

November 14, 2023
File No. 27223133.24

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

Subject: 2023 Annual Water Quality Report
Clinton County Sanitary Landfill-East
North MSWLF Unit
Permit No. 23-SDP-01-74P

Dear Mick:

SCS Engineers, on behalf of the Clinton County Area Solid Waste Agency, has completed the water quality monitoring and data evaluation for the North municipal solid waste landfill unit (North MSWLF unit) at the Clinton County Sanitary Landfill - East for the year 2023. Services were performed in general accordance with the 1989 Iowa Administrative Code (IAC) Section 103.26(4) and the current permit requirements for implementation of the Hydrologic Monitoring System Plan. Please find enclosed a copy of the 2023 Annual Water Quality Report for the North MSWLF unit.

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

Sincerely,



Nathan Ohrt
Senior Project Professional
SCS Engineers



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

NPO/TCB

Copies: Mr. Brad Seward, Clinton County Area Solid Waste Agency



2023 ANNUAL WATER QUALITY REPORT
CLINTON COUNTY SANITARY LANDFILL – EAST
NORTH MSWLF UNIT

CLINTON, IOWA

PERMIT No. 23-SDP-01-74P
PROJECT No. 27223133.24
NOVEMBER 2023



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.


Timothy C. Buelow, P.E.

Date: 11/14/2023

License No. 14445

My license renewal date is December 31, 2023.

Pages or sheets covered by this seal:

All except Appendix B-1.

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Section 1.0 Introduction

SCS Engineers (SCS), on behalf of the Clinton County Area Solid Waste Agency (Agency), has completed the required groundwater sampling and statistical evaluation of the North municipal solid waste landfill unit (North MSWLF unit) at the Clinton County Sanitary Landfill – East (Landfill). This report has been prepared in accordance with the requirements of the 1989 Iowa Administrative Code (IAC) 567-103(455B) and the permit most recently revised on June 5, 2023 (Doc #106929). The report summarizes the 2023 groundwater monitoring program and provides analysis of the data collected for the North MSWLF unit.

1.1 Report Priority

There is no report priority regarding groundwater monitoring at this time.

1.2 Response to DNR Comments

There are currently no outstanding comments regarding water quality items from the Iowa Department of Natural Resources (DNR) that require response at this time.

1.3 Site Location

The Landfill property is shown on Figure 1, Approved Monitoring Network. The property consists of approximately 330 acres located along 220th Street, approximately 5 miles west of Clinton, Iowa and is located within the S $\frac{1}{2}$, NE $\frac{1}{4}$; E $\frac{1}{2}$, SW $\frac{1}{4}$; and the SE $\frac{1}{4}$ of Section 33, in Township 82 North, Range 6 East, in Clinton County, Iowa.

1.4 Background

Solid waste disposal was initiated at the Landfill on December 13, 1974 and the Landfill has been operated as a county-owned facility since that time. The Landfill is comprised of a North MSWLF unit, which has not received waste since prior to October 1994 and a South MSWLF unit that is actively receiving waste.

1.5 Sampling Summary

Table 1-1 below summarizes the Hydrologic Monitoring System Plan (HMSP) monitoring points and sampling conducted during the 2023 semi-annual sampling events.

**Table 1-1
2023 Reporting Period Monitoring Summary**

Aquifer	Monitoring Point	March 2023	August 2023
Shallow	MW-06-7R (u)	Appendix I, TSS	Appendix I, TSS
	MW-90-5	Appendix I VOCs	Appendix I VOCs
	MW-90-13	Appendix I VOCs	Appendix I VOCs
	MW-03-16	Appendix I, TSS	Appendix I, TSS=
	PZ-R3	Arsenic, TSS, Appendix I VOCs	Arsenic, TSS, Appendix I VOCs
	PZ-R4	Appendix I, TSS	Appendix I, TSS ¹

Aquifer	Monitoring Point	March 2023	August 2023
Deep	MW-06-6R (u)	Appendix I metals list ⁽¹⁾ , TSS	Appendix I metals list ⁽¹⁾ , TSS
	MW-90-15R	Appendix I VOCs	Appendix I VOCs

(u) – Upgradient well

TSS – Total Suspended Solids

(1) Appendix I metals list includes arsenic, barium, beryllium, cadmium, cobalt, copper, lead, nickel, and vanadium.

The reporting period for this Annual Water Quality Report (AWQR) is November 2022 to October 2023 and includes the March and August 2023 sampling events. The field sampling forms and laboratory analytical data sheets for the 2023 sampling events are included in Appendices A and B-1, respectively.

Section 2.0

Hydrogeologic Site Summary

2.1 Geology of the Site

Previous research indicates that the regional stratigraphy located within the Landfill area is Wisconsin age loess consisting of wind deposited silts. The loess is approximately 1 to 30 feet thick and is underlain by Pre-Illinoian age paleosols and glacial tills. The glacial tills are of the Wolf Creek Formation and consist of clays and sandy clays with various amounts of sand and gravel and range in thickness from less than 1 foot to 75 feet. These overburden deposits are underlain by Silurian age dolomites. The first aquifer is the Silurian dolomite. The Silurian rocks are underlain by Ordovician age Maquoketa shale. Pennsylvanian age clays, silts, and sands have been noted in the cavities and caverns in the Silurian dolomites near Clinton, Iowa but Devonian age rocks are absent within this portion of Iowa (Indeco, Inc. 1991).

Locally around the Landfill area the Silurian rocks are approximately 100 to 200 feet thick. These Paleozoic rocks dip gently toward the south to southwest about 12 feet per mile. The gentle regional dip is due to a structural feature known as the East Central Iowa Basin formed during Silurian time and attributes to the varying character of the Silurian rocks. The lower sections of the Silurian carbonates are cherty, sandy, and argillaceous. In the upper sections they are reef-like, very soft, and porous (Indeco, Inc., 1991).

2.2 Hydrology of the Site

According to the document entitled *Clinton County Area Solid Waste Agency, Clinton County, Iowa, East Site - Soils Exploration, Monitoring Well Construction, and Hydrologic Monitoring System Report* prepared by Indeco, Inc. in March 1991, an overview of the hydrogeology in the area of the Landfill was described as follows:

The landfill site is set within a region consisting of glacial deposits over sedimentary rocks, ranging from New York to the Great Plains. The principal feature of this glaciated region is the yield of groundwater from glacial drift, with the majority of this groundwater contained within outwash plains and buried bedrock valleys. Most of the glacial drift is fine grained, but there are numerous sand and gravel deposits which yield various amounts of groundwater. The Silurian-Devonian shallow bedrock aquifer underlies 87 percent of the state of Iowa and is the uppermost bedrock in 21 percent of the state. This aquifer is a significant source of water for 30 percent of the state and yields 500 to 1000 gpm in the stream valleys and 100 gpm in the upland areas.

Waters within the Silurian-Devonian aquifers occur in joints, fractures, bedding planes and solution cavities. Since the Devonian rocks are absent in the east-central portion of the state, the Silurian rocks are the contributors for local shallow bedrock supplies. The waters are found mainly in the upper strata of the Silurian where porous reefs facies contribute the majority of the waters and the joints, fractures, and bedding planes are secondary. The overall groundwater movement in the Silurian-Devonian aquifer generally follows the direction of the surface flow of the major streams, that is, southeasterly with discharge to the Mississippi River. The elevation of the Silurian aquifer in the vicinity of the landfill site is between 650 and 700 feet msl.

Major deep bedrock aquifers include limestones and sandstones of Paleozoic age. Some of these are widespread and include the: (1) Mt. Simon Sandstone; (2) Galesville

Sandstone; (3) Ironton Sandstone; (4) Franconia Sandstone; (5) Jordan Sandstone; and (6) Trempealeau Formation, all of the Cambrian system. These deep aquifers also include the Prairie Du Chien formation and St. Peter Sandstone of the Ordovician system. These are the deep bedrock aquifers of eastern Iowa, southern Minnesota, southern Wisconsin, and northern Illinois.

Less permeable beds of the Maquoketa shales confine the groundwater in the Cambrian-Ordovician from the overlying bedrock aquifers. Recharge for the deep bedrock aquifers is in southern Minnesota and regional flow is to the southeast. The yield from the deep bedrock aquifers is from a few hundred gpm to 2,000 gpm.

Section 3.0

Monitoring Well Maintenance and Performance Evaluation

The hydrologic monitoring system was re-evaluated to determine the reliability of the performance of the monitoring points based on the following tasks.

- The high and low groundwater levels were compared to well depth/screened interval.
- Water level conditions in the monitoring wells were reviewed to evaluate possible changes in the hydrologic setting/flow paths.
- Well depths were measured to evaluate the potential effect of siltation on well integrity.
- A biennial well recharge evaluation is included to evaluate potential changes in the ability of the monitoring well to transmit groundwater.

A visual inspection of well integrity was performed during the sampling events.

3.1 Water Level Measurements

The high and low water levels accompanied by a discussion of the acceptability of well location (vertically and horizontally) and exposure of the screened interval to the atmosphere was included in the 2022 AWQR and will be included next in the 2024 AWQR.

3.2 Groundwater Flow

Groundwater contours were determined using groundwater elevation data collected during the August 2023 sampling event. The groundwater contours, shown on Figure 3-1, representing the water table in the shallow monitoring wells, indicate a general flow direction to the east towards the ravines on the east side of the North MSWLF unit. This is consistent with historical groundwater contour maps.

3.3 Well Depth Evaluation

IAC 567-113.21(2)"c" requires annual measurements of well depths to ensure that wells are physically intact and not filling with sediment. Monitoring wells MW-06-6R, MW-06-7R, and MW-90-15R are equipped with dedicated submersible sampling pumps and total well depths are measured every five years; well depths were last measured in 2020 will be measured next in 2025. The March and August 2023 well depth measurements are included in Table 3-1.

Table 3-1
Summary of Groundwater Levels and Well Performance

Monitoring Well	Installed Well Depths (feet)	March 2023		August 2023	
		Measured Depth (feet)	Difference from Constructed Depth	Measured Depth (feet)	Difference from Constructed Depth
MW-90-5	29.5	30.1	-0.6	30.0	-0.5
MW-90-13	25.0	24.3	0.7	24.2	0.8
MW-03-16	25.3	24.7	0.6	24.6	0.7
PZ-R3	11.4	11.2	0.2	11.2	0.2
PZ-R4	16.8	13.8	3.0	13.9	2.9

As shown in Table 3-1, the measured well depths were within 1.0 foot of the installed depths with the exception of PZ-R4. PZ-R4 historically has had a measured total depth that has fluctuated between 13.8 to 17.8 feet since 2009. As samples were able to be collected from the monitoring wells during the 2023 sampling events, it appears that well siltation is not affecting the ability of the wells to consistently produce samples.

3.4 Well Recharge Evaluation

As approved in Amendment #12 dated September 11, 2014, biennial evaluations of well recharge rates and chemistry to determine if well deterioration is occurring in accordance with IAC 567-113.10(2)"f"(4) is required in lieu of in-situ permeability testing. A well recharge evaluation was last included in the 2022 AWQR and will be included next in the 2024 AWQR.

3.5 Monitoring System Recommendations

No changes to the monitoring system are recommended for the upcoming reporting period.



Section 4.0

Evaluation of Water Quality Parameters

The historical analytical results of the groundwater monitoring points for the North MSWLF unit are presented in Appendix C (Summary of Groundwater Chemistry). Time series graphs are included in Appendix D.

4.1 Data Evaluation

Groundwater monitoring for the North MSWLF unit consists of samples from monitoring wells along the southwest and southeast downgradient waste boundaries and three monitoring wells near the mouth of Ravine #2. The two upgradient wells are located northwest of the unit. Numerous supplemental monitoring wells, sampled biennially and utilized for geochemistry and natural attenuation evaluation and impact delineation, are located within or adjacent to Ravine #2. The range of measured concentrations for the detected constituents for this reporting period is shown on Figure 4-1, Reporting Period Detection Summary.

Groundwater impact from volatile organic compounds (VOCs) is evident in monitoring wells MW-90-5, MW-90-13, MW-03-16, and PZ-R4. Three of the detected VOCs each were measured as site-wide maximum concentrations in monitoring wells MW-90-5 and MW-03-16. Monitoring well MW-03-16 also had site-wide maximum concentrations for four inorganics. MW-03-16 is analyzed for Appendix I and TSS and MW-90-5 and 90-MW-13 are analyzed for Appendix I VOCs only. Two inorganic site-wide maximum concentrations each were measured in monitoring wells MW-06-7R and PZ-R4.

Concentrations above the GWPS included arsenic, cobalt, and benzene in monitoring well MW-03-16, arsenic, cobalt, and thallium in PZ-R4, trichloroethene in monitoring well MW-90-5, and arsenic in PZ-R3.

4.2 Statistical Evaluation

In order to evaluate the site with more powerful statistical methods than those required under the 1989 IAC 567-103, this statistical evaluation was performed in general accordance with IAC 567-113.10(6), using assessment monitoring analyses including Mann-Kendall trend testing and confidence interval/confidence band evaluations.

4.2.1 Mann-Kendall Trend Testing

Mann-Kendall trend testing performed at 99% confidence ($\alpha = 0.01$) indicated one statistically significant decreasing trend for tetrachloroethene in monitoring well MW-90-5 and no statistically significant increasing trends.

The tetrachloroethene with a statistically significant decreasing trend in monitoring well MW-90-5 is a chlorinated hydrocarbon. Chlorinated hydrocarbons trichloroethene and cis-1,2-dichloroethene, which are daughter products of tetrachloroethene, are also decreasing in monitoring well MW-90-5, although not at statistically significant rates. The decreasing trends may indicate that reductive dechlorination is occurring at a rate sufficient to prevent the accumulation of daughter products, indicating natural attenuation may be improving groundwater quality near the southwest side of the North MSWLF unit. The Mann-Kendall summary table and graphs at 99% confidence is included in Appendix E.

4.2.2 Confidence Interval/Confidence Band Evaluation

Confidence intervals were calculated to evaluate concentrations at statistically significant levels (SSLs) above GWPSs. Confidence bands were used to evaluate SSLs for constituents with statistically significant trends. SSLs above the GWPSs are summarized in Table 4-1.

Table 4-1
SSLs Above the GWPS

Monitoring Well	SSLs
MW-90-5	Trichloroethene
MW-90-13	None
MW-90-15R	None
MW-03-16	Arsenic, Cobalt, Benzene
PZ-R3	None
PZ-R4	Cobalt

The SSLs measured during this reporting period are unchanged from the previous two reporting periods. The confidence interval summary table and graphs and Theil-Sen confidence band summary table and graphs are included in Appendices F and G, respectively.

4.3 Geochemical and Natural Attenuation Evaluations

As approved in correspondence dated April 14, 2021 (Doc #100209), sampling and analysis for geochemistry and natural attenuation will be performed biennially. The evaluations were included in the 2022 AWQR with the next sampling and analysis scheduled to occur in 2024.

4.4 Maximum Contaminant Levels

The measured concentrations were compared to current United States Environmental Protection Agency (USEPA) Maximum Contaminant Levels (MCLs). A summary of MCL exceedances is shown in Table 4-2.

Table 4-2
2023 Summary of USEPA MCL Exceedances

Constituent	MCL	MW-90-5	MW-03-16	PZ-R3	PZ-R4
Arsenic	0.01 mg/L		3, 8	8	3, 8
Benzene	5 µg/L		3, 8		
Trichloroethene	5 µg/L	3, 8			

3 = March 2023 Sampling Event

8 = August 2023 Sampling Event

The MCL exceedances for arsenic at monitoring wells MW-03-16, PZ-R3, PZ-R4 and benzene at monitoring well MW-03-16 are considered bracketed at this time. The MCL exceedances measured at monitoring well MW-90-5 are bracketed by the South MSWLF unit.

4.5 Potential Receptors

Pursuant to guidance from the DNR, if MCLs are exceeded at any groundwater monitoring point, information is to be provided regarding potential receptors. As shown in Section 4.4, MCLs were exceeded in monitoring wells MW-03-16, MW-90-5, PZ-R3, and PZ-R4. A well search performed in November 2019 indicated one well within a 1,000-foot radius from the Landfill (XY UTM coordinates: 727123/4638239). The well is listed on the private well tracking system and owned by the Clinton County Landfill. The well status is listed as plugged. Well search documentation was included in Appendix J of the 2020 AWQR (Doc #99026). A potential receptor downgradient from MW-03-16 is a tributary of Mill Creek. Based on concentrations measured in downgradient monitoring wells in Ravine #2, it is unlikely the potential receptor is impacted.

4.6 QA/QC Information

The quality assurance/quality control (QA/QC) program for the North MSWLF unit follows similar protocols as included in the HMSP. Data validation procedures were performed on analytical results for laboratory quality control samples and a quality assurance assessment of the data was conducted as the data were generated. The QA review procedure provided documentation of the accuracy and precision of the analytical data and confirmed that the analyses were sufficiently sensitive to detect constituents at levels below regulatory standards when technically feasible with the laboratory method utilized. SCS then conducted QA/QC data validation of the produced data, which included review of sample handling, analytical sensitivity, and blanks, accuracy, and precision. The data validation checklists are provided in Appendix B-2. An explanation of the laboratory QA/QC and data validation procedures is described in more detail below.

4.6.1 Sample Collection and Sample Handling

Sample receipt forms were reviewed by SCS and checked to verify that samples were received in good condition and within the acceptable temperature range. Chain of custody records for each sampling event were reviewed and confirmed that information was complete, custody was not breached, and samples were analyzed within the acceptable hold times. There were no issues with sample collection and handling during this reporting period.

4.6.2 Analytical Sensitivity and Blanks

Laboratory QA/QC procedures and post-analysis data validation assist in producing data of acceptable quality and reliability. Eurofins is a certified laboratory in Iowa and performs QA/QC procedures which include analyzing laboratory method blanks in association with samples collected for the project to check for contributions to the analytical results possibly attributable to laboratory-based contamination. Trip blanks were submitted with groundwater samples for VOCs analysis and verified that cross-contamination did not occur during sample handling and transport. Trip blanks had no detections during this reporting period. Chloromethane was detected in the method blank above the method detection limit during the March 2023 sampling event; the concentration was less than the reporting limit so re-analysis was not performed.

4.6.3 Accuracy

Laboratory analytical accuracy can be assessed by evaluating the constituent recoveries from initial and continuing calibration verification (ICV/CCV) and laboratory control samples and duplicates (LCS/LCSD). LCS/LCSD samples assess the accuracy of analytical procedures by checking the ability to recover constituents added to clean aqueous matrices. In some cases, the laboratory spiked project samples as matrix spike and duplicate (MS/MSD) samples to assess the ability to recover constituents from a matrix similar to that of project samples. Accuracy was also assessed for organic analyses by evaluating the recovery of analyte surrogates added to project samples. The post-analysis data validation conducted by SCS confirmed that the laboratory had performed QA/QC of its laboratory control samples and made recommendations on how to proceed with data that had possibly been compromised, if applicable. The following were noted from the laboratory reports:

- During both 2023 sampling events, CCVs recovered outside control limit for multiple parameters; the associated samples were non-detect for the affected analytes so the data was reported.
- During the August 2023 sampling event, LCSs recovered outside control limits for multiple parameters; the analytes were biased high in the LCS and were non-detect in the associated samples so the data was reported.

4.6.4 Precision

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

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

Duplicate samples were collected during each sampling event to evaluate the precision of analytical measurements, as well as the reproducibility of sampling technique. Duplicate samples were chosen at random and are typically for Appendix I parameters and TSS. The relative percent difference (RPD; difference between the sample and its field duplicate divided by the mean of the two) was calculated to evaluate the precision of the data. The RPD can be evaluated only if the results of the analyses for both samples are detected quantitatively (above the reporting limit).

During the March 2023 sampling event, the concentrations reported in the sample MW-03-16 and duplicate sample MW-DN had <50% relative difference for analyzed parameters. Concentrations measured at J flags and TSS were not considered in the duplicate comparison. These results indicate that a problem with sampling or analysis is not likely to have occurred.

During the August 2023 sampling event, the concentrations reported in the sample PZ-R4 and duplicate sample MW-DN had <50% relative difference for analyzed parameters. Concentrations measured at J flags and TSS were not considered in the duplicate comparison. These results indicate that a problem with sampling or analysis is not likely to have occurred.

4.7 Conclusions and Recommendations for Future Monitoring

The recommended sampling schedule for the upcoming two reporting periods is summarized in Tables 4-3 and 4-4 on the following page.

Table 4-3
2024 AWQR Reporting Period Sampling Schedule

Aquifer	Monitoring Point	1 st 2024 Semi-Annual	2 nd 2024 Semi-Annual
Shallow	MW-06-7R (u)	Appendix I, TSS	Appendix I, TSS
	MW-90-5	Appendix I VOCs	Appendix I VOCs
	MW-90-13	Appendix I VOCs	Appendix I VOCs
	MW-03-16	Appendix I, TSS	Appendix I, TSS, Geochemistry, NA ⁽²⁾⁽³⁾
	PZ-R3	Appendix I VOCs	Appendix I VOCs, Arsenic, TSS, Geochemistry, NA ⁽²⁾⁽³⁾
	PZ-R4	Appendix I, TSS	Appendix I, TSS, Geochemistry, NA ⁽²⁾⁽³⁾
Deep	MW-06-6R (u)	Appendix I metals list ⁽¹⁾ , TSS	Appendix I metals list ⁽¹⁾ , TSS
	MW-90-15R	Appendix I VOCs	Appendix I VOCs
	PZ-2-R16		Geochemistry, NA
Supplemental	PZ-6-R16		Geochemistry, NA
	PZ-11		Appendix I metals list ⁽¹⁾ , TSS, Geochemistry, NA ⁽²⁾⁽³⁾
	PZ-12		Appendix I metals list ⁽¹⁾ , TSS, Geochemistry, NA ⁽²⁾⁽³⁾
	MW-36		Arsenic, Cobalt, TSS, Benzene
	MW-38		Arsenic, Cobalt, TSS, Benzene

(u) – Upgradient well

TSS – Total Suspended Solids

(1) Appendix I metals list includes arsenic, barium, beryllium, cadmium, cobalt, copper, lead, nickel, and vanadium.

(2) Geochemistry parameters include calcium, sodium, magnesium, potassium, chloride, bicarbonate, carbonate, and sulfate.

(3) NA - Natural attenuation parameters include sulfate, total iron, total manganese, total organic carbon, and nitrate.

Table 4-4
2025 AWQR Reporting Period Sampling Schedule

Aquifer	Monitoring Point	1 st 2025 Semi-Annual	2 nd 2025 Semi-Annual
Shallow	MW-06-7R (u)	Appendix I, TSS	Appendix I, TSS
	MW-90-5	Appendix I VOCs	Appendix I VOCs
	MW-90-13	Appendix I VOCs	Appendix I VOCs
	MW-03-16	Appendix I, TSS	Appendix I, TSS
	PZ-R3	Appendix I VOCs, Arsenic, TSS	Appendix I VOCs, Arsenic, TSS
	PZ-R4	Appendix I, TSS	Appendix I, TSS
Deep	MW-06-6R (u)	Appendix I metals list ⁽¹⁾ , TSS	Appendix I metals list ⁽¹⁾ , TSS
	MW-90-15R	Appendix I VOCs	Appendix I VOCs

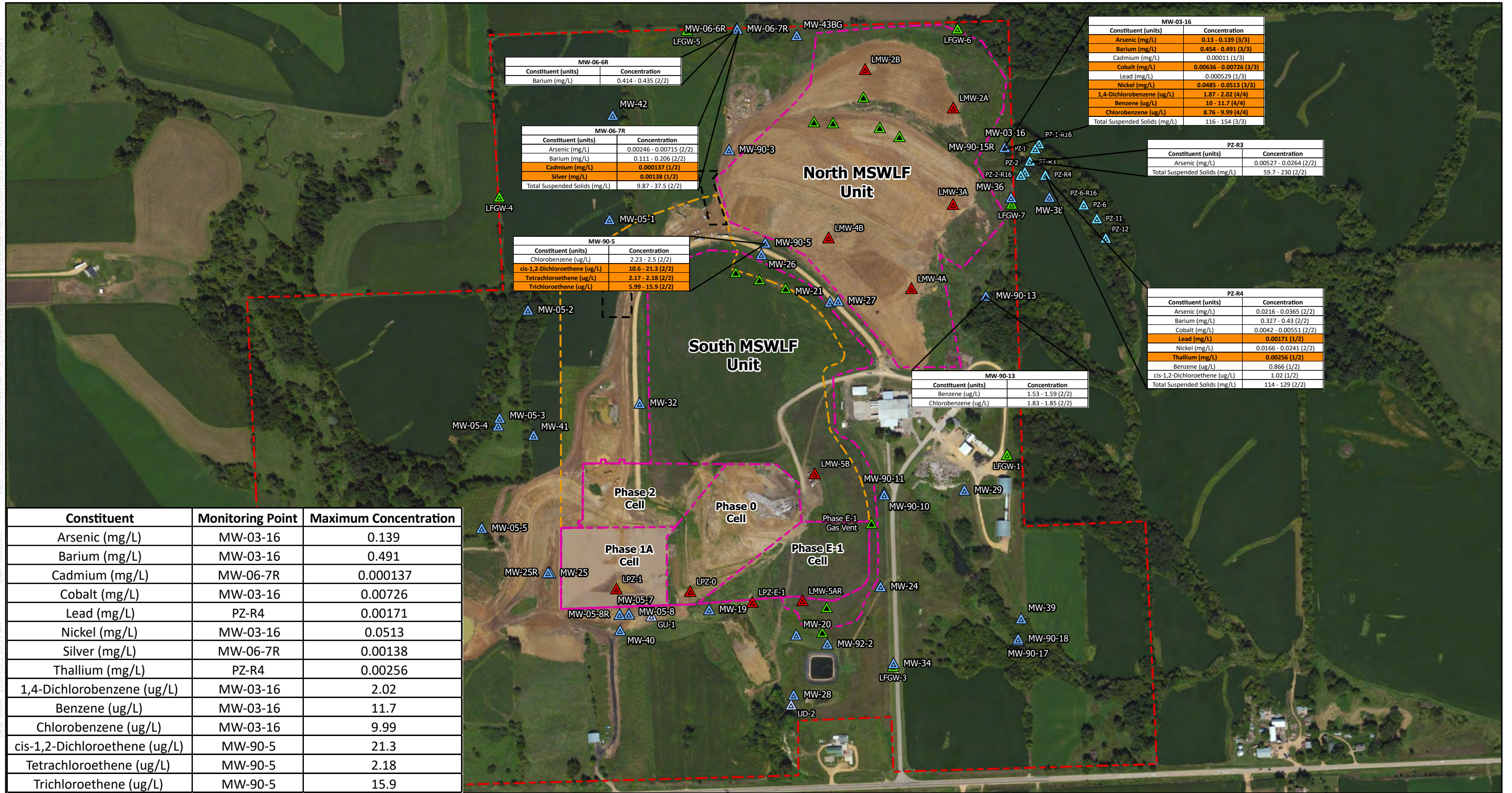
(u) – Upgradient well

TSS – Total Suspended Solids

(1) Appendix I metals list includes arsenic, barium, beryllium, cadmium, cobalt, copper, lead, nickel, and vanadium.

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Path: C:\Users\hmadson\OneDrive - SCS Engineers\Desktop\GIS\MapSet\Sites\MapSet\CCASMI-East-2022-AV009-Clinton-2022-AV009-APPX
User: hmadson
Date Saved: 11/8/2023 10:55 AM



Reporting Period Detection Summary

Legend

- | | | |
|------------------------------|-----------------------------------|------------------------------------|
| Monitoring Well | Gas Vent | Approximate Property Boundary |
| Groundwater Underdrain | Landfill Gas Monitoring Point | Cell Boundary |
| Groundwater Piezometer | Petroleum Contaminated Soils Area | Phase Boundaries |
| Leachate Monitoring Location | Approximate Future Waste Boundary | Approximate Current Waste Boundary |

Clinton County Sanitary
Landfill - East
North MSWLF Unit
Clinton, Iowa
Project No: 27223133.24
Drawing Date: October 2023

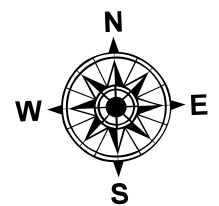


Figure 4-1



Section 5.0

General Comments

The analysis and opinions expressed in this report are based upon data obtained from the samples collected at the indicated locations and from any other information discussed in this report. This report does not reflect any variation in subsurface stratigraphy, hydrogeology, or chemical concentrations that may occur between sampling locations or across the site. Actual subsurface conditions may vary and may not become evident without further exploration.

SCS has prepared this report for the exclusive use of our client for the specific application to the project discussed. No warranty is expressly stated or implied in this report. SCS has relied upon information furnished by others as noted in the report, and SCS accepts no responsibility for any deficiency, misstatements, or inaccuracy in this report as a result of misstatements, omissions, misrepresentations, fraudulent, or inaccurate information or data provided by others.

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Section 6.0 References

1. Indeco, Inc. *Clinton County Area Solid Waste Agency, Clinton County, Iowa, East Site – Soils Exploration, Monitoring Well Construction and Hydrologic Monitoring System Report*. March 1991.
2. Iowa Department of Natural Resources. *Annual Report 1997, Registry of Hazardous Waste or Hazardous Substance Disposal Sites and Hazardous Waste Remedial Fund*. January 1, 1998.
3. Raymond Professional Group – Government, Inc. *Annual Water Quality Report, East Landfill Site, prepared for Clinton County Area Solid Waste Agency, Clinton County, Iowa*. November 2001. Doc #23419.
4. Barker Lemar Engineering Consultants. *Groundwater Assessment Report, Clinton County Sanitary Landfill – (East Site – North MSWLF Unit)*. March 2015. Doc #82841.
5. Evora Consulting. *2022 Annual Water Quality Report, Clinton County Sanitary Landfill – East, North MSWLF Unit*. November 2022. Doc #104691.

Appendix A
Field Sampling Forms

FORM FOR GROUNDWATER SAMPLING

Project: Clinton County Sanitary Landfill-East, North MSWLF Unit	
Monitoring Well/Piezometer ID: MW-06-6R	Date: 3/21/2023
Gradient: Up	Sampler: Scott Stoller

A. MW/PIEZOMETER CONDITIONS

Well/Piezometer Capped? Yes	
Litter/Standing Water? No	

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)

Measured Well Total Depth (feet): NM
Initial Static Water Level (feet): 26.34
Initial Groundwater Elevation (ft-amsl): 719.96
Equipment Used: Dedicated Submersible

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
10:00 AM	Purging start time.						
10:03 AM	10.2	1.5	627.4	7.42	-109.6	2.7	
10:06 AM	10.1	0.9	633.5	7.33	-109.8	2.8	
10:09 AM	10.1	0.8	635.2	7.29	-107.7	3.0	
10:12 AM	9.9	0.7	631.8	7.27	-104.1	2.7	
Parameters stabilized, sample collected.							

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

D. WELL MAINTENANCE

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

FORM FOR GROUNDWATER SAMPLING

Project: Clinton County Sanitary Landfill-East, North MSWLF Unit	
Monitoring Well/Piezometer ID: MW-06-7R	Date: 3/21/2023
Gradient: Up	Sampler: Scott Stoller

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	NM
Initial Static Water Level (feet):	20.77
Initial Groundwater Elevation (ft-amsl):	725.48
Equipment Used:	Dedicated Submersible

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
10:20 AM	Purging start time.						
10:23 AM	10.1	1.4	508.8	7.39	-115.5	28.2	
10:26 AM	10.3	0.8	509.0	7.34	-122.4	12.8	
10:29 AM	10.4	0.7	509.7	7.32	-125.8	9.0	
10:32 AM	10.5	0.6	510.1	7.32	-128.1	6.9	
Parameters stabilized, sample collected.							

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

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

FORM FOR GROUNDWATER SAMPLING

Project: Clinton County Sanitary Landfill-East, North MSWLF Unit	
Monitoring Well/Piezometer ID: MW-90-5	Date: 3/22/2023
Gradient: Down	Sampler: Scott Stoller

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	30.1
Initial Static Water Level (feet):	17.12
Initial Groundwater Elevation (ft-amsl):	718.45
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
2:41 PM	Purging start time.						
2:44 PM	11.3	1.7	1955.8	6.38	21.9	5.7	
2:47 PM	11.5	1.0	1951.5	6.38	33.0	5.3	
2:50 PM	11.5	0.8	1950.7	6.38	39.6	5.0	
2:53 PM	11.6	0.6	1949.6	6.38	44.3	4.8	
Parameters stabilized, sample collected.							

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

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

FORM FOR GROUNDWATER SAMPLING

Project: Clinton County Sanitary Landfill-East, North MSWLF Unit	
Monitoring Well/Piezometer ID: MW-90-13	Date: 3/22/2023
Gradient: Down	Sampler: Scott Stoller

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	24.3
Initial Static Water Level (feet):	1.73
Initial Groundwater Elevation (ft-amsl):	670.18
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
1:37 PM	Purging start time.						
1:40 PM	7.9	1.9	2558.2	6.60	-51.4	3.0	
1:43 PM	7.9	1.0	2566.0	6.64	-55.9	3.1	
1:46 PM	8.1	0.8	2568.5	6.66	-59.7	3.4	
1:49 PM	8.0	0.6	2573.2	6.67	-62.4	2.9	
Parameters stabilized, sample collected.							

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

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

FORM FOR GROUNDWATER SAMPLING

[illegible]

FORM FOR GROUNDWATER SAMPLING

Project: Clinton County Sanitary Landfill-East, North MSWLF Unit	
Monitoring Well/Piezometer ID: MW-03-16	Date: 3/22/2023
Gradient: Down	Sampler: Scott Stoller

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	24.7
Initial Static Water Level (feet):	4.51
Initial Groundwater Elevation (ft-amsl):	687.19
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
2:02 PM	Purging start time.						
2:05 PM	8.5	2.0	2467.8	6.99	-113.5	50.8	
2:08 PM	8.5	1.0	2472.4	7.02	-125.6	41.1	
2:11 PM	8.5	0.7	2474.0	7.04	-132.1	34.8	
2:14 PM	8.5	0.6	2473.0	7.05	-135.9	40.3	
Parameters stabilized, sample collected.							

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

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

FORM FOR GROUNDWATER SAMPLING

Project: Clinton County Sanitary Landfill-East, North MSWLF Unit	
Monitoring Well/Piezometer ID: PZ-R3	Date: 3/21/2023
Gradient: Down	Sampler: Scott Stoller

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	11.2
Initial Static Water Level (feet):	2.75
Initial Groundwater Elevation (ft-amsl):	678.69
Equipment Used: Dedicated Tubing – Peristaltic Pump	

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
5:41 PM	Purging start time.						
5:44 PM	5.9	1.4	1490.3	7.44	-78.6	22.0	
5:47 PM	5.9	1.0	1488.6	7.41	-78.6	11.0	
5:50 PM	5.6	0.7	1452.9	7.43	-78.4	25.9	
5:53 PM	5.5	0.6	1434.6	7.45	-75.5	19.0	
Parameters stabilized, sample collected.							

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

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

FORM FOR GROUNDWATER SAMPLING

Project: Clinton County Sanitary Landfill-East, North MSWLF Unit	
Monitoring Well/Piezometer ID: PZ-R4	Date: 3/21/2023
Gradient: Down	Sampler: Scott Stoller

A. MW/PIEZOMETER CONDITIONS

Well/Piezometer Capped? Yes	
Litter/Standing Water? No	

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)

Measured Well Total Depth (feet):	13.8
Initial Static Water Level (feet):	3.63
Initial Groundwater Elevation (ft-amsl):	672.05
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 Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
5:11 PM	Purging start time.						
5:14 PM	6.2	0.9	1886.0	7.12	-140.4	161.7	
5:17 PM	6.3	0.7	1891.9	7.12	-145.1	122.0	
5:20 PM	6.3	0.6	1890.7	7.12	-148.4	100.0	
5:23 PM	6.4	0.6	1892.4	7.12	-151.0	88.7	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.0
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	162.50

D. WELL MAINTENANCE

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

FORM FOR GROUNDWATER SAMPLING

Project: Clinton County Sanitary Landfill-East, North MSWLF Unit	
Monitoring Well/Piezometer ID: MW-06-6R	Date: 8/16/2023
Gradient: Up	Sampler: Chad Dentlinger

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	NM
Initial Static Water Level (feet):	27.33
Initial Groundwater Elevation (ft-amsl):	718.97
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
10:54 AM	Purging start time.						
10:57 AM	15.5	2.5	644.6	8.13	43.9	5.2	
11:00 AM	13.4	1.3	665.3	7.84	10.4	5.6	
11:03 AM	14.0	0.9	662.4	7.65	-1.5	5.5	
11:06 AM	15.7	0.8	663.2	7.49	-10.2	5.7	
11:09 AM	16.0	0.8	672.5	7.48	-17.2	6.0	
Parameters stabilized, sample collected.							

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

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

FORM FOR GROUNDWATER SAMPLING

[illegible]

FORM FOR GROUNDWATER SAMPLING

Project:	Clinton County Sanitary Landfill-East, North MSWLF Unit		
Monitoring Well/Piezometer ID:	MW-90-5	Date:	8/15/2023
Gradient:	Down	Sampler:	Chad Dentlinger

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	30.0
Initial Static Water Level (feet):	18.32
Initial Groundwater Elevation (ft-amsl):	717.25
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
5:09 PM	Purging start time.						
5:12 PM	16.1	1.8	2106.7	6.53	104.4	8.4	
5:15 PM	15.9	1.0	2109.0	6.42	109.6	8.0	
5:18 PM	15.9	0.8	2113.8	6.39	109.9	8.0	
5:21 PM	16.0	0.7	2122.9	6.37	108.5	8.7	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	1.9
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	158.33

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

FORM FOR GROUNDWATER SAMPLING

Project:	Clinton County Sanitary Landfill-East, North MSWLF Unit		
Monitoring Well/Piezometer ID:	MW-90-13	Date:	8/16/2023
Gradient:	Down	Sampler:	Chad Dentlinger

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):	24.2
Initial Static Water Level (feet):	2.71
Initial Groundwater Elevation (ft-amsl):	669.20
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
4:05 PM	Purging start time.						
4:08 PM	15.6	1.4	2640.8	7.25	25.5	7.8	
4:11 PM	15.5	0.8	2631.9	7.20	22.1	7.7	
4:14 PM	15.3	0.6	2628.8	7.19	17.2	7.7	
4:17 PM	15.2	0.5	2620.8	7.20	12.4	7.6	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.4
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	200.00

D. WELL MAINTENANCE

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

FORM FOR GROUNDWATER SAMPLING

[illegible]

FORM FOR GROUNDWATER SAMPLING

Project: Clinton County Sanitary Landfill-East, North MSWLF Unit	
Monitoring Well/Piezometer ID: MW-03-16	Date: 8/16/2023
Gradient: Down	Sampler: Chad Dentlinger

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):	24.6
Initial Static Water Level (feet):	7.12
Initial Groundwater Elevation (ft-amsl):	684.58
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
12:54 PM	Purging start time.						
12:57 PM	17.6	1.6	2645.1	7.65	-37.4	51.1	
1:00 PM	17.1	1.0	2646.7	7.37	-49.7	51.7	
1:03 PM	17.0	0.8	2644.3	7.33	-56.3	43.7	
1:06 PM	17.2	0.7	2645.0	7.15	-60.3	37.1	
1:09 PM	17.3	0.6	2647.4	7.13	-62.9	38.6	
1:12 PM	16.3	0.5	2644.5	7.18	-64.5	36.4	
Parameters stabilized, sample collected.							

Quantity of Water Removed from Well (liters):	2.3
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	18:00
Average Purge Rate (mL/min):	127.78

D. WELL MAINTENANCE

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

FORM FOR GROUNDWATER SAMPLING

Project: Clinton County Sanitary Landfill-East, North MSWLF Unit	
Monitoring Well/Piezometer ID: PZ-R3	Date: 8/16/2023
Gradient: Down	Sampler: Chad Dentlinger

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):	11.2
Initial Static Water Level (feet):	5.52
Initial Groundwater Elevation (ft-amsl):	675.92
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
2:10 PM	Purging start time.						
2:13 PM	15.6	1.5	1825.7	7.94	-70.8	16.9	
2:16 PM	15.8	0.9	1798.1	7.76	-75.0	14.5	
2:19 PM	16.4	0.7	1794.7	7.63	-72.7	13.1	
2:22 PM	16.8	0.6	1782.4	7.59	-70.5	12.7	
2:25 PM	17.0	0.6	1780.5	7.54	-64.6	13.0	
Parameters stabilized, sample collected.							

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

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

FORM FOR GROUNDWATER SAMPLING

Project: Clinton County Sanitary Landfill-East, North MSWLF Unit	
Monitoring Well/Piezometer ID: PZ-R4	Date: 8/16/2023
Gradient: Down	Sampler: Chad Dentlinger

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	13.9
Initial Static Water Level (feet):	6.55
Initial Groundwater Elevation (ft-amsl):	669.13
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING							
FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES							
Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
2:50 PM	Purging start time.						
2:53 PM	15.9	1.8	1978.6	7.54	-17.0	43.5	
2:56 PM	15.9	1.0	1973.4	7.43	-38.3	31.4	
2:59 PM	15.6	0.8	1957.7	7.43	-48.0	24.8	
3:02 PM	15.6	0.7	1946.8	7.43	-53.2	27.5	
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:	

Appendix B-1
Laboratory Analytical Data Sheets

ANALYTICAL REPORT

PREPARED FOR

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

Generated 5/2/2023 4:57:27 PM Revision 1

JOB DESCRIPTION

CCASW EN 1st 2023 Event - HMSP

JOB NUMBER

310-252104-1

Eurofins Cedar Falls

Job Notes

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

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

Authorization



Authorized for release by
Meredith Liechti, Service Center Manager
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(319)277-2401

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Revision 1

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Case Narrative

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Job ID: 310-252104-1

Laboratory: Eurofins Cedar Falls

Narrative

**Job Narrative
310-252104-1**

REVISION

The report being provided is a revision of the original report sent on 3/31/2023. The report (revision 1) is being revised due to Client requested:

Would you be able to reissue the Final reports for the above jobs with "Client: SCS Engineers"?

Receipt

The samples were received on 3/24/2023 4:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 0.5°C, 0.6°C, 1.1°C and 1.1°C

GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-382269 recovered outside of the control limits for Carbon disulfide (-22.1%D), Chlorobromomethane (-21.0%D), and 1,1-Dichloroethene (-20.1%D). The LCS associated with this CCV passed CCV criteria for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 310-382269/3).

Method 8260D: The method blank for analytical batch 310-382302 contained Chloromethane above the method detection limit. This target analyte concentration was less than the reporting limit (RL); 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.

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: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-252104-1	MW-90-5	Water	03/22/23 14:53	03/24/23 16:15
310-252104-2	MW-90-13	Water	03/22/23 13:49	03/24/23 16:15
310-252104-3	MW-90-15R	Water	03/21/23 13:47	03/24/23 16:15
310-252104-4	MW-03-16	Water	03/22/23 14:15	03/24/23 16:15
310-252104-5	MW-06-6R	Water	03/21/23 10:12	03/24/23 16:15
310-252104-6	PZ-R3	Water	03/21/23 17:53	03/24/23 16:15
310-252104-7	PZ-R4	Water	03/21/23 17:22	03/24/23 16:15
310-252104-8	MW-DN	Water	03/22/23 14:15	03/24/23 16:15
310-252104-9	Trip Blank	Water	03/22/23 00:00	03/24/23 16:15

Detection Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: MW-90-5

Lab Sample ID: 310-252104-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.375	J	0.500	0.220	ug/L	1		8260D	Total/NA
Chlorobenzene	2.50		1.00	0.400	ug/L	1		8260D	Total/NA
Chloroethane	0.809	J	4.00	0.790	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	10.6		1.00	0.210	ug/L	1		8260D	Total/NA
1,1-Dichloroethane	0.638	J	1.00	0.220	ug/L	1		8260D	Total/NA
Tetrachloroethene	2.18		1.00	0.480	ug/L	1		8260D	Total/NA
trans-1,2-Dichloroethene	0.451	J	1.00	0.270	ug/L	1		8260D	Total/NA
Trichloroethene	5.99		1.00	0.430	ug/L	1		8260D	Total/NA

Client Sample ID: MW-90-13

Lab Sample ID: 310-252104-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.53		0.500	0.220	ug/L	1		8260D	Total/NA
Chlorobenzene	1.83		1.00	0.400	ug/L	1		8260D	Total/NA
Chloroethane	1.09	J	4.00	0.790	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.240	J	1.00	0.210	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	0.788	J	1.00	0.230	ug/L	1		8260D	Total/NA

Client Sample ID: MW-90-15R

Lab Sample ID: 310-252104-3

No Detections.

Client Sample ID: MW-03-16

Lab Sample ID: 310-252104-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	11.3		0.500	0.220	ug/L	1		8260D	Total/NA
Chlorobenzene	9.67		1.00	0.400	ug/L	1		8260D	Total/NA
Chloroethane	2.04	J	4.00	0.790	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	1.95		1.00	0.230	ug/L	1		8260D	Total/NA
Xylenes, Total	0.570	J	3.00	0.400	ug/L	1		8260D	Total/NA
Arsenic	0.139		0.00200	0.000750	mg/L	1		6020B	Total/NA
Barium	0.491		0.00200	0.000880	mg/L	1		6020B	Total/NA
Cadmium	0.000110		0.000100	0.0000550	mg/L	1		6020B	Total/NA
Cobalt	0.00673		0.000500	0.000190	mg/L	1		6020B	Total/NA
Lead	0.000529		0.000500	0.000240	mg/L	1		6020B	Total/NA
Nickel	0.0513		0.00500	0.00190	mg/L	1		6020B	Total/NA
Vanadium	0.00117	J	0.00500	0.00110	mg/L	1		6020B	Total/NA
Total Suspended Solids	128		15.0	5.10	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-06-6R

Lab Sample ID: 310-252104-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.000838	J	0.00200	0.000750	mg/L	1		6020B	Total/NA
Barium	0.435		0.00200	0.000880	mg/L	1		6020B	Total/NA
Total Suspended Solids	1.50	J	1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: PZ-R3

Lab Sample ID: 310-252104-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00527		0.00200	0.000750	mg/L	1		6020B	Total/NA
Total Suspended Solids	59.7		5.00	1.70	mg/L	1		I-3765-85	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: PZ-R4

Lab Sample ID: 310-252104-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.866		0.500	0.220	ug/L	1		8260D	Total/NA
Chlorobenzene	0.717	J	1.00	0.400	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.771	J	1.00	0.210	ug/L	1		8260D	Total/NA
Arsenic	0.0216		0.00200	0.000750	mg/L	1		6020B	Total/NA
Barium	0.327		0.00200	0.000880	mg/L	1		6020B	Total/NA
Cobalt	0.00551		0.000500	0.000190	mg/L	1		6020B	Total/NA
Lead	0.000418	J	0.000500	0.000240	mg/L	1		6020B	Total/NA
Nickel	0.0166		0.00500	0.00190	mg/L	1		6020B	Total/NA
Vanadium	0.00163	J	0.00500	0.00110	mg/L	1		6020B	Total/NA
Total Suspended Solids	129		7.50	2.55	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-DN

Lab Sample ID: 310-252104-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	10.0		0.500	0.220	ug/L	1		8260D	Total/NA
Chlorobenzene	8.76		1.00	0.400	ug/L	1		8260D	Total/NA
Chloroethane	1.57	J	4.00	0.790	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	1.87		1.00	0.230	ug/L	1		8260D	Total/NA
Xylenes, Total	0.519	J	3.00	0.400	ug/L	1		8260D	Total/NA
Arsenic	0.133		0.00200	0.000750	mg/L	1		6020B	Total/NA
Barium	0.473		0.00200	0.000880	mg/L	1		6020B	Total/NA
Cadmium	0.0000770	J	0.000100	0.0000550	mg/L	1		6020B	Total/NA
Cobalt	0.00636		0.000500	0.000190	mg/L	1		6020B	Total/NA
Lead	0.000475	J	0.000500	0.000240	mg/L	1		6020B	Total/NA
Nickel	0.0493		0.00500	0.00190	mg/L	1		6020B	Total/NA
Total Suspended Solids	154		15.0	5.10	mg/L	1		I-3765-85	Total/NA

Client Sample ID: Trip Blank

Lab Sample ID: 310-252104-9

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Quantitation Limit Exceptions Summary

Client: SCS Engineers

Job ID: 310-252104-1

Project/Site: CCASW EN 1st 2023 Event - 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	Water	Total/NA	ug/L	1.20	5
8260D	1,2-Dibromoethane (EDB)	Water	Total/NA	ug/L	0.340	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: MW-90-5

Lab Sample ID: 310-252104-1

Date Collected: 03/22/23 14:53

Matrix: Water

Date Received: 03/24/23 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			03/31/23 13:33	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			03/31/23 13:33	1
Benzene	0.375	J	0.500	0.220	ug/L			03/31/23 13:33	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			03/31/23 13:33	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			03/31/23 13:33	1
Bromoform	<5.00		5.00	0.780	ug/L			03/31/23 13:33	1
Bromomethane	<4.00		4.00	1.10	ug/L			03/31/23 13:33	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			03/31/23 13:33	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			03/31/23 13:33	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			03/31/23 13:33	1
Chlorobenzene	2.50		1.00	0.400	ug/L			03/31/23 13:33	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			03/31/23 13:33	1
Chloroethane	0.809	J	4.00	0.790	ug/L			03/31/23 13:33	1
Chloroform	<3.00		3.00	1.30	ug/L			03/31/23 13:33	1
Chloromethane	<3.00		3.00	0.610	ug/L			03/31/23 13:33	1
cis-1,2-Dichloroethene	10.6		1.00	0.210	ug/L			03/31/23 13:33	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			03/31/23 13:33	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			03/31/23 13:33	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			03/31/23 13:33	1
Dibromomethane	<1.00		1.00	0.330	ug/L			03/31/23 13:33	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			03/31/23 13:33	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			03/31/23 13:33	1
1,1-Dichloroethane	0.638	J	1.00	0.220	ug/L			03/31/23 13:33	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			03/31/23 13:33	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			03/31/23 13:33	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			03/31/23 13:33	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			03/31/23 13:33	1
2-Hexanone	<10.0		10.0	2.00	ug/L			03/31/23 13:33	1
Iodomethane	<10.0		10.0	7.00	ug/L			03/31/23 13:33	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			03/31/23 13:33	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			03/31/23 13:33	1
Styrene	<1.00		1.00	0.370	ug/L			03/31/23 13:33	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			03/31/23 13:33	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			03/31/23 13:33	1
Tetrachloroethene	2.18		1.00	0.480	ug/L			03/31/23 13:33	1
Toluene	<1.00		1.00	0.430	ug/L			03/31/23 13:33	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			03/31/23 13:33	1
trans-1,2-Dichloroethene	0.451	J	1.00	0.270	ug/L			03/31/23 13:33	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			03/31/23 13:33	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			03/31/23 13:33	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			03/31/23 13:33	1
Trichloroethene	5.99		1.00	0.430	ug/L			03/31/23 13:33	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			03/31/23 13:33	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			03/31/23 13:33	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			03/31/23 13:33	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			03/31/23 13:33	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			03/31/23 13:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		03/31/23 13:33	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: MW-90-5

Date Collected: 03/22/23 14:53

Date Received: 03/24/23 16:15

Lab Sample ID: 310-252104-1

Matrix: Water

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Dibromofluoromethane (Surr)</i>	90		80 - 128		03/31/23 13:33	1
<i>Toluene-d8 (Surr)</i>	99		80 - 120		03/31/23 13:33	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: MW-90-13

Lab Sample ID: 310-252104-2

Date Collected: 03/22/23 13:49

Matrix: Water

Date Received: 03/24/23 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			03/31/23 11:26	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			03/31/23 11:26	1
Benzene	1.53		0.500	0.220	ug/L			03/31/23 11:26	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			03/31/23 11:26	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			03/31/23 11:26	1
Bromoform	<5.00		5.00	0.780	ug/L			03/31/23 11:26	1
Bromomethane	<4.00		4.00	1.10	ug/L			03/31/23 11:26	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			03/31/23 11:26	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			03/31/23 11:26	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			03/31/23 11:26	1
Chlorobenzene	1.83		1.00	0.400	ug/L			03/31/23 11:26	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			03/31/23 11:26	1
Chloroethane	1.09	J	4.00	0.790	ug/L			03/31/23 11:26	1
Chloroform	<3.00		3.00	1.30	ug/L			03/31/23 11:26	1
Chloromethane	<3.00		3.00	0.610	ug/L			03/31/23 11:26	1
cis-1,2-Dichloroethene	0.240	J	1.00	0.210	ug/L			03/31/23 11:26	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			03/31/23 11:26	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			03/31/23 11:26	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			03/31/23 11:26	1
Dibromomethane	<1.00		1.00	0.330	ug/L			03/31/23 11:26	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			03/31/23 11:26	1
1,4-Dichlorobenzene	0.788	J	1.00	0.230	ug/L			03/31/23 11:26	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			03/31/23 11:26	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			03/31/23 11:26	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			03/31/23 11:26	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			03/31/23 11:26	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			03/31/23 11:26	1
2-Hexanone	<10.0		10.0	2.00	ug/L			03/31/23 11:26	1
Iodomethane	<10.0		10.0	7.00	ug/L			03/31/23 11:26	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			03/31/23 11:26	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			03/31/23 11:26	1
Styrene	<1.00		1.00	0.370	ug/L			03/31/23 11:26	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			03/31/23 11:26	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			03/31/23 11:26	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			03/31/23 11:26	1
Toluene	<1.00		1.00	0.430	ug/L			03/31/23 11:26	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			03/31/23 11:26	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			03/31/23 11:26	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			03/31/23 11:26	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			03/31/23 11:26	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			03/31/23 11:26	1
Trichloroethene	<1.00		1.00	0.430	ug/L			03/31/23 11:26	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			03/31/23 11:26	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			03/31/23 11:26	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			03/31/23 11:26	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			03/31/23 11:26	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			03/31/23 11:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		80 - 120		03/31/23 11:26	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: MW-90-13

Date Collected: 03/22/23 13:49

Date Received: 03/24/23 16:15

Lab Sample ID: 310-252104-2

Matrix: Water

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Dibromofluoromethane (Surr)</i>	94		80 - 128		03/31/23 11:26	1
<i>Toluene-d8 (Surr)</i>	99		80 - 120		03/31/23 11:26	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: MW-90-15R

Lab Sample ID: 310-252104-3

Date Collected: 03/21/23 13:47

Matrix: Water

Date Received: 03/24/23 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			03/28/23 05:34	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			03/28/23 05:34	1
Benzene	<0.500		0.500	0.220	ug/L			03/28/23 12:48	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			03/28/23 05:34	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			03/28/23 05:34	1
Bromoform	<5.00		5.00	0.780	ug/L			03/28/23 05:34	1
Bromomethane	<4.00		4.00	1.10	ug/L			03/28/23 05:34	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			03/28/23 05:34	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			03/28/23 05:34	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			03/28/23 05:34	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			03/28/23 05:34	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			03/28/23 05:34	1
Chloroethane	<4.00		4.00	0.790	ug/L			03/28/23 05:34	1
Chloroform	<3.00		3.00	1.30	ug/L			03/28/23 05:34	1
Chloromethane	<3.00		3.00	0.610	ug/L			03/28/23 05:34	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			03/28/23 05:34	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			03/28/23 05:34	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			03/28/23 05:34	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			03/28/23 05:34	1
Dibromomethane	<1.00		1.00	0.330	ug/L			03/28/23 05:34	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			03/28/23 05:34	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			03/28/23 05:34	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			03/28/23 05:34	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			03/28/23 05:34	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			03/28/23 05:34	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			03/28/23 05:34	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			03/28/23 05:34	1
2-Hexanone	<10.0		10.0	2.00	ug/L			03/28/23 05:34	1
Iodomethane	<10.0		10.0	7.00	ug/L			03/28/23 12:48	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			03/28/23 05:34	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			03/28/23 05:34	1
Styrene	<1.00		1.00	0.370	ug/L			03/28/23 05:34	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			03/28/23 05:34	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			03/28/23 05:34	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			03/28/23 05:34	1
Toluene	<1.00		1.00	0.430	ug/L			03/28/23 05:34	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			03/28/23 05:34	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			03/28/23 05:34	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			03/28/23 05:34	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			03/28/23 05:34	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			03/28/23 05:34	1
Trichloroethene	<1.00		1.00	0.430	ug/L			03/28/23 05:34	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			03/28/23 05:34	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			03/28/23 05:34	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			03/28/23 05:34	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			03/28/23 05:34	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			03/28/23 12:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		80 - 120		03/28/23 05:34	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: MW-90-15R

Lab Sample ID: 310-252104-3

Date Collected: 03/21/23 13:47

Matrix: Water

Date Received: 03/24/23 16:15

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
4-Bromofluorobenzene (Surr)	100		80 - 120		03/28/23 12:48	1
Dibromofluoromethane (Surr)	109		80 - 128		03/28/23 05:34	1
Dibromofluoromethane (Surr)	94		80 - 128		03/28/23 12:48	1
Toluene-d8 (Surr)	97		80 - 120		03/28/23 05:34	1
Toluene-d8 (Surr)	98		80 - 120		03/28/23 12:48	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: MW-03-16

Lab Sample ID: 310-252104-4

Date Collected: 03/22/23 14:15

Matrix: Water

Date Received: 03/24/23 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			03/31/23 11:47	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			03/31/23 11:47	1
Benzene	11.3		0.500	0.220	ug/L			03/31/23 11:47	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			03/31/23 11:47	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			03/31/23 11:47	1
Bromoform	<5.00		5.00	0.780	ug/L			03/31/23 11:47	1
Bromomethane	<4.00		4.00	1.10	ug/L			03/31/23 11:47	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			03/31/23 11:47	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			03/31/23 11:47	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			03/31/23 11:47	1
Chlorobenzene	9.67		1.00	0.400	ug/L			03/31/23 11:47	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			03/31/23 11:47	1
Chloroethane	2.04	J	4.00	0.790	ug/L			03/31/23 11:47	1
Chloroform	<3.00		3.00	1.30	ug/L			03/31/23 11:47	1
Chloromethane	<3.00		3.00	0.610	ug/L			03/31/23 11:47	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			03/31/23 11:47	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			03/31/23 11:47	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			03/31/23 11:47	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			03/31/23 11:47	1
Dibromomethane	<1.00		1.00	0.330	ug/L			03/31/23 11:47	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			03/31/23 11:47	1
1,4-Dichlorobenzene	1.95		1.00	0.230	ug/L			03/31/23 11:47	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			03/31/23 11:47	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			03/31/23 11:47	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			03/31/23 11:47	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			03/31/23 11:47	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			03/31/23 11:47	1
2-Hexanone	<10.0		10.0	2.00	ug/L			03/31/23 11:47	1
Iodomethane	<10.0		10.0	7.00	ug/L			03/31/23 11:47	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			03/31/23 11:47	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			03/31/23 11:47	1
Styrene	<1.00		1.00	0.370	ug/L			03/31/23 11:47	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			03/31/23 11:47	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			03/31/23 11:47	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			03/31/23 11:47	1
Toluene	<1.00		1.00	0.430	ug/L			03/31/23 11:47	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			03/31/23 11:47	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			03/31/23 11:47	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			03/31/23 11:47	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			03/31/23 11:47	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			03/31/23 11:47	1
Trichloroethene	<1.00		1.00	0.430	ug/L			03/31/23 11:47	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			03/31/23 11:47	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			03/31/23 11:47	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			03/31/23 11:47	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			03/31/23 11:47	1
Xylenes, Total	0.570	J	3.00	0.400	ug/L			03/31/23 11:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		80 - 120		03/31/23 11:47	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: MW-03-16

Lab Sample ID: 310-252104-4

Date Collected: 03/22/23 14:15

Matrix: Water

Date Received: 03/24/23 16:15

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	93		80 - 128		03/31/23 11:47	1
Toluene-d8 (Surr)	101		80 - 120		03/31/23 11:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.000690	mg/L		03/28/23 09:10	03/29/23 12:37	1
Arsenic	0.139		0.00200	0.000750	mg/L		03/28/23 09:10	03/28/23 22:55	1
Barium	0.491		0.00200	0.000880	mg/L		03/28/23 09:10	03/28/23 22:55	1
Beryllium	<0.00100		0.00100	0.000270	mg/L		03/28/23 09:10	03/28/23 22:55	1
Cadmium	0.000110		0.000100	0.0000550	mg/L		03/28/23 09:10	03/28/23 22:55	1
Chromium	<0.00500		0.00500	0.00110	mg/L		03/28/23 09:10	03/28/23 22:55	1
Cobalt	0.00673		0.000500	0.000190	mg/L		03/28/23 09:10	03/28/23 22:55	1
Copper	<0.00500		0.00500	0.00180	mg/L		03/28/23 09:10	03/28/23 22:55	1
Lead	0.000529		0.000500	0.000240	mg/L		03/28/23 09:10	03/28/23 22:55	1
Nickel	0.0513		0.00500	0.00190	mg/L		03/28/23 09:10	03/28/23 22:55	1
Selenium	<0.00500		0.00500	0.000960	mg/L		03/28/23 09:10	03/28/23 22:55	1
Silver	<0.00100		0.00100	0.000490	mg/L		03/28/23 09:10	03/28/23 22:55	1
Thallium	<0.00100		0.00100	0.000260	mg/L		03/28/23 09:10	03/28/23 22:55	1
Vanadium	0.00117 J		0.00500	0.00110	mg/L		03/28/23 09:10	03/28/23 22:55	1
Zinc	<0.0200		0.0200	0.0100	mg/L		03/28/23 09:10	03/28/23 22:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	128		15.0	5.10	mg/L			03/28/23 07:19	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: MW-06-6R

Lab Sample ID: 310-252104-5

Date Collected: 03/21/23 10:12

Matrix: Water

Date Received: 03/24/23 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.000838	J	0.00200	0.000750	mg/L		03/28/23 09:10	03/28/23 23:01	1
Barium	0.435		0.00200	0.000880	mg/L		03/28/23 09:10	03/28/23 23:01	1
Beryllium	<0.00100		0.00100	0.000270	mg/L		03/28/23 09:10	03/28/23 23:01	1
Cadmium	<0.000100		0.000100	0.0000550	mg/L		03/28/23 09:10	03/28/23 23:01	1
Cobalt	<0.000500		0.000500	0.000190	mg/L		03/28/23 09:10	03/28/23 23:01	1
Copper	<0.00500		0.00500	0.00180	mg/L		03/28/23 09:10	03/28/23 23:01	1
Lead	<0.000500		0.000500	0.000240	mg/L		03/28/23 09:10	03/28/23 23:01	1
Nickel	<0.00500		0.00500	0.00190	mg/L		03/28/23 09:10	03/28/23 23:01	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		03/28/23 09:10	03/28/23 23:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	1.50	J	1.88	0.638	mg/L			03/27/23 12:18	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: PZ-R3

Lab Sample ID: 310-252104-6

Date Collected: 03/21/23 17:53

Matrix: Water

Date Received: 03/24/23 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			03/28/23 05:59	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			03/28/23 05:59	1
Benzene	<0.500		0.500	0.220	ug/L			03/28/23 13:09	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			03/28/23 05:59	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			03/28/23 05:59	1
Bromoform	<5.00		5.00	0.780	ug/L			03/28/23 05:59	1
Bromomethane	<4.00		4.00	1.10	ug/L			03/28/23 05:59	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			03/28/23 05:59	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			03/28/23 05:59	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			03/28/23 05:59	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			03/28/23 05:59	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			03/28/23 05:59	1
Chloroethane	<4.00		4.00	0.790	ug/L			03/28/23 05:59	1
Chloroform	<3.00		3.00	1.30	ug/L			03/28/23 05:59	1
Chloromethane	<3.00		3.00	0.610	ug/L			03/28/23 05:59	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			03/28/23 05:59	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			03/28/23 05:59	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			03/28/23 05:59	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			03/28/23 05:59	1
Dibromomethane	<1.00		1.00	0.330	ug/L			03/28/23 05:59	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			03/28/23 05:59	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			03/28/23 05:59	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			03/28/23 05:59	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			03/28/23 05:59	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			03/28/23 05:59	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			03/28/23 05:59	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			03/28/23 05:59	1
2-Hexanone	<10.0		10.0	2.00	ug/L			03/28/23 05:59	1
Iodomethane	<10.0		10.0	7.00	ug/L			03/28/23 13:09	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			03/28/23 05:59	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			03/28/23 05:59	1
Styrene	<1.00		1.00	0.370	ug/L			03/28/23 05:59	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			03/28/23 05:59	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			03/28/23 05:59	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			03/28/23 05:59	1
Toluene	<1.00		1.00	0.430	ug/L			03/28/23 05:59	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			03/28/23 05:59	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			03/28/23 05:59	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			03/28/23 05:59	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			03/28/23 05:59	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			03/28/23 05:59	1
Trichloroethene	<1.00		1.00	0.430	ug/L			03/28/23 05:59	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			03/28/23 05:59	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			03/28/23 05:59	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			03/28/23 05:59	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			03/28/23 05:59	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			03/28/23 05:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		03/28/23 05:59	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: PZ-R3

Date Collected: 03/21/23 17:53

Date Received: 03/24/23 16:15

Lab Sample ID: 310-252104-6

Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		80 - 120		03/28/23 13:09	1
Dibromofluoromethane (Surr)	109		80 - 128		03/28/23 05:59	1
Dibromofluoromethane (Surr)	95		80 - 128		03/28/23 13:09	1
Toluene-d8 (Surr)	96		80 - 120		03/28/23 05:59	1
Toluene-d8 (Surr)	99		80 - 120		03/28/23 13:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00527		0.00200	0.000750	mg/L		03/28/23 09:10	03/28/23 23:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	59.7		5.00	1.70	mg/L			03/27/23 12:18	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: PZ-R4

Lab Sample ID: 310-252104-7

Date Collected: 03/21/23 17:22

Matrix: Water

Date Received: 03/24/23 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			03/28/23 06:23	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			03/28/23 06:23	1
Benzene	0.866		0.500	0.220	ug/L			03/28/23 06:23	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			03/28/23 06:23	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			03/28/23 06:23	1
Bromoform	<5.00		5.00	0.780	ug/L			03/28/23 06:23	1
Bromomethane	<4.00		4.00	1.10	ug/L			03/28/23 06:23	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			03/28/23 06:23	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			03/28/23 06:23	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			03/28/23 06:23	1
Chlorobenzene	0.717 J		1.00	0.400	ug/L			03/28/23 06:23	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			03/28/23 06:23	1
Chloroethane	<4.00		4.00	0.790	ug/L			03/28/23 06:23	1
Chloroform	<3.00		3.00	1.30	ug/L			03/28/23 06:23	1
Chloromethane	<3.00		3.00	0.610	ug/L			03/28/23 06:23	1
cis-1,2-Dichloroethene	0.771 J		1.00	0.210	ug/L			03/28/23 06:23	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			03/28/23 06:23	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			03/28/23 06:23	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			03/28/23 06:23	1
Dibromomethane	<1.00		1.00	0.330	ug/L			03/28/23 06:23	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			03/28/23 06:23	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			03/28/23 06:23	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			03/28/23 06:23	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			03/28/23 06:23	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			03/28/23 06:23	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			03/28/23 06:23	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			03/28/23 06:23	1
2-Hexanone	<10.0		10.0	2.00	ug/L			03/28/23 06:23	1
Iodomethane	<10.0		10.0	7.00	ug/L			03/28/23 13:31	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			03/28/23 06:23	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			03/28/23 06:23	1
Styrene	<1.00		1.00	0.370	ug/L			03/28/23 06:23	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			03/28/23 06:23	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			03/28/23 06:23	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			03/28/23 06:23	1
Toluene	<1.00		1.00	0.430	ug/L			03/28/23 06:23	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			03/28/23 06:23	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			03/28/23 06:23	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			03/28/23 06:23	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			03/28/23 06:23	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			03/28/23 06:23	1
Trichloroethene	<1.00		1.00	0.430	ug/L			03/28/23 06:23	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			03/28/23 06:23	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			03/28/23 06:23	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			03/28/23 06:23	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			03/28/23 06:23	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			03/28/23 06:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		80 - 120		03/28/23 06:23	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: PZ-R4

Date Collected: 03/21/23 17:22

Date Received: 03/24/23 16:15

Lab Sample ID: 310-252104-7

Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		80 - 120		03/28/23 13:31	1
Dibromofluoromethane (Surr)	108		80 - 128		03/28/23 06:23	1
Dibromofluoromethane (Surr)	95		80 - 128		03/28/23 13:31	1
Toluene-d8 (Surr)	97		80 - 120		03/28/23 06:23	1
Toluene-d8 (Surr)	98		80 - 120		03/28/23 13:31	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.000690	mg/L		03/28/23 09:10	03/29/23 12:43	1
Arsenic	0.0216		0.00200	0.000750	mg/L		03/28/23 09:10	03/28/23 23:07	1
Barium	0.327		0.00200	0.000880	mg/L		03/28/23 09:10	03/28/23 23:07	1
Beryllium	<0.00100		0.00100	0.000270	mg/L		03/28/23 09:10	03/28/23 23:07	1
Cadmium	<0.000100		0.000100	0.0000550	mg/L		03/28/23 09:10	03/28/23 23:07	1
Chromium	<0.00500		0.00500	0.00110	mg/L		03/28/23 09:10	03/28/23 23:07	1
Cobalt	0.00551		0.000500	0.000190	mg/L		03/28/23 09:10	03/28/23 23:07	1
Copper	<0.00500		0.00500	0.00180	mg/L		03/28/23 09:10	03/28/23 23:07	1
Lead	0.000418	J	0.000500	0.000240	mg/L		03/28/23 09:10	03/28/23 23:07	1
Nickel	0.0166		0.00500	0.00190	mg/L		03/28/23 09:10	03/28/23 23:07	1
Selenium	<0.00500		0.00500	0.000960	mg/L		03/28/23 09:10	03/28/23 23:07	1
Silver	<0.00100		0.00100	0.000490	mg/L		03/28/23 09:10	03/28/23 23:07	1
Thallium	<0.00100		0.00100	0.000260	mg/L		03/28/23 09:10	03/28/23 23:07	1
Vanadium	0.00163	J	0.00500	0.00110	mg/L		03/28/23 09:10	03/28/23 23:07	1
Zinc	<0.0200		0.0200	0.0100	mg/L		03/28/23 09:10	03/28/23 23:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	129		7.50	2.55	mg/L			03/27/23 12:18	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: MW-DN

Lab Sample ID: 310-252104-8

Date Collected: 03/22/23 14:15

Matrix: Water

Date Received: 03/24/23 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			03/27/23 22:37	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			03/27/23 22:37	1
Benzene	10.0		0.500	0.220	ug/L			03/27/23 22:37	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			03/27/23 22:37	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			03/27/23 22:37	1
Bromoform	<5.00		5.00	0.780	ug/L			03/27/23 22:37	1
Bromomethane	<4.00		4.00	1.10	ug/L			03/27/23 22:37	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			03/27/23 22:37	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			03/27/23 22:37	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			03/27/23 22:37	1
Chlorobenzene	8.76		1.00	0.400	ug/L			03/27/23 22:37	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			03/27/23 22:37	1
Chloroethane	1.57	J	4.00	0.790	ug/L			03/27/23 22:37	1
Chloroform	<3.00		3.00	1.30	ug/L			03/27/23 22:37	1
Chloromethane	<3.00		3.00	0.610	ug/L			03/27/23 22:37	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			03/27/23 22:37	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			03/27/23 22:37	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			03/27/23 22:37	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			03/27/23 22:37	1
Dibromomethane	<1.00		1.00	0.330	ug/L			03/27/23 22:37	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			03/27/23 22:37	1
1,4-Dichlorobenzene	1.87		1.00	0.230	ug/L			03/27/23 22:37	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			03/27/23 22:37	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			03/27/23 22:37	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			03/27/23 22:37	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			03/27/23 22:37	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			03/27/23 22:37	1
2-Hexanone	<10.0		10.0	2.00	ug/L			03/27/23 22:37	1
Iodomethane	<10.0		10.0	7.00	ug/L			03/27/23 22:37	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			03/27/23 22:37	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			03/27/23 22:37	1
Styrene	<1.00		1.00	0.370	ug/L			03/27/23 22:37	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			03/27/23 22:37	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			03/27/23 22:37	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			03/27/23 22:37	1
Toluene	<1.00		1.00	0.430	ug/L			03/27/23 22:37	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			03/27/23 22:37	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			03/27/23 22:37	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			03/27/23 22:37	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			03/27/23 22:37	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			03/27/23 22:37	1
Trichloroethene	<1.00		1.00	0.430	ug/L			03/27/23 22:37	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			03/27/23 22:37	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			03/27/23 22:37	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			03/27/23 22:37	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			03/27/23 22:37	1
Xylenes, Total	0.519	J	3.00	0.400	ug/L			03/27/23 22:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		80 - 120		03/27/23 22:37	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: MW-DN

Lab Sample ID: 310-252104-8

Date Collected: 03/22/23 14:15

Matrix: Water

Date Received: 03/24/23 16:15

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	100		80 - 128		03/27/23 22:37	1
Toluene-d8 (Surr)	98		80 - 120		03/27/23 22:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.000690	mg/L		03/28/23 09:10	03/29/23 12:46	1
Arsenic	0.133		0.00200	0.000750	mg/L		03/28/23 09:10	03/28/23 23:10	1
Barium	0.473		0.00200	0.000880	mg/L		03/28/23 09:10	03/28/23 23:10	1
Beryllium	<0.00100		0.00100	0.000270	mg/L		03/28/23 09:10	03/28/23 23:10	1
Cadmium	0.0000770	J	0.000100	0.0000550	mg/L		03/28/23 09:10	03/28/23 23:10	1
Chromium	<0.00500		0.00500	0.00110	mg/L		03/28/23 09:10	03/28/23 23:10	1
Cobalt	0.00636		0.000500	0.000190	mg/L		03/28/23 09:10	03/28/23 23:10	1
Copper	<0.00500		0.00500	0.00180	mg/L		03/28/23 09:10	03/28/23 23:10	1
Lead	0.000475	J	0.000500	0.000240	mg/L		03/28/23 09:10	03/28/23 23:10	1
Nickel	0.0493		0.00500	0.00190	mg/L		03/28/23 09:10	03/28/23 23:10	1
Selenium	<0.00500		0.00500	0.000960	mg/L		03/28/23 09:10	03/28/23 23:10	1
Silver	<0.00100		0.00100	0.000490	mg/L		03/28/23 09:10	03/28/23 23:10	1
Thallium	<0.00100		0.00100	0.000260	mg/L		03/28/23 09:10	03/28/23 23:10	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		03/28/23 09:10	03/28/23 23:10	1
Zinc	<0.0200		0.0200	0.0100	mg/L		03/28/23 09:10	03/28/23 23:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	154		15.0	5.10	mg/L			03/28/23 10:08	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: Trip Blank

Lab Sample ID: 310-252104-9

Date Collected: 03/22/23 00:00

Matrix: Water

Date Received: 03/24/23 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			03/27/23 21:54	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			03/27/23 21:54	1
Benzene	<0.500		0.500	0.220	ug/L			03/27/23 21:54	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			03/27/23 21:54	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			03/27/23 21:54	1
Bromoform	<5.00		5.00	0.780	ug/L			03/27/23 21:54	1
Bromomethane	<4.00		4.00	1.10	ug/L			03/27/23 21:54	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			03/27/23 21:54	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			03/27/23 21:54	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			03/27/23 21:54	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			03/27/23 21:54	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			03/27/23 21:54	1
Chloroethane	<4.00		4.00	0.790	ug/L			03/27/23 21:54	1
Chloroform	<3.00		3.00	1.30	ug/L			03/27/23 21:54	1
Chloromethane	<3.00		3.00	0.610	ug/L			03/27/23 21:54	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			03/27/23 21:54	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			03/27/23 21:54	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			03/27/23 21:54	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			03/27/23 21:54	1
Dibromomethane	<1.00		1.00	0.330	ug/L			03/27/23 21:54	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			03/27/23 21:54	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			03/27/23 21:54	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			03/27/23 21:54	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			03/27/23 21:54	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			03/27/23 21:54	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			03/27/23 21:54	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			03/27/23 21:54	1
2-Hexanone	<10.0		10.0	2.00	ug/L			03/27/23 21:54	1
Iodomethane	<10.0		10.0	7.00	ug/L			03/27/23 21:54	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			03/27/23 21:54	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			03/27/23 21:54	1
Styrene	<1.00		1.00	0.370	ug/L			03/27/23 21:54	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			03/27/23 21:54	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			03/27/23 21:54	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			03/27/23 21:54	1
Toluene	<1.00		1.00	0.430	ug/L			03/27/23 21:54	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			03/27/23 21:54	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			03/27/23 21:54	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			03/27/23 21:54	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			03/27/23 21:54	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			03/27/23 21:54	1
Trichloroethene	<1.00		1.00	0.430	ug/L			03/27/23 21:54	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			03/27/23 21:54	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			03/27/23 21:54	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			03/27/23 21:54	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			03/27/23 21:54	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			03/27/23 21:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		03/27/23 21:54	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: Trip Blank

Date Collected: 03/22/23 00:00

Date Received: 03/24/23 16:15

Lab Sample ID: 310-252104-9

Matrix: Water

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Dibromofluoromethane (Surr)</i>	98		80 - 128		03/27/23 21:54	1
<i>Toluene-d8 (Surr)</i>	97		80 - 120		03/27/23 21:54	1

Definitions/Glossary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

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.

General Chemistry

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

Glossary

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

Surrogate Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		BFB (80-120)	DBFM (80-128)	TOL (80-120)
310-252104-1	MW-90-5	100	90	99
310-252104-2	MW-90-13	99	94	99
310-252104-3	MW-90-15R	102	109	97
310-252104-3	MW-90-15R	100	94	98
310-252104-4	MW-03-16	101	93	101
310-252104-6	PZ-R3	100	109	96
310-252104-6	PZ-R3	101	95	99
310-252104-7	PZ-R4	101	108	97
310-252104-7	PZ-R4	102	95	98
310-252104-8	MW-DN	99	100	98
310-252104-9	Trip Blank	100	98	97
LCS 310-382269/6	Lab Control Sample	101	96	100
LCS 310-382269/7	Lab Control Sample	102	98	98
LCS 310-382302/6	Lab Control Sample	100	103	99
LCS 310-382302/7	Lab Control Sample	100	108	99
LCS 310-382435/6	Lab Control Sample	100	94	100
LCS 310-382435/7	Lab Control Sample	102	97	99
LCS 310-382719/6	Lab Control Sample	100	90	102
LCS 310-382719/7	Lab Control Sample	100	95	99
MB 310-382269/5	Method Blank	102	96	98
MB 310-382302/5	Method Blank	102	110	99
MB 310-382435/5	Method Blank	100	97	98
MB 310-382719/5	Method Blank	100	93	101

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

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

Lab Sample ID: MB 310-382269/5

Matrix: Water

Analysis Batch: 382269

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			03/27/23 20:50	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			03/27/23 20:50	1
Benzene	<0.500		0.500	0.220	ug/L			03/27/23 20:50	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			03/27/23 20:50	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			03/27/23 20:50	1
Bromoform	<5.00		5.00	0.780	ug/L			03/27/23 20:50	1
Bromomethane	<4.00		4.00	1.10	ug/L			03/27/23 20:50	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			03/27/23 20:50	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			03/27/23 20:50	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			03/27/23 20:50	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			03/27/23 20:50	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			03/27/23 20:50	1
Chloroethane	<4.00		4.00	0.790	ug/L			03/27/23 20:50	1
Chloroform	<3.00		3.00	1.30	ug/L			03/27/23 20:50	1
Chloromethane	<3.00		3.00	0.610	ug/L			03/27/23 20:50	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			03/27/23 20:50	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			03/27/23 20:50	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			03/27/23 20:50	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			03/27/23 20:50	1
Dibromomethane	<1.00		1.00	0.330	ug/L			03/27/23 20:50	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			03/27/23 20:50	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			03/27/23 20:50	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			03/27/23 20:50	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			03/27/23 20:50	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			03/27/23 20:50	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			03/27/23 20:50	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			03/27/23 20:50	1
2-Hexanone	<10.0		10.0	2.00	ug/L			03/27/23 20:50	1
Iodomethane	<10.0		10.0	7.00	ug/L			03/27/23 20:50	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			03/27/23 20:50	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			03/27/23 20:50	1
Styrene	<1.00		1.00	0.370	ug/L			03/27/23 20:50	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			03/27/23 20:50	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			03/27/23 20:50	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			03/27/23 20:50	1
Toluene	<1.00		1.00	0.430	ug/L			03/27/23 20:50	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			03/27/23 20:50	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			03/27/23 20:50	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			03/27/23 20:50	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			03/27/23 20:50	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			03/27/23 20:50	1
Trichloroethene	<1.00		1.00	0.430	ug/L			03/27/23 20:50	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			03/27/23 20:50	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			03/27/23 20:50	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			03/27/23 20:50	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			03/27/23 20:50	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			03/27/23 20:50	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

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

Lab Sample ID: MB 310-382269/5

Matrix: Water

Analysis Batch: 382269

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		80 - 120		03/27/23 20:50	1
Dibromofluoromethane (Surr)	96		80 - 128		03/27/23 20:50	1
Toluene-d8 (Surr)	98		80 - 120		03/27/23 20:50	1

Lab Sample ID: LCS 310-382269/6

Matrix: Water

Analysis Batch: 382269

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	40.0	42.22		ug/L		106	50 - 150
Acrylonitrile	200	188.9		ug/L		94	50 - 150
Benzene	20.0	19.20		ug/L		96	73 - 122
Bromochloromethane	20.0	18.02		ug/L		90	68 - 132
Bromodichloromethane	20.0	20.27		ug/L		101	72 - 121
Bromoform	20.0	19.30		ug/L		97	55 - 129
2-Butanone (MEK)	40.0	39.49		ug/L		99	50 - 150
Carbon disulfide	20.0	16.42		ug/L		82	58 - 131
Carbon tetrachloride	20.0	18.25		ug/L		91	67 - 132
Chlorobenzene	20.0	19.03		ug/L		95	69 - 121
Chlorodibromomethane	20.0	19.64		ug/L		98	69 - 122
Chloroform	20.0	18.33		ug/L		92	72 - 120
cis-1,2-Dichloroethene	20.0	18.18		ug/L		91	74 - 120
cis-1,3-Dichloropropene	20.0	18.82		ug/L		94	71 - 126
1,2-Dibromo-3-Chloropropane	20.0	19.70		ug/L		99	50 - 150
1,2-Dibromoethane (EDB)	20.0	19.73		ug/L		99	73 - 125
Dibromomethane	20.0	18.99		ug/L		95	72 - 123
1,2-Dichlorobenzene	20.0	19.11		ug/L		96	68 - 120
1,4-Dichlorobenzene	20.0	18.48		ug/L		92	67 - 120
1,1-Dichloroethane	20.0	18.63		ug/L		93	71 - 123
1,2-Dichloroethane	20.0	19.08		ug/L		95	70 - 124
1,1-Dichloroethene	20.0	17.07		ug/L		85	61 - 129
1,2-Dichloropropene	20.0	20.44		ug/L		102	73 - 121
Ethylbenzene	20.0	18.84		ug/L		94	69 - 122
2-Hexanone	40.0	40.39		ug/L		101	60 - 132
Iodomethane	20.0	13.04		ug/L		65	10 - 150
Methylene Chloride	20.0	19.76		ug/L		99	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	42.44		ug/L		106	62 - 130
Styrene	20.0	19.47		ug/L		97	67 - 125
1,1,1,2-Tetrachloroethane	20.0	19.69		ug/L		98	68 - 123
1,1,2,2-Tetrachloroethane	20.0	21.11		ug/L		106	64 - 124
Tetrachloroethene	20.0	17.23		ug/L		86	69 - 131
Toluene	20.0	19.10		ug/L		96	72 - 121
trans-1,4-Dichloro-2-butene	20.0	19.51		ug/L		98	48 - 150
trans-1,2-Dichloroethene	20.0	18.31		ug/L		92	68 - 125
trans-1,3-Dichloropropene	20.0	18.94		ug/L		95	68 - 124
1,1,1-Trichloroethane	20.0	18.78		ug/L		94	71 - 128
1,1,2-Trichloroethane	20.0	20.59		ug/L		103	70 - 124
Trichloroethene	20.0	18.87		ug/L		94	73 - 126

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

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

Lab Sample ID: LCS 310-382269/6

Matrix: Water

Analysis Batch: 382269

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	20.0	20.94		ug/L		105	64 - 125
Vinyl acetate	40.0	33.02		ug/L		83	50 - 150
Xylenes, Total	40.0	37.09		ug/L		93	68 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	96		80 - 128
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: LCS 310-382269/7

Matrix: Water

Analysis Batch: 382269

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	17.82		ug/L		89	24 - 150
Chloroethane	20.0	16.23		ug/L		81	51 - 137
Chloromethane	20.0	17.24		ug/L		86	37 - 150
Trichlorofluoromethane	20.0	16.38		ug/L		82	56 - 144
Vinyl chloride	20.0	17.64		ug/L		88	57 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	98		80 - 128
Toluene-d8 (Surr)	98		80 - 120

Lab Sample ID: MB 310-382302/5

Matrix: Water

Analysis Batch: 382302

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			03/27/23 23:28	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			03/27/23 23:28	1
Benzene	<0.500		0.500	0.220	ug/L			03/27/23 23:28	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			03/27/23 23:28	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			03/27/23 23:28	1
Bromoform	<5.00		5.00	0.780	ug/L			03/27/23 23:28	1
Bromomethane	<4.00		4.00	1.10	ug/L			03/27/23 23:28	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			03/27/23 23:28	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			03/27/23 23:28	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			03/27/23 23:28	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			03/27/23 23:28	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			03/27/23 23:28	1
Chloroethane	<4.00		4.00	0.790	ug/L			03/27/23 23:28	1
Chloroform	<3.00		3.00	1.30	ug/L			03/27/23 23:28	1
Chloromethane	1.648 J		3.00	0.610	ug/L			03/27/23 23:28	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			03/27/23 23:28	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			03/27/23 23:28	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			03/27/23 23:28	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

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

Lab Sample ID: MB 310-382302/5

Matrix: Water

Analysis Batch: 382302

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			03/27/23 23:28	1
Dibromomethane	<1.00		1.00	0.330	ug/L			03/27/23 23:28	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			03/27/23 23:28	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			03/27/23 23:28	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			03/27/23 23:28	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			03/27/23 23:28	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			03/27/23 23:28	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			03/27/23 23:28	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			03/27/23 23:28	1
2-Hexanone	<10.0		10.0	2.00	ug/L			03/27/23 23:28	1
Iodomethane	<10.0		10.0	7.00	ug/L			03/27/23 23:28	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			03/27/23 23:28	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			03/27/23 23:28	1
Styrene	<1.00		1.00	0.370	ug/L			03/27/23 23:28	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			03/27/23 23:28	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			03/27/23 23:28	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			03/27/23 23:28	1
Toluene	<1.00		1.00	0.430	ug/L			03/27/23 23:28	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			03/27/23 23:28	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			03/27/23 23:28	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			03/27/23 23:28	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			03/27/23 23:28	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			03/27/23 23:28	1
Trichloroethene	<1.00		1.00	0.430	ug/L			03/27/23 23:28	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			03/27/23 23:28	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			03/27/23 23:28	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			03/27/23 23:28	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			03/27/23 23:28	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			03/27/23 23:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		80 - 120		03/27/23 23:28	1
Dibromofluoromethane (Surr)	110		80 - 128		03/27/23 23:28	1
Toluene-d8 (Surr)	99		80 - 120		03/27/23 23:28	1

Lab Sample ID: LCS 310-382302/6

Matrix: Water

Analysis Batch: 382302

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	40.0	33.70		ug/L		84	50 - 150
Acrylonitrile	200	155.9		ug/L		78	50 - 150
Benzene	20.0	17.37		ug/L		87	73 - 122
Bromochloromethane	20.0	20.56		ug/L		103	68 - 132
Bromodichloromethane	20.0	17.94		ug/L		90	72 - 121
Bromoform	20.0	16.60		ug/L		83	55 - 129
2-Butanone (MEK)	40.0	31.86		ug/L		80	50 - 150
Carbon disulfide	20.0	16.56		ug/L		83	58 - 131

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

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

Lab Sample ID: LCS 310-382302/6

Matrix: Water

Analysis Batch: 382302

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon tetrachloride	20.0	18.33		ug/L		92	67 - 132
Chlorobenzene	20.0	17.98		ug/L		90	69 - 121
Chlorodibromomethane	20.0	17.51		ug/L		88	69 - 122
Chloroform	20.0	18.66		ug/L		93	72 - 120
cis-1,2-Dichloroethene	20.0	18.24		ug/L		91	74 - 120
cis-1,3-Dichloropropene	20.0	17.67		ug/L		88	71 - 126
1,2-Dibromo-3-Chloropropane	20.0	16.20		ug/L		81	50 - 150
1,2-Dibromoethane (EDB)	20.0	18.31		ug/L		92	73 - 125
Dibromomethane	20.0	18.63		ug/L		93	72 - 123
1,2-Dichlorobenzene	20.0	17.61		ug/L		88	68 - 120
1,4-Dichlorobenzene	20.0	17.57		ug/L		88	67 - 120
1,1-Dichloroethane	20.0	18.18		ug/L		91	71 - 123
1,2-Dichloroethane	20.0	18.23		ug/L		91	70 - 124
1,1-Dichloroethene	20.0	18.56		ug/L		93	61 - 129
1,2-Dichloropropane	20.0	16.97		ug/L		85	73 - 121
Ethylbenzene	20.0	17.62		ug/L		88	69 - 122
2-Hexanone	40.0	32.69		ug/L		82	60 - 132
Iodomethane	20.0	<10.0		ug/L		32	10 - 150
Methylene Chloride	20.0	15.96		ug/L		80	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	33.59		ug/L		84	62 - 130
Styrene	20.0	18.09		ug/L		90	67 - 125
1,1,1,2-Tetrachloroethane	20.0	17.65		ug/L		88	68 - 123
1,1,2,2-Tetrachloroethane	20.0	17.84		ug/L		89	64 - 124
Tetrachloroethene	20.0	18.38		ug/L		92	69 - 131
Toluene	20.0	18.13		ug/L		91	72 - 121
trans-1,4-Dichloro-2-butene	20.0	15.84		ug/L		79	48 - 150
trans-1,2-Dichloroethene	20.0	16.96		ug/L		85	68 - 125
trans-1,3-Dichloropropene	20.0	17.14		ug/L		86	68 - 124
1,1,1-Trichloroethane	20.0	18.86		ug/L		94	71 - 128
1,1,2-Trichloroethane	20.0	17.64		ug/L		88	70 - 124
Trichloroethene	20.0	18.26		ug/L		91	73 - 126
1,2,3-Trichloropropane	20.0	15.85		ug/L		79	64 - 125
Vinyl acetate	40.0	35.64		ug/L		89	50 - 150
Xylenes, Total	40.0	36.13		ug/L		90	68 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	103		80 - 128
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: LCS 310-382302/7

Matrix: Water

Analysis Batch: 382302

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	9.615		ug/L		48	24 - 150
Chloroethane	20.0	15.82		ug/L		79	51 - 137
Chloromethane	20.0	13.96		ug/L		70	37 - 150

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

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

Lab Sample ID: LCS 310-382302/7

Matrix: Water

Analysis Batch: 382302

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Trichlorofluoromethane	20.0	19.55		ug/L		98	56 - 144
Vinyl chloride	20.0	18.62		ug/L		93	57 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	108		80 - 128
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: MB 310-382435/5

Matrix: Water

Analysis Batch: 382435

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			03/28/23 11:24	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			03/28/23 11:24	1
Benzene	<0.500		0.500	0.220	ug/L			03/28/23 11:24	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			03/28/23 11:24	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			03/28/23 11:24	1
Bromoform	<5.00		5.00	0.780	ug/L			03/28/23 11:24	1
Bromomethane	<4.00		4.00	1.10	ug/L			03/28/23 11:24	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			03/28/23 11:24	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			03/28/23 11:24	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			03/28/23 11:24	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			03/28/23 11:24	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			03/28/23 11:24	1
Chloroethane	<4.00		4.00	0.790	ug/L			03/28/23 11:24	1
Chloroform	<3.00		3.00	1.30	ug/L			03/28/23 11:24	1
Chloromethane	<3.00		3.00	0.610	ug/L			03/28/23 11:24	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			03/28/23 11:24	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			03/28/23 11:24	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			03/28/23 11:24	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			03/28/23 11:24	1
Dibromomethane	<1.00		1.00	0.330	ug/L			03/28/23 11:24	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			03/28/23 11:24	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			03/28/23 11:24	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			03/28/23 11:24	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			03/28/23 11:24	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			03/28/23 11:24	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			03/28/23 11:24	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			03/28/23 11:24	1
2-Hexanone	<10.0		10.0	2.00	ug/L			03/28/23 11:24	1
Iodomethane	<10.0		10.0	7.00	ug/L			03/28/23 11:24	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			03/28/23 11:24	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			03/28/23 11:24	1
Styrene	<1.00		1.00	0.370	ug/L			03/28/23 11:24	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			03/28/23 11:24	1
1,1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			03/28/23 11:24	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			03/28/23 11:24	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

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

Lab Sample ID: MB 310-382435/5

Matrix: Water

Analysis Batch: 382435

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<1.00		1.00	0.430	ug/L			03/28/23 11:24	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			03/28/23 11:24	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			03/28/23 11:24	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			03/28/23 11:24	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			03/28/23 11:24	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			03/28/23 11:24	1
Trichloroethene	<1.00		1.00	0.430	ug/L			03/28/23 11:24	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			03/28/23 11:24	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			03/28/23 11:24	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			03/28/23 11:24	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			03/28/23 11:24	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			03/28/23 11:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		03/28/23 11:24	1
Dibromofluoromethane (Surr)	97		80 - 128		03/28/23 11:24	1
Toluene-d8 (Surr)	98		80 - 120		03/28/23 11:24	1

Lab Sample ID: LCS 310-382435/6

Matrix: Water

Analysis Batch: 382435

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	40.0	38.80		ug/L		97	50 - 150
Acrylonitrile	200	175.5		ug/L		88	50 - 150
Benzene	20.0	18.23		ug/L		91	73 - 122
Bromochloromethane	20.0	16.76		ug/L		84	68 - 132
Bromodichloromethane	20.0	18.21		ug/L		91	72 - 121
Bromoform	20.0	16.34		ug/L		82	55 - 129
2-Butanone (MEK)	40.0	39.17		ug/L		98	50 - 150
Carbon disulfide	20.0	16.49		ug/L		82	58 - 131
Carbon tetrachloride	20.0	18.56		ug/L		93	67 - 132
Chlorobenzene	20.0	17.26		ug/L		86	69 - 121
Chlorodibromomethane	20.0	17.16		ug/L		86	69 - 122
Chloroform	20.0	17.05		ug/L		85	72 - 120
cis-1,2-Dichloroethene	20.0	16.98		ug/L		85	74 - 120
cis-1,3-Dichloropropene	20.0	17.21		ug/L		86	71 - 126
1,2-Dibromo-3-Chloropropane	20.0	17.33		ug/L		87	50 - 150
1,2-Dibromoethane (EDB)	20.0	17.64		ug/L		88	73 - 125
Dibromomethane	20.0	17.15		ug/L		86	72 - 123
1,2-Dichlorobenzene	20.0	17.39		ug/L		87	68 - 120
1,4-Dichlorobenzene	20.0	16.96		ug/L		85	67 - 120
1,1-Dichloroethane	20.0	17.71		ug/L		89	71 - 123
1,2-Dichloroethane	20.0	17.84		ug/L		89	70 - 124
1,1-Dichloroethene	20.0	16.98		ug/L		85	61 - 129
1,2-Dichloropropane	20.0	18.70		ug/L		94	73 - 121
Ethylbenzene	20.0	17.62		ug/L		88	69 - 122
2-Hexanone	40.0	35.66		ug/L		89	60 - 132

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QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

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

Lab Sample ID: LCS 310-382435/6

Matrix: Water

Analysis Batch: 382435

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iodomethane	20.0	12.47		ug/L		62	10 - 150
Methylene Chloride	20.0	18.79		ug/L		94	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	37.78		ug/L		94	62 - 130
Styrene	20.0	17.33		ug/L		87	67 - 125
1,1,1,2-Tetrachloroethane	20.0	17.38		ug/L		87	68 - 123
1,1,2,2-Tetrachloroethane	20.0	18.43		ug/L		92	64 - 124
Tetrachloroethene	20.0	17.09		ug/L		85	69 - 131
Toluene	20.0	17.62		ug/L		88	72 - 121
trans-1,4-Dichloro-2-butene	20.0	16.73		ug/L		84	48 - 150
trans-1,2-Dichloroethene	20.0	17.36		ug/L		87	68 - 125
trans-1,3-Dichloropropene	20.0	17.06		ug/L		85	68 - 124
1,1,1-Trichloroethane	20.0	18.25		ug/L		91	71 - 128
1,1,2-Trichloroethane	20.0	18.14		ug/L		91	70 - 124
Trichloroethene	20.0	17.72		ug/L		89	73 - 126
1,2,3-Trichloropropane	20.0	17.67		ug/L		88	64 - 125
Vinyl acetate	40.0	31.95		ug/L		80	50 - 150
Xylenes, Total	40.0	33.84		ug/L		85	68 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	94		80 - 128
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: LCS 310-382435/7

Matrix: Water

Analysis Batch: 382435

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	16.10		ug/L		80	24 - 150
Chloroethane	20.0	14.70		ug/L		73	51 - 137
Chloromethane	20.0	16.16		ug/L		81	37 - 150
Trichlorofluoromethane	20.0	15.67		ug/L		78	56 - 144
Vinyl chloride	20.0	16.50		ug/L		82	57 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	97		80 - 128
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: MB 310-382719/5

Matrix: Water

Analysis Batch: 382719

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			03/31/23 08:14	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			03/31/23 08:14	1
Benzene	<0.500		0.500	0.220	ug/L			03/31/23 08:14	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			03/31/23 08:14	1

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QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

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

Lab Sample ID: MB 310-382719/5

Matrix: Water

Analysis Batch: 382719

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	<1.00		1.00	0.390	ug/L			03/31/23 08:14	1
Bromoform	<5.00		5.00	0.780	ug/L			03/31/23 08:14	1
Bromomethane	<4.00		4.00	1.10	ug/L			03/31/23 08:14	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			03/31/23 08:14	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			03/31/23 08:14	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			03/31/23 08:14	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			03/31/23 08:14	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			03/31/23 08:14	1
Chloroethane	<4.00		4.00	0.790	ug/L			03/31/23 08:14	1
Chloroform	<3.00		3.00	1.30	ug/L			03/31/23 08:14	1
Chloromethane	<3.00		3.00	0.610	ug/L			03/31/23 08:14	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			03/31/23 08:14	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			03/31/23 08:14	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			03/31/23 08:14	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			03/31/23 08:14	1
Dibromomethane	<1.00		1.00	0.330	ug/L			03/31/23 08:14	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			03/31/23 08:14	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			03/31/23 08:14	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			03/31/23 08:14	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			03/31/23 08:14	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			03/31/23 08:14	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			03/31/23 08:14	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			03/31/23 08:14	1
2-Hexanone	<10.0		10.0	2.00	ug/L			03/31/23 08:14	1
Iodomethane	<10.0		10.0	7.00	ug/L			03/31/23 08:14	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			03/31/23 08:14	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			03/31/23 08:14	1
Styrene	<1.00		1.00	0.370	ug/L			03/31/23 08:14	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			03/31/23 08:14	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			03/31/23 08:14	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			03/31/23 08:14	1
Toluene	<1.00		1.00	0.430	ug/L			03/31/23 08:14	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			03/31/23 08:14	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			03/31/23 08:14	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			03/31/23 08:14	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			03/31/23 08:14	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			03/31/23 08:14	1
Trichloroethene	<1.00		1.00	0.430	ug/L			03/31/23 08:14	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			03/31/23 08:14	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			03/31/23 08:14	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			03/31/23 08:14	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			03/31/23 08:14	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			03/31/23 08:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		03/31/23 08:14	1
Dibromofluoromethane (Surr)	93		80 - 128		03/31/23 08:14	1
Toluene-d8 (Surr)	101		80 - 120		03/31/23 08:14	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

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

Lab Sample ID: LCS 310-382719/6

Matrix: Water

Analysis Batch: 382719

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	40.0	51.05		ug/L		128	50 - 150
Acrylonitrile	200	228.5		ug/L		114	50 - 150
Benzene	20.0	21.41		ug/L		107	73 - 122
Bromochloromethane	20.0	19.16		ug/L		96	68 - 132
Bromodichloromethane	20.0	21.61		ug/L		108	72 - 121
Bromoform	20.0	20.72		ug/L		104	55 - 129
2-Butanone (MEK)	40.0	53.37		ug/L		133	50 - 150
Carbon disulfide	20.0	18.94		ug/L		95	58 - 131
Carbon tetrachloride	20.0	20.62		ug/L		103	67 - 132
Chlorobenzene	20.0	20.32		ug/L		102	69 - 121
Chlorodibromomethane	20.0	21.17		ug/L		106	69 - 122
Chloroform	20.0	19.64		ug/L		98	72 - 120
cis-1,2-Dichloroethene	20.0	19.61		ug/L		98	74 - 120
cis-1,3-Dichloropropene	20.0	20.13		ug/L		101	71 - 126
1,2-Dibromo-3-Chloropropane	20.0	22.96		ug/L		115	50 - 150
1,2-Dibromoethane (EDB)	20.0	21.19		ug/L		106	73 - 125
Dibromomethane	20.0	20.18		ug/L		101	72 - 123
1,2-Dichlorobenzene	20.0	20.81		ug/L		104	68 - 120
1,4-Dichlorobenzene	20.0	19.89		ug/L		99	67 - 120
1,1-Dichloroethane	20.0	20.60		ug/L		103	71 - 123
1,2-Dichloroethane	20.0	21.07		ug/L		105	70 - 124
1,1-Dichloroethene	20.0	18.90		ug/L		95	61 - 129
1,2-Dichloropropane	20.0	23.03		ug/L		115	73 - 121
Ethylbenzene	20.0	20.57		ug/L		103	69 - 122
2-Hexanone	40.0	51.10		ug/L		128	60 - 132
Iodomethane	20.0	16.66		ug/L		83	10 - 150
Methylene Chloride	20.0	21.91		ug/L		110	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	51.55		ug/L		129	62 - 130
Styrene	20.0	20.73		ug/L		104	67 - 125
1,1,1,2-Tetrachloroethane	20.0	21.20		ug/L		106	68 - 123
1,1,2,2-Tetrachloroethane	20.0	24.73		ug/L		124	64 - 124
Tetrachloroethene	20.0	18.64		ug/L		93	69 - 131
Toluene	20.0	20.28		ug/L		101	72 - 121
trans-1,4-Dichloro-2-butene	20.0	21.75		ug/L		109	48 - 150
trans-1,2-Dichloroethene	20.0	20.07		ug/L		100	68 - 125
trans-1,3-Dichloropropene	20.0	19.71		ug/L		99	68 - 124
1,1,1-Trichloroethane	20.0	20.90		ug/L		104	71 - 128
1,1,2-Trichloroethane	20.0	22.44		ug/L		112	70 - 124
Trichloroethene	20.0	20.98		ug/L		105	73 - 126
1,2,3-Trichloropropane	20.0	23.56		ug/L		118	64 - 125
Vinyl acetate	40.0	36.81		ug/L		92	50 - 150
Xylenes, Total	40.0	39.75		ug/L		99	68 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	90		80 - 128
Toluene-d8 (Surr)	102		80 - 120

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QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

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

Lab Sample ID: LCS 310-382719/7

Matrix: Water

Analysis Batch: 382719

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	18.59		ug/L		93	24 - 150
Chloroethane	20.0	18.86		ug/L		94	51 - 137
Chloromethane	20.0	19.23		ug/L		96	37 - 150
Trichlorofluoromethane	20.0	19.21		ug/L		96	56 - 144
Vinyl chloride	20.0	19.13		ug/L		96	57 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	95		80 - 128
Toluene-d8 (Surr)	99		80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-382353/1-A

Matrix: Water

Analysis Batch: 382566

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 382353

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000750	mg/L		03/28/23 09:10	03/28/23 21:58	1
Barium	<0.00200		0.00200	0.000880	mg/L		03/28/23 09:10	03/28/23 21:58	1
Beryllium	<0.00100		0.00100	0.000270	mg/L		03/28/23 09:10	03/28/23 21:58	1
Cadmium	<0.000100		0.000100	0.0000550	mg/L		03/28/23 09:10	03/28/23 21:58	1
Chromium	<0.00500		0.00500	0.00110	mg/L		03/28/23 09:10	03/28/23 21:58	1
Cobalt	<0.000500		0.000500	0.000190	mg/L		03/28/23 09:10	03/28/23 21:58	1
Copper	<0.00500		0.00500	0.00180	mg/L		03/28/23 09:10	03/28/23 21:58	1
Lead	<0.000500		0.000500	0.000240	mg/L		03/28/23 09:10	03/28/23 21:58	1
Nickel	<0.00500		0.00500	0.00190	mg/L		03/28/23 09:10	03/28/23 21:58	1
Selenium	<0.00500		0.00500	0.000960	mg/L		03/28/23 09:10	03/28/23 21:58	1
Silver	<0.00100		0.00100	0.000490	mg/L		03/28/23 09:10	03/28/23 21:58	1
Thallium	<0.00100		0.00100	0.000260	mg/L		03/28/23 09:10	03/28/23 21:58	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		03/28/23 09:10	03/28/23 21:58	1
Zinc	<0.0200		0.0200	0.0100	mg/L		03/28/23 09:10	03/28/23 21:58	1

Lab Sample ID: MB 310-382353/1-A

Matrix: Water

Analysis Batch: 382618

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 382353

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.000690	mg/L		03/28/23 09:10	03/29/23 11:57	1

Lab Sample ID: LCS 310-382353/2-A

Matrix: Water

Analysis Batch: 382566

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 382353

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.2096		mg/L		105	80 - 120
Barium	0.100	0.1077		mg/L		108	80 - 120
Beryllium	0.100	0.1065		mg/L		107	80 - 120
Cadmium	0.100	0.1048		mg/L		105	80 - 120

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QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSF

Job ID: 310-252104-1

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

Lab Sample ID: LCS 310-382353/2-A
Matrix: Water
Analysis Batch: 382566

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 382353

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	0.100	0.09966		mg/L		100	80 - 120
Cobalt	0.100	0.09873		mg/L		99	80 - 120
Copper	0.200	0.2313		mg/L		116	80 - 120
Lead	0.200	0.2183		mg/L		109	80 - 120
Nickel	0.200	0.2176		mg/L		109	80 - 120
Selenium	0.400	0.4144		mg/L		104	80 - 120
Silver	0.100	0.1021		mg/L		102	80 - 120
Thallium	0.200	0.1806		mg/L		90	80 - 120
Vanadium	0.100	0.1038		mg/L		104	80 - 120
Zinc	0.200	0.2061		mg/L		103	80 - 120

Lab Sample ID: LCS 310-382353/2-A
Matrix: Water
Analysis Batch: 382618

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 382353

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2289		mg/L		114	80 - 120

Lab Sample ID: 310-252104-4 DU
Matrix: Water
Analysis Batch: 382566

Client Sample ID: MW-03-16
Prep Type: Total/NA
Prep Batch: 382353

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	0.139		0.1397		mg/L		0.2	20
Barium	0.491		0.4915		mg/L		0	20
Beryllium	<0.00100		<0.00100		mg/L		NC	20
Cadmium	0.000110		0.0001110		mg/L		0.9	20
Chromium	<0.00500		<0.00500		mg/L		NC	20
Cobalt	0.00673		0.006664		mg/L		1	20
Copper	<0.00500		<0.00500		mg/L		NC	20
Lead	0.000529		0.0005230		mg/L		1	20
Nickel	0.0513		0.05073		mg/L		1	20
Selenium	<0.00500		<0.00500		mg/L		NC	20
Silver	<0.00100		<0.00100		mg/L		NC	20
Thallium	<0.00100		<0.00100		mg/L		NC	20
Vanadium	0.00117 J		0.001161 J		mg/L		0.4	20
Zinc	<0.0200		<0.0200		mg/L		NC	20

Lab Sample ID: 310-252104-4 DU
Matrix: Water
Analysis Batch: 382618

Client Sample ID: MW-03-16
Prep Type: Total/NA
Prep Batch: 382353

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.00200		<0.00200		mg/L		NC	20

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QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

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

Lab Sample ID: MB 310-382320/1
Matrix: Water
Analysis Batch: 382320

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	1.70	mg/L			03/27/23 12:18	1

Lab Sample ID: LCS 310-382320/2
Matrix: Water
Analysis Batch: 382320

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	101.0		mg/L		101	75 - 116

Lab Sample ID: MB 310-382392/1
Matrix: Water
Analysis Batch: 382392

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	1.70	mg/L			03/28/23 07:19	1

Lab Sample ID: LCS 310-382392/2
Matrix: Water
Analysis Batch: 382392

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	100.0		mg/L		100	75 - 116

Lab Sample ID: MB 310-382445/1
Matrix: Water
Analysis Batch: 382445

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	1.70	mg/L			03/28/23 10:08	1

Lab Sample ID: LCS 310-382445/2
Matrix: Water
Analysis Batch: 382445

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	92.00		mg/L		92	75 - 116

Lab Sample ID: 310-252104-8 DU
Matrix: Water
Analysis Batch: 382445

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

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	154		151.0		mg/L		2	35

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QC Association Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

GC/MS VOA

Analysis Batch: 382269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-252104-8	MW-DN	Total/NA	Water	8260D	
310-252104-9	Trip Blank	Total/NA	Water	8260D	
MB 310-382269/5	Method Blank	Total/NA	Water	8260D	
LCS 310-382269/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-382269/7	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 382302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-252104-3	MW-90-15R	Total/NA	Water	8260D	
310-252104-6	PZ-R3	Total/NA	Water	8260D	
310-252104-7	PZ-R4	Total/NA	Water	8260D	
MB 310-382302/5	Method Blank	Total/NA	Water	8260D	
LCS 310-382302/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-382302/7	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 382435

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-252104-3	MW-90-15R	Total/NA	Water	8260D	
310-252104-6	PZ-R3	Total/NA	Water	8260D	
310-252104-7	PZ-R4	Total/NA	Water	8260D	
MB 310-382435/5	Method Blank	Total/NA	Water	8260D	
LCS 310-382435/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-382435/7	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 382719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-252104-1	MW-90-5	Total/NA	Water	8260D	
310-252104-2	MW-90-13	Total/NA	Water	8260D	
310-252104-4	MW-03-16	Total/NA	Water	8260D	
MB 310-382719/5	Method Blank	Total/NA	Water	8260D	
LCS 310-382719/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-382719/7	Lab Control Sample	Total/NA	Water	8260D	

Metals

Prep Batch: 382353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-252104-4	MW-03-16	Total/NA	Water	3005A	
310-252104-5	MW-06-6R	Total/NA	Water	3005A	
310-252104-6	PZ-R3	Total/NA	Water	3005A	
310-252104-7	PZ-R4	Total/NA	Water	3005A	
310-252104-8	MW-DN	Total/NA	Water	3005A	
MB 310-382353/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-382353/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-252104-4 DU	MW-03-16	Total/NA	Water	3005A	

Analysis Batch: 382566

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-252104-4	MW-03-16	Total/NA	Water	6020B	382353
310-252104-5	MW-06-6R	Total/NA	Water	6020B	382353
310-252104-6	PZ-R3	Total/NA	Water	6020B	382353

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QC Association Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Metals (Continued)

Analysis Batch: 382566 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-252104-7	PZ-R4	Total/NA	Water	6020B	382353
310-252104-8	MW-DN	Total/NA	Water	6020B	382353
MB 310-382353/1-A	Method Blank	Total/NA	Water	6020B	382353
LCS 310-382353/2-A	Lab Control Sample	Total/NA	Water	6020B	382353
310-252104-4 DU	MW-03-16	Total/NA	Water	6020B	382353

Analysis Batch: 382618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-252104-4	MW-03-16	Total/NA	Water	6020B	382353
310-252104-7	PZ-R4	Total/NA	Water	6020B	382353
310-252104-8	MW-DN	Total/NA	Water	6020B	382353
MB 310-382353/1-A	Method Blank	Total/NA	Water	6020B	382353
LCS 310-382353/2-A	Lab Control Sample	Total/NA	Water	6020B	382353
310-252104-4 DU	MW-03-16	Total/NA	Water	6020B	382353

General Chemistry

Analysis Batch: 382320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-252104-5	MW-06-6R	Total/NA	Water	I-3765-85	
310-252104-6	PZ-R3	Total/NA	Water	I-3765-85	
310-252104-7	PZ-R4	Total/NA	Water	I-3765-85	
MB 310-382320/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-382320/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 382392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-252104-4	MW-03-16	Total/NA	Water	I-3765-85	
MB 310-382392/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-382392/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 382445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-252104-8	MW-DN	Total/NA	Water	I-3765-85	
MB 310-382445/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-382445/2	Lab Control Sample	Total/NA	Water	I-3765-85	
310-252104-8 DU	MW-DN	Total/NA	Water	I-3765-85	

Lab Chronicle

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: MW-90-5

Date Collected: 03/22/23 14:53

Date Received: 03/24/23 16:15

Lab Sample ID: 310-252104-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	382719	WSE8	EET CF	03/31/23 13:33

Client Sample ID: MW-90-13

Date Collected: 03/22/23 13:49

Date Received: 03/24/23 16:15

Lab Sample ID: 310-252104-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	382719	WSE8	EET CF	03/31/23 11:26

Client Sample ID: MW-90-15R

Date Collected: 03/21/23 13:47

Date Received: 03/24/23 16:15

Lab Sample ID: 310-252104-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	382435	WSE8	EET CF	03/28/23 12:48
Total/NA	Analysis	8260D		1	382302	WSE8	EET CF	03/28/23 05:34

Client Sample ID: MW-03-16

Date Collected: 03/22/23 14:15

Date Received: 03/24/23 16:15

Lab Sample ID: 310-252104-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	382719	WSE8	EET CF	03/31/23 11:47
Total/NA	Prep	3005A			382353	DHM5	EET CF	03/28/23 09:10
Total/NA	Analysis	6020B		1	382566	A6US	EET CF	03/28/23 22:55
Total/NA	Prep	3005A			382353	DHM5	EET CF	03/28/23 09:10
Total/NA	Analysis	6020B		1	382618	A6US	EET CF	03/29/23 12:37
Total/NA	Analysis	I-3765-85		1	382392	DGU1	EET CF	03/28/23 07:19

Client Sample ID: MW-06-6R

Date Collected: 03/21/23 10:12

Date Received: 03/24/23 16:15

Lab Sample ID: 310-252104-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			382353	DHM5	EET CF	03/28/23 09:10
Total/NA	Analysis	6020B		1	382566	A6US	EET CF	03/28/23 23:01
Total/NA	Analysis	I-3765-85		1	382320	D7CP	EET CF	03/27/23 12:18

Client Sample ID: PZ-R3

Date Collected: 03/21/23 17:53

Date Received: 03/24/23 16:15

Lab Sample ID: 310-252104-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	382435	WSE8	EET CF	03/28/23 13:09
Total/NA	Analysis	8260D		1	382302	WSE8	EET CF	03/28/23 05:59

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Lab Chronicle

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Client Sample ID: PZ-R3

Date Collected: 03/21/23 17:53

Date Received: 03/24/23 16:15

Lab Sample ID: 310-252104-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			382353	DHM5	EET CF	03/28/23 09:10
Total/NA	Analysis	6020B		1	382566	A6US	EET CF	03/28/23 23:04
Total/NA	Analysis	I-3765-85		1	382320	D7CP	EET CF	03/27/23 12:18

Client Sample ID: PZ-R4

Date Collected: 03/21/23 17:22

Date Received: 03/24/23 16:15

Lab Sample ID: 310-252104-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	382435	WSE8	EET CF	03/28/23 13:31
Total/NA	Analysis	8260D		1	382302	WSE8	EET CF	03/28/23 06:23
Total/NA	Prep	3005A			382353	DHM5	EET CF	03/28/23 09:10
Total/NA	Analysis	6020B		1	382566	A6US	EET CF	03/28/23 23:07
Total/NA	Prep	3005A			382353	DHM5	EET CF	03/28/23 09:10
Total/NA	Analysis	6020B		1	382618	A6US	EET CF	03/29/23 12:43
Total/NA	Analysis	I-3765-85		1	382320	D7CP	EET CF	03/27/23 12:18

Client Sample ID: MW-DN

Date Collected: 03/22/23 14:15

Date Received: 03/24/23 16:15

Lab Sample ID: 310-252104-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	382269	WSE8	EET CF	03/27/23 22:37
Total/NA	Prep	3005A			382353	DHM5	EET CF	03/28/23 09:10
Total/NA	Analysis	6020B		1	382566	A6US	EET CF	03/28/23 23:10
Total/NA	Prep	3005A			382353	DHM5	EET CF	03/28/23 09:10
Total/NA	Analysis	6020B		1	382618	A6US	EET CF	03/29/23 12:46
Total/NA	Analysis	I-3765-85		1	382445	DGU1	EET CF	03/28/23 10:08

Client Sample ID: Trip Blank

Date Collected: 03/22/23 00:00

Date Received: 03/24/23 16:15

Lab Sample ID: 310-252104-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	382269	WSE8	EET CF	03/27/23 21:54

Laboratory References:

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

Eurofins Cedar Falls

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-252104-1

Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	04-12-23

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

Method Summary

Client: SCS Engineers

Job ID: 310-252104-1

Project/Site: CCASW EN 1st 2023 Event - HMSP

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

Protocol References:

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

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

Laboratory References:

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



Environment Testing
America



310-252104 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SLS Engineers</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>5/24/23</u>	TIME <u>1615</u>	Received By: <u>Am</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	☒ Yes ☐ No	If yes: Cooler ID: _____	
Multiple Coolers?	☒ Yes ☐ No	If yes: Cooler # <u>1</u> of <u>4</u>	
Cooler Custody Seals Present?	☐ Yes ☒ No	If yes: Cooler custody seals intact? ☐ Yes ☐ No	
Sample Custody Seals Present?	☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No	
Trip Blank Present?	☒ Yes ☐ No	If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant:	☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____	☐ NONE	
Thermometer ID:	<u>W</u>	Correction Factor (°C): <u>0</u>	
Temp Blank Temperature If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	<u>1.1</u>	Corrected Temp (°C): <u>1.1</u>	
Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			
<u>P2 R4 MW4U m-DS2 MW05-8R</u>			
<u>P2 R3 MW41 MW90-15R</u>			
<u>MW32</u>			



Environment Testing
America

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SLS Engineers</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>5/24/23</u>	TIME <u>1615</u>	Received By: <u>Am</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes: Cooler ID: _____
Multiple Coolers?		☒ Yes ☐ No	If yes: Cooler # <u>2</u> of <u>4</u>
Cooler Custody Seals Present?		☐ Yes ☒ No	If yes: Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☐ Yes ☒ No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>W</u>		Correction Factor (°C): <u>0</u>	
Temp Blank Temperature: If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):		Corrected Temp (°C):	
Sample Container Temperature			
Container(s) used:	CONTAINER 1 <u>1L NT</u>		CONTAINER 2
Uncorrected Temp (°C):	<u>0.5</u>		
Corrected Temp (°C):	<u>0.5</u>		
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			
<u>MW32</u> <u>MW43 BG</u>			
<u>MW90-11</u> <u>MW39</u>			
<u>MW28</u> <u>MW06-7R</u>			



Environment Testing
America

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Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>GLS Engineers</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>3/24/23</u>	TIME <u>1615</u>	Received By: <u>AM</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?	☒ Yes ☐ No	If yes: Cooler ID: _____	
Multiple Coolers?	☒ Yes ☐ No	If yes: Cooler # <u>3</u> of <u>4</u>	
Cooler Custody Seals Present?	☐ Yes ☒ No	If yes: Cooler custody seals intact? ☐ Yes ☐ No	
Sample Custody Seals Present?	☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No	
Trip Blank Present?	☒ Yes ☒ No	If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant:	☒ Wet Ice ☐ Blue ice ☐ Dry ice ☐ Other: _____	☐ NONE	
Thermometer ID:	<u>W</u>	Correction Factor (°C): <u>0</u>	
Temp Blank Temperature: If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	<u>0.6</u>	Corrected Temp (°C): <u>0.6</u>	
Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			
<u>MW 42</u>			
<u>64-1</u>			
<u>MW 33</u>			



Environment Testing
America

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Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SLS Engineers</u>			
City/State:	CITY: _____	STATE: _____	Project: _____
Receipt Information			
Date/Time Received:	DATE: <u>3/24/23</u>	TIME: _____	Received By: <u>Am</u>
Delivery Type: ☐ UPS ☒ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes: Cooler ID: _____
Multiple Coolers?		☒ Yes ☐ No	If yes: Cooler # <u>4</u> of <u>4</u>
Cooler Custody Seals Present?		☐ Yes ☒ No	If yes: Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☐ Yes ☒ No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: ☒ Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>W</u>		Correction Factor (°C): <u>0</u>	
Temp Blank Temperature: If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>1.1</u>		Corrected Temp (°C): <u>1.1</u>	
Sample Container Temperature			
Container(s) used:	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			
<u>MW01</u> <u>MW20</u> <u>MW90-5</u> <u>MW19</u>			
<u>MW03-16</u> <u>MW90-13</u> <u>MW90-18</u>			
<u>MW24</u> <u>MW-29</u>			

704 Enterprise Drive
Cedar Falls, Iowa 50613

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

REPORT TO: Nathan Ohrt (nohrt@scsengineers.com)

NAME: SCS Engineers

COMPANY NAME: CCASW EN 1st 2023 Event HMSP

PROJECT NAME: 23001

PROJECT NUMBER: 1609 All State Court, Suite 100

ADDRESS: West Des Moines, IA 50265

CITY/STATE/ZIP:

SAMPLER: SCS Engineers

SITE NAME: Clinton County Sanitary Landfill (East North)

ADDRESS:

CITY/STATE/ZIP:

TELEPHONE NUMBER: 504 504

SAMPLED BY (PRINT NAME): Scott Stollen

SIGNATURE: [Signature]

Sample ID	# of Containers Ordered	Sub (B/R)	Time Sampled	# of Containers Shipped	Grab	Composite	Field Filtered	Preservative						Matrix						Analyze For						Trip Blank	Fax Results
								HNO ₃ (Red & White Label)	HCl (Blue & White Label)	NaOH (Orange & White Label)	H ₂ SO ₄ Plastic (Yellow & White Label)	H ₂ SO ₄ Glass (Yellow & White Label)	None (Black & White Label)	Trip Blank	Groundwater	Wastewater	Drinking Water	Sludge	Soil	Trip Blank	Appendix I VOCs	Appendix I Metals list*	Total Suspended Solids	Arsenic	Appendix I Metals list*	Trip Blank	
MW-90-5		3-22	14 53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-90-13		3-22	13 49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-90-15R		3-22	13 47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-03 16		3-22	14 15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-06-6R		3-21	10 12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PZ-R3		3-21	17 53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PZ R4		3-21	17 22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-DN		3-22	14 15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Trip Blank																										X	

*Appendix I metals list includes arsenic, barium, beryllium, cadmium, cobalt, copper, lead, nickel, and vanadium

Relinquished by: [Signature] Date: 3/24 Time: 13 00

Received by: [Signature] Date: 3-24-23 Time: 16 15

Shipped Via: MU

Comments: [Blank]

Laboratory Comments: (1) For Appendix I and II, report to the detection limits. Make sure that the reporting units are below the EPA's MCL. (2) For analysis other than Appendix I and II, report to the detection limits. Please make sure that the detection units are below the EPA's MCL. (3) In the "Result" column for all LDD files, when non-detect, please report "X" for reporting units or the detection limits instead of indicating with "ND".

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-252104-1

Login Number: 252104

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Costello, Mackenzie K

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

ANALYTICAL REPORT

PREPARED FOR

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

Generated 8/25/2023 2:40:33 PM

JOB DESCRIPTION

CCASW EN 1st 2023 Event - HMSP
SDG NUMBER 23001

JOB NUMBER

310-262781-1

Eurofins Cedar Falls

Job Notes

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

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

Authorization



Generated
8/25/2023 2:40:33 PM

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

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Case Narrative

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262781-1
SDG: 23001

Job ID: 310-262781-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-262781-1

Receipt

The sample was received on 8/17/2023 8:35 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 -0.1°C

GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-397500 recovered above the upper control limit for 2-Hexanone (36.2%D), 4-Methyl-2-pentanone (MIBK) (46.7%D) and Vinyl acetate (55.4%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 310-397500/3).

Method 8260D: The laboratory control sample (LCS) for analytical batch 310-397500 recovered outside control limits for the following analytes: 2-Hexanone, 4-Methyl-2-pentanone (MIBK) and Vinyl acetate. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

Sample Summary

Client: SCS Engineers

Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262781-1

SDG: 23001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-262781-1	MW-90-5	Water	08/16/23 17:25	08/17/23 08:35

1

2

3

4

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Detection Summary

Client: SCS Engineers

Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262781-1

SDG: 23001

Client Sample ID: MW-90-5

Lab Sample ID: 310-262781-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzene	0.448	J	0.500	0.220	ug/L	1			8260D	Total/NA
Chlorobenzene	2.23		1.00	0.400	ug/L	1			8260D	Total/NA
cis-1,2-Dichloroethene	21.3		1.00	0.210	ug/L	1			8260D	Total/NA
1,1-Dichloroethane	0.936	J	1.00	0.220	ug/L	1			8260D	Total/NA
Tetrachloroethene	2.17		1.00	0.480	ug/L	1			8260D	Total/NA
trans-1,2-Dichloroethene	0.784	J	1.00	0.270	ug/L	1			8260D	Total/NA
Trichloroethene	15.9		1.00	0.430	ug/L	1			8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Quantitation Limit Exceptions Summary

Client: SCS Engineers

Job ID: 310-262781-1

Project/Site: CCASW EN 1st 2023 Event - HMSP

SDG: 23001

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

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

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262781-1
SDG: 23001

Client Sample ID: MW-90-5

Lab Sample ID: 310-262781-1

Date Collected: 08/16/23 17:25

Matrix: Water

Date Received: 08/17/23 08:35

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			08/23/23 13:47	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/23/23 13:47	1
Benzene	0.448	J	0.500	0.220	ug/L			08/23/23 13:47	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/23/23 13:47	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/23/23 13:47	1
Bromoform	<5.00		5.00	0.780	ug/L			08/23/23 13:47	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/23/23 13:47	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/23/23 13:47	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/23/23 13:47	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/23/23 13:47	1
Chlorobenzene	2.23		1.00	0.400	ug/L			08/23/23 13:47	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/23/23 13:47	1
Chloroethane	<4.00		4.00	0.790	ug/L			08/23/23 13:47	1
Chloroform	<3.00		3.00	1.30	ug/L			08/23/23 13:47	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/23/23 13:47	1
cis-1,2-Dichloroethene	21.3		1.00	0.210	ug/L			08/23/23 13:47	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/23/23 13:47	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/23/23 13:47	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/23/23 13:47	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/23/23 13:47	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/23/23 13:47	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			08/23/23 13:47	1
1,1-Dichloroethane	0.936	J	1.00	0.220	ug/L			08/23/23 13:47	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/23/23 13:47	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/23/23 13:47	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/23/23 13:47	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/23/23 13:47	1
2-Hexanone	<10.0	*+	10.0	2.00	ug/L			08/23/23 13:47	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/23/23 13:47	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/23/23 13:47	1
4-Methyl-2-pentanone (MIBK)	<10.0	*+	10.0	2.10	ug/L			08/23/23 13:47	1
Styrene	<1.00		1.00	0.370	ug/L			08/23/23 13:47	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/23/23 13:47	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/23/23 13:47	1
Tetrachloroethene	2.17		1.00	0.480	ug/L			08/23/23 13:47	1
Toluene	<1.00		1.00	0.430	ug/L			08/23/23 13:47	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/23/23 13:47	1
trans-1,2-Dichloroethene	0.784	J	1.00	0.270	ug/L			08/23/23 13:47	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/23/23 13:47	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/23/23 13:47	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/23/23 13:47	1
Trichloroethene	15.9		1.00	0.430	ug/L			08/23/23 13:47	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/23/23 13:47	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/23/23 13:47	1
Vinyl acetate	<10.0	*+	10.0	2.50	ug/L			08/23/23 13:47	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			08/23/23 13:47	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			08/23/23 13:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		80 - 120		08/23/23 13:47	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262781-1
SDG: 23001

Client Sample ID: MW-90-5

Lab Sample ID: 310-262781-1

Date Collected: 08/16/23 17:25

Matrix: Water

Date Received: 08/17/23 08:35

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	92		80 - 128		08/23/23 13:47	1
Toluene-d8 (Surr)	104		80 - 120		08/23/23 13:47	1

Definitions/Glossary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262781-1
SDG: 23001

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Surrogate Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262781-1
SDG: 23001

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	BFB	DBFM	TOL
		(80-120)	(80-128)	(80-120)
310-262781-1	MW-90-5	98	92	104
310-262781-1 MS	MW-90-5	97	93	105
310-262781-1 MSD	MW-90-5	96	94	106
LCS 310-397500/6	Lab Control Sample	97	93	106
LCS 310-397500/7	Lab Control Sample	99	89	104
MB 310-397500/5	Method Blank	101	91	103
Surrogate Legend				
BFB = 4-Bromofluorobenzene (Surr)				
DBFM = Dibromofluoromethane (Surr)				
TOL = Toluene-d8 (Surr)				

QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262781-1
SDG: 23001

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

Lab Sample ID: MB 310-397500/5

Matrix: Water

Analysis Batch: 397500

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			08/23/23 11:53	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/23/23 11:53	1
Benzene	<0.500		0.500	0.220	ug/L			08/23/23 11:53	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/23/23 11:53	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/23/23 11:53	1
Bromoform	<5.00		5.00	0.780	ug/L			08/23/23 11:53	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/23/23 11:53	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/23/23 11:53	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/23/23 11:53	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/23/23 11:53	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			08/23/23 11:53	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/23/23 11:53	1
Chloroethane	<4.00		4.00	0.790	ug/L			08/23/23 11:53	1
Chloroform	<3.00		3.00	1.30	ug/L			08/23/23 11:53	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/23/23 11:53	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			08/23/23 11:53	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/23/23 11:53	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/23/23 11:53	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/23/23 11:53	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/23/23 11:53	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/23/23 11:53	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			08/23/23 11:53	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			08/23/23 11:53	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/23/23 11:53	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/23/23 11:53	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/23/23 11:53	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/23/23 11:53	1
2-Hexanone	<10.0		10.0	2.00	ug/L			08/23/23 11:53	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/23/23 11:53	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/23/23 11:53	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			08/23/23 11:53	1
Styrene	<1.00		1.00	0.370	ug/L			08/23/23 11:53	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/23/23 11:53	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/23/23 11:53	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			08/23/23 11:53	1
Toluene	<1.00		1.00	0.430	ug/L			08/23/23 11:53	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/23/23 11:53	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			08/23/23 11:53	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/23/23 11:53	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/23/23 11:53	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/23/23 11:53	1
Trichloroethene	<1.00		1.00	0.430	ug/L			08/23/23 11:53	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/23/23 11:53	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/23/23 11:53	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			08/23/23 11:53	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			08/23/23 11:53	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			08/23/23 11:53	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262781-1
SDG: 23001

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

Lab Sample ID: MB 310-397500/5

Matrix: Water

Analysis Batch: 397500

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		80 - 120		08/23/23 11:53	1
Dibromofluoromethane (Surr)	91		80 - 128		08/23/23 11:53	1
Toluene-d8 (Surr)	103		80 - 120		08/23/23 11:53	1

Lab Sample ID: LCS 310-397500/6

Matrix: Water

Analysis Batch: 397500

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	40.0	52.58		ug/L		131	50 - 150
Acrylonitrile	200	253.3		ug/L		127	50 - 150
Benzene	20.0	21.72		ug/L		109	73 - 122
Bromochloromethane	20.0	18.83		ug/L		94	68 - 132
Bromodichloromethane	20.0	20.58		ug/L		103	72 - 121
Bromoform	20.0	16.16		ug/L		81	55 - 129
2-Butanone (MEK)	40.0	52.45		ug/L		131	50 - 150
Carbon disulfide	20.0	20.49		ug/L		102	58 - 131
Carbon tetrachloride	20.0	19.59		ug/L		98	67 - 132
Chlorobenzene	20.0	20.54		ug/L		103	69 - 121
Chlorodibromomethane	20.0	17.28		ug/L		86	69 - 122
Chloroform	20.0	20.69		ug/L		103	72 - 120
cis-1,2-Dichloroethene	20.0	21.40		ug/L		107	74 - 120
cis-1,3-Dichloropropene	20.0	22.45		ug/L		112	71 - 126
1,2-Dibromo-3-Chloropropane	20.0	26.06		ug/L		130	50 - 150
1,2-Dibromoethane (EDB)	20.0	19.78		ug/L		99	73 - 125
Dibromomethane	20.0	18.43		ug/L		92	72 - 123
1,2-Dichlorobenzene	20.0	20.35		ug/L		102	68 - 120
1,4-Dichlorobenzene	20.0	20.38		ug/L		102	67 - 120
1,1-Dichloroethane	20.0	22.63		ug/L		113	71 - 123
1,2-Dichloroethane	20.0	20.88		ug/L		104	70 - 124
1,1-Dichloroethene	20.0	24.06		ug/L		120	61 - 129
1,2-Dichloropropane	20.0	22.22		ug/L		111	73 - 121
Ethylbenzene	20.0	21.91		ug/L		110	69 - 122
2-Hexanone	40.0	55.18	*+	ug/L		138	60 - 132
Iodomethane	20.0	12.81		ug/L		64	10 - 150
Methylene Chloride	20.0	21.02		ug/L		105	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	56.65	*+	ug/L		142	62 - 130
Styrene	20.0	21.61		ug/L		108	67 - 125
1,1,1,2-Tetrachloroethane	20.0	19.30		ug/L		96	68 - 123
1,1,2,2-Tetrachloroethane	20.0	20.10		ug/L		100	64 - 124
Tetrachloroethene	20.0	21.19		ug/L		106	69 - 131
Toluene	20.0	21.34		ug/L		107	72 - 121
trans-1,4-Dichloro-2-butene	20.0	25.68		ug/L		128	48 - 150
trans-1,2-Dichloroethene	20.0	22.66		ug/L		113	68 - 125
trans-1,3-Dichloropropene	20.0	21.19		ug/L		106	68 - 124
1,1,1-Trichloroethane	20.0	21.21		ug/L		106	71 - 128
1,1,2-Trichloroethane	20.0	20.77		ug/L		104	70 - 124
Trichloroethene	20.0	20.20		ug/L		101	73 - 126

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262781-1
SDG: 23001

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

Lab Sample ID: LCS 310-397500/6

Matrix: Water

Analysis Batch: 397500

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	20.0	19.53		ug/L		98	64 - 125
Vinyl acetate	40.0	61.34	*+	ug/L		153	50 - 150
Xylenes, Total	40.0	42.35		ug/L		106	68 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	93		80 - 128
Toluene-d8 (Surr)	106		80 - 120

Lab Sample ID: LCS 310-397500/7

Matrix: Water

Analysis Batch: 397500

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	18.69		ug/L		93	24 - 150
Chloroethane	20.0	22.59		ug/L		113	51 - 137
Chloromethane	20.0	20.72		ug/L		104	37 - 150
Trichlorofluoromethane	20.0	23.71		ug/L		119	56 - 144
Vinyl chloride	20.0	19.62		ug/L		98	57 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	89		80 - 128
Toluene-d8 (Surr)	104		80 - 120

Lab Sample ID: 310-262781-1 MS

Matrix: Water

Analysis Batch: 397500

Client Sample ID: MW-90-5

Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	93		80 - 128
Toluene-d8 (Surr)	105		80 - 120

Lab Sample ID: 310-262781-1 MSD

Matrix: Water

Analysis Batch: 397500

Client Sample ID: MW-90-5

Prep Type: Total/NA

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	94		80 - 128
Toluene-d8 (Surr)	106		80 - 120

QC Association Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262781-1
SDG: 23001

GC/MS VOA

Analysis Batch: 397500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-262781-1	MW-90-5	Total/NA	Water	8260D	
MB 310-397500/5	Method Blank	Total/NA	Water	8260D	
LCS 310-397500/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-397500/7	Lab Control Sample	Total/NA	Water	8260D	
310-262781-1 MS	MW-90-5	Total/NA	Water	8260D	
310-262781-1 MSD	MW-90-5	Total/NA	Water	8260D	

Lab Chronicle

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262781-1
SDG: 23001

Client Sample ID: MW-90-5
Date Collected: 08/16/23 17:25
Date Received: 08/17/23 08:35

Lab Sample ID: 310-262781-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	397500	FE5V	EET CF	08/23/23 13:47

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

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262781-1
SDG: 23001

Laboratory: Eurofins Cedar Falls

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

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

1
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16

Method Summary

Client: SCS Engineers

Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262781-1

SDG: 23001

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF

Protocol References:

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

Laboratory References:

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



Environment Testing
America



310-262781 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>8-17-23</u>	TIME <u>835</u>	Received By: <u>mc</u>
Delivery Type: ☒ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes: Cooler ID: _____
Multiple Coolers?		☐ Yes ☒ No	If yes: Cooler # _____ of _____
Cooler Custody Seals Present?		☒ Yes ☐ No	If yes: Cooler custody seals intact? ☒ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☐ Yes ☒ No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>R</u>		Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>-0.1</u>		Corrected Temp (°C): <u>-0.1</u>	
• Sample Container Temperature			
Container(s) used:	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

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

SAMPLER: _____
SITE NAME: _____
ADDRESS: _____
CITY/STATE/ZIP: _____
TELEPHONE NUMBER: _____
SAMPLED BY: (PRINT NAME) _____
SIGNATURE: _____

REPORT TO:
NAME:
COMPANY NAME:
PROJECT NAME:
PROJECT NUMBER:
ADDRESS:
CITY/STATE/ZIP:

Nathan Ohrt (nohrt@scsengineers.com)
SCS Engineers
CCASW EN 1st 2023 Event HMSP
23001
1609 All State Court, Suite 100
West Des Moines, IA 50265

COMPANY NAME:
PROJECT NAME:
PROJECT NUMBER:
ADDRESS:
CITY/STATE/ZIP:

CITY/STATE/ZIP: 515-205-5977
TELEPHONE NUMBER: 515-205-5977
SAMPLED BY: (PRINT NAME) Carolyn Howard
SIGNATURE: Carolyn Howard
FAX: _____

TELEPHONE NUMBER 515-205-5977

SAMPLED BY: (PRINT NAME) C. J. G. 22107

SIGNATURE Colin G. G.

[illegible]

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Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-262781-1

SDG Number: 23001

Login Number: 262781

List Number: 1

Creator: Homolar, Dana J

List Source: Eurofins Cedar Falls

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

ANALYTICAL REPORT

PREPARED FOR

Attn: Nathan Ohrt
SCS Engineers
1690 All State Court
Suite 100
West Des Moines, Iowa 50265
Generated 9/25/2023 5:03:53 PM Revision 1

JOB DESCRIPTION

CCASW EN 1st 2023 Event - HMSP
SDG NUMBER 23001

JOB NUMBER

310-262928-1

Eurofins Cedar Falls

Job Notes

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

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

Authorization



Authorized for release by
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(319)277-2401

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Revision 1

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Case Narrative

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Job ID: 310-262928-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-262928-1

REVISION

The report being provided is a revision of the original report sent on 8/28/2023. The report (revision 1) is being revised due to App1 metals removed from MW-06-6R, remaining metals list: arsenic, barium, beryllium, cadmium, cobalt, copper, lead, nickel, and vanadium..

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

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

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

Receipt

The samples were received on 8/18/2023 8:25 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.3°C and 1.8°C

GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-397500 recovered above the upper control limit for 2-Hexanone (36.2%D), 4-Methyl-2-pentanone (MIBK) (46.7%D) and Vinyl acetate (55.4%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 310-397500/3).

Method 8260D: The laboratory control sample (LCS) for analytical batch 310-397500 recovered outside control limits for the following analytes: 2-Hexanone, 4-Methyl-2-pentanone (MIBK) and Vinyl acetate. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-397537 recovered above the upper control limit for 2-Hexanone (33.3%D) and 4-Methyl-2-pentanone (MIBK) (41.0%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 310-397537/3).

Method 8260D: The laboratory control sample (LCS) for analytical batch 310-397537 recovered outside control limits for the following analytes: 2-Hexanone and 4-Methyl-2-pentanone (MIBK). These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

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: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-262928-1	MW-06-7R	Water	08/16/23 12:00	08/18/23 08:25
310-262928-2	MW-05-2	Water	08/16/23 20:10	08/18/23 08:25
310-262928-3	MW-29	Water	08/16/23 17:35	08/18/23 08:25
310-262928-4	MW-DS1	Water	08/16/23 20:30	08/18/23 08:25
310-262928-5	MW-90-13	Water	08/16/23 16:21	08/18/23 08:25
310-262928-6	MW-03-16	Water	08/16/23 13:25	08/18/23 08:25
310-262928-7	MW-06-6R	Water	08/16/23 11:15	08/18/23 08:25
310-262928-8	PZ-R3	Water	08/16/23 14:34	08/18/23 08:25
310-262928-9	PZ-R4	Water	08/16/23 15:12	08/18/23 08:25
310-262928-10	MW-DN	Water	08/16/23 13:20	08/18/23 08:25
310-262928-11	Trip Blank 1	Water	08/16/23 00:00	08/18/23 08:25
310-262928-12	Trip Blank 2	Water	08/16/23 00:00	08/18/23 08:25

Detection Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-06-7R

Lab Sample ID: 310-262928-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00715		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.206	B	0.00200	0.000640	mg/L	1		6020B	Total/NA
Total Suspended Solids	37.5		7.50	2.55	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-05-2

Lab Sample ID: 310-262928-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.18	J	10.0	3.10	ug/L	1		8260D	Total/NA
Barium	0.123	B	0.00200	0.000640	mg/L	1		6020B	Total/NA
Chromium	0.00187	J	0.00500	0.00110	mg/L	1		6020B	Total/NA
Cobalt	0.000181	J	0.000500	0.000170	mg/L	1		6020B	Total/NA
Total Suspended Solids	9.12		1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-29

Lab Sample ID: 310-262928-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.52	J	10.0	3.10	ug/L	1		8260D	Total/NA
Barium	0.140	B	0.00200	0.000640	mg/L	1		6020B	Total/NA
Chromium	0.00266	J	0.00500	0.00110	mg/L	1		6020B	Total/NA
Cobalt	0.000256	J	0.000500	0.000170	mg/L	1		6020B	Total/NA
Total Suspended Solids	1.63	J	1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-DS1

Lab Sample ID: 310-262928-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.128	B	0.00200	0.000640	mg/L	1		6020B	Total/NA
Chromium	0.00206	J	0.00500	0.00110	mg/L	1		6020B	Total/NA
Cobalt	0.000201	J	0.000500	0.000170	mg/L	1		6020B	Total/NA
Total Suspended Solids	8.88		1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-90-13

Lab Sample ID: 310-262928-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.59		0.500	0.220	ug/L	1		8260D	Total/NA
Chlorobenzene	1.85		1.00	0.400	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	0.808	J	1.00	0.230	ug/L	1		8260D	Total/NA

Client Sample ID: MW-03-16

Lab Sample ID: 310-262928-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	11.1		0.500	0.220	ug/L	1		8260D	Total/NA
Chlorobenzene	9.20		1.00	0.400	ug/L	1		8260D	Total/NA
Chloroethane	2.57	J	4.00	0.790	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	1.87		1.00	0.230	ug/L	1		8260D	Total/NA
Xylenes, Total	0.557	J	3.00	0.400	ug/L	1		8260D	Total/NA
Arsenic	0.130		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.454	B	0.00200	0.000640	mg/L	1		6020B	Total/NA
Cadmium	0.000103	J	0.000200	0.000100	mg/L	1		6020B	Total/NA
Chromium	0.00112	J	0.00500	0.00110	mg/L	1		6020B	Total/NA
Cobalt	0.00726		0.000500	0.000170	mg/L	1		6020B	Total/NA
Lead	0.000353	J	0.000500	0.000240	mg/L	1		6020B	Total/NA
Nickel	0.0485		0.00500	0.00190	mg/L	1		6020B	Total/NA
Total Suspended Solids	116		15.0	5.10	mg/L	1		I-3765-85	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-06-6R

Lab Sample ID: 310-262928-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.414		0.00200	0.000640	mg/L	1		6020B	Total/NA

Client Sample ID: PZ-R3

Lab Sample ID: 310-262928-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.46	J	10.0	3.10	ug/L	1		8260D	Total/NA
Arsenic	0.0264		0.00200	0.000530	mg/L	1		6020B	Total/NA
Total Suspended Solids	230		15.0	5.10	mg/L	1		I-3765-85	Total/NA

Client Sample ID: PZ-R4

Lab Sample ID: 310-262928-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.466	J	0.500	0.220	ug/L	1		8260D	Total/NA
Chlorobenzene	0.931	J	1.00	0.400	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	1.02		1.00	0.210	ug/L	1		8260D	Total/NA
Vinyl chloride	0.335	J	1.00	0.180	ug/L	1		8260D	Total/NA
Arsenic	0.0365		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.430		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cobalt	0.00420		0.000500	0.000170	mg/L	1		6020B	Total/NA
Copper	0.00186	J	0.00500	0.00180	mg/L	1		6020B	Total/NA
Lead	0.00171		0.000500	0.000240	mg/L	1		6020B	Total/NA
Nickel	0.0241		0.00500	0.00190	mg/L	1		6020B	Total/NA
Thallium	0.00256		0.00100	0.000260	mg/L	1		6020B	Total/NA
Vanadium	0.00237	J	0.00500	0.00110	mg/L	1		6020B	Total/NA
Total Suspended Solids	114		15.0	5.10	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-DN

Lab Sample ID: 310-262928-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	11.7		0.500	0.220	ug/L	1		8260D	Total/NA
Chlorobenzene	9.99		1.00	0.400	ug/L	1		8260D	Total/NA
Chloroethane	2.16	J	4.00	0.790	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	2.02		1.00	0.230	ug/L	1		8260D	Total/NA
Xylenes, Total	0.572	J	3.00	0.400	ug/L	1		8260D	Total/NA

Client Sample ID: Trip Blank 1

Lab Sample ID: 310-262928-11

No Detections.

Client Sample ID: Trip Blank 2

Lab Sample ID: 310-262928-12

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Quantitation Limit Exceptions Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

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

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

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-06-7R

Lab Sample ID: 310-262928-1

Date Collected: 08/16/23 12:00

Matrix: Water

Date Received: 08/18/23 08:25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			08/23/23 14:10	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/23/23 14:10	1
Benzene	<0.500		0.500	0.220	ug/L			08/23/23 14:10	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/23/23 14:10	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/23/23 14:10	1
Bromoform	<5.00		5.00	0.780	ug/L			08/23/23 14:10	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/23/23 14:10	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/23/23 14:10	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/23/23 14:10	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/23/23 14:10	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			08/23/23 14:10	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/23/23 14:10	1
Chloroethane	<4.00		4.00	0.790	ug/L			08/23/23 14:10	1
Chloroform	<3.00		3.00	1.30	ug/L			08/23/23 14:10	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/23/23 14:10	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			08/23/23 14:10	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/23/23 14:10	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/23/23 14:10	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/23/23 14:10	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/23/23 14:10	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/23/23 14:10	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			08/23/23 14:10	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			08/23/23 14:10	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/23/23 14:10	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/23/23 14:10	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/23/23 14:10	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/23/23 14:10	1
2-Hexanone	<10.0	++	10.0	2.00	ug/L			08/23/23 14:10	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/23/23 14:10	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/23/23 14:10	1
4-Methyl-2-pentanone (MIBK)	<10.0	++	10.0	2.10	ug/L			08/23/23 14:10	1
Styrene	<1.00		1.00	0.370	ug/L			08/23/23 14:10	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/23/23 14:10	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/23/23 14:10	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			08/23/23 14:10	1
Toluene	<1.00		1.00	0.430	ug/L			08/23/23 14:10	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/23/23 14:10	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			08/23/23 14:10	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/23/23 14:10	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/23/23 14:10	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/23/23 14:10	1
Trichloroethene	<1.00		1.00	0.430	ug/L			08/23/23 14:10	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/23/23 14:10	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/23/23 14:10	1
Vinyl acetate	<10.0	++	10.0	2.50	ug/L			08/23/23 14:10	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			08/23/23 14:10	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			08/23/23 14:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		08/23/23 14:10	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-06-7R

Lab Sample ID: 310-262928-1

Date Collected: 08/16/23 12:00

Matrix: Water

Date Received: 08/18/23 08:25

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	90		80 - 128		08/23/23 14:10	1
Toluene-d8 (Surr)	104		80 - 120		08/23/23 14:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		08/21/23 09:50	08/24/23 16:44	1
Arsenic	0.00715		0.00200	0.000530	mg/L		08/21/23 09:50	08/24/23 16:44	1
Barium	0.206	B	0.00200	0.000640	mg/L		08/21/23 09:50	08/24/23 16:44	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		08/21/23 09:50	08/24/23 16:44	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		08/21/23 09:50	08/24/23 16:44	1
Chromium	<0.00500		0.00500	0.00110	mg/L		08/21/23 09:50	08/24/23 16:44	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		08/21/23 09:50	08/24/23 16:44	1
Copper	<0.00500		0.00500	0.00180	mg/L		08/21/23 09:50	08/24/23 16:44	1
Lead	<0.000500		0.000500	0.000240	mg/L		08/21/23 09:50	08/24/23 16:44	1
Nickel	<0.00500		0.00500	0.00190	mg/L		08/21/23 09:50	08/24/23 16:44	1
Selenium	<0.00500		0.00500	0.00140	mg/L		08/21/23 09:50	08/24/23 16:44	1
Silver	<0.00100		0.00100	0.000500	mg/L		08/21/23 09:50	08/24/23 16:44	1
Thallium	<0.00100		0.00100	0.000260	mg/L		08/21/23 09:50	08/24/23 16:44	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		08/21/23 09:50	08/24/23 16:44	1
Zinc	<0.0200		0.0200	0.00640	mg/L		08/21/23 09:50	08/24/23 16:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	37.5		7.50	2.55	mg/L			08/18/23 09:40	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-05-2

Lab Sample ID: 310-262928-2

Date Collected: 08/16/23 20:10

Matrix: Water

Date Received: 08/18/23 08:25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.18	J	10.0	3.10	ug/L			08/23/23 14:33	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/23/23 14:33	1
Benzene	<0.500		0.500	0.220	ug/L			08/23/23 14:33	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/23/23 14:33	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/23/23 14:33	1
Bromoform	<5.00		5.00	0.780	ug/L			08/23/23 14:33	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/23/23 14:33	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/23/23 14:33	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/23/23 14:33	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/23/23 14:33	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			08/23/23 14:33	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/23/23 14:33	1
Chloroethane	<4.00		4.00	0.790	ug/L			08/23/23 14:33	1
Chloroform	<3.00		3.00	1.30	ug/L			08/23/23 14:33	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/23/23 14:33	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			08/23/23 14:33	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/23/23 14:33	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/23/23 14:33	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/23/23 14:33	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/23/23 14:33	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/23/23 14:33	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			08/23/23 14:33	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			08/23/23 14:33	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/23/23 14:33	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/23/23 14:33	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/23/23 14:33	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/23/23 14:33	1
2-Hexanone	<10.0	++	10.0	2.00	ug/L			08/23/23 14:33	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/23/23 14:33	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/23/23 14:33	1
4-Methyl-2-pentanone (MIBK)	<10.0	++	10.0	2.10	ug/L			08/23/23 14:33	1
Styrene	<1.00		1.00	0.370	ug/L			08/23/23 14:33	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/23/23 14:33	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/23/23 14:33	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			08/23/23 14:33	1
Toluene	<1.00		1.00	0.430	ug/L			08/23/23 14:33	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/23/23 14:33	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			08/23/23 14:33	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/23/23 14:33	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/23/23 14:33	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/23/23 14:33	1
Trichloroethene	<1.00		1.00	0.430	ug/L			08/23/23 14:33	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/23/23 14:33	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/23/23 14:33	1
Vinyl acetate	<10.0	++	10.0	2.50	ug/L			08/23/23 14:33	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			08/23/23 14:33	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			08/23/23 14:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		08/23/23 14:33	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-05-2

Lab Sample ID: 310-262928-2

Date Collected: 08/16/23 20:10

Matrix: Water

Date Received: 08/18/23 08:25

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	89		80 - 128		08/23/23 14:33	1
Toluene-d8 (Surr)	104		80 - 120		08/23/23 14:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		08/21/23 09:50	08/24/23 16:47	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		08/21/23 09:50	08/24/23 02:15	1
Barium	0.123	B	0.00200	0.000640	mg/L		08/21/23 09:50	08/24/23 02:15	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		08/21/23 09:50	08/24/23 02:15	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		08/21/23 09:50	08/24/23 02:15	1
Chromium	0.00187	J	0.00500	0.00110	mg/L		08/21/23 09:50	08/24/23 02:15	1
Cobalt	0.000181	J	0.000500	0.000170	mg/L		08/21/23 09:50	08/24/23 02:15	1
Copper	<0.00500		0.00500	0.00180	mg/L		08/21/23 09:50	08/24/23 02:15	1
Lead	<0.000500		0.000500	0.000240	mg/L		08/21/23 09:50	08/24/23 02:15	1
Nickel	<0.00500		0.00500	0.00190	mg/L		08/21/23 09:50	08/24/23 02:15	1
Selenium	<0.00500		0.00500	0.00140	mg/L		08/21/23 09:50	08/24/23 02:15	1
Silver	<0.00100		0.00100	0.000500	mg/L		08/21/23 09:50	08/24/23 02:15	1
Thallium	<0.00100		0.00100	0.000260	mg/L		08/21/23 09:50	08/24/23 02:15	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		08/21/23 09:50	08/24/23 02:15	1
Zinc	<0.0200		0.0200	0.00640	mg/L		08/21/23 09:50	08/24/23 02:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	9.12		1.88	0.638	mg/L			08/18/23 09:40	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-29

Lab Sample ID: 310-262928-3

Date Collected: 08/16/23 17:35

Matrix: Water

Date Received: 08/18/23 08:25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	5.52	J	10.0	3.10	ug/L			08/23/23 14:55	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/23/23 14:55	1
Benzene	<0.500		0.500	0.220	ug/L			08/23/23 14:55	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/23/23 14:55	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/23/23 14:55	1
Bromoform	<5.00		5.00	0.780	ug/L			08/23/23 14:55	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/23/23 14:55	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/23/23 14:55	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/23/23 14:55	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/23/23 14:55	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			08/23/23 14:55	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/23/23 14:55	1
Chloroethane	<4.00		4.00	0.790	ug/L			08/23/23 14:55	1
Chloroform	<3.00		3.00	1.30	ug/L			08/23/23 14:55	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/23/23 14:55	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			08/23/23 14:55	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/23/23 14:55	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/23/23 14:55	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/23/23 14:55	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/23/23 14:55	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/23/23 14:55	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			08/23/23 14:55	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			08/23/23 14:55	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/23/23 14:55	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/23/23 14:55	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/23/23 14:55	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/23/23 14:55	1
2-Hexanone	<10.0	++	10.0	2.00	ug/L			08/23/23 14:55	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/23/23 14:55	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/23/23 14:55	1
4-Methyl-2-pentanone (MIBK)	<10.0	++	10.0	2.10	ug/L			08/23/23 14:55	1
Styrene	<1.00		1.00	0.370	ug/L			08/23/23 14:55	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/23/23 14:55	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/23/23 14:55	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			08/23/23 14:55	1
Toluene	<1.00		1.00	0.430	ug/L			08/23/23 14:55	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/23/23 14:55	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			08/23/23 14:55	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/23/23 14:55	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/23/23 14:55	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/23/23 14:55	1
Trichloroethene	<1.00		1.00	0.430	ug/L			08/23/23 14:55	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/23/23 14:55	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/23/23 14:55	1
Vinyl acetate	<10.0	++	10.0	2.50	ug/L			08/23/23 14:55	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			08/23/23 14:55	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			08/23/23 14:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		80 - 120		08/23/23 14:55	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-29

Date Collected: 08/16/23 17:35

Date Received: 08/18/23 08:25

Lab Sample ID: 310-262928-3

Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	90		80 - 128		08/23/23 14:55	1
Toluene-d8 (Surr)	106		80 - 120		08/23/23 14:55	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		08/21/23 09:50	08/24/23 16:49	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		08/21/23 09:50	08/24/23 02:18	1
Barium	0.140	B	0.00200	0.000640	mg/L		08/21/23 09:50	08/24/23 02:18	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		08/21/23 09:50	08/24/23 02:18	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		08/21/23 09:50	08/24/23 02:18	1
Chromium	0.00266	J	0.00500	0.00110	mg/L		08/21/23 09:50	08/24/23 02:18	1
Cobalt	0.000256	J	0.000500	0.000170	mg/L		08/21/23 09:50	08/24/23 02:18	1
Copper	<0.00500		0.00500	0.00180	mg/L		08/21/23 09:50	08/24/23 02:18	1
Lead	<0.000500		0.000500	0.000240	mg/L		08/21/23 09:50	08/24/23 02:18	1
Nickel	<0.00500		0.00500	0.00190	mg/L		08/21/23 09:50	08/24/23 02:18	1
Selenium	<0.00500		0.00500	0.00140	mg/L		08/21/23 09:50	08/24/23 02:18	1
Silver	<0.00100		0.00100	0.000500	mg/L		08/21/23 09:50	08/24/23 02:18	1
Thallium	<0.00100		0.00100	0.000260	mg/L		08/21/23 09:50	08/24/23 02:18	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		08/21/23 09:50	08/24/23 02:18	1
Zinc	<0.0200		0.0200	0.00640	mg/L		08/21/23 09:50	08/24/23 02:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	1.63	J	1.88	0.638	mg/L			08/18/23 09:40	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-DS1

Lab Sample ID: 310-262928-4

Date Collected: 08/16/23 20:30

Matrix: Water

Date Received: 08/18/23 08:25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			08/23/23 15:18	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/23/23 15:18	1
Benzene	<0.500		0.500	0.220	ug/L			08/23/23 15:18	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/23/23 15:18	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/23/23 15:18	1
Bromoform	<5.00		5.00	0.780	ug/L			08/23/23 15:18	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/23/23 15:18	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/23/23 15:18	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/23/23 15:18	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/23/23 15:18	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			08/23/23 15:18	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/23/23 15:18	1
Chloroethane	<4.00		4.00	0.790	ug/L			08/23/23 15:18	1
Chloroform	<3.00		3.00	1.30	ug/L			08/23/23 15:18	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/23/23 15:18	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			08/23/23 15:18	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/23/23 15:18	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/23/23 15:18	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/23/23 15:18	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/23/23 15:18	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/23/23 15:18	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			08/23/23 15:18	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			08/23/23 15:18	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/23/23 15:18	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/23/23 15:18	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/23/23 15:18	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/23/23 15:18	1
2-Hexanone	<10.0	++	10.0	2.00	ug/L			08/23/23 15:18	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/23/23 15:18	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/23/23 15:18	1
4-Methyl-2-pentanone (MIBK)	<10.0	++	10.0	2.10	ug/L			08/23/23 15:18	1
Styrene	<1.00		1.00	0.370	ug/L			08/23/23 15:18	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/23/23 15:18	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/23/23 15:18	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			08/23/23 15:18	1
Toluene	<1.00		1.00	0.430	ug/L			08/23/23 15:18	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/23/23 15:18	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			08/23/23 15:18	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/23/23 15:18	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/23/23 15:18	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/23/23 15:18	1
Trichloroethene	<1.00		1.00	0.430	ug/L			08/23/23 15:18	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/23/23 15:18	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/23/23 15:18	1
Vinyl acetate	<10.0	++	10.0	2.50	ug/L			08/23/23 15:18	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			08/23/23 15:18	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			08/23/23 15:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		80 - 120		08/23/23 15:18	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-DS1

Lab Sample ID: 310-262928-4

Date Collected: 08/16/23 20:30

Matrix: Water

Date Received: 08/18/23 08:25

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	91		80 - 128		08/23/23 15:18	1
Toluene-d8 (Surr)	103		80 - 120		08/23/23 15:18	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		08/21/23 09:50	08/24/23 16:51	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		08/21/23 09:50	08/24/23 02:20	1
Barium	0.128	B	0.00200	0.000640	mg/L		08/21/23 09:50	08/24/23 02:20	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		08/21/23 09:50	08/24/23 02:20	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		08/21/23 09:50	08/24/23 02:20	1
Chromium	0.00206	J	0.00500	0.00110	mg/L		08/21/23 09:50	08/24/23 02:20	1
Cobalt	0.000201	J	0.000500	0.000170	mg/L		08/21/23 09:50	08/24/23 02:20	1
Copper	<0.00500		0.00500	0.00180	mg/L		08/21/23 09:50	08/24/23 02:20	1
Lead	<0.000500		0.000500	0.000240	mg/L		08/21/23 09:50	08/24/23 02:20	1
Nickel	<0.00500		0.00500	0.00190	mg/L		08/21/23 09:50	08/24/23 02:20	1
Selenium	<0.00500		0.00500	0.00140	mg/L		08/21/23 09:50	08/24/23 02:20	1
Silver	<0.00100		0.00100	0.000500	mg/L		08/21/23 09:50	08/24/23 02:20	1
Thallium	<0.00100		0.00100	0.000260	mg/L		08/21/23 09:50	08/24/23 02:20	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		08/21/23 09:50	08/24/23 02:20	1
Zinc	<0.0200		0.0200	0.00640	mg/L		08/21/23 09:50	08/24/23 02:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	8.88		1.88	0.638	mg/L			08/18/23 11:56	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-90-13

Lab Sample ID: 310-262928-5

Date Collected: 08/16/23 16:21

Matrix: Water

Date Received: 08/18/23 08:25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			08/23/23 18:22	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/23/23 18:22	1
Benzene	1.59		0.500	0.220	ug/L			08/23/23 18:22	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/23/23 18:22	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/23/23 18:22	1
Bromoform	<5.00		5.00	0.780	ug/L			08/23/23 18:22	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/23/23 18:22	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/23/23 18:22	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/23/23 18:22	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/23/23 18:22	1
Chlorobenzene	1.85		1.00	0.400	ug/L			08/23/23 18:22	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/23/23 18:22	1
Chloroethane	<4.00		4.00	0.790	ug/L			08/23/23 18:22	1
Chloroform	<3.00		3.00	1.30	ug/L			08/23/23 18:22	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/23/23 18:22	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			08/23/23 18:22	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/23/23 18:22	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/23/23 18:22	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/23/23 18:22	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/23/23 18:22	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/23/23 18:22	1
1,4-Dichlorobenzene	0.808 J		1.00	0.230	ug/L			08/23/23 18:22	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			08/23/23 18:22	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/23/23 18:22	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/23/23 18:22	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/23/23 18:22	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/23/23 18:22	1
2-Hexanone	<10.0	+	10.0	2.00	ug/L			08/23/23 18:22	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/23/23 18:22	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/23/23 18:22	1
4-Methyl-2-pentanone (MIBK)	<10.0	+	10.0	2.10	ug/L			08/23/23 18:22	1
Styrene	<1.00		1.00	0.370	ug/L			08/23/23 18:22	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/23/23 18:22	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/23/23 18:22	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			08/23/23 18:22	1
Toluene	<1.00		1.00	0.430	ug/L			08/23/23 18:22	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/23/23 18:22	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			08/23/23 18:22	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/23/23 18:22	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/23/23 18:22	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/23/23 18:22	1
Trichloroethene	<1.00		1.00	0.430	ug/L			08/23/23 18:22	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/23/23 18:22	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/23/23 18:22	1
Vinyl acetate	<10.0	+	10.0	2.50	ug/L			08/23/23 18:22	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			08/23/23 18:22	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			08/23/23 18:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		80 - 120		08/23/23 18:22	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-90-13

Date Collected: 08/16/23 16:21

Date Received: 08/18/23 08:25

Lab Sample ID: 310-262928-5

Matrix: Water

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Dibromofluoromethane (Surr)</i>	94		80 - 128		08/23/23 18:22	1
<i>Toluene-d8 (Surr)</i>	103		80 - 120		08/23/23 18:22	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-03-16

Lab Sample ID: 310-262928-6

Date Collected: 08/16/23 13:25

Matrix: Water

Date Received: 08/18/23 08:25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			08/23/23 18:45	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/23/23 18:45	1
Benzene	11.1		0.500	0.220	ug/L			08/23/23 18:45	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/23/23 18:45	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/23/23 18:45	1
Bromoform	<5.00		5.00	0.780	ug/L			08/23/23 18:45	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/23/23 18:45	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/23/23 18:45	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/23/23 18:45	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/23/23 18:45	1
Chlorobenzene	9.20		1.00	0.400	ug/L			08/23/23 18:45	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/23/23 18:45	1
Chloroethane	2.57	J	4.00	0.790	ug/L			08/23/23 18:45	1
Chloroform	<3.00		3.00	1.30	ug/L			08/23/23 18:45	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/23/23 18:45	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			08/23/23 18:45	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/23/23 18:45	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/23/23 18:45	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/23/23 18:45	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/23/23 18:45	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/23/23 18:45	1
1,4-Dichlorobenzene	1.87		1.00	0.230	ug/L			08/23/23 18:45	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			08/23/23 18:45	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/23/23 18:45	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/23/23 18:45	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/23/23 18:45	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/23/23 18:45	1
2-Hexanone	<10.0	++	10.0	2.00	ug/L			08/23/23 18:45	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/23/23 18:45	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/23/23 18:45	1
4-Methyl-2-pentanone (MIBK)	<10.0	++	10.0	2.10	ug/L			08/23/23 18:45	1
Styrene	<1.00		1.00	0.370	ug/L			08/23/23 18:45	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/23/23 18:45	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/23/23 18:45	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			08/23/23 18:45	1
Toluene	<1.00		1.00	0.430	ug/L			08/23/23 18:45	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/23/23 18:45	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			08/23/23 18:45	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/23/23 18:45	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/23/23 18:45	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/23/23 18:45	1
Trichloroethene	<1.00		1.00	0.430	ug/L			08/23/23 18:45	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/23/23 18:45	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/23/23 18:45	1
Vinyl acetate	<10.0	++	10.0	2.50	ug/L			08/23/23 18:45	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			08/23/23 18:45	1
Xylenes, Total	0.557	J	3.00	0.400	ug/L			08/23/23 18:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	97		80 - 120		08/23/23 18:45	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-03-16

Lab Sample ID: 310-262928-6

Date Collected: 08/16/23 13:25

Matrix: Water

Date Received: 08/18/23 08:25

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	93		80 - 128		08/23/23 18:45	1
Toluene-d8 (Surr)	104		80 - 120		08/23/23 18:45	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		08/21/23 09:50	08/24/23 16:53	1
Arsenic	0.130		0.00200	0.000530	mg/L		08/21/23 09:50	08/24/23 02:23	1
Barium	0.454	B	0.00200	0.000640	mg/L		08/21/23 09:50	08/24/23 02:23	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		08/21/23 09:50	08/24/23 02:23	1
Cadmium	0.000103	J	0.000200	0.000100	mg/L		08/21/23 09:50	08/24/23 02:23	1
Chromium	0.00112	J	0.00500	0.00110	mg/L		08/21/23 09:50	08/24/23 02:23	1
Cobalt	0.00726		0.000500	0.000170	mg/L		08/21/23 09:50	08/24/23 02:23	1
Copper	<0.00500		0.00500	0.00180	mg/L		08/21/23 09:50	08/24/23 02:23	1
Lead	0.000353	J	0.000500	0.000240	mg/L		08/21/23 09:50	08/24/23 02:23	1
Nickel	0.0485		0.00500	0.00190	mg/L		08/21/23 09:50	08/24/23 02:23	1
Selenium	<0.00500		0.00500	0.00140	mg/L		08/21/23 09:50	08/24/23 02:23	1
Silver	<0.00100		0.00100	0.000500	mg/L		08/21/23 09:50	08/24/23 02:23	1
Thallium	<0.00100		0.00100	0.000260	mg/L		08/21/23 09:50	08/24/23 02:23	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		08/21/23 09:50	08/24/23 02:23	1
Zinc	<0.0200		0.0200	0.00640	mg/L		08/21/23 09:50	08/24/23 02:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	116		15.0	5.10	mg/L			08/18/23 11:56	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-06-6R

Lab Sample ID: 310-262928-7

Date Collected: 08/16/23 11:15

Matrix: Water

Date Received: 08/18/23 08:25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		08/21/23 09:50	08/25/23 04:27	1
Barium	0.414		0.00200	0.000640	mg/L		08/21/23 09:50	08/25/23 04:27	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		08/21/23 09:50	08/25/23 04:27	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		08/21/23 09:50	08/25/23 04:27	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		08/21/23 09:50	08/25/23 04:27	1
Copper	<0.00500		0.00500	0.00180	mg/L		08/21/23 09:50	08/25/23 04:27	1
Lead	<0.000500		0.000500	0.000240	mg/L		08/21/23 09:50	08/25/23 04:27	1
Nickel	<0.00500		0.00500	0.00190	mg/L		08/21/23 09:50	08/25/23 04:27	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		08/21/23 09:50	08/25/23 04:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	0.638	mg/L			08/18/23 11:56	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: PZ-R3

Lab Sample ID: 310-262928-8

Date Collected: 08/16/23 14:34

Matrix: Water

Date Received: 08/18/23 08:25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.46	J	10.0	3.10	ug/L			08/23/23 15:41	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/23/23 15:41	1
Benzene	<0.500		0.500	0.220	ug/L			08/23/23 15:41	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/23/23 15:41	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/23/23 15:41	1
Bromoform	<5.00		5.00	0.780	ug/L			08/23/23 15:41	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/23/23 15:41	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/23/23 15:41	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/23/23 15:41	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/23/23 15:41	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			08/23/23 15:41	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/23/23 15:41	1
Chloroethane	<4.00		4.00	0.790	ug/L			08/23/23 15:41	1
Chloroform	<3.00		3.00	1.30	ug/L			08/23/23 15:41	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/23/23 15:41	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			08/23/23 15:41	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/23/23 15:41	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/23/23 15:41	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/23/23 15:41	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/23/23 15:41	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/23/23 15:41	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			08/23/23 15:41	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			08/23/23 15:41	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/23/23 15:41	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/23/23 15:41	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/23/23 15:41	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/23/23 15:41	1
2-Hexanone	<10.0	++	10.0	2.00	ug/L			08/23/23 15:41	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/23/23 15:41	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/23/23 15:41	1
4-Methyl-2-pentanone (MIBK)	<10.0	++	10.0	2.10	ug/L			08/23/23 15:41	1
Styrene	<1.00		1.00	0.370	ug/L			08/23/23 15:41	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/23/23 15:41	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/23/23 15:41	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			08/23/23 15:41	1
Toluene	<1.00		1.00	0.430	ug/L			08/23/23 15:41	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/23/23 15:41	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			08/23/23 15:41	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/23/23 15:41	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/23/23 15:41	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/23/23 15:41	1
Trichloroethene	<1.00		1.00	0.430	ug/L			08/23/23 15:41	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/23/23 15:41	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/23/23 15:41	1
Vinyl acetate	<10.0	++	10.0	2.50	ug/L			08/23/23 15:41	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			08/23/23 15:41	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			08/23/23 15:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		08/23/23 15:41	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: PZ-R3

Date Collected: 08/16/23 14:34

Date Received: 08/18/23 08:25

Lab Sample ID: 310-262928-8

Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	90		80 - 128		08/23/23 15:41	1
Toluene-d8 (Surr)	104		80 - 120		08/23/23 15:41	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0264		0.00200	0.000530	mg/L		08/21/23 09:50	08/25/23 05:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	230		15.0	5.10	mg/L			08/18/23 11:56	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: PZ-R4

Lab Sample ID: 310-262928-9

Date Collected: 08/16/23 15:12

Matrix: Water

Date Received: 08/18/23 08:25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			08/23/23 16:04	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/23/23 16:04	1
Benzene	0.466	J	0.500	0.220	ug/L			08/23/23 16:04	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/23/23 16:04	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/23/23 16:04	1
Bromoform	<5.00		5.00	0.780	ug/L			08/23/23 16:04	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/23/23 16:04	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/23/23 16:04	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/23/23 16:04	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/23/23 16:04	1
Chlorobenzene	0.931	J	1.00	0.400	ug/L			08/23/23 16:04	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/23/23 16:04	1
Chloroethane	<4.00		4.00	0.790	ug/L			08/23/23 16:04	1
Chloroform	<3.00		3.00	1.30	ug/L			08/23/23 16:04	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/23/23 16:04	1
cis-1,2-Dichloroethene	1.02		1.00	0.210	ug/L			08/23/23 16:04	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/23/23 16:04	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/23/23 16:04	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/23/23 16:04	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/23/23 16:04	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/23/23 16:04	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			08/23/23 16:04	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			08/23/23 16:04	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/23/23 16:04	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/23/23 16:04	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/23/23 16:04	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/23/23 16:04	1
2-Hexanone	<10.0	++	10.0	2.00	ug/L			08/23/23 16:04	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/23/23 16:04	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/23/23 16:04	1
4-Methyl-2-pentanone (MIBK)	<10.0	++	10.0	2.10	ug/L			08/23/23 16:04	1
Styrene	<1.00		1.00	0.370	ug/L			08/23/23 16:04	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/23/23 16:04	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/23/23 16:04	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			08/23/23 16:04	1
Toluene	<1.00		1.00	0.430	ug/L			08/23/23 16:04	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/23/23 16:04	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			08/23/23 16:04	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/23/23 16:04	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/23/23 16:04	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/23/23 16:04	1
Trichloroethene	<1.00		1.00	0.430	ug/L			08/23/23 16:04	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/23/23 16:04	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/23/23 16:04	1
Vinyl acetate	<10.0	++	10.0	2.50	ug/L			08/23/23 16:04	1
Vinyl chloride	0.335	J	1.00	0.180	ug/L			08/23/23 16:04	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			08/23/23 16:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		80 - 120		08/23/23 16:04	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: PZ-R4

Date Collected: 08/16/23 15:12

Date Received: 08/18/23 08:25

Lab Sample ID: 310-262928-9

Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	90		80 - 128		08/23/23 16:04	1
Toluene-d8 (Surr)	103		80 - 120		08/23/23 16:04	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		08/21/23 09:50	08/25/23 18:05	1
Arsenic	0.0365		0.00200	0.000530	mg/L		08/21/23 09:50	08/25/23 05:30	1
Barium	0.430		0.00200	0.000640	mg/L		08/21/23 09:50	08/25/23 05:30	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		08/21/23 09:50	08/25/23 05:30	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		08/21/23 09:50	08/25/23 05:30	1
Chromium	<0.00500		0.00500	0.00110	mg/L		08/21/23 09:50	08/25/23 05:30	1
Cobalt	0.00420		0.000500	0.000170	mg/L		08/21/23 09:50	08/25/23 05:30	1
Copper	0.00186 J		0.00500	0.00180	mg/L		08/21/23 09:50	08/25/23 05:30	1
Lead	0.00171		0.000500	0.000240	mg/L		08/21/23 09:50	08/25/23 05:30	1
Nickel	0.0241		0.00500	0.00190	mg/L		08/21/23 09:50	08/25/23 05:30	1
Selenium	<0.00500		0.00500	0.00140	mg/L		08/21/23 09:50	08/25/23 05:30	1
Silver	<0.00100		0.00100	0.000500	mg/L		08/21/23 09:50	08/25/23 05:30	1
Thallium	0.00256		0.00100	0.000260	mg/L		08/21/23 09:50	08/25/23 18:05	1
Vanadium	0.00237 J		0.00500	0.00110	mg/L		08/21/23 09:50	08/25/23 05:30	1
Zinc	<0.0200		0.0200	0.00640	mg/L		08/21/23 09:50	08/25/23 05:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	114		15.0	5.10	mg/L			08/18/23 11:56	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-DN

Lab Sample ID: 310-262928-10

Date Collected: 08/16/23 13:20

Matrix: Water

Date Received: 08/18/23 08:25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			08/23/23 19:08	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/23/23 19:08	1
Benzene	11.7		0.500	0.220	ug/L			08/23/23 19:08	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/23/23 19:08	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/23/23 19:08	1
Bromoform	<5.00		5.00	0.780	ug/L			08/23/23 19:08	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/23/23 19:08	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/23/23 19:08	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/23/23 19:08	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/23/23 19:08	1
Chlorobenzene	9.99		1.00	0.400	ug/L			08/23/23 19:08	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/23/23 19:08	1
Chloroethane	2.16	J	4.00	0.790	ug/L			08/23/23 19:08	1
Chloroform	<3.00		3.00	1.30	ug/L			08/23/23 19:08	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/23/23 19:08	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			08/23/23 19:08	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/23/23 19:08	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/23/23 19:08	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/23/23 19:08	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/23/23 19:08	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/23/23 19:08	1
1,4-Dichlorobenzene	2.02		1.00	0.230	ug/L			08/23/23 19:08	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			08/23/23 19:08	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/23/23 19:08	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/23/23 19:08	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/23/23 19:08	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/23/23 19:08	1
2-Hexanone	<10.0	++	10.0	2.00	ug/L			08/23/23 19:08	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/23/23 19:08	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/23/23 19:08	1
4-Methyl-2-pentanone (MIBK)	<10.0	++	10.0	2.10	ug/L			08/23/23 19:08	1
Styrene	<1.00		1.00	0.370	ug/L			08/23/23 19:08	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/23/23 19:08	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/23/23 19:08	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			08/23/23 19:08	1
Toluene	<1.00		1.00	0.430	ug/L			08/23/23 19:08	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/23/23 19:08	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			08/23/23 19:08	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/23/23 19:08	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/23/23 19:08	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/23/23 19:08	1
Trichloroethene	<1.00		1.00	0.430	ug/L			08/23/23 19:08	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/23/23 19:08	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/23/23 19:08	1
Vinyl acetate	<10.0	++	10.0	2.50	ug/L			08/23/23 19:08	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			08/23/23 19:08	1
Xylenes, Total	0.572	J	3.00	0.400	ug/L			08/23/23 19:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		80 - 120		08/23/23 19:08	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-DN

Date Collected: 08/16/23 13:20

Date Received: 08/18/23 08:25

Lab Sample ID: 310-262928-10

Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	92		80 - 128		08/23/23 19:08	1
Toluene-d8 (Surr)	105		80 - 120		08/23/23 19:08	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: Trip Blank 1

Lab Sample ID: 310-262928-11

Date Collected: 08/16/23 00:00

Matrix: Water

Date Received: 08/18/23 08:25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			08/24/23 00:03	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/24/23 00:03	1
Benzene	<0.500		0.500	0.220	ug/L			08/24/23 00:03	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/24/23 00:03	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/24/23 00:03	1
Bromoform	<5.00		5.00	0.780	ug/L			08/24/23 00:03	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/24/23 00:03	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/24/23 00:03	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/24/23 00:03	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/24/23 00:03	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			08/24/23 00:03	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/24/23 00:03	1
Chloroethane	<4.00		4.00	0.790	ug/L			08/24/23 00:03	1
Chloroform	<3.00		3.00	1.30	ug/L			08/24/23 00:03	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/24/23 00:03	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			08/24/23 00:03	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/24/23 00:03	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/24/23 00:03	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/24/23 00:03	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/24/23 00:03	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/24/23 00:03	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			08/24/23 00:03	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			08/24/23 00:03	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/24/23 00:03	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/24/23 00:03	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/24/23 00:03	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/24/23 00:03	1
2-Hexanone	<10.0	+	10.0	2.00	ug/L			08/24/23 00:03	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/24/23 00:03	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/24/23 00:03	1
4-Methyl-2-pentanone (MIBK)	<10.0	+	10.0	2.10	ug/L			08/24/23 00:03	1
Styrene	<1.00		1.00	0.370	ug/L			08/24/23 00:03	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/24/23 00:03	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/24/23 00:03	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			08/24/23 00:03	1
Toluene	<1.00		1.00	0.430	ug/L			08/24/23 00:03	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/24/23 00:03	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			08/24/23 00:03	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/24/23 00:03	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/24/23 00:03	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/24/23 00:03	1
Trichloroethene	<1.00		1.00	0.430	ug/L			08/24/23 00:03	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/24/23 00:03	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/24/23 00:03	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			08/24/23 00:03	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			08/24/23 00:03	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			08/24/23 00:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		80 - 120		08/24/23 00:03	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: Trip Blank 1

Date Collected: 08/16/23 00:00

Date Received: 08/18/23 08:25

Lab Sample ID: 310-262928-11

Matrix: Water

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Dibromofluoromethane (Surr)</i>	91		80 - 128		08/24/23 00:03	1
<i>Toluene-d8 (Surr)</i>	103		80 - 120		08/24/23 00:03	1

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: Trip Blank 2

Lab Sample ID: 310-262928-12

Date Collected: 08/16/23 00:00

Matrix: Water

Date Received: 08/18/23 08:25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			08/24/23 00:26	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/24/23 00:26	1
Benzene	<0.500		0.500	0.220	ug/L			08/24/23 00:26	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/24/23 00:26	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/24/23 00:26	1
Bromoform	<5.00		5.00	0.780	ug/L			08/24/23 00:26	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/24/23 00:26	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/24/23 00:26	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/24/23 00:26	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/24/23 00:26	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			08/24/23 00:26	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/24/23 00:26	1
Chloroethane	<4.00		4.00	0.790	ug/L			08/24/23 00:26	1
Chloroform	<3.00		3.00	1.30	ug/L			08/24/23 00:26	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/24/23 00:26	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			08/24/23 00:26	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/24/23 00:26	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/24/23 00:26	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/24/23 00:26	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/24/23 00:26	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/24/23 00:26	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			08/24/23 00:26	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			08/24/23 00:26	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/24/23 00:26	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/24/23 00:26	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/24/23 00:26	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/24/23 00:26	1
2-Hexanone	<10.0	++	10.0	2.00	ug/L			08/24/23 00:26	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/24/23 00:26	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/24/23 00:26	1
4-Methyl-2-pentanone (MIBK)	<10.0	++	10.0	2.10	ug/L			08/24/23 00:26	1
Styrene	<1.00		1.00	0.370	ug/L			08/24/23 00:26	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/24/23 00:26	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/24/23 00:26	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			08/24/23 00:26	1
Toluene	<1.00		1.00	0.430	ug/L			08/24/23 00:26	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/24/23 00:26	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			08/24/23 00:26	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/24/23 00:26	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/24/23 00:26	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/24/23 00:26	1
Trichloroethene	<1.00		1.00	0.430	ug/L			08/24/23 00:26	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/24/23 00:26	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/24/23 00:26	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			08/24/23 00:26	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			08/24/23 00:26	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			08/24/23 00:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		80 - 120		08/24/23 00:26	1

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Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: Trip Blank 2

Date Collected: 08/16/23 00:00

Date Received: 08/18/23 08:25

Lab Sample ID: 310-262928-12

Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	89		80 - 128		08/24/23 00:26	1
Toluene-d8 (Surr)	103		80 - 120		08/24/23 00:26	1

Definitions/Glossary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

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

Glossary

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

Surrogate Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	BFB (80-120)	DBFM (80-128)	TOL (80-120)
310-262928-1	MW-06-7R	100	90	104
310-262928-2	MW-05-2	100	89	104
310-262928-3	MW-29	98	90	106
310-262928-4	MW-DS1	99	91	103
310-262928-5	MW-90-13	98	94	103
310-262928-6	MW-03-16	97	93	104
310-262928-8	PZ-R3	100	90	104
310-262928-9	PZ-R4	99	90	103
310-262928-10	MW-DN	98	92	105
310-262928-11	Trip Blank 1	99	91	103
310-262928-12	Trip Blank 2	100	89	103
LCS 310-397500/6	Lab Control Sample	97	93	106
LCS 310-397500/7	Lab Control Sample	99	89	104
LCS 310-397537/6	Lab Control Sample	95	93	107
LCS 310-397537/7	Lab Control Sample	99	91	105
MB 310-397500/5	Method Blank	101	91	103
MB 310-397537/5	Method Blank	98	89	104

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

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

Lab Sample ID: MB 310-397500/5

Matrix: Water

Analysis Batch: 397500

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			08/23/23 11:53	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/23/23 11:53	1
Benzene	<0.500		0.500	0.220	ug/L			08/23/23 11:53	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/23/23 11:53	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/23/23 11:53	1
Bromoform	<5.00		5.00	0.780	ug/L			08/23/23 11:53	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/23/23 11:53	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/23/23 11:53	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/23/23 11:53	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/23/23 11:53	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			08/23/23 11:53	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/23/23 11:53	1
Chloroethane	<4.00		4.00	0.790	ug/L			08/23/23 11:53	1
Chloroform	<3.00		3.00	1.30	ug/L			08/23/23 11:53	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/23/23 11:53	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			08/23/23 11:53	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/23/23 11:53	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/23/23 11:53	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/23/23 11:53	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/23/23 11:53	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/23/23 11:53	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			08/23/23 11:53	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			08/23/23 11:53	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/23/23 11:53	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/23/23 11:53	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/23/23 11:53	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/23/23 11:53	1
2-Hexanone	<10.0		10.0	2.00	ug/L			08/23/23 11:53	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/23/23 11:53	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/23/23 11:53	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			08/23/23 11:53	1
Styrene	<1.00		1.00	0.370	ug/L			08/23/23 11:53	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/23/23 11:53	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/23/23 11:53	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			08/23/23 11:53	1
Toluene	<1.00		1.00	0.430	ug/L			08/23/23 11:53	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/23/23 11:53	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			08/23/23 11:53	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/23/23 11:53	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/23/23 11:53	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/23/23 11:53	1
Trichloroethene	<1.00		1.00	0.430	ug/L			08/23/23 11:53	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/23/23 11:53	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/23/23 11:53	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			08/23/23 11:53	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			08/23/23 11:53	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			08/23/23 11:53	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

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

Lab Sample ID: MB 310-397500/5

Matrix: Water

Analysis Batch: 397500

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		80 - 120		08/23/23 11:53	1
Dibromofluoromethane (Surr)	91		80 - 128		08/23/23 11:53	1
Toluene-d8 (Surr)	103		80 - 120		08/23/23 11:53	1

Lab Sample ID: LCS 310-397500/6

Matrix: Water

Analysis Batch: 397500

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	40.0	52.58		ug/L		131	50 - 150
Acrylonitrile	200	253.3		ug/L		127	50 - 150
Benzene	20.0	21.72		ug/L		109	73 - 122
Bromochloromethane	20.0	18.83		ug/L		94	68 - 132
Bromodichloromethane	20.0	20.58		ug/L		103	72 - 121
Bromoform	20.0	16.16		ug/L		81	55 - 129
2-Butanone (MEK)	40.0	52.45		ug/L		131	50 - 150
Carbon disulfide	20.0	20.49		ug/L		102	58 - 131
Carbon tetrachloride	20.0	19.59		ug/L		98	67 - 132
Chlorobenzene	20.0	20.54		ug/L		103	69 - 121
Chlorodibromomethane	20.0	17.28		ug/L		86	69 - 122
Chloroform	20.0	20.69		ug/L		103	72 - 120
cis-1,2-Dichloroethene	20.0	21.40		ug/L		107	74 - 120
cis-1,3-Dichloropropene	20.0	22.45		ug/L		112	71 - 126
1,2-Dibromo-3-Chloropropane	20.0	26.06		ug/L		130	50 - 150
1,2-Dibromoethane (EDB)	20.0	19.78		ug/L		99	73 - 125
Dibromomethane	20.0	18.43		ug/L		92	72 - 123
1,2-Dichlorobenzene	20.0	20.35		ug/L		102	68 - 120
1,4-Dichlorobenzene	20.0	20.38		ug/L		102	67 - 120
1,1-Dichloroethane	20.0	22.63		ug/L		113	71 - 123
1,2-Dichloroethane	20.0	20.88		ug/L		104	70 - 124
1,1-Dichloroethene	20.0	24.06		ug/L		120	61 - 129
1,2-Dichloropropane	20.0	22.22		ug/L		111	73 - 121
Ethylbenzene	20.0	21.91		ug/L		110	69 - 122
2-Hexanone	40.0	55.18	*+	ug/L		138	60 - 132
Iodomethane	20.0	12.81		ug/L		64	10 - 150
Methylene Chloride	20.0	21.02		ug/L		105	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	56.65	*+	ug/L		142	62 - 130
Styrene	20.0	21.61		ug/L		108	67 - 125
1,1,1,2-Tetrachloroethane	20.0	19.30		ug/L		96	68 - 123
1,1,2,2-Tetrachloroethane	20.0	20.10		ug/L		100	64 - 124
Tetrachloroethene	20.0	21.19		ug/L		106	69 - 131
Toluene	20.0	21.34		ug/L		107	72 - 121
trans-1,4-Dichloro-2-butene	20.0	25.68		ug/L		128	48 - 150
trans-1,2-Dichloroethene	20.0	22.66		ug/L		113	68 - 125
trans-1,3-Dichloropropene	20.0	21.19		ug/L		106	68 - 124
1,1,1-Trichloroethane	20.0	21.21		ug/L		106	71 - 128
1,1,2-Trichloroethane	20.0	20.77		ug/L		104	70 - 124
Trichloroethene	20.0	20.20		ug/L		101	73 - 126

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QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

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

Lab Sample ID: LCS 310-397500/6

Matrix: Water

Analysis Batch: 397500

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	20.0	19.53		ug/L		98	64 - 125
Vinyl acetate	40.0	61.34	*+	ug/L		153	50 - 150
Xylenes, Total	40.0	42.35		ug/L		106	68 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	93		80 - 128
Toluene-d8 (Surr)	106		80 - 120

Lab Sample ID: LCS 310-397500/7

Matrix: Water

Analysis Batch: 397500

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	18.69		ug/L		93	24 - 150
Chloroethane	20.0	22.59		ug/L		113	51 - 137
Chloromethane	20.0	20.72		ug/L		104	37 - 150
Trichlorofluoromethane	20.0	23.71		ug/L		119	56 - 144
Vinyl chloride	20.0	19.62		ug/L		98	57 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	89		80 - 128
Toluene-d8 (Surr)	104		80 - 120

Lab Sample ID: MB 310-397537/5

Matrix: Water

Analysis Batch: 397537

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			08/23/23 22:55	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/23/23 22:55	1
Benzene	<0.500		0.500	0.220	ug/L			08/23/23 22:55	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/23/23 22:55	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/23/23 22:55	1
Bromoform	<5.00		5.00	0.780	ug/L			08/23/23 22:55	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/23/23 22:55	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/23/23 22:55	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/23/23 22:55	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/23/23 22:55	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			08/23/23 22:55	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/23/23 22:55	1
Chloroethane	<4.00		4.00	0.790	ug/L			08/23/23 22:55	1
Chloroform	<3.00		3.00	1.30	ug/L			08/23/23 22:55	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/23/23 22:55	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			08/23/23 22:55	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/23/23 22:55	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/23/23 22:55	1

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QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

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

Lab Sample ID: MB 310-397537/5

Matrix: Water

Analysis Batch: 397537

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/23/23 22:55	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/23/23 22:55	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/23/23 22:55	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			08/23/23 22:55	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			08/23/23 22:55	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/23/23 22:55	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/23/23 22:55	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/23/23 22:55	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/23/23 22:55	1
2-Hexanone	<10.0		10.0	2.00	ug/L			08/23/23 22:55	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/23/23 22:55	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/23/23 22:55	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			08/23/23 22:55	1
Styrene	<1.00		1.00	0.370	ug/L			08/23/23 22:55	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/23/23 22:55	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/23/23 22:55	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			08/23/23 22:55	1
Toluene	<1.00		1.00	0.430	ug/L			08/23/23 22:55	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/23/23 22:55	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			08/23/23 22:55	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/23/23 22:55	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/23/23 22:55	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/23/23 22:55	1
Trichloroethene	<1.00		1.00	0.430	ug/L			08/23/23 22:55	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/23/23 22:55	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/23/23 22:55	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			08/23/23 22:55	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			08/23/23 22:55	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			08/23/23 22:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		80 - 120		08/23/23 22:55	1
Dibromofluoromethane (Surr)	89		80 - 128		08/23/23 22:55	1
Toluene-d8 (Surr)	104		80 - 120		08/23/23 22:55	1

Lab Sample ID: LCS 310-397537/6

Matrix: Water

Analysis Batch: 397537

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	40.0	57.91		ug/L		145	50 - 150
Acrylonitrile	200	257.3		ug/L		129	50 - 150
Benzene	20.0	20.89		ug/L		104	73 - 122
Bromochloromethane	20.0	18.51		ug/L		93	68 - 132
Bromodichloromethane	20.0	20.14		ug/L		101	72 - 121
Bromoform	20.0	16.25		ug/L		81	55 - 129
2-Butanone (MEK)	40.0	52.14		ug/L		130	50 - 150
Carbon disulfide	20.0	19.85		ug/L		99	58 - 131

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QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

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

Lab Sample ID: LCS 310-397537/6

Matrix: Water

Analysis Batch: 397537

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon tetrachloride	20.0	20.35		ug/L		102	67 - 132
Chlorobenzene	20.0	20.30		ug/L		101	69 - 121
Chlorodibromomethane	20.0	16.86		ug/L		84	69 - 122
Chloroform	20.0	20.13		ug/L		101	72 - 120
cis-1,2-Dichloroethene	20.0	20.88		ug/L		104	74 - 120
cis-1,3-Dichloropropene	20.0	21.18		ug/L		106	71 - 126
1,2-Dibromo-3-Chloropropane	20.0	22.75		ug/L		114	50 - 150
1,2-Dibromoethane (EDB)	20.0	20.14		ug/L		101	73 - 125
Dibromomethane	20.0	19.55		ug/L		98	72 - 123
1,2-Dichlorobenzene	20.0	19.63		ug/L		98	68 - 120
1,4-Dichlorobenzene	20.0	19.51		ug/L		98	67 - 120
1,1-Dichloroethane	20.0	21.41		ug/L		107	71 - 123
1,2-Dichloroethane	20.0	19.90		ug/L		99	70 - 124
1,1-Dichloroethene	20.0	23.54		ug/L		118	61 - 129
1,2-Dichloropropane	20.0	22.11		ug/L		111	73 - 121
Ethylbenzene	20.0	21.59		ug/L		108	69 - 122
2-Hexanone	40.0	54.55	*+	ug/L		136	60 - 132
Iodomethane	20.0	14.97		ug/L		75	10 - 150
Methylene Chloride	20.0	20.84		ug/L		104	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	56.04	*+	ug/L		140	62 - 130
Styrene	20.0	21.50		ug/L		107	67 - 125
1,1,1,2-Tetrachloroethane	20.0	19.15		ug/L		96	68 - 123
1,1,2,2-Tetrachloroethane	20.0	20.83		ug/L		104	64 - 124
Tetrachloroethene	20.0	20.45		ug/L		102	69 - 131
Toluene	20.0	21.04		ug/L		105	72 - 121
trans-1,4-Dichloro-2-butene	20.0	23.57		ug/L		118	48 - 150
trans-1,2-Dichloroethene	20.0	22.04		ug/L		110	68 - 125
trans-1,3-Dichloropropene	20.0	20.47		ug/L		102	68 - 124
1,1,1-Trichloroethane	20.0	20.80		ug/L		104	71 - 128
1,1,2-Trichloroethane	20.0	20.78		ug/L		104	70 - 124
Trichloroethene	20.0	20.01		ug/L		100	73 - 126
1,2,3-Trichloropropane	20.0	19.22		ug/L		96	64 - 125
Vinyl acetate	40.0	57.23		ug/L		143	50 - 150
Xylenes, Total	40.0	41.92		ug/L		105	68 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	93		80 - 128
Toluene-d8 (Surr)	107		80 - 120

Lab Sample ID: LCS 310-397537/7

Matrix: Water

Analysis Batch: 397537

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	16.87		ug/L		84	24 - 150
Chloroethane	20.0	23.50		ug/L		117	51 - 137
Chloromethane	20.0	20.91		ug/L		105	37 - 150

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QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

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

Lab Sample ID: LCS 310-397537/7

Matrix: Water

Analysis Batch: 397537

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Trichlorofluoromethane	20.0	24.70		ug/L		124	56 - 144
Vinyl chloride	20.0	20.58		ug/L		103	57 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	91		80 - 128
Toluene-d8 (Surr)	105		80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-397167/1-A

Matrix: Water

Analysis Batch: 397703

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 397167

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		08/21/23 09:50	08/24/23 16:22	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		08/21/23 09:50	08/24/23 16:22	1
Barium	0.004833		0.00200	0.000640	mg/L		08/21/23 09:50	08/24/23 16:22	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		08/21/23 09:50	08/24/23 16:22	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		08/21/23 09:50	08/24/23 16:22	1
Chromium	<0.00500		0.00500	0.00110	mg/L		08/21/23 09:50	08/24/23 16:22	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		08/21/23 09:50	08/24/23 16:22	1
Copper	<0.00500		0.00500	0.00180	mg/L		08/21/23 09:50	08/24/23 16:22	1
Lead	<0.000500		0.000500	0.000240	mg/L		08/21/23 09:50	08/24/23 16:22	1
Nickel	<0.00500		0.00500	0.00190	mg/L		08/21/23 09:50	08/24/23 16:22	1
Selenium	<0.00500		0.00500	0.00140	mg/L		08/21/23 09:50	08/24/23 16:22	1
Silver	<0.00100		0.00100	0.000500	mg/L		08/21/23 09:50	08/24/23 16:22	1
Thallium	<0.00100		0.00100	0.000260	mg/L		08/21/23 09:50	08/24/23 16:22	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		08/21/23 09:50	08/24/23 16:22	1
Zinc	<0.0200		0.0200	0.00640	mg/L		08/21/23 09:50	08/24/23 16:22	1

Lab Sample ID: LCS 310-397167/2-A

Matrix: Water

Analysis Batch: 397703

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 397167

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2175		mg/L		109	80 - 120
Arsenic	0.200	0.2133		mg/L		107	80 - 120
Barium	0.100	0.1021		mg/L		102	80 - 120
Beryllium	0.100	0.1047		mg/L		105	80 - 120
Cadmium	0.100	0.1019		mg/L		102	80 - 120
Chromium	0.100	0.1055		mg/L		106	80 - 120
Cobalt	0.100	0.1027		mg/L		103	80 - 120
Copper	0.200	0.2205		mg/L		110	80 - 120
Lead	0.200	0.2073		mg/L		104	80 - 120
Nickel	0.200	0.2178		mg/L		109	80 - 120
Selenium	0.400	0.4158		mg/L		104	80 - 120
Silver	0.100	0.1002		mg/L		100	80 - 120
Thallium	0.200	0.1612		mg/L		81	80 - 120

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QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

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

Lab Sample ID: LCS 310-397167/2-A
Matrix: Water
Analysis Batch: 397703

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 397167

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vanadium	0.100	0.1052		mg/L		105	80 - 120
Zinc	0.200	0.1967		mg/L		98	80 - 120

Lab Sample ID: MB 310-397168/1-A
Matrix: Water
Analysis Batch: 397775

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 397168

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		08/21/23 09:50	08/25/23 04:01	1
Barium	<0.00200		0.00200	0.000640	mg/L		08/21/23 09:50	08/25/23 04:01	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		08/21/23 09:50	08/25/23 04:01	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		08/21/23 09:50	08/25/23 04:01	1
Chromium	<0.00500		0.00500	0.00110	mg/L		08/21/23 09:50	08/25/23 04:01	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		08/21/23 09:50	08/25/23 04:01	1
Copper	<0.00500		0.00500	0.00180	mg/L		08/21/23 09:50	08/25/23 04:01	1
Lead	<0.000500		0.000500	0.000240	mg/L		08/21/23 09:50	08/25/23 04:01	1
Nickel	<0.00500		0.00500	0.00190	mg/L		08/21/23 09:50	08/25/23 04:01	1
Selenium	<0.00500		0.00500	0.00140	mg/L		08/21/23 09:50	08/25/23 04:01	1
Silver	<0.00100		0.00100	0.000500	mg/L		08/21/23 09:50	08/25/23 04:01	1
Thallium	<0.00100		0.00100	0.000260	mg/L		08/21/23 09:50	08/25/23 04:01	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		08/21/23 09:50	08/25/23 04:01	1
Zinc	<0.0200		0.0200	0.00640	mg/L		08/21/23 09:50	08/25/23 04:01	1

Lab Sample ID: MB 310-397168/1-A
Matrix: Water
Analysis Batch: 397908

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 397168

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		08/21/23 09:50	08/25/23 17:54	1

Lab Sample ID: LCS 310-397168/2-A
Matrix: Water
Analysis Batch: 397775

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 397168

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.2083		mg/L		104	80 - 120
Barium	0.100	0.1021		mg/L		102	80 - 120
Beryllium	0.100	0.1068		mg/L		107	80 - 120
Cadmium	0.100	0.1004		mg/L		100	80 - 120
Chromium	0.100	0.1024		mg/L		102	80 - 120
Cobalt	0.100	0.1026		mg/L		103	80 - 120
Copper	0.200	0.2068		mg/L		103	80 - 120
Lead	0.200	0.2040		mg/L		102	80 - 120
Nickel	0.200	0.2101		mg/L		105	80 - 120
Selenium	0.400	0.3917		mg/L		98	80 - 120
Silver	0.100	0.1053		mg/L		105	80 - 120
Vanadium	0.100	0.1010		mg/L		101	80 - 120
Zinc	0.200	0.2035		mg/L		102	80 - 120

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QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

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

Lab Sample ID: LCS 310-397168/2-A
Matrix: Water
Analysis Batch: 397908

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 397168

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2088		mg/L		104	80 - 120
Thallium	0.200	0.1633		mg/L		82	80 - 120

Lab Sample ID: 310-262928-7 MS
Matrix: Water
Analysis Batch: 397775

Client Sample ID: MW-06-6R
Prep Type: Total/NA
Prep Batch: 397168

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	<0.00200		0.200	0.2081		mg/L		104	75 - 125
Barium	0.414		0.100	0.5007	4	mg/L		87	75 - 125
Beryllium	<0.00100		0.100	0.1094		mg/L		109	75 - 125
Cadmium	<0.000200		0.100	0.09734		mg/L		97	75 - 125
Chromium	<0.00500		0.100	0.09752		mg/L		98	75 - 125
Cobalt	<0.000500		0.100	0.09639		mg/L		96	75 - 125
Copper	<0.00500		0.200	0.1966		mg/L		98	75 - 125
Lead	<0.000500		0.200	0.2003		mg/L		100	75 - 125
Nickel	<0.00500		0.200	0.1983		mg/L		99	75 - 125
Selenium	<0.00500		0.400	0.3615		mg/L		90	75 - 125
Silver	<0.00100		0.100	0.1010		mg/L		101	75 - 125
Thallium	0.000434	J F1 *-	0.200	0.1089	F1	mg/L		54	75 - 125
Vanadium	<0.00500		0.100	0.09921		mg/L		99	75 - 125
Zinc	<0.0200		0.200	0.1983		mg/L		99	75 - 125

Lab Sample ID: 310-262928-7 MS
Matrix: Water
Analysis Batch: 397908

Client Sample ID: MW-06-6R
Prep Type: Total/NA
Prep Batch: 397168

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.00200		0.200	0.2051		mg/L		103	75 - 125
Thallium	0.00189		0.200	0.1564		mg/L		77	75 - 125

Lab Sample ID: 310-262928-7 MSD
Matrix: Water
Analysis Batch: 397775

Client Sample ID: MW-06-6R
Prep Type: Total/NA
Prep Batch: 397168

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Arsenic	<0.00200		0.200	0.2060		mg/L		103	75 - 125	1	20
Barium	0.414		0.100	0.4955	4	mg/L		82	75 - 125	1	20
Beryllium	<0.00100		0.100	0.1088		mg/L		109	75 - 125	1	20
Cadmium	<0.000200		0.100	0.09739		mg/L		97	75 - 125	0	20
Chromium	<0.00500		0.100	0.09764		mg/L		98	75 - 125	0	20
Cobalt	<0.000500		0.100	0.09617		mg/L		96	75 - 125	0	20
Copper	<0.00500		0.200	0.1959		mg/L		98	75 - 125	0	20
Lead	<0.000500		0.200	0.2028		mg/L		101	75 - 125	1	20
Nickel	<0.00500		0.200	0.1993		mg/L		100	75 - 125	0	20
Selenium	<0.00500		0.400	0.3580		mg/L		90	75 - 125	1	20
Silver	<0.00100		0.100	0.1013		mg/L		101	75 - 125	0	20
Thallium	0.000434	J F1 *-	0.200	0.1090	F1	mg/L		54	75 - 125	0	20
Vanadium	<0.00500		0.100	0.09837		mg/L		98	75 - 125	1	20

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QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

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

Lab Sample ID: 310-262928-7 MSD

Matrix: Water

Analysis Batch: 397775

Client Sample ID: MW-06-6R

Prep Type: Total/NA

Prep Batch: 397168

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Zinc	<0.0200		0.200	0.1993		mg/L		100	75 - 125	1	20

Lab Sample ID: 310-262928-7 MSD

Matrix: Water

Analysis Batch: 397908

Client Sample ID: MW-06-6R

Prep Type: Total/NA

Prep Batch: 397168

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	<0.00200		0.200	0.2051		mg/L		103	75 - 125	0	20
Thallium	0.00189		0.200	0.1630		mg/L		81	75 - 125	4	20

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

Lab Sample ID: MB 310-397088/1

Matrix: Water

Analysis Batch: 397088

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	1.70	mg/L			08/18/23 09:40	1

Lab Sample ID: LCS 310-397088/2

Matrix: Water

Analysis Batch: 397088

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	102.0		mg/L		102	75 - 116

Lab Sample ID: MB 310-397141/1

Matrix: Water

Analysis Batch: 397141

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	1.70	mg/L			08/18/23 11:56	1

Lab Sample ID: LCS 310-397141/2

Matrix: Water

Analysis Batch: 397141

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	104.0		mg/L		104	75 - 116

Lab Sample ID: 310-262928-6 DU

Matrix: Water

Analysis Batch: 397141

Client Sample ID: MW-03-16

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	116		117.0		mg/L		0.9	35

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

GC/MS VOA

Analysis Batch: 397500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-262928-1	MW-06-7R	Total/NA	Water	8260D	
310-262928-2	MW-05-2	Total/NA	Water	8260D	
310-262928-3	MW-29	Total/NA	Water	8260D	
310-262928-4	MW-DS1	Total/NA	Water	8260D	
310-262928-5	MW-90-13	Total/NA	Water	8260D	
310-262928-6	MW-03-16	Total/NA	Water	8260D	
310-262928-8	PZ-R3	Total/NA	Water	8260D	
310-262928-9	PZ-R4	Total/NA	Water	8260D	
310-262928-10	MW-DN	Total/NA	Water	8260D	
MB 310-397500/5	Method Blank	Total/NA	Water	8260D	
LCS 310-397500/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-397500/7	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 397537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-262928-11	Trip Blank 1	Total/NA	Water	8260D	
310-262928-12	Trip Blank 2	Total/NA	Water	8260D	
MB 310-397537/5	Method Blank	Total/NA	Water	8260D	
LCS 310-397537/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-397537/7	Lab Control Sample	Total/NA	Water	8260D	

Metals

Prep Batch: 397167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-262928-1	MW-06-7R	Total/NA	Water	3005A	
310-262928-2	MW-05-2	Total/NA	Water	3005A	
310-262928-3	MW-29	Total/NA	Water	3005A	
310-262928-4	MW-DS1	Total/NA	Water	3005A	
310-262928-6	MW-03-16	Total/NA	Water	3005A	
MB 310-397167/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-397167/2-A	Lab Control Sample	Total/NA	Water	3005A	

Prep Batch: 397168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-262928-7	MW-06-6R	Total/NA	Water	3005A	
310-262928-8	PZ-R3	Total/NA	Water	3005A	
310-262928-9	PZ-R4	Total/NA	Water	3005A	
MB 310-397168/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-397168/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-262928-7 MS	MW-06-6R	Total/NA	Water	3005A	
310-262928-7 MSD	MW-06-6R	Total/NA	Water	3005A	

Analysis Batch: 397621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-262928-2	MW-05-2	Total/NA	Water	6020B	397167
310-262928-3	MW-29	Total/NA	Water	6020B	397167
310-262928-4	MW-DS1	Total/NA	Water	6020B	397167
310-262928-6	MW-03-16	Total/NA	Water	6020B	397167

Eurofins Cedar Falls

QC Association Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Metals

Analysis Batch: 397703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-262928-1	MW-06-7R	Total/NA	Water	6020B	397167
310-262928-2	MW-05-2	Total/NA	Water	6020B	397167
310-262928-3	MW-29	Total/NA	Water	6020B	397167
310-262928-4	MW-DS1	Total/NA	Water	6020B	397167
310-262928-6	MW-03-16	Total/NA	Water	6020B	397167
MB 310-397167/1-A	Method Blank	Total/NA	Water	6020B	397167
LCS 310-397167/2-A	Lab Control Sample	Total/NA	Water	6020B	397167

Analysis Batch: 397775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-262928-7	MW-06-6R	Total/NA	Water	6020B	397168
310-262928-8	PZ-R3	Total/NA	Water	6020B	397168
310-262928-9	PZ-R4	Total/NA	Water	6020B	397168
MB 310-397168/1-A	Method Blank	Total/NA	Water	6020B	397168
LCS 310-397168/2-A	Lab Control Sample	Total/NA	Water	6020B	397168
310-262928-7 MS	MW-06-6R	Total/NA	Water	6020B	397168
310-262928-7 MSD	MW-06-6R	Total/NA	Water	6020B	397168

Analysis Batch: 397908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-262928-9	PZ-R4	Total/NA	Water	6020B	397168
MB 310-397168/1-A	Method Blank	Total/NA	Water	6020B	397168
LCS 310-397168/2-A	Lab Control Sample	Total/NA	Water	6020B	397168
310-262928-7 MS	MW-06-6R	Total/NA	Water	6020B	397168
310-262928-7 MSD	MW-06-6R	Total/NA	Water	6020B	397168

General Chemistry

Analysis Batch: 397088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-262928-1	MW-06-7R	Total/NA	Water	I-3765-85	
310-262928-2	MW-05-2	Total/NA	Water	I-3765-85	
310-262928-3	MW-29	Total/NA	Water	I-3765-85	
MB 310-397088/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-397088/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 397141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-262928-4	MW-DS1	Total/NA	Water	I-3765-85	
310-262928-6	MW-03-16	Total/NA	Water	I-3765-85	
310-262928-7	MW-06-6R	Total/NA	Water	I-3765-85	
310-262928-8	PZ-R3	Total/NA	Water	I-3765-85	
310-262928-9	PZ-R4	Total/NA	Water	I-3765-85	
MB 310-397141/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-397141/2	Lab Control Sample	Total/NA	Water	I-3765-85	
310-262928-6 DU	MW-03-16	Total/NA	Water	I-3765-85	

Lab Chronicle

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-06-7R

Date Collected: 08/16/23 12:00

Date Received: 08/18/23 08:25

Lab Sample ID: 310-262928-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	397500	FE5V	EET CF	08/23/23 14:10
Total/NA	Prep	3005A			397167	QTZ5	EET CF	08/21/23 09:50
Total/NA	Analysis	6020B		1	397703	A6US	EET CF	08/24/23 16:44
Total/NA	Analysis	I-3765-85		1	397088	DGU1	EET CF	08/18/23 09:40

Client Sample ID: MW-05-2

Date Collected: 08/16/23 20:10

Date Received: 08/18/23 08:25

Lab Sample ID: 310-262928-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	397500	FE5V	EET CF	08/23/23 14:33
Total/NA	Prep	3005A			397167	QTZ5	EET CF	08/21/23 09:50
Total/NA	Analysis	6020B		1	397621	A6US	EET CF	08/24/23 02:15
Total/NA	Prep	3005A			397167	QTZ5	EET CF	08/21/23 09:50
Total/NA	Analysis	6020B		1	397703	A6US	EET CF	08/24/23 16:47
Total/NA	Analysis	I-3765-85		1	397088	DGU1	EET CF	08/18/23 09:40

Client Sample ID: MW-29

Date Collected: 08/16/23 17:35

Date Received: 08/18/23 08:25

Lab Sample ID: 310-262928-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	397500	FE5V	EET CF	08/23/23 14:55
Total/NA	Prep	3005A			397167	QTZ5	EET CF	08/21/23 09:50
Total/NA	Analysis	6020B		1	397621	A6US	EET CF	08/24/23 02:18
Total/NA	Prep	3005A			397167	QTZ5	EET CF	08/21/23 09:50
Total/NA	Analysis	6020B		1	397703	A6US	EET CF	08/24/23 16:49
Total/NA	Analysis	I-3765-85		1	397088	DGU1	EET CF	08/18/23 09:40

Client Sample ID: MW-DS1

Date Collected: 08/16/23 20:30

Date Received: 08/18/23 08:25

Lab Sample ID: 310-262928-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	397500	FE5V	EET CF	08/23/23 15:18
Total/NA	Prep	3005A			397167	QTZ5	EET CF	08/21/23 09:50
Total/NA	Analysis	6020B		1	397621	A6US	EET CF	08/24/23 02:20
Total/NA	Prep	3005A			397167	QTZ5	EET CF	08/21/23 09:50
Total/NA	Analysis	6020B		1	397703	A6US	EET CF	08/24/23 16:51
Total/NA	Analysis	I-3765-85		1	397141	DGU1	EET CF	08/18/23 11:56

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-90-13

Lab Sample ID: 310-262928-5

Date Collected: 08/16/23 16:21

Matrix: Water

Date Received: 08/18/23 08:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	397500	FE5V	EET CF	08/23/23 18:22

Client Sample ID: MW-03-16

Lab Sample ID: 310-262928-6

Date Collected: 08/16/23 13:25

Matrix: Water

Date Received: 08/18/23 08:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	397500	FE5V	EET CF	08/23/23 18:45
Total/NA	Prep	3005A			397167	QTZ5	EET CF	08/21/23 09:50
Total/NA	Analysis	6020B		1	397621	A6US	EET CF	08/24/23 02:23
Total/NA	Prep	3005A			397167	QTZ5	EET CF	08/21/23 09:50
Total/NA	Analysis	6020B		1	397703	A6US	EET CF	08/24/23 16:53
Total/NA	Analysis	I-3765-85		1	397141	DGU1	EET CF	08/18/23 11:56

Client Sample ID: MW-06-6R

Lab Sample ID: 310-262928-7

Date Collected: 08/16/23 11:15

Matrix: Water

Date Received: 08/18/23 08:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			397168	QTZ5	EET CF	08/21/23 09:50
Total/NA	Analysis	6020B		1	397775	A6US	EET CF	08/25/23 04:27
Total/NA	Analysis	I-3765-85		1	397141	DGU1	EET CF	08/18/23 11:56

Client Sample ID: PZ-R3

Lab Sample ID: 310-262928-8

Date Collected: 08/16/23 14:34

Matrix: Water

Date Received: 08/18/23 08:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	397500	FE5V	EET CF	08/23/23 15:41
Total/NA	Prep	3005A			397168	QTZ5	EET CF	08/21/23 09:50
Total/NA	Analysis	6020B		1	397775	A6US	EET CF	08/25/23 05:26
Total/NA	Analysis	I-3765-85		1	397141	DGU1	EET CF	08/18/23 11:56

Client Sample ID: PZ-R4

Lab Sample ID: 310-262928-9

Date Collected: 08/16/23 15:12

Matrix: Water

Date Received: 08/18/23 08:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	397500	FE5V	EET CF	08/23/23 16:04
Total/NA	Prep	3005A			397168	QTZ5	EET CF	08/21/23 09:50
Total/NA	Analysis	6020B		1	397775	A6US	EET CF	08/25/23 05:30
Total/NA	Prep	3005A			397168	QTZ5	EET CF	08/21/23 09:50
Total/NA	Analysis	6020B		1	397908	DHM5	EET CF	08/25/23 18:05
Total/NA	Analysis	I-3765-85		1	397141	DGU1	EET CF	08/18/23 11:56

Eurofins Cedar Falls

Lab Chronicle

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Client Sample ID: MW-DN

Date Collected: 08/16/23 13:20

Date Received: 08/18/23 08:25

Lab Sample ID: 310-262928-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	397500	FE5V	EET CF	08/23/23 19:08

Client Sample ID: Trip Blank 1

Date Collected: 08/16/23 00:00

Date Received: 08/18/23 08:25

Lab Sample ID: 310-262928-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	397537	FE5V	EET CF	08/24/23 00:03

Client Sample ID: Trip Blank 2

Date Collected: 08/16/23 00:00

Date Received: 08/18/23 08:25

Lab Sample ID: 310-262928-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	397537	FE5V	EET CF	08/24/23 00:26

Laboratory References:

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

Accreditation/Certification Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

Laboratory: Eurofins Cedar Falls

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

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

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

Method Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-262928-1
SDG: 23001

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

Protocol References:

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

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

Laboratory References:

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



Environment Testing
America



310-262928 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SES</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>8/18/23</u>	TIME <u>0825</u>	Received By: <u>R</u>
Delivery Type: ☒ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes: Cooler ID: _____
Multiple Coolers?		☒ Yes ☐ No	If yes: Cooler # <u>1</u> of <u>2</u>
Cooler Custody Seals Present?		☒ Yes ☐ No	If yes: Cooler custody seals intact? ☒ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☒ Yes ☒ No	If yes: Which VOA samples are in cooler? ↓
<u>trips - MW-06-7R MW-29</u>			
<u>MW-D1</u>			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue Ice ☐ Dry Ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>T</u>		Correction Factor (°C): <u>70.0</u>	
* Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>1.3</u>		Corrected Temp (°C): <u>1.3</u>	
Sample Container Temperature			
Container(s) used:	<u>CONTAINER 1</u>		<u>CONTAINER 2</u>
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			



Environment Testing
America

Place COC scanning label
here

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SCS</u>			
City/State:	CITY	STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>8/18/23</u>	TIME <u>0825</u>	Received By: <u>[Signature]</u>
Delivery Type: ☒ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler? ☒ Yes ☐ No If yes: Cooler ID: _____			
Multiple Coolers? ☒ Yes ☐ No If yes: Cooler # <u>2</u> of <u>2</u>			
Cooler Custody Seals Present? ☒ Yes ☐ No If yes: Cooler custody seals intact? ☒ Yes ☐ No			
Sample Custody Seals Present? ☐ Yes ☒ No If yes: Sample custody seals intact? ☐ Yes ☐ No			
Trip Blank Present? ☒ Yes ☒ No If yes: Which VOA samples are in cooler? ↓			
<u>tnps, MW-03-16 P2-R3, P2-R4 MW 72N</u> <u>MW-06-6R MW-90-13</u>			
Temperature Record			
Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>T</u>		Correction Factor (°C) <u>0.0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>1.8</u>		Corrected Temp (°C): <u>1.8</u>	
Sample Container Temperature			
Container(s) used:	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ 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			
<u>1 vial for MW-90-13 was dropped @ unpacking</u>			

704 Enterprise Drive
Cedar Falls, Iowa 50613
319.277.2401 (phone)
515 792.7989 (fax)

SAMPLER SCS Engineers

ADDRESS: Clinton County Sanitary Landfill (East-South)

CITY/STATE/ZIP _____
TELEPHONE NUMBER _____
FAX: _____

SAMPLED BY (PRINT NAME) Caleb Gomez

REPORT TO:	NAME	COMPANY NAME	PROJECT NAME	PRODUCT NUMBER	ADDRESS
	Nathan Dhrt	SCS Engineers	CAASW ES 1st 2023 HMSP	23001	1690 All State Court, Suite 100 Waukegan, IL 60085

[illegible]

704 Enterprise Drive
Cedar Falls, Iowa 50613

CITY/STATE/ZIP-

SIGNATURE.

1

Calder & Sons

9/25/2023 (Rev. 1)

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-262928-1

SDG Number: 23001

Login Number: 262928

List Number: 1

Creator: Homolar, Dana J

List Source: Eurofins Cedar Falls

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

ANALYTICAL REPORT

PREPARED FOR

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

Generated 8/25/2023 2:44:31 PM

JOB DESCRIPTION

CCASW EN 1st 2023 Event - HMSP
SDG NUMBER 23001

JOB NUMBER

310-263058-1

Eurofins Cedar Falls

Job Notes

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

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

Authorization



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8/25/2023 2:44:31 PM

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

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Case Narrative

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-263058-1
SDG: 23001

Job ID: 310-263058-1

Laboratory: Eurofins Cedar Falls

Narrative

Job Narrative 310-263058-1

Receipt

The sample was received on 8/21/2023 4:15 PM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.1°C

GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-397537 recovered above the upper control limit for 2-Hexanone (33.3%D) and 4-Methyl-2-pentanone (MIBK) (41.0%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 310-397537/3).

Method 8260D: The laboratory control sample (LCS) for analytical batch 310-397537 recovered outside control limits for the following analytes: 2-Hexanone and 4-Methyl-2-pentanone (MIBK). These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

Sample Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-263058-1
SDG: 23001

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-263058-1	MW-90-15R	Water	08/17/23 11:55	08/21/23 16:15

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

Detection Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-263058-1
SDG: 23001

Client Sample ID: MW-90-15R Lab Sample ID: 310-263058-1

No Detections.

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

This Detection Summary does not include radiochemical test results.

Quantitation Limit Exceptions Summary

Client: SCS Engineers

Job ID: 310-263058-1

Project/Site: CCASW EN 1st 2023 Event - HMSP

SDG: 23001

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

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

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-263058-1
SDG: 23001

Client Sample ID: MW-90-15R

Lab Sample ID: 310-263058-1

Date Collected: 08/17/23 11:55

Matrix: Water

Date Received: 08/21/23 16:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			08/24/23 05:20	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/24/23 05:20	1
Benzene	<0.500		0.500	0.220	ug/L			08/24/23 05:20	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/24/23 05:20	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/24/23 05:20	1
Bromoform	<5.00		5.00	0.780	ug/L			08/24/23 05:20	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/24/23 05:20	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/24/23 05:20	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/24/23 05:20	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/24/23 05:20	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			08/24/23 05:20	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/24/23 05:20	1
Chloroethane	<4.00		4.00	0.790	ug/L			08/24/23 05:20	1
Chloroform	<3.00		3.00	1.30	ug/L			08/24/23 05:20	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/24/23 05:20	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			08/24/23 05:20	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/24/23 05:20	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/24/23 05:20	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/24/23 05:20	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/24/23 05:20	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/24/23 05:20	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			08/24/23 05:20	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			08/24/23 05:20	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/24/23 05:20	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/24/23 05:20	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/24/23 05:20	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/24/23 05:20	1
2-Hexanone	<10.0	+	10.0	2.00	ug/L			08/24/23 05:20	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/24/23 05:20	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/24/23 05:20	1
4-Methyl-2-pentanone (MIBK)	<10.0	+	10.0	2.10	ug/L			08/24/23 05:20	1
Styrene	<1.00		1.00	0.370	ug/L			08/24/23 05:20	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/24/23 05:20	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/24/23 05:20	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			08/24/23 05:20	1
Toluene	<1.00		1.00	0.430	ug/L			08/24/23 05:20	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/24/23 05:20	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			08/24/23 05:20	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/24/23 05:20	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/24/23 05:20	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/24/23 05:20	1
Trichloroethene	<1.00		1.00	0.430	ug/L			08/24/23 05:20	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/24/23 05:20	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/24/23 05:20	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			08/24/23 05:20	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			08/24/23 05:20	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			08/24/23 05:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		80 - 120		08/24/23 05:20	1

Eurofins Cedar Falls

Client Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-263058-1
SDG: 23001

Client Sample ID: MW-90-15R

Lab Sample ID: 310-263058-1

Date Collected: 08/17/23 11:55

Matrix: Water

Date Received: 08/21/23 16:15

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Dibromofluoromethane (Surr)</i>	89		80 - 128		08/24/23 05:20	1
<i>Toluene-d8 (Surr)</i>	103		80 - 120		08/24/23 05:20	1

Definitions/Glossary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-263058-1
SDG: 23001

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.

Glossary

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

Surrogate Summary

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-263058-1
SDG: 23001

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

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	BFB (80-120)	DBFM (80-128)	TOL (80-120)
310-263058-1	MW-90-15R	98	89	103
LCS 310-397537/6	Lab Control Sample	95	93	107
LCS 310-397537/7	Lab Control Sample	99	91	105
MB 310-397537/5	Method Blank	98	89	104
Surrogate Legend				
BFB = 4-Bromofluorobenzene (Surr)				
DBFM = Dibromofluoromethane (Surr)				
TOL = Toluene-d8 (Surr)				

QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-263058-1
SDG: 23001

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

Lab Sample ID: MB 310-397537/5

Matrix: Water

Analysis Batch: 397537

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<10.0		10.0	3.10	ug/L			08/23/23 22:55	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			08/23/23 22:55	1
Benzene	<0.500		0.500	0.220	ug/L			08/23/23 22:55	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			08/23/23 22:55	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			08/23/23 22:55	1
Bromoform	<5.00		5.00	0.780	ug/L			08/23/23 22:55	1
Bromomethane	<4.00		4.00	1.10	ug/L			08/23/23 22:55	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			08/23/23 22:55	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			08/23/23 22:55	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			08/23/23 22:55	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			08/23/23 22:55	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			08/23/23 22:55	1
Chloroethane	<4.00		4.00	0.790	ug/L			08/23/23 22:55	1
Chloroform	<3.00		3.00	1.30	ug/L			08/23/23 22:55	1
Chloromethane	<3.00		3.00	0.610	ug/L			08/23/23 22:55	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			08/23/23 22:55	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			08/23/23 22:55	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			08/23/23 22:55	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			08/23/23 22:55	1
Dibromomethane	<1.00		1.00	0.330	ug/L			08/23/23 22:55	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			08/23/23 22:55	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			08/23/23 22:55	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			08/23/23 22:55	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			08/23/23 22:55	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			08/23/23 22:55	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			08/23/23 22:55	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			08/23/23 22:55	1
2-Hexanone	<10.0		10.0	2.00	ug/L			08/23/23 22:55	1
Iodomethane	<10.0		10.0	7.00	ug/L			08/23/23 22:55	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			08/23/23 22:55	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			08/23/23 22:55	1
Styrene	<1.00		1.00	0.370	ug/L			08/23/23 22:55	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			08/23/23 22:55	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			08/23/23 22:55	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			08/23/23 22:55	1
Toluene	<1.00		1.00	0.430	ug/L			08/23/23 22:55	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			08/23/23 22:55	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			08/23/23 22:55	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			08/23/23 22:55	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			08/23/23 22:55	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			08/23/23 22:55	1
Trichloroethene	<1.00		1.00	0.430	ug/L			08/23/23 22:55	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			08/23/23 22:55	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			08/23/23 22:55	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			08/23/23 22:55	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			08/23/23 22:55	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			08/23/23 22:55	1

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-263058-1
SDG: 23001

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

Lab Sample ID: MB 310-397537/5

Matrix: Water

Analysis Batch: 397537

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		80 - 120		08/23/23 22:55	1
Dibromofluoromethane (Surr)	89		80 - 128		08/23/23 22:55	1
Toluene-d8 (Surr)	104		80 - 120		08/23/23 22:55	1

Lab Sample ID: LCS 310-397537/6

Matrix: Water

Analysis Batch: 397537

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	40.0	57.91		ug/L		145	50 - 150
Acrylonitrile	200	257.3		ug/L		129	50 - 150
Benzene	20.0	20.89		ug/L		104	73 - 122
Bromochloromethane	20.0	18.51		ug/L		93	68 - 132
Bromodichloromethane	20.0	20.14		ug/L		101	72 - 121
Bromoform	20.0	16.25		ug/L		81	55 - 129
2-Butanone (MEK)	40.0	52.14		ug/L		130	50 - 150
Carbon disulfide	20.0	19.85		ug/L		99	58 - 131
Carbon tetrachloride	20.0	20.35		ug/L		102	67 - 132
Chlorobenzene	20.0	20.30		ug/L		101	69 - 121
Chlorodibromomethane	20.0	16.86		ug/L		84	69 - 122
Chloroform	20.0	20.13		ug/L		101	72 - 120
cis-1,2-Dichloroethene	20.0	20.88		ug/L		104	74 - 120
cis-1,3-Dichloropropene	20.0	21.18		ug/L		106	71 - 126
1,2-Dibromo-3-Chloropropane	20.0	22.75		ug/L		114	50 - 150
1,2-Dibromoethane (EDB)	20.0	20.14		ug/L		101	73 - 125
Dibromomethane	20.0	19.55		ug/L		98	72 - 123
1,2-Dichlorobenzene	20.0	19.63		ug/L		98	68 - 120
1,4-Dichlorobenzene	20.0	19.51		ug/L		98	67 - 120
1,1-Dichloroethane	20.0	21.41		ug/L		107	71 - 123
1,2-Dichloroethane	20.0	19.90		ug/L		99	70 - 124
1,1-Dichloroethene	20.0	23.54		ug/L		118	61 - 129
1,2-Dichloropropane	20.0	22.11		ug/L		111	73 - 121
Ethylbenzene	20.0	21.59		ug/L		108	69 - 122
2-Hexanone	40.0	54.55	*+	ug/L		136	60 - 132
Iodomethane	20.0	14.97		ug/L		75	10 - 150
Methylene Chloride	20.0	20.84		ug/L		104	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	56.04	*+	ug/L		140	62 - 130
Styrene	20.0	21.50		ug/L		107	67 - 125
1,1,1,2-Tetrachloroethane	20.0	19.15		ug/L		96	68 - 123
1,1,2,2-Tetrachloroethane	20.0	20.83		ug/L		104	64 - 124
Tetrachloroethene	20.0	20.45		ug/L		102	69 - 131
Toluene	20.0	21.04		ug/L		105	72 - 121
trans-1,4-Dichloro-2-butene	20.0	23.57		ug/L		118	48 - 150
trans-1,2-Dichloroethene	20.0	22.04		ug/L		110	68 - 125
trans-1,3-Dichloropropene	20.0	20.47		ug/L		102	68 - 124
1,1,1-Trichloroethane	20.0	20.80		ug/L		104	71 - 128
1,1,2-Trichloroethane	20.0	20.78		ug/L		104	70 - 124
Trichloroethene	20.0	20.01		ug/L		100	73 - 126

Eurofins Cedar Falls

QC Sample Results

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-263058-1
SDG: 23001

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

Lab Sample ID: LCS 310-397537/6

Matrix: Water

Analysis Batch: 397537

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	20.0	19.22		ug/L		96	64 - 125
Vinyl acetate	40.0	57.23		ug/L		143	50 - 150
Xylenes, Total	40.0	41.92		ug/L		105	68 - 124

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	93		80 - 128
Toluene-d8 (Surr)	107		80 - 120

Lab Sample ID: LCS 310-397537/7

Matrix: Water

Analysis Batch: 397537

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	16.87		ug/L		84	24 - 150
Chloroethane	20.0	23.50		ug/L		117	51 - 137
Chloromethane	20.0	20.91		ug/L		105	37 - 150
Trichlorofluoromethane	20.0	24.70		ug/L		124	56 - 144
Vinyl chloride	20.0	20.58		ug/L		103	57 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	91		80 - 128
Toluene-d8 (Surr)	105		80 - 120

QC Association Summary

Client: SCS Engineers

Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-263058-1

SDG: 23001

GC/MS VOA

Analysis Batch: 397537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-263058-1	MW-90-15R	Total/NA	Water	8260D	
MB 310-397537/5	Method Blank	Total/NA	Water	8260D	
LCS 310-397537/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-397537/7	Lab Control Sample	Total/NA	Water	8260D	

Lab Chronicle

Client: SCS Engineers
Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-263058-1
SDG: 23001

Client Sample ID: MW-90-15R
Date Collected: 08/17/23 11:55
Date Received: 08/21/23 16:15

Lab Sample ID: 310-263058-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	397537	FE5V	EET CF	08/24/23 05:20

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

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Accreditation/Certification Summary

Client: SCS Engineers

Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-263058-1

SDG: 23001

Laboratory: Eurofins Cedar Falls

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

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

Method Summary

Client: SCS Engineers

Project/Site: CCASW EN 1st 2023 Event - HMSP

Job ID: 310-263058-1

SDG: 23001

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF

Protocol References:

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

Laboratory References:

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



Environment Testing
America



310-263058 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>SEC</u>			
City/State: <u>CHY</u>		STATE	Project:
Receipt Information			
Date/Time Received:	DATE <u>8/21/23</u>	TIME <u>1615</u>	Received By: <u>Em</u>
Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____			
Condition of Cooler/Containers			
Sample(s) received in Cooler?		☒ Yes ☐ No	If yes: Cooler ID: _____
Multiple Coolers?		☐ Yes ☒ No	If yes: Cooler # _____ of _____
Cooler Custody Seals Present?		☐ Yes ☒ No	If yes: Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present?		☐ Yes ☒ No	If yes: Sample custody seals intact? ☐ Yes ☐ No
Trip Blank Present?		☐ Yes ☒ No	If yes: Which VOA samples are in cooler? ↓
Temperature Record			
Coolant: ☒ Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ Other: _____ ☐ NONE			
Thermometer ID: <u>P</u>		Correction Factor (°C): <u>0</u>	
Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>+0.1</u>		Corrected Temp (°C): <u>+0.1</u>	
Sample Container Temperature			
Container(s) used:	CONTAINER 1		CONTAINER 2
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No a) If yes: Is there evidence that the chilling process began? ☐ Yes ☐ No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No			
NOTE If yes, contact PM before proceeding If no, proceed with login			
Additional Comments			

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-263058-1

SDG Number: 23001

Login Number: 263058

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Homolar, Dana J

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	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.	False	No date or time on COC, logged in per container labels.
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix B-2
Data Validation Documentation

Completed by: Nathan Ohrt
 Sample Date: 3/21-22/2023
 Lab Report Date: 5/2/2023
 Site Name: Clinton County Sanitary Landfill - East, North MSWLF unit
 Project Type: 1st 2023 HMSP
 Lab Report Number: 310-252104

OK NO N/A NOTES

Sample Collection and Sample Handling

Chain of Custody
 Temperature
 Preservation
 Condition
 Case Narrative
 Holding Times

X			
X			
X			
X			
X			
X			

Analytical Sensitivity and Blanks

Method Blank Detections

X			Chloromethane was detected above the method detection limit; the concentration was less than the reporting limit so re-analysis was not performed.
X			No detections.

Trip Blank Detections

Accuracy

ICV/CCV

	X		The CCV recovered outside control limit for multiple parameters; the LCS associated with this CCV passed using CCV criteria for the affected analytes so the data was reported.
X			
X			
X			

LCS/LCSD

MS/MSD

Surrogates (organics only)

Precision

QA/QC Sample RPDs

Field Duplicates

X			
X			Sample MW-03-16 and duplicate sample MW-DN had <50% RPD for analyzed parameters.

Completed by: Nathan Ohrt
 Sample Date: 8/16/2023
 Lab Report Date: 8/25/2023
 Site Name: Clinton County Sanitary Landfill - East, North MSWLF unit
 Project Type: 2nd 2023 HMSP
 Lab Report Number: 310-262781

OK NO N/A NOTES

Sample Collection and Sample Handling

Chain of Custody
 Temperature
 Preservation
 Condition
 Case Narrative
 Holding Times

X			
X			
X			
X			
X			
X			

Analytical Sensitivity and Blanks

Method Blank Detections
 Trip Blank Detections

X			None.
		X	

Accuracy

ICV/CCV

	X		The CCV recovered outside control limit for multiple parameters; the associated samples were non-detect for the affected analytes so the data was reported.
--	---	--	---

LCS/LCSD

X			The LCS recovered outside control limits for multiple parameters; the analytes were biased high in the LCS and were non-detect in the associated samples so the data was reported.
---	--	--	--

MS/MSD

Surrogates (organics only)

X			
X			

Precision

QA/QC Sample RPDs
 Field Duplicates

X			
		X	

Completed by: Nathan Ohrt
 Sample Date: 8/16/2023
 Lab Report Date: 9/25/2023
 Site Name: Clinton County Sanitary Landfill - East, South and North MSWLF unit
 Project Type: 2nd 2023 HMSP
 Lab Report Number: 310-262928

OK NO N/A NOTES

Sample Collection and Sample Handling

Chain of Custody
 Temperature
 Preservation
 Condition
 Case Narrative
 Holding Times

X			
X			
X			
X			
X			
X			

Analytical Sensitivity and Blanks

Method Blank Detections
 Trip Blank Detections

X			None.
X			No detections.

Accuracy

ICV/CCV

	X		The CCV recovered above the upper control limits for multiple parameters; the associated samples were non-detect for the affected analytes so the data was reported.
--	---	--	--

LCS/LCSD

X			The LCS recovered outside control limits for multiple parameters; the analytes were biased high in the LCS and were non-detect in the associated samples so the data was reported.
---	--	--	--

MS/MSD

Surrogates (organics only)

X			
X			

Precision

QA/QC Sample RPDs

Field Duplicates

X			
X			Sample MW-03-16 and duplicate sample MW-DN had <50% RPD for analyzed parameters.

Completed by: Nathan Ohrt
 Sample Date: 8/17/2023
 Lab Report Date: 8/25/2023
 Site Name: Clinton County Sanitary Landfill - East, North MSWLF unit
 Project Type: 2nd 2023 HMSP
 Lab Report Number: 310-263058

OK NO N/A NOTES

Sample Collection and Sample Handling

Chain of Custody
 Temperature
 Preservation
 Condition
 Case Narrative
 Holding Times

X			
X			
X			
X			
X			
X			

Analytical Sensitivity and Blanks

Method Blank Detections
 Trip Blank Detections

X			None.
		X	

Accuracy

ICV/CCV

LCS/LCSD

MS/MSD

Surrogates (organics only)

	X		The CCV recovered above the upper control limit for 2-hexanone and 4-methyl-2-pentatone (MIBK); the associate samples were non-detect for the affected analytes so the data was reported.
X			The LCS recovered outside control limits for 2-hexanone and 4-methyl-2-pentatone (MIBK); the analytes were biased high in the LCS and not detected in the associated samples so the data was reported.
X			
X			

Precision

QA/QC Sample RPDs
 Field Duplicates

X			
		X	

Appendix C
Summary of Groundwater Chemistry

SCS ENGINEERS

Summary of Groundwater Chemistry Clinton County Sanitary Landfill - 23-SDP-01-74P - East North

Total Metals Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
Antimony, mg/L (CAS NO - 7440-36-0)	3/5/2014	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	< 0.006	< 0.006	N/A	N/A	< 0.006	< 0.006	< 0.006
	4/7/2015	N/A	< 0.001	0.000264*	N/A	N/A	N/A	< 0.001	< 0.001
	9/21/2015	N/A	0.00485	N/A	N/A	N/A	N/A	N/A	N/A
	7/13/2016	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	9/19/2017	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	3/6/2018	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	8/8/2018	N/A	0.000442*	N/A	N/A	N/A	N/A	N/A	N/A
	3/19/2019	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	8/28/2019	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	8/28/2019	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/3/2020	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	3/3/2020	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	N/A
	5/19/2021	N/A	< 0.002	< 0.002	N/A	N/A	N/A	< 0.002	N/A
	9/14/2021	N/A	< 0.002	< 0.002	N/A	N/A	N/A	N/A	< 0.002
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002
	4/27/2022	< 0.002	< 0.002	< 0.002	N/A	N/A	N/A	N/A	< 0.002
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002
	9/13/2022	N/A	< 0.002	< 0.002	N/A	N/A	N/A	N/A	< 0.002
	3/21/2023	N/A	< 0.002	< 0.002	N/A	N/A	N/A	N/A	< 0.002
	3/21/2023	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 0.002	< 0.002	N/A	N/A	N/A	N/A	< 0.002
Arsenic, mg/L (CAS NO - 7440-38-2)	3/5/2014	N/A	0.00301	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	0.00329	0.157	N/A	N/A	0.00485	0.0246	0.00836
	4/7/2015	N/A	0.00101*	0.0926	N/A	N/A	N/A	0.00539	0.00396*
	9/21/2015	N/A	0.0152	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2016	N/A	N/A	0.129	N/A	N/A	N/A	N/A	0.0188
	7/13/2016	N/A	0.00205	0.123	N/A	N/A	N/A	N/A	0.0213
	4/4/2017	N/A	N/A	0.116	N/A	N/A	N/A	N/A	0.0136
	9/19/2017	N/A	0.000662*	0.135	N/A	N/A	N/A	N/A	0.0278
	3/6/2018	N/A	0.000593*	0.124	N/A	N/A	N/A	N/A	0.0168
	8/8/2018	N/A	0.0157	0.0882	N/A	N/A	N/A	N/A	0.0265
	3/19/2019	< 0.002	0.00151*	0.116	N/A	N/A	N/A	N/A	0.00329
	8/28/2019	< 0.002	0.00159*	0.138	N/A	N/A	N/A	0.0259	0.00199*
	8/28/2019	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/3/2020	< 0.002	0.00201	0.123	N/A	N/A	N/A	0.0277	0.021
	3/3/2020	N/A	N/A	0.122	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 0.002	0.00412	0.136	N/A	N/A	N/A	0.0309	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	0.0156	N/A
	5/19/2021	< 0.002	0.00725	0.115	N/A	N/A	N/A	0.0179	N/A
	9/14/2021	< 0.002	0.00439	0.14	N/A	N/A	N/A	0.0518	0.0271
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0271
	4/27/2022	< 0.002	0.00278	0.127	N/A	N/A	N/A	N/A	0.00772
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00921
	9/13/2022	< 0.002	0.00458	0.141	N/A	N/A	N/A	0.00835	0.0154
	3/21/2023	0.000838*	0.00246	0.139	N/A	N/A	N/A	0.00527	0.0216
	3/21/2023	N/A	N/A	0.133	N/A	N/A	N/A	N/A	N/A
	8/16/2023	< 0.002	0.00715	0.13	N/A	N/A	N/A	0.0264	0.0365
Barium, mg/L (CAS NO - 7440-39-3)	3/5/2014	N/A	0.544	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	0.676	0.536	N/A	N/A	1.05	0.698	1.6
	4/7/2015	N/A	0.135	0.487	N/A	N/A	N/A	0.382	0.477
	9/21/2015	N/A	0.657	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2016	N/A	N/A	0.725	N/A	N/A	N/A	N/A	0.516
	7/13/2016	N/A	0.135	0.625	N/A	N/A	N/A	N/A	0.418
	4/4/2017	N/A	N/A	0.576	N/A	N/A	N/A	N/A	0.392
	9/19/2017	N/A	0.405	0.642	N/A	N/A	N/A	N/A	0.429
	3/6/2018	N/A	0.38	0.6	N/A	N/A	N/A	N/A	0.435
	8/8/2018	N/A	0.517	0.374	N/A	N/A	N/A	N/A	0.335
	3/19/2019	0.456	0.131	0.517	N/A	N/A	N/A	N/A	0.261
	8/28/2019	0.414	0.12	0.426	N/A	N/A	N/A	N/A	0.187
	8/28/2019	0.414	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/3/2020	0.443	0.127	0.496	N/A	N/A	N/A	N/A	0.212
	3/3/2020	N/A	N/A	0.498	N/A	N/A	N/A	N/A	N/A
	9/23/2020	0.407	0.171	0.414	N/A	N/A	N/A	N/A	N/A
	5/19/2021	0.404	0.363	0.468	N/A	N/A	N/A	0.407	N/A
	9/14/2021	0.398	0.161	0.425	N/A	N/A	N/A	N/A	0.261
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.26
	4/27/2022	0.447	0.138	0.516	N/A	N/A	N/A	N/A	0.153
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.154
	9/13/2022	0.429	0.168	0.444	N/A	N/A	N/A	N/A	0.27
	3/21/2023	0.435	0.111	0.491	N/A	N/A	N/A	N/A	0.327
	3/21/2023	N/A	N/A	0.473	N/A	N/A	N/A	N/A	N/A
	8/16/2023	0.414	0.206	0.454	N/A	N/A	N/A	N/A	0.43

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Summary of Groundwater Chemistry
Clinton County Sanitary Landfill - 23-SDP-01-74P - East North

Total Metals Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
Beryllium, mg/L (CAS NO - 7440-41-7)	3/5/2014	N/A	0.00234	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	0.00264	0.000337*	N/A	N/A	0.00377	0.00076*	0.00375
	4/7/2015	N/A	< 0.001	< 0.001	N/A	N/A	N/A	0.000094*	0.00206*
	9/21/2015	N/A	0.00615	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2016	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	7/13/2016	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	4/4/2017	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	9/19/2017	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	3/6/2018	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	8/8/2018	N/A	0.00178	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	3/19/2019	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	8/28/2019	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	8/28/2019	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/3/2020	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	3/3/2020	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	N/A
	5/19/2021	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	< 0.001	N/A
	9/14/2021	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001
	4/27/2022	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001
	9/13/2022	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	3/21/2023	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	3/21/2023	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	8/16/2023	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
Cadmium, mg/L (CAS NO - 7440-43-9)	3/5/2014	N/A	0.000836	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	0.0029	0.000766	N/A	N/A	0.00711	0.00129	0.00353
	4/7/2015	N/A	0.000195*	0.000444*	N/A	N/A	N/A	0.00039*	0.0012
	9/21/2015	N/A	0.00647	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2016	N/A	N/A	0.000136*	N/A	N/A	N/A	N/A	0.0002*
	7/13/2016	N/A	< 0.0005	0.000093*	N/A	N/A	N/A	N/A	0.000065*
	4/4/2017	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	< 0.0005
	9/19/2017	N/A	0.000111*	0.00031*	N/A	N/A	N/A	N/A	0.000135*
	3/6/2018	N/A	< 0.0005	0.000197*	N/A	N/A	N/A	N/A	< 0.0005
	8/8/2018	N/A	0.00101	< 0.0005	N/A	N/A	N/A	N/A	< 0.0005
	3/19/2019	< 0.0005	< 0.0005	< 0.0005	N/A	N/A	N/A	N/A	0.000101*
	8/28/2019	< 0.0001	< 0.0001	< 0.0001	N/A	N/A	N/A	N/A	< 0.0001
	8/28/2019	< 0.0001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/3/2020	< 0.0001	< 0.0001	< 0.0001	N/A	N/A	N/A	N/A	0.000039*
	3/3/2020	N/A	N/A	< 0.0001	N/A	N/A	N/A	N/A	N/A
	9/23/2020	0.000166	< 0.0001	< 0.0001	N/A	N/A	N/A	N/A	N/A
	5/19/2021	< 0.0001	< 0.0001	< 0.0001	N/A	N/A	N/A	0.000123	N/A
	9/14/2021	< 0.0001	< 0.0001	< 0.0001	N/A	N/A	N/A	N/A	< 0.0001
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0001
	4/27/2022	< 0.0001	< 0.0001	< 0.0001	N/A	N/A	N/A	N/A	0.000064*
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0001
	9/13/2022	< 0.0001	< 0.0001	< 0.0001	N/A	N/A	N/A	N/A	< 0.0001
	3/21/2023	< 0.0001	0.000137	0.00011	N/A	N/A	N/A	N/A	< 0.0001
	3/21/2023	N/A	N/A	0.000077*	N/A	N/A	N/A	N/A	N/A
	8/16/2023	< 0.0002	< 0.0002	0.000103*	N/A	N/A	N/A	N/A	< 0.0002
Chromium, mg/L (CAS NO - 7440-47-3)	3/5/2014	N/A	0.00989*	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	0.00657*	< 0.02	N/A	N/A	< 0.02	< 0.02	< 0.02
	4/7/2015	N/A	< 0.005	< 0.005	N/A	N/A	N/A	< 0.005	0.00692*
	9/21/2015	N/A	0.0162	N/A	N/A	N/A	N/A	N/A	N/A
	7/13/2016	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	9/19/2017	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	3/6/2018	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	8/8/2018	N/A	0.0468	N/A	N/A	N/A	N/A	N/A	N/A
	3/19/2019	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	8/28/2019	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	8/28/2019	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/3/2020	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	3/3/2020	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 0.005	0.00177*	N/A	N/A	N/A	N/A	N/A
	5/19/2021	N/A	< 0.005	< 0.005	N/A	N/A	N/A	0.00147*	N/A
	9/14/2021	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005
	4/27/2022	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005
	9/13/2022	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	3/21/2023	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	3/21/2023	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 0.005	0.00112*	N/A	N/A	N/A	N/A	< 0.005

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Total Metals Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
Cobalt, mg/L (CAS NO - 7440-48-4)	3/5/2014	N/A	0.0123	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	0.029	0.00975	N/A	N/A	0.0638	0.018	0.0318
	4/7/2015	N/A	0.000393*	0.00924	N/A	N/A	N/A	0.00868	0.011
	9/21/2015	N/A	0.0216	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2016	N/A	N/A	0.00963	N/A	N/A	N/A	N/A	0.00853
	7/13/2016	N/A	0.000078	0.0107	N/A	N/A	N/A	N/A	0.00798
	4/4/2017	N/A	N/A	0.0098	N/A	N/A	N/A	N/A	0.0079
	9/19/2017	N/A	0.000377*	0.0109	N/A	N/A	N/A	N/A	0.00831
	3/6/2018	N/A	0.000098*	0.0089	N/A	N/A	N/A	N/A	0.00824
	8/8/2018	N/A	0.0233	0.00832	N/A	N/A	N/A	N/A	0.00714
	3/19/2019	0.000124*	< 0.0005	0.00901	N/A	N/A	N/A	N/A	0.00395
	8/28/2019	< 0.0005	< 0.0005	0.00677	N/A	N/A	N/A	N/A	0.00381
	8/28/2019	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/3/2020	< 0.0005	< 0.0005	0.00715	N/A	N/A	N/A	N/A	0.00475
	3/3/2020	N/A	N/A	0.00724	N/A	N/A	N/A	N/A	N/A
	9/23/2020	0.000402*	< 0.0005	0.00624	N/A	N/A	N/A	N/A	N/A
	5/19/2021	0.000152*	< 0.0005	0.00715	N/A	N/A	N/A	0.00515	N/A
	9/14/2021	< 0.0005	< 0.0005	0.00687	N/A	N/A	N/A	N/A	0.00547
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00551
	4/27/2022	0.000313*	< 0.0005	0.00828	N/A	N/A	N/A	N/A	0.00749
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00737
	9/13/2022	< 0.0005	< 0.0005	0.00681	N/A	N/A	N/A	N/A	0.00373
	3/21/2023	< 0.0005	< 0.0005	0.00673	N/A	N/A	N/A	N/A	0.00551
	3/21/2023	N/A	N/A	0.00636	N/A	N/A	N/A	N/A	N/A
	8/16/2023	< 0.0005	< 0.0005	0.00726	N/A	N/A	N/A	N/A	0.0042
Copper, mg/L (CAS NO - 7440-50-8)	3/5/2014	N/A	0.00453*	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	0.0158*	0.00381*	N/A	N/A	0.0182*	0.0335	0.0293
	4/7/2015	N/A	0.000656*	0.00195*	N/A	N/A	N/A	0.00668	0.0368
	9/21/2015	N/A	0.021	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2016	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	0.00277*
	7/13/2016	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	4/4/2017	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	9/19/2017	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	3/6/2018	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	8/8/2018	N/A	0.052	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	3/19/2019	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	8/28/2019	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	8/28/2019	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/3/2020	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	3/3/2020	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	N/A
	5/19/2021	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	0.00302*	N/A
	9/14/2021	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005
	4/27/2022	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005
	9/13/2022	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	3/21/2023	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	3/21/2023	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	8/16/2023	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	0.00186*
Lead, mg/L (CAS NO - 7439-92-1)	3/5/2014	N/A	0.00976	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	0.00505	0.00668	N/A	N/A	0.0116	0.016	0.00765
	4/7/2015	N/A	0.000641	0.00144	N/A	N/A	N/A	0.00265	0.0338
	9/21/2015	N/A	0.0106	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2016	N/A	N/A	0.00053	N/A	N/A	N/A	N/A	0.00147
	7/13/2016	N/A	< 0.0005	< 0.0005	N/A	N/A	N/A	N/A	< 0.0005
	4/4/2017	N/A	N/A	0.000345*	N/A	N/A	N/A	N/A	< 0.0005
	9/19/2017	N/A	< 0.0005	0.00196	N/A	N/A	N/A	N/A	0.0266
	3/6/2018	N/A	0.0021	0.000893	N/A	N/A	N/A	N/A	< 0.0005
	8/8/2018	N/A	0.031	< 0.0005	N/A	N/A	N/A	N/A	< 0.0005
	3/19/2019	< 0.0005	< 0.0005	< 0.0005	N/A	N/A	N/A	N/A	< 0.0005
	8/28/2019	< 0.0005	< 0.0005	< 0.0005	N/A	N/A	N/A	N/A	< 0.0005
	8/28/2019	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/3/2020	< 0.0005	< 0.0005	< 0.0005	N/A	N/A	N/A	N/A	< 0.0005
	3/3/2020	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A
	9/23/2020	0.000474*	0.000163*	< 0.0005	N/A	N/A	N/A	N/A	N/A
	5/19/2021	0.000281*	0.000268*	< 0.0005	N/A	N/A	N/A	0.0043	N/A
	9/14/2021	< 0.0005	< 0.0005	< 0.0005	N/A	N/A	N/A	N/A	< 0.0005
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005
	4/27/2022	< 0.0005	< 0.0005	< 0.0005	N/A	N/A	N/A	N/A	< 0.0005
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005
	9/13/2022	< 0.0005	< 0.0005	< 0.0005	N/A	N/A	N/A	N/A	< 0.0005
	3/21/2023	< 0.0005	0.000307*	0.000529	N/A	N/A	N/A	N/A	0.000418*
	3/21/2023	N/A	N/A	0.000475*	N/A	N/A	N/A	N/A	N/A
	8/16/2023	< 0.0005	< 0.0005	0.000353*	N/A	N/A	N/A	N/A	0.00171

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Total Metals Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
Nickel, mg/L (CAS NO - 7440-02-0)	3/5/2014	N/A	0.0206*	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	0.0591	0.0563	N/A	N/A	0.103	0.0428*	0.0538
	4/7/2015	N/A	0.000956*	0.0487	N/A	N/A	N/A	0.0252	0.031
	9/21/2015	N/A	0.124	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2016	N/A	N/A	0.048	N/A	N/A	N/A	N/A	0.0229
	7/13/2016	N/A	< 0.005	0.054	N/A	N/A	N/A	N/A	0.0245
	4/4/2017	N/A	N/A	0.0513	N/A	N/A	N/A	N/A	0.0208
	9/19/2017	N/A	0.00268*	0.0482	N/A	N/A	N/A	N/A	0.0206
	3/6/2018	N/A	< 0.005	0.0455	N/A	N/A	N/A	N/A	0.019
	8/8/2018	N/A	0.0509	0.0507	N/A	N/A	N/A	N/A	0.0194
	3/19/2019	< 0.005	< 0.005	0.0524	N/A	N/A	N/A	N/A	0.016
	8/28/2019	< 0.005	< 0.005	0.0457	N/A	N/A	N/A	N/A	0.0145
	8/28/2019	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/3/2020	< 0.005	< 0.005	0.0415	N/A	N/A	N/A	N/A	0.0159
	3/3/2020	N/A	N/A	0.0419	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 0.005	< 0.005	0.0404	N/A	N/A	N/A	N/A	N/A
	5/19/2021	< 0.005	< 0.005	0.0442	N/A	N/A	N/A	0.0252	N/A
	9/14/2021	< 0.005	< 0.005	0.0431	N/A	N/A	N/A	N/A	0.0173
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0174
	4/27/2022	< 0.005	< 0.005	0.0491	N/A	N/A	N/A	N/A	0.0174
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0174
	9/13/2022	< 0.005	< 0.005	0.0442	N/A	N/A	N/A	N/A	0.0104
	3/21/2023	< 0.005	< 0.005	0.0513	N/A	N/A	N/A	N/A	0.0166
	3/21/2023	N/A	N/A	0.0493	N/A	N/A	N/A	N/A	N/A
	8/16/2023	< 0.005	< 0.005	0.0485	N/A	N/A	N/A	N/A	0.0241
Selenium, mg/L (CAS NO - 7782-49-2)	3/5/2014	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	< 0.005	< 0.005	N/A	N/A	< 0.005	< 0.005	< 0.005
	4/7/2015	N/A	< 0.005	< 0.005	N/A	N/A	N/A	< 0.005	< 0.015
	9/21/2015	N/A	0.0102	N/A	N/A	N/A	N/A	N/A	N/A
	7/13/2016	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	9/19/2017	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	3/6/2018	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	8/8/2018	N/A	0.00198*	N/A	N/A	N/A	N/A	N/A	N/A
	3/19/2019	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	8/28/2019	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	8/28/2019	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/3/2020	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	3/3/2020	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	N/A
	5/19/2021	N/A	< 0.005	< 0.005	N/A	N/A	N/A	< 0.005	N/A
	9/14/2021	N/A	0.0015*	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005
	4/27/2022	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005
	9/13/2022	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	3/21/2023	N/A	0.00161*	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	3/21/2023	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
Silver, mg/L (CAS NO - 7440-22-4)	3/5/2014	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	< 0.02	< 0.02	N/A	N/A	< 0.02	< 0.02	< 0.02
	4/7/2015	N/A	< 0.001	0.000068*	N/A	N/A	N/A	0.00007*	0.000045*
	9/21/2015	N/A	0.00429	N/A	N/A	N/A	N/A	N/A	N/A
	7/13/2016	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	9/19/2017	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	3/6/2018	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	8/8/2018	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	3/19/2019	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	8/28/2019	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	8/28/2019	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/3/2020	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	3/3/2020	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	N/A
	5/19/2021	N/A	< 0.001	< 0.001	N/A	N/A	N/A	< 0.001	N/A
	9/14/2021	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001
	4/27/2022	< 0.001	0.000809*	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001
	9/13/2022	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	3/21/2023	N/A	0.00138	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	3/21/2023	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001

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Summary of Groundwater Chemistry Clinton County Sanitary Landfill - 23-SDP-01-74P - East North

Total Metals Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
Thallium, mg/L (CAS NO - 7440-28-0)	3/5/2014	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	< 0.002	< 0.002	N/A	N/A	< 0.002	< 0.002	< 0.002
	4/7/2015	N/A	< 0.001	0.00004*	N/A	N/A	N/A	< 0.001	0.000065*
	9/21/2015	N/A	0.00449	N/A	N/A	N/A	N/A	N/A	N/A
	7/13/2016	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	9/19/2017	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	3/6/2018	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	8/8/2018	N/A	0.000615*	N/A	N/A	N/A	N/A	N/A	N/A
	3/19/2019	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	8/28/2019	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	8/28/2019	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/3/2020	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	3/3/2020	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	N/A
	5/19/2021	N/A	< 0.001	< 0.001	N/A	N/A	N/A	< 0.001	N/A
	9/14/2021	N/A	0.000853*	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001
	4/27/2022	< 0.001	0.000265*	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001
	9/13/2022	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	3/21/2023	N/A	0.000895*	< 0.001	N/A	N/A	N/A	N/A	< 0.001
	3/21/2023	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	0.00256
Vanadium, mg/L (CAS NO - 7440-62-2)	3/5/2014	N/A	0.037*	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	0.044*	0.00949*	N/A	N/A	0.0747	0.0171*	0.0364*
	4/7/2015	N/A	0.00145*	0.00167*	N/A	N/A	N/A	0.00223*	0.0318
	9/21/2015	N/A	0.0226	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2016	N/A	N/A	0.00118*	N/A	N/A	N/A	N/A	0.00173*
	7/13/2016	N/A	< 0.005	0.000756*	N/A	N/A	N/A	N/A	0.000677*
	4/4/2017	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	9/19/2017	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	3/6/2018	N/A	< 0.005	0.00158*	N/A	N/A	N/A	N/A	< 0.005
	8/8/2018	N/A	0.0724	0.000579*	N/A	N/A	N/A	N/A	< 0.005
	3/19/2019	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	8/28/2019	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	8/28/2019	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/3/2020	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	3/3/2020	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	N/A
	5/19/2021	< 0.005	0.0019*	< 0.005	N/A	N/A	N/A	0.00445*	N/A
	9/14/2021	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005
	4/27/2022	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005
	9/13/2022	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	3/21/2023	< 0.005	< 0.005	0.00117*	N/A	N/A	N/A	N/A	0.00163*
	3/21/2023	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	8/16/2023	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	0.00237*
Zinc, mg/L (CAS NO - 7440-66-6)	3/5/2014	N/A	0.0246	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	0.116	< 0.02	N/A	N/A	0.0342	< 0.02	0.0456
	4/7/2015	N/A	< 0.01	< 0.01	N/A	N/A	N/A	0.00778*	0.0647
	9/21/2015	N/A	0.0304	N/A	N/A	N/A	N/A	N/A	N/A
	7/13/2016	N/A	0.00542	N/A	N/A	N/A	N/A	N/A	N/A
	9/19/2017	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	3/6/2018	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	8/8/2018	N/A	0.116	N/A	N/A	N/A	N/A	N/A	N/A
	3/19/2019	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	0.0288
	8/28/2019	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	N/A	< 0.02
	8/28/2019	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/3/2020	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	N/A	< 0.02
	3/3/2020	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A
	5/19/2021	N/A	< 0.02	< 0.02	N/A	N/A	N/A	< 0.02	N/A
	9/14/2021	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	< 0.02
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02
	4/27/2022	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	N/A	< 0.02
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02
	9/13/2022	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	< 0.02
	3/21/2023	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	< 0.02
	3/21/2023	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	< 0.02

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Summary of Groundwater Chemistry Clinton County Sanitary Landfill - 23-SDP-01-74P - East North

Total Metals Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
Total Suspended Solids, mg/L (CAS NO - TSS)	3/5/2014	N/A	1850	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	2290	N/A	N/A	N/A	N/A	N/A	N/A
	4/7/2015	N/A	105	120	N/A	N/A	N/A	166	3600
	9/21/2015	N/A	40	137	N/A	N/A	N/A	1390	157
	3/29/2016	4.62	N/A	186	5	57	21.1	14100	280
	7/13/2016	44.6	18.9	114	10	32	27.9	5840	75
	4/4/2017	10.8	N/A	73.4	3.87	29.3	296	445	44.9
	9/19/2017	25.1	15.3	91.6	4.13	32.9	170	171	80.6
	3/6/2018	9.33	3.4	124	11.6	38.8	4	569	71
	8/8/2018	588	2370	121	5	38.5	17.7	194	73
	3/19/2019	4.88	13.4	109	3	42.8	18.4	N/A	4.88
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	656	N/A
	8/28/2019	2.5	14	104	3.5	38	2.5	1710	3.75
	3/3/2020	2.25	10	98	N/A	N/A	N/A	1130	74
	3/3/2020	N/A	N/A	100	N/A	N/A	N/A	N/A	N/A
	9/23/2020	15	25.5	96	N/A	N/A	N/A	1060	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	794	N/A
	5/19/2021	5.25	104	105	N/A	N/A	N/A	169	71
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	256	N/A
	9/14/2021	< 5	22.7	88.5	N/A	N/A	N/A	160	72
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	67.7
	4/27/2022	17	8.5	105	N/A	N/A	N/A	N/A	56
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	53
	9/13/2022	1.75	20.5	92	N/A	N/A	N/A	31	45
	3/21/2023	1.5*	9.87	128	N/A	N/A	N/A	59.7	129
	3/21/2023	N/A	N/A	154	N/A	N/A	N/A	N/A	N/A
	8/16/2023	< 1.88	37.5	116	N/A	N/A	N/A	230	114

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
Clinton County Sanitary Landfill - 23-SDP-01-74P - East North

Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
1,1,1,2-Tetrachloroethane, ug/L (CAS NO - 630-20-6)	3/5/2014	N/A	<1	<1	<1	N/A	<1	<1	N/A
	10/28/2014	N/A	<1	<1	<1	<1	<1	<1	<1
	4/7/2015	N/A	<1	<1	<1	<1	<1	<1	<1
	9/21/2015	N/A	<1	<10	<1	<10	<1	N/A	N/A
	3/29/2016	N/A	N/A	<1	<1	<1	<1	<1	N/A
	7/13/2016	N/A	<1	<1	N/A	N/A	N/A	<1	<1
	4/4/2017	N/A	N/A	<1	<1	<1	<1	<1	<1
	9/19/2017	N/A	<1	<1	<1	<1	<1	<1	<1
	3/6/2018	N/A	<1	<1	<1	<1	<1	<1	<1
	8/8/2018	N/A	<1	<1	<1	<1	<1	<1	<1
	3/19/2019	N/A	<1	<10	<1	<1	<1	N/A	<1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A
	8/28/2019	N/A	<1	<1	<1	<1	<1	<1	<1
	3/3/2020	N/A	<1	<1	<1	<1	<1	<1	<1
	3/3/2020	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	<1	<1	<1	<1	<1	<1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A
	5/19/2021	N/A	<1	<10	<1	<10	<1	<1	<10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A
	9/14/2021	N/A	<1	<1	<1	<1	<1	<1	<1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1
	4/27/2022	N/A	<1	<1	<1	<1	<1	<1	<1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1
	9/13/2022	N/A	<1	<1	<1	<1	<1	<1	<1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	3/21/2023	N/A	<1	<1	<1	<1	<1	<1	<1
	3/21/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	<1	<1	<1	<1	<1	<1	<1
	8/16/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
1,1,1-Trichloroethane, ug/L (CAS NO - 71-55-6)	3/5/2014	N/A	<1	<1	<1	N/A	<1	<1	N/A
	10/28/2014	N/A	<1	<1	<1	<1	<1	<1	<1
	4/7/2015	N/A	<1	<1	<1	<1	<1	<1	<1
	9/21/2015	N/A	<1	<10	<1	<10	<1	N/A	N/A
	3/29/2016	N/A	N/A	<1	<1	<1	<1	<1	N/A
	7/13/2016	N/A	<1	<1	N/A	N/A	N/A	<1	<1
	4/4/2017	N/A	N/A	<1	<1	<1	<1	<1	<1
	9/19/2017	N/A	<1	<1	<1	<1	<1	<1	<1
	3/6/2018	N/A	<1	<1	<1	<1	<1	<1	<1
	8/8/2018	N/A	<1	<1	<1	<1	<1	<1	<1
	3/19/2019	N/A	<1	<10	<1	<1	<1	N/A	<1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A
	8/28/2019	N/A	<1	<1	<1	<1	<1	<1	<1
	3/3/2020	N/A	<1	<1	<1	<1	<1	<1	<1
	3/3/2020	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	<1	<1	<1	<1	<1	<1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A
	5/19/2021	N/A	<1	<10	<1	<10	<1	<1	<10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A
	9/14/2021	N/A	<1	<1	<1	<1	<1	<1	<1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1
	4/27/2022	N/A	<1	<1	<1	<1	<1	<1	<1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1
	9/13/2022	N/A	<1	<1	<1	<1	<1	<1	<1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	3/21/2023	N/A	<1	<1	<1	<1	<1	<1	<1
	3/21/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	<1	<1	<1	<1	<1	<1	<1
	8/16/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane, ug/L (CAS NO - 79-34-5)	3/5/2014	N/A	<1	<1	<1	N/A	<1	<1	N/A
	10/28/2014	N/A	<1	<1	<1	<1	<1	<1	<1
	4/7/2015	N/A	<1	<1	<1	<1	<1	<1	<1
	9/21/2015	N/A	<1	<10	<1	<10	<1	N/A	N/A
	3/29/2016	N/A	N/A	<1	<1	<1	<1	<1	N/A
	7/13/2016	N/A	<1	<1	N/A	N/A	N/A	<1	<1
	4/4/2017	N/A	N/A	<1	<1	<1	<1	<1	<1
	9/19/2017	N/A	<1	<1	<1	<1	<1	<1	<1
	3/6/2018	N/A	<1	<1	<1	<1	<1	<1	<1
	8/8/2018	N/A	<1	<1	<1	<1	<1	<1	<1
	3/19/2019	N/A	<1	<10	<1	<1	<1	N/A	<1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A
	8/28/2019	N/A	<1	<1	<1	<1	<1	<1	<1
	3/3/2020	N/A	<1	<1	<1	<1	<1	<1	<1
	3/3/2020	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	<1	<1	<1	<1	<1	<1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A
	5/19/2021	N/A	<1	<10	<1	<10	<1	<1	<10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A
	9/14/2021	N/A	<1	<1	<1	<1	<1	<1	<1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1

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Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
1,1,2,2-Tetrachloroethane, ug/L (CAS NO - 79-34-5)	9/14/2021	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	4/27/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	9/13/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/21/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/16/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
1,1,2-Trichloroethane, ug/L (CAS NO - 79-00-5)	3/5/2014	N/A	< 1	< 1	< 1	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	< 1	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1
	9/19/2017	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/6/2018	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/8/2018	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/19/2019	N/A	< 1	< 10	< 1	< 1	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	5/19/2021	N/A	< 1	< 10	< 1	< 10	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	9/14/2021	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	4/27/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	9/13/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/21/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/16/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethane, ug/L (CAS NO - 75-34-3)	3/5/2014	N/A	< 1	< 1	11.5	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	< 1	37.3	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	< 1	8.73	< 1	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	6.52	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	< 1	4.76	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	< 1	3.72	< 1	< 1	< 1	< 1
	9/19/2017	N/A	< 1	< 1	3.04	< 1	< 1	< 1	< 1
	3/6/2018	N/A	< 1	< 1	3.69	< 1	< 1	< 1	< 1
	8/8/2018	N/A	< 1	< 1	2.31	< 1	< 1	< 1	< 1
	3/19/2019	N/A	< 1	< 10	2.27	< 1	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	< 1	1.97	< 1	< 1	< 1	< 1
	3/3/2020	N/A	< 1	< 1	1.58	< 1	< 1	< 1	< 1
	3/3/2020	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	< 1	1.98	< 1	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	5/19/2021	N/A	< 1	< 10	0.851*	< 10	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	9/14/2021	N/A	< 1	< 1	0.899*	< 1	< 1	< 1	< 1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	4/27/2022	N/A	< 1	< 1	0.804*	< 1	< 1	< 1	< 1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	9/13/2022	N/A	< 1	< 1	0.856*	0.305*	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	< 1	0.638*	< 1	< 1	< 1	< 1
	3/21/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	< 1	0.936*	< 1	< 1	< 1	< 1
	8/16/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethene, ug/L (CAS NO - 75-35-4)	3/5/2014	N/A	< 2	< 2	< 2	N/A	< 2	< 2	N/A
	10/28/2014	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	4/7/2015	N/A	< 2	< 2	0.296*	< 2	< 2	< 2	< 2
	9/21/2015	N/A	< 2	< 20	< 2	< 20	< 2	N/A	N/A
	3/29/2016	N/A	N/A	< 2	< 2	< 2	< 2	< 2	N/A
	7/13/2016	N/A	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	4/4/2017	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2
	9/19/2017	N/A	< 2	< 2	0.197*	< 2	< 2	< 2	< 2
	3/6/2018	N/A	< 2	< 2	0.232*	< 2	< 2	< 2	< 2
	3/6/2018	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2

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Summary of Groundwater Chemistry
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Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
1,1-Dichloroethene, ug/L (CAS NO - 75-35-4)	8/8/2018	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	3/19/2019	N/A	< 2	< 20	< 2	< 2	< 2	N/A	< 2
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	8/28/2019	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	3/3/2020	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	3/3/2020	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 2	< 2	< 2	< 2	< 2	< 2	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	5/19/2021	N/A	< 2	< 20	< 2	< 20	< 2	< 2	< 20
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	9/14/2021	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2
	4/27/2022	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2
	9/13/2022	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	3/21/2023	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	3/21/2023	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	8/16/2023	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A
1,2,3-Trichloropropane, ug/L (CAS NO - 96-18-4)	3/5/2014	N/A	< 1	< 1	< 1	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	< 1	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1
	9/19/2017	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/6/2018	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/8/2018	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/19/2019	N/A	< 1	< 10	< 1	< 1	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	5/19/2021	N/A	< 1	< 10	< 1	< 10	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	9/14/2021	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	4/27/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	9/13/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/21/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/16/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
1,2-Dibromo-3-Chloropropane, ug/L (CAS NO - 96-12-8)	3/5/2014	N/A	< 0.12	< 0.12	< 0.12	N/A	< 0.12	< 0.12	N/A
	10/28/2014	N/A	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
	4/7/2015	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	9/21/2015	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A
	3/29/2016	N/A	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A
	7/13/2016	N/A	< 0.5	< 0.5	N/A	N/A	N/A	< 0.5	< 0.5
	4/4/2017	N/A	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	9/19/2017	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	3/6/2018	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	8/8/2018	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	3/19/2019	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A	< 1.2
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A
	8/28/2019	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
	3/3/2020	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
	3/3/2020	N/A	N/A	< 1.2	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A
	5/19/2021	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A
	9/14/2021	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2
	4/27/2022	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2
	9/13/2022	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A
	3/21/2023	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
	3/21/2023	N/A	N/A	< 1.2	N/A	N/A	N/A	N/A	N/A

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Summary of Groundwater Chemistry Clinton County Sanitary Landfill - 23-SDP-01-74P - East North

Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
1,2-Dibromo-3-Chloropropane, ug/L (CAS NO - 96-12-8)	8/16/2023	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
	8/16/2023	N/A	N/A	< 1.2	N/A	N/A	N/A	N/A	N/A
1,2-Dibromoethane [EDB], ug/L (CAS NO - 106-93-4)	3/5/2014	N/A	< 0.13	< 0.13	< 0.13	N/A	< 0.13	< 0.13	N/A
	10/28/2014	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
	4/7/2015	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
	9/21/2015	N/A	< 0.13	< 1.3	< 0.13	< 1.3	< 0.13	N/A	N/A
	3/29/2016	N/A	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A
	7/13/2016	N/A	< 0.13	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13
	4/4/2017	N/A	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
	9/19/2017	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
	3/6/2018	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
	8/8/2018	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
	3/19/2019	N/A	< 0.34	< 3.4	< 0.34	< 0.34	< 0.34	N/A	< 0.34
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A
	8/28/2019	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34
	3/3/2020	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34
	3/3/2020	N/A	N/A	< 0.34	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A
	5/19/2021	N/A	< 0.34	< 3.4	< 0.34	< 3.4	< 0.34	< 0.34	< 3.4
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A
	9/14/2021	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34
	4/27/2022	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34
	9/13/2022	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A
	3/21/2023	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34
	3/21/2023	N/A	N/A	< 0.34	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34
	8/16/2023	N/A	N/A	< 0.34	N/A	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene, ug/L (CAS NO - 95-50-1)	3/5/2014	N/A	< 1	< 1	< 1	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	0.156*	< 1	< 1	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	< 1	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	0.192*	< 1	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	0.223*	< 1	< 1	< 1	< 1	< 1
	9/19/2017	N/A	< 1	0.163*	< 1	< 1	< 1	< 1	< 1
	3/6/2018	N/A	< 1	0.198*	< 1	< 1	< 1	< 1	< 1
	8/8/2018	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/19/2019	N/A	< 1	< 10	< 1	< 1	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	5/19/2021	N/A	< 1	< 10	< 1	< 10	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	9/14/2021	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	4/27/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	9/13/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/21/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/16/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
1,2-Dichloroethane, ug/L (CAS NO - 107-06-2)	3/5/2014	N/A	< 1	< 1	< 1	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	< 1	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	< 1	0.234*	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	< 1	0.234*	< 1	< 1	< 1	< 1
	9/19/2017	N/A	< 1	< 1	0.248*	< 1	< 1	< 1	< 1
	3/6/2018	N/A	< 1	< 1	0.25*	< 1	< 1	1.69	< 1
	8/8/2018	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/19/2019	N/A	< 1	< 10	< 1	< 1	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A

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Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
1,2-Dichloroethane, ug/L (CAS NO - 107-06-2)	5/19/2021	N/A	< 1	< 10	< 1	< 10	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	9/14/2021	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	4/27/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	9/13/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/21/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/16/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
1,2-Dichloropropane, ug/L (CAS NO - 78-87-5)	3/5/2014	N/A	< 1	< 1	1.99	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	< 1	2.65	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	1.54	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	< 1	1.2	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	< 1	1.09	< 1	< 1	< 1	< 1
	9/19/2017	N/A	< 1	< 1	1.21	< 1	< 1	< 1	< 1
	3/6/2018	N/A	< 1	< 1	1.2	< 1	< 1	< 1	< 1
	8/8/2018	N/A	< 1	< 1	0.778*	< 1	< 1	< 1	< 1
	3/19/2019	N/A	< 1	< 10	0.689*	< 1	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	< 1	0.516*	< 1	< 1	< 1	< 1
	3/3/2020	N/A	< 1	< 1	0.509*	< 1	< 1	< 1	< 1
	3/3/2020	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	< 1	0.57*	< 1	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	5/19/2021	N/A	< 1	< 10	< 1	< 10	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	9/14/2021	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	4/27/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	9/13/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/21/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/16/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene, ug/L (CAS NO - 106-46-7)	3/5/2014	N/A	< 1	2.13	< 1	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	1.53	< 1	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	1.88	< 1	0.797*	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	< 1	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	2.09	< 1	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	2.1	< 1	< 1	< 1	< 1	< 1
	9/19/2017	N/A	< 1	1.88	< 1	0.668*	< 1	< 1	< 1
	3/6/2018	N/A	< 1	2.38	< 1	0.671*	< 1	< 1	< 1
	8/8/2018	N/A	< 1	1.48	< 1	0.701*	< 1	< 1	< 1
	3/19/2019	N/A	< 1	< 10	< 1	0.63*	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	1.62	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	< 1	1.99	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	N/A	2.09	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	2.45	< 1	0.672*	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	5/19/2021	N/A	< 1	< 10	< 1	< 10	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	9/14/2021	N/A	< 1	2.16	< 1	0.596*	< 1	< 1	< 1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	4/27/2022	N/A	< 1	1.9	< 1	< 1	< 1	< 1	< 1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	9/13/2022	N/A	< 1	1.56	< 1	< 1	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	1.95	< 1	0.788*	< 1	< 1	< 1
	3/21/2023	N/A	N/A	1.87	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	1.87	< 1	0.808*	< 1	< 1	< 1
	8/16/2023	N/A	N/A	2.02	N/A	N/A	N/A	N/A	N/A
2-Butanone, ug/L (CAS NO - 78-93-3)	3/5/2014	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A
	10/28/2014	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	4/7/2015	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/21/2015	N/A	< 10	< 100	< 10	< 100	2.53*	N/A	N/A
	3/29/2016	N/A	N/A	< 10	< 10	< 10	< 10	< 10	N/A
	7/13/2016	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	4/4/2017	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10

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Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
2-Butanone, ug/L (CAS NO - 78-93-3)	9/19/2017	N/A	< 10	1.52*	1.43*	< 10	< 10	2.05*	< 10
	3/6/2018	N/A	< 10	< 10	1.22*	1.75*	< 10	< 10	< 10
	8/8/2018	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/19/2019	N/A	< 10	< 100	< 10	< 10	< 10	N/A	< 10
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	8/28/2019	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/3/2020	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/3/2020	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	5/19/2021	N/A	< 10	< 100	< 10	< 100	< 10	< 10	< 100
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	9/14/2021	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	4/27/2022	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	9/13/2022	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/13/2022	N/A	N/A	N/A	N/A	N/A	3.49*	N/A	N/A
	3/21/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/21/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	8/16/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
2-Hexanone, ug/L (CAS NO - 591-78-6)	3/5/2014	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A
	10/28/2014	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	4/7/2015	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/21/2015	N/A	< 10	< 100	< 10	< 100	< 10	N/A	N/A
	3/29/2016	N/A	N/A	< 10	< 10	< 10	< 10	< 10	N/A
	7/13/2016	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	4/4/2017	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10
	9/19/2017	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/6/2018	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	8/8/2018	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/19/2019	N/A	< 10	< 100	< 10	< 10	< 10	N/A	< 10
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	8/28/2019	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/3/2020	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/3/2020	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	5/19/2021	N/A	< 10	< 100	< 10	< 100	< 10	< 10	< 100
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	9/14/2021	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	4/27/2022	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	9/13/2022	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/21/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/21/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	8/16/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
4-Methyl-2-Pentanone, ug/L (CAS NO - 108-10-1)	3/5/2014	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A
	10/28/2014	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	4/7/2015	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/21/2015	N/A	< 10	< 100	< 10	< 100	< 10	N/A	N/A
	3/29/2016	N/A	N/A	< 10	< 10	< 10	< 10	< 10	N/A
	7/13/2016	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	4/4/2017	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10
	9/19/2017	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/6/2018	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	8/8/2018	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/19/2019	N/A	< 10	< 100	< 10	< 10	< 10	N/A	< 10
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	8/28/2019	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/3/2020	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/3/2020	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	5/19/2021	N/A	< 10	< 100	< 10	< 100	< 10	< 10	< 100
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	9/14/2021	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	4/27/2022	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	9/13/2022	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/13/2022	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10
	3/21/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/21/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	8/16/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A

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Summary of Groundwater Chemistry
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Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
4-Methyl-2-Pentanone, ug/L (CAS NO - 108-10-1)	3/21/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/21/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	8/16/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
Acetone, ug/L (CAS NO - 67-64-1)	3/5/2014	N/A	3.73*	< 10	< 10	N/A	2.03*	< 10	N/A
	10/28/2014	N/A	< 10	< 10	< 10	5.45*	< 10	< 10	< 10
	4/7/2015	N/A	< 10	4.5*	< 10	3.5*	< 10	< 10	< 10
	9/21/2015	N/A	< 10	< 100	< 10	< 100	16.3	N/A	N/A
	3/29/2016	N/A	N/A	7.25*	3.17*	6.61*	4.79*	7.17*	N/A
	7/13/2016	N/A	2.82	5.61*	N/A	N/A	N/A	11.5	< 10
	4/4/2017	N/A	N/A	5.56*	< 10	4.36*	2.31*	6.95*	5.21*
	9/19/2017	N/A	< 10	8.38*	3.35*	4.31*	2.65*	5.18*	4.38*
	3/6/2018	N/A	2.01*	4.38*	3.52*	4.32*	2.33*	7.35*	3.29*
	8/8/2018	N/A	< 10	< 10	3.12*	16.6	< 10	3.47*	< 10
	3/19/2019	N/A	3.24*	< 100	< 10	4.64*	< 10	N/A	< 10
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	3.42	N/A
	8/28/2019	N/A	< 10	11.5	< 10	< 10	< 10	< 10	< 10
	3/3/2020	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/3/2020	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	5/19/2021	N/A	< 10	34.2*	< 10	37.4*	< 10	< 10	< 100
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	9/14/2021	N/A	< 10	4.85*	< 10	< 10	< 10	5.3*	< 10
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	4/27/2022	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	9/13/2022	N/A	< 10	< 10	< 10	4.06*	3.33*	< 10	< 10
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/21/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/21/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 10	< 10	< 10	< 10	< 10	3.46*	< 10
	8/16/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
Acrylonitrile, ug/L (CAS NO - 107-13-1)	3/5/2014	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A
	10/28/2014	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	4/7/2015	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/21/2015	N/A	< 10	< 100	< 10	< 100	< 10	N/A	N/A
	3/29/2016	N/A	N/A	< 10	< 10	< 10	0.584*	< 10	N/A
	7/13/2016	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	4/4/2017	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10
	9/19/2017	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/6/2018	N/A	0.872*	< 10	< 10	< 10	< 10	< 10	< 10
	8/8/2018	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/19/2019	N/A	< 10	< 100	< 10	< 10	< 10	N/A	< 10
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	8/28/2019	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/3/2020	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/3/2020	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	5/19/2021	N/A	< 10	< 100	< 10	< 100	< 10	< 10	< 100
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	9/14/2021	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	4/27/2022	N/A	< 10	< 10	< 10	< 10	4.93*	< 10	< 10
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	9/13/2022	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/21/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/21/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	8/16/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
Benzene, ug/L (CAS NO - 71-43-2)	3/5/2014	N/A	< 0.5	15	1.05	N/A	< 0.5	0.879	N/A
	10/28/2014	N/A	< 0.5	15.3	2.59	1.45	< 0.5	0.957	< 0.5
	4/7/2015	N/A	< 0.5	13.6	0.923	0.996	< 0.5	0.416*	< 0.5
	9/21/2015	N/A	< 0.5	14	0.925	1.96*	< 0.5	N/A	N/A
	3/29/2016	N/A	N/A	11.2	0.651	1.09	< 0.5	0.99	N/A
	7/13/2016	N/A	< 0.5	10.8	N/A	N/A	N/A	0.831	0.612
	4/4/2017	N/A	N/A	11.4	0.624	1.24	< 0.5	0.497*	0.436*
	9/19/2017	N/A	< 0.5	11.7	0.574	1.27	< 0.5	2	0.911
	3/6/2018	N/A	< 0.5	11.7	0.659	1.23	< 0.5	1.38	0.49*
	8/8/2018	N/A	< 0.5	10.8	0.568	1.16	< 0.5	1.74	0.629
	3/19/2019	N/A	< 0.5	12.6	0.641	0.926	< 0.5	N/A	< 0.5
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	0.566	N/A
	8/28/2019	N/A	< 0.5	11.5	0.592	1.41	< 0.5	0.269*	0.311*
	3/3/2020	N/A	< 0.5	10.3	0.614	0.382*	< 0.5	0.322*	0.498*
	3/3/2020	N/A	N/A	10.2	N/A	N/A	N/A	N/A	N/A

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Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
Benzene, ug/L (CAS NO - 71-43-2)	9/23/2020	N/A	< 0.5	13	0.835	1.24	< 0.5	0.276*	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	0.568	N/A
	5/19/2021	N/A	< 0.5	8.39	0.638	< 5	< 0.5	< 0.5	< 5
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	0.317*	N/A
	9/14/2021	N/A	< 0.5	9.26	< 0.5	1.22	< 0.5	0.493*	0.577
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.515
	4/27/2022	N/A	< 0.5	10.4	0.463*	1.44	< 0.5	< 0.5	0.472*
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.371*
	9/13/2022	N/A	< 0.5	9.98	0.515	1.79	< 0.5	< 0.5	< 0.5
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A
	3/21/2023	N/A	< 0.5	11.3	0.375*	1.53	< 0.5	< 0.5	0.866
	3/21/2023	N/A	N/A	10	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 0.5	11.1	0.448*	1.59	< 0.5	< 0.5	0.466*
	8/16/2023	N/A	N/A	11.7	N/A	N/A	N/A	N/A	N/A
Bromochloromethane, ug/L (CAS NO - 74-97-5)	3/5/2014	N/A	< 5	< 5	< 5	N/A	< 5	< 5	N/A
	10/28/2014	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	4/7/2015	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/21/2015	N/A	< 5	< 50	< 5	< 50	< 5	N/A	N/A
	3/29/2016	N/A	N/A	< 5	< 5	< 5	< 5	< 5	N/A
	7/13/2016	N/A	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	4/4/2017	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5
	9/19/2017	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/6/2018	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	8/8/2018	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/19/2019	N/A	< 5	< 50	< 5	< 5	< 5	N/A	< 5
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	8/28/2019	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/3/2020	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/3/2020	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	5/19/2021	N/A	< 5	< 50	< 5	< 50	< 5	< 5	< 50
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	9/14/2021	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5
	4/27/2022	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5
	9/13/2022	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	3/21/2023	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/21/2023	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	8/16/2023	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
Bromodichloromethane, ug/L (CAS NO - 75-27-4)	3/5/2014	N/A	< 1	< 1	< 1	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	< 1	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1
	9/19/2017	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/6/2018	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/8/2018	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/19/2019	N/A	< 1	< 10	< 1	< 1	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	5/19/2021	N/A	< 1	< 10	< 1	4.35*	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	9/14/2021	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	4/27/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	9/13/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/21/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/16/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
Bromoform, ug/L (CAS NO - 75-25-2)	3/5/2014	N/A	< 5	< 5	< 5	N/A	< 5	< 5	N/A
	10/28/2014	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	4/7/2015	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/21/2015	N/A	< 5	< 50	< 5	< 50	< 5	N/A	N/A
	3/29/2016	N/A	N/A	< 5	< 5	< 5	< 5	< 5	N/A

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Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
Bromoform, ug/L (CAS NO - 75-25-2)	7/13/2016	N/A	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	4/4/2017	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5
	9/19/2017	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/6/2018	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	8/8/2018	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/19/2019	N/A	< 5	< 50	< 5	< 5	< 5	N/A	< 5
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	8/28/2019	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/3/2020	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/3/2020	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	5/19/2021	N/A	< 5	< 50	< 5	< 50	< 5	< 5	< 50
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	9/14/2021	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5
	4/27/2022	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5
	9/13/2022	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	3/21/2023	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/21/2023	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	8/16/2023	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
Bromomethane, ug/L (CAS NO - 74-83-9)	3/5/2014	N/A	< 4	< 4	< 4	N/A	< 4	< 4	N/A
	10/28/2014	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	4/7/2015	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	9/21/2015	N/A	< 4	< 40	< 4	< 40	< 4	N/A	N/A
	3/29/2016	N/A	N/A	< 4	< 4	< 4	0.514*	< 4	N/A
	7/13/2016	N/A	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	4/4/2017	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4
	9/19/2017	N/A	0.375*	0.471*	0.662*	< 4	0.583*	0.504*	0.61*
	3/6/2018	N/A	< 4	< 4	< 4	< 4	< 4	0.348*	0.308*
	8/8/2018	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	3/19/2019	N/A	< 4	< 40	< 4	< 4	< 4	N/A	< 4
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	8/28/2019	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	3/3/2020	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	3/3/2020	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	5/19/2021	N/A	< 4	< 40	< 4	< 40	< 4	< 4	< 40
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	9/14/2021	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4
	4/27/2022	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4
	9/13/2022	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	3/21/2023	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	3/21/2023	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	8/16/2023	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
Carbon Disulfide, ug/L (CAS NO - 75-15-0)	3/5/2014	N/A	< 1	< 1	< 1	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	< 1	< 10	0.246*	N/A	N/A
	3/29/2016	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	< 1	0.176*	< 1	< 1	< 1	< 1
	9/19/2017	N/A	0.918*	< 1	< 1	< 1	0.233*	< 1	< 1
	3/6/2018	N/A	< 1	< 1	0.161*	< 1	< 1	0.163*	< 1
	8/8/2018	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/19/2019	N/A	< 1	< 10	< 1	< 1	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	< 1	< 1	< 1	< 1	< 1	0.612*	< 1
	3/3/2020	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	5/19/2021	N/A	< 1	< 10	< 1	< 10	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	9/14/2021	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	4/27/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1

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Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
Carbon Disulfide, ug/L (CAS NO - 75-15-0)	9/13/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/21/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/16/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride, ug/L (CAS NO - 56-23-5)	3/5/2014	N/A	< 2	< 2	< 2	N/A	< 2	< 2	N/A
	10/28/2014	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	4/7/2015	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	9/21/2015	N/A	< 2	< 20	< 2	< 20	< 2	N/A	N/A
	3/29/2016	N/A	N/A	< 2	< 2	< 2	< 2	< 2	N/A
	7/13/2016	N/A	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	4/4/2017	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2
	9/19/2017	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	3/6/2018	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	8/8/2018	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	3/19/2019	N/A	< 2	< 20	< 2	< 2	< 2	N/A	< 2
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	8/28/2019	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	3/3/2020	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	3/3/2020	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 2	< 2	< 2	< 2	< 2	< 2	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	5/19/2021	N/A	< 2	< 20	< 2	< 20	< 2	< 2	< 20
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	9/14/2021	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2
	4/27/2022	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2
	9/13/2022	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	3/21/2023	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	3/21/2023	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	8/16/2023	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A
Chlorobenzene, ug/L (CAS NO - 108-90-7)	3/5/2014	N/A	< 1	8.09	< 1	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	8.23	< 1	2.9	< 1	0.871*	< 1
	4/7/2015	N/A	< 1	7.45	0.726*	2.55	< 1	0.504*	< 1
	9/21/2015	N/A	< 1	8.74*	0.829*	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	8.24	< 1	2.04	< 1	0.506*	N/A
	7/13/2016	N/A	< 1	8.15	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	7.62	0.871*	2.17	< 1	0.358*	0.43*
	9/19/2017	N/A	< 1	8.12	1.14	1.97	< 1	0.586*	1.09
	3/6/2018	N/A	< 1	8.28	1.28	1.92	< 1	0.512*	0.443*
	8/8/2018	N/A	< 1	7.12	1.21	2.07	< 1	< 1	< 1
	3/19/2019	N/A	< 1	< 10	1.32	1.46	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	10	1.23	1.56	< 1	< 1	< 1
	3/3/2020	N/A	< 1	9.52	1.65	0.8*	< 1	< 1	0.677*
	3/3/2020	N/A	N/A	9.32	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	11.6	1.92	1.98	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	5/19/2021	N/A	< 1	7.72*	< 1	< 10	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	9/14/2021	N/A	< 1	9.98	2.03	1.72	< 1	< 1	1.06
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.21
	4/27/2022	N/A	< 1	9.56	2.22	1.61	< 1	< 1	0.781*
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.75*
	9/13/2022	N/A	< 1	9.67	2.2	< 1	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	9.67	2.5	1.83	< 1	< 1	0.717*
	3/21/2023	N/A	N/A	8.76	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	9.2	2.23	1.85	< 1	< 1	0.931*
	8/16/2023	N/A	N/A	9.99	N/A	N/A	N/A	N/A	N/A
Chlorodibromomethane, ug/L (CAS NO - 124-48-1)	3/5/2014	N/A	< 5	< 5	< 5	N/A	< 5	< 5	N/A
	10/28/2014	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	4/7/2015	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/21/2015	N/A	< 5	< 50	< 5	< 50	< 5	N/A	N/A
	3/29/2016	N/A	N/A	< 5	< 5	< 5	< 5	< 5	N/A
	7/13/2016	N/A	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	4/4/2017	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5
	9/19/2017	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/6/2018	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	8/8/2018	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/19/2019	N/A	< 5	< 50	< 5	< 5	< 5	N/A	< 5
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	8/28/2019	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5

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Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
Chlorodibromomethane, ug/L (CAS NO - 124-48-1)	3/3/2020	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/3/2020	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	5/19/2021	N/A	< 5	< 50	< 5	< 50	< 5	< 5	< 50
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	9/14/2021	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5
	4/27/2022	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5
	9/13/2022	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	3/21/2023	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/21/2023	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	8/16/2023	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
Chloroethane, ug/L (CAS NO - 75-00-3)	3/5/2014	N/A	< 4	5.47	2.76*	N/A	< 4	< 4	N/A
	10/28/2014	N/A	< 4	4.45	< 4	< 4	< 4	< 4	< 4
	4/7/2015	N/A	< 4	3.82*	2.11*	0.918*	< 4	< 4	< 4
	9/21/2015	N/A	< 4	< 40	4.28	< 40	< 4	N/A	N/A
	3/29/2016	N/A	N/A	4.86	1.84*	0.709*	< 4	< 4	N/A
	7/13/2016	N/A	< 4	3.86*	N/A	N/A	N/A	< 4	< 4
	4/4/2017	N/A	N/A	4.34	1.4*	0.96*	< 4	< 4	< 4
	9/19/2017	N/A	< 4	4.3	2.52*	0.878*	< 4	< 4	1.08*
	3/6/2018	N/A	< 4	1.71*	1.03*	< 4	< 4	< 4	< 4
	8/8/2018	N/A	< 4	3.49*	2.17*	0.829*	< 4	< 4	< 4
	3/19/2019	N/A	< 4	< 40	2*	1.02*	< 4	N/A	< 4
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	8/28/2019	N/A	< 4	3.52*	2.3*	0.839*	< 4	< 4	< 4
	3/3/2020	N/A	< 4	3.37*	1.49*	< 4	< 4	< 4	< 4
	3/3/2020	N/A	N/A	3.41*	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 4	3.26*	1.84*	1.03*	< 4	< 4	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	5/19/2021	N/A	< 4	< 40	0.958*	< 40	< 4	< 4	< 40
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	9/14/2021	N/A	< 4	2.79*	1.59*	0.988*	< 4	< 4	< 4
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4
	4/27/2022	N/A	< 4	2*	0.823*	1.96*	< 4	< 4	< 4
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4
	9/13/2022	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	3/21/2023	N/A	< 4	2.04*	0.809*	1.09*	< 4	< 4	< 4
	3/21/2023	N/A	N/A	1.57*	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 4	2.57*	< 4	< 4	< 4	< 4	< 4
	8/16/2023	N/A	N/A	2.16*	N/A	N/A	N/A	N/A	N/A
Chloroform, ug/L (CAS NO - 67-66-3)	3/5/2014	N/A	< 1	< 1	< 1	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	< 1	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1
	9/19/2017	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/6/2018	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/8/2018	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	3/19/2019	N/A	< 3	< 30	< 3	< 3	< 3	N/A	< 3
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A
	8/28/2019	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	3/3/2020	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	3/3/2020	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 3	< 3	< 3	< 3	< 3	< 3	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A
	5/19/2021	N/A	< 3	< 30	< 3	< 30	< 3	< 3	< 30
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A
	9/14/2021	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3
	4/27/2022	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3
	9/13/2022	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	3/21/2023	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	3/21/2023	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	8/16/2023	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A
Chloromethane, ug/L (CAS NO - 74-87-3)	3/5/2014	N/A	< 3	< 3	< 3	N/A	< 3	< 3	N/A
	10/28/2014	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	4/7/2015	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3

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Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
Chloromethane, ug/L (CAS NO - 74-87-3)	9/21/2015	N/A	< 3	< 30	< 3	< 30	< 3	N/A	N/A
	3/29/2016	N/A	N/A	< 3	< 3	< 3	< 3	< 3	N/A
	7/13/2016	N/A	< 3	< 3	N/A	N/A	N/A	< 3	< 3
	4/4/2017	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3
	9/19/2017	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	3/6/2018	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	8/8/2018	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	3/19/2019	N/A	< 3	< 30	< 3	< 3	< 3	N/A	< 3
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A
	8/28/2019	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	3/3/2020	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	3/3/2020	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 3	< 3	< 3	< 3	< 3	< 3	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A
	5/19/2021	N/A	< 3	< 30	< 3	< 30	< 3	< 3	< 30
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A
	9/14/2021	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3
	4/27/2022	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3
	9/13/2022	N/A	< 3	0.623*	< 3	< 3	< 3	0.879*	< 3
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	3/21/2023	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	3/21/2023	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	8/16/2023	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A
cis-1,2-Dichloroethene, ug/L (CAS NO - 156-59-2)	3/5/2014	N/A	< 1	< 1	400	N/A	< 1	0.955*	N/A
	10/28/2014	N/A	< 1	< 1	803	< 1	< 1	0.188*	< 1
	4/7/2015	N/A	< 1	< 1	279	0.517*	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	264	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	< 1	206	0.255*	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	0.164*
	4/4/2017	N/A	N/A	0.291*	156	0.344*	< 1	< 1	0.141*
	9/19/2017	N/A	< 1	0.227*	126	< 1	< 1	< 1	0.283*
	3/6/2018	N/A	< 1	< 1	126	0.244*	< 1	< 1	0.165*
	8/8/2018	N/A	< 1	< 1	73.8	< 1	< 1	< 1	< 1
	3/19/2019	N/A	< 1	18.1	70.4	0.431*	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	< 1	48.5	0.383*	< 1	< 1	< 1
	3/3/2020	N/A	< 1	< 1	62.9	0.214*	< 1	< 1	< 1
	3/3/2020	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	< 1	57.1	< 1	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	5/19/2021	N/A	< 1	< 10	18.3	< 10	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	9/14/2021	N/A	< 1	< 1	20.4	< 1	< 1	0.232*	0.742*
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.821*
	4/27/2022	N/A	< 1	< 1	15.1	0.305*	< 1	< 1	0.756*
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.668*
	9/13/2022	N/A	< 1	< 1	14.6	0.324*	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	< 1	10.6	0.24*	< 1	< 1	0.771*
	3/21/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	< 1	21.3	< 1	< 1	< 1	1.02
	8/16/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
cis-1,3-Dichloropropene, ug/L (CAS NO - 10061-01-5)	3/5/2014	N/A	< 5	< 5	< 5	N/A	< 5	< 5	N/A
	10/28/2014	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	4/7/2015	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/21/2015	N/A	< 5	< 50	< 5	< 50	< 5	N/A	N/A
	3/29/2016	N/A	N/A	< 5	< 5	< 5	< 5	< 5	N/A
	7/13/2016	N/A	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	4/4/2017	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5
	9/19/2017	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/6/2018	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	8/8/2018	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/19/2019	N/A	< 5	< 50	< 5	< 5	< 5	N/A	< 5
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	8/28/2019	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/3/2020	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/3/2020	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	5/19/2021	N/A	< 5	< 50	< 5	< 50	< 5	< 5	< 50
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	9/14/2021	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5

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Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
cis-1,3-Dichloropropene, ug/L (CAS NO - 10061-01-5)	4/27/2022	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5
	9/13/2022	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	3/21/2023	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/21/2023	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	8/16/2023	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
Ethylbenzene, ug/L (CAS NO - 100-41-4)	3/5/2014	N/A	< 1	< 1	< 1	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	< 1	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1
	9/19/2017	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/6/2018	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/8/2018	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/19/2019	N/A	< 1	< 10	< 1	< 1	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	5/19/2021	N/A	< 1	< 10	< 1	< 10	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	9/14/2021	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	4/27/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	9/13/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/21/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/16/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
Iodomethane, ug/L (CAS NO - 74-88-4)	3/5/2014	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A
	10/28/2014	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	4/7/2015	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/21/2015	N/A	< 10	< 100	< 10	< 100	< 10	N/A	N/A
	3/29/2016	N/A	N/A	< 10	< 10	< 10	< 10	< 10	N/A
	7/13/2016	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	4/4/2017	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10
	9/19/2017	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/6/2018	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	8/8/2018	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/19/2019	N/A	< 10	< 100	< 10	< 10	< 10	N/A	< 10
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	8/28/2019	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/3/2020	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/3/2020	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	5/19/2021	N/A	< 10	< 100	< 10	< 100	< 10	< 10	< 100
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	9/14/2021	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	4/27/2022	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	9/13/2022	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/21/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/21/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	8/16/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
Methylene Bromide, ug/L (CAS NO - 74-95-3)	3/5/2014	N/A	< 1	< 1	< 1	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	< 1	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1
	9/19/2017	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/6/2018	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/8/2018	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/19/2019	N/A	< 1	< 10	< 1	< 1	< 1	N/A	< 1

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Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
Methylene Bromide, ug/L (CAS NO - 74-95-3)	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A
	8/28/2019	N/A	<1	<1	<1	<1	<1	<1	<1
	3/3/2020	N/A	<1	<1	<1	<1	<1	<1	<1
	3/3/2020	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	<1	<1	<1	<1	<1	<1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A
	5/19/2021	N/A	<1	<10	<1	<10	<1	<1	<10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A
	9/14/2021	N/A	<1	<1	<1	<1	<1	<1	<1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1
	4/27/2022	N/A	<1	<1	<1	<1	<1	<1	<1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1
	9/13/2022	N/A	<1	<1	<1	<1	<1	<1	<1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	3/21/2023	N/A	<1	<1	<1	<1	<1	<1	<1
	3/21/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	<1	<1	<1	<1	<1	<1	<1
	8/16/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
Methylene Chloride, ug/L (CAS NO - 75-09-2)	3/5/2014	N/A	<5	0.208*	<5	N/A	0.282*	<5	N/A
	10/28/2014	N/A	<5	<5	<5	<5	<5	<5	<5
	4/7/2015	N/A	<5	0.296*	<5	<5	<5	<5	<5
	9/21/2015	N/A	<5	3.94*	0.449*	2.54*	<5	N/A	N/A
	3/29/2016	N/A	N/A	<5	<5	<5	<5	<5	N/A
	7/13/2016	N/A	0.374	0.405*	N/A	N/A	N/A	0.314*	0.405*
	4/4/2017	N/A	N/A	0.361*	0.212*	<5	0.26*	<5	<5
	9/19/2017	N/A	<5	<5	<5	<5	<5	<5	<5
	3/6/2018	N/A	<5	<5	<5	<5	<5	<5	<5
	8/8/2018	N/A	<5	<5	<5	<5	<5	<5	<5
	3/19/2019	N/A	<5	<50	<5	<5	<5	N/A	<5
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	<5	N/A
	8/28/2019	N/A	<5	<5	<5	<5	<5	<5	<5
	3/3/2020	N/A	<5	<5	<5	<5	<5	<5	<5
	3/3/2020	N/A	N/A	<5	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	<5	<5	<5	<5	<5	<5	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	<5	N/A
	5/19/2021	N/A	<5	<50	<5	<50	<5	<5	<50
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	<5	N/A
	9/14/2021	N/A	<5	<5	<5	<5	<5	<5	<5
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5
	4/27/2022	N/A	<5	<5	<5	<5	<5	<5	<5
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<5
	9/13/2022	N/A	<5	<5	<5	<5	<5	<5	<5
	9/13/2022	N/A	N/A	N/A	N/A	N/A	<5	N/A	N/A
	3/21/2023	N/A	<5	<5	<5	<5	<5	<5	<5
	3/21/2023	N/A	N/A	<5	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	<5	<5	<5	<5	<5	<5	<5
	8/16/2023	N/A	N/A	<5	N/A	N/A	N/A	N/A	N/A
Styrene, ug/L (CAS NO - 100-42-5)	3/5/2014	N/A	<1	<1	<1	N/A	<1	<1	N/A
	10/28/2014	N/A	<1	<1	<1	<1	<1	<1	<1
	4/7/2015	N/A	<1	<1	<1	<1	<1	<1	<1
	9/21/2015	N/A	<1	<10	<1	<10	<1	N/A	N/A
	3/29/2016	N/A	N/A	<1	<1	<1	<1	<1	N/A
	7/13/2016	N/A	<1	<1	N/A	N/A	N/A	<1	<1
	4/4/2017	N/A	N/A	<1	<1	<1	<1	<1	<1
	9/19/2017	N/A	<1	<1	<1	<1	<1	<1	<1
	3/6/2018	N/A	<1	<1	<1	<1	<1	<1	<1
	8/8/2018	N/A	<1	<1	<1	<1	<1	<1	<1
	3/19/2019	N/A	<1	<10	<1	<1	<1	N/A	<1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A
	8/28/2019	N/A	<1	<1	<1	<1	<1	<1	<1
	3/3/2020	N/A	<1	<1	<1	<1	<1	<1	<1
	3/3/2020	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	<1	<1	<1	<1	<1	<1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A
	5/19/2021	N/A	<1	<10	<1	<10	<1	<1	<10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A
	9/14/2021	N/A	<1	<1	<1	<1	<1	<1	<1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1
	4/27/2022	N/A	<1	<1	<1	<1	<1	<1	<1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1
	9/13/2022	N/A	<1	<1	<1	<1	<1	<1	<1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A
	3/21/2023	N/A	<1	<1	<1	<1	<1	<1	<1
	3/21/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	<1	<1	<1	<1	<1	<1	<1
	8/16/2023	N/A	N/A	<1	N/A	N/A	N/A	N/A	N/A

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Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
Tetrachloroethene, ug/L (CAS NO - 127-18-4)	3/5/2014	N/A	< 1	< 1	5.32	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	< 1	1.37	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	< 1	4.77	< 1	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	4.92	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	< 1	4.19	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	< 1	4.22	< 1	< 1	< 1	< 1
	9/19/2017	N/A	< 1	< 1	4.5	< 1	< 1	< 1	< 1
	3/6/2018	N/A	< 1	< 1	1.61	< 1	< 1	< 1	< 1
	8/8/2018	N/A	< 1	< 1	3.84	< 1	< 1	< 1	< 1
	3/19/2019	N/A	< 1	< 10	3.04	< 1	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	< 1	4.07	< 1	< 1	< 1	< 1
	3/3/2020	N/A	< 1	< 1	3.8	< 1	< 1	< 1	< 1
	3/3/2020	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	< 1	4.83	< 1	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	5/19/2021	N/A	< 1	< 10	3.01	< 10	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	9/14/2021	N/A	< 1	< 1	3.34	< 1	< 1	0.933*	< 1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	4/27/2022	N/A	< 1	< 1	2.61	< 1	< 1	< 1	< 1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	9/13/2022	N/A	< 1	< 1	2.45	< 1	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	< 1	2.18	< 1	< 1	< 1	< 1
	3/21/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	< 1	2.17	< 1	< 1	< 1	< 1
	8/16/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
Toluene, ug/L (CAS NO - 108-88-3)	3/5/2014	N/A	< 1	0.536*	< 1	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	0.485*	< 1	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	0.476*	< 1	< 1	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	< 1	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	0.607*	< 1	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	0.446*	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	0.509*	0.215*	< 1	< 1	0.168*	< 1
	9/19/2017	N/A	< 1	0.598*	< 1	< 1	< 1	< 1	< 1
	3/6/2018	N/A	< 1	0.478*	0.202*	< 1	< 1	< 1	< 1
	8/8/2018	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/19/2019	N/A	< 1	< 10	< 1	< 1	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	0.437*	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/3/2020	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	5/19/2021	N/A	< 1	< 10	< 1	< 10	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	9/14/2021	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	4/27/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	9/13/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/21/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/16/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
trans-1,2-Dichloroethene, ug/L (CAS NO - 156-60-5)	3/5/2014	N/A	< 1	< 1	9.32	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	< 1	17.5	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	< 1	7.86	< 1	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	7.64	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	< 1	5.31	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	< 1	4.52	< 1	< 1	< 1	< 1
	9/19/2017	N/A	< 1	< 1	4.06	< 1	< 1	< 1	< 1
	3/6/2018	N/A	< 1	< 1	4.4	< 1	< 1	< 1	< 1
	8/8/2018	N/A	< 1	< 1	2.66	< 1	< 1	< 1	< 1
	3/19/2019	N/A	< 1	< 10	2.29	< 1	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	< 1	1.88	< 1	< 1	< 1	< 1
	3/3/2020	N/A	< 1	< 1	2.3	< 1	< 1	< 1	< 1
	3/3/2020	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	< 1	2.13	< 1	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	5/19/2021	N/A	< 1	< 10	0.792*	< 10	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A

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Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
trans-1,2-Dichloroethene, ug/L (CAS NO - 156-60-5)	9/14/2021	N/A	< 1	< 1	0.72*	< 1	< 1	< 1	< 1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	4/27/2022	N/A	< 1	< 1	0.656*	< 1	< 1	< 1	< 1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	9/13/2022	N/A	< 1	< 1	0.633*	< 1	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	< 1	0.451*	< 1	< 1	< 1	< 1
	3/21/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	< 1	0.784*	< 1	< 1	< 1	< 1
	8/16/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
trans-1,3-Dichloropropene, ug/L (CAS NO - 10061-02-6)	3/5/2014	N/A	< 5	< 5	< 5	N/A	< 5	< 5	N/A
	10/28/2014	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	4/7/2015	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/21/2015	N/A	< 5	< 50	< 5	< 50	< 5	N/A	N/A
	3/29/2016	N/A	N/A	< 5	< 5	< 5	< 5	< 5	N/A
	7/13/2016	N/A	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	4/4/2017	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5
	9/19/2017	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/6/2018	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	8/8/2018	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/19/2019	N/A	< 5	< 50	< 5	< 5	< 5	N/A	< 5
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	8/28/2019	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/3/2020	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/3/2020	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	5/19/2021	N/A	< 5	< 50	< 5	< 50	< 5	< 5	< 50
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	9/14/2021	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5
	4/27/2022	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5
	9/13/2022	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	3/21/2023	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/21/2023	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	8/16/2023	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
trans-1,4-Dichloro-2-Butene, ug/L (CAS NO - 110-57-6)	3/5/2014	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A
	10/28/2014	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	4/7/2015	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/21/2015	N/A	< 10	< 100	< 10	< 100	< 10	N/A	N/A
	3/29/2016	N/A	N/A	< 10	< 10	< 10	< 10	< 10	N/A
	7/13/2016	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	4/4/2017	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10
	9/19/2017	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/6/2018	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	8/8/2018	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/19/2019	N/A	< 10	< 100	< 10	< 10	< 10	N/A	< 10
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	8/28/2019	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/3/2020	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/3/2020	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	5/19/2021	N/A	< 10	< 100	< 10	< 100	< 10	< 10	< 100
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	9/14/2021	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	4/27/2022	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	9/13/2022	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/21/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/21/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	8/16/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
Trichloroethene, ug/L (CAS NO - 79-01-6)	3/5/2014	N/A	< 1	< 1	80.7	N/A	< 1	< 1	N/A
	10/28/2014	N/A	< 1	< 1	99	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	< 1	66.9	< 1	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	68.1	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	< 1	51.9	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	< 1	41.2	< 1	< 1	< 1	< 1
	9/19/2017	N/A	< 1	< 1	43.4	< 1	< 1	< 1	< 1
	3/6/2018	N/A	< 1	< 1	46.5	< 1	< 1	< 1	< 1

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Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
Trichloroethene, ug/L (CAS NO - 79-01-6)	8/8/2018	N/A	< 1	< 1	27.2	< 1	< 1	< 1	< 1
	3/19/2019	N/A	< 1	6.41*	26.7	< 1	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	< 1	17.4	< 1	< 1	< 1	< 1
	3/3/2020	N/A	< 1	< 1	27.5	< 1	< 1	< 1	< 1
	3/3/2020	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	< 1	23.8	< 1	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	5/19/2021	N/A	< 1	< 10	8.58	< 10	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	9/14/2021	N/A	< 1	< 1	10.9	< 1	< 1	< 1	< 1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	4/27/2022	N/A	< 1	< 1	9.56	< 1	< 1	< 1	< 1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1
	9/13/2022	N/A	< 1	< 1	7.14	< 1	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	< 1	5.99	< 1	< 1	< 1	< 1
	3/21/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	< 1	15.9	< 1	< 1	< 1	< 1
	8/16/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
Trichlorofluoromethane, ug/L (CAS NO - 75-69-4)	3/5/2014	N/A	< 4	< 4	< 4	N/A	< 4	< 4	N/A
	10/28/2014	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	4/7/2015	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	9/21/2015	N/A	< 4	< 40	< 4	< 40	< 4	N/A	N/A
	3/29/2016	N/A	N/A	< 4	< 4	< 4	< 4	< 4	N/A
	7/13/2016	N/A	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	4/4/2017	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4
	9/19/2017	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	3/6/2018	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	8/8/2018	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	3/19/2019	N/A	< 4	< 40	< 4	< 4	< 4	N/A	< 4
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	8/28/2019	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	3/3/2020	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	3/3/2020	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	5/19/2021	N/A	< 4	< 40	< 4	< 40	< 4	< 4	< 40
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	9/14/2021	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4
	4/27/2022	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4
	9/13/2022	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	3/21/2023	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	3/21/2023	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	8/16/2023	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
Vinyl Acetate, ug/L (CAS NO - 108-05-4)	3/5/2014	N/A	< 2	< 2	< 2	N/A	< 2	< 2	N/A
	10/28/2014	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	4/7/2015	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/21/2015	N/A	< 10	< 100	< 10	< 100	< 10	N/A	N/A
	3/29/2016	N/A	N/A	< 10	< 10	< 10	< 10	< 10	N/A
	7/13/2016	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	4/4/2017	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10
	9/19/2017	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/6/2018	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	8/8/2018	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/19/2019	N/A	< 10	< 100	< 10	< 10	< 10	N/A	< 10
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	8/28/2019	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/3/2020	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/3/2020	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	5/19/2021	N/A	< 10	< 100	< 10	< 100	< 10	< 10	< 100
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	9/14/2021	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	4/27/2022	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10
	9/13/2022	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/21/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/21/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A

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Summary of Groundwater Chemistry Clinton County Sanitary Landfill - 23-SDP-01-74P - East North

Appendix I VOC Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
Vinyl Acetate, ug/L (CAS NO - 108-05-4)	8/16/2023	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	8/16/2023	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride, ug/L (CAS NO - 75-01-4)	3/5/2014	N/A	< 1	< 1	3.39	N/A	< 1	0.235*	N/A
	10/28/2014	N/A	< 1	< 1	7.22	< 1	< 1	< 1	< 1
	4/7/2015	N/A	< 1	< 1	2.12	< 1	< 1	< 1	< 1
	9/21/2015	N/A	< 1	< 10	1.28	< 10	< 1	N/A	N/A
	3/29/2016	N/A	N/A	< 1	0.737*	< 1	< 1	< 1	N/A
	7/13/2016	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/4/2017	N/A	N/A	< 1	0.954*	< 1	< 1	< 1	< 1
	9/19/2017	N/A	< 1	< 1	0.37*	< 1	< 1	< 1	< 1
	3/6/2018	N/A	< 1	< 1	4.13	< 1	< 1	< 1	0.186*
	8/8/2018	N/A	< 1	< 1	0.874*	< 1	< 1	< 1	< 1
	3/19/2019	N/A	< 1	< 10	< 1	< 1	< 1	N/A	< 1
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2019	N/A	< 1	< 1	0.608*	< 1	< 1	< 1	< 1
	3/3/2020	N/A	< 1	< 1	< 1	0.18*	< 1	< 1	< 1
	3/3/2020	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	5/19/2021	N/A	< 1	< 10	< 1	< 10	< 1	< 1	< 10
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	9/14/2021	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.269*
	4/27/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.241*
	9/13/2022	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/21/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/21/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 1	< 1	< 1	< 1	< 1	< 1	0.335*
	8/16/2023	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
Xylenes, total, ug/L (CAS NO - 1330-20-7)	3/5/2014	N/A	< 3	0.883*	< 3	N/A	< 3	< 3	N/A
	10/28/2014	N/A	< 3	1.1*	< 3	< 3	< 3	< 3	< 3
	4/7/2015	N/A	< 3	1.27*	< 3	< 3	< 3	< 3	< 3
	9/21/2015	N/A	< 3	< 30	< 3	< 30	< 3	N/A	N/A
	3/29/2016	N/A	N/A	1.06*	< 3	< 3	< 3	0.165*	N/A
	7/13/2016	N/A	< 3	0.699*	N/A	N/A	< 3	< 3	< 3
	4/4/2017	N/A	N/A	0.764*	0.164*	< 3	< 3	0.148*	< 3
	9/19/2017	N/A	0.26*	0.638*	< 3	< 3	< 3	< 3	< 3
	3/6/2018	N/A	0.134*	0.808*	< 3	< 3	< 3	0.163*	< 3
	8/8/2018	N/A	< 3	0.566*	< 3	< 3	< 3	< 3	< 3
	3/19/2019	N/A	< 3	8.75*	< 3	< 3	< 3	N/A	< 3
	3/28/2019	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A
	8/28/2019	N/A	< 3	0.913*	< 3	< 3	< 3	< 3	< 3
	3/3/2020	N/A	< 3	0.821*	< 3	< 3	< 3	< 3	< 3
	3/3/2020	N/A	N/A	0.724*	N/A	N/A	N/A	N/A	N/A
	9/23/2020	N/A	< 3	0.924*	< 3	< 3	< 3	< 3	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A
	5/19/2021	N/A	< 3	< 30	< 3	< 30	< 3	< 3	< 30
	5/19/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A
	9/14/2021	N/A	< 3	0.507*	< 3	< 3	< 3	< 3	< 3
	9/14/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3
	4/27/2022	N/A	< 3	0.554*	< 3	< 3	< 3	< 3	< 3
	4/27/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3
	9/13/2022	N/A	< 3	0.691*	< 3	< 3	< 3	< 3	< 3
	9/13/2022	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	3/21/2023	N/A	< 3	0.57*	< 3	< 3	< 3	< 3	< 3
	3/21/2023	N/A	N/A	0.519*	N/A	N/A	N/A	N/A	N/A
	8/16/2023	N/A	< 3	0.557*	< 3	< 3	< 3	< 3	< 3
	8/16/2023	N/A	N/A	0.572*	N/A	N/A	N/A	N/A	N/A

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

Denotes Detection.

Denotes Confirmed Outlier. Statistically Excluded.

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

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Summary of Groundwater Chemistry Clinton County Sanitary Landfill - 23-SDP-01-74P - East North

Other Constituents	Sample Date	MW-06-6R UPG	MW-06-7R UPG	MW-03-16 DNG	MW-90-5 DNG	MW-90-13 DNG	MW-90-15R DNG	PZ-R3 DNG	PZ-R4 DNG
Phenol, mg/L (CAS NO - 108-95-2)	10/28/2014	< 0.018	< 0.018	0.00809*	< 0.0188	< 0.02	< 0.02	< 0.0192	< 0.0196
	9/21/2015	< 0.02	< 0.0184	< 0.0196	< 0.0208	< 0.018	< 0.0184	< 0.018	< 0.0192
	7/13/2016	< 0.02	< 0.02	0.00656*	< 0.02	0.00656*	< 0.02	< 0.02	< 0.02
	4/4/2017	N/A	N/A	< 0.0188	N/A	N/A	N/A	0.0387	< 0.0188
	9/19/2017	0.0512	< 0.0196	< 0.02	< 0.0204	0.0187	< 0.0196	< 0.02	< 0.0204
	3/6/2018	N/A	N/A	< 0.0188	N/A	N/A	N/A	< 0.0184	< 0.018
	8/8/2018	< 0.02	< 0.02	< 0.0192	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Sulfide, mg/L (CAS NO - 18496-25-8)	3/5/2014	N/A	0.274*	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/7/2015	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	9/21/2015	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	7/13/2016	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A

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

Denotes Detection.

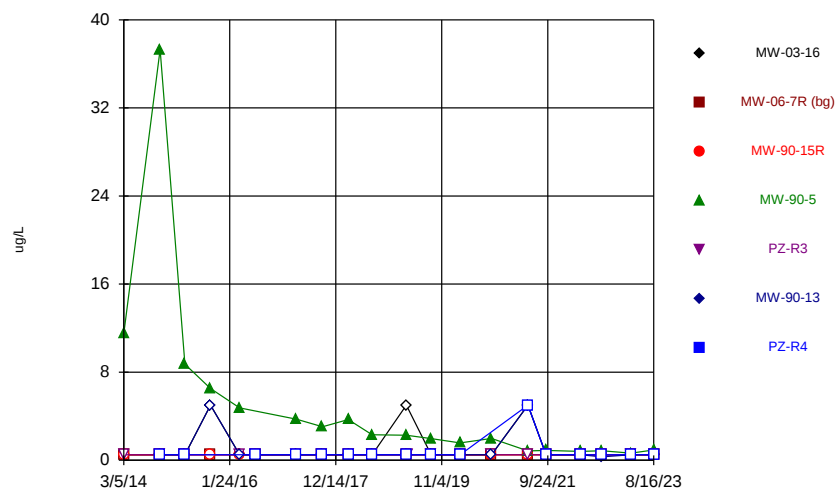
Denotes Confirmed Outlier. Statistically Excluded.

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

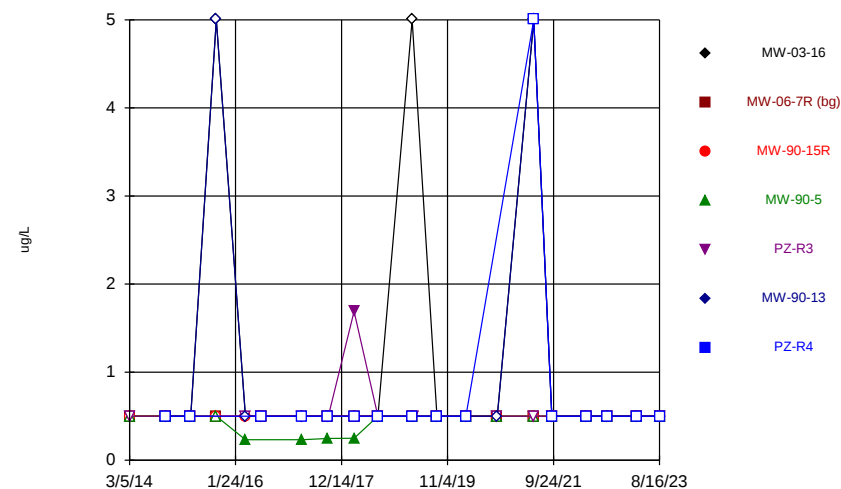
Appendix D

Time Series Graphs

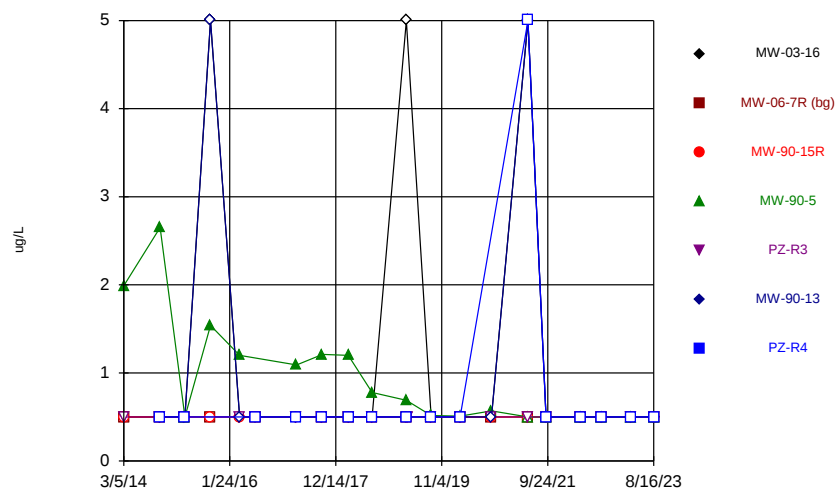
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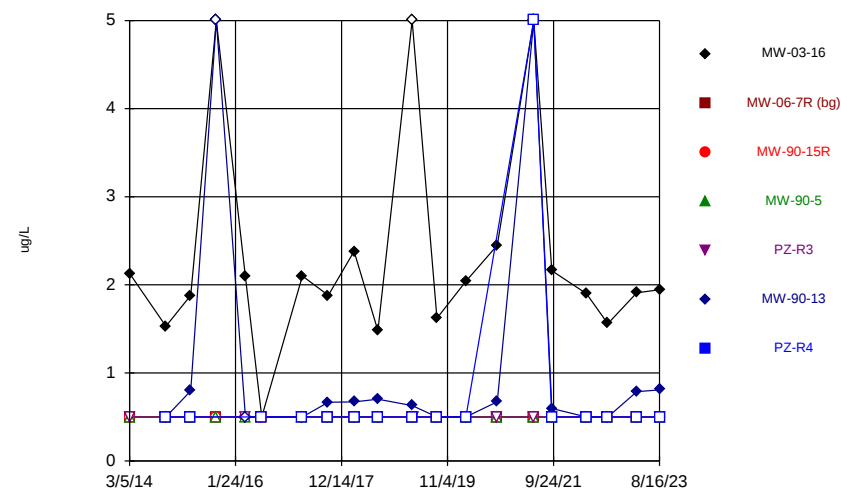
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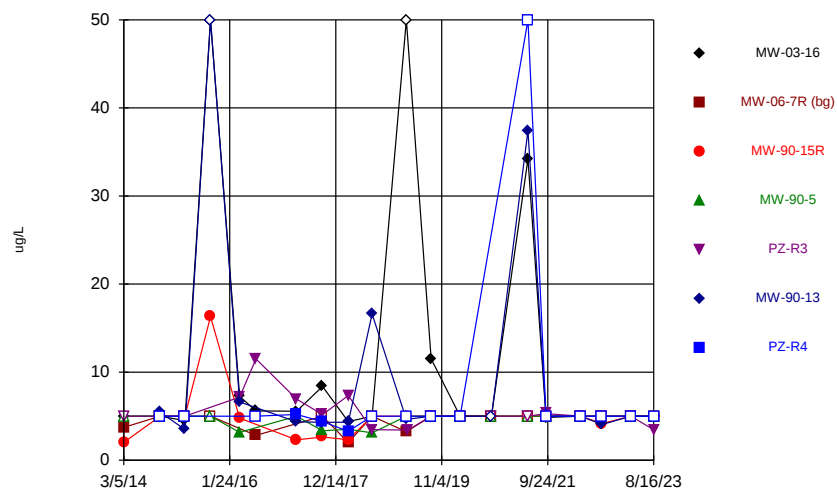
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Time Series

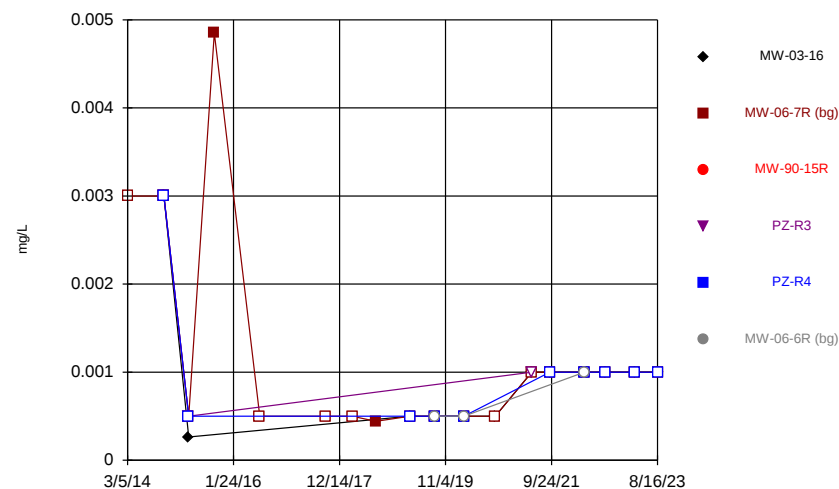


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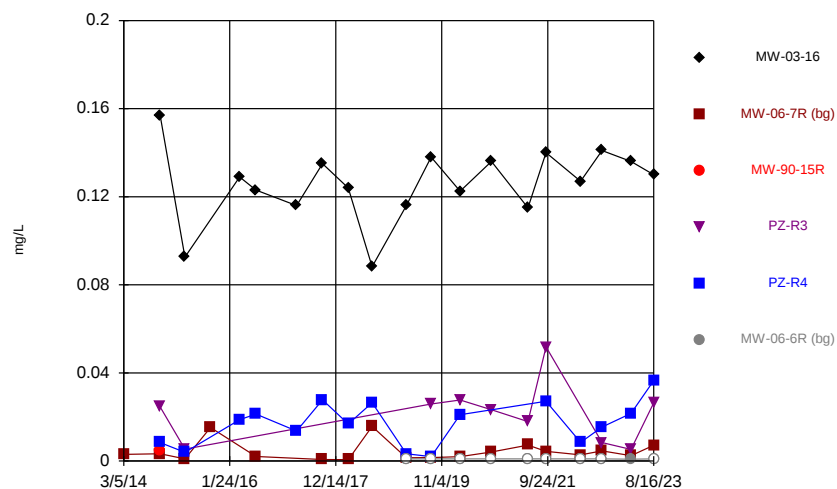
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Clinton County SLF Client: SCS Engineers Data: 23-SDP-01-74 dbo CCASW EN

Time Series



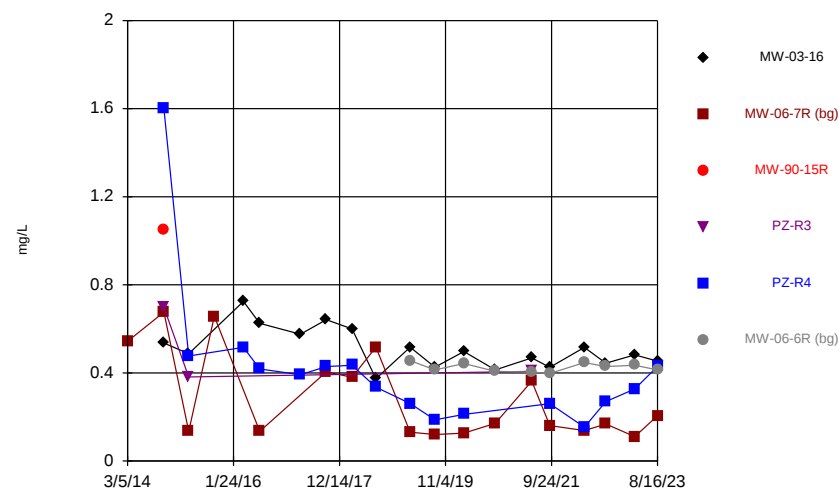
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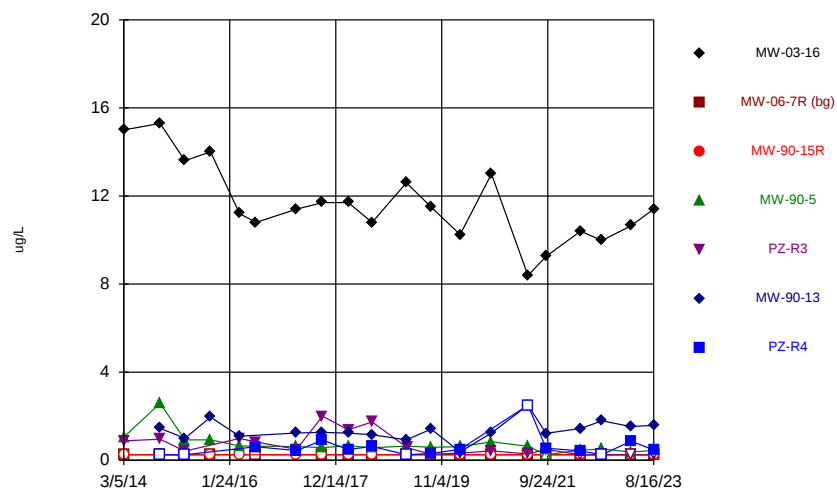
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Time Series



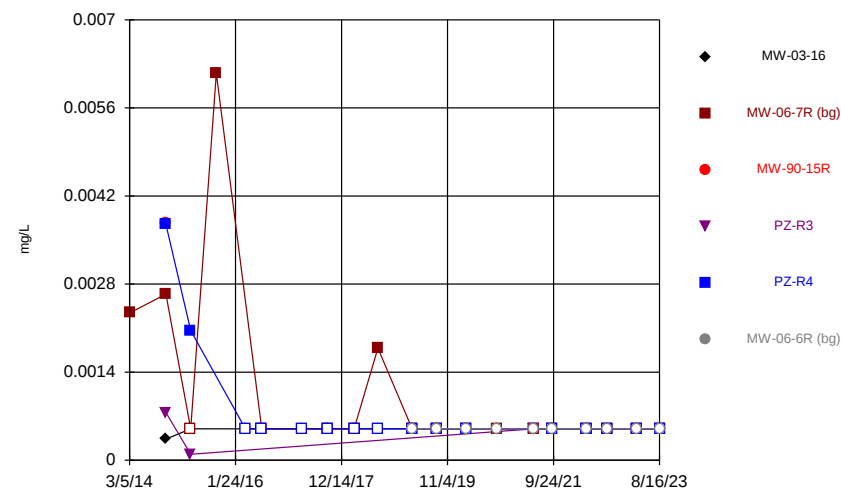
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Clinton County SLF Client: SCS Engineers Data: 23-SDP-01-74 dbo CCASW EN

Time Series



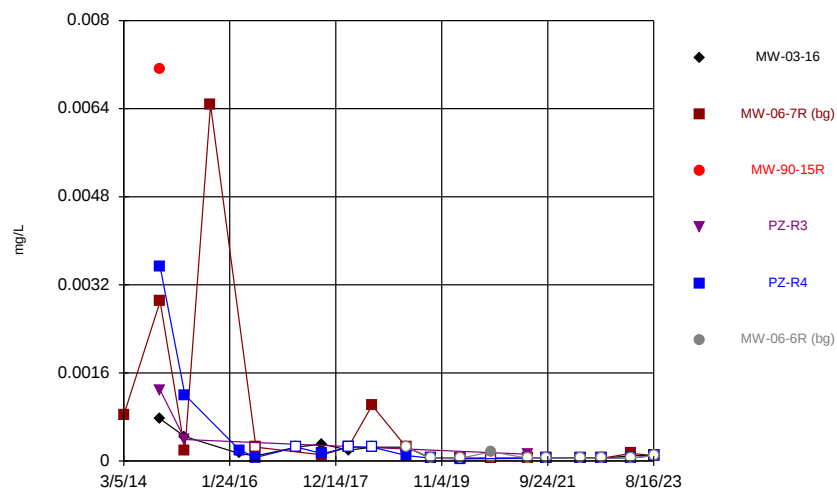
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Clinton County SLF Client: SCS Engineers Data: 23-SDP-01-74 dbo CCASW EN

Time Series



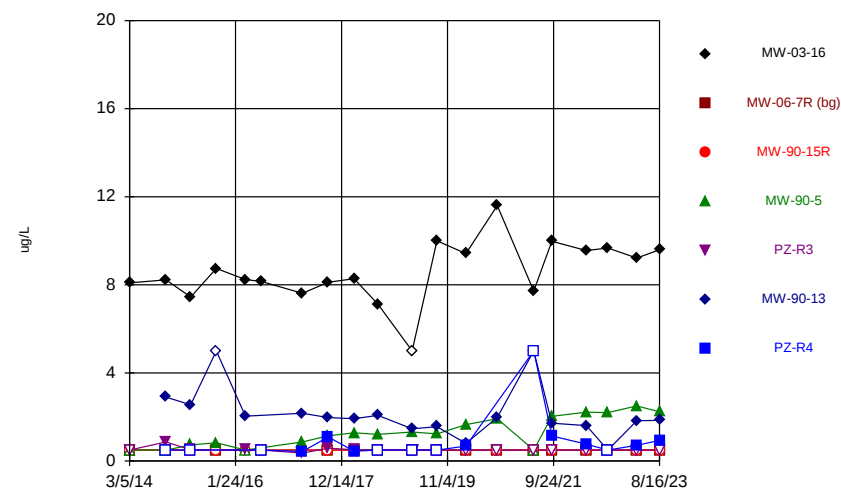
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Time Series



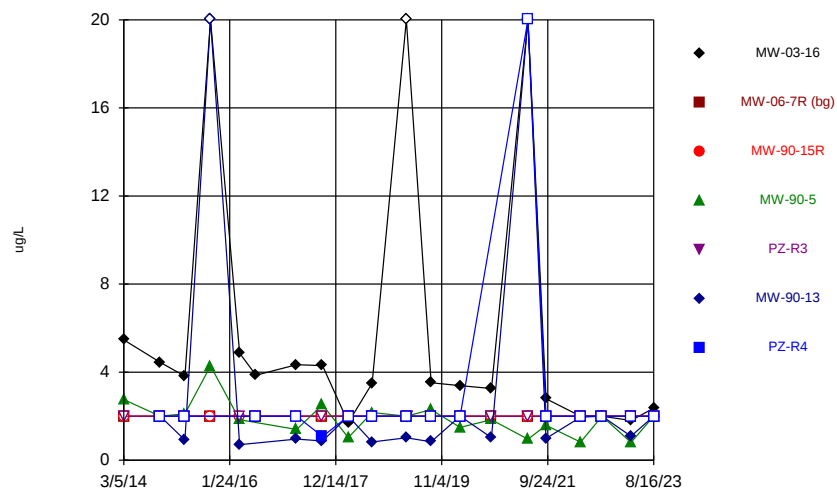
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Clinton County SLF Client: SCS Engineers Data: 23-SDP-01-74 dbo CCASW EN

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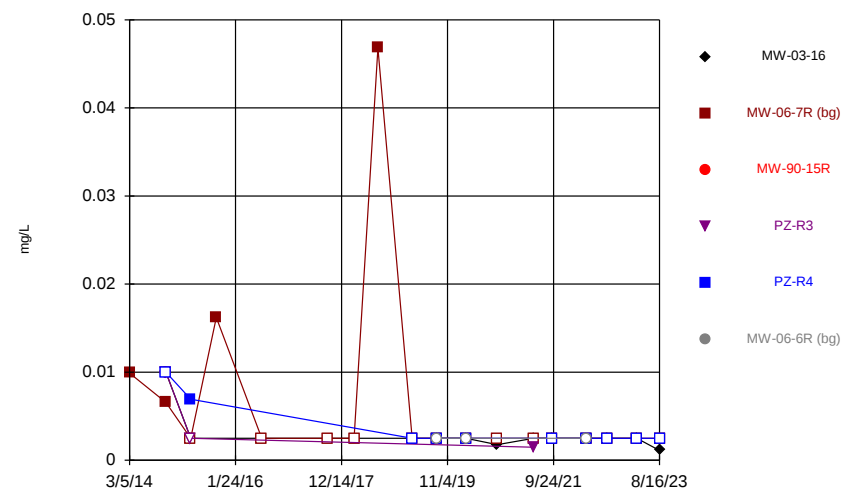


Constituent: Chlorobenzene Analysis Run 9/28/2023 10:23 AM View: 2023AWQR-TimeSeries
Clinton County SLF Client: SCS Engineers Data: 23-SDP-01-74 dbo CCASW EN

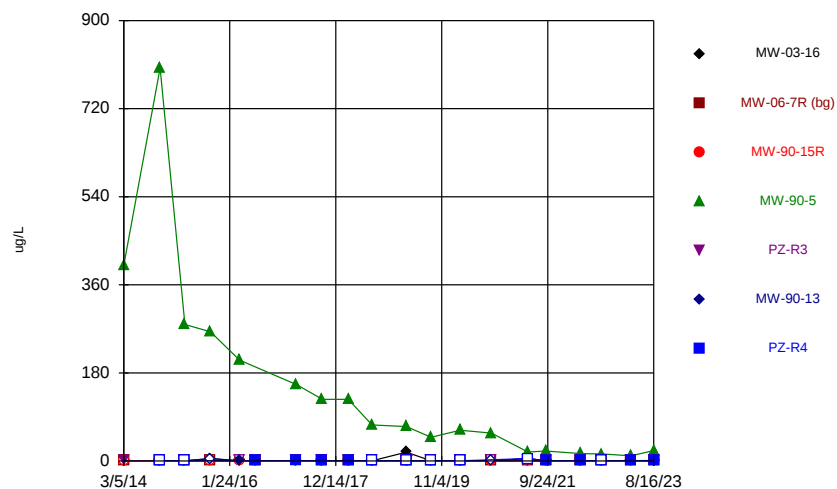
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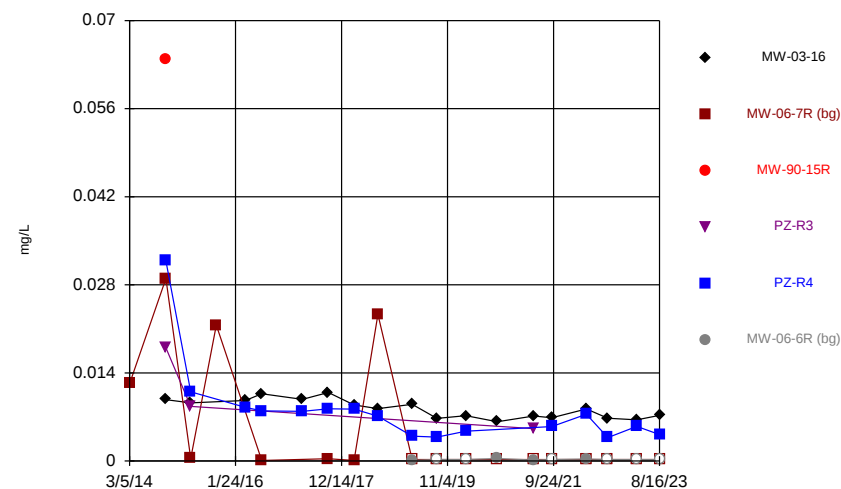
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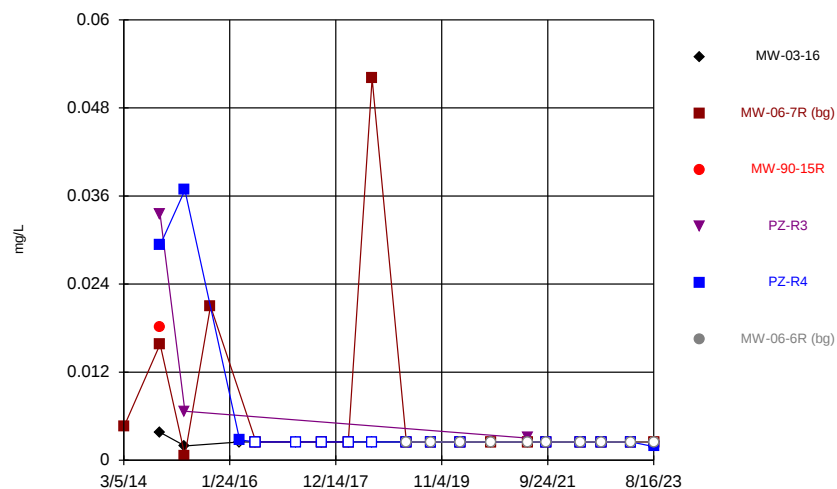
Time Series



Time Series

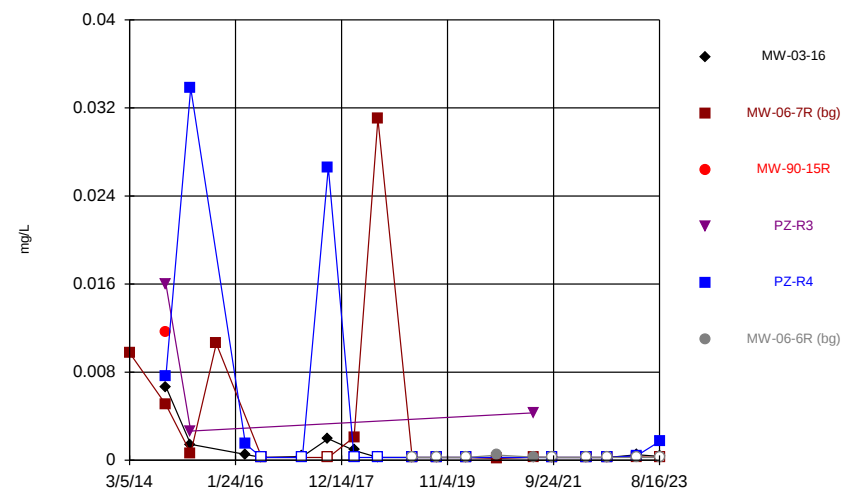


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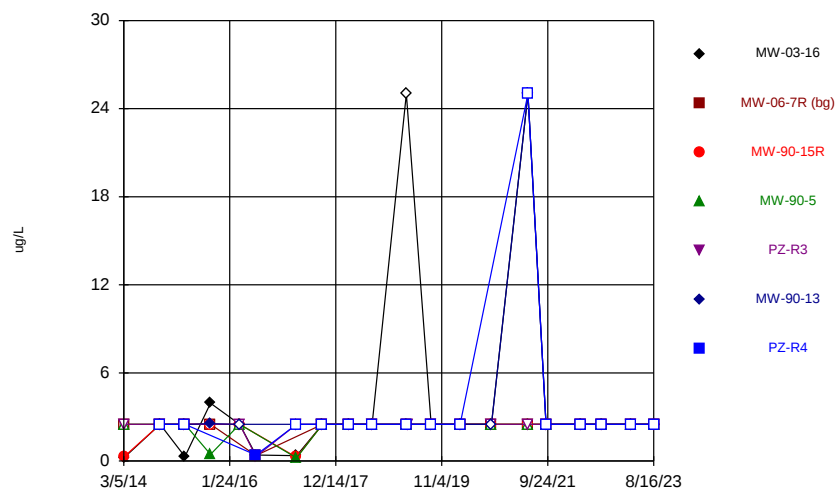
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Clinton County SLF Client: SCS Engineers Data: 23-SDP-01-74 dbo CCASW EN

Time Series



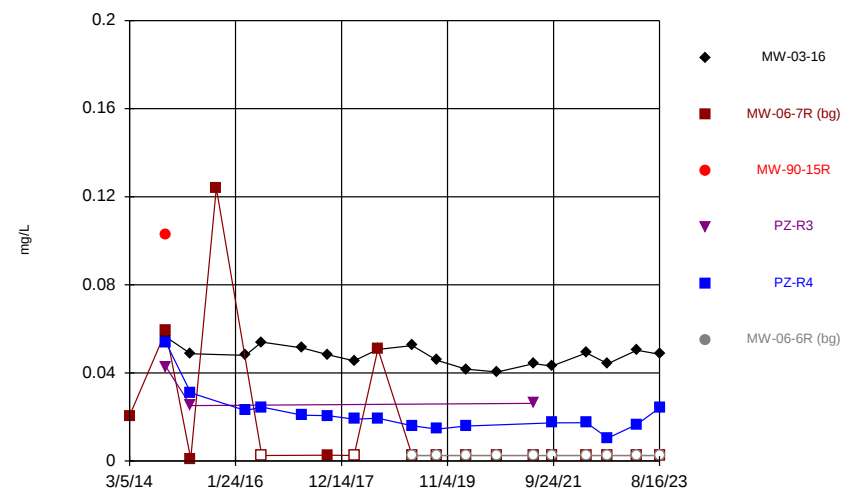
Constituent: Lead Analysis Run 9/28/2023 10:23 AM View: 2023AWQR-TimeSeries
Clinton County SLF Client: SCS Engineers Data: 23-SDP-01-74 dbo CCASW EN

Time Series



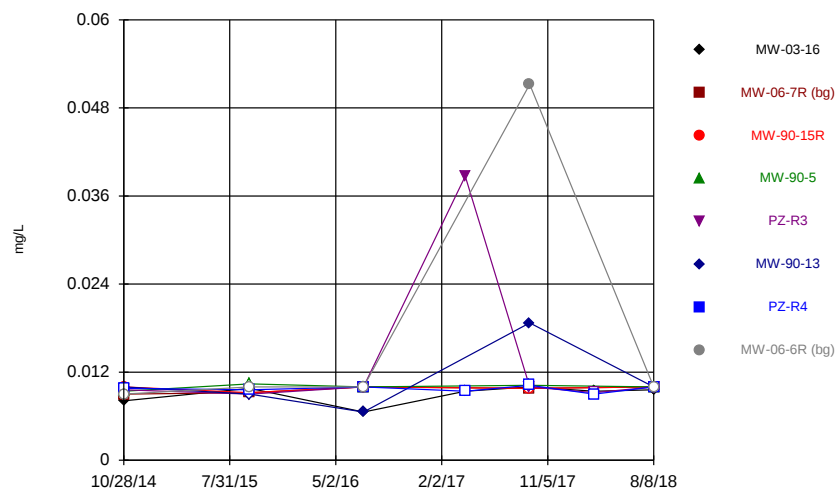
Constituent: Methylene Chloride Analysis Run 9/28/2023 10:23 AM View: 2023AWQR-TimeSeries
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Time Series

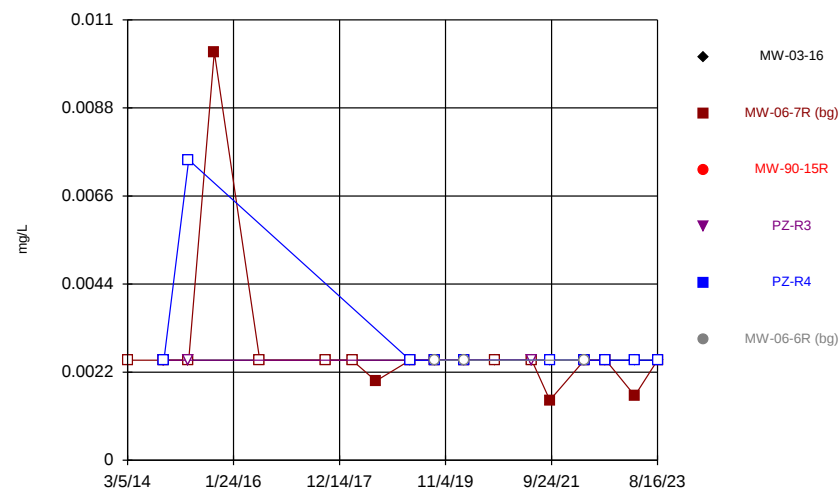


Constituent: Nickel Analysis Run 9/28/2023 10:23 AM View: 2023AWQR-TimeSeries
Clinton County SLF Client: SCS Engineers Data: 23-SDP-01-74 dbo CCASW EN

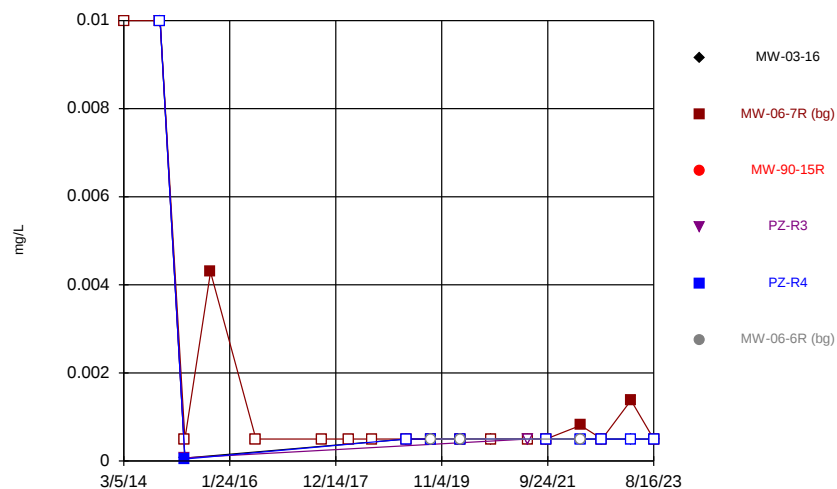
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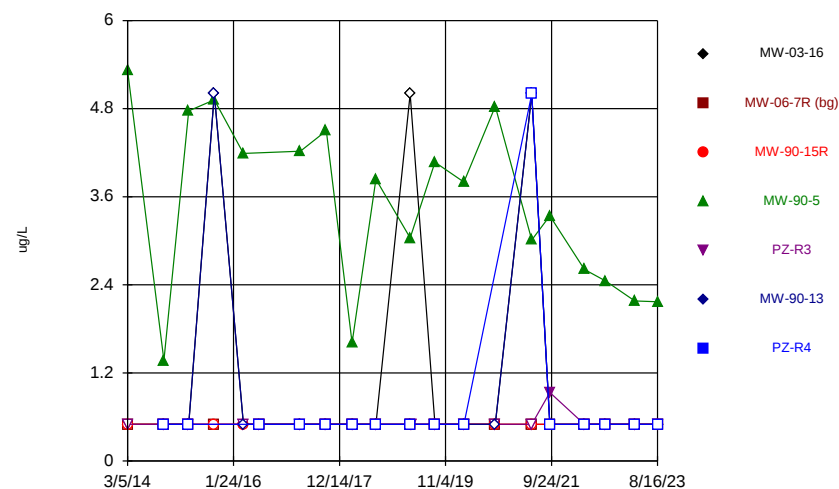
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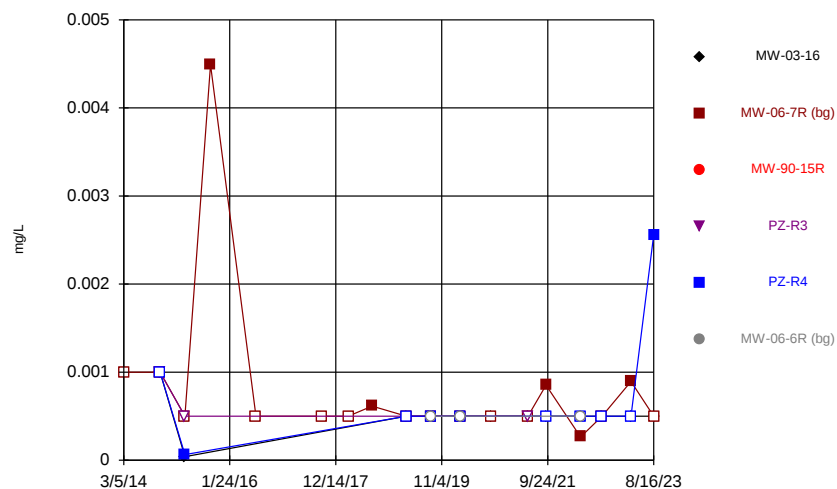
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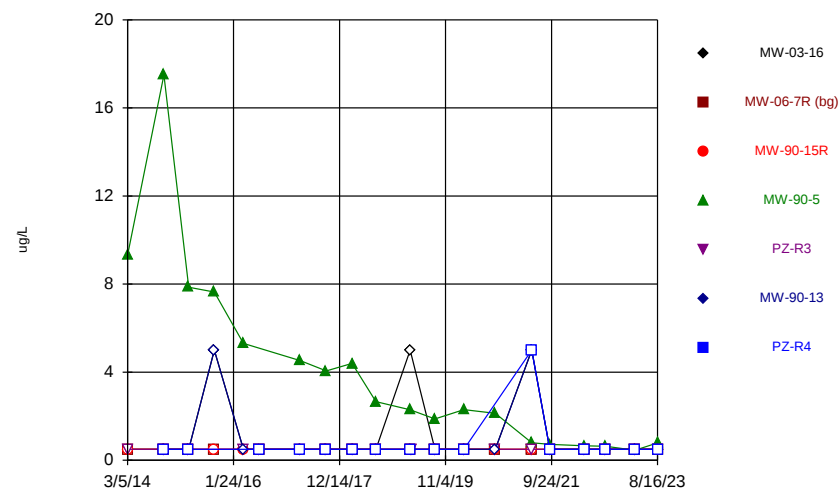
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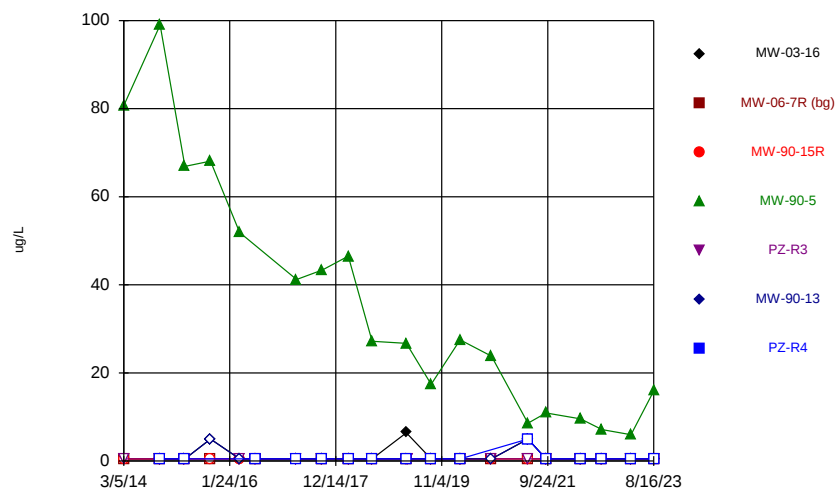
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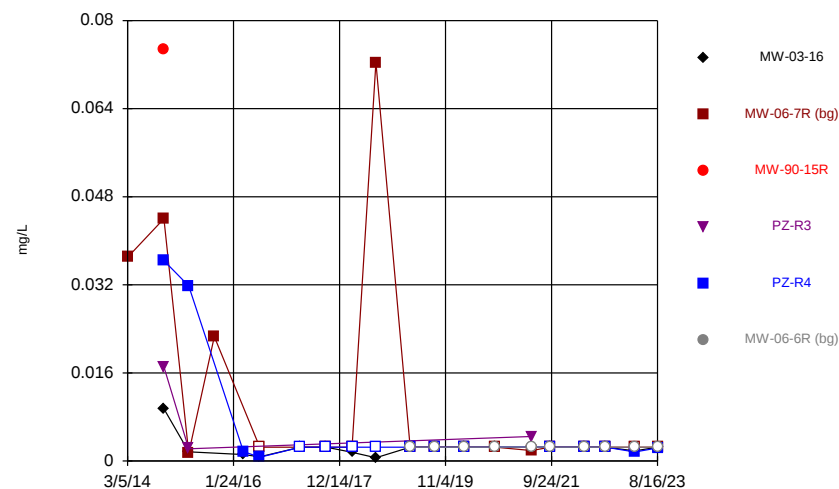
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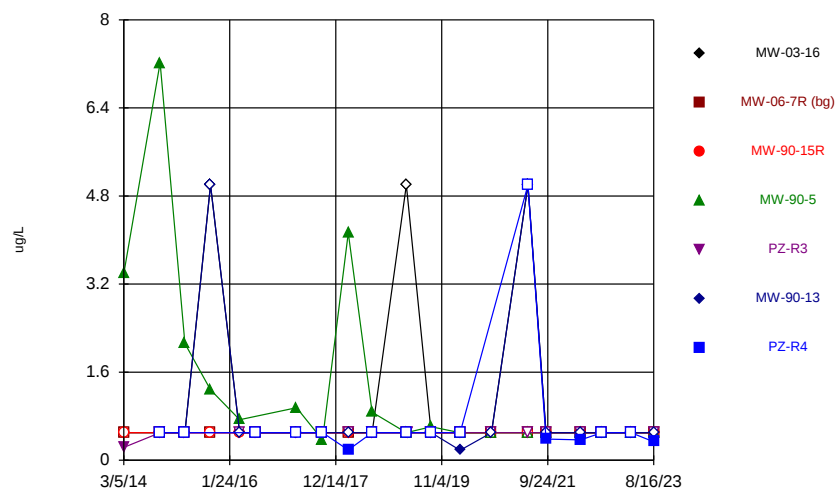
Time Series



Time Series

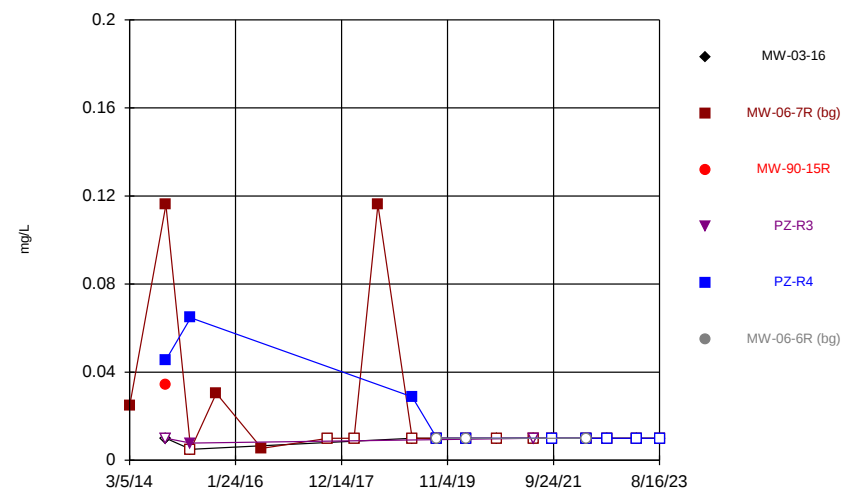


Time Series



Constituent: Vinyl Chloride Analysis Run 9/28/2023 10:23 AM View: 2023AWQR-TimeSeries
Clinton County SLF Client: SCS Engineers Data: 23-SDP-01-74 dbo CCASW EN

Time Series



Constituent: Zinc Analysis Run 9/28/2023 10:23 AM View: 2023AWQR-TimeSeries
Clinton County SLF Client: SCS Engineers Data: 23-SDP-01-74 dbo CCASW EN

Appendix E
Mann-Kendall Summary Table and Graphs

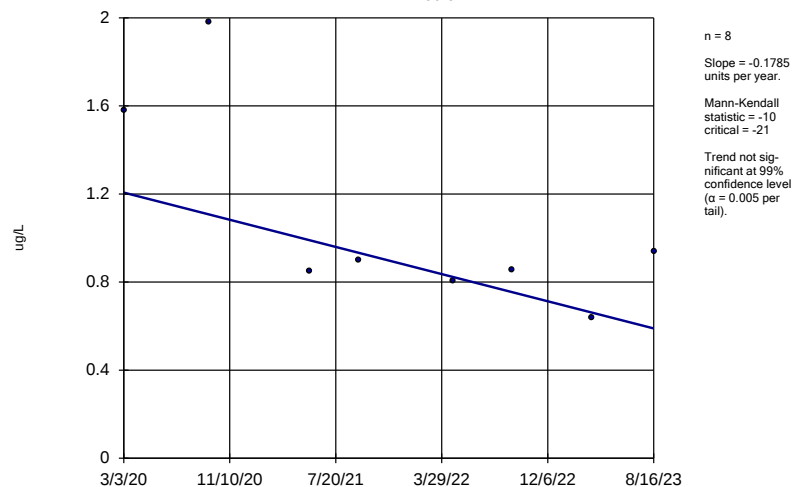
Trend Test

Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM Printed 9/28/2023, 11:14 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Alpha</u>	<u>Method</u>
1,1-Dichloroethane (ug/L)	MW-90-5	-0.1785	-10	-21	No	8	0	0.01	NP
1,4-Dichlorobenzene (ug/L)	MW-03-16	-0.1697	-10	-21	No	8	12.5	0.01	NP
Arsenic (mg/L)	MW-03-16	0.002236	7	21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-06-7R (bg)	0.000255	6	21	No	8	0	0.01	NP
Arsenic (mg/L)	PZ-R3	-0.005774	-8	-21	No	8	0	0.01	NP
Arsenic (mg/L)	PZ-R4	0.004731	16	21	No	8	0	0.01	NP
Barium (mg/L)	MW-03-16	0.008225	2	21	No	8	0	0.01	NP
Barium (mg/L)	MW-06-6R (bg)	-0.0003818	0	21	No	8	0	0.01	NP
Barium (mg/L)	MW-06-7R (bg)	0.001797	0	21	No	8	0	0.01	NP
Barium (mg/L)	PZ-R4	0.03679	14	21	No	8	0	0.01	NP
Benzene (ug/L)	MW-03-16	0.5274	8	21	No	8	0	0.01	NP
Benzene (ug/L)	MW-90-13	0.1703	12	21	No	8	12.5	0.01	NP
Benzene (ug/L)	MW-90-5	-0.08153	-12	-21	No	8	12.5	0.01	NP
Benzene (ug/L)	PZ-R3	-0.02449	-14	-21	No	8	50	0.01	NP
Benzene (ug/L)	PZ-R4	0.01101	0	21	No	8	25	0.01	NP
Cadmium (mg/L)	MW-03-16	0	13	21	No	8	75	0.01	NP
Cadmium (mg/L)	MW-06-6R (bg)	0	1	21	No	8	87.5	0.01	NP
Cadmium (mg/L)	MW-06-7R (bg)	0	11	21	No	8	87.5	0.01	NP
Chlorobenzene (ug/L)	MW-03-16	-0.07423	-2	-21	No	8	0	0.01	NP
Chlorobenzene (ug/L)	MW-90-13	0.002217	0	21	No	8	25	0.01	NP
Chlorobenzene (ug/L)	MW-90-5	0.2251	20	21	No	8	12.5	0.01	NP
Chlorobenzene (ug/L)	PZ-R4	0.02713	3	21	No	8	37.5	0.01	NP
cis-1,2-Dichloroethene (ug/L)	MW-90-5	-8.161	-16	-21	No	8	0	0.01	NP
cis-1,2-Dichloroethene (ug/L)	PZ-R4	0.07778	7	21	No	8	50	0.01	NP
Cobalt (mg/L)	MW-03-16	-0.000009173	0	21	No	8	0	0.01	NP
Cobalt (mg/L)	PZ-R4	0.0001737	6	21	No	8	0	0.01	NP
Lead (mg/L)	MW-03-16	0	11	21	No	8	75	0.01	NP
Lead (mg/L)	PZ-R4	0	13	21	No	8	75	0.01	NP
Nickel (mg/L)	MW-03-16	0.002416	17	21	No	8	0	0.01	NP
Nickel (mg/L)	PZ-R4	0.0005653	10	21	No	8	0	0.01	NP
Silver (mg/L)	MW-06-7R (bg)	0	7	21	No	8	75	0.01	NP
Tetrachloroethene (ug/L)	MW-90-5	-0.5263	-24	-21	Yes	8	0	0.01	NP
Thallium (mg/L)	PZ-R4	0	7	21	No	8	87.5	0.01	NP
trans-1,2-Dichloroethene (ug/L)	MW-90-5	-0.2661	-20	-21	No	8	0	0.01	NP
Trichloroethene (ug/L)	MW-90-5	-3.564	-14	-21	No	8	0	0.01	NP
Zinc (mg/L)	PZ-R4	0	-7	-21	No	8	87.5	0.01	NP

Sen's Slope Estimator

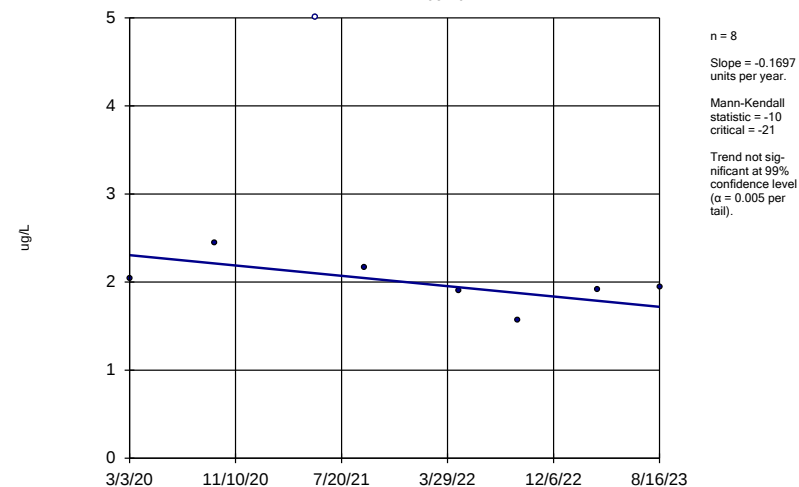
MW-90-5



Constituent: 1,1-Dichloroethane Analysis Run 9/28/2023 11:12 PM View: 2023AWQR - MannKendall
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Sen's Slope Estimator

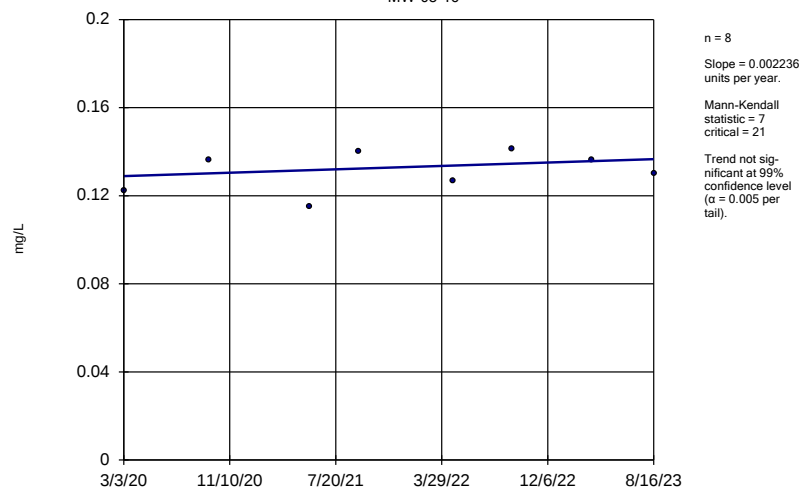
MW-03-16



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Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Sen's Slope Estimator

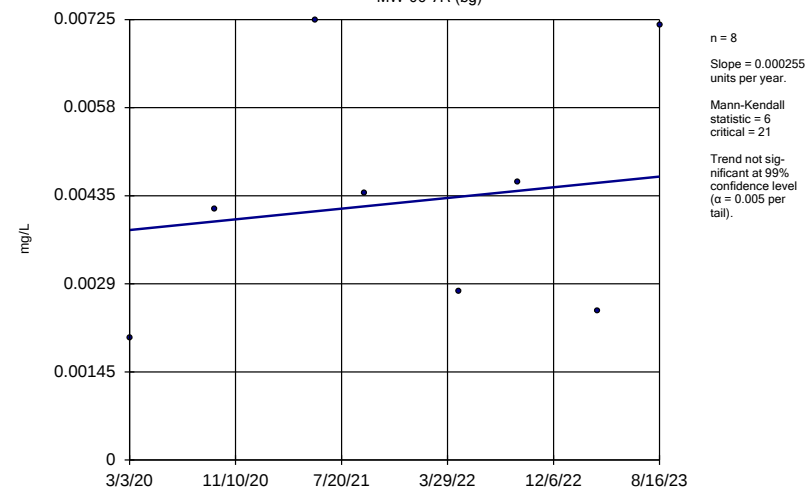
MW-03-16



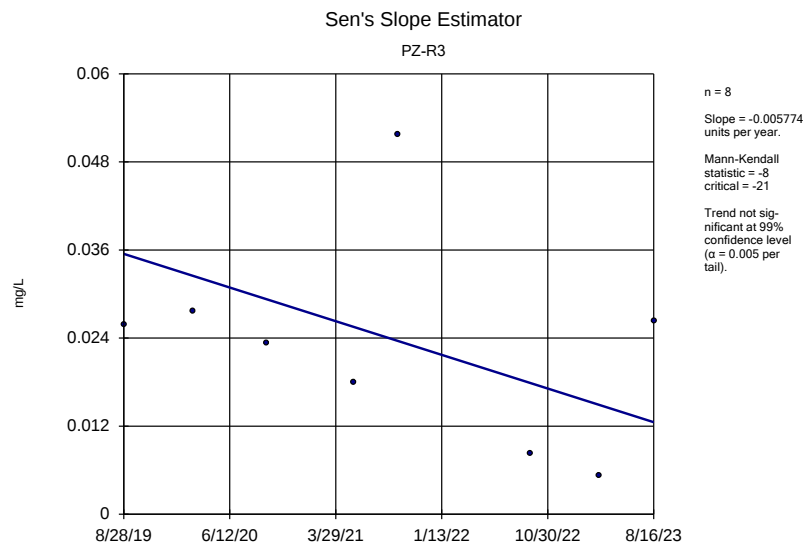
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Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Sen's Slope Estimator

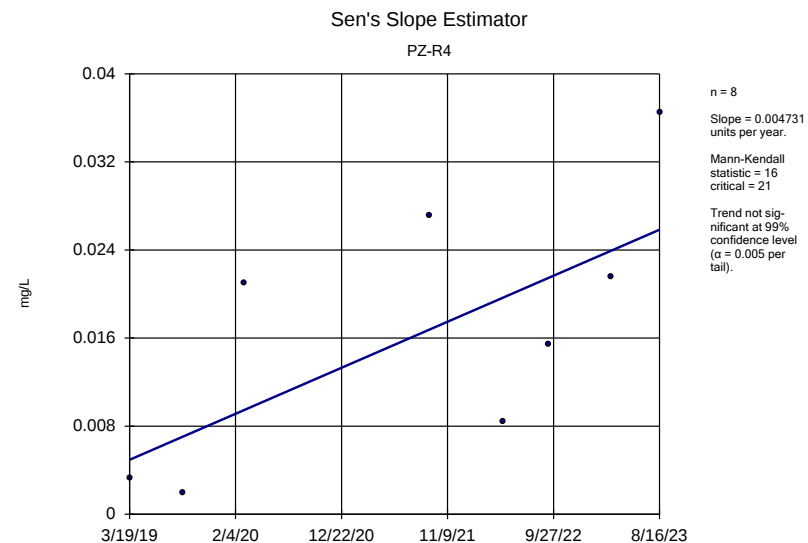
MW-06-7R (bg)



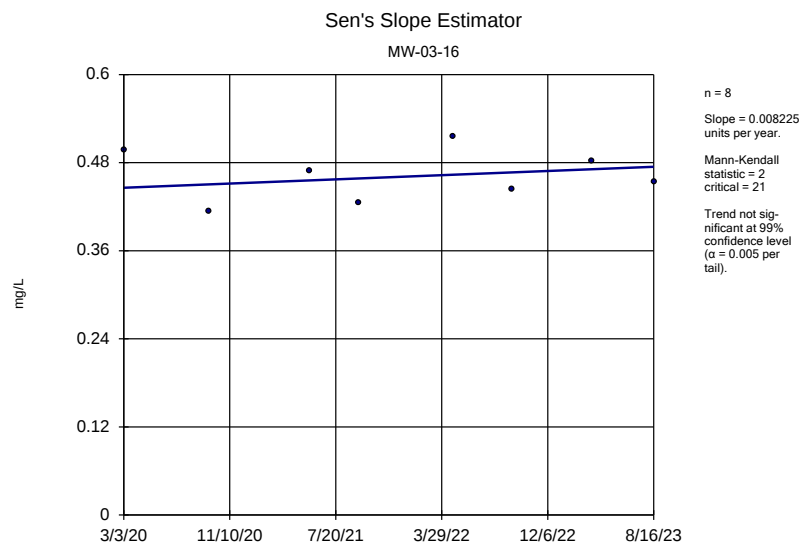
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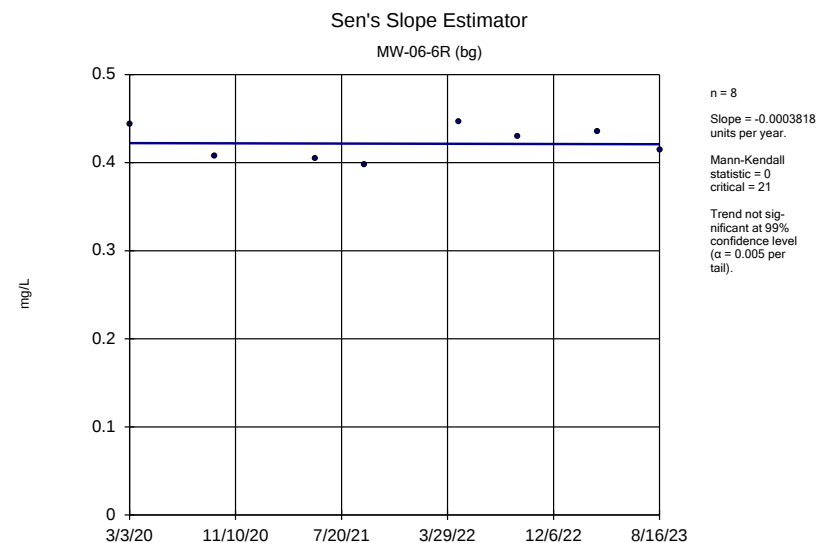
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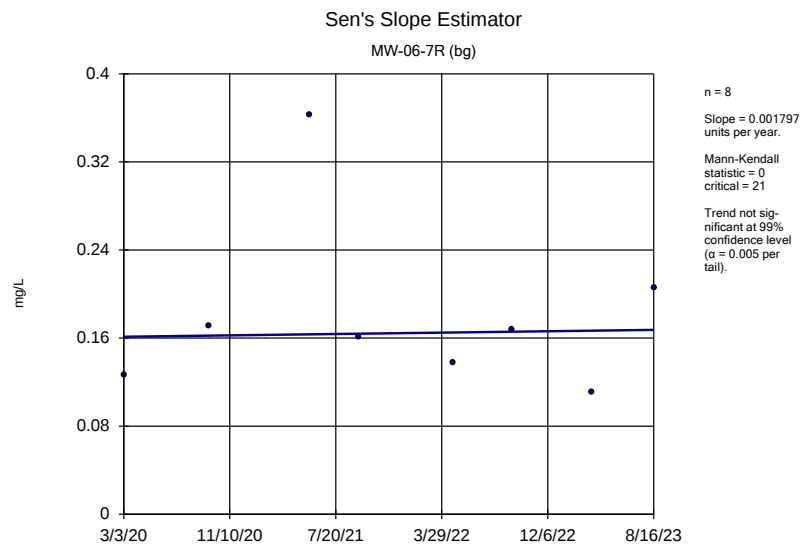
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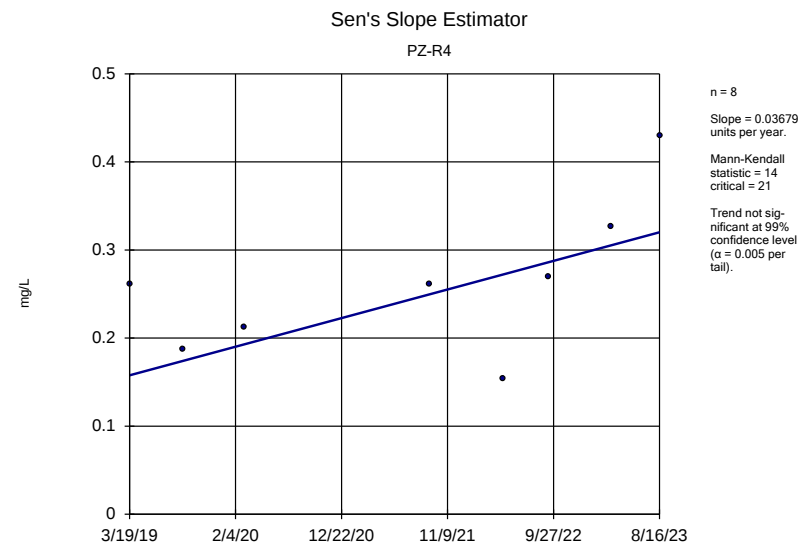
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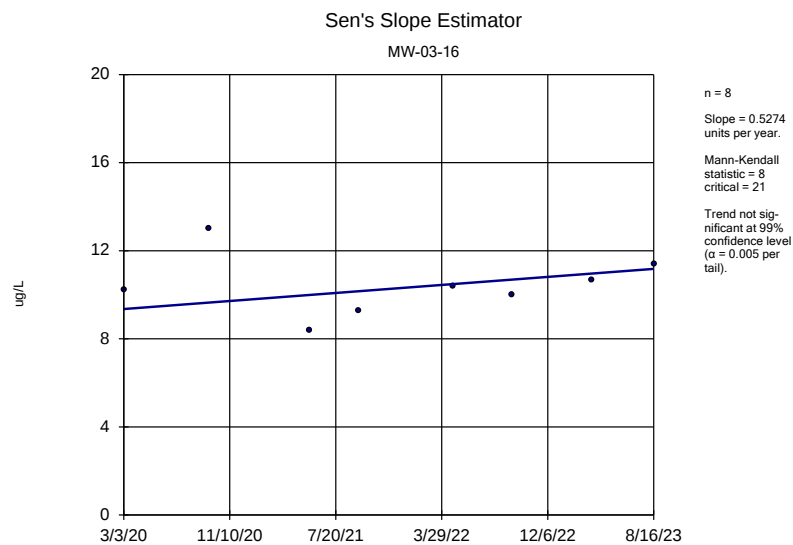
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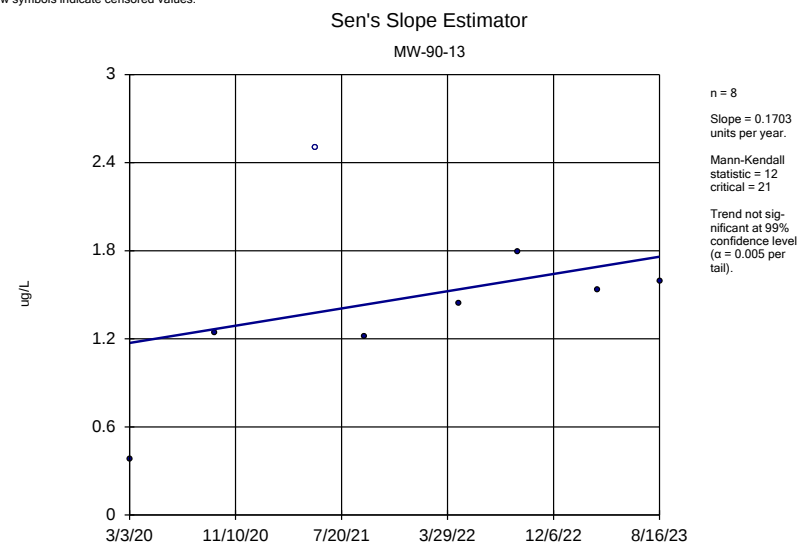
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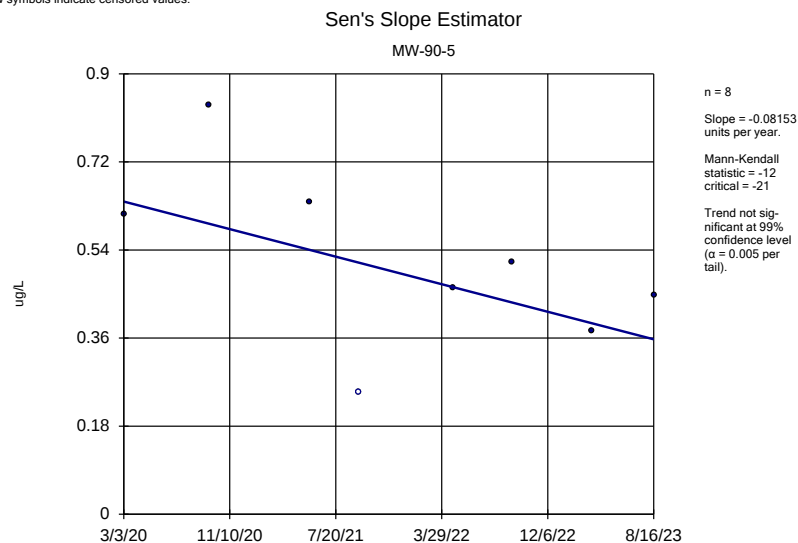
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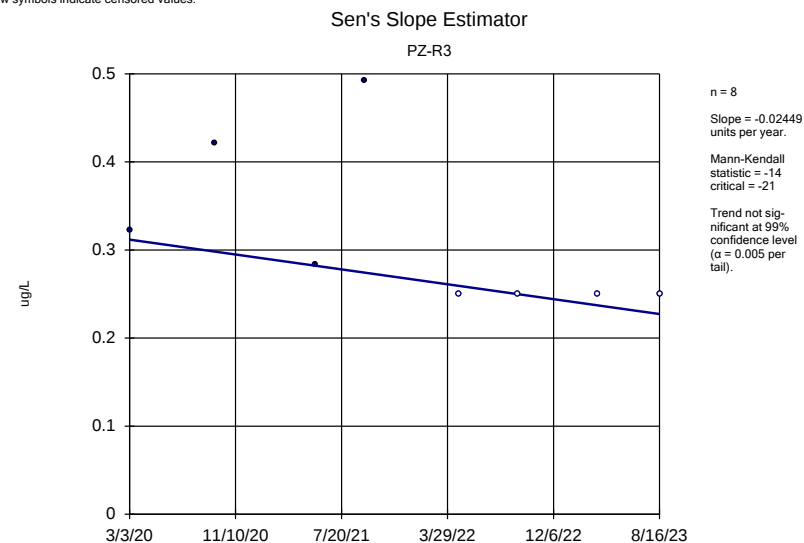
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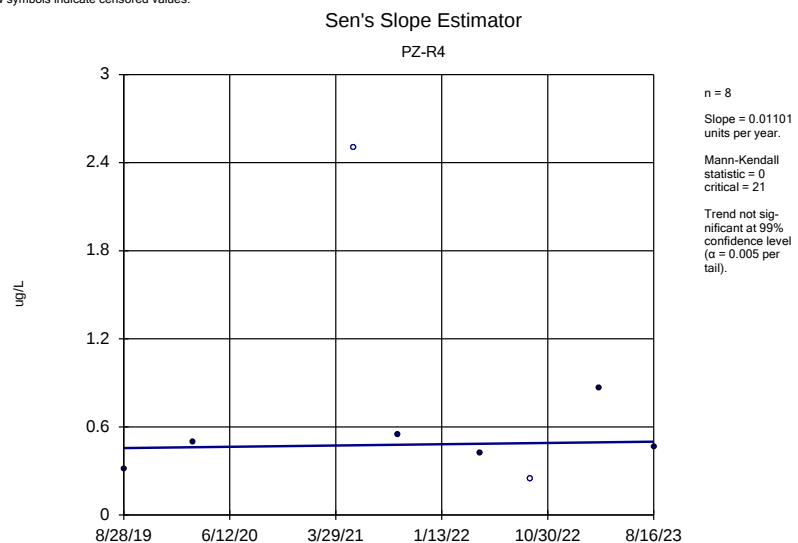
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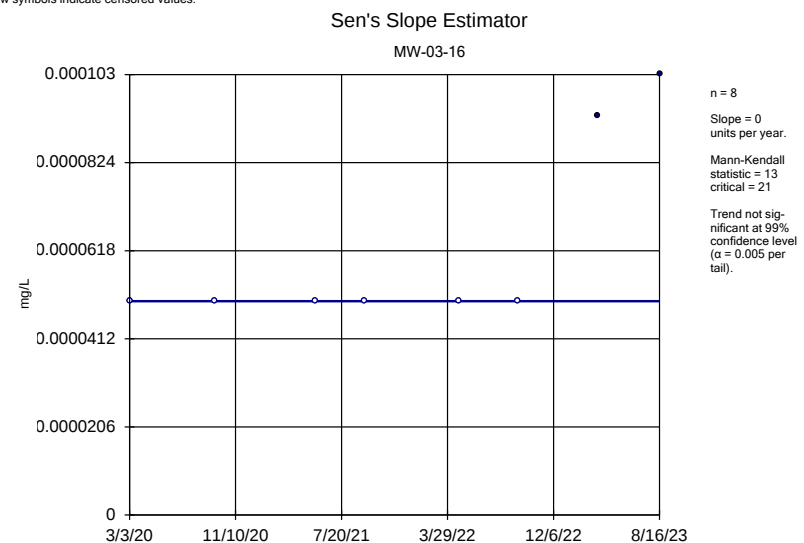
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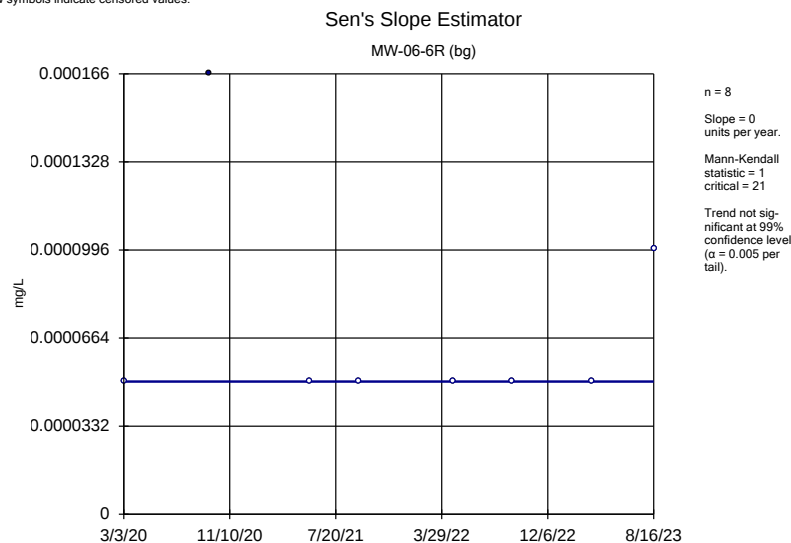
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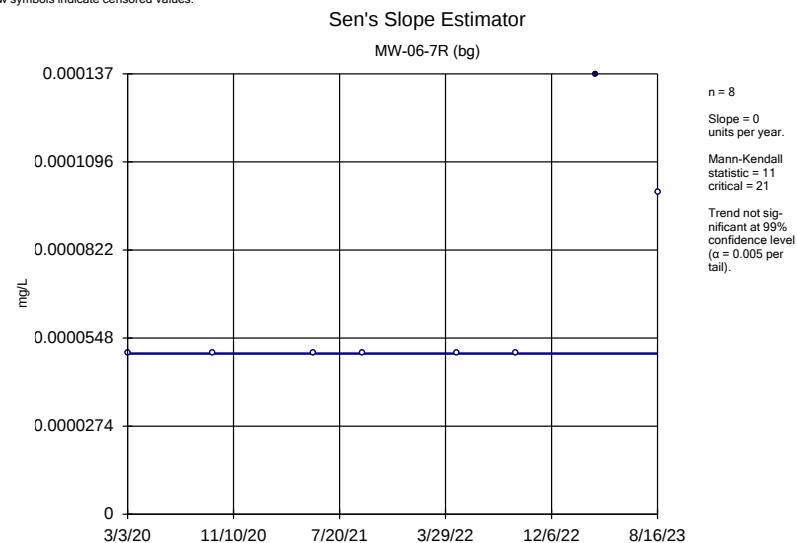
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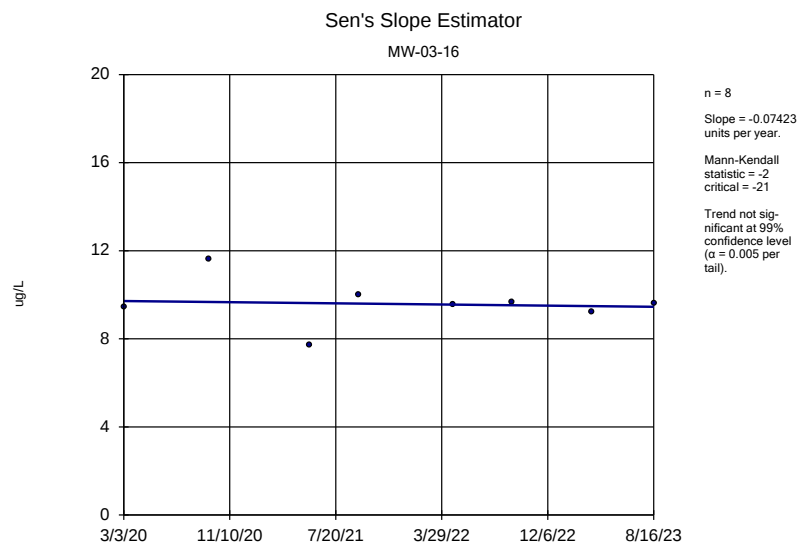
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Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM



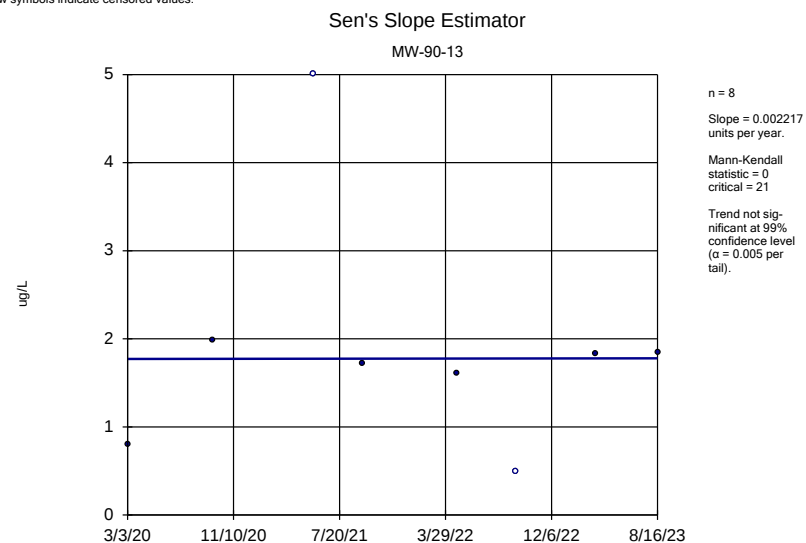
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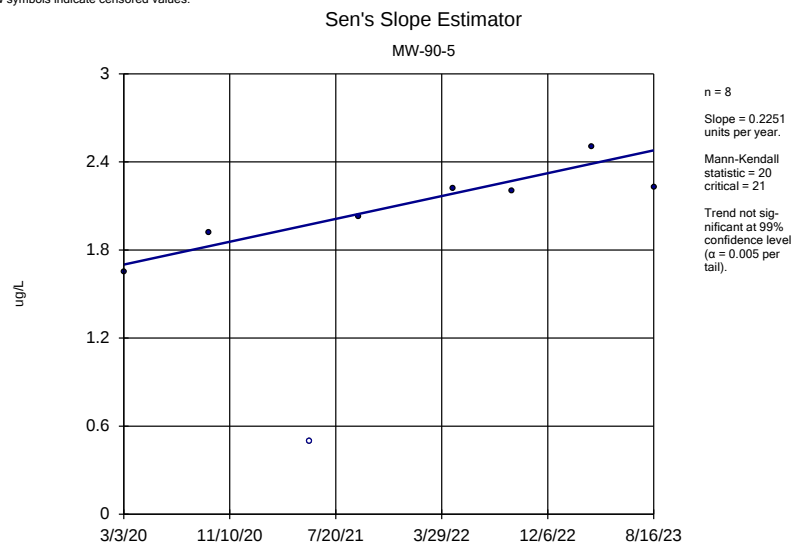
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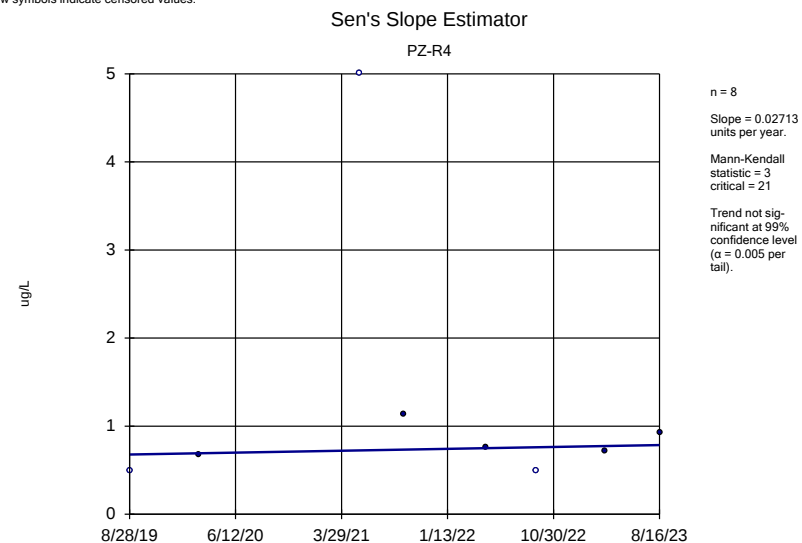
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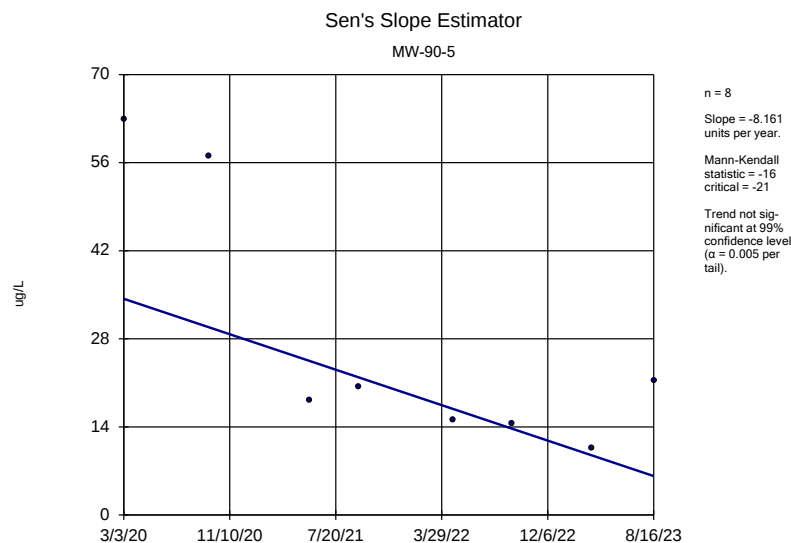
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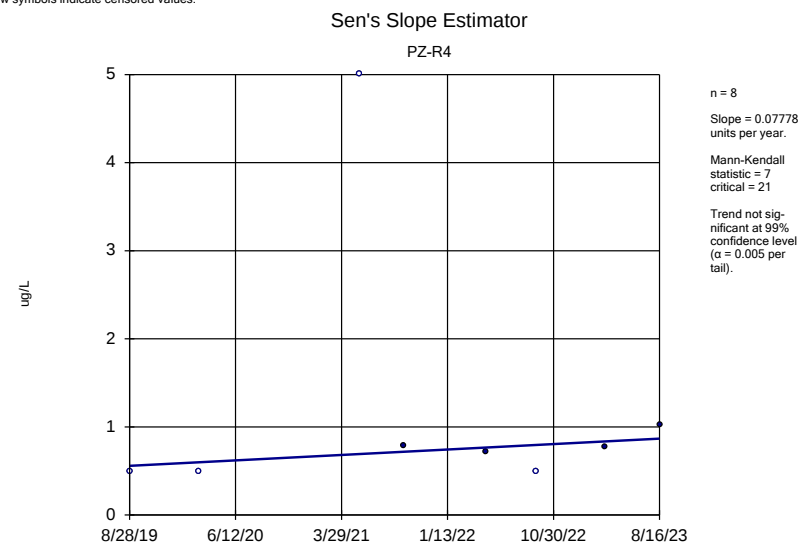
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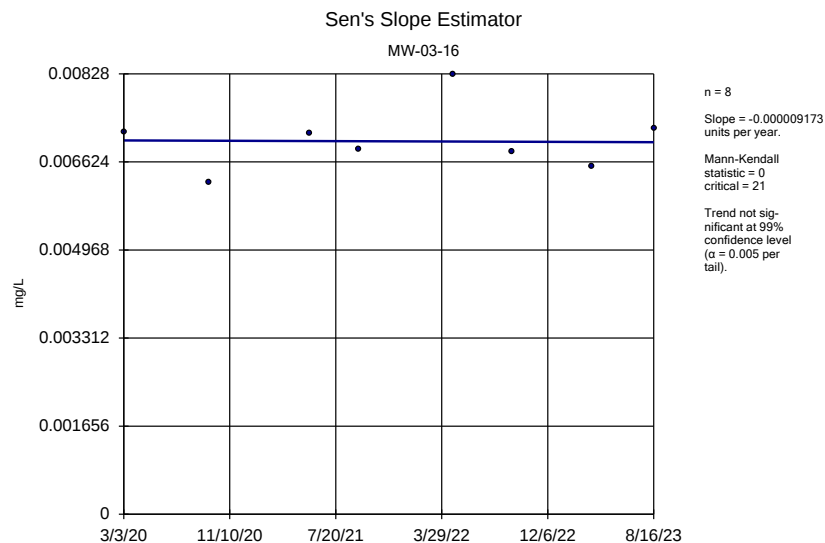
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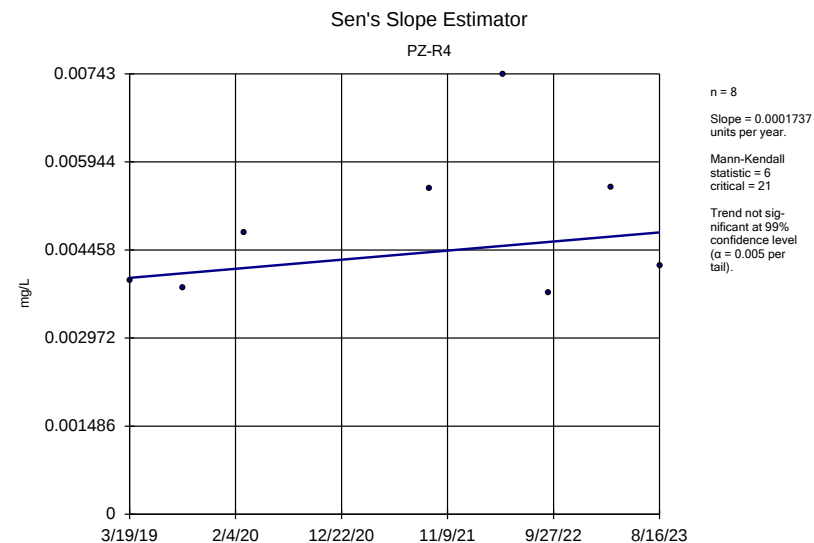
Constituent: cis-1,2-Dichloroethene Analysis Run 9/28/2023 11:12 PM View: 2023AWQR - MannKendall
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM



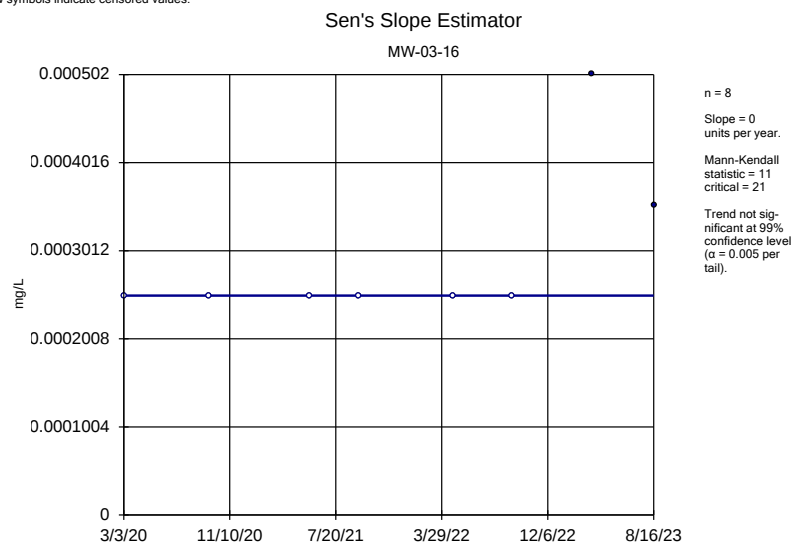
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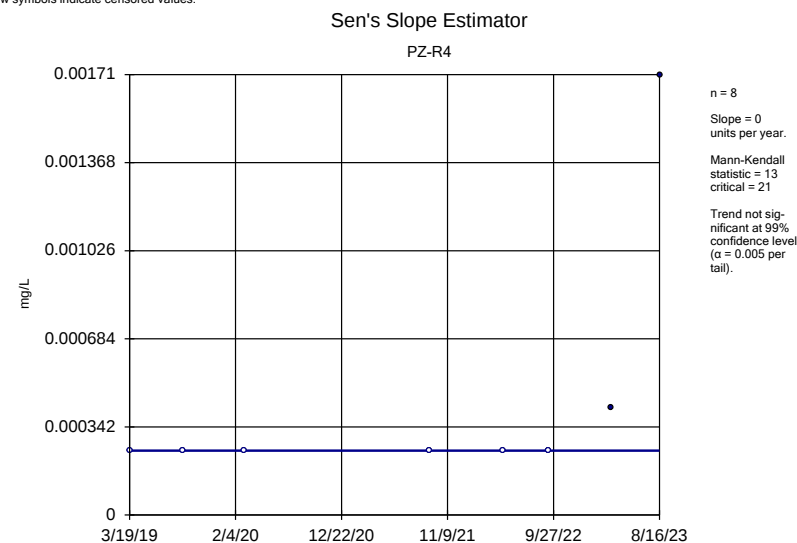
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Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM



Constituent: Cobalt Analysis Run 9/28/2023 11:12 PM View: 2023AWQR - MannKendall
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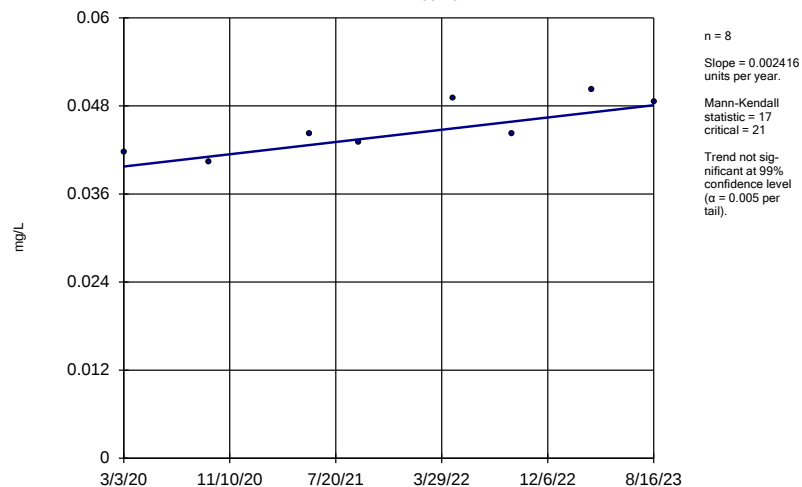
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Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM



Constituent: Lead Analysis Run 9/28/2023 11:12 PM View: 2023AWQR - MannKendall
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Sen's Slope Estimator

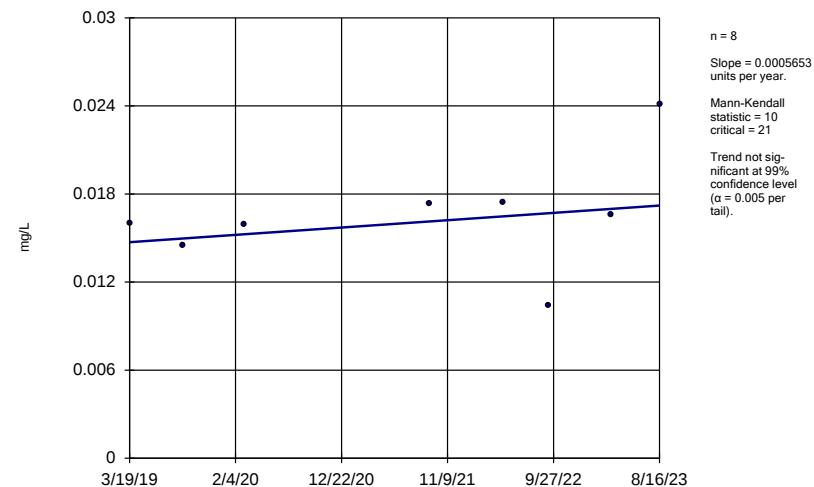
MW-03-16



Constituent: Nickel Analysis Run 9/28/2023 11:12 PM View: 2023AWQR - MannKendall
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Sen's Slope Estimator

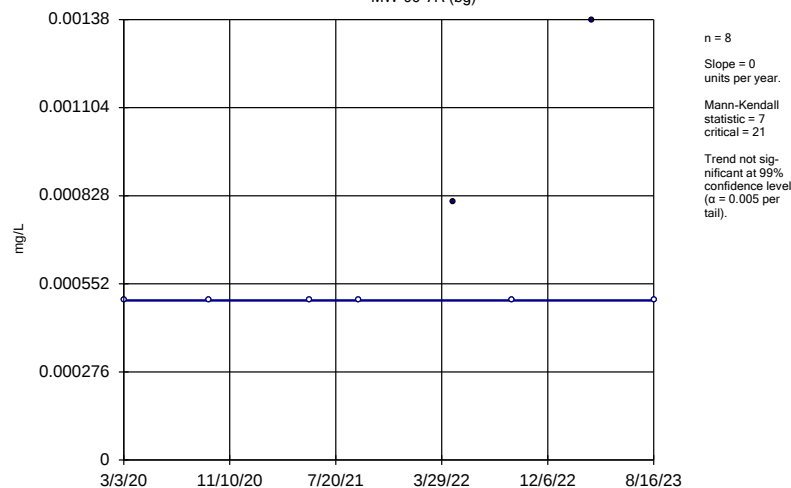
PZ-R4



Constituent: Nickel Analysis Run 9/28/2023 11:12 PM View: 2023AWQR - MannKendall
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Sen's Slope Estimator

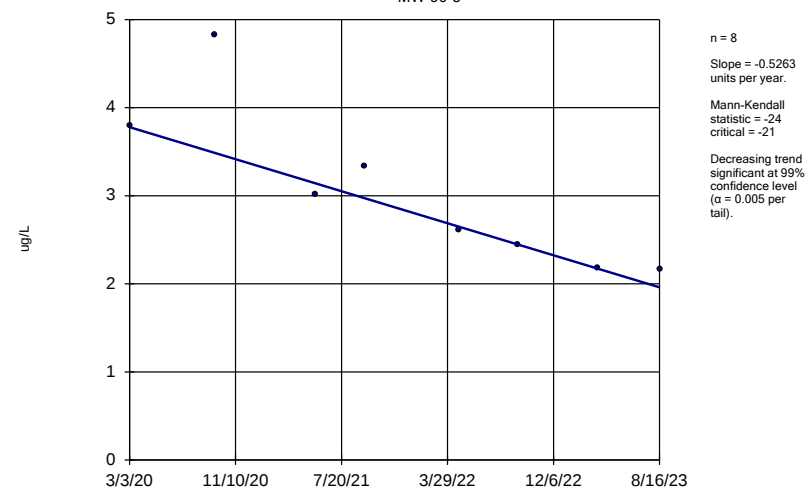
MW-06-7R (bg)



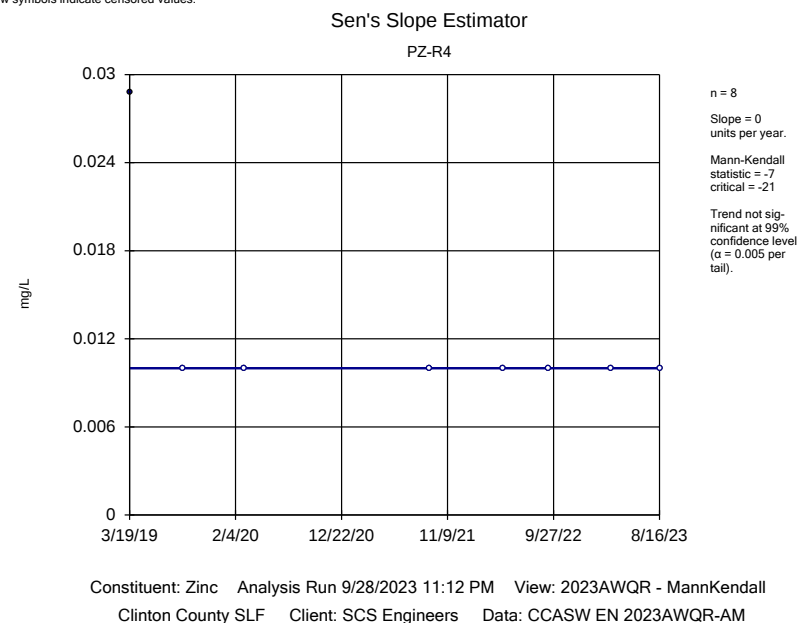
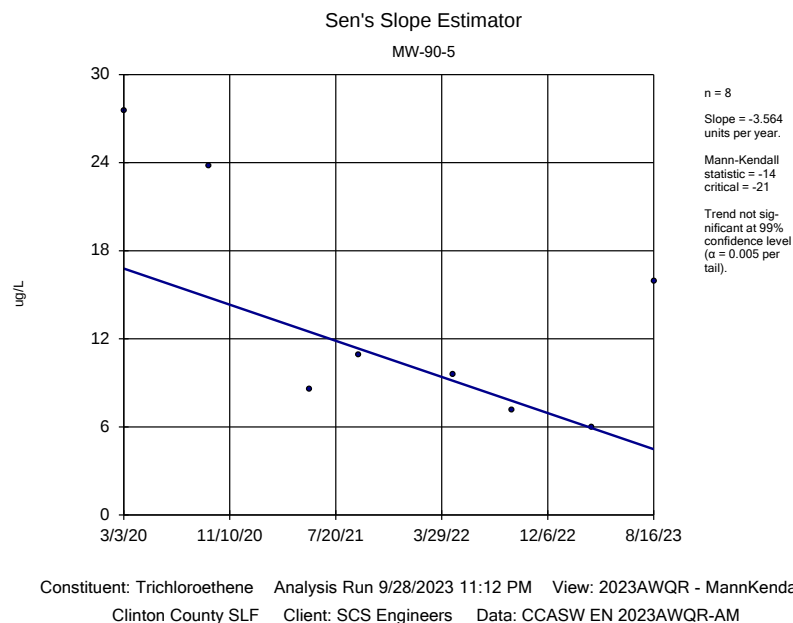
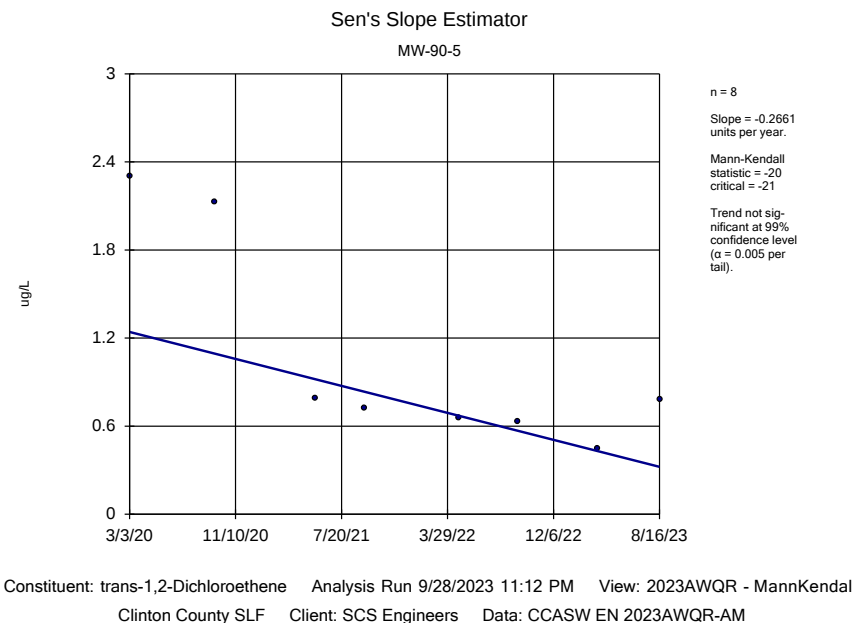
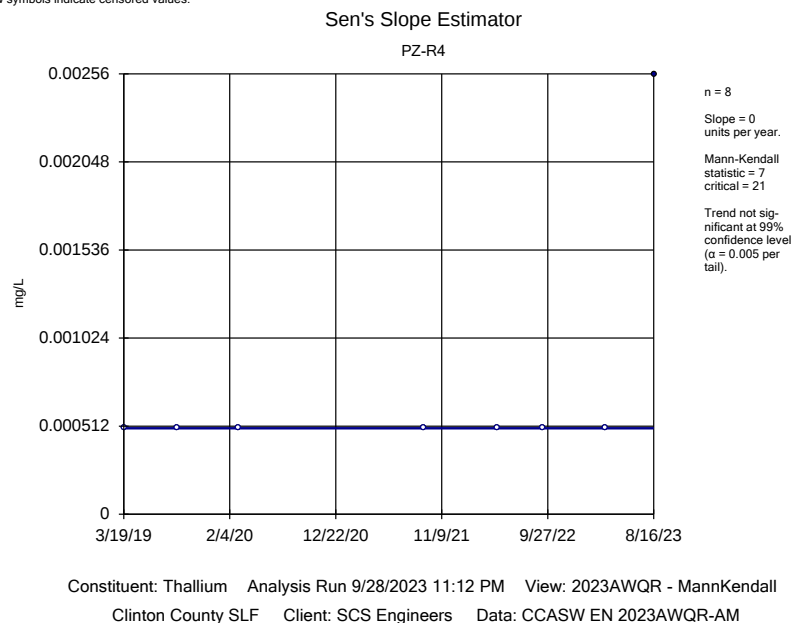
Constituent: Silver Analysis Run 9/28/2023 11:12 PM View: 2023AWQR - MannKendall
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Sen's Slope Estimator

MW-90-5



Constituent: Tetrachloroethene Analysis Run 9/28/2023 11:12 PM View: 2023AWQR - MannKendall
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM



Appendix F
Confidence Interval Summary Table and Graphs

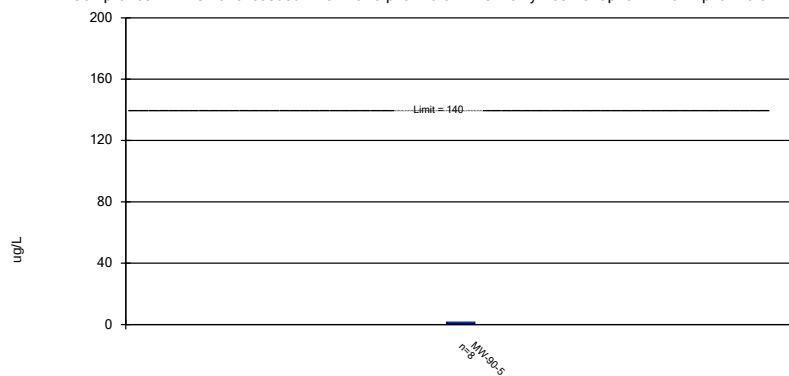
Confidence Interval

Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM Printed 9/28/2023, 11:26 PM

<u>Constituent</u>	<u>Well</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Compliance</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
1,1-Dichloroethane (ug/L)	MW-90-5	1.556	0.5796	140	No	8	0	No	0.01	Param.
1,4-Dichlorobenzene (ug/L)	MW-03-16	5	1.56	75	No	8	12.5	No	0.004	NP (normality)
Arsenic (mg/L)	MW-03-16	0.1406	0.1213	0.01	Yes	8	0	No	0.01	Param.
Arsenic (mg/L)	MW-06-7R (bg)	0.006457	0.002228	0.01	No	8	0	No	0.01	Param.
Arsenic (mg/L)	PZ-R3	0.03845	0.008194	0.01	No	8	0	No	0.01	Param.
Arsenic (mg/L)	PZ-R4	0.02964	0.004199	0.01	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-03-16	0.4997	0.4253	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-06-6R (bg)	0.442	0.4022	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-06-7R (bg)	0.2647	0.09651	2	No	8	0	No	0.01	Param.
Barium (mg/L)	PZ-R4	0.3543	0.1709	2	No	8	0	No	0.01	Param.
Benzene (ug/L)	MW-03-16	11.88	8.952	5	Yes	8	0	No	0.01	Param.
Benzene (ug/L)	MW-90-13	2.092	0.8305	5	No	8	12.5	No	0.01	Param.
Benzene (ug/L)	MW-90-5	0.707	0.3275	5	No	8	12.5	No	0.01	Param.
Benzene (ug/L)	PZ-R3	0.4675	0.2927	5	No	8	50	No	0.01	Param.
Benzene (ug/L)	PZ-R4	2.5	0.25	5	No	8	25	No	0.004	NP (normality)
Cadmium (mg/L)	MW-03-16	0.000103	0.00005	0.005	No	8	75	No	0.004	NP (NDs)
Cadmium (mg/L)	MW-06-6R (bg)	0.000166	0.00005	0.005	No	8	87.5	No	0.004	NP (NDs)
Cadmium (mg/L)	MW-06-7R (bg)	0.000137	0.00005	0.005	No	8	87.5	No	0.004	NP (NDs)
Chlorobenzene (ug/L)	MW-03-16	10.72	8.471	100	No	8	0	No	0.01	Param.
Chlorobenzene (ug/L)	MW-90-13	2.004	1.022	100	No	8	25	No	0.01	Param.
Chlorobenzene (ug/L)	MW-90-5	2.565	1.248	100	No	8	12.5	No	0.01	Param.
Chlorobenzene (ug/L)	PZ-R4	5	0.5	100	No	8	37.5	No	0.004	NP (normality)
cis-1,2-Dichloroethene (ug/L)	MW-90-5	62.9	10.6	70	No	8	0	No	0.004	NP (normality)
cis-1,2-Dichloroethene (ug/L)	PZ-R4	5	0.5	70	No	8	50	No	0.004	NP (normality)
Cobalt (mg/L)	MW-03-16	0.007688	0.006399	0.0021	Yes	8	0	No	0.01	Param.
Cobalt (mg/L)	PZ-R4	0.006192	0.003525	0.0021	Yes	8	0	No	0.01	Param.
Lead (mg/L)	MW-03-16	0.000502	0.00025	0.015	No	8	75	No	0.004	NP (NDs)
Lead (mg/L)	PZ-R4	0.00171	0.00025	0.015	No	8	75	No	0.004	NP (NDs)
Nickel (mg/L)	MW-03-16	0.04907	0.04131	0.1	No	8	0	No	0.01	Param.
Nickel (mg/L)	PZ-R4	0.02056	0.0125	0.1	No	8	0	No	0.01	Param.
Silver (mg/L)	MW-06-7R (bg)	0.00138	0.0005	0.1	No	8	75	No	0.004	NP (NDs)
Thallium (mg/L)	PZ-R4	0.00256	0.0005	0.002	No	8	87.5	No	0.004	NP (NDs)
trans-1,2-Dichloroethene (ug/L)	MW-90-5	2.3	0.451	100	No	8	0	No	0.004	NP (normality)
Trichloroethene (ug/L)	MW-90-5	22.18	5.164	5	Yes	8	0	No	0.01	Param.
Zinc (mg/L)	PZ-R4	0.0288	0.01	2	No	8	87.5	No	0.004	NP (NDs)

Parametric Confidence Interval

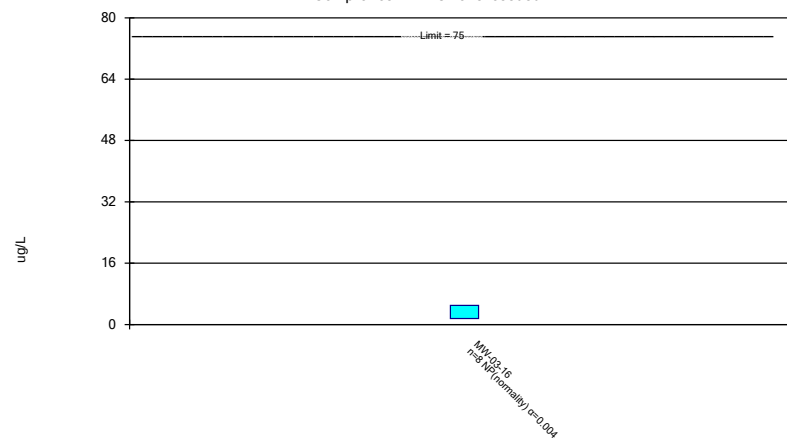
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: 1,1-Dichloroethane Analysis Run 9/28/2023 11:18 PM View: 2023AWQR - Confidence Interv
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Non-Parametric Confidence Interval

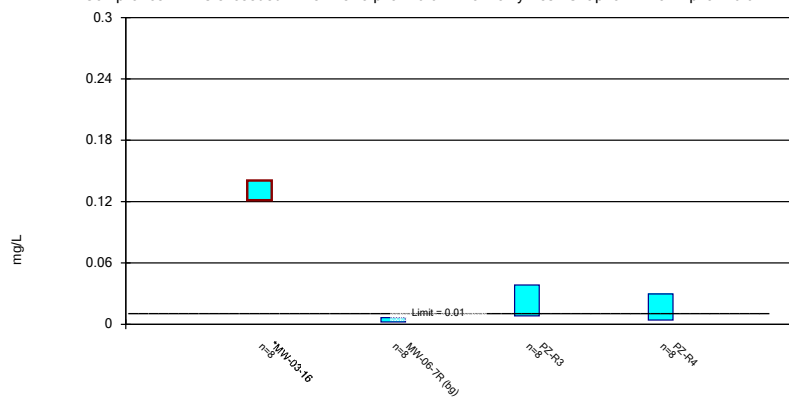
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Constituent: 1,4-Dichlorobenzene Analysis Run 9/28/2023 11:18 PM View: 2023AWQR - Confidence Inter
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Parametric Confidence Interval

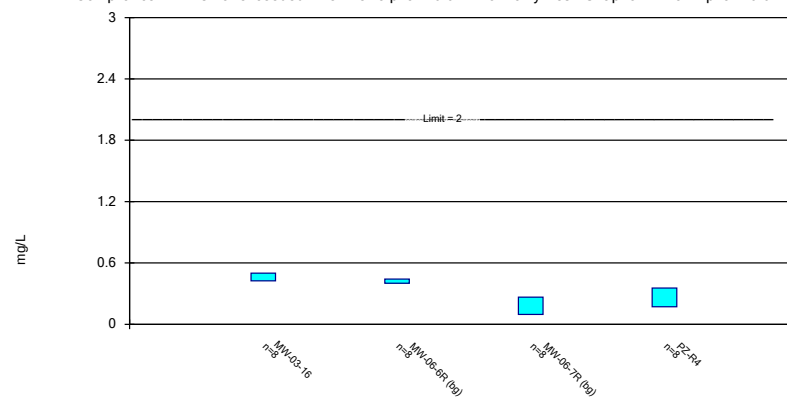
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Arsenic Analysis Run 9/28/2023 11:18 PM View: 2023AWQR - Confidence Interval
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Parametric Confidence Interval

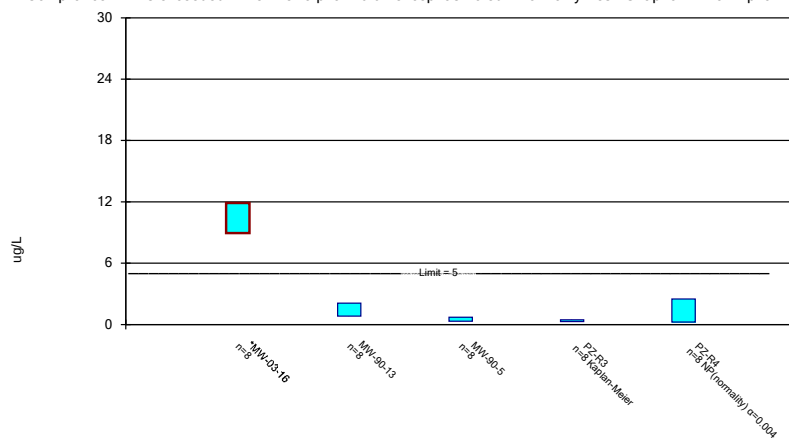
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Barium Analysis Run 9/28/2023 11:18 PM View: 2023AWQR - Confidence Interval
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Parametric and Non-Parametric (NP) Confidence Interval

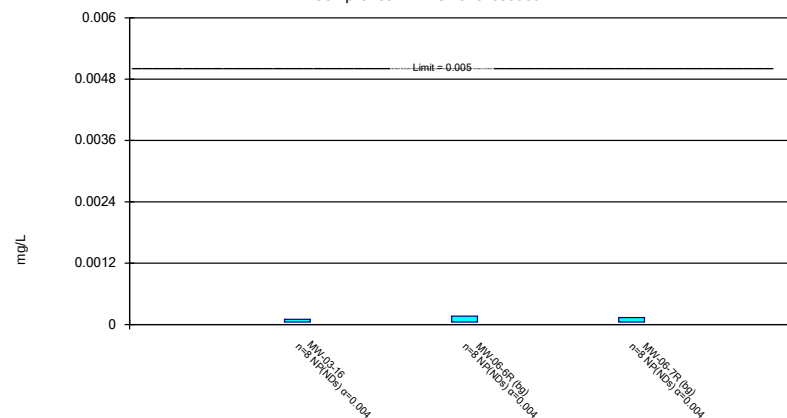
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Benzene Analysis Run 9/28/2023 11:18 PM View: 2023AWQR - Confidence Interval
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Non-Parametric Confidence Interval

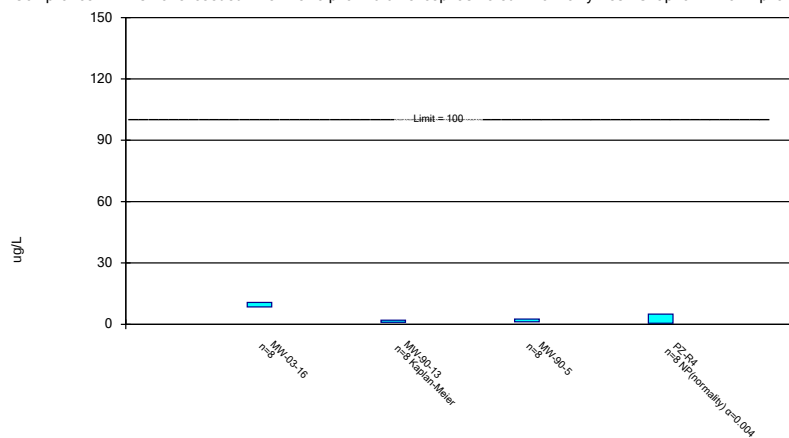
Compliance Limit is not exceeded.



Constituent: Cadmium Analysis Run 9/28/2023 11:18 PM View: 2023AWQR - Confidence Interval
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Parametric and Non-Parametric (NP) Confidence Interval

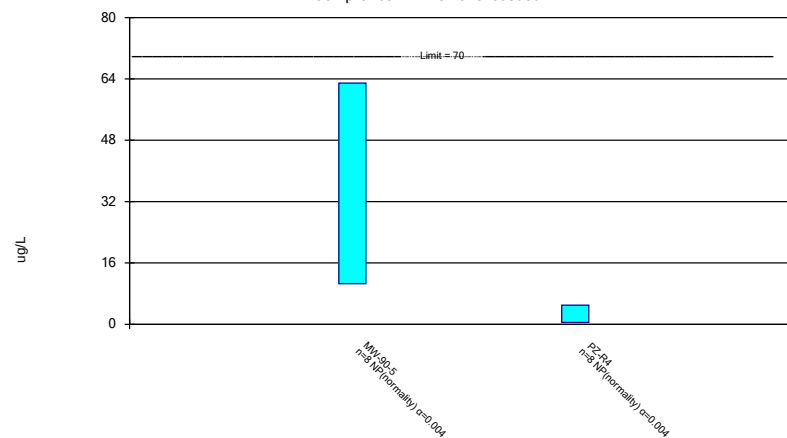
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.



Constituent: Chlorobenzene Analysis Run 9/28/2023 11:18 PM View: 2023AWQR - Confidence Interval
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

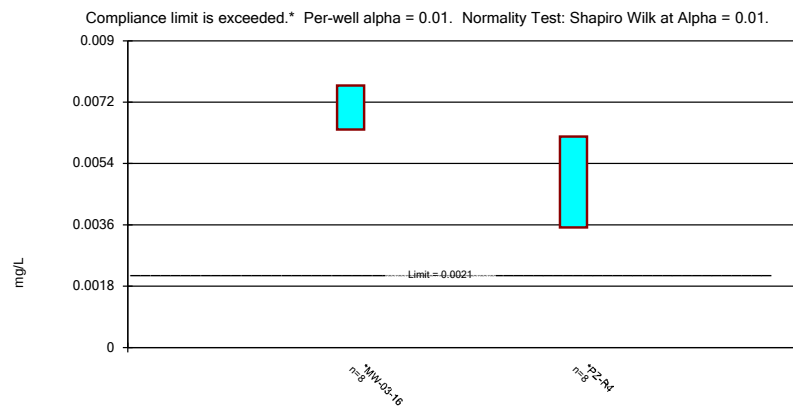
Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



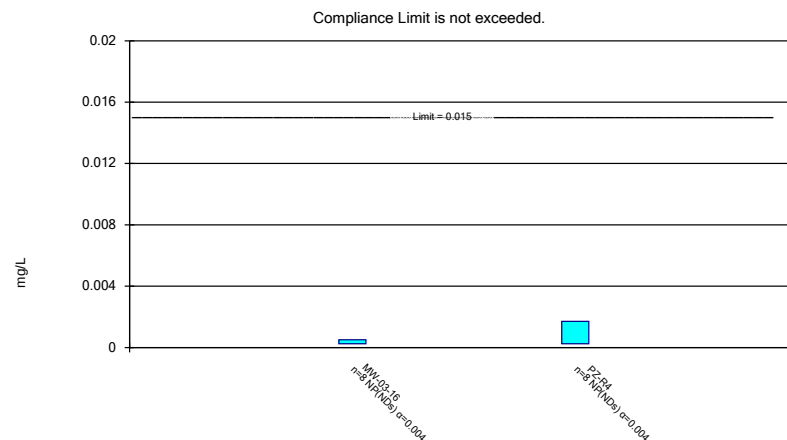
Constituent: cis-1,2-Dichloroethene Analysis Run 9/28/2023 11:18 PM View: 2023AWQR - Confidence Int
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Parametric Confidence Interval



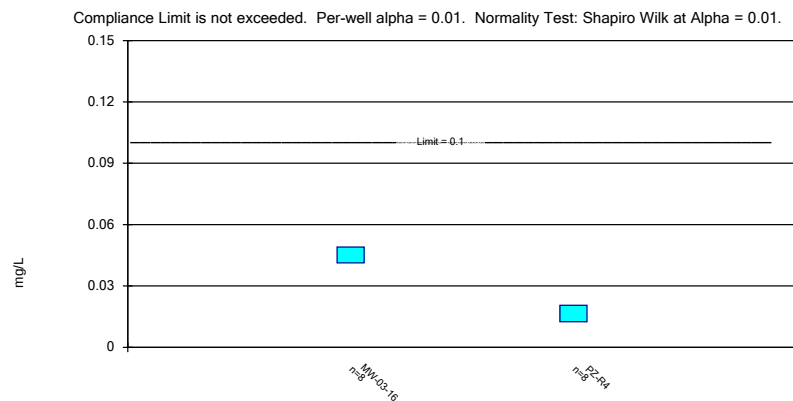
Constituent: Cobalt Analysis Run 9/28/2023 11:18 PM View: 2023AWQR - Confidence Interval
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Non-Parametric Confidence Interval



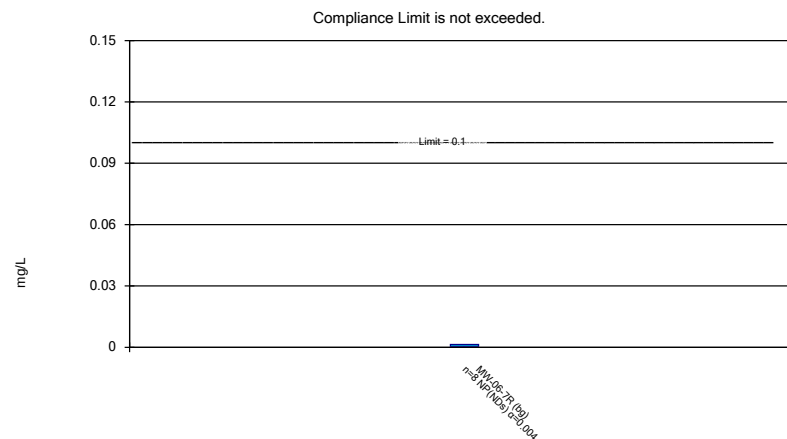
Constituent: Lead Analysis Run 9/28/2023 11:18 PM View: 2023AWQR - Confidence Interval
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Parametric Confidence Interval

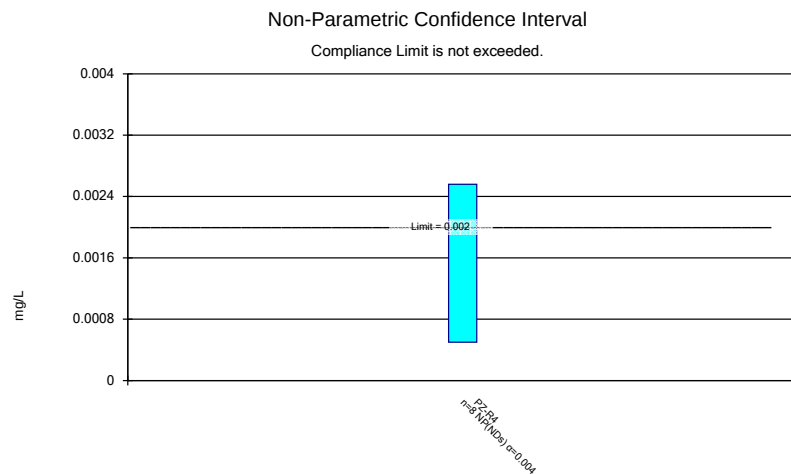


Constituent: Nickel Analysis Run 9/28/2023 11:18 PM View: 2023AWQR - Confidence Interval
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

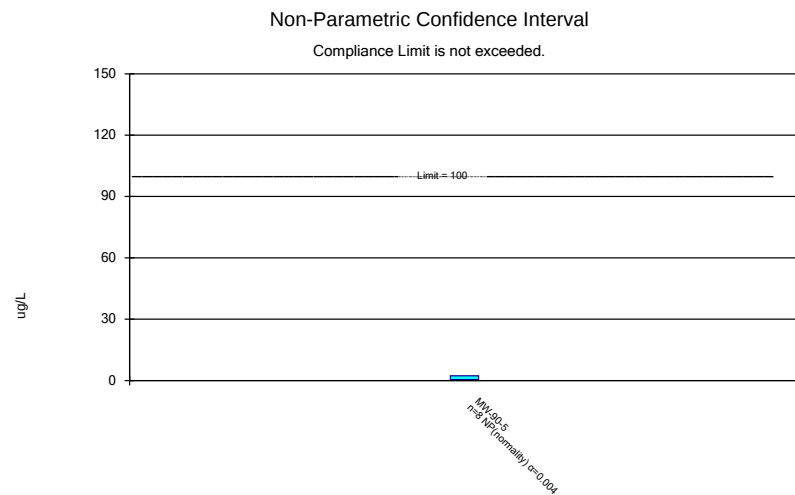
Non-Parametric Confidence Interval



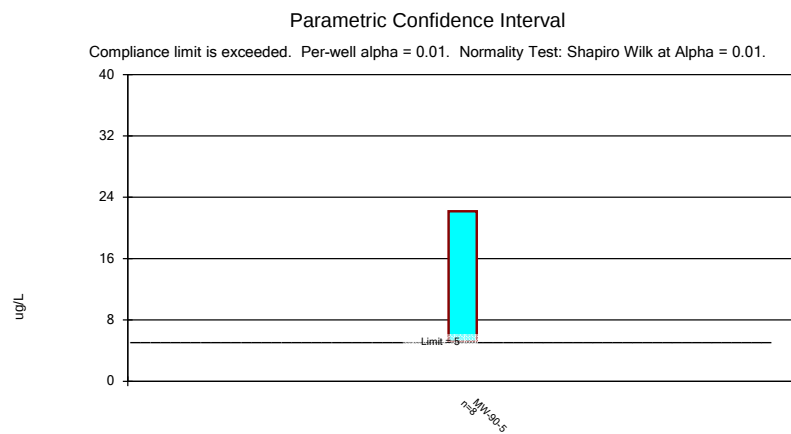
Constituent: Silver Analysis Run 9/28/2023 11:18 PM View: 2023AWQR - Confidence Interval
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM



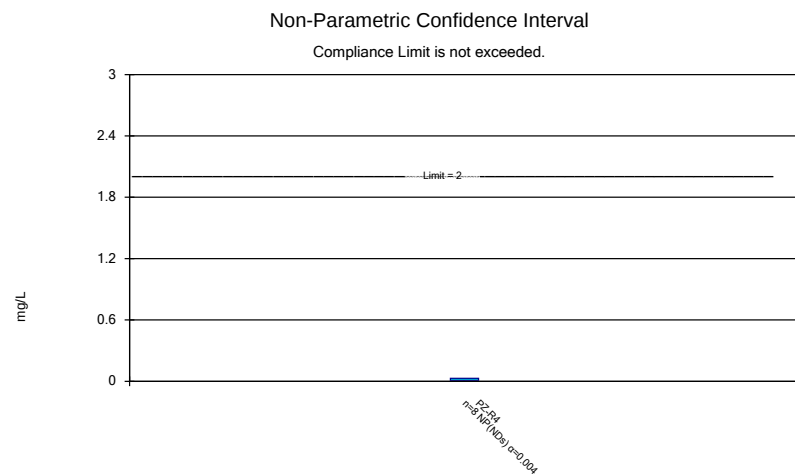
Constituent: Thallium Analysis Run 9/28/2023 11:18 PM View: 2023AWQR - Confidence Interval
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM



Constituent: trans-1,2-Dichloroethene Analysis Run 9/28/2023 11:18 PM View: 2023AWQR - Confidence Interval
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM



Constituent: Trichloroethene Analysis Run 9/28/2023 11:18 PM View: 2023AWQR - Confidence Interval
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM



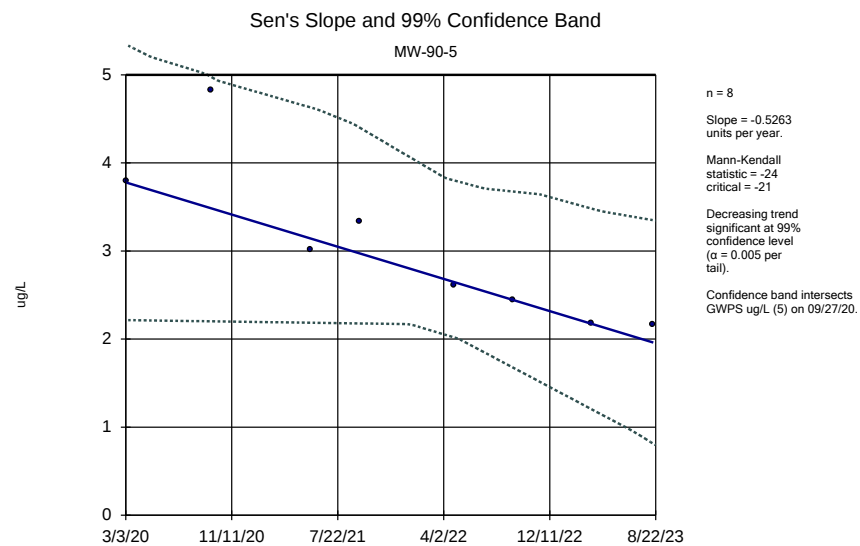
Constituent: Zinc Analysis Run 9/28/2023 11:18 PM View: 2023AWQR - Confidence Interval
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM

Appendix G
Theil-Sen Confidence Band Summary Table and Graphs

Theil Sen/Trend Test

Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM Printed 9/28/2023, 11:30 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Alpha</u>	<u>Method</u>
Tetrachloroethene (ug/L)	MW-90-5	-0.5263	-24	-21	Yes	8	0	0.01	NP



Constituent: Tetrachloroethene Analysis Run 9/28/2023 11:28 PM View: 2023AWQR - Theil Sen
Clinton County SLF Client: SCS Engineers Data: CCASW EN 2023AWQR-AM