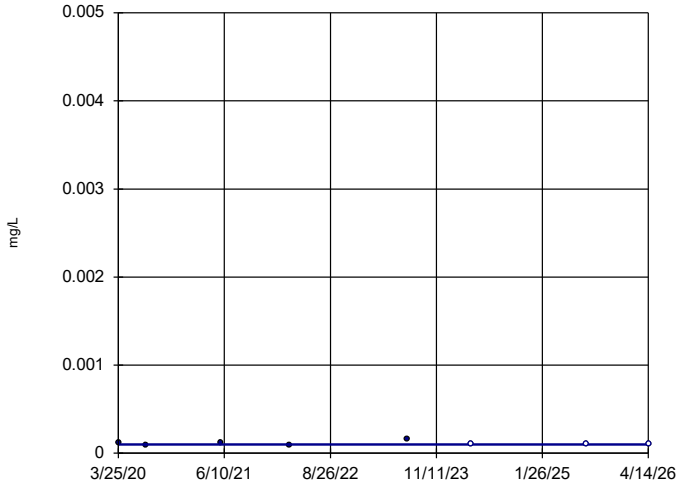
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cadmium Analysis Run 9/9/2026 11:41 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-89-6R



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = -1
critical = -21

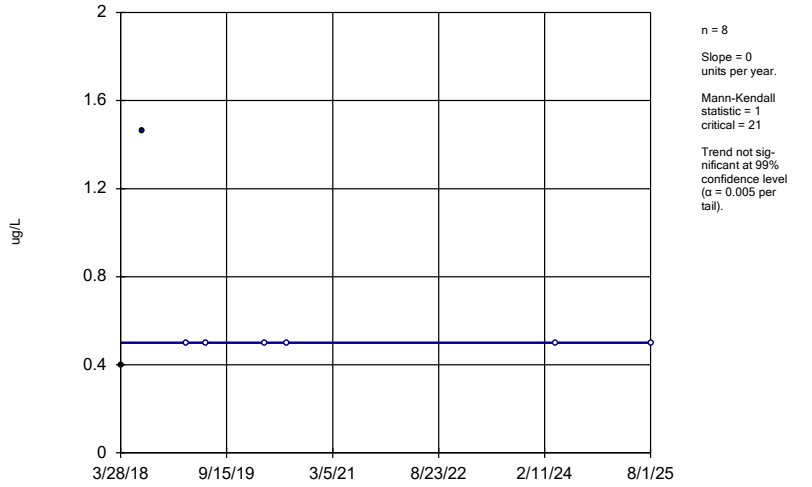
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cadmium Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-89-2



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = 1
critical = 21

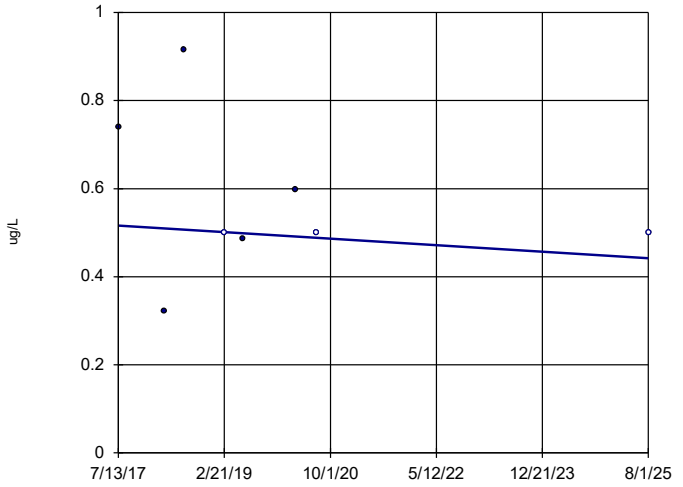
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Carbon disulfide Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Hollow symbols indicate censored values.

Sen's Slope Estimator

PZ-21



n = 8

Slope = -0.009148 units per year.

Mann-Kendall statistic = -3
critical = -21

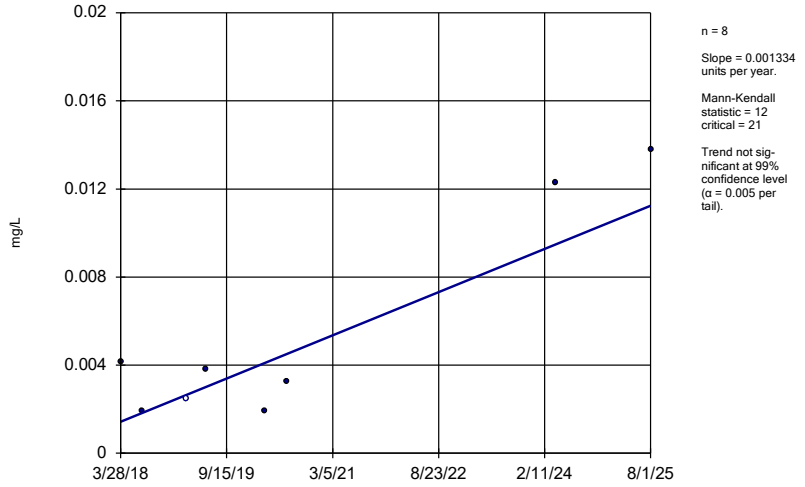
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Carbon disulfide Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-89-2



n = 8

Slope = 0.001334 units per year.

Mann-Kendall statistic = 12 critical = 21

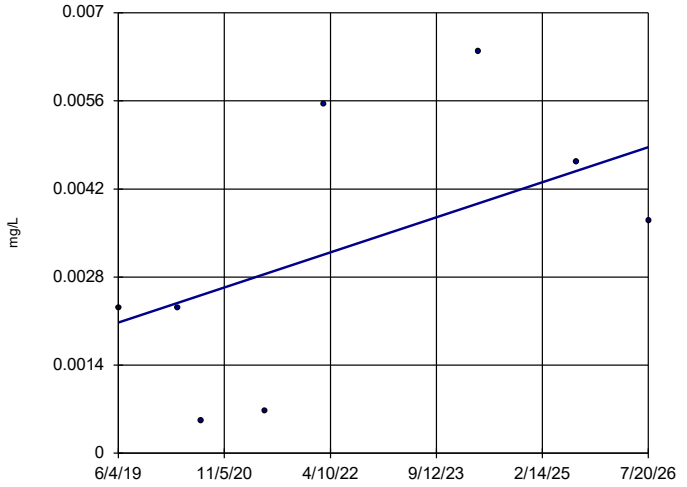
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chromium Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Sen's Slope Estimator

MW-89-2



n = 8

Slope = 0.0003907 units per year.

Mann-Kendall statistic = 10 critical = 21

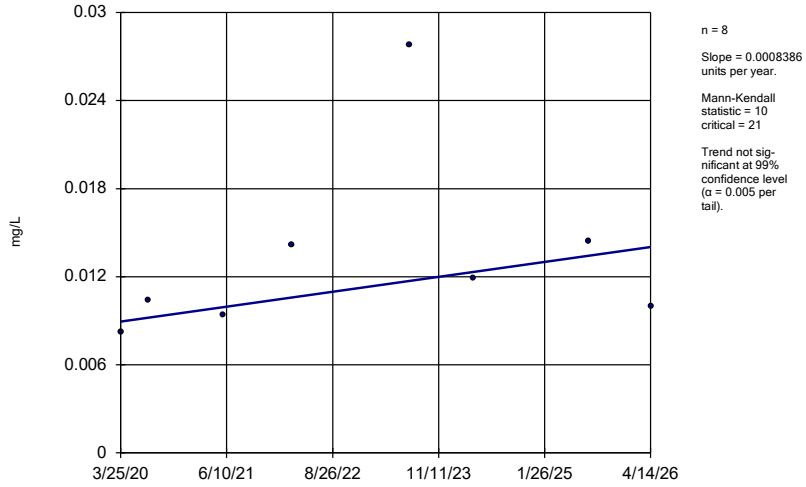
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Sen's Slope Estimator

MW-89-6R



n = 8

Slope = 0.0008386 units per year.

Mann-Kendall statistic = 10 critical = 21

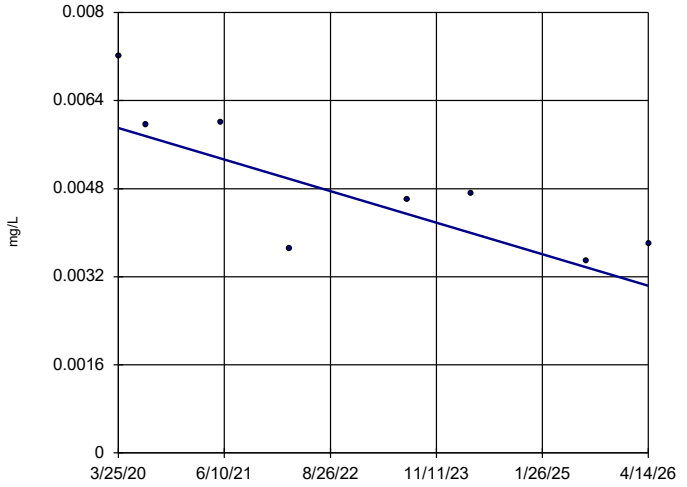
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Sen's Slope Estimator

MW-89-7



n = 8

Slope = -0.0004731 units per year.

Mann-Kendall statistic = -16 critical = -21

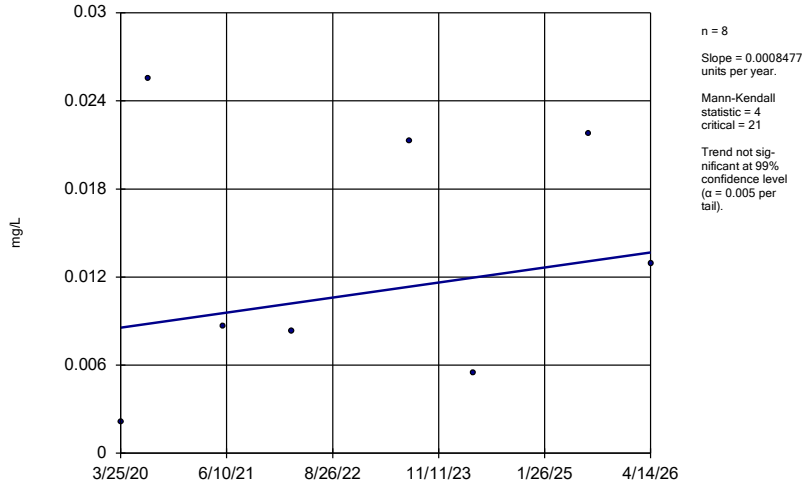
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Sen's Slope Estimator

MW-89-9R



n = 8

Slope = 0.0008477 units per year.

Mann-Kendall statistic = 4
critical = 21

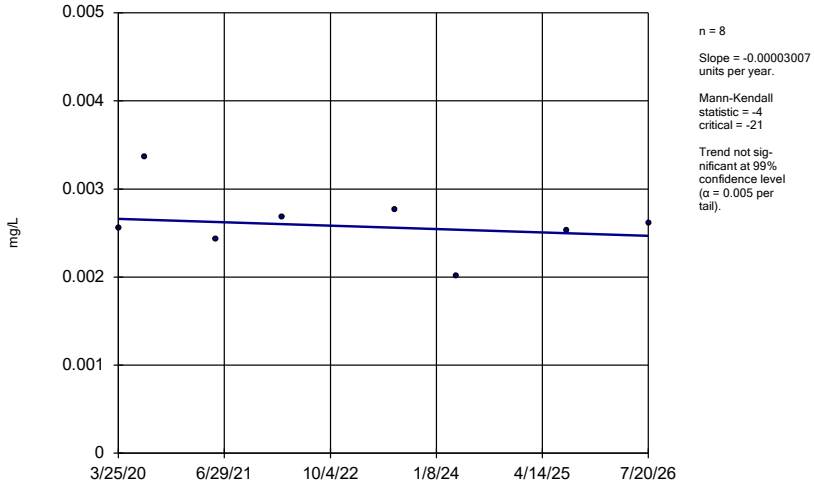
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Sen's Slope Estimator

PZ-21



n = 8

Slope = -0.00003007 units per year.

Mann-Kendall statistic = -4
critical = -21

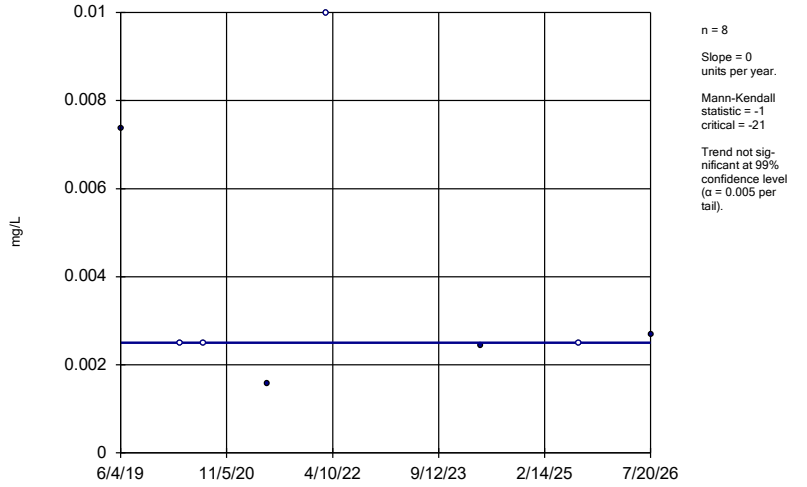
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-89-2



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = -1
critical = -21

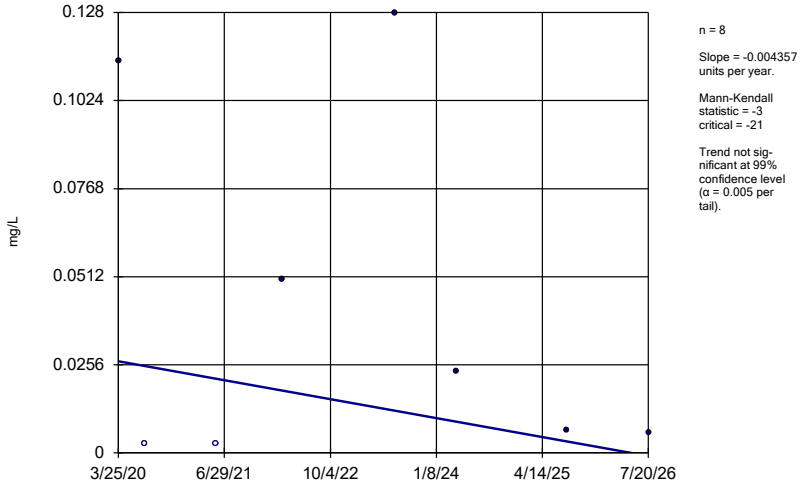
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Copper Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

PZ-21



n = 8

Slope = -0.004357 units per year.

Mann-Kendall statistic = -3
critical = -21

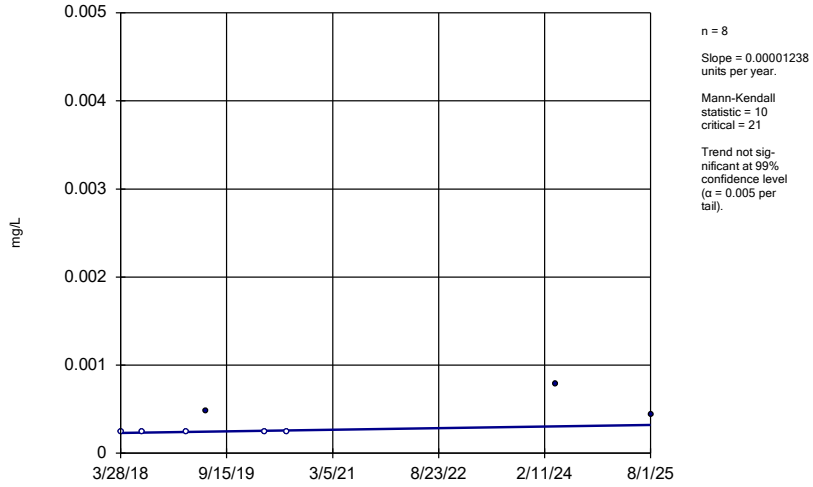
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Copper Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-89-2



n = 8

Slope = 0.00001238 units per year.

Mann-Kendall statistic = 10
critical = 21

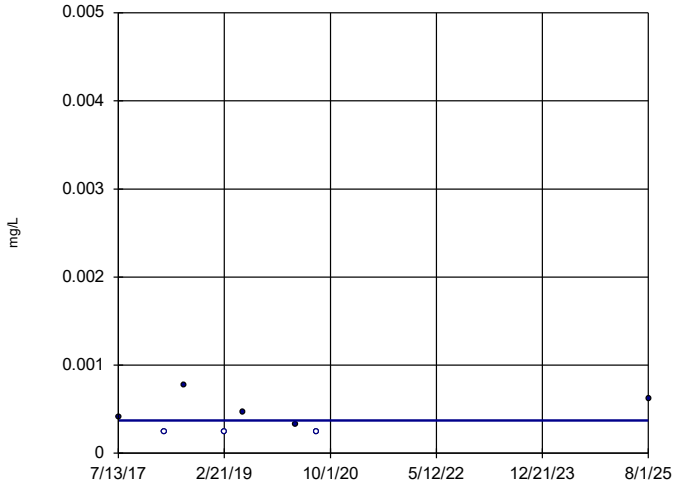
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Lead Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

PZ-21



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = 1
critical = 21

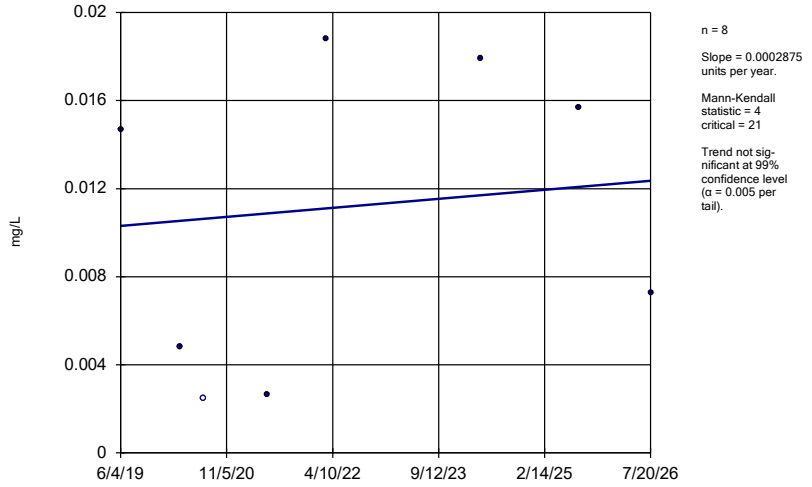
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Lead Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-89-2



n = 8

Slope = 0.0002875 units per year.

Mann-Kendall statistic = 4
critical = 21

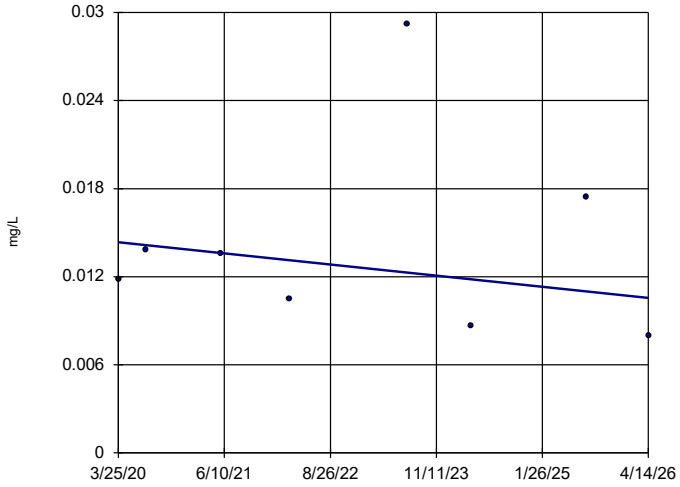
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Nickel Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-89-6R



n = 8

Slope = -0.0006266 units per year.

Mann-Kendall statistic = -6
critical = -21

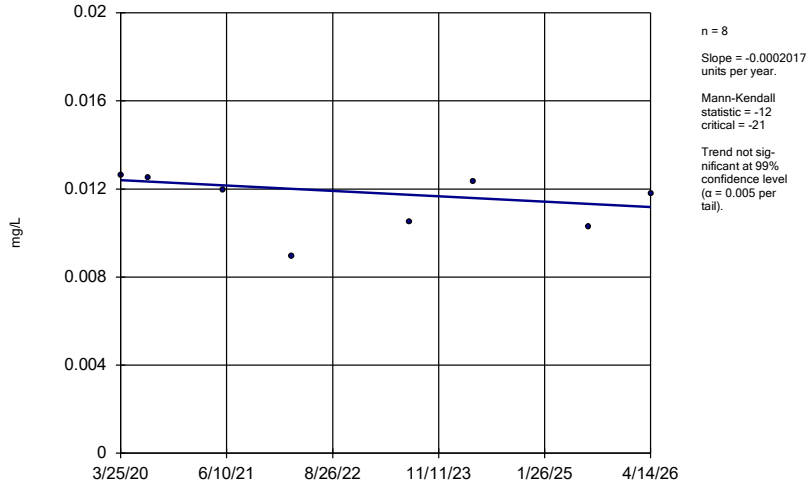
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Nickel Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Sen's Slope Estimator

MW-89-7



n = 8

Slope = -0.0002017 units per year.

Mann-Kendall statistic = -12 critical = -21

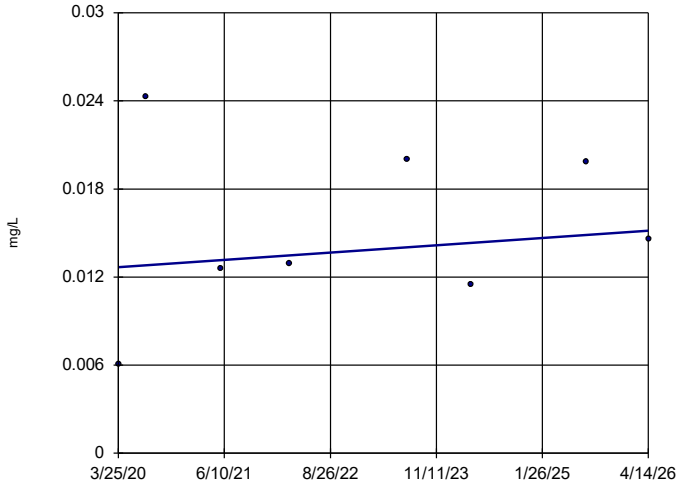
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Nickel Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Sen's Slope Estimator

MW-89-9R



n = 8

Slope = 0.0004118 units per year.

Mann-Kendall statistic = 4 critical = 21

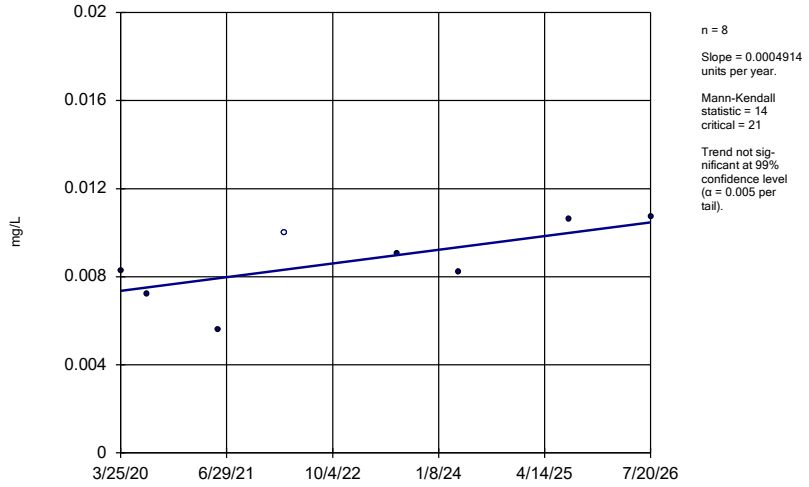
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Nickel Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Hollow symbols indicate censored values.

Sen's Slope Estimator

PZ-21



n = 8

Slope = 0.0004914 units per year.

Mann-Kendall statistic = 14 critical = 21

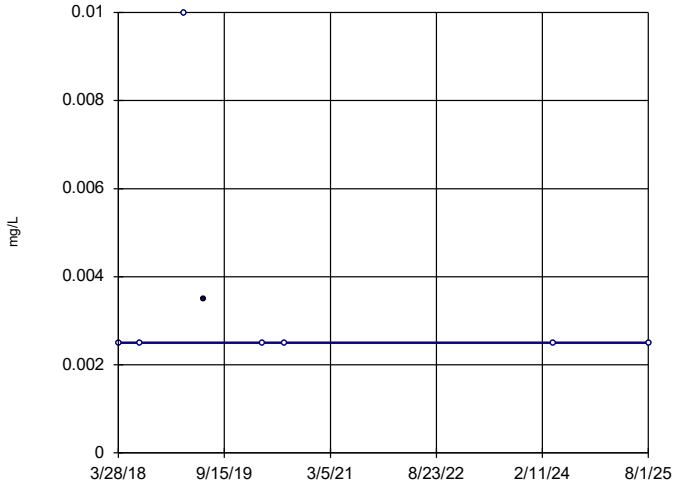
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Nickel Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-89-2



n = 8

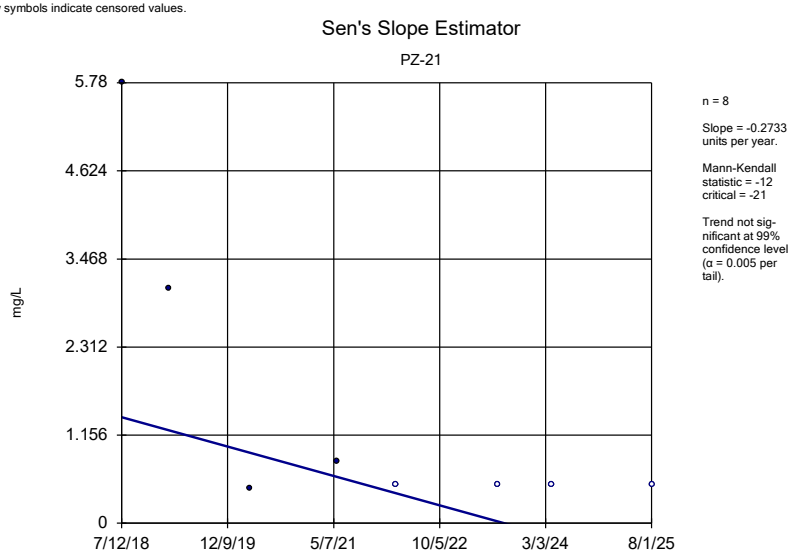
Slope = 0 units per year.

Mann-Kendall statistic = -5 critical = -21

Trend not significant at 99% confidence level (α = 0.005 per tail).

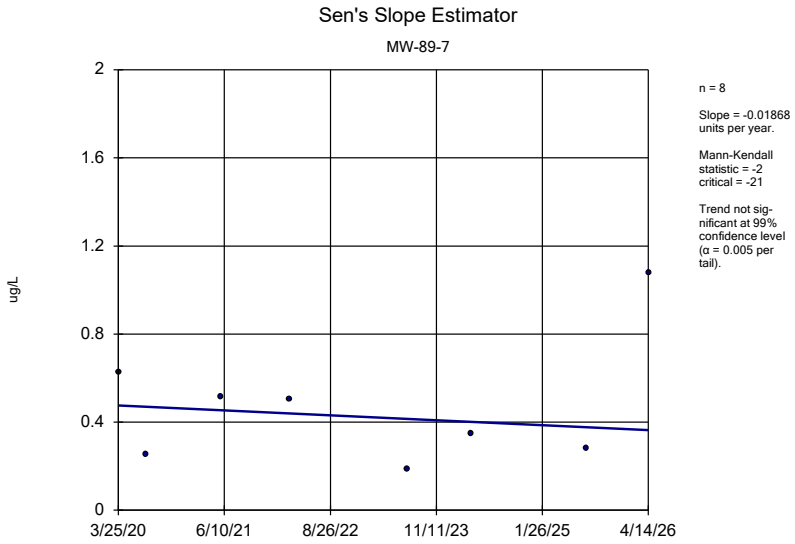
Constituent: Selenium Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Hollow symbols indicate censored values.



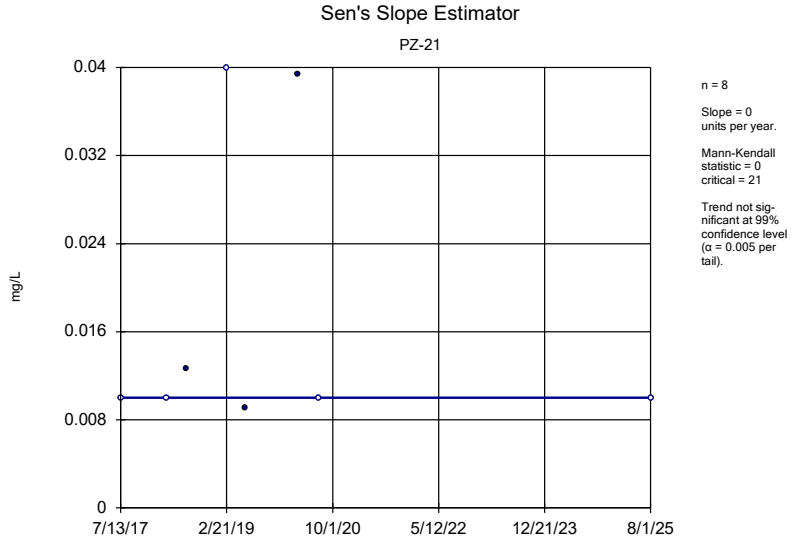
Constituent: Sulfide Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Constituent: Vinyl chloride Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Hollow symbols indicate censored values.



Constituent: Zinc Analysis Run 9/9/2026 11:42 AM View: 2026_AWQR-Mann_Kendall
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Confidence Interval Summary Table and Graphs

Confidence Interval

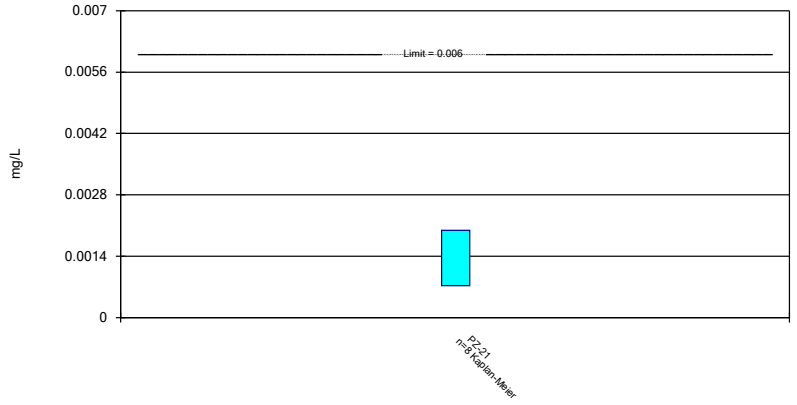
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR Printed 9/9/2026, 12:11 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Antimony (mg/L)	PZ-21	0.001993	0.0007282	0.006	No	8	37.5	No	0.01	Param.
Arsenic (mg/L)	MW-89-2	0.00303	0.0008688	0.01	No	8	12.5	No	0.01	Param.
Arsenic (mg/L)	MW-89-6R	0.0185	0.001606	0.01	No	8	12.5	No	0.01	Param.
Arsenic (mg/L)	MW-89-7	0.009261	0.003935	0.01	No	8	0	No	0.01	Param.
Arsenic (mg/L)	MW-89-9R	0.007493	0.00267	0.01	No	8	12.5	No	0.01	Param.
Arsenic (mg/L)	PZ-21	0.004	0.00086	0.01	No	8	25	No	0.004	NP (normality)
Barium (mg/L)	MW-89-2	0.02949	0.02151	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-89-6R	0.4068	0.216	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-89-7	0.4487	0.3471	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-89-9R	0.2657	0.1286	2	No	8	0	No	0.01	Param.
Barium (mg/L)	PZ-21	0.0173	0.01328	2	No	8	0	No	0.01	Param.
Beryllium (mg/L)	PZ-21	0.00446	0.0002	0.004	No	8	62.5	No	0.004	NP (normality)
Cadmium (mg/L)	MW-89-2	0.0002499	0.00008925	0.005	No	8	50	No	0.01	Param.
Cadmium (mg/L)	MW-89-6R	0.0001456	0.00008565	0.005	No	8	37.5	No	0.01	Param.
Carbon disulfide (ug/L)	MW-89-2	1.46	0.401	700	No	8	75	No	0.004	NP (normality)
Carbon disulfide (ug/L)	PZ-21	0.8283	0.3961	700	No	8	37.5	No	0.01	Param.
Chromium (mg/L)	MW-89-2	0.0138	0.00191	0.1	No	8	12.5	No	0.004	NP (normality)
Cobalt (mg/L)	MW-89-2	0.005565	0.0009558	0.01651	No	8	0	No	0.01	Param.
Cobalt (mg/L)	MW-89-6R	0.0278	0.00824	0.01651	No	8	0	No	0.004	NP (normality)
Cobalt (mg/L)	MW-89-7	0.006351	0.003524	0.01651	No	8	0	No	0.01	Param.
Cobalt (mg/L)	MW-89-9R	0.02238	0.004135	0.01651	No	8	0	No	0.01	Param.
Cobalt (mg/L)	PZ-21	0.003021	0.002216	0.01651	No	8	0	No	0.01	Param.
Copper (mg/L)	MW-89-2	0.01	0.00158	1.3	No	8	50	No	0.004	NP (normality)
Copper (mg/L)	PZ-21	0.09302	0	1.3	No	8	25	No	0.01	Param.
Lead (mg/L)	MW-89-2	0.000791	0.00025	0.015	No	8	62.5	No	0.004	NP (normality)
Lead (mg/L)	PZ-21	0.0006235	0.0003261	0.015	No	8	37.5	No	0.01	Param.
Nickel (mg/L)	MW-89-2	0.01789	0.003202	0.1	No	8	12.5	No	0.01	Param.
Nickel (mg/L)	MW-89-6R	0.02134	0.006894	0.1	No	8	0	No	0.01	Param.
Nickel (mg/L)	MW-89-7	0.01276	0.009979	0.1	No	8	0	No	0.01	Param.
Nickel (mg/L)	MW-89-9R	0.02139	0.009072	0.1	No	8	0	No	0.01	Param.
Nickel (mg/L)	PZ-21	0.01057	0.006847	0.1	No	8	12.5	No	0.01	Param.
Selenium (mg/L)	MW-89-2	0.01	0.0025	0.05	No	8	87.5	No	0.004	NP (NDs)
Sulfide (mg/L)	PZ-21	5.78	0.465	1	No	8	50	No	0.004	NP (normality)
Vinyl chloride (ug/L)	MW-89-7	0.7795	0.1708	2	No	8	0	No	0.01	Param.
Zinc (mg/L)	PZ-21	0.04	0.00913	2	No	8	62.5	No	0.004	NP (normality)

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Parametric Confidence Interval

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

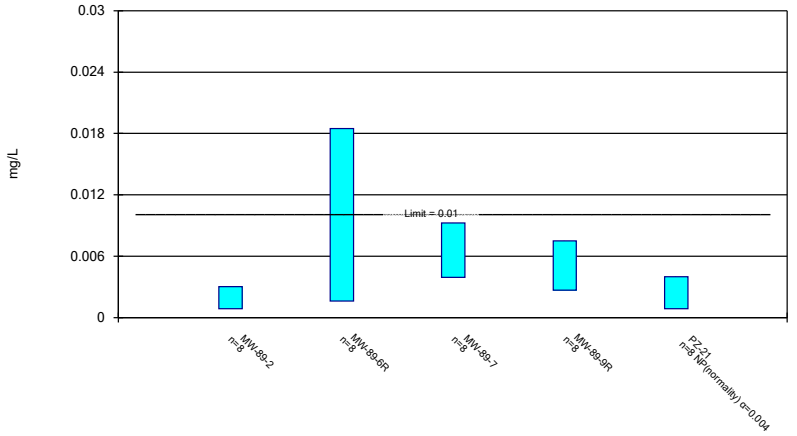


Constituent: Antimony Analysis Run 9/9/2026 12:08 PM View: 2026_AWQR-Confidence_Interval
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

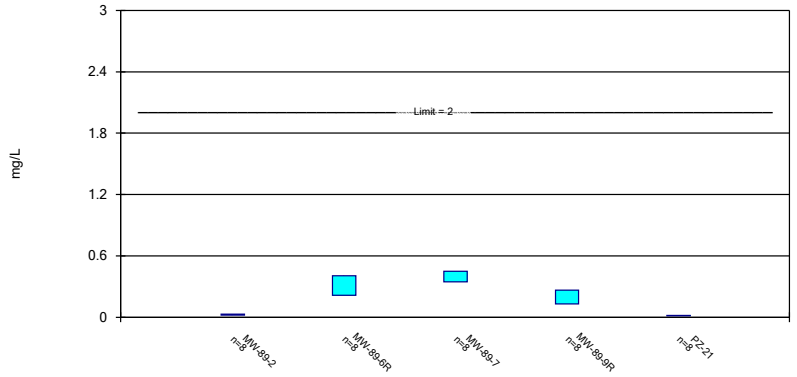


Constituent: Arsenic Analysis Run 9/9/2026 12:08 PM View: 2026_AWQR-Confidence_Interval
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

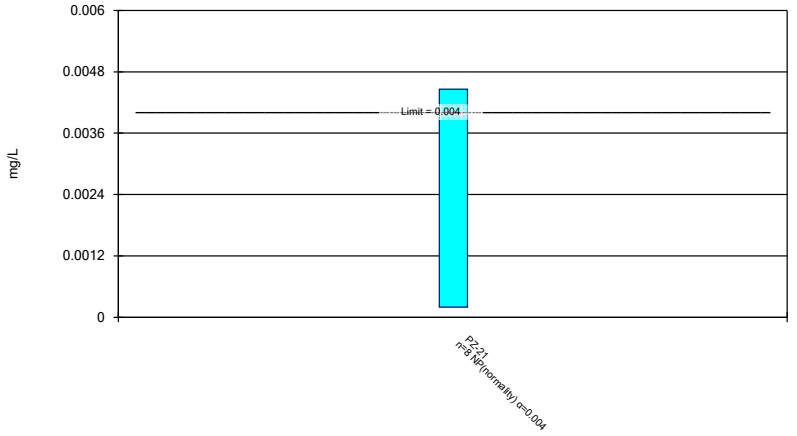


Constituent: Barium Analysis Run 9/9/2026 12:08 PM View: 2026_AWQR-Confidence_Interval
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

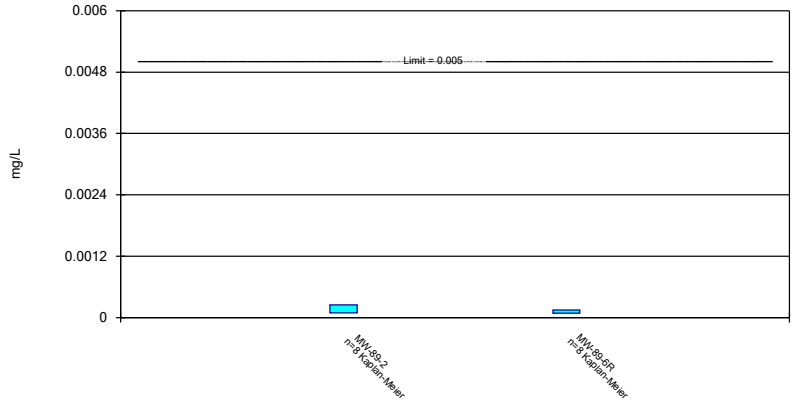


Constituent: Beryllium Analysis Run 9/9/2026 12:08 PM View: 2026_AWQR-Confidence_Interval
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

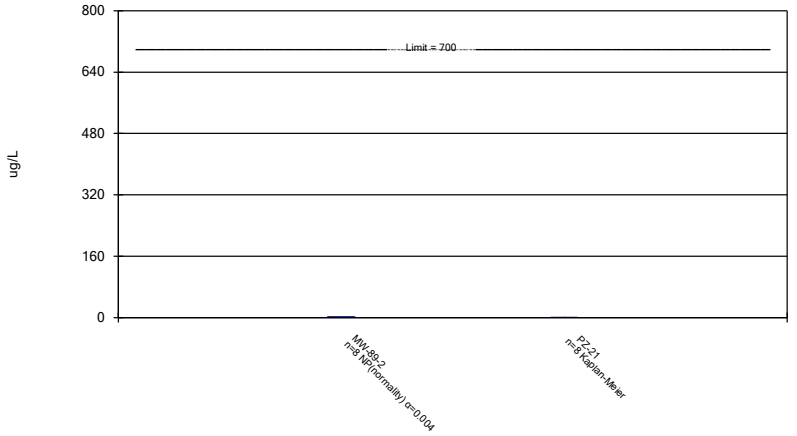


Constituent: Cadmium Analysis Run 9/9/2026 12:08 PM View: 2026_AWQR-Confidence_Interval
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

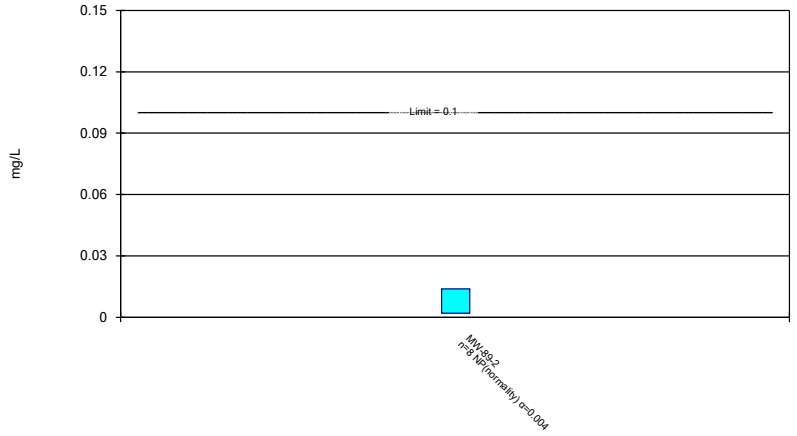


Constituent: Carbon disulfide Analysis Run 9/9/2026 12:08 PM View: 2026_AWQR-Confidence_Interval
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

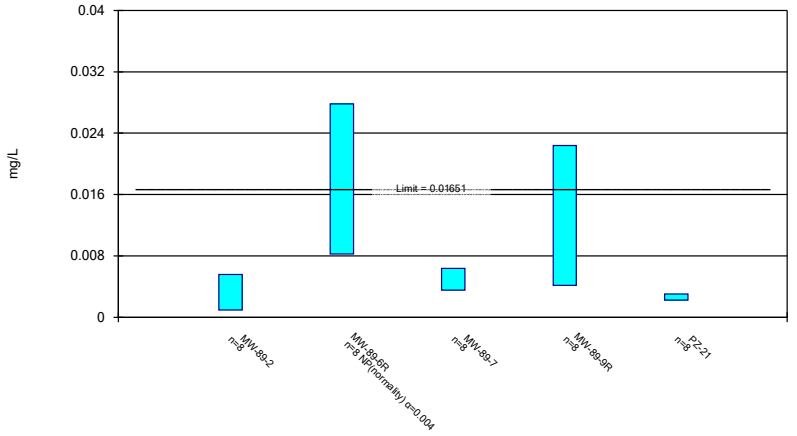


Constituent: Chromium Analysis Run 9/9/2026 12:08 PM View: 2026_AWQR-Confidence_Interval
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

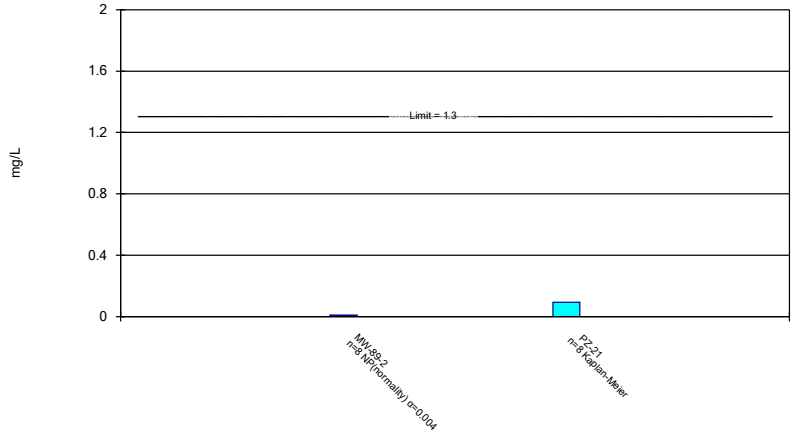


Constituent: Cobalt Analysis Run 9/9/2026 12:08 PM View: 2026_AWQR-Confidence_Interval
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

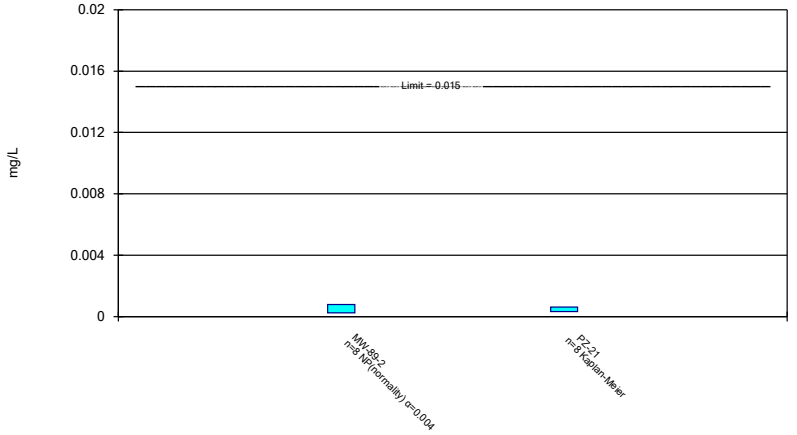


Constituent: Copper Analysis Run 9/9/2026 12:08 PM View: 2026_AWQR-Confidence_Interval
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

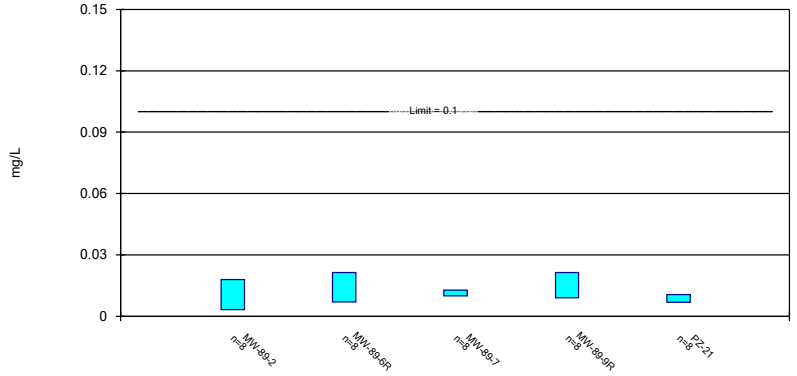


Constituent: Lead Analysis Run 9/9/2026 12:08 PM View: 2026_AWQR-Confidence_Interval
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

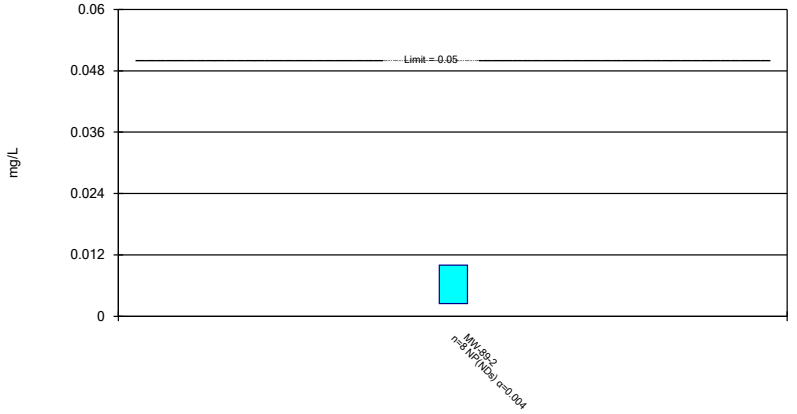


Constituent: Nickel Analysis Run 9/9/2026 12:08 PM View: 2026_AWQR-Confidence_Interval
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

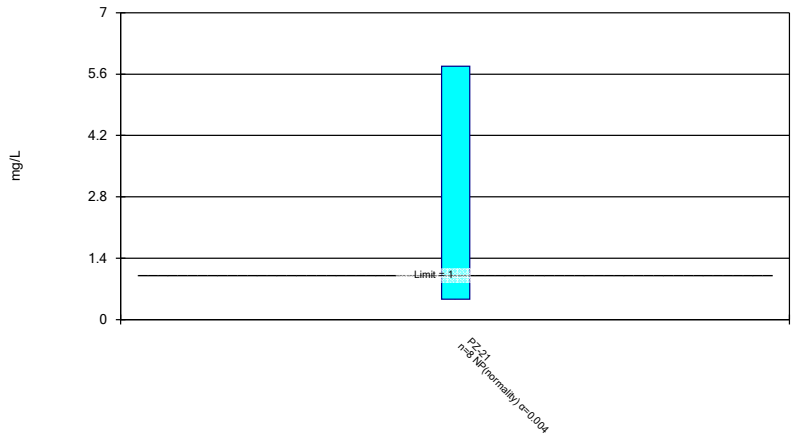


Constituent: Selenium Analysis Run 9/9/2026 12:08 PM View: 2026_AWQR-Confidence_Interval
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

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Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

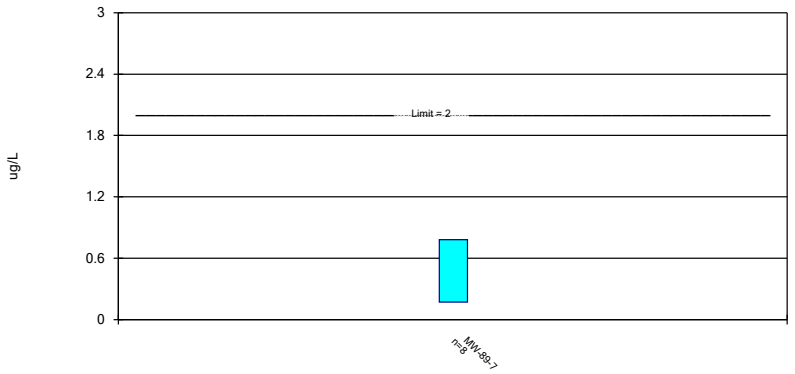


Constituent: Sulfide Analysis Run 9/9/2026 12:08 PM View: 2026_AWQR-Confidence_Interval
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

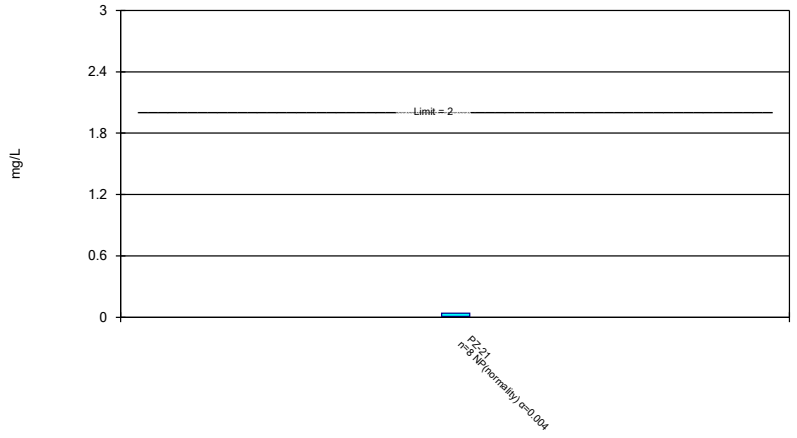


Constituent: Vinyl chloride Analysis Run 9/9/2026 12:09 PM View: 2026_AWQR-Confidence_Interval
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

Sanitas™ v.10.1.08 Software licensed to SCS Engineers. UG

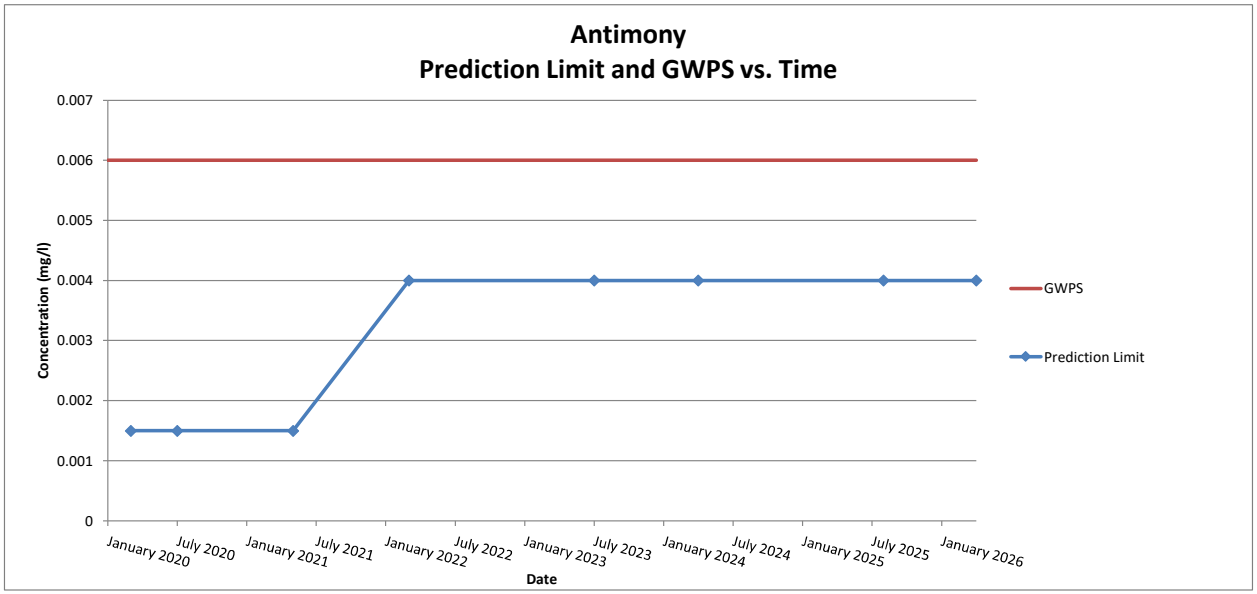
Non-Parametric Confidence Interval

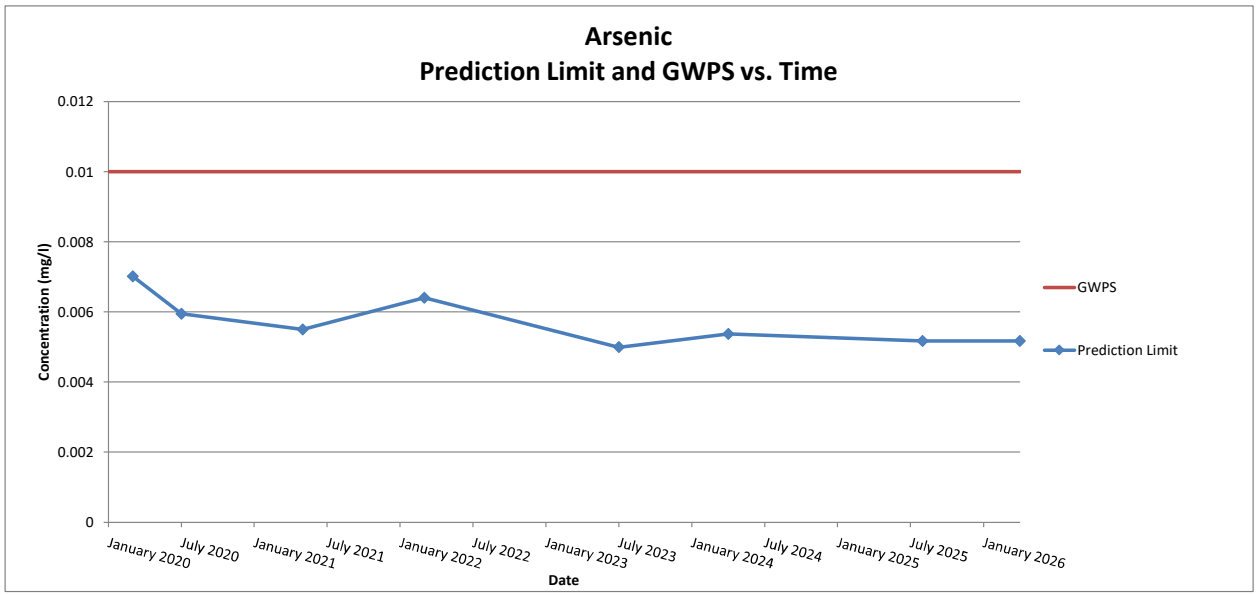
Compliance Limit is not exceeded.

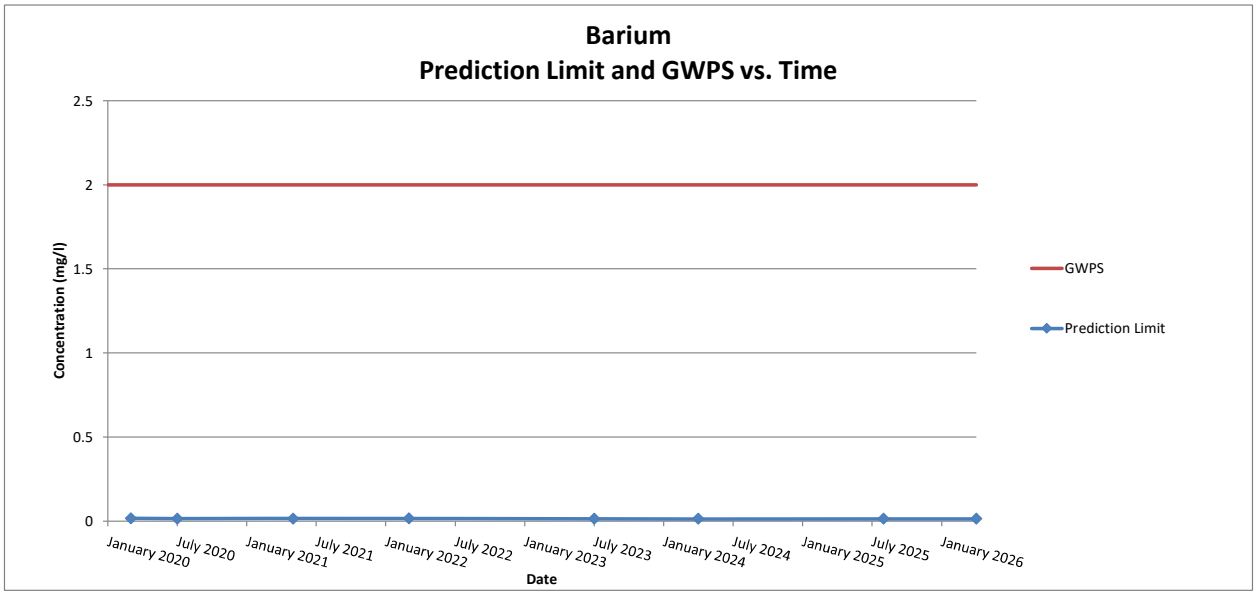


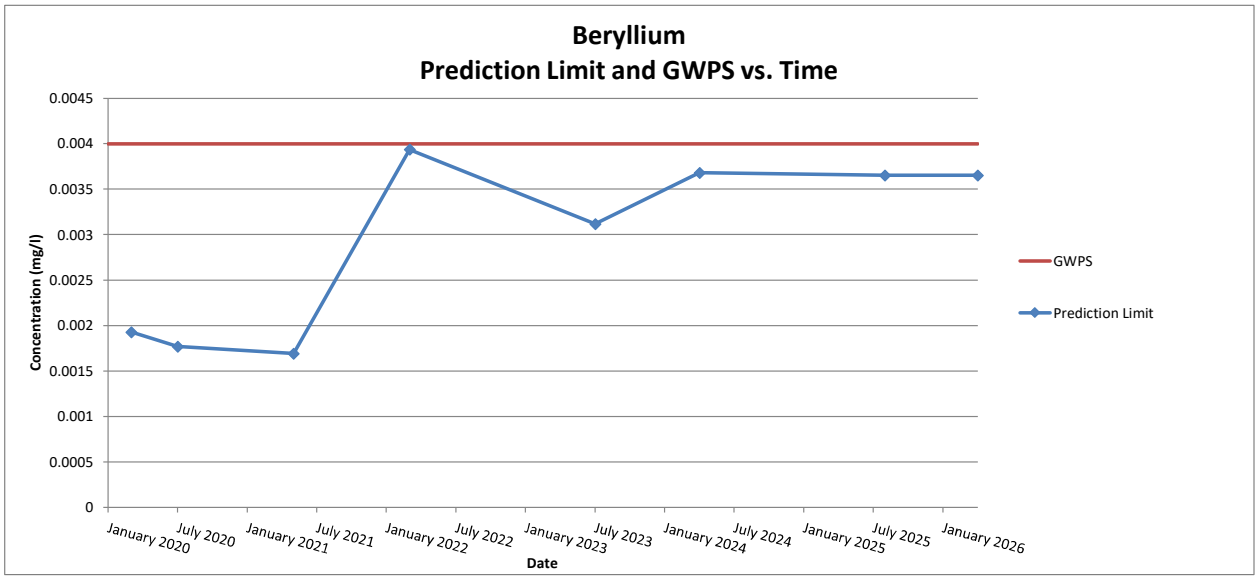
Constituent: Zinc Analysis Run 9/9/2026 12:09 PM View: 2026_AWQR-Confidence_Interval
Union County Sanitary Landfill Client: SCS Engineers Data: UCSWC_AM_2026AWQR

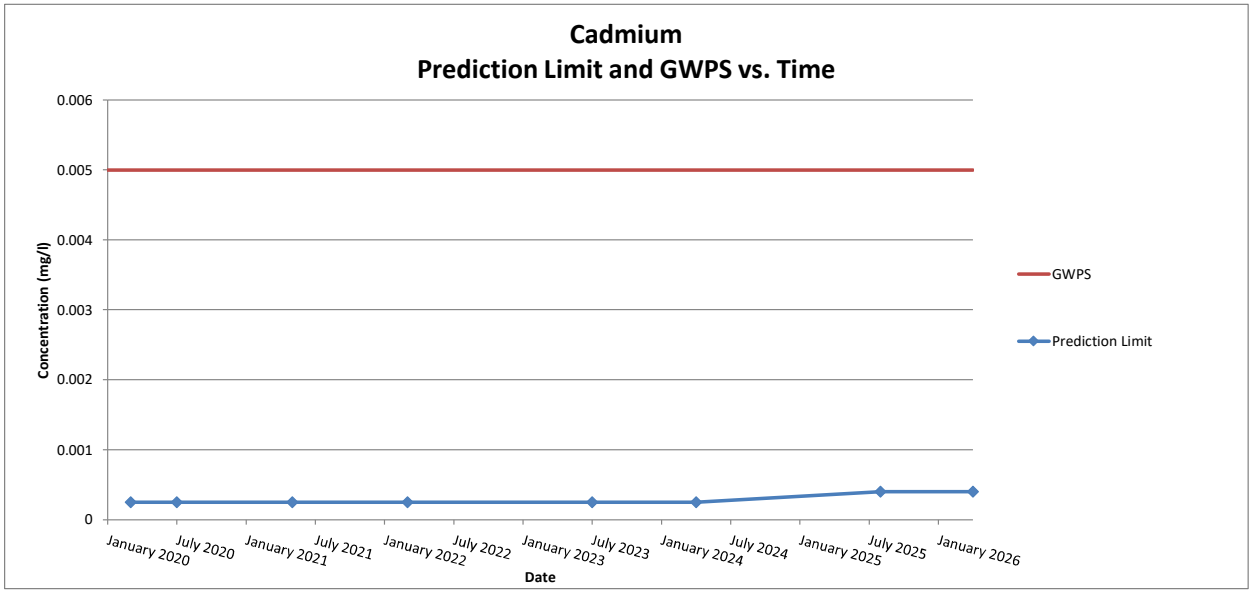
APPENDIX E | STANDARDS HISTORY GRAPHS

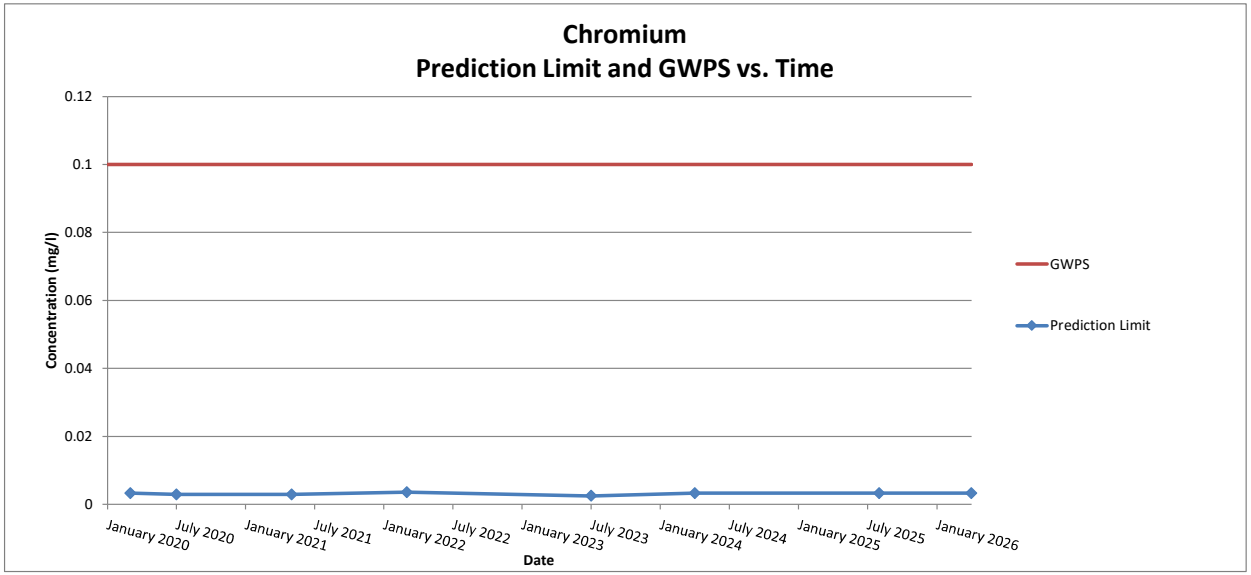

Antimony
Prediction Limit and GWPS vs. Time
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
Concentration (mg/l)
January 2020
July 2020
January 2021
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
January 2025
July 2025
January 2026
Date
GWPS
Prediction Limit

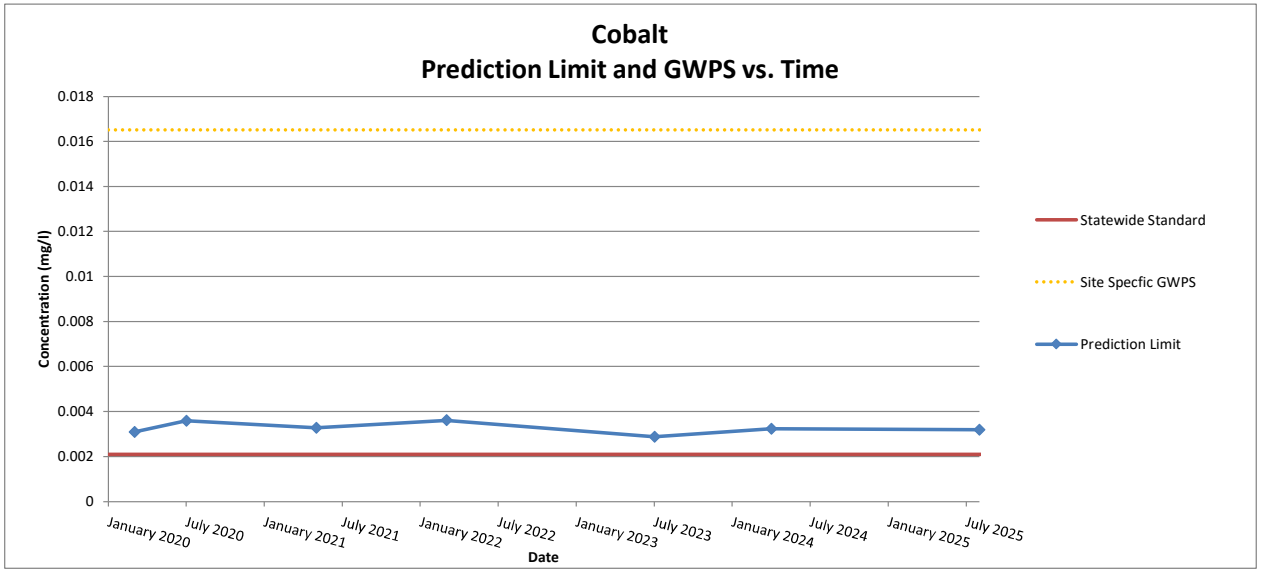

Arsenic
Prediction Limit and GWPS vs. Time
0.012
0.01
0.008
0.006
0.004
0.002
0
Concentration (mg/l)
January 2020
July 2020
January 2021
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
January 2025
July 2025
January 2026
Date
GWPS
Prediction Limit

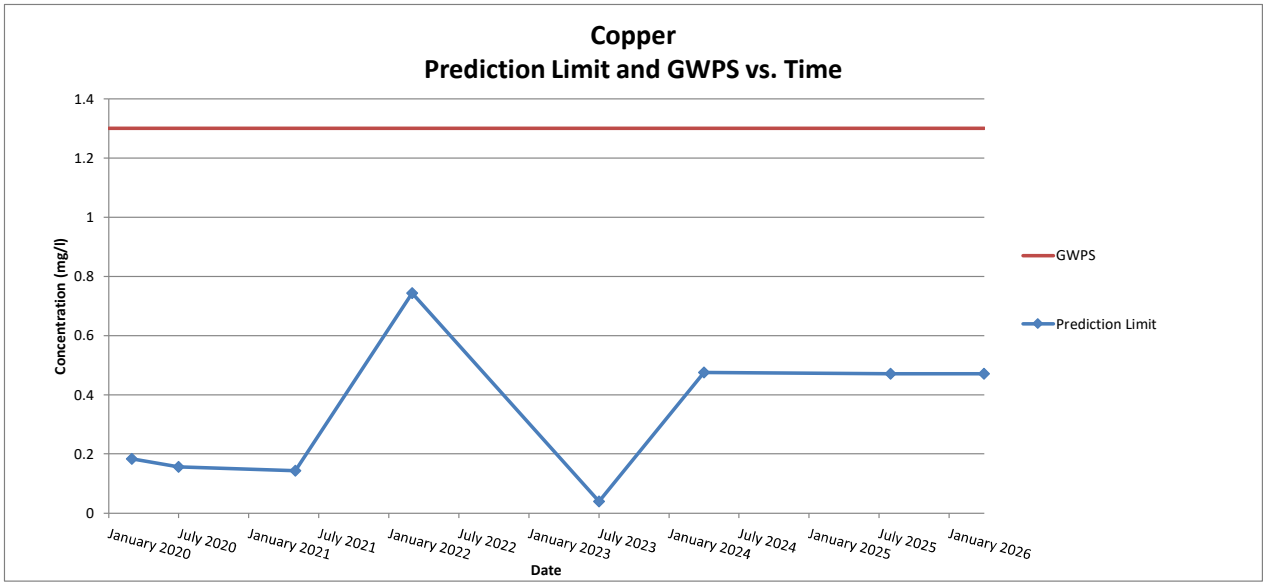

Barium
Prediction Limit and GWPS vs. Time
Concentration (mg/l)
2.5
2
1.5
1
0.5
0
January 2020
July 2020
January 2021
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
January 2025
July 2025
January 2026
Date
GWPS
Prediction Limit

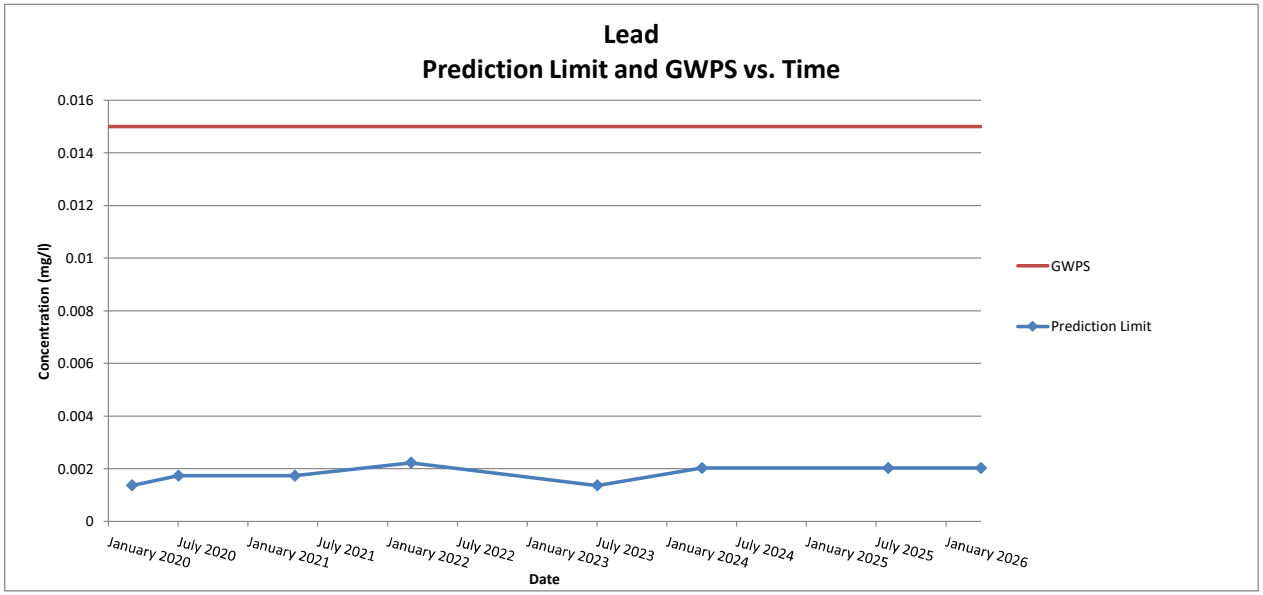

Beryllium
Prediction Limit and GWPS vs. Time
Concentration (mg/l)
0.0045
0.004
0.0035
0.003
0.0025
0.002
0.0015
0.001
0.0005
0
January 2020
July 2020
January 2021
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
January 2025
July 2025
January 2026
Date
GWPS
Prediction Limit

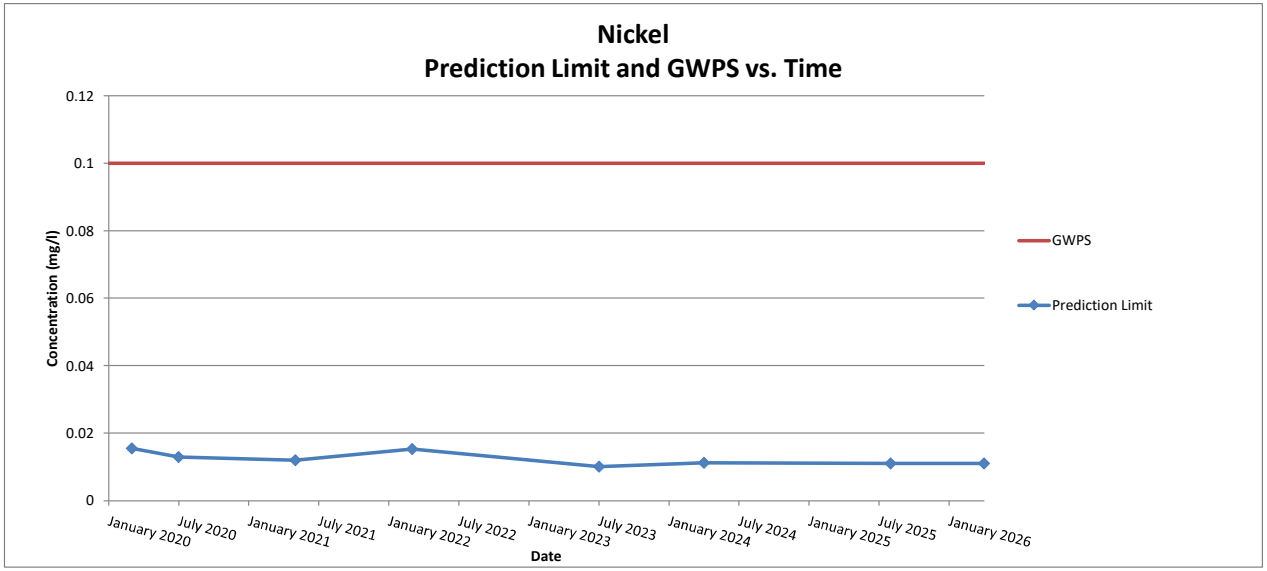

Cadmium
Prediction Limit and GWPS vs. Time
0.006
0.005
0.004
0.003
0.002
0.001
0
Concentration (mg/l)
January 2020
July 2020
January 2021
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
January 2025
July 2025
January 2026
Date
GWPS
Prediction Limit

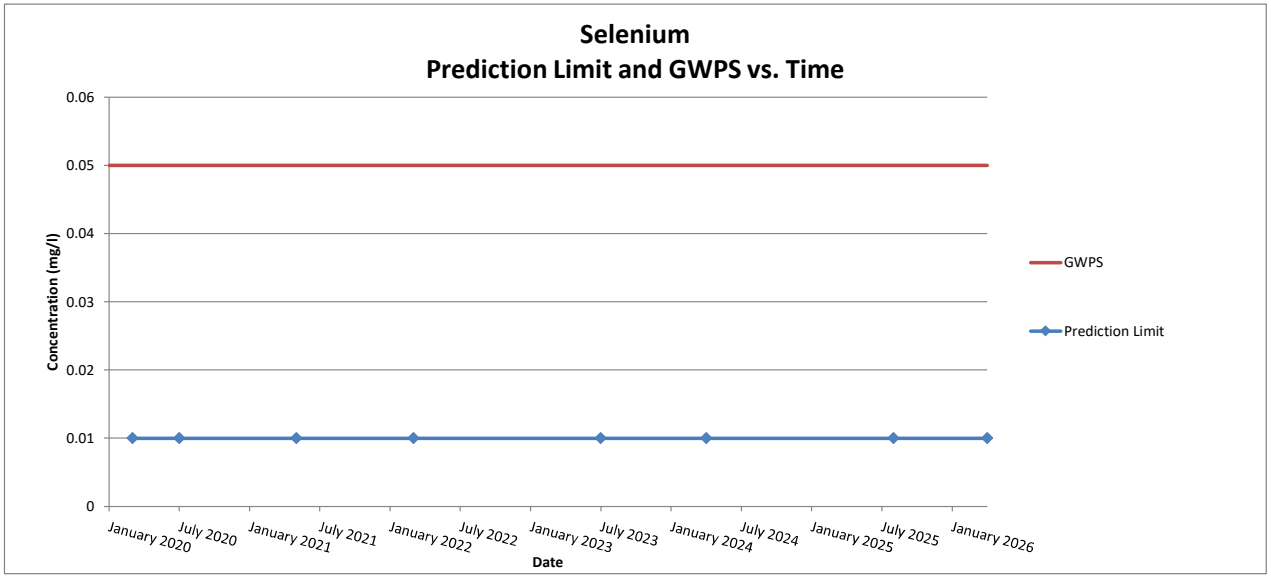

Chromium
Prediction Limit and GWPS vs. Time
0.12
0.1
0.08
0.06
0.04
0.02
0
Concentration (mg/l)
January 2020
July 2020
January 2021
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
January 2025
July 2025
January 2026
Date
GWPS
Prediction Limit

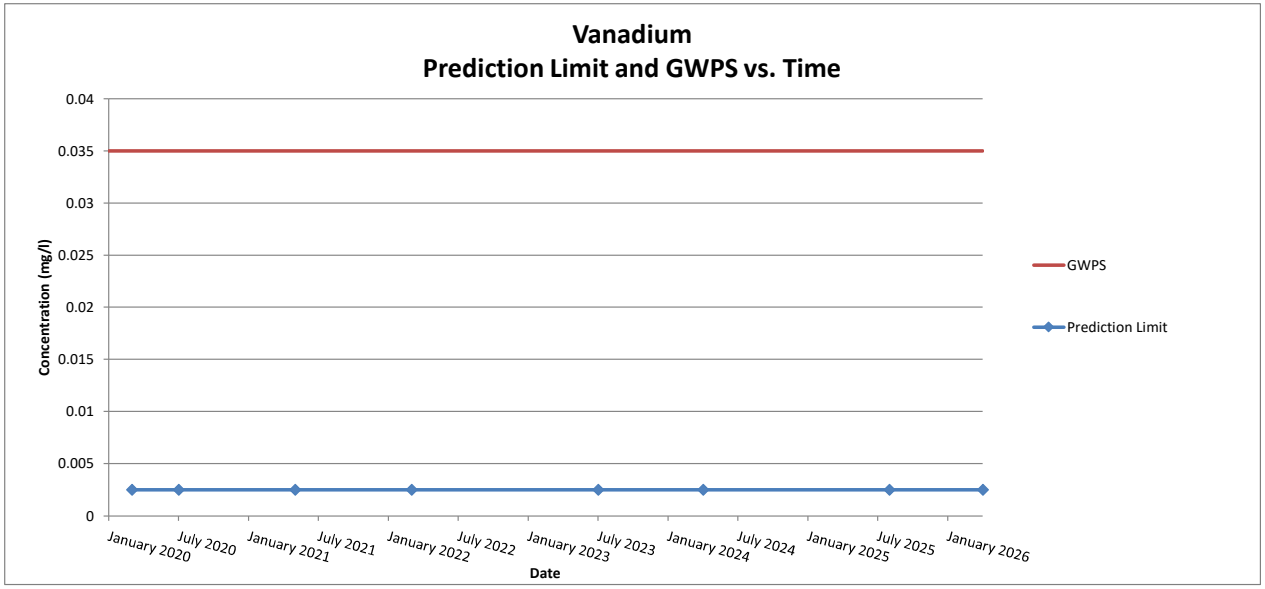

Cobalt
Prediction Limit and GWPS vs. Time
Concentration (mg/l)
0.018
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
January 2020
July 2020
January 2021
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
January 2025
July 2025
Date
Statewide Standard
Site Specfic GWPS
Prediction Limit

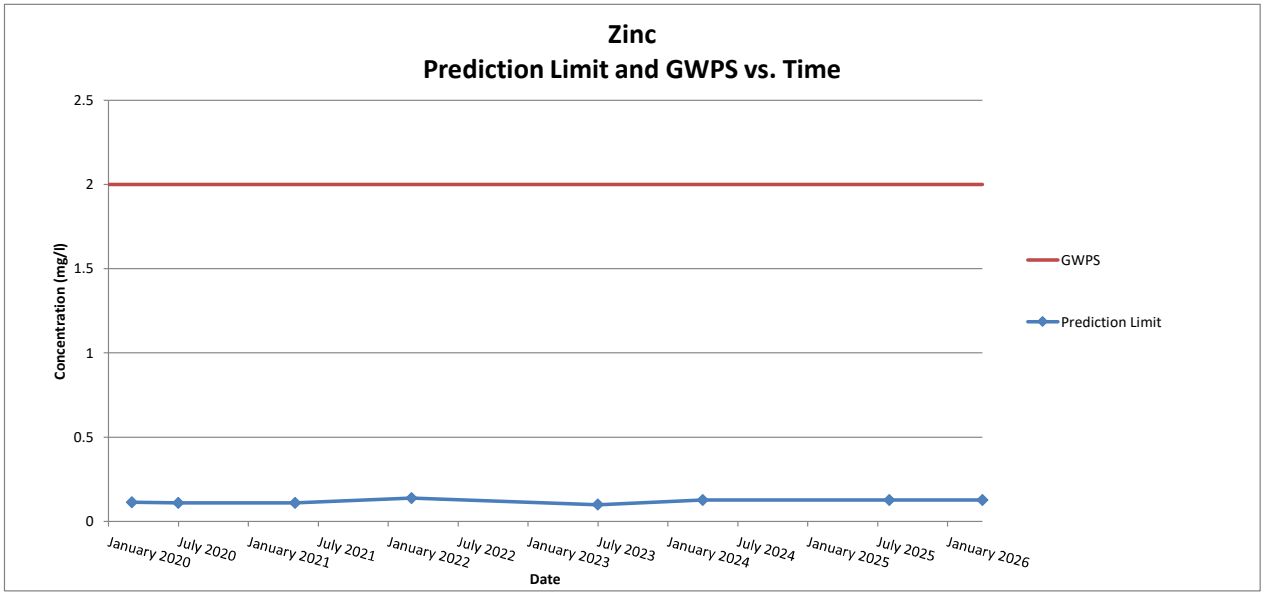

Copper
Prediction Limit and GWPS vs. Time
Concentration (mg/l)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
January 2020
July 2020
January 2021
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
January 2025
July 2025
January 2026
Date
GWPS
Prediction Limit


Lead
Prediction Limit and GWPS vs. Time
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
Concentration (mg/l)
January 2020
July 2020
January 2021
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
January 2025
July 2025
January 2026
Date
GWPS
Prediction Limit


Nickel
Prediction Limit and GWPS vs. Time
0.12
0.1
0.08
0.06
0.04
0.02
0
Concentration (mg/l)
January 2020
July 2020
January 2021
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
January 2025
July 2025
January 2026
Date
GWPS
Prediction Limit


Selenium
Prediction Limit and GWPS vs. Time
0.06
0.05
0.04
0.03
0.02
0.01
0
Concentration (mg/l)
January 2020
July 2020
January 2021
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
January 2025
July 2025
January 2026
Date
GWPS
Prediction Limit


Vanadium
Prediction Limit and GWPS vs. Time
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
Concentration (mg/l)
January 2020
July 2020
January 2021
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
January 2025
July 2025
January 2026
Date
GWPS
Prediction Limit


Zinc
Prediction Limit and GWPS vs. Time
2.5
2
1.5
1
0.5
0
Concentration (mg/l)
January 2020
July 2020
January 2021
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
January 2025
July 2025
January 2026
Date
GWPS
Prediction Limit

APPENDIX F | 2026 LEACHATE CONTROL SYSTEM PERFORMANCE EVALUATION REPORT

Leachate Management Summary
2026 Leachate Control System Performance Evaluation Report
Union County Sanitary Landfill
Permit No. 88-SDP-01-79C

Date	Column Thickness (ft)				Discharged to Corning POTW (gal)	Precipitation (in)
	LPZ-2R	LPZ-4R	LPZ-5R	LPZ-6		
December 2025						0.51
January 2026						0.90
February 2026						0.05
March 2026						0.86
April 2026	6.8	15.4	20.8	25.2		5.68
May 2026					251,060	2.55
June 2026					447,635	5.84
July 2026	8.0	13.2	Damaged	Not Located		1.69
August 2026						4.79
September 2026						5.50
				Reporting Period Total	**698,695**	**28.37**

Comments:

Reporting Period: December 2025 - September 2026

Recommended Changes to Leachate Collection System: None.

Maintenance Performed on Leachate Collection System: None.

Last Date of Cleaning and Inspection: September 2024.

Date for Next Cleaning and Inspection: Leachate line cleaning and inspection will be performed next in 2027.

Volume of Leachate Recirculated: Leachate is not recirculated.

Volume of Leachate Treated On-Site: Leachate is not treated on-site.

Volume of Leachate Treated Off-Site: 698,695 gallons of leachate were hauled for treatment during this reporting period.

Leachate Quality Testing Results: Leachate sampling analytical results for 2026 are attached.

Precipitation data from the Iowa State University Iowa Environmental Mesonet (https://mesonet.agron.iastate.edu/ASOS/reports/mon_prec.php?)

Historical leachate levels and graphs are attached.

Laboratory analytical data sheets are attached.

Notes:

1) The closure permit issued July 2, 2008 (Document #25637) requires semi-annual leachate measurements of leachate head levels and elevations.
2) Thicknesses remained generally stable and consistent with historical measurements in LPZ-2R. The thicknesses in LPZ-4R, LPZ-5R, and LPZ-6 showed marked increases in 2025, but the 2026 thicknesses decreased from the 2025 highs.



Leachate Control System

Legend

- Approximate Location of Leachate Piping
- Approximate Leachate Monitoring Location
- Approximate Monitoring Well Location
- Approximate Groundwater Piezometer Location
- Approximate Landfill Gas Well Location
- Approximate Property Boundary
- Approximate Waste Boundary
- Located Waste Boundary

Union County Sanitary Landfill
Creston, Iowa
Project No: 27224311.27
Drawing Date: August 2026

Figure 1

N W E S

0 120 240 480 720 Feet

SCS ENGINEERS
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User: cdavis
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ATTACHMENT A
UNION COUNTY SANITARY LANDFILL
HISTORICAL LEACHATE COLUMN THICKNESSES

Piezometer	LPZ-2			LPZ-4			LPZ-5			LPZ-6		
Total Depth	46.1			29.9			42.7			44.2		
	DEPTH TO LEACHATE	MEASURED DEPTH	COLUMN THICKNESS	DEPTH TO LEACHATE	MEASURED DEPTH	COLUMN THICKNESS	DEPTH TO LEACHATE	MEASURED DEPTH	COLUMN THICKNESS	DEPTH TO LEACHATE	MEASURED DEPTH	COLUMN THICKNESS
11/19/2003	12.60	NA	33.5	4.80	NA	25.1	11.15	NA	31.6	31.60	NA	12.6
12/31/2003	11.66	42.5	34.4	4.40	30.0	25.5	17.60	42.1	25.1	28.75	44.0	15.5
2/10/2004	13.10	44.2	33.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
3/9/2004	12.80	43.0	33.3	4.90	29.8	25.0	18.80	43.0	23.9	26.30	44.5	17.9
4/8/2004	NA	NA	NA	4.70	29.6	25.2	19.50	43.2	23.2	25.10	44.2	19.1
5/11/2004	NA	NA	NA	5.00	29.6	24.9	19.50	43.3	23.2	25.80	44.3	18.4
6/3/2004	NA	NA	NA	4.70	29.6	25.2	19.50	43.0	23.2	28.30	44.3	15.9
7/6/2004	NA	NA	NA	4.70	29.6	25.2	17.70	42.5	25.0	29.00	44.2	15.2
8/11/2004	10.80	48.9	35.3	4.60	29.9	25.3	19.20	42.5	23.5	26.00	44.3	18.2
9/21/2004	18.40	48.8	27.7	2.50	31.8	27.4	19.60	42.8	23.1	24.90	44.0	19.3
10/22/2004	18.20	49.0	27.9	4.80	29.9	25.1	19.20	42.5	23.5	22.80	44.3	21.4
1/31/2005	16.10	NA	30.0	4.50	NA	25.4	20.20	NA	22.5	19.20	NA	NA
9/20/2005	11.93	16.7	34.2	11.93	16.7	18.0	11.93	16.7	30.8	11.93	16.7	32.3
3/7/2006	9.25	17.3	36.9	9.25	17.3	20.7	9.25	17.3	33.5	9.25	17.3	35.0
9/20/2006	8.80	17.8	37.3	8.80	17.8	21.1	8.80	17.8	33.9	8.80	17.8	35.4
3/20/2007	6.80	17.8	39.3	6.80	17.8	23.1	6.80	17.8	35.9	6.80	17.8	37.4
9/7/2007	7.10	17.8	39.0	7.10	17.8	22.8	7.10	17.8	35.6	7.10	17.8	37.1
3/4/2008	NA	25.9	NA	NA	4.9	NA	NA	14.5	NA	21.85	43.9	22.4
9/15/2008	NA	25.6	NA	NA	4.7	NA	NA	14.0	NA	26.60	34.3	17.6
3/24/2009	NA	25.8	NA	NA	5.0	NA	NA	14.4	NA	23.00	34.3	21.2
9/9/2009	Dry	25.6	NA	Dry	5.1	NA	Dry	14.4	NA	24.22	38.6	20.0
3/3/2010	Dry	25.0	NA	NA	NA	NA	Dry	14.7	NA	29.64	38.2	14.6
9/29/2010	Dry	25.0	NA	Dry	5.9	NA	Dry	14.0	NA	28.11	38.2	16.1
3/25/2011	NM	NM	NA	NM	NM	NA	NM	NM	NA	NM	NM	NA
9/1/2011	NM	NM	NA	NM	NM	NA	NM	NM	NA	24.31	34.2	19.9

ATTACHMENT A
UNION COUNTY SANITARY LANDFILL
HISTORICAL LEACHATE COLUMN THICKNESSES

11/1/2011	LPZ-1R, LPZ-2R, LPZ-4R, and LPZ-5R installed.											
Piezometer	LPZ-2R			LPZ-4R			LPZ-5R			LPZ-6		
Total Depth	49.9			38.0			44.8			44.2		
	DEPTH TO LEACHATE	MEASURED DEPTH	COLUMN THICKNESS	DEPTH TO LEACHATE	MEASURED DEPTH	COLUMN THICKNESS	DEPTH TO LEACHATE	MEASURED DEPTH	COLUMN THICKNESS	DEPTH TO LEACHATE	MEASURED DEPTH	COLUMN THICKNESS
2/27/2012	20.00	49.8	29.9	21.89	40.1	16.1	18.59	43.5	26.2	14.57	44.0	29.6
10/18/2012	22.71	49.7	27.2	23.75	38.1	14.3	23.75	44.6	21.1	20.00	44.1	24.2
4/24/2013	42.06	49.7	7.8	27.25	38.0	10.8	27.75	44.4	17.1	28.70	43.9	15.5
10/2/2013	NA	NA	NA	29.73	38.3	8.3	27.85	44.4	17.0	30.15	43.9	14.1
9/22/2014	43.25	49.5	6.7	NM	NM	NA	26.12	44.3	18.7	NM	NM	NA
11/13/2014	43.10	49.6	6.8	28.70	38.7	9.3	26.90	44.2	17.9	25.90	34.3	18.3
4/6/2015	42.25	49.7	7.7	28.20	37.7	9.8	26.80	44.4	18.0	25.50	34.4	18.7
9/3/2015	42.60	49.7	7.3	27.49	37.7	10.5	26.04	44.3	18.8	25.68	34.3	18.5
2/18/2016	42.62	49.8	7.3	27.81	37.8	10.2	26.71	44.4	18.1	25.80	34.3	18.4
8/3/2016	42.80	49.9	7.1	26.90	37.7	11.1	25.95	44.3	18.9	25.35	44.3	18.9
6/29/2017	43.02	49.7	6.9	28.32	37.7	9.7	25.40	44.4	19.4	26.42	44.3	17.8
9/5/2017	43.47	49.7	6.4	28.72	37.7	9.3	27.14	44.4	17.7	25.87	44.3	18.3
3/28/2018	40.92	49.7	9.0	28.21	37.6	9.8	27.50	44.4	17.3	27.05	34.3	17.2
7/12/2018	41.07	49.7	8.8	28.34	37.6	9.7	27.20	44.4	17.6	27.18	34.3	17.0
2/25/2019	41.30	49.7	8.6	27.50	37.6	10.5	26.20	44.4	18.6	27.50	34.3	16.7
6/4/2019	40.70	49.7	9.2	26.33	37.6	11.7	24.99	44.4	19.8	25.73	34.3	18.5
3/25/2020	40.45	49.6	9.5	27.74	37.7	10.3	25.86	44.3	18.9	27.59	34.3	16.6
7/16/2020	41.53	50.6	8.4	27.87	37.6	10.1	25.79	44.3	19.0	26.64	34.3	17.6
5/26/2021	41.05	49.4	8.9	27.93	34.6	10.1	24.04	24.8	20.8	27.12	34.3	17.1
8/3/2021	41.28	49.5	8.6	27.71	37.6	10.3	25.21	44.3	19.6	25.37	34.3	18.8
3/9/2022	42.08	49.5	7.8	28.10	37.6	9.9	27.00	44.2	17.8	23.77	34.3	20.4
8/2/2022	41.79	49.4	8.1	27.50	37.6	10.5	25.51	44.3	19.3	19.31	34.3	24.9
7/13/2023	41.88	49.5	8.0	27.95	37.6	10.1	26.95	44.3	17.9	23.70	34.3	20.5
11/1/2023	40.23	49.3	9.7	27.75	37.6	10.3	25.42	44.2	19.4	19.71	34.3	24.5
4/1/2024	42.11	49.4	7.8	26.27	37.6	11.7	26.98	44.3	17.8	23.75	34.3	20.5
9/10/2024	43.01	49.4	6.9	27.20	37.6	10.8	28.00	44.3	16.8	24.13	34.3	20.1
3/10/2025	42.00	49.3	7.9	22.49	32.6	15.5	22.90	44.3	21.9	19.26	34.3	24.9
7/31/2025	41.63	49.7	8.3	Damage	Damage	NA	22.65	44.7	22.2	15.60	34.2	28.6
4/14/2026	43.10	49.3	6.8	22.60	32.6	15.4	24.00	44.2	20.8	19.00	34.4	25.2
7/20/2026	41.90	49.3	8.0	24.81	32.5	13.2	Damage	Damage	NA	NA	NA	NA

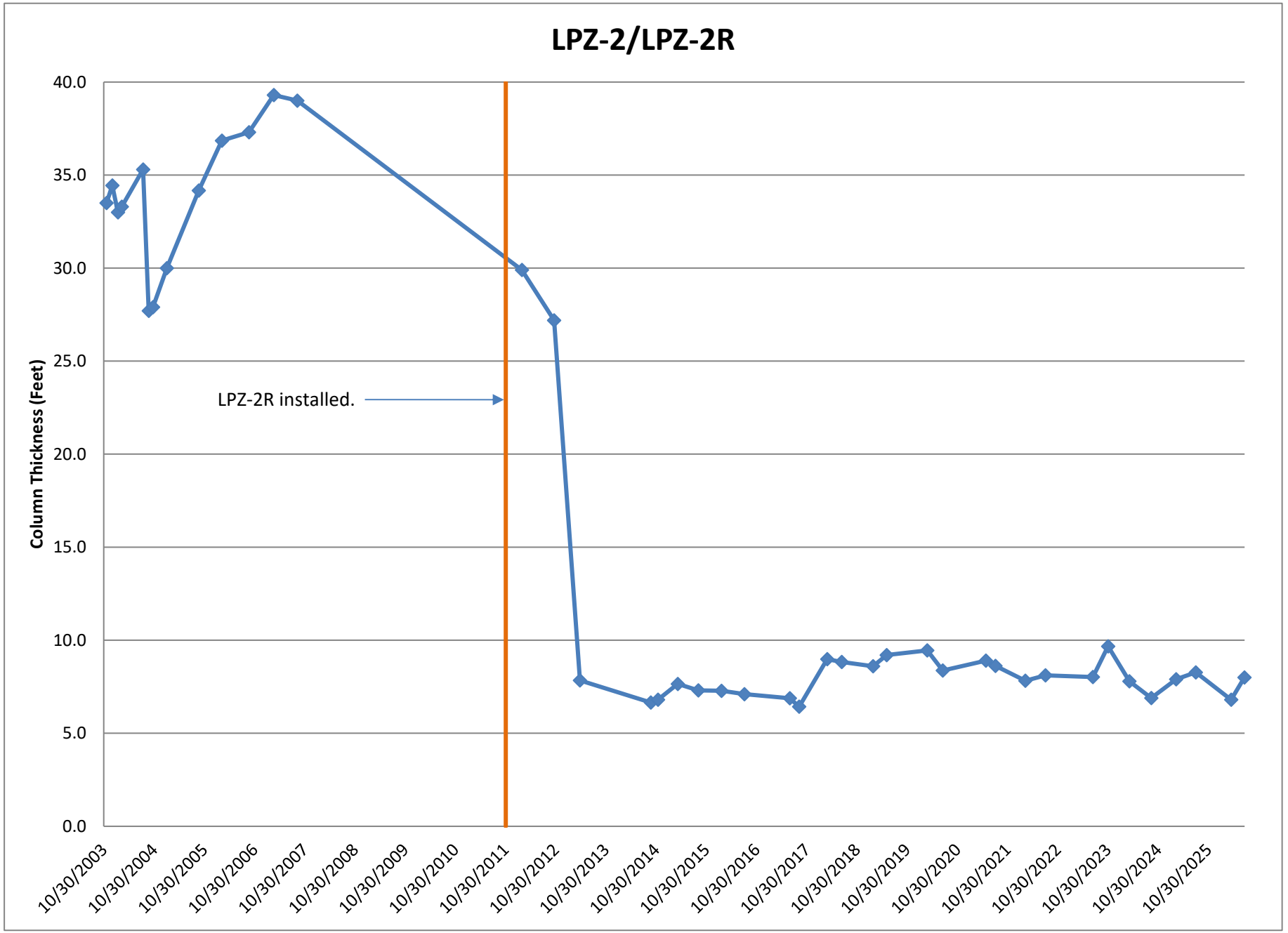
Notes:

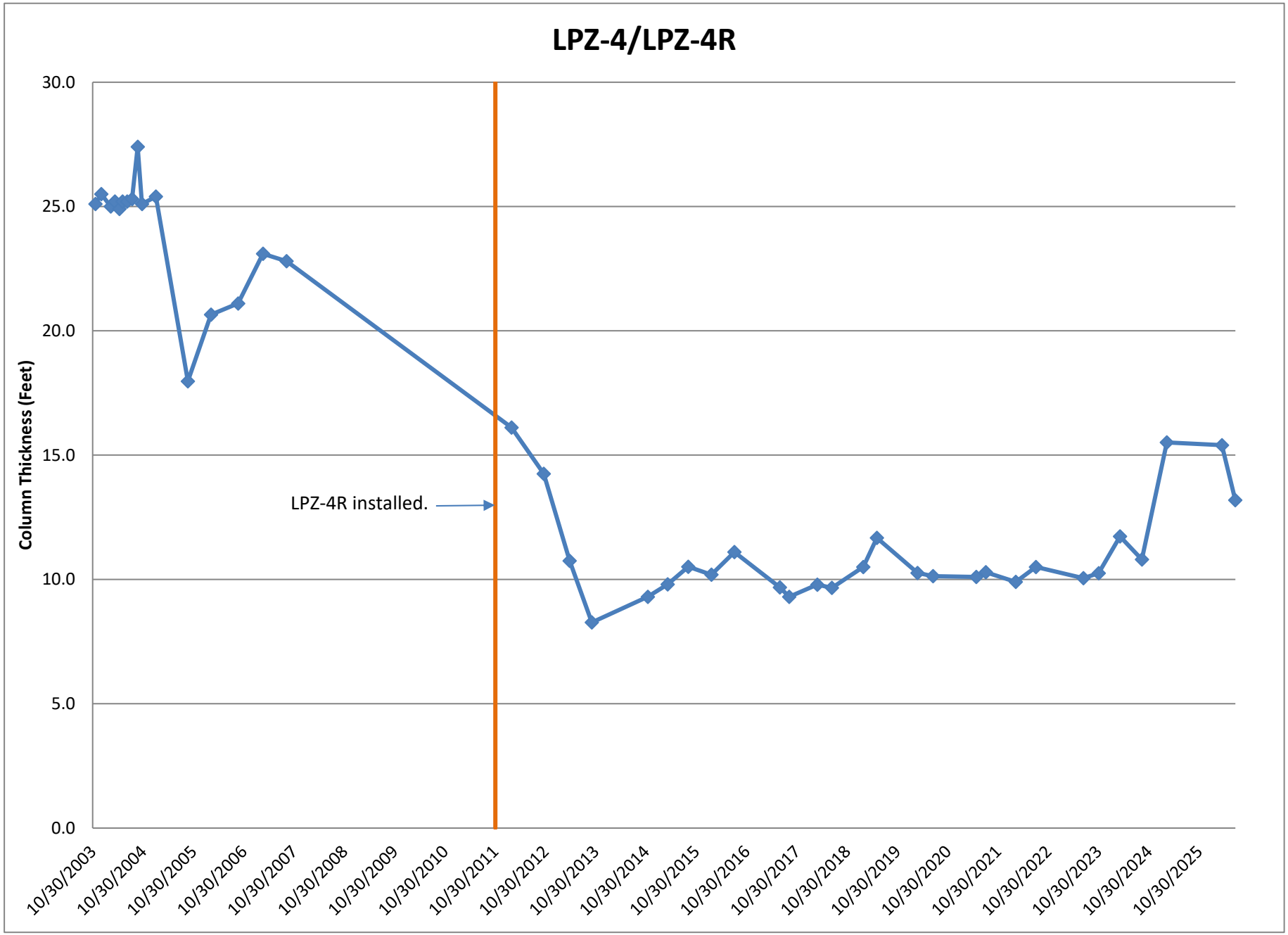
All measurements in feet.

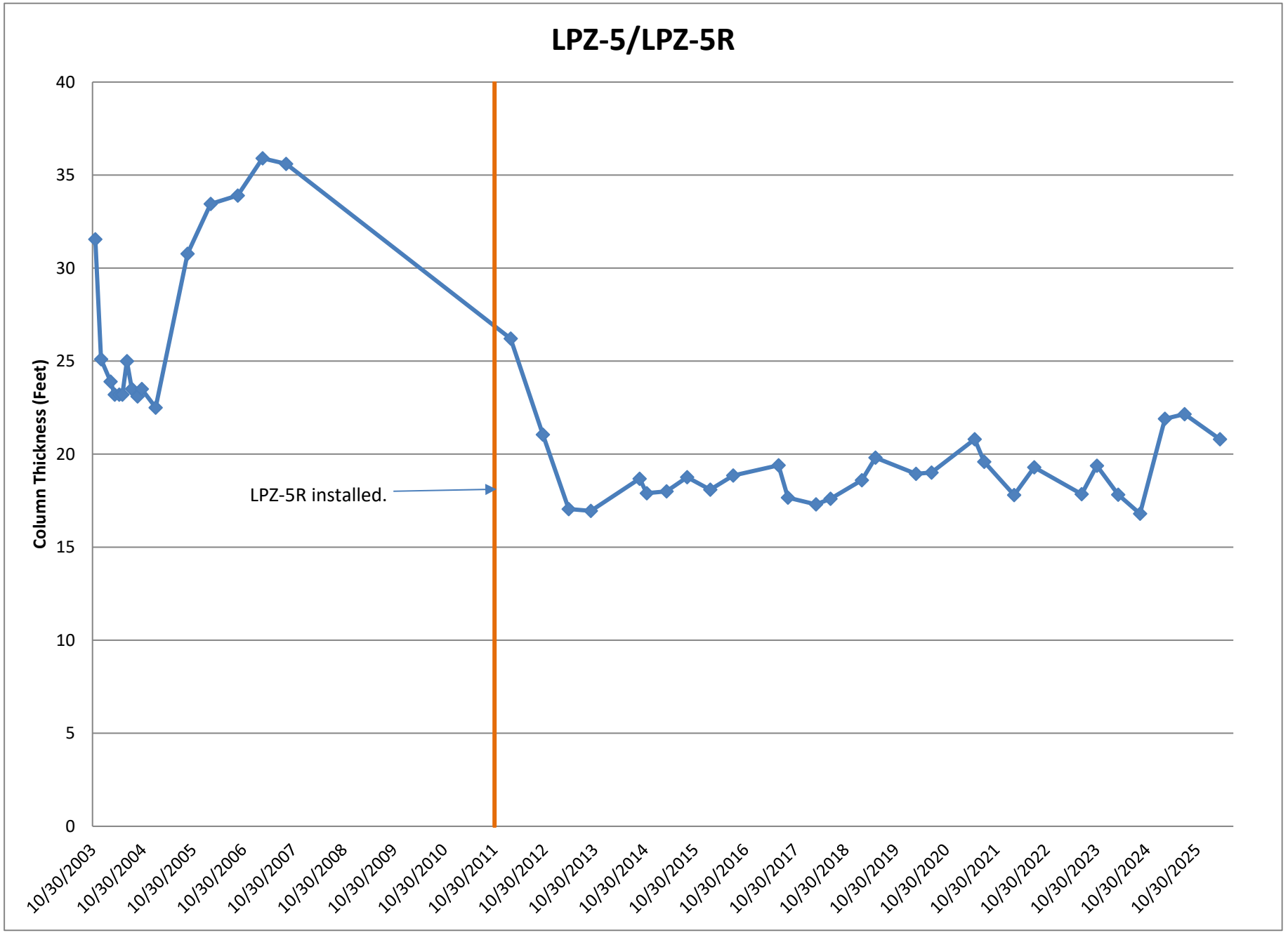
NA - Piezometer was not found/measured.

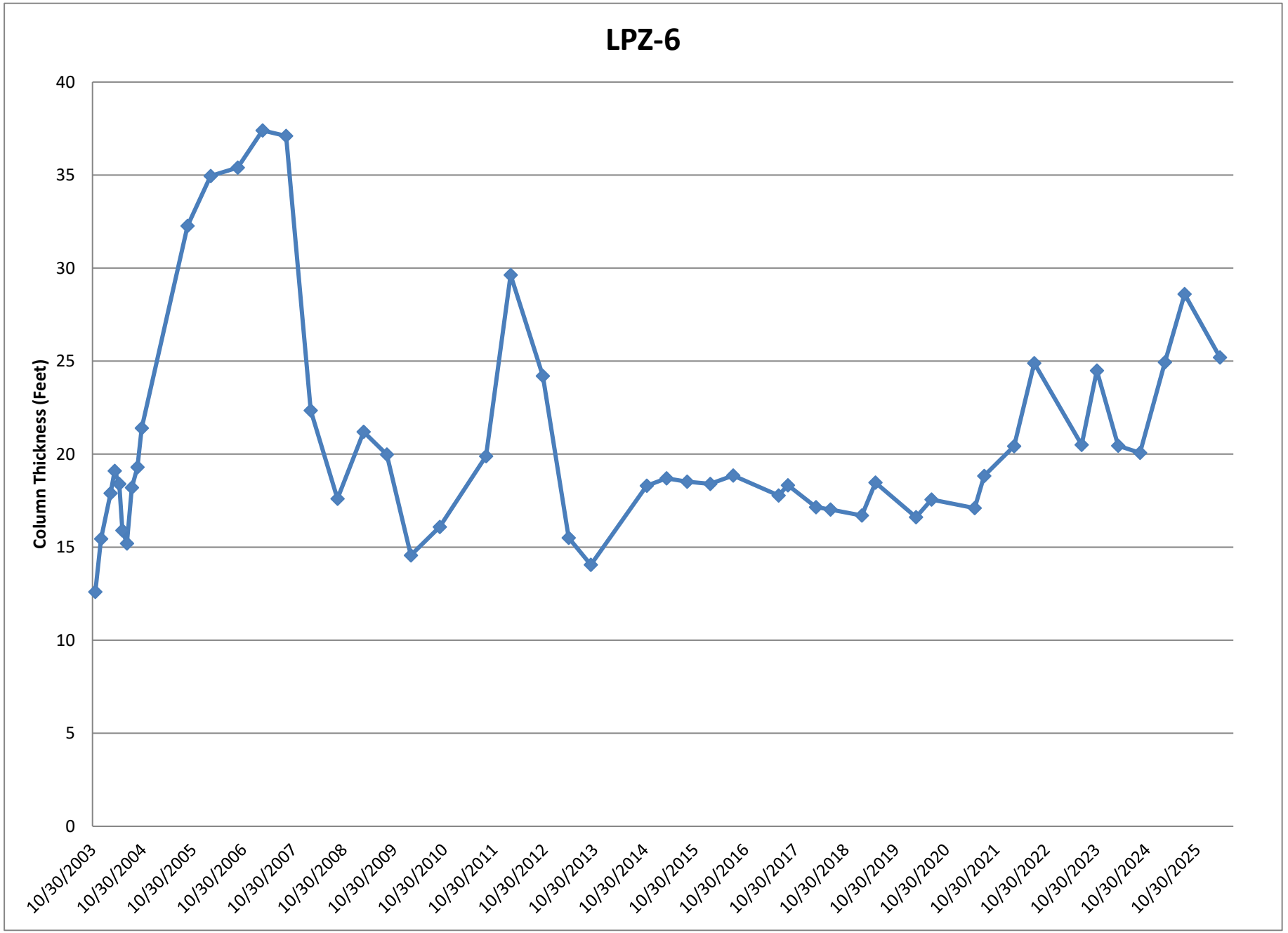
NM - Not measured

* Replacement piezometers LPZ-2R, LPZ-4R, and LPZ-5R installed in November 2011. TD represents total depths of replacement piezometers.


LPZ-2/LPZ-2R
Column Thickness (Feet)
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
LPZ-2R installed.
10/30/2003
10/30/2004
10/30/2005
10/30/2006
10/30/2007
10/30/2008
10/30/2009
10/30/2010
10/30/2011
10/30/2012
10/30/2013
10/30/2014
10/30/2015
10/30/2016
10/30/2017
10/30/2018
10/30/2019
10/30/2020
10/30/2021
10/30/2022
10/30/2023
10/30/2024
10/30/2025


LPZ-4/LPZ-4R
Column Thickness (Feet)
30.0
25.0
20.0
15.0
10.0
5.0
0.0
LPZ-4R installed.
10/30/2003
10/30/2004
10/30/2005
10/30/2006
10/30/2007
10/30/2008
10/30/2009
10/30/2010
10/30/2011
10/30/2012
10/30/2013
10/30/2014
10/30/2015
10/30/2016
10/30/2017
10/30/2018
10/30/2019
10/30/2020
10/30/2021
10/30/2022
10/30/2023
10/30/2024
10/30/2025


LPZ-5/LPZ-5R
Column Thickness (Feet)
40
35
30
25
20
15
10
5
0
LPZ-5R installed.
10/30/2003
10/30/2004
10/30/2005
10/30/2006
10/30/2007
10/30/2008
10/30/2009
10/30/2010
10/30/2011
10/30/2012
10/30/2013
10/30/2014
10/30/2015
10/30/2016
10/30/2017
10/30/2018
10/30/2019
10/30/2020
10/30/2021
10/30/2022
10/30/2023
10/30/2024
10/30/2025


LPZ-6
Column Thickness (Feet)
40
35
30
25
20
15
10
5
0
10/30/2003
10/30/2004
10/30/2005
10/30/2006
10/30/2007
10/30/2008
10/30/2009
10/30/2010
10/30/2011
10/30/2012
10/30/2013
10/30/2014
10/30/2015
10/30/2016
10/30/2017
10/30/2018
10/30/2019
10/30/2020
10/30/2021
10/30/2022
10/30/2023
10/30/2024
10/30/2025

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

ANALYTICAL REPORT

PREPARED FOR

Attn: Janeen Frey
Prairie Solid Waste Agency
1774 Lark Avenue
PO BOX 227
Creston, Iowa 50801

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JOB DESCRIPTION

Prairie Solid Waste/Union County Leachate

JOB NUMBER

310-331062-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

myEOL

Job Notes

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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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Job ID: 310-331062-1 — Eurofins Cedar Falls

Job Narrative
310-331062-1

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 sample was received on 5/1/2026 9:00 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.1°C.

GC/MS VOA
Method 624.1: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container: Leachate (310-331062-1).

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

GC/MS Semi VOA
Method 625.1: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 310-487945 and analytical batch 310-488301 recovered outside control limits for the following analytes: Indeno[1,2,3-cd]pyrene.

Method 625.1: The laboratory control sample (LCS) for preparation batch 310-487945 and analytical batch 310-488301 recovered outside acceptance limits for 2-Chloronaphthalene. There was insufficient sample and holding-time to perform a re-extraction or re-analysis; therefore, the data have been reported.

Method 625.1: The method blank for preparation batch 310-487945 and analytical batch 310-488301 contained Diethyl phthalate above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

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

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

Pesticides
Method 608.3: The laboratory control sample (LCS) for preparation batch 310-487806 and analytical batch 310-487896 recovered outside control limits for the following analytes: Endosulfan I.

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
Method SM 5210B: All the dilutions failed to deplete the method-required 2 mgO2/L for the following samples: Leachate (310-331062-1). Only a "less than" result could be calculated from the least dilute preparation.

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

Sample Summary

Client: Prairie Solid Waste Agency
Job ID: 310-331062-1
Project/Site: Prairie Solid Waste/Union County Leachate

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
310-331062-1	Leachate	Water	04/30/26 10:33	05/01/26 09:00	Iowa

Detection Summary

Client: Prairie Solid Waste Agency
Job ID: 310-331062-1
Project/Site: Prairie Solid Waste/Union County Leachate

Client Sample ID: Leachate
Lab Sample ID: 310-331062-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00175	J	0.00200	0.000530	mg/L	1		200.8	Total/NA
Barium	0.107		0.00200	0.000660	mg/L	1		200.8	Total/NA
Chromium	0.00297	J	0.00500	0.00270	mg/L	1		200.8	Total/NA
Iron	0.342		0.100	0.0560	mg/L	1		200.8	Total/NA
Magnesium	68.4		0.500	0.150	mg/L	1		200.8	Total/NA
Nickel	0.0201		0.00500	0.00230	mg/L	1		200.8	Total/NA
Ammonia as N	18.4		5.00	1.60	mg/L	10		350.1	Total/NA
Total Kjeldahl Nitrogen	27.8		10.0	5.50	mg/L	10		351.2	Total/NA
Total Suspended Solids	8.33		5.00	2.80	mg/L	1		I-3765-85	Total/NA
Total Dissolved Solids	1050		250	145	mg/L	1		SM 2540C	Total/NA
pH	8.6	HF	1.0	1.0	SU	1		SM 4500 H+ B	Total/NA
Total Organic Carbon	54.5		40.0	20.0	mg/L	40		SM 5310C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Prairie Solid Waste Agency
Job ID: 310-331062-1
Project/Site: Prairie Solid Waste/Union County Leachate

Client Sample ID: Leachate
Lab Sample ID: 310-331062-1
Date Collected: 04/30/26 10:33
Matrix: Water
Date Received: 05/01/26 09:00

Method: EPA 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.500		0.500	0.220	ug/L			05/01/26 15:18	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			05/01/26 15:18	1
Bromoform	<5.00		5.00	2.60	ug/L			05/01/26 15:18	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/01/26 15:18	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/01/26 15:18	1
Chlorobenzene	<1.00		1.00	0.350	ug/L			05/01/26 15:18	1
Chlorodibromomethane	<5.00		5.00	1.50	ug/L			05/01/26 15:18	1
Chloroethane	<4.00		4.00	0.900	ug/L			05/01/26 15:18	1
2-Chloroethyl vinyl ether	<2.00		2.00	0.800	ug/L			05/01/26 15:18	1
Chloroform	<3.00		3.00	1.30	ug/L			05/01/26 15:18	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/01/26 15:18	1
cis-1,2-Dichloroethene	<1.00		1.00	0.550	ug/L			05/01/26 15:18	1
cis-1,3-Dichloropropene	<5.00		5.00	1.20	ug/L			05/01/26 15:18	1
1,1-Dichloroethane	<1.00		1.00	0.400	ug/L			05/01/26 15:18	1
1,2-Dichloroethane	<1.00		1.00	0.890	ug/L			05/01/26 15:18	1
1,1-Dichloroethene	<2.00		2.00	0.460	ug/L			05/01/26 15:18	1
1,2-Dichloropropane	<1.00		1.00	0.380	ug/L			05/01/26 15:18	1
1,3-Dichloropropene, Total	<5.00		5.00	2.30	ug/L			05/01/26 15:18	1
Ethylbenzene	<1.00		1.00	0.420	ug/L			05/01/26 15:18	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			05/01/26 15:18	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.350	ug/L			05/01/26 15:18	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/01/26 15:18	1
Toluene	<1.00		1.00	0.430	ug/L			05/01/26 15:18	1
trans-1,2-Dichloroethene	<1.00		1.00	0.410	ug/L			05/01/26 15:18	1
trans-1,3-Dichloropropene	<5.00		5.00	2.30	ug/L			05/01/26 15:18	1
1,1,1-Trichloroethane	<1.00		1.00	0.420	ug/L			05/01/26 15:18	1
1,1,2-Trichloroethane	<1.00		1.00	0.330	ug/L			05/01/26 15:18	1
Trichloroethene	<1.00		1.00	0.350	ug/L			05/01/26 15:18	1
Vinyl chloride	<1.00		1.00	0.430	ug/L			05/01/26 15:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*05/01/26 15:18*	*1*
Dibromofluoromethane (Surr)	*118*		*76 - 130*		*05/01/26 15:18*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*05/01/26 15:18*	*1*

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<10.0		10.0	0.560	ug/L		05/05/26 11:25	05/08/26 14:11	1
1,2-Dichlorobenzene	<10.0		10.0	0.620	ug/L		05/05/26 11:25	05/08/26 14:11	1
1,3-Dichlorobenzene	<10.0		10.0	0.640	ug/L		05/05/26 11:25	05/08/26 14:11	1
1,4-Dichlorobenzene	<10.0		10.0	0.640	ug/L		05/05/26 11:25	05/08/26 14:11	1
2,4,5-Trichlorophenol	<10.0		10.0	5.30	ug/L		05/05/26 11:25	05/08/26 14:11	1
2,4,6-Trichlorophenol	<10.0		10.0	5.00	ug/L		05/05/26 11:25	05/08/26 14:11	1
2,4-Dichlorophenol	<10.0		10.0	0.850	ug/L		05/05/26 11:25	05/08/26 14:11	1
2,4-Dimethylphenol	<10.0		10.0	0.580	ug/L		05/05/26 11:25	05/08/26 14:11	1
2,4-Dinitrophenol	<20.0		20.0	13.0	ug/L		05/05/26 11:25	05/11/26 18:53	1
2,4-Dinitrotoluene	<10.0		10.0	6.40	ug/L		05/05/26 11:25	05/08/26 14:11	1
2,6-Dinitrotoluene	<10.0		10.0	0.520	ug/L		05/05/26 11:25	05/08/26 14:11	1
2-Chloronaphthalene	<10.0	*-	10.0	0.640	ug/L		05/05/26 11:25	05/08/26 14:11	1
2-Chlorophenol	<10.0		10.0	0.540	ug/L		05/05/26 11:25	05/08/26 14:11	1

Client: Prairie Solid Waste Agency
Job ID: 310-331062-1
Project/Site: Prairie Solid Waste/Union County Leachate

Client Sample ID: Leachate
Lab Sample ID: 310-331062-1
Date Collected: 04/30/26 10:33
Matrix: Water
Date Received: 05/01/26 09:00

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrophenol	<10.0		10.0	6.80	ug/L		05/05/26 11:25	05/08/26 14:11	1
3,3'-Dichlorobenzidine	<10.0		10.0	1.40	ug/L		05/05/26 11:25	05/08/26 14:11	1
4,6-Dinitro-2-methylphenol	<10.0		10.0	6.90	ug/L		05/05/26 11:25	05/08/26 14:11	1
4-Bromophenyl phenyl ether	<10.0		10.0	0.700	ug/L		05/05/26 11:25	05/08/26 14:11	1
4-Chloro-3-methylphenol	<10.0		10.0	0.840	ug/L		05/05/26 11:25	05/08/26 14:11	1
4-Chlorophenyl phenyl ether	<10.0		10.0	0.690	ug/L		05/05/26 11:25	05/08/26 14:11	1
4-Nitrophenol	<10.0		10.0	7.60	ug/L		05/05/26 11:25	05/08/26 14:11	1
Acenaphthene	<10.0		10.0	0.640	ug/L		05/05/26 11:25	05/08/26 14:11	1
Acenaphthylene	<10.0		10.0	0.720	ug/L		05/05/26 11:25	05/08/26 14:11	1
Anthracene	<10.0		10.0	0.870	ug/L		05/05/26 11:25	05/08/26 14:11	1
Benzo[a]anthracene	<10.0		10.0	0.850	ug/L		05/05/26 11:25	05/08/26 14:11	1
Benzo[a]pyrene	<10.0		10.0	8.10	ug/L		05/05/26 11:25	05/08/26 14:11	1
Benzo[b]fluoranthene	<10.0		10.0	4.90	ug/L		05/05/26 11:25	05/08/26 14:11	1
Benzo[g,h,i]perylene	<10.0		10.0	6.30	ug/L		05/05/26 11:25	05/08/26 14:11	1
Benzo[k]fluoranthene	<10.0		10.0	2.20	ug/L		05/05/26 11:25	05/08/26 14:11	1
Benzoic acid	<100		100	17.0	ug/L		05/05/26 11:25	05/08/26 14:11	1
Benzyl alcohol	<10.0		10.0	1.30	ug/L		05/05/26 11:25	05/08/26 14:11	1
Bis(2-chloroethoxy)methane	<10.0		10.0	0.760	ug/L		05/05/26 11:25	05/08/26 14:11	1
Bis(2-chloroethyl)ether	<10.0		10.0	0.820	ug/L		05/05/26 11:25	05/08/26 14:11	1
bis (2-chloroisopropyl) ether	<10.0		10.0	0.540	ug/L		05/05/26 11:25	05/08/26 14:11	1
Bis(2-ethylhexyl) phthalate	<10.0		10.0	5.50	ug/L		05/05/26 11:25	05/08/26 14:11	1
Butyl benzyl phthalate	<10.0		10.0	5.40	ug/L		05/05/26 11:25	05/08/26 14:11	1
Chrysene	<10.0		10.0	0.870	ug/L		05/05/26 11:25	05/08/26 14:11	1
Dibenz(a,h)anthracene	<10.0		10.0	3.90	ug/L		05/05/26 11:25	05/08/26 14:11	1
Dibenzofuran	<10.0		10.0	0.740	ug/L		05/05/26 11:25	05/08/26 14:11	1
Diethyl phthalate	<10.0		10.0	1.70	ug/L		05/05/26 11:25	05/08/26 14:11	1
Dimethyl phthalate	<10.0		10.0	1.00	ug/L		05/05/26 11:25	05/08/26 14:11	1
Di-n-butyl phthalate	<10.0		10.0	5.60	ug/L		05/05/26 11:25	05/08/26 14:11	1
Di-n-octyl phthalate	<20.0		20.0	7.00	ug/L		05/05/26 11:25	05/08/26 14:11	1
Fluoranthene	<10.0		10.0	1.70	ug/L		05/05/26 11:25	05/08/26 14:11	1
Fluorene	<10.0		10.0	0.790	ug/L		05/05/26 11:25	05/08/26 14:11	1
Hexachlorobenzene	<10.0		10.0	0.700	ug/L		05/05/26 11:25	05/08/26 14:11	1
Hexachlorobutadiene	<10.0		10.0	0.860	ug/L		05/05/26 11:25	05/08/26 14:11	1
Hexachlorocyclopentadiene	<10.0		10.0	5.10	ug/L		05/05/26 11:25	05/08/26 14:11	1
Hexachloroethane	<10.0		10.0	0.970	ug/L		05/05/26 11:25	05/08/26 14:11	1
Indeno[1,2,3-cd]pyrene	<10.0	*1	10.0	4.20	ug/L		05/05/26 11:25	05/08/26 14:11	1
Isophorone	<10.0		10.0	0.930	ug/L		05/05/26 11:25	05/08/26 14:11	1
Naphthalene	<10.0		10.0	6.10	ug/L		05/05/26 11:25	05/08/26 14:11	1
Nitrobenzene	<10.0		10.0	0.800	ug/L		05/05/26 11:25	05/08/26 14:11	1
N-Nitrosodi-n-propylamine	<10.0		10.0	0.920	ug/L		05/05/26 11:25	05/08/26 14:11	1
N-Nitrosodiphenylamine	<10.0		10.0	0.750	ug/L		05/05/26 11:25	05/08/26 14:11	1
Pentachlorophenol	<10.0		10.0	9.60	ug/L		05/05/26 11:25	05/08/26 14:11	1
Phenanthrene	<10.0		10.0	0.790	ug/L		05/05/26 11:25	05/08/26 14:11	1
Pyrene	<10.0		10.0	0.790	ug/L		05/05/26 11:25	05/08/26 14:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*45*		*21 - 110*	*05/05/26 11:25*	*05/08/26 14:11*	*1*
Phenol-d5 (Surr)	*38*		*21 - 110*	*05/05/26 11:25*	*05/08/26 14:11*	*1*
Nitrobenzene-d5 (Surr)	*61*		*39 - 140*	*05/05/26 11:25*	*05/08/26 14:11*	*1*
2-Fluorobiphenyl (Surr)	*64*		*33 - 126*	*05/05/26 11:25*	*05/08/26 14:11*	*1*

Client Sample ID: Leachate
Lab Sample ID: 310-331062-1

Date Collected: 04/30/26 10:33
Matrix: Water

Date Received: 05/01/26 09:00

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (SUR)	*69*		*20 - 144*	*05/05/26 11:25*	*05/08/26 14:11*	*1*
Terphenyl-d14	*62*		*13 - 150*	*05/05/26 11:25*	*05/08/26 14:11*	*1*

Method: EPA 608.3 - Organochlorine Pesticides in Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.0640		0.0640	0.0270	ug/L		05/04/26 10:00	05/11/26 11:35	1
4,4'-DDE	<0.0640		0.0640	0.0270	ug/L		05/04/26 10:00	05/11/26 11:35	1
4,4'-DDT	<0.0640		0.0640	0.0420	ug/L		05/04/26 10:00	05/11/26 11:35	1
Aldrin	<0.0640		0.0640	0.0320	ug/L		05/04/26 10:00	05/11/26 11:35	1
beta-BHC	<0.0640		0.0640	0.0370	ug/L		05/04/26 10:00	05/11/26 11:35	1
Chlordane (technical)	<2.00		2.00	0.810	ug/L		05/04/26 10:00	05/11/26 11:35	1
delta-BHC	<0.0640		0.0640	0.0270	ug/L		05/04/26 10:00	05/11/26 11:35	1
Dieldrin	<0.0640		0.0640	0.0260	ug/L		05/04/26 10:00	05/11/26 11:35	1
Endosulfan I	<0.0640	*-	0.0640	0.0330	ug/L		05/04/26 10:00	05/11/26 11:35	1
Endosulfan II	<0.0640		0.0640	0.0290	ug/L		05/04/26 10:00	05/11/26 11:35	1
Endosulfan sulfate	<0.0640		0.0640	0.0300	ug/L		05/04/26 10:00	05/11/26 11:35	1
Endrin	<0.0640		0.0640	0.0260	ug/L		05/04/26 10:00	05/11/26 11:35	1
Endrin aldehyde	<0.0640		0.0640	0.0290	ug/L		05/04/26 10:00	05/11/26 11:35	1
gamma-BHC (Lindane)	<0.0640		0.0640	0.0360	ug/L		05/04/26 10:00	05/11/26 11:35	1
Heptachlor	<0.0640		0.0640	0.0330	ug/L		05/04/26 10:00	05/11/26 11:35	1
Heptachlor epoxide	<0.0640		0.0640	0.0290	ug/L		05/04/26 10:00	05/11/26 11:35	1
Toxaphene	<2.00		2.00	0.690	ug/L		05/04/26 10:00	05/11/26 11:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*46*		*10 - 126*	*05/04/26 10:00*	*05/11/26 11:35*	*1*
Tetrachloro-m-xylene	*53*		*10 - 124*	*05/04/26 10:00*	*05/11/26 11:35*	*1*

Method: EPA 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.800		0.800	0.160	ug/L		05/04/26 10:00	05/11/26 11:35	1
PCB-1221	<0.800		0.800	0.160	ug/L		05/04/26 10:00	05/11/26 11:35	1
PCB-1232	<0.800		0.800	0.160	ug/L		05/04/26 10:00	05/11/26 11:35	1
PCB-1242	<0.800		0.800	0.160	ug/L		05/04/26 10:00	05/11/26 11:35	1
PCB-1248	<0.800		0.800	0.110	ug/L		05/04/26 10:00	05/11/26 11:35	1
PCB-1254	<0.800		0.800	0.110	ug/L		05/04/26 10:00	05/11/26 11:35	1
PCB-1260	<0.800		0.800	0.110	ug/L		05/04/26 10:00	05/11/26 11:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*46*		*10 - 126*	*05/04/26 10:00*	*05/11/26 11:35*	*1*
Tetrachloro-m-xylene (Surr)	*53*		*10 - 124*	*05/04/26 10:00*	*05/11/26 11:35*	*1*

Method: EPA 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00175**	**J**	0.00200	0.000530	mg/L		05/04/26 08:30	05/06/26 12:58	1
Barium	**0.107**		0.00200	0.000660	mg/L		05/04/26 08:30	05/06/26 12:58	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		05/04/26 08:30	05/06/26 12:58	1
Chromium	**0.00297**	**J**	0.00500	0.00270	mg/L		05/04/26 08:30	05/06/26 12:58	1
Copper	<0.00500		0.00500	0.00280	mg/L		05/04/26 08:30	05/06/26 12:58	1
Iron	**0.342**		0.100	0.0560	mg/L		05/04/26 08:30	05/06/26 12:58	1
Lead	<0.000500		0.000500	0.000440	mg/L		05/04/26 08:30	05/08/26 12:53	1

Client: Prairie Solid Waste Agency
Job ID: 310-331062-1
Project/Site: Prairie Solid Waste/Union County Leachate

Client Sample ID: Leachate
Lab Sample ID: 310-331062-1
Date Collected: 04/30/26 10:33
Matrix: Water
Date Received: 05/01/26 09:00

Method: EPA 200.8 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	**68.4**		0.500	0.150	mg/L		05/04/26 08:30	05/06/26 12:58	1
Molybdenum	<0.00200		0.00200	0.00130	mg/L		05/04/26 08:30	05/06/26 12:58	1
Nickel	**0.0201**		0.00500	0.00230	mg/L		05/04/26 08:30	05/06/26 12:58	1
Selenium	<0.00500		0.00500	0.000630	mg/L		05/04/26 08:30	05/06/26 12:58	1
Silver	<0.00100		0.00100	0.000340	mg/L		05/04/26 08:30	05/05/26 16:03	1
Zinc	<0.0200		0.0200	0.0130	mg/L		05/04/26 08:30	05/06/26 12:58	1

Method: EPA 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200	0.0000449	mg/L		05/11/26 09:25	05/11/26 14:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease) (1664A)	<5.0		5.0	3.3	mg/L		05/06/26 11:00	05/06/26 11:00	1
Ammonia as N (EPA 350.1)	**18.4**		5.00	1.60	mg/L			05/06/26 17:48	10
Total Kjeldahl Nitrogen (EPA 351.2)	**27.8**		10.0	5.50	mg/L		05/04/26 05:17	05/04/26 23:27	10
Total Suspended Solids (USGS I-3765-85)	**8.33**		5.00	2.80	mg/L			05/06/26 11:45	1
Total Dissolved Solids (SM 2540C)	**1050**		250	145	mg/L			05/05/26 14:36	1
Biochemical Oxygen Demand (SM 5210B)	<6.00		6.00	6.00	mg/L			05/01/26 10:02	2
Total Organic Carbon (SM 5310C)	**54.5**		40.0	20.0	mg/L			05/06/26 07:54	40

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SM 4500 H+ B)	**8.6**	**HF**	1.0	1.0	SU			05/01/26 11:57	1

Definitions/Glossary

Client: Prairie Solid Waste Agency
Job ID: 310-331062-1
Project/Site: Prairie Solid Waste/Union County Leachate

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.

Metals

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

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	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: Prairie Solid Waste Agency
Job ID: 310-331062-1
Project/Site: Prairie Solid Waste/Union County Leachate

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
		BFB	DBFM	TOL							
Lab Sample ID	Client Sample ID	(80-120)	(76-130)	(80-120)							
310-331062-1	Leachate	106	118	93							
LCS 310-487539/6	Lab Control Sample	103	97	97							
LCS 310-487539/7	Lab Control Sample	106	119	93							
MB 310-487539/5	Method Blank	105	115	93							

Surrogate Legend

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

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
		2FP	PHL	NBZ	FBP	TBP	TPHL		
Lab Sample ID	Client Sample ID	(21-110)	(21-110)	(39-140)	(33-126)	(20-144)	(13-150)		
310-331062-1	Leachate	45	38	61	64	69	62		
LCS 310-487945/2-A	Lab Control Sample	56	46	72	71	83	72		
LCSD 310-487945/3-A	Lab Control Sample Dup	61	50	80	81	93	84		
MB 310-487945/1-A	Method Blank	60	50	80	77	87	86		

Surrogate Legend

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

Method: 608.3 - Organochlorine Pesticides in Water

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
		DCB1	TCX1						
Lab Sample ID	Client Sample ID	(10-126)	(10-124)						
310-331062-1	Leachate	46	53						
LCS 310-487806/4-A	Lab Control Sample	54	60						
LCSD 310-487806/5-A	Lab Control Sample Dup	40	61						
MB 310-487806/1-A	Method Blank	60	62						

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)
TCX = Tetrachloro-m-xylene

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
		DCB1	TCX1						
Lab Sample ID	Client Sample ID	(10-126)	(10-124)						
310-331062-1	Leachate	46	53						
LCS 310-487806/2-A	Lab Control Sample	44	58						

Surrogate Summary

Client: Prairie Solid Waste Agency
Job ID: 310-331062-1
Project/Site: Prairie Solid Waste/Union County Leachate

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC) (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
		DCB1	TCX1								
Lab Sample ID	Client Sample ID	(10-126)	(10-124)								
LCSD 310-487806/3-A	Lab Control Sample Dup	47	51								
MB 310-487806/1-A	Method Blank	60	62								

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene (Surr)

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 310-487539/5
Matrix: Water
Analysis Batch: 487539

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			05/01/26 11:29	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			05/01/26 11:29	1
Bromoform	<5.00		5.00	2.60	ug/L			05/01/26 11:29	1
Bromomethane	<4.00		4.00	1.10	ug/L			05/01/26 11:29	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			05/01/26 11:29	1
Chlorobenzene	<1.00		1.00	0.350	ug/L			05/01/26 11:29	1
Chlorodibromomethane	<5.00		5.00	1.50	ug/L			05/01/26 11:29	1
Chloroethane	<4.00		4.00	0.900	ug/L			05/01/26 11:29	1
2-Chloroethyl vinyl ether	<2.00		2.00	0.800	ug/L			05/01/26 11:29	1
Chloroform	<3.00		3.00	1.30	ug/L			05/01/26 11:29	1
Chloromethane	<3.00		3.00	0.610	ug/L			05/01/26 11:29	1
cis-1,2-Dichloroethene	<1.00		1.00	0.550	ug/L			05/01/26 11:29	1
cis-1,3-Dichloropropene	<5.00		5.00	1.20	ug/L			05/01/26 11:29	1
1,1-Dichloroethane	<1.00		1.00	0.400	ug/L			05/01/26 11:29	1
1,2-Dichloroethane	<1.00		1.00	0.890	ug/L			05/01/26 11:29	1
1,1-Dichloroethene	<2.00		2.00	0.460	ug/L			05/01/26 11:29	1
1,2-Dichloropropane	<1.00		1.00	0.380	ug/L			05/01/26 11:29	1
1,3-Dichloropropene, Total	<5.00		5.00	2.30	ug/L			05/01/26 11:29	1
Ethylbenzene	<1.00		1.00	0.420	ug/L			05/01/26 11:29	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			05/01/26 11:29	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.350	ug/L			05/01/26 11:29	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			05/01/26 11:29	1
Toluene	<1.00		1.00	0.430	ug/L			05/01/26 11:29	1
trans-1,2-Dichloroethene	<1.00		1.00	0.410	ug/L			05/01/26 11:29	1
trans-1,3-Dichloropropene	<5.00		5.00	2.30	ug/L			05/01/26 11:29	1
1,1,1-Trichloroethane	<1.00		1.00	0.420	ug/L			05/01/26 11:29	1
1,1,2-Trichloroethane	<1.00		1.00	0.330	ug/L			05/01/26 11:29	1
Trichloroethene	<1.00		1.00	0.350	ug/L			05/01/26 11:29	1
Vinyl chloride	<1.00		1.00	0.430	ug/L			05/01/26 11:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*05/01/26 11:29*	*1*
Dibromofluoromethane (Surr)	*115*		*76 - 130*		*05/01/26 11:29*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*05/01/26 11:29*	*1*

Lab Sample ID: LCS 310-487539/6
Matrix: Water
Analysis Batch: 487539

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzene	10.0	10.12		ug/L		101	71 - 125
Bromodichloromethane	10.0	9.680		ug/L		97	70 - 122
Bromoform	10.0	10.07		ug/L		101	70 - 122
Carbon tetrachloride	10.0	10.21		ug/L		102	70 - 130
Chlorobenzene	10.0	9.972		ug/L		100	74 - 120
Chlorodibromomethane	10.0	9.309		ug/L		93	70 - 121
2-Chloroethyl vinyl ether	10.0	8.902		ug/L		89	50 - 150
Chloroform	10.0	10.63		ug/L		106	72 - 122

Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 310-487539/6
Matrix: Water
Analysis Batch: 487539

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
cis-1,2-Dichloroethene	10.0	10.37		ug/L		104	72 - 123
cis-1,3-Dichloropropene	10.0	9.440		ug/L		94	72 - 123
1,1-Dichloroethane	10.0	10.09		ug/L		101	70 - 127
1,2-Dichloroethane	10.0	9.638		ug/L		96	70 - 125
1,1-Dichloroethene	10.0	9.490		ug/L		95	64 - 134
1,2-Dichloropropane	10.0	9.848		ug/L		98	72 - 128
Ethylbenzene	10.0	10.01		ug/L		100	75 - 120
Methylene Chloride	10.0	10.84		ug/L		108	72 - 128
1,1,2,2-Tetrachloroethane	10.0	9.120		ug/L		91	70 - 122
Tetrachloroethene	10.0	11.08		ug/L		111	70 - 128
Toluene	10.0	10.08		ug/L		101	74 - 120
trans-1,2-Dichloroethene	10.0	10.18		ug/L		102	70 - 127
trans-1,3-Dichloropropene	10.0	9.087		ug/L		91	67 - 123
1,1,1-Trichloroethane	10.0	10.27		ug/L		103	70 - 130
1,1,2-Trichloroethane	10.0	9.660		ug/L		97	75 - 121
Trichloroethene	10.0	9.734		ug/L		97	70 - 128

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

Lab Sample ID: LCS 310-487539/7
Matrix: Water
Analysis Batch: 487539

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	18.00		ug/L		90	33 - 138
Chloroethane	20.0	19.35		ug/L		97	59 - 139
Chloromethane	20.0	21.22		ug/L		106	52 - 146
Vinyl chloride	20.0	19.12		ug/L		96	60 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*119*		*76 - 130*
Toluene-d8 (Surr)	*93*		*80 - 120*

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 310-487945/1-A
Matrix: Water
Analysis Batch: 488301

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487945

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	<10.0		10.0	0.560	ug/L		05/05/26 11:25	05/08/26 08:28	1
1,2-Dichlorobenzene	<10.0		10.0	0.620	ug/L		05/05/26 11:25	05/08/26 08:28	1
1,3-Dichlorobenzene	<10.0		10.0	0.640	ug/L		05/05/26 11:25	05/08/26 08:28	1
1,4-Dichlorobenzene	<10.0		10.0	0.640	ug/L		05/05/26 11:25	05/08/26 08:28	1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 310-487945/1-A
Matrix: Water
Analysis Batch: 488301

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487945

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-Trichlorophenol	<10.0		10.0	5.30	ug/L		05/05/26 11:25	05/08/26 08:28	1
2,4,6-Trichlorophenol	<10.0		10.0	5.00	ug/L		05/05/26 11:25	05/08/26 08:28	1
2,4-Dichlorophenol	<10.0		10.0	0.850	ug/L		05/05/26 11:25	05/08/26 08:28	1
2,4-Dimethylphenol	<10.0		10.0	0.580	ug/L		05/05/26 11:25	05/08/26 08:28	1
2,4-Dinitrotoluene	<10.0		10.0	6.40	ug/L		05/05/26 11:25	05/08/26 08:28	1
2,6-Dinitrotoluene	<10.0		10.0	0.520	ug/L		05/05/26 11:25	05/08/26 08:28	1
2-Chloronaphthalene	<10.0		10.0	0.640	ug/L		05/05/26 11:25	05/08/26 08:28	1
2-Chlorophenol	<10.0		10.0	0.540	ug/L		05/05/26 11:25	05/08/26 08:28	1
2-Nitrophenol	<10.0		10.0	6.80	ug/L		05/05/26 11:25	05/08/26 08:28	1
3,3'-Dichlorobenzidine	<10.0		10.0	1.40	ug/L		05/05/26 11:25	05/08/26 08:28	1
4,6-Dinitro-2-methylphenol	<10.0		10.0	6.90	ug/L		05/05/26 11:25	05/08/26 08:28	1
4-Bromophenyl phenyl ether	<10.0		10.0	0.700	ug/L		05/05/26 11:25	05/08/26 08:28	1
4-Chloro-3-methylphenol	<10.0		10.0	0.840	ug/L		05/05/26 11:25	05/08/26 08:28	1
4-Chlorophenyl phenyl ether	<10.0		10.0	0.690	ug/L		05/05/26 11:25	05/08/26 08:28	1
4-Nitrophenol	<10.0		10.0	7.60	ug/L		05/05/26 11:25	05/08/26 08:28	1
Acenaphthene	<10.0		10.0	0.640	ug/L		05/05/26 11:25	05/08/26 08:28	1
Acenaphthylene	<10.0		10.0	0.720	ug/L		05/05/26 11:25	05/08/26 08:28	1
Anthracene	<10.0		10.0	0.870	ug/L		05/05/26 11:25	05/08/26 08:28	1
Benzo[a]anthracene	<10.0		10.0	0.850	ug/L		05/05/26 11:25	05/08/26 08:28	1
Benzo[a]pyrene	<10.0		10.0	8.10	ug/L		05/05/26 11:25	05/08/26 08:28	1
Benzo[b]fluoranthene	<10.0		10.0	4.90	ug/L		05/05/26 11:25	05/08/26 08:28	1
Benzo[g,h,i]perylene	<10.0		10.0	6.30	ug/L		05/05/26 11:25	05/08/26 08:28	1
Benzo[k]fluoranthene	<10.0		10.0	2.20	ug/L		05/05/26 11:25	05/08/26 08:28	1
Benzoic acid	<100		100	17.0	ug/L		05/05/26 11:25	05/08/26 08:28	1
Benzyl alcohol	<10.0		10.0	1.30	ug/L		05/05/26 11:25	05/08/26 08:28	1
Bis(2-chloroethoxy)methane	<10.0		10.0	0.760	ug/L		05/05/26 11:25	05/08/26 08:28	1
Bis(2-chloroethyl)ether	<10.0		10.0	0.820	ug/L		05/05/26 11:25	05/08/26 08:28	1
bis (2-chloroisopropyl) ether	<10.0		10.0	0.540	ug/L		05/05/26 11:25	05/08/26 08:28	1
Bis(2-ethylhexyl) phthalate	<10.0		10.0	5.50	ug/L		05/05/26 11:25	05/08/26 08:28	1
Butyl benzyl phthalate	<10.0		10.0	5.40	ug/L		05/05/26 11:25	05/08/26 08:28	1
Chrysene	<10.0		10.0	0.870	ug/L		05/05/26 11:25	05/08/26 08:28	1
Dibenz(a,h)anthracene	<10.0		10.0	3.90	ug/L		05/05/26 11:25	05/08/26 08:28	1
Dibenzofuran	<10.0		10.0	0.740	ug/L		05/05/26 11:25	05/08/26 08:28	1
Diethyl phthalate	2.444	J	10.0	1.70	ug/L		05/05/26 11:25	05/08/26 08:28	1
Dimethyl phthalate	<10.0		10.0	1.00	ug/L		05/05/26 11:25	05/08/26 08:28	1
Di-n-butyl phthalate	<10.0		10.0	5.60	ug/L		05/05/26 11:25	05/08/26 08:28	1
Di-n-octyl phthalate	<20.0		20.0	7.00	ug/L		05/05/26 11:25	05/08/26 08:28	1
Fluoranthene	<10.0		10.0	1.70	ug/L		05/05/26 11:25	05/08/26 08:28	1
Fluorene	<10.0		10.0	0.790	ug/L		05/05/26 11:25	05/08/26 08:28	1
Hexachlorobenzene	<10.0		10.0	0.700	ug/L		05/05/26 11:25	05/08/26 08:28	1
Hexachlorobutadiene	<10.0		10.0	0.860	ug/L		05/05/26 11:25	05/08/26 08:28	1
Hexachlorocyclopentadiene	<10.0		10.0	5.10	ug/L		05/05/26 11:25	05/08/26 08:28	1
Hexachloroethane	<10.0		10.0	0.970	ug/L		05/05/26 11:25	05/08/26 08:28	1
Indeno[1,2,3-cd]pyrene	<10.0		10.0	4.20	ug/L		05/05/26 11:25	05/08/26 08:28	1
Isophorone	<10.0		10.0	0.930	ug/L		05/05/26 11:25	05/08/26 08:28	1
Naphthalene	<10.0		10.0	6.10	ug/L		05/05/26 11:25	05/08/26 08:28	1
Nitrobenzene	<10.0		10.0	0.800	ug/L		05/05/26 11:25	05/08/26 08:28	1
N-Nitrosodi-n-propylamine	<10.0		10.0	0.920	ug/L		05/05/26 11:25	05/08/26 08:28	1
N-Nitrosodiphenylamine	<10.0		10.0	0.750	ug/L		05/05/26 11:25	05/08/26 08:28	1

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 310-487945/1-A
Matrix: Water
Analysis Batch: 488301

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487945

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	<10.0		10.0	9.60	ug/L		05/05/26 11:25	05/08/26 08:28	1
Phenanthrene	<10.0		10.0	0.790	ug/L		05/05/26 11:25	05/08/26 08:28	1
Pyrene	<10.0		10.0	0.790	ug/L		05/05/26 11:25	05/08/26 08:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*60*		*21 - 110*	*05/05/26 11:25*	*05/08/26 08:28*	*1*
Phenol-d5 (Surr)	*50*		*21 - 110*	*05/05/26 11:25*	*05/08/26 08:28*	*1*
Nitrobenzene-d5 (Surr)	*80*		*39 - 140*	*05/05/26 11:25*	*05/08/26 08:28*	*1*
2-Fluorobiphenyl (Surr)	*77*		*33 - 126*	*05/05/26 11:25*	*05/08/26 08:28*	*1*
2,4,6-Tribromophenol (SUR)	*87*		*20 - 144*	*05/05/26 11:25*	*05/08/26 08:28*	*1*
Terphenyl-d14	*86*		*13 - 150*	*05/05/26 11:25*	*05/08/26 08:28*	*1*

Lab Sample ID: MB 310-487945/1-A
Matrix: Water
Analysis Batch: 488490

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487945

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	<20.0		20.0	13.0	ug/L		05/05/26 11:25	05/11/26 08:58	1

Lab Sample ID: LCS 310-487945/2-A
Matrix: Water
Analysis Batch: 488301

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487945

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	100	53.76		ug/L		54	44 - 110
1,2-Dichlorobenzene	100	51.68		ug/L		52	31 - 110
1,3-Dichlorobenzene	100	49.22		ug/L		49	29 - 110
1,4-Dichlorobenzene	100	49.35		ug/L		49	29 - 110
2,4,5-Trichlorophenol	100	70.44		ug/L		70	39 - 136
2,4,6-Trichlorophenol	100	69.95		ug/L		70	37 - 141
2,4-Dichlorophenol	100	71.72		ug/L		72	44 - 131
2,4-Dimethylphenol	100	66.19		ug/L		66	32 - 120
2,4-Dinitrotoluene	100	74.34		ug/L		74	48 - 136
2,6-Dinitrotoluene	100	75.97		ug/L		76	50 - 135
2-Chloronaphthalene	100	53.16	*-	ug/L		53	60 - 112
2-Chlorophenol	100	68.33		ug/L		68	43 - 119
2-Nitrophenol	100	75.82		ug/L		76	36 - 144
4,6-Dinitro-2-methylphenol	200	147.9		ug/L		74	22 - 150
4-Bromophenyl phenyl ether	100	75.19		ug/L		75	53 - 127
4-Chloro-3-methylphenol	100	76.63		ug/L		77	51 - 132
4-Chlorophenyl phenyl ether	100	65.08		ug/L		65	44 - 118
4-Nitrophenol	200	80.55		ug/L		40	22 - 110
Acenaphthene	100	61.79		ug/L		62	47 - 118
Acenaphthylene	100	58.71		ug/L		59	39 - 115
Anthracene	100	74.26		ug/L		74	49 - 127
Benzo[a]anthracene	100	73.46		ug/L		73	49 - 126
Benzo[a]pyrene	100	75.80		ug/L		76	44 - 133
Benzo[b]fluoranthene	100	73.39		ug/L		73	44 - 136
Benzo[g,h,i]perylene	100	63.32		ug/L		63	42 - 135

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 310-487945/2-A
Matrix: Water
Analysis Batch: 488301

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487945

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[k]fluoranthene	100	75.30		ug/L		75	49 - 134
Benzyl alcohol	100	74.92		ug/L		75	46 - 123
Bis(2-chloroethoxy)methane	100	74.85		ug/L		75	44 - 126
Bis(2-chloroethyl)ether	100	66.55		ug/L		67	41 - 116
bis (2-chloroisopropyl) ether	100	64.28		ug/L		64	36 - 115
Bis(2-ethylhexyl) phthalate	100	67.58		ug/L		68	46 - 138
Butyl benzyl phthalate	100	71.55		ug/L		72	47 - 133
Chrysene	100	76.05		ug/L		76	50 - 128
Dibenz(a,h)anthracene	100	64.08		ug/L		64	36 - 146
Dibenzofuran	100	62.46		ug/L		62	44 - 114
Diethyl phthalate	100	72.62		ug/L		73	43 - 120
Dimethyl phthalate	100	70.89		ug/L		71	46 - 120
Di-n-butyl phthalate	100	74.21		ug/L		74	49 - 120
Di-n-octyl phthalate	100	65.00		ug/L		65	33 - 146
Fluoranthene	100	73.85		ug/L		74	49 - 132
Fluorene	100	68.10		ug/L		68	59 - 118
Hexachlorobenzene	100	74.92		ug/L		75	42 - 134
Hexachlorobutadiene	100	52.27		ug/L		52	29 - 110
Hexachlorocyclopentadiene	100	47.70		ug/L		48	10 - 110
Hexachloroethane	100	45.35		ug/L		45	40 - 110
Indeno[1,2,3-cd]pyrene	100	57.44		ug/L		57	36 - 149
Isophorone	100	74.91		ug/L		75	46 - 126
Naphthalene	100	57.00		ug/L		57	34 - 110
Nitrobenzene	100	64.45		ug/L		64	42 - 123
N-Nitrosodi-n-propylamine	100	71.44		ug/L		71	44 - 124
N-Nitrosodiphenylamine	100	70.70		ug/L		71	43 - 132
Pentachlorophenol	200	150.5		ug/L		75	28 - 142
Phenanthrene	100	71.34		ug/L		71	54 - 120
Pyrene	100	76.47		ug/L		76	52 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorophenol (Surr)	*56*		*21 - 110*
Phenol-d5 (Surr)	*46*		*21 - 110*
Nitrobenzene-d5 (Surr)	*72*		*39 - 140*
2-Fluorobiphenyl (Surr)	*71*		*33 - 126*
2,4,6-Tribromophenol (SUR)	*83*		*20 - 144*
Terphenyl-d14	*72*		*13 - 150*

Lab Sample ID: LCS 310-487945/2-A
Matrix: Water
Analysis Batch: 488490

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487945

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-Dinitrophenol	200	134.2		ug/L		67	10 - 150

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 310-487945/3-A
Matrix: Water
Analysis Batch: 488301

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 487945

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene			100	65.65		ug/L		66	44 - 110	20	35
1,2-Dichlorobenzene			100	59.43		ug/L		59	31 - 110	14	35
1,3-Dichlorobenzene			100	56.12		ug/L		56	29 - 110	13	35
1,4-Dichlorobenzene			100	58.10		ug/L		58	29 - 110	16	35
2,4,5-Trichlorophenol			100	87.17		ug/L		87	39 - 136	21	35
2,4,6-Trichlorophenol			100	83.51		ug/L		84	37 - 141	18	35
2,4-Dichlorophenol			100	87.56		ug/L		88	44 - 131	20	35
2,4-Dimethylphenol			100	78.27		ug/L		78	32 - 120	17	35
2,4-Dinitrotoluene			100	89.85		ug/L		90	48 - 136	19	35
2,6-Dinitrotoluene			100	89.87		ug/L		90	50 - 135	17	35
2-Chloronaphthalene			100	64.02		ug/L		64	60 - 112	19	24
2-Chlorophenol			100	78.31		ug/L		78	43 - 119	14	35
2-Nitrophenol			100	86.50		ug/L		87	36 - 144	13	35
4,6-Dinitro-2-methylphenol			200	180.6		ug/L		90	22 - 150	20	35
4-Bromophenyl phenyl ether			100	90.11		ug/L		90	53 - 127	18	35
4-Chloro-3-methylphenol			100	88.49		ug/L		88	51 - 132	14	35
4-Chlorophenyl phenyl ether			100	78.20		ug/L		78	44 - 118	18	35
4-Nitrophenol			200	99.31		ug/L		50	22 - 110	21	35
Acenaphthene			100	73.55		ug/L		74	47 - 118	17	35
Acenaphthylene			100	72.19		ug/L		72	39 - 115	21	35
Anthracene			100	89.49		ug/L		89	49 - 127	19	35
Benzo[a]anthracene			100	85.36		ug/L		85	49 - 126	15	35
Benzo[a]pyrene			100	90.05		ug/L		90	44 - 133	17	35
Benzo[b]fluoranthene			100	81.63		ug/L		82	44 - 136	11	35
Benzo[g,h,i]perylene			100	89.19		ug/L		89	42 - 135	34	35
Benzo[k]fluoranthene			100	85.00		ug/L		85	49 - 134	12	35
Benzyl alcohol			100	87.82		ug/L		88	46 - 123	16	35
Bis(2-chloroethoxy)methane			100	87.03		ug/L		87	44 - 126	15	35
Bis(2-chloroethyl)ether			100	78.33		ug/L		78	41 - 116	16	35
bis (2-chloroisopropyl) ether			100	75.36		ug/L		75	36 - 115	16	35
Bis(2-ethylhexyl) phthalate			100	82.09		ug/L		82	46 - 138	19	35
Butyl benzyl phthalate			100	87.83		ug/L		88	47 - 133	20	35
Chrysene			100	91.84		ug/L		92	50 - 128	19	35
Dibenz(a,h)anthracene			100	89.92		ug/L		90	36 - 146	34	35
Dibenzofuran			100	77.53		ug/L		78	44 - 114	22	35
Diethyl phthalate			100	87.66		ug/L		88	43 - 120	19	35
Dimethyl phthalate			100	84.46		ug/L		84	46 - 120	17	35
Di-n-butyl phthalate			100	89.37		ug/L		89	49 - 120	19	35
Di-n-octyl phthalate			100	80.19		ug/L		80	33 - 146	21	35
Fluoranthene			100	89.97		ug/L		90	49 - 132	20	35
Fluorene			100	81.88		ug/L		82	59 - 118	18	35
Hexachlorobenzene			100	85.61		ug/L		86	42 - 134	13	35
Hexachlorobutadiene			100	61.94		ug/L		62	29 - 110	17	35
Hexachlorocyclopentadiene			100	58.16		ug/L		58	10 - 110	20	35
Hexachloroethane			100	53.42		ug/L		53	40 - 110	16	35
Indeno[1,2,3-cd]pyrene			100	83.91	*1	ug/L		84	36 - 149	37	35
Isophorone			100	87.41		ug/L		87	46 - 126	15	35
Naphthalene			100	69.14		ug/L		69	34 - 110	19	35

Method: 625.1 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 310-487945/3-A
Matrix: Water
Analysis Batch: 488301

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 487945

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrobenzene			100	78.98		ug/L		79	42 - 123	20	35
N-Nitrosodi-n-propylamine			100	80.08		ug/L		80	44 - 124	11	35
N-Nitrosodiphenylamine			100	82.59		ug/L		83	43 - 132	16	35
Pentachlorophenol			200	166.2		ug/L		83	28 - 142	10	35
Phenanthrene			100	89.82		ug/L		90	54 - 120	23	35
Pyrene			100	93.26		ug/L		93	52 - 120	20	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorophenol (Surr)	*61*		*21 - 110*
Phenol-d5 (Surr)	*50*		*21 - 110*
Nitrobenzene-d5 (Surr)	*80*		*39 - 140*
2-Fluorobiphenyl (Surr)	*81*		*33 - 126*
2,4,6-Tribromophenol (SUR)	*93*		*20 - 144*
Terphenyl-d14	*84*		*13 - 150*

Lab Sample ID: LCSD 310-487945/3-A
Matrix: Water
Analysis Batch: 488490

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 487945

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4-Dinitrophenol			200	140.5		ug/L		70	10 - 150	5	35

Method: 608.3 - Organochlorine Pesticides in Water

Lab Sample ID: MB 310-487806/1-A
Matrix: Water
Analysis Batch: 487896

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487806

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.0640		0.0640	0.0270	ug/L		05/04/26 10:00	05/05/26 13:29	1
4,4'-DDE	<0.0640		0.0640	0.0270	ug/L		05/04/26 10:00	05/05/26 13:29	1
4,4'-DDT	<0.0640		0.0640	0.0420	ug/L		05/04/26 10:00	05/05/26 13:29	1
Aldrin	<0.0640		0.0640	0.0320	ug/L		05/04/26 10:00	05/05/26 13:29	1
beta-BHC	<0.0640		0.0640	0.0370	ug/L		05/04/26 10:00	05/05/26 13:29	1
Chlordane (technical)	<2.00		2.00	0.810	ug/L		05/04/26 10:00	05/05/26 13:29	1
delta-BHC	<0.0640		0.0640	0.0270	ug/L		05/04/26 10:00	05/05/26 13:29	1
Dieldrin	<0.0640		0.0640	0.0260	ug/L		05/04/26 10:00	05/05/26 13:29	1
Endosulfan I	<0.0640		0.0640	0.0330	ug/L		05/04/26 10:00	05/05/26 13:29	1
Endosulfan II	<0.0640		0.0640	0.0290	ug/L		05/04/26 10:00	05/05/26 13:29	1
Endosulfan sulfate	<0.0640		0.0640	0.0300	ug/L		05/04/26 10:00	05/05/26 13:29	1
Endrin	<0.0640		0.0640	0.0260	ug/L		05/04/26 10:00	05/05/26 13:29	1
Endrin aldehyde	<0.0640		0.0640	0.0290	ug/L		05/04/26 10:00	05/05/26 13:29	1
gamma-BHC (Lindane)	<0.0640		0.0640	0.0360	ug/L		05/04/26 10:00	05/05/26 13:29	1
Heptachlor	<0.0640		0.0640	0.0330	ug/L		05/04/26 10:00	05/05/26 13:29	1
Heptachlor epoxide	<0.0640		0.0640	0.0290	ug/L		05/04/26 10:00	05/05/26 13:29	1
Toxaphene	<2.00		2.00	0.690	ug/L		05/04/26 10:00	05/05/26 13:29	1

Method: 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: MB 310-487806/1-A
Matrix: Water
Analysis Batch: 487896

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487806

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	60		10 - 126	05/04/26 10:00	05/05/26 13:29	1
Tetrachloro-m-xylene	62		10 - 124	05/04/26 10:00	05/05/26 13:29	1

Lab Sample ID: LCS 310-487806/4-A
Matrix: Water
Analysis Batch: 487896

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487806

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
4,4'-DDD			1.00	0.6560		ug/L		66	41 - 117		
4,4'-DDE			1.00	0.6592		ug/L		66	35 - 110		
4,4'-DDT			1.00	0.7334		ug/L		73	26 - 123		
Aldrin			1.00	0.5579		ug/L		56	42 - 110		
beta-BHC			1.00	0.6648		ug/L		66	38 - 114		
delta-BHC			1.00	0.6277		ug/L		63	34 - 114		
Dieldrin			1.00	0.6703		ug/L		67	37 - 114		
Endosulfan I			1.00	0.4161	*-	ug/L		42	45 - 113		
Endosulfan II			1.00	0.4769		ug/L		48	12 - 113		
Endosulfan sulfate			1.00	0.7432		ug/L		74	35 - 123		
Endrin			1.00	0.6484		ug/L		65	36 - 119		
Endrin aldehyde			1.00	0.6065		ug/L		61	37 - 111		
gamma-BHC (Lindane)			1.00	0.6352		ug/L		64	35 - 113		
Heptachlor			1.00	0.6279		ug/L		63	34 - 110		
Heptachlor epoxide			1.00	0.6799		ug/L		68	38 - 114		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	54		10 - 126
Tetrachloro-m-xylene	60		10 - 124

Lab Sample ID: LCSD 310-487806/5-A
Matrix: Water
Analysis Batch: 487896

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 487806

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4,4'-DDD			1.00	0.6181		ug/L		62	41 - 117	6	34
4,4'-DDE			1.00	0.6466		ug/L		65	35 - 110	2	35
4,4'-DDT			1.00	0.6959		ug/L		70	26 - 123	5	35
Aldrin			1.00	0.5449		ug/L		54	42 - 110	2	35
beta-BHC			1.00	0.6320		ug/L		63	38 - 114	5	35
delta-BHC			1.00	0.5896		ug/L		59	34 - 114	4	35
Dieldrin			1.00	0.6463		ug/L		65	37 - 114	4	35
Endosulfan I			1.00	0.4001	*-	ug/L		40	45 - 113	4	28
Endosulfan II			1.00	0.4412		ug/L		44	12 - 113	8	35
Endosulfan sulfate			1.00	0.7780		ug/L		78	35 - 123	5	35
Endrin			1.00	0.6247		ug/L		62	36 - 119	4	35
Endrin aldehyde			1.00	0.6127		ug/L		61	37 - 111	1	35
gamma-BHC (Lindane)			1.00	0.5901		ug/L		59	35 - 113	7	35
Heptachlor			1.00	0.6126		ug/L		61	34 - 110	2	35
Heptachlor epoxide			1.00	0.6605		ug/L		66	38 - 114	3	26

Method: 608.3 - Organochlorine Pesticides in Water (Continued)

Lab Sample ID: LCSD 310-487806/5-A
Matrix: Water
Analysis Batch: 487896

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 487806

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	40		10 - 126
Tetrachloro-m-xylene	61		10 - 124

Method: 608.3 - Polychlorinated Biphenyls (PCBs) (GC)

Lab Sample ID: MB 310-487806/1-A
Matrix: Water
Analysis Batch: 487897

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487806

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.800		0.800	0.160	ug/L		05/04/26 10:00	05/05/26 13:29	1
PCB-1221	<0.800		0.800	0.160	ug/L		05/04/26 10:00	05/05/26 13:29	1
PCB-1232	<0.800		0.800	0.160	ug/L		05/04/26 10:00	05/05/26 13:29	1
PCB-1242	<0.800		0.800	0.160	ug/L		05/04/26 10:00	05/05/26 13:29	1
PCB-1248	<0.800		0.800	0.110	ug/L		05/04/26 10:00	05/05/26 13:29	1
PCB-1254	<0.800		0.800	0.110	ug/L		05/04/26 10:00	05/05/26 13:29	1
PCB-1260	<0.800		0.800	0.110	ug/L		05/04/26 10:00	05/05/26 13:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	60		10 - 126	05/04/26 10:00	05/05/26 13:29	1
Tetrachloro-m-xylene (Surr)	62		10 - 124	05/04/26 10:00	05/05/26 13:29	1

Lab Sample ID: LCS 310-487806/2-A
Matrix: Water
Analysis Batch: 487897

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487806

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
PCB-1016			10.0	6.013		ug/L		60	50 - 123		
PCB-1260			10.0	4.545		ug/L		45	38 - 118		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	44		10 - 126
Tetrachloro-m-xylene (Surr)	58		10 - 124

Lab Sample ID: LCSD 310-487806/3-A
Matrix: Water
Analysis Batch: 487897

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 487806

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-1016			10.0	6.262		ug/L		63	50 - 123	4	33
PCB-1260			10.0	5.027		ug/L		50	38 - 118	10	33

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	47		10 - 126
Tetrachloro-m-xylene (Surr)	51		10 - 124

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 310-487754/1-A
Matrix: Water
Analysis Batch: 488028

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487754

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	<0.00100		0.00100	0.000340	mg/L		05/04/26 08:30	05/05/26 15:36	1

Lab Sample ID: MB 310-487754/1-A
Matrix: Water
Analysis Batch: 488185

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487754

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		05/04/26 08:30	05/06/26 12:43	1
Barium	<0.00200		0.00200	0.000660	mg/L		05/04/26 08:30	05/06/26 12:43	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		05/04/26 08:30	05/06/26 12:43	1
Chromium	<0.00500		0.00500	0.00270	mg/L		05/04/26 08:30	05/06/26 12:43	1
Copper	<0.00500		0.00500	0.00280	mg/L		05/04/26 08:30	05/06/26 12:43	1
Iron	<0.100		0.100	0.0560	mg/L		05/04/26 08:30	05/06/26 12:43	1
Magnesium	<0.500		0.500	0.150	mg/L		05/04/26 08:30	05/06/26 12:43	1
Molybdenum	<0.00200		0.00200	0.00130	mg/L		05/04/26 08:30	05/06/26 12:43	1
Nickel	<0.00500		0.00500	0.00230	mg/L		05/04/26 08:30	05/06/26 12:43	1
Selenium	<0.00500		0.00500	0.000630	mg/L		05/04/26 08:30	05/06/26 12:43	1
Zinc	<0.0200		0.0200	0.0130	mg/L		05/04/26 08:30	05/06/26 12:43	1

Lab Sample ID: MB 310-487754/1-A
Matrix: Water
Analysis Batch: 488630

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487754

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	<0.000500		0.000500	0.000440	mg/L		05/04/26 08:30	05/11/26 13:31	1

Lab Sample ID: LCS 310-487754/2-A
Matrix: Water
Analysis Batch: 488028

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487754

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	0.100	0.08473		mg/L		85	85 - 115

Lab Sample ID: LCS 310-487754/2-A
Matrix: Water
Analysis Batch: 488185

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487754

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.1730		mg/L		87	85 - 115
Barium	0.100	0.08747		mg/L		87	85 - 115
Cadmium	0.100	0.08865		mg/L		89	85 - 115
Chromium	0.100	0.08609		mg/L		86	85 - 115
Copper	0.200	0.1776		mg/L		89	85 - 115
Iron	0.200	0.2095		mg/L		105	85 - 115
Magnesium	2.00	1.779		mg/L		89	85 - 115
Molybdenum	0.200	0.1765		mg/L		88	85 - 115
Nickel	0.200	0.1779		mg/L		89	85 - 115
Selenium	0.400	0.3461		mg/L		87	85 - 115
Zinc	0.200	0.1723		mg/L		86	85 - 115

Client: Prairie Solid Waste Agency
Job ID: 310-331062-1
Project/Site: Prairie Solid Waste/Union County Leachate

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 310-487754/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 488630
Prep Batch: 487754

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	0.200	0.2135		mg/L		107	85 - 115

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 500-865698/12-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 865801
Prep Batch: 865698

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200	0.0000449	mg/L		05/11/26 09:25	05/11/26 14:31	1

Lab Sample ID: LCS 500-865698/13-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 865801
Prep Batch: 865698

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00200	0.001901		mg/L		95	85 - 115

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 310-488086/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 488227
Prep Batch: 488086

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM (Oil & Grease)	<5.0		5.0	3.3	mg/L		05/06/26 11:00	05/06/26 11:00	1

Lab Sample ID: LCS 310-488086/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 488227
Prep Batch: 488086

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
HEM (Oil & Grease)	40.0	40.10		mg/L		100	78 - 114

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 310-488170/84
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 488170

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	<0.500		0.500	0.160	mg/L			05/06/26 15:22	1

Lab Sample ID: LCS 310-488170/85
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 488170

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia as N	2.26	2.155		mg/L		95	90 - 110

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 310-487750/1-A
Matrix: Water
Analysis Batch: 487875

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 487750

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Kjeldahl Nitrogen	<1.00		1.00	0.550	mg/L		05/04/26 05:17	05/04/26 23:02	1

Lab Sample ID: LCS 310-487750/26-A
Matrix: Water
Analysis Batch: 487875

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 487750

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Kjeldahl Nitrogen	4.01	4.384		mg/L		109	90 - 110

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

Lab Sample ID: MB 310-488106/1
Matrix: Water
Analysis Batch: 488106

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	2.80	mg/L			05/06/26 11:45	1

Lab Sample ID: LCS 310-488106/2
Matrix: Water
Analysis Batch: 488106

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	89.00		mg/L		89	82 - 117

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 310-487977/1
Matrix: Water
Analysis Batch: 487977

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<50.0		50.0	29.0	mg/L			05/05/26 14:36	1

Lab Sample ID: LCS 310-487977/2
Matrix: Water
Analysis Batch: 487977

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	1000	1034		mg/L		103	89 - 110

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 310-487608/1
Matrix: Water
Analysis Batch: 487608

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	98 - 102

Method: SM 4500 H+ B - pH (Continued)

Lab Sample ID: 310-331062-1 DU
Matrix: Water
Analysis Batch: 487608

Client Sample ID: Leachate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	8.6	HF	8.5		SU		0.1	20

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: USB 310-487599/1
Matrix: Water
Analysis Batch: 487599

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

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	<3.00		3.00	3.00	mg/L			05/01/26 08:03	1

Lab Sample ID: LCS 310-487599/2
Matrix: Water
Analysis Batch: 487599

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Biochemical Oxygen Demand	198	188.1		mg/L		95	85 - 115

Method: SM 5310C - TOC

Lab Sample ID: MB 310-488071/11
Matrix: Water
Analysis Batch: 488071

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	<1.00		1.00	0.500	mg/L			05/05/26 15:41	1

Lab Sample ID: LCS 310-488071/12
Matrix: Water
Analysis Batch: 488071

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Organic Carbon	9.99	10.30		mg/L		103	85 - 115

GC/MS VOA

Analysis Batch: 487539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	624.1	
MB 310-487539/5	Method Blank	Total/NA	Water	624.1	
LCS 310-487539/6	Lab Control Sample	Total/NA	Water	624.1	
LCS 310-487539/7	Lab Control Sample	Total/NA	Water	624.1	

GC/MS Semi VOA

Prep Batch: 487945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	625	
MB 310-487945/1-A	Method Blank	Total/NA	Water	625	
LCS 310-487945/2-A	Lab Control Sample	Total/NA	Water	625	
LCSD 310-487945/3-A	Lab Control Sample Dup	Total/NA	Water	625	

Analysis Batch: 488301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	625.1	487945
MB 310-487945/1-A	Method Blank	Total/NA	Water	625.1	487945
LCS 310-487945/2-A	Lab Control Sample	Total/NA	Water	625.1	487945
LCSD 310-487945/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	487945

Analysis Batch: 488490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	625.1	487945
MB 310-487945/1-A	Method Blank	Total/NA	Water	625.1	487945
LCS 310-487945/2-A	Lab Control Sample	Total/NA	Water	625.1	487945
LCSD 310-487945/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	487945

GC Semi VOA

Prep Batch: 487806

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	608	
MB 310-487806/1-A	Method Blank	Total/NA	Water	608	
LCS 310-487806/2-A	Lab Control Sample	Total/NA	Water	608	
LCS 310-487806/4-A	Lab Control Sample	Total/NA	Water	608	
LCSD 310-487806/3-A	Lab Control Sample Dup	Total/NA	Water	608	
LCSD 310-487806/5-A	Lab Control Sample Dup	Total/NA	Water	608	

Analysis Batch: 487896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-487806/1-A	Method Blank	Total/NA	Water	608.3	487806
LCS 310-487806/4-A	Lab Control Sample	Total/NA	Water	608.3	487806
LCSD 310-487806/5-A	Lab Control Sample Dup	Total/NA	Water	608.3	487806

Analysis Batch: 487897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-487806/1-A	Method Blank	Total/NA	Water	608.3	487806
LCS 310-487806/2-A	Lab Control Sample	Total/NA	Water	608.3	487806
LCSD 310-487806/3-A	Lab Control Sample Dup	Total/NA	Water	608.3	487806

GC Semi VOA

Analysis Batch: 488509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	608.3	487806

Analysis Batch: 488510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	608.3	487806

Metals

Prep Batch: 487754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	200.8	
MB 310-487754/1-A	Method Blank	Total/NA	Water	200.8	
LCS 310-487754/2-A	Lab Control Sample	Total/NA	Water	200.8	

Analysis Batch: 488028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	200.8	487754
MB 310-487754/1-A	Method Blank	Total/NA	Water	200.8	487754
LCS 310-487754/2-A	Lab Control Sample	Total/NA	Water	200.8	487754

Analysis Batch: 488185

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	200.8	487754
MB 310-487754/1-A	Method Blank	Total/NA	Water	200.8	487754
LCS 310-487754/2-A	Lab Control Sample	Total/NA	Water	200.8	487754

Analysis Batch: 488433

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	200.8	487754

Analysis Batch: 488630

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-487754/1-A	Method Blank	Total/NA	Water	200.8	487754
LCS 310-487754/2-A	Lab Control Sample	Total/NA	Water	200.8	487754

Prep Batch: 865698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	245.1	
MB 500-865698/12-A	Method Blank	Total/NA	Water	245.1	
LCS 500-865698/13-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 865801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	245.1	865698
MB 500-865698/12-A	Method Blank	Total/NA	Water	245.1	865698
LCS 500-865698/13-A	Lab Control Sample	Total/NA	Water	245.1	865698

General Chemistry

Analysis Batch: 487599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	SM 5210B	

General Chemistry (Continued)

Analysis Batch: 487599 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
USB 310-487599/1	Method Blank	Total/NA	Water	SM 5210B	
LCS 310-487599/2	Lab Control Sample	Total/NA	Water	SM 5210B	

Analysis Batch: 487608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	SM 4500 H+ B	
LCS 310-487608/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
310-331062-1 DU	Leachate	Total/NA	Water	SM 4500 H+ B	

Prep Batch: 487750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	351.2	
MB 310-487750/1-A	Method Blank	Total/NA	Water	351.2	
LCS 310-487750/26-A	Lab Control Sample	Total/NA	Water	351.2	

Analysis Batch: 487875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	351.2	487750
MB 310-487750/1-A	Method Blank	Total/NA	Water	351.2	487750
LCS 310-487750/26-A	Lab Control Sample	Total/NA	Water	351.2	487750

Analysis Batch: 487977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	SM 2540C	
MB 310-487977/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 310-487977/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 488071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	SM 5310C	
MB 310-488071/11	Method Blank	Total/NA	Water	SM 5310C	
LCS 310-488071/12	Lab Control Sample	Total/NA	Water	SM 5310C	

Prep Batch: 488086

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	1664A	
MB 310-488086/1-A	Method Blank	Total/NA	Water	1664A	
LCS 310-488086/2-A	Lab Control Sample	Total/NA	Water	1664A	

Analysis Batch: 488106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	I-3765-85	
MB 310-488106/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-488106/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 488170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	350.1	
MB 310-488170/84	Method Blank	Total/NA	Water	350.1	
LCS 310-488170/85	Lab Control Sample	Total/NA	Water	350.1	

QC Association Summary

Client: Prairie Solid Waste Agency
Job ID: 310-331062-1
Project/Site: Prairie Solid Waste/Union County Leachate

General Chemistry

Analysis Batch: 488227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-331062-1	Leachate	Total/NA	Water	1664A	488086
MB 310-488086/1-A	Method Blank	Total/NA	Water	1664A	488086
LCS 310-488086/2-A	Lab Control Sample	Total/NA	Water	1664A	488086

Lab Chronicle

Client: Prairie Solid Waste Agency
Job ID: 310-331062-1
Project/Site: Prairie Solid Waste/Union County Leachate

Client Sample ID: Leachate
Lab Sample ID: 310-331062-1

Date Collected: 04/30/26 10:33
Matrix: Water

Date Received: 05/01/26 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	624.1		1	487539	WSE8	EET CF	05/01/26 15:18
Total/NA	Prep	625			487945	J5BR	EET CF	05/05/26 11:25
Total/NA	Analysis	625.1		1	488490	V7YZ	EET CF	05/11/26 18:53
Total/NA	Prep	625			487945	J5BR	EET CF	05/05/26 11:25
Total/NA	Analysis	625.1		1	488301	V7YZ	EET CF	05/08/26 14:11
Total/NA	Prep	608			487806	J5BR	EET CF	05/04/26 10:00
Total/NA	Analysis	608.3		1	488509	BW2O	EET CF	05/11/26 11:35
Total/NA	Prep	608			487806	J5BR	EET CF	05/04/26 10:00
Total/NA	Analysis	608.3		1	488510	BW2O	EET CF	05/11/26 11:35
Total/NA	Prep	200.8			487754	F8JX	EET CF	05/04/26 08:30
Total/NA	Analysis	200.8		1	488185	NFT2	EET CF	05/06/26 12:58
Total/NA	Prep	200.8			487754	F8JX	EET CF	05/04/26 08:30
Total/NA	Analysis	200.8		1	488028	NFT2	EET CF	05/05/26 16:03
Total/NA	Prep	200.8			487754	F8JX	EET CF	05/04/26 08:30
Total/NA	Analysis	200.8		1	488433	ZRI4	EET CF	05/08/26 12:53
Total/NA	Prep	245.1			865698	MJG	EET CHI	05/11/26 09:25 - 05/11/26 11:25 [1]
Total/NA	Analysis	245.1		1	865801	MJG	EET CHI	05/11/26 14:51
Total/NA	Prep	1664A			488086	DGU1	EET CF	05/06/26 11:00
Total/NA	Analysis	1664A		1	488227	DGU1	EET CF	05/06/26 11:00
Total/NA	Analysis	350.1		10	488170	ENB7	EET CF	05/06/26 17:48
Total/NA	Prep	351.2			487750	W9YR	EET CF	05/04/26 05:17
Total/NA	Analysis	351.2		10	487875	ZJX4	EET CF	05/04/26 23:27
Total/NA	Analysis	I-3765-85		1	488106	DGU1	EET CF	05/06/26 11:45
Total/NA	Analysis	SM 2540C		1	487977	ENB7	EET CF	05/05/26 14:36
Total/NA	Analysis	SM 4500 H+ B		1	487608	W9YR	EET CF	05/01/26 11:57
Total/NA	Analysis	SM 5210B		2	487599	W9YR	EET CF	05/01/26 10:02
Total/NA	Analysis	SM 5310C		40	488071	WZC8	EET CF	05/06/26 07:54

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

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

EET CHI = Eurofins Chicago, 18410 Crossing Drive, Suite E, Tinley Park, IL 60487, TEL (708)534-5200

Accreditation/Certification Summary

Client: Prairie Solid Waste Agency
Job ID: 310-331062-1
Project/Site: Prairie Solid Waste/Union County Leachate

Laboratory: Eurofins Cedar Falls

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-27

The following analytes are included in this report, but the laboratory is not certified by Iowa State 007. This list may include analytes for which the agency does not offer certification:

Analysis Method	Prep Method	Matrix	Analyte
624.1		Water	1,3-Dichloropropene, Total
625.1	625	Water	1,2-Dichlorobenzene
625.1	625	Water	1,3-Dichlorobenzene
625.1	625	Water	1,4-Dichlorobenzene
625.1	625	Water	Dibenzofuran

Laboratory: Eurofins Chicago

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	082	05-01-28

Method Summary

Client: Prairie Solid Waste Agency
Job ID: 310-331062-1
Project/Site: Prairie Solid Waste/Union County Leachate

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	EPA	EET CF
625.1	Semivolatile Organic Compounds (GC/MS)	EPA	EET CF
608.3	Organochlorine Pesticides in Water	EPA	EET CF
608.3	Polychlorinated Biphenyls (PCBs) (GC)	EPA	EET CF
200.8	Metals (ICP/MS)	EPA	EET CF
245.1	Mercury (CVAA)	EPA	EET CHI
1664A	HEM and SGT-HEM	1664A	EET CF
350.1	Nitrogen, Ammonia	EPA	EET CF
351.2	Nitrogen, Total Kjeldahl	EPA	EET CF
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CF
SM 4500 H+ B	pH	SM	EET CF
SM 5210B	BOD, 5-Day	SM	EET CF
SM 5310C	TOC	SM	EET CF
1664A	HEM and SGT-HEM (SPE)	1664A	EET CF
200.8	Preparation, Total Metals	EPA	EET CF
245.1	Preparation, Mercury	EPA	EET CHI
351.2	Nitrogen, Total Kjeldahl	EPA	EET CF
608	Liquid-Liquid Extraction (Separatory Funnel)	EPA	EET CF
625	Liquid-Liquid Extraction	EPA	EET CF

Protocol References:

1664A = EPA-821-98-002
EPA = US Environmental Protection Agency
SM = "Standard Methods For The Examination Of Water And Wastewater"
USGS = "Methods For Analysis Of Water And Fluvial Sediments", USGS, 1989

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401
EET CHI = Eurofins Chicago, 18410 Crossing Drive, Suite E, Tinley Park, IL 60487, TEL (708)534-5200

eurofins | Environment Testing America

310-331062 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: Prairie Solid Waste Agency			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE 5/11/26	TIME 0900	Received By: OR
Delivery Type	☑ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee		
	☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____		
Condition of Cooler/Containers			
Sample(s) received in Cooler?	☑ Yes ☐ No	*If yes* Cooler ID:	
Multiple Coolers?	☐ Yes ☑ No	*If yes:* Cooler # _____ of _____	
Cooler Custody Seals Present?	☐ Yes ☐ No	*If yes:* Cooler custody seals intact? ☐ Yes ☐ No	
Sample Custody Seals Present?	☐ Yes ☐ No	*If yes:* Sample custody seals intact? ☐ Yes ☐ No	
Trip Blank Present?	☐ Yes ☑ No	*If yes:* Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant	☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE		
Thermometer ID. B13		Correction Factor (°C): 0	
• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): 1.1		Corrected Temp (°C): 1.1	
• **Sample Container Temperature**			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C)			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling?		☐ Yes ☐ No	
a) *If yes:* Is there evidence that the chilling process began?		☐ Yes ☐ No	
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g , bulging septa, broken/cracked bottles, frozen solid?)		☐ Yes ☐ No	
NOTE If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

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

Chain of Custody Record

eurofins

Client Information	Sampler: Janeen Frey	Lab PM: Miller Samuel	Carrier Tracking No(s)	COC No. 310-119473-17782.1
Client Contact: Janeen Frey	Phone: 641-278-6110	E-Mail: Samuel.Miller@et.eurofinsus.com	State of Origin.	Page: Page 1 of 1
Company: Prairie Solid Waste Agency	PWSID:			Job #:
Address: 1774 Lark Avenue PO BOX 227	Due Date Requested:			
City: Creston	TAT Requested (days):			
State, Zip: IA, 50801	Compliance Project: Δ Yes Δ No			
Phone: 641-278-6110	PO #: Purchase Order not required			
Email: recycle@iowatelecom.net	WO #:			
Project Name: Prairie Solid Waste/Union County Leachat	Project #: 31007282			
Site: Leachate	SSOW#:			

Analysis Requested

Preservation Codes: S - H2SO4; D - HNO3; A - HCL; N - None; Other

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air DW=Drinking Water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1, 351.2	200.8_CWA, 245.2	624.1_PREC - (MOD) Volatile Standard Sublist	608.3_PCB_PREC; 608.3_Pest_PREC; 625.1_PREC	2540C_Calcd, I_3765_05, SM4500_H+; SM5210B_Calc	1664A - Oil and Grease (HEM)	624.1_PREC - (MOD) Volatile Standard Sublist	5310C - TOC	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	D	A	N	N	S	N	S		
Leachate	4-30-26	10:33AM		Water												

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II, III IV Other (specify)

Special Instructions/QC Requirements.

Empty Kit Relinquished by: J Frey Date: 4-30-26 Time: 10:33AM Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Janeen Frey	4-30-26 10:33AM	PSWA			
Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company
Relinquished by	Date/Time:	Company	Received by	Date/Time: 5/1/26 0800	Company

Custody Seals Intact: Δ (Yes) Δ No | Custody Seal No 2930387 | Cooler Temperature(s) °C and Other Remarks

Ver: 10/10 2024

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5/12/2026

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

Chain of Custody Record

eurofins

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Miller Samuel	Carrier Tracking No(s): N/A	COC No: 310-93806.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Samuel.Miller@et.eurofinsus.com	State of Origin: Iowa	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): State Iowa; State Program Iowa		Job #: 310-331062-1
Address: 18410 Crossing Drive, Suite E	Due Date Requested: 5/11/2026			
City: Tinley Park	TAT Requested (days): N/A			
State, Zip: IL 60487				
Phone: 708-534-5200(Tel) 708-534-5211(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Prairie Solid Waste/Union County Leachate	Project #: 31007282			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes:

310-331062 COC

Other: N/A

Sample Identification Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	245.1/245.1_Prep	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Leachate (310-331062-1)	4/30/26	10:33 Central	G	Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested I II III, IV Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	5/1/26 1435		Stephanie Hernandez	5/2/26 1030	EETIA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks: unconfirmed

Login Sample Receipt Checklist

Client: Prairie Solid Waste Agency

Job Number: 310-331062-1

Login Number: 331062

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Hirsch, Preston

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

Login Sample Receipt Checklist

Client: Prairie Solid Waste Agency

Job Number: 310-331062-1

Login Number: 331062
List Number: 2
Creator: Hernandez, Stephanie

List Source: Eurofins Chicago
List Creation: 05/02/26 11:38 AM

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

APPENDIX G | 2026 LANDFILL GAS ANNUAL REPORT

Gas Monitoring Summary
2026 Landfill Gas Annual Report
Union County Landfill
Permit No. 88-SDP-01-79C

ID	Name	Type	Description	Methane Results (% LEL)					
				1/30/2026	S (Y/N)	4/14/2026	S (Y/N)	7/20/2026	S (Y/N)
#1	LFGW-1	Subsurface	Vadose zone north of the landfill.	0%	N	NM*	-	0%	N
#2	LFGW-2	Subsurface	Vadose zone west of the landfill.	0%	Y	NM*	-	0%	Y
#3	PZ-21	Subsurface	Vadose zone east of the landfill.	0%	Y	NM*	-	0%	N
#4	Scale House	Indoor	Inside scale house.	0%		0%		0%	
#5	RCC Processing Area	Indoor	Inside RCC processing area.	0%		0%		0%	
#7	Transfer Station	Indoor	Inside transfer station.	0%		0%		0%	
#8	Break Shack	Indoor	Inside break shack.	0%		Removed			
#9	New Building	Indoor	Inside new building.	NA		0%		0%	

S(Y/N) - Was screen submerged, yes or no.

* - NM indicates not measured. Monitoring points #1, #2, and #3 are measured semi-annually.

#8 Break Shack was removed and #9 New Building during this reporting as reflected in the April 2026 measurement event.

There were no action levels exceeded during this reporting period.

Data from the 4th quarter methane monitoring event for facility structures will be included in the 2026 Landfill Gas Annual Report.



No.	Sample Point	Type	Description
#1	LFGW-1	Subsurface	Gas monitoring north of the landfill.
#2	LFGW-2	Subsurface	Gas monitoring west of the landfill.
#3	PZ-21	Subsurface	Monitoring east of the landfill.
#4	Scale House	Indoor	Inside scale house.
#5	RCC Processing Area	Indoor	Inside RCC processing area.
#7	Transfer Station	Indoor	Inside transfer station.
#9	New Building	Indoor	Inside new building.

SCS ENGINEERS
environmental consultants and contractors

Methane Monitoring Network

Legend

- Methane Monitoring Point
- Approximate Monitoring Well Location
- Approximate Groundwater Piezometer Location
- Approximate Leachate Monitoring Location
- Approximate Property Boundary
- Approximate Waste Boundary
- Located Waste Boundary

Union County Sanitary Landfill
Creston, Iowa
Project No: 27224311.27
Drawing Date: August 2026

Figure 1

N W E S

0 120 240 480 720 Feet

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, CGIAR, USGS, USDA NAIP, Iowa State University GIS Facility

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User: cdavis
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