SCS ENGINEERS

Transmittal

West Des Moines, IA

PROJECT:	Des Moines Co,FY25 Env Comp,IA 27224414.25	DATE:	2/28/2025
SUBJECT:	Des Moines County Regional Sanitary Landfill - 29-SDP-01-76P - 2024 Annual Water Quality Report, Leachate Control System Performance Evaluation Review, and Landfill Gas Annual Report	TRANSMITTAL ID:	00002
PURPOSE:	For your approval	VIA:	Info Exchange

FROM

NAME	COMPANY	EMAIL	PHONE
Sean Marczewski West Des Moines, IA	SCS Engineers	SMarczewski@scsengineers.com	+1-515-631-6152

TO

NAME	COMPANY	EMAIL	PHONE
Geoffrey Spain United States		geoffrey.spain@dnr.iowa.gov	

REMARKS:

Geoff -

Please find for your download theDes Moines County Regional Sanitary Landfill 2024 Annual Water Quality Report, Leachate Control System Performance Evaluation Review, and Landfill Gas Annual Report . Let us know if you have any questions or comments.

Thanks,

Sean A. Marczewski
Project Professional
SCS Engineers
1690 All-State Court, Suite 100
West Des Moines, Iowa 50265
712-661-9682 (C)
515-631-6152 (O)
smarczewski@scsengineers.com

DESCRIPTION OF CONTENTS

QTY	DATED	TITLE	NOTES
1	2/28/2025	Des Moines County Sanitary Landfill - 29-SDP-01-76P - 2024 AWQR.LCSPER.MMR 02.28.2025.pdf	

Transmittal

DATE: 2/28/2025
TRANSMITTAL ID: 00002

COPIES:

Becky Jolly	
Chris Ball	(Des Moines County)
Tim Buelow	(SCS Engineers)
Sean Marczewski	(SCS Engineers)
Ben Madson	(SCS Engineers)
Eric Houtz	(Des Moines County)

February 28, 2025
File No. 27224414.25

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

Subject: 2024 Annual Water Quality Report, 2024 Leachate Control System Performance Evaluation Report, and 2024 Landfill Gas Annual Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Dear Geoff:

SCS Engineers, on behalf of the Des Moines County (DMC) Regional Solid Waste Commission (Commission), has completed the required groundwater monitoring and statistical evaluation for the DMC Regional Sanitary Landfill (Landfill) for the year 2024. Services were performed in general accordance with applicable sections of Iowa Administrative Code (IAC) 567-113.10 and the current requirements for implementation of the Hydrologic Monitoring System Plan for the Landfill. Please find enclosed a copy of the 2024 Annual Water Quality Report.

Additionally, an evaluation of the leachate control system and gas monitoring results for the Landfill are included in accordance with IAC 567-113.7(5)"b"(14) and 113.9(2)"d," respectively. The 2024 Leachate Control System Performance Evaluation Report and the 2024 Landfill Gas Annual Report for the Landfill are included as appendices to the Annual Water Quality Report.

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

Sincerely,

Sean Marczewski
Project Professional II
SCS Engineers

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

SAM/TCB

Copies: Mr. Chris Ball, Des Moines County Solid Waste Commission
Mr. Eric Houtz, Des Moines County Regional Sanitary Landfill

2024 Annual Water Quality Report, Leachate Control System Performance Evaluation Report, and Landfill Gas Annual Report

Des Moines County Regional Sanitary Landfill
Solid Waste Permit No. 29-SDP-01-76P

Prepared for:

Des Moines County Regional Solid Waste Commission

SCS ENGINEERS

27224414.25 | February 28, 2025

1690 All-State Court, Suite 100
West Des Moines, IA 50265
515-631-6160

Table of Contents

Section Page

Certification ..... **iii**
Executive Summary ..... **iv**
Period of Report Coverage iv
Report Priority iv
Site Status and Applicable Rules iv
Comments iv
Acronyms/Abbreviations ..... **v**
1.0 Site Background **1**
1.1 Site Location 1
1.2 Facility 1
1.3 Geology and Hydrogeology of the Site 1
2.0 Figures Discussion **2**
2.1 Figure 1 – Approved Monitoring Network 2
2.2 Figure 2 – Groundwater Contours 2
2.3 Figure 3 – Reporting Period Detection Summary 3
2.4 Figure 4 – Arsenic Concentration Map 3
2.5 Figure 5 – Cobalt Concentration Map 3
2.6 Figure 6 – Alpha-BHC Concentration Map 3
3.0 Standards History Graphs **4**
4.0 QA/QC Summary **4**
5.0 Data Evaluation and Summary **5**
5.1 Data Evaluation 5
5.2 Trending in Assessment/Corrective Action Monitoring Wells 5
5.3 Corrective Action Groundwater Monitoring Program Remedy Discussion 5
6.0 Recommendations **7**
6.1 Site Impact on Groundwater 7
6.2 Proposed Monitoring 7
6.3 Proposed Monitoring Well Changes 7

Tables

Table 1	Monitoring Program Summary
Table 2	Monitoring Program Implementation Schedule
Table 3	Monitoring Well Maintenance and Performance Re-Evaluation Schedule
Table 4	Monitoring Well Performance and Maintenance Summary
Table 5	Background and GWPS Summary
Table 6	Summary of Well/Detected Constituent Pairs with No Previous SSIs
Table 7	Summary Table of Ongoing and Newly Identified SSIs
Table 8	Summary table of Ongoing and Newly Identified SSLs
Table 9	Summary of Groundwater Chemistry
Table 10	Historical SSIs and SSLs
Table 11	Corrective Action Trend Analysis

Figures

Figure 1	Approved Monitoring Network
Figure 2	Groundwater Contours
Figure 3	Reporting Period Detection Summary
Figure 4	Arsenic Concentration Map
Figure 5	Cobalt Concentration Map
Figure 6	Alpha-BHC Concentration Map

Appendices

Appendix A	Field Sampling Forms
Appendix B-1	Laboratory Analytical Data Sheets
Appendix B-2	Data Validation
Appendix C-1	Summary of Groundwater Chemistry – HMSP
Appendix C-2	Summary of Groundwater Chemistry – CAMP
Appendix D	Statistical Method and Output
Appendix E	2024 Leachate Control System Performance Evaluation Report
Appendix F	2024 Landfill Gas Annual Report
Appendix G	Standards History Graphs

CERTIFICATION

Prepared by: _____ Date: 2/28/2025

Typed: Sean Marczewski

Reviewed by: _____ Date: 2/28/2025

Typed: Timothy C. Buelow

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

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

EXECUTIVE SUMMARY

Period of Report Coverage

The period of report coverage is from January – December 2024 and includes the June and November 2024 semi-annual sampling events.

Report Priority

The following summarizes report priorities associated with groundwater compliance at the Des Moines County Regional Sanitary Landfill (Landfill):

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

Site Status and Applicable Rules

- Landfill Status: Active
- Types of waste accepted: MSW, C&D, and Special Waste
- Applicable IAC rules: 2009 567-113.10

Comments

The request by Evora Consulting to amend the corrective action groundwater monitoring plan (CAMP) submitted in the 2022 Spring Sampling Notification to install five new monitoring wells and utilize one current bracketing monitoring well as attenuation zone point of compliance (AZPOC) monitoring wells was approved by the DNR on June 8, 2023 (Doc #106948). The installation of new AZPOC wells began in October 2024 and was completed in January 2025.

There were twelve newly identified monitoring well/constituent pairs with indicated statistically significant increases (SSI) above background that are summarized in **Table 6**. The monitoring wells are in the assessment or corrective action monitoring programs and do not require retesting; therefore, the SSIs were not confirmed.

Statistically significant levels (SSL) above the groundwater protection standards (GWPS) remain for alpha-BHC in monitoring well MW-39R, arsenic in monitoring wells MW-43 and MW-7-90R, and cobalt in monitoring wells MW-37, MW-4-90R, MW-4-93, MW-7-93, and monitoring point PZ-10. SSLs are summarized in **Table 8**. The current SSL wells are now considered source wells, and the SSLs have been transferred to the associated AZPOC wells as submitted in the 2022 SSN (Doc #103436) and approved by the DNR (Doc #106948) for compliance and tracking of remedy progress. The approved AZPOC wells are shown in the table in **Section 5.3**.

ACRONYMS/ABBREVIATIONS

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

1.0 SITE BACKGROUND

1.1 SITE LOCATION

The portion of the property encompassing the Landfill is depicted on **Figure 1**, Approved Monitoring Network. The Landfill property is generally described as a portion of the SW ¼ of the SE ¼ and a portion of the SW ¼ of Section 15; a portion of the E ½ of the SE ¼ and a portion of the E ½ of the NW ¼ of Section 21; the N ½ of the SW ¼, the W ½ of the NW ¼, and a portion of the E ½ of the NW ¼ of Section 22, all in Township 70 North, Range 3 West, Des Moines County, Iowa.

1.2 FACILITY

The Landfill consists of one contiguous unit and has been a permitted facility since 1976. The Landfill has actively been receiving waste since that time.

According to historical records, a permit to construct and operate a sanitary landfill was submitted to the Des Moines County Courthouse on March 14, 1975. The permit application indicated the proposed site was not zoned. According to Landfill staff, the Landfill property was purchased from a farmer. Available historical maps indicated the area was in its natural condition at the time of purchase.

1.3 GEOLOGY AND HYDROGEOLOGY OF THE SITE

The hydrogeologic conditions at the Landfill have been assessed extensively with borings and well installations beginning in 1981. Previous reports summarizing the hydrogeology of the Landfill include "Hydrogeological Investigation Report", March 26, 1991, prepared by Geotechnics, Inc. (1991 HIR), "Supplemental Report, Hydrogeologic Investigation, Des Moines County Landfill," January 31, 1992, Geotechnics, Inc. (1992 HIR), "Hydrogeological Assessment Report for the Des Moines County Regional Sanitary Landfill", dated September 28, 1998, Barker, Lemar & Associates (1998 HAR), "Review of Hydrologic Monitoring System," September 2004, Barker Lemar, and the hydrogeologic conditions presented in the Groundwater Quality Assessment Plan, Barker Lemar, July 2007 (2007 GWQAP).

The following is an excerpt from the 2007 GWQAP, which references the 1998 HAR. The monitoring wells referenced in the 2007 GWQAP excerpt are shown in Figure 1.

> *Figure 5* [Attachment B-1 of the 2007 GWQAP] *indicates four general geologic layers beneath the site. These layers generally consist of glacial tills in various stages of oxidation underlain by bedrock. The glacial till layers consist of a brown silty lean clay (oxidized glacial till), underlain by a gray silty lean clay with trace of sand and gravel, underlain by sand seams that appear to overlie bedrock. Figure 5* [Attachment B-1 of the 2007 GWQAP] *also indicates that the top of the bedrock was not present in the area of MW1-89 (southeast portion of the proposed horizontal expansion area) at an elevation nearly 60 feet lower than at MW6-97 (in the east central portion of the proposed horizontal expansion area). The stratigraphy depicted in Figure 4* [Attachment B-1 of the 2007 GWQAP] *is similar to Figure 5* [Attachment B-1 of the 2007 GWQAP] *with a noted absence of the sand seams encountered immediately above the bedrock. Figures 6 and 7* [Attachment B-1 of the 2007 GWQAP] *indicate a similar stratigraphy* [as] *indicated in Figure 5* [Attachment B-1 of the 2007 GWQAP]*, with the exception that bedrock (auger refusal) was encountered at an elevation of*

approximately 613 feet above MSL in MW4-98, which is the highest elevation for bedrock encountered in this field work.

The following is an excerpt from the 2007 GWQAP, which references the 1992 HIR.

> *Based on the present information and the present conditions of the landfill, it is clear that groundwater moves toward the natural ravines and creeks along the east side of the landfill and toward the natural ravine and excavated area of Area B* [Attachment B-2 of the 2007 GWQAP] *[Note: Area B corresponds to the vicinity of Cells 1, 2, and 4] with ultimate movement along the creek area to the east of Area B. There does not appear to be any influence from any underground aquifers such as sand layers beneath the landfill. The sand layers encountered in Boring 1-89 … [are likely] sufficiently isolated* [to account for the apparent lack of] *…significant influence on the groundwater contours. The existing creek areas are the dominant control for groundwater movement. The deep seated movements from beneath the landfill flow toward these creek areas with flow lines moving upward toward the creeks in the vicinity of the creek areas.*
>
> *The piezometric levels in the deep piezometers have remained very stable and still indicate the possible influence of a rock aquifer in the southwest portion of the landfill though the surface contours do not slope in this direction.*

Previous studies also noted that the sand layer over the bedrock and the incidence of overlying sand lenses occurred mostly in the eastern portion of the Landfill property, which appears to follow the general downgradient drainage pattern over the Landfill property as indicated by ravine topography and the occurrence of an intermittent stream along the east side of the property.

The original Landfill property topography indicates a primary ravine aligned from the southwest corner of the fill area downgradient toward the northeast bisecting the fill area. Numerous tributary ravines cover most of the permitted fill area. It can be seen on historical groundwater contour maps that the groundwater flow gradient generally follows the ravine topography. The groundwater point of convergence in the vicinity of monitoring well MW7-93 is located at the downgradient end of the primary ravine and represents a major point of groundwater convergence. Another groundwater point of convergence is located in the vicinity of monitoring well MW-43, at the downgradient end of a smaller ravine. Southwest of the fill area, a groundwater divide appears from which groundwater flows toward the northeast and the southeast.

2.0 FIGURES DISCUSSION

The following figures are attached.

2.1 FIGURE 1 – APPROVED MONITORING NETWORK

The Landfill property, hydrologic monitoring system plan (HMSP) monitoring network, and impact delineation monitoring points are depicted on **Figure 1**. **Figure 1** indicates the respective monitoring programs of the HMSP monitoring points as of the beginning of this reporting period.

2.2 FIGURE 2 – GROUNDWATER CONTOURS

A groundwater contour map based on water levels measured during the June 2024 groundwater sampling event is included in **Figure 2**. **Figure 2** indicates a generally northeasterly flow over a majority of the Landfill, a generally easterly flow in the eastern portion of the closed city/county area,

and a generally southeasterly flow in the southeastern portion of the Landfill property. Therefore, monitoring points to the south and west of the municipal solid waste landfill (MSWLF) unit are generally upgradient of the MSWLF unit.

2.3 FIGURE 3 – REPORTING PERIOD DETECTION SUMMARY

Figure 3 shows the range of measured concentrations by monitoring point during this reporting period for the HMSP monitoring wells. Further discussion of the detected constituents is included in Section 5.0 – Data Evaluation and Summary of this report.

2.4 FIGURE 4 – ARSENIC CONCENTRATION MAP

A groundwater concentration map for SSL parameter arsenic is included as Figure 4. Arsenic is generally defined near SSL monitoring well MW-7-90R, located in the southern portion of the Landfill property.

Arsenic concentrations in monitoring well MW-7-90R are bracketed to the north and east by the Landfill and to the west and south by monitoring wells MW-39R, MW-38, and MW-6-90. It should be noted that monitoring points to the south and west of the MSWLF unit are generally upgradient of the Landfill.

2.5 FIGURE 5 – COBALT CONCENTRATION MAP

A groundwater concentration map for SSL parameter cobalt is included as Figure 5. Cobalt is generally defined around SSL monitoring well MW-7-93. Cobalt was newly detected at an SSL in monitoring wells MW-4-90, MW-4-93, MW-37, and PZ-10 during the 2022 reporting period following an update to the site specific GWPS for cobalt. The request by Evora Consulting to amend the corrective action monitoring plan (CAMP) submitted in the 2022 Spring Sampling Notification to install four new monitoring wells and utilize one current bracketing monitoring well as attenuation zone point of compliance (AZPOC) wells was approved by the DNR on June 8, 2023 (Doc #106948). Installation of the AZPOC wells began in October 2024 and was completed in January 2025.

2.6 FIGURE 6 – ALPHA-BHC CONCENTRATION MAP

A groundwater concentration map for SSL parameter alpha-BHC is included in Figure 6. Alpha-BHC was first measured as an SSL during the 2nd 2021 semi-annual statistical evaluation. Alpha-BHC concentrations in monitoring well MW-39R are bracketed to the north by the Landfill, to the east by monitoring well MW-7-90R, to the west by monitoring well MW-4-90, and to the south by monitoring well MW-5-90. The alpha-BHC concentrations measured in monitoring well MW-39R have been below the prediction limit in the four most recent samples, indicating a potential improvement in groundwater quality near monitoring well MW-39R.

3.0 STANDARDS HISTORY GRAPHS

Standards history graphs are included in **Appendix G**. It should be noted that monitoring points GW-Lagoon-C1W and PZ-11 are analyzed using intrawell prediction limit analysis; however, data obtained prior to 2018 or prior to the implementation of low-flow sampling, respectively, was removed from the dataset due to potentially elevated total suspended solids (TSS) concentrations likely impacting the inorganic concentrations. Intrawell prediction limits will be completed once representative datasets are obtained. Standards history graphs for the following parameters are included:

Interwell – background monitoring points MW-4-89 and MW-41:

- Arsenic
- Barium
- Cadmium
- Chromium
- Cobalt
- Copper
- Lead
- Nickel
- Silver
- Vanadium
- Zinc

The prediction limits were below the SWS in all instances. It should be noted that background was updated prior to the 2nd 2021 semi-annual statistical evaluation. Data obtained prior to the implementation of low-flow sampling during the 2nd 2015 semi-annual sampling event was removed from the background dataset due to the effect that elevated TSS concentrations could have on inorganic concentrations. Previous background prediction limit values were removed as site-specific GWPSs and the historical data was removed from the standard history graphs.

4.0 QA/QC SUMMARY

The quality assurance/quality control (QA/QC) program for the Landfill 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 was 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. A summary of the laboratory QA/QC and data validation can be found in **Appendices B-1**, Laboratory Data, and **B-2**, Data Validation, respectively. The QA/QC review indicated that the data was acceptable.

5.0 DATA EVALUATION AND SUMMARY

Assessment/corrective action monitoring statistical evaluation in accordance with the requirements of IAC 567-113.10(6) were conducted for the groundwater analytical data collected during the 2024 reporting period sampling events. The statistical evaluation methodology for samples collected during this reporting period are located in **Appendix D**, Statistical Method and Output, of this report.

The HMSP monitoring network at the Landfill consists of eighteen monitoring points, with background wells MW-4-89, located southwest of the Landfill, and MW-41, located northeast of the Landfill. Compliance monitoring points are located on the downgradient sides of the Landfill. The range of measured concentrations for the detected constituents during this reporting period is shown in **Figure 3**, Reporting Period Detection Summary.

5.1 DATA EVALUATION

GWPS exceedances at SSLs have occurred in monitoring wells southwest, west, and east of the Landfill. Site-wide maximum metals concentrations were measured in monitoring points MW7-90R, MW4-93, and PZ-10 – see Figure 3. Elevated total suspended solids may have influenced the number of maximum metals concentrations measured in monitoring well PZ-10.

Site-wide maximum volatile organic compound (VOC) concentrations were measured in multiple monitoring wells to the east, west, and south of the Landfill – see Figure 3. Monitoring well MW-39R had the highest number of site-wide maximum VOC concentrations during the 2024 reporting period.

5.2 TRENDING IN ASSESSMENT/CORRECTIVE ACTION MONITORING WELLS

Statistically significant trend analysis was completed for monitoring well/constituent pairs by Mann-Kendall analysis during this reporting period. The trend analyses are included Attachments A and B, 1st and 2nd 2024 statistical outputs of **Appendix D**, respectively. The statistically significant trends were as follows:

Monitoring Point	Constituent	Trend
1st 2024 Semi-Annual		
MW-37	Vinyl Chloride	Decreasing
MW-38	Selenium	Increasing
2nd 2024 Semi-Annual		
MW-37	cis-1,2-Dichloroethene	Increasing
MW-37	Vinyl Chloride	Decreasing
MW-38	Selenium	Increasing

5.3 CORRECTIVE ACTION GROUNDWATER MONITORING PROGRAM REMEDY DISCUSSION

An Assessment of Corrective Measures (ACM) Report was submitted on July 18, 2018 (Doc #92776) and approved in permit correspondence dated September 21, 2020 (Doc #98498). The selected remedy to address the groundwater impact at the Landfill was source control by leachate extraction coupled with monitored natural attenuation (MNA) as selected in correspondence dated May 23,

2019 (Doc #95270) and approved in the permit revision dated June 3, 2019 (Doc #95295). The selected remedy of leachate extraction is comprehensive to the Landfill, in that the natural flow of groundwater at the Landfill is convergent to the northeast as shown in the original ravines map included as **Figure 2-2** in the ACM report (Doc #92776). Leachate extraction pumps are distributed throughout the unlined portions of the MSWLF unit, including one pump in the City/County area. The City/County area also includes a toe drain along the outside perimeter that collects leachate. Cell 1W on the west side of the MSWLF unit is a clay-lined C&D cell with a leachate collection system installed on the abutment and base of the cell. The groundwater underdrain beneath Cell 1W was shutoff based on a risk analysis previously approved by the DNR. Cells 1 and 2 are Subtitle D equivalent cells lined with clay and include a leachate collection system. The groundwater underdrain system for Cell 1 is connected to the leachate collection system of Cell 2. The groundwater underdrain for Cell 2 was shutoff as part of the Cell 5 construction as the Cell 5 groundwater underdrain was designed and approved by the DNR to intercept groundwater from Cell 2. Cells 3 through 5 are Subtitle D, FML-lined cells with groundwater underdrains. The underdrains below Cells 3 and 4 are treated with the leachate. In addition, toe drains in the unlined area and upgradient from Cells 3 and 4 intercept leachate.

As described in the 2022 SSN (Doc #103436), the current remedy in place is applicable for the five ongoing SSLs for cobalt that were measured in monitoring wells MW-37, MW-4-90, MW-4-93, MW-7- and PZ-10 during this reporting period. The request to amend the CAMP to include the proposed AZPOC wells as submitted in the 2022 SSN and shown in the table below was approved by the DNR on June 8, 2023 (Doc #106948). AZPOC well installation began in October 2024 and was completed in January 2025. AZPOC wells MW-45 and MW-46 did not produce sufficient water during well development that occurred in December 2024 and were subsequently abandoned and replaced with AZPOC wells MW-45R and MW-46R in January 2025.

AZPOC Wells

AZPOC Well	Corrective Action Well
MW-5-90	MW-39R
MW-45R*	MW-7-93
	MW-37
MW-46R*	MW-4-93
MW-47*	MW-4-90
MW-48*	PZ-10
MW-49*	MW-7-90R

*Indicates installed new well.

6.0 RECOMMENDATIONS

6.1 SITE IMPACT ON GROUNDWATER

- Groundwater impact for arsenic is present around corrective action monitoring well MW-7-90R. Monitoring well MW-49 was installed as an AZPOC monitoring well northeast of monitoring well MW-7-90R.
- Groundwater impact for cobalt is present around corrective action monitoring wells MW-37, MW-4-90, MW-4-93, MW-7-93, and PZ-10. Monitoring wells MW-45R, MW-46R, MW-47, and MW-48 were installed as AZPOC monitoring wells for compliance monitoring for these locations.
- Groundwater impact for alpha-BHC is present around corrective action monitoring well MW-39R. Current bracketing monitoring well MW-5-90, located south of MW-39R, is utilized as an AZPOC monitoring well.

6.2 PROPOSED MONITORING

Anticipated groundwater sampling for the 2025 reporting period is shown in Table 2.

6.3 PROPOSED MONITORING WELL CHANGES

No changes to the monitoring wells are recommended at this time.

Tables

Table 1
Monitoring Program Summary
2024 Annual Water Quality Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Monitoring Well	Formation[1]	Current Monitoring Program	Change for Next Sampling Event	SSIs	SSLs	Total Number of Samples in Each Monitoring Program		
						Detection Inorganic/Organic	Assessment Inorganic/Organic	Corrective Action Inorganic/Organic
MW-4-89	sandy clay	Background	No Change	Not Applicable	Not Applicable	20/36		
MW-1-99	sandy clayey silt	Assessment	No Change	Cobalt	None		20/37	
MW-2-93	silty sandy clay	Assessment	No Change	Barium, 1,1-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene	None		12/30	
MW-43[2]	silty clay, sandy clay	Corrective Action	No Change	Arsenic, Barium, Cobalt, Nickel, Acetone	Arsenic[2]			9/8
MW-38	sandy clay, silty clay, sandy silty clay, sand	Assessment	No Change	Barium	None		12/29	
MW-40R	sandy clay	Detection	No Change	None	Not Applicable	19/19		
MW-41	silty clay, sand	Background, Supplemental	No Change	None (IG - Not Sampled)	Not Applicable	3/9		
PZ-11	sandy silty clay, sand	Detection, Supplemental	No Change	Not Applicable (BG Set 2024AWQR)	Not Applicable	9/21		
GW-Lagoon-00	NA	Detection	No Change	Not Applicable (Insufficient sampling events)	Not Applicable	8/7		
GW-Lagoon-Cell 1W	NA	Detection	No Change	None	Not Applicable	11/16		
MW5-90	silty clay	Corrective Action (AZPOC)	No Change	None	Alpha-BHC			
MW-45R	lean clay with sand, trace gravel	Corrective Action (AZPOC)	No Change	None	Cobalt			
MW-46R	glacial till	Corrective Action (AZPOC)	No Change	None	Cobalt			
MW-47	sandy lean to fat clay, trace gravel	Corrective Action (AZPOC)	No Change	None	Cobalt			
MW-48	sandy lean clay, trace gravel	Corrective Action (AZPOC)	No Change	None	Cobalt			
MW-49	sandy lean clay, trace gravel, trace silt	Corrective Action (AZPOC)	No Change	None	Arsenic			
Source Wells								
MW-4-90	silty clay	Corrective Action	No Change	Arsenic, Cobalt, Toluene	Transferred to AZPOC Well MW-47			15/29
MW-4-93	silty sandy clay	Corrective Action	No Change	Arsenic, Cobalt, Nickel, Vanadium, 1,1-Dichloroethane, 1,4-Dichlorobenzene, Chlorobenzene	Transferred to AZPOC Well MW-46R			20/39
MW-7-90R	silty clay	Corrective Action	No Change	Arsenic, Barium	Transferred to AZPOC Well MW-49			13/28
MW-7-93	silty sand	Corrective Action	No Change	Cobalt, Nickel	Transferred to AZPOC Well MW-45R			20/37
MW-37	silty clay	Corrective Action	No Change	Arsenic, Cobalt, Nickel, 1,1-Dichloroethane, 1,1-Dichloroethene, Benzene, Chlorobenzene, Chloroethane, cis-1,2-Dichloroethene	Transferred to AZPOC Well MW-45R		20/34	
MW-39R	silty clay, sandy clay	Corrective Action	No Change	Barium, Cobalt, Nickel, 1,1-Dichloroethane, Benzene, cis-1,2-Dichloroethene, Tetrachloroethene, Trichloroethene, Vinyl Chloride, Dichlorodifluoromethane	Transferred to AZPOC Well MW-5-90			17/17
PZ-10	NA	Corrective Action	No Change	Arsenic, Barium, Cobalt, Copper, Lead, Nickel, Vanadium, 1,4-Dichlorobenzene, Benzene, Chlorobenzene	Transferred to AZPOC Well MW-48			15/27
Other Monitoring Points								
MW3-98	sandy silty clay, clay, bedrock	Supplemental						
MW6-90	sandy silty clay	CAMP						
MW6-93	NA	CAMP						
MW8-90R	sandy clayey silt, silty sand, silty sandy clay	Supplemental						
MW-44	silty clay	CAMP						

Notes:
[1] Obtained from screened interval in boring logs and/or cross-sections.
[2] Monitoring well MW-43 replaced corrective action monitoring well MW-9-90 in the HMSP as approved in permit correspondence dated March 18, 2021 (Doc #99998).

AZPOC - Attenuation Zone Point of Compliance
CAMP - Corrective Action Monitoring Plan.
IG - Inward Gradient.
NA - Not Available.
SSI - Statistically Significant Increase above background.
SSL - Statistically Significant Level above a groundwater protection standard.

Table 2
Monitoring Program Implementation Schedule
2024 Annual Water Quality Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Monitoring Well	Recent Sampling Dates and Constituents		Upcoming Sampling Dates and Constituents		Full Appendix II Sample Dates	
	June 2024	November 2024	1st 2025 Semi-Annual	2nd 2025 Semi-Annual	Previously Collected	Next Event
MW-4-89	Metals List A, Appendix I VOCs, Alpha-BHC, TSS	Metals List A, Appendix I VOCs, Alpha-BHC, TSS	Metals List A, Appendix I VOCs, Alpha-BHC, TSS	Metals List A, Appendix I VOCs, Alpha-BHC, TSS	NA	NA
MW-1-99	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	7/2011, 8/2012, 8/2017, and 8/2022	2027
MW-2-93*	Metals List C, Appendix I VOCs, TSS	-	-	Metals List C, Appendix I VOCs, TSS	8/2009, 10/2010, 10/2011, 3/2017, 3/2022, and 11/2023	2028
MW-43	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	8/2009, 10/2010, 10/2011, 3/2017, and 3/2022	2027
MW-38*	Metals List C, Appendix I VOCs, TSS	-	-	Metals List C, Appendix I VOCs, TSS	8/2012, 10/2013, 5/2018, and 11/2023	2028
MW-40R	Metals List A, Appendix I VOCs, Alpha-BHC, TSS	Metals List A, Appendix I VOCs, Alpha-BHC, TSS	Metals List A, Appendix I VOCs, Alpha-BHC, TSS	Metals List A, Appendix I VOCs, Alpha-BHC, TSS	NA	NA
MW-41	No Sample (IG)	No Sample (IG)	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	NA	NA
PZ-11	No Sample (IG)	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	NA	NA
GW-Lagoon-00	Metals List A, Appendix I VOCs, TSS	No Sample (Not Located)	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	NA	NA
GW-Lagoon-Cell 1W	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	NA	NA
MW5-90	Arsenic, Alpha-BHC, TSS	Arsenic, Alpha-BHC, TSS	Appendix I, Alpha-BHC, TSS	Appendix I, Alpha-BHC, TSS	NA	NA
MW-45R	NI	NI	Appendix I, TSS	Appendix I, TSS	NA	NA
MW-46R	NI	NI	Appendix I, TSS	Appendix I, TSS	NA	NA
MW-47	NI	NI	Appendix I, TSS	Appendix I, TSS	NA	NA
MW-48	NI	NI	Appendix I, TSS	Appendix I, TSS	NA	NA
MW-49	NI	NI	Appendix I, TSS	Appendix I, TSS	NA	NA
Source Wells						
MW-4-90*	Appendix I, Endosulfan Sulfate, Alpha-BHC, TSS	Alpha-BHC, Endosulfan Sulfate	-	Appendix I, Endosulfan Sulfate, Alpha-BHC, TSS	4/2010, 10/2011, 9/2016, and 4/2021	NA
MW-4-93	Metals List A, Appendix I VOCs, 2,4-D [2C], 3/4-Methylphenol, Endrin Aldehyde, 4,4`-DDT, Methoxychlor, Phenol, Sulfide, TSS	Metals List A, Appendix I VOCs, 2,4-D [2C], 3/4-Methylphenol, Endrin Aldehyde, 4,4`-DDT, Methoxychlor, Phenol, Sulfide, TSS	Metals List A, Appendix I VOCs, 2,4-D [2C], 3/4-Methylphenol, Endrin Aldehyde, 4,4`-DDT, Methoxychlor, Phenol, Sulfide, TSS	Metals List A, Appendix I VOCs, 2,4-D [2C], 3/4-Methylphenol, Endrin Aldehyde, 4,4`-DDT, Methoxychlor, Phenol, Sulfide, TSS	8/2009, 10/2010, 10/2011, 9/2016, and 7/2021	NA
MW-7-90R*	Metals List C, Appendix I VOCs, TSS	-	-	Metals List C, Appendix I VOCs, TSS	7/2011, 8/2012, 8/2017, 3/2022, and 11/2023	NA
MW-7-93	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	8/2009, 12/2010, 10/2011, 9/2016, and 7/2021	NA
MW-37	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	3/2011, 4/2012, 8/2017, and 8/2022	NA
MW-39R	Metals List A, Appendix I VOCs, Alpha-BHC, Tetrachloroethene, TSS	Metals List A, Appendix I VOCs, 2,4,5-TP[Silvex][2C], Alpha-BHC, Dichlorodifluoromethane, TSS	Metals List A, Appendix I VOCs, 2,4,5-TP[Silvex][2C], Alpha-BHC, Dichlorodifluoromethane, TSS	Metals List A, Appendix I VOCs, 2,4,5-TP[Silvex][2C], Alpha-BHC, Dichlorodifluoromethane, TSS	5/2017, 5/2018, and 11/2023	NA
PZ-10	Appendix II, TSS	No Sample (Insufficient Water)	Metals List A, Appendix I VOCs, TSS	Metals List A, Appendix I VOCs, TSS	8/2012, 10/2013, 9/2018, 6/2024	NA
CAMP Monitoring Points						
MW-6-90	Arsenic, TSS	-	-	Arsenic, TSS	NA	NA
MW-6-93	Arsenic, TSS	-	-	Arsenic, TSS	NA	NA
MW-44	Arsenic, TSS	-	-	Arsenic, TSS	NA	NA

Notes:

Metals List A: arsenic, barium, chromium, cobalt, copper, lead, nickel, selenium, vanadium, and zinc.

Metals List B: arsenic, barium, cobalt, nickel, and zinc.

Metals List C: arsenic, barium, nickel, and zinc.

* - Monitoring well is sampled annually in accordance with the Groundwater Monitoring Optimization Report approved on September 21, 2020 (Doc #98499).

NA - Not Applicable.

NI - Not Installed.

TSS - Total Suspended Solids.

IG - Inward Gradient.

Table 3
Monitoring Well Maintenance and Performance Re-Evaluation Schedule
2024 Annual Water Quality Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Compliance with:	2022	2023	2024	2025
567 IAC 113.10(2)"f"(1) high and low water levels	Completed	Completed	Included[2]	Scheduled
567 IAC 113.10(2)"f"(2) changes in the hydrologic setting and flow paths	Completed	Completed	Included[1]	Scheduled
567 IAC 113.10(2)"f"(3) well depths	Completed	Completed	Included[2]	Scheduled
567 IAC 113.10(2)"f"(4) well recharge rates and chemistry	Completed		Included[2]	
Waste separation from ground water 113.6(2)"l"	Completed	Completed	Included[2]	Scheduled

Notes:

[1] See Section 2.2 of this report.

[2] See Table 4.

Comments:

None.

Table 4
Monitoring Well Maintenance and Performance Summary
2024 Annual Water Quality Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Well	Top of Casing	Top of Screen	Total Depth		Date of Measurements		Maximum Depth	Initial Flow Rate	Recent Flow Rate (L/min)	
					6/11/2024	11/19/2024	Discrepancy (ft)	(L/min)	Date	% Change
MW-4-89	702.25	686.35	26.1	Groundwater Level (ft)	7.35	11.29	-0.6	0.125 07/2015	0.117 11/2024	-6%
				Groundwater Elevation (Ft MSL)	694.90	690.96				
				Measured Well Depth (ft)	26.5	26.7				
				Submerged screen	Y	Y				
MW-1-99	641.29	630.89	20.4	Groundwater Level (ft)	10.14	12.06	-0.1	0.150 07/2015	0.127 11/2024	-15%
				Groundwater Elevation (Ft MSL)	631.15	629.23				
				Measured Well Depth (ft)	20.5	20.4				
				Submerged screen	Y	N				
MW-2-93	690.54	671.04	29.5	Groundwater Level (ft)	12.38	15.79	-0.8	0.120 07/2015	0.183 06/2024	53%
				Groundwater Elevation (Ft MSL)	678.16	674.75				
				Measured Well Depth (ft)	30.4	30.4				
				Submerged screen	Y	Y				
MW-4-90	700.15	692.35	17.8	Groundwater Level (ft)	10.36	13.43	-0.8	0.150 07/2015	0.117 11/2024	-22%
				Groundwater Elevation (Ft MSL)	689.79	686.72				
				Measured Well Depth (ft)	18.5	18.5				
				Submerged screen	N	N				
MW-4-93	660.88	629.98	40.9	Groundwater Level (ft)	25.11	27.24	2.0	0.225 07/2015	0.213 05/2023	-5%
				Groundwater Elevation (Ft MSL)	635.77	633.64				
				Measured Well Depth (ft)	38.9	38.9				
				Submerged screen	Y	Y				
MW-7-90R	699.41	694.91	14.5	Groundwater Level (ft)	5.98	6.37	0.2	0.250 07/2015	0.233 06/2024	-7%
				Groundwater Elevation (Ft MSL)	693.43	693.04				
				Measured Well Depth (ft)	14.3	14.3				
				Submerged screen	N	N				
MW-7-93	618.33	608.93	19.4	Groundwater Level (ft)	5.32	3.68	-0.5	0.300 07/2015	0.183 11/2024	-39%
				Groundwater Elevation (Ft MSL)	613.01	614.65				
				Measured Well Depth (ft)	19.9	19.9				
				Submerged screen	Y	Y				
MW-37	627.15	614.35	32.8	Groundwater Level (ft)	11.42	11.11	0.6	0.300 07/2015	0.142 11/2024	-53%
				Groundwater Elevation (Ft MSL)	615.73	616.04				
				Measured Well Depth (ft)	32.9	32.2				
				Submerged screen	Y	Y				
MW-38	700.48	677.68	37.8	Groundwater Level (ft)	8.01	9.42	-0.8	0.120 07/2015	0.150 06/2024	25%
				Groundwater Elevation (Ft MSL)	692.47	691.06				
				Measured Well Depth (ft)	38.6	38.6				
				Submerged screen	Y	Y				
MW-39R	700.24	684.93	25.3	Groundwater Level (ft)	4.75	4.22	-0.9	0.200 01/2017	0.158 11/2024	-21%
				Groundwater Elevation (Ft MSL)	695.49	696.02				
				Measured Well Depth (ft)	26.2	26.1				
				Submerged screen	Y	Y				
MW-40R	700.42	692.6	17.8	Groundwater Level (ft)	6.72	7.09	-0.3	0.100 01/2017	0.147 11/2024	47%
				Groundwater Elevation (Ft MSL)	693.70	693.33				
				Measured Well Depth (ft)	18.0	18.1				
				Submerged screen	Y	Y				
MW-43	606.67	599.07	17.6	Groundwater Level (ft)	5.15	5.25	-0.3	0.100 01/2017	0.192 11/2024	92%
				Groundwater Elevation (Ft MSL)	601.52	601.42				
				Measured Well Depth (ft)	17.9	17.9				
				Submerged screen	Y	Y				
PZ-10	700.06	689.36	20.7	Groundwater Level (ft)	11.59	15.14	2.8	0.300 07/2015	0.108 06/2024	-64%
				Groundwater Elevation (Ft MSL)	688.47	684.92				
				Measured Well Depth (ft)	17.9	17.9				
				Submerged screen	N	N				
MW-41	620.72	608.02	27.7	Groundwater Level (ft)	7.25	9.30	-0.3	0.175 03/2017	0.167 11/2023	-5%
				Groundwater Elevation (Ft MSL)	613.47	611.42				
				Measured Well Depth (ft)	28.0	28.0				
				Submerged screen	Y	Y				
PZ-11	701.03	688.03	23.0	Groundwater Level (ft)	13.44	17.46	-0.1	0.175 03/2017	0.125 11/2024	-29%
				Groundwater Elevation (Ft MSL)	687.59	683.57				
				Measured Well Depth (ft)	23.1	23.1				
				Submerged screen	N	N				

Comments:

1) Measured well depths were within 2.0 feet of the installed depth with the following exception:
   PZ-10: PZ-10 has historically measured 1.0-3.0 feet shallower than installation depth since 2010; therefore, it does not appear that siltation is adversely impacting the ability of the monitoring well to consistently produce samples.

Groundwater Underdrain Piezometer

Well		Date of Measurements	
		6/11/2024	11/19/2024
GWP-1	Bottom of waste (feet MSL)	608.72	
	Groundwater Elevation (feet MSL)	609.03	608.98
	Separation distance (feet)	0.00	0.00

Comments:

1) The sump pump in the groundwater underdrain was malfunctioning during the 2024 reporting period. Subsequent repairs have been completed and the pump is operational.

Table 5
Background and GWPS Summary
2024 Annual Water Quality Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Interwell Background/GWPS (MW-4-89 and MW-41)

Constituent	Units	Samples	Detections	Min	Max	Mean	Background level	Statistical Test	GWPS	Source
Antimony (Sb)	mg/L	11	0	0.0005 (1/2 RL)	0.0015 (1/2 RL)	0.00059	< 0.003	DQR	0.006	MCL
Arsenic (As)	mg/L	21	3	0.000662*	0.00210	0.00102	0.0021	PL (NP)	0.01	MCL
Barium (Ba)	mg/L	21	21	0.0151	0.1970	0.08218	0.197	PL (NP)	2	MCL
Beryllium (Be)	mg/L	11	0	0.0005 (1/2 RL)	0.0005 (1/2 RL)	0.00050	< 0.001	DQR	0.004	MCL
Cadmium (Cd)	mg/L	11	5	0.000065*	0.000433*	0.00021	0.000433	PL (NP)	0.005	MCL
Chromium (Cr)	mg/L	21	2	0.0012*	0.00395*	0.00251	0.00395	PL (NP)	0.1	MCL
Cobalt (Co)	mg/L	19	5	0.000106*	0.000761	0.00030	0.000761	PL (NP)	0.004646	SSS
Copper (Cu)	mg/L	21	2	0.001 (1/2 RL)	0.0025 (1/2 RL)	0.00229	0.0025	PL (NP)	1.3	MCL
Lead (Pb)	mg/L	21	4	0.000097*	0.000415*	0.00025	0.000415	PL (NP)	0.015	MCL
Nickel (Ni)	mg/L	21	5	0.000706*	0.00423*	0.00240	0.00423	PL (NP)	0.1	SWS
Selenium (Se)	mg/L	21	0	0.00125 (1/2 RL)	0.0025 (1/2 RL)	0.00244	< 0.005	DQR	0.05	MCL
Silver (Ag)	mg/L	11	2	0.000089*	0.0005 (1/2 RL)	0.00043	0.0005	PL (NP)	0.1	SWS
Thallium (Tl)	mg/L	11	0	0.0005 (1/2 RL)	0.001 (1/2 RL)	0.00055	< 0.002	DQR	0.002	MCL
Vanadium (V)	mg/L	21	1	0.000323*	0.0025 (1/2 RL)	0.00240	0.0025	PL (NP)	0.035	SWS
Zinc (Zn)	mg/L	21	3	0.005 (1/2 RL)	0.0635	0.01181	0.0635	PL (NP)	2	SWS

Intrawell Background/GWPS (GW-Lagoon-Cell 1W)

Constituent	Units	Samples	Detections	Min	Max	Mean	Background level	Statistical Test	GWPS	Source
Inorganics										
Arsenic (As)	mg/L	8	5	0.00078*	0.00463	0.00181	0.007849	PL (P)	0.01	MCL
Barium (Ba)	mg/L	8	8	0.1	0.1910	0.13338	0.2418	PL (P)	2	MCL
Chromium (Cr)	mg/L	8	0	0.0025 (1/2 RL)	0.0025 (1/2 RL)	0.00250	< 0.005	DQR	0.1	MCL
Cobalt (Co)	mg/L	6	6	0.000286*	0.002100	0.00141	0.004924	PL (P)	0.004924	SSS
Copper (Cu)	mg/L	8	2	0.00221*	0.343	0.04503	0.343	PL (NP)	1.3	MCL
Lead (Pb)	mg/L	8	1	0.00025 (1/2 RL)	0.0887	0.01131	0.0887	PL (NP)	0.0887	SSS
Nickel (Ni)	mg/L	8	8	0.00349*	0.00954	0.00561	0.01287	PL (P)	0.1	SWS
Selenium (Se)	mg/L	8	4	0.00123*	0.00271*	0.00221	0.003798	PL (P)	0.05	MCL
Vanadium (V)	mg/L	8	2	0.000882*	0.00344*	0.00242	0.00344	PL (NP)	0.035	SWS
Zinc (Zn)	mg/L	8	1	0.01 (1/2 RL)	0.834	0.11300	0.834	PL (NP)	2	SWS

Intrawell Background/GWPS (PZ-11)

Constituent	Units	Samples	Detections	Min	Max	Mean	Background level	Statistical Test	GWPS	Source
Inorganics										
Arsenic (As)	mg/L	8	7	0.001 (1/2 RL)	0.00503	0.00289	0.008174	PL (P)	0.01	MCL
Barium (Ba)	mg/L	8	8	0.074	0.1860	0.12074	0.2634	PL (P)	2	MCL
Chromium (Cr)	mg/L	8	1	0.0025 (1/2 RL)	0.00376*	0.00266	0.00376	PL (NP)	0.1	MCL
Cobalt (Co)	mg/L	7	7	0.000504	0.003480	0.00237	0.007221	PL (P)	0.007221	SSS
Copper (Cu)	mg/L	8	1	0.00177*	0.0025 (1/2 RL)	0.00241	0.0025	PL (NP)	1.3	MCL
Lead (Pb)	mg/L	8	6	0.00025 (1/2 RL)	0.00126	0.00056	0.001619	PL (P)	0.015	MCL
Nickel (Ni)	mg/L	8	7	0.0025 (1/2 RL)	0.00495	0.00355	0.00624	PL (P)	0.1	SWS
Selenium (Se)	mg/L	8	0	0.00125 (1/2 RL)	0.0025 (1/2 RL)	0.00234	< 0.005	DQR	0.05	MCL
Vanadium (V)	mg/L	8	2	0.00114*	0.00363*	0.00247	0.00363	PL (NP)	0.035	SWS
Zinc (Zn)	mg/L	8	0	0.01 (1/2 RL)	0.01 (1/2 RL)	0.01000	< 0.02	DQR	2	SWS

Notes:

1) Background levels based on calculated prediction limits or reporting limit, as applicable.
2) A site-specific GWPS of 0.004646 mg/L for cobalt was calculated using only samples collected using low-flow sampling methods. The updated site-specific GWPS determination was included with the 2022 spring sampling notification (SSN) submitted June 16, 2022 (Doc #103436).

* - J flag - Concentration is below the reporting limit but above the method detection limit. The concentration is estimated.

Acronyms/Abbreviations:

RL = Reporting Limit
GWPS = Groundwater Protection Standard
DQR = Double Quantification Rule
SSS = Site-Specific GWPS
SWS = Statewide Standard
PL = Prediction Limit
MCL = EPA Maximum Contaminant Level
NP = Non-Parametric
P = Parametric

Comments:

1) **Water quality results and effectiveness of the statistical data evaluation criteria:** Statistical analyses consist of prediction limits and confidence intervals/confidence bands, as appropriate, and do not use data from the background wells for development of the confidence interval.
2) **Changes to the previous statistical method during reporting period:** There were no changes to the statistical method during the 2024 reporting period.
3) **Re-sampling strategy:** Retesting is performed on a 1-of-2 retesting scheme.
4) **Justification for data exclusion:** Inorganic data obtained prior to the June 2018 event in GW-Lagoon-Cell 1W and prior to the implementation of low-flow sampling in all other HMSP monitoring wells (July 2015) is considered unrepresentative due to the affect that elevated TSS concentrations may have had; this data was removed from statistical consideration.

Table 6
Summary of Well/Detected Constituent Pairs With No Previous SSIs
2024 Annual Water Quality Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Well	Constituent	Units	Most Recent Result	Background Standard
MW-2-93	1,1-Dichloroethene	µg/L	3.13	<2
	cis-1,2-Dichloroethene	µg/L	1.65	<1
MW-4-90	Toluene	µg/L	3.01	<1
MW-4-93	Arsenic	mg/L	0.0068	0.0021
	Vanadium	mg/L	0.0246	0.0025
MW-43	Acetone	µg/L	4.065*	< 10
PZ-10	Copper	mg/L	0.00553	0.0025
	Vanadium	mg/L	0.0095	0.0025

Notes:

1) Criteria for inclusion in this table is a well/constituent pair with a statistically significant increase above background (SSI) during this current reporting period and no SSI in the immediately preceding reporting period. For monitoring well MW-43, no samples were collected in the 2023 reporting period, therefore, the 2022 reporting period statistical findings were used for comparrison.
2) A single exceedance in an assessment monitoring well is recorded above as an SSI. Retesting is not performed as these monitoring wells are not in the detection monitoring program.
3) A single detection of a VOC in the most recent semi-annual sampling event, and not in the immediately preceding reporting period, is recorded above as an SSI. In detection monitoring wells a retest will occur prior to the next regularly scheduled semi-annual sampling event to confirm and/or not confirm the indicated SSI.

*- J Flag - concentration is less than the reporting limit but greater than the method detection limit. The concentration is estimated.

Comments:

1) **Problems with the current detection network:** None.
2) **Schedule to implement remedies:** Not applicable.
3) **Alternative constituent or sample frequency changes:** An alternative constituent and sample frequency change was requested in the Groundwater Monitoring Optimization Report submitted on May 16, 2018 (Doc #98501) and approved in DNR correspondence dated September 21, 2020 (Doc #98499).
4) **Significant changes to calculated prediction limits:** None.
5) **Resampling strategy:** Retesting is performed on a 1-of-2 retesting scheme.

Table 7
Summary of Ongoing and Newly Identified SSIs
2024 Annual Water Quality Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Well	Constituent	Units	Most Recent Result	Background Standard	Lower Confidence Limit	GWPS	Sample Dates		
							Initial Exceedance	Resample(s)	5th background sample
MW-1-99	Cobalt	mg/L	0.00268	0.000761	0.00008563	0.004646	11/14/2023	NA	8/7/2017
MW-2-93	Barium	mg/L	0.204	0.197	0.06685	2	11/14/2023	NA	12/11/2008
	1,1-Dichloroethane	µg/L	6.74	< 1	0.501	140	4/29/2008	NA	12/11/2008
	1,1-Dichloroethene	µg/L	3.13	< 2	1	7	6/11/2024	NA	12/11/2008
	cis-1,2-Dichloroethene	µg/L	1.65	< 1	0.497	70	6/11/2024	NA	12/11/2008
MW-4-90	Arsenic	mg/L	0.00229	0.0021	0.0008314	0.01	11/14/2023	NA	8/7/2017
	Cobalt	mg/L	0.00374	0.000761	0.004557	0.004646	11/14/2023	NA	8/7/2017
	Toluene	µg/L	3.01	< 1	0.5	1000	6/11/2024	NA	6/15/2010
MW-4-93	Arsenic	mg/L	0.0068	0.0021	0.0008195	0.01	6/11/2024	NA	8/7/2017
	Cobalt	mg/L	0.0498	0.000761	0.00405	0.004646	5/25/2023	NA	8/7/2017
	Nickel	mg/L	0.188	0.00423	0.0386	0.1	5/25/2023	NA	8/7/2017
	Vanadium	mg/L	0.0246	0.0025	0.00116	0.035	6/11/2024	NA	8/7/2017
	1,1-Dichloroethane	µg/L	1.1	< 1	0.9217	140	4/29/2008	NA	12/11/2008
	1,4-Dichlorobenzene	µg/L	2.03	< 1	0.9639	75	12/11/2008	NA	12/11/2008
	Chlorobenzene	µg/L	19.7	< 1	19.69	100	2/8/2008	NA	12/11/2008
MW-7-90R	Arsenic	mg/L	0.00886	0.0021	0.006384	0.01	11/14/2023	NA	8/7/2017
	Barium	mg/L	0.659	0.197	0.2393	2	11/14/2023	NA	8/7/2017
MW-7-93	Cobalt	mg/L	0.0127	0.000761	0.007688	0.004646	5/25/2023	NA	8/7/2017
	Nickel	mg/L	0.0663	0.00423	0.05947	0.1	5/25/2023	NA	8/7/2017
MW-43†**	Arsenic	mg/L	0.006055	0.0021	0.003641	0.01	6/11/2024	NA	3/1/2022
	Barium	mg/L	0.623	0.197	0.5038	2	6/11/2024	NA	3/1/2022
	Cobalt	mg/L	0.002175	0.000761	0.001416	0.004646	6/11/2024	NA	3/1/2022
	Nickel	mg/L	0.005515	0.00423	0.004284	0.1	6/11/2024	NA	3/1/2022
	Acetone	µg/L	4.065*	< 10	4.065	6300	6/11/2024	NA	3/1/2022
MW-37	Arsenic	mg/L	0.00219	0.0021	0.001788	0.01	5/25/2023	NA	8/7/2017
	Cobalt	mg/L	0.00265	0.000761	0.004497	0.004646	5/25/2023	NA	5/21/2018
	Nickel	mg/L	0.0422	0.00423	0.04013	0.1	5/25/2023	NA	8/7/2017
	1,1-Dichloroethane	µg/L	58.7	< 1	44.58	140	12/29/2009	NA	10/13/2010
	1,1-Dichloroethene	µg/L	2.8	< 2	2.909	7	12/29/2009	NA	10/13/2010
	Benzene	µg/L	0.466*	< 0.5	0.5419	5	12/29/2009	NA	10/13/2010
	Chlorobenzene	µg/L	1.58	< 1	2.559	100	12/29/2009	NA	10/13/2010
	Chloroethane	µg/L	13.1	< 4	14.09	2800	12/29/2009	NA	10/13/2010
	cis-1,2-Dichloroethene	µg/L	3.22	< 1	TS	70	12/29/2009	NA	10/13/2010

Table 7
Summary of Ongoing and Newly Identified SSIs
2024 Annual Water Quality Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Well	Constituent	Units	Most Recent Result	Background Standard	Lower Confidence Limit	GWPS	Sample Dates		
							Initial Exceedance	Resample(s)	5th background sample
MW-38	Barium	mg/L	0.354	0.197	0.3606	2	11/14/2023	NA	8/7/2027
MW-39R	Barium	mg/L	0.203	0.197	0.1888	2	5/25/2023	NA	8/7/2017
	Cobalt	mg/L	0.00141	0.000761	0.001237	0.004646	5/25/2023	NA	8/7/2017
	Nickel	mg/L	0.0212	0.00423	0.01596	0.1	5/25/2023	NA	8/7/2017
	1,1-Dichloroethane	µg/L	49.9	< 1	38.2	140	1/31/2017	NA	11/28/2017
	Benzene	µg/L	0.953	< 0.5	0.2905	5	1/31/2017	NA	11/28/2017
	cis-1,2-Dichloroethene	µg/L	22.1	< 1	16.27	70	1/31/2017	NA	11/28/2017
	Tetrachloroethene	µg/L	1.27	< 1	0.6725	5	1/31/2017	NA	11/28/2017
	Trichloroethene	µg/L	4.28	< 1	3.718	5	1/31/2017	NA	11/28/2017
	Vinyl Chloride	µg/L	1.67	< 1	0.987	2	8/7/2017	NA	11/28/2017
	Dichlorodifluoromethane	µg/L	20.1	< 3	18.99	1000	5/24/2017	NA	9/25/2018
MW-40R	None								
MW-41	No Samples								
PZ-10	Arsenic	mg/L	0.0542	0.0021	0.002745	0.01	5/25/2023	NA	8/7/2017
	Barium	mg/L	0.396	0.197	0.2708	2	5/25/2023	NA	8/7/2017
	Cobalt	mg/L	0.0353	0.000761	0.01365	0.004646	5/25/2023	NA	8/7/2017
	Copper	mg/L	0.00553	0.0025	0.0025	1.3	6/11/2024	NA	8/7/2017
	Lead	mg/L	0.00394	0.000415	0.00025	0.015	5/25/2023	NA	8/7/2017
	Nickel	mg/L	0.0259	0.00423	0.01275	0.1	5/25/2023	NA	8/7/2017
	Vanadium	mg/L	0.0095	0.0025	0.0025	0.035	6/11/2024	NA	8/7/2017
	1,4-Dichlorobenzene	µg/L	6.26	< 1	6.535	75	8/28/2012	NA	3/15/2011
	Chlorobenzene	µg/L	9.16	< 1	9.321	100	8/28/2012	NA	3/15/2011
PZ-11	No Samples								

Notes:

1) Ongoing SSI is defined as an indicated SSI for a monitoring well/constituent pair in both the previous and current reporting periods. For monitoring well MW-43, no samples were collected in the 2023 reporting period, therefore, the 2022 reporting period statistical findings were used for comparrison.

* - Indicates J Flag; concentration is estimated.

**- Duplicate sample monitoring well during this reporting period, the most recent result concentrations shown are an average of both samples obtained from the monitoring well.

† - Monitoring well MW-43 replaced monitoring well MW-9-90 in the HMSP beginning with the 2021 reporting period as approved in permit correspondence dated March 18, 2021 (Doc #99998) and historical SSIs and SSLs in MW-9-90 apply to MW-43.

NA - Not Applicable; Monitoring well is in assessment or corrective action monitoring and does not require a resample.

TS - Thiel Sen. Due to a statistically significant trend, a lower confidence interval was not calculated.

Comments:

1) **Problems with the current assessment network:** None.
2) **Proposed remedies:** None.
3) **Alternative constituent or sample frequency changes:** An alternative constituent and sample frequency change was requested in the Groundwater Monitoring Optimization Report submitted on May 16, 2018 (Doc #98501) and approved in DNR correspondence dated September 21, 2020 (Doc #98499).
4) **Plume delineation strategies:** See discussion of Figures 4-6 in report.
5) **Property owner notifications:** Not applicable.

Table 8
Summary of Ongoing and Newly Identified SSLs
2024 Annual Water Quality Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Well (AZPOC Well)	Constituent	Units	Most Recent Result	Upper Confidence Limit	GWPS	Initial Exceedance	Upper Confidence Limit Below GWPS					
							1st Year		2nd Year		3rd Year	
MW-37 (MW-45R)	Cobalt	mg/L	NI	NI	0.004646	2022	NA	NA	NA	NA	NA	NA
MW-43*	Arsenic	mg/L	0.00606	0.0021	0.01	2009	NA	NA	NA	NA	NA	NA
MW-4-90 (MW-47)	Cobalt	mg/L	NI	NI	0.004646	2022	NA	NA	NA	NA	NA	NA
MW-4-93 (MW-46R)	Cobalt	mg/L	NI	NI	0.004646	2022	NA	NA	NA	NA	NA	NA
MW-7-90R (MW-49)	Arsenic	mg/L	NI	NI	0.01	2011	NA	NA	NA	NA	NA	NA
MW-7-93 (MW-45R)	Cobalt	mg/L	NI	NI	0.004646	2009	NA	NA	NA	NA	NA	NA
MW-39R (MW-5-90)	Alpha-BHC	µg/L	NI	NI	0.028	2021	NA	NA	NA	NA	NA	NA
PZ-10 (MW-48)	Cobalt	mg/L	NI	NI	0.004646	2022	NA	NA	NA	NA	NA	NA

Notes:

1) The current SSL wells are now considered source wells and the SSLs have been transferred to the associated AZPOC wells as summarized in Section 5.3.

*- Monitoring well MW-43 replaced monitoring well MW-9-90 in the HMSP beginning with the 2021 reporting period as approved in permit correspondence dated March 18, 2021 (Doc #99998). Historical SSIs and SSLs in MW-9-90 apply to MW-43.

NA - Indicates that the constituent-monitoring point dataset has not satisfied the statistical requirements of IAC 567-113.10(9)"e"(2), which is identified by the entire confidence interval or confidence band, as appropriate, being below the GWPS.

NI - Not Installed. AZPOC wells were installed after the 2024 reporting period sampling.

Table 9
Analytical Data Summary
2024 Annual Water Quality Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

The Summary of Groundwater Chemistry - HMSP is located in Appendix C-1.
The Summary of Groundwater Chemistry - CAMP is located in Appendix C-2.

Table 10
Historical SSI and SSL
2024 Annual Water Quality Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Key

SSI

SSL

Well	Constituent	Spring 2019	Fall 2019	Spring 2020	Fall 2020	Spring 2021	Fall 2021	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024
MW-1-99	Cobalt												
	Selenium												
	1,1,1-Trichloroethane												
	1,1-Dichloroethene												
	1,2-Dichloroethane												
	1,2-Dichloropropane												
MW-2-93*	Arsenic				-		-		-	-			-
	Barium				-		-		-	-			-
	1,1-Dichloroethane				-		-		-	-			-
	1,1-Dichloroethene				-		-		-	-			-
	cis-1,2-Dichloroethene				-		-		-	-			-
	Chlorobenzene				-		-		-	-			-
MW-4-90*	Arsenic				-		-		-	-			-
	Cobalt				-		-		-	-			-
	Nickel				-		-		-	-			-
	1,4-Dichlorobenzene				-		-		-	-			-
	Benzene				-		-		-	-			-
	Chlorobenzene				-		-		-	-			-
	Chloroethane				-		-		-	-			-
	Toluene				-		-		-	-			-
	Endosulfan sulfate				-		-		-	-			-
MW-4-93	Arsenic												
	Cobalt								NS				
	Copper												
	Lead												
	Nickel												
	Vanadium												
	1,1-Dichloroethane												
	1,4-Dichlorobenzene												
	Acetone												
	Benzene												
	Chlorobenzene												
	cis-1,2-Dichloroethene												
	2,4-D [2C]												
	3/4-Methylphenol												
	4,4`-DDT												
	Endrin aldehyde												
	Methoxychlor												
	Phenol												
	Sulfide												

Table 10
Historical SSI and SSL
2024 Annual Water Quality Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Key

SSI

SSL

Well	Constituent	Spring 2019	Fall 2019	Spring 2020	Fall 2020	Spring 2021	Fall 2021	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024
MW-7-90R*	Arsenic	SSL	SSL	SSL	-	SSL	-	SSL	-	-	SSL	SSL	-
	Barium				-		-	SSI	-	-	SSI	SSI	-
	Cobalt				-		-	SSI	-	-			-
	Lead				-		-		-	-	SSI		-
	1,1-Dichloroethane				-		-		-	-			-
	1,4-Dichlorobenzene	SSI		SSI	-		-		-	-			-
	Benzene	SSI		SSI	-	SSI	-		-	-			-
	cis-1,2-Dichloroethene				-		-		-	-			-
	Sulfide				-		-		-	-	SSI		-
MW-7-93	Cobalt	SSL	SSL	SSL	SSL	SSL	SSL	SSL	SSL	SSL	SSL	SSL	SSL
	Copper							SSI	SSI				
	Nickel							SSI	SSI	SSI	SSI	SSI	SSI
MW-37	Arsenic							SSI	SSI	SSI	SSI		SSI
	Cobalt							SSL	SSL	SSL	SSL	SSL	SSL
	Nickel							SSI	SSI	SSI	SSI	SSI	SSI
	1,1-Dichloroethane	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI
	1,1-Dichloroethene	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI
	Benzene	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI
	Chlorobenzene	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI
	Chloroethane	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI
	cis-1,2-Dichloroethene	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI
	Trichloroethene			SSI									
	Vinyl Chloride	SSI	SSI	SSI	SSI	SSI	SSI		SSI	SSI			
MW-38*	Barium				-		-	SSI	-	-	SSI	SSI	-
	Selenium				-		-		-	-	SSI		-
MW-39R	Barium							SSI	SSI	SSI	SSI		SSI
	Cobalt							SSI	SSI	SSI	SSI	SSI	SSI
	Lead									SSI			
	Nickel							SSI	SSI	SSI	SSI	SSI	SSI
	1,1-Dichloroethane	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI
	Benzene	SSI	SSI	SSI	SSI				SSI	SSI	SSI	SSI	SSI
	Chloroethane		SSI										
	cis-1,2-Dichloroethene	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI
	Tetrachloroethene		SSI								SSI	SSI	SSI
	Trichloroethene	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI
	Vinyl Chloride	SSI	SSI	SSI	SSI	SSI	SSI		SSI	SSI	SSI	SSI	SSI
	2,4,5-TP[Silvex][2C]										SSI		
	Alpha-BHC	SSI	SSI	SSI	SSI	SSI	SSL	SSL	SSL	SSL	SSL	SSL	SSL
	Dichlorodifluoromethane	SSI		SSI	SSI	SSI	SSI	SSI	SSI	SSI	SSI		SSI

Table 10
Historical SSI and SSL
2024 Annual Water Quality Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Key

SSI

SSL

Well	Constituent	Spring 2019	Fall 2019	Spring 2020	Fall 2020	Spring 2021	Fall 2021	Spring 2022	Fall 2022	Spring 2023	Fall 2023	Spring 2024	Fall 2024
MW-9-90	Arsenic					AB	AB	AB	AB	AB	AB	AB	AB
MW-43	Arsenic									NS	NS		
	Barium									NS	NS		
	Cobalt									NS	NS		
	Nickel									NS	NS		
	Acetone									NS	NS		
PZ-10	Arsenic										NS		NS
	Barium										NS		NS
	Cobalt										NS		NS
	Copper										NS		NS
	Lead										NS		NS
	Nickel										NS		NS
	Vanadium										NS		NS
	1,1-Dichloroethane										NS		NS
	1,4-Dichlorobenzene										NS		NS
	Benzene										NS		NS
	Chlorobenzene										NS		NS
	Chloroethane										NS		NS
	cis-1,2-Dichloroethene										NS		NS
PZ-11	Arsenic									NS	NS	NS	
	Cobalt									NS	NS	NS	
	Lead									NS	NS	NS	
	Acetone									NS	NS	NS	
	Carbon Disulfide									NS	NS	NS	

Notes:

AB: Abandoned; monitoring well MW-9-90 was replaced by monitoring well MW-43 beginning with the 2021 reporting period.

NS: Not Sampled. See Table 2.

* - Monitoring well is sampled annually in accordance with the Groundwater Monitoring Optimization Report approved on September 21, 2020 (Doc #98499).

Comments:

Retesting is not performed in assessment and corrective action monitoring wells as these monitoring wells are not in the detection monitoring program.

Table 11
Corrective Action Trend Analysis
2024 Annual Water Quality Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Well	Current SSL	Trend	Calculated S	Critical S	N	Projected Year to Completion*
MW-37	Cobalt	Decreasing	-18	-21	8	2031
MW-43	Arsenic	Increasing	10	21	8	NA
MW-4-90	Cobalt	Decreasing	-8	-21	8	2030
MW-4-93	Cobalt	Increasing	12	21	8	NA
MW-7-90R	Arsenic	Decreasing	-20	-21	8	2030
MW-7-93	Cobalt	Decreasing	-8	-21	8	2035
MW-39R	Alpha-BHC	Decreasing	-12	-21	8	2032
PZ-10	Cobalt	Increasing	8	21	8	NA

Notes:

N - Number of Samples.

S - Mann-Kendall Statistic.

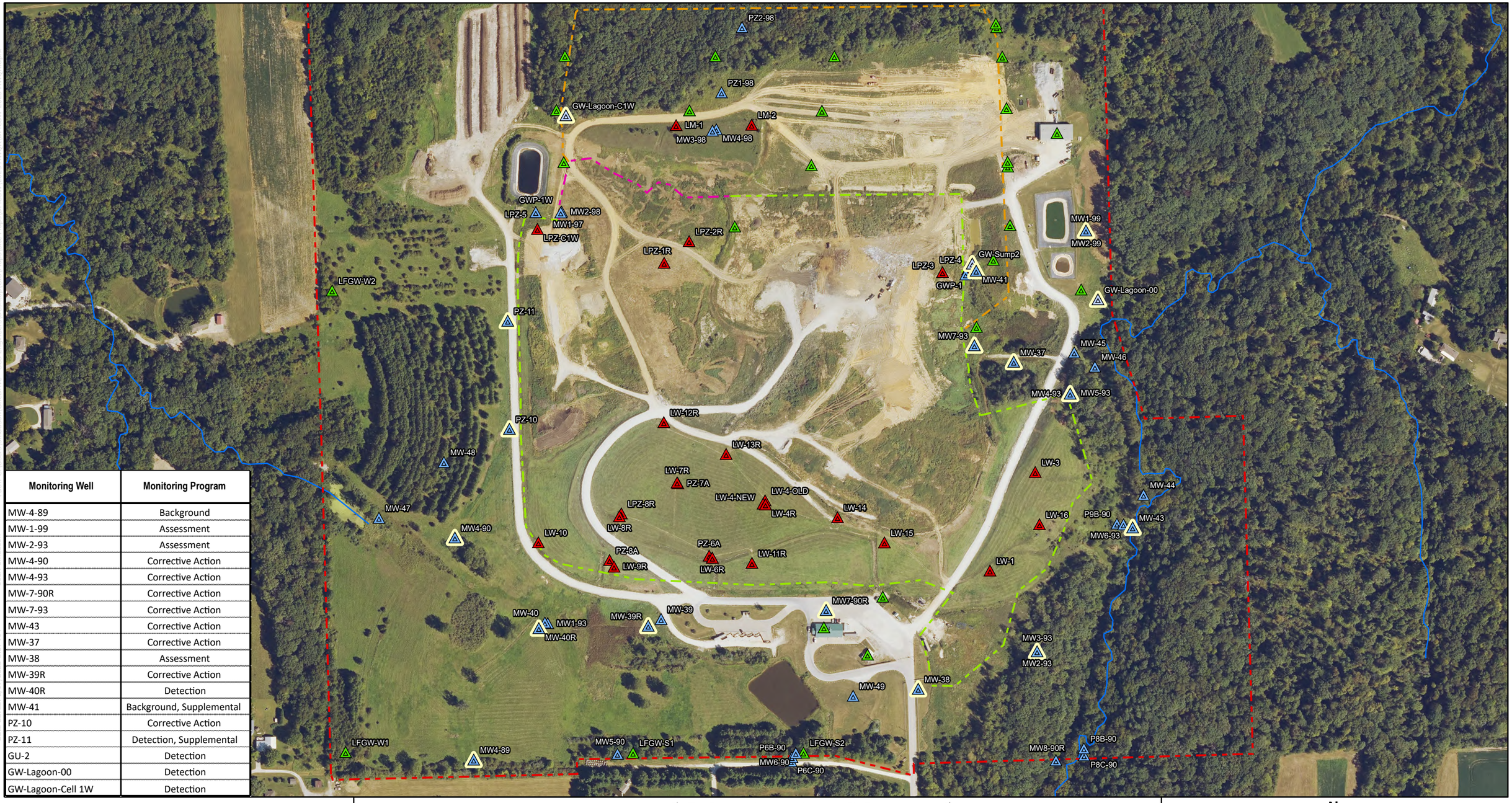
NA - Not Available; projected year to completion unable to be calculated due to increasing or stable trend.

* - To satisfy IAC 113.10(9)"e"; Projected Year to Completion was based on utilizing the Sen's slope calculation to determine when the concentration would be below the GWPS for eight sampling events and remain there for three consecutive years.

Comments:

1) An Assessment of Corrective Measures Report was submitted on July 13, 2018 (Doc #92776) and approved in permit revision dated March 5, 2019 (Doc #94510).

Figures



Monitoring Well	Monitoring Program
MW-4-89	Background
MW-1-99	Assessment
MW-2-93	Assessment
MW-4-90	Corrective Action
MW-4-93	Corrective Action
MW-7-90R	Corrective Action
MW-7-93	Corrective Action
MW-43	Corrective Action
MW-37	Corrective Action
MW-38	Assessment
MW-39R	Corrective Action
MW-40R	Detection
MW-41	Background, Supplemental
PZ-10	Corrective Action
PZ-11	Detection, Supplemental
GU-2	Detection
GW-Lagoon-00	Detection
GW-Lagoon-Cell 1W	Detection

SCS ENGINEERS
environmental consultants and contractors

Approved Monitoring Network

Legend

- HMSP Monitoring Well
- HMSP Groundwater Underdrain
- Monitoring Well
- Groundwater Underdrain
- Leachate Monitoring Point
- Landfill Gas Well
- Future Waste Boundary
- Approximate Waste Boundary
- Located Waste Boundary
- Approximate Property Boundary
- Stream

Des Moines County Regional Sanitary Landfill
West Burlington, Iowa
Project No:27224414.25
Drawing Date: February 2025

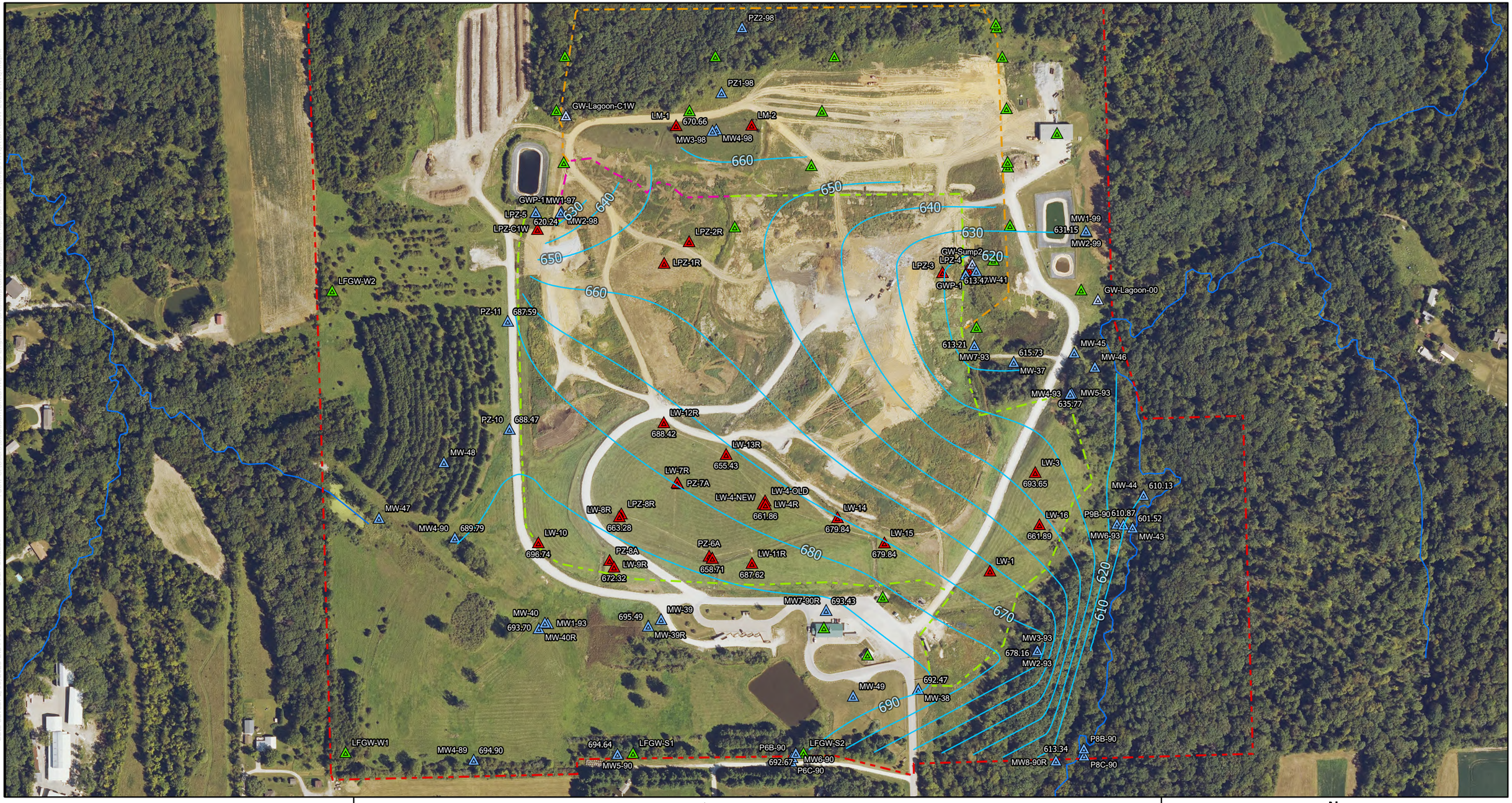
N W E S

0 190 380 760 1,140 Feet

Figure 1

Esri, CGIAR, USGS, Esri, TomTom, Garmin, Foursquare, FAO, METI/NASA, USGS, USDA NAIP, Iowa State University GIS Facility

Path: C:\Users\bmadson\OneDrive - SCS Engineers\Desktop\GIS\Maps\Site Maps\DMCSW 2023 AWOR\DMCSW_2023_AWOR.aprx
User: bmadson
Date Saved: 2/17/2025 8:37 AM



Groundwater Contours

Legend

- Approximate Groundwater Contour Based on Field Measurements Taken June 11-14, 2024
- Monitoring Well
- Groundwater Underdrain
- Leachate Monitoring Point
- Landfill Gas Well
- Future Waste Boundary
- Approximate Waste Boundary
- Located Waste Boundary
- Approximate Property Boundary
- Stream

Des Moines County Regional Sanitary Landfill
West Burlington, Iowa
Project No:27224414.25
Drawing Date: February 2025

N
W E
S

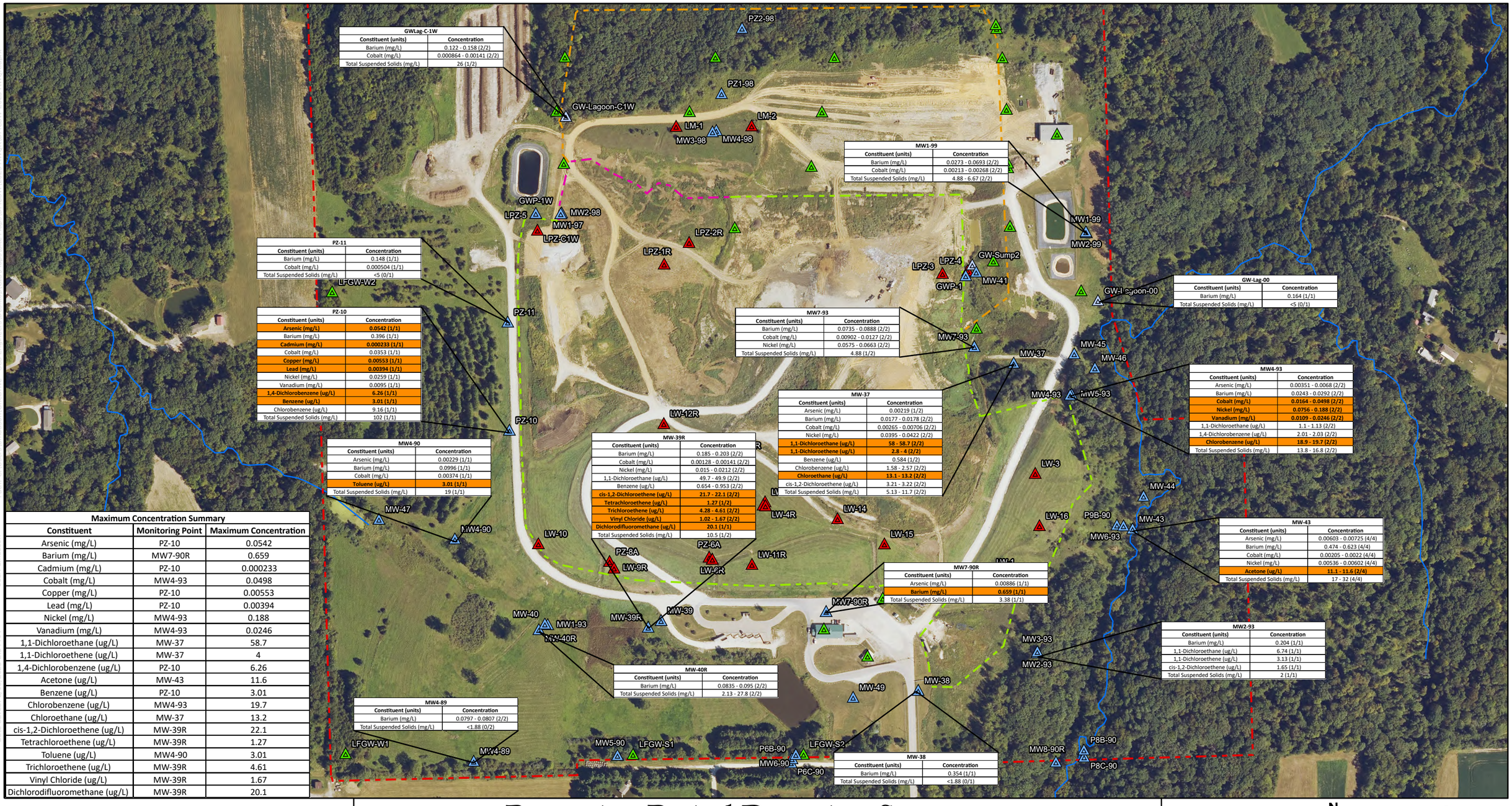
0 190 380 760 1,140 Feet

Figure 2

SCS ENGINEERS
environmental consultants and contractors

Esri, CGIAR, USGS, Esri, TomTom, Garmin, Foursquare, FAO, METI/NASA, USGS, USDA/NAIP, Iowa State University GIS Facility

Path: C:\Users\bmadson\OneDrive - SCS Engineers\Desktop\GIS\Maps\Site Maps\DMCSW 2023 AWOR\DMCSW-2023-AWOR.aprx
User: bmadson
Date Saved: 2/18/2025 2:54 AM



GWLag-C-1W	
Constituent (units)	**Concentration**
Barium (mg/L)	0.122 - 0.158 (2/2)
Cobalt (mg/L)	0.000864 - 0.00141 (2/2)
Total Suspended Solids (mg/L)	26 (1/2)

MW1-99	
Constituent (units)	**Concentration**
Barium (mg/L)	0.0273 - 0.0693 (2/2)
Cobalt (mg/L)	0.00213 - 0.00268 (2/2)
Total Suspended Solids (mg/L)	4.88 - 6.67 (2/2)

PZ-11	
Constituent (units)	**Concentration**
Barium (mg/L)	0.148 (1/1)
Cobalt (mg/L)	0.000504 (1/1)
Total Suspended Solids (mg/L)	<5 (0/1)

PZ-10	
Constituent (units)	**Concentration**
Arsenic (mg/L)	**0.0542 (1/1)**
Barium (mg/L)	0.396 (1/1)
Cadmium (mg/L)	**0.000233 (1/1)**
Cobalt (mg/L)	0.0353 (1/1)
Copper (mg/L)	**0.00553 (1/1)**
Lead (mg/L)	**0.00394 (1/1)**
Nickel (mg/L)	0.0259 (1/1)
Vanadium (mg/L)	0.0095 (1/1)
1,4-Dichlorobenzene (ug/L)	**6.26 (1/1)**
Benzene (ug/L)	**3.01 (1/1)**
Chlorobenzene (ug/L)	9.16 (1/1)
Total Suspended Solids (mg/L)	102 (1/1)

MW7-93	
Constituent (units)	**Concentration**
Barium (mg/L)	0.0735 - 0.0888 (2/2)
Cobalt (mg/L)	0.00902 - 0.0127 (2/2)
Nickel (mg/L)	0.0575 - 0.0663 (2/2)
Total Suspended Solids (mg/L)	4.88 (1/2)

GW-Lag-00	
Constituent (units)	**Concentration**
Barium (mg/L)	0.164 (1/1)
Total Suspended Solids (mg/L)	<5 (0/1)

MW4-93	
Constituent (units)	**Concentration**
Arsenic (mg/L)	0.00351 - 0.0068 (2/2)
Barium (mg/L)	0.0243 - 0.0292 (2/2)
Cobalt (mg/L)	**0.0164 - 0.0498 (2/2)**
Nickel (mg/L)	**0.0756 - 0.188 (2/2)**
Vanadium (mg/L)	**0.0109 - 0.0246 (2/2)**
1,1-Dichloroethane (ug/L)	1.1 - 1.13 (2/2)
1,4-Dichlorobenzene (ug/L)	2.01 - 2.03 (2/2)
Chlorobenzene (ug/L)	**18.9 - 19.7 (2/2)**
Total Suspended Solids (mg/L)	13.8 - 16.8 (2/2)

MW4-90	
Constituent (units)	**Concentration**
Arsenic (mg/L)	0.00229 (1/1)
Barium (mg/L)	0.0996 (1/1)
Cobalt (mg/L)	0.00374 (1/1)
Toluene (ug/L)	**3.01 (1/1)**
Total Suspended Solids (mg/L)	19 (1/1)

MW-39R	
Constituent (units)	**Concentration**
Barium (mg/L)	0.185 - 0.203 (2/2)
Cobalt (mg/L)	0.00128 - 0.00141 (2/2)
Nickel (mg/L)	0.015 - 0.0212 (2/2)
1,1-Dichloroethane (ug/L)	49.7 - 49.9 (2/2)
Benzene (ug/L)	0.654 - 0.953 (2/2)
cis-1,2-Dichloroethene (ug/L)	**21.7 - 22.1 (2/2)**
Tetrachloroethene (ug/L)	**1.27 (1/2)**
Trichloroethene (ug/L)	**4.28 - 4.61 (2/2)**
Vinyl Chloride (ug/L)	**1.02 - 1.67 (2/2)**
Dichlorodifluoromethane (ug/L)	**20.1 (1/1)**
Total Suspended Solids (mg/L)	10.5 (1/2)

MW-37	
Constituent (units)	**Concentration**
Arsenic (mg/L)	0.00219 (1/2)
Barium (mg/L)	0.0177 - 0.0178 (2/2)
Cobalt (mg/L)	0.00265 - 0.00706 (2/2)
Nickel (mg/L)	0.0395 - 0.0422 (2/2)
1,1-Dichloroethane (ug/L)	**58 - 58.7 (2/2)**
1,1-Dichloroethene (ug/L)	**2.8 - 4 (2/2)**
Benzene (ug/L)	0.584 (1/2)
Chlorobenzene (ug/L)	1.58 - 2.57 (2/2)
Chloroethane (ug/L)	**13.1 - 13.2 (2/2)**
cis-1,2-Dichloroethene (ug/L)	3.21 - 3.22 (2/2)
Total Suspended Solids (mg/L)	5.13 - 11.7 (2/2)

MW7-90R	
Constituent (units)	**Concentration**
Arsenic (mg/L)	0.00886 (1/1)
Barium (mg/L)	**0.659 (1/1)**
Total Suspended Solids (mg/L)	3.38 (1/1)

MW-43	
Constituent (units)	**Concentration**
Arsenic (mg/L)	0.00603 - 0.00725 (4/4)
Barium (mg/L)	0.474 - 0.623 (4/4)
Cobalt (mg/L)	0.00205 - 0.0022 (4/4)
Nickel (mg/L)	0.00536 - 0.00602 (4/4)
Acetone (ug/L)	**11.1 - 11.6 (2/4)**
Total Suspended Solids (mg/L)	17 - 32 (4/4)

MW-40R	
Constituent (units)	**Concentration**
Barium (mg/L)	0.0835 - 0.095 (2/2)
Total Suspended Solids (mg/L)	2.13 - 27.8 (2/2)

MW2-93	
Constituent (units)	**Concentration**
Barium (mg/L)	0.204 (1/1)
1,1-Dichloroethane (ug/L)	6.74 (1/1)
1,1-Dichloroethene (ug/L)	3.13 (1/1)
cis-1,2-Dichloroethene (ug/L)	1.65 (1/1)
Total Suspended Solids (mg/L)	2 (1/1)

MW4-89	
Constituent (units)	**Concentration**
Barium (mg/L)	0.0797 - 0.0807 (2/2)
Total Suspended Solids (mg/L)	<1.88 (0/2)

MW-38	
Constituent (units)	**Concentration**
Barium (mg/L)	0.354 (1/1)
Total Suspended Solids (mg/L)	<1.88 (0/1)

Maximum Concentration Summary		
Constituent	**Monitoring Point**	**Maximum Concentration**
Arsenic (mg/L)	PZ-10	0.0542
Barium (mg/L)	MW7-90R	0.659
Cadmium (mg/L)	PZ-10	0.000233
Cobalt (mg/L)	MW4-93	0.0498
Copper (mg/L)	PZ-10	0.00553
Lead (mg/L)	PZ-10	0.00394
Nickel (mg/L)	MW4-93	0.188
Vanadium (mg/L)	MW4-93	0.0246
1,1-Dichloroethane (ug/L)	MW-37	58.7
1,1-Dichloroethene (ug/L)	MW-37	4
1,4-Dichlorobenzene (ug/L)	PZ-10	6.26
Acetone (ug/L)	MW-43	11.6
Benzene (ug/L)	PZ-10	3.01
Chlorobenzene (ug/L)	MW4-93	19.7
Chloroethane (ug/L)	MW-37	13.2
cis-1,2-Dichloroethene (ug/L)	MW-39R	22.1
Tetrachloroethene (ug/L)	MW-39R	1.27
Toluene (ug/L)	MW4-90	3.01
Trichloroethene (ug/L)	MW-39R	4.61
Vinyl Chloride (ug/L)	MW-39R	1.67
Dichlorodifluoromethane (ug/L)	MW-39R	20.1

Reporting Period Detection Summary

Legend

- Monitoring Well
- Groundwater Underdrain
- Leachate Monitoring Point
- Landfill Gas Well
- Future Waste Boundary
- Approximate Waste Boundary
- Located Waste Boundary
- Approximate Property Boundary
- Stream

Des Moines County Regional Sanitary Landfill
West Burlington, Iowa
Project No:27224414.25
Drawing Date: February 2025

Figure 3

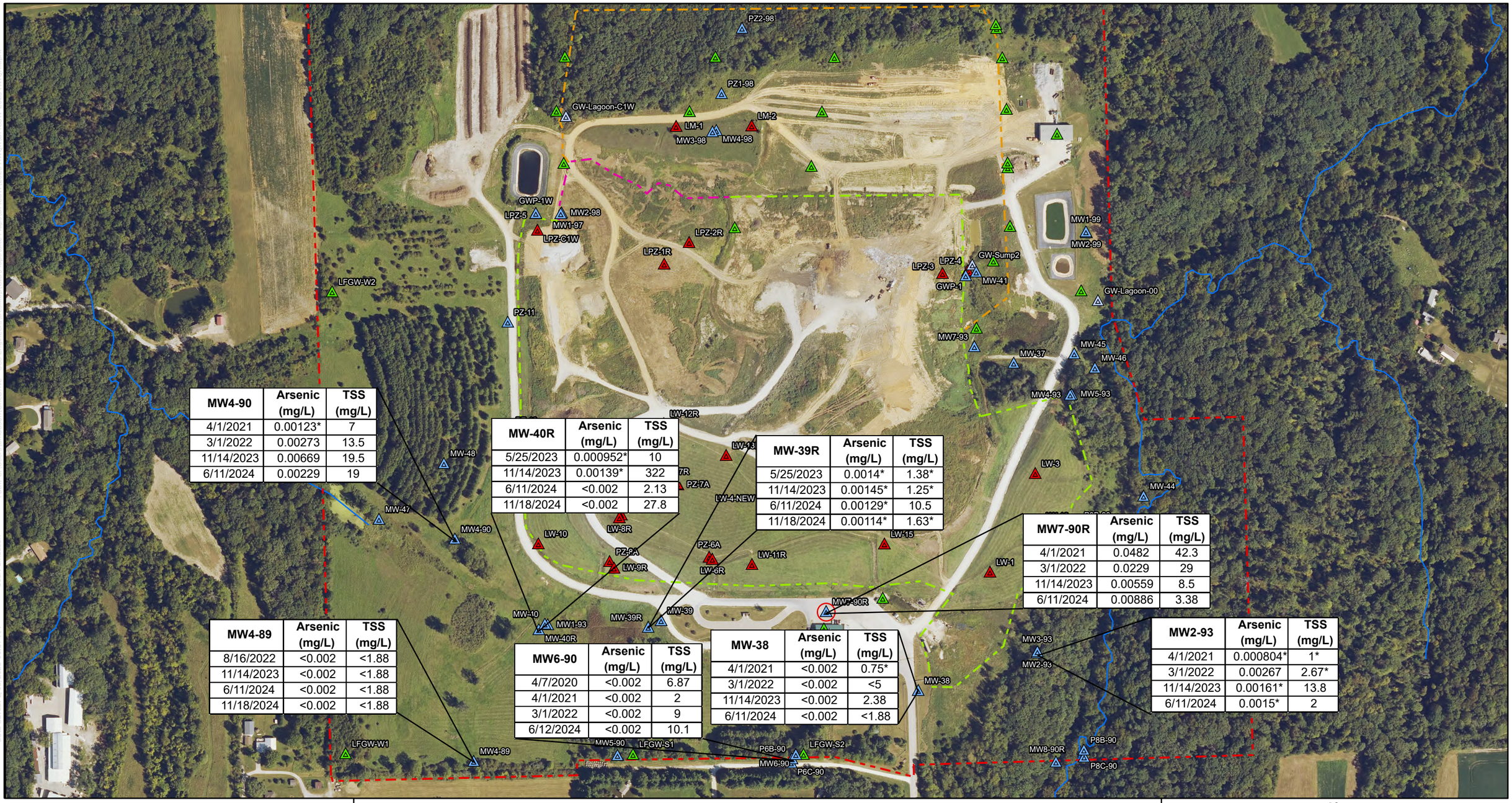
N W E S

0 190 380 760 1,140 Feet

SCS ENGINEERS
environmental consultants and contractors

Esri, CGIAR, USGS, Esri, TomTom, Garmin, Foursquare, FAO, METI/NASA, USGS, USDA NAIP, Iowa State University GIS Facility

Path: C:\Users\bmadson\OneDrive - SCS Engineers\Desktop\GIS\Maps\Site Maps\DMCSW 2023 AWOR\DMCSW 2023 AWOR.aprx
User: bmadson
Date Saved: 2/18/2025 2:54 AM



MW4-90	Arsenic (mg/L)	TSS (mg/L)
4/1/2021	0.00123*	7
3/1/2022	0.00273	13.5
11/14/2023	0.00669	19.5
6/11/2024	0.00229	19

MW-40R	Arsenic (mg/L)	TSS (mg/L)
5/25/2023	0.000952*	10
11/14/2023	0.00139*	322
6/11/2024	<0.002	2.13
11/18/2024	<0.002	27.8

MW-39R	Arsenic (mg/L)	TSS (mg/L)
5/25/2023	0.0014*	1.38*
11/14/2023	0.00145*	1.25*
6/11/2024	0.00129*	10.5
11/18/2024	0.00114*	1.63*

MW7-90R	Arsenic (mg/L)	TSS (mg/L)
4/1/2021	0.0482	42.3
3/1/2022	0.0229	29
11/14/2023	0.00559	8.5
6/11/2024	0.00886	3.38

MW4-89	Arsenic (mg/L)	TSS (mg/L)
8/16/2022	<0.002	<1.88
11/14/2023	<0.002	<1.88
6/11/2024	<0.002	<1.88
11/18/2024	<0.002	<1.88

MW6-90	Arsenic (mg/L)	TSS (mg/L)
4/7/2020	<0.002	6.87
4/1/2021	<0.002	2
3/1/2022	<0.002	9
6/12/2024	<0.002	10.1

MW-38	Arsenic (mg/L)	TSS (mg/L)
4/1/2021	<0.002	0.75*
3/1/2022	<0.002	<5
11/14/2023	<0.002	2.38
6/11/2024	<0.002	<1.88

MW2-93	Arsenic (mg/L)	TSS (mg/L)
4/1/2021	0.000804*	1*
3/1/2022	0.00267	2.67*
11/14/2023	0.00161*	13.8
6/11/2024	0.0015*	2

Arsenic Concentration Map

Figure 4

Legend

Arsenic Prediction Limit = 0.0021 mg/L

- Monitoring Well
- Groundwater Underdrain
- Leachate Monitoring Point
- SSL Well
- Landfill Gas Well
- Future Waste Boundary
- Approximate Waste Boundary
- Located Waste Boundary
- Approximate Property Boundary
- Stream

* J Flag concentrations are not included in the lists of detected parameters

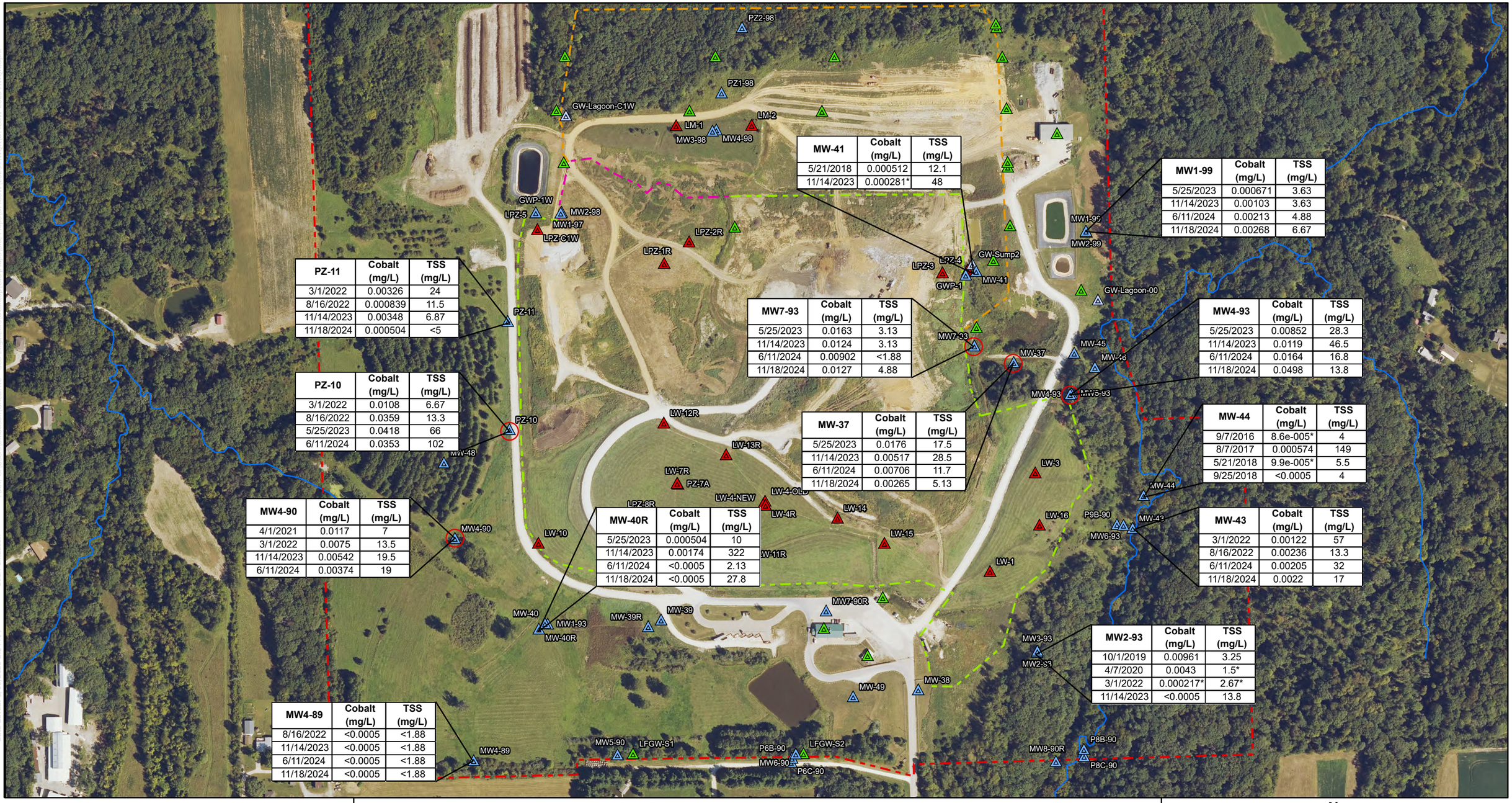
Des Moines County Regional Sanitary Landfill
West Burlington, Iowa
Project No:27224414.25
Drawing Date: February 2025

N W E S

0 190 380 760 1,140 Feet

SCS ENGINEERS
environmental consultants and contractors

Esri, CGIAR, USGS, Esri, TomTom, Garmin, Foursquare, FAO, METI/NASA, USGS, USDA NAIP, Iowa State University GIS Facility



PZ-11	Cobalt (mg/L)	TSS (mg/L)
3/1/2022	0.00326	24
8/16/2022	0.000839	11.5
11/14/2023	0.00348	6.87
11/18/2024	0.000504	<5

PZ-10	Cobalt (mg/L)	TSS (mg/L)
3/1/2022	0.0108	6.67
8/16/2022	0.0359	13.3
5/25/2023	0.0418	66
6/11/2024	0.0353	102

MW4-90	Cobalt (mg/L)	TSS (mg/L)
4/1/2021	0.0117	7
3/1/2022	0.0075	13.5
11/14/2023	0.00542	19.5
6/11/2024	0.00374	19

MW4-89	Cobalt (mg/L)	TSS (mg/L)
8/16/2022	<0.0005	<1.88
11/14/2023	<0.0005	<1.88
6/11/2024	<0.0005	<1.88
11/18/2024	<0.0005	<1.88

MW-40R	Cobalt (mg/L)	TSS (mg/L)
5/25/2023	0.000504	10
11/14/2023	0.00174	322
6/11/2024	<0.0005	2.13
11/18/2024	<0.0005	27.8

MW-41	Cobalt (mg/L)	TSS (mg/L)
5/21/2018	0.000512	12.1
11/14/2023	0.000281*	48

MW7-93	Cobalt (mg/L)	TSS (mg/L)
5/25/2023	0.0163	3.13
11/14/2023	0.0124	3.13
6/11/2024	0.00902	<1.88
11/18/2024	0.0127	4.88

MW-37	Cobalt (mg/L)	TSS (mg/L)
5/25/2023	0.0176	17.5
11/14/2023	0.00517	28.5
6/11/2024	0.00706	11.7
11/18/2024	0.00265	5.13

MW1-99	Cobalt (mg/L)	TSS (mg/L)
5/25/2023	0.000671	3.63
11/14/2023	0.00103	3.63
6/11/2024	0.00213	4.88
11/18/2024	0.00268	6.67

MW4-93	Cobalt (mg/L)	TSS (mg/L)
5/25/2023	0.00852	28.3
11/14/2023	0.0119	46.5
6/11/2024	0.0164	16.8
11/18/2024	0.0498	13.8

MW-44	Cobalt (mg/L)	TSS (mg/L)
9/7/2016	8.6e-005*	4
8/7/2017	0.000574	149
5/21/2018	9.9e-005*	5.5
9/25/2018	<0.0005	4

MW-43	Cobalt (mg/L)	TSS (mg/L)
3/1/2022	0.00122	57
8/16/2022	0.00236	13.3
6/11/2024	0.00205	32
11/18/2024	0.0022	17

MW2-93	Cobalt (mg/L)	TSS (mg/L)
10/1/2019	0.00961	3.25
4/7/2020	0.0043	1.5*
3/1/2022	0.000217*	2.67*
11/14/2023	<0.0005	13.8

Cobalt Concentration Map

Legend

Cobalt Prediction Limit = 0.000761 mg/L

- Monitoring Well
- Groundwater Underdrain
- Leachate Monitoring Point
- SSL Well
- Landfill Gas Well
- Future Waste Boundary
- Approximate Waste Boundary
- Located Waste Boundary
- Approximate Property Boundary
- Stream

* J Flag concentrations are not included in the lists of detected parameters

Des Moines County Regional Sanitary Landfill
West Burlington, Iowa
Project No:27224414.25
Drawing Date: February 2025

Figure 5

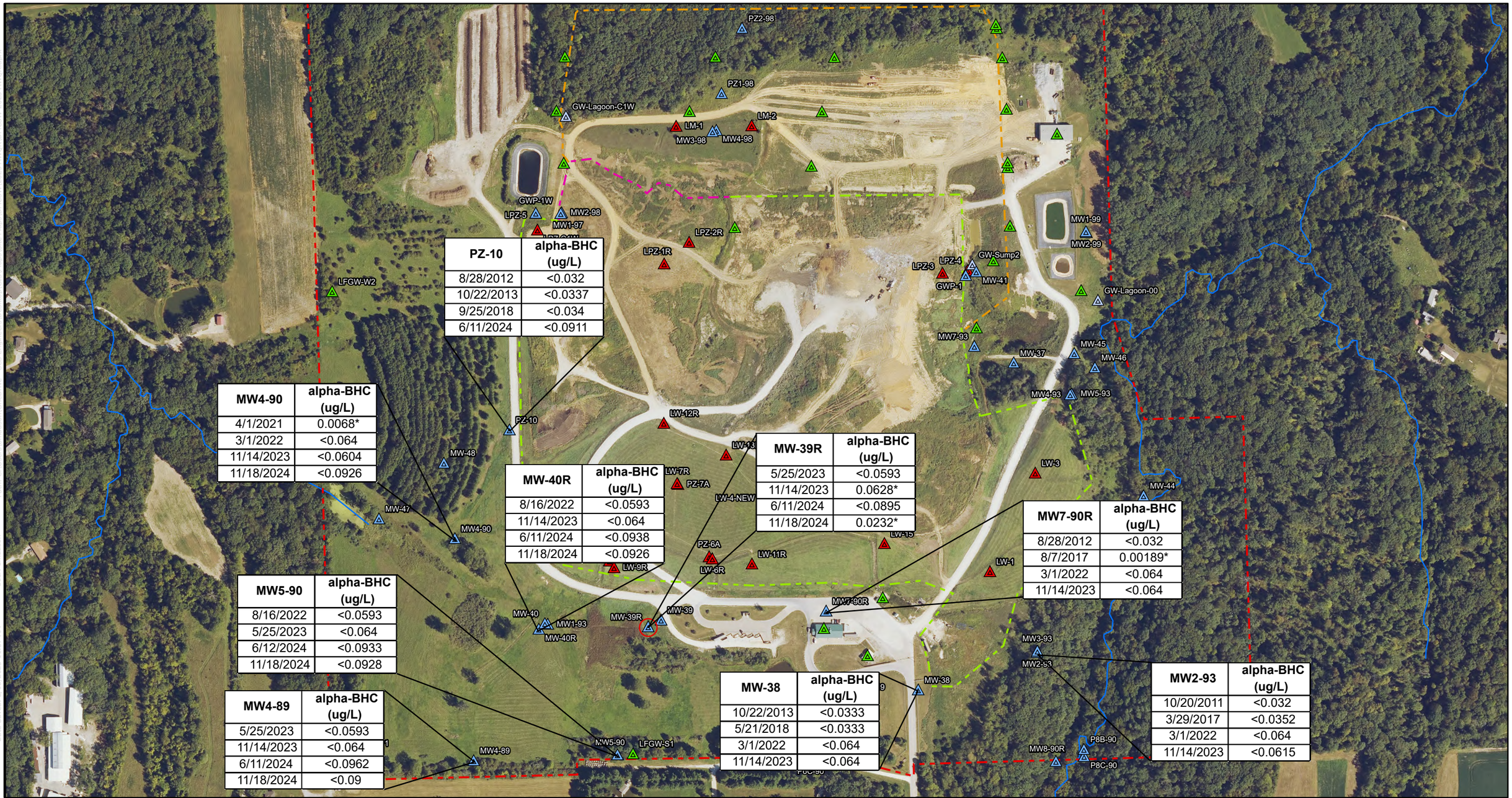
N W E S

0 190 380 760 1,140 Feet

SCS ENGINEERS
environmental consultants and contractors

Esri, CGIAR, USGS, Esri, TomTom, Garmin, Foursquare, FAO, METI/NASA, USGS, USDA NAIP, Iowa State University GIS Facility

Path: C:\Users\bmadson\OneDrive - SCS Engineers\Desktop\GIS\Maps\Site Maps\DMCSW\2023 AWOR\DMCSW_2023_AWOR.aprx
User: bmadson
Date Saved: 2/18/2025 2:54 AM



PZ-10	alpha-BHC (ug/L)
8/28/2012	<0.032
10/22/2013	<0.0337
9/25/2018	<0.034
6/11/2024	<0.0911

MW4-90	alpha-BHC (ug/L)
4/1/2021	0.0068*
3/1/2022	<0.064
11/14/2023	<0.0604
11/18/2024	<0.0926

MW-40R	alpha-BHC (ug/L)
8/16/2022	<0.0593
11/14/2023	<0.064
6/11/2024	<0.0938
11/18/2024	<0.0926

MW-39R	alpha-BHC (ug/L)
5/25/2023	<0.0593
11/14/2023	0.0628*
6/11/2024	<0.0895
11/18/2024	0.0232*

MW7-90R	alpha-BHC (ug/L)
8/28/2012	<0.032
8/7/2017	0.00189*
3/1/2022	<0.064
11/14/2023	<0.064

MW5-90	alpha-BHC (ug/L)
8/16/2022	<0.0593
5/25/2023	<0.064
6/12/2024	<0.0933
11/18/2024	<0.0928

MW4-89	alpha-BHC (ug/L)
5/25/2023	<0.0593
11/14/2023	<0.064
6/11/2024	<0.0962
11/18/2024	<0.09

MW-38	alpha-BHC (ug/L)
10/22/2013	<0.0333
5/21/2018	<0.0333
3/1/2022	<0.064
11/14/2023	<0.064

MW2-93	alpha-BHC (ug/L)
10/20/2011	<0.032
3/29/2017	<0.0352
3/1/2022	<0.064
11/14/2023	<0.0615

SCS ENGINEERS
environmental consultants and contractors

Alpha-BHC Concentration Map

Legend

Alpha-BHC Prediction Limit = < 0.0946 ug/L

- Monitoring Well
- Groundwater Underdrain
- Leachate Monitoring Point
- SSL Well
- Landfill Gas Well
- Future Waste Boundary
- Approximate Waste Boundary
- Located Waste Boundary
- Approximate Property Boundary
- Stream

* J Flag concentrations are not included in the lists of detected parameters

Des Moines County Regional Sanitary Landfill
West Burlington, Iowa
Project No:27224414.25
Drawing Date: February 2025

Figure 6

N W E S

0 190 380 760 1,140 Feet

Esri, CGIAR, USGS, Esri, TomTom, Garmin, Foursquare, FAO, METI/NASA, USGS, USDA NAIP, Iowa State University GIS Facility

Path: C:\Users\bmadson\OneDrive - SCS Engineers\Desktop\GIS\Maps\Site Maps\DMCSW 2023 AWOR\DMCSW 2023 AWOR.aprx
User: bmadson
Date Saved: 2/18/2025 11:57 AM

Appendix A

Field Sampling Forms

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-1-99**	Date:	**6/12/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	20.5
Initial Static Water Level (feet):	10.14
Initial Groundwater Elevation (ft-amsl):	631.15
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
9:03 AM	Purging start time.						
9:06 AM	14.9	4.7	535.8	7.17	77.9	13.6	
9:09 AM	17.6	3.0	526.9	7.16	79.7	19.2	
9:12 AM	18.3	2.0	529.0	7.17	66.6	24.0	
9:15 AM	18.9	1.5	528.5	7.17	-0.1	29.0	
	Parameters stabilized, sample collected.						

Quantity of Water Removed from Well (liters):	2.5
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	208.33

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

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-2-93**	Date:	**6/12/2024**
Gradient:	Down	Sampler:	Michael Morgan

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):	30.4
Initial Static Water Level (feet):	12.38
Initial Groundwater Elevation (ft-amsl):	678.16
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)	
2:31 PM	Purging start time.						
2:34 PM	15.7	4.8	827.4	7.02	45.8	24.2	
2:37 PM	15.7	4.6	824.8	7.06	59.4	13.5	
2:40 PM	15.5	4.4	819.2	7.08	66.0	15.3	
2:43 PM	15.2	4.4	826.9	7.09	70.8	13.8	
	Parameters stabilized, sample collected.						

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

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

Additional Comments:	Color: Clear Odor: None Some detritus in sample.

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-4-89**	Date:	**6/13/2024**
Gradient:	Up	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	26.5
Initial Static Water Level (feet):	7.35
Initial Groundwater Elevation (ft-amsl):	694.90
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
10:59 AM	Purging start time.						
11:02 AM	14.7	1.4	423.4	6.83	98.3	6.9	
11:05 AM	14.8	1.1	419.6	6.76	101.4	8.0	
11:08 AM	14.9	1.0	412.3	6.71	102.2	10.3	
11:11 AM	14.9	0.9	406.5	6.69	102.6	16.5	
	Parameters stabilized, sample collected.						

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

D. WELL MAINTENANCE

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

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-4-90**	Date:	**6/13/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	18.5
Initial Static Water Level (feet):	10.36
Initial Groundwater Elevation (ft-amsl):	689.79
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)	
12:10 PM	Purging start time.						
12:13 PM	17.3	0.9	1250.6	6.29	-76.2	7.8	
12:16 PM	17.7	0.4	1256.8	6.37	-82.3	8.3	
12:19 PM	18.1	0.2	1270.5	6.41	-86.9	8.2	
12:22 PM	19.7	0.8	1272.0	6.45	-94.2	9.9	
12:25 PM	20.7	1.0	1278.8	6.46	-101.4	17.8	
12:28 PM	21.3	1.5	1284.0	6.49	-108.6	12.2	
	Parameters stabilized, sample collected.						

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

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

Additional Comments:	Color: Initially clear then slightly grey by end of sampling. Odor: Seaweed

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-4-93**	Date:	**6/13/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	38.9
Initial Static Water Level (feet):	25.11
Initial Groundwater Elevation (ft-amsl):	635.77
Equipment Used:	Disposable Bailer

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
	Purging start time.						
15:51	19.6	2.4	2485.0	6.41	-28.1	21.3	
	Parameters stabilized, sample collected.						

Quantity of Water Removed from Well (liters):	26.2
Was well pumped/bailed dry?	Yes
Total Amount of Time Purged (minutes:seconds):	NA
Average Purge Rate (mL/min):	NA

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

Additional Comments:	Color: Clear Odor: None Well purge and sample occurred on the same day.

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-5-90**	Date:	**6/13/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	16.0
Initial Static Water Level (feet):	8.61
Initial Groundwater Elevation (ft-amsl):	694.64
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
9:59 AM	Purging start time.						
10:02 AM	12.9	3.5	899.9	7.12	84.0	7.3	
10:05 AM	14.1	3.2	896.2	7.09	92.0	7.8	
10:08 AM	13.9	3.2	913.7	7.07	97.3	8.4	
10:11 AM	13.9	3.1	906.6	7.06	101.1	8.1	
	Parameters stabilized, sample collected.						

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

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

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-6-90**	Date:	**6/12/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	16.1
Initial Static Water Level (feet):	10.30
Initial Groundwater Elevation (ft-amsl):	692.67
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
3:48 PM	Purging start time.						
3:51 PM	13.9	<0.1	1106.3	6.92	70.3	13.2	
3:54 PM	14.5	<0.1	1114.2	6.94	70.8	16.4	
3:57 PM	14.3	0.4	1128.0	6.95	70.7	13.4	
4:00 PM	13.9	0.4	1127.3	6.96	70.5	12.7	
	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:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-6-93**	Date:	**6/12/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	54.9
Initial Static Water Level (feet):	10.06
Initial Groundwater Elevation (ft-amsl):	610.72
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
12:34 PM	Purging start time.						
12:37 PM	28.1	7.2	11.9	7.56	5.2	38.6	
12:40 PM	28.2	7.2	10.4	7.59	-46.0	37.5	
12:50 PM	15.6	5.4	975.5	7.59	-48.3	157.1	
12:53 PM	15.5	1.7	848.0	7.45	-149.3	232.3	
12:56 PM	16.6	1.2	827.4	7.43	-149.0	220.6	
12:59 PM	18.1	1.4	788.4	7.40	-145.9	460.4	
1:02 PM	21.2	0.9	742.6	7.33	-143.6	1311.3	
1:05 PM	14.5	<0.1	654.4	7.48	-163.4	329.7	
1:08 PM	14.2	<0.1	621.7	7.54	-160.0	266.8	
1:11 PM	14.9	<0.1	613.0	7.53	-150.7	23.6	
	Parameters stabilized, sample collected.						

Quantity of Water Removed from Well (liters):	3.0
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	21:00
Average Purge Rate (mL/min):	142.86

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

Additional Comments:	Color: Grey at first, became clear Odor: Sea salt Peristaltic pump struggled with the depth. Pulled peristaltic tubing up until constant flow is established (12:50 PM).

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-7-90R**	Date:	**6/11/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	14.3
Initial Static Water Level (feet):	5.98
Initial Groundwater Elevation (ft-amsl):	693.43
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	18.8	0.4	1828.1	6.55	1.7	6.5	
5:17 PM	18.9	0.1	1838.5	6.57	18.6	7.0	
5:20 PM	18.9	0.1	1841.7	6.57	8.0	6.4	
5:23 PM	19.1	<0.1	1839.8	6.57	-12.5	7.3	
	Parameters stabilized, sample collected.						

Quantity of Water Removed from Well (liters):	2.8
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	233.33

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

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-7-93**	Date:	**6/11/2024**
Gradient:	Down	Sampler:	Michael Morgan

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):	19.9
Initial Static Water Level (feet):	5.32
Initial Groundwater Elevation (ft-amsl):	613.01
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
2:34 PM	Purging start time.						
2:37 PM	13.9	19.4	2209.0	NM	NM	NM	
2:40 PM	13.8	15.8	2208.9	NM	NM	NM	
2:43 PM	13.7	15.0	2210.8	NM	NM	NM	
2:46 PM	13.8	14.9	2207.6	NM	NM	NM	
	Parameters stabilized, sample collected.						

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

D. WELL MAINTENANCE

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

Additional Comments:	Color: Clear Odor: None Equipment malfunction - turbidity, pH, and ORP not measured.

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-37**	Date:	**6/11/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	32.9
Initial Static Water Level (feet):	11.42
Initial Groundwater Elevation (ft-amsl):	615.56
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
3:20 PM	Purging start time.						
3:23 PM	14.4	1.0	3412.0	6.28	-0.7	11.0	
3:26 PM	15.1	0.2	3441.4	6.31	-4.0	13.4	
3:29 PM	14.9	0.1	3444.7	6.33	-5.4	8.9	
3:32 PM	15.1	<0.1	3448.7	6.35	-6.4	7.4	
	Parameters stabilized, sample collected.						

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

D. WELL MAINTENANCE

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

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-38**	Date:	**6/11/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	38.6
Initial Static Water Level (feet):	8.01
Initial Groundwater Elevation (ft-amsl):	692.47
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)	
5:54 PM	Purging start time.						
5:57 PM	17.2	2.4	867.0	6.96	69.5	20.4	
6:00 PM	17.4	1.8	857.8	6.94	68.2	9.9	
6:03 PM	17.5	1.7	853.5	6.94	68.0	13.6	
6:06 PM	17.4	1.6	852.8	6.94	69.0	27.0	
	Parameters stabilized, sample collected.						

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

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

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-39R**	Date:	**6/13/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	26.2
Initial Static Water Level (feet):	4.75
Initial Groundwater Elevation (ft-amsl):	695.49
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)	
7:32 AM	Purging start time.						
7:35 AM	13.8	0.7	1034.7	6.33	-9.4	7.1	
7:38 AM	13.7	0.2	1013.0	6.26	-0.8	13.6	
7:41 AM	13.7	0.1	994.8	6.14	8.6	25.3	
7:44 AM	13.7	<0.1	995.7	6.12	9.3	38.2	
7:47 AM	13.7	<0.1	1001.8	6.12	8.4	43.8	
	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):	15:00
Average Purge Rate (mL/min):	160.00

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

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-40R**	Date:	**6/11/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	18.0
Initial Static Water Level (feet):	6.72
Initial Groundwater Elevation (ft-amsl):	693.70
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)	
12:57 PM	Purging start time.						
1:00 PM	14.7	2.6	477.4	6.69	66.4	15.8	
1:03 PM	14.9	2.2	468.5	6.56	73.5	47.2	
1:06 PM	15.4	2.2	467.4	6.51	78.2	84.9	
1:09 PM	15.5	2.4	466.7	6.50	82.2	98.7	
	Parameters stabilized, sample collected.						

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

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

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-43**	Date:	**6/12/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	17.9
Initial Static Water Level (feet):	5.15
Initial Groundwater Elevation (ft-amsl):	601.52
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
11:40 AM	Purging start time.						
11:43 AM	15.7	<0.1	1529.4	7.02	-138.8	12.6	
11:46 AM	15.4	<0.1	1529.5	7.13	-152.6	15.9	
11:49 AM	15.6	<0.1	1533.7	7.22	-164.8	21.6	
11:52 AM	15.8	<0.1	1539.6	7.27	-173.6	25.6	
11:55 AM	16.0	<0.1	1539.4	7.31	-180.7	33.7	
	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):	15:00
Average Purge Rate (mL/min):	133.33

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

Additional Comments:	Color: Slight brown tint Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-44**	Date:	**6/12/2024**
Gradient:	Down	Sampler:	Michael Morgan

A. MW/PIEZOMETER CONDITIONS		
Well/Piezometer Capped?	Yes	
Litter/Standing Water?	Yes	Water - artesian well

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	32.9
Initial Static Water Level (feet):	0.00
Initial Groundwater Elevation (ft-amsl):	609.95
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
9:57 AM	Purging start time.						
10:00 AM	15.9	<0.1	642.3	7.33	-122.8	62.9	
10:03 AM	15.9	0.3	641.7	7.35	-138.6	79.8	
10:06 AM	15.7	0.1	640.8	7.37	-146.6	53.9	
10:09 AM	15.7	<0.1	642.3	7.39	-152.0	50.7	
	Parameters stabilized, sample collected.						

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

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

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**PZ-10**	Date:	**6/11/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	17.9
Initial Static Water Level (feet):	11.59
Initial Groundwater Elevation (ft-amsl):	688.47
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	Temperature (°C) 10%	Dissolved Oxygen (mg/L)	Specific Conductivity (µS/cm) +/- 10%	pH (S.U.) +/- 0.1	ORP (mV)	Turbidity (FNU)	
9:39 AM	Purging start time.						
9:42 AM	21.9	7.1	2000.2	6.78	-100.5	264.6	
9:45 AM	20.9	7.2	2006.6	6.81	-99.5	245.1	
9:48 AM	20.0	7.3	2009.4	6.80	-95.7	254.8	
9:51 AM	19.5	7.4	2012.7	6.79	-92.8	200.1	
	Parameters stabilized, sample collected.						

Quantity of Water Removed from Well (liters):	1.3
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	108.33

D. WELL MAINTENANCE

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

Additional Comments:	Color: Slightly cloudy brown Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-1-99**	Date:	**11/20/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	20.4
Initial Static Water Level (feet):	12.06
Initial Groundwater Elevation (ft-amsl):	629.23
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)	
12:17 PM	Purging start time.						
12:20 PM	11.1	3.4	1162.2	7.04	109.9	3.6	
12:23 PM	10.1	1.9	1164.0	7.01	98.1	3.9	
12:26 PM	11.2	1.1	1140.7	7.02	70.5	4.7	
12:29 PM	11.4	0.7	1126.3	7.03	30.9	4.7	
12:32 PM	11.2	0.5	1117.6	7.05	-7.6	4.7	
	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):	15:00
Average Purge Rate (mL/min):	126.67

D. WELL MAINTENANCE

Does the well require any future maintenance?	Yes	
If yes, explain:	Concrete base is loose.	

Additional Comments:	Color: Clear Odor: None Some detritus in sample, notably invertebrates.

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-4-89**	Date:	**11/20/2024**
Gradient:	Up	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	26.7
Initial Static Water Level (feet):	11.29
Initial Groundwater Elevation (ft-amsl):	690.96
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	**Temperature (°C) 10%**	Dissolved Oxygen (mg/L)	**Specific Conductivity (µS/cm) +/- 10%**	**pH (S.U.) +/- 0.1**	ORP (mV)	Turbidity (FNU)	
10:05 AM	Purging start time.						
10:08 AM	12.2	2.9	553.1	6.61	55.6	3.5	
10:11 AM	12.1	1.4	516.3	6.43	59.2	2.7	
10:14 AM	12.3	0.9	493.7	6.33	58.3	2.6	
10:17 AM	12.2	0.6	472.6	6.27	58.3	2.5	
10:20 AM	12.3	0.4	460.3	6.21	59.1	2.6	
10:23 AM	12.4	0.3	456.2	6.19	59.8	2.6	
	Parameters stabilized, sample collected.						

Quantity of Water Removed from Well (liters):	2.1
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	18:00
Average Purge Rate (mL/min):	116.67

D. WELL MAINTENANCE

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

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-4-90**	Date:	**11/20/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	18.5
Initial Static Water Level (feet):	13.43
Initial Groundwater Elevation (ft-amsl):	686.72
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	**Temperature (°C) 10%**	Dissolved Oxygen (mg/L)	**Specific Conductivity (µS/cm) +/- 10%**	**pH (S.U.) +/- 0.1**	ORP (mV)	Turbidity (FNU)	
8:22 AM	Purging start time.						
8:25 AM	11.6	1.1	1918.2	6.14	2.9	5.0	
8:28 AM	11.6	0.6	1945.2	6.15	-16.0	5.1	
8:31 AM	11.7	0.5	1966.4	6.16	-24.6	5.1	
8:34 AM	11.7	0.3	1997.7	6.17	-29.9	4.4	
	Parameters stabilized, sample collected.						

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

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

Additional Comments:	Color: Clear Odor: Very slight ocean smell

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-4-93**	Date:	**11/21/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	38.9
Initial Static Water Level (feet):	27.24
Initial Groundwater Elevation (ft-amsl):	633.64
Equipment Used:	Disposable Bailer

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	**Temperature (°C) 10%**	Dissolved Oxygen (mg/L)	**Specific Conductivity (µS/cm) +/- 10%**	**pH (S.U.) +/- 0.1**	ORP (mV)	Turbidity (FNU)	
	Purging start time.						
8:23 AM	10.5	9.4	3601.0	6.49	105.8	4.0	
	Parameters stabilized, sample collected.						

Quantity of Water Removed from Well (liters):	22.1
Was well pumped/bailed dry?	Yes
Total Amount of Time Purged (minutes:seconds):	NA
Average Purge Rate (mL/min):	NA

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

Additional Comments:	Color: Clear Odor: None Well bailed dry on 11/20/2024 and sampled on 11/21/2024.

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-5-90**	Date:	**11/20/2024**
Gradient:	Down	Sampler:	Michael Morgan

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):	15.9
Initial Static Water Level (feet):	12.77
Initial Groundwater Elevation (ft-amsl):	690.48
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	**Temperature (°C) 10%**	Dissolved Oxygen (mg/L)	**Specific Conductivity (µS/cm) +/- 10%**	**pH (S.U.) +/- 0.1**	ORP (mV)	Turbidity (FNU)	
11:10 AM	Purging start time.						
11:13 AM	12.2	4.1	1113.2	6.65	110.3	2.9	
11:16 AM	12.7	4.4	1126.6	6.68	106.0	2.8	
11:19 AM	12.6	5.4	1121.4	6.68	105.2	3.1	
11:22 AM	12.5	4.9	1126.0	6.71	103.8	3.6	
	Parameters stabilized, sample collected.						

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

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

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-7-93**	Date:	**11/20/2024**
Gradient:	Down	Sampler:	Michael Morgan

A. MW/PIEZOMETER CONDITIONS		
Well/Piezometer Capped?	Yes	
Litter/Standing Water?	Yes	Litter - well downwind of active cell.

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	19.9
Initial Static Water Level (feet):	3.68
Initial Groundwater Elevation (ft-amsl):	614.65
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	**Temperature (°C) 10%**	Dissolved Oxygen (mg/L)	**Specific Conductivity (µS/cm) +/- 10%**	**pH (S.U.) +/- 0.1**	ORP (mV)	Turbidity (FNU)	
2:51 PM	Purging start time.						
2:54 PM	12.3	1.8	3300.8	6.43	23.8	11.7	
2:57 PM	12.7	1.0	3216.9	6.40	22.8	11.8	
3:00 PM	12.8	0.6	3154.9	6.39	23.1	11.7	
3:03 PM	12.9	0.5	3109.6	6.39	23.8	13.7	
	Parameters stabilized, sample collected.						

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

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

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-37**	Date:	**11/19/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	32.2
Initial Static Water Level (feet):	11.11
Initial Groundwater Elevation (ft-amsl):	615.87
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	**Temperature (°C) 10%**	Dissolved Oxygen (mg/L)	**Specific Conductivity (µS/cm) +/- 10%**	**pH (S.U.) +/- 0.1**	ORP (mV)	Turbidity (FNU)	
2:29 PM	Purging start time.						
2:32 PM	13.6	2.0	4747.5	6.24	53.1	2.3	
2:35 PM	13.5	0.9	4783.7	6.22	33.3	2.5	
2:38 PM	13.6	0.6	4789.2	6.23	24.2	2.6	
2:41 PM	13.6	0.4	4791.1	6.23	19.5	2.7	
	Parameters stabilized, sample collected.						

Quantity of Water Removed from Well (liters):	1.7
Was well pumped/bailed dry?	No
Total Amount of Time Purged (minutes:seconds):	12:00
Average Purge Rate (mL/min):	141.67

D. WELL MAINTENANCE

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

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-39R**	Date:	**11/21/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	26.1
Initial Static Water Level (feet):	4.22
Initial Groundwater Elevation (ft-amsl):	696.02
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	**Temperature (°C) 10%**	Dissolved Oxygen (mg/L)	**Specific Conductivity (µS/cm) +/- 10%**	**pH (S.U.) +/- 0.1**	ORP (mV)	Turbidity (FNU)
7:29 AM	Purging start time.					
7:32 AM	10.9	2.5	1218.1	5.66	161.7	4.1
7:35 AM	11.2	1.2	1207.1	5.55	144.7	7.1
7:38 AM	11.4	0.8	1198.4	5.52	132.5	11.7
7:41 AM	11.6	0.5	1190.5	5.49	125.0	20.6
	Parameters stabilized, sample collected.					

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

D. WELL MAINTENANCE

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

Additional Comments:	Color: Clear Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-40R**	Date:	**11/20/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	18.1
Initial Static Water Level (feet):	7.09
Initial Groundwater Elevation (ft-amsl):	693.33
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	**Temperature (°C) 10%**	Dissolved Oxygen (mg/L)	**Specific Conductivity (µS/cm) +/- 10%**	**pH (S.U.) +/- 0.1**	ORP (mV)	Turbidity (FNU)	
9:04 AM	Purging start time.						
9:07 AM	13.1	4.3	693.6	6.63	-18.4	26.1	
9:10 AM	13.1	3.6	666.7	6.48	-3.3	24.2	
9:13 AM	13.1	3.4	659.5	6.41	8.6	23.3	
9:16 AM	13.2	3.2	657.0	6.37	19.0	22.1	
9:19 AM	13.1	3.2	655.9	6.35	28.0	20.4	
	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:	Color: Very slightly cloudy Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**MW-43**	Date:	**11/20/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	17.9
Initial Static Water Level (feet):	5.25
Initial Groundwater Elevation (ft-amsl):	601.42
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)	
1:50 PM	Purging start time.						
1:53 PM	11.3	3.1	2320.5	7.14	-55.2	5.7	
1:56 PM	11.9	1.3	2391.5	7.15	-102.3	6.5	
1:59 PM	12.1	0.8	2404.9	7.17	-120.6	7.4	
2:02 PM	11.9	0.5	2410.7	7.18	-129.9	14.3	
	Parameters stabilized, sample collected.						

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

D. WELL MAINTENANCE

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

Additional Comments:	Color: Slight yellow tint Odor: None

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**PZ-10**	Date:	**11/19/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	17.9
Initial Static Water Level (feet):	15.14
Initial Groundwater Elevation (ft-amsl):	684.92
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)	
	Purging start time.						
	Parameters stabilized, sample collected.						

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

D. WELL MAINTENANCE		
Does the well require any future maintenance?	Yes	
If yes, explain:	Well casing lid won't fully close.	

Additional Comments:	Unable to sample well, couldn't draw water up even after extending peristaltic tubing.

FORM FOR GROUNDWATER SAMPLING

Project:	**Des Moines County Sanitary Landfill**		
Monitoring Well/Piezometer ID:	**PZ-11**	Date:	**11/19/2024**
Gradient:	Down	Sampler:	Michael Morgan

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

B. GROUNDWATER ELEVATION MEASUREMENT (+/- 0.01 foot, MSL)	
Measured Well Total Depth (feet):	23.1
Initial Static Water Level (feet):	17.46
Initial Groundwater Elevation (ft-amsl):	683.57
Equipment Used:	Dedicated Tubing – Peristaltic Pump

C. WELL PURGING

FIELD PARAMETERS [stabilization criteria] RECORD EVERY 3 MINUTES

Time	**Temperature (°C) 10%**	Dissolved Oxygen (mg/L)	**Specific Conductivity (µS/cm) +/- 10%**	**pH (S.U.) +/- 0.1**	ORP (mV)	Turbidity (FNU)	
12:02 PM	Purging start time.						
12:05 PM	15.0	1.2	1190.9	6.12	113.8	2.4	
12:08 PM	15.0	0.8	1183.8	6.08	121.5	2.6	
12:11 PM	14.9	0.5	1168.6	6.08	123.2	3.0	
12:14 PM	14.8	0.4	1155.0	6.09	123.4	4.2	
	Parameters stabilized, sample collected.						

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

D. WELL MAINTENANCE		
Does the well require any future maintenance?	Yes	
If yes, explain:	Well casing lid won't fully close.	

Additional Comments:	Color: Clear Odor: None

Appendix B-1

Laboratory Analytical Data Sheets

eurofins | Environment Testing

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

ANALYTICAL REPORT

PREPARED FOR

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

Generated 11/1/2024 4:03:20 PM Revision 1

JOB DESCRIPTION

Des Moines County Regional LF (HMSP)
HMSP

JOB NUMBER

310-283669-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

myEOL

Job Notes

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

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

Authorization

Generated
11/1/2024 4:03:20 PM
Revision 1

Authorized for release by
Samuel Miller, Project Management Assistant I
Samuel.Miller@et.eurofinsus.com
(319)277-2401

Table of Contents

Cover Page 1
Table of Contents 3
Case Narrative 4
Sample Summary 6
Detection Summary 7
Detection Limit Exceptions Summary 10
Client Sample Results 11
Definitions 40
Surrogate Summary 41
QC Sample Results 45
QC Association 59
Chronicle 63
Certification Summary 67
Method Summary 69
Chain of Custody 70
Receipt Checklists 76

Job Narrative
310-283669-1

REVISION

The report being provided is a revision of the original report sent on 7/16/2024. The report (revision 1) is being revised due to Added reportable analytes to samples MW4-90 and MW-39R..

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

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

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

Receipt
The samples were received on 6/14/2024 5:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 0.8°C, 1.3°C and 2.1°C.

Receipt Exceptions
<EXPLANATION_REQUIRED>

MW-4-93 (310-283669-5)

GC/MS VOA
Method 8260D: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container: Trip Blank 3 (310-283669-14).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-424866 recovered above the upper control limit for 1,2-Dichloroethane (-21.2%D). The LCS associated with this CCV passed CCV criteria for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-424866/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-424866 recovered above the upper control limit for Dichlorodifluoromethane (60.6%D). The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-424866/4).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-425101 recovered above the upper control limit for Bromoform (23.1%D). The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-425101/3).

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

GC/MS Semi VOA
Method 8270E: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 310-425054. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

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

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

Pesticides

Job ID: 310-283669-1 (Continued) Eurofins Cedar Falls

Method 8081B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 310-424953 and analytical batch 310-424973 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8081B: The surrogate recovery for the LCS associated with preparation batch 310-424953 and analytical batch 310-424973 was outside the upper control limits.

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

Metals
Method 6020B: The laboratory control sample (LCS) for preparation batch 310-424817 and analytical batch 310-427084 recovered outside control limits for the following analytes: Silver & Thallium. 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.

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

Sample Summary

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-283669-1	MW-4-89	Groundwater	06/13/24 11:40	06/14/24 17:00
310-283669-2	MW-1-99	Groundwater	06/12/24 09:30	06/14/24 17:00
310-283669-3	MW-2-93	Groundwater	06/12/24 14:05	06/14/24 17:00
310-283669-4	MW-4-90	Groundwater	06/13/24 13:03	06/14/24 17:00
310-283669-5	MW-4-93	Groundwater	06/13/24 17:00	06/14/24 17:00
310-283669-6	MW-7-93	Groundwater	06/11/24 14:58	06/14/24 17:00
310-283669-7	MW-37	Groundwater	06/11/24 15:46	06/14/24 17:00
310-283669-8	MW-38	Groundwater	06/11/24 18:21	06/14/24 17:00
310-283669-9	MW-39R	Groundwater	06/11/24 08:17	06/14/24 17:00
310-283669-10	MW-40R	Groundwater	06/11/24 13:39	06/14/24 17:00
310-283669-11	MW-7-90R	Groundwater	06/11/24 17:33	06/14/24 17:00
310-283669-12	Trip Blank 1	Trip Blank	06/11/24 00:00	06/14/24 17:00
310-283669-13	Trip Blank 2	Trip Blank	06/11/24 00:00	06/14/24 17:00
310-283669-14	Trip Blank 3	Trip Blank	06/11/24 00:00	06/14/24 17:00

Detection Summary

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Client Sample ID: MW-4-89 — Lab Sample ID: 310-283669-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0797		0.00200	0.000660	mg/L	1		6020B	Total/NA

Client Sample ID: MW-1-99 — Lab Sample ID: 310-283669-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00143	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0273		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00213		0.000500	0.000170	mg/L	1		6020B	Total/NA
Copper	0.00201	J	0.00500	0.00180	mg/L	1		6020B	Total/NA
Total Suspended Solids	4.88		1.88	1.39	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-2-93 — Lab Sample ID: 310-283669-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.65		1.00	0.210	ug/L	1		8260D	Total/NA
1,1-Dichloroethane	6.74		1.00	0.220	ug/L	1		8260D	Total/NA
1,1-Dichloroethene	3.13		2.00	0.560	ug/L	1		8260D	Total/NA
Arsenic	0.00150	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.204		0.00200	0.000660	mg/L	1		6020B	Total/NA
Total Suspended Solids	2.00		1.88	1.39	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-4-90 — Lab Sample ID: 310-283669-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.65	J	10.0	3.10	ug/L	1		8260D	Total/NA
Chloroethane	1.85	J	4.00	0.790	ug/L	1		8260D	Total/NA
Toluene	3.01		1.00	0.430	ug/L	1		8260D	Total/NA
Arsenic	0.00229		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0996		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00374		0.000500	0.000170	mg/L	1		6020B	Total/NA
Total Suspended Solids	19.0		7.50	5.55	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-4-93 — Lab Sample ID: 310-283669-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.77	J	10.0	3.10	ug/L	1		8260D	Total/NA
Benzene	0.294	J	0.500	0.220	ug/L	1		8260D	Total/NA
Chlorobenzene	18.9		1.00	0.400	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.461	J	1.00	0.210	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	2.01		1.00	0.230	ug/L	1		8260D	Total/NA
1,1-Dichloroethane	1.13		1.00	0.220	ug/L	1		8260D	Total/NA
Arsenic	0.00351		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0292		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.0164		0.000500	0.000170	mg/L	1		6020B	Total/NA
Copper	0.00253	J	0.00500	0.00180	mg/L	1		6020B	Total/NA
Lead	0.000427	J	0.000500	0.000260	mg/L	1		6020B	Total/NA
Nickel	0.0756		0.00500	0.00210	mg/L	1		6020B	Total/NA
Vanadium	0.0109		0.00500	0.00110	mg/L	1		6020B	Total/NA
Total Suspended Solids	16.8		1.88	1.39	mg/L	1		I-3765-85	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Client Sample ID: MW-7-93 — Lab Sample ID: 310-283669-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.000697	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0735		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00902		0.000500	0.000170	mg/L	1		6020B	Total/NA
Copper	0.00419	J	0.00500	0.00180	mg/L	1		6020B	Total/NA
Nickel	0.0575		0.00500	0.00210	mg/L	1		6020B	Total/NA

Client Sample ID: MW-37 — Lab Sample ID: 310-283669-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.584		0.500	0.220	ug/L	1		8260D	Total/NA
Chlorobenzene	2.57		1.00	0.400	ug/L	1		8260D	Total/NA
Chloroethane	13.2		4.00	0.790	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	3.21		1.00	0.210	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	0.241	J	1.00	0.230	ug/L	1		8260D	Total/NA
1,1-Dichloroethane	58.0		1.00	0.220	ug/L	1		8260D	Total/NA
1,1-Dichloroethene	4.00		2.00	0.560	ug/L	1		8260D	Total/NA
1,2-Dichloropropane	0.355	J	1.00	0.270	ug/L	1		8260D	Total/NA
Trichloroethene	0.665	J	1.00	0.430	ug/L	1		8260D	Total/NA
Vinyl chloride	0.712	J	1.00	0.180	ug/L	1		8260D	Total/NA
Arsenic	0.00126	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0178		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00706		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0395		0.00500	0.00210	mg/L	1		6020B	Total/NA
Total Suspended Solids	11.7		5.00	3.70	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-38 — Lab Sample ID: 310-283669-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.354		0.00200	0.000660	mg/L	1		6020B	Total/NA

Client Sample ID: MW-39R — Lab Sample ID: 310-283669-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.654		0.500	0.220	ug/L	1		8260D	Total/NA
Chloroethane	2.05	J	4.00	0.790	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	21.7		1.00	0.210	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	0.523	J	1.00	0.230	ug/L	1		8260D	Total/NA
Dichlorodifluoromethane	13.8		3.00	0.250	ug/L	1		8260D	Total/NA
1,1-Dichloroethane	49.7		1.00	0.220	ug/L	1		8260D	Total/NA
1,2-Dichloropropane	0.469	J	1.00	0.270	ug/L	1		8260D	Total/NA
Trichloroethene	4.61		1.00	0.430	ug/L	1		8260D	Total/NA
Vinyl chloride	1.02		1.00	0.180	ug/L	1		8260D	Total/NA
Arsenic	0.00129	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.185		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00128		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0150		0.00500	0.00210	mg/L	1		6020B	Total/NA
Total Suspended Solids	10.5		1.88	1.39	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-40R — Lab Sample ID: 310-283669-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0835		0.00200	0.000660	mg/L	1		6020B	Total/NA
Total Suspended Solids	2.13		1.88	1.39	mg/L	1		I-3765-85	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Detection Summary

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Client Sample ID: MW-7-90R — Lab Sample ID: 310-283669-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dichlorobenzene	0.669	J	1.00	0.230	ug/L	1		8260D	Total/NA
Arsenic	0.00886		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.659		0.00200	0.000660	mg/L	1		6020B	Total/NA
Nickel	0.00374	J	0.00500	0.00210	mg/L	1		6020B	Total/NA
Zinc	0.0188	J	0.0200	0.00970	mg/L	1		6020B	Total/NA
Total Suspended Solids	3.38		1.88	1.39	mg/L	1		I-3765-85	Total/NA

Client Sample ID: Trip Blank 1 — Lab Sample ID: 310-283669-12

No Detections.

Client Sample ID: Trip Blank 2 — Lab Sample ID: 310-283669-13

No Detections.

Client Sample ID: Trip Blank 3 — Lab Sample ID: 310-283669-14

No Detections.

This Detection Summary does not include radiochemical test results.

Quantitation Limit Exceptions Summary

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (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	Groundwater	Total/NA	ug/L	1.20	5
8260D	1,2-Dibromo-3-Chloropropane	Trip Blank	Total/NA	ug/L	1.20	5
8260D	1,2-Dibromoethane (EDB)	Groundwater	Total/NA	ug/L	0.340	1
8260D	1,2-Dibromoethane (EDB)	Trip Blank	Total/NA	ug/L	0.340	1

Client: SCS Engineers
Project/Site: Des Moines County Regional LF (HMSP)

Job ID: 310-283669-1

Client Sample ID: MW-4-89
Date Collected: 06/13/24 11:40
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-1
Matrix: Groundwater

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			06/19/24 09:45	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/19/24 09:45	1
Benzene	<0.500		0.500	0.220	ug/L			06/19/24 09:45	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/19/24 09:45	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/19/24 09:45	1
Bromoform	<5.00		5.00	0.780	ug/L			06/19/24 09:45	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/19/24 09:45	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/19/24 09:45	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/19/24 09:45	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/19/24 09:45	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/19/24 09:45	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/19/24 09:45	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/19/24 09:45	1
Chloroform	<3.00		3.00	1.30	ug/L			06/19/24 09:45	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/19/24 09:45	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/19/24 09:45	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/19/24 09:45	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/19/24 09:45	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/19/24 09:45	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/19/24 09:45	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/19/24 09:45	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/19/24 09:45	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/19/24 09:45	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/19/24 09:45	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/19/24 09:45	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/19/24 09:45	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/19/24 09:45	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/19/24 09:45	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/19/24 09:45	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/19/24 09:45	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/19/24 09:45	1
Styrene	<1.00		1.00	0.370	ug/L			06/19/24 09:45	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/19/24 09:45	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/19/24 09:45	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/19/24 09:45	1
Toluene	<1.00		1.00	0.430	ug/L			06/19/24 09:45	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/19/24 09:45	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/19/24 09:45	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/19/24 09:45	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/19/24 09:45	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/19/24 09:45	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/19/24 09:45	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/19/24 09:45	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/19/24 09:45	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/19/24 09:45	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/19/24 09:45	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/19/24 09:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/19/24 09:45*	*1*

Client: SCS Engineers
Project/Site: Des Moines County Regional LF (HMSP)

Job ID: 310-283669-1

Client Sample ID: MW-4-89

Date Collected: 06/13/24 11:40
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-1

Matrix: Groundwater

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*97*		*73 - 130*		*06/19/24 09:45*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*06/19/24 09:45*	*1*

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0962		0.0962	0.00962	ug/L		06/19/24 07:06	06/19/24 20:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*107*		*10 - 136*	*06/19/24 07:06*	*06/19/24 20:45*	*1*
Tetrachloro-m-xylene (Surr)	*99*		*10 - 130*	*06/19/24 07:06*	*06/19/24 20:45*	*1*

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		06/18/24 09:00	07/12/24 15:41	1
Barium	**0.0797**		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 22:25	1
Chromium	<0.00500		0.00500	0.00120	mg/L		06/18/24 09:00	07/11/24 22:25	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		06/18/24 09:00	07/11/24 22:25	1
Copper	<0.00500		0.00500	0.00180	mg/L		06/18/24 09:00	07/11/24 22:25	1
Lead	<0.000500		0.000500	0.000260	mg/L		06/18/24 09:00	07/11/24 22:25	1
Nickel	<0.00500		0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 22:25	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/24 09:00	07/11/24 22:25	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/18/24 09:00	07/11/24 22:25	1
Zinc	<0.0200		0.0200	0.00970	mg/L		06/18/24 09:00	07/11/24 22:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.39	mg/L			06/19/24 09:51	1

Client: SCS Engineers
Project/Site: Des Moines County Regional LF (HMSP)

Job ID: 310-283669-1

Client Sample ID: MW-1-99
Date Collected: 06/12/24 09:30
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-2
Matrix: Groundwater

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			06/19/24 10:07	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/19/24 10:07	1
Benzene	<0.500		0.500	0.220	ug/L			06/19/24 10:07	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/19/24 10:07	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/19/24 10:07	1
Bromoform	<5.00		5.00	0.780	ug/L			06/19/24 10:07	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/19/24 10:07	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/19/24 10:07	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/19/24 10:07	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/19/24 10:07	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/19/24 10:07	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/19/24 10:07	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/19/24 10:07	1
Chloroform	<3.00		3.00	1.30	ug/L			06/19/24 10:07	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/19/24 10:07	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/19/24 10:07	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/19/24 10:07	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/19/24 10:07	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/19/24 10:07	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/19/24 10:07	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/19/24 10:07	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/19/24 10:07	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/19/24 10:07	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/19/24 10:07	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/19/24 10:07	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/19/24 10:07	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/19/24 10:07	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/19/24 10:07	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/19/24 10:07	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/19/24 10:07	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/19/24 10:07	1
Styrene	<1.00		1.00	0.370	ug/L			06/19/24 10:07	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/19/24 10:07	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/19/24 10:07	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/19/24 10:07	1
Toluene	<1.00		1.00	0.430	ug/L			06/19/24 10:07	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/19/24 10:07	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/19/24 10:07	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/19/24 10:07	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/19/24 10:07	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/19/24 10:07	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/19/24 10:07	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/19/24 10:07	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/19/24 10:07	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/19/24 10:07	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/19/24 10:07	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/19/24 10:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*06/19/24 10:07*	*1*

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Client Sample ID: MW-1-99
Lab Sample ID: 310-283669-2
Date Collected: 06/12/24 09:30
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*96*		*73 - 130*		*06/19/24 10:07*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*06/19/24 10:07*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00143**	**J**	0.00200	0.000530	mg/L		06/18/24 09:00	07/12/24 15:43	1
Barium	**0.0273**		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 22:28	1
Chromium	<0.00500		0.00500	0.00120	mg/L		06/18/24 09:00	07/11/24 22:28	1
Cobalt	**0.00213**		0.000500	0.000170	mg/L		06/18/24 09:00	07/11/24 22:28	1
Copper	**0.00201**	**J**	0.00500	0.00180	mg/L		06/18/24 09:00	07/11/24 22:28	1
Lead	<0.000500		0.000500	0.000260	mg/L		06/18/24 09:00	07/11/24 22:28	1
Nickel	<0.00500		0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 22:28	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/24 09:00	07/11/24 22:28	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/18/24 09:00	07/11/24 22:28	1
Zinc	<0.0200		0.0200	0.00970	mg/L		06/18/24 09:00	07/11/24 22:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**4.88**		1.88	1.39	mg/L			06/17/24 11:46	1

Client: SCS Engineers
Project/Site: Des Moines County Regional LF (HMSP)

Job ID: 310-283669-1

Client Sample ID: MW-2-93
Date Collected: 06/12/24 14:05
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-3
Matrix: Groundwater

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			06/20/24 13:07	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/20/24 13:07	1
Benzene	<0.500		0.500	0.220	ug/L			06/20/24 13:07	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/20/24 13:07	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/20/24 13:07	1
Bromoform	<5.00		5.00	0.780	ug/L			06/20/24 13:07	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/20/24 13:07	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/20/24 13:07	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/20/24 13:07	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/20/24 13:07	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/20/24 13:07	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/20/24 13:07	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/20/24 13:07	1
Chloroform	<3.00		3.00	1.30	ug/L			06/20/24 13:07	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/20/24 13:07	1
cis-1,2-Dichloroethene	**1.65**		1.00	0.210	ug/L			06/20/24 13:07	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/20/24 13:07	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/20/24 13:07	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/20/24 13:07	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/20/24 13:07	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/20/24 13:07	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/20/24 13:07	1
1,1-Dichloroethane	**6.74**		1.00	0.220	ug/L			06/20/24 13:07	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/20/24 13:07	1
1,1-Dichloroethene	**3.13**		2.00	0.560	ug/L			06/20/24 13:07	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/20/24 13:07	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/20/24 13:07	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/20/24 13:07	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/20/24 13:07	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/20/24 13:07	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/20/24 13:07	1
Styrene	<1.00		1.00	0.370	ug/L			06/20/24 13:07	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/20/24 13:07	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/20/24 13:07	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/20/24 13:07	1
Toluene	<1.00		1.00	0.430	ug/L			06/20/24 13:07	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/20/24 13:07	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/20/24 13:07	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/20/24 13:07	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/20/24 13:07	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/20/24 13:07	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/20/24 13:07	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/20/24 13:07	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/20/24 13:07	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/20/24 13:07	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/20/24 13:07	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/20/24 13:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*80 - 120*		*06/20/24 13:07*	*1*

Client Sample ID: MW-2-93
Lab Sample ID: 310-283669-3
Date Collected: 06/12/24 14:05
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*114*		*73 - 130*		*06/20/24 13:07*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*06/20/24 13:07*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00150**	**J**	0.00200	0.000530	mg/L		06/18/24 09:00	07/12/24 15:46	1
Barium	**0.204**		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 22:32	1
Nickel	<0.00500		0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 22:32	1
Zinc	<0.0200		0.0200	0.00970	mg/L		06/18/24 09:00	07/11/24 22:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**2.00**		1.88	1.39	mg/L			06/17/24 11:46	1

Client: SCS Engineers
Project/Site: Des Moines County Regional LF (HMSP)

Job ID: 310-283669-1

Client Sample ID: MW-4-90

Date Collected: 06/13/24 13:03
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-4

Matrix: Groundwater

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**3.65**	**J**	10.0	3.10	ug/L			06/19/24 10:30	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/19/24 10:30	1
Benzene	<0.500		0.500	0.220	ug/L			06/19/24 10:30	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/19/24 10:30	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/19/24 10:30	1
Bromoform	<5.00		5.00	0.780	ug/L			06/19/24 10:30	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/19/24 10:30	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/19/24 10:30	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/19/24 10:30	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/19/24 10:30	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/19/24 10:30	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/19/24 10:30	1
Chloroethane	**1.85**	**J**	4.00	0.790	ug/L			06/19/24 10:30	1
Chloroform	<3.00		3.00	1.30	ug/L			06/19/24 10:30	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/19/24 10:30	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/19/24 10:30	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/19/24 10:30	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/19/24 10:30	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/19/24 10:30	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/19/24 10:30	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/19/24 10:30	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/19/24 10:30	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/19/24 10:30	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/19/24 10:30	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/19/24 10:30	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/19/24 10:30	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/19/24 10:30	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/19/24 10:30	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/19/24 10:30	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/19/24 10:30	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/19/24 10:30	1
Styrene	<1.00		1.00	0.370	ug/L			06/19/24 10:30	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/19/24 10:30	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/19/24 10:30	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/19/24 10:30	1
Toluene	**3.01**		1.00	0.430	ug/L			06/19/24 10:30	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/19/24 10:30	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/19/24 10:30	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/19/24 10:30	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/19/24 10:30	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/19/24 10:30	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/19/24 10:30	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/19/24 10:30	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/19/24 10:30	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/19/24 10:30	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/19/24 10:30	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/19/24 10:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*06/19/24 10:30*	*1*

Client Sample ID: MW-4-90
Lab Sample ID: 310-283669-4

Date Collected: 06/13/24 13:03
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*99*		*73 - 130*		*06/19/24 10:30*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*06/19/24 10:30*	*1*

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0902		0.0902	0.00902	ug/L		06/19/24 07:06	06/19/24 20:26	1
Endosulfan sulfate	<0.0902		0.0902	0.0162	ug/L		06/19/24 07:06	06/19/24 20:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*104*		*10 - 136*	*06/19/24 07:06*	*06/19/24 20:26*	*1*
Tetrachloro-m-xylene	*98*		*10 - 130*	*06/19/24 07:06*	*06/19/24 20:26*	*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		06/18/24 09:00	07/12/24 15:48	1
Arsenic	**0.00229**		0.00200	0.000530	mg/L		06/18/24 09:00	07/12/24 15:48	1
Barium	**0.0996**		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 22:36	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/18/24 09:00	07/11/24 22:36	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		06/18/24 09:00	07/11/24 22:36	1
Chromium	<0.00500		0.00500	0.00120	mg/L		06/18/24 09:00	07/11/24 22:36	1
Cobalt	**0.00374**		0.000500	0.000170	mg/L		06/18/24 09:00	07/11/24 22:36	1
Copper	<0.00500		0.00500	0.00180	mg/L		06/18/24 09:00	07/11/24 22:36	1
Lead	<0.000500		0.000500	0.000260	mg/L		06/18/24 09:00	07/11/24 22:36	1
Nickel	<0.00500		0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 22:36	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/24 09:00	07/11/24 22:36	1
Silver	<0.00100	*+	0.00100	0.000500	mg/L		06/18/24 09:00	07/11/24 22:36	1
Thallium	<0.00100	*+	0.00100	0.000570	mg/L		06/18/24 09:00	07/11/24 22:36	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/18/24 09:00	07/11/24 22:36	1
Zinc	<0.0200		0.0200	0.00970	mg/L		06/18/24 09:00	07/11/24 22:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**19.0**		7.50	5.55	mg/L			06/19/24 09:51	1

Client: SCS Engineers
Project/Site: Des Moines County Regional LF (HMSP)

Job ID: 310-283669-1

Client Sample ID: MW-4-93

Date Collected: 06/13/24 17:00
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-5

Matrix: Groundwater

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**3.77**	**J**	10.0	3.10	ug/L			06/19/24 10:52	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/19/24 10:52	1
Benzene	**0.294**	**J**	0.500	0.220	ug/L			06/19/24 10:52	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/19/24 10:52	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/19/24 10:52	1
Bromoform	<5.00		5.00	0.780	ug/L			06/19/24 10:52	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/19/24 10:52	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/19/24 10:52	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/19/24 10:52	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/19/24 10:52	1
Chlorobenzene	**18.9**		1.00	0.400	ug/L			06/19/24 10:52	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/19/24 10:52	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/19/24 10:52	1
Chloroform	<3.00		3.00	1.30	ug/L			06/19/24 10:52	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/19/24 10:52	1
cis-1,2-Dichloroethene	**0.461**	**J**	1.00	0.210	ug/L			06/19/24 10:52	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/19/24 10:52	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/19/24 10:52	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/19/24 10:52	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/19/24 10:52	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/19/24 10:52	1
1,4-Dichlorobenzene	**2.01**		1.00	0.230	ug/L			06/19/24 10:52	1
1,1-Dichloroethane	**1.13**		1.00	0.220	ug/L			06/19/24 10:52	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/19/24 10:52	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/19/24 10:52	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/19/24 10:52	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/19/24 10:52	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/19/24 10:52	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/19/24 10:52	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/19/24 10:52	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/19/24 10:52	1
Styrene	<1.00		1.00	0.370	ug/L			06/19/24 10:52	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/19/24 10:52	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/19/24 10:52	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/19/24 10:52	1
Toluene	<1.00		1.00	0.430	ug/L			06/19/24 10:52	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/19/24 10:52	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/19/24 10:52	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/19/24 10:52	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/19/24 10:52	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/19/24 10:52	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/19/24 10:52	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/19/24 10:52	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/19/24 10:52	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/19/24 10:52	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/19/24 10:52	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/19/24 10:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*06/19/24 10:52*	*1*

Client Sample ID: MW-4-93
Date Collected: 06/13/24 17:00
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-5
Matrix: Groundwater

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*105*		*73 - 130*		*06/19/24 10:52*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*06/19/24 10:52*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methylphenol (and/or 3-Methylphenol)	<10.0		10.0	0.700	ug/L		06/20/24 08:00	06/24/24 16:19	1
Phenol	<10.0		10.0	1.10	ug/L		06/20/24 08:00	06/24/24 16:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*45*		*25 - 110*	*06/20/24 08:00*	*06/24/24 16:19*	*1*
Phenol-d5 (Surr)	*37*		*21 - 110*	*06/20/24 08:00*	*06/24/24 16:19*	*1*
2,4,6-Tribromophenol (Surr)	*56*		*27 - 136*	*06/20/24 08:00*	*06/24/24 16:19*	*1*

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDT	<0.0893	F2	0.0893	0.0179	ug/L		06/19/24 07:06	06/19/24 13:05	1
Endrin aldehyde	<0.0893		0.0893	0.0241	ug/L		06/19/24 07:06	06/19/24 13:05	1
Methoxychlor	<0.0893		0.0893	0.0286	ug/L		06/19/24 07:06	06/19/24 13:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*109*		*10 - 136*	*06/19/24 07:06*	*06/19/24 13:05*	*1*
Tetrachloro-m-xylene (Surr)	*95*		*10 - 130*	*06/19/24 07:06*	*06/19/24 13:05*	*1*

Method: SW846 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	<0.624		0.624	0.260	ug/L		06/19/24 18:06	06/21/24 16:38	1
Silvex (2,4,5-TP)	<0.0520		0.0520	0.0229	ug/L		06/19/24 18:06	06/21/24 16:38	1
2,4,5-T	<0.156		0.156	0.0676	ug/L		06/19/24 18:06	06/21/24 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid (Surr)	*79*		*34 - 142*	*06/19/24 18:06*	*06/21/24 16:38*	*1*
2,4-Dichlorophenylacetic acid (Surr)	*82*		*34 - 142*	*06/19/24 18:06*	*06/21/24 16:38*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00351**		0.00200	0.000530	mg/L		06/18/24 09:00	07/12/24 15:50	1
Barium	**0.0292**		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 22:39	1
Chromium	<0.00500		0.00500	0.00120	mg/L		06/18/24 09:00	07/11/24 22:39	1
Cobalt	**0.0164**		0.000500	0.000170	mg/L		06/18/24 09:00	07/11/24 22:39	1
Copper	**0.00253**	**J**	0.00500	0.00180	mg/L		06/18/24 09:00	07/11/24 22:39	1
Lead	**0.000427**	**J**	0.000500	0.000260	mg/L		06/18/24 09:00	07/11/24 22:39	1
Nickel	**0.0756**		0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 22:39	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/24 09:00	07/11/24 22:39	1
Vanadium	**0.0109**		0.00500	0.00110	mg/L		06/18/24 09:00	07/11/24 22:39	1
Zinc	<0.0200		0.0200	0.00970	mg/L		06/18/24 09:00	07/11/24 22:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide (SW846 9034)	<1.00		1.00	0.231	mg/L		06/18/24 18:25	06/18/24 20:46	1

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Client Sample ID: MW-4-93
Lab Sample ID: 310-283669-5
Date Collected: 06/13/24 17:00
Matrix: Groundwater
Date Received: 06/14/24 17:00

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	16.8		1.88	1.39	mg/L			06/19/24 09:51	1

Client: SCS Engineers
Project/Site: Des Moines County Regional LF (HMSP)

Job ID: 310-283669-1

Client Sample ID: MW-7-93
Date Collected: 06/11/24 14:58
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-6
Matrix: Groundwater

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			06/20/24 13:29	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/20/24 13:29	1
Benzene	<0.500		0.500	0.220	ug/L			06/20/24 13:29	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/20/24 13:29	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/20/24 13:29	1
Bromoform	<5.00		5.00	0.780	ug/L			06/20/24 13:29	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/20/24 13:29	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/20/24 13:29	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/20/24 13:29	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/20/24 13:29	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/20/24 13:29	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/20/24 13:29	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/20/24 13:29	1
Chloroform	<3.00		3.00	1.30	ug/L			06/20/24 13:29	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/20/24 13:29	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/20/24 13:29	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/20/24 13:29	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/20/24 13:29	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/20/24 13:29	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/20/24 13:29	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/20/24 13:29	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/20/24 13:29	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/20/24 13:29	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/20/24 13:29	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/20/24 13:29	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/20/24 13:29	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/20/24 13:29	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/20/24 13:29	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/20/24 13:29	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/20/24 13:29	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/20/24 13:29	1
Styrene	<1.00		1.00	0.370	ug/L			06/20/24 13:29	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/20/24 13:29	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/20/24 13:29	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/20/24 13:29	1
Toluene	<1.00		1.00	0.430	ug/L			06/20/24 13:29	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/20/24 13:29	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/20/24 13:29	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/20/24 13:29	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/20/24 13:29	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/20/24 13:29	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/20/24 13:29	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/20/24 13:29	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/20/24 13:29	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/20/24 13:29	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/20/24 13:29	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/20/24 13:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*80 - 120*		*06/20/24 13:29*	*1*

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Client Sample ID: MW-7-93
Lab Sample ID: 310-283669-6
Date Collected: 06/11/24 14:58
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*111*		*73 - 130*		*06/20/24 13:29*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*06/20/24 13:29*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.000697**	**J**	0.00200	0.000530	mg/L		06/18/24 09:00	07/12/24 15:52	1
Barium	**0.0735**		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 22:43	1
Chromium	<0.00500		0.00500	0.00120	mg/L		06/18/24 09:00	07/11/24 22:43	1
Cobalt	**0.00902**		0.000500	0.000170	mg/L		06/18/24 09:00	07/11/24 22:43	1
Copper	**0.00419**	**J**	0.00500	0.00180	mg/L		06/18/24 09:00	07/11/24 22:43	1
Lead	<0.000500		0.000500	0.000260	mg/L		06/18/24 09:00	07/11/24 22:43	1
Nickel	**0.0575**		0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 22:43	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/24 09:00	07/11/24 22:43	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/18/24 09:00	07/11/24 22:43	1
Zinc	<0.0200		0.0200	0.00970	mg/L		06/18/24 09:00	07/11/24 22:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.39	mg/L			06/17/24 10:43	1

Client: SCS Engineers
Project/Site: Des Moines County Regional LF (HMSP)

Job ID: 310-283669-1

Client Sample ID: MW-37

Date Collected: 06/11/24 15:46
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-7

Matrix: Groundwater

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			06/20/24 13:50	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/20/24 13:50	1
Benzene	**0.584**		0.500	0.220	ug/L			06/20/24 13:50	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/20/24 13:50	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/20/24 13:50	1
Bromoform	<5.00		5.00	0.780	ug/L			06/20/24 13:50	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/20/24 13:50	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/20/24 13:50	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/20/24 13:50	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/20/24 13:50	1
Chlorobenzene	**2.57**		1.00	0.400	ug/L			06/20/24 13:50	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/20/24 13:50	1
Chloroethane	**13.2**		4.00	0.790	ug/L			06/20/24 13:50	1
Chloroform	<3.00		3.00	1.30	ug/L			06/20/24 13:50	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/20/24 13:50	1
cis-1,2-Dichloroethene	**3.21**		1.00	0.210	ug/L			06/20/24 13:50	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/20/24 13:50	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/20/24 13:50	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/20/24 13:50	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/20/24 13:50	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/20/24 13:50	1
1,4-Dichlorobenzene	**0.241**	**J**	1.00	0.230	ug/L			06/20/24 13:50	1
1,1-Dichloroethane	**58.0**		1.00	0.220	ug/L			06/20/24 13:50	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/20/24 13:50	1
1,1-Dichloroethene	**4.00**		2.00	0.560	ug/L			06/20/24 13:50	1
1,2-Dichloropropane	**0.355**	**J**	1.00	0.270	ug/L			06/20/24 13:50	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/20/24 13:50	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/20/24 13:50	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/20/24 13:50	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/20/24 13:50	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/20/24 13:50	1
Styrene	<1.00		1.00	0.370	ug/L			06/20/24 13:50	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/20/24 13:50	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/20/24 13:50	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/20/24 13:50	1
Toluene	<1.00		1.00	0.430	ug/L			06/20/24 13:50	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/20/24 13:50	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/20/24 13:50	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/20/24 13:50	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/20/24 13:50	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/20/24 13:50	1
Trichloroethene	**0.665**	**J**	1.00	0.430	ug/L			06/20/24 13:50	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/20/24 13:50	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/20/24 13:50	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/20/24 13:50	1
Vinyl chloride	**0.712**	**J**	1.00	0.180	ug/L			06/20/24 13:50	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/20/24 13:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*80 - 120*		*06/20/24 13:50*	*1*

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Client Sample ID: MW-37
Lab Sample ID: 310-283669-7
Date Collected: 06/11/24 15:46
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*118*		*73 - 130*		*06/20/24 13:50*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*06/20/24 13:50*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00126**	**J**	0.00200	0.000530	mg/L		06/18/24 09:00	07/12/24 16:03	1
Barium	**0.0178**		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 22:47	1
Chromium	<0.00500		0.00500	0.00120	mg/L		06/18/24 09:00	07/11/24 22:47	1
Cobalt	**0.00706**		0.000500	0.000170	mg/L		06/18/24 09:00	07/11/24 22:47	1
Copper	<0.00500		0.00500	0.00180	mg/L		06/18/24 09:00	07/11/24 22:47	1
Lead	<0.000500		0.000500	0.000260	mg/L		06/18/24 09:00	07/11/24 22:47	1
Nickel	**0.0395**		0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 22:47	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/24 09:00	07/11/24 22:47	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/18/24 09:00	07/11/24 22:47	1
Zinc	<0.0200		0.0200	0.00970	mg/L		06/18/24 09:00	07/11/24 22:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**11.7**		5.00	3.70	mg/L			06/17/24 10:43	1

Client: SCS Engineers
Project/Site: Des Moines County Regional LF (HMSP)

Job ID: 310-283669-1

Client Sample ID: MW-38
Date Collected: 06/11/24 18:21
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-8
Matrix: Groundwater

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			06/20/24 14:12	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/20/24 14:12	1
Benzene	<0.500		0.500	0.220	ug/L			06/20/24 14:12	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/20/24 14:12	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/20/24 14:12	1
Bromoform	<5.00		5.00	0.780	ug/L			06/20/24 14:12	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/20/24 14:12	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/20/24 14:12	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/20/24 14:12	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/20/24 14:12	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/20/24 14:12	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/20/24 14:12	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/20/24 14:12	1
Chloroform	<3.00		3.00	1.30	ug/L			06/20/24 14:12	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/20/24 14:12	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/20/24 14:12	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/20/24 14:12	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/20/24 14:12	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/20/24 14:12	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/20/24 14:12	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/20/24 14:12	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/20/24 14:12	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/20/24 14:12	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/20/24 14:12	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/20/24 14:12	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/20/24 14:12	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/20/24 14:12	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/20/24 14:12	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/20/24 14:12	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/20/24 14:12	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/20/24 14:12	1
Styrene	<1.00		1.00	0.370	ug/L			06/20/24 14:12	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/20/24 14:12	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/20/24 14:12	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/20/24 14:12	1
Toluene	<1.00		1.00	0.430	ug/L			06/20/24 14:12	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/20/24 14:12	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/20/24 14:12	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/20/24 14:12	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/20/24 14:12	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/20/24 14:12	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/20/24 14:12	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/20/24 14:12	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/20/24 14:12	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/20/24 14:12	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/20/24 14:12	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/20/24 14:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*80 - 120*		*06/20/24 14:12*	*1*

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Client Sample ID: MW-38
Lab Sample ID: 310-283669-8
Date Collected: 06/11/24 18:21
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*116*		*73 - 130*		*06/20/24 14:12*	*1*
Toluene-d8 (Surr)	*89*		*80 - 120*		*06/20/24 14:12*	*1*

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		06/18/24 09:00	07/12/24 16:05	1
Barium	**0.354**		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 22:50	1
Nickel	<0.00500		0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 22:50	1
Zinc	<0.0200		0.0200	0.00970	mg/L		06/18/24 09:00	07/11/24 22:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.39	mg/L			06/17/24 10:43	1

Client: SCS Engineers
Project/Site: Des Moines County Regional LF (HMSP)

Job ID: 310-283669-1

Client Sample ID: MW-39R
Date Collected: 06/11/24 08:17
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-9
Matrix: Groundwater

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			06/20/24 14:34	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/20/24 14:34	1
Benzene	**0.654**		0.500	0.220	ug/L			06/20/24 14:34	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/20/24 14:34	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/20/24 14:34	1
Bromoform	<5.00		5.00	0.780	ug/L			06/20/24 14:34	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/20/24 14:34	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/20/24 14:34	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/20/24 14:34	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/20/24 14:34	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/20/24 14:34	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/20/24 14:34	1
Chloroethane	**2.05**	**J**	4.00	0.790	ug/L			06/20/24 14:34	1
Chloroform	<3.00		3.00	1.30	ug/L			06/20/24 14:34	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/20/24 14:34	1
cis-1,2-Dichloroethene	**21.7**		1.00	0.210	ug/L			06/20/24 14:34	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/20/24 14:34	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/20/24 14:34	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/20/24 14:34	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/20/24 14:34	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/20/24 14:34	1
1,4-Dichlorobenzene	**0.523**	**J**	1.00	0.230	ug/L			06/20/24 14:34	1
Dichlorodifluoromethane	**13.8**		3.00	0.250	ug/L			06/20/24 14:34	1
1,1-Dichloroethane	**49.7**		1.00	0.220	ug/L			06/20/24 14:34	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/20/24 14:34	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/20/24 14:34	1
1,2-Dichloropropane	**0.469**	**J**	1.00	0.270	ug/L			06/20/24 14:34	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/20/24 14:34	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/20/24 14:34	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/20/24 14:34	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/20/24 14:34	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/20/24 14:34	1
Styrene	<1.00		1.00	0.370	ug/L			06/20/24 14:34	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/20/24 14:34	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/20/24 14:34	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/20/24 14:34	1
Toluene	<1.00		1.00	0.430	ug/L			06/20/24 14:34	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/20/24 14:34	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/20/24 14:34	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/20/24 14:34	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/20/24 14:34	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/20/24 14:34	1
Trichloroethene	**4.61**		1.00	0.430	ug/L			06/20/24 14:34	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/20/24 14:34	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/20/24 14:34	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/20/24 14:34	1
Vinyl chloride	**1.02**		1.00	0.180	ug/L			06/20/24 14:34	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/20/24 14:34	1

Client Sample ID: MW-39R
Lab Sample ID: 310-283669-9
Date Collected: 06/11/24 08:17
Matrix: Groundwater
Date Received: 06/14/24 17:00

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*80 - 120*		*06/20/24 14:34*	*1*
Dibromofluoromethane (Surr)	*117*		*73 - 130*		*06/20/24 14:34*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*06/20/24 14:34*	*1*

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0895		0.0895	0.00895	ug/L		06/18/24 13:01	06/18/24 17:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*114*		*10 - 136*	*06/18/24 13:01*	*06/18/24 17:54*	*1*
Tetrachloro-m-xylene (Surr)	*116*		*10 - 130*	*06/18/24 13:01*	*06/18/24 17:54*	*1*

Method: SW846 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	<1.06		1.06	0.324	ug/L		06/18/24 17:17	06/20/24 17:06	1
Silvex (2,4,5-TP)	<1.06		1.06	0.0881	ug/L		06/18/24 17:17	06/20/24 17:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCAA	*88*		*25 - 130*	*06/18/24 17:17*	*06/20/24 17:06*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00129**	**J**	0.00200	0.000530	mg/L		06/18/24 09:00	07/12/24 16:08	1
Barium	**0.185**		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 22:54	1
Chromium	<0.00500		0.00500	0.00120	mg/L		06/18/24 09:00	07/11/24 22:54	1
Cobalt	**0.00128**		0.000500	0.000170	mg/L		06/18/24 09:00	07/11/24 22:54	1
Copper	<0.00500		0.00500	0.00180	mg/L		06/18/24 09:00	07/11/24 22:54	1
Lead	<0.000500		0.000500	0.000260	mg/L		06/18/24 09:00	07/11/24 22:54	1
Nickel	**0.0150**		0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 22:54	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/24 09:00	07/11/24 22:54	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/18/24 09:00	07/11/24 22:54	1
Zinc	<0.0200		0.0200	0.00970	mg/L		06/18/24 09:00	07/11/24 22:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**10.5**		1.88	1.39	mg/L			06/17/24 10:43	1

Client: SCS Engineers
Project/Site: Des Moines County Regional LF (HMSP)

Job ID: 310-283669-1

Client Sample ID: MW-40R
Date Collected: 06/11/24 13:39
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-10
Matrix: Groundwater

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			06/20/24 14:56	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/20/24 14:56	1
Benzene	<0.500		0.500	0.220	ug/L			06/20/24 14:56	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/20/24 14:56	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/20/24 14:56	1
Bromoform	<5.00		5.00	0.780	ug/L			06/20/24 14:56	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/20/24 14:56	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/20/24 14:56	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/20/24 14:56	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/20/24 14:56	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/20/24 14:56	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/20/24 14:56	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/20/24 14:56	1
Chloroform	<3.00		3.00	1.30	ug/L			06/20/24 14:56	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/20/24 14:56	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/20/24 14:56	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/20/24 14:56	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/20/24 14:56	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/20/24 14:56	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/20/24 14:56	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/20/24 14:56	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/20/24 14:56	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/20/24 14:56	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/20/24 14:56	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/20/24 14:56	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/20/24 14:56	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/20/24 14:56	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/20/24 14:56	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/20/24 14:56	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/20/24 14:56	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/20/24 14:56	1
Styrene	<1.00		1.00	0.370	ug/L			06/20/24 14:56	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/20/24 14:56	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/20/24 14:56	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/20/24 14:56	1
Toluene	<1.00		1.00	0.430	ug/L			06/20/24 14:56	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/20/24 14:56	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/20/24 14:56	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/20/24 14:56	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/20/24 14:56	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/20/24 14:56	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/20/24 14:56	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/20/24 14:56	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/20/24 14:56	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/20/24 14:56	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/20/24 14:56	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/20/24 14:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*		*06/20/24 14:56*	*1*

Client: SCS Engineers
Project/Site: Des Moines County Regional LF (HMSP)

Job ID: 310-283669-1

Client Sample ID: MW-40R

Date Collected: 06/11/24 13:39
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-10

Matrix: Groundwater

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*116*		*73 - 130*		*06/20/24 14:56*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*06/20/24 14:56*	*1*

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0938		0.0938	0.00938	ug/L		06/18/24 13:01	06/18/24 18:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*89*		*10 - 136*	*06/18/24 13:01*	*06/18/24 18:32*	*1*
Tetrachloro-m-xylene (Surr)	*92*		*10 - 130*	*06/18/24 13:01*	*06/18/24 18:32*	*1*

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		06/18/24 09:00	07/12/24 16:10	1
Barium	**0.0835**		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 22:58	1
Chromium	<0.00500		0.00500	0.00120	mg/L		06/18/24 09:00	07/11/24 22:58	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		06/18/24 09:00	07/11/24 22:58	1
Copper	<0.00500		0.00500	0.00180	mg/L		06/18/24 09:00	07/11/24 22:58	1
Lead	<0.000500		0.000500	0.000260	mg/L		06/18/24 09:00	07/11/24 22:58	1
Nickel	<0.00500		0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 22:58	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/24 09:00	07/11/24 22:58	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/18/24 09:00	07/11/24 22:58	1
Zinc	<0.0200		0.0200	0.00970	mg/L		06/18/24 09:00	07/11/24 22:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**2.13**		1.88	1.39	mg/L			06/17/24 10:43	1

Client: SCS Engineers
Project/Site: Des Moines County Regional LF (HMSP)

Job ID: 310-283669-1

Client Sample ID: MW-7-90R

Date Collected: 06/11/24 17:33
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-11

Matrix: Groundwater

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			06/20/24 15:17	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/20/24 15:17	1
Benzene	<0.500		0.500	0.220	ug/L			06/20/24 15:17	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/20/24 15:17	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/20/24 15:17	1
Bromoform	<5.00		5.00	0.780	ug/L			06/20/24 15:17	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/20/24 15:17	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/20/24 15:17	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/20/24 15:17	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/20/24 15:17	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/20/24 15:17	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/20/24 15:17	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/20/24 15:17	1
Chloroform	<3.00		3.00	1.30	ug/L			06/20/24 15:17	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/20/24 15:17	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/20/24 15:17	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/20/24 15:17	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/20/24 15:17	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/20/24 15:17	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/20/24 15:17	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/20/24 15:17	1
1,4-Dichlorobenzene	**0.669**	**J**	1.00	0.230	ug/L			06/20/24 15:17	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/20/24 15:17	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/20/24 15:17	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/20/24 15:17	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/20/24 15:17	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/20/24 15:17	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/20/24 15:17	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/20/24 15:17	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/20/24 15:17	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/20/24 15:17	1
Styrene	<1.00		1.00	0.370	ug/L			06/20/24 15:17	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/20/24 15:17	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/20/24 15:17	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/20/24 15:17	1
Toluene	<1.00		1.00	0.430	ug/L			06/20/24 15:17	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/20/24 15:17	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/20/24 15:17	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/20/24 15:17	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/20/24 15:17	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/20/24 15:17	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/20/24 15:17	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/20/24 15:17	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/20/24 15:17	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/20/24 15:17	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/20/24 15:17	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/20/24 15:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*06/20/24 15:17*	*1*

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Client Sample ID: MW-7-90R
Lab Sample ID: 310-283669-11
Date Collected: 06/11/24 17:33
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*119*		*73 - 130*		*06/20/24 15:17*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*06/20/24 15:17*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00886		0.00200	0.000530	mg/L		06/18/24 09:00	07/12/24 16:14	1
Barium	0.659		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 23:20	1
Nickel	0.00374	J	0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 23:20	1
Zinc	0.0188	J	0.0200	0.00970	mg/L		06/18/24 09:00	07/12/24 16:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	3.38		1.88	1.39	mg/L			06/17/24 10:43	1

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Client Sample ID: Trip Blank 1
Lab Sample ID: 310-283669-12

Date Collected: 06/11/24 00:00
Matrix: Trip Blank
Date Received: 06/14/24 17:00

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			06/19/24 08:37	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/19/24 08:37	1
Benzene	<0.500		0.500	0.220	ug/L			06/19/24 08:37	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/19/24 08:37	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/19/24 08:37	1
Bromoform	<5.00		5.00	0.780	ug/L			06/19/24 08:37	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/19/24 08:37	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/19/24 08:37	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/19/24 08:37	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/19/24 08:37	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/19/24 08:37	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/19/24 08:37	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/19/24 08:37	1
Chloroform	<3.00		3.00	1.30	ug/L			06/19/24 08:37	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/19/24 08:37	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/19/24 08:37	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/19/24 08:37	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/19/24 08:37	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/19/24 08:37	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/19/24 08:37	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/19/24 08:37	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/19/24 08:37	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/19/24 08:37	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/19/24 08:37	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/19/24 08:37	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/19/24 08:37	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/19/24 08:37	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/19/24 08:37	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/19/24 08:37	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/19/24 08:37	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/19/24 08:37	1
Styrene	<1.00		1.00	0.370	ug/L			06/19/24 08:37	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/19/24 08:37	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/19/24 08:37	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/19/24 08:37	1
Toluene	<1.00		1.00	0.430	ug/L			06/19/24 08:37	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/19/24 08:37	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/19/24 08:37	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/19/24 08:37	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/19/24 08:37	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/19/24 08:37	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/19/24 08:37	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/19/24 08:37	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/19/24 08:37	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/19/24 08:37	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/19/24 08:37	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/19/24 08:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*06/19/24 08:37*	*1*

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Client Sample ID: Trip Blank 1
Lab Sample ID: 310-283669-12
Date Collected: 06/11/24 00:00
Matrix: Trip Blank
Date Received: 06/14/24 17:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	97		73 - 130		06/19/24 08:37	1
Toluene-d8 (Surr)	96		80 - 120		06/19/24 08:37	1

Client: SCS Engineers
Project/Site: Des Moines County Regional LF (HMSP)

Job ID: 310-283669-1

Client Sample ID: Trip Blank 2

Date Collected: 06/11/24 00:00
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-13

Matrix: Trip Blank

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			06/19/24 09:00	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/19/24 09:00	1
Benzene	<0.500		0.500	0.220	ug/L			06/19/24 09:00	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/19/24 09:00	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/19/24 09:00	1
Bromoform	<5.00		5.00	0.780	ug/L			06/19/24 09:00	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/19/24 09:00	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/19/24 09:00	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/19/24 09:00	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/19/24 09:00	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/19/24 09:00	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/19/24 09:00	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/19/24 09:00	1
Chloroform	<3.00		3.00	1.30	ug/L			06/19/24 09:00	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/19/24 09:00	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/19/24 09:00	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/19/24 09:00	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/19/24 09:00	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/19/24 09:00	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/19/24 09:00	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/19/24 09:00	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/19/24 09:00	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/19/24 09:00	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/19/24 09:00	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/19/24 09:00	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/19/24 09:00	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/19/24 09:00	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/19/24 09:00	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/19/24 09:00	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/19/24 09:00	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/19/24 09:00	1
Styrene	<1.00		1.00	0.370	ug/L			06/19/24 09:00	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/19/24 09:00	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/19/24 09:00	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/19/24 09:00	1
Toluene	<1.00		1.00	0.430	ug/L			06/19/24 09:00	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/19/24 09:00	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/19/24 09:00	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/19/24 09:00	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/19/24 09:00	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/19/24 09:00	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/19/24 09:00	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/19/24 09:00	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/19/24 09:00	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/19/24 09:00	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/19/24 09:00	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/19/24 09:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/19/24 09:00*	*1*

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Client Sample ID: Trip Blank 2
Lab Sample ID: 310-283669-13
Date Collected: 06/11/24 00:00
Matrix: Trip Blank
Date Received: 06/14/24 17:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	97		73 - 130		06/19/24 09:00	1
Toluene-d8 (Surr)	96		80 - 120		06/19/24 09:00	1

Client: SCS Engineers
Project/Site: Des Moines County Regional LF (HMSP)

Job ID: 310-283669-1

Client Sample ID: Trip Blank 3

Date Collected: 06/11/24 00:00
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-14

Matrix: Trip Blank

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			06/19/24 09:22	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/19/24 09:22	1
Benzene	<0.500		0.500	0.220	ug/L			06/19/24 09:22	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/19/24 09:22	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/19/24 09:22	1
Bromoform	<5.00		5.00	0.780	ug/L			06/19/24 09:22	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/19/24 09:22	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/19/24 09:22	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/19/24 09:22	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/19/24 09:22	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/19/24 09:22	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/19/24 09:22	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/19/24 09:22	1
Chloroform	<3.00		3.00	1.30	ug/L			06/19/24 09:22	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/19/24 09:22	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/19/24 09:22	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/19/24 09:22	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/19/24 09:22	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/19/24 09:22	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/19/24 09:22	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/19/24 09:22	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/19/24 09:22	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/19/24 09:22	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/19/24 09:22	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/19/24 09:22	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/19/24 09:22	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/19/24 09:22	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/19/24 09:22	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/19/24 09:22	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/19/24 09:22	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/19/24 09:22	1
Styrene	<1.00		1.00	0.370	ug/L			06/19/24 09:22	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/19/24 09:22	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/19/24 09:22	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/19/24 09:22	1
Toluene	<1.00		1.00	0.430	ug/L			06/19/24 09:22	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/19/24 09:22	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/19/24 09:22	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/19/24 09:22	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/19/24 09:22	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/19/24 09:22	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/19/24 09:22	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/19/24 09:22	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/19/24 09:22	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/19/24 09:22	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/19/24 09:22	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/19/24 09:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/19/24 09:22*	*1*

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Client Sample ID: Trip Blank 3
Lab Sample ID: 310-283669-14
Date Collected: 06/11/24 00:00
Matrix: Trip Blank
Date Received: 06/14/24 17:00

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	95		73 - 130		06/19/24 09:22	1
Toluene-d8 (Surr)	95		80 - 120		06/19/24 09:22	1

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Qualifiers

GC/MS VOA

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

GC Semi VOA

Qualifier	Qualifier Description
F2	MS/MSD RPD exceeds control limits

Metals

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: Des Moines County Regional LF (HMSP)

Job ID: 310-283669-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(73-130)	(80-120)
310-283669-1	MW-4-89	102	97	95
310-283669-2	MW-1-99	103	96	96
310-283669-3	MW-2-93	112	114	92
310-283669-3 MS	MW-2-93	103	96	103
310-283669-3 MSD	MW-2-93	103	93	102
310-283669-4	MW-4-90	103	99	96
310-283669-5	MW-4-93	98	105	95
310-283669-6	MW-7-93	113	111	91
310-283669-7	MW-37	115	118	91
310-283669-8	MW-38	113	116	89
310-283669-9	MW-39R	110	117	93
310-283669-10	MW-40R	107	116	91
310-283669-11	MW-7-90R	104	119	92

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(73-130)	(80-120)
310-283669-12	Trip Blank 1	104	97	96
310-283669-13	Trip Blank 2	102	97	96
310-283669-14	Trip Blank 3	102	95	95

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(73-130)	(80-120)
LCS 310-424866/6	Lab Control Sample	102	96	97
LCS 310-424866/7	Lab Control Sample	103	97	95
LCS 310-425101/6	Lab Control Sample	104	91	104
LCS 310-425101/7	Lab Control Sample	113	117	96
MB 310-424866/5	Method Blank	101	99	94
MB 310-425101/5	Method Blank	108	114	94

Surrogate Legend

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

Surrogate Summary

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		2FP	PHL	TBP
Lab Sample ID	Client Sample ID	(25-110)	(21-110)	(27-136)
310-283669-5	MW-4-93	45	37	56

Surrogate Legend

2FP = 2-Fluorophenol (Surr)
PHL = Phenol-d5 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		2FP	PHL	TBP
Lab Sample ID	Client Sample ID	(25-110)	(21-110)	(27-136)
LCS 310-425054/2-A	Lab Control Sample	67	53	97
LCSD 310-425054/3-A	Lab Control Sample Dup	60	55	82
MB 310-425054/1-A	Method Blank	63	51	84

Surrogate Legend

2FP = 2-Fluorophenol (Surr)
PHL = Phenol-d5 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Method: 8081B - Organochlorine Pesticides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB2	TCX2
Lab Sample ID	Client Sample ID	(10-136)	(10-130)
310-283669-1	MW-4-89	107	99
310-283669-4	MW-4-90	104	98

Surrogate Legend

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

Method: 8081B - Organochlorine Pesticides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB1	TCX1
Lab Sample ID	Client Sample ID	(10-136)	(10-130)
310-283669-5	MW-4-93	109	95
310-283669-5 MS	MW-4-93	116	95
310-283669-5 MSD	MW-4-93	131	108
310-283669-9	MW-39R	114	116
310-283669-10	MW-40R	89	92

Surrogate Legend

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

Surrogate Summary

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Method: 8081B - Organochlorine Pesticides (GC)

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

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCB1 (10-136)	TCX1 (10-130)
LCS 310-424910/9-A	Lab Control Sample	105	101
LCS 310-424953/20-A	Lab Control Sample	123	86
MB 310-424910/1-A	Method Blank	98	107
MB 310-424953/1-A	Method Blank	115	95

Surrogate Legend

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

Method: 8151A - Herbicides (GC)

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

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCPAA1 (34-142)	DCPAA2 (34-142)
310-283669-5	MW-4-93	79	82

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid (Surr)

Method: 8151A - Herbicides (GC)

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

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCPAA1 (25-130)
310-283669-9	MW-39R	88

Surrogate Legend

DCPAA = DCAA

Method: 8151A - Herbicides (GC)

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

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCPAA2 (34-142)
LCS 410-519265/2-A	Lab Control Sample	88
MB 410-519265/1-A	Method Blank	78

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid (Surr)

Method: 8151A - Herbicides (GC)

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

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCPAA1 (25-130)
LCS 500-773024/2-A	Lab Control Sample	98
LCSD 500-773024/6-A	Lab Control Sample Dup	87
MB 500-773024/1-A	Method Blank	85

Surrogate Legend

Surrogate Summary

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

DCPAA = DCAA

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

Lab Sample ID: MB 310-424866/5
Matrix: Water
Analysis Batch: 424866

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			06/19/24 06:44	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/19/24 06:44	1
Benzene	<0.500		0.500	0.220	ug/L			06/19/24 06:44	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/19/24 06:44	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/19/24 06:44	1
Bromoform	<5.00		5.00	0.780	ug/L			06/19/24 06:44	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/19/24 06:44	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/19/24 06:44	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/19/24 06:44	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/19/24 06:44	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/19/24 06:44	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/19/24 06:44	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/19/24 06:44	1
Chloroform	<3.00		3.00	1.30	ug/L			06/19/24 06:44	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/19/24 06:44	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/19/24 06:44	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/19/24 06:44	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/19/24 06:44	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/19/24 06:44	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/19/24 06:44	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/19/24 06:44	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/19/24 06:44	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/19/24 06:44	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/19/24 06:44	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/19/24 06:44	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/19/24 06:44	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/19/24 06:44	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/19/24 06:44	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/19/24 06:44	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/19/24 06:44	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/19/24 06:44	1
Styrene	<1.00		1.00	0.370	ug/L			06/19/24 06:44	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/19/24 06:44	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/19/24 06:44	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/19/24 06:44	1
Toluene	<1.00		1.00	0.430	ug/L			06/19/24 06:44	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/19/24 06:44	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/19/24 06:44	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/19/24 06:44	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/19/24 06:44	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/19/24 06:44	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/19/24 06:44	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/19/24 06:44	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/19/24 06:44	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/19/24 06:44	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/19/24 06:44	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/19/24 06:44	1

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

Lab Sample ID: MB 310-424866/5
Matrix: Water
Analysis Batch: 424866

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*		*06/19/24 06:44*	*1*
Dibromofluoromethane (Surr)	*99*		*73 - 130*		*06/19/24 06:44*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*06/19/24 06:44*	*1*

Lab Sample ID: LCS 310-424866/6
Matrix: Water
Analysis Batch: 424866

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	35.29		ug/L		88	50 - 150
Acrylonitrile	200	181.7		ug/L		91	50 - 150
Benzene	20.0	18.52		ug/L		93	72 - 124
Bromochloromethane	20.0	18.45		ug/L		92	73 - 130
Bromodichloromethane	20.0	18.01		ug/L		90	74 - 122
Bromoform	20.0	17.13		ug/L		86	61 - 122
2-Butanone (MEK)	40.0	35.89		ug/L		90	50 - 150
Carbon disulfide	20.0	18.25		ug/L		91	59 - 135
Carbon tetrachloride	20.0	17.12		ug/L		86	67 - 132
Chlorobenzene	20.0	19.05		ug/L		95	76 - 120
Chlorodibromomethane	20.0	18.15		ug/L		91	71 - 121
Chloroform	20.0	17.39		ug/L		87	72 - 125
cis-1,2-Dichloroethene	20.0	17.81		ug/L		89	74 - 123
cis-1,3-Dichloropropene	20.0	17.61		ug/L		88	71 - 125
1,2-Dibromo-3-Chloropropane	20.0	16.91		ug/L		85	50 - 150
1,2-Dibromoethane (EDB)	20.0	19.05		ug/L		95	75 - 125
Dibromomethane	20.0	18.64		ug/L		93	74 - 125
1,2-Dichlorobenzene	20.0	19.52		ug/L		98	74 - 120
1,4-Dichlorobenzene	20.0	17.13		ug/L		86	72 - 120
1,1-Dichloroethane	20.0	18.00		ug/L		90	70 - 127
1,2-Dichloroethane	20.0	16.41		ug/L		82	71 - 125
1,1-Dichloroethene	20.0	18.75		ug/L		94	63 - 132
1,2-Dichloropropane	20.0	19.71		ug/L		99	73 - 124
Ethylbenzene	20.0	17.90		ug/L		90	74 - 122
2-Hexanone	40.0	42.46		ug/L		106	60 - 140
Iodomethane	20.0	12.41		ug/L		62	10 - 150
Methylene Chloride	20.0	19.94		ug/L		100	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	39.97		ug/L		100	60 - 139
Styrene	20.0	18.85		ug/L		94	74 - 121
1,1,1,2-Tetrachloroethane	20.0	17.64		ug/L		88	71 - 120
1,1,2,2-Tetrachloroethane	20.0	18.67		ug/L		93	68 - 124
Tetrachloroethene	20.0	17.90		ug/L		89	71 - 130
Toluene	20.0	19.77		ug/L		99	74 - 123
trans-1,4-Dichloro-2-butene	20.0	13.86		ug/L		69	50 - 150
trans-1,2-Dichloroethene	20.0	15.90		ug/L		80	70 - 126
trans-1,3-Dichloropropene	20.0	16.84		ug/L		84	69 - 123
1,1,1-Trichloroethane	20.0	17.42		ug/L		87	73 - 129
1,1,2-Trichloroethane	20.0	19.41		ug/L		97	73 - 123
Trichloroethene	20.0	19.07		ug/L		95	72 - 126

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

Lab Sample ID: LCS 310-424866/6
Matrix: Water
Analysis Batch: 424866

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	18.34		ug/L		92	65 - 127
Vinyl acetate	40.0	36.57		ug/L		91	50 - 150
Xylenes, Total	40.0	37.17		ug/L		93	73 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*73 - 130*
Toluene-d8 (Surr)	*97*		*80 - 120*

Lab Sample ID: LCS 310-424866/7
Matrix: Water
Analysis Batch: 424866

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	13.41		ug/L		67	23 - 150
Chloroethane	20.0	22.42		ug/L		112	54 - 136
Chloromethane	20.0	24.21		ug/L		121	38 - 150
Trichlorofluoromethane	20.0	22.30		ug/L		111	54 - 149
Vinyl chloride	20.0	21.30		ug/L		106	56 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*73 - 130*
Toluene-d8 (Surr)	*95*		*80 - 120*

Lab Sample ID: MB 310-425101/5
Matrix: Water
Analysis Batch: 425101

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			06/20/24 09:08	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/20/24 09:08	1
Benzene	<0.500		0.500	0.220	ug/L			06/20/24 09:08	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/20/24 09:08	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/20/24 09:08	1
Bromoform	<5.00		5.00	0.780	ug/L			06/20/24 09:08	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/20/24 09:08	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/20/24 09:08	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/20/24 09:08	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/20/24 09:08	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/20/24 09:08	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/20/24 09:08	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/20/24 09:08	1
Chloroform	<3.00		3.00	1.30	ug/L			06/20/24 09:08	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/20/24 09:08	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/20/24 09:08	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/20/24 09:08	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/20/24 09:08	1

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

Lab Sample ID: MB 310-425101/5
Matrix: Water
Analysis Batch: 425101

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			06/20/24 09:08	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/20/24 09:08	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/20/24 09:08	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/20/24 09:08	1
Dichlorodifluoromethane	<3.00		3.00	0.250	ug/L			06/20/24 09:08	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/20/24 09:08	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/20/24 09:08	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/20/24 09:08	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/20/24 09:08	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/20/24 09:08	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/20/24 09:08	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/20/24 09:08	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/20/24 09:08	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/20/24 09:08	1
Styrene	<1.00		1.00	0.370	ug/L			06/20/24 09:08	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/20/24 09:08	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/20/24 09:08	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/20/24 09:08	1
Toluene	<1.00		1.00	0.430	ug/L			06/20/24 09:08	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/20/24 09:08	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/20/24 09:08	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/20/24 09:08	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/20/24 09:08	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/20/24 09:08	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/20/24 09:08	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/20/24 09:08	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/20/24 09:08	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/20/24 09:08	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/20/24 09:08	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/20/24 09:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*		*06/20/24 09:08*	*1*
Dibromofluoromethane (Surr)	*114*		*73 - 130*		*06/20/24 09:08*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*06/20/24 09:08*	*1*

Lab Sample ID: LCS 310-425101/6
Matrix: Water
Analysis Batch: 425101

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	37.25		ug/L		93	50 - 150
Acrylonitrile	200	192.3		ug/L		96	50 - 150
Benzene	20.0	19.63		ug/L		98	72 - 124
Bromochloromethane	20.0	18.39		ug/L		92	73 - 130
Bromodichloromethane	20.0	18.25		ug/L		91	74 - 122
Bromoform	20.0	20.69		ug/L		103	61 - 122
2-Butanone (MEK)	40.0	37.50		ug/L		94	50 - 150

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

Lab Sample ID: LCS 310-425101/6
Matrix: Water
Analysis Batch: 425101

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon disulfide	20.0	23.70		ug/L		119	59 - 135
Carbon tetrachloride	20.0	20.11		ug/L		101	67 - 132
Chlorobenzene	20.0	18.57		ug/L		93	76 - 120
Chlorodibromomethane	20.0	17.16		ug/L		86	71 - 121
Chloroform	20.0	18.94		ug/L		95	72 - 125
cis-1,2-Dichloroethene	20.0	18.84		ug/L		94	74 - 123
cis-1,3-Dichloropropene	20.0	19.47		ug/L		97	71 - 125
1,2-Dibromo-3-Chloropropane	20.0	19.97		ug/L		100	50 - 150
1,2-Dibromoethane (EDB)	20.0	18.50		ug/L		92	75 - 125
Dibromomethane	20.0	18.67		ug/L		93	74 - 125
1,2-Dichlorobenzene	20.0	18.89		ug/L		94	74 - 120
1,4-Dichlorobenzene	20.0	18.71		ug/L		94	72 - 120
1,1-Dichloroethane	20.0	18.74		ug/L		94	70 - 127
1,2-Dichloroethane	20.0	19.12		ug/L		96	71 - 125
1,1-Dichloroethene	20.0	21.96		ug/L		110	63 - 132
1,2-Dichloropropane	20.0	18.79		ug/L		94	73 - 124
Ethylbenzene	20.0	20.05		ug/L		100	74 - 122
2-Hexanone	40.0	37.40		ug/L		93	60 - 140
Iodomethane	20.0	17.97		ug/L		90	10 - 150
Methylene Chloride	20.0	20.58		ug/L		103	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	36.63		ug/L		92	60 - 139
Styrene	20.0	20.40		ug/L		102	74 - 121
1,1,1,2-Tetrachloroethane	20.0	20.69		ug/L		103	71 - 120
1,1,2,2-Tetrachloroethane	20.0	18.53		ug/L		93	68 - 124
Tetrachloroethene	20.0	20.16		ug/L		101	71 - 130
Toluene	20.0	18.44		ug/L		92	74 - 123
trans-1,4-Dichloro-2-butene	20.0	17.96		ug/L		90	50 - 150
trans-1,2-Dichloroethene	20.0	21.24		ug/L		106	70 - 126
trans-1,3-Dichloropropene	20.0	19.27		ug/L		96	69 - 123
1,1,1-Trichloroethane	20.0	20.29		ug/L		101	73 - 129
1,1,2-Trichloroethane	20.0	18.50		ug/L		93	73 - 123
Trichloroethene	20.0	20.17		ug/L		101	72 - 126
1,2,3-Trichloropropane	20.0	19.70		ug/L		99	65 - 127
Vinyl acetate	40.0	39.29		ug/L		98	50 - 150
Xylenes, Total	40.0	39.13		ug/L		98	73 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*91*		*73 - 130*
Toluene-d8 (Surr)	*104*		*80 - 120*

Lab Sample ID: LCS 310-425101/7
Matrix: Water
Analysis Batch: 425101

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	14.40		ug/L		72	23 - 150
Chloroethane	20.0	15.32		ug/L		77	54 - 136

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

Lab Sample ID: LCS 310-425101/7
Matrix: Water
Analysis Batch: 425101

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloromethane	20.0	15.78		ug/L		79	38 - 150
Trichlorofluoromethane	20.0	16.54		ug/L		83	54 - 149
Vinyl chloride	20.0	15.70		ug/L		79	56 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*113*		*80 - 120*
Dibromofluoromethane (Surr)	*117*		*73 - 130*
Toluene-d8 (Surr)	*96*		*80 - 120*

Lab Sample ID: 310-283669-3 MS
Matrix: Groundwater
Analysis Batch: 425101

Client Sample ID: MW-2-93
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	<10.0		50.0	43.04		ug/L		86	31 - 150
Acrylonitrile	<10.0		250	226.7		ug/L		91	40 - 150
Benzene	<0.500		25.0	22.09		ug/L		88	46 - 130
Bromochloromethane	<5.00		25.0	21.79		ug/L		87	57 - 130
Bromodichloromethane	<1.00		25.0	21.15		ug/L		85	57 - 130
Bromoform	<5.00		25.0	23.61		ug/L		94	44 - 130
2-Butanone (MEK)	<10.0		50.0	44.59		ug/L		89	38 - 150
Carbon disulfide	<1.00		25.0	23.83		ug/L		95	38 - 135
Carbon tetrachloride	<2.00		25.0	21.66		ug/L		87	45 - 132
Chlorobenzene	<1.00		25.0	20.90		ug/L		84	59 - 130
Chlorodibromomethane	<5.00		25.0	20.30		ug/L		81	54 - 130
Chloroform	<3.00		25.0	21.37		ug/L		85	51 - 130
cis-1,2-Dichloroethene	1.65		25.0	23.01		ug/L		85	45 - 130
cis-1,3-Dichloropropene	<5.00		25.0	20.28		ug/L		81	53 - 130
1,2-Dibromo-3-Chloropropane	<1.20		25.0	22.41		ug/L		90	38 - 150
1,2-Dibromoethane (EDB)	<0.340		25.0	21.21		ug/L		85	60 - 130
Dibromomethane	<1.00		25.0	22.28		ug/L		89	59 - 130
1,2-Dichlorobenzene	<1.00		25.0	21.27		ug/L		85	59 - 130
1,4-Dichlorobenzene	<1.00		25.0	21.33		ug/L		85	57 - 130
1,1-Dichloroethane	6.74		25.0	26.17		ug/L		78	49 - 130
1,2-Dichloroethane	<1.00		25.0	21.95		ug/L		88	51 - 130
1,1-Dichloroethene	3.13		25.0	24.90		ug/L		87	37 - 132
1,2-Dichloropropane	<1.00		25.0	21.20		ug/L		85	57 - 130
Ethylbenzene	<1.00		25.0	22.74		ug/L		91	45 - 130
2-Hexanone	<10.0		50.0	39.36		ug/L		79	46 - 140
Iodomethane	<10.0		25.0	21.47		ug/L		86	10 - 150
Methylene Chloride	<5.00		25.0	23.38		ug/L		94	37 - 150
4-Methyl-2-pentanone (MIBK)	<10.0		50.0	42.23		ug/L		84	47 - 139
Styrene	<1.00		25.0	23.76		ug/L		95	47 - 130
1,1,1,2-Tetrachloroethane	<1.00		25.0	23.48		ug/L		94	55 - 130
1,1,2,2-Tetrachloroethane	<1.00		25.0	22.33		ug/L		89	54 - 130
Tetrachloroethene	<1.00		25.0	20.84		ug/L		83	47 - 130
Toluene	<1.00		25.0	20.55		ug/L		82	51 - 130
trans-1,4-Dichloro-2-butene	<10.0		25.0	19.39		ug/L		78	26 - 150

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

Lab Sample ID: 310-283669-3 MS
Matrix: Groundwater
Analysis Batch: 425101

Client Sample ID: MW-2-93
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
trans-1,2-Dichloroethene	<1.00		25.0	22.66		ug/L		91	48 - 130
trans-1,3-Dichloropropene	<5.00		25.0	20.14		ug/L		81	50 - 130
1,1,1-Trichloroethane	<1.00		25.0	21.53		ug/L		86	52 - 130
1,1,2-Trichloroethane	<1.00		25.0	21.69		ug/L		87	58 - 130
Trichloroethene	<1.00		25.0	21.73		ug/L		87	51 - 130
1,2,3-Trichloropropane	<1.00		25.0	22.74		ug/L		91	49 - 130
Vinyl acetate	<10.0		50.0	37.49		ug/L		75	29 - 150
Xylenes, Total	<3.00		50.0	44.26		ug/L		89	43 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*73 - 130*
Toluene-d8 (Surr)	*103*		*80 - 120*

Lab Sample ID: 310-283669-3 MSD
Matrix: Groundwater
Analysis Batch: 425101

Client Sample ID: MW-2-93
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	<10.0		50.0	40.64		ug/L		81	31 - 150	6	29
Acrylonitrile	<10.0		250	222.4		ug/L		89	40 - 150	2	20
Benzene	<0.500		25.0	21.90		ug/L		88	46 - 130	1	20
Bromochloromethane	<5.00		25.0	20.75		ug/L		83	57 - 130	5	20
Bromodichloromethane	<1.00		25.0	21.62		ug/L		86	57 - 130	2	20
Bromoform	<5.00		25.0	23.00		ug/L		92	44 - 130	3	20
2-Butanone (MEK)	<10.0		50.0	44.18		ug/L		88	38 - 150	1	20
Carbon disulfide	<1.00		25.0	23.11		ug/L		92	38 - 135	3	30
Carbon tetrachloride	<2.00		25.0	21.35		ug/L		85	45 - 132	1	20
Chlorobenzene	<1.00		25.0	20.74		ug/L		83	59 - 130	1	20
Chlorodibromomethane	<5.00		25.0	20.63		ug/L		83	54 - 130	2	20
Chloroform	<3.00		25.0	21.56		ug/L		86	51 - 130	1	20
cis-1,2-Dichloroethene	1.65		25.0	23.50		ug/L		87	45 - 130	2	20
cis-1,3-Dichloropropene	<5.00		25.0	20.93		ug/L		84	53 - 130	3	20
1,2-Dibromo-3-Chloropropane	<1.20		25.0	21.08		ug/L		84	38 - 150	6	20
1,2-Dibromoethane (EDB)	<0.340		25.0	21.50		ug/L		86	60 - 130	1	20
Dibromomethane	<1.00		25.0	22.08		ug/L		88	59 - 130	1	20
1,2-Dichlorobenzene	<1.00		25.0	22.25		ug/L		89	59 - 130	4	20
1,4-Dichlorobenzene	<1.00		25.0	21.82		ug/L		87	57 - 130	2	20
1,1-Dichloroethane	6.74		25.0	26.17		ug/L		78	49 - 130	0	20
1,2-Dichloroethane	<1.00		25.0	22.36		ug/L		89	51 - 130	2	20
1,1-Dichloroethene	3.13		25.0	23.15		ug/L		80	37 - 132	7	26
1,2-Dichloropropane	<1.00		25.0	22.15		ug/L		89	57 - 130	4	20
Ethylbenzene	<1.00		25.0	22.37		ug/L		89	45 - 130	2	20
2-Hexanone	<10.0		50.0	40.31		ug/L		81	46 - 140	2	20
Iodomethane	<10.0		25.0	24.00		ug/L		96	10 - 150	11	35
Methylene Chloride	<5.00		25.0	24.08		ug/L		96	37 - 150	3	24
4-Methyl-2-pentanone (MIBK)	<10.0		50.0	42.83		ug/L		86	47 - 139	1	20
Styrene	<1.00		25.0	23.00		ug/L		92	47 - 130	3	20

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

Lab Sample ID: 310-283669-3 MSD
Matrix: Groundwater
Analysis Batch: 425101

Client Sample ID: MW-2-93
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	<1.00		25.0	23.30		ug/L		93	55 - 130	1	20
1,1,2,2-Tetrachloroethane	<1.00		25.0	21.57		ug/L		86	54 - 130	3	20
Tetrachloroethene	<1.00		25.0	21.80		ug/L		87	47 - 130	4	20
Toluene	<1.00		25.0	20.69		ug/L		83	51 - 130	1	20
trans-1,4-Dichloro-2-butene	<10.0		25.0	18.90		ug/L		76	26 - 150	3	23
trans-1,2-Dichloroethene	<1.00		25.0	22.15		ug/L		89	48 - 130	2	22
trans-1,3-Dichloropropene	<5.00		25.0	21.07		ug/L		84	50 - 130	5	20
1,1,1-Trichloroethane	<1.00		25.0	21.80		ug/L		87	52 - 130	1	20
1,1,2-Trichloroethane	<1.00		25.0	22.09		ug/L		88	58 - 130	2	20
Trichloroethene	<1.00		25.0	22.26		ug/L		89	51 - 130	2	20
1,2,3-Trichloropropane	<1.00		25.0	22.26		ug/L		89	49 - 130	2	26
Vinyl acetate	<10.0		50.0	38.63		ug/L		77	29 - 150	3	23
Xylenes, Total	<3.00		50.0	43.28		ug/L		87	43 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*93*		*73 - 130*
Toluene-d8 (Surr)	*102*		*80 - 120*

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

Lab Sample ID: MB 310-425054/1-A
Matrix: Water
Analysis Batch: 425420

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 425054

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methylphenol (and/or 3-Methylphenol)	<10.0		10.0	0.700	ug/L		06/20/24 08:00	06/24/24 11:30	1
Phenol	<10.0		10.0	1.10	ug/L		06/20/24 08:00	06/24/24 11:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*63*		*25 - 110*	*06/20/24 08:00*	*06/24/24 11:30*	*1*
Phenol-d5 (Surr)	*51*		*21 - 110*	*06/20/24 08:00*	*06/24/24 11:30*	*1*
2,4,6-Tribromophenol (Surr)	*84*		*27 - 136*	*06/20/24 08:00*	*06/24/24 11:30*	*1*

Lab Sample ID: LCS 310-425054/2-A
Matrix: Water
Analysis Batch: 425420

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 425054

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
4-Methylphenol (and/or 3-Methylphenol)			100	89.13		ug/L		89	46 - 117		
Phenol			100	60.17		ug/L		60	29 - 110		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorophenol (Surr)	*67*		*25 - 110*
Phenol-d5 (Surr)	*53*		*21 - 110*
2,4,6-Tribromophenol (Surr)	*97*		*27 - 136*

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

Lab Sample ID: LCSD 310-425054/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 425420
Prep Batch: 425054

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4-Methylphenol (and/or 3-Methylphenol)			100	87.72		ug/L		88	46 - 117	2	35
Phenol			100	61.69		ug/L		62	29 - 110	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorophenol (Surr)	*60*		*25 - 110*
Phenol-d5 (Surr)	*55*		*21 - 110*
2,4,6-Tribromophenol (Surr)	*82*		*27 - 136*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 310-424910/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 424852
Prep Batch: 424910

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0946		0.0946	0.00946	ug/L		06/18/24 13:01	06/18/24 15:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*98*		*10 - 136*	*06/18/24 13:01*	*06/18/24 15:01*	*1*
Tetrachloro-m-xylene (Surr)	*107*		*10 - 130*	*06/18/24 13:01*	*06/18/24 15:01*	*1*

Lab Sample ID: LCS 310-424910/9-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 424852
Prep Batch: 424910

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
alpha-BHC			1.29	1.480		ug/L		115	36 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*105*		*10 - 136*
Tetrachloro-m-xylene (Surr)	*101*		*10 - 130*

Lab Sample ID: MB 310-424953/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 424973
Prep Batch: 424953

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDT	<0.0931		0.0931	0.0186	ug/L		06/19/24 07:06	06/19/24 10:39	1
Endrin aldehyde	<0.0931		0.0931	0.0251	ug/L		06/19/24 07:06	06/19/24 10:39	1
Methoxychlor	<0.0931		0.0931	0.0298	ug/L		06/19/24 07:06	06/19/24 10:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*115*		*10 - 136*	*06/19/24 07:06*	*06/19/24 10:39*	*1*
Tetrachloro-m-xylene (Surr)	*95*		*10 - 130*	*06/19/24 07:06*	*06/19/24 10:39*	*1*

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 310-424953/20-A
Matrix: Water
Analysis Batch: 424973

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424953

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
4,4'-DDT			2.60	1.583		ug/L		61	23 - 150		
Endrin aldehyde			2.60	2.732		ug/L		105	32 - 137		
Methoxychlor			2.60	2.760		ug/L		106	10 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*123*		*10 - 136*
Tetrachloro-m-xylene (Surr)	*86*		*10 - 130*

Lab Sample ID: 310-283669-5 MS
Matrix: Groundwater
Analysis Batch: 424973

Client Sample ID: MW-4-93
Prep Type: Total/NA
Prep Batch: 424953

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
4,4'-DDT	<0.0893	F2	2.58	2.445		ug/L		95	23 - 150		
Endrin aldehyde	<0.0893		2.58	2.833		ug/L		110	32 - 137		
Methoxychlor	<0.0893		2.58	3.434		ug/L		133	10 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*116*		*10 - 136*
Tetrachloro-m-xylene (Surr)	*95*		*10 - 130*

Lab Sample ID: 310-283669-5 MSD
Matrix: Groundwater
Analysis Batch: 424973

Client Sample ID: MW-4-93
Prep Type: Total/NA
Prep Batch: 424953

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4,4'-DDT	<0.0893	F2	2.48	1.448	F2	ug/L		58	23 - 150	51	35
Endrin aldehyde	<0.0893		2.48	2.656		ug/L		107	32 - 137	6	35
Methoxychlor	<0.0893		2.48	3.634		ug/L		146	10 - 150	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*131*		*10 - 136*
Tetrachloro-m-xylene (Surr)	*108*		*10 - 130*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 410-519265/1-A
Matrix: Water
Analysis Batch: 519885

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 519265

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	<0.600		0.600	0.250	ug/L		06/19/24 18:06	06/21/24 09:06	1
Silvex (2,4,5-TP)	<0.0500		0.0500	0.0220	ug/L		06/19/24 18:06	06/21/24 09:06	1
2,4,5-T	<0.150		0.150	0.0650	ug/L		06/19/24 18:06	06/21/24 09:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid (Surr)	*78*		*34 - 142*	*06/19/24 18:06*	*06/21/24 09:06*	*1*

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 410-519265/2-A
Matrix: Water
Analysis Batch: 519885

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 519265

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
2,4-D			2.51	2.014		ug/L		80	53 - 159		
Silvex (2,4,5-TP)			0.250	0.2218		ug/L		89	62 - 170		
2,4,5-T			0.250	0.2090		ug/L		84	57 - 171		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid (Surr)	*88*		*34 - 142*

Lab Sample ID: MB 500-773024/1-A
Matrix: Water
Analysis Batch: 773505

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 773024

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	<1.00		1.00	0.307	ug/L		06/18/24 10:31	06/20/24 15:16	1
Silvex (2,4,5-TP)	<1.00		1.00	0.0834	ug/L		06/18/24 10:31	06/20/24 15:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCAA	*85*		*25 - 130*	*06/18/24 10:31*	*06/20/24 15:16*	*1*

Lab Sample ID: LCS 500-773024/2-A
Matrix: Water
Analysis Batch: 773505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 773024

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
2,4-D			10.1	8.905		ug/L		89	30 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCAA	*98*		*25 - 130*

Lab Sample ID: LCSD 500-773024/6-A
Matrix: Water
Analysis Batch: 773505

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 773024

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4-D			10.1	10.29		ug/L		102	30 - 115	14	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCAA	*87*		*25 - 130*

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-424817/1-A
Matrix: Water
Analysis Batch: 427084

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424817

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		06/18/24 09:00	07/11/24 22:03	1
Barium	<0.00200		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 22:03	1

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

Lab Sample ID: MB 310-424817/1-A
Matrix: Water
Analysis Batch: 427084

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424817

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/18/24 09:00	07/11/24 22:03	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		06/18/24 09:00	07/11/24 22:03	1
Chromium	<0.00500		0.00500	0.00120	mg/L		06/18/24 09:00	07/11/24 22:03	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		06/18/24 09:00	07/11/24 22:03	1
Copper	<0.00500		0.00500	0.00180	mg/L		06/18/24 09:00	07/11/24 22:03	1
Lead	<0.000500		0.000500	0.000260	mg/L		06/18/24 09:00	07/11/24 22:03	1
Nickel	<0.00500		0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 22:03	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/24 09:00	07/11/24 22:03	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/18/24 09:00	07/11/24 22:03	1
Thallium	<0.00100		0.00100	0.000570	mg/L		06/18/24 09:00	07/11/24 22:03	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/18/24 09:00	07/11/24 22:03	1
Zinc	<0.0200		0.0200	0.00970	mg/L		06/18/24 09:00	07/11/24 22:03	1

Lab Sample ID: MB 310-424817/1-A
Matrix: Water
Analysis Batch: 427207

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424817

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/18/24 09:00	07/12/24 15:37	1

Lab Sample ID: LCS 310-424817/2-A
Matrix: Water
Analysis Batch: 425355

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424817

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.1637		mg/L		82	80 - 120
Barium	0.100	0.08703		mg/L		87	80 - 120
Beryllium	0.100	0.08605		mg/L		86	80 - 120
Cadmium	0.100	0.08460		mg/L		85	80 - 120
Chromium	0.100	0.08586		mg/L		86	80 - 120
Cobalt	0.100	0.08517		mg/L		85	80 - 120
Copper	0.200	0.1802		mg/L		90	80 - 120
Lead	0.200	0.1772		mg/L		89	80 - 120
Nickel	0.200	0.1808		mg/L		90	80 - 120
Selenium	0.400	0.3280		mg/L		82	80 - 120
Vanadium	0.100	0.08382		mg/L		84	80 - 120
Zinc	0.200	0.1687		mg/L		84	80 - 120

Lab Sample ID: LCS 310-424817/2-A
Matrix: Water
Analysis Batch: 427207

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424817

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2026		mg/L		101	80 - 120
Silver	0.100	0.1548	*+	mg/L		155	80 - 120
Thallium	0.100	0.2081	*+	mg/L		208	80 - 120

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

Lab Sample ID: 310-283669-10 DU
Matrix: Groundwater
Analysis Batch: 427084

Client Sample ID: MW-40R
Prep Type: Total/NA
Prep Batch: 424817

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Barium	0.0835		0.08151		mg/L		2	20
Beryllium	<0.00100		<0.00100		mg/L		NC	20
Cobalt	<0.000500		<0.000500		mg/L		NC	20
Copper	<0.00500		<0.00500		mg/L		NC	20
Lead	<0.000500		<0.000500		mg/L		NC	20
Nickel	<0.00500		<0.00500		mg/L		NC	20
Vanadium	<0.00500		<0.00500		mg/L		NC	20

Lab Sample ID: 310-283669-10 DU
Matrix: Groundwater
Analysis Batch: 427207

Client Sample ID: MW-40R
Prep Type: Total/NA
Prep Batch: 424817

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.00200		<0.00200		mg/L		NC	20
Arsenic	<0.00200		<0.00200		mg/L		NC	20
Barium	0.0968		0.09572		mg/L		1	20
Beryllium	<0.00100		<0.00100		mg/L		NC	20
Cadmium	<0.000200		<0.000200		mg/L		NC	20
Chromium	0.00122	J	<0.00500		mg/L		NC	20
Cobalt	<0.000500		<0.000500		mg/L		NC	20
Copper	<0.00500		<0.00500		mg/L		NC	20
Lead	<0.000500		<0.000500		mg/L		NC	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	0.00126	J	0.001152	J	mg/L		9	20
Zinc	0.0111	J	<0.0200		mg/L		NC	20

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 500-773131/1-A
Matrix: Water
Analysis Batch: 773132

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 773131

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<1.00		1.00	0.231	mg/L		06/18/24 18:00	06/18/24 20:14	1

Lab Sample ID: LCS 500-773131/2-A
Matrix: Water
Analysis Batch: 773132

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 773131

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.64	3.492		mg/L		96	80 - 120

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

Lab Sample ID: MB 310-424751/1
Matrix: Water
Analysis Batch: 424751

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			06/17/24 10:43	1

Lab Sample ID: LCS 310-424751/2
Matrix: Water
Analysis Batch: 424751

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	99.00		mg/L		99	81 - 116

Lab Sample ID: MB 310-424756/1
Matrix: Water
Analysis Batch: 424756

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			06/17/24 11:46	1

Lab Sample ID: LCS 310-424756/2
Matrix: Water
Analysis Batch: 424756

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	94.00		mg/L		94	81 - 116

Lab Sample ID: MB 310-425005/1
Matrix: Water
Analysis Batch: 425005

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			06/19/24 09:51	1

Lab Sample ID: LCS 310-425005/2
Matrix: Water
Analysis Batch: 425005

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	105.0		mg/L		105	81 - 116

QC Association Summary

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

GC/MS VOA

Analysis Batch: 424866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-1	MW-4-89	Total/NA	Groundwater	8260D	
310-283669-2	MW-1-99	Total/NA	Groundwater	8260D	
310-283669-4	MW-4-90	Total/NA	Groundwater	8260D	
310-283669-5	MW-4-93	Total/NA	Groundwater	8260D	
310-283669-12	Trip Blank 1	Total/NA	Trip Blank	8260D	
310-283669-13	Trip Blank 2	Total/NA	Trip Blank	8260D	
310-283669-14	Trip Blank 3	Total/NA	Trip Blank	8260D	
MB 310-424866/5	Method Blank	Total/NA	Water	8260D	
LCS 310-424866/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-424866/7	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 425101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-3	MW-2-93	Total/NA	Groundwater	8260D	
310-283669-6	MW-7-93	Total/NA	Groundwater	8260D	
310-283669-7	MW-37	Total/NA	Groundwater	8260D	
310-283669-8	MW-38	Total/NA	Groundwater	8260D	
310-283669-9	MW-39R	Total/NA	Groundwater	8260D	
310-283669-10	MW-40R	Total/NA	Groundwater	8260D	
310-283669-11	MW-7-90R	Total/NA	Groundwater	8260D	
MB 310-425101/5	Method Blank	Total/NA	Water	8260D	
LCS 310-425101/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-425101/7	Lab Control Sample	Total/NA	Water	8260D	
310-283669-3 MS	MW-2-93	Total/NA	Groundwater	8260D	
310-283669-3 MSD	MW-2-93	Total/NA	Groundwater	8260D	

GC/MS Semi VOA

Prep Batch: 425054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-5	MW-4-93	Total/NA	Groundwater	3510C	
MB 310-425054/1-A	Method Blank	Total/NA	Water	3510C	
LCS 310-425054/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 310-425054/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 425420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-5	MW-4-93	Total/NA	Groundwater	8270E	425054
MB 310-425054/1-A	Method Blank	Total/NA	Water	8270E	425054
LCS 310-425054/2-A	Lab Control Sample	Total/NA	Water	8270E	425054
LCSD 310-425054/3-A	Lab Control Sample Dup	Total/NA	Water	8270E	425054

GC Semi VOA

Analysis Batch: 424852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-9	MW-39R	Total/NA	Groundwater	8081B	424910
310-283669-10	MW-40R	Total/NA	Groundwater	8081B	424910
MB 310-424910/1-A	Method Blank	Total/NA	Water	8081B	424910
LCS 310-424910/9-A	Lab Control Sample	Total/NA	Water	8081B	424910

GC Semi VOA

Prep Batch: 424910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-9	MW-39R	Total/NA	Groundwater	3511	
310-283669-10	MW-40R	Total/NA	Groundwater	3511	
MB 310-424910/1-A	Method Blank	Total/NA	Water	3511	
LCS 310-424910/9-A	Lab Control Sample	Total/NA	Water	3511	

Prep Batch: 424953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-1	MW-4-89	Total/NA	Groundwater	3511	
310-283669-4	MW-4-90	Total/NA	Groundwater	3511	
310-283669-5	MW-4-93	Total/NA	Groundwater	3511	
MB 310-424953/1-A	Method Blank	Total/NA	Water	3511	
LCS 310-424953/20-A	Lab Control Sample	Total/NA	Water	3511	
310-283669-5 MS	MW-4-93	Total/NA	Groundwater	3511	
310-283669-5 MSD	MW-4-93	Total/NA	Groundwater	3511	

Analysis Batch: 424973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-5	MW-4-93	Total/NA	Groundwater	8081B	424953
MB 310-424953/1-A	Method Blank	Total/NA	Water	8081B	424953
LCS 310-424953/20-A	Lab Control Sample	Total/NA	Water	8081B	424953
310-283669-5 MS	MW-4-93	Total/NA	Groundwater	8081B	424953
310-283669-5 MSD	MW-4-93	Total/NA	Groundwater	8081B	424953

Analysis Batch: 425056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-1	MW-4-89	Total/NA	Groundwater	8081B	424953
310-283669-4	MW-4-90	Total/NA	Groundwater	8081B	424953

Prep Batch: 519265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-5	MW-4-93	Total/NA	Groundwater	8151A	
MB 410-519265/1-A	Method Blank	Total/NA	Water	8151A	
LCS 410-519265/2-A	Lab Control Sample	Total/NA	Water	8151A	

Analysis Batch: 519885

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-5	MW-4-93	Total/NA	Groundwater	8151A	519265
MB 410-519265/1-A	Method Blank	Total/NA	Water	8151A	519265
LCS 410-519265/2-A	Lab Control Sample	Total/NA	Water	8151A	519265

Prep Batch: 773024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-9	MW-39R	Total/NA	Groundwater	8151A	
MB 500-773024/1-A	Method Blank	Total/NA	Water	8151A	
LCS 500-773024/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 500-773024/6-A	Lab Control Sample Dup	Total/NA	Water	8151A	

Analysis Batch: 773505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-9	MW-39R	Total/NA	Groundwater	8151A	773024
MB 500-773024/1-A	Method Blank	Total/NA	Water	8151A	773024

GC Semi VOA (Continued)

Analysis Batch: 773505 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-773024/2-A	Lab Control Sample	Total/NA	Water	8151A	773024
LCSD 500-773024/6-A	Lab Control Sample Dup	Total/NA	Water	8151A	773024

Metals

Prep Batch: 424817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-1	MW-4-89	Total/NA	Groundwater	3005A	
310-283669-2	MW-1-99	Total/NA	Groundwater	3005A	
310-283669-3	MW-2-93	Total/NA	Groundwater	3005A	
310-283669-4	MW-4-90	Total/NA	Groundwater	3005A	
310-283669-5	MW-4-93	Total/NA	Groundwater	3005A	
310-283669-6	MW-7-93	Total/NA	Groundwater	3005A	
310-283669-7	MW-37	Total/NA	Groundwater	3005A	
310-283669-8	MW-38	Total/NA	Groundwater	3005A	
310-283669-9	MW-39R	Total/NA	Groundwater	3005A	
310-283669-10	MW-40R	Total/NA	Groundwater	3005A	
310-283669-11	MW-7-90R	Total/NA	Groundwater	3005A	
MB 310-424817/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-424817/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-283669-10 DU	MW-40R	Total/NA	Groundwater	3005A	

Analysis Batch: 425355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-424817/2-A	Lab Control Sample	Total/NA	Water	6020B	424817

Analysis Batch: 427084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-1	MW-4-89	Total/NA	Groundwater	6020B	424817
310-283669-2	MW-1-99	Total/NA	Groundwater	6020B	424817
310-283669-3	MW-2-93	Total/NA	Groundwater	6020B	424817
310-283669-4	MW-4-90	Total/NA	Groundwater	6020B	424817
310-283669-5	MW-4-93	Total/NA	Groundwater	6020B	424817
310-283669-6	MW-7-93	Total/NA	Groundwater	6020B	424817
310-283669-7	MW-37	Total/NA	Groundwater	6020B	424817
310-283669-8	MW-38	Total/NA	Groundwater	6020B	424817
310-283669-9	MW-39R	Total/NA	Groundwater	6020B	424817
310-283669-10	MW-40R	Total/NA	Groundwater	6020B	424817
310-283669-11	MW-7-90R	Total/NA	Groundwater	6020B	424817
MB 310-424817/1-A	Method Blank	Total/NA	Water	6020B	424817
310-283669-10 DU	MW-40R	Total/NA	Groundwater	6020B	424817

Analysis Batch: 427207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-1	MW-4-89	Total/NA	Groundwater	6020B	424817
310-283669-2	MW-1-99	Total/NA	Groundwater	6020B	424817
310-283669-3	MW-2-93	Total/NA	Groundwater	6020B	424817
310-283669-4	MW-4-90	Total/NA	Groundwater	6020B	424817
310-283669-5	MW-4-93	Total/NA	Groundwater	6020B	424817
310-283669-6	MW-7-93	Total/NA	Groundwater	6020B	424817
310-283669-7	MW-37	Total/NA	Groundwater	6020B	424817

Metals (Continued)

Analysis Batch: 427207 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-8	MW-38	Total/NA	Groundwater	6020B	424817
310-283669-9	MW-39R	Total/NA	Groundwater	6020B	424817
310-283669-10	MW-40R	Total/NA	Groundwater	6020B	424817
310-283669-11	MW-7-90R	Total/NA	Groundwater	6020B	424817
MB 310-424817/1-A	Method Blank	Total/NA	Water	6020B	424817
LCS 310-424817/2-A	Lab Control Sample	Total/NA	Water	6020B	424817
310-283669-10 DU	MW-40R	Total/NA	Groundwater	6020B	424817

General Chemistry

Analysis Batch: 424751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-6	MW-7-93	Total/NA	Groundwater	I-3765-85	
310-283669-7	MW-37	Total/NA	Groundwater	I-3765-85	
310-283669-8	MW-38	Total/NA	Groundwater	I-3765-85	
310-283669-9	MW-39R	Total/NA	Groundwater	I-3765-85	
310-283669-10	MW-40R	Total/NA	Groundwater	I-3765-85	
310-283669-11	MW-7-90R	Total/NA	Groundwater	I-3765-85	
MB 310-424751/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-424751/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 424756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-2	MW-1-99	Total/NA	Groundwater	I-3765-85	
310-283669-3	MW-2-93	Total/NA	Groundwater	I-3765-85	
MB 310-424756/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-424756/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 425005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-1	MW-4-89	Total/NA	Groundwater	I-3765-85	
310-283669-4	MW-4-90	Total/NA	Groundwater	I-3765-85	
310-283669-5	MW-4-93	Total/NA	Groundwater	I-3765-85	
MB 310-425005/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-425005/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Prep Batch: 773131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-5	MW-4-93	Total/NA	Groundwater	9030B	
MB 500-773131/1-A	Method Blank	Total/NA	Water	9030B	
LCS 500-773131/2-A	Lab Control Sample	Total/NA	Water	9030B	

Analysis Batch: 773132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283669-5	MW-4-93	Total/NA	Groundwater	9034	773131
MB 500-773131/1-A	Method Blank	Total/NA	Water	9034	773131
LCS 500-773131/2-A	Lab Control Sample	Total/NA	Water	9034	773131

Client Sample ID: MW-4-89
Lab Sample ID: 310-283669-1
Date Collected: 06/13/24 11:40
Matrix: Groundwater
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	424866	WSE8	EET CF	06/19/24 09:45
Total/NA	Prep	3511			424953	D0DG	EET CF	06/19/24 07:06
Total/NA	Analysis	8081B		1	425056	BW2O	EET CF	06/19/24 20:45
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427084	NFT2	EET CF	07/11/24 22:25
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427207	A6US	EET CF	07/12/24 15:41
Total/NA	Analysis	I-3765-85		1	425005	HE7K	EET CF	06/19/24 09:51

Client Sample ID: MW-1-99
Lab Sample ID: 310-283669-2
Date Collected: 06/12/24 09:30
Matrix: Groundwater
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	424866	WSE8	EET CF	06/19/24 10:07
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427084	NFT2	EET CF	07/11/24 22:28
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427207	A6US	EET CF	07/12/24 15:43
Total/NA	Analysis	I-3765-85		1	424756	DGU1	EET CF	06/17/24 11:46

Client Sample ID: MW-2-93
Lab Sample ID: 310-283669-3
Date Collected: 06/12/24 14:05
Matrix: Groundwater
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	425101	WSE8	EET CF	06/20/24 13:07
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427084	NFT2	EET CF	07/11/24 22:32
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427207	A6US	EET CF	07/12/24 15:46
Total/NA	Analysis	I-3765-85		1	424756	DGU1	EET CF	06/17/24 11:46

Client Sample ID: MW-4-90
Lab Sample ID: 310-283669-4
Date Collected: 06/13/24 13:03
Matrix: Groundwater
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	424866	WSE8	EET CF	06/19/24 10:30
Total/NA	Prep	3511			424953	D0DG	EET CF	06/19/24 07:06
Total/NA	Analysis	8081B		1	425056	BW2O	EET CF	06/19/24 20:26
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427084	NFT2	EET CF	07/11/24 22:36
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427207	A6US	EET CF	07/12/24 15:48

Lab Chronicle

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Client Sample ID: MW-4-90
Date Collected: 06/13/24 13:03
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-4
Matrix: Groundwater

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	I-3765-85		1	425005	HE7K	EET CF	06/19/24 09:51

Client Sample ID: MW-4-93
Date Collected: 06/13/24 17:00
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-5
Matrix: Groundwater

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	424866	WSE8	EET CF	06/19/24 10:52
Total/NA	Prep	3510C			425054	C3AA	EET CF	06/20/24 08:00
Total/NA	Analysis	8270E		1	425420	L0FS	EET CF	06/24/24 16:19
Total/NA	Prep	3511			424953	D0DG	EET CF	06/19/24 07:06
Total/NA	Analysis	8081B		1	424973	BW2O	EET CF	06/19/24 13:05
Total/NA	Prep	8151A			519265	QJZ6	ELLE	06/19/24 18:06
Total/NA	Analysis	8151A		1	519885	UAMZ	ELLE	06/21/24 16:38
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427084	NFT2	EET CF	07/11/24 22:39
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427207	A6US	EET CF	07/12/24 15:50
Total/NA	Prep	9030B			773131	CLB	EET CHI	06/18/24 18:25 - 06/18/24 18:30 [1]
Total/NA	Analysis	9034		1	773132	CLB	EET CHI	06/18/24 20:46 - 06/18/24 20:53 [1]
Total/NA	Analysis	I-3765-85		1	425005	HE7K	EET CF	06/19/24 09:51

Client Sample ID: MW-7-93
Date Collected: 06/11/24 14:58
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-6
Matrix: Groundwater

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	425101	WSE8	EET CF	06/20/24 13:29
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427084	NFT2	EET CF	07/11/24 22:43
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427207	A6US	EET CF	07/12/24 15:52
Total/NA	Analysis	I-3765-85		1	424751	DGU1	EET CF	06/17/24 10:43

Client Sample ID: MW-37
Date Collected: 06/11/24 15:46
Date Received: 06/14/24 17:00

Lab Sample ID: 310-283669-7
Matrix: Groundwater

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	425101	WSE8	EET CF	06/20/24 13:50
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427084	NFT2	EET CF	07/11/24 22:47
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427207	A6US	EET CF	07/12/24 16:03
Total/NA	Analysis	I-3765-85		1	424751	DGU1	EET CF	06/17/24 10:43

Lab Chronicle

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Client Sample ID: MW-38
Lab Sample ID: 310-283669-8
Date Collected: 06/11/24 18:21
Matrix: Groundwater
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	425101	WSE8	EET CF	06/20/24 14:12
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427084	NFT2	EET CF	07/11/24 22:50
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427207	A6US	EET CF	07/12/24 16:05
Total/NA	Analysis	I-3765-85		1	424751	DGU1	EET CF	06/17/24 10:43

Client Sample ID: MW-39R
Lab Sample ID: 310-283669-9
Date Collected: 06/11/24 08:17
Matrix: Groundwater
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	425101	WSE8	EET CF	06/20/24 14:34
Total/NA	Prep	3511			424910	D2YP	EET CF	06/18/24 13:01
Total/NA	Analysis	8081B		1	424852	BW2O	EET CF	06/18/24 17:54
Total/NA	Prep	8151A			773024	DAK	EET CHI	06/18/24 17:17
Total/NA	Analysis	8151A		1	773505	H7CM	EET CHI	06/20/24 17:06
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427084	NFT2	EET CF	07/11/24 22:54
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427207	A6US	EET CF	07/12/24 16:08
Total/NA	Analysis	I-3765-85		1	424751	DGU1	EET CF	06/17/24 10:43

Client Sample ID: MW-40R
Lab Sample ID: 310-283669-10
Date Collected: 06/11/24 13:39
Matrix: Groundwater
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	425101	WSE8	EET CF	06/20/24 14:56
Total/NA	Prep	3511			424910	D2YP	EET CF	06/18/24 13:01
Total/NA	Analysis	8081B		1	424852	BW2O	EET CF	06/18/24 18:32
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427084	NFT2	EET CF	07/11/24 22:58
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427207	A6US	EET CF	07/12/24 16:10
Total/NA	Analysis	I-3765-85		1	424751	DGU1	EET CF	06/17/24 10:43

Client Sample ID: MW-7-90R
Lab Sample ID: 310-283669-11
Date Collected: 06/11/24 17:33
Matrix: Groundwater
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	425101	WSE8	EET CF	06/20/24 15:17
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427084	NFT2	EET CF	07/11/24 23:20

Lab Chronicle

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Client Sample ID: MW-7-90R
Lab Sample ID: 310-283669-11
Date Collected: 06/11/24 17:33
Matrix: Groundwater
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427207	A6US	EET CF	07/12/24 16:14
Total/NA	Analysis	I-3765-85		1	424751	DGU1	EET CF	06/17/24 10:43

Client Sample ID: Trip Blank 1
Lab Sample ID: 310-283669-12
Date Collected: 06/11/24 00:00
Matrix: Trip Blank
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	424866	WSE8	EET CF	06/19/24 08:37

Client Sample ID: Trip Blank 2
Lab Sample ID: 310-283669-13
Date Collected: 06/11/24 00:00
Matrix: Trip Blank
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	424866	WSE8	EET CF	06/19/24 09:00

Client Sample ID: Trip Blank 3
Lab Sample ID: 310-283669-14
Date Collected: 06/11/24 00:00
Matrix: Trip Blank
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	424866	WSE8	EET CF	06/19/24 09:22

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

Laboratory References:

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

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	07-29-24

Laboratory: Eurofins Chicago

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	082	08-01-24

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	07-17-24
A2LA	ISO/IEC 17025	0001.01	07-17-24
Alabama	State	43200	01-31-25
Alaska	State	PA00009	06-30-24
Alaska (UST)	State	17-027	10-29-24
Arizona	State	AZ0780	03-12-25
Arkansas DEQ	State	88-00660	08-09-24
California	State	2792	11-30-24
Colorado	State	PA00009	06-30-25
Connecticut	State	PH-0746	06-30-25
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-25
Delaware (DW)	State	N/A	01-31-25
Florida	NELAP	E87997	06-30-24
Georgia (DW)	State	C048	01-31-25
Hawaii	State	N/A	01-31-25
Illinois	NELAP	200027	07-30-24
Iowa	State	361	03-01-26
Kansas	NELAP	E-10151	10-31-24
Kentucky (DW)	State	KY90088	12-31-24
Kentucky (UST)	State	0001.01	07-17-24
Kentucky (WW)	State	KY90088	12-31-24
Louisiana (All)	NELAP	02055	06-30-24
Maine	State	2019012	03-12-25
Maryland	State	100	10-21-24
Massachusetts	State	M-PA009	06-30-25
Michigan	State	9930	01-31-25
Minnesota	NELAP	042-999-487	12-31-24
Mississippi	State	023	01-31-25
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-25
Nebraska	State	NE-OS-32-17	01-31-25
New Hampshire	NELAP	2730	08-12-24
New Jersey	NELAP	PA011	06-30-24
New York	NELAP	10670	04-01-25
North Carolina (DW)	State	42705	06-30-24
North Carolina (WW/SW)	State	521	08-04-24
North Dakota	State	R-205	01-31-24 *
Oklahoma	NELAP	9804	08-31-24
Oregon	NELAP	PA200001	09-11-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	36-00037	06-24-24
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-24
Rhode Island	State	LAO00338	12-30-24
South Carolina	State	89002	01-31-25
Tennessee	State	02838	01-31-25
Texas	NELAP	T104704194-23-46	08-31-24
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-27-24
Virginia	NELAP	460182	07-09-24
Washington	State	C457	04-11-25
West Virginia (DW)	State	9906 C	01-31-25
West Virginia DEP	State	055	07-25-24
Wyoming	State	8TMS-L	01-31-25
Wyoming (UST)	A2LA	0001.01	07-17-24

Method Summary

Client: SCS Engineers
Job ID: 310-283669-1
Project/Site: Des Moines County Regional LF (HMSP)

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
8270E	Semivolatile Organic Compounds (GC/MS)	SW846	EET CF
8081B	Organochlorine Pesticides (GC)	SW846	EET CF
8151A	Herbicides (GC)	SW846	EET CHI
8151A	Herbicides (GC)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	EET CF
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	EET CHI
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CF
3511	Microextraction of Organic Compounds	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF
8151A	Extraction (Herbicides)	SW846	EET CHI
8151A	Extraction (Herbicides)	SW846	ELLE
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	SW846	EET CHI

Protocol References:

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

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

Laboratory References:

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

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

eurofins | Environment Testing America

310-283669 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 6-14-24 | TIME 1700 | Received By: MY

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 # 1 of 3 MY

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? ↓

MW-38; MW-2-93; MW-7-93, MW-40R; MW-4-89; MW-37

Temperature Record

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

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

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

Uncorrected Temp (°C): 1.3 | Corrected Temp (°C): 1.3

• **Sample Container Temperature**

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

Exceptions Noted

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

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

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

Additional Comments

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 6-14-24 | TIME 1700 | Received By: MY

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 # 2 of 3 MY

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? ↓

MW-4-90, MW-39R, MW-1-99, MW-4-93

Temperature Record

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

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

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

Uncorrected Temp (°C): 2.1 | Corrected Temp (°C): 2.1

• **Sample Container Temperature**

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

Exceptions Noted

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

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

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

Additional Comments

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 6-14-24 | TIME 1700 | Received By: MY

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 # 3 of 3 MY

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? ↓

MW-7-90R

Temperature Record

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

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

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

Uncorrected Temp (°C): 0.8 | Corrected Temp (°C): 0.8

• **Sample Container Temperature**

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

Exceptions Noted

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

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

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

Additional Comments

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone (319) 277-2401 Phone (319) 277-2425

Chain of Custody Record

TestAmerica Des Moines SC
214

eurofins | Environment Testing

Client Information	Sampler	Lab PM	Carrier Tracking No(s)	COC No
	Michael Mahan	Yang, Mary E		310-93823-25756 1
Client Contact: Ben Madson	Phone: 515 [illegible]	E-Mail: Mary.Yang@ET EurofinsUS com	State of Origin:	Page: Page 1 of 1
Company: SCS Engineers	PWSID:			Job #:
Address: 1690 All State Court Suite 100	Due Date Requested:			
City: West Des Moines	TAT Requested (days):			
State, Zip: IA, 50265	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 27223154.24			
Email: bmadson@scsengineers.com	WO #:			
Project Name: Des Moines Co Sanitary LF (HMSP) Event Desc: HMSP	Project #: 31002156			
Site: Iowa	SSOW#:			

Analysis Requested

Preservation Codes
N - None
D - HNO3
A - HCL
CB - ZnAcetate/NaOH
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Metals List A	6020B - Metals List C	8260D - (MOD) App I VOCs	6020B - (MOD) Appendix I Metals	I_3765_85 - Total Suspended Solids	8081B - (MOD) Alpha-BHC	8260D - (MOD) App I VOCs + Dichlorodifluoromethane & Tetrachloroethene	8081B - (MOD) Endosulfan Sulfate	8081B, 8270E - (Endrin Aldehyde, Methoxychlor, & 4,4'-DDT) (3/4-Methoxyphenol & Phenol)	8151A - (MOD) 2,4-D [2C]	8151A - (MOD) 2,4,5-TP [Silvex][2C]	9034_Calc - Sulfide		Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D	A	D	N	N	A	N	N	N	N	CB			
MW-4-89	6 3 24	40		Water			X		X		X	X									Metals List A: Arsenic, Barium Chromium, Cobalt, Copper Lead, Nickel, Selenium, Vanadium and Zinc.
MW--1-99	6 2 24	9 [illegible]		Water			X		X		X										
MW-2-93	6 12 24	4 [illegible]		Water				X	X		X										Metals List C: Arsenic, Barium Nickel, and Zinc.
MW-4-90	6 [illegible] 24	30		Water					X	X	X	X		X							
MW-4-93	6 3 24	[illegible]		Water			X		X		X				X	X		X			LOGIN WITH SITES AND EVENTS
MW-7-90R	6 [illegible] 24	[illegible]		Water				X	X		X										Sub 8151 Herbs to Lancaster
MW-7-93	6 [illegible] 24	4 50		Water			X		X		X										Sub 9034 Sulfide to Chicago
MW-37	6/ 12 4	15 46		Water			X		X		X										
MW-38	6 [illegible] 24	[illegible]		Water				X	X		X										
MW-39R	6 4 24	[illegible]		Water			X				X		X				X				
MW-40R	6/ 12 4	[illegible]		Water			X		X		X	X									
Trip Blank				Water									X								

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

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

Special Instructions/QC Requirements.

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Michael Mahan	6/14 [illegible]	SCS			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 6/14/24 1700	Company: et

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

Ver: 04/02/2024

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Yang, Mary E	Carrier Tracking No(s):	COC No: 310-73525 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Mary Yang@ET EurofinsUS com	State of Origin: Iowa	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): State Program - Iowa		Job #: 310-283669-1
Address: 2417 Bond Street, ,	Due Date Requested: 6/27/2024			
City: University Park	TAT Requested (days):			
State, Zip: IL, 60484				
Phone: 708-534-5200(Tel) 708-534-5211(Fax)	PO #:			
Email:	WO #:			
Project Name: Des Moines County Regional LF (HMSP)	Project #: 31002156			
Site: 310-SCS Des Moines County Sanitary Landf	SSOW#:			

Analysis Requested

Preservation Codes: -

310-283669 COC

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9034_Calc/9030B	8151A/8151A_AP 8151 Herbicides	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-4-93 (310-283669-5)	6/13/24	17 00 Central		Water			X	X	1	

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

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

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	6/7/24 1500		Stephanie Hernandez	6/10/24 0945	EETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 2.3-2.9

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Yang, Mary E	Carrier Tracking No(s)	COC No: 310-73539 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Mary Yang@ET EurofinsUS com	State of Origin: Iowa	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): State Program - Iowa		Job #: 310-283669-1
Address: 2417 Bond Street, ,	Due Date Requested: 6/27/2024			
City: University Park	TAT Requested (days)			
State, Zip: IL, 60484				
Phone: 708-534-5200(Tel) 708-534-5211(Fax)	PO #:			
Email:	WO #:			
Project Name: Des Moines County Regional LF (HMSP)	Project #: 31002156			
Site: 310-SCS Des Moines County Sanitary Landf	SSOW#:			

Analysis Requested

Preservation Codes: -

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8151A/8151A_AP 8151 Herbicides	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-39R (310-283669-9)	6/11/24	08 17 Central		Water			X	2	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment.

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	6/12/24 1615		Stephanie Hernandez	6/10/24 0945	EEIA
Relinquished by	Date/Time	Company	Received by	Date/Time:	Company
Relinquished by	Date/Time	Company	Received by	Date/Time:	Company

Custody Seals Intact. ∆ Yes ∆ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks.
		0.8 → 0.9

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-283669-1

Login Number: 283669
List Number: 1
Creator: Hummel, Matthew R

List Source: Eurofins Cedar Falls

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

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-283669-1

Login Number: 283669
List Number: 2
Creator: Hernandez, Stephanie

List Source: Eurofins Chicago
List Creation: 06/18/24 10:20 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.9,0.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

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

ANALYTICAL REPORT

PREPARED FOR

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

Generated 7/15/2024 9:34:14 AM

JOB DESCRIPTION

Des Moines County Regional LF (HMSP 2)
HMSP 2

JOB NUMBER

310-283673-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

my EOL

Job Notes

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

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

Authorization

Generated
7/15/2024 9:34:14 AM

Authorized for release by
Mary Yang, Client Service Manager
Mary.Yang@ET.EurofinsUS.com
(319)595-2025

Table of Contents

Cover Page 1
Table of Contents 3
Case Narrative 4
Sample Summary 6
Detection Summary 7
Detection Limit Exceptions Summary 9
Client Sample Results 10
Definitions 26
Surrogate Summary 27
QC Sample Results 30
QC Association 45
Chronicle 49
Certification Summary 51
Method Summary 53
Chain of Custody 54
Receipt Checklists 59

Job Narrative
310-283673-1

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

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

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

Receipt
The samples were received on 6/14/2024 5:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.2°C and 1.9°C.

GC/MS VOA
Method 8260D: The continuing calibration verification (CCV) associated with batch 310-425101 recovered above the upper control limit for Bromoform (23.1%D). The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-425101/3).

Method 8260D: The initial calibration verification (ICV) result for batch 310-425101 was above the upper control limit. The affected analyte is: Methyl Methacrylate. Sample results were non-detects, and have been reported as qualified data.

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

GC/MS Semi VOA
Method 8270E: The surrogate recovery for the blank associated with preparation batch 310-424891 and analytical batch 310-425029 was outside the control limits.

Method 8270E: Surrogate recovery for the following sample was outside of acceptance limits: PZ-10 (310-283673-3). There was insufficient holding time to perform a re-extraction; therefore, the data have been reported.

Method 8270E: The continuing calibration verification (CCV) associated with batch 310-425029 recovered above the upper control limit for Safrole (23.0%D), 1,3-Dinitrobenzene (25.2%D), o,o',o''-Triethylphosphorothioate (22.0%D) and Dinoseb (24.1%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270E: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 310-424891 and analytical batch 310-425029 recovered outside control limits for the following analyte(s): 2,4-Dinitrophenol, 2-Nitrophenol and 4,6-Dinitro-2-methylphenol. 2,4-Dinitrophenol, 2-Nitrophenol and 4,6-Dinitro-2-methylphenol hasve been identified as poor performing analytes when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Method 8270E: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 310-424891 and analytical batch 310-425029 recovered outside control limits for the following analytes: 4-Chloroaniline and 4-Nitrophenol.

Method 8270E: The laboratory control sample duplicate (LCSD) for preparation batch 310-424891 and analytical batch 310-425029 recovered outside control limits for multiple analytes. These analytes were biased high in the LCSD 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.

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

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

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

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

Metals
Method 6020B: The reference method requires samples to be preserved to a pH of <2. The following sample was received with insufficient preservation at a pH of >2: MW-D (310-283673-7). The sample(s) was preserved to the appropriate pH in the laboratory.

Method 6020B: The laboratory control sample (LCS) for preparation batch 310-424817 and analytical batch 310-427207 recovered outside control limits for the following analytes: Silver & Thallium. 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.

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

Sample Summary

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-283673-2	MW-43	Groundwater	06/12/24 12:18	06/14/24 17:00
310-283673-3	PZ-10	Groundwater	06/11/24 11:08	06/14/24 17:00
310-283673-5	GW-Lagoon-00	Groundwater	06/11/24 16:30	06/14/24 17:00
310-283673-6	GW-Lagoon-Cell 1W	Groundwater	06/11/24 12:00	06/14/24 17:00
310-283673-7	MW-D	Groundwater	06/12/24 12:18	06/14/24 17:00
310-283673-8	Trip Blank	Trip Blank	06/12/24 12:18	06/14/24 17:00

Detection Summary

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: MW-43
Lab Sample ID: 310-283673-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	11.6		10.0	3.10	ug/L	1		8260D	Total/NA
Arsenic	0.00725		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.494		0.00200	0.000660	mg/L	1		6020B	Total/NA
Chromium	0.00131	J	0.00500	0.00120	mg/L	1		6020B	Total/NA
Cobalt	0.00205		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.00582		0.00500	0.00210	mg/L	1		6020B	Total/NA
Vanadium	0.00151	J	0.00500	0.00110	mg/L	1		6020B	Total/NA
Total Suspended Solids	32.0		15.0	11.1	mg/L	1		I-3765-85	Total/NA

Client Sample ID: PZ-10
Lab Sample ID: 310-283673-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.01		0.500	0.220	ug/L	1		8260D	Total/NA
Chlorobenzene	9.16		1.00	0.400	ug/L	1		8260D	Total/NA
Chloroethane	1.53	J	4.00	0.790	ug/L	1		8260D	Total/NA
1,2-Dichlorobenzene	0.441	J	1.00	0.370	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	6.26		1.00	0.230	ug/L	1		8260D	Total/NA
1,1-Dichloroethane	0.680	J	1.00	0.220	ug/L	1		8260D	Total/NA
Arsenic	0.0542		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.396		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cadmium	0.000233		0.000200	0.000100	mg/L	1		6020B	Total/NA
Chromium	0.00471	J	0.00500	0.00120	mg/L	1		6020B	Total/NA
Cobalt	0.0353		0.000500	0.000170	mg/L	1		6020B	Total/NA
Copper	0.00553		0.00500	0.00180	mg/L	1		6020B	Total/NA
Lead	0.00394		0.000500	0.000260	mg/L	1		6020B	Total/NA
Nickel	0.0259		0.00500	0.00210	mg/L	1		6020B	Total/NA
Vanadium	0.00950		0.00500	0.00110	mg/L	1		6020B	Total/NA
Zinc	0.0180	J	0.0200	0.00970	mg/L	1		6020B	Total/NA
Total Suspended Solids	102		15.0	11.1	mg/L	1		I-3765-85	Total/NA

Client Sample ID: GW-Lagoon-00
Lab Sample ID: 310-283673-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00145	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.164		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.000309	J	0.000500	0.000170	mg/L	1		6020B	Total/NA
Total Suspended Solids	4.00	J	5.00	3.70	mg/L	1		I-3765-85	Total/NA

Client Sample ID: GW-Lagoon-Cell 1W
Lab Sample ID: 310-283673-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.122		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.000864		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.00304	J	0.00500	0.00210	mg/L	1		6020B	Total/NA
Total Suspended Solids	26.0		5.00	3.70	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-D
Lab Sample ID: 310-283673-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	11.1		10.0	3.10	ug/L	1		8260D	Total/NA
Arsenic	0.00684		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.474		0.00200	0.000660	mg/L	1		6020B	Total/NA
Chromium	0.00125	J	0.00500	0.00120	mg/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: MW-D (Continued)
Lab Sample ID: 310-283673-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	0.00213		0.000500	0.000170	mg/L	1		6020B	Total/NA
Copper	0.00300	J	0.00500	0.00180	mg/L	1		6020B	Total/NA
Nickel	0.00602		0.00500	0.00210	mg/L	1		6020B	Total/NA
Vanadium	0.00142	J	0.00500	0.00110	mg/L	1		6020B	Total/NA
Total Suspended Solids	23.0		15.0	11.1	mg/L	1		I-3765-85	Total/NA

Client Sample ID: Trip Blank
Lab Sample ID: 310-283673-8

No Detections.

This Detection Summary does not include radiochemical test results.

Quantitation Limit Exceptions Summary

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

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	Groundwater	Total/NA	ug/L	1.20	5
8260D	1,2-Dibromo-3-Chloropropane	Trip Blank	Total/NA	ug/L	1.20	5
8260D	1,2-Dibromoethane (EDB)	Groundwater	Total/NA	ug/L	0.340	1
8260D	1,2-Dibromoethane (EDB)	Trip Blank	Total/NA	ug/L	0.340	1

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: MW-43
Lab Sample ID: 310-283673-2
Date Collected: 06/12/24 12:18
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**11.6**		10.0	3.10	ug/L			06/20/24 16:44	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/20/24 16:44	1
Benzene	<0.500		0.500	0.220	ug/L			06/20/24 16:44	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/20/24 16:44	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/20/24 16:44	1
Bromoform	<5.00		5.00	0.780	ug/L			06/20/24 16:44	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/20/24 16:44	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/20/24 16:44	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/20/24 16:44	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/20/24 16:44	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/20/24 16:44	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/20/24 16:44	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/20/24 16:44	1
Chloroform	<3.00		3.00	1.30	ug/L			06/20/24 16:44	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/20/24 16:44	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/20/24 16:44	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/20/24 16:44	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/20/24 16:44	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/20/24 16:44	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/20/24 16:44	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/20/24 16:44	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/20/24 16:44	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/20/24 16:44	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/20/24 16:44	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/20/24 16:44	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/20/24 16:44	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/20/24 16:44	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/20/24 16:44	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/20/24 16:44	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/20/24 16:44	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/20/24 16:44	1
Styrene	<1.00		1.00	0.370	ug/L			06/20/24 16:44	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/20/24 16:44	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/20/24 16:44	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/20/24 16:44	1
Toluene	<1.00		1.00	0.430	ug/L			06/20/24 16:44	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/20/24 16:44	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/20/24 16:44	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/20/24 16:44	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/20/24 16:44	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/20/24 16:44	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/20/24 16:44	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/20/24 16:44	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/20/24 16:44	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/20/24 16:44	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/20/24 16:44	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/20/24 16:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*80 - 120*		*06/20/24 16:44*	*1*

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: MW-43
Lab Sample ID: 310-283673-2
Date Collected: 06/12/24 12:18
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*118*		*73 - 130*		*06/20/24 16:44*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*06/20/24 16:44*	*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		06/18/24 09:00	07/12/24 16:17	1
Arsenic	**0.00725**		0.00200	0.000530	mg/L		06/18/24 09:00	07/12/24 16:17	1
Barium	**0.494**		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 23:23	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/18/24 09:00	07/11/24 23:23	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		06/18/24 09:00	07/11/24 23:23	1
Chromium	**0.00131**	**J**	0.00500	0.00120	mg/L		06/18/24 09:00	07/12/24 16:17	1
Cobalt	**0.00205**		0.000500	0.000170	mg/L		06/18/24 09:00	07/11/24 23:23	1
Copper	<0.00500		0.00500	0.00180	mg/L		06/18/24 09:00	07/11/24 23:23	1
Lead	<0.000500		0.000500	0.000260	mg/L		06/18/24 09:00	07/11/24 23:23	1
Nickel	**0.00582**		0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 23:23	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/24 09:00	07/11/24 23:23	1
Silver	<0.00100	*+	0.00100	0.000500	mg/L		06/18/24 09:00	07/12/24 16:17	1
Thallium	<0.00100	*+	0.00100	0.000570	mg/L		06/18/24 09:00	07/12/24 16:17	1
Vanadium	**0.00151**	**J**	0.00500	0.00110	mg/L		06/18/24 09:00	07/11/24 23:23	1
Zinc	<0.0200		0.0200	0.00970	mg/L		06/18/24 09:00	07/12/24 16:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**32.0**		15.0	11.1	mg/L			06/17/24 11:46	1

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: PZ-10
Lab Sample ID: 310-283673-3
Date Collected: 06/11/24 11:08
Matrix: Groundwater
Date Received: 06/14/24 17:00

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			06/20/24 16:23	1
Acrolein	<10.0		10.0	3.60	ug/L			06/20/24 16:23	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/20/24 16:23	1
Allyl chloride	<2.00		2.00	0.700	ug/L			06/20/24 16:23	1
Benzene	**3.01**		0.500	0.220	ug/L			06/20/24 16:23	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/20/24 16:23	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/20/24 16:23	1
Bromoform	<5.00		5.00	0.780	ug/L			06/20/24 16:23	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/20/24 16:23	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/20/24 16:23	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/20/24 16:23	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/20/24 16:23	1
Chlorobenzene	**9.16**		1.00	0.400	ug/L			06/20/24 16:23	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/20/24 16:23	1
Chloroethane	**1.53**	**J**	4.00	0.790	ug/L			06/20/24 16:23	1
Chloroform	<3.00		3.00	1.30	ug/L			06/20/24 16:23	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/20/24 16:23	1
Chloroprene	<1.00		1.00	0.230	ug/L			06/20/24 16:23	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/20/24 16:23	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/20/24 16:23	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/20/24 16:23	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/20/24 16:23	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/20/24 16:23	1
1,2-Dichlorobenzene	**0.441**	**J**	1.00	0.370	ug/L			06/20/24 16:23	1
1,3-Dichlorobenzene	<1.00		1.00	0.300	ug/L			06/20/24 16:23	1
1,4-Dichlorobenzene	**6.26**		1.00	0.230	ug/L			06/20/24 16:23	1
Dichlorodifluoromethane	<3.00		3.00	0.250	ug/L			06/20/24 16:23	1
1,1-Dichloroethane	**0.680**	**J**	1.00	0.220	ug/L			06/20/24 16:23	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/20/24 16:23	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/20/24 16:23	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/20/24 16:23	1
1,3-Dichloropropane	<1.00		1.00	0.400	ug/L			06/20/24 16:23	1
2,2-Dichloropropane	<4.00		4.00	0.690	ug/L			06/20/24 16:23	1
1,1-Dichloropropene	<1.00		1.00	0.430	ug/L			06/20/24 16:23	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/20/24 16:23	1
Ethyl methacrylate	<2.00		2.00	0.680	ug/L			06/20/24 16:23	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/20/24 16:23	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/20/24 16:23	1
Methacrylonitrile	<10.0		10.0	3.30	ug/L			06/20/24 16:23	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/20/24 16:23	1
Methyl methacrylate	<2.00		2.00	0.760	ug/L			06/20/24 16:23	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/20/24 16:23	1
Naphthalene	<5.00		5.00	3.00	ug/L			06/20/24 16:23	1
Propionitrile	<10.0		10.0	3.40	ug/L			06/20/24 16:23	1
Styrene	<1.00		1.00	0.370	ug/L			06/20/24 16:23	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/20/24 16:23	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/20/24 16:23	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/20/24 16:23	1
Toluene	<1.00		1.00	0.430	ug/L			06/20/24 16:23	1

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: PZ-10
Lab Sample ID: 310-283673-3
Date Collected: 06/11/24 11:08
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/20/24 16:23	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/20/24 16:23	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/20/24 16:23	1
1,2,4-Trichlorobenzene	<5.00		5.00	0.750	ug/L			06/20/24 16:23	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/20/24 16:23	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/20/24 16:23	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/20/24 16:23	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/20/24 16:23	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/20/24 16:23	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/20/24 16:23	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/20/24 16:23	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/20/24 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*80 - 120*		*06/20/24 16:23*	*1*
Dibromofluoromethane (Surr)	*116*		*73 - 130*		*06/20/24 16:23*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*06/20/24 16:23*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	<10.0		10.0	0.540	ug/L		06/18/24 11:41	06/19/24 13:12	1
1,3,5-Trinitrobenzene	<10.0		10.0	2.30	ug/L		06/18/24 11:41	06/19/24 13:12	1
1,3-Dinitrobenzene	<10.0	*+	10.0	3.20	ug/L		06/18/24 11:41	06/19/24 13:12	1
1,4-Naphthoquinone	<10.0		10.0	3.60	ug/L		06/18/24 11:41	06/19/24 13:12	1
1,4-phenylenediamine	<10.0		10.0	1.90	ug/L		06/18/24 11:41	06/19/24 13:12	1
1-Naphthylamine	<10.0		10.0	2.50	ug/L		06/18/24 11:41	06/19/24 13:12	1
2,3,4,6-Tetrachlorophenol	<10.0		10.0	5.30	ug/L		06/18/24 11:41	06/19/24 13:12	1
2,4,5-Trichlorophenol	<10.0		10.0	5.30	ug/L		06/18/24 11:41	06/19/24 13:12	1
2,4,6-Trichlorophenol	<10.0		10.0	5.00	ug/L		06/18/24 11:41	06/19/24 13:12	1
2,4-Dichlorophenol	<10.0		10.0	0.850	ug/L		06/18/24 11:41	06/19/24 13:12	1
2,4-Dimethylphenol	<10.0		10.0	0.580	ug/L		06/18/24 11:41	06/19/24 13:12	1
2,4-Dinitrophenol	<20.0	*-	20.0	13.0	ug/L		06/18/24 11:41	06/19/24 13:12	1
2,4-Dinitrotoluene	<10.0		10.0	6.40	ug/L		06/18/24 11:41	06/19/24 13:12	1
2,6-Dichlorophenol	<10.0		10.0	0.690	ug/L		06/18/24 11:41	06/19/24 13:12	1
2,6-Dinitrotoluene	<10.0		10.0	0.520	ug/L		06/18/24 11:41	06/19/24 13:12	1
2-Acetylaminofluorene	<10.0		10.0	2.70	ug/L		06/18/24 11:41	06/19/24 13:12	1
2-Chloronaphthalene	<10.0		10.0	0.640	ug/L		06/18/24 11:41	06/19/24 13:12	1
2-Chlorophenol	<10.0		10.0	0.540	ug/L		06/18/24 11:41	06/19/24 13:12	1
2-Methylnaphthalene	<10.0		10.0	0.590	ug/L		06/18/24 11:41	06/19/24 13:12	1
2-Methylphenol	<10.0		10.0	0.650	ug/L		06/18/24 11:41	06/19/24 13:12	1
2-Naphthylamine	<10.0		10.0	2.10	ug/L		06/18/24 11:41	06/19/24 13:12	1
2-Nitroaniline	<10.0		10.0	5.90	ug/L		06/18/24 11:41	06/19/24 13:12	1
2-Nitrophenol	<10.0		10.0	6.80	ug/L		06/18/24 11:41	06/19/24 13:12	1
3,3'-Dichlorobenzidine	<10.0		10.0	1.40	ug/L		06/18/24 11:41	06/19/24 13:12	1
3,3'-Dimethylbenzidine	<10.0		10.0	1.50	ug/L		06/18/24 11:41	06/19/24 13:12	1
3-Methylcholanthrene	<10.0		10.0	0.320	ug/L		06/18/24 11:41	06/19/24 13:12	1
3-Nitroaniline	<10.0		10.0	2.70	ug/L		06/18/24 11:41	06/19/24 13:12	1
4,6-Dinitro-2-methylphenol	<10.0	*-	10.0	6.90	ug/L		06/18/24 11:41	06/19/24 13:12	1
4-Aminobiphenyl	<10.0		10.0	2.20	ug/L		06/18/24 11:41	06/19/24 13:12	1
4-Bromophenyl phenyl ether	<10.0		10.0	0.700	ug/L		06/18/24 11:41	06/19/24 13:12	1

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: PZ-10
Lab Sample ID: 310-283673-3
Date Collected: 06/11/24 11:08
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloro-3-methylphenol	<10.0		10.0	0.840	ug/L		06/18/24 11:41	06/19/24 13:12	1
4-Chloroaniline	<10.0	*1	10.0	0.620	ug/L		06/18/24 11:41	06/19/24 13:12	1
4-Chlorophenyl phenyl ether	<10.0		10.0	0.690	ug/L		06/18/24 11:41	06/19/24 13:12	1
Methylphenol, 3 & 4	<10.0		10.0	0.700	ug/L		06/18/24 11:41	06/19/24 13:12	1
4-Nitroaniline	<10.0		10.0	1.30	ug/L		06/18/24 11:41	06/19/24 13:12	1
4-Nitrophenol	<10.0	*- *1	10.0	7.60	ug/L		06/18/24 11:41	06/19/24 13:12	1
5-Nitro-o-toluidine	<10.0		10.0	2.80	ug/L		06/18/24 11:41	06/19/24 13:12	1
7,12-Dimethylbenz(a)anthracene	<10.0		10.0	1.90	ug/L		06/18/24 11:41	06/19/24 13:12	1
Acenaphthene	<10.0	*+	10.0	0.640	ug/L		06/18/24 11:41	06/19/24 13:12	1
Acenaphthylene	<10.0		10.0	0.720	ug/L		06/18/24 11:41	06/19/24 13:12	1
Acetophenone	<10.0	*+	10.0	0.690	ug/L		06/18/24 11:41	06/19/24 13:12	1
Anthracene	<10.0	*+	10.0	0.870	ug/L		06/18/24 11:41	06/19/24 13:12	1
Benzo[a]anthracene	<10.0		10.0	0.850	ug/L		06/18/24 11:41	06/19/24 13:12	1
Benzo[a]pyrene	<10.0		10.0	8.10	ug/L		06/18/24 11:41	06/19/24 13:12	1
Benzo[b]fluoranthene	<10.0		10.0	4.90	ug/L		06/18/24 11:41	06/19/24 13:12	1
Benzo[g,h,i]perylene	<10.0		10.0	6.30	ug/L		06/18/24 11:41	06/19/24 13:12	1
Benzo[k]fluoranthene	<10.0		10.0	2.20	ug/L		06/18/24 11:41	06/19/24 13:12	1
Benzyl alcohol	<10.0		10.0	1.30	ug/L		06/18/24 11:41	06/19/24 13:12	1
Bis(2-chloroethoxy)methane	<10.0		10.0	0.760	ug/L		06/18/24 11:41	06/19/24 13:12	1
Bis(2-chloroethyl)ether	<10.0		10.0	0.820	ug/L		06/18/24 11:41	06/19/24 13:12	1
bis (2-chloroisopropyl) ether	<10.0		10.0	0.540	ug/L		06/18/24 11:41	06/19/24 13:12	1
Bis(2-ethylhexyl) phthalate	<10.0		10.0	5.50	ug/L		06/18/24 11:41	06/19/24 13:12	1
Butyl benzyl phthalate	<10.0		10.0	5.40	ug/L		06/18/24 11:41	06/19/24 13:12	1
Chlorobenzilate	<10.0		10.0	3.60	ug/L		06/18/24 11:41	06/19/24 13:12	1
Chrysene	<10.0		10.0	0.870	ug/L		06/18/24 11:41	06/19/24 13:12	1
Diallate	<10.0		10.0	4.00	ug/L		06/18/24 11:41	06/19/24 13:12	1
Dibenzo(a,h)anthracene	<10.0		10.0	3.90	ug/L		06/18/24 11:41	06/19/24 13:12	1
Dibenzofuran	<10.0		10.0	0.740	ug/L		06/18/24 11:41	06/19/24 13:12	1
Diethyl phthalate	<10.0		10.0	1.70	ug/L		06/18/24 11:41	06/19/24 13:12	1
Dimethoate	<10.0		10.0	3.60	ug/L		06/18/24 11:41	06/19/24 13:12	1
Dimethyl phthalate	<10.0	*+	10.0	1.00	ug/L		06/18/24 11:41	06/19/24 13:12	1
Di-n-butyl phthalate	<10.0		10.0	5.60	ug/L		06/18/24 11:41	06/19/24 13:12	1
Di-n-octyl phthalate	<20.0		20.0	7.00	ug/L		06/18/24 11:41	06/19/24 13:12	1
Dinoseb	<10.0		10.0	2.40	ug/L		06/18/24 11:41	06/19/24 13:12	1
Diphenylamine	<10.0		10.0	6.00	ug/L		06/18/24 11:41	06/19/24 13:12	1
Disulfoton	<10.0		10.0	2.40	ug/L		06/18/24 11:41	06/19/24 13:12	1
Ethyl methanesulfonate	<10.0		10.0	3.60	ug/L		06/18/24 11:41	06/19/24 13:12	1
Ethyl Parathion	<10.0		10.0	2.20	ug/L		06/18/24 11:41	06/19/24 13:12	1
Famphur	<10.0		10.0	3.80	ug/L		06/18/24 11:41	06/19/24 13:12	1
Fluoranthene	<10.0		10.0	1.70	ug/L		06/18/24 11:41	06/19/24 13:12	1
Fluorene	<10.0	*+	10.0	0.790	ug/L		06/18/24 11:41	06/19/24 13:12	1
Hexachlorobenzene	<10.0		10.0	0.700	ug/L		06/18/24 11:41	06/19/24 13:12	1
Hexachlorobutadiene	<10.0		10.0	0.860	ug/L		06/18/24 11:41	06/19/24 13:12	1
Hexachlorocyclopentadiene	<10.0		10.0	5.10	ug/L		06/18/24 11:41	06/19/24 13:12	1
Hexachloroethane	<10.0		10.0	0.970	ug/L		06/18/24 11:41	06/19/24 13:12	1
Hexachloropropene	<10.0		10.0	2.60	ug/L		06/18/24 11:41	06/19/24 13:12	1
Indeno[1,2,3-cd]pyrene	<10.0		10.0	4.20	ug/L		06/18/24 11:41	06/19/24 13:12	1
Isodrin	<10.0		10.0	4.70	ug/L		06/18/24 11:41	06/19/24 13:12	1
Isophorone	<10.0		10.0	0.930	ug/L		06/18/24 11:41	06/19/24 13:12	1

Client Sample ID: PZ-10
Lab Sample ID: 310-283673-3
Date Collected: 06/11/24 11:08
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isosafrole	<10.0		10.0	2.30	ug/L		06/18/24 11:41	06/19/24 13:12	1
Kepone	<10.0		10.0	1.00	ug/L		06/18/24 11:41	06/19/24 13:12	1
Methapyrilene	<10.0		10.0	0.760	ug/L		06/18/24 11:41	06/19/24 13:12	1
Methyl methanesulfonate	<10.0		10.0	3.30	ug/L		06/18/24 11:41	06/19/24 13:12	1
Methyl parathion	<10.0		10.0	2.30	ug/L		06/18/24 11:41	06/19/24 13:12	1
Nitrobenzene	<10.0		10.0	0.800	ug/L		06/18/24 11:41	06/19/24 13:12	1
N-Nitrosodiethylamine	<10.0		10.0	3.40	ug/L		06/18/24 11:41	06/19/24 13:12	1
N-Nitrosodimethylamine	<10.0		10.0	0.720	ug/L		06/18/24 11:41	06/19/24 13:12	1
N-Nitrosodi-n-butylamine	<10.0		10.0	3.90	ug/L		06/18/24 11:41	06/19/24 13:12	1
N-Nitrosodi-n-propylamine	<10.0		10.0	0.920	ug/L		06/18/24 11:41	06/19/24 13:12	1
N-Nitrosodiphenylamine	<10.0		10.0	0.750	ug/L		06/18/24 11:41	06/19/24 13:12	1
N-Nitrosomethylethylamine	<10.0		10.0	4.90	ug/L		06/18/24 11:41	06/19/24 13:12	1
N-Nitrosopiperidine	<10.0		10.0	2.70	ug/L		06/18/24 11:41	06/19/24 13:12	1
N-Nitrosopyrrolidine	<10.0		10.0	3.60	ug/L		06/18/24 11:41	06/19/24 13:12	1
o,o',o''-Triethylphosphorothioate	<10.0		10.0	3.20	ug/L		06/18/24 11:41	06/19/24 13:12	1
o-Toluidine	<10.0		10.0	2.90	ug/L		06/18/24 11:41	06/19/24 13:12	1
p-Dimethylamino azobenzene	<10.0		10.0	2.20	ug/L		06/18/24 11:41	06/19/24 13:12	1
Pentachlorobenzene	<10.0		10.0	2.80	ug/L		06/18/24 11:41	06/19/24 13:12	1
Pentachloronitrobenzene	<10.0		10.0	5.80	ug/L		06/18/24 11:41	06/19/24 13:12	1
Pentachlorophenol	<10.0		10.0	9.60	ug/L		06/18/24 11:41	06/19/24 13:12	1
Phenacetin	<10.0		10.0	1.90	ug/L		06/18/24 11:41	06/19/24 13:12	1
Phenanthrene	<10.0	*+	10.0	0.790	ug/L		06/18/24 11:41	06/19/24 13:12	1
Phenol	<10.0		10.0	1.10	ug/L		06/18/24 11:41	06/19/24 13:12	1
Phorate	<10.0		10.0	3.20	ug/L		06/18/24 11:41	06/19/24 13:12	1
Pronamide	<10.0		10.0	2.70	ug/L		06/18/24 11:41	06/19/24 13:12	1
Pyrene	<10.0		10.0	0.790	ug/L		06/18/24 11:41	06/19/24 13:12	1
Safrole	<10.0		10.0	2.80	ug/L		06/18/24 11:41	06/19/24 13:12	1
Thionazin	<10.0		10.0	3.50	ug/L		06/18/24 11:41	06/19/24 13:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*23*	*S1-*	*25 - 110*	*06/18/24 11:41*	*06/19/24 13:12*	*1*
Phenol-d5 (Surr)	*45*		*21 - 110*	*06/18/24 11:41*	*06/19/24 13:12*	*1*
Nitrobenzene-d5 (Surr)	*76*		*45 - 129*	*06/18/24 11:41*	*06/19/24 13:12*	*1*
2-Fluorobiphenyl (Surr)	*68*		*39 - 118*	*06/18/24 11:41*	*06/19/24 13:12*	*1*
2,4,6-Tribromophenol (Surr)	*13*	*S1-*	*27 - 136*	*06/18/24 11:41*	*06/19/24 13:12*	*1*
Terphenyl-d14 (Surr)	*80*		*12 - 144*	*06/18/24 11:41*	*06/19/24 13:12*	*1*

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetonitrile	<10.0		10.0	2.60	mg/L			06/24/24 14:55	1
Isobutanol	<10.0		10.0	2.40	mg/L			06/24/24 14:55	1

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.0911		0.0911	0.0228	ug/L		06/18/24 13:01	06/18/24 18:13	1
4,4'-DDE	<0.0911		0.0911	0.0273	ug/L		06/18/24 13:01	06/18/24 18:13	1
4,4'-DDT	<0.0911		0.0911	0.0182	ug/L		06/18/24 13:01	06/18/24 18:13	1
Aldrin	<0.0911		0.0911	0.0201	ug/L		06/18/24 13:01	06/18/24 18:13	1
alpha-BHC	<0.0911		0.0911	0.00911	ug/L		06/18/24 13:01	06/18/24 18:13	1
beta-BHC	<0.0911		0.0911	0.0383	ug/L		06/18/24 13:01	06/18/24 18:13	1

Client Sample ID: PZ-10
Lab Sample ID: 310-283673-3
Date Collected: 06/11/24 11:08
Matrix: Groundwater
Date Received: 06/14/24 17:00

Method: SW846 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlordane (technical)	<1.82		1.82	0.355	ug/L		06/18/24 13:01	06/18/24 18:13	1
delta-BHC	<0.0911		0.0911	0.0292	ug/L		06/18/24 13:01	06/18/24 18:13	1
Dieldrin	<0.0911		0.0911	0.0191	ug/L		06/18/24 13:01	06/18/24 18:13	1
Endosulfan I	<0.0911		0.0911	0.0255	ug/L		06/18/24 13:01	06/18/24 18:13	1
Endosulfan II	<0.0911		0.0911	0.0237	ug/L		06/18/24 13:01	06/18/24 18:13	1
Endosulfan sulfate	<0.0911		0.0911	0.0164	ug/L		06/18/24 13:01	06/18/24 18:13	1
Endrin	<0.0911		0.0911	0.0255	ug/L		06/18/24 13:01	06/18/24 18:13	1
Endrin aldehyde	<0.0911		0.0911	0.0246	ug/L		06/18/24 13:01	06/18/24 18:13	1
gamma-BHC (Lindane)	<0.0911		0.0911	0.00911	ug/L		06/18/24 13:01	06/18/24 18:13	1
Heptachlor	<0.0911		0.0911	0.0210	ug/L		06/18/24 13:01	06/18/24 18:13	1
Heptachlor epoxide	<0.0911		0.0911	0.0292	ug/L		06/18/24 13:01	06/18/24 18:13	1
Methoxychlor	<0.0911		0.0911	0.0292	ug/L		06/18/24 13:01	06/18/24 18:13	1
Toxaphene	<1.82		1.82	0.911	ug/L		06/18/24 13:01	06/18/24 18:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*101*		*10 - 136*	*06/18/24 13:01*	*06/18/24 18:13*	*1*
Tetrachloro-m-xylene	*103*		*10 - 130*	*06/18/24 13:01*	*06/18/24 18:13*	*1*

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<1.82		1.82	0.747	ug/L		06/18/24 13:01	06/18/24 18:13	1
PCB-1221	<1.82		1.82	0.747	ug/L		06/18/24 13:01	06/18/24 18:13	1
PCB-1232	<1.82		1.82	0.747	ug/L		06/18/24 13:01	06/18/24 18:13	1
PCB-1242	<1.82		1.82	0.747	ug/L		06/18/24 13:01	06/18/24 18:13	1
PCB-1248	<1.82		1.82	0.629	ug/L		06/18/24 13:01	06/18/24 18:13	1
PCB-1254	<1.82		1.82	0.629	ug/L		06/18/24 13:01	06/18/24 18:13	1
PCB-1260	<1.82		1.82	0.629	ug/L		06/18/24 13:01	06/18/24 18:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*101*		*10 - 136*	*06/18/24 13:01*	*06/18/24 18:13*	*1*
Tetrachloro-m-xylene	*103*		*10 - 130*	*06/18/24 13:01*	*06/18/24 18:13*	*1*

Method: SW846 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	<0.621		0.621	0.259	ug/L		06/18/24 15:50	06/20/24 16:04	1
Silvex (2,4,5-TP)	<0.0517		0.0517	0.0228	ug/L		06/18/24 15:50	06/20/24 16:04	1
2,4,5-T	<0.155		0.155	0.0673	ug/L		06/18/24 15:50	06/20/24 16:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid (Surr)	*73*		*34 - 142*	*06/18/24 15:50*	*06/20/24 16:04*	*1*
2,4-Dichlorophenylacetic acid (Surr)	*66*		*34 - 142*	*06/18/24 15:50*	*06/20/24 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		06/18/24 09:00	07/12/24 16:19	1
Arsenic	**0.0542**		0.00200	0.000530	mg/L		06/18/24 09:00	07/12/24 16:19	1
Barium	**0.396**		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 23:27	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/18/24 09:00	07/11/24 23:27	1
Cadmium	**0.000233**		0.000200	0.000100	mg/L		06/18/24 09:00	07/11/24 23:27	1
Chromium	**0.00471**	**J**	0.00500	0.00120	mg/L		06/18/24 09:00	07/12/24 16:19	1
Cobalt	**0.0353**		0.000500	0.000170	mg/L		06/18/24 09:00	07/11/24 23:27	1

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: PZ-10
Lab Sample ID: 310-283673-3
Date Collected: 06/11/24 11:08
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	**0.00553**		0.00500	0.00180	mg/L		06/18/24 09:00	07/11/24 23:27	1
Lead	**0.00394**		0.000500	0.000260	mg/L		06/18/24 09:00	07/11/24 23:27	1
Nickel	**0.0259**		0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 23:27	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/24 09:00	07/11/24 23:27	1
Silver	<0.00100	*+	0.00100	0.000500	mg/L		06/18/24 09:00	07/12/24 16:19	1
Thallium	<0.00100	*+	0.00100	0.000570	mg/L		06/18/24 09:00	07/12/24 16:19	1
Vanadium	**0.00950**		0.00500	0.00110	mg/L		06/18/24 09:00	07/11/24 23:27	1
Zinc	**0.0180**	**J**	0.0200	0.00970	mg/L		06/18/24 09:00	07/12/24 16:19	1
Tin	<0.00500		0.00500	0.00230	mg/L		06/18/24 09:00	07/11/24 23:27	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200	0.000110	mg/L		06/26/24 15:25	06/27/24 13:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total (SW846 9012B)	<0.0100		0.0100	0.00350	mg/L		06/19/24 09:31	06/21/24 18:13	1
Sulfide (SW846 9034)	<1.00		1.00	0.231	mg/L		06/18/24 18:10	06/18/24 20:27	1
Total Suspended Solids (USGS I-3765-85)	**102**		15.0	11.1	mg/L			06/17/24 10:43	1

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: GW-Lagoon-00
Lab Sample ID: 310-283673-5
Date Collected: 06/11/24 16:30
Matrix: Groundwater
Date Received: 06/14/24 17:00

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			06/20/24 15:39	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/20/24 15:39	1
Benzene	<0.500		0.500	0.220	ug/L			06/20/24 15:39	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/20/24 15:39	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/20/24 15:39	1
Bromoform	<5.00		5.00	0.780	ug/L			06/20/24 15:39	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/20/24 15:39	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/20/24 15:39	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/20/24 15:39	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/20/24 15:39	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/20/24 15:39	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/20/24 15:39	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/20/24 15:39	1
Chloroform	<3.00		3.00	1.30	ug/L			06/20/24 15:39	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/20/24 15:39	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/20/24 15:39	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/20/24 15:39	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/20/24 15:39	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/20/24 15:39	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/20/24 15:39	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/20/24 15:39	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/20/24 15:39	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/20/24 15:39	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/20/24 15:39	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/20/24 15:39	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/20/24 15:39	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/20/24 15:39	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/20/24 15:39	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/20/24 15:39	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/20/24 15:39	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/20/24 15:39	1
Styrene	<1.00		1.00	0.370	ug/L			06/20/24 15:39	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/20/24 15:39	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/20/24 15:39	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/20/24 15:39	1
Toluene	<1.00		1.00	0.430	ug/L			06/20/24 15:39	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/20/24 15:39	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/20/24 15:39	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/20/24 15:39	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/20/24 15:39	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/20/24 15:39	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/20/24 15:39	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/20/24 15:39	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/20/24 15:39	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/20/24 15:39	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/20/24 15:39	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/20/24 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*80 - 120*		*06/20/24 15:39*	*1*

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: GW-Lagoon-00
Lab Sample ID: 310-283673-5
Date Collected: 06/11/24 16:30
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*117*		*73 - 130*		*06/20/24 15:39*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*06/20/24 15:39*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00145**	**J**	0.00200	0.000530	mg/L		06/18/24 09:00	07/12/24 16:21	1
Barium	**0.164**		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 23:30	1
Chromium	<0.00500		0.00500	0.00120	mg/L		06/18/24 09:00	07/12/24 16:21	1
Cobalt	**0.000309**	**J**	0.000500	0.000170	mg/L		06/18/24 09:00	07/11/24 23:30	1
Copper	<0.00500		0.00500	0.00180	mg/L		06/18/24 09:00	07/11/24 23:30	1
Lead	<0.000500		0.000500	0.000260	mg/L		06/18/24 09:00	07/11/24 23:30	1
Nickel	<0.00500		0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 23:30	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/24 09:00	07/11/24 23:30	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/18/24 09:00	07/11/24 23:30	1
Zinc	<0.0200		0.0200	0.00970	mg/L		06/18/24 09:00	07/12/24 16:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**4.00**	**J**	5.00	3.70	mg/L			06/17/24 10:43	1

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: GW-Lagoon-Cell 1W
Lab Sample ID: 310-283673-6
Date Collected: 06/11/24 12:00
Matrix: Groundwater
Date Received: 06/14/24 17:00

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			06/20/24 16:01	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/20/24 16:01	1
Benzene	<0.500		0.500	0.220	ug/L			06/20/24 16:01	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/20/24 16:01	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/20/24 16:01	1
Bromoform	<5.00		5.00	0.780	ug/L			06/20/24 16:01	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/20/24 16:01	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/20/24 16:01	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/20/24 16:01	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/20/24 16:01	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/20/24 16:01	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/20/24 16:01	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/20/24 16:01	1
Chloroform	<3.00		3.00	1.30	ug/L			06/20/24 16:01	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/20/24 16:01	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/20/24 16:01	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/20/24 16:01	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/20/24 16:01	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/20/24 16:01	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/20/24 16:01	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/20/24 16:01	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/20/24 16:01	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/20/24 16:01	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/20/24 16:01	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/20/24 16:01	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/20/24 16:01	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/20/24 16:01	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/20/24 16:01	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/20/24 16:01	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/20/24 16:01	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/20/24 16:01	1
Styrene	<1.00		1.00	0.370	ug/L			06/20/24 16:01	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/20/24 16:01	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/20/24 16:01	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/20/24 16:01	1
Toluene	<1.00		1.00	0.430	ug/L			06/20/24 16:01	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/20/24 16:01	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/20/24 16:01	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/20/24 16:01	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/20/24 16:01	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/20/24 16:01	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/20/24 16:01	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/20/24 16:01	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/20/24 16:01	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/20/24 16:01	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/20/24 16:01	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/20/24 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*06/20/24 16:01*	*1*

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: GW-Lagoon-Cell 1W
Lab Sample ID: 310-283673-6
Date Collected: 06/11/24 12:00
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*117*		*73 - 130*		*06/20/24 16:01*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*06/20/24 16:01*	*1*

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		06/18/24 09:00	07/12/24 16:23	1
Barium	**0.122**		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 23:34	1
Chromium	<0.00500		0.00500	0.00120	mg/L		06/18/24 09:00	07/12/24 16:23	1
Cobalt	**0.000864**		0.000500	0.000170	mg/L		06/18/24 09:00	07/11/24 23:34	1
Copper	<0.00500		0.00500	0.00180	mg/L		06/18/24 09:00	07/11/24 23:34	1
Lead	<0.000500		0.000500	0.000260	mg/L		06/18/24 09:00	07/11/24 23:34	1
Nickel	**0.00304**	**J**	0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 23:34	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/24 09:00	07/11/24 23:34	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/18/24 09:00	07/11/24 23:34	1
Zinc	<0.0200		0.0200	0.00970	mg/L		06/18/24 09:00	07/12/24 16:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**26.0**		5.00	3.70	mg/L			06/17/24 10:43	1

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: MW-D
Lab Sample ID: 310-283673-7
Date Collected: 06/12/24 12:18
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	11.1		10.0	3.10	ug/L			06/20/24 17:06	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/20/24 17:06	1
Benzene	<0.500		0.500	0.220	ug/L			06/20/24 17:06	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/20/24 17:06	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/20/24 17:06	1
Bromoform	<5.00		5.00	0.780	ug/L			06/20/24 17:06	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/20/24 17:06	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/20/24 17:06	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/20/24 17:06	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/20/24 17:06	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/20/24 17:06	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/20/24 17:06	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/20/24 17:06	1
Chloroform	<3.00		3.00	1.30	ug/L			06/20/24 17:06	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/20/24 17:06	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/20/24 17:06	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/20/24 17:06	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/20/24 17:06	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/20/24 17:06	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/20/24 17:06	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/20/24 17:06	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/20/24 17:06	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/20/24 17:06	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/20/24 17:06	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/20/24 17:06	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/20/24 17:06	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/20/24 17:06	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/20/24 17:06	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/20/24 17:06	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/20/24 17:06	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/20/24 17:06	1
Styrene	<1.00		1.00	0.370	ug/L			06/20/24 17:06	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/20/24 17:06	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/20/24 17:06	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/20/24 17:06	1
Toluene	<1.00		1.00	0.430	ug/L			06/20/24 17:06	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/20/24 17:06	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/20/24 17:06	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/20/24 17:06	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/20/24 17:06	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/20/24 17:06	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/20/24 17:06	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/20/24 17:06	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/20/24 17:06	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/20/24 17:06	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/20/24 17:06	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/20/24 17:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*		*06/20/24 17:06*	*1*

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: MW-D
Lab Sample ID: 310-283673-7
Date Collected: 06/12/24 12:18
Matrix: Groundwater
Date Received: 06/14/24 17:00

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*120*		*73 - 130*		*06/20/24 17:06*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*06/20/24 17:06*	*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		06/18/24 09:00	07/12/24 16:34	1
Arsenic	**0.00684**		0.00200	0.000530	mg/L		06/18/24 09:00	07/12/24 16:34	1
Barium	**0.474**		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 23:38	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/18/24 09:00	07/11/24 23:38	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		06/18/24 09:00	07/11/24 23:38	1
Chromium	**0.00125**	**J**	0.00500	0.00120	mg/L		06/18/24 09:00	07/12/24 16:34	1
Cobalt	**0.00213**		0.000500	0.000170	mg/L		06/18/24 09:00	07/11/24 23:38	1
Copper	**0.00300**	**J**	0.00500	0.00180	mg/L		06/18/24 09:00	07/11/24 23:38	1
Lead	<0.000500		0.000500	0.000260	mg/L		06/18/24 09:00	07/11/24 23:38	1
Nickel	**0.00602**		0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 23:38	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/24 09:00	07/11/24 23:38	1
Silver	<0.00100	*+	0.00100	0.000500	mg/L		06/18/24 09:00	07/11/24 23:38	1
Thallium	<0.00100	*+	0.00100	0.000570	mg/L		06/18/24 09:00	07/11/24 23:38	1
Vanadium	**0.00142**	**J**	0.00500	0.00110	mg/L		06/18/24 09:00	07/11/24 23:38	1
Zinc	<0.0200		0.0200	0.00970	mg/L		06/18/24 09:00	07/12/24 16:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**23.0**		15.0	11.1	mg/L			06/17/24 11:46	1

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: Trip Blank
Lab Sample ID: 310-283673-8
Date Collected: 06/12/24 12:18
Matrix: Trip Blank
Date Received: 06/14/24 17:00

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			06/20/24 10:35	1
Acrolein	<10.0		10.0	3.60	ug/L			06/20/24 10:35	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/20/24 10:35	1
Allyl chloride	<2.00		2.00	0.700	ug/L			06/20/24 10:35	1
Benzene	<0.500		0.500	0.220	ug/L			06/20/24 10:35	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/20/24 10:35	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/20/24 10:35	1
Bromoform	<5.00		5.00	0.780	ug/L			06/20/24 10:35	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/20/24 10:35	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/20/24 10:35	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/20/24 10:35	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/20/24 10:35	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/20/24 10:35	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/20/24 10:35	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/20/24 10:35	1
Chloroform	<3.00		3.00	1.30	ug/L			06/20/24 10:35	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/20/24 10:35	1
Chloroprene	<1.00		1.00	0.230	ug/L			06/20/24 10:35	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/20/24 10:35	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/20/24 10:35	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/20/24 10:35	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/20/24 10:35	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/20/24 10:35	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/20/24 10:35	1
1,3-Dichlorobenzene	<1.00		1.00	0.300	ug/L			06/20/24 10:35	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/20/24 10:35	1
Dichlorodifluoromethane	<3.00		3.00	0.250	ug/L			06/20/24 10:35	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/20/24 10:35	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/20/24 10:35	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/20/24 10:35	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/20/24 10:35	1
1,3-Dichloropropane	<1.00		1.00	0.400	ug/L			06/20/24 10:35	1
2,2-Dichloropropane	<4.00		4.00	0.690	ug/L			06/20/24 10:35	1
1,1-Dichloropropene	<1.00		1.00	0.430	ug/L			06/20/24 10:35	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/20/24 10:35	1
Ethyl methacrylate	<2.00		2.00	0.680	ug/L			06/20/24 10:35	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/20/24 10:35	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/20/24 10:35	1
Methacrylonitrile	<10.0		10.0	3.30	ug/L			06/20/24 10:35	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/20/24 10:35	1
Methyl methacrylate	<2.00		2.00	0.760	ug/L			06/20/24 10:35	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/20/24 10:35	1
Naphthalene	<5.00		5.00	3.00	ug/L			06/20/24 10:35	1
Propionitrile	<10.0		10.0	3.40	ug/L			06/20/24 10:35	1
Styrene	<1.00		1.00	0.370	ug/L			06/20/24 10:35	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/20/24 10:35	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/20/24 10:35	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/20/24 10:35	1
Toluene	<1.00		1.00	0.430	ug/L			06/20/24 10:35	1

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: Trip Blank
Lab Sample ID: 310-283673-8
Date Collected: 06/12/24 12:18
Matrix: Trip Blank
Date Received: 06/14/24 17:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/20/24 10:35	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/20/24 10:35	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/20/24 10:35	1
1,2,4-Trichlorobenzene	<5.00		5.00	0.750	ug/L			06/20/24 10:35	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/20/24 10:35	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/20/24 10:35	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/20/24 10:35	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/20/24 10:35	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/20/24 10:35	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/20/24 10:35	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/20/24 10:35	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/20/24 10:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*		*06/20/24 10:35*	*1*
Dibromofluoromethane (Surr)	*115*		*73 - 130*		*06/20/24 10:35*	*1*
Toluene-d8 (Surr)	*91*		*80 - 120*		*06/20/24 10:35*	*1*

Qualifiers

GC/MS VOA

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

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
S1-	Surrogate recovery exceeds control limits, low biased.

Metals

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.

General Chemistry

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

Glossary

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

Surrogate Summary

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(73-130)	(80-120)
310-283673-2	MW-43	109	118	91
310-283673-3	PZ-10	112	116	92
310-283673-5	GW-Lagoon-00	109	117	91
310-283673-6	GW-Lagoon-Cell 1W	106	117	94
310-283673-7	MW-D	107	120	94

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(73-130)	(80-120)
310-283673-8	Trip Blank	107	115	91

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(73-130)	(80-120)
LCS 310-425101/6	Lab Control Sample	104	91	104
LCS 310-425101/7	Lab Control Sample	113	117	96
MB 310-425101/5	Method Blank	108	114	94

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)					
		2FP	PHL	NBZ	FBP	TBP	TPHL
Lab Sample ID	Client Sample ID	(25-110)	(21-110)	(45-129)	(39-118)	(27-136)	(12-144)
310-283673-3	PZ-10	23 S1-	45	76	68	13 S1-	80

Surrogate Legend

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

Surrogate Summary

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

TPHL = Terphenyl-d14 (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)					
		2FP	PHL	NBZ	FBP	TBP	TPHL
Lab Sample ID	Client Sample ID	(25-110)	(21-110)	(45-129)	(39-118)	(27-136)	(12-144)
LCS 310-424891/2-A	Lab Control Sample	59	68	95	86	83	111
LCSD 310-424891/3-A	Lab Control Sample Dup	66	76	110	105	92	123
MB 310-424891/1-A	Method Blank	10 S1-	37	99	96	16 S1-	106

Surrogate Legend

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

Method: 8081B - Organochlorine Pesticides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB1	TCX1
Lab Sample ID	Client Sample ID	(10-136)	(10-130)
310-283673-3	PZ-10	101	103

Surrogate Legend

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

Method: 8081B - Organochlorine Pesticides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB1	TCX1
Lab Sample ID	Client Sample ID	(10-136)	(10-130)
LCS 310-424910/9-A	Lab Control Sample	105	101
MB 310-424910/1-A	Method Blank	98	107

Surrogate Legend

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

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB1	TCX1
Lab Sample ID	Client Sample ID	(10-136)	(10-130)
310-283673-3	PZ-10	101	103

Surrogate Legend

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

Surrogate Summary

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

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

		Percent Surrogate Recovery (Acceptance Limits)									
		DCB1	TCX1								
Lab Sample ID	Client Sample ID	(10-136)	(10-130)								
LCS 310-424910/12-A	Lab Control Sample	88	91								
MB 310-424910/1-A	Method Blank	98	107								

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene

Method: 8151A - Herbicides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)									
		DCPAA1	DCPAA2								
Lab Sample ID	Client Sample ID	(34-142)	(34-142)								
310-283673-3	PZ-10	73	66								

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid (Surr)

Method: 8151A - Herbicides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)									
		DCPAA1	DCPAA2								
Lab Sample ID	Client Sample ID	(34-142)	(34-142)								
LCS 410-518676/2-A	Lab Control Sample	86	88								
LCSD 410-518676/3-A	Lab Control Sample Dup	85	90								
MB 410-518676/1-A	Method Blank	78	75								

Surrogate Legend

DCPAA = 2,4-Dichlorophenylacetic acid (Surr)

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

Lab Sample ID: MB 310-425101/5
Matrix: Water
Analysis Batch: 425101

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			06/20/24 09:08	1
Acrolein	<10.0		10.0	3.60	ug/L			06/20/24 09:08	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			06/20/24 09:08	1
Allyl chloride	<2.00		2.00	0.700	ug/L			06/20/24 09:08	1
Benzene	<0.500		0.500	0.220	ug/L			06/20/24 09:08	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			06/20/24 09:08	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			06/20/24 09:08	1
Bromoform	<5.00		5.00	0.780	ug/L			06/20/24 09:08	1
Bromomethane	<4.00		4.00	1.10	ug/L			06/20/24 09:08	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			06/20/24 09:08	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			06/20/24 09:08	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			06/20/24 09:08	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			06/20/24 09:08	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			06/20/24 09:08	1
Chloroethane	<4.00		4.00	0.790	ug/L			06/20/24 09:08	1
Chloroform	<3.00		3.00	1.30	ug/L			06/20/24 09:08	1
Chloromethane	<3.00		3.00	0.610	ug/L			06/20/24 09:08	1
Chloroprene	<1.00		1.00	0.230	ug/L			06/20/24 09:08	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			06/20/24 09:08	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			06/20/24 09:08	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			06/20/24 09:08	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			06/20/24 09:08	1
Dibromomethane	<1.00		1.00	0.330	ug/L			06/20/24 09:08	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			06/20/24 09:08	1
1,3-Dichlorobenzene	<1.00		1.00	0.300	ug/L			06/20/24 09:08	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			06/20/24 09:08	1
Dichlorodifluoromethane	<3.00		3.00	0.250	ug/L			06/20/24 09:08	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			06/20/24 09:08	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			06/20/24 09:08	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			06/20/24 09:08	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			06/20/24 09:08	1
1,3-Dichloropropane	<1.00		1.00	0.400	ug/L			06/20/24 09:08	1
2,2-Dichloropropane	<4.00		4.00	0.690	ug/L			06/20/24 09:08	1
1,1-Dichloropropene	<1.00		1.00	0.430	ug/L			06/20/24 09:08	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			06/20/24 09:08	1
Ethyl methacrylate	<2.00		2.00	0.680	ug/L			06/20/24 09:08	1
2-Hexanone	<10.0		10.0	2.00	ug/L			06/20/24 09:08	1
Iodomethane	<10.0		10.0	7.00	ug/L			06/20/24 09:08	1
Methacrylonitrile	<10.0		10.0	3.30	ug/L			06/20/24 09:08	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			06/20/24 09:08	1
Methyl methacrylate	<2.00		2.00	0.760	ug/L			06/20/24 09:08	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			06/20/24 09:08	1
Naphthalene	<5.00		5.00	3.00	ug/L			06/20/24 09:08	1
Propionitrile	<10.0		10.0	3.40	ug/L			06/20/24 09:08	1
Styrene	<1.00		1.00	0.370	ug/L			06/20/24 09:08	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			06/20/24 09:08	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			06/20/24 09:08	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			06/20/24 09:08	1

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

Lab Sample ID: MB 310-425101/5
Matrix: Water
Analysis Batch: 425101

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			06/20/24 09:08	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			06/20/24 09:08	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			06/20/24 09:08	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			06/20/24 09:08	1
1,2,4-Trichlorobenzene	<5.00		5.00	0.750	ug/L			06/20/24 09:08	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			06/20/24 09:08	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			06/20/24 09:08	1
Trichloroethene	<1.00		1.00	0.430	ug/L			06/20/24 09:08	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			06/20/24 09:08	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			06/20/24 09:08	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			06/20/24 09:08	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			06/20/24 09:08	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			06/20/24 09:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*		*06/20/24 09:08*	*1*
Dibromofluoromethane (Surr)	*114*		*73 - 130*		*06/20/24 09:08*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*06/20/24 09:08*	*1*

Lab Sample ID: LCS 310-425101/6
Matrix: Water
Analysis Batch: 425101

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	37.25		ug/L		93	50 - 150
Acrolein	94.8	97.05		ug/L		102	49 - 150
Acrylonitrile	200	192.3		ug/L		96	50 - 150
Allyl chloride	20.0	19.74		ug/L		99	49 - 150
Benzene	20.0	19.63		ug/L		98	72 - 124
Bromochloromethane	20.0	18.39		ug/L		92	73 - 130
Bromodichloromethane	20.0	18.25		ug/L		91	74 - 122
Bromoform	20.0	20.69		ug/L		103	61 - 122
2-Butanone (MEK)	40.0	37.50		ug/L		94	50 - 150
Carbon disulfide	20.0	23.70		ug/L		119	59 - 135
Carbon tetrachloride	20.0	20.11		ug/L		101	67 - 132
Chlorobenzene	20.0	18.57		ug/L		93	76 - 120
Chlorodibromomethane	20.0	17.16		ug/L		86	71 - 121
Chloroform	20.0	18.94		ug/L		95	72 - 125
Chloroprene	20.0	22.22		ug/L		111	69 - 133
cis-1,2-Dichloroethene	20.0	18.84		ug/L		94	74 - 123
cis-1,3-Dichloropropene	20.0	19.47		ug/L		97	71 - 125
1,2-Dibromo-3-Chloropropane	20.0	19.97		ug/L		100	50 - 150
1,2-Dibromoethane (EDB)	20.0	18.50		ug/L		92	75 - 125
Dibromomethane	20.0	18.67		ug/L		93	74 - 125
1,2-Dichlorobenzene	20.0	18.89		ug/L		94	74 - 120
1,3-Dichlorobenzene	20.0	18.93		ug/L		95	72 - 120
1,4-Dichlorobenzene	20.0	18.71		ug/L		94	72 - 120
1,1-Dichloroethane	20.0	18.74		ug/L		94	70 - 127

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

Lab Sample ID: LCS 310-425101/6
Matrix: Water
Analysis Batch: 425101

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichloroethane	20.0	19.12		ug/L		96	71 - 125
1,1-Dichloroethene	20.0	21.96		ug/L		110	63 - 132
1,2-Dichloropropane	20.0	18.79		ug/L		94	73 - 124
1,3-Dichloropropane	20.0	19.00		ug/L		95	72 - 125
2,2-Dichloropropane	20.0	20.83		ug/L		104	50 - 150
1,1-Dichloropropene	20.0	21.90		ug/L		110	69 - 132
Ethylbenzene	20.0	20.05		ug/L		100	74 - 122
Ethyl methacrylate	20.0	17.39		ug/L		87	70 - 129
2-Hexanone	40.0	37.40		ug/L		93	60 - 140
Iodomethane	20.0	17.97		ug/L		90	10 - 150
Methacrylonitrile	200	185.1		ug/L		93	69 - 129
Methylene Chloride	20.0	20.58		ug/L		103	50 - 150
Methyl methacrylate	40.0	38.44		ug/L		96	68 - 131
4-Methyl-2-pentanone (MIBK)	40.0	36.63		ug/L		92	60 - 139
Naphthalene	20.0	21.19		ug/L		106	50 - 150
Propionitrile	200	193.3		ug/L		97	63 - 135
Styrene	20.0	20.40		ug/L		102	74 - 121
1,1,1,2-Tetrachloroethane	20.0	20.69		ug/L		103	71 - 120
1,1,2,2-Tetrachloroethane	20.0	18.53		ug/L		93	68 - 124
Tetrachloroethene	20.0	20.16		ug/L		101	71 - 130
Toluene	20.0	18.44		ug/L		92	74 - 123
trans-1,4-Dichloro-2-butene	20.0	17.96		ug/L		90	50 - 150
trans-1,2-Dichloroethene	20.0	21.24		ug/L		106	70 - 126
trans-1,3-Dichloropropene	20.0	19.27		ug/L		96	69 - 123
1,2,4-Trichlorobenzene	20.0	19.88		ug/L		99	68 - 124
1,1,1-Trichloroethane	20.0	20.29		ug/L		101	73 - 129
1,1,2-Trichloroethane	20.0	18.50		ug/L		93	73 - 123
Trichloroethene	20.0	20.17		ug/L		101	72 - 126
1,2,3-Trichloropropane	20.0	19.70		ug/L		99	65 - 127
Vinyl acetate	40.0	39.29		ug/L		98	50 - 150
Xylenes, Total	40.0	39.13		ug/L		98	73 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*91*		*73 - 130*
Toluene-d8 (Surr)	*104*		*80 - 120*

Lab Sample ID: LCS 310-425101/7
Matrix: Water
Analysis Batch: 425101

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	14.40		ug/L		72	23 - 150
Chloroethane	20.0	15.32		ug/L		77	54 - 136
Chloromethane	20.0	15.78		ug/L		79	38 - 150
Dichlorodifluoromethane	20.0	15.60		ug/L		78	39 - 150
Trichlorofluoromethane	20.0	16.54		ug/L		83	54 - 149
Vinyl chloride	20.0	15.70		ug/L		79	56 - 140

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

Lab Sample ID: LCS 310-425101/7
Matrix: Water
Analysis Batch: 425101

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	113		80 - 120
Dibromofluoromethane (Surr)	117		73 - 130
Toluene-d8 (Surr)	96		80 - 120

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

Lab Sample ID: MB 310-424891/1-A
Matrix: Water
Analysis Batch: 425029

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424891

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	<10.0		10.0	0.540	ug/L		06/18/24 11:41	06/19/24 11:58	1
1,3,5-Trinitrobenzene	<10.0		10.0	2.30	ug/L		06/18/24 11:41	06/19/24 11:58	1
1,3-Dinitrobenzene	<10.0		10.0	3.20	ug/L		06/18/24 11:41	06/19/24 11:58	1
1,4-Naphthoquinone	<10.0		10.0	3.60	ug/L		06/18/24 11:41	06/19/24 11:58	1
1,4-phenylenediamine	<10.0		10.0	1.90	ug/L		06/18/24 11:41	06/19/24 11:58	1
1-Naphthylamine	<10.0		10.0	2.50	ug/L		06/18/24 11:41	06/19/24 11:58	1
2,3,4,6-Tetrachlorophenol	<10.0		10.0	5.30	ug/L		06/18/24 11:41	06/19/24 11:58	1
2,4,5-Trichlorophenol	<10.0		10.0	5.30	ug/L		06/18/24 11:41	06/19/24 11:58	1
2,4,6-Trichlorophenol	<10.0		10.0	5.00	ug/L		06/18/24 11:41	06/19/24 11:58	1
2,4-Dichlorophenol	<10.0		10.0	0.850	ug/L		06/18/24 11:41	06/19/24 11:58	1
2,4-Dimethylphenol	<10.0		10.0	0.580	ug/L		06/18/24 11:41	06/19/24 11:58	1
2,4-Dinitrophenol	<20.0		20.0	13.0	ug/L		06/18/24 11:41	06/19/24 11:58	1
2,4-Dinitrotoluene	<10.0		10.0	6.40	ug/L		06/18/24 11:41	06/19/24 11:58	1
2,6-Dichlorophenol	<10.0		10.0	0.690	ug/L		06/18/24 11:41	06/19/24 11:58	1
2,6-Dinitrotoluene	<10.0		10.0	0.520	ug/L		06/18/24 11:41	06/19/24 11:58	1
2-Acetylaminofluorene	<10.0		10.0	2.70	ug/L		06/18/24 11:41	06/19/24 11:58	1
2-Chloronaphthalene	<10.0		10.0	0.640	ug/L		06/18/24 11:41	06/19/24 11:58	1
2-Chlorophenol	<10.0		10.0	0.540	ug/L		06/18/24 11:41	06/19/24 11:58	1
2-Methylnaphthalene	<10.0		10.0	0.590	ug/L		06/18/24 11:41	06/19/24 11:58	1
2-Methylphenol	<10.0		10.0	0.650	ug/L		06/18/24 11:41	06/19/24 11:58	1
2-Naphthylamine	<10.0		10.0	2.10	ug/L		06/18/24 11:41	06/19/24 11:58	1
2-Nitroaniline	<10.0		10.0	5.90	ug/L		06/18/24 11:41	06/19/24 11:58	1
2-Nitrophenol	<10.0		10.0	6.80	ug/L		06/18/24 11:41	06/19/24 11:58	1
3,3'-Dichlorobenzidine	<10.0		10.0	1.40	ug/L		06/18/24 11:41	06/19/24 11:58	1
3,3'-Dimethylbenzidine	<10.0		10.0	1.50	ug/L		06/18/24 11:41	06/19/24 11:58	1
3-Methylcholanthrene	<10.0		10.0	0.320	ug/L		06/18/24 11:41	06/19/24 11:58	1
3-Nitroaniline	<10.0		10.0	2.70	ug/L		06/18/24 11:41	06/19/24 11:58	1
4,6-Dinitro-2-methylphenol	<10.0		10.0	6.90	ug/L		06/18/24 11:41	06/19/24 11:58	1
4-Aminobiphenyl	<10.0		10.0	2.20	ug/L		06/18/24 11:41	06/19/24 11:58	1
4-Bromophenyl phenyl ether	<10.0		10.0	0.700	ug/L		06/18/24 11:41	06/19/24 11:58	1
4-Chloro-3-methylphenol	<10.0		10.0	0.840	ug/L		06/18/24 11:41	06/19/24 11:58	1
4-Chloroaniline	<10.0		10.0	0.620	ug/L		06/18/24 11:41	06/19/24 11:58	1
4-Chlorophenyl phenyl ether	<10.0		10.0	0.690	ug/L		06/18/24 11:41	06/19/24 11:58	1
Methylphenol, 3 & 4	<10.0		10.0	0.700	ug/L		06/18/24 11:41	06/19/24 11:58	1
4-Nitroaniline	<10.0		10.0	1.30	ug/L		06/18/24 11:41	06/19/24 11:58	1
4-Nitrophenol	<10.0		10.0	7.60	ug/L		06/18/24 11:41	06/19/24 11:58	1
5-Nitro-o-toluidine	<10.0		10.0	2.80	ug/L		06/18/24 11:41	06/19/24 11:58	1
7,12-Dimethylbenz(a)anthracene	<10.0		10.0	1.90	ug/L		06/18/24 11:41	06/19/24 11:58	1

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

Lab Sample ID: MB 310-424891/1-A
Matrix: Water
Analysis Batch: 425029

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424891

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	<10.0		10.0	0.640	ug/L		06/18/24 11:41	06/19/24 11:58	1
Acenaphthylene	<10.0		10.0	0.720	ug/L		06/18/24 11:41	06/19/24 11:58	1
Acetophenone	<10.0		10.0	0.690	ug/L		06/18/24 11:41	06/19/24 11:58	1
Anthracene	<10.0		10.0	0.870	ug/L		06/18/24 11:41	06/19/24 11:58	1
Benzo[a]anthracene	<10.0		10.0	0.850	ug/L		06/18/24 11:41	06/19/24 11:58	1
Benzo[a]pyrene	<10.0		10.0	8.10	ug/L		06/18/24 11:41	06/19/24 11:58	1
Benzo[b]fluoranthene	<10.0		10.0	4.90	ug/L		06/18/24 11:41	06/19/24 11:58	1
Benzo[g,h,i]perylene	<10.0		10.0	6.30	ug/L		06/18/24 11:41	06/19/24 11:58	1
Benzo[k]fluoranthene	<10.0		10.0	2.20	ug/L		06/18/24 11:41	06/19/24 11:58	1
Benzyl alcohol	<10.0		10.0	1.30	ug/L		06/18/24 11:41	06/19/24 11:58	1
Bis(2-chloroethoxy)methane	<10.0		10.0	0.760	ug/L		06/18/24 11:41	06/19/24 11:58	1
Bis(2-chloroethyl)ether	<10.0		10.0	0.820	ug/L		06/18/24 11:41	06/19/24 11:58	1
bis (2-chloroisopropyl) ether	<10.0		10.0	0.540	ug/L		06/18/24 11:41	06/19/24 11:58	1
Bis(2-ethylhexyl) phthalate	<10.0		10.0	5.50	ug/L		06/18/24 11:41	06/19/24 11:58	1
Butyl benzyl phthalate	<10.0		10.0	5.40	ug/L		06/18/24 11:41	06/19/24 11:58	1
Chlorobenzilate	<10.0		10.0	3.60	ug/L		06/18/24 11:41	06/19/24 11:58	1
Chrysene	<10.0		10.0	0.870	ug/L		06/18/24 11:41	06/19/24 11:58	1
Diallate	<10.0		10.0	4.00	ug/L		06/18/24 11:41	06/19/24 11:58	1
Dibenzo(a,h)anthracene	<10.0		10.0	3.90	ug/L		06/18/24 11:41	06/19/24 11:58	1
Dibenzofuran	<10.0		10.0	0.740	ug/L		06/18/24 11:41	06/19/24 11:58	1
Diethyl phthalate	<10.0		10.0	1.70	ug/L		06/18/24 11:41	06/19/24 11:58	1
Dimethoate	<10.0		10.0	3.60	ug/L		06/18/24 11:41	06/19/24 11:58	1
Dimethyl phthalate	<10.0		10.0	1.00	ug/L		06/18/24 11:41	06/19/24 11:58	1
Di-n-butyl phthalate	<10.0		10.0	5.60	ug/L		06/18/24 11:41	06/19/24 11:58	1
Di-n-octyl phthalate	<20.0		20.0	7.00	ug/L		06/18/24 11:41	06/19/24 11:58	1
Dinoseb	<10.0		10.0	2.40	ug/L		06/18/24 11:41	06/19/24 11:58	1
Diphenylamine	<10.0		10.0	6.00	ug/L		06/18/24 11:41	06/19/24 11:58	1
Disulfoton	<10.0		10.0	2.40	ug/L		06/18/24 11:41	06/19/24 11:58	1
Ethyl methanesulfonate	<10.0		10.0	3.60	ug/L		06/18/24 11:41	06/19/24 11:58	1
Ethyl Parathion	<10.0		10.0	2.20	ug/L		06/18/24 11:41	06/19/24 11:58	1
Famphur	<10.0		10.0	3.80	ug/L		06/18/24 11:41	06/19/24 11:58	1
Fluoranthene	<10.0		10.0	1.70	ug/L		06/18/24 11:41	06/19/24 11:58	1
Fluorene	<10.0		10.0	0.790	ug/L		06/18/24 11:41	06/19/24 11:58	1
Hexachlorobenzene	<10.0		10.0	0.700	ug/L		06/18/24 11:41	06/19/24 11:58	1
Hexachlorobutadiene	<10.0		10.0	0.860	ug/L		06/18/24 11:41	06/19/24 11:58	1
Hexachlorocyclopentadiene	<10.0		10.0	5.10	ug/L		06/18/24 11:41	06/19/24 11:58	1
Hexachloroethane	<10.0		10.0	0.970	ug/L		06/18/24 11:41	06/19/24 11:58	1
Hexachloropropene	<10.0		10.0	2.60	ug/L		06/18/24 11:41	06/19/24 11:58	1
Indeno[1,2,3-cd]pyrene	<10.0		10.0	4.20	ug/L		06/18/24 11:41	06/19/24 11:58	1
Isodrin	<10.0		10.0	4.70	ug/L		06/18/24 11:41	06/19/24 11:58	1
Isophorone	<10.0		10.0	0.930	ug/L		06/18/24 11:41	06/19/24 11:58	1
Isosafrole	<10.0		10.0	2.30	ug/L		06/18/24 11:41	06/19/24 11:58	1
Kepone	<10.0		10.0	1.00	ug/L		06/18/24 11:41	06/19/24 11:58	1
Methapyrilene	<10.0		10.0	0.760	ug/L		06/18/24 11:41	06/19/24 11:58	1
Methyl methanesulfonate	<10.0		10.0	3.30	ug/L		06/18/24 11:41	06/19/24 11:58	1
Methyl parathion	<10.0		10.0	2.30	ug/L		06/18/24 11:41	06/19/24 11:58	1
Nitrobenzene	<10.0		10.0	0.800	ug/L		06/18/24 11:41	06/19/24 11:58	1
N-Nitrosodiethylamine	<10.0		10.0	3.40	ug/L		06/18/24 11:41	06/19/24 11:58	1
N-Nitrosodimethylamine	<10.0		10.0	0.720	ug/L		06/18/24 11:41	06/19/24 11:58	1

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

Lab Sample ID: MB 310-424891/1-A
Matrix: Water
Analysis Batch: 425029

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424891

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-butylamine	<10.0		10.0	3.90	ug/L		06/18/24 11:41	06/19/24 11:58	1
N-Nitrosodi-n-propylamine	<10.0		10.0	0.920	ug/L		06/18/24 11:41	06/19/24 11:58	1
N-Nitrosodiphenylamine	<10.0		10.0	0.750	ug/L		06/18/24 11:41	06/19/24 11:58	1
N-Nitrosomethylethylamine	<10.0		10.0	4.90	ug/L		06/18/24 11:41	06/19/24 11:58	1
N-Nitrosopiperidine	<10.0		10.0	2.70	ug/L		06/18/24 11:41	06/19/24 11:58	1
N-Nitrosopyrrolidine	<10.0		10.0	3.60	ug/L		06/18/24 11:41	06/19/24 11:58	1
o,o',o''-Triethylphosphorothioate	<10.0		10.0	3.20	ug/L		06/18/24 11:41	06/19/24 11:58	1
o-Toluidine	<10.0		10.0	2.90	ug/L		06/18/24 11:41	06/19/24 11:58	1
p-Dimethylamino azobenzene	<10.0		10.0	2.20	ug/L		06/18/24 11:41	06/19/24 11:58	1
Pentachlorobenzene	<10.0		10.0	2.80	ug/L		06/18/24 11:41	06/19/24 11:58	1
Pentachloronitrobenzene	<10.0		10.0	5.80	ug/L		06/18/24 11:41	06/19/24 11:58	1
Pentachlorophenol	<10.0		10.0	9.60	ug/L		06/18/24 11:41	06/19/24 11:58	1
Phenacetin	<10.0		10.0	1.90	ug/L		06/18/24 11:41	06/19/24 11:58	1
Phenanthrene	<10.0		10.0	0.790	ug/L		06/18/24 11:41	06/19/24 11:58	1
Phenol	<10.0		10.0	1.10	ug/L		06/18/24 11:41	06/19/24 11:58	1
Phorate	<10.0		10.0	3.20	ug/L		06/18/24 11:41	06/19/24 11:58	1
Pronamide	<10.0		10.0	2.70	ug/L		06/18/24 11:41	06/19/24 11:58	1
Pyrene	<10.0		10.0	0.790	ug/L		06/18/24 11:41	06/19/24 11:58	1
Safrole	<10.0		10.0	2.80	ug/L		06/18/24 11:41	06/19/24 11:58	1
Thionazin	<10.0		10.0	3.50	ug/L		06/18/24 11:41	06/19/24 11:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*10*	*S1-*	*25 - 110*	*06/18/24 11:41*	*06/19/24 11:58*	*1*
Phenol-d5 (Surr)	*37*		*21 - 110*	*06/18/24 11:41*	*06/19/24 11:58*	*1*
Nitrobenzene-d5 (Surr)	*99*		*45 - 129*	*06/18/24 11:41*	*06/19/24 11:58*	*1*
2-Fluorobiphenyl (Surr)	*96*		*39 - 118*	*06/18/24 11:41*	*06/19/24 11:58*	*1*
2,4,6-Tribromophenol (Surr)	*16*	*S1-*	*27 - 136*	*06/18/24 11:41*	*06/19/24 11:58*	*1*
Terphenyl-d14 (Surr)	*106*		*12 - 144*	*06/18/24 11:41*	*06/19/24 11:58*	*1*

Lab Sample ID: LCS 310-424891/2-A
Matrix: Water
Analysis Batch: 425029

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424891

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4,5-Tetrachlorobenzene	100	80.06		ug/L		80	36 - 110
1,3-Dinitrobenzene	100	121.2		ug/L		121	45 - 138
2,3,4,6-Tetrachlorophenol	100	59.84		ug/L		60	33 - 134
2,4,5-Trichlorophenol	100	85.11		ug/L		85	35 - 133
2,4,6-Trichlorophenol	100	71.85		ug/L		72	28 - 139
2,4-Dichlorophenol	100	99.99		ug/L		100	41 - 124
2,4-Dimethylphenol	100	85.59		ug/L		86	31 - 142
2,4-Dinitrophenol	200	<20.0	*-	ug/L		0.8	10 - 138
2,4-Dinitrotoluene	100	103.8		ug/L		104	47 - 137
2,6-Dichlorophenol	100	74.77		ug/L		75	30 - 130
2,6-Dinitrotoluene	100	104.7		ug/L		105	51 - 130
2-Chloronaphthalene	100	80.13		ug/L		80	37 - 110
2-Chlorophenol	100	93.82		ug/L		94	44 - 117
2-Methylnaphthalene	100	89.38		ug/L		89	33 - 110

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

Lab Sample ID: LCS 310-424891/2-A
Matrix: Water
Analysis Batch: 425029

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424891

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Methylphenol	100	99.23		ug/L		99	47 - 118
2-Nitroaniline	100	99.84		ug/L		100	50 - 135
2-Nitrophenol	100	94.04		ug/L		94	41 - 129
3-Nitroaniline	100	118.7		ug/L		119	42 - 139
4,6-Dinitro-2-methylphenol	200	33.78	*-	ug/L		17	22 - 143
4-Bromophenyl phenyl ether	100	100.2		ug/L		100	45 - 119
4-Chloro-3-methylphenol	100	104.1		ug/L		104	49 - 130
4-Chloroaniline	100	102.6		ug/L		103	21 - 139
4-Chlorophenyl phenyl ether	100	91.40		ug/L		91	44 - 116
Methylphenol, 3 & 4	100	93.49		ug/L		93	46 - 117
4-Nitroaniline	100	92.23		ug/L		92	31 - 145
4-Nitrophenol	200	11.07	*-	ug/L		6	18 - 110
Acenaphthene	100	101.3		ug/L		101	43 - 110
Acenaphthylene	100	91.86		ug/L		92	40 - 110
Acetophenone	100	103.7		ug/L		104	48 - 119
Anthracene	100	107.7		ug/L		108	51 - 120
Benzo[a]anthracene	100	100.1		ug/L		100	51 - 123
Benzo[a]pyrene	100	111.3		ug/L		111	48 - 125
Benzo[b]fluoranthene	100	102.2		ug/L		102	49 - 129
Benzo[g,h,i]perylene	100	110.8		ug/L		111	43 - 139
Benzo[k]fluoranthene	100	112.0		ug/L		112	47 - 130
Benzyl alcohol	100	103.4		ug/L		103	39 - 128
Bis(2-chloroethoxy)methane	100	96.49		ug/L		96	48 - 121
Bis(2-chloroethyl)ether	100	100.1		ug/L		100	43 - 123
bis (2-chloroisopropyl) ether	100	90.30		ug/L		90	34 - 123
Bis(2-ethylhexyl) phthalate	100	115.3		ug/L		115	43 - 143
Butyl benzyl phthalate	100	103.0		ug/L		103	46 - 135
Chrysene	100	101.8		ug/L		102	51 - 125
Dibenzo(a,h)anthracene	100	109.6		ug/L		110	38 - 149
Dibenzofuran	100	95.23		ug/L		95	45 - 112
Diethyl phthalate	100	108.2		ug/L		108	43 - 135
Dimethyl phthalate	100	114.9		ug/L		115	43 - 129
Di-n-butyl phthalate	100	115.8		ug/L		116	50 - 133
Di-n-octyl phthalate	100	108.7		ug/L		109	34 - 150
Fluoranthene	100	104.8		ug/L		105	47 - 128
Fluorene	100	105.1		ug/L		105	45 - 119
Hexachlorobenzene	100	95.16		ug/L		95	48 - 119
Hexachlorobutadiene	100	77.12		ug/L		77	32 - 110
Hexachlorocyclopentadiene	100	30.32		ug/L		30	10 - 110
Hexachloroethane	100	57.18		ug/L		57	31 - 110
Indeno[1,2,3-cd]pyrene	100	115.5		ug/L		115	37 - 150
Isophorone	100	90.91		ug/L		91	50 - 125
Nitrobenzene	100	88.81		ug/L		89	47 - 116
N-Nitrosodimethylamine	100	72.54		ug/L		73	37 - 110
N-Nitrosodi-n-propylamine	100	94.13		ug/L		94	45 - 130
N-Nitrosodiphenylamine	100	105.0		ug/L		105	49 - 121
Pentachlorophenol	200	62.72		ug/L		31	26 - 133
Phenanthrene	100	105.1		ug/L		105	51 - 117
Phenol	100	65.21		ug/L		65	29 - 110

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

Lab Sample ID: LCS 310-424891/2-A
Matrix: Water
Analysis Batch: 425029

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424891

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Pyrene			100	108.0		ug/L		108	48 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorophenol (Surr)	*59*		*25 - 110*
Phenol-d5 (Surr)	*68*		*21 - 110*
Nitrobenzene-d5 (Surr)	*95*		*45 - 129*
2-Fluorobiphenyl (Surr)	*86*		*39 - 118*
2,4,6-Tribromophenol (Surr)	*83*		*27 - 136*
Terphenyl-d14 (Surr)	*111*		*12 - 144*

Lab Sample ID: LCSD 310-424891/3-A
Matrix: Water
Analysis Batch: 425029

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 424891

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4,5-Tetrachlorobenzene			100	91.12		ug/L		91	36 - 110	13	35
1,3-Dinitrobenzene			100	144.6	*+	ug/L		145	45 - 138	18	35
2,3,4,6-Tetrachlorophenol			100	70.49		ug/L		70	33 - 134	16	35
2,4,5-Trichlorophenol			100	95.52		ug/L		96	35 - 133	12	35
2,4,6-Trichlorophenol			100	83.88		ug/L		84	28 - 139	15	35
2,4-Dichlorophenol			100	117.8		ug/L		118	41 - 124	16	35
2,4-Dimethylphenol			100	102.8		ug/L		103	31 - 142	18	35
2,4-Dinitrophenol			200	<20.0	*-	ug/L		0.8	10 - 138	5	35
2,4-Dinitrotoluene			100	119.0		ug/L		119	47 - 137	14	35
2,6-Dichlorophenol			100	88.36		ug/L		88	30 - 130	17	35
2,6-Dinitrotoluene			100	120.9		ug/L		121	51 - 130	14	35
2-Chloronaphthalene			100	92.29		ug/L		92	37 - 110	14	35
2-Chlorophenol			100	110.9		ug/L		111	44 - 117	17	35
2-Methylnaphthalene			100	105.4		ug/L		105	33 - 110	16	35
2-Methylphenol			100	116.7		ug/L		117	47 - 118	16	35
2-Nitroaniline			100	116.3		ug/L		116	50 - 135	15	35
2-Nitrophenol			100	105.9		ug/L		106	41 - 129	12	35
3-Nitroaniline			100	137.1		ug/L		137	42 - 139	14	35
4,6-Dinitro-2-methylphenol			200	41.83	*-	ug/L		21	22 - 143	21	35
4-Bromophenyl phenyl ether			100	112.6		ug/L		113	45 - 119	12	35
4-Chloro-3-methylphenol			100	121.0		ug/L		121	49 - 130	15	35
4-Chloroaniline			100	46.41	*1	ug/L		46	21 - 139	75	35
4-Chlorophenyl phenyl ether			100	102.0		ug/L		102	44 - 116	11	35
Methylphenol, 3 & 4			100	110.7		ug/L		111	46 - 117	17	35
4-Nitroaniline			100	104.3		ug/L		104	31 - 145	12	35
4-Nitrophenol			200	16.18	*- *1	ug/L		8	18 - 110	38	35
Acenaphthene			100	117.8	*+	ug/L		118	43 - 110	15	35
Acenaphthylene			100	106.3		ug/L		106	40 - 110	15	35
Acetophenone			100	124.7	*+	ug/L		125	48 - 119	18	35
Anthracene			100	122.9	*+	ug/L		123	51 - 120	13	35
Benzo[a]anthracene			100	112.0		ug/L		112	51 - 123	11	35
Benzo[a]pyrene			100	125.4		ug/L		125	48 - 125	12	35
Benzo[b]fluoranthene			100	118.3		ug/L		118	49 - 129	15	35

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

Lab Sample ID: LCSD 310-424891/3-A
Matrix: Water
Analysis Batch: 425029

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 424891

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzo[g,h,i]perylene			100	122.9		ug/L		123	43 - 139	10	35
Benzo[k]fluoranthene			100	126.5		ug/L		127	47 - 130	12	35
Benzyl alcohol			100	119.0		ug/L		119	39 - 128	14	35
Bis(2-chloroethoxy)methane			100	116.3		ug/L		116	48 - 121	19	35
Bis(2-chloroethyl)ether			100	118.7		ug/L		119	43 - 123	17	35
bis (2-chloroisopropyl) ether			100	109.3		ug/L		109	34 - 123	19	35
Bis(2-ethylhexyl) phthalate			100	132.0		ug/L		132	43 - 143	14	35
Butyl benzyl phthalate			100	117.8		ug/L		118	46 - 135	13	35
Chrysene			100	117.2		ug/L		117	51 - 125	14	35
Dibenzo(a,h)anthracene			100	119.6		ug/L		120	38 - 149	9	35
Dibenzofuran			100	111.7		ug/L		112	45 - 112	16	35
Diethyl phthalate			100	127.4		ug/L		127	43 - 135	16	35
Dimethyl phthalate			100	133.6	*+	ug/L		134	43 - 129	15	35
Di-n-butyl phthalate			100	127.3		ug/L		127	50 - 133	9	35
Di-n-octyl phthalate			100	122.2		ug/L		122	34 - 150	12	35
Fluoranthene			100	116.0		ug/L		116	47 - 128	10	35
Fluorene			100	120.6	*+	ug/L		121	45 - 119	14	35
Hexachlorobenzene			100	110.9		ug/L		111	48 - 119	15	35
Hexachlorobutadiene			100	88.70		ug/L		89	32 - 110	14	35
Hexachlorocyclopentadiene			100	35.70		ug/L		36	10 - 110	16	35
Hexachloroethane			100	67.35		ug/L		67	31 - 110	16	35
Indeno[1,2,3-cd]pyrene			100	132.8		ug/L		133	37 - 150	14	35
Isophorone			100	109.7		ug/L		110	50 - 125	19	35
Nitrobenzene			100	106.4		ug/L		106	47 - 116	18	35
N-Nitrosodimethylamine			100	83.74		ug/L		84	37 - 110	14	35
N-Nitrosodi-n-propylamine			100	114.0		ug/L		114	45 - 130	19	35
N-Nitrosodiphenylamine			100	120.5		ug/L		120	49 - 121	14	35
Pentachlorophenol			200	75.66		ug/L		38	26 - 133	19	35
Phenanthrene			100	118.9	*+	ug/L		119	51 - 117	12	35
Phenol			100	75.83		ug/L		76	29 - 110	15	35
Pyrene			100	121.6		ug/L		122	48 - 127	12	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorophenol (Surr)	*66*		*25 - 110*
Phenol-d5 (Surr)	*76*		*21 - 110*
Nitrobenzene-d5 (Surr)	*110*		*45 - 129*
2-Fluorobiphenyl (Surr)	*105*		*39 - 118*
2,4,6-Tribromophenol (Surr)	*92*		*27 - 136*
Terphenyl-d14 (Surr)	*123*		*12 - 144*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Lab Sample ID: MB 310-425395/16
Matrix: Water
Analysis Batch: 425395

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetonitrile	<10.0		10.0	2.60	mg/L			06/24/24 13:34	1
Isobutanol	<10.0		10.0	2.40	mg/L			06/24/24 13:34	1

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Lab Sample ID: LCS 310-425395/17
Matrix: Water
Analysis Batch: 425395

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetonitrile			113	115.9		mg/L		102	67 - 132		
Isobutanol			104	104.7		mg/L		100	80 - 121		

Lab Sample ID: 310-283673-3 MS
Matrix: Groundwater
Analysis Batch: 425395

Client Sample ID: PZ-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetonitrile	<10.0		113	125.8		mg/L		111	60 - 138		
Isobutanol	<10.0		104	106.9		mg/L		102	72 - 131		

Lab Sample ID: 310-283673-3 MSD
Matrix: Groundwater
Analysis Batch: 425395

Client Sample ID: PZ-10
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetonitrile	<10.0		113	100.5		mg/L		89	60 - 138	22	30
Isobutanol	<10.0		104	100.8		mg/L		97	72 - 131	6	30

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 310-424910/1-A
Matrix: Water
Analysis Batch: 424852

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424910

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.0946		0.0946	0.0236	ug/L		06/18/24 13:01	06/18/24 15:01	1
4,4'-DDE	<0.0946		0.0946	0.0284	ug/L		06/18/24 13:01	06/18/24 15:01	1
4,4'-DDT	<0.0946		0.0946	0.0189	ug/L		06/18/24 13:01	06/18/24 15:01	1
Aldrin	<0.0946		0.0946	0.0208	ug/L		06/18/24 13:01	06/18/24 15:01	1
alpha-BHC	<0.0946		0.0946	0.00946	ug/L		06/18/24 13:01	06/18/24 15:01	1
beta-BHC	<0.0946		0.0946	0.0397	ug/L		06/18/24 13:01	06/18/24 15:01	1
Chlordane (technical)	<1.89		1.89	0.369	ug/L		06/18/24 13:01	06/18/24 15:01	1
delta-BHC	<0.0946		0.0946	0.0303	ug/L		06/18/24 13:01	06/18/24 15:01	1
Dieldrin	<0.0946		0.0946	0.0199	ug/L		06/18/24 13:01	06/18/24 15:01	1
Endosulfan I	<0.0946		0.0946	0.0265	ug/L		06/18/24 13:01	06/18/24 15:01	1
Endosulfan II	<0.0946		0.0946	0.0246	ug/L		06/18/24 13:01	06/18/24 15:01	1
Endosulfan sulfate	<0.0946		0.0946	0.0170	ug/L		06/18/24 13:01	06/18/24 15:01	1
Endrin	<0.0946		0.0946	0.0265	ug/L		06/18/24 13:01	06/18/24 15:01	1
Endrin aldehyde	<0.0946		0.0946	0.0255	ug/L		06/18/24 13:01	06/18/24 15:01	1
gamma-BHC (Lindane)	<0.0946		0.0946	0.00946	ug/L		06/18/24 13:01	06/18/24 15:01	1
Heptachlor	<0.0946		0.0946	0.0218	ug/L		06/18/24 13:01	06/18/24 15:01	1
Heptachlor epoxide	<0.0946		0.0946	0.0303	ug/L		06/18/24 13:01	06/18/24 15:01	1
Methoxychlor	<0.0946		0.0946	0.0303	ug/L		06/18/24 13:01	06/18/24 15:01	1
Toxaphene	<1.89		1.89	0.946	ug/L		06/18/24 13:01	06/18/24 15:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*98*		*10 - 136*	*06/18/24 13:01*	*06/18/24 15:01*	*1*
Tetrachloro-m-xylene	*107*		*10 - 130*	*06/18/24 13:01*	*06/18/24 15:01*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: LCS 310-424910/9-A
Matrix: Water
Analysis Batch: 424852

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424910

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,4'-DDD	1.29	1.235		ug/L		96	36 - 149
4,4'-DDE	1.29	1.244		ug/L		97	34 - 130
4,4'-DDT	1.29	1.064		ug/L		83	23 - 150
Aldrin	1.29	1.203		ug/L		93	13 - 120
alpha-BHC	1.29	1.480		ug/L		115	36 - 127
beta-BHC	1.29	1.464		ug/L		114	37 - 136
delta-BHC	1.29	1.182		ug/L		92	33 - 134
Dieldrin	1.29	1.278		ug/L		99	39 - 130
Endosulfan I	1.29	1.175		ug/L		91	10 - 120
Endosulfan II	1.29	1.276		ug/L		99	14 - 120
Endosulfan sulfate	1.29	1.395		ug/L		108	36 - 147
Endrin	1.29	1.335		ug/L		104	39 - 140
Endrin aldehyde	1.29	1.419		ug/L		110	32 - 137
gamma-BHC (Lindane)	1.29	1.476		ug/L		115	36 - 132
Heptachlor	1.29	1.177		ug/L		91	27 - 120
Heptachlor epoxide	1.29	1.409		ug/L		109	38 - 133
Methoxychlor	1.29	1.187		ug/L		92	10 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*105*		*10 - 136*
Tetrachloro-m-xylene	*101*		*10 - 130*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 310-424910/1-A
Matrix: Water
Analysis Batch: 424853

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424910

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<1.89		1.89	0.776	ug/L		06/18/24 13:01	06/18/24 15:01	1
PCB-1221	<1.89		1.89	0.776	ug/L		06/18/24 13:01	06/18/24 15:01	1
PCB-1232	<1.89		1.89	0.776	ug/L		06/18/24 13:01	06/18/24 15:01	1
PCB-1242	<1.89		1.89	0.776	ug/L		06/18/24 13:01	06/18/24 15:01	1
PCB-1248	<1.89		1.89	0.653	ug/L		06/18/24 13:01	06/18/24 15:01	1
PCB-1254	<1.89		1.89	0.653	ug/L		06/18/24 13:01	06/18/24 15:01	1
PCB-1260	<1.89		1.89	0.653	ug/L		06/18/24 13:01	06/18/24 15:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*98*		*10 - 136*	*06/18/24 13:01*	*06/18/24 15:01*	*1*
Tetrachloro-m-xylene	*107*		*10 - 130*	*06/18/24 13:01*	*06/18/24 15:01*	*1*

Lab Sample ID: LCS 310-424910/12-A
Matrix: Water
Analysis Batch: 424853

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424910

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
PCB-1016	26.1	21.13		ug/L		81	30 - 133
PCB-1260	26.1	15.33		ug/L		59	31 - 133

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 310-424910/12-A
Matrix: Water
Analysis Batch: 424853

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424910

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	88		10 - 136
Tetrachloro-m-xylene	91		10 - 130

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 410-518676/1-A
Matrix: Water
Analysis Batch: 519353

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 518676

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	<0.600		0.600	0.250	ug/L		06/18/24 15:50	06/20/24 13:15	1
Silvex (2,4,5-TP)	<0.0500		0.0500	0.0220	ug/L		06/18/24 15:50	06/20/24 13:15	1
2,4,5-T	<0.150		0.150	0.0650	ug/L		06/18/24 15:50	06/20/24 13:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	78		34 - 142	06/18/24 15:50	06/20/24 13:15	1
2,4-Dichlorophenylacetic acid (Surr)	75		34 - 142	06/18/24 15:50	06/20/24 13:15	1

Lab Sample ID: LCS 410-518676/2-A
Matrix: Water
Analysis Batch: 519353

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 518676

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
2,4-D			2.51	2.194		ug/L		87	53 - 159		
Silvex (2,4,5-TP)			0.250	0.2342		ug/L		94	62 - 170		
2,4,5-T			0.250	0.2482		ug/L		99	57 - 171		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid (Surr)	86		34 - 142
2,4-Dichlorophenylacetic acid (Surr)	88		34 - 142

Lab Sample ID: LCSD 410-518676/3-A
Matrix: Water
Analysis Batch: 519353

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 518676

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4-D			2.51	2.243		ug/L		89	53 - 159	2	30
Silvex (2,4,5-TP)			0.250	0.2283		ug/L		91	62 - 170	3	30
2,4,5-T			0.250	0.2530		ug/L		101	57 - 171	2	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4-Dichlorophenylacetic acid (Surr)	85		34 - 142
2,4-Dichlorophenylacetic acid (Surr)	90		34 - 142

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-424817/1-A
Matrix: Water
Analysis Batch: 427084

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424817

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		06/18/24 09:00	07/11/24 22:03	1
Barium	<0.00200		0.00200	0.000660	mg/L		06/18/24 09:00	07/11/24 22:03	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		06/18/24 09:00	07/11/24 22:03	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		06/18/24 09:00	07/11/24 22:03	1
Chromium	<0.00500		0.00500	0.00120	mg/L		06/18/24 09:00	07/11/24 22:03	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		06/18/24 09:00	07/11/24 22:03	1
Copper	<0.00500		0.00500	0.00180	mg/L		06/18/24 09:00	07/11/24 22:03	1
Lead	<0.000500		0.000500	0.000260	mg/L		06/18/24 09:00	07/11/24 22:03	1
Nickel	<0.00500		0.00500	0.00210	mg/L		06/18/24 09:00	07/11/24 22:03	1
Selenium	<0.00500		0.00500	0.00140	mg/L		06/18/24 09:00	07/11/24 22:03	1
Silver	<0.00100		0.00100	0.000500	mg/L		06/18/24 09:00	07/11/24 22:03	1
Thallium	<0.00100		0.00100	0.000570	mg/L		06/18/24 09:00	07/11/24 22:03	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		06/18/24 09:00	07/11/24 22:03	1
Zinc	<0.0200		0.0200	0.00970	mg/L		06/18/24 09:00	07/11/24 22:03	1
Tin	0.003892	J	0.00500	0.00230	mg/L		06/18/24 09:00	07/11/24 22:03	1

Lab Sample ID: MB 310-424817/1-A
Matrix: Water
Analysis Batch: 427207

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424817

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		06/18/24 09:00	07/12/24 15:37	1

Lab Sample ID: LCS 310-424817/2-A
Matrix: Water
Analysis Batch: 425355

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424817

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.1637		mg/L		82	80 - 120
Barium	0.100	0.08703		mg/L		87	80 - 120
Beryllium	0.100	0.08605		mg/L		86	80 - 120
Cadmium	0.100	0.08460		mg/L		85	80 - 120
Chromium	0.100	0.08586		mg/L		86	80 - 120
Cobalt	0.100	0.08517		mg/L		85	80 - 120
Copper	0.200	0.1802		mg/L		90	80 - 120
Lead	0.200	0.1772		mg/L		89	80 - 120
Nickel	0.200	0.1808		mg/L		90	80 - 120
Selenium	0.400	0.3280		mg/L		82	80 - 120
Vanadium	0.100	0.08382		mg/L		84	80 - 120
Zinc	0.200	0.1687		mg/L		84	80 - 120
Tin	0.200	0.1873		mg/L		94	80 - 120

Lab Sample ID: LCS 310-424817/2-A
Matrix: Water
Analysis Batch: 427207

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424817

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2026		mg/L		101	80 - 120
Cadmium	0.100	0.09333		mg/L		93	80 - 120

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

Lab Sample ID: LCS 310-424817/2-A
Matrix: Water
Analysis Batch: 427207

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424817

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium	0.100	0.09116		mg/L		91	80 - 120
Selenium	0.400	0.3628		mg/L		91	80 - 120
Silver	0.100	0.1548	*+	mg/L		155	80 - 120
Thallium	0.100	0.2081	*+	mg/L		208	80 - 120
Zinc	0.200	0.1735		mg/L		87	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-425722/1-A
Matrix: Water
Analysis Batch: 425884

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 425722

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000200		0.000200	0.000110	mg/L		06/26/24 15:25	06/27/24 13:13	1

Lab Sample ID: LCS 310-425722/2-A
Matrix: Water
Analysis Batch: 425884

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 425722

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00167	0.001553		mg/L		93	80 - 120

Method: 9012B - Cyanide, Total andor Amenable

Lab Sample ID: MB 310-425000/1-A
Matrix: Water
Analysis Batch: 425359

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 425000

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.0100		0.0100	0.00350	mg/L		06/19/24 09:31	06/21/24 17:54	1

Lab Sample ID: LCS 310-425000/2-A
Matrix: Water
Analysis Batch: 425359

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 425000

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.200	0.1932		mg/L		97	90 - 110

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 500-773131/1-A
Matrix: Water
Analysis Batch: 773132

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 773131

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<1.00		1.00	0.231	mg/L		06/18/24 18:00	06/18/24 20:14	1

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: LCS 500-773131/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 773132
Prep Batch: 773131

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide			3.64	3.492		mg/L		96	80 - 120		

Lab Sample ID: 310-283673-3 MS
Client Sample ID: PZ-10
Matrix: Groundwater
Prep Type: Total/NA
Analysis Batch: 773132
Prep Batch: 773131

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide	<1.00		9.09	8.769		mg/L		96	75 - 125		

Lab Sample ID: 310-283673-3 MSD
Client Sample ID: PZ-10
Matrix: Groundwater
Prep Type: Total/NA
Analysis Batch: 773132
Prep Batch: 773131

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	<1.00		9.09	8.293		mg/L		91	75 - 125	6	20

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

Lab Sample ID: MB 310-424751/1
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 424751

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			06/17/24 10:43	1

Lab Sample ID: LCS 310-424751/2
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 424751

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Suspended Solids			100	99.00		mg/L		99	81 - 116		

Lab Sample ID: MB 310-424756/1
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 424756

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			06/17/24 11:46	1

Lab Sample ID: LCS 310-424756/2
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 424756

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Suspended Solids			100	94.00		mg/L		94	81 - 116		

GC/MS VOA

Analysis Batch: 425101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-2	MW-43	Total/NA	Groundwater	8260D	
310-283673-3	PZ-10	Total/NA	Groundwater	8260D	
310-283673-5	GW-Lagoon-00	Total/NA	Groundwater	8260D	
310-283673-6	GW-Lagoon-Cell 1W	Total/NA	Groundwater	8260D	
310-283673-7	MW-D	Total/NA	Groundwater	8260D	
310-283673-8	Trip Blank	Total/NA	Trip Blank	8260D	
MB 310-425101/5	Method Blank	Total/NA	Water	8260D	
LCS 310-425101/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-425101/7	Lab Control Sample	Total/NA	Water	8260D	

GC/MS Semi VOA

Prep Batch: 424891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-3	PZ-10	Total/NA	Groundwater	3510C	
MB 310-424891/1-A	Method Blank	Total/NA	Water	3510C	
LCS 310-424891/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 310-424891/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 425029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-3	PZ-10	Total/NA	Groundwater	8270E	424891
MB 310-424891/1-A	Method Blank	Total/NA	Water	8270E	424891
LCS 310-424891/2-A	Lab Control Sample	Total/NA	Water	8270E	424891
LCSD 310-424891/3-A	Lab Control Sample Dup	Total/NA	Water	8270E	424891

GC Semi VOA

Analysis Batch: 424852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-3	PZ-10	Total/NA	Groundwater	8081B	424910
MB 310-424910/1-A	Method Blank	Total/NA	Water	8081B	424910
LCS 310-424910/9-A	Lab Control Sample	Total/NA	Water	8081B	424910

Analysis Batch: 424853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-3	PZ-10	Total/NA	Groundwater	8082A	424910
MB 310-424910/1-A	Method Blank	Total/NA	Water	8082A	424910
LCS 310-424910/12-A	Lab Control Sample	Total/NA	Water	8082A	424910

Prep Batch: 424910

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-3	PZ-10	Total/NA	Groundwater	3511	
MB 310-424910/1-A	Method Blank	Total/NA	Water	3511	
LCS 310-424910/12-A	Lab Control Sample	Total/NA	Water	3511	
LCS 310-424910/9-A	Lab Control Sample	Total/NA	Water	3511	

Analysis Batch: 425395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-3	PZ-10	Total/NA	Groundwater	8015C	
MB 310-425395/16	Method Blank	Total/NA	Water	8015C	
LCS 310-425395/17	Lab Control Sample	Total/NA	Water	8015C	

GC Semi VOA (Continued)

Analysis Batch: 425395 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-3 MS	PZ-10	Total/NA	Groundwater	8015C	
310-283673-3 MSD	PZ-10	Total/NA	Groundwater	8015C	

Prep Batch: 518676

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-3	PZ-10	Total/NA	Groundwater	8151A	
MB 410-518676/1-A	Method Blank	Total/NA	Water	8151A	
LCS 410-518676/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 410-518676/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	

Analysis Batch: 519353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-3	PZ-10	Total/NA	Groundwater	8151A	518676
MB 410-518676/1-A	Method Blank	Total/NA	Water	8151A	518676
LCS 410-518676/2-A	Lab Control Sample	Total/NA	Water	8151A	518676
LCSD 410-518676/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	518676

Metals

Prep Batch: 424817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-2	MW-43	Total/NA	Groundwater	3005A	
310-283673-3	PZ-10	Total/NA	Groundwater	3005A	
310-283673-5	GW-Lagoon-00	Total/NA	Groundwater	3005A	
310-283673-6	GW-Lagoon-Cell 1W	Total/NA	Groundwater	3005A	
310-283673-7	MW-D	Total/NA	Groundwater	3005A	
MB 310-424817/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-424817/2-A	Lab Control Sample	Total/NA	Water	3005A	

Analysis Batch: 425355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-424817/2-A	Lab Control Sample	Total/NA	Water	6020B	424817

Prep Batch: 425722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-3	PZ-10	Total/NA	Groundwater	7470A	
MB 310-425722/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-425722/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 425884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-3	PZ-10	Total/NA	Groundwater	7470A	425722
MB 310-425722/1-A	Method Blank	Total/NA	Water	7470A	425722
LCS 310-425722/2-A	Lab Control Sample	Total/NA	Water	7470A	425722

Analysis Batch: 427084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-2	MW-43	Total/NA	Groundwater	6020B	424817
310-283673-3	PZ-10	Total/NA	Groundwater	6020B	424817
310-283673-5	GW-Lagoon-00	Total/NA	Groundwater	6020B	424817
310-283673-6	GW-Lagoon-Cell 1W	Total/NA	Groundwater	6020B	424817

Metals (Continued)

Analysis Batch: 427084 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-7	MW-D	Total/NA	Groundwater	6020B	424817
MB 310-424817/1-A	Method Blank	Total/NA	Water	6020B	424817

Analysis Batch: 427207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-2	MW-43	Total/NA	Groundwater	6020B	424817
310-283673-3	PZ-10	Total/NA	Groundwater	6020B	424817
310-283673-5	GW-Lagoon-00	Total/NA	Groundwater	6020B	424817
310-283673-6	GW-Lagoon-Cell 1W	Total/NA	Groundwater	6020B	424817
310-283673-7	MW-D	Total/NA	Groundwater	6020B	424817
MB 310-424817/1-A	Method Blank	Total/NA	Water	6020B	424817
LCS 310-424817/2-A	Lab Control Sample	Total/NA	Water	6020B	424817

General Chemistry

Analysis Batch: 424751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-3	PZ-10	Total/NA	Groundwater	I-3765-85	
310-283673-5	GW-Lagoon-00	Total/NA	Groundwater	I-3765-85	
310-283673-6	GW-Lagoon-Cell 1W	Total/NA	Groundwater	I-3765-85	
MB 310-424751/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-424751/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 424756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-2	MW-43	Total/NA	Groundwater	I-3765-85	
310-283673-7	MW-D	Total/NA	Groundwater	I-3765-85	
MB 310-424756/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-424756/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Prep Batch: 425000

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-3	PZ-10	Total/NA	Groundwater	9012B	
MB 310-425000/1-A	Method Blank	Total/NA	Water	9012B	
LCS 310-425000/2-A	Lab Control Sample	Total/NA	Water	9012B	

Analysis Batch: 425359

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-3	PZ-10	Total/NA	Groundwater	9012B	425000
MB 310-425000/1-A	Method Blank	Total/NA	Water	9012B	425000
LCS 310-425000/2-A	Lab Control Sample	Total/NA	Water	9012B	425000

Prep Batch: 773131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-3	PZ-10	Total/NA	Groundwater	9030B	
MB 500-773131/1-A	Method Blank	Total/NA	Water	9030B	
LCS 500-773131/2-A	Lab Control Sample	Total/NA	Water	9030B	
310-283673-3 MS	PZ-10	Total/NA	Groundwater	9030B	
310-283673-3 MSD	PZ-10	Total/NA	Groundwater	9030B	

QC Association Summary

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

General Chemistry

Analysis Batch: 773132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283673-3	PZ-10	Total/NA	Groundwater	9034	773131
MB 500-773131/1-A	Method Blank	Total/NA	Water	9034	773131
LCS 500-773131/2-A	Lab Control Sample	Total/NA	Water	9034	773131
310-283673-3 MS	PZ-10	Total/NA	Groundwater	9034	773131
310-283673-3 MSD	PZ-10	Total/NA	Groundwater	9034	773131

Lab Chronicle

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: MW-43
Lab Sample ID: 310-283673-2
Date Collected: 06/12/24 12:18
Matrix: Groundwater
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	425101	WSE8	EET CF	06/20/24 16:44
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427084	NFT2	EET CF	07/11/24 23:23
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427207	A6US	EET CF	07/12/24 16:17
Total/NA	Analysis	I-3765-85		1	424756	DGU1	EET CF	06/17/24 11:46

Client Sample ID: PZ-10
Lab Sample ID: 310-283673-3
Date Collected: 06/11/24 11:08
Matrix: Groundwater
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	425101	WSE8	EET CF	06/20/24 16:23
Total/NA	Prep	3510C			424891	D0DG	EET CF	06/18/24 11:41
Total/NA	Analysis	8270E		1	425029	L0FS	EET CF	06/19/24 13:12
Total/NA	Analysis	8015C		1	425395	V7YZ	EET CF	06/24/24 14:55
Total/NA	Prep	3511			424910	D2YP	EET CF	06/18/24 13:01
Total/NA	Analysis	8081B		1	424852	BW2O	EET CF	06/18/24 18:13
Total/NA	Prep	3511			424910	D2YP	EET CF	06/18/24 13:01
Total/NA	Analysis	8082A		1	424853	BW2O	EET CF	06/18/24 18:13
Total/NA	Prep	8151A			518676	QJZ6	ELLE	06/18/24 15:50
Total/NA	Analysis	8151A		1	519353	UAMZ	ELLE	06/20/24 16:04
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427084	NFT2	EET CF	07/11/24 23:27
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427207	A6US	EET CF	07/12/24 16:19
Total/NA	Prep	7470A			425722	DHM5	EET CF	06/26/24 15:25
Total/NA	Analysis	7470A		1	425884	DHM5	EET CF	06/27/24 13:54
Total/NA	Prep	9012B			425000	WZC8	EET CF	06/19/24 09:31
Total/NA	Analysis	9012B		1	425359	ZJX4	EET CF	06/21/24 18:13
Total/NA	Prep	9030B			773131	CLB	EET CHI	06/18/24 18:10 - 06/18/24 18:15 [1]
Total/NA	Analysis	9034		1	773132	CLB	EET CHI	06/18/24 20:27 - 06/18/24 20:33 [1]
Total/NA	Analysis	I-3765-85		1	424751	DGU1	EET CF	06/17/24 10:43

Client Sample ID: GW-Lagoon-00
Lab Sample ID: 310-283673-5
Date Collected: 06/11/24 16:30
Matrix: Groundwater
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	425101	WSE8	EET CF	06/20/24 15:39
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427084	NFT2	EET CF	07/11/24 23:30
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427207	A6US	EET CF	07/12/24 16:21

Lab Chronicle

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Client Sample ID: GW-Lagoon-00
Lab Sample ID: 310-283673-5
Date Collected: 06/11/24 16:30
Matrix: Groundwater
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	I-3765-85		1	424751	DGU1	EET CF	06/17/24 10:43

Client Sample ID: GW-Lagoon-Cell 1W
Lab Sample ID: 310-283673-6
Date Collected: 06/11/24 12:00
Matrix: Groundwater
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	425101	WSE8	EET CF	06/20/24 16:01
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427084	NFT2	EET CF	07/11/24 23:34
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427207	A6US	EET CF	07/12/24 16:23
Total/NA	Analysis	I-3765-85		1	424751	DGU1	EET CF	06/17/24 10:43

Client Sample ID: MW-D
Lab Sample ID: 310-283673-7
Date Collected: 06/12/24 12:18
Matrix: Groundwater
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	425101	WSE8	EET CF	06/20/24 17:06
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427084	NFT2	EET CF	07/11/24 23:38
Total/NA	Prep	3005A			424817	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	427207	A6US	EET CF	07/12/24 16:34
Total/NA	Analysis	I-3765-85		1	424756	DGU1	EET CF	06/17/24 11:46

Client Sample ID: Trip Blank
Lab Sample ID: 310-283673-8
Date Collected: 06/12/24 12:18
Matrix: Trip Blank
Date Received: 06/14/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	425101	WSE8	EET CF	06/20/24 10:35

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

Laboratory References:

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

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Laboratory: Eurofins Cedar Falls

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

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

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260D		Groundwater	1,2,4-Trichlorobenzene
8260D		Groundwater	Allyl chloride
8260D		Groundwater	Ethyl methacrylate
8260D		Trip Blank	1,2,4-Trichlorobenzene
8260D		Trip Blank	Allyl chloride
8260D		Trip Blank	Ethyl methacrylate
I-3765-85		Groundwater	Total Suspended Solids

Laboratory: Eurofins Chicago

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	082	05-01-26

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alabama	State	43200	01-31-25
Alaska	State	PA00009	06-30-24
Alaska (UST)	State	17-027	02-28-25
Arizona	State	AZ0780	03-12-25
Arkansas DEQ	State	88-00660	08-09-24
California	State	2792	11-30-24
Colorado	State	PA00009	06-30-25
Connecticut	State	PH-0746	06-30-25
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-25
Delaware (DW)	State	N/A	01-31-25
Florida	NELAP	E87997	06-30-24
Georgia (DW)	State	C048	01-31-25
Hawaii	State	N/A	01-31-25
Illinois	NELAP	200027	01-31-25
Iowa	State	361	03-01-26
Kansas	NELAP	E-10151	10-31-24
Kentucky (DW)	State	KY90088	12-31-24
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-24
Louisiana (All)	NELAP	02055	06-30-24
Maine	State	2019012	03-12-25
Maryland	State	100	06-30-25
Massachusetts	State	M-PA009	06-30-25
Michigan	State	9930	01-31-25
Minnesota	NELAP	042-999-487	12-31-24
Mississippi	State	023	01-31-25

Accreditation/Certification Summary

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-25
Nebraska	State	NE-OS-32-17	01-31-25
New Hampshire	NELAP	2730	01-10-25
New Jersey	NELAP	PA011	06-30-24
New York	NELAP	10670	04-01-25
North Carolina (DW)	State	42705	06-30-24
North Carolina (WW/SW)	State	521	12-31-24
North Dakota	State	R-205	01-31-24 *
Oklahoma	NELAP	9804	08-31-24
Oregon	NELAP	PA200001	09-11-24
Pennsylvania	NELAP	36-00037	01-31-25
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-24
Rhode Island	State	LAO00338	12-30-24
South Carolina	State	89002	01-31-25
Tennessee	State	02838	01-31-25
Texas	NELAP	T104704194-23-46	08-31-24
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-24
Virginia	NELAP	460182	07-09-24
Washington	State	C457	04-11-24 *
West Virginia (DW)	State	9906 C	01-31-25
West Virginia DEP	State	055	06-20-24
Wyoming	State	8TMS-L	01-31-25
Wyoming (UST)	A2LA	0001.01	11-30-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: SCS Engineers
Job ID: 310-283673-1
Project/Site: Des Moines County Regional LF (HMSP 2)

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
8270E	Semivolatile Organic Compounds (GC/MS)	SW846	EET CF
8015C	Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)	SW846	EET CF
8081B	Organochlorine Pesticides (GC)	SW846	EET CF
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CF
8151A	Herbicides (GC)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	EET CF
7470A	Mercury (CVAA)	SW846	EET CF
9012B	Cyanide, Total andor Amenable	SW846	EET CF
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	EET CHI
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CF
3511	Microextraction of Organic Compounds	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF
8151A	Extraction (Herbicides)	SW846	ELLE
9012B	Cyanide, Total and/or Amenable, Distillation	SW846	EET CF
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	SW846	EET CHI

Protocol References:

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

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

Laboratory References:

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

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

eurofins | Environment Testing America

310-283673 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 6-14-24 | TIME 1700 | Received By: MY

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: MY

Multiple Coolers? ☒ Yes ☐ No *If yes:* Cooler # 1 of 1 (1 of 2)

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? ↓

PZ-10; MW-43; GW Lagoon 1W; GW Lagoon 00

Temperature Record

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

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

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

Uncorrected Temp (°C): 1.2 | Corrected Temp (°C): 1.2

• Sample Container Temperature

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

Exceptions Noted

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

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

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

Additional Comments

~~No COC received Des Moines Co LF (HMSP2)~~
Found!

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SSC

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 6-14-24 TIME 1700 | Received By: MY

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 # 2 of 2

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: R | Correction Factor (°C): 0

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

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

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:	Plastic 250 Nitric	Plastic 1 L
Uncorrected Temp (°C):	1.9	2.6
Corrected Temp (°C):	1.9	2.6

Exceptions Noted

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

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

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

Additional Comments

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone (319) 277-2401 Phone (319) 277-2425

Chain of Custody Record

TestAmerica Des Moines SC
214

eurofins | Environment Testing

Client Information	Sampler: Michael Morgan	Lab PM: Yang, Mary E	Carrier Tracking No(s):	COC No: 310-93826-25757 1
Client Contact: Ben Madson	Phone: 515 [illegible]	E-Mail: Mary Yang@ET EurofinsUS com	State of Origin:	Page: Page 1 of 1
Company: SCS Engineers	PWSID:			Job #:
Address: 1690 All State Court Suite 100	Due Date Requested:			
City: West Des Moines	TAT Requested (days):			
State, Zip: IA, 50265	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 27223154 24			
Email: bmadson@scsengineers.com	WO #:			
Project Name: Des Moines Co Sanitary Landfill (HMSP 2) Event Desc: HMSP 2	Project #: 31002156			
Site: Iowa	SSOW#:			

Analysis Requested

Preservation Codes:
N - None
D - HNO3
A - HCL
B - NaOH
CB - ZnAcetate/NaOH
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - Metals List A	6020B - (MOD) Appendix I Metals	8260D - (MOD) Volatile Appendix I Sublist	6020B, 7470A - (MOD) Appendix II Metals	8260D - Volatile Appendix II Sublist	I_3765_86 - Total Suspended Solids	8015C_DAI - Acetonitrile, Isobutyl alcohol	8151A - 8151A APII Herbicides	9034_Calc - Sulfide	9012B - Cyanide, Total	8081B, 8082A, 8270E			Total Number of containers	Special Instructions/Note:
Preservation Code:							D	D	A	D	A	N	N	N	CB	B	N				
MW-41	[illegible]			Water			X		X			X									Metals List A. Arsenic, Barium, Chromium, Cobalt, Copper, Lead, Nickel, Selenium, Vanadium, and Zinc.
MW-43	6/2/24	2 [illegible]		Water				X	X			X									
PZ-10	6/1/24	02		Water						X	X	X	X	X	X	X	X				LOGIN WITH SITES AND EVENTS
PZ-11				Water			X		X			X									Sub 8151 Herbs to Lancaster
GW-Lagoon-00	6/2/24	[illegible]		Water			X		X			X									Sub 9034 Sulfide to Chicago
GW-Lagoon-Cell 1W	6/2/24	2[illegible]		Water			X		X			X									
MW-D	6/2/24	2 [illegible]		Water				X	X			X									
Trip Blank				Water							X										

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

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

Special Instructions/QC Requirements.

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Michael Morgan	6/4/24 3:20	SCS			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 6/4/24 1700	Company ET

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

Ver 04/02/2024

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Yang, Mary E	Carrier Tracking No(s):	COC No: 310-73534.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Mary.Yang@ET.EurofinsUS.com	State of Origin: Iowa	Page: Page 1 of 1
Company: Eurofins Lancaster Laboratories Environm		Accreditations Required (See note): State Program - Iowa		Job #: 310-283673-1
Address: 2425 New Holland Pike, ,	Due Date Requested: 6/27/2024	Analysis Requested		Preservation Codes:
City: Lancaster	TAT Requested (days):			
State, Zip: PA, 17601				
Phone: 717-656-2300(Tel)	PO #:			
Email:	WO #:			
Project Name: Des Moines County Regional LF (HMSP 2)	Project #: 31002156			
Site: 310-SCS Des Moines County Sanitary Landf	SSOW#:			Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8151A/8151A_AP 8151A APII Herbicides	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X		X	
PZ-10 (310-283673-3)	6/11/24	11:08 Central		Water			X	2	

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

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

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	6/17/24 1530				
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: Debra A. Byers	Date/Time: 6-18-24 10:35	Company ELLET

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: Raw 3.1 - COR 3.2

mB

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

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Yang, Mary E	Carrier Tracking No(s):	COC No: 310-73525 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Mary Yang@ET EurofinsUS com	State of Origin: Iowa	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): State Program - Iowa		Job #: 310-283673-1
Address: 2417 Bond Street, ,	Due Date Requested: 6/27/2024			Preservation Codes: -
City: University Park	TAT Requested (days)			
State, Zip: IL, 60484				310-283673 COC
Phone: 708-534-5200(Tel) 708-534-5211(Fax)	PO #:			Other
Email	WO #:			
Project Name: Des Moines County Regional LF (HMSP 2)	Project #: 31002156			
Site: 310-SCS Des Moines County Sanitary Landf	SSOW#:			

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9034_Calc/9030B	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
PZ-10 (310-283673-3)	6/11/24	11 08 Central		Water			X	1	

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

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

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
	6/17/24 1500		Stephanie Hernandez	6/18/24 0945	EETA
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks. 2.3-7.6.9

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-283673-1

Login Number: 283673

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Bennett, Samantha

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

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-283673-1

Login Number: 283673
List Number: 2
Creator: Hernandez, Stephanie

List Source: Eurofins Chicago
List Creation: 06/18/24 10:20 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-283673-1

Login Number: 283673
List Number: 3
Creator: Ballard, Megan

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 06/18/24 11:36 AM

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	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	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

eurofins | Environment Testing

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

ANALYTICAL REPORT

PREPARED FOR

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

Generated 7/10/2024 8:34:03 AM

JOB DESCRIPTION

Des Moines County Regional LF (HMSP) Bracketing

JOB NUMBER

310-283664-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

myEOL

Job Notes

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

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

Authorization

Generated
7/10/2024 8:34:03 AM

Authorized for release by
Mary Yang, Client Service Manager
Mary.Yang@ET.EurofinsUS.com
(319)595-2025

Table of Contents

Cover Page 1
Table of Contents 3
Case Narrative 4
Sample Summary 5
Detection Summary 6
Client Sample Results 7
Definitions 11
Surrogate Summary 12
QC Sample Results 13
QC Association 15
Chronicle 17
Certification Summary 18
Method Summary 19
Chain of Custody 20
Receipt Checklists 22

Job ID: 310-283664-1 Eurofins Cedar Falls

Job Narrative
310-283664-1

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

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

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

Receipt
The samples were received on 6/15/2024 5:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.8°C.

Pesticides
Method 8081B: The surrogate recovery for the LCS associated with preparation batch 310-424953 and analytical batch 310-424973 was outside the upper control limits.

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

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

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

Sample Summary

Client: SCS Engineers
Job ID: 310-283664-1
Project/Site: Des Moines County Regional LF (HMSP)
Bracketing

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-283664-1	MW-5-90	Ground Water	06/13/24 10:25	06/15/24 17:00
310-283664-2	MW-6-90	Ground Water	06/12/24 10:10	06/15/24 17:00
310-283664-3	MW-6-93	Ground Water	06/12/24 13:20	06/15/24 17:00
310-283664-4	MW-44	Ground Water	06/12/24 10:20	06/15/24 17:00

Detection Summary

Client: SCS Engineers
Job ID: 310-283664-1
Project/Site: Des Moines County Regional LF (HMSP)
Bracketing

Client Sample ID: MW-5-90 — Lab Sample ID: 310-283664-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.000874	J	0.00200	0.000530	mg/L	1		6020B	Total/NA

Client Sample ID: MW-6-90 — Lab Sample ID: 310-283664-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	10.1		1.88	1.39	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-6-93 — Lab Sample ID: 310-283664-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00231		0.00200	0.000530	mg/L	1		6020B	Total/NA
Total Suspended Solids	22.5		1.88	1.39	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-44 — Lab Sample ID: 310-283664-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.000799	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Total Suspended Solids	79.3		3.75	2.78	mg/L	1		I-3765-85	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: SCS Engineers
Job ID: 310-283664-1
Project/Site: Des Moines County Regional LF (HMSP)
Bracketing

Client Sample ID: MW-5-90
Lab Sample ID: 310-283664-1
Date Collected: 06/13/24 10:25
Matrix: Ground Water
Date Received: 06/15/24 17:00

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0933		0.0933	0.00933	ug/L		06/19/24 07:06	06/19/24 15:48	1

Method: SW846 8081B - Organochlorine Pesticides (GC)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*133*		*10 - 136*	*06/19/24 07:06*	*06/19/24 15:48*	*1*
Tetrachloro-m-xylene (Surr)	*107*		*10 - 130*	*06/19/24 07:06*	*06/19/24 15:48*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.000874	J	0.00200	0.000530	mg/L		06/18/24 09:00	07/09/24 15:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.39	mg/L			06/19/24 09:51	1

Client Sample Results

Client: SCS Engineers
Job ID: 310-283664-1
Project/Site: Des Moines County Regional LF (HMSP)
Bracketing

Client Sample ID: MW-6-90
Lab Sample ID: 310-283664-2
Date Collected: 06/12/24 10:10
Matrix: Ground Water
Date Received: 06/15/24 17:00

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		06/18/24 09:00	07/09/24 15:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	10.1		1.88	1.39	mg/L			06/18/24 08:26	1

Client: SCS Engineers
Job ID: 310-283664-1
Project/Site: Des Moines County Regional LF (HMSP)
Bracketing

Client Sample ID: MW-6-93
Lab Sample ID: 310-283664-3
Date Collected: 06/12/24 13:20
Matrix: Ground Water
Date Received: 06/15/24 17:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.00231		0.00200	0.000530	mg/L		06/18/24 09:00	07/09/24 15:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	22.5		1.88	1.39	mg/L			06/17/24 11:46	1

Client Sample Results

Client: SCS Engineers
Job ID: 310-283664-1
Project/Site: Des Moines County Regional LF (HMSP)
Bracketing

Client Sample ID: MW-44
Lab Sample ID: 310-283664-4
Date Collected: 06/12/24 10:20
Matrix: Ground Water
Date Received: 06/15/24 17:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.000799	J	0.00200	0.000530	mg/L		06/18/24 09:00	07/09/24 15:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	79.3		3.75	2.78	mg/L			06/18/24 08:26	1

Definitions/Glossary

Client: SCS Engineers
Job ID: 310-283664-1
Project/Site: Des Moines County Regional LF (HMSP)
Bracketing

Qualifiers

Metals

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

Glossary

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

Surrogate Summary

Client: SCS Engineers
Job ID: 310-283664-1
Project/Site: Des Moines County Regional LF (HMSP)
Bracketing

Method: 8081B - Organochlorine Pesticides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)									
		DCB1	TCX1								
Lab Sample ID	Client Sample ID	(10-136)	(10-130)								
310-283664-1	MW-5-90	133	107								

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene (Surr)

Method: 8081B - Organochlorine Pesticides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)									
		DCB1	TCX1								
Lab Sample ID	Client Sample ID	(10-136)	(10-130)								
LCS 310-424953/20-A	Lab Control Sample	123	86								
MB 310-424953/1-A	Method Blank		95								

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene (Surr)

Client: SCS Engineers
Job ID: 310-283664-1
Project/Site: Des Moines County Regional LF (HMSP)
Bracketing

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 310-424953/1-A
Matrix: Water
Analysis Batch: 424973

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424953

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0931		0.0931	0.00931	ug/L		06/19/24 07:06	06/19/24 10:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene (Surr)	*95*		*10 - 130*	*06/19/24 07:06*	*06/19/24 10:39*	*1*

Lab Sample ID: LCS 310-424953/20-A
Matrix: Water
Analysis Batch: 424973

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424953

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
alpha-BHC	2.60	2.677		ug/L		103	36 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*123*		*10 - 136*
Tetrachloro-m-xylene (Surr)	*86*		*10 - 130*

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-424818/1-A
Matrix: Water
Analysis Batch: 425341

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 424818

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		06/18/24 09:00	06/21/24 14:23	1

Lab Sample ID: LCS 310-424818/2-A
Matrix: Water
Analysis Batch: 425341

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 424818

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.1783		mg/L		89	80 - 120

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

Lab Sample ID: MB 310-424756/1
Matrix: Water
Analysis Batch: 424756

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			06/17/24 11:46	1

Lab Sample ID: LCS 310-424756/2
Matrix: Water
Analysis Batch: 424756

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	94.00		mg/L		94	81 - 116

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

Lab Sample ID: MB 310-424840/1
Matrix: Water
Analysis Batch: 424840

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			06/18/24 08:26	1

Lab Sample ID: LCS 310-424840/2
Matrix: Water
Analysis Batch: 424840

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	103.0		mg/L		103	81 - 116

Lab Sample ID: MB 310-425005/1
Matrix: Water
Analysis Batch: 425005

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			06/19/24 09:51	1

Lab Sample ID: LCS 310-425005/2
Matrix: Water
Analysis Batch: 425005

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	105.0		mg/L		105	81 - 116

QC Association Summary

Client: SCS Engineers
Job ID: 310-283664-1
Project/Site: Des Moines County Regional LF (HMSP)
Bracketing

GC Semi VOA

Prep Batch: 424953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283664-1	MW-5-90	Total/NA	Ground Water	3511	
MB 310-424953/1-A	Method Blank	Total/NA	Water	3511	
LCS 310-424953/20-A	Lab Control Sample	Total/NA	Water	3511	

Analysis Batch: 424973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283664-1	MW-5-90	Total/NA	Ground Water	8081B	424953
MB 310-424953/1-A	Method Blank	Total/NA	Water	8081B	424953
LCS 310-424953/20-A	Lab Control Sample	Total/NA	Water	8081B	424953

Metals

Prep Batch: 424818

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283664-1	MW-5-90	Total/NA	Ground Water	3005A	
310-283664-2	MW-6-90	Total/NA	Ground Water	3005A	
310-283664-3	MW-6-93	Total/NA	Ground Water	3005A	
310-283664-4	MW-44	Total/NA	Ground Water	3005A	
MB 310-424818/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-424818/2-A	Lab Control Sample	Total/NA	Water	3005A	

Analysis Batch: 425341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-424818/1-A	Method Blank	Total/NA	Water	6020B	424818
LCS 310-424818/2-A	Lab Control Sample	Total/NA	Water	6020B	424818

Analysis Batch: 426777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283664-1	MW-5-90	Total/NA	Ground Water	6020B	424818
310-283664-2	MW-6-90	Total/NA	Ground Water	6020B	424818
310-283664-3	MW-6-93	Total/NA	Ground Water	6020B	424818
310-283664-4	MW-44	Total/NA	Ground Water	6020B	424818

General Chemistry

Analysis Batch: 424756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283664-3	MW-6-93	Total/NA	Ground Water	I-3765-85	
MB 310-424756/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-424756/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 424840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283664-2	MW-6-90	Total/NA	Ground Water	I-3765-85	
310-283664-4	MW-44	Total/NA	Ground Water	I-3765-85	
MB 310-424840/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-424840/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 425005

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-283664-1	MW-5-90	Total/NA	Ground Water	I-3765-85	

General Chemistry (Continued)

Analysis Batch: 425005 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-425005/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-425005/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Lab Chronicle

Client: SCS Engineers
Job ID: 310-283664-1
Project/Site: Des Moines County Regional LF (HMSP)
Bracketing

Client Sample ID: MW-5-90
Lab Sample ID: 310-283664-1
Date Collected: 06/13/24 10:25
Matrix: Ground Water
Date Received: 06/15/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3511			424953	D0DG	EET CF	06/19/24 07:06
Total/NA	Analysis	8081B		1	424973	BW2O	EET CF	06/19/24 15:48
Total/NA	Prep	3005A			424818	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	426777	NFT2	EET CF	07/09/24 15:36
Total/NA	Analysis	I-3765-85		1	425005	HE7K	EET CF	06/19/24 09:51

Client Sample ID: MW-6-90
Lab Sample ID: 310-283664-2
Date Collected: 06/12/24 10:10
Matrix: Ground Water
Date Received: 06/15/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			424818	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	426777	NFT2	EET CF	07/09/24 15:38
Total/NA	Analysis	I-3765-85		1	424840	DGU1	EET CF	06/18/24 08:26

Client Sample ID: MW-6-93
Lab Sample ID: 310-283664-3
Date Collected: 06/12/24 13:20
Matrix: Ground Water
Date Received: 06/15/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			424818	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	426777	NFT2	EET CF	07/09/24 15:41
Total/NA	Analysis	I-3765-85		1	424756	DGU1	EET CF	06/17/24 11:46

Client Sample ID: MW-44
Lab Sample ID: 310-283664-4
Date Collected: 06/12/24 10:20
Matrix: Ground Water
Date Received: 06/15/24 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			424818	DHM5	EET CF	06/18/24 09:00
Total/NA	Analysis	6020B		1	426777	NFT2	EET CF	07/09/24 15:43
Total/NA	Analysis	I-3765-85		1	424840	DGU1	EET CF	06/18/24 08:26

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

Accreditation/Certification Summary

Client: SCS Engineers
Job ID: 310-283664-1
Project/Site: Des Moines County Regional LF (HMSP)
Bracketing

Laboratory: Eurofins Cedar Falls

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

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

Method Summary

Client: SCS Engineers
Job ID: 310-283664-1
Project/Site: Des Moines County Regional LF (HMSP)
Bracketing

Method	Method Description	Protocol	Laboratory
8081B	Organochlorine Pesticides (GC)	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
3511	Microextraction of Organic Compounds	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

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: SCS			
City/State: CITY		STATE	Project:
Receipt Information			
Date/Time Received: DATE 6-14-24		TIME 1700	Received By: MY

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? No	☐ Yes	☒ No	*If yes:* Cooler custody seals intact? ☐ Yes ☐ No
Sample Custody Seals Present? No	☐ 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: R	Correction Factor (°C): 0

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

Uncorrected Temp (°C): 0.8	Corrected Temp (°C): 0.8

• **Sample Container Temperature**

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

Exceptions Noted

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

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

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

Additional Comments

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone (319) 277-2401 Phone (319) 277-2425

Chain of Custody Record

TestAmerica Des Moines SC
214

eurofins | Environment Testing

Client Information	Sampler: Michael Mc aan	Lab PM: Yang, Mary E	Carrier Tracking No(s):	COC No: 310-93800-24345 1
Client Contact: Ben Madson	Phone: 5 5 C s 2 7 5	E-Mail: Mary Yang@ET EurofinsUS com	State of Origin:	Page: Page 1 of 1
Company: SCS Engineers	PWSID:	Analysis Requested		Job #:
Address: 1690 All State Court Suite 100	Due Date Requested:			Preservation Codes: D - HNO3 N - None
City: West Des Moines	TAT Requested (days):			
State, Zip: IA, 50265	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 27223154 24			
Email: bmadson@scsengineers.com	WO #:			
Project Name: Des Moines County Sanitary Landfill (HMSP) Bracketing	Project #: 31002156			
Site:	SSOW#:			Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B - (MOD) Arsenic	I_3766_86 - Residue, Non-filterable (TSS)	8081B - (MOD) Alpha-BHC	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N		
MW-5-90	6 13 24	0 25		Water			X	X	X		
MW-6-90	6 12 24	16 0		Water			X	X			
MW-6-93	6 12 24	15 20		Water			X	X			
MW-44	6 12 24	10 20		Water			X	X			

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

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

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

Special Instructions/QC Requirements.

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Michael Mc aan	6 14 24 3 0	SCS			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 6/14/24 1700	Company

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

Ver 04/02/2024

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-283664-1

Login Number: 283664

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Hummel, Matthew R

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

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

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

Generated 12/9/2024 11:50:17 AM

JOB DESCRIPTION

2nd 2024 Semi-Annual Groundwater Sampling
Des Moines County Sanitary Landfill (HMSP)
HMSP

JOB NUMBER

310-295910-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

my EOL

Job Notes

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

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

Authorization

Generated
12/9/2024 11:50:17 AM

Authorized for release by
Samuel Miller, Project Management Assistant I
Samuel.Miller@et.eurofinsus.com
(319)277-2401

Table of Contents

Cover Page 1
Table of Contents 3
Case Narrative 4
Sample Summary 6
Detection Summary 7
Detection Limit Exceptions Summary 10
Client Sample Results 11
Definitions 38
Surrogate Summary 40
QC Sample Results 43
QC Association 61
Chronicle 65
Certification Summary 69
Method Summary 70
Chain of Custody 71
Receipt Checklists 77

Job ID: 310-295910-1 Eurofins Cedar Falls

Job Narrative
310-295910-1

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

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

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

Receipt
The samples were received on 11/22/2024 4:30 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.9°C, 2.3°C and 4.9°C.

GC/MS VOA
Method 8260D: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid : MW-37 (310-295910-6), PZ-11 (310-295910-12), GW-Lagoon-Cell 1W (310-295910-13) and (310-295916-E-5). The requested target analyte list includes acrylonitrile, acid-labile compounds that degrades in an acidic medium.

Method 8260D: The following sample was analyzed outside of analytical holding time for Acrylonitrile: PZ-11 (310-295910-12).

Method 8260D: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container(s): MW-43 (310-295910-11).

Method 8260D: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid : MW-1-99 (310-295910-2), MW-7-93 (310-295910-5), Trip Blank 1 (310-295910-9), Trip Blank 2 (310-295910-10), MW-43 (310-295910-11), MW-D (310-295910-14) and (310-295853-B-6). The requested target analyte list includes acrylonitrile, acid-labile compounds that degrades in an acidic medium.

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-441114 recovered above the upper control limit for Vinyl chloride (23.5%D), Chloroethane (29.2%D) and Trichlorofluoromethane (42.8%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 310-441114/4).

Method 8260D: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analytes requested. The following sample(s) was received preserved with hydrochloric acid. Vial preservation was pH <2 rather than pH 4-5. : MW-7-93 (310-295910-5). The requested target analyte list includes acrylonitrile, acid-labile compounds that degrades in an acidic medium.

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

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

Herbicides
Method 8151A: Surrogate and LCS recoveries for the following samples was below the control limits: MW-4-93 (310-295910-4), MW-39R (310-295910-7), (LCSD 500-797329/3-A) and (MB 500-797329/1-A). Re-extraction was performed outside of holding time with acceptable results. Both results have been reported.

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

Pesticides
Method 8081B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch

Job ID: 310-295910-1 (Continued) Eurofins Cedar Falls

310-441152 and analytical batch 310-441372 recovered outside control limits for the following analytes: 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha-BHC, beta-BHC, cis-Chlordane, delta-BHC, Dieldrin, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin aldehyde, gamma-BHC (Lindane), Heptachlor, Heptachlor epoxide, Methoxychlor and trans-Chlordane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8081B: The surrogate recovery for the blank, LCS and LCSD associated with preparation batch 310-441152 and analytical batch 310-441372 was outside the upper control limits.

Method 8081B: Surrogate recovery for the following samples were outside the upper control limit: MW-4-89 (310-295910-1), MW-4-90 (310-295910-3), MW-4-93 (310-295910-4) and MW-40R (310-295910-8). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8081B: The laboratory control sample (LCS) for preparation batch 310-441152 and analytical batch 310-441372 recovered outside control limits for the following analytes:

Method 8081B: Surrogate recovery for the following sample was outside control limits: MW-39R (310-295910-7). Evidence of matrix interferences is not obvious.

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

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

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

Sample Summary

Client: SCS Engineers
Job ID: 310-295910-1
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (HMSP)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-295910-1	MW-4-89	Groundwater	11/20/24 10:23	11/22/24 16:30
310-295910-2	MW-1-99	Groundwater	11/20/24 12:32	11/22/24 16:30
310-295910-3	MW-4-90	Groundwater	11/20/24 08:34	11/22/24 16:30
310-295910-4	MW-4-93	Groundwater	11/21/24 08:23	11/22/24 16:30
310-295910-5	MW-7-93	Groundwater	11/20/24 15:13	11/22/24 16:30
310-295910-6	MW-37	Groundwater	11/19/24 14:41	11/22/24 16:30
310-295910-7	MW-39R	Groundwater	11/21/24 07:58	11/22/24 16:30
310-295910-8	MW-40R	Groundwater	11/20/24 09:19	11/22/24 16:30
310-295910-9	Trip Blank 1	Trip Blank	11/20/24 00:00	11/22/24 16:30
310-295910-10	Trip Blank 2	Trip Blank	11/20/24 00:00	11/22/24 16:30
310-295910-11	MW-43	Groundwater	11/20/24 14:02	11/22/24 16:30
310-295910-12	PZ-11	Groundwater	11/18/24 12:14	11/22/24 16:30
310-295910-13	GW-Lagoon-Cell 1W	Groundwater	11/19/24 13:05	11/22/24 16:30
310-295910-14	MW-D	Groundwater	11/20/24 14:02	11/22/24 16:30

Detection Summary

Client: SCS Engineers
Job ID: 310-295910-1
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: MW-4-89 — Lab Sample ID: 310-295910-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0807		0.00200	0.000660	mg/L	1		6020B	Total/NA

Client Sample ID: MW-1-99 — Lab Sample ID: 310-295910-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00178	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0693		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00268		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.00326	J	0.00500	0.00210	mg/L	1		6020B	Total/NA
Total Suspended Solids	6.67		5.00	3.70	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-4-90 — Lab Sample ID: 310-295910-3

No Detections.

Client Sample ID: MW-4-93 — Lab Sample ID: 310-295910-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	19.7		1.00	0.400	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.479	J	1.00	0.210	ug/L	1		8260D	Total/NA
1,2-Dichlorobenzene	0.523	J	1.00	0.370	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	2.03		1.00	0.230	ug/L	1		8260D	Total/NA
1,1-Dichloroethane	1.10		1.00	0.220	ug/L	1		8260D	Total/NA
Arsenic	0.00680		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0243		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.0498		0.000500	0.000170	mg/L	1		6020B	Total/NA
Copper	0.00291	J	0.00500	0.00180	mg/L	1		6020B	Total/NA
Lead	0.000412	J	0.000500	0.000260	mg/L	1		6020B	Total/NA
Nickel	0.188		0.00500	0.00210	mg/L	1		6020B	Total/NA
Vanadium	0.0246		0.00500	0.00110	mg/L	1		6020B	Total/NA
Zinc	0.0123	J	0.0200	0.00970	mg/L	1		6020B	Total/NA
Total Suspended Solids	13.8		1.88	1.39	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-7-93 — Lab Sample ID: 310-295910-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.000772	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0888		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.0127		0.000500	0.000170	mg/L	1		6020B	Total/NA
Copper	0.00358	J	0.00500	0.00180	mg/L	1		6020B	Total/NA
Nickel	0.0663		0.00500	0.00210	mg/L	1		6020B	Total/NA
Total Suspended Solids	4.88		1.88	1.39	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-37 — Lab Sample ID: 310-295910-6

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	1.58		1.00	0.400	ug/L	1		8260D	Total/NA
Chloroethane	13.1		4.00	0.790	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	3.22		1.00	0.210	ug/L	1		8260D	Total/NA
1,1-Dichloroethane	58.7		1.00	0.220	ug/L	1		8260D	Total/NA
1,1-Dichloroethene	2.80		2.00	0.560	ug/L	1		8260D	Total/NA
trans-1,2-Dichloroethene	0.298	J	1.00	0.270	ug/L	1		8260D	Total/NA
Trichloroethene	0.552	J	1.00	0.430	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: SCS Engineers
Job ID: 310-295910-1
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: MW-37 (Continued) — Lab Sample ID: 310-295910-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00219		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0177		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00265		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0422		0.00500	0.00210	mg/L	1		6020B	Total/NA
Total Suspended Solids	5.13		1.88	1.39	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-39R — Lab Sample ID: 310-295910-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.953		0.500	0.220	ug/L	1		8260D	Total/NA
Chlorobenzene	0.554	J	1.00	0.400	ug/L	1		8260D	Total/NA
Chloroethane	3.19	J	4.00	0.790	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	22.1		1.00	0.210	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	0.743	J	1.00	0.230	ug/L	1		8260D	Total/NA
Dichlorodifluoromethane	20.1		3.00	0.250	ug/L	1		8260D	Total/NA
1,1-Dichloroethane	49.9		1.00	0.220	ug/L	1		8260D	Total/NA
1,2-Dichloropropane	0.450	J	1.00	0.270	ug/L	1		8260D	Total/NA
Tetrachloroethene	1.27		1.00	0.480	ug/L	1		8260D	Total/NA
trans-1,2-Dichloroethene	0.463	J	1.00	0.270	ug/L	1		8260D	Total/NA
Trichloroethene	4.28		1.00	0.430	ug/L	1		8260D	Total/NA
Trichlorofluoromethane	0.645	J	4.00	0.380	ug/L	1		8260D	Total/NA
Vinyl chloride	1.67		1.00	0.180	ug/L	1		8260D	Total/NA
alpha-BHC	0.0232	J *+ B *1	0.0946	0.00946	ug/L	1		8081B	Total/NA
Arsenic	0.00114	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.203		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00141		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0212		0.00500	0.00210	mg/L	1		6020B	Total/NA
Total Suspended Solids	1.63	J	1.88	1.39	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-40R — Lab Sample ID: 310-295910-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.0950		0.00200	0.000660	mg/L	1		6020B	Total/NA
Lead	0.000410	J	0.000500	0.000260	mg/L	1		6020B	Total/NA
Total Suspended Solids	27.8		3.75	2.78	mg/L	1		I-3765-85	Total/NA

Client Sample ID: Trip Blank 1 — Lab Sample ID: 310-295910-9

No Detections.

Client Sample ID: Trip Blank 2 — Lab Sample ID: 310-295910-10

No Detections.

Client Sample ID: MW-43 — Lab Sample ID: 310-295910-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.68	J	10.0	3.10	ug/L	1		8260D	Total/NA
Arsenic	0.00608		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.623		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00220	B	0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.00567		0.00500	0.00210	mg/L	1		6020B	Total/NA
Vanadium	0.00216	J	0.00500	0.00110	mg/L	1		6020B	Total/NA
Total Suspended Solids	22.0		5.00	3.70	mg/L	1		I-3765-85	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: SCS Engineers
Job ID: 310-295910-1
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: PZ-11 — Lab Sample ID: 310-295910-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.148		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.000504	B	0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.00299	J	0.00500	0.00210	mg/L	1		6020B	Total/NA

Client Sample ID: GW-Lagoon-Cell 1W — Lab Sample ID: 310-295910-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.000746	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.158		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00141	B	0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.00314	J	0.00500	0.00210	mg/L	1		6020B	Total/NA

Client Sample ID: MW-D — Lab Sample ID: 310-295910-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.45	J	10.0	3.10	ug/L	1		8260D	Total/NA
Arsenic	0.00603		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.623		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00215	B	0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.00536		0.00500	0.00210	mg/L	1		6020B	Total/NA
Vanadium	0.00222	J	0.00500	0.00110	mg/L	1		6020B	Total/NA
Total Suspended Solids	17.0		5.00	3.70	mg/L	1		I-3765-85	Total/NA

This Detection Summary does not include radiochemical test results.

Quantitation Limit Exceptions Summary

Client: SCS Engineers
Job ID: 310-295910-1
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (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	Groundwater	Total/NA	ug/L	1.20	5
8260D	1,2-Dibromo-3-Chloropropane	Trip Blank	Total/NA	ug/L	1.20	5
8260D	1,2-Dibromoethane (EDB)	Groundwater	Total/NA	ug/L	0.340	1
8260D	1,2-Dibromoethane (EDB)	Trip Blank	Total/NA	ug/L	0.340	1

Client: SCS Engineers
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling

Job ID: 310-295910-1
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: MW-4-89
Date Collected: 11/20/24 10:23
Date Received: 11/22/24 16:30

Lab Sample ID: 310-295910-1
Matrix: Groundwater

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			11/27/24 03:09	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/27/24 03:09	1
Benzene	<0.500		0.500	0.220	ug/L			11/27/24 03:09	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/27/24 03:09	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/27/24 03:09	1
Bromoform	<5.00		5.00	0.780	ug/L			11/27/24 03:09	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/27/24 03:09	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/27/24 03:09	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/27/24 03:09	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/27/24 03:09	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/27/24 03:09	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/27/24 03:09	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/27/24 03:09	1
Chloroform	<3.00		3.00	1.30	ug/L			11/27/24 03:09	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/27/24 03:09	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/27/24 03:09	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/27/24 03:09	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/27/24 03:09	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/27/24 03:09	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/27/24 03:09	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/27/24 03:09	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/27/24 03:09	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/27/24 03:09	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/27/24 03:09	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/27/24 03:09	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/27/24 03:09	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/27/24 03:09	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/27/24 03:09	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/27/24 03:09	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/27/24 03:09	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/27/24 03:09	1
Styrene	<1.00		1.00	0.370	ug/L			11/27/24 03:09	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/27/24 03:09	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/27/24 03:09	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/27/24 03:09	1
Toluene	<1.00		1.00	0.430	ug/L			11/27/24 03:09	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/27/24 03:09	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/27/24 03:09	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/27/24 03:09	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/27/24 03:09	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/27/24 03:09	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/27/24 03:09	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/27/24 03:09	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/27/24 03:09	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/27/24 03:09	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/27/24 03:09	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/27/24 03:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*11/27/24 03:09*	*1*

Client Sample ID: MW-4-89
Lab Sample ID: 310-295910-1
Date Collected: 11/20/24 10:23
Matrix: Groundwater
Date Received: 11/22/24 16:30

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*112*		*73 - 130*		*11/27/24 03:09*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/27/24 03:09*	*1*

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.0900	*+ *1	0.0900	0.0225	ug/L		11/27/24 12:45	12/03/24 16:15	1
4,4'-DDE	<0.0900	*+ *1	0.0900	0.0270	ug/L		11/27/24 12:45	12/03/24 16:15	1
4,4'-DDT	<0.0900	*+ *1	0.0900	0.0180	ug/L		11/27/24 12:45	12/03/24 16:15	1
Aldrin	<0.0900	*+ *1	0.0900	0.0198	ug/L		11/27/24 12:45	12/03/24 16:15	1
alpha-BHC	<0.0900	*+ *1	0.0900	0.00900	ug/L		11/27/24 12:45	12/03/24 16:15	1
beta-BHC	<0.0900	*+ *1	0.0900	0.0378	ug/L		11/27/24 12:45	12/03/24 16:15	1
Chlordane (technical)	<1.80		1.80	0.351	ug/L		11/27/24 12:45	12/03/24 16:15	1
delta-BHC	<0.0900	*+ *1	0.0900	0.0288	ug/L		11/27/24 12:45	12/03/24 16:15	1
Dieldrin	<0.0900	*+ *1	0.0900	0.0189	ug/L		11/27/24 12:45	12/03/24 16:15	1
Endosulfan I	<0.0900	*+ *1	0.0900	0.0252	ug/L		11/27/24 12:45	12/03/24 16:15	1
Endosulfan II	<0.0900	*+ *1	0.0900	0.0234	ug/L		11/27/24 12:45	12/03/24 16:15	1
Endosulfan sulfate	<0.0900	*+ *1	0.0900	0.0162	ug/L		11/27/24 12:45	12/03/24 16:15	1
Endrin	<0.0900	*+ *1	0.0900	0.0252	ug/L		11/27/24 12:45	12/03/24 16:15	1
Endrin aldehyde	<0.0900	*+ *1	0.0900	0.0243	ug/L		11/27/24 12:45	12/03/24 16:15	1
gamma-BHC (Lindane)	<0.0900	*+ *1	0.0900	0.00900	ug/L		11/27/24 12:45	12/03/24 16:15	1
Heptachlor	<0.0900	*+ *1	0.0900	0.0207	ug/L		11/27/24 12:45	12/03/24 16:15	1
Heptachlor epoxide	<0.0900	*+ *1	0.0900	0.0288	ug/L		11/27/24 12:45	12/03/24 16:15	1
Methoxychlor	<0.0900	*+ *1	0.0900	0.0288	ug/L		11/27/24 12:45	12/03/24 16:15	1
Toxaphene	<1.80		1.80	0.900	ug/L		11/27/24 12:45	12/03/24 16:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*263*	*S1+*	*10 - 136*	*11/27/24 12:45*	*12/03/24 16:15*	*1*
Tetrachloro-m-xylene	*290*	*S1+*	*10 - 130*	*11/27/24 12:45*	*12/03/24 16:15*	*1*

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		11/26/24 09:30	11/26/24 17:03	1
Barium	**0.0807**		0.00200	0.000660	mg/L		11/26/24 09:30	11/26/24 17:03	1
Chromium	<0.00500		0.00500	0.00120	mg/L		11/26/24 09:30	11/26/24 17:03	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		11/26/24 09:30	11/26/24 17:03	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/26/24 09:30	11/26/24 17:03	1
Lead	<0.000500		0.000500	0.000260	mg/L		11/26/24 09:30	11/26/24 17:03	1
Nickel	<0.00500		0.00500	0.00210	mg/L		11/26/24 09:30	11/26/24 17:03	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/26/24 09:30	11/26/24 17:03	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/26/24 09:30	11/26/24 17:03	1
Zinc	<0.0200		0.0200	0.00970	mg/L		11/26/24 09:30	11/26/24 17:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<1.88		1.88	1.39	mg/L			11/25/24 23:51	1

Client: SCS Engineers
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling

Job ID: 310-295910-1
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: MW-1-99
Date Collected: 11/20/24 12:32
Date Received: 11/22/24 16:30

Lab Sample ID: 310-295910-2
Matrix: Groundwater

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			11/27/24 04:58	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/27/24 04:58	1
Benzene	<0.500		0.500	0.220	ug/L			11/27/24 04:58	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/27/24 04:58	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/27/24 04:58	1
Bromoform	<5.00		5.00	0.780	ug/L			11/27/24 04:58	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/27/24 04:58	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/27/24 04:58	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/27/24 04:58	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/27/24 04:58	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/27/24 04:58	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/27/24 04:58	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/27/24 04:58	1
Chloroform	<3.00		3.00	1.30	ug/L			11/27/24 04:58	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/27/24 04:58	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/27/24 04:58	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/27/24 04:58	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/27/24 04:58	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/27/24 04:58	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/27/24 04:58	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/27/24 04:58	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/27/24 04:58	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/27/24 04:58	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/27/24 04:58	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/27/24 04:58	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/27/24 04:58	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/27/24 04:58	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/27/24 04:58	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/27/24 04:58	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/27/24 04:58	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/27/24 04:58	1
Styrene	<1.00		1.00	0.370	ug/L			11/27/24 04:58	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/27/24 04:58	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/27/24 04:58	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/27/24 04:58	1
Toluene	<1.00		1.00	0.430	ug/L			11/27/24 04:58	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/27/24 04:58	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/27/24 04:58	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/27/24 04:58	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/27/24 04:58	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/27/24 04:58	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/27/24 04:58	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/27/24 04:58	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/27/24 04:58	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/27/24 04:58	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/27/24 04:58	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/27/24 04:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*11/27/24 04:58*	*1*

Client: SCS Engineers
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling

Job ID: 310-295910-1
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: MW-1-99
Date Collected: 11/20/24 12:32
Date Received: 11/22/24 16:30

Lab Sample ID: 310-295910-2
Matrix: Groundwater

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*116*		*73 - 130*		*11/27/24 04:58*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/27/24 04:58*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00178**	**J**	0.00200	0.000530	mg/L		11/26/24 09:30	11/26/24 17:07	1
Barium	**0.0693**		0.00200	0.000660	mg/L		11/26/24 09:30	11/26/24 17:07	1
Chromium	<0.00500		0.00500	0.00120	mg/L		11/26/24 09:30	11/26/24 17:07	1
Cobalt	**0.00268**		0.000500	0.000170	mg/L		11/26/24 09:30	11/26/24 17:07	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/26/24 09:30	11/26/24 17:07	1
Lead	<0.000500		0.000500	0.000260	mg/L		11/26/24 09:30	11/26/24 17:07	1
Nickel	**0.00326**	**J**	0.00500	0.00210	mg/L		11/26/24 09:30	11/26/24 17:07	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/26/24 09:30	11/26/24 17:07	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/26/24 09:30	11/26/24 17:07	1
Zinc	<0.0200		0.0200	0.00970	mg/L		11/26/24 09:30	11/26/24 17:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**6.67**		5.00	3.70	mg/L			11/25/24 23:51	1

Client: SCS Engineers
Job ID: 310-295910-1
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: MW-4-90
Lab Sample ID: 310-295910-3
Date Collected: 11/20/24 08:34
Matrix: Groundwater
Date Received: 11/22/24 16:30

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0926	*+ *1	0.0926	0.00926	ug/L		11/27/24 12:45	12/03/24 15:51	1
Endosulfan sulfate	<0.0926	*+ *1	0.0926	0.0167	ug/L		11/27/24 12:45	12/03/24 15:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*166*	*S1+*	*10 - 136*	*11/27/24 12:45*	*12/03/24 15:51*	*1*
Tetrachloro-m-xylene	*172*	*S1+*	*10 - 130*	*11/27/24 12:45*	*12/03/24 15:51*	*1*

Client: SCS Engineers
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling

Job ID: 310-295910-1
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: MW-4-93
Date Collected: 11/21/24 08:23
Date Received: 11/22/24 16:30

Lab Sample ID: 310-295910-4
Matrix: Groundwater

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			11/27/24 11:52	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/27/24 11:52	1
Benzene	<0.500		0.500	0.220	ug/L			11/27/24 11:52	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/27/24 11:52	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/27/24 11:52	1
Bromoform	<5.00		5.00	0.780	ug/L			11/27/24 11:52	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/27/24 11:52	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/27/24 11:52	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/27/24 11:52	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/27/24 11:52	1
Chlorobenzene	**19.7**		1.00	0.400	ug/L			11/27/24 11:52	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/27/24 11:52	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/27/24 11:52	1
Chloroform	<3.00		3.00	1.30	ug/L			11/27/24 11:52	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/27/24 11:52	1
cis-1,2-Dichloroethene	**0.479**	**J**	1.00	0.210	ug/L			11/27/24 11:52	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/27/24 11:52	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/27/24 11:52	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/27/24 11:52	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/27/24 11:52	1
1,2-Dichlorobenzene	**0.523**	**J**	1.00	0.370	ug/L			11/27/24 11:52	1
1,4-Dichlorobenzene	**2.03**		1.00	0.230	ug/L			11/27/24 11:52	1
1,1-Dichloroethane	**1.10**		1.00	0.220	ug/L			11/27/24 11:52	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/27/24 11:52	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/27/24 11:52	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/27/24 11:52	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/27/24 11:52	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/27/24 11:52	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/27/24 11:52	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/27/24 11:52	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/27/24 11:52	1
Styrene	<1.00		1.00	0.370	ug/L			11/27/24 11:52	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/27/24 11:52	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/27/24 11:52	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/27/24 11:52	1
Toluene	<1.00		1.00	0.430	ug/L			11/27/24 11:52	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/27/24 11:52	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/27/24 11:52	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/27/24 11:52	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/27/24 11:52	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/27/24 11:52	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/27/24 11:52	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/27/24 11:52	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/27/24 11:52	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/27/24 11:52	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/27/24 11:52	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/27/24 11:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*11/27/24 11:52*	*1*

Client Sample ID: MW-4-93

Date Collected: 11/21/24 08:23
Date Received: 11/22/24 16:30

Lab Sample ID: 310-295910-4

Matrix: Groundwater

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*114*		*73 - 130*		*11/27/24 11:52*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/27/24 11:52*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methylphenol (and/or 3-Methylphenol)	<10.0		10.0	0.700	ug/L		11/26/24 06:42	11/26/24 21:29	1
Phenol	<10.0		10.0	1.10	ug/L		11/26/24 06:42	11/26/24 21:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*69*		*25 - 110*	*11/26/24 06:42*	*11/26/24 21:29*	*1*
Phenol-d5 (Surr)	*61*		*21 - 110*	*11/26/24 06:42*	*11/26/24 21:29*	*1*
2,4,6-Tribromophenol (Surr)	*98*		*27 - 136*	*11/26/24 06:42*	*11/26/24 21:29*	*1*

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDT	<0.0904	*+ *1	0.0904	0.0181	ug/L		11/27/24 12:45	12/03/24 15:32	1
Endrin aldehyde	<0.0904	*+ *1	0.0904	0.0244	ug/L		11/27/24 12:45	12/03/24 15:32	1
Methoxychlor	<0.0904	*+ *1	0.0904	0.0289	ug/L		11/27/24 12:45	12/03/24 15:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*111*		*10 - 136*	*11/27/24 12:45*	*12/03/24 15:32*	*1*
Tetrachloro-m-xylene	*112*		*10 - 130*	*11/27/24 12:45*	*12/03/24 15:32*	*1*

Method: SW846 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	<1.01	*-	1.01	0.311	ug/L		11/27/24 09:38	12/02/24 14:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCAA	*5*	*S1-*	*25 - 130*	*11/27/24 09:38*	*12/02/24 14:38*	*1*
DCAA	*67*		*25 - 130*	*12/03/24 10:32*	*12/04/24 17:15*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00680**		0.00200	0.000530	mg/L		11/26/24 09:30	11/26/24 17:26	1
Barium	**0.0243**		0.00200	0.000660	mg/L		11/26/24 09:30	11/26/24 17:26	1
Chromium	<0.00500		0.00500	0.00120	mg/L		11/26/24 09:30	11/26/24 17:26	1
Cobalt	**0.0498**		0.000500	0.000170	mg/L		11/26/24 09:30	11/26/24 17:26	1
Copper	**0.00291**	**J**	0.00500	0.00180	mg/L		11/26/24 09:30	11/26/24 17:26	1
Lead	**0.000412**	**J**	0.000500	0.000260	mg/L		11/26/24 09:30	11/26/24 17:26	1
Nickel	**0.188**		0.00500	0.00210	mg/L		11/26/24 09:30	11/26/24 17:26	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/26/24 09:30	11/26/24 17:26	1
Vanadium	**0.0246**		0.00500	0.00110	mg/L		11/26/24 09:30	11/26/24 17:26	1
Zinc	**0.0123**	**J**	0.0200	0.00970	mg/L		11/26/24 09:30	11/26/24 17:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide (SW846 9034)	<1.00		1.00	0.231	mg/L		11/26/24 18:12	11/27/24 06:59	1
Total Suspended Solids (USGS I-3765-85)	**13.8**		1.88	1.39	mg/L			11/26/24 19:49	1

Client Sample ID: MW-7-93
Lab Sample ID: 310-295910-5
Date Collected: 11/20/24 15:13
Matrix: Groundwater
Date Received: 11/22/24 16:30

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			11/27/24 23:06	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/27/24 23:06	1
Benzene	<0.500		0.500	0.220	ug/L			11/27/24 23:06	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/27/24 23:06	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/27/24 23:06	1
Bromoform	<5.00		5.00	0.780	ug/L			11/27/24 23:06	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/27/24 23:06	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/27/24 23:06	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/27/24 23:06	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/27/24 23:06	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/27/24 23:06	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/27/24 23:06	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/27/24 23:06	1
Chloroform	<3.00		3.00	1.30	ug/L			11/27/24 23:06	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/27/24 23:06	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/27/24 23:06	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/27/24 23:06	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/27/24 23:06	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/27/24 23:06	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/27/24 23:06	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/27/24 23:06	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/27/24 23:06	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/27/24 23:06	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/27/24 23:06	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/27/24 23:06	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/27/24 23:06	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/27/24 23:06	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/27/24 23:06	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/27/24 23:06	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/27/24 23:06	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/27/24 23:06	1
Styrene	<1.00		1.00	0.370	ug/L			11/27/24 23:06	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/27/24 23:06	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/27/24 23:06	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/27/24 23:06	1
Toluene	<1.00		1.00	0.430	ug/L			11/27/24 23:06	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/27/24 23:06	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/27/24 23:06	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/27/24 23:06	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/27/24 23:06	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/27/24 23:06	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/27/24 23:06	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/27/24 23:06	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/27/24 23:06	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/27/24 23:06	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/27/24 23:06	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/27/24 23:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*11/27/24 23:06*	*1*

Client: SCS Engineers
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling

Job ID: 310-295910-1
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: MW-7-93
Date Collected: 11/20/24 15:13
Date Received: 11/22/24 16:30

Lab Sample ID: 310-295910-5
Matrix: Groundwater

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*100*		*73 - 130*		*11/27/24 23:06*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*11/27/24 23:06*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.000772**	**J**	0.00200	0.000530	mg/L		11/26/24 09:30	11/26/24 17:29	1
Barium	**0.0888**		0.00200	0.000660	mg/L		11/26/24 09:30	11/26/24 17:29	1
Chromium	<0.00500		0.00500	0.00120	mg/L		11/26/24 09:30	11/26/24 17:29	1
Cobalt	**0.0127**		0.000500	0.000170	mg/L		11/26/24 09:30	11/26/24 17:29	1
Copper	**0.00358**	**J**	0.00500	0.00180	mg/L		11/26/24 09:30	11/26/24 17:29	1
Lead	<0.000500		0.000500	0.000260	mg/L		11/26/24 09:30	11/26/24 17:29	1
Nickel	**0.0663**		0.00500	0.00210	mg/L		11/26/24 09:30	11/26/24 17:29	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/26/24 09:30	11/26/24 17:29	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/26/24 09:30	11/26/24 17:29	1
Zinc	<0.0200		0.0200	0.00970	mg/L		11/26/24 09:30	11/26/24 17:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**4.88**		1.88	1.39	mg/L			11/25/24 23:51	1

Client Sample ID: MW-37
Lab Sample ID: 310-295910-6
Date Collected: 11/19/24 14:41
Matrix: Groundwater
Date Received: 11/22/24 16:30

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			11/26/24 18:48	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/26/24 18:48	1
Benzene	**0.466**	**J**	0.500	0.220	ug/L			11/26/24 18:48	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/26/24 18:48	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/26/24 18:48	1
Bromoform	<5.00		5.00	0.780	ug/L			11/26/24 18:48	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/26/24 18:48	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/26/24 18:48	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/26/24 18:48	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/26/24 18:48	1
Chlorobenzene	**1.58**		1.00	0.400	ug/L			11/26/24 18:48	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/26/24 18:48	1
Chloroethane	**13.1**		4.00	0.790	ug/L			11/26/24 18:48	1
Chloroform	<3.00		3.00	1.30	ug/L			11/26/24 18:48	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/26/24 18:48	1
cis-1,2-Dichloroethene	**3.22**		1.00	0.210	ug/L			11/26/24 18:48	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/26/24 18:48	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/26/24 18:48	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/26/24 18:48	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/26/24 18:48	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/26/24 18:48	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/26/24 18:48	1
1,1-Dichloroethane	**58.7**		1.00	0.220	ug/L			11/26/24 18:48	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/26/24 18:48	1
1,1-Dichloroethene	**2.80**		2.00	0.560	ug/L			11/26/24 18:48	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/26/24 18:48	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/26/24 18:48	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/26/24 18:48	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/26/24 18:48	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/26/24 18:48	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/26/24 18:48	1
Styrene	<1.00		1.00	0.370	ug/L			11/26/24 18:48	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/26/24 18:48	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/26/24 18:48	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/26/24 18:48	1
Toluene	<1.00		1.00	0.430	ug/L			11/26/24 18:48	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/26/24 18:48	1
trans-1,2-Dichloroethene	**0.298**	**J**	1.00	0.270	ug/L			11/26/24 18:48	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/26/24 18:48	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/26/24 18:48	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/26/24 18:48	1
Trichloroethene	**0.552**	**J**	1.00	0.430	ug/L			11/26/24 18:48	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/26/24 18:48	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/26/24 18:48	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/26/24 18:48	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/26/24 18:48	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/26/24 18:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*11/26/24 18:48*	*1*

Client Sample ID: MW-37
Lab Sample ID: 310-295910-6
Date Collected: 11/19/24 14:41
Matrix: Groundwater
Date Received: 11/22/24 16:30

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*112*		*73 - 130*		*11/26/24 18:48*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*11/26/24 18:48*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00219**		0.00200	0.000530	mg/L		11/26/24 09:30	11/26/24 17:33	1
Barium	**0.0177**		0.00200	0.000660	mg/L		11/26/24 09:30	11/26/24 17:33	1
Chromium	<0.00500		0.00500	0.00120	mg/L		11/26/24 09:30	11/26/24 17:33	1
Cobalt	**0.00265**		0.000500	0.000170	mg/L		11/26/24 09:30	11/26/24 17:33	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/26/24 09:30	11/26/24 17:33	1
Lead	<0.000500		0.000500	0.000260	mg/L		11/26/24 09:30	11/26/24 17:33	1
Nickel	**0.0422**		0.00500	0.00210	mg/L		11/26/24 09:30	11/26/24 17:33	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/26/24 09:30	11/26/24 17:33	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/26/24 09:30	11/26/24 17:33	1
Zinc	<0.0200		0.0200	0.00970	mg/L		11/26/24 09:30	11/26/24 17:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**5.13**		1.88	1.39	mg/L			11/25/24 19:01	1

Client: SCS Engineers
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling

Job ID: 310-295910-1
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: MW-39R
Date Collected: 11/21/24 07:58
Date Received: 11/22/24 16:30

Lab Sample ID: 310-295910-7
Matrix: Groundwater

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			11/27/24 12:13	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/27/24 12:13	1
Benzene	**0.953**		0.500	0.220	ug/L			11/27/24 12:13	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/27/24 12:13	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/27/24 12:13	1
Bromoform	<5.00		5.00	0.780	ug/L			11/27/24 12:13	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/27/24 12:13	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/27/24 12:13	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/27/24 12:13	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/27/24 12:13	1
Chlorobenzene	**0.554**	**J**	1.00	0.400	ug/L			11/27/24 12:13	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/27/24 12:13	1
Chloroethane	**3.19**	**J**	4.00	0.790	ug/L			11/27/24 12:13	1
Chloroform	<3.00		3.00	1.30	ug/L			11/27/24 12:13	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/27/24 12:13	1
cis-1,2-Dichloroethene	**22.1**		1.00	0.210	ug/L			11/27/24 12:13	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/27/24 12:13	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/27/24 12:13	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/27/24 12:13	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/27/24 12:13	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/27/24 12:13	1
1,4-Dichlorobenzene	**0.743**	**J**	1.00	0.230	ug/L			11/27/24 12:13	1
Dichlorodifluoromethane	**20.1**		3.00	0.250	ug/L			11/27/24 12:13	1
1,1-Dichloroethane	**49.9**		1.00	0.220	ug/L			11/27/24 12:13	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/27/24 12:13	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/27/24 12:13	1
1,2-Dichloropropane	**0.450**	**J**	1.00	0.270	ug/L			11/27/24 12:13	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/27/24 12:13	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/27/24 12:13	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/27/24 12:13	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/27/24 12:13	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/27/24 12:13	1
Styrene	<1.00		1.00	0.370	ug/L			11/27/24 12:13	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/27/24 12:13	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/27/24 12:13	1
Tetrachloroethene	**1.27**		1.00	0.480	ug/L			11/27/24 12:13	1
Toluene	<1.00		1.00	0.430	ug/L			11/27/24 12:13	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/27/24 12:13	1
trans-1,2-Dichloroethene	**0.463**	**J**	1.00	0.270	ug/L			11/27/24 12:13	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/27/24 12:13	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/27/24 12:13	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/27/24 12:13	1
Trichloroethene	**4.28**		1.00	0.430	ug/L			11/27/24 12:13	1
Trichlorofluoromethane	**0.645**	**J**	4.00	0.380	ug/L			11/27/24 12:13	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/27/24 12:13	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/27/24 12:13	1
Vinyl chloride	**1.67**		1.00	0.180	ug/L			11/27/24 12:13	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/27/24 12:13	1

Client Sample ID: MW-39R
Date Collected: 11/21/24 07:58
Date Received: 11/22/24 16:30

Lab Sample ID: 310-295910-7
Matrix: Groundwater

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*11/27/24 12:13*	*1*
Dibromofluoromethane (Surr)	*114*		*73 - 130*		*11/27/24 12:13*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/27/24 12:13*	*1*

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	**0.0232**	**J *+ B *1**	0.0946	0.00946	ug/L		11/27/24 12:45	12/03/24 15:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*218*	*S1+*	*10 - 136*	*11/27/24 12:45*	*12/03/24 15:08*	*1*
Tetrachloro-m-xylene	*204*	*S1+*	*10 - 130*	*11/27/24 12:45*	*12/03/24 15:08*	*1*

Method: SW846 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silvex (2,4,5-TP)	<1.04	*-	1.04	0.0863	ug/L		11/27/24 09:38	12/02/24 14:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCAA	*2*	*S1-*	*25 - 130*	*11/27/24 09:38*	*12/02/24 14:57*	*1*
DCAA	*67*		*25 - 130*	*12/03/24 10:32*	*12/04/24 17:33*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.00114**	**J**	0.00200	0.000530	mg/L		11/26/24 09:30	11/26/24 17:37	1
Barium	**0.203**		0.00200	0.000660	mg/L		11/26/24 09:30	11/26/24 17:37	1
Chromium	<0.00500		0.00500	0.00120	mg/L		11/26/24 09:30	11/26/24 17:37	1
Cobalt	**0.00141**		0.000500	0.000170	mg/L		11/26/24 09:30	11/26/24 17:37	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/26/24 09:30	11/26/24 17:37	1
Lead	<0.000500		0.000500	0.000260	mg/L		11/26/24 09:30	11/26/24 17:37	1
Nickel	**0.0212**		0.00500	0.00210	mg/L		11/26/24 09:30	11/26/24 17:37	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/26/24 09:30	11/26/24 17:37	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/26/24 09:30	11/26/24 17:37	1
Zinc	<0.0200		0.0200	0.00970	mg/L		11/26/24 09:30	11/26/24 17:37	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	1.39	mg/L			11/25/24 23:51	1

Client Sample ID: MW-40R
Lab Sample ID: 310-295910-8
Date Collected: 11/20/24 09:19
Matrix: Groundwater
Date Received: 11/22/24 16:30

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			11/27/24 03:30	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/27/24 03:30	1
Benzene	<0.500		0.500	0.220	ug/L			11/27/24 03:30	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/27/24 03:30	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/27/24 03:30	1
Bromoform	<5.00		5.00	0.780	ug/L			11/27/24 03:30	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/27/24 03:30	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/27/24 03:30	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/27/24 03:30	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/27/24 03:30	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/27/24 03:30	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/27/24 03:30	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/27/24 03:30	1
Chloroform	<3.00		3.00	1.30	ug/L			11/27/24 03:30	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/27/24 03:30	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/27/24 03:30	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/27/24 03:30	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/27/24 03:30	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/27/24 03:30	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/27/24 03:30	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/27/24 03:30	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/27/24 03:30	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/27/24 03:30	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/27/24 03:30	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/27/24 03:30	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/27/24 03:30	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/27/24 03:30	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/27/24 03:30	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/27/24 03:30	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/27/24 03:30	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/27/24 03:30	1
Styrene	<1.00		1.00	0.370	ug/L			11/27/24 03:30	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/27/24 03:30	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/27/24 03:30	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/27/24 03:30	1
Toluene	<1.00		1.00	0.430	ug/L			11/27/24 03:30	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/27/24 03:30	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/27/24 03:30	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/27/24 03:30	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/27/24 03:30	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/27/24 03:30	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/27/24 03:30	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/27/24 03:30	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/27/24 03:30	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/27/24 03:30	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/27/24 03:30	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/27/24 03:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*11/27/24 03:30*	*1*

Client Sample ID: MW-40R
Lab Sample ID: 310-295910-8

Date Collected: 11/20/24 09:19
Matrix: Groundwater
Date Received: 11/22/24 16:30

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*118*		*73 - 130*		*11/27/24 03:30*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/27/24 03:30*	*1*

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.0926	*+ *1	0.0926	0.0231	ug/L		11/27/24 12:45	12/03/24 14:45	1
4,4'-DDE	<0.0926	*+ *1	0.0926	0.0278	ug/L		11/27/24 12:45	12/03/24 14:45	1
4,4'-DDT	<0.0926	*+ *1	0.0926	0.0185	ug/L		11/27/24 12:45	12/03/24 14:45	1
Aldrin	<0.0926	*+ *1	0.0926	0.0204	ug/L		11/27/24 12:45	12/03/24 14:45	1
alpha-BHC	<0.0926	*+ *1	0.0926	0.00926	ug/L		11/27/24 12:45	12/03/24 14:45	1
beta-BHC	<0.0926	*+ *1	0.0926	0.0389	ug/L		11/27/24 12:45	12/03/24 14:45	1
Chlordane (technical)	<1.85		1.85	0.361	ug/L		11/27/24 12:45	12/03/24 14:45	1
delta-BHC	<0.0926	*+ *1	0.0926	0.0296	ug/L		11/27/24 12:45	12/03/24 14:45	1
Dieldrin	<0.0926	*+	0.0926	0.0194	ug/L		11/27/24 12:45	12/03/24 14:45	1
Endosulfan I	<0.0926	*+ *1	0.0926	0.0259	ug/L		11/27/24 12:45	12/03/24 14:45	1
Endosulfan II	<0.0926	*+ *1	0.0926	0.0241	ug/L		11/27/24 12:45	12/03/24 14:45	1
Endosulfan sulfate	<0.0926	*+ *1	0.0926	0.0167	ug/L		11/27/24 12:45	12/03/24 14:45	1
Endrin	<0.0926	*+	0.0926	0.0259	ug/L		11/27/24 12:45	12/03/24 14:45	1
Endrin aldehyde	<0.0926	*+ *1	0.0926	0.0250	ug/L		11/27/24 12:45	12/03/24 14:45	1
gamma-BHC (Lindane)	<0.0926	*+ *1	0.0926	0.00926	ug/L		11/27/24 12:45	12/03/24 14:45	1
Heptachlor	<0.0926	*+ *1	0.0926	0.0213	ug/L		11/27/24 12:45	12/03/24 14:45	1
Heptachlor epoxide	<0.0926	*+ *1	0.0926	0.0296	ug/L		11/27/24 12:45	12/03/24 14:45	1
Methoxychlor	<0.0926	*+	0.0926	0.0296	ug/L		11/27/24 12:45	12/03/24 14:45	1
Toxaphene	<1.85		1.85	0.926	ug/L		11/27/24 12:45	12/03/24 14:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*497*	*S1+*	*10 - 136*	*11/27/24 12:45*	*12/03/24 14:45*	*1*
Tetrachloro-m-xylene	*456*	*S1+*	*10 - 130*	*11/27/24 12:45*	*12/03/24 14:45*	*1*

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		11/26/24 09:30	11/26/24 17:40	1
Barium	**0.0950**		0.00200	0.000660	mg/L		11/26/24 09:30	11/26/24 17:40	1
Chromium	<0.00500		0.00500	0.00120	mg/L		11/26/24 09:30	11/26/24 17:40	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		11/26/24 09:30	11/26/24 17:40	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/26/24 09:30	11/26/24 17:40	1
Lead	**0.000410**	**J**	0.000500	0.000260	mg/L		11/26/24 09:30	11/26/24 17:40	1
Nickel	<0.00500		0.00500	0.00210	mg/L		11/26/24 09:30	11/26/24 17:40	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/26/24 09:30	11/26/24 17:40	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/26/24 09:30	11/26/24 17:40	1
Zinc	<0.0200		0.0200	0.00970	mg/L		11/26/24 09:30	11/26/24 17:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**27.8**		3.75	2.78	mg/L			11/25/24 23:51	1

Client: SCS Engineers
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling

Job ID: 310-295910-1
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: Trip Blank 1
Date Collected: 11/20/24 00:00
Date Received: 11/22/24 16:30

Lab Sample ID: 310-295910-9
Matrix: Trip Blank

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			11/26/24 23:31	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/26/24 23:31	1
Benzene	<0.500		0.500	0.220	ug/L			11/26/24 23:31	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/26/24 23:31	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/26/24 23:31	1
Bromoform	<5.00		5.00	0.780	ug/L			11/26/24 23:31	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/26/24 23:31	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/26/24 23:31	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/26/24 23:31	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/26/24 23:31	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/26/24 23:31	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/26/24 23:31	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/26/24 23:31	1
Chloroform	<3.00		3.00	1.30	ug/L			11/26/24 23:31	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/26/24 23:31	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/26/24 23:31	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/26/24 23:31	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/26/24 23:31	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/26/24 23:31	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/26/24 23:31	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/26/24 23:31	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/26/24 23:31	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/26/24 23:31	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/26/24 23:31	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/26/24 23:31	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/26/24 23:31	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/26/24 23:31	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/26/24 23:31	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/26/24 23:31	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/26/24 23:31	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/26/24 23:31	1
Styrene	<1.00		1.00	0.370	ug/L			11/26/24 23:31	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/26/24 23:31	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/26/24 23:31	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/26/24 23:31	1
Toluene	<1.00		1.00	0.430	ug/L			11/26/24 23:31	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/26/24 23:31	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/26/24 23:31	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/26/24 23:31	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/26/24 23:31	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/26/24 23:31	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/26/24 23:31	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/26/24 23:31	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/26/24 23:31	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/26/24 23:31	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/26/24 23:31	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/26/24 23:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*11/26/24 23:31*	*1*

Client Sample ID: Trip Blank 1
Lab Sample ID: 310-295910-9
Date Collected: 11/20/24 00:00
Matrix: Trip Blank
Date Received: 11/22/24 16:30

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	114		73 - 130		11/26/24 23:31	1
Toluene-d8 (Surr)	96		80 - 120		11/26/24 23:31	1

Client: SCS Engineers
Job ID: 310-295910-1
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: Trip Blank 2
Lab Sample ID: 310-295910-10
Date Collected: 11/20/24 00:00
Matrix: Trip Blank
Date Received: 11/22/24 16:30

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			11/26/24 23:53	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/26/24 23:53	1
Benzene	<0.500		0.500	0.220	ug/L			11/26/24 23:53	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/26/24 23:53	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/26/24 23:53	1
Bromoform	<5.00		5.00	0.780	ug/L			11/26/24 23:53	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/26/24 23:53	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/26/24 23:53	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/26/24 23:53	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/26/24 23:53	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/26/24 23:53	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/26/24 23:53	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/26/24 23:53	1
Chloroform	<3.00		3.00	1.30	ug/L			11/26/24 23:53	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/26/24 23:53	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/26/24 23:53	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/26/24 23:53	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/26/24 23:53	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/26/24 23:53	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/26/24 23:53	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/26/24 23:53	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/26/24 23:53	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/26/24 23:53	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/26/24 23:53	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/26/24 23:53	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/26/24 23:53	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/26/24 23:53	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/26/24 23:53	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/26/24 23:53	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/26/24 23:53	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/26/24 23:53	1
Styrene	<1.00		1.00	0.370	ug/L			11/26/24 23:53	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/26/24 23:53	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/26/24 23:53	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/26/24 23:53	1
Toluene	<1.00		1.00	0.430	ug/L			11/26/24 23:53	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/26/24 23:53	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/26/24 23:53	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/26/24 23:53	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/26/24 23:53	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/26/24 23:53	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/26/24 23:53	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/26/24 23:53	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/26/24 23:53	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/26/24 23:53	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/26/24 23:53	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/26/24 23:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*11/26/24 23:53*	*1*

Client: SCS Engineers
Job ID: 310-295910-1
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: Trip Blank 2
Lab Sample ID: 310-295910-10
Date Collected: 11/20/24 00:00
Matrix: Trip Blank
Date Received: 11/22/24 16:30

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	113		73 - 130		11/26/24 23:53	1
Toluene-d8 (Surr)	97		80 - 120		11/26/24 23:53	1

Client: SCS Engineers
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling

Job ID: 310-295910-1
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: MW-43
Date Collected: 11/20/24 14:02
Date Received: 11/22/24 16:30

Lab Sample ID: 310-295910-11
Matrix: Groundwater

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**4.68**	**J**	10.0	3.10	ug/L			11/27/24 05:41	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/27/24 05:41	1
Benzene	<0.500		0.500	0.220	ug/L			11/27/24 05:41	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/27/24 05:41	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/27/24 05:41	1
Bromoform	<5.00		5.00	0.780	ug/L			11/27/24 05:41	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/27/24 05:41	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/27/24 05:41	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/27/24 05:41	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/27/24 05:41	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/27/24 05:41	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/27/24 05:41	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/27/24 05:41	1
Chloroform	<3.00		3.00	1.30	ug/L			11/27/24 05:41	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/27/24 05:41	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/27/24 05:41	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/27/24 05:41	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/27/24 05:41	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/27/24 05:41	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/27/24 05:41	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/27/24 05:41	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/27/24 05:41	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/27/24 05:41	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/27/24 05:41	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/27/24 05:41	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/27/24 05:41	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/27/24 05:41	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/27/24 05:41	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/27/24 05:41	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/27/24 05:41	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/27/24 05:41	1
Styrene	<1.00		1.00	0.370	ug/L			11/27/24 05:41	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/27/24 05:41	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/27/24 05:41	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/27/24 05:41	1
Toluene	<1.00		1.00	0.430	ug/L			11/27/24 05:41	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/27/24 05:41	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/27/24 05:41	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/27/24 05:41	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/27/24 05:41	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/27/24 05:41	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/27/24 05:41	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/27/24 05:41	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/27/24 05:41	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/27/24 05:41	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/27/24 05:41	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/27/24 05:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*11/27/24 05:41*	*1*

Client Sample ID: MW-43
Lab Sample ID: 310-295910-11
Date Collected: 11/20/24 14:02
Matrix: Groundwater
Date Received: 11/22/24 16:30

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*115*		*73 - 130*		*11/27/24 05:41*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/27/24 05:41*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		11/27/24 09:00	11/27/24 20:28	1
Arsenic	**0.00608**		0.00200	0.000530	mg/L		11/27/24 09:00	11/27/24 20:28	1
Barium	**0.623**		0.00200	0.000660	mg/L		11/27/24 09:00	11/27/24 20:28	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/27/24 09:00	11/27/24 20:28	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/27/24 09:00	11/27/24 20:28	1
Chromium	<0.00500		0.00500	0.00120	mg/L		11/27/24 09:00	11/27/24 20:28	1
Cobalt	**0.00220**	**B**	0.000500	0.000170	mg/L		11/27/24 09:00	11/27/24 20:28	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/27/24 09:00	11/27/24 20:28	1
Lead	<0.000500		0.000500	0.000260	mg/L		11/27/24 09:00	11/27/24 20:28	1
Nickel	**0.00567**		0.00500	0.00210	mg/L		11/27/24 09:00	11/27/24 20:28	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/27/24 09:00	11/27/24 20:28	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/27/24 09:00	11/27/24 20:28	1
Thallium	<0.00100		0.00100	0.000570	mg/L		11/27/24 09:00	11/27/24 20:28	1
Vanadium	**0.00216**	**J**	0.00500	0.00110	mg/L		11/27/24 09:00	11/27/24 20:28	1
Zinc	<0.0200		0.0200	0.00970	mg/L		11/27/24 09:00	11/27/24 20:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**22.0**		5.00	3.70	mg/L			11/25/24 23:51	1

Client: SCS Engineers
Job ID: 310-295910-1
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: PZ-11
Lab Sample ID: 310-295910-12
Date Collected: 11/18/24 12:14
Matrix: Groundwater
Date Received: 11/22/24 16:30

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			11/26/24 19:10	1
Acrylonitrile	<10.0	H	10.0	2.20	ug/L			11/26/24 19:10	1
Benzene	<0.500		0.500	0.220	ug/L			11/26/24 19:10	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/26/24 19:10	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/26/24 19:10	1
Bromoform	<5.00		5.00	0.780	ug/L			11/26/24 19:10	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/26/24 19:10	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/26/24 19:10	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/26/24 19:10	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/26/24 19:10	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/26/24 19:10	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/26/24 19:10	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/26/24 19:10	1
Chloroform	<3.00		3.00	1.30	ug/L			11/26/24 19:10	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/26/24 19:10	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/26/24 19:10	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/26/24 19:10	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/26/24 19:10	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/26/24 19:10	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/26/24 19:10	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/26/24 19:10	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/26/24 19:10	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/26/24 19:10	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/26/24 19:10	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/26/24 19:10	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/26/24 19:10	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/26/24 19:10	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/26/24 19:10	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/26/24 19:10	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/26/24 19:10	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/26/24 19:10	1
Styrene	<1.00		1.00	0.370	ug/L			11/26/24 19:10	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/26/24 19:10	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/26/24 19:10	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/26/24 19:10	1
Toluene	<1.00		1.00	0.430	ug/L			11/26/24 19:10	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/26/24 19:10	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/26/24 19:10	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/26/24 19:10	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/26/24 19:10	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/26/24 19:10	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/26/24 19:10	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/26/24 19:10	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/26/24 19:10	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/26/24 19:10	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/26/24 19:10	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/26/24 19:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*11/26/24 19:10*	*1*

Client: SCS Engineers
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling

Job ID: 310-295910-1
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: PZ-11
Date Collected: 11/18/24 12:14
Date Received: 11/22/24 16:30

Lab Sample ID: 310-295910-12
Matrix: Groundwater

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*109*		*73 - 130*		*11/26/24 19:10*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*11/26/24 19:10*	*1*

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		11/27/24 09:00	11/27/24 20:42	1
Barium	**0.148**		0.00200	0.000660	mg/L		11/27/24 09:00	11/27/24 20:42	1
Chromium	<0.00500		0.00500	0.00120	mg/L		11/27/24 09:00	11/27/24 20:42	1
Cobalt	**0.000504**	**B**	0.000500	0.000170	mg/L		11/27/24 09:00	11/27/24 20:42	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/27/24 09:00	11/27/24 20:42	1
Lead	<0.000500		0.000500	0.000260	mg/L		11/27/24 09:00	11/27/24 20:42	1
Nickel	**0.00299**	**J**	0.00500	0.00210	mg/L		11/27/24 09:00	11/27/24 20:42	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/27/24 09:00	11/27/24 20:42	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/27/24 09:00	11/27/24 20:42	1
Zinc	<0.0200		0.0200	0.00970	mg/L		11/27/24 09:00	11/27/24 20:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<5.00		5.00	3.70	mg/L			11/25/24 19:01	1

Client: SCS Engineers
Job ID: 310-295910-1
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: GW-Lagoon-Cell 1W
Lab Sample ID: 310-295910-13
Date Collected: 11/19/24 13:05
Matrix: Groundwater
Date Received: 11/22/24 16:30

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			11/26/24 19:32	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/26/24 19:32	1
Benzene	<0.500		0.500	0.220	ug/L			11/26/24 19:32	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/26/24 19:32	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/26/24 19:32	1
Bromoform	<5.00		5.00	0.780	ug/L			11/26/24 19:32	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/26/24 19:32	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/26/24 19:32	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/26/24 19:32	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/26/24 19:32	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/26/24 19:32	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/26/24 19:32	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/26/24 19:32	1
Chloroform	<3.00		3.00	1.30	ug/L			11/26/24 19:32	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/26/24 19:32	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/26/24 19:32	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/26/24 19:32	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/26/24 19:32	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/26/24 19:32	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/26/24 19:32	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/26/24 19:32	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/26/24 19:32	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/26/24 19:32	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/26/24 19:32	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/26/24 19:32	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/26/24 19:32	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/26/24 19:32	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/26/24 19:32	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/26/24 19:32	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/26/24 19:32	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/26/24 19:32	1
Styrene	<1.00		1.00	0.370	ug/L			11/26/24 19:32	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/26/24 19:32	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/26/24 19:32	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/26/24 19:32	1
Toluene	<1.00		1.00	0.430	ug/L			11/26/24 19:32	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/26/24 19:32	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/26/24 19:32	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/26/24 19:32	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/26/24 19:32	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/26/24 19:32	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/26/24 19:32	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/26/24 19:32	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/26/24 19:32	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/26/24 19:32	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/26/24 19:32	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/26/24 19:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*11/26/24 19:32*	*1*

Client: SCS Engineers
Job ID: 310-295910-1
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: GW-Lagoon-Cell 1W
Lab Sample ID: 310-295910-13
Date Collected: 11/19/24 13:05
Matrix: Groundwater
Date Received: 11/22/24 16:30

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*109*		*73 - 130*		*11/26/24 19:32*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*11/26/24 19:32*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.000746**	**J**	0.00200	0.000530	mg/L		11/27/24 09:00	11/27/24 20:45	1
Barium	**0.158**		0.00200	0.000660	mg/L		11/27/24 09:00	11/27/24 20:45	1
Chromium	<0.00500		0.00500	0.00120	mg/L		11/27/24 09:00	11/27/24 20:45	1
Cobalt	**0.00141**	**B**	0.000500	0.000170	mg/L		11/27/24 09:00	11/27/24 20:45	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/27/24 09:00	11/27/24 20:45	1
Lead	<0.000500		0.000500	0.000260	mg/L		11/27/24 09:00	11/27/24 20:45	1
Nickel	**0.00314**	**J**	0.00500	0.00210	mg/L		11/27/24 09:00	11/27/24 20:45	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/27/24 09:00	11/27/24 20:45	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/27/24 09:00	11/27/24 20:45	1
Zinc	<0.0200		0.0200	0.00970	mg/L		11/27/24 09:00	11/27/24 20:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<5.00		5.00	3.70	mg/L			11/25/24 19:01	1

Client Sample ID: MW-D
Lab Sample ID: 310-295910-14
Date Collected: 11/20/24 14:02
Matrix: Groundwater
Date Received: 11/22/24 16:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**3.45**	**J**	10.0	3.10	ug/L			11/27/24 06:03	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/27/24 06:03	1
Benzene	<0.500		0.500	0.220	ug/L			11/27/24 06:03	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/27/24 06:03	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/27/24 06:03	1
Bromoform	<5.00		5.00	0.780	ug/L			11/27/24 06:03	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/27/24 06:03	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/27/24 06:03	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/27/24 06:03	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/27/24 06:03	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/27/24 06:03	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/27/24 06:03	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/27/24 06:03	1
Chloroform	<3.00		3.00	1.30	ug/L			11/27/24 06:03	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/27/24 06:03	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/27/24 06:03	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/27/24 06:03	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/27/24 06:03	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/27/24 06:03	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/27/24 06:03	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/27/24 06:03	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/27/24 06:03	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/27/24 06:03	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/27/24 06:03	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/27/24 06:03	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/27/24 06:03	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/27/24 06:03	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/27/24 06:03	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/27/24 06:03	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/27/24 06:03	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/27/24 06:03	1
Styrene	<1.00		1.00	0.370	ug/L			11/27/24 06:03	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/27/24 06:03	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/27/24 06:03	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/27/24 06:03	1
Toluene	<1.00		1.00	0.430	ug/L			11/27/24 06:03	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/27/24 06:03	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/27/24 06:03	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/27/24 06:03	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/27/24 06:03	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/27/24 06:03	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/27/24 06:03	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/27/24 06:03	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/27/24 06:03	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/27/24 06:03	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/27/24 06:03	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/27/24 06:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*11/27/24 06:03*	*1*

Client: SCS Engineers
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling

Job ID: 310-295910-1
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: MW-D
Date Collected: 11/20/24 14:02
Date Received: 11/22/24 16:30

Lab Sample ID: 310-295910-14
Matrix: Groundwater

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*108*		*73 - 130*		*11/27/24 06:03*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*11/27/24 06:03*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		11/27/24 09:00	11/27/24 20:48	1
Arsenic	**0.00603**		0.00200	0.000530	mg/L		11/27/24 09:00	11/27/24 20:48	1
Barium	**0.623**		0.00200	0.000660	mg/L		11/27/24 09:00	11/27/24 20:48	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/27/24 09:00	11/27/24 20:48	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/27/24 09:00	11/27/24 20:48	1
Chromium	<0.00500		0.00500	0.00120	mg/L		11/27/24 09:00	11/27/24 20:48	1
Cobalt	**0.00215**	**B**	0.000500	0.000170	mg/L		11/27/24 09:00	11/27/24 20:48	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/27/24 09:00	11/27/24 20:48	1
Lead	<0.000500		0.000500	0.000260	mg/L		11/27/24 09:00	11/27/24 20:48	1
Nickel	**0.00536**		0.00500	0.00210	mg/L		11/27/24 09:00	11/27/24 20:48	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/27/24 09:00	11/27/24 20:48	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/27/24 09:00	11/27/24 20:48	1
Thallium	<0.00100		0.00100	0.000570	mg/L		11/27/24 09:00	11/27/24 20:48	1
Vanadium	**0.00222**	**J**	0.00500	0.00110	mg/L		11/27/24 09:00	11/27/24 20:48	1
Zinc	<0.0200		0.0200	0.00970	mg/L		11/27/24 09:00	11/27/24 20:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**17.0**		5.00	3.70	mg/L			11/25/24 23:51	1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

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

General Chemistry

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

Glossary

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

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(73-130)	(80-120)
310-295910-1	MW-4-89	100	112	95
310-295910-2	MW-1-99	101	116	96
310-295910-4	MW-4-93	101	114	96
310-295910-5	MW-7-93	105	100	99
310-295910-6	MW-37	102	112	97
310-295910-7	MW-39R	101	114	95
310-295910-8	MW-40R	98	118	96
310-295910-11	MW-43	99	115	96
310-295910-12	PZ-11	100	109	97
310-295910-13	GW-Lagoon-Cell 1W	103	109	96
310-295910-14	MW-D	100	108	95

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(73-130)	(80-120)
310-295910-9	Trip Blank 1	100	114	96
310-295910-10	Trip Blank 2	100	113	97

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(73-130)	(80-120)
LCS 310-440948/6	Lab Control Sample	100	101	101
LCS 310-440948/7	Lab Control Sample	100	113	94
LCS 310-441008/6	Lab Control Sample	101	98	101
LCS 310-441008/7	Lab Control Sample	100	116	96
LCS 310-441010/6	Lab Control Sample	101	101	101
LCS 310-441010/7	Lab Control Sample	101	111	96
LCS 310-441114/6	Lab Control Sample	98	100	101
LCS 310-441114/7	Lab Control Sample	103	102	99
MB 310-440948/5	Method Blank	103	114	94
MB 310-441008/5	Method Blank	103	110	97
MB 310-441010/5	Method Blank	100	114	97
MB 310-441114/5	Method Blank	103	100	99

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		2FP	PHL	TBP
Lab Sample ID	Client Sample ID	(25-110)	(21-110)	(27-136)
310-295910-4	MW-4-93	69	61	98

Surrogate Legend

2FP = 2-Fluorophenol (Surr)
PHL = Phenol-d5 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		2FP	PHL	TBP
Lab Sample ID	Client Sample ID	(25-110)	(21-110)	(27-136)
LCS 310-440916/2-A	Lab Control Sample	74	63	113
LCSD 310-440916/3-A	Lab Control Sample Dup	77	65	115
MB 310-440916/1-A	Method Blank	83	69	127

Surrogate Legend

2FP = 2-Fluorophenol (Surr)
PHL = Phenol-d5 (Surr)
TBP = 2,4,6-Tribromophenol (Surr)

Method: 8081B - Organochlorine Pesticides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB1	TCX1
Lab Sample ID	Client Sample ID	(10-136)	(10-130)
310-295910-1	MW-4-89	263 S1+	290 S1+
310-295910-3	MW-4-90	166 S1+	172 S1+
310-295910-4	MW-4-93	111	112
310-295910-7	MW-39R	218 S1+	204 S1+
310-295910-8	MW-40R	497 S1+	456 S1+

Surrogate Legend

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

Method: 8081B - Organochlorine Pesticides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB1	TCX1
Lab Sample ID	Client Sample ID	(10-136)	(10-130)
LCS 310-441152/2-A	Lab Control Sample	265 S1+	290 S1+
LCSD 310-441152/3-A	Lab Control Sample Dup	134	129
MB 310-441152/1-A	Method Blank	191 S1+	218 S1+

Surrogate Legend

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

Surrogate Summary

Client: SCS Engineers
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling

Job ID: 310-295910-1
SDG: Des Moines County Sanitary Landfill (HMSP)

Method: 8151A - Herbicides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)							
		DCPAA1							
Lab Sample ID	Client Sample ID	(25-130)							
310-295910-4	MW-4-93	5 S1-							
310-295910-7	MW-39R	2 S1-							

Surrogate Legend

DCPAA = DCAA

Method: 8151A - Herbicides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)							
		DCPAA2							
Lab Sample ID	Client Sample ID	(25-130)							
310-295910-4	MW-4-93	67							
310-295910-7	MW-39R	67							

Surrogate Legend

DCPAA = DCAA

Method: 8151A - Herbicides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)							
		DCPAA1							
Lab Sample ID	Client Sample ID	(25-130)							
LCS 500-797329/2-A	Lab Control Sample	2 S1-							
LCSD 500-797329/3-A	Lab Control Sample Dup	2 S1-							
MB 500-797329/1-A	Method Blank	3 S1-							

Surrogate Legend

DCPAA = DCAA

Method: 8151A - Herbicides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)							
		DCPAA2							
Lab Sample ID	Client Sample ID	(25-130)							
LCS 500-797777/2-A	Lab Control Sample	69							
LCSD 500-797777/3-A	Lab Control Sample Dup	71							
MB 500-797777/1-A	Method Blank	42							

Surrogate Legend

DCPAA = DCAA

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

Lab Sample ID: MB 310-440948/5
Matrix: Water
Analysis Batch: 440948

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			11/26/24 10:55	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/26/24 10:55	1
Benzene	<0.500		0.500	0.220	ug/L			11/26/24 10:55	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/26/24 10:55	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/26/24 10:55	1
Bromoform	<5.00		5.00	0.780	ug/L			11/26/24 10:55	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/26/24 10:55	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/26/24 10:55	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/26/24 10:55	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/26/24 10:55	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/26/24 10:55	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/26/24 10:55	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/26/24 10:55	1
Chloroform	<3.00		3.00	1.30	ug/L			11/26/24 10:55	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/26/24 10:55	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/26/24 10:55	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/26/24 10:55	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/26/24 10:55	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/26/24 10:55	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/26/24 10:55	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/26/24 10:55	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/26/24 10:55	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/26/24 10:55	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/26/24 10:55	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/26/24 10:55	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/26/24 10:55	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/26/24 10:55	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/26/24 10:55	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/26/24 10:55	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/26/24 10:55	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/26/24 10:55	1
Styrene	<1.00		1.00	0.370	ug/L			11/26/24 10:55	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/26/24 10:55	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/26/24 10:55	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/26/24 10:55	1
Toluene	<1.00		1.00	0.430	ug/L			11/26/24 10:55	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/26/24 10:55	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/26/24 10:55	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/26/24 10:55	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/26/24 10:55	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/26/24 10:55	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/26/24 10:55	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/26/24 10:55	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/26/24 10:55	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/26/24 10:55	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/26/24 10:55	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/26/24 10:55	1

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

Lab Sample ID: MB 310-440948/5
Matrix: Water
Analysis Batch: 440948

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*11/26/24 10:55*	*1*
Dibromofluoromethane (Surr)	*114*		*73 - 130*		*11/26/24 10:55*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/26/24 10:55*	*1*

Lab Sample ID: LCS 310-440948/6
Matrix: Water
Analysis Batch: 440948

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	34.09		ug/L		85	50 - 150
Acrylonitrile	200	182.4		ug/L		91	50 - 150
Benzene	20.0	18.23		ug/L		91	72 - 124
Bromochloromethane	20.0	18.55		ug/L		93	73 - 130
Bromodichloromethane	20.0	18.77		ug/L		94	74 - 122
Bromoform	20.0	17.90		ug/L		89	61 - 122
2-Butanone (MEK)	40.0	34.83		ug/L		87	50 - 150
Carbon disulfide	20.0	17.35		ug/L		87	59 - 135
Carbon tetrachloride	20.0	19.02		ug/L		95	67 - 132
Chlorobenzene	20.0	18.43		ug/L		92	76 - 120
Chlorodibromomethane	20.0	18.68		ug/L		93	71 - 121
Chloroform	20.0	19.48		ug/L		97	72 - 125
cis-1,2-Dichloroethene	20.0	18.72		ug/L		94	74 - 123
cis-1,3-Dichloropropene	20.0	18.93		ug/L		95	71 - 125
1,2-Dibromo-3-Chloropropane	20.0	20.10		ug/L		100	50 - 150
1,2-Dibromoethane (EDB)	20.0	18.85		ug/L		94	75 - 125
Dibromomethane	20.0	18.84		ug/L		94	74 - 125
1,2-Dichlorobenzene	20.0	19.27		ug/L		96	74 - 120
1,4-Dichlorobenzene	20.0	18.45		ug/L		92	72 - 120
1,1-Dichloroethane	20.0	17.92		ug/L		90	70 - 127
1,2-Dichloroethane	20.0	18.64		ug/L		93	71 - 125
1,1-Dichloroethene	20.0	18.00		ug/L		90	63 - 132
1,2-Dichloropropane	20.0	19.12		ug/L		96	73 - 124
Ethylbenzene	20.0	18.54		ug/L		93	74 - 122
2-Hexanone	40.0	37.99		ug/L		95	60 - 140
Iodomethane	20.0	12.16		ug/L		61	10 - 150
Methylene Chloride	20.0	18.73		ug/L		94	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	34.83		ug/L		87	60 - 139
Styrene	20.0	19.06		ug/L		95	74 - 121
1,1,1,2-Tetrachloroethane	20.0	18.28		ug/L		91	71 - 120
1,1,2,2-Tetrachloroethane	20.0	18.08		ug/L		90	68 - 124
Tetrachloroethene	20.0	18.52		ug/L		93	71 - 130
Toluene	20.0	18.87		ug/L		94	74 - 123
trans-1,4-Dichloro-2-butene	20.0	18.80		ug/L		94	50 - 150
trans-1,2-Dichloroethene	20.0	18.19		ug/L		91	70 - 126
trans-1,3-Dichloropropene	20.0	18.20		ug/L		91	69 - 123
1,1,1-Trichloroethane	20.0	19.37		ug/L		97	73 - 129
1,1,2-Trichloroethane	20.0	18.95		ug/L		95	73 - 123
Trichloroethene	20.0	18.06		ug/L		90	72 - 126

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

Lab Sample ID: LCS 310-440948/6
Matrix: Water
Analysis Batch: 440948

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	18.25		ug/L		91	65 - 127
Vinyl acetate	40.0	32.09		ug/L		80	50 - 150
Xylenes, Total	40.0	36.04		ug/L		90	73 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*73 - 130*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: LCS 310-440948/7
Matrix: Water
Analysis Batch: 440948

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	18.90		ug/L		94	23 - 150
Chloroethane	20.0	20.63		ug/L		103	54 - 136
Chloromethane	20.0	21.08		ug/L		105	38 - 150
Trichlorofluoromethane	20.0	20.97		ug/L		105	54 - 149
Vinyl chloride	20.0	21.26		ug/L		106	56 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*113*		*73 - 130*
Toluene-d8 (Surr)	*94*		*80 - 120*

Lab Sample ID: MB 310-441008/5
Matrix: Water
Analysis Batch: 441008

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			11/26/24 22:04	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/26/24 22:04	1
Benzene	<0.500		0.500	0.220	ug/L			11/26/24 22:04	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/26/24 22:04	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/26/24 22:04	1
Bromoform	<5.00		5.00	0.780	ug/L			11/26/24 22:04	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/26/24 22:04	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/26/24 22:04	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/26/24 22:04	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/26/24 22:04	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/26/24 22:04	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/26/24 22:04	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/26/24 22:04	1
Chloroform	<3.00		3.00	1.30	ug/L			11/26/24 22:04	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/26/24 22:04	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/26/24 22:04	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/26/24 22:04	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/26/24 22:04	1

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

Lab Sample ID: MB 310-441008/5
Matrix: Water
Analysis Batch: 441008

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			11/26/24 22:04	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/26/24 22:04	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/26/24 22:04	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/26/24 22:04	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/26/24 22:04	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/26/24 22:04	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/26/24 22:04	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/26/24 22:04	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/26/24 22:04	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/26/24 22:04	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/26/24 22:04	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/26/24 22:04	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/26/24 22:04	1
Styrene	<1.00		1.00	0.370	ug/L			11/26/24 22:04	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/26/24 22:04	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/26/24 22:04	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/26/24 22:04	1
Toluene	<1.00		1.00	0.430	ug/L			11/26/24 22:04	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/26/24 22:04	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/26/24 22:04	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/26/24 22:04	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/26/24 22:04	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/26/24 22:04	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/26/24 22:04	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/26/24 22:04	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/26/24 22:04	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/26/24 22:04	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/26/24 22:04	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/26/24 22:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*11/26/24 22:04*	*1*
Dibromofluoromethane (Surr)	*110*		*73 - 130*		*11/26/24 22:04*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*11/26/24 22:04*	*1*

Lab Sample ID: LCS 310-441008/6
Matrix: Water
Analysis Batch: 441008

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	37.11		ug/L		93	50 - 150
Acrylonitrile	200	192.0		ug/L		96	50 - 150
Benzene	20.0	18.51		ug/L		93	72 - 124
Bromochloromethane	20.0	19.28		ug/L		96	73 - 130
Bromodichloromethane	20.0	19.35		ug/L		97	74 - 122
Bromoform	20.0	18.37		ug/L		92	61 - 122
2-Butanone (MEK)	40.0	34.33		ug/L		86	50 - 150
Carbon disulfide	20.0	18.39		ug/L		92	59 - 135

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

Lab Sample ID: LCS 310-441008/6
Matrix: Water
Analysis Batch: 441008

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	19.63		ug/L		98	67 - 132
Chlorobenzene	20.0	19.43		ug/L		97	76 - 120
Chlorodibromomethane	20.0	19.07		ug/L		95	71 - 121
Chloroform	20.0	19.77		ug/L		99	72 - 125
cis-1,2-Dichloroethene	20.0	18.99		ug/L		95	74 - 123
cis-1,3-Dichloropropene	20.0	18.61		ug/L		93	71 - 125
1,2-Dibromo-3-Chloropropane	20.0	20.99		ug/L		105	50 - 150
1,2-Dibromoethane (EDB)	20.0	19.39		ug/L		97	75 - 125
Dibromomethane	20.0	19.24		ug/L		96	74 - 125
1,2-Dichlorobenzene	20.0	19.64		ug/L		98	74 - 120
1,4-Dichlorobenzene	20.0	19.42		ug/L		97	72 - 120
1,1-Dichloroethane	20.0	18.90		ug/L		95	70 - 127
1,2-Dichloroethane	20.0	18.74		ug/L		94	71 - 125
1,1-Dichloroethene	20.0	18.98		ug/L		95	63 - 132
1,2-Dichloropropane	20.0	19.73		ug/L		99	73 - 124
Ethylbenzene	20.0	19.37		ug/L		97	74 - 122
2-Hexanone	40.0	38.14		ug/L		95	60 - 140
Iodomethane	20.0	16.44		ug/L		82	10 - 150
Methylene Chloride	20.0	19.47		ug/L		97	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	35.50		ug/L		89	60 - 139
Styrene	20.0	19.89		ug/L		99	74 - 121
1,1,1,2-Tetrachloroethane	20.0	19.57		ug/L		98	71 - 120
1,1,2,2-Tetrachloroethane	20.0	19.07		ug/L		95	68 - 124
Tetrachloroethene	20.0	18.53		ug/L		93	71 - 130
Toluene	20.0	19.48		ug/L		97	74 - 123
trans-1,4-Dichloro-2-butene	20.0	16.73		ug/L		84	50 - 150
trans-1,2-Dichloroethene	20.0	19.26		ug/L		96	70 - 126
trans-1,3-Dichloropropene	20.0	18.28		ug/L		91	69 - 123
1,1,1-Trichloroethane	20.0	19.04		ug/L		95	73 - 129
1,1,2-Trichloroethane	20.0	19.92		ug/L		100	73 - 123
Trichloroethene	20.0	18.83		ug/L		94	72 - 126
1,2,3-Trichloropropane	20.0	19.24		ug/L		96	65 - 127
Vinyl acetate	40.0	33.96		ug/L		85	50 - 150
Xylenes, Total	40.0	37.98		ug/L		95	73 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*73 - 130*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: LCS 310-441008/7
Matrix: Water
Analysis Batch: 441008

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	17.51		ug/L		88	23 - 150
Chloroethane	20.0	19.48		ug/L		97	54 - 136
Chloromethane	20.0	19.51		ug/L		98	38 - 150

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

Lab Sample ID: LCS 310-441008/7
Matrix: Water
Analysis Batch: 441008

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Trichlorofluoromethane	20.0	18.93		ug/L		95	54 - 149
Vinyl chloride	20.0	19.78		ug/L		99	56 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*116*		*73 - 130*
Toluene-d8 (Surr)	*96*		*80 - 120*

Lab Sample ID: MB 310-441010/5
Matrix: Water
Analysis Batch: 441010

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			11/27/24 08:35	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/27/24 08:35	1
Benzene	<0.500		0.500	0.220	ug/L			11/27/24 08:35	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/27/24 08:35	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/27/24 08:35	1
Bromoform	<5.00		5.00	0.780	ug/L			11/27/24 08:35	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/27/24 08:35	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/27/24 08:35	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/27/24 08:35	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/27/24 08:35	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/27/24 08:35	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/27/24 08:35	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/27/24 08:35	1
Chloroform	<3.00		3.00	1.30	ug/L			11/27/24 08:35	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/27/24 08:35	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/27/24 08:35	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/27/24 08:35	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/27/24 08:35	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/27/24 08:35	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/27/24 08:35	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/27/24 08:35	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/27/24 08:35	1
Dichlorodifluoromethane	<3.00		3.00	0.250	ug/L			11/27/24 08:35	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/27/24 08:35	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/27/24 08:35	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/27/24 08:35	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/27/24 08:35	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/27/24 08:35	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/27/24 08:35	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/27/24 08:35	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/27/24 08:35	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/27/24 08:35	1
Styrene	<1.00		1.00	0.370	ug/L			11/27/24 08:35	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/27/24 08:35	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/27/24 08:35	1

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

Lab Sample ID: MB 310-441010/5
Matrix: Water
Analysis Batch: 441010

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/27/24 08:35	1
Toluene	<1.00		1.00	0.430	ug/L			11/27/24 08:35	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/27/24 08:35	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/27/24 08:35	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/27/24 08:35	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/27/24 08:35	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/27/24 08:35	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/27/24 08:35	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/27/24 08:35	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/27/24 08:35	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/27/24 08:35	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/27/24 08:35	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/27/24 08:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*11/27/24 08:35*	*1*
Dibromofluoromethane (Surr)	*114*		*73 - 130*		*11/27/24 08:35*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*11/27/24 08:35*	*1*

Lab Sample ID: LCS 310-441010/6
Matrix: Water
Analysis Batch: 441010

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	37.94		ug/L		95	50 - 150
Acrylonitrile	200	202.3		ug/L		101	50 - 150
Benzene	20.0	18.63		ug/L		93	72 - 124
Bromochloromethane	20.0	19.30		ug/L		97	73 - 130
Bromodichloromethane	20.0	19.43		ug/L		97	74 - 122
Bromoform	20.0	19.00		ug/L		95	61 - 122
2-Butanone (MEK)	40.0	37.10		ug/L		93	50 - 150
Carbon disulfide	20.0	18.51		ug/L		93	59 - 135
Carbon tetrachloride	20.0	19.47		ug/L		97	67 - 132
Chlorobenzene	20.0	18.92		ug/L		95	76 - 120
Chlorodibromomethane	20.0	19.66		ug/L		98	71 - 121
Chloroform	20.0	19.83		ug/L		99	72 - 125
cis-1,2-Dichloroethene	20.0	19.17		ug/L		96	74 - 123
cis-1,3-Dichloropropene	20.0	18.38		ug/L		92	71 - 125
1,2-Dibromo-3-Chloropropane	20.0	20.84		ug/L		104	50 - 150
1,2-Dibromoethane (EDB)	20.0	19.95		ug/L		100	75 - 125
Dibromomethane	20.0	19.82		ug/L		99	74 - 125
1,2-Dichlorobenzene	20.0	19.44		ug/L		97	74 - 120
1,4-Dichlorobenzene	20.0	18.81		ug/L		94	72 - 120
1,1-Dichloroethane	20.0	19.33		ug/L		97	70 - 127
1,2-Dichloroethane	20.0	19.80		ug/L		99	71 - 125
1,1-Dichloroethene	20.0	18.79		ug/L		94	63 - 132
1,2-Dichloropropane	20.0	20.29		ug/L		101	73 - 124
Ethylbenzene	20.0	18.87		ug/L		94	74 - 122

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

Lab Sample ID: LCS 310-441010/6
Matrix: Water
Analysis Batch: 441010

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Hexanone	40.0	39.65		ug/L		99	60 - 140
Iodomethane	20.0	14.80		ug/L		74	10 - 150
Methylene Chloride	20.0	19.78		ug/L		99	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	38.03		ug/L		95	60 - 139
Styrene	20.0	19.06		ug/L		95	74 - 121
1,1,1,2-Tetrachloroethane	20.0	19.25		ug/L		96	71 - 120
1,1,2,2-Tetrachloroethane	20.0	19.56		ug/L		98	68 - 124
Tetrachloroethene	20.0	19.17		ug/L		96	71 - 130
Toluene	20.0	19.46		ug/L		97	74 - 123
trans-1,4-Dichloro-2-butene	20.0	16.53		ug/L		83	50 - 150
trans-1,2-Dichloroethene	20.0	18.98		ug/L		95	70 - 126
trans-1,3-Dichloropropene	20.0	18.39		ug/L		92	69 - 123
1,1,1-Trichloroethane	20.0	19.37		ug/L		97	73 - 129
1,1,2-Trichloroethane	20.0	20.39		ug/L		102	73 - 123
Trichloroethene	20.0	19.46		ug/L		97	72 - 126
1,2,3-Trichloropropane	20.0	19.94		ug/L		100	65 - 127
Vinyl acetate	40.0	32.45		ug/L		81	50 - 150
Xylenes, Total	40.0	37.05		ug/L		93	73 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*73 - 130*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: LCS 310-441010/7
Matrix: Water
Analysis Batch: 441010

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	15.93		ug/L		80	23 - 150
Chloroethane	20.0	19.08		ug/L		95	54 - 136
Chloromethane	20.0	18.48		ug/L		92	38 - 150
Trichlorofluoromethane	20.0	19.40		ug/L		97	54 - 149
Vinyl chloride	20.0	19.05		ug/L		95	56 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*111*		*73 - 130*
Toluene-d8 (Surr)	*96*		*80 - 120*

Lab Sample ID: MB 310-441114/5
Matrix: Water
Analysis Batch: 441114

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			11/27/24 20:27	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/27/24 20:27	1
Benzene	<0.500		0.500	0.220	ug/L			11/27/24 20:27	1

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

Lab Sample ID: MB 310-441114/5
Matrix: Water
Analysis Batch: 441114

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/27/24 20:27	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/27/24 20:27	1
Bromoform	<5.00		5.00	0.780	ug/L			11/27/24 20:27	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/27/24 20:27	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/27/24 20:27	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/27/24 20:27	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/27/24 20:27	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/27/24 20:27	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/27/24 20:27	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/27/24 20:27	1
Chloroform	<3.00		3.00	1.30	ug/L			11/27/24 20:27	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/27/24 20:27	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/27/24 20:27	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/27/24 20:27	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/27/24 20:27	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/27/24 20:27	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/27/24 20:27	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/27/24 20:27	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/27/24 20:27	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/27/24 20:27	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/27/24 20:27	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/27/24 20:27	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/27/24 20:27	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/27/24 20:27	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/27/24 20:27	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/27/24 20:27	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/27/24 20:27	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/27/24 20:27	1
Styrene	<1.00		1.00	0.370	ug/L			11/27/24 20:27	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/27/24 20:27	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/27/24 20:27	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/27/24 20:27	1
Toluene	<1.00		1.00	0.430	ug/L			11/27/24 20:27	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/27/24 20:27	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/27/24 20:27	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/27/24 20:27	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/27/24 20:27	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/27/24 20:27	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/27/24 20:27	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/27/24 20:27	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/27/24 20:27	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/27/24 20:27	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/27/24 20:27	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/27/24 20:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*11/27/24 20:27*	*1*
Dibromofluoromethane (Surr)	*100*		*73 - 130*		*11/27/24 20:27*	*1*

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

Lab Sample ID: MB 310-441114/5
Matrix: Water
Analysis Batch: 441114

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		11/27/24 20:27	1

Lab Sample ID: LCS 310-441114/6
Matrix: Water
Analysis Batch: 441114

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	40.90		ug/L		102	50 - 150
Acrylonitrile	200	203.4		ug/L		102	50 - 150
Benzene	20.0	20.96		ug/L		105	72 - 124
Bromochloromethane	20.0	23.13		ug/L		116	73 - 130
Bromodichloromethane	20.0	20.53		ug/L		103	74 - 122
Bromoform	20.0	19.26		ug/L		96	61 - 122
2-Butanone (MEK)	40.0	40.18		ug/L		100	50 - 150
Carbon disulfide	20.0	20.14		ug/L		101	59 - 135
Carbon tetrachloride	20.0	20.76		ug/L		104	67 - 132
Chlorobenzene	20.0	20.82		ug/L		104	76 - 120
Chlorodibromomethane	20.0	20.36		ug/L		102	71 - 121
Chloroform	20.0	20.61		ug/L		103	72 - 125
cis-1,2-Dichloroethene	20.0	21.17		ug/L		106	74 - 123
cis-1,3-Dichloropropene	20.0	19.89		ug/L		99	71 - 125
1,2-Dibromo-3-Chloropropane	20.0	21.93		ug/L		110	50 - 150
1,2-Dibromoethane (EDB)	20.0	21.75		ug/L		109	75 - 125
Dibromomethane	20.0	21.42		ug/L		107	74 - 125
1,2-Dichlorobenzene	20.0	20.76		ug/L		104	74 - 120
1,4-Dichlorobenzene	20.0	20.12		ug/L		101	72 - 120
1,1-Dichloroethane	20.0	21.20		ug/L		106	70 - 127
1,2-Dichloroethane	20.0	20.52		ug/L		103	71 - 125
1,1-Dichloroethene	20.0	21.66		ug/L		108	63 - 132
1,2-Dichloropropane	20.0	21.27		ug/L		106	73 - 124
Ethylbenzene	20.0	20.71		ug/L		104	74 - 122
2-Hexanone	40.0	39.00		ug/L		98	60 - 140
Iodomethane	20.0	18.48		ug/L		92	10 - 150
Methylene Chloride	20.0	21.80		ug/L		109	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	39.80		ug/L		99	60 - 139
Styrene	20.0	20.54		ug/L		103	74 - 121
1,1,1,2-Tetrachloroethane	20.0	20.87		ug/L		104	71 - 120
1,1,2,2-Tetrachloroethane	20.0	21.04		ug/L		105	68 - 124
Tetrachloroethene	20.0	20.80		ug/L		104	71 - 130
Toluene	20.0	20.36		ug/L		102	74 - 123
trans-1,4-Dichloro-2-butene	20.0	19.14		ug/L		96	50 - 150
trans-1,2-Dichloroethene	20.0	20.83		ug/L		104	70 - 126
trans-1,3-Dichloropropene	20.0	19.51		ug/L		98	69 - 123
1,1,1-Trichloroethane	20.0	20.78		ug/L		104	73 - 129
1,1,2-Trichloroethane	20.0	21.55		ug/L		108	73 - 123
Trichloroethene	20.0	21.27		ug/L		106	72 - 126
1,2,3-Trichloropropane	20.0	21.01		ug/L		105	65 - 127
Vinyl acetate	40.0	38.03		ug/L		95	50 - 150

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

Lab Sample ID: LCS 310-441114/6
Matrix: Water
Analysis Batch: 441114

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Xylenes, Total			40.0	41.09		ug/L		103	73 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*73 - 130*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: LCS 310-441114/7
Matrix: Water
Analysis Batch: 441114

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	17.85		ug/L		89	23 - 150		
Chloroethane			20.0	20.33		ug/L		102	54 - 136		
Chloromethane			20.0	16.64		ug/L		83	38 - 150		
Trichlorofluoromethane			20.0	21.91		ug/L		110	54 - 149		
Vinyl chloride			20.0	19.18		ug/L		96	56 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*73 - 130*
Toluene-d8 (Surr)	*99*		*80 - 120*

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

Lab Sample ID: MB 310-440916/1-A
Matrix: Water
Analysis Batch: 440991

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 440916

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methylphenol (and/or 3-Methylphenol)	<10.0		10.0	0.700	ug/L		11/26/24 06:42	11/26/24 12:55	1
Phenol	<10.0		10.0	1.10	ug/L		11/26/24 06:42	11/26/24 12:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*83*		*25 - 110*	*11/26/24 06:42*	*11/26/24 12:55*	*1*
Phenol-d5 (Surr)	*69*		*21 - 110*	*11/26/24 06:42*	*11/26/24 12:55*	*1*
2,4,6-Tribromophenol (Surr)	*127*		*27 - 136*	*11/26/24 06:42*	*11/26/24 12:55*	*1*

Lab Sample ID: LCS 310-440916/2-A
Matrix: Water
Analysis Batch: 440991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 440916

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
4-Methylphenol (and/or 3-Methylphenol)			100	93.15		ug/L		93	46 - 117		
Phenol			100	72.95		ug/L		73	29 - 110		

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

Lab Sample ID: LCS 310-440916/2-A
Matrix: Water
Analysis Batch: 440991

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 440916

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorophenol (Surr)	*74*		*25 - 110*
Phenol-d5 (Surr)	*63*		*21 - 110*
2,4,6-Tribromophenol (Surr)	*113*		*27 - 136*

Lab Sample ID: LCSD 310-440916/3-A
Matrix: Water
Analysis Batch: 440991

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 440916

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4-Methylphenol (and/or 3-Methylphenol)			100	80.85		ug/L		81	46 - 117	14	35
Phenol			100	58.09		ug/L		58	29 - 110	23	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorophenol (Surr)	*77*		*25 - 110*
Phenol-d5 (Surr)	*65*		*21 - 110*
2,4,6-Tribromophenol (Surr)	*115*		*27 - 136*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 310-441152/1-A
Matrix: Water
Analysis Batch: 441372

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 441152

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.0941		0.0941	0.0235	ug/L		11/27/24 12:45	12/03/24 13:16	1
4,4'-DDE	<0.0941		0.0941	0.0282	ug/L		11/27/24 12:45	12/03/24 13:16	1
4,4'-DDT	<0.0941		0.0941	0.0188	ug/L		11/27/24 12:45	12/03/24 13:16	1
Aldrin	<0.0941		0.0941	0.0207	ug/L		11/27/24 12:45	12/03/24 13:16	1
beta-BHC	<0.0941		0.0941	0.0395	ug/L		11/27/24 12:45	12/03/24 13:16	1
Chlordane (technical)	<1.88		1.88	0.367	ug/L		11/27/24 12:45	12/03/24 13:16	1
delta-BHC	<0.0941		0.0941	0.0301	ug/L		11/27/24 12:45	12/03/24 13:16	1
Dieldrin	<0.0941		0.0941	0.0198	ug/L		11/27/24 12:45	12/03/24 13:16	1
Endosulfan I	<0.0941		0.0941	0.0263	ug/L		11/27/24 12:45	12/03/24 13:16	1
Endosulfan II	<0.0941		0.0941	0.0245	ug/L		11/27/24 12:45	12/03/24 13:16	1
Endosulfan sulfate	<0.0941		0.0941	0.0169	ug/L		11/27/24 12:45	12/03/24 13:16	1
Endrin	<0.0941		0.0941	0.0263	ug/L		11/27/24 12:45	12/03/24 13:16	1
Endrin aldehyde	<0.0941		0.0941	0.0254	ug/L		11/27/24 12:45	12/03/24 13:16	1
gamma-BHC (Lindane)	<0.0941		0.0941	0.00941	ug/L		11/27/24 12:45	12/03/24 13:16	1
Heptachlor	<0.0941		0.0941	0.0216	ug/L		11/27/24 12:45	12/03/24 13:16	1
Heptachlor epoxide	<0.0941		0.0941	0.0301	ug/L		11/27/24 12:45	12/03/24 13:16	1
Methoxychlor	<0.0941		0.0941	0.0301	ug/L		11/27/24 12:45	12/03/24 13:16	1
Toxaphene	<1.88		1.88	0.941	ug/L		11/27/24 12:45	12/03/24 13:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	*191*	*S1+*	*10 - 136*	*11/27/24 12:45*	*12/03/24 13:16*	*1*
Tetrachloro-m-xylene	*218*	*S1+*	*10 - 130*	*11/27/24 12:45*	*12/03/24 13:16*	*1*

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 310-441152/2-A
Matrix: Water
Analysis Batch: 441372

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 441152

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
4,4'-DDD			2.62	5.928	*+	ug/L		226	36 - 149		
4,4'-DDE			2.62	5.944	*+	ug/L		227	34 - 130		
4,4'-DDT			2.62	5.831	*+	ug/L		223	23 - 150		
Aldrin			2.62	6.598	*+	ug/L		252	13 - 120		
alpha-BHC			2.62	6.886	*+	ug/L		263	36 - 127		
beta-BHC			2.62	6.151	*+	ug/L		235	37 - 136		
delta-BHC			2.62	6.372	*+	ug/L		243	33 - 134		
Dieldrin			2.62	6.429	*+	ug/L		246	39 - 130		
Endosulfan I			2.62	5.602	*+	ug/L		214	10 - 120		
Endosulfan II			2.62	5.527	*+	ug/L		211	14 - 120		
Endosulfan sulfate			2.62	6.258	*+	ug/L		239	36 - 147		
Endrin			2.62	6.793	*+	ug/L		260	39 - 140		
Endrin aldehyde			2.62	4.726	*+	ug/L		181	32 - 137		
gamma-BHC (Lindane)			2.62	6.944	*+	ug/L		265	36 - 132		
Heptachlor			2.62	6.437	*+	ug/L		246	27 - 120		
Heptachlor epoxide			2.62	6.708	*+	ug/L		256	38 - 133		
Methoxychlor			2.62	6.297	*+	ug/L		241	10 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*265*	*S1+*	*10 - 136*
Tetrachloro-m-xylene	*290*	*S1+*	*10 - 130*

Lab Sample ID: LCSD 310-441152/3-A
Matrix: Water
Analysis Batch: 441372

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 441152

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4,4'-DDD			2.59	3.056	*1	ug/L		118	36 - 149	64	35
4,4'-DDE			2.59	2.952	*1	ug/L		114	34 - 130	67	35
4,4'-DDT			2.59	2.842	*1	ug/L		110	23 - 150	69	35
Aldrin			2.59	3.395	*+ *1	ug/L		131	13 - 120	64	35
alpha-BHC			2.59	3.948	*+ *1	ug/L		152	36 - 127	54	35
beta-BHC			2.59	3.622	*+ *1	ug/L		140	37 - 136	52	35
delta-BHC			2.59	3.561	*+ *1	ug/L		137	33 - 134	57	35
Dieldrin			2.59	3.418	*+ *1	ug/L		132	39 - 130	61	35
Endosulfan I			2.59	3.097	*1	ug/L		120	10 - 120	58	35
Endosulfan II			2.59	3.089	*1	ug/L		119	14 - 120	57	35
Endosulfan sulfate			2.59	3.569	*1	ug/L		138	36 - 147	55	35
Endrin			2.59	3.626	*1	ug/L		140	39 - 140	61	35
Endrin aldehyde			2.59	2.804	*1	ug/L		108	32 - 137	51	35
gamma-BHC (Lindane)			2.59	3.931	*+ *1	ug/L		152	36 - 132	55	35
Heptachlor			2.59	3.395	*+ *1	ug/L		131	27 - 120	62	35
Heptachlor epoxide			2.59	3.655	*+ *1	ug/L		141	38 - 133	59	35
Methoxychlor			2.59	3.353	*1	ug/L		129	10 - 150	61	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*134*		*10 - 136*
Tetrachloro-m-xylene	*129*		*10 - 130*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 500-797329/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 797601
Prep Batch: 797329

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	<1.00		1.00	0.307	ug/L		11/27/24 09:38	12/02/24 12:48	1
Silvex (2,4,5-TP)	<1.00		1.00	0.0834	ug/L		11/27/24 09:38	12/02/24 12:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCAA	*3*	*S1-*	*25 - 130*	*11/27/24 09:38*	*12/02/24 12:48*	*1*

Lab Sample ID: LCS 500-797329/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 797601
Prep Batch: 797329

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
2,4-D			10.1	<1.00	*-	ug/L		0	30 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCAA	*2*	*S1-*	*25 - 130*

Lab Sample ID: LCSD 500-797329/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 797601
Prep Batch: 797329

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4-D			10.1	<1.00	*-	ug/L		0	30 - 115	NC	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCAA	*2*	*S1-*	*25 - 130*

Lab Sample ID: MB 500-797777/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 798024
Prep Batch: 797777

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	<1.00		1.00	0.307	ug/L		12/03/24 10:32	12/04/24 14:46	1
Silvex (2,4,5-TP)	<1.00		1.00	0.0834	ug/L		12/03/24 10:32	12/04/24 14:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCAA	*42*		*25 - 130*	*12/03/24 10:32*	*12/04/24 14:46*	*1*

Lab Sample ID: LCS 500-797777/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 798024
Prep Batch: 797777

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
2,4-D			10.1	7.232		ug/L		72	30 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCAA	*69*		*25 - 130*

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCSD 500-797777/3-A
Matrix: Water
Analysis Batch: 798024

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 797777

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4-D			10.1	6.372		ug/L		63	30 - 115	13	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCAA	*71*		*25 - 130*

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-440863/1-A
Matrix: Water
Analysis Batch: 441078

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 440863

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		11/26/24 09:30	11/26/24 15:42	1
Barium	<0.00200		0.00200	0.000660	mg/L		11/26/24 09:30	11/26/24 15:42	1
Chromium	<0.00500		0.00500	0.00120	mg/L		11/26/24 09:30	11/26/24 15:42	1
Cobalt	<0.000500		0.000500	0.000170	mg/L		11/26/24 09:30	11/26/24 15:42	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/26/24 09:30	11/26/24 15:42	1
Lead	<0.000500		0.000500	0.000260	mg/L		11/26/24 09:30	11/26/24 15:42	1
Nickel	<0.00500		0.00500	0.00210	mg/L		11/26/24 09:30	11/26/24 15:42	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/26/24 09:30	11/26/24 15:42	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/26/24 09:30	11/26/24 15:42	1
Zinc	<0.0200		0.0200	0.00970	mg/L		11/26/24 09:30	11/26/24 15:42	1

Lab Sample ID: LCS 310-440863/2-A
Matrix: Water
Analysis Batch: 441078

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 440863

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.200	0.2077		mg/L		104	80 - 120
Barium	0.100	0.1031		mg/L		103	80 - 120
Chromium	0.100	0.1030		mg/L		103	80 - 120
Cobalt	0.100	0.1020		mg/L		102	80 - 120
Copper	0.200	0.2034		mg/L		102	80 - 120
Lead	0.200	0.2005		mg/L		100	80 - 120
Nickel	0.200	0.2019		mg/L		101	80 - 120
Selenium	0.400	0.3797		mg/L		95	80 - 120
Vanadium	0.100	0.1012		mg/L		101	80 - 120
Zinc	0.200	0.1979		mg/L		99	80 - 120

Lab Sample ID: MB 310-441026/1-A
Matrix: Water
Analysis Batch: 441235

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 441026

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00200		0.00200	0.00100	mg/L		11/27/24 09:00	11/27/24 20:22	1
Arsenic	<0.00200		0.00200	0.000530	mg/L		11/27/24 09:00	11/27/24 20:22	1
Barium	<0.00200		0.00200	0.000660	mg/L		11/27/24 09:00	11/27/24 20:22	1
Beryllium	<0.00100		0.00100	0.000330	mg/L		11/27/24 09:00	11/27/24 20:22	1
Cadmium	<0.000200		0.000200	0.000100	mg/L		11/27/24 09:00	11/27/24 20:22	1

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

Lab Sample ID: MB 310-441026/1-A
Matrix: Water
Analysis Batch: 441235

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 441026

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	<0.00500		0.00500	0.00120	mg/L		11/27/24 09:00	11/27/24 20:22	1
Cobalt	0.0004430	J	0.000500	0.000170	mg/L		11/27/24 09:00	11/27/24 20:22	1
Copper	<0.00500		0.00500	0.00180	mg/L		11/27/24 09:00	11/27/24 20:22	1
Lead	<0.000500		0.000500	0.000260	mg/L		11/27/24 09:00	11/27/24 20:22	1
Nickel	<0.00500		0.00500	0.00210	mg/L		11/27/24 09:00	11/27/24 20:22	1
Selenium	<0.00500		0.00500	0.00140	mg/L		11/27/24 09:00	11/27/24 20:22	1
Silver	<0.00100		0.00100	0.000500	mg/L		11/27/24 09:00	11/27/24 20:22	1
Thallium	<0.00100		0.00100	0.000570	mg/L		11/27/24 09:00	11/27/24 20:22	1
Vanadium	<0.00500		0.00500	0.00110	mg/L		11/27/24 09:00	11/27/24 20:22	1
Zinc	<0.0200		0.0200	0.00970	mg/L		11/27/24 09:00	11/27/24 20:22	1

Lab Sample ID: LCS 310-441026/2-A
Matrix: Water
Analysis Batch: 441235

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 441026

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.1992		mg/L		100	80 - 120
Arsenic	0.200	0.2048		mg/L		102	80 - 120
Barium	0.100	0.1031		mg/L		103	80 - 120
Beryllium	0.100	0.09930		mg/L		99	80 - 120
Cadmium	0.100	0.09365		mg/L		94	80 - 120
Chromium	0.100	0.1058		mg/L		106	80 - 120
Cobalt	0.100	0.1080		mg/L		108	80 - 120
Copper	0.200	0.2142		mg/L		107	80 - 120
Lead	0.200	0.2116		mg/L		106	80 - 120
Nickel	0.200	0.2128		mg/L		106	80 - 120
Selenium	0.400	0.3926		mg/L		98	80 - 120
Silver	0.100	0.1082		mg/L		108	80 - 120
Thallium	0.100	0.1084		mg/L		108	80 - 120
Vanadium	0.100	0.1041		mg/L		104	80 - 120
Zinc	0.200	0.1759		mg/L		88	80 - 120

Lab Sample ID: 310-295910-11 MS
Matrix: Groundwater
Analysis Batch: 441235

Client Sample ID: MW-43
Prep Type: Total/NA
Prep Batch: 441026

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<0.00200		0.200	0.2004		mg/L		100	75 - 125
Arsenic	0.00608		0.200	0.2152		mg/L		105	75 - 125
Barium	0.623		0.100	0.7297	4	mg/L		107	75 - 125
Beryllium	<0.00100		0.100	0.09582		mg/L		96	75 - 125
Cadmium	<0.000200		0.100	0.09919		mg/L		99	75 - 125
Chromium	<0.00500		0.100	0.1042		mg/L		104	75 - 125
Cobalt	0.00220	B	0.100	0.1046		mg/L		102	75 - 125
Copper	<0.00500		0.200	0.1986		mg/L		99	75 - 125
Lead	<0.000500		0.200	0.1966		mg/L		98	75 - 125
Nickel	0.00567		0.200	0.2047		mg/L		100	75 - 125
Selenium	<0.00500		0.400	0.3943		mg/L		99	75 - 125
Silver	<0.00100		0.100	0.1122		mg/L		112	75 - 125

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

Lab Sample ID: 310-295910-11 MS
Matrix: Groundwater
Analysis Batch: 441235

Client Sample ID: MW-43
Prep Type: Total/NA
Prep Batch: 441026

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Thallium	<0.00100		0.100	0.1148		mg/L		115	75 - 125
Vanadium	0.00216	J	0.100	0.1058		mg/L		104	75 - 125
Zinc	<0.0200		0.200	0.1914		mg/L		96	75 - 125

Lab Sample ID: 310-295910-11 MSD
Matrix: Groundwater
Analysis Batch: 441235

Client Sample ID: MW-43
Prep Type: Total/NA
Prep Batch: 441026

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	<0.00200		0.200	0.2015		mg/L		101	75 - 125	1	20
Arsenic	0.00608		0.200	0.2126		mg/L		103	75 - 125	1	20
Barium	0.623		0.100	0.7201	4	mg/L		97	75 - 125	1	20
Beryllium	<0.00100		0.100	0.09668		mg/L		97	75 - 125	1	20
Cadmium	<0.000200		0.100	0.09593		mg/L		96	75 - 125	3	20
Chromium	<0.00500		0.100	0.1036		mg/L		104	75 - 125	1	20
Cobalt	0.00220	B	0.100	0.1033		mg/L		101	75 - 125	1	20
Copper	<0.00500		0.200	0.1971		mg/L		99	75 - 125	1	20
Lead	<0.000500		0.200	0.1972		mg/L		99	75 - 125	0	20
Nickel	0.00567		0.200	0.2025		mg/L		98	75 - 125	1	20
Selenium	<0.00500		0.400	0.3934		mg/L		98	75 - 125	0	20
Silver	<0.00100		0.100	0.1081		mg/L		108	75 - 125	4	20
Thallium	<0.00100		0.100	0.1079		mg/L		108	75 - 125	6	20
Vanadium	0.00216	J	0.100	0.1047		mg/L		103	75 - 125	1	20
Zinc	<0.0200		0.200	0.1851		mg/L		93	75 - 125	3	20

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 500-797284/1-A
Matrix: Water
Analysis Batch: 797289

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 797284

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<1.00		1.00	0.231	mg/L		11/26/24 18:00	11/27/24 06:33	1

Lab Sample ID: LCS 500-797284/2-A
Matrix: Water
Analysis Batch: 797289

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 797284

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	3.76	3.761		mg/L		100	80 - 120

Lab Sample ID: 310-295910-4 MS
Matrix: Groundwater
Analysis Batch: 797289

Client Sample ID: MW-4-93
Prep Type: Total/NA
Prep Batch: 797284

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	<1.00		9.39	9.722		mg/L		104	75 - 125

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: 310-295910-4 MSD
Matrix: Groundwater
Analysis Batch: 797289

Client Sample ID: MW-4-93
Prep Type: Total/NA
Prep Batch: 797284

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	<1.00		9.39	9.124		mg/L		97	75 - 125	6	20

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

Lab Sample ID: MB 310-440897/1
Matrix: Water
Analysis Batch: 440897

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			11/25/24 19:01	1

Lab Sample ID: LCS 310-440897/2
Matrix: Water
Analysis Batch: 440897

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	116.0		mg/L		116	81 - 116

Lab Sample ID: MB 310-440903/1
Matrix: Water
Analysis Batch: 440903

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			11/25/24 23:51	1

Lab Sample ID: LCS 310-440903/2
Matrix: Water
Analysis Batch: 440903

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	97.00		mg/L		97	81 - 116

Lab Sample ID: MB 310-441056/1
Matrix: Water
Analysis Batch: 441056

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			11/26/24 19:49	1

Lab Sample ID: LCS 310-441056/2
Matrix: Water
Analysis Batch: 441056

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	99.00		mg/L		99	81 - 116

GC/MS VOA

Analysis Batch: 440948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-6	MW-37	Total/NA	Groundwater	8260D	
310-295910-12	PZ-11	Total/NA	Groundwater	8260D	
310-295910-13	GW-Lagoon-Cell 1W	Total/NA	Groundwater	8260D	
MB 310-440948/5	Method Blank	Total/NA	Water	8260D	
LCS 310-440948/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-440948/7	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 441008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-1	MW-4-89	Total/NA	Groundwater	8260D	
310-295910-2	MW-1-99	Total/NA	Groundwater	8260D	
310-295910-8	MW-40R	Total/NA	Groundwater	8260D	
310-295910-9	Trip Blank 1	Total/NA	Trip Blank	8260D	
310-295910-10	Trip Blank 2	Total/NA	Trip Blank	8260D	
310-295910-11	MW-43	Total/NA	Groundwater	8260D	
310-295910-14	MW-D	Total/NA	Groundwater	8260D	
MB 310-441008/5	Method Blank	Total/NA	Water	8260D	
LCS 310-441008/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-441008/7	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 441010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-4	MW-4-93	Total/NA	Groundwater	8260D	
310-295910-7	MW-39R	Total/NA	Groundwater	8260D	
MB 310-441010/5	Method Blank	Total/NA	Water	8260D	
LCS 310-441010/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-441010/7	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 441114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-5	MW-7-93	Total/NA	Groundwater	8260D	
MB 310-441114/5	Method Blank	Total/NA	Water	8260D	
LCS 310-441114/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-441114/7	Lab Control Sample	Total/NA	Water	8260D	

GC/MS Semi VOA

Prep Batch: 440916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-4	MW-4-93	Total/NA	Groundwater	3510C	
MB 310-440916/1-A	Method Blank	Total/NA	Water	3510C	
LCS 310-440916/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 310-440916/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 440991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-4	MW-4-93	Total/NA	Groundwater	8270E	440916
MB 310-440916/1-A	Method Blank	Total/NA	Water	8270E	440916
LCS 310-440916/2-A	Lab Control Sample	Total/NA	Water	8270E	440916
LCSD 310-440916/3-A	Lab Control Sample Dup	Total/NA	Water	8270E	440916

GC Semi VOA

Prep Batch: 441152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-1	MW-4-89	Total/NA	Groundwater	3511	
310-295910-3	MW-4-90	Total/NA	Groundwater	3511	
310-295910-4	MW-4-93	Total/NA	Groundwater	3511	
310-295910-7	MW-39R	Total/NA	Groundwater	3511	
310-295910-8	MW-40R	Total/NA	Groundwater	3511	
MB 310-441152/1-A	Method Blank	Total/NA	Water	3511	
LCS 310-441152/2-A	Lab Control Sample	Total/NA	Water	3511	
LCSD 310-441152/3-A	Lab Control Sample Dup	Total/NA	Water	3511	

Analysis Batch: 441372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-1	MW-4-89	Total/NA	Groundwater	8081B	441152
310-295910-3	MW-4-90	Total/NA	Groundwater	8081B	441152
310-295910-4	MW-4-93	Total/NA	Groundwater	8081B	441152
310-295910-7	MW-39R	Total/NA	Groundwater	8081B	441152
310-295910-8	MW-40R	Total/NA	Groundwater	8081B	441152
MB 310-441152/1-A	Method Blank	Total/NA	Water	8081B	441152
LCS 310-441152/2-A	Lab Control Sample	Total/NA	Water	8081B	441152
LCSD 310-441152/3-A	Lab Control Sample Dup	Total/NA	Water	8081B	441152

Prep Batch: 797329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-4	MW-4-93	Total/NA	Groundwater	8151A	
310-295910-7	MW-39R	Total/NA	Groundwater	8151A	
MB 500-797329/1-A	Method Blank	Total/NA	Water	8151A	
LCS 500-797329/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 500-797329/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	

Analysis Batch: 797601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-4	MW-4-93	Total/NA	Groundwater	8151A	797329
310-295910-7	MW-39R	Total/NA	Groundwater	8151A	797329
MB 500-797329/1-A	Method Blank	Total/NA	Water	8151A	797329
LCS 500-797329/2-A	Lab Control Sample	Total/NA	Water	8151A	797329
LCSD 500-797329/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	797329

Prep Batch: 797777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-4	MW-4-93	Total/NA	Groundwater	8151A	
310-295910-7	MW-39R	Total/NA	Groundwater	8151A	
MB 500-797777/1-A	Method Blank	Total/NA	Water	8151A	
LCS 500-797777/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 500-797777/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	

Analysis Batch: 798024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-4	MW-4-93	Total/NA	Groundwater	8151A	797777
310-295910-7	MW-39R	Total/NA	Groundwater	8151A	797777
MB 500-797777/1-A	Method Blank	Total/NA	Water	8151A	797777
LCS 500-797777/2-A	Lab Control Sample	Total/NA	Water	8151A	797777
LCSD 500-797777/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	797777

Metals

Prep Batch: 440863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-1	MW-4-89	Total/NA	Groundwater	3005A	
310-295910-2	MW-1-99	Total/NA	Groundwater	3005A	
310-295910-4	MW-4-93	Total/NA	Groundwater	3005A	
310-295910-5	MW-7-93	Total/NA	Groundwater	3005A	
310-295910-6	MW-37	Total/NA	Groundwater	3005A	
310-295910-7	MW-39R	Total/NA	Groundwater	3005A	
310-295910-8	MW-40R	Total/NA	Groundwater	3005A	
MB 310-440863/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-440863/2-A	Lab Control Sample	Total/NA	Water	3005A	

Prep Batch: 441026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-11	MW-43	Total/NA	Groundwater	3005A	
310-295910-12	PZ-11	Total/NA	Groundwater	3005A	
310-295910-13	GW-Lagoon-Cell 1W	Total/NA	Groundwater	3005A	
310-295910-14	MW-D	Total/NA	Groundwater	3005A	
MB 310-441026/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-441026/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-295910-11 MS	MW-43	Total/NA	Groundwater	3005A	
310-295910-11 MSD	MW-43	Total/NA	Groundwater	3005A	

Analysis Batch: 441078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-1	MW-4-89	Total/NA	Groundwater	6020B	440863
310-295910-2	MW-1-99	Total/NA	Groundwater	6020B	440863
310-295910-4	MW-4-93	Total/NA	Groundwater	6020B	440863
310-295910-5	MW-7-93	Total/NA	Groundwater	6020B	440863
310-295910-6	MW-37	Total/NA	Groundwater	6020B	440863
310-295910-7	MW-39R	Total/NA	Groundwater	6020B	440863
310-295910-8	MW-40R	Total/NA	Groundwater	6020B	440863
MB 310-440863/1-A	Method Blank	Total/NA	Water	6020B	440863
LCS 310-440863/2-A	Lab Control Sample	Total/NA	Water	6020B	440863

Analysis Batch: 441235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-11	MW-43	Total/NA	Groundwater	6020B	441026
310-295910-12	PZ-11	Total/NA	Groundwater	6020B	441026
310-295910-13	GW-Lagoon-Cell 1W	Total/NA	Groundwater	6020B	441026
310-295910-14	MW-D	Total/NA	Groundwater	6020B	441026
MB 310-441026/1-A	Method Blank	Total/NA	Water	6020B	441026
LCS 310-441026/2-A	Lab Control Sample	Total/NA	Water	6020B	441026
310-295910-11 MS	MW-43	Total/NA	Groundwater	6020B	441026
310-295910-11 MSD	MW-43	Total/NA	Groundwater	6020B	441026

General Chemistry

Analysis Batch: 440897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-6	MW-37	Total/NA	Groundwater	I-3765-85	
310-295910-12	PZ-11	Total/NA	Groundwater	I-3765-85	
310-295910-13	GW-Lagoon-Cell 1W	Total/NA	Groundwater	I-3765-85	

General Chemistry (Continued)

Analysis Batch: 440897 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-440897/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-440897/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 440903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-1	MW-4-89	Total/NA	Groundwater	I-3765-85	
310-295910-2	MW-1-99	Total/NA	Groundwater	I-3765-85	
310-295910-5	MW-7-93	Total/NA	Groundwater	I-3765-85	
310-295910-7	MW-39R	Total/NA	Groundwater	I-3765-85	
310-295910-8	MW-40R	Total/NA	Groundwater	I-3765-85	
310-295910-11	MW-43	Total/NA	Groundwater	I-3765-85	
310-295910-14	MW-D	Total/NA	Groundwater	I-3765-85	
MB 310-440903/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-440903/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 441056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-4	MW-4-93	Total/NA	Groundwater	I-3765-85	
MB 310-441056/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-441056/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Prep Batch: 797284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-4	MW-4-93	Total/NA	Groundwater	9030B	
MB 500-797284/1-A	Method Blank	Total/NA	Water	9030B	
LCS 500-797284/2-A	Lab Control Sample	Total/NA	Water	9030B	
310-295910-4 MS	MW-4-93	Total/NA	Groundwater	9030B	
310-295910-4 MSD	MW-4-93	Total/NA	Groundwater	9030B	

Analysis Batch: 797289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295910-4	MW-4-93	Total/NA	Groundwater	9034	797284
MB 500-797284/1-A	Method Blank	Total/NA	Water	9034	797284
LCS 500-797284/2-A	Lab Control Sample	Total/NA	Water	9034	797284
310-295910-4 MS	MW-4-93	Total/NA	Groundwater	9034	797284
310-295910-4 MSD	MW-4-93	Total/NA	Groundwater	9034	797284

Client Sample ID: MW-4-89
Lab Sample ID: 310-295910-1

Date Collected: 11/20/24 10:23
Matrix: Groundwater
Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	441008	MZR8	EET CF	11/27/24 03:09
Total/NA	Prep	3511			441152	AYK7	EET CF	11/27/24 12:45
Total/NA	Analysis	8081B		1	441372	BW2O	EET CF	12/03/24 16:15
Total/NA	Prep	3005A			440863	F5MW	EET CF	11/26/24 09:30
Total/NA	Analysis	6020B		1	441078	NFT2	EET CF	11/26/24 17:03
Total/NA	Analysis	I-3765-85		1	440903	MDU9	EET CF	11/25/24 23:51

Client Sample ID: MW-1-99
Lab Sample ID: 310-295910-2

Date Collected: 11/20/24 12:32
Matrix: Groundwater
Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	441008	MZR8	EET CF	11/27/24 04:58
Total/NA	Prep	3005A			440863	F5MW	EET CF	11/26/24 09:30
Total/NA	Analysis	6020B		1	441078	NFT2	EET CF	11/26/24 17:07
Total/NA	Analysis	I-3765-85		1	440903	MDU9	EET CF	11/25/24 23:51

Client Sample ID: MW-4-90
Lab Sample ID: 310-295910-3

Date Collected: 11/20/24 08:34
Matrix: Groundwater
Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3511			441152	AYK7	EET CF	11/27/24 12:45
Total/NA	Analysis	8081B		1	441372	BW2O	EET CF	12/03/24 15:51

Client Sample ID: MW-4-93
Lab Sample ID: 310-295910-4

Date Collected: 11/21/24 08:23
Matrix: Groundwater
Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	441010	WSE8	EET CF	11/27/24 11:52
Total/NA	Prep	3510C			440916	AYK7	EET CF	11/26/24 06:42
Total/NA	Analysis	8270E		1	440991	L0FS	EET CF	11/26/24 21:29
Total/NA	Prep	3511			441152	AYK7	EET CF	11/27/24 12:45
Total/NA	Analysis	8081B		1	441372	BW2O	EET CF	12/03/24 15:32
Total/NA	Prep	8151A			797329	LG	EET CHI	11/27/24 09:38
Total/NA	Analysis	8151A		1	797601	H7CM	EET CHI	12/02/24 14:38
Total/NA	Prep	8151A			797777	LG	EET CHI	12/03/24 10:32
Total/NA	Analysis	8151A		1	798024	H7CM	EET CHI	12/04/24 17:15
Total/NA	Prep	3005A			440863	F5MW	EET CF	11/26/24 09:30
Total/NA	Analysis	6020B		1	441078	NFT2	EET CF	11/26/24 17:26
Total/NA	Prep	9030B			797284	CLB	EET CHI	11/26/24 18:12 - 11/26/24 18:18 [1]
Total/NA	Analysis	9034		1	797289	CLB	EET CHI	11/27/24 06:59 - 11/27/24 07:13 [1]
Total/NA	Analysis	I-3765-85		1	441056	MDU9	EET CF	11/26/24 19:49

Client Sample ID: MW-7-93
Lab Sample ID: 310-295910-5

Date Collected: 11/20/24 15:13
Matrix: Groundwater
Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	441114	FE5V	EET CF	11/27/24 23:06
Total/NA	Prep	3005A			440863	F5MW	EET CF	11/26/24 09:30
Total/NA	Analysis	6020B		1	441078	NFT2	EET CF	11/26/24 17:29
Total/NA	Analysis	I-3765-85		1	440903	MDU9	EET CF	11/25/24 23:51

Client Sample ID: MW-37
Lab Sample ID: 310-295910-6

Date Collected: 11/19/24 14:41
Matrix: Groundwater
Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	440948	MZR8	EET CF	11/26/24 18:48
Total/NA	Prep	3005A			440863	F5MW	EET CF	11/26/24 09:30
Total/NA	Analysis	6020B		1	441078	NFT2	EET CF	11/26/24 17:33
Total/NA	Analysis	I-3765-85		1	440897	MDU9	EET CF	11/25/24 19:01

Client Sample ID: MW-39R
Lab Sample ID: 310-295910-7

Date Collected: 11/21/24 07:58
Matrix: Groundwater
Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	441010	WSE8	EET CF	11/27/24 12:13
Total/NA	Prep	3511			441152	AYK7	EET CF	11/27/24 12:45
Total/NA	Analysis	8081B		1	441372	BW2O	EET CF	12/03/24 15:08
Total/NA	Prep	8151A			797329	LG	EET CHI	11/27/24 09:38
Total/NA	Analysis	8151A		1	797601	H7CM	EET CHI	12/02/24 14:57
Total/NA	Prep	8151A			797777	LG	EET CHI	12/03/24 10:32
Total/NA	Analysis	8151A		1	798024	H7CM	EET CHI	12/04/24 17:33
Total/NA	Prep	3005A			440863	F5MW	EET CF	11/26/24 09:30
Total/NA	Analysis	6020B		1	441078	NFT2	EET CF	11/26/24 17:37
Total/NA	Analysis	I-3765-85		1	440903	MDU9	EET CF	11/25/24 23:51

Client Sample ID: MW-40R
Lab Sample ID: 310-295910-8

Date Collected: 11/20/24 09:19
Matrix: Groundwater
Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	441008	MZR8	EET CF	11/27/24 03:30
Total/NA	Prep	3511			441152	AYK7	EET CF	11/27/24 12:45
Total/NA	Analysis	8081B		1	441372	BW2O	EET CF	12/03/24 14:45
Total/NA	Prep	3005A			440863	F5MW	EET CF	11/26/24 09:30
Total/NA	Analysis	6020B		1	441078	NFT2	EET CF	11/26/24 17:40
Total/NA	Analysis	I-3765-85		1	440903	MDU9	EET CF	11/25/24 23:51

Client Sample ID: Trip Blank 1
Lab Sample ID: 310-295910-9

Date Collected: 11/20/24 00:00
Matrix: Trip Blank
Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	441008	MZR8	EET CF	11/26/24 23:31

Client Sample ID: Trip Blank 2
Lab Sample ID: 310-295910-10

Date Collected: 11/20/24 00:00
Matrix: Trip Blank
Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	441008	MZR8	EET CF	11/26/24 23:53

Client Sample ID: MW-43
Lab Sample ID: 310-295910-11

Date Collected: 11/20/24 14:02
Matrix: Groundwater
Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	441008	MZR8	EET CF	11/27/24 05:41
Total/NA	Prep	3005A			441026	F5MW	EET CF	11/27/24 09:00
Total/NA	Analysis	6020B		1	441235	NFT2	EET CF	11/27/24 20:28
Total/NA	Analysis	I-3765-85		1	440903	MDU9	EET CF	11/25/24 23:51

Client Sample ID: PZ-11
Lab Sample ID: 310-295910-12

Date Collected: 11/18/24 12:14
Matrix: Groundwater
Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	440948	MZR8	EET CF	11/26/24 19:10
Total/NA	Prep	3005A			441026	F5MW	EET CF	11/27/24 09:00
Total/NA	Analysis	6020B		1	441235	NFT2	EET CF	11/27/24 20:42
Total/NA	Analysis	I-3765-85		1	440897	MDU9	EET CF	11/25/24 19:01

Client Sample ID: GW-Lagoon-Cell 1W
Lab Sample ID: 310-295910-13

Date Collected: 11/19/24 13:05
Matrix: Groundwater
Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	440948	MZR8	EET CF	11/26/24 19:32
Total/NA	Prep	3005A			441026	F5MW	EET CF	11/27/24 09:00
Total/NA	Analysis	6020B		1	441235	NFT2	EET CF	11/27/24 20:45
Total/NA	Analysis	I-3765-85		1	440897	MDU9	EET CF	11/25/24 19:01

Client Sample ID: MW-D
Lab Sample ID: 310-295910-14

Date Collected: 11/20/24 14:02
Matrix: Groundwater
Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	441008	MZR8	EET CF	11/27/24 06:03

Lab Chronicle

Client: SCS Engineers
Job ID: 310-295910-1
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (HMSP)

Client Sample ID: MW-D
Lab Sample ID: 310-295910-14

Date Collected: 11/20/24 14:02
Matrix: Groundwater

Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3005A			441026	F5MW	EET CF	11/27/24 09:00
Total/NA	Analysis	6020B		1	441235	NFT2	EET CF	11/27/24 20:48
Total/NA	Analysis	I-3765-85		1	440903	MDU9	EET CF	11/25/24 23:51

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

Laboratory References:

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

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

Accreditation/Certification Summary

Client: SCS Engineers
Job ID: 310-295910-1
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (HMSP)

Laboratory: Eurofins Cedar Falls

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

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

Laboratory: Eurofins Chicago

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	082	05-01-26

Method Summary

Client: SCS Engineers
Job ID: 310-295910-1
Project/Site: 2nd 2024 Semi-Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (HMSP)

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
8270E	Semivolatile Organic Compounds (GC/MS)	SW846	EET CF
8081B	Organochlorine Pesticides (GC)	SW846	EET CF
8151A	Herbicides (GC)	SW846	EET CHI
6020B	Metals (ICP/MS)	SW846	EET CF
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	EET CHI
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CF
3511	Microextraction of Organic Compounds	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF
8151A	Extraction (Herbicides)	SW846	EET CHI
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	SW846	EET CHI

Protocol References:

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

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

Laboratory References:

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

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

eurofins | Environment Testing America

310-295910 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS Engineers

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 11-22-24 | TIME 1630 | Received By: CGC

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 CGC *If yes:* Cooler # 1 of 3

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? ↓

MW-4-89, MW-1-99, MW-4-90, MW-D

Temperature Record

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

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

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

Uncorrected Temp (°C): 2.3 | Corrected Temp (°C): 2.3

• Sample Container Temperature

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

Exceptions Noted

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

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

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

Additional Comments

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS Engineers

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 11-22-24 | TIME 1630 | Received By: CGC

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~~ CGC *If yes:* Cooler # 2 of 3

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? ↓

MW-39R, MW-43, MW-4-93

Temperature Record

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

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

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

Uncorrected Temp (°C): 4.9 | Corrected Temp (°C): 4.9

• Sample Container Temperature

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

Exceptions Noted

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

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

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

Additional Comments

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS Engineers

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 11-22-24 | TIME 1630 | Received By: CGC

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 CGC *If yes:* Cooler # 3 of 3

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: P | Correction Factor (°C): 0

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

Uncorrected Temp (°C): 1.9 | Corrected Temp (°C): 1.9

• **Sample Container Temperature**

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

Exceptions Noted

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

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

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

Additional Comments

TestAmerica Des Moines SC
214

Chain of Custody Record

eurofins

Eurofins TestAmerica, Cedar Falls
3019 Venture Way
Cedar Falls, IA
50613

Regulatory Program: ☐DW ☐NPDES ☐RCRA ☐Other

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

Client Contact	Project Manager: Ben Madson	Site Contact: Ben Madson	Date:	COC No
SCS Engineers	Email bmadson@scsengineers.com	Lab Contact: Samuel Miller	Carrier:	1 of 2 COCs
1690 All-State Court, Suite 100	Cell. 515-776-9255			Sampler
West Des Moines, IA 50265	Analysis Turnaround Time			For Lab Use Only:
515-631-6160	☐CALENDAR DAYS ☐WORKING DAYS			Walk-in Client:
	Other:			Lab Sampling.
Project Name: 2nd 2024 Semi-Annual Groundwater Sampling	☐ 2 weeks			Job / SDG No
Site. Des Moines County Sanitary Landfill (HMSP)	☐ 1 week			
P O # 27224414 25	☐ 2 days ☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Metals List A	Appendix I	Appendix I VOCs	TSS	Alpha-BHC	Dichlorodifluoromethane	Endosulfan Sulfate	Endrin Aldehyde	Methoxychlor	Phenol	Sulfide	Tetrachloroethene	2,4-D [2C]	2,4,5-TP [Silvex][2C]	3/4-Methylphenol	4,4'-DDT	Trip Blank	Sample Specific Notes.
MW-4-89	11/20/24	10 23	G	GW				X		X	X	X													Metals List A. Arsenic, Barium, Chromium, Cobalt, Copper Lead Nickel, Selenium, Vanadium, and Zinc.
MW-1-99	11/20/24	12 32	G	GW				X		X	X														
MW-4-90	11/20/24	8 34	G	GW								X		X											
MW-4-93	11/21/24	8 23	G	GW				X		X	X				X	X	X	X		X		X	X		
MW-7-93	11/20/24	15 13	G	GW				X		X	X														
MW-37	11/9/24	14 41	G	GW				X		X	X														
MW-39R	11/21/24	7 58	G	GW				X		X	X	X	X						X		X				
MW-40R	11/20/24	9 19	G	GW				X		X	X	X													
Trip Blank																								X	Include trip blank if samples containing VOC s are shipped in coolers.

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison B ☐Unknown

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

☐Return to Client ☐Disposal by Lab ☐Archive for_____ Months

Special Instructions/QC Requirements & Comments:
Metals List A: Arsenic, Barium, Chromium Cobalt, Copper, Lead, Nickel, Selenium, Vanadium and Zinc.
Metals List C: Arsenic, Barium, Nickel, and Zinc.

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No | Cooler Temp (°C) Obs'd _____ Corr'd _____ Therm ID No. _____

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Michael Morgan	SCS Engineers	11/22/24 9 am			
Relinquished by	Company	Date/Time.	Received by	Company	Date/Time.
Relinquished by	Company	Date/Time:	Received in Laboratory by: CGC	Company: Eurofins	Date/Time: 11-22-24 1630

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

12/9/2024

Eurofins TestAmerica, Cedar Falls
3019 Venture Way
Cedar Falls, IA
50613

TestAmerica Des Mo es Sc
214

Chain of Custody Record

eurofins

Regulatory Program: ☐DW ☐NPDES ☐RCRA ☐Other

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

Client Contact	Project Manager: Ben Madson	Site Contact: Ben Madson	Date:	COC No
SCS Engineers	Email bmadson@scsengineers.com	Lab Contact: Samuel Miller	Carrier:	2 of 2 COCs
1690 All-State Court, Suite 100	Cell 515-776-9255			Sampler
West Des Moines, IA 50265	Analysis Turnaround Time			For Lab Use Only:
515-631-6160	☐ CALENDAR DAYS ☐ WORKING DAYS			Walk-in Client:
	Other:			Lab Sampling
Project Name: 2nd 2024 Semi-Annual Groundwater Sampling	☐ 2 weeks			
Site Des Moines County Sanitary Landfill (HMSP)	☐ 1 week			Job / SDG No
P O # 27224414 25	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Appendix I	Appendix II	TSS	Dichlorodifluoromethane	Metals List A	Appendix I VOCs	Trip Blank	Sample Specific Notes.
MW-41			G	GW						X		X	X		Metals List A. Arsenic, Barium, Chromium, Cobalt, Copper Lead, Nickel, Selenium Vanadium, and Zinc.
MW-43	11/20/24	14 02	G	GW				X		X					
PZ-10			G	GW						X		X	X		
PZ-11	11/18/24	12 14	G	GW						X		X	X		
GW-Lagoon-00			G	GW						X		X	X		
GW-Lagoon-Cell 1W	11/9/24	13 05	G	GW						X		X	X		
MW-D	11/20/24	14 02	G	GW				X		X					
Trip Blank														X	lude trip blan ier taining VOC rs.

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐Non-Hazard ☐Flammable ☐Skin Irritant ☑Poison B ☐Unknown

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

☐Return to Client ☐Disposal by Lab ☐Archive for_____ Months

Special Instructions/QC Requirements & Comments:
Metals List A: Arsenic, Barium, Chromium, Cobalt, Copper, Lead, Nickel, Selenium, Vanadium, and Zinc.

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No | Cooler Temp (°C) Obs'd _____ Corr'd _____ | Therm ID No _____

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
Michael Morgan	SCS Engineers	11/22/24 9 cu			
Relinquished by	Company	Date/Time:	Received by	Company	Date/Time:
Relinquished by	Company	Date/Time.	Received in Laboratory by: Clare	Company: Eurofins	Date/Time: 11.22.24 1630

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

12/9/2024

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

Chain of Custody Record

eurofins
Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Miller, Samuel	Carrier Tracking No(s): N/A	COC No: 310-78743 1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Samuel Miller@et eurofinsus com	State of Origin: Iowa	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): State Program - Iowa		Job #: 310-295910-1
Address: 2417 Bond Street, ,	Due Date Requested: 12/9/2024			
City: University Park	TAT Requested (days): N/A			
State Zip: IL, 60484				
Phone: 708-534-5200(Tel) 708-534-5211(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: 2nd 2024 Semi-Annual Groundwater Sampling	Project #: 31002156			
Site: 310-SCS Des Moines County Sanitary Landf	SSOW#: N/A			

Analysis Requested

Preservation Codes

310-295910 COC

Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9034_Calc/9030B	8151A/8151A_AP 8151 Herbicides	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-4-93 (310-295910-4)	11/21/24	08 23 Central	G	Water			X	X	3	
MW-39R (310-295910-7)	11/21/24	07 58 Central	G	Water				X	2	

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

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

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

Relinquished by:	Date/Time	Company	Received by:	Date/Time	Company
IR	11/25/24 1300		Stephanie Hernandez	11/26/24 0945	EEA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 4.6 + 4.5

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-295910-1

SDG Number: Des Moines County Sanitary Landfill (HMSP)

Login Number: 295910

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Hirsch, Preston

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

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-295910-1

SDG Number: Des Moines County Sanitary Landfill (HMSP)

Login Number: 295910

List Source: Eurofins Chicago

List Number: 2

List Creation: 11/26/24 01:04 PM

Creator: Hernandez, Stephanie

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing

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

ANALYTICAL REPORT

PREPARED FOR

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

Generated 12/9/2024 11:50:17 AM

JOB DESCRIPTION

1st 2024 Semi Annual Groundwater Sampling
Des Moines County Sanitary Landfill (Bracketing)

JOB NUMBER

310-295911-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

myEOL

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
12/9/2024 11:50:17 AM

Authorized for release by
Samuel Miller, Project Management Assistant I
Samuel.Miller@et.eurofinsus.com
(319)277-2401

Table of Contents

Cover Page 1
Table of Contents 3
Case Narrative 4
Sample Summary 5
Detection Summary 6
Detection Limit Exceptions Summary 7
Client Sample Results 8
Definitions 11
Surrogate Summary 12
QC Sample Results 13
QC Association 17
Chronicle 18
Certification Summary 19
Method Summary 20
Chain of Custody 21
Receipt Checklists 23

Job ID: 310-295911-1 Eurofins Cedar Falls

Job Narrative
310-295911-1

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

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

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

Receipt
The samples were received on 11/22/2024 4:30 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.9°C.

GC/MS VOA
Method 8260D: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid : Trip Blank (310-295911-2) and (310-295853-B-6). The requested target analyte list includes acrylonitrile, acid-labile compounds that degrades in an acidic medium.

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

Pesticides
Method 8081B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 310-441152 and analytical batch 310-441372 recovered outside control limits for the following analytes: alpha-BHC. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8081B: The surrogate recovery for the blank, LCS and LCSD associated with preparation batch 310-441152 and analytical batch 310-441372 was outside the upper control limits.

Method 8081B: Surrogate recovery for the following sample was outside the upper control limit: MW-5-90 (310-295911-1). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis 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
Job ID: 310-295911-1
Project/Site: 1st 2024 Semi Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (Bracketing)

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-295911-1	MW-5-90	Water	11/20/24 11:22	11/22/24 16:30
310-295911-2	Trip Blank	Water	11/20/24 00:00	11/22/24 16:30

Detection Summary

Client: SCS Engineers
Job ID: 310-295911-1
Project/Site: 1st 2024 Semi Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (Bracketing)

Client Sample ID: MW-5-90
Lab Sample ID: 310-295911-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Solids	2.75		1.88	1.39	mg/L	1		I-3765-85	Total/NA

Client Sample ID: Trip Blank
Lab Sample ID: 310-295911-2

No Detections.

This Detection Summary does not include radiochemical test results.

Quantitation Limit Exceptions Summary

Client: SCS Engineers
Job ID: 310-295911-1
Project/Site: 1st 2024 Semi Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (Bracketing)

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: SCS Engineers
Job ID: 310-295911-1
Project/Site: 1st 2024 Semi Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (Bracketing)

Client Sample ID: MW-5-90
Lab Sample ID: 310-295911-1
Date Collected: 11/20/24 11:22
Matrix: Water
Date Received: 11/22/24 16:30

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0928	*+ *1	0.0928	0.00928	ug/L		11/27/24 12:45	12/03/24 14:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*110*		*10 - 136*	*11/27/24 12:45*	*12/03/24 14:26*	*1*
Tetrachloro-m-xylene (Surr)	*122*		*10 - 130*	*11/27/24 12:45*	*12/03/24 14:26*	*1*

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		11/27/24 09:00	11/27/24 19:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	2.75		1.88	1.39	mg/L			11/25/24 23:51	1

Client Sample ID: Trip Blank
Lab Sample ID: 310-295911-2
Date Collected: 11/20/24 00:00
Matrix: Water
Date Received: 11/22/24 16:30

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			11/27/24 00:14	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/27/24 00:14	1
Benzene	<0.500		0.500	0.220	ug/L			11/27/24 00:14	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/27/24 00:14	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/27/24 00:14	1
Bromoform	<5.00		5.00	0.780	ug/L			11/27/24 00:14	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/27/24 00:14	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/27/24 00:14	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/27/24 00:14	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/27/24 00:14	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/27/24 00:14	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/27/24 00:14	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/27/24 00:14	1
Chloroform	<3.00		3.00	1.30	ug/L			11/27/24 00:14	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/27/24 00:14	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/27/24 00:14	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/27/24 00:14	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/27/24 00:14	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/27/24 00:14	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/27/24 00:14	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/27/24 00:14	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/27/24 00:14	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/27/24 00:14	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/27/24 00:14	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/27/24 00:14	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/27/24 00:14	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/27/24 00:14	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/27/24 00:14	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/27/24 00:14	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/27/24 00:14	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/27/24 00:14	1
Styrene	<1.00		1.00	0.370	ug/L			11/27/24 00:14	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/27/24 00:14	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/27/24 00:14	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/27/24 00:14	1
Toluene	<1.00		1.00	0.430	ug/L			11/27/24 00:14	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/27/24 00:14	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/27/24 00:14	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/27/24 00:14	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/27/24 00:14	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/27/24 00:14	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/27/24 00:14	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/27/24 00:14	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/27/24 00:14	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/27/24 00:14	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/27/24 00:14	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/27/24 00:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*11/27/24 00:14*	*1*

Client Sample ID: Trip Blank
Lab Sample ID: 310-295911-2
Date Collected: 11/20/24 00:00
Matrix: Water
Date Received: 11/22/24 16:30

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	116		73 - 130		11/27/24 00:14	1
Toluene-d8 (Surr)	95		80 - 120		11/27/24 00:14	1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
S1+	Surrogate recovery exceeds control limits, high biased.

Glossary

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

Surrogate Summary

Client: SCS Engineers
Job ID: 310-295911-1
Project/Site: 1st 2024 Semi Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (Bracketing)

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(73-130)	(80-120)
310-295911-2	Trip Blank	100	116	95
LCS 310-441008/6	Lab Control Sample	101	98	101
LCS 310-441008/7	Lab Control Sample	100	116	96
MB 310-441008/5	Method Blank	103	110	97

Surrogate Legend

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

Method: 8081B - Organochlorine Pesticides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB1	TCX1
Lab Sample ID	Client Sample ID	(10-136)	(10-130)
310-295911-1	MW-5-90	110	122
LCS 310-441152/2-A	Lab Control Sample	265 S1+	290 S1+
LCSD 310-441152/3-A	Lab Control Sample Dup	134	129
MB 310-441152/1-A	Method Blank	191 S1+	218 S1+

Surrogate Legend

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

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

Lab Sample ID: MB 310-441008/5
Matrix: Water
Analysis Batch: 441008

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			11/26/24 22:04	1
Acrylonitrile	<10.0		10.0	2.20	ug/L			11/26/24 22:04	1
Benzene	<0.500		0.500	0.220	ug/L			11/26/24 22:04	1
Bromochloromethane	<5.00		5.00	0.540	ug/L			11/26/24 22:04	1
Bromodichloromethane	<1.00		1.00	0.390	ug/L			11/26/24 22:04	1
Bromoform	<5.00		5.00	0.780	ug/L			11/26/24 22:04	1
Bromomethane	<4.00		4.00	1.10	ug/L			11/26/24 22:04	1
2-Butanone (MEK)	<10.0		10.0	2.10	ug/L			11/26/24 22:04	1
Carbon disulfide	<1.00		1.00	0.450	ug/L			11/26/24 22:04	1
Carbon tetrachloride	<2.00		2.00	0.650	ug/L			11/26/24 22:04	1
Chlorobenzene	<1.00		1.00	0.400	ug/L			11/26/24 22:04	1
Chlorodibromomethane	<5.00		5.00	0.750	ug/L			11/26/24 22:04	1
Chloroethane	<4.00		4.00	0.790	ug/L			11/26/24 22:04	1
Chloroform	<3.00		3.00	1.30	ug/L			11/26/24 22:04	1
Chloromethane	<3.00		3.00	0.610	ug/L			11/26/24 22:04	1
cis-1,2-Dichloroethene	<1.00		1.00	0.210	ug/L			11/26/24 22:04	1
cis-1,3-Dichloropropene	<5.00		5.00	0.250	ug/L			11/26/24 22:04	1
1,2-Dibromo-3-Chloropropane	<1.20		1.20	1.20	ug/L			11/26/24 22:04	1
1,2-Dibromoethane (EDB)	<0.340		0.340	0.340	ug/L			11/26/24 22:04	1
Dibromomethane	<1.00		1.00	0.330	ug/L			11/26/24 22:04	1
1,2-Dichlorobenzene	<1.00		1.00	0.370	ug/L			11/26/24 22:04	1
1,4-Dichlorobenzene	<1.00		1.00	0.230	ug/L			11/26/24 22:04	1
1,1-Dichloroethane	<1.00		1.00	0.220	ug/L			11/26/24 22:04	1
1,2-Dichloroethane	<1.00		1.00	0.390	ug/L			11/26/24 22:04	1
1,1-Dichloroethene	<2.00		2.00	0.560	ug/L			11/26/24 22:04	1
1,2-Dichloropropane	<1.00		1.00	0.270	ug/L			11/26/24 22:04	1
Ethylbenzene	<1.00		1.00	0.310	ug/L			11/26/24 22:04	1
2-Hexanone	<10.0		10.0	2.00	ug/L			11/26/24 22:04	1
Iodomethane	<10.0		10.0	7.00	ug/L			11/26/24 22:04	1
Methylene Chloride	<5.00		5.00	1.70	ug/L			11/26/24 22:04	1
4-Methyl-2-pentanone (MIBK)	<10.0		10.0	2.10	ug/L			11/26/24 22:04	1
Styrene	<1.00		1.00	0.370	ug/L			11/26/24 22:04	1
1,1,1,2-Tetrachloroethane	<1.00		1.00	0.380	ug/L			11/26/24 22:04	1
1,1,2,2-Tetrachloroethane	<1.00		1.00	0.470	ug/L			11/26/24 22:04	1
Tetrachloroethene	<1.00		1.00	0.480	ug/L			11/26/24 22:04	1
Toluene	<1.00		1.00	0.430	ug/L			11/26/24 22:04	1
trans-1,4-Dichloro-2-butene	<10.0		10.0	1.10	ug/L			11/26/24 22:04	1
trans-1,2-Dichloroethene	<1.00		1.00	0.270	ug/L			11/26/24 22:04	1
trans-1,3-Dichloropropene	<5.00		5.00	0.560	ug/L			11/26/24 22:04	1
1,1,1-Trichloroethane	<1.00		1.00	0.190	ug/L			11/26/24 22:04	1
1,1,2-Trichloroethane	<1.00		1.00	0.450	ug/L			11/26/24 22:04	1
Trichloroethene	<1.00		1.00	0.430	ug/L			11/26/24 22:04	1
Trichlorofluoromethane	<4.00		4.00	0.380	ug/L			11/26/24 22:04	1
1,2,3-Trichloropropane	<1.00		1.00	0.590	ug/L			11/26/24 22:04	1
Vinyl acetate	<10.0		10.0	2.50	ug/L			11/26/24 22:04	1
Vinyl chloride	<1.00		1.00	0.180	ug/L			11/26/24 22:04	1
Xylenes, Total	<3.00		3.00	0.400	ug/L			11/26/24 22:04	1

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

Lab Sample ID: MB 310-441008/5
Matrix: Water
Analysis Batch: 441008

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*11/26/24 22:04*	*1*
Dibromofluoromethane (Surr)	*110*		*73 - 130*		*11/26/24 22:04*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*11/26/24 22:04*	*1*

Lab Sample ID: LCS 310-441008/6
Matrix: Water
Analysis Batch: 441008

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	37.11		ug/L		93	50 - 150
Acrylonitrile	200	192.0		ug/L		96	50 - 150
Benzene	20.0	18.51		ug/L		93	72 - 124
Bromochloromethane	20.0	19.28		ug/L		96	73 - 130
Bromodichloromethane	20.0	19.35		ug/L		97	74 - 122
Bromoform	20.0	18.37		ug/L		92	61 - 122
2-Butanone (MEK)	40.0	34.33		ug/L		86	50 - 150
Carbon disulfide	20.0	18.39		ug/L		92	59 - 135
Carbon tetrachloride	20.0	19.63		ug/L		98	67 - 132
Chlorobenzene	20.0	19.43		ug/L		97	76 - 120
Chlorodibromomethane	20.0	19.07		ug/L		95	71 - 121
Chloroform	20.0	19.77		ug/L		99	72 - 125
cis-1,2-Dichloroethene	20.0	18.99		ug/L		95	74 - 123
cis-1,3-Dichloropropene	20.0	18.61		ug/L		93	71 - 125
1,2-Dibromo-3-Chloropropane	20.0	20.99		ug/L		105	50 - 150
1,2-Dibromoethane (EDB)	20.0	19.39		ug/L		97	75 - 125
Dibromomethane	20.0	19.24		ug/L		96	74 - 125
1,2-Dichlorobenzene	20.0	19.64		ug/L		98	74 - 120
1,4-Dichlorobenzene	20.0	19.42		ug/L		97	72 - 120
1,1-Dichloroethane	20.0	18.90		ug/L		95	70 - 127
1,2-Dichloroethane	20.0	18.74		ug/L		94	71 - 125
1,1-Dichloroethene	20.0	18.98		ug/L		95	63 - 132
1,2-Dichloropropane	20.0	19.73		ug/L		99	73 - 124
Ethylbenzene	20.0	19.37		ug/L		97	74 - 122
2-Hexanone	40.0	38.14		ug/L		95	60 - 140
Iodomethane	20.0	16.44		ug/L		82	10 - 150
Methylene Chloride	20.0	19.47		ug/L		97	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	35.50		ug/L		89	60 - 139
Styrene	20.0	19.89		ug/L		99	74 - 121
1,1,1,2-Tetrachloroethane	20.0	19.57		ug/L		98	71 - 120
1,1,2,2-Tetrachloroethane	20.0	19.07		ug/L		95	68 - 124
Tetrachloroethene	20.0	18.53		ug/L		93	71 - 130
Toluene	20.0	19.48		ug/L		97	74 - 123
trans-1,4-Dichloro-2-butene	20.0	16.73		ug/L		84	50 - 150
trans-1,2-Dichloroethene	20.0	19.26		ug/L		96	70 - 126
trans-1,3-Dichloropropene	20.0	18.28		ug/L		91	69 - 123
1,1,1-Trichloroethane	20.0	19.04		ug/L		95	73 - 129
1,1,2-Trichloroethane	20.0	19.92		ug/L		100	73 - 123
Trichloroethene	20.0	18.83		ug/L		94	72 - 126

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

Lab Sample ID: LCS 310-441008/6
Matrix: Water
Analysis Batch: 441008

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	19.24		ug/L		96	65 - 127
Vinyl acetate	40.0	33.96		ug/L		85	50 - 150
Xylenes, Total	40.0	37.98		ug/L		95	73 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*73 - 130*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: LCS 310-441008/7
Matrix: Water
Analysis Batch: 441008

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	17.51		ug/L		88	23 - 150
Chloroethane	20.0	19.48		ug/L		97	54 - 136
Chloromethane	20.0	19.51		ug/L		98	38 - 150
Trichlorofluoromethane	20.0	18.93		ug/L		95	54 - 149
Vinyl chloride	20.0	19.78		ug/L		99	56 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*116*		*73 - 130*
Toluene-d8 (Surr)	*96*		*80 - 120*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 310-441152/1-A
Matrix: Water
Analysis Batch: 441372

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 441152

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0941		0.0941	0.00941	ug/L		11/27/24 12:45	12/03/24 13:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*191*	*S1+*	*10 - 136*	*11/27/24 12:45*	*12/03/24 13:16*	*1*
Tetrachloro-m-xylene (Surr)	*218*	*S1+*	*10 - 130*	*11/27/24 12:45*	*12/03/24 13:16*	*1*

Lab Sample ID: LCS 310-441152/2-A
Matrix: Water
Analysis Batch: 441372

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 441152

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
alpha-BHC	2.62	6.886	*+	ug/L		263	36 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*265*	*S1+*	*10 - 136*
Tetrachloro-m-xylene (Surr)	*290*	*S1+*	*10 - 130*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: LCSD 310-441152/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 441372
Prep Batch: 441152

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
alpha-BHC			2.59	3.948	*+ *1	ug/L		152	36 - 127	54	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*134*		*10 - 136*
Tetrachloro-m-xylene (Surr)	*129*		*10 - 130*

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-441025/1-A
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 441235
Prep Batch: 441025

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.00200		0.00200	0.000530	mg/L		11/27/24 09:00	11/27/24 18:34	1

Lab Sample ID: LCS 310-441025/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 441235
Prep Batch: 441025

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			0.200	0.2017		mg/L		101	80 - 120		

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

Lab Sample ID: MB 310-440903/1
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 440903

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<5.00		5.00	3.70	mg/L			11/25/24 23:51	1

Lab Sample ID: LCS 310-440903/2
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 440903

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Suspended Solids			100	97.00		mg/L		97	81 - 116		

GC/MS VOA

Analysis Batch: 441008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295911-2	Trip Blank	Total/NA	Water	8260D	
MB 310-441008/5	Method Blank	Total/NA	Water	8260D	
LCS 310-441008/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-441008/7	Lab Control Sample	Total/NA	Water	8260D	

GC Semi VOA

Prep Batch: 441152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295911-1	MW-5-90	Total/NA	Water	3511	
MB 310-441152/1-A	Method Blank	Total/NA	Water	3511	
LCS 310-441152/2-A	Lab Control Sample	Total/NA	Water	3511	
LCSD 310-441152/3-A	Lab Control Sample Dup	Total/NA	Water	3511	

Analysis Batch: 441372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295911-1	MW-5-90	Total/NA	Water	8081B	441152
MB 310-441152/1-A	Method Blank	Total/NA	Water	8081B	441152
LCS 310-441152/2-A	Lab Control Sample	Total/NA	Water	8081B	441152
LCSD 310-441152/3-A	Lab Control Sample Dup	Total/NA	Water	8081B	441152

Metals

Prep Batch: 441025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295911-1	MW-5-90	Total/NA	Water	3005A	
MB 310-441025/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-441025/2-A	Lab Control Sample	Total/NA	Water	3005A	

Analysis Batch: 441235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295911-1	MW-5-90	Total/NA	Water	6020B	441025
MB 310-441025/1-A	Method Blank	Total/NA	Water	6020B	441025
LCS 310-441025/2-A	Lab Control Sample	Total/NA	Water	6020B	441025

General Chemistry

Analysis Batch: 440903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-295911-1	MW-5-90	Total/NA	Water	I-3765-85	
MB 310-440903/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-440903/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Lab Chronicle

Client: SCS Engineers
Job ID: 310-295911-1
Project/Site: 1st 2024 Semi Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (Bracketing)

Client Sample ID: MW-5-90
Lab Sample ID: 310-295911-1

Date Collected: 11/20/24 11:22
Matrix: Water
Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3511			441152	AYK7	EET CF	11/27/24 12:45
Total/NA	Analysis	8081B		1	441372	BW2O	EET CF	12/03/24 14:26
Total/NA	Prep	3005A			441025	F5MW	EET CF	11/27/24 09:00
Total/NA	Analysis	6020B		1	441235	NFT2	EET CF	11/27/24 19:54
Total/NA	Analysis	I-3765-85		1	440903	MDU9	EET CF	11/25/24 23:51

Client Sample ID: Trip Blank
Lab Sample ID: 310-295911-2

Date Collected: 11/20/24 00:00
Matrix: Water
Date Received: 11/22/24 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	441008	MZR8	EET CF	11/27/24 00:14

Laboratory References:

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

Accreditation/Certification Summary

Client: SCS Engineers
Job ID: 310-295911-1
Project/Site: 1st 2024 Semi Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (Bracketing)

Laboratory: Eurofins Cedar Falls

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

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

Method Summary

Client: SCS Engineers
Job ID: 310-295911-1
Project/Site: 1st 2024 Semi Annual Groundwater Sampling
SDG: Des Moines County Sanitary Landfill (Bracketing)

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
8081B	Organochlorine Pesticides (GC)	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
3511	Microextraction of Organic Compounds	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

eurofins | Environment Testing America

310-295911 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: SCS Engineers

City/State: CITY | STATE | Project:

Receipt Information

Date/Time Received: DATE 11.22.24 | TIME 1630 | Received By: CGC

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? HCl ☑ Yes ☐ No *If yes:* Which VOA samples are in cooler? ↓

All

Temperature Record

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

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

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

Uncorrected Temp (°C): 1.9 | Corrected Temp (°C): 1.9

• **Sample Container Temperature**

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

Exceptions Noted

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

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

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

Additional Comments

Eurofins TestAmerica, Cedar Falls
3019 Venture Way
Cedar Falls, IA
50613

TestAmerica Des Moines 214

Chain of Custody Record

eurofins

Regulatory Program: ☐DW ☐NPDES ☐RCRA ☐Other

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

Client Contact	Project Manager: Ben Madson	Site Contact: Ben Madson	Date:	COC No
SCS Engineers	Email bmadson@scsengineers.com	Lab Contact: Samuel Miller	Carrier:	1 of 1 COCs
1690 All-State Court, Suite 100	Cell 515-776-9255			Sampler:
West Des Moines, IA 50265	Analysis Turnaround Time			For Lab Use Only:
515-631-6160	☐CALENDAR DAYS ☐WORKING DAYS			Walk-in Client:
	Other:_____			Lab Sampling:
Project Name: 1st 2024 Semi-Annual Groundwater Sampling	☐ 2 weeks			Job / SDG No
Site Des Moines County Sanitary Landfill (Bracketing)	☐ 1 week			
P O # 27224414 25	☐ 2 days			
	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Alpha-BHC	Arsenic	TSS	Trip Blank	Sample Specific Notes
MW-5-90	1/20/24	11 22	G	GW				X	X	X		
Trip Blank											X	trip blanks i ng VOC sam

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison B ☐Unknown

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

☐Return to Client ☐Disposal by Lab ☐Archive for_____ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No	Cooler Temp (°C) Obs'd _____ Corr'd _____ Therm ID No. _____		
Relinquished by: Michael Morgan	Company: SCS Engineers	Date/Time: 11/22/24 9	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time	Received by:	Company:	Date/Time:
Relinquished by:	Company	Date/Time:	Received in Laboratory by: CGC	Company: Eurofins	Date/Time: 11.22.24 1630

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

12/9/2024

Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 310-295911-1

SDG Number: Des Moines County Sanitary Landfill (Bracketing)

Login Number: 295911

List Source: Eurofins Cedar Falls

List Number: 1

Creator: Hirsch, Preston

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

Appendix B-2

Data Validation

Completed by: Michael Morgan
Date of Sampling: 6/11/2024
Lab Report Date: 11/1/2024
Site Name: Des Moines County Regional Landfill
Project Type: 1st 2024 Semi-Annual HMSP Sampling Event
Lab Report Number: 310-283669-1

	OK	NO	N/A	NOTES
Sample Collection and Sample Handling				
Chain of Custody	X			
Temperature	X			
Preservation	X			
Condition	X			
Case Narrative	X			
Holding Times	X			
Analytical Sensitivty and Blanks				
Method Blank Detections	X			No detections.
Trip Blank Detections	X			No detections.
Accuracy				
ICV/CCV		X		Method 8260D: The continuing calibration verification (CCV) associated with batch 310-424866 recovered below the upper control limit for 1,2-Dichloroethane (-21.2%D). The LCS associated with this CCV passed CCV criteria for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-424866/3). Method 8260D: The continuing calibration verification (CCV) associated with batch 310-424866 recovered above the upper control limit for Dichlorodifluoromethane (60.6%D). The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-424866/4). Method 8260D: The continuing calibration verification (CCV) associated with batch 310-425101 recovered above the upper control limit for Bromoform (23.1%D). The samples associated with this CCV were non detects for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-425101/3).
LCS/LCSD		X		Method 8270E: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 310-425054. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch. Method 8081B: The surrogate recovery for the LCS associated with preparation batch 310-424953 and analytical batch 310-424973 was outside the upper control limits. Method 6020B: The laboratory control sample (LCS) for preparation batch 310-424817 and analytical batch 310-427084 recovered outside control limits for the following analytes: Silver & Thallium. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

MS/MSD		X		Method 8081B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 310-424953 and analytical batch 310-424973 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.
Surrogates (organics only)	X			
Other QA QC samples		X		Method 8260D: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container: Trip Blank 3 (310-283669-14).

Precision

QA/QC Sample RPDs	X			
Field Duplicates	X			Sample MW-43 and duplicate MW-D had less than 50% RPD for analyzed parameters.

Completed by: Michael Morgan
Date of Sampling: 6/11/2024
Lab Report Date: 11/1/2024
Site Name: Des Moines County Regional Landfill
Project Type: 1st 2024 Semi-Annual HMSP Sampling Event (Continued)
Lab Report Number: 310-283673-1

	OK	NO	N/A	NOTES
Sample Collection and Sample Handling				
Chain of Custody	X			
Temperature	X			
Preservation		X		Method 6020B: The reference method requires samples to be preserved to a pH of <2. The following sample was received with insufficient preservation at a pH of >2: MW-D (310-283673-7). The sample(s) was preserved to the appropriate pH in the laboratory.
Condition	X			
Case Narrative	X			
Holding Times	X			
Analytical Sensitivty and Blanks				
Method Blank Detections	X			No detections.
Trip Blank Detections	X			No detections.
Accuracy				
ICV/CCV		X		Method 8260D: The continuing calibration verification (CCV) associated with batch 310-425101 recovered above the upper control limit for Bromoform (23.1%D). The samples associated with this CCV were non detects for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-425101/3). Method 8260D: The initial calibration verification (ICV) result for batch 310-425101 was above the upper control limit. The affected analyte is: Methyl Methacrylate. Sample results were non-detects, and have been reported as qualified data. Method 8270E: The continuing calibration verification (CCV) associated with batch 310-425029 recovered above the upper control limit for Safrole (23.0%D), 1,3-Dinitrobenzene (25.2%D), o,o',o'' Triethylphosphorothioate (22.0%D) and Dinoseb (24.1%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

LCS/LCSD		X		Method 8270E: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 310-424891 and analytical batch 310-425029 recovered outside control limits for the following analyte(s): 2,4-Dinitrophenol, 2- Nitrophenol and 4,6-Dinitro-2-methylphenol. 2,4-Dinitrophenol, 2-Nitrophenol and 4,6-Dinitro-2-methylphenol hasve been identified as poor performing analytes when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Method 8270E: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 310-424891 and analytical batch 310-425029 recovered outside control limits for the following analytes: 4-Chloroaniline and 4-Nitrophenol. Method 8270E: The laboratory control sample duplicate (LCSD) for preparation batch 310-424891 and analytical batch 310-425029 recovered outside control limits for multiple analytes. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported. Method 6020B: The laboratory control sample (LCS) for preparation batch 310-424817 and analytical batch 310-427207 recovered outside control limits for the following analytes: Silver & Thallium. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.
MS/MSD	X			
Surrogates (organics only)		X		Method 8270E: The surrogate recovery for the blank associated with preparation batch 310-424891 and analytical batch 310-425029 was outside the control limits. Method 8270E: Surrogate recovery for the following sample was outside of acceptance limits: PZ-10 (310-283673-3). There was insufficient holding time to perform a re-extraction; therefore, the data have been reported.
Other QA QC samples	X			

Precision

QA/QC Sample RPDs	X			
Field Duplicates	X			Sample MW-43 and duplicate MW-D had less than 50% RPD for analyzed parameters.

Completed by: Michael Morgan
Date of Sampling: 6/12/2024
Lab Report Date: 7/10/2024
Site Name: Des Moines County Regional Landfill
Project Type: 1st 2024 Semi-Annual HMSP Sampling Event (Bracketing)
Lab Report Number: 310-283664-1

	OK	NO	N/A	NOTES
Sample Collection and Sample Handling				
Chain of Custody	X			
Temperature	X			
Preservation	X			
Condition	X			
Case Narrative	X			
Holding Times	X			
Analytical Sensitivty and Blanks				
Method Blank Detections	X			No detections.
Trip Blank Detections	X			No detections.
Accuracy				
ICV/CCV	X			
LCS/LCSD	X			
MS/MSD	X			
Surrogates (organics only)		X		Method 8081B: The surrogate recovery for the LCS associated with preparation batch 310-424953 and analytical batch 310-424973 was outside the upper control limits.
Other QA QC samples	X			
Precision				
QA/QC Sample RPDs	X			
Field Duplicates			X	

Completed by: Michael Morgan
Date of Sampling: 11/19/2024
Lab Report Date: 12/4/2024
Site Name: Des Moines County Regional Landfill
Project Type: 2nd 2024 Semi-Annual HMSP Sampling Event
Lab Report Number: 310-295910-1

	OK	NO	N/A	NOTES
Sample Collection and Sample Handling				
Chain of Custody	X			
Temperature	X			
Preservation		X		Method 8260D: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid : MW-37 (310-295910-6), PZ-11 (310-295910-12), GW-Lagoon-Cell 1W (310-295910-13) and (310-295916-E-5). The requested target analyte list includes acrylonitrile, acid-labile compounds that degrades in an acidic medium. Method 8260D: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid : MW-1-99 (310-295910-2), MW-7-93 (310-295910-5), Trip Blank 1 (310-295910-9), Trip Blank 2 (310-295910-10), MW-43 (310-295910-11), MW-D (310-295910-14) and (310-295853-B-6). The requested target analyte list includes acrylonitrile, acid-labile compounds that degrades in an acidic medium. Method 8260D: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analytes requested. The following sample(s) was received preserved with hydrochloric acid. Vial preservation was pH <2 rather than pH 4-5. : MW-7-93 (310-295910-5). The requested target analyte list includes acrylonitrile, acid-labile compounds that degrades in an acidic medium.
Condition	X			
Case Narrative	X			
Holding Times		X		Method 8260D: The following sample was analyzed outside of analytical holding time for Acrylonitrile: PZ-11 (310-295910-12).
Analytical Sensitivty and Blanks				
Method Blank Detections		X		Biased High detection for Cobalt: MW-43, PZ-11, GW-Lagoon-Cell 1W and MW-D.
Trip Blank Detections	X			No detections.
Accuracy				
ICV/CCV		X		Method 8260D: The continuing calibration verification (CCV) associated with batch 310-441114 recovered above the upper control limit for Vinyl chloride (23.5 D), Chloroethane (29.2%D) and Trichlorofluoromethane (42.8%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 310-441114/4).

LCS/LCSD		X		Method 8151A: Surrogate and LCS recoveries for the following samples was below the control limits: MW-4-93 (310-295910-4), MW-39R (310-295910-7), (LCSD 500-797329/3-A) and (MB 500-797329/1-A). Re-extraction was performed outside of holding time with acceptable results. Both results have been reported. Method 8081B: The laboratory control sample (LCS) for preparation batch 310-441152 and analytical batch 310-441372 recovered outside control limits for the following analytes:
MS/MSD	X			
Surrogates (organics only)		X		Method 8081B: The surrogate recovery for the blank, LCS and LCSD associated with preparation batch 310-441152 and analytical batch 310-441372 was outside the upper control limits. Method 8081B: Surrogate recovery for the following samples were outside the upper control limit: MW-4-89 (310-295910-1), MW-4-90 (310-295910-3), MW-4-93 (310-295910-4) and MW-40R (310-295910-8). This sample did not contain any target analytes; therefore, re extraction and/or re-analysis was not performed. Method 8081B: Surrogate recovery for the following sample was outside control limits: MW-39R (310-295910-7). Evidence of matrix interferences is not obvious.
Other QA QC samples		X		Method 8260D: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container(s): MW-43 (310-295910-11). Method 8081B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 310-441152 and analytical batch 310-441372 recovered outside control limits for the following analytes: 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, alpha-BHC, beta-BHC, cis-Chlordane, delta-BHC, Dieldrin, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin aldehyde, gamma-BHC (Lindane), Heptachlor, Heptachlor epoxide, Methoxychlor and trans-Chlordane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Precision

QA/QC Sample RPDs	X			
Field Duplicates	X			Sample MW-43 and duplicate MW-D had less than 50% RPD for analyzed parameters.

Completed by: Michael Morgan
Date of Sampling: 11/20/2024
Lab Report Date: 12/9/2024
Site Name: Des Moines County Regional Landfill
Project Type: 2nd 2024 Semi-Annual HMSP Sampling Event (Bracketing)
Lab Report Number: 310-295911-1

	OK	NO	N/A	NOTES
Sample Collection and Sample Handling				
Chain of Custody	X			
Temperature	X			
Preservation		X		Method 8260D: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid : Trip Blank (310-295911-2) and (310-295853- B-6). The requested target analyte list includes acrylonitrile, acid-labile compounds that degrades in an acidic medium.
Condition	X			
Case Narrative	X			
Holding Times	X			
Analytical Sensitivty and Blanks				
Method Blank Detections	X			No detections.
Trip Blank Detections	X			No detections.
Accuracy				
ICV/CCV	X			
LCS/LCSD		X		Method 8081B: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 310-441152 and analytical batch 310-441372 recovered outside control limits for the following analytes: alpha-BHC. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.
MS/MSD	X			
Surrogates (organics only)		X		Method 8081B: The surrogate recovery for the blank, LCS and LCSD associated with preparation batch 310-441152 and analytical batch 310-441372 was outside the upper control limits. Method 8081B: Surrogate recovery for the following sample was outside the upper control limit: MW-5-90 (310-295911-1). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.
Other QA QC samples	X			
Precision				
QA/QC Sample RPDs	X			
Field Duplicates			X	

Appendix C-1

Summary of Groundwater Chemistry – HMSP

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Total Metals Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Antimony, mg/L (CAS NO - 7440-36-0)	2/8/2008	< 0.006	N/A	N/A	N/A	< 0.006	< 0.006	< 0.006	< 0.006	N/A	< 0.006	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.006	N/A	< 0.006	N/A	< 0.006	< 0.006	N/A	< 0.006	N/A	< 0.006	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.006	N/A	N/A	N/A	< 0.006	< 0.006	N/A	< 0.006	N/A	< 0.006	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.006	N/A	< 0.006	< 0.006	< 0.03	< 0.006	N/A	< 0.006	N/A	< 0.006	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.006	N/A	N/A	N/A	< 0.006	< 0.006	N/A	< 0.006	N/A	< 0.006	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.006	N/A	< 0.012	< 0.006	< 0.006	< 0.006	N/A	< 0.006	N/A	< 0.006	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 0.012	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	N/A	< 0.006	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	< 0.006	N/A	< 0.006	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 0.006	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A	< 0.006	< 0.006	N/A	N/A	N/A	N/A	< 0.006
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 0.006	< 0.006	< 0.006	N/A	< 0.006	< 0.006	< 0.006	< 0.006	N/A	< 0.006	< 0.006	< 0.006	< 0.006	N/A	N/A	N/A	N/A	< 0.006
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.006	N/A
	6/15/2010	N/A	< 0.006	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A	< 0.006	< 0.006	N/A	N/A	N/A	N/A	< 0.006
	8/27/2010	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	0.00822	< 0.006	N/A	N/A	N/A	< 0.006	< 0.006
	8/27/2010	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 0.006	< 0.006	N/A	N/A	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	N/A	< 0.006	< 0.006	< 0.006	N/A	N/A	N/A	< 0.006	< 0.006
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.006	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	< 0.006	N/A
	3/15/2011	< 0.006	< 0.006	N/A	N/A	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	N/A	N/A	N/A	< 0.006	< 0.006
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	< 0.006	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.006	N/A	N/A	N/A	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	N/A	N/A	N/A	N/A	< 0.006
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 0.006	N/A	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	0.00827	< 0.006	0.00769	< 0.006	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.018	N/A
	8/28/2012	< 0.006	N/A	N/A	N/A	< 0.006	< 0.006	N/A	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	N/A	N/A	N/A	< 0.012	< 0.012
	8/28/2012	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	< 0.012	N/A
	2/28/2013	< 0.006	N/A	N/A	N/A	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	N/A	N/A	N/A	< 0.006	< 0.006
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 0.006	N/A	N/A	N/A	< 0.006	< 0.006	< 0.006	0.00239	< 0.006	0.00166	< 0.006	0.00165	< 0.006	N/A	N/A	N/A	< 0.006	< 0.006
	10/22/2013	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 0.006	N/A	N/A	N/A	< 0.006	< 0.006	< 0.006	0.00514	< 0.006	0.00355	< 0.006	0.00561	< 0.006	N/A	N/A	N/A	N/A	< 0.006
	2/19/2014	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 0.006	< 0.006	N/A	N/A	< 0.006	N/A	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	N/A	N/A	N/A	< 0.006	< 0.006
	10/28/2014	N/A	N/A	N/A	N/A	< 0.006	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	0.00639	N/A	N/A	N/A	0.000366	N/A	0.00134	0.000738	< 0.001	0.000901	**0.00306**	0.000566	0.00392	N/A	N/A	N/A	< 0.001	< 0.001
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	0.000358	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 0.001	N/A	N/A	N/A	0.000244*	< 0.001	< 0.001	**0.00539**	< 0.001	< 0.001	0.000262*	0.000191*	< 0.001	N/A	N/A	N/A	< 0.001	N/A
	7/15/2015	N/A	N/A	N/A	N/A	0.000316*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	< 0.001	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 0.001	N/A	N/A	N/A	< 0.001	N/A	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	< 0.001	N/A	N/A	N/A	< 0.001	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	0.00096*	N/A	N/A	N/A
	3/29/2017	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	< 0.001	0.000227*	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.000744*	N/A	< 0.001	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	0.000843*	N/A	N/A	N/A
	8/7/2017	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	< 0.001	0.000252*	< 0.001	< 0.001	N/A	< 0.001	< 0.001	< 0.001	0.000355*	N/A	< 0.001	< 0.001
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	0.000817*	N/A	N/A	N/A
	5/21/2018	< 0.001	< 0.001	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.000549*	N/A	< 0.001	< 0.001
	5/21/2018	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 0.003	N/A	N/A	N/A	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	N/A	< 0.003	< 0.003
	5/7/2019	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A
	4/7/2020	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	**0.00232**	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00129*	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0.00301**	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.002	< 0.002	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	< 0.002	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.002	< 0.002	N/A	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	< 0.002	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A
Arsenic, mg/L (CAS NO - 7440-38-2)	2/8/2008	< 0.001	N/A	N/A	N/A	0.00422	0.00164	0.00282	< 0.001	N/A	0.00814	**0.0458**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.001	N/A	**0.0488**	N/A	< 0.001	0.00279	N/A	< 0.001	N/A	0.0233	**0.487**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	0.00124	N/A	N/A	N/A	0.119	0.0052	N/A	0.00126	N/A	0.0174	**0.14**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	0.00156	N/A	**0.00636**	0.00374	< 0.001	0.00178	N/A	0.00183	N/A	0.0106	**2.83**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	0.00133	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	0.00401	N/A	N/A	N/A	< 0.001	0.028	N/A	< 0.001	N/A	0.00564	**0.0786**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	0.00121	N/A	**0.213**	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A	0.00439	**0.0422**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	0.00148	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	**1.09**	0.00176	< 0.001	< 0.001	0.00454	< 0.001	N/A	0.00369	**0.134**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	0.00528	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	0.00166	N/A	0.00215	N/A	0.00585	**0.185**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 0.001	N/A	N/A	N/A	N/A	0.00564	N/A	N/A	N/A	N/A	0.00954	< 0.001	N/A	N/A	N/A	0.00704	N/A
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00483	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 0.001	0.00105	**0.0289**	N/A	< 0.001	0.00116	< 0.001	N/A	N/A	0.0034	**0.159**	0.00792	< 0.001	N/A	N/A	N/A	0.00526	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0381	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00162	N/A
	6/15/2010	N/A	< 0.003	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	0.0046	< 0.001	N/A	N/A	N/A	0.0506	N/A
	8/27/2010	N/A	< 0.003	N/A	N/A	N/A	N/A	N/A	N/A	0.0285	N/A	N/A	< 0.003	< 0.001	N/A	N/A	N/A	0.00446	0.0097
	8/27/2010	N/A	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 0.001	< 0.001	N/A	N/A	< 0.002	< 0.001	0.00124	< 0.003	0.0519	N/A	**0.0591**	0.00281	< 0.002	N/A	N/A	N/A	0.00398	0.00606
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00325	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0431	0.00432	N/A	N/A	N/A	N/A	N/A	N/A	0.00435	N/A
	3/15/2011	< 0.001	< 0.002	N/A	N/A	< 0.002	0.00133	< 0.001	< 0.024	0.0336	0.0108	**0.041**	0.00691	< 0.005	N/A	N/A	N/A	0.00203	0.00213
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.004	N/A	N/A	N/A	0.0366	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.001	N/A	N/A	N/A	< 0.001	< 0.002	0.00231	< 0.003	0.0653	< 0.002	**0.0472**	< 0.002	< 0.001	N/A	N/A	N/A	N/A	0.00224
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	0.00117	0.0745	0.00471	**0.0372**	< 0.004	< 0.001	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00381	N/A
	8/28/2012	< 0.001	N/A	N/A	N/A	< 0.001	0.0441	N/A	< 0.001	0.0868	0.0129	**0.0512**	0.00517	< 0.001	N/A	N/A	N/A	0.00809	0.00606
	8/28/2012	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	0.0117	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Total Metals Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Arsenic, mg/L (CAS NO - 7440-38-2)	2/28/2013	0.00127	N/A	N/A	N/A	< 0.001	0.0282	< 0.001	0.0023	0.0336	0.0191	0.0563	0.00217	< 0.001	N/A	N/A	N/A	0.00851	0.00736
	2/28/2013	N/A	N/A	N/A	N/A	N/A	0.0193	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 0.001	N/A	N/A	N/A	< 0.001	0.0143	0.00328	< 0.001	0.0484	0.00603	0.212	0.000942	< 0.001	N/A	N/A	N/A	0.0199	0.0103
	10/22/2013	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 0.001	N/A	N/A	N/A	< 0.001	0.00233	0.00296	< 0.002	0.0277	0.00135	0.0198	< 0.002	< 0.001	N/A	N/A	N/A	N/A	0.0029
	2/19/2014	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	0.00158	0.00185	N/A	N/A	< 0.001	N/A	0.00334	< 0.003	0.13	0.009	0.00902	< 0.002	< 0.001	N/A	N/A	N/A	0.01	0.00508
	10/28/2014	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 0.002	N/A	N/A	N/A	0.0019	N/A	0.00246	0.00108	0.0665	0.00614	0.125	0.00928	< 0.002	N/A	N/A	N/A	0.00491	0.0027
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	0.00239	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 0.002	N/A	N/A	N/A	< 0.002	0.00415	0.00269	< 0.002	0.0461	0.00144*	0.121	0.00148*	< 0.002	N/A	N/A	N/A	0.0352	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002	< 0.002	< 0.002	0.0425	0.00128*	0.0627	0.00121*	< 0.002	N/A	N/A	N/A	0.0301	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 0.002	N/A	N/A	N/A	< 0.002	N/A	0.00193*	0.000776*	0.0947	0.00114*	N/A	0.00177*	< 0.002	N/A	N/A	N/A	0.00328	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0914	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00163*	< 0.002	N/A	N/A	N/A
	3/29/2017	< 0.002	N/A	N/A	N/A	< 0.002	0.0266	0.00178*	0.000553*	0.0583	0.00303	0.0685	0.0023	< 0.002	0.00161*	< 0.002	N/A	0.00872	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00148*	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00213	0.000785*	N/A	N/A	N/A
	8/7/2017	< 0.002	N/A	N/A	N/A	< 0.002	0.0497	0.00166*	< 0.002	0.065	0.00222	N/A	0.00329	< 0.002	0.00125*	< 0.002	N/A	0.00334	0.00492
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00216	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000955*	0.00149*	N/A	N/A	N/A
	5/21/2018	< 0.002	0.000662*	N/A	0.0154	0.000655*	0.0127	0.00219	0.00112*	0.0591	0.00065*	0.0024	0.00217	< 0.002	0.00179*	0.000605*	N/A	N/A	0.00363
	5/21/2018	N/A	N/A	N/A	N/A	0.000578*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/10/2018	N/A	N/A	0.00429	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	0.000717*	N/A	N/A	N/A	0.00167	0.00333	0.00427	0.00404	0.11	0.00337	0.0505	0.00514	0.00178	0.00248	0.00111	N/A	0.00672	0.00265
	5/7/2019	< 0.002	N/A	N/A	0.00437	< 0.002	0.0017*	< 0.002	< 0.002	0.0448	< 0.002	0.00147*	0.0039	< 0.002	0.00148*	< 0.002	N/A	0.059	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0437	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 0.002	N/A	N/A	0.00463	< 0.002	0.0024	0.00166*	0.000872*	0.081	0.000811*	0.00503	0.00304	< 0.002	0.00169*	< 0.002	N/A	0.00648	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A
	4/7/2020	< 0.002	N/A	N/A	0.00119*	< 0.002	0.0018*	0.00267	0.00112*	0.0342	< 0.002	0.00673	0.00417	< 0.002	0.00255	< 0.002	N/A	0.0176	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00414	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 0.002	N/A	N/A	0.00169*	< 0.002	N/A	N/A	0.000891*	N/A	< 0.002	N/A	0.00209	N/A	0.00162*	< 0.002	N/A	0.00571	0.00503
	9/23/2020	N/A	N/A	N/A	N/A	0.00115*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 0.002	N/A	N/A	< 0.002	< 0.002	0.000804*	0.00123*	< 0.002	0.0482	0.000998*	N/A	0.00436	< 0.002	0.00143*	< 0.002	0.00425	0.0437	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00433	N/A	N/A
	7/27/2021	< 0.002	N/A	N/A	< 0.002	0.00207	N/A	N/A	0.0012*	N/A	0.000818*	N/A	0.00251	N/A	0.00112*	< 0.002	0.00544	0.029	N/A
	7/27/2021	N/A	N/A	N/A	N/A	0.00167*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0037	N/A	N/A
	3/1/2022	< 0.002	N/A	N/A	0.00078*	< 0.002	0.00267	0.00273	0.0013*	0.0229	< 0.002	N/A	0.0038	< 0.002	0.000894*	< 0.002	0.00337	0.00479	0.00205
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A
	8/16/2022	< 0.002	N/A	N/A	< 0.002	< 0.002	N/A	N/A	0.000788*	N/A	0.00147*	N/A	0.00507	N/A	0.00143*	< 0.002	0.00645	0.00875	0.0025
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000851*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 0.002	N/A	N/A	N/A	0.000585*	N/A	N/A	0.000921*	N/A	N/A	N/A	0.00241	N/A	0.0014*	0.000952*	N/A	0.0143	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00234	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 0.002	0.0021	0.00106*	0.0032	0.000565*	0.00161*	0.00669	0.0019*	0.00559	0.000786*	N/A	0.00344	< 0.002	0.00145*	0.00139	N/A	N/A	0.00133*
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000852*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 0.002	N/A	0.00145*	< 0.002	0.00143*	0.0015*	0.00229	0.00351	0.00886	0.000697*	N/A	0.00126*	< 0.002	0.00129*	< 0.002	0.00684	0.0542	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00725	N/A	N/A
	11/18/2024	< 0.002	N/A	N/A	0.000746*	0.00178*	N/A	N/A	0.0068	N/A	0.000722*	N/A	0.00219	N/A	0.00134*	< 0.002	0.00603	N/A	< 0.002
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00608	N/A	N/A
Barium, mg/L (CAS NO - 7440-39-3)	2/8/2008	0.109	N/A	N/A	N/A	0.182	0.0941	0.228	0.0375	N/A	0.57	0.416	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	0.153	N/A	0.522	N/A	0.0223	0.0603	N/A	0.0374	N/A	0.249	4.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	0.289	N/A	N/A	N/A	0.221	0.111	N/A	0.0678	N/A	0.71	4.57	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	0.0828	N/A	0.149	0.12	0.0402	0.109	N/A	0.0844	N/A	0.685	10.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	0.135	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	0.132	N/A	N/A	N/A	0.0239	3.65	N/A	0.0229	N/A	0.196	0.92	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	0.171	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	0.224	N/A	1.65	0.11	0.0196	0.0985	N/A	0.0304	N/A	0.234	3.63	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	0.332	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	2.38	0.0755	0.0295	0.0901	0.249	0.0306	N/A	0.301	4.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	0.465	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	0.074	N/A	0.0341	N/A	0.29	1.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	0.0555	N/A	N/A	N/A	N/A	0.217	N/A	N/A	N/A	N/A	0.0683	0.362	N/A	N/A	N/A	N/A	1.24
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0868	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	0.134	0.0394	0.453	N/A	0.0267	0.0753	0.202	0.0269	N/A	0.176	1.78	0.0669	0.252	N/A	N/A	N/A	N/A	1.01
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0266	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.979	N/A
	6/15/2010	N/A	0.0359	N/A	N/A	N/A	N/A	0.0884	N/A	N/A	N/A	N/A	0.066	0.371	N/A	N/A	N/A	N/A	2.5
	8/27/2010	N/A	0.0398	N/A	N/A	N/A	N/A	N/A	N/A	0.29	N/A	N/A	0.0516	0.461	N/A	N/A	N/A	1.63	1.44
	8/27/2010	N/A	0.0367	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	0.122	0.0309	N/A	N/A	0.0245	0.08	0.185	0.0471	0.437	N/A	0.583	0.052	0.343	N/A	N/A	N/A	1.877	1.1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.05	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.458	0.64	N/A	N/A	N/A	N/A	N/A	N/A	1.92	N/A
	3/15/2011	0.172	0.012	N/A	N/A	0.0189	0.389	0.167	0.0798	0.501	0.436	0.53	0.0566	0.536	N/A	N/A	N/A	0.393	0.796
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.47	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	0.0306	N/A	N/A	N/A	0.232	N/A	N/A	0.0396	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	0.129	N/A	N/A	N/A	0.0323	0.0703	0.268	0.0375	0.441	0.166	0.545	0.0392	0.392	N/A	N/A	N/A	0.414	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.406	N/A	N/A	N/A	N/A	N/A
	4/25/2012	0.119	N/A	N/A	0.143	0.0326	0.117	0.152	0.156	0.276	0.124	0.609	0.0418	0.383	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A
	8/28/2012	0.133	N/A	N/A	N/A	0.0262	0.697	N/A	0.0461	0.35	0.109	0.594	0.0476	0.398	N/A	N/A	N/A	2.59	1.92
	8/28/2012	0.115	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	0.193	N/A	N/A	N/A	N/A	N/A	0.38	N/A	N/A	N/A	4.99	N/A
	2/28/2013	0.0681	N/A	N/A	N/A	0.0157	0.435	0.128	0.0454	0.296	0.16	0.694	0.033	0.312	N/A	N/A	N/A	1.08	1.36
	2/28/2013	N/A	N/A	N/A	N/A	N/A	0.571	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	0.12	N/A	N/A	N/A	0.0386	0.511	0.204	0.0364	0.928	0.181	4.6	0.0352	0.427	N/A	N/A	N/A	3.51	2.25
	10/22/2013	0.0998	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	0.113	N/A	N/A	N/A	0.0226	0.424	0.215	0.0288	0.3	0.0631	0.517	0.0258	0.37	N/A	N/A	N/A	1.2	1.2
	2/19/2014	N/A	N/A	N/A	N/A	0.021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	0.144	0.0144	N/A	N/A	0.0244	N/A	0.2	0.0255	0.302	0.208	0.212	0.0402	0.606	N/A	N/A	N/A	3.52	0.405
	10/28/2014	N/A	N/A	N/A	N/A	0.0291	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	0.0997	N/A	N/A	N/A	0.0221	N/A	0.149	0.104	0.315	0.167	0.941	0.269	0.522	N/A	N/A	N/A	0.607	0.234
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	0.145	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	0.0882	N/A	N/A	0.0521	0.284	0.118	0.0617	0.17	0.144	0.495	0.0329	0.456	N/A	N/A	N/A	N/A	0.365	N/A
	7/15/2015	N/A	N/A	N/A	N/A	0.0481	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	0.0806	N/A	N/A	N/A	0.0264	0.268	0.119	0.0339	0.181	0.116	0.892	0.0364	0.373	N/A	N/A	N/A	0.307	N/A
	2/23/2016	N/A	N/A	N/A	N/A	0.0249	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	0.197	N/A	N/A	N/A	0.0391	N/A	0.188	0.0314	0.21	0.147	N/A	0.0244	0.412	N/A	N/A	N/A	0.248	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.217	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.203	0.0661	N/A	N/A	N/A
	3/29/2017	0.0899	N/A	N/A	N/A	0.0337	0.297	0.118	0.0279	0.175	0.151	0.63	0.0359	0.37	0.184	0.064	N/A	0.277	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.172	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.184	0.064	N/A	N/A	N/A
	8/7/2017	0.103	N/A	N/A	N/A	0.0361	0.427	0.13	0.027	0.189	0.175	N/A	0.0281	0.401	0.223	0.0894	N/A	0.261	0.128
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.173	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.264	0.0999	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Total Metals Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Barium, mg/L (CAS NO - 7440-39-3)	5/21/2018	0.0847	0.018	N/A	0.299	0.0265	0.275	0.113	0.0325	0.222	0.121	0.116	0.0238	0.401	0.241	0.0877	N/A	N/A	0.186
	5/21/2018	N/A	N/A	N/A	N/A	0.0268	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/10/2018	N/A	N/A	N/A	0.211	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	0.07	N/A	N/A	N/A	0.0423	0.0788	0.156	0.0287	0.317	0.141	0.646	0.0189	0.378	0.226	0.0823	N/A	0.332	0.161
	5/7/2019	0.103	N/A	N/A	0.108	0.0314	0.0633	0.101	0.0251	0.26	0.0963	0.118	0.0207	0.386	0.212	0.0742	N/A	0.356	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.254	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	0.0695	N/A	N/A	0.144	0.0415	0.0852	0.212	0.0278	0.303	0.102	0.273	0.0204	0.372	0.217	0.0827	N/A	0.267	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0791	N/A	N/A	N/A
	4/7/2020	0.0854	N/A	N/A	0.12	0.0289	0.0813	0.13	0.0298	0.297	0.0924	0.321	0.0233	0.392	0.24	0.0889	N/A	0.3	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0224	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	0.0772	N/A	N/A	0.144	0.0505	N/A	N/A	0.033	N/A	0.104	N/A	0.0188	N/A	0.2	0.0877	N/A	0.277	0.0856
	9/23/2020	N/A	N/A	N/A	N/A	0.0417	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	0.0885	N/A	N/A	0.102	0.0253	0.239	0.145	0.032	0.446	0.0997	N/A	0.0253	0.441	0.26	0.0998	0.499	0.379	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0873	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.532	N/A	N/A
	7/27/2021	0.0735	N/A	N/A	0.1	0.0446	N/A	N/A	0.0704	N/A	0.137	N/A	0.0175	N/A	0.187	0.086	0.594	0.291	N/A
	7/27/2021	N/A	N/A	N/A	N/A	0.0438	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.631	N/A	N/A
	3/1/2022	0.0808	N/A	N/A	0.115	0.0402	0.214	0.159	0.0301	0.334	0.0696	N/A	0.0206	0.377	0.229	0.0935	0.627	0.27	0.0919
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0913	N/A	N/A	N/A
	8/16/2022	0.0732	N/A	N/A	0.151	0.0364	N/A	N/A	0.0281	N/A	0.131	N/A	0.019	N/A	0.207	0.0991	0.545	0.31	0.074
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0318	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	0.0845	N/A	N/A	N/A	0.0301	N/A	N/A	0.0308	N/A	0.0939	N/A	0.017	N/A	0.224	0.0939	N/A	0.341	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0222	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	0.0833	0.0151	0.25	0.191	0.0377	0.213	0.195	0.0461	0.621	0.086	N/A	0.0196	0.412	0.25	0.153	N/A	N/A	0.0914
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0885	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	0.0797	N/A	0.164	0.122	0.0273	0.204	0.0996	0.0292	0.659	0.0735	N/A	0.0178	0.354	0.185	0.0835	0.474	0.396	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.494	N/A	N/A
	11/18/2024	0.0807	N/A	0.158	0.0893	N/A	N/A	N/A	0.0243	N/A	0.0868	N/A	0.0177	N/A	0.203	0.095	0.623	N/A	0.148
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.623	N/A	N/A
Beryllium, mg/L (CAS NO - 7440-41-7)	2/8/2008	< 0.001	N/A	N/A	N/A	0.00156	< 0.001	< 0.001	< 0.001	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.001	N/A	0.00452	N/A	< 0.001	< 0.001	N/A	< 0.001	N/A	0.00332	0.00176	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.001	N/A	N/A	N/A	0.00122	< 0.001	N/A	< 0.001	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.001	N/A	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A	< 0.001	0.00508	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.001	N/A	N/A	N/A	< 0.001	0.00907	N/A	< 0.001	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	0.00193	N/A	0.0221	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A	< 0.001	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	0.00111	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	0.0213	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	0.00128	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	0.00268	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	< 0.001	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 0.001	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	0.00516
	4/8/2010	< 0.001	< 0.001	0.00104	N/A	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	0.00379
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00137	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00407	N/A
	6/15/2010	N/A	< 0.001	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	0.0129
	8/27/2010	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	0.00309	N/A	N/A	< 0.001	< 0.001	N/A	N/A	N/A	0.00744	0.0106
	8/27/2010	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 0.001	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	0.00134	N/A	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	0.00274	0.00453
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00182	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	0.00806	N/A
	3/15/2011	< 0.001	< 0.001	N/A	N/A	0.00106	< 0.001	< 0.001	< 0.001	0.0137	< 0.001	< 0.001	0.00348	N/A	N/A	N/A	N/A	0.00145	0.00663
	7/21/2011	N/A	N/A	N/A	N/A	0.00204	N/A	N/A	N/A	< 0.001	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	0.0026	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	N/A	0.0021
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	0.00126	4/25/2012	< 0.001	0.002224	< 0.001	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00424	N/A
	8/28/2012	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	N/A	< 0.001	0.00136	< 0.001	< 0.001	0.00314	< 0.001	N/A	N/A	N/A	0.00654	0.00927
	8/28/2012	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	0.0161	N/A
	2/28/2013	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	0.00148	< 0.001	< 0.001	0.00126	< 0.001	N/A	N/A	N/A	0.00303	0.00676
	2/28/2013	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 0.001	N/A	N/A	N/A	< 0.001	0.000382	< 0.001	< 0.001	0.00457	< 0.001	0.00269	0.000437	0.000305	N/A	N/A	N/A	0.00822	0.00974
	10/22/2013	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	0.00122	< 0.001	0.000409*	< 0.001	< 0.001	N/A	N/A	N/A	N/A	0.00587
	2/19/2014	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	0.00024	< 0.001	N/A	N/A	N/A	N/A	< 0.001	< 0.001	0.000366	< 0.001	< 0.001	0.00127	0.000383	N/A	N/A	N/A	0.0147	0.00152
	3/18/2015	< 0.001	N/A	N/A	N/A	0.000162	N/A	N/A	< 0.001	0.000459	< 0.001	0.000147*	0.000881	< 0.001	N/A	N/A	N/A	0.00089	0.00262
	7/15/2015	< 0.001	N/A	N/A	N/A	< 0.001	0.000079*	0.000059*	0.000041	< 0.001	< 0.001	0.000092*	< 0.001	0.000041*	N/A	N/A	N/A	0.000107*	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	< 0.001	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 0.001	N/A	N/A	N/A	< 0.001	N/A	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	< 0.001	N/A	N/A	N/A	< 0.001	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A	N/A	N/A
	3/29/2017	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A	N/A	N/A
	8/7/2017	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	< 0.001
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	0.000311*	N/A	N/A	N/A
	5/21/2018	< 0.001	< 0.001	N/A	0.00081	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A	< 0.001
	5/21/2018	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	< 0.001
	5/7/2019	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	0.00161	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	4/7/2020	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00044*	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	< 0.001	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Total Metals Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Cadmium, mg/L (CAS NO - 7440-43-9)	2/8/2008	0.000521	N/A	N/A	N/A	< 0.0005	0.000544	0.000559	< 0.0005	N/A	< 0.0005	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	0.000992	N/A	**0.00332**	N/A	< 0.0005	0.003	N/A	0.000568	N/A	0.00332	**0.00232**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	0.000836	N/A	N/A	N/A	0.00051	< 0.0005	N/A	0.0022	N/A	< 0.0005	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.0005	N/A	< 0.0005	< 0.0005	< 0.0005	0.000819	N/A	0.000647	N/A	0.00822	**0.0161**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	0.000948	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	0.00432	N/A	N/A	N/A	0.00196	0.00382	N/A	0.003868	N/A	0.00853	**0.00194**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	0.000918	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	0.00248	N/A	**0.0198**	< 0.0005	0.000614	0.00324	N/A	0.000568	N/A	0.00779	**0.00476**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	0.00197	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	**0.0148**	< 0.0005	0.000716	0.000513	0.00484	0.000599	N/A	< 0.0005	**0.000837**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	0.000982	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	0.000725	N/A	0.00119	N/A	0.00122	**0.00138**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 0.0005	N/A	N/A	N/A	N/A	0.000931	N/A	N/A	N/A	N/A	0.000859	< 0.0005	N/A	N/A	N/A	N/A	0.00258
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	0.00152	< 0.0005	**0.00108**	N/A	0.00102	0.0017	0.000907	0.00138	N/A	0.00141	**0.00147**	0.000878	0.00119	N/A	N/A	N/A	N/A	0.00185
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00149	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000813	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0012	N/A
	6/15/2010	N/A	0.000511	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	< 0.0005	< 0.0005	N/A	N/A	N/A	N/A	0.00586
	8/27/2010	N/A	0.00268	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	0.000745	0.000838	N/A	N/A	N/A	0.00149	0.00245
	8/27/2010	N/A	0.00396	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	0.00144	0.0011	N/A	N/A	< 0.0005	0.000655	0.00234	< 0.0005	< 0.0005	N/A	< 0.0005	< 0.0005	0.00083	N/A	N/A	N/A	0.000973	0.00223
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	0.00168	N/A
	3/15/2011	< 0.0005	< 0.0005	N/A	N/A	0.000627	0.00114	0.000592	0.000608	0.000779	0.000664	< 0.0005	0.00166	0.000554	N/A	N/A	N/A	< 0.0005	0.00129
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000708	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	< 0.0005	N/A	N/A	0.00204	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	0.00105	N/A	N/A	N/A	0.00131	0.00192	0.00166	< 0.0005	< 0.0005	< 0.0005	**0.00606**	0.00163	< 0.0005	N/A	N/A	N/A	N/A	0.00141
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A
	4/25/2012	0.0053	N/A	N/A	< 0.0005	0.000515	0.000982	0.000614	0.000569	< 0.0005	0.00128	**0.00159**	0.00124	0.00589	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00135	N/A
	8/28/2012	< 0.0005	N/A	N/A	N/A	0.000765	0.000678	N/A	< 0.0005	< 0.0005	0.00154	**0.000894**	0.00135	< 0.0005	N/A	N/A	N/A	0.00179	0.0033
	8/28/2012	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	0.00103	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	0.00578	N/A
	2/28/2013	0.000748	N/A	N/A	N/A	0.000908	0.00437	0.00311	0.00312	< 0.0005	0.000664	**0.003**	< 0.0005	0.00171	N/A	N/A	N/A	0.00233	0.00212
	2/28/2013	N/A	N/A	N/A	N/A	N/A	0.00111	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	0.00274	N/A	N/A	N/A	0.000984	0.00383	0.00282	0.0016	0.000414	0.00579	**0.00651**	0.00301	0.000347	N/A	N/A	N/A	0.00176	0.00286
	10/22/2013	0.00407	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	0.00036	N/A	N/A	N/A	0.000557	0.00124	0.000966	0.000452	0.000369	0.000636	**0.00051**	0.000349	0.00022	N/A	N/A	N/A	N/A	0.00263
	2/19/2014	N/A	N/A	N/A	N/A	0.00087	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	0.000175	0.000248	N/A	N/A	0.0004	N/A	0.000334	0.000738	< 0.0005	0.000536	**0.00114**	0.00117	0.00105	N/A	N/A	N/A	0.00341	0.000511
	10/28/2014	N/A	N/A	N/A	N/A	0.00103	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	0.00125	N/A	N/A	N/A	0.000295	N/A	0.000718	0.000851	0.000523	0.000752	**0.00133**	0.000961	0.000629	N/A	N/A	N/A	0.00159	0.000631
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	0.000935	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 0.0005	N/A	N/A	N/A	0.000203*	< 0.0005	0.000113*	**0.00039**	< 0.0005	0.000163*	< 0.0005	0.000213*	< 0.0005	N/A	N/A	N/A	< 0.0005	N/A
	7/15/2015	N/A	N/A	N/A	N/A	0.000174*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 0.0005	N/A	N/A	N/A	< 0.0005	< 0.0005	0.000276*	< 0.0005	< 0.0005	0.000154*	< 0.0005	0.000115*	< 0.0005	N/A	N/A	N/A	< 0.0005	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 0.0005	N/A	N/A	N/A	0.000058*	N/A	0.000321*	< 0.0005	< 0.0005	0.000123*	N/A	< 0.0005	< 0.0005	N/A	N/A	N/A	< 0.0005	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00021*	0.000038*	N/A	N/A	N/A
	3/29/2017	< 0.0005	N/A	N/A	N/A	0.000198*	0.000221*	0.000088*	0.000066*	< 0.0005	0.000196*	0.000088*	0.000302*	0.000174*	0.000111*	< 0.0005	N/A	< 0.0005	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000093*	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000064*	0.000049*	N/A	N/A	N/A
	8/7/2017	0.000433*	N/A	N/A	N/A	< 0.0005	0.000059*	0.000047*	0.000171*	< 0.0005	0.000211*	N/A	< 0.0005	< 0.0005	0.000068*	0.000092*	N/A	< 0.0005	0.000278*
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000173*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000074*	0.000055*	N/A	N/A	N/A
	5/21/2018	0.000106*	< 0.0005	N/A	0.000514	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.000146*	**0.000671**	< 0.0005	< 0.0005	< 0.0005	< 0.0005	N/A	< 0.0005	< 0.0005
	5/21/2018	N/A	N/A	N/A	N/A	0.000081*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 0.0005	N/A	N/A	N/A	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	N/A	< 0.0005	< 0.0005
	5/7/2019	0.000085*	N/A	N/A	0.000188	< 0.0005	0.000417*	0.000286*	< 0.0005	< 0.0005	0.000209*	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	N/A	< 0.0005	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	0.000065*	N/A	N/A	< 0.0001	< 0.0001	0.000063*	< 0.0001	0.000071*	< 0.0001	**0.000414**	**0.000107**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	N/A	< 0.0001	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0001	N/A	N/A	N/A
	4/7/2020	0.000068*	N/A	N/A	< 0.0001	0.000044*	**0.000264**	< 0.0001	**0.000611**	< 0.0001	**0.000151**	**0.000191**	< 0.0001	< 0.0001	< 0.0001	< 0.0001	N/A	< 0.0001	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0001	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0001	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0001	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0.000599**	N/A	**0.000114**	N/A	N/A	N/A	N/A	N/A	< 0.0001	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0001	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.0001	< 0.0001	N/A	< 0.0001	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0001	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	0.000058*	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0001	N/A	N/A	N/A	< 0.0001	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.0002	< 0.0002	N/A	< 0.0002	N/A	N/A	N/A	< 0.0002	< 0.0002	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	**0.000233**	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A
Chromium, mg/L (CAS NO - 7440-47-3)	2/8/2008	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.02	N/A	< 0.02	N/A	< 0.02	< 0.02	N/A	< 0.02	N/A	0.0256	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	0.0481	N/A	N/A	N/A	0.0264	< 0.02	N/A	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	N/A	< 0.02	**0.0798**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.02	N/A	N/A	N/A	< 0.02	< 0.06	N/A	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.02	N/A	0.308	< 0.02	< 0.02	< 0.02	N/A	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	**0.223**	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 0.02	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	N/A	< 0.02
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 0.02	< 0.02	< 0.1	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	N/A	< 0.02
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A
	6/15/2010	N/A	< 0.02	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	< 0.02
	8/27/2010	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	< 0.02	< 0.02	N/A	N/A	N/A	0.242	0.15
	8/27/2010	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 0.02	< 0.02	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A
	3/15/2011	< 0.02	< 0.02	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	0.0326	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	< 0.02	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 0.02	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0838	N/A
	8/28/2012	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	0.0214	< 0.02	N/A	N/A	N/A	< 0.02	0.0319
	8/28/2012	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	0.76	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Total Metals Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Chromium, mg/L (CAS NO - 7440-47-3)	2/28/2013	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	0.00269	N/A	N/A	N/A	0.00437	0.00442	0.00586	0.00827	0.0133	0.00537	0.00819*	0.00892	0.00859	N/A	N/A	N/A	0.0103	0.0107
	10/22/2013	0.00717	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.00208	N/A	N/A	N/A	N/A	0.00177
	2/19/2014	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 0.02	< 0.02	N/A	N/A	0.00369	N/A	< 0.02	< 0.02	0.00761	< 0.02	< 0.02	0.00445	0.00444	N/A	N/A	N/A	0.0134	0.00509
	10/28/2014	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	0.00145	N/A	N/A	N/A	< 0.005	N/A	< 0.005	< 0.005	0.00158	< 0.005	0.00336*	0.0134	< 0.005	N/A	N/A	N/A	< 0.005	0.00166
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 0.005	N/A	N/A	N/A	< 0.005	0.00411*	< 0.005	0.00243	0.00186*	< 0.005	< 0.005	< 0.005	0.00236*	N/A	N/A	N/A	0.00147*	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 0.005	N/A	N/A	N/A	< 0.005	< 0.005	0.00564	< 0.005	0.0119	< 0.005	0.00161*	< 0.005	0.00399*	N/A	N/A	N/A	0.00352*	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 0.005	N/A	N/A	N/A	< 0.005	N/A	< 0.005	< 0.005	< 0.005	0.000595*	N/A	0.00038*	0.00341*	N/A	N/A	N/A	< 0.005	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00141*	< 0.005	N/A	N/A	N/A
	3/29/2017	< 0.005	N/A	N/A	N/A	< 0.005	< 0.005	< 0.005	0.00156*	< 0.005	0.000755*	< 0.005	< 0.005	0.00398*	< 0.005	< 0.005	N/A	0.000746*	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	< 0.005	N/A	N/A	N/A
	8/7/2017	< 0.005	N/A	N/A	N/A	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	0.00339*	< 0.005	< 0.005	N/A	< 0.005	< 0.005
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	0.000823*	N/A	N/A	N/A
	5/21/2018	< 0.005	< 0.005	N/A	0.0136	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.003*	< 0.005	< 0.005	N/A	N/A	< 0.005
	5/21/2018	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	0.00395*	N/A	N/A	N/A	0.00444*	0.00417*	0.00386*	0.00361*	0.00331*	0.00428*	0.00212*	0.00412*	0.00661	0.00383*	0.00298*	N/A	0.00269*	0.00376*
	5/7/2019	0.0012*	N/A	N/A	0.00194	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00202*	< 0.005	< 0.005	0.00321*	< 0.005	< 0.005	N/A	< 0.005	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 0.005	N/A	N/A	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00267*	< 0.005	N/A	N/A	< 0.005	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	4/7/2020	< 0.005	N/A	N/A	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00235*	< 0.005	< 0.005	N/A	< 0.005	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 0.005	N/A	N/A	< 0.005	< 0.005	N/A	N/A	0.0249	N/A	< 0.005	N/A	0.00111*	N/A	< 0.005	< 0.005	N/A	< 0.005	< 0.005
	9/23/2020	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 0.005	N/A	N/A	< 0.005	< 0.005	N/A	< 0.005	0.00259*	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	0.00161*	< 0.01	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	7/27/2021	< 0.005	N/A	N/A	< 0.005	< 0.005	N/A	N/A	0.00158*	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	0.00119*	< 0.005	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	3/1/2022	< 0.005	N/A	N/A	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	8/16/2022	< 0.005	N/A	N/A	< 0.005	< 0.005	N/A	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	0.00131*	< 0.005	< 0.005
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 0.005	N/A	N/A	N/A	< 0.005	N/A	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	0.0019*	N/A	< 0.005	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	0.00242*	< 0.005	0.00496	N/A	N/A	< 0.005
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 0.005	N/A	< 0.005	< 0.005	< 0.005	N/A	< 0.005	< 0.005	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	0.00125*	0.00471*	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00131*	N/A	N/A
	11/18/2024	< 0.005	N/A	N/A	< 0.005	< 0.005	N/A	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	< 0.005	N/A	< 0.005
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
Cobalt, mg/L (CAS NO - 7440-48-4)	2/8/2008	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	N/A	0.0418	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.02	N/A	0.0706	N/A	< 0.02	0.0264	N/A	< 0.02	N/A	0.0826	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	N/A	< 0.02	N/A	0.0634	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	N/A	0.0541	0.301	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.02	N/A	N/A	N/A	< 0.02	0.0739	N/A	< 0.02	N/A	0.0579	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.02	N/A	0.536	< 0.02	< 0.02	< 0.02	N/A	< 0.02	N/A	0.0388	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	0.274	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	0.0287	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	0.0256	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	< 0.02	N/A	0.0252	0.0203	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 0.02	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	0.0278	< 0.02	N/A	N/A	N/A	N/A	< 0.02
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0234	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	0.0029	0.00673	0.141	N/A	< 0.00155	0.0325	0.00839	0.0109	N/A	0.0258	0.0127	0.0298	0.00224	N/A	N/A	N/A	N/A	0.0191
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0125	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.065	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0363	N/A
	6/15/2010	N/A	0.00494	N/A	N/A	N/A	N/A	< 0.00155	N/A	N/A	N/A	N/A	0.0273	< 0.00155	N/A	N/A	N/A	N/A	0.0355
	8/27/2010	N/A	0.00657	N/A	N/A	N/A	N/A	N/A	N/A	0.0271	N/A	N/A	0.0259	0.00301	N/A	N/A	N/A	0.0717	0.0669
	8/27/2010	N/A	0.00754	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 0.00155	0.00683	N/A	N/A	< 0.00155	0.0268	0.00911	0.00294	0.0388	N/A	0.00342	0.0223	< 0.00155	N/A	N/A	N/A	0.0253	0.0135
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0235	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0447	0.0276	N/A	N/A	N/A	N/A	N/A	N/A	0.0459	N/A
	3/15/2011	0.00476	0.00321	N/A	N/A	0.00589	0.0243	0.0104	0.0182	0.0843	0.0291	0.00728	0.0309	0.00685	N/A	N/A	N/A	0.0229	0.0223
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00516	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	0.0105	N/A	N/A	N/A	0.0275	N/A	N/A	0.022	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	0.00255	N/A	N/A	N/A	< 0.00155	0.0165	0.011	0.00881	0.0495	0.022	0.00535	0.021	< 0.00155	N/A	N/A	N/A	N/A	0.0101
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.00155	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 0.00155	N/A	N/A	0.00272	< 0.00155	0.011	0.0142	0.00407	0.0395	0.022	0.00576	0.0233	< 0.00155	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.028	N/A
	8/28/2012	< 0.00155	N/A	N/A	N/A	< 0.00155	0.00453	N/A	0.00985	0.0438	0.0338	< 0.00155	0.0278	< 0.00155	N/A	N/A	N/A	0.0276	0.0456
	8/28/2012	< 0.00155	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	0.00856	N/A	N/A	N/A	N/A	N/A	< 0.00155	N/A	N/A	N/A	0.187	N/A
	2/28/2013	< 0.00132	N/A	N/A	N/A	0.00243	0.0133	0.0102	0.0113	0.0346	0.022	0.00735	0.0135	0.00132	N/A	N/A	N/A	0.0265	0.0114
	2/28/2013	N/A	N/A	N/A	N/A	N/A	0.00977	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 0.00132	N/A	N/A	N/A	< 0.00132	0.0076	0.00974	0.00948	0.0531	0.0257	0.00439	0.016	< 0.00132	N/A	N/A	N/A	0.0638	0.0227
	10/22/2013	0.0048	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 0.00132	N/A	N/A	N/A	< 0.00132	0.00144	0.00528	0.00516	0.0357	0.0249	< 0.00132	0.0115	< 0.00132	N/A	N/A	N/A	N/A	0.0155
	2/19/2014	N/A	N/A	N/A	N/A	< 0.00132	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 0.00241	< 0.00241	N/A	N/A	0.00317	N/A	0.0119	0.00977	0.0387	0.0325	< 0.00241	0.0174	0.00326	N/A	N/A	N/A	0.0773	0.0149
	10/28/2014	N/A	N/A	N/A	N/A	< 0.00241	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	0.000409	N/A	N/A	N/A	0.00247	N/A	0.0115	0.00153	0.0575	0.0294	0.00476	0.0174	0.000193	N/A	N/A	N/A	0.0268	0.00666
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	0.0109	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 0.0009	N/A	N/A	N/A	0.000159*	0.00072	0.00865	0.00349	0.0182	0.0196	0.000897	0.00924	< 0.0005	N/A	N/A	N/A	0.0216	N/A
	7/15/2015	N/A	N/A	N/A	N/A	0.000134*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 0.0005	N/A	N/A	N/A	0.000158*	0.000131*	0.00122	0.00942	0.0217	0.0285	0.00239	0.0211	< 0.0005	N/A	N/A	N/A	0.0225	N/A
	2/23/2016	N/A	N/A	N/A	N/A	0.000124*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	0.000328*	N/A	N/A	N/A	0.000738	N/A	0.0105	0.0121	0.0158	0.0245	N/A	0.00521	< 0.0005	N/A	N/A	N/A	0.0072	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0147	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00606	0.000059*	N/A	N/A	N/A
	3/29/2017	< 0.0005	N/A	N/A	N/A	0.000254*	0.000526	0.00641	0.0093	0.0219	0.0277	0.00133	0.0287	< 0.0005	0.0043	0.000048*	N/A	0.0148	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00394	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0034	< 0.0005	N/A	N/A	N/A
	8/7/2017	0.000106*	N/A	N/A	N/A	0.000443*	0.00214	0.0064	0.0021	0.0153	0.0263	N/A	0.0185	< 0.0005	0.00161	0.000122*	N/A	0.0115	0.00332
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0257	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00256	0.00068	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Total Metals Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Cobalt, mg/L (CAS NO - 7440-48-4)	5/21/2018	< 0.0005	0.000512	N/A	0.0117	0.000227*	0.000305*	0.00731	0.0111	0.0265	0.0236	0.00125	0.00423	< 0.0005	0.00218	< 0.0005	N/A	N/A	0.00291
	5/21/2018	N/A	N/A	N/A	N/A	0.000231*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/10/2018	N/A	N/A	N/A	0.00385	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 0.001	N/A	N/A	N/A	0.000436*	0.00902	0.00738	0.00967	0.0103	0.0211	0.00225	0.00243	< 0.001	0.00174	< 0.001	N/A	0.0194	0.00227
	5/7/2019	< 0.0005	N/A	N/A	0.00358	0.000162*	0.00853	0.00722	0.00898	0.0127	0.0191	0.00128	0.0181	< 0.0005	0.00144	< 0.0005	N/A	0.0265	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0127	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 0.0005	N/A	N/A	0.0021	0.000308*	0.00961	0.0056	0.0107	0.00087	0.0167	0.00142	0.00958	< 0.0005	0.00149	< 0.0005	N/A	0.0131	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A
	4/7/2020	< 0.0005	N/A	N/A	0.00209	0.000147*	0.0043	0.00767	0.00405	0.00355	0.0142	0.0024	0.0228	< 0.0005	0.00142	< 0.0005	N/A	0.0241	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0228	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	0.0117	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00181	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0018	N/A	N/A
	7/27/2021	0.000761	N/A	N/A	0.00199	0.00165	N/A	N/A	0.0126	N/A	0.0239	N/A	0.0101	N/A	0.00125	< 0.0005	0.00184	0.0179	N/A
	7/27/2021	N/A	N/A	N/A	N/A	0.00178	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00135	N/A	N/A
	3/1/2022	< 0.0005	N/A	N/A	0.000786	< 0.0005	0.000217*	0.0075	0.0134	0.0075	0.00483	N/A	0.0259	N/A	0.00162	< 0.0005	0.00122	0.0108	0.00326
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A
	8/16/2022	< 0.0005	N/A	N/A	0.00119	0.000235*	N/A	N/A	0.0105	N/A	0.023	N/A	0.019	N/A	0.00138	< 0.0005	0.00236	0.0339	0.000839
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0143	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 0.0005	N/A	N/A	N/A	0.000671	N/A	N/A	0.00852	N/A	0.0163	N/A	0.0149	N/A	0.00176	0.000504	N/A	0.0418	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0176	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 0.0005	0.000281*	0.000271*	0.000286*	0.00103	< 0.0005	0.00542	0.0119	0.000431*	0.0124	N/A	0.00517	< 0.0005	0.00129	0.00174	N/A	N/A	0.00348
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0127	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 0.0005	N/A	0.000309*	0.000864	0.00213	N/A	0.00374	0.0164	N/A	0.00902	N/A	0.00706	N/A	0.00128	< 0.0005	0.00213	0.0353	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00205	N/A	N/A
	11/18/2024	< 0.0005	N/A	N/A	0.00141	0.00268	N/A	N/A	0.0498	N/A	0.0127	N/A	0.00265	N/A	0.00141	< 0.0005	0.00215	N/A	0.000504
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0022	N/A	N/A
Copper, mg/L (CAS NO - 7440-50-8)	2/8/2008	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.02	N/A	0.0306	N/A	< 0.02	< 0.02	N/A	< 0.02	N/A	< 0.02	N/A	0.0968	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	0.0397	N/A	N/A	N/A	0.0273	< 0.02	N/A	< 0.02	N/A	< 0.02	0.0675	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	N/A	< 0.02	0.356	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.02	N/A	N/A	N/A	< 0.02	< 0.06	N/A	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.02	N/A	1.25	< 0.02	< 0.02	< 0.02	N/A	< 0.02	N/A	< 0.02	0.114	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	0.403	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	0.054	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	< 0.02	N/A	< 0.02	0.0387	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 0.02	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	0.0208	N/A
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0216	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 0.02	< 0.02	< 0.1	N/A	< 0.02	0.0256	< 0.02	< 0.02	N/A	< 0.02	0.0546	< 0.02	< 0.02	N/A	N/A	N/A	N/A	0.0492
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0445	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A
	6/15/2010	N/A	< 0.02	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	0.0508
	8/27/2010	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	< 0.02	< 0.02	N/A	N/A	N/A	0.166	0.149
	8/27/2010	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 0.02	< 0.02	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	0.0229	0.0258
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0212	0.0294	N/A	N/A	N/A	N/A	N/A	N/A	0.0378	N/A
	3/15/2011	< 0.02	< 0.02	N/A	N/A	< 0.02	0.0299	< 0.02	< 0.02	0.0519	0.0279	0.0256	0.0421	< 0.02	N/A	N/A	N/A	< 0.02	0.0338
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	0.0278	N/A	N/A	N/A	< 0.02	N/A	N/A	0.0388	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.02	N/A	N/A	N/A	0.0246	0.0233	0.0267	0.0243	< 0.02	< 0.02	< 0.02	0.0314	< 0.02	N/A	N/A	N/A	N/A	0.0253
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 0.02	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.0283	< 0.02	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0482	N/A
	8/28/2012	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	0.0425	< 0.02	N/A	N/A	N/A	< 0.02	0.0622
	8/28/2012	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	0.592	N/A
	2/28/2013	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	< 0.02	0.0215
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	0.00296	N/A	N/A	N/A	0.0075	0.0212	0.00644	0.00381	< 0.02	0.00285	0.172	0.00699	N/A	0.00469	N/A	N/A	< 0.02	0.0407
	10/22/2013	0.00601	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	0.00159	N/A	N/A	N/A	0.00493	0.00346	0.00564	0.00441	0.286	0.011	0.0218	0.00826	0.00184	N/A	N/A	N/A	N/A	0.0254
	2/19/2014	N/A	N/A	N/A	N/A	0.00474	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	0.00582	0.00793	N/A	N/A	N/A	N/A	0.0103	0.00898	0.0069	0.00798	0.0205	0.0323	0.012	N/A	N/A	N/A	0.019	0.0211
	3/18/2015	0.00311	N/A	N/A	N/A	0.00418	N/A	0.00728	0.00881	0.0468	0.00544	0.0128	0.0254	0.00564	N/A	N/A	N/A	0.0212	0.00929
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	0.00249	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 0.002	N/A	N/A	N/A	0.00318	0.00169*	0.00064*	0.00797	0.00862	0.0013*	0.00646	0.00179*	< 0.002	N/A	N/A	N/A	< 0.002	N/A
	7/15/2015	N/A	N/A	N/A	N/A	0.00262	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 0.002	N/A	N/A	N/A	0.00385	0.00176*	0.00086*	< 0.002	0.000791*	0.0011*	0.00147*	0.00287	0.000528*	N/A	N/A	N/A	< 0.002	N/A
	2/23/2016	N/A	N/A	N/A	N/A	0.00327	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	0.000204*	N/A	N/A	N/A	0.00163*	N/A	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	< 0.005	N/A	N/A	N/A	0.00195*	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00386*	< 0.005	N/A	N/A	N/A
	3/29/2017	< 0.005	N/A	N/A	N/A	0.00322*	0.00228*	< 0.005	< 0.005	< 0.005	0.00257*	0.00381*	0.00244*	< 0.005	< 0.005	< 0.005	N/A	< 0.005	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	< 0.005	N/A	N/A	N/A
	8/7/2017	< 0.005	N/A	N/A	N/A	0.00295*	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	< 0.005
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	< 0.005	N/A	N/A	N/A
	5/21/2018	< 0.005	< 0.005	N/A	0.0161	0.00283*	< 0.005	< 0.005	< 0.005	0.00246*	< 0.005	0.00429*	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A	< 0.005
	5/21/2018	N/A	N/A	N/A	N/A	0.00342*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	0.00164*	N/A	N/A	N/A	0.00294	0.00352	0.00182*	0.00188*	0.00203	0.00138*	0.00932*	0.00945*	0.00345*	0.000947*	0.00118*	N/A	0.000916*	0.00127*
	5/7/2019	< 0.005	N/A	N/A	0.00362	< 0.005	0.0117	< 0.005	< 0.005	< 0.005	0.0028*	< 0.005	0.00531	< 0.005	< 0.005	< 0.005	N/A	< 0.005	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 0.005	N/A	N/A	< 0.005	< 0.005	< 0.005	< 0.005	0.0176	< 0.005	0.00297*	0.00496*	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	4/7/2020	< 0.005	N/A	N/A	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00569	0.00402*	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 0.005	N/A	N/A	< 0.005	< 0.005	N/A	N/A	0.0373	N/A	0.00603	N/A	< 0.005	N/A	< 0.005	< 0.005	N/A	< 0.005	< 0.005
	9/23/2020	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 0.005	N/A	N/A	< 0.005	0.00306*	N/A	< 0.005	0.00189*	N/A	0.00599	N/A	0.00159*	N/A	< 0.005	< 0.005	< 0.005	< 0.01	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	7/27/2021	< 0.005	N/A	N/A	< 0.005	N/A	N/A	N/A	0.0195	N/A	N/A	N/A	0.00407*	N/A	< 0.005	< 0.005	< 0.005	< 0.005	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	3/1/2022	< 0.005	N/A	N/A	0.00221*	< 0.005	< 0.005	0.00357*	< 0.005	< 0.005	0.00572	N/A	< 0.005	N/A	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	8/16/2022	< 0.005	N/A	N/A	< 0.005	0.00219*	N/A	N/A	< 0.005	N/A	0.00521	N/A	< 0.005	N/A	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 0.005	N/A	N/A	N/A	0.00443*	N/A	N/A	< 0.005	N/A	0.00417*	N/A	< 0.005	N/A	< 0.005	< 0.005	N/A	< 0.005	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 0.005	< 0.005	< 0.005	0.343	0.0022*	0.00237*	< 0.005	0.0131	< 0.005	0.00333*	N/A	< 0.005	< 0.005	< 0.005	0.00483	N/A	N/A	< 0.005
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.003*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Total Metals Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Copper, mg/L (CAS NO - 7440-50-8)	6/11/2024	< 0.005	N/A	< 0.005	< 0.005	0.00201*	N/A	< 0.005	0.00253*	N/A	0.00419*	N/A	< 0.005	N/A	< 0.005	< 0.005	0.003*	0.00553	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	11/18/2024	< 0.005	N/A	N/A	< 0.005	< 0.005	N/A	N/A	0.00291*	N/A	0.00358*	N/A	< 0.005	N/A	< 0.005	< 0.005	< 0.005	N/A	< 0.005
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
Lead, mg/L (CAS NO - 7439-92-1)	2/8/2008	< 0.004	N/A	N/A	N/A	0.00678	< 0.004	< 0.004	0.00643	N/A	< 0.004	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.004	N/A	0.00478	N/A	< 0.004	0.00605	N/A	< 0.004	N/A	0.0143	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	0.00544	N/A	N/A	N/A	0.00485	< 0.004	N/A	< 0.004	N/A	< 0.004	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.004	N/A	0.00637	< 0.004	< 0.004	< 0.004	N/A	< 0.004	N/A	< 0.004	0.0359	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	N/A	N/A	N/A	N/A	< 0.004	0.0248	N/A	< 0.004	N/A	< 0.004	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	0.00828	N/A	0.245	< 0.004	< 0.004	< 0.004	N/A	< 0.004	N/A	< 0.004	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	0.00619	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	0.187	< 0.004	< 0.004	< 0.004	0.0042	< 0.004	N/A	< 0.004	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	0.0218	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 0.004	N/A	< 0.004	N/A	< 0.004	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	0.0312	N/A	N/A	N/A	N/A	0.00624	N/A	N/A	N/A	N/A	0.0113	0.0046	N/A	N/A	N/A	0.00926	N/A
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00755	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 0.004	< 0.004	< 0.004	N/A	< 0.004	< 0.004	< 0.004	< 0.004	N/A	< 0.004	< 0.004	0.00422	< 0.004	N/A	N/A	N/A	0.0102	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0339	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00727	N/A
	6/15/2010	N/A	< 0.004	N/A	N/A	N/A	N/A	< 0.004	N/A	N/A	N/A	N/A	< 0.004	< 0.004	N/A	N/A	N/A	N/A	0.0168
	8/27/2010	N/A	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	0.0227	N/A	N/A	< 0.004	0.00418	N/A	N/A	N/A	0.0249	0.0163
	8/27/2010	N/A	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 0.004	< 0.004	N/A	N/A	< 0.004	< 0.004	0.00464	< 0.004	0.0163	N/A	< 0.004	0.00728	< 0.004	N/A	N/A	N/A	0.0218	0.0134
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00686	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0219	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	0.0264	N/A
	3/15/2011	< 0.004	< 0.004	N/A	N/A	< 0.004	< 0.004	< 0.004	< 0.004	0.0623	< 0.004	0.00413	0.0178	0.00626	N/A	N/A	N/A	0.00837	0.0166
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0041	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	0.00522	N/A	N/A	N/A	0.00652	N/A	N/A	0.0199	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.004	N/A	N/A	N/A	< 0.004	< 0.004	0.00568	< 0.004	0.00951	< 0.004	< 0.004	< 0.004	< 0.004	N/A	N/A	N/A	N/A	0.00975
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.004	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 0.004	N/A	N/A	< 0.004	< 0.004	< 0.004	< 0.004	0.00644	0.016	< 0.004	< 0.004	0.0156	< 0.004	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0442	N/A
	8/28/2012	< 0.004	N/A	N/A	N/A	< 0.004	< 0.004	N/A	< 0.004	0.00663	0.00781	< 0.004	0.0341	< 0.004	N/A	N/A	N/A	0.029	0.0297
	8/28/2012	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 0.004	N/A	N/A	N/A	N/A	N/A	< 0.004	N/A	N/A	N/A	0.135	N/A
	2/5/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0164
	2/28/2013	< 0.004	N/A	N/A	N/A	< 0.004	N/A	< 0.004	< 0.004	0.00815	< 0.004	< 0.004	0.0105	< 0.004	N/A	N/A	N/A	0.00728	0.0114
	10/22/2013	0.00169	N/A	N/A	N/A	< 0.004	0.00706	0.00192	< 0.004	0.0052	< 0.004	< 0.004	0.0112	0.00211	N/A	N/A	N/A	0.0198	0.0181
	10/22/2013	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 0.004	N/A	N/A	N/A	< 0.004	< 0.004	0.0012	0.00128	0.026	0.00197	0.00355*	0.00698	< 0.004	N/A	N/A	N/A	N/A	0.0142
	2/19/2014	N/A	N/A	N/A	N/A	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	0.00266	0.00293	N/A	N/A	0.00244	N/A	0.00295	< 0.004	0.0201	< 0.004	0.00388*	0.0365	0.00567	N/A	N/A	N/A	0.0388	0.0169
	10/28/2014	N/A	N/A	N/A	N/A	0.00532	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	0.0024	N/A	N/A	N/A	0.00115	N/A	0.000709	0.00254	0.0247	0.000694	0.00441	0.019	0.000759	N/A	N/A	N/A	0.0193	0.0126
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	0.00694	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	0.000097*	N/A	N/A	N/A	0.000097*	0.000369*	0.000113*	0.00214	0.00122	< 0.0005	0.00028*	0.003	< 0.0005	N/A	N/A	N/A	0.000142*	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 0.0005	N/A	N/A	N/A	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.000499*	< 0.0005	0.000429*	0.000308*	0.00012*	N/A	N/A	N/A	0.000102*	N/A
	2/23/2016	N/A	N/A	N/A	N/A	0.000281*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	0.000306*	N/A	N/A	N/A	< 0.0005	N/A	< 0.0005	< 0.0005	0.00133	< 0.0005	N/A	0.000236*	< 0.0005	N/A	N/A	N/A	0.000413*	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0027	< 0.0005	N/A	N/A	N/A
	3/29/2017	< 0.0005	N/A	N/A	N/A	< 0.0005	0.000424*	< 0.0005	< 0.0005	0.000592	< 0.0005	< 0.0005	0.00083	< 0.0005	0.000467*	< 0.0005	N/A	0.00178	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000579	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	< 0.0005	N/A	N/A	N/A
	8/7/2017	< 0.0005	N/A	N/A	N/A	< 0.0005	< 0.0005	0.000374*	< 0.0005	< 0.0005	< 0.0005	N/A	< 0.0005	< 0.0005	< 0.0005	< 0.0005	N/A	< 0.0005	0.00126
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	0.00351	N/A	N/A	N/A
	5/21/2018	0.000415*	< 0.0005	N/A	0.0174	< 0.0005	< 0.0005	0.000268*	0.000344*	0.000523	< 0.0005	0.000905	< 0.0005	< 0.0005	< 0.0005	0.000279*	N/A	N/A	0.00064
	5/21/2018	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	0.000191*	N/A	N/A	N/A	< 0.0005	0.000305*	< 0.0005	0.000236*	0.000561	< 0.0005	0.000455*	< 0.0005	< 0.0005	< 0.0005	< 0.0005	N/A	< 0.0005	0.000646
	5/7/2019	< 0.0005	N/A	N/A	0.0027	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	N/A	< 0.0005	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 0.0005	N/A	N/A	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.000348*	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	N/A	< 0.0005	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A
	4/7/2020	< 0.0005	N/A	N/A	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.000511	< 0.0005	0.000525	< 0.0005	< 0.0005	< 0.0005	< 0.0005	N/A	< 0.0005	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 0.0005	N/A	N/A	< 0.0005	< 0.0005	N/A	N/A	0.000604	N/A	< 0.0005	N/A	< 0.0005	N/A	< 0.0005	< 0.0005	N/A	< 0.0005	0.000394*
	9/23/2020	N/A	N/A	N/A	N/A	0.000114*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 0.0005	N/A	N/A	< 0.0005	< 0.0005	N/A	< 0.0005	0.000368*	N/A	< 0.0005	N/A	0.000927	N/A	< 0.0005	< 0.0005	0.00106	0.00164	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A
	7/27/2021	< 0.0005	N/A	N/A	< 0.0005	< 0.0005	N/A	N/A	0.000878	N/A	< 0.0005	N/A	< 0.0005	N/A	< 0.0005	< 0.0005	< 0.0005	0.000279*	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A
	3/1/2022	< 0.0005	N/A	N/A	< 0.0005	< 0.0005	< 0.0005	0.000265*	< 0.0005	< 0.0005	< 0.0005	N/A	< 0.0005	N/A	< 0.0005	0.000717	< 0.0005	< 0.0005	0.000732
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00043*	N/A	N/A	N/A
	6/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A
	8/16/2022	< 0.0005	N/A	N/A	< 0.0005	< 0.0005	N/A	N/A	< 0.0005	N/A	< 0.0005	N/A	0.000278*	N/A	< 0.0005	0.000319*	< 0.0005	< 0.0005	0.000313*
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 0.0005	N/A	N/A	N/A	< 0.0005	N/A	N/A	< 0.0005	N/A	< 0.0005	N/A	0.000347*	N/A	0.00106	0.00187	N/A	0.00168	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00118	N/A	N/A	N/A	N/A	N/A	N/A
	10/4/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A
	11/14/2023	< 0.0005	< 0.0005	< 0.0005	0.0887	< 0.0005	< 0.0005	< 0.0005	0.00124	0.00166	< 0.0005	N/A	< 0.0005	< 0.0005	< 0.0005	0.00803	N/A	N/A	< 0.0005
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 0.0005	N/A	< 0.0005	< 0.0005	< 0.0005	N/A	< 0.0005	0.000427*	N/A	< 0.0005	N/A	< 0.0005	N/A	< 0.0005	< 0.0005	< 0.0005	0.00394	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A
	11/18/2024	< 0.0005	N/A	N/A	< 0.0005	< 0.0005	N/A	N/A	0.000412*	N/A	< 0.0005	N/A	< 0.0005	N/A	< 0.0005	0.00041*	< 0.0005	N/A	< 0.0005
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0005	N/A	N/A
Mercury, mg/L (CAS NO - 7439-97-6)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	< 0.0002	N/A	< 0.0002	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	< 0.0002	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 0.0002	< 0.0002	< 0.0002	< 0.0002	N/A	< 0.0002	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	< 0.0002	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0000273	N/A	N/A	N/A	0.000198	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	< 0.0002	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	< 0.0002	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	< 0.0002	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Total Metals Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Mercury, mg/L (CAS NO - 7439-97-6)	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A	N/A	< 0.0002	N/A	N/A	N/A	< 0.0002	< 0.0002	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0002	N/A
Nickel, mg/L (CAS NO - 7440-02-0)	2/8/2008	< 0.05	N/A	N/A	N/A	< 0.05	< 0.05	< 0.05	< 0.05	N/A	0.136	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.05	N/A	0.072	N/A	< 0.05	0.143	N/A	< 0.05	N/A	0.25	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	0.0521	N/A	N/A	N/A	< 0.05	< 0.05	N/A	< 0.05	N/A	0.174	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.05	N/A	< 0.05	< 0.05	< 0.05	0.0635	N/A	< 0.05	N/A	0.165	0.535	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.05	N/A	N/A	N/A	< 0.05	< 0.15	N/A	< 0.05	N/A	0.221	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.05	N/A	1.01	< 0.05	< 0.05	< 0.05	N/A	< 0.05	N/A	0.119	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	0.427	< 0.05	< 0.05	< 0.05	N/A	< 0.05	N/A	0.0784	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	< 0.05	N/A	0.0719	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 0.05	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	0.0588	< 0.05	N/A	N/A	N/A	N/A	< 0.05
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.051	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 0.05	< 0.05	< 0.25	N/A	< 0.05	0.102	< 0.05	0.0559	N/A	0.0708	< 0.05	0.0968	< 0.05	N/A	N/A	N/A	N/A	< 0.05
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0551	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.102	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0636	N/A
	6/15/2010	N/A	< 0.05	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	0.0967	< 0.05	N/A	N/A	N/A	N/A	0.0817
	8/27/2010	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	0.0864	< 0.05	N/A	N/A	N/A	0.204	0.191
	8/27/2010	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 0.05	< 0.05	N/A	N/A	< 0.05	0.078	< 0.05	< 0.05	0.0786	N/A	< 0.05	0.0876	< 0.05	N/A	N/A	N/A	< 0.05	< 0.05
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.085	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0958	0.0853	N/A	N/A	N/A	N/A	N/A	N/A	0.0622	N/A
	3/15/2011	< 0.05	< 0.05	N/A	N/A	< 0.05	0.0649	< 0.05	0.0634	0.185	0.061	< 0.05	0.0992	< 0.05	N/A	N/A	N/A	< 0.05	< 0.05
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	< 0.05	N/A	N/A	0.0972	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.05	N/A	N/A	N/A	< 0.05	< 0.05	< 0.05	0.0522	0.0855	0.0598	< 0.05	0.0903	< 0.05	N/A	N/A	N/A	N/A	< 0.05
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 0.05	N/A	N/A	< 0.05	< 0.05	0.0625	< 0.05	< 0.05	0.0586	0.0596	< 0.05	0.091	< 0.05	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0769	N/A
	8/28/2012	< 0.05	N/A	N/A	N/A	< 0.05	< 0.05	N/A	0.0541	0.0546	0.0841	< 0.05	0.0938	< 0.05	N/A	N/A	N/A	< 0.05	0.0937
	8/28/2012	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	0.62	N/A
	2/28/2013	< 0.05	N/A	N/A	N/A	< 0.05	< 0.05	< 0.05	< 0.05	0.0542	0.0507	< 0.05	0.064	< 0.05	N/A	N/A	N/A	< 0.05	< 0.05
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	0.0187	N/A	N/A	N/A	0.00389	0.0169	0.0125	0.0663	0.11	0.0838	0.0141*	0.0856	0.00468	N/A	N/A	N/A	0.102	0.0454
	10/22/2013	0.00844	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 0.05	N/A	N/A	N/A	< 0.05	0.00624	0.00782	0.0488	0.0552	0.0651	0.00985*	0.0808	< 0.05	N/A	N/A	N/A	N/A	0.0273
	2/19/2014	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	0.00825	< 0.05	N/A	N/A	0.0131	N/A	0.0202	0.0448	0.0789	0.0897	0.0152*	0.0888	0.00781	N/A	N/A	N/A	0.127	0.0217
	10/28/2014	N/A	N/A	N/A	N/A	0.00934	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	0.00215	N/A	N/A	N/A	0.0153	N/A	0.0137	0.0316	0.0672	0.0781	0.00958	0.0758	0.00112	N/A	N/A	N/A	0.032	0.00737
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	0.0133	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	0.000706*	N/A	N/A	N/A	0.000999*	0.00643	0.00941	0.04	0.0272	0.0619	0.00631	0.077	< 0.005	N/A	N/A	N/A	0.022	N/A
	7/15/2015	N/A	N/A	N/A	N/A	0.00133*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 0.005	N/A	N/A	N/A	0.0013*	0.00356*	0.018	0.0389	0.0329	0.101	0.00543	0.0838	< 0.005	N/A	N/A	N/A	0.0215	N/A
	2/23/2016	N/A	N/A	N/A	N/A	0.00138*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 0.005	N/A	N/A	N/A	0.00281*	N/A	0.013	0.045	0.0124	0.103	N/A	0.0508	< 0.005	N/A	N/A	N/A	0.00994	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0136	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0149	0.00265*	N/A	N/A
	3/29/2017	< 0.005	N/A	N/A	N/A	0.00171*	0.00248*	0.00833	0.0424	0.0213	0.102	0.00586	0.0852	< 0.005	0.0123	0.00263*	N/A	0.0178	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0135	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.013	0.00209*	N/A	N/A	N/A
	8/7/2017	0.000124*	N/A	N/A	N/A	0.00137*	0.00117*	0.00714	0.0297	0.0128	0.103	N/A	0.0808	< 0.005	0.021	0.00646	N/A	0.0123	0.00288*
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.102	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0208	0.00247*	N/A	N/A	N/A
	5/21/2018	< 0.005	0.00193*	N/A	0.0261	< 0.005	0.00457*	0.0105	0.0437	0.0214	0.104	0.00516	0.0409	< 0.005	0.0186	< 0.005	N/A	N/A	0.00352*
	5/21/2018	N/A	N/A	N/A	N/A	0.00108*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	0.00182*	N/A	N/A	N/A	0.00151*	0.0165	0.00943	0.0375	0.00918	0.0899	0.00517	0.0375	< 0.002	0.0195	0.0012*	N/A	0.0147	0.00495
	5/7/2019	< 0.005	N/A	N/A	0.052	N/A	0.0139	0.0417	0.00621	0.0282	0.00454*	0.042	< 0.005	N/A	0.0184	< 0.005	N/A	0.0234	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00636	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 0.005	N/A	N/A	0.00954	< 0.005	0.0813	0.0102	0.0493	0.0019*	0.0928	0.00959	0.0506	< 0.005	0.0212	< 0.005	N/A	0.0124	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	4/7/2020	< 0.005	N/A	N/A	0.00349*	< 0.005	0.0337	0.00568	0.0396	< 0.005	0.0725	0.00715	0.0489	< 0.005	0.0169	< 0.005	N/A	0.016	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0495	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 0.005	N/A	N/A	0.00376*	0.00286*	N/A	N/A	0.059	N/A	0.0798	N/A	0.0363	N/A	0.0168	< 0.005	N/A	0.0141	0.00405*
	9/23/2020	N/A	N/A	N/A	N/A	0.00254*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 0.005	N/A	N/A	0.00704	< 0.005	< 0.005	0.00963	0.053	< 0.005	0.076	N/A	0.0535	< 0.005	0.0172	< 0.005	0.00589	0.0272	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00268*	N/A	N/A
	7/27/2021	0.00423*	N/A	N/A	0.00558	< 0.005	N/A	N/A	0.0458	N/A	0.0686	N/A	0.0393	N/A	0.015	< 0.005	0.00713	0.0183	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00615	N/A	N/A
	3/1/2022	< 0.005	N/A	N/A	0.00489*	< 0.005	< 0.005	0.00891	0.0473	0.00389*	0.0622	N/A	0.0512	< 0.005	0.0208	< 0.005	0.0057	0.0108	0.0037*
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	8/16/2022	< 0.005	N/A	N/A	0.00406*	< 0.005	N/A	N/A	0.0468	N/A	0.0704	N/A	0.0551	N/A	0.0212	< 0.005	0.00739	0.0168	< 0.005
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.053	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 0.005	N/A	N/A	N/A	< 0.005	N/A	N/A	0.0386	N/A	0.0589	N/A	0.0433	N/A	0.0205	< 0.005	N/A	0.0208	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0539	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 0.005	< 0.005	< 0.005	0.00648	0.00314*	< 0.005	0.00938	0.0484	< 0.005	0.0705	N/A	0.0445	< 0.005	0.0233	0.00455	N/A	N/A	0.00377*
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0664	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 0.005	N/A	< 0.005	0.00304*	< 0.005	< 0.005	< 0.005	0.0716	0.00374*	0.0675	N/A	0.0395	< 0.005	0.015	< 0.005	0.00402	0.0259	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00582	N/A	N/A
	11/18/2024	< 0.005	N/A	N/A	0.00314*	0.00326*	N/A	N/A	0.188	N/A	0.0663	N/A	0.0422	N/A	0.0212	< 0.005	0.00536	N/A	0.00299*
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00567	N/A	N/A
Selenium, mg/L (CAS NO - 7782-49-2)	2/8/2008	< 0.005	N/A	N/A	N/A	0.00846	< 0.005	< 0.005	< 0.005	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.005	N/A	< 0.005	N/A	0.0145	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.005	N/A	N/A	N/A	< 0.005	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.005	N/A	< 0.005	< 0.005	0.0293	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.005	N/A	N/A	N/A	0.0239	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.005	N/A	0.015	< 0.005	0.00849	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	0.0506	< 0.005	0.0195	< 0.005	< 0.005	< 0.005	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 0.005	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 0.005	< 0.005	< 0.005	N/A	0.0258	< 0.005	< 0.005	< 0.005	N/A	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A
	6/15/2010	N/A	< 0.005	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	< 0.005
	8/27/2010	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	< 0.005	< 0.005	N/A	N/A	N/A	< 0.005	< 0.005
	8/27/2010	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Total Metals Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Selenium, mg/L (CAS NO - 7782-49-2)	10/13/2010	< 0.005	< 0.005	N/A	N/A	0.0291	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	< 0.005	< 0.005
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A
	3/15/2011	< 0.005	< 0.005	N/A	N/A	0.00982	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	< 0.005	< 0.005
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	0.00824	N/A	N/A	N/A	< 0.005	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.005	N/A	N/A	N/A	0.026	< 0.009	< 0.006	< 0.008	< 0.007	< 0.01	< 0.005	< 0.008	< 0.005	N/A	N/A	N/A	< 0.005	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 0.005	N/A	N/A	< 0.005	0.00908	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A
	8/28/2012	< 0.005	N/A	N/A	N/A	0.0262	< 0.005	N/A	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	< 0.005	< 0.005
	8/28/2012	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	< 0.005	N/A
	2/28/2013	< 0.005	N/A	N/A	N/A	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	< 0.005	< 0.005
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 0.005	N/A	N/A	N/A	0.0158	0.000585	< 0.005	0.000786	< 0.005	0.00059	< 0.005	0.00125	0.000696	N/A	N/A	N/A	0.000596	< 0.005
	10/22/2013	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 0.005	N/A	N/A	N/A	0.0103	0.000635	0.000909	< 0.005	0.00204	0.00897	0.000664*	0.00178	< 0.005	N/A	N/A	N/A	N/A	0.00036
	2/19/2014	N/A	N/A	N/A	N/A	0.00925	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 0.005	< 0.005	N/A	N/A	N/A	N/A	0.00876	< 0.005	< 0.005	0.000622	< 0.005	0.00132	< 0.005	N/A	N/A	N/A	< 0.005	< 0.005
	3/18/2015	< 0.005	N/A	N/A	N/A	0.0135	N/A	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	< 0.005	< 0.005
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 0.005	N/A	N/A	N/A	**0.0232**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	< 0.005	N/A
	7/15/2015	N/A	N/A	N/A	N/A	**0.0212**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 0.005	N/A	N/A	N/A	**0.015**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	N/A	N/A	< 0.005	N/A
	2/23/2016	N/A	N/A	N/A	N/A	**0.0156**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 0.005	N/A	N/A	N/A	**0.019**	N/A	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	0.00152*	N/A	N/A	N/A	< 0.005	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000909*	N/A	N/A	N/A
	3/29/2017	< 0.005	N/A	N/A	N/A	**0.0147**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0016*	< 0.005	< 0.005	N/A	< 0.005	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	0.00107*	N/A	N/A	N/A
	8/7/2017	< 0.005	N/A	N/A	N/A	0.00458*	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	0.00203*	< 0.005	< 0.005	N/A	< 0.005	< 0.005
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	< 0.005	N/A	< 0.005	N/A
	5/21/2018	< 0.005	< 0.005	N/A	0.0018	**0.0114**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00375*	< 0.005	< 0.005	N/A	N/A	< 0.005
	5/21/2018	N/A	N/A	N/A	N/A	**0.0112**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 0.0025	N/A	N/A	N/A	**0.00926**	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	**0.00348**	< 0.0025	< 0.0025	N/A	< 0.0025	< 0.0025
	5/7/2019	< 0.005	N/A	N/A	0.00268	**0.0108**	0.00222*	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00427*	< 0.005	< 0.005	N/A	< 0.005	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 0.005	N/A	N/A	< 0.005	**0.00896**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00422*	< 0.005	< 0.005	N/A	< 0.005	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	4/7/2020	< 0.005	N/A	N/A	0.00123*	**0.0127**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00486*	< 0.005	< 0.005	N/A	< 0.005	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 0.005	N/A	N/A	< 0.005	0.00104*	N/A	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	N/A	< 0.005	< 0.005
	9/23/2020	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 0.005	N/A	N/A	0.00191*	0.00484*	N/A	< 0.005	< 0.005	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	0.00245*	< 0.01	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	7/27/2021	< 0.005	N/A	N/A	0.00271*	0.00103*	N/A	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	< 0.005	< 0.005	N/A
	7/27/2021	N/A	N/A	N/A	N/A	0.00178*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	3/1/2022	< 0.005	N/A	N/A	0.00184*	0.00234*	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	8/16/2022	< 0.005	N/A	N/A	< 0.005	**0.0108**	N/A	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 0.005	N/A	N/A	0.00266*	N/A	N/A	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	N/A	0.00498*	**0.0092**	N/A	0.00454*	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00343*	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	**0.00777**	< 0.005	< 0.005	N/A	N/A	< 0.005
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 0.005	N/A	< 0.005	< 0.005	< 0.005	N/A	< 0.005	< 0.005	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	< 0.005	< 0.005	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	11/18/2024	< 0.005	N/A	< 0.005	< 0.005	< 0.005	N/A	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	< 0.005	< 0.005	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
Silver, mg/L (CAS NO - 7440-22-4)	2/8/2008	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.02	N/A	< 0.02	N/A	< 0.02	< 0.02	N/A	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	N/A	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	N/A	< 0.02	< 0.06	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.02	N/A	N/A	N/A	< 0.02	< 0.06	N/A	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.02	N/A	< 0.12	< 0.02	< 0.02	< 0.02	N/A	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 0.12	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	< 0.02	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 0.02	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	< 0.02
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 0.02	< 0.02	< 0.1	N/A	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	N/A	< 0.02
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A
	6/15/2010	N/A	< 0.02	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	< 0.02
	8/27/2010	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	< 0.02	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02
	8/27/2010	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 0.02	< 0.02	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A
	3/15/2011	< 0.02	< 0.02	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	< 0.02	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 0.02	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A
	8/28/2012	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02
	8/28/2012	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	< 0.04	N/A
	2/28/2013	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02
	10/22/2013	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02
	2/19/2014	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 0.02	< 0.02	N/A	N/A	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02
	10/28/2014	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	0.00009	N/A	N/A	N/A	0.000099	N/A	0.000041	0.000047	< 0.001	< 0.001	0.000049*	0.000195	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 0.001	N/A	N/A	N/A	< 0.001	0.000046*	0.000046*	< 0.001	< 0.001	< 0.001	0.000057*	< 0.001	0.000067*	N/A	N/A	N/A	< 0.001	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Total Metals Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Silver, mg/L (CAS NO - 7440-22-4)	2/23/2016	0.000089*	N/A	N/A	N/A	0.000056*	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	< 0.001	N/A
	2/23/2016	N/A	N/A	N/A	N/A	0.000083*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 0.001	N/A	N/A	N/A	< 0.001	N/A	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	< 0.001	N/A	N/A	N/A	< 0.001	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A	N/A	N/A
	3/29/2017	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.000154*	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	0.000153*	N/A	N/A	N/A
	8/7/2017	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	< 0.001
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A	N/A	N/A
	5/21/2018	0.000433*	< 0.001	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.000374*	< 0.001	< 0.001	< 0.001	N/A	N/A	< 0.001
	5/21/2018	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 0.0005	N/A	N/A	N/A	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	N/A	< 0.0005	< 0.0005
	5/7/2019	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	4/7/2020	< 0.001	N/A	N/A	0.00137	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	0.000831*	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	< 0.001	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
Thallium, mg/L (CAS NO - 7440-28-0)	2/8/2008	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002	< 0.002	< 0.002	N/A	< 0.002	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.002	N/A	< 0.002	N/A	< 0.002	< 0.002	N/A	< 0.002	N/A	< 0.002	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002	N/A	< 0.002	N/A	< 0.002	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.002	N/A	< 0.002	N/A	< 0.002	< 0.002	N/A	< 0.002	N/A	< 0.002	0.00357	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002	N/A	< 0.002	N/A	< 0.002	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.002	N/A	< 0.004	< 0.002	< 0.002	< 0.002	N/A	< 0.002	N/A	< 0.002	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 0.004	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	< 0.002	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	< 0.002	N/A	< 0.002	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 0.002	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	< 0.002	< 0.002	N/A	N/A	N/A	N/A	< 0.002
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 0.002	< 0.002	< 0.002	N/A	< 0.002	< 0.002	< 0.002	< 0.002	N/A	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A	N/A	N/A	< 0.002
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A
	6/15/2010	N/A	< 0.002	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	< 0.002	< 0.002	N/A	N/A	N/A	N/A	< 0.002
	8/27/2010	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	< 0.002	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002
	8/27/2010	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 0.002	< 0.002	N/A	N/A	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	< 0.002	< 0.002	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A
	3/15/2011	< 0.002	< 0.002	N/A	N/A	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	< 0.002	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A	N/A	N/A	< 0.002
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 0.002	N/A	N/A	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A
	8/28/2012	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002	N/A	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002
	8/28/2012	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	< 0.002	N/A
	2/28/2013	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002
	10/22/2013	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A	N/A	N/A	< 0.002
	2/19/2014	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 0.002	< 0.002	N/A	N/A	< 0.002	N/A	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002
	10/28/2014	N/A	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 0.001	N/A	N/A	N/A	0.00006	N/A	0.000035	0.000055	0.000064	0.00006	0.000107*	0.000221	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	0.00004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	0.000044*	0.000058	< 0.001	0.000072*	< 0.001	0.00005*	< 0.001	N/A	N/A	N/A	< 0.001	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.000064*	< 0.001	< 0.001	< 0.001	N/A	N/A	N/A	< 0.001	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 0.001	N/A	N/A	N/A	< 0.001	N/A	0.00003*	< 0.001	< 0.001	0.000089*	N/A	< 0.001	< 0.001	N/A	N/A	N/A	< 0.001	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00003*	< 0.001	N/A	N/A	N/A
	3/29/2017	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.000068*	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A	N/A	N/A
	8/7/2017	< 0.001	N/A	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.000072*	N/A	< 0.001	< 0.001	< 0.001	0.000072*	N/A	< 0.001	< 0.001
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000066*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A	N/A	N/A
	5/21/2018	< 0.001	< 0.001	N/A	0.000174	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	N/A	< 0.001
	5/21/2018	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 0.002	N/A	N/A	N/A	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	N/A	< 0.002	< 0.002
	5/7/2019	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	4/7/2020	< 0.001	N/A	N/A	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	N/A	< 0.001	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00282	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	8/16/2022	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	< 0.001	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A	< 0.001	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	< 0.001	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Total Metals Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Tin, mg/L (CAS NO - 7440-31-5)	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 0.1	N/A	< 0.1	N/A	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.1	N/A	< 0.1	N/A	N/A	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.1	N/A	N/A	N/A	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.1	< 0.1	< 0.1	N/A	< 0.1	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.1	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.1	N/A	N/A	N/A	< 0.1	N/A	N/A	N/A	< 0.1	N/A	N/A	N/A	< 0.1	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.478	N/A	N/A	N/A	0.807	N/A
	7/15/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	< 0.005	N/A
	2/23/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	< 0.005	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	< 0.005	N/A	< 0.005	N/A	N/A	< 0.005	N/A	N/A	N/A	< 0.005	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	< 0.005	N/A	< 0.005	N/A	N/A	N/A	< 0.005	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	< 0.005	N/A	N/A	< 0.005	< 0.005	N/A	N/A	N/A	< 0.005	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	< 0.005	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	< 0.005	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	< 0.005	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	< 0.005	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A
Vanadium, mg/L (CAS NO - 7440-62-2)	2/8/2008	< 0.05	N/A	N/A	N/A	< 0.05	< 0.05	< 0.05	< 0.05	N/A	< 0.05	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.05	N/A	0.0613	N/A	< 0.05	< 0.05	N/A	< 0.05	N/A	0.0751	0.0593	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	0.0753	N/A	N/A	N/A	< 0.05	< 0.05	N/A	< 0.05	N/A	< 0.05	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.05	N/A	< 0.05	< 0.05	< 0.05	< 0.05	N/A	< 0.05	N/A	< 0.05	0.193	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.05	N/A	N/A	N/A	< 0.05	< 0.15	N/A	< 0.05	N/A	< 0.05	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.05	N/A	0.905	< 0.05	< 0.05	< 0.05	N/A	< 0.05	N/A	< 0.05	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	0.737	< 0.05	< 0.05	< 0.05	N/A	< 0.05	N/A	< 0.05	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	< 0.05	N/A	< 0.05	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 0.05	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	< 0.05	< 0.05	N/A	N/A	N/A	< 0.05	N/A
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 0.05	< 0.05	< 0.25	N/A	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	N/A	N/A	N/A	< 0.05	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A
	6/15/2010	N/A	< 0.05	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	< 0.05	< 0.05	N/A	N/A	N/A	N/A	< 0.05
	8/27/2010	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	< 0.05	< 0.05	N/A	N/A	N/A	0.391	0.182
	8/27/2010	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 0.05	< 0.05	N/A	N/A	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	N/A	< 0.05	< 0.05	< 0.05	N/A	N/A	N/A	< 0.05	< 0.05
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	0.0801	N/A
	3/15/2011	< 0.05	< 0.05	N/A	N/A	< 0.05	< 0.05	< 0.05	< 0.05	0.119	< 0.05	< 0.05	< 0.05	< 0.05	N/A	N/A	N/A	< 0.05	< 0.05
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	< 0.05	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.05	N/A	N/A	N/A	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	N/A	N/A	N/A	N/A	< 0.05
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 0.05	N/A	N/A	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.146	N/A
	8/28/2012	< 0.05	N/A	N/A	N/A	< 0.05	< 0.05	N/A	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	N/A	N/A	N/A	< 0.05	< 0.05
	8/28/2012	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	1.1	N/A
	2/28/2013	< 0.05	N/A	N/A	N/A	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	N/A	N/A	N/A	< 0.05	< 0.05
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	N/A	N/A	N/A	N/A	< 0.05	0.00562	0.00573	< 0.05	0.0612	< 0.05	0.135	< 0.05	0.00331	N/A	N/A	N/A	0.0521	0.0325
	2/19/2014	< 0.05	N/A	N/A	N/A	< 0.05	< 0.05	< 0.05	< 0.05	0.0201	< 0.05	0.0186*	< 0.05	N/A	N/A	N/A	N/A	N/A	0.0217
	2/19/2014	N/A	N/A	N/A	N/A	< 0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	0.00608	0.00382	N/A	N/A	0.00365	N/A	0.0113	0.00287	0.0205	0.00386	0.00842*	0.0236	0.00762	N/A	N/A	N/A	0.118	0.0215
	10/28/2014	N/A	N/A	N/A	N/A	0.00592	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	0.00184	N/A	N/A	N/A	0.00232	N/A	0.00263	0.00308	0.00991	0.00196	0.0121	0.0117	0.000645	N/A	N/A	N/A	0.0162	0.00957
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	0.00245	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 0.005	N/A	N/A	N/A	< 0.005	0.00131*	0.000745*	0.00224	0.00152*	0.000617*	0.00547	0.000697*	< 0.005	N/A	N/A	N/A	< 0.005	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 0.005	N/A	N/A	N/A	< 0.005	< 0.005	< 0.005	0.000476*	0.000781*	< 0.005	0.00137*	< 0.005	0.000509*	N/A	N/A	N/A	< 0.005	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	0.000323*	N/A	N/A	N/A	0.000433*	N/A	0.000463*	0.000634*	0.000768*	0.000264*	N/A	< 0.005	0.000347*	N/A	N/A	N/A	0.000753*	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000748*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00327*	0.000556*	N/A	N/A	N/A
	3/29/2017	< 0.005	N/A	N/A	N/A	< 0.005	< 0.005	< 0.005	< 0.005	0.000894*	< 0.005	0.00304*	< 0.005	< 0.005	< 0.005	< 0.005	N/A	0.0024*	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000946*	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	< 0.005	N/A	N/A	N/A
	8/7/2017	< 0.005	N/A	N/A	N/A	< 0.005	< 0.005	< 0.005	0.000857*	< 0.005	< 0.005	N/A	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	< 0.005
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	0.00176*	N/A	N/A	N/A
	5/21/2018	< 0.005	< 0.005	N/A	0.0272	< 0.005	< 0.005	0.000655*	0.00111*	< 0.005	< 0.005	0.00226*	< 0.005	0.000671*	< 0.005	0.000703*	N/A	N/A	0.00114*
	5/21/2018	N/A	N/A	N/A	N/A	0.000561*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 0.005	N/A	N/A	N/A	0.00276*	0.00366*	0.00296*	0.00397*	< 0.005	< 0.005	0.00291*	0.00315*	0.00265*	0.00237*	0.0025*	N/A	< 0.005	0.00363*
	5/7/2019	< 0.005	N/A	N/A	0.00368	< 0.005	0.0015*	< 0.005	0.000943*	0.000846*	< 0.005	0.00101*	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000826*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 0.005	N/A	N/A	0.000882*	< 0.005	0.00136*	< 0.005	0.00129*	< 0.005	< 0.005	0.00138*	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	4/7/2020	< 0.005	N/A	N/A	< 0.005	< 0.005	0.00145*	< 0.005	0.00283*	0.000881*	< 0.005	0.00174*	< 0.005	< 0.005	< 0.005	< 0.005	N/A	< 0.005	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 0.005	N/A	N/A	< 0.005	< 0.005	N/A	N/A	0.00209*	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	N/A	< 0.005	< 0.005
	9/23/2020	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 0.005	N/A	N/A	< 0.005	< 0.005	N/A	< 0.005	0.00136*	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	0.0013*	< 0.01	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00193*	N/A	N/A
	7/27/2021	< 0.005	N/A	N/A	< 0.005	< 0.005	N/A	N/A	0.00121*	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	0.00133*	< 0.005	N/A
	7/27/2021	N/A	N/A	N/A	< 0.005	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0012*	N/A	N/A
	3/1/2022	< 0.005	N/A	N/A	< 0.005	< 0.005	< 0.005	< 0.005	0.00116*	< 0.005	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	0.00127*	< 0.005	< 0.005
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	8/16/2022	< 0.005	N/A	N/A	< 0.005	< 0.005	N/A	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	0.00171*	< 0.005	< 0.005
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 0.005	N/A	N/A	N/A	< 0.005	N/A	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	0.00146*	N/A	< 0.005	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Total Metals Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Vanadium, mg/L (CAS NO - 7440-62-2)	11/14/2023	< 0.005	< 0.005	< 0.005	0.00344*	< 0.005	< 0.005	< 0.005	0.00264*	< 0.005	< 0.005	N/A	< 0.005	< 0.005	< 0.005	0.00367	N/A	N/A	< 0.005
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 0.005	N/A	< 0.005	< 0.005	< 0.005	N/A	< 0.005	**0.0109**	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	0.00142*	**0.0095**	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00151*	N/A	N/A
	11/18/2024	< 0.005	N/A	N/A	< 0.005	< 0.005	N/A	N/A	**0.0246**	N/A	< 0.005	N/A	< 0.005	N/A	< 0.005	< 0.005	0.00222*	N/A	< 0.005
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00216*	N/A	N/A
Zinc, mg/L (CAS NO - 7440-66-6)	2/8/2008	< 0.02	N/A	N/A	N/A	0.104	< 0.02	0.0276	0.0207	N/A	< 0.02	**0.0208**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	0.0208	N/A	**0.268**	N/A	0.0306	0.151	N/A	0.0371	N/A	0.179	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	0.115	N/A	N/A	N/A	0.274	0.0886	N/A	0.195	N/A	0.125	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	0.0224	N/A	**0.0568**	0.031	0.0318	0.0436	N/A	0.0562	N/A	< 0.02	**1.13**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	0.0409	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	0.0316	N/A	N/A	N/A	0.0396	0.433	N/A	0.0661	N/A	0.0323	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	0.0333	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	0.0701	N/A	**1.57**	0.0342	0.0657	0.0481	N/A	0.0938	N/A	0.0465	**0.109**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	0.0589	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	**1.18**	0.0756	0.0327	0.0584	0.331	0.191	N/A	0.0891	**0.131**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	0.106	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	0.057	N/A	0.105	N/A	0.0447	**0.134**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	0.116	N/A	N/A	N/A	N/A	0.0881	N/A	N/A	N/A	N/A	0.121	0.0418	N/A	N/A	N/A	0.118	N/A
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.103	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 0.02	0.0721	< 0.1	N/A	0.0327	0.0359	0.0539	0.0871	N/A	0.0248	**0.0401**	0.0328	0.0374	N/A	N/A	N/A	N/A	0.15
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0972	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0527	N/A
	6/15/2010	N/A	0.0586	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	< 0.06	0.0218	N/A	N/A	N/A	0.26	N/A
	8/27/2010	N/A	0.1	N/A	N/A	N/A	N/A	N/A	N/A	0.883	N/A	N/A	< 0.02	0.0416	N/A	N/A	N/A	0.268	0.473
	8/27/2010	N/A	0.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	0.0329	0.135	N/A	N/A	0.0686	0.0532	0.0903	0.0794	0.418	N/A	**0.0742**	0.0348	0.0442	N/A	N/A	N/A	0.101	0.124
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0482	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.35	0.0628	N/A	N/A	N/A	N/A	N/A	N/A	0.133	N/A
	3/15/2011	< 0.02	< 0.02	N/A	N/A	0.0591	< 0.02	< 0.02	< 0.02	3.31	0.0223	**0.0419**	< 0.02	< 0.02	N/A	N/A	N/A	0.0202	0.126
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	1.35	N/A	N/A	N/A	0.662	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	0.0519	< 0.02	1.19	< 0.02	**0.175**	< 0.02	< 0.02	N/A	N/A	N/A	N/A	0.067
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 0.02	N/A	N/A	N/A	< 0.02	0.0203	< 0.02	0.0415	0.834	< 0.02	**0.0455**	0.0633	< 0.02	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.164	N/A
	8/28/2012	< 0.02	N/A	N/A	N/A	0.0247	0.02	N/A	< 0.02	0.822	0.0547	**0.0232**	0.0724	< 0.02	N/A	N/A	N/A	0.0612	0.31
	8/28/2012	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	0.0454	N/A	N/A	N/A	N/A	N/A	0.027	N/A	N/A	N/A	3.59	N/A
	2/28/2013	< 0.02	N/A	N/A	N/A	0.0621	0.0849	0.0557	0.067	0.74	0.0527	**0.0633**	0.0989	0.0389	N/A	N/A	N/A	0.0832	0.104
	2/28/2013	N/A	N/A	N/A	N/A	N/A	0.0421	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	0.0421	N/A	N/A	N/A	0.108	0.167	0.146	0.234	0.715	0.153	**0.288**	0.215	0.0916	N/A	N/A	N/A	0.257	0.253
	10/22/2013	0.0409	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	0.00518	N/A	N/A	N/A	0.0125	0.00945	0.0311	0.0288	0.3	0.031	0.0184*	0.023	0.00632	N/A	N/A	N/A	N/A	0.106
	2/19/2014	N/A	N/A	N/A	N/A	0.0188	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 0.02	0.0605	N/A	N/A	0.0278	N/A	0.036	0.0828	1.14	< 0.02	0.0155*	0.0228	< 0.02	N/A	N/A	N/A	0.211	0.0555
	10/28/2014	N/A	N/A	N/A	N/A	0.113	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	0.00755	N/A	N/A	N/A	0.0525	N/A	< 0.01	0.0139	0.668	0.0137	**0.0159**	0.0449	0.0153	N/A	N/A	N/A	0.0304	0.0291
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	0.0113	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 0.01	N/A	N/A	N/A	< 0.01	< 0.01	< 0.01	**0.0169**	**0.0195**	< 0.01	< 0.01	< 0.01	< 0.01	N/A	N/A	N/A	< 0.01	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 0.01	N/A	N/A	N/A	< 0.01	< 0.01	< 0.01	< 0.01	**0.0124**	< 0.01	< 0.01	0.00834*	< 0.01	N/A	N/A	N/A	< 0.01	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 0.01	N/A	N/A	N/A	**0.0164**	N/A	0.00563*	< 0.01	< 0.01	< 0.01	N/A	< 0.01	< 0.01	N/A	N/A	N/A	< 0.01	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00797*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0.0177**	< 0.01	N/A	N/A	N/A
	3/29/2017	**0.0635**	N/A	N/A	**0.516**	**4.41**	0.0156*	< 0.02	**0.269**	< 0.02	< 0.02	< 0.02	< 0.02	**0.0908**	< 0.02	< 0.02	N/A	**0.0563**	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	< 0.02	N/A	N/A	N/A
	8/7/2017	< 0.02	N/A	N/A	N/A	< 0.02	< 0.02	0.0135*	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	< 0.02	N/A	N/A	N/A
	5/21/2018	< 0.02	0.0112*	N/A	0.057	< 0.02	< 0.02	< 0.02	< 0.02	0.00384*	< 0.02	0.0121*	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02
	5/21/2018	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	0.00821*	N/A	N/A	N/A	< 0.02	< 0.02	< 0.02	0.00788*	**0.02**	< 0.02	< 0.02	< 0.02	< 0.02	0.00726*	0.00775*	N/A	< 0.02	< 0.02
	5/7/2019	< 0.02	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 0.02	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	**0.0663**	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A
	4/7/2020	< 0.02	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.0149*	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 0.02	N/A	N/A	< 0.02	< 0.02	N/A	N/A	**0.0223**	N/A	< 0.02	N/A	< 0.02	N/A	< 0.02	< 0.02	N/A	< 0.02	< 0.02
	9/23/2020	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 0.02	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.04	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A
	7/27/2021	< 0.02	N/A	N/A	< 0.02	< 0.02	N/A	N/A	**0.0282**	N/A	< 0.02	N/A	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A
	3/1/2022	< 0.02	N/A	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A
	8/16/2022	< 0.02	N/A	N/A	< 0.02	< 0.02	N/A	N/A	< 0.02	N/A	< 0.02	N/A	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 0.02	N/A	N/A	N/A	< 0.02	N/A	N/A	0.00741*	N/A	< 0.02	N/A	< 0.02	N/A	< 0.02	< 0.02	N/A	< 0.02	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 0.02	< 0.02	< 0.02	**0.334**	< 0.02	< 0.02	< 0.02	0.0123*	< 0.02	< 0.02	N/A	< 0.02	< 0.02	0.00653*	0.0148	N/A	N/A	< 0.02
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.0188*	< 0.02	N/A	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.018*	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A
	11/18/2024	< 0.02	N/A	N/A	< 0.02	< 0.02	N/A	N/A	0.0123*	N/A	< 0.02	N/A	< 0.02	N/A	< 0.02	< 0.02	< 0.02	N/A	< 0.02
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A
Total Suspended Solids, mg/L (CAS NO - TSS)	2/19/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	45	N/A	N/A	N/A	192	142	N/A	N/A	N/A	N/A	N/A
	10/28/2014	296	215	N/A	N/A	85	N/A	191	16.3	1350	45.3	**243**	2940	404	N/A	N/A	N/A	5030	2710
	10/28/2014	N/A	N/A	N/A	N/A	302	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	18.1	N/A	N/A	N/A	36	N/A	25.3	79.6	1110	34	**266**	701	19.4	N/A	N/A	N/A	1150	940
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	22.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	**3.87**	N/A	**1.88**	N/A	**31**	**7**	**20.7**	**41.7**	**15.7**	**12.3**	**48.6**	**2.75**	N/A	N/A	N/A	N/A	**40.3**	N/A
	7/15/2015	N/A	N/A	N/A	N/A	**2**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1.88	N/A	N/A	N/A	< 1.88	1.5*	**4.25**	1.13*	**47.3**	**13**	**116**	**7.88**	< 1.88	N/A	N/A	N/A	**28.9**	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1.88	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	**2.88**	N/A	N/A	N/A	**4.5**	N/A	**4.25**	**10.8**	**32.3**	**13.2**	N/A	**12.4**	1*	N/A	N/A	N/A	**11.8**	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**40.4**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**365**	**5.25**	N/A	N/A	N/A
	3/29/2017	**2.75**	N/A	N/A	N/A	**4.4**	**35**	**11.5**	**2.25**	**53**	**27.5**	**210**	**37.5**	**2.75**	**79.5**	**4.5**	N/A	**144**	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**113**	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**6.25**	< 1.88	N/A	N/A	N/A
	8/7/2017	0.875*	N/A	N/A	N/A	**2.5**	**31.4**	**4.5**	**21.6**	**72**	**14.9**	N/A	**12.3**	< 1.88	**2.13**	0.75*	N/A	**6.5**	**37.8**
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**12.1**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Total Metals Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Total Suspended Solids, mg/L (CAS NO - TSS)	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**2.38**	**140**	N/A	N/A	N/A
	5/21/2018	1.5*	**12.1**	N/A	1770	1.38*	**14.6**	**8.63**	**3.25**	**27.9**	**2.5**	**2890**	**6.12**	0.75*	**2.89**	**3.63**	N/A	N/A	**20.8**
	5/21/2018	N/A	N/A	N/A	N/A	**1.88**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/10/2018	N/A	N/A	N/A	329	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1.88	N/A	N/A	N/A	**1.88**	**4.62**	**7.4**	**4.88**	**63.7**	**5**	**98.5**	**3.38**	**2.88**	1.5*	**9.12**	N/A	**11.7**	**11**
	5/7/2019	< 1.88	N/A	N/A	280	0.875*	< 7.5	1.5*	**3.13**	**52**	1.5*	1*	**26**	< 1.88	0.75*	0.875*	N/A	**55**	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**53**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1.88	N/A	N/A	**9.5**	1.13*	**3.25**	**2.38**	**15.3**	**23**	**2.75**	**12**	**3.38**	0.875*	**4.38**	**2.25**	N/A	**2.63**	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.875*	N/A	N/A	N/A
	4/7/2020	< 1.88	N/A	N/A	**7.25**	< 1.88	1.5*	13*	1*	44*	1*	**35.3**	**29**	< 1.88	**1.88**	**30.6**	N/A	**29**	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**21**	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	1.13*	N/A	N/A	**4.37**	**1.88**	N/A	N/A	**16.8**	N/A	**4**	N/A	**10.3**	N/A	**3.13**	**2.63**	N/A	**5.63**	**5**
	9/23/2020	N/A	N/A	N/A	N/A	**3.75**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1.88	N/A	N/A	2.67*	0.875*	1*	**7**	**14.8**	**42.3**	**4.62**	N/A	**31.6**	0.75*	**3.5**	1.13*	**50.7**	**79.3**	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.75*	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**25**	N/A	N/A
	7/27/2021	1.13*	N/A	N/A	< 1.88	**3.38**	N/A	N/A	**17.2**	N/A	**12.1**	N/A	**16.4**	N/A	**1.88**	**3.5**	**34.6**	**31**	N/A
	7/27/2021	N/A	N/A	N/A	N/A	**4.25**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**49**	N/A	N/A
	3/1/2022	< 5	N/A	N/A	4*	< 5	2.67*	**13.5**	**5.33**	**29**	< 5	N/A	**19.3**	< 5	2*	**26.3**	**57**	**6.67**	**24**
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**12**	N/A	N/A	N/A
	6/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**6**	N/A	N/A	N/A
	8/16/2022	< 1.88	N/A	N/A	**4.75**	1.38*	N/A	N/A	**7.25**	N/A	**16**	N/A	**24**	N/A	**2.63**	**21.8**	**13.3**	**13.3**	**11.5**
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**6.25**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	N/A	N/A	N/A	N/A	**3.63**	N/A	N/A	**28.3**	N/A	**3.13**	N/A	**18.3**	N/A	1.38*	**10**	N/A	**66**	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**17.5**	N/A	N/A	N/A	N/A	N/A	N/A
	10/4/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**27.9**	N/A	N/A	N/A
	11/14/2023	< 1.88	**48**	**19.2**	**46**	**3.63**	**13.8**	**19.5**	**46.5**	**8.5**	**3.13**	N/A	**28.5**	**2.38**	1.25*	322	N/A	N/A	**6.87**
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**2.75**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1.88	N/A	4*	**26**	**4.88**	**2**	**19**	**16.8**	**3.38**	< 1.88	N/A	**11.7**	< 1.88	**10.5**	**2.13**	**23**	**102**	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**32**	N/A	N/A
	11/18/2024	< 1.88	N/A	N/A	< 5	**6.67**	N/A	N/A	**13.8**	N/A	**4.88**	N/A	**5.13**	N/A	1.63*	**27.8**	**22**	N/A	< 5
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**17**	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.

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
1,1,1,2-Tetrachloroethane, ug/L (CAS NO - 630-20-6)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.33	N/A	< 0.33	N/A	< 0.33	< 0.33	N/A	< 0.33	N/A	< 0.33	< 0.33	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.33	N/A	N/A	N/A	< 0.33	< 0.33	N/A	< 0.33	N/A	< 0.33	< 0.33	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 5	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 5	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 5	< 1	< 5	< 1	N/A	< 5	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 2	< 1	N/A	< 1	< 1	< 1	< 2	< 1	< 2	N/A	N/A	N/A	< 2	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	5/21/2018	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,1,1-Trichloroethane, ug/L (CAS NO - 71-55-6)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.19	N/A	< 0.19	N/A	< 0.19	< 0.19	N/A	< 0.19	N/A	< 0.19	< 0.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.19	N/A	N/A	N/A	< 0.19	< 0.19	N/A	< 0.19	N/A	< 0.19	< 0.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 4	< 4	< 4	N/A	< 4	< 4	< 4	< 4	N/A	< 4	< 4	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.54	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
1,1,1-Trichloroethane, ug/L (CAS NO - 71-55-6)	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A	0.461*	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.354*	< 1	< 1	< 1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.316*	< 1	< 1	< 1	N/A	N/A	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.365*	< 1	< 1	< 1	N/A	< 1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	1.07	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	0.938*	N/A	< 1	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.757*	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,1,2,2-Tetrachloroethane, ug/L (CAS NO - 79-34-5)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.23	N/A	< 0.23	N/A	< 0.23	< 0.23	N/A	< 0.23	N/A	< 0.23	< 0.23	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.23	N/A	N/A	N/A	< 0.23	< 0.23	N/A	< 0.23	N/A	< 0.23	< 0.23	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 4	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
1,1,2,2-Tetrachloroethane, ug/L (CAS NO - 79-34-5)	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,1,2-Trichloroethane, ug/L (CAS NO - 79-00-5)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.37	N/A	< 0.37	N/A	< 0.37	< 0.37	N/A	< 0.37	N/A	< 0.37	< 0.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.37	N/A	N/A	N/A	< 0.37	< 0.37	N/A	< 0.37	N/A	< 0.37	< 0.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
1,1,2-Trichloroethane, ug/L (CAS NO - 79-00-5)	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,1-Dichloroethane, ug/L (CAS NO - 75-34-3)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.19	N/A	< 0.19	N/A	< 0.19	0.239	N/A	5.12	N/A	< 0.19	< 0.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.19	N/A	N/A	N/A	< 0.19	< 0.19	N/A	1.09	N/A	< 0.19	< 0.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	3.43	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	1.11	N/A	1.03	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	1.19	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	1.49	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	N/A	1.65	N/A	N/A	N/A	N/A	156	< 1	N/A	N/A	N/A	N/A	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	126	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	< 1	N/A	< 1	< 1	1.81	1.05	N/A	< 1	< 1	41	< 1	N/A	N/A	N/A	N/A	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	33.1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	2.4	N/A	N/A	25.1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	1.19	< 1	3.53	N/A	< 1	47.2	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	33.1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.2	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	1.58	< 1	5.12	< 1	< 1	13.3	< 1	N/A	N/A	N/A	2.77	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	3.37	N/A	N/A	12.8	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	2.18	1.07	4.47	< 1	< 1	14.4	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	5.26	< 1	< 1	14.5	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.87	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	3.55	N/A	2.18	5.5	< 1	< 1	26.9	< 1	N/A	N/A	N/A	3.79	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	1.34	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	4.1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	3.17	< 1	< 1	2.79	< 1	< 1	12.4	< 1	N/A	N/A	N/A	3.42	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	4.74	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	3.86	0.908*	1.48	3.39	< 1	< 1	22.7	< 1	N/A	N/A	N/A	4.04	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	4.77	1.33	1.48	3.82	< 1	< 1	9.59	< 1	N/A	N/A	N/A	N/A	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	2.55	2.65	< 1	< 1	25.9	< 1	N/A	N/A	N/A	2.67	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	0.39*	1.39	< 1	< 1	10.1	< 1	N/A	N/A	N/A	1.68	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	5.32	0.303*	< 1	2.7	< 1	< 1	7.76	< 1	N/A	N/A	N/A	1.92	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	2.69	< 1	0.466*	2.48	< 1	< 1	2.37	< 1	N/A	N/A	N/A	2.9	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	2.18	2.33	< 1	N/A	47.8	< 1	N/A	N/A	N/A	2.37	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.6	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	1.56	< 1	0.97*	2.02	< 1	< 1	6.51	< 1	27.6	< 1	N/A	1.39	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31.2	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	3.24	0.343*	0.701*	2.08	< 1	N/A	60.1	< 1	47.1	< 1	N/A	2.04	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	51.7	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	2.77	< 1	2.12	1.78	0.375*	< 1	110	< 1	49	< 1	N/A	N/A	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	0.386*	1.99	0.336*	< 1	< 1	83.7	< 1	52.8	< 1	N/A	1.48	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	0.239*	< 1	0.875*	< 1	< 1	87.5	< 1	45	< 1	N/A	1.03	< 1
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.867*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	0.926*	1.59	< 1	0.235*	< 1	90.4	< 1	61.8	< 1	N/A	1.37	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	0.818*	0.418*	< 1	< 1	74.4	< 1	51.1	< 1	N/A	0.9*	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	74.8	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	1.66	N/A	< 1	N/A	101	N/A	50.3	< 1	N/A	1.2	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	3.4	0.304*	2.52	0.629*	< 1	N/A	79.2	< 1	45.2	< 1	< 1	1.37	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	6/8/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	1.64	N/A	< 1	N/A	74.3	N/A	44.1	< 1	< 1	0.943*	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	2.26	< 1	1.34	0.805*	< 1	N/A	48.7	< 1	31.1	< 1	< 1	1.07	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	1.32	N/A	< 1	N/A	40.5	N/A	45.5	< 1	< 1	0.886*	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.92	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	0.357*	N/A	N/A	N/A	< 1	N/A	N/A	3.08	N/A	< 1	N/A	49.1	N/A	42.9	< 1	N/A	1.41	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	48.7	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	0.429*	< 1	4.42	0.313*	1.13	< 1	< 1	N/A	58.9	< 1	50.9	< 1	N/A	< 1	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	6.74	< 1	1.13	< 1	< 1	N/A	58	< 1	49.7	< 1	< 1	0.68*	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	1.1	N/A	< 1	N/A	58.7	N/A	49.9	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,1-Dichloroethene, ug/L (CAS NO - 75-35-4)	2/8/2008	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.37	N/A	< 0.37	N/A	< 0.37	< 0.37	N/A	< 0.37	N/A	< 0.37	< 0.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.37	N/A	N/A	N/A	< 0.37	< 0.37	N/A	< 0.37	N/A	< 0.37	< 0.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 2	N/A	< 2	< 2	< 2	< 2	N/A	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 2	N/A	N/A	N/A	< 2	< 2	N/A	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 2	N/A	< 2	< 2	< 2	< 2	N/A	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 2	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 2	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	19.2	< 2	N/A	N/A	N/A	N/A	< 2
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13.4	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
1,1-Dichloroethene, ug/L (CAS NO - 75-35-4)	4/8/2010	< 2	< 2	< 2	N/A	< 2	< 2	< 2	< 2	N/A	< 2	< 2	2.78	< 2	N/A	N/A	N/A	N/A	< 2
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	6/15/2010	N/A	< 2	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	2.06	< 2	N/A	N/A	N/A	N/A	< 2
	8/27/2010	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	8/27/2010	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 2	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	3.57	< 2	N/A	N/A	N/A	< 2	< 2
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.42	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	3/15/2011	< 2	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 2	N/A	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	N/A	< 2
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	8/28/2012	< 2	N/A	N/A	N/A	< 2	< 2	N/A	< 2	< 2	< 2	< 2	3.45	< 2	N/A	N/A	N/A	< 2	< 2
	8/28/2012	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A
	2/28/2013	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 2	N/A	N/A	N/A	< 2	1.17*	< 2	< 2	< 2	< 2	< 2	2.67	< 2	N/A	N/A	N/A	< 2	< 2
	10/22/2013	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 2	N/A	N/A	N/A	< 2	1.55*	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	2/19/2014	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 2	< 2	N/A	N/A	< 2	N/A	< 2	< 2	< 2	< 2	< 2	2.63	< 2	N/A	N/A	N/A	< 2	< 2
	10/28/2014	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 2	N/A	N/A	N/A	< 2	N/A	< 2	< 2	< 2	< 2	< 2	0.73*	< 2	N/A	N/A	N/A	< 2	< 2
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 2	N/A	N/A	N/A	< 2	1.75*	< 2	< 2	< 2	< 2	< 2	0.668*	< 2	N/A	N/A	N/A	< 2	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 2	N/A	N/A	N/A	< 2	0.543*	< 2	< 2	< 2	< 2	< 2	0.417*	< 2	N/A	N/A	N/A	< 2	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 2	N/A	N/A	N/A	< 2	N/A	< 2	< 2	< 2	< 2	N/A	4.25	< 2	N/A	N/A	N/A	< 2	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	N/A
	3/29/2017	< 2	N/A	N/A	N/A	< 2	0.226*	< 2	< 2	< 2	< 2	< 2	0.651*	< 2	< 2	< 2	N/A	< 2	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A
	8/7/2017	< 2	N/A	N/A	N/A	< 2	0.955*	< 2	< 2	< 2	< 2	N/A	4.39	< 2	0.159*	< 2	N/A	< 2	< 2
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.241*	< 2	N/A	N/A	N/A
	5/21/2018	< 2	< 2	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	8.42	< 2	< 2	< 2	N/A	N/A	< 2
	5/21/2018	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	5.69	< 2	< 2	< 2	N/A	< 2	< 2
	5/7/2019	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	6.97	< 2	< 2	< 2	N/A	< 2	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	6.89	< 2	< 2	< 2	N/A	< 2	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A
	4/7/2020	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	7.01	< 2	< 2	< 2	N/A	< 2	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.61	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 2	N/A	N/A	< 2	< 2	N/A	< 2	N/A	< 2	< 2	N/A	7.18	N/A	< 2	< 2	N/A	< 2	< 2
	9/23/2020	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 2	N/A	N/A	< 2	< 2	1.59*	< 2	< 2	< 2	< 2	N/A	7.04	< 2	< 2	< 2	< 2	< 2	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A
	7/27/2021	< 2	N/A	N/A	< 2	< 2	N/A	N/A	< 2	N/A	< 2	N/A	5.47	N/A	< 2	< 2	< 2	< 2	N/A
	7/27/2021	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	3/1/2022	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	3.98	< 2	< 2	< 2	< 2	< 2	< 2
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A
	8/16/2022	< 2	N/A	N/A	< 2	< 2	N/A	N/A	< 2	N/A	< 2	N/A	2.79	N/A	< 2	< 2	< 2	< 2	< 2
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 2	N/A	N/A	N/A	6.23	N/A	N/A	< 2	N/A	< 2	N/A	7.59	N/A	< 2	< 2	N/A	< 2	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.9	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	4.12	< 2	< 2	< 2	N/A	N/A	< 2
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 2	N/A	< 2	< 2	< 2	3.13	< 2	< 2	< 2	< 2	N/A	4	< 2	< 2	< 2	< 2	< 2	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	11/18/2024	< 2	N/A	N/A	< 2	< 2	N/A	N/A	< 2	< 2	N/A	N/A	2.8	N/A	< 2	< 2	< 2	< 2	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
1,2,3-Trichloropropane, ug/L (CAS NO - 96-18-4)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.7	N/A	< 0.7	N/A	< 0.7	< 0.7	N/A	< 0.7	N/A	< 0.7	< 0.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.7	N/A	N/A	N/A	< 0.7	< 0.7	N/A	< 0.7	N/A	< 0.7	< 0.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	< 4	< 4	< 4	< 4	< 1	< 4	< 4	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
1,2,3-Trichloropropane, ug/L (CAS NO - 96-18-4)	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,2-Dibromo-3-Chloropropane, ug/L (CAS NO - 96-12-8)	2/8/2008	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.86	N/A	< 0.86	N/A	< 0.86	< 0.86	N/A	< 0.86	N/A	< 0.86	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.86	N/A	N/A	N/A	< 0.86	< 0.86	N/A	< 0.86	N/A	< 0.86	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.86	N/A	< 0.86	< 0.86	< 0.86	< 0.86	N/A	< 0.86	N/A	< 0.86	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.86	N/A	N/A	N/A	< 0.86	< 0.86	N/A	< 0.86	N/A	< 0.86	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.86	N/A	< 0.86	< 0.86	< 0.86	< 0.86	N/A	< 0.86	N/A	< 0.86	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 0.498	< 0.498	< 0.498	< 10	< 0.498	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 0.498	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 0.498	N/A	< 0.498	N/A	N/A	< 0.498	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 0.498	N/A	N/A	N/A	N/A	< 0.498	N/A	N/A	N/A	N/A	< 0.498	< 0.498	N/A	N/A	N/A	N/A	< 0.498
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.498	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 0.498	< 0.498	< 0.498	N/A	< 0.498	< 0.498	< 0.498	< 0.498	N/A	< 0.498	< 0.498	< 0.498	< 0.498	N/A	N/A	N/A	N/A	< 0.498
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.498	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	6/15/2010	N/A	< 0.498	N/A	N/A	N/A	N/A	< 0.498	N/A	N/A	N/A	N/A	< 0.498	< 0.498	N/A	N/A	N/A	< 0.498	N/A
	8/27/2010	N/A	< 0.498	N/A	N/A	N/A	N/A	N/A	N/A	< 0.498	N/A	N/A	< 0.498	< 0.498	N/A	N/A	N/A	< 0.498	< 0.498
	8/27/2010	N/A	< 0.498	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 0.12	< 0.12	N/A	N/A	< 0.12	< 10	< 0.12	< 10	< 0.12	N/A	< 10	< 0.12	< 0.12	N/A	N/A	N/A	< 0.12	< 0.12
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.12	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.12	< 0.12	N/A	N/A	N/A	N/A	N/A	N/A	< 0.12	N/A
	3/15/2011	< 0.12	< 0.12	N/A	N/A	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	N/A	N/A	N/A	< 0.12	< 0.12
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.12	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.12	N/A	N/A	N/A	< 0.12	N/A	N/A	< 0.12	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.12	N/A	N/A	N/A	N/A	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	N/A	N/A	N/A	< 0.12	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.12	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 0.12	N/A	N/A	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	N/A	N/A	N/A	< 0.12	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.16	N/A
	8/28/2012	< 0.12	N/A	N/A	N/A	< 0.12	< 0.12	N/A	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	N/A	N/A	N/A	< 0.12	< 0.12
	8/28/2012	< 0.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 0.12	N/A	N/A	N/A	N/A	N/A	< 0.12	N/A	N/A	N/A	< 0.12	N/A
	2/28/2013	< 0.12	N/A	N/A	N/A	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	N/A	N/A	N/A	< 0.12	< 0.12
	2/28/2013	N/A	N/A	N/A	N/A	< 0.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 0.12	N/A	N/A	N/A	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	N/A	N/A	N/A	< 0.12	< 0.12
	10/22/2013	< 0.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 0.12	N/A	N/A	N/A	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	N/A	N/A	N/A	N/A	< 0.12
	2/19/2014	N/A	N/A	N/A	N/A	< 0.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 0.12	< 0.12	N/A	N/A	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	N/A	N/A	N/A	< 0.12	< 0.12
	10/28/2014	N/A	N/A	N/A	N/A	< 0.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 0.5	N/A	N/A	N/A	< 0.5	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A	N/A	< 0.5	< 0.5
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 0.5	N/A	N/A	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A	N/A	< 0.5	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 0.5	N/A	N/A	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A	N/A	< 0.5	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 0.5	N/A	N/A	N/A	< 0.5	N/A	< 0.5	< 0.5	< 0.5	< 0.5	N/A	< 0.5	< 0.5	N/A	N/A	N/A	< 0.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	< 0.5	N/A	N/A	N/A
	3/29/2017	< 0.5	N/A	N/A	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A	< 0.5	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	< 0.5	N/A	N/A	N/A
	8/7/2017	< 0.5	N/A	N/A	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A	< 0.5	< 0.5	< 0.5	< 0.5	N/A	< 0.5	< 0.5
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	< 0.5	N/A	N/A	N/A
	5/21/2018	< 0.5	< 0.5	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A	N/A	< 0.5
	5/21/2018	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 0.5	N/A	N/A	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A	< 0.5	< 0.5
	5/7/2019	< 1.2	N/A	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A	< 1.2	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1.2	N/A	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A	< 1.2	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A	N/A
	4/7/2020	< 1.2	N/A	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A	< 1.2	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
1,2-Dibromo-3-Chloropropane, ug/L (CAS NO - 96-12-8)	9/23/2020	< 1.2	N/A	N/A	< 1.2	< 1.2	N/A	N/A	< 1.2	N/A	< 1.2	N/A	< 1.2	N/A	< 1.2	< 1.2	N/A	< 1.2	< 1.2
	9/23/2020	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1.2	N/A	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A
	7/27/2021	< 1.2	N/A	N/A	< 1.2	< 1.2	N/A	N/A	< 1.2	N/A	< 1.2	N/A	< 1.2	N/A	< 1.2	< 1.2	< 1.2	< 1.2	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A
	3/1/2022	< 1.2	N/A	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A	N/A
	8/16/2022	< 1.2	N/A	N/A	< 1.2	< 1.2	N/A	N/A	< 1.2	N/A	< 1.2	N/A	< 1.2	N/A	< 1.2	< 1.2	< 1.2	< 1.2	N/A
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1.2	N/A	N/A	N/A	< 1.2	N/A	N/A	< 1.2	N/A	< 1.2	N/A	< 1.2	N/A	< 1.2	< 1.2	N/A	< 1.2	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A	< 1.2	< 1.2	< 1.2	< 1.2	N/A	N/A	< 1.2
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1.2	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A
	11/18/2024	< 1.2	N/A	N/A	< 1.2	< 1.2	N/A	N/A	< 1.2	N/A	< 1.2	N/A	< 1.2	N/A	< 1.2	< 1.2	< 1.2	N/A	< 1.2
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.2	N/A	N/A
1,2-Dibromoethane [EDB], ug/L (CAS NO - 106-93-4)	2/8/2008	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.25	N/A	< 0.25	N/A	< 0.25	< 0.25	N/A	< 0.25	N/A	< 0.25	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.25	N/A	N/A	N/A	< 0.25	< 0.25	N/A	< 0.25	N/A	< 0.25	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.25	N/A	< 0.25	< 0.25	< 0.25	< 0.25	N/A	< 0.25	N/A	< 0.25	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.25	N/A	N/A	N/A	< 0.25	< 0.25	N/A	< 0.25	N/A	< 0.25	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.25	N/A	< 0.25	< 0.25	< 0.25	< 0.25	N/A	< 0.25	N/A	< 0.25	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 0.255	< 0.255	< 0.255	< 10	< 0.255	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 0.255	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 0.255	N/A	< 0.255	N/A	N/A	< 0.255	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 0.255	N/A	N/A	N/A	N/A	< 0.255	N/A	N/A	N/A	N/A	< 0.255	< 0.255	N/A	N/A	N/A	N/A	< 0.255
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.255	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 0.255	< 0.255	< 0.255	< 0.255	< 0.255	< 0.255	< 0.255	< 0.255	N/A	< 0.255	< 0.255	< 0.255	< 0.255	N/A	N/A	N/A	N/A	< 0.255
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.255	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	6/15/2010	N/A	< 0.255	N/A	N/A	N/A	N/A	< 0.255	N/A	N/A	N/A	N/A	< 0.255	< 0.255	N/A	N/A	N/A	N/A	N/A
	8/27/2010	N/A	< 0.255	N/A	N/A	N/A	N/A	N/A	N/A	< 0.255	N/A	N/A	< 0.255	< 0.255	N/A	N/A	N/A	< 0.255	< 0.255
	8/27/2010	N/A	< 0.255	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 0.13	< 0.13	N/A	< 0.13	< 10	< 0.13	< 10	< 0.13	< 0.13	N/A	< 10	< 0.13	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.13	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A	< 0.13	N/A
	3/15/2011	< 0.13	< 0.13	N/A	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.13	N/A	N/A	N/A	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	N/A	N/A	< 0.13
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 0.13	N/A	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.13	N/A
	8/28/2012	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13
	8/28/2012	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	< 0.13	N/A
	2/28/2013	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13
	10/22/2013	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	N/A	< 0.13	N/A
	2/19/2014	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 0.13	< 0.13	N/A	N/A	< 0.13	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13
	10/28/2014	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 0.13	N/A	N/A	N/A	< 0.13	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	N/A	< 0.13	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	N/A	< 0.13	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 0.13	N/A	N/A	N/A	< 0.13	N/A	< 0.13	< 0.13	< 0.13	< 0.13	N/A	< 0.13	< 0.13	N/A	N/A	N/A	< 0.13	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.13	< 0.13	N/A	N/A	N/A
	3/29/2017	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	< 0.13	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.13	< 0.13	N/A	N/A	N/A
	8/7/2017	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	< 0.13	< 0.13	< 0.13	< 0.13	N/A	< 0.13	< 0.13
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.13	< 0.13	N/A	N/A	N/A
	5/21/2018	< 0.13	< 0.13	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	N/A	< 0.13
	5/21/2018	N/A	N/A	N/A	N/A	< 0.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 0.13	N/A	N/A	N/A	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	N/A	< 0.13	< 0.13
	5/7/2019	< 0.34	N/A	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	N/A	< 0.34	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 0.34	N/A	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	N/A	< 0.34	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A	N/A
	4/7/2020	< 0.34	N/A	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	N/A	< 0.34	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 0.34	N/A	N/A	< 0.34	< 0.34	N/A	N/A	< 0.34	N/A	< 0.34	N/A	< 0.34	N/A	< 0.34	< 0.34	N/A	< 0.34	< 0.34
	9/23/2020	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 0.34	N/A	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A	N/A
	7/27/2021	< 0.34	N/A	N/A	< 0.34	< 0.34	N/A	N/A	< 0.34	N/A	< 0.34	N/A	< 0.34	N/A	< 0.34	< 0.34	< 0.34	< 0.34	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A
	3/1/2022	< 0.34	N/A	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A	N/A
	8/16/2022	< 0.34	N/A	N/A	< 0.34	< 0.34	N/A	N/A	< 0.34	N/A	< 0.34	N/A	< 0.34	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 0.34	N/A	N/A	< 0.34	< 0.34	N/A	N/A	< 0.34	N/A	< 0.34	N/A	< 0.34	N/A	< 0.34	< 0.34	N/A	< 0.34	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	N/A	< 0.34	< 0.34	< 0.34	< 0.34	N/A	N/A	< 0.34
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 0.34	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	N/A	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	< 0.34	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A
	11/18/2024	< 0.34	N/A	N/A	< 0.34	< 0.34	N/A	N/A	< 0.34	N/A	< 0.34	N/A	< 0.34	N/A	< 0.34	< 0.34	< 0.34	N/A	< 0.34
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.34	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
1,2-Dichlorobenzene, ug/L (CAS NO - 95-50-1)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.21	N/A	< 0.21	N/A	< 0.21	< 0.21	N/A	0.258	N/A	< 0.21	< 0.21	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.21	N/A	N/A	N/A	< 0.21	< 0.21	N/A	0.23	N/A	< 0.21	< 0.21	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	8.1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 2	< 2	N/A	N/A	< 2	< 1	< 2	< 1	< 2	N/A	< 1	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	4.66	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	14.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	16.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	4.39	< 1	0.537*	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	4.58	< 1	0.482*	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	0.453*	< 1	< 1	< 1	0.468*	< 1	N/A	N/A	N/A	0.27*	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	0.316*	< 1	< 1	< 1	< 1	< 1	0.477*	< 1	N/A	N/A	N/A	0.312*	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	0.536*	< 1	0.224*	< 1	< 1	< 1	0.673*	< 1	N/A	N/A	N/A	0.413*	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	0.492*	< 1	< 1	N/A	0.291*	< 1	N/A	N/A	N/A	0.218*	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	1.4	< 1	0.311*	< 1	< 1	N/A	0.229*	< 1	< 1	< 1	N/A	0.265*	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	2.82	< 1	0.506*	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	0.437*	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.518*	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.606*	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	0.411*	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.477*	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	0.527*	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.604*	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	0.476*	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	0.422*	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	0.452*	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	0.409*	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	0.54*	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.567*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	< 1	N/A	N/A	0.384*	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	0.552*	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.548*	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	0.441*	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	0.523*	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,2-Dichloroethane, ug/L (CAS NO - 107-06-2)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.2	N/A	< 0.2	N/A	< 0.2	0.3	N/A	< 0.2	N/A	< 0.2	< 0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.2	N/A	N/A	N/A	< 0.2	0.31	N/A	< 0.2	N/A	< 0.2	< 0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
1,2-Dichloroethane, ug/L (CAS NO - 107-06-2)	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 2	< 1	N/A	< 1	< 1	< 1	< 2	< 1	< 2	N/A	N/A	N/A	< 2	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.272*	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.264*	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.365*	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A	0.431*	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.287*	< 1	< 1	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.454*	< 1	0.317*	< 1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.586*	< 1	< 1	< 1	N/A	N/A	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	0.458*	N/A	< 1	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.543*	< 1	< 1	< 1	< 1	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	0.414*	N/A	< 1	< 1	< 1	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	1.11	N/A	N/A	< 1	N/A	0.808*	N/A	0.965*	N/A	< 1	0.54*	N/A	< 1	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.789*	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
1,2-Dichloropropane, ug/L (CAS NO - 78-87-5)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.4	N/A	< 0.4	N/A	< 0.4	< 0.4	N/A	< 0.4	N/A	< 0.4	< 0.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.4	N/A	N/A	N/A	< 0.4	< 0.4	N/A	< 0.4	N/A	< 0.4	< 0.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
1,2-Dichloropropane, ug/L (CAS NO - 78-87-5)	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	0.531*	< 1	< 1	< 1	0.425*	< 1	0.634*	< 1	N/A	< 1	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	0.443*	< 1	< 1	< 1	< 1	< 1	0.716*	< 1	N/A	< 1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	0.288*	< 1	< 1	< 1	0.325*	< 1	0.632*	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.529*	< 1	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	0.359*	N/A	< 1	N/A	0.432*	N/A	0.661*	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	0.492*	< 1	< 1	N/A	0.45*	< 1	0.618*	< 1	< 1	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	0.29*	N/A	< 1	N/A	0.431*	N/A	0.492*	< 1	< 1	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.32*	< 1	0.317*	< 1	< 1	< 1	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	0.318*	N/A	< 1	N/A	0.4*	N/A	0.665*	< 1	< 1	< 1	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.448*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	1.76	N/A	N/A	0.747*	N/A	< 1	N/A	0.526*	N/A	0.7*	< 1	N/A	< 1	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.633*	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.33*	< 1	0.533*	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.355*	< 1	0.469*	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	0.45*	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
1,4-Dichlorobenzene, ug/L (CAS NO - 106-46-7)	2/8/2008	< 1	N/A	N/A	N/A	< 1	1.65	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.16	N/A	< 0.16	N/A	< 0.16	0.358	N/A	< 0.16	N/A	< 0.16	< 0.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.16	N/A	N/A	N/A	< 0.16	2.23	N/A	< 0.16	N/A	< 0.16	< 0.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	1.65	N/A	1.64	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	2.53	N/A	1.8	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	1.75	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	2.96	N/A	1.02	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	< 1	N/A	< 1	< 1	< 1	1.77	N/A	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.39	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	1.91	N/A	N/A	1.04	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	2.42	< 1	< 1	2.65	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.98	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	2.33	< 1	< 1	3.42	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 4	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	3.27	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	1.82	1.57	< 1	4.03	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	1.59	< 1	< 1	3.49	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	< 1	N/A	2.1	3.71	< 1	< 1	< 1	< 1	N/A	N/A	N/A	1.8	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	1.71	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	1.63	< 1	< 1	3.33	< 1	< 1	< 1	< 1	N/A	N/A	N/A	4.66	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	1.43	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	0.315*	0.452*	2.39	3.74	< 1	< 1	0.761*	< 1	N/A	N/A	N/A	3.16	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	2.44	4.31	< 1	< 1	0.61*	< 1	N/A	N/A	N/A	N/A	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	1.65	5.58	< 1	< 1	< 1	< 1	N/A	N/A	N/A	5.48	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	1.74	3.82	< 1	< 1	0.83*	< 1	N/A	N/A	N/A	7.38	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	4.28	< 1	< 1	0.753*	< 1	N/A	N/A	N/A	8.98	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	1.16	< 1	< 1	< 1	1.32	< 1	N/A	N/A	N/A	10.3	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	1.59	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	5.33	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	2.61	2.05	< 1	< 1	0.317*	< 1	< 1	< 1	N/A	9.17	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	0.231*	0.353*	1.39	2.63	< 1	N/A	0.36*	< 1	0.338*	< 1	N/A	5.99	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.682*	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	2.34	2.1	< 1	< 1	< 1	< 1	0.485*	< 1	N/A	< 1	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	1.38	< 1	< 1	< 1	< 1	< 1	< 1	N/A	8.69	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	0.253*	1.74	2.09	< 1	< 1	< 1	< 1	< 1	< 1	N/A	10.6	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	1.39	1.87	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	8.82	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	0.638*	< 1	3.09	1.28	< 1	< 1	0.529*	< 1	< 1	< 1	N/A	10.3	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.423*	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	1.62	N/A	< 1	N/A	< 1	N/A	0.388*	< 1	N/A	7.59	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	1.41	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	10.8	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	7.24	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
1,4-Dichlorobenzene, ug/L (CAS NO - 106-46-7)	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	1.58	0.948*	< 1	N/A	0.31*	< 1	< 1	< 1	< 1	6.87	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	1.91	N/A	< 1	N/A	< 1	N/A	0.534*	< 1	< 1	8.26	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	< 1	N/A	N/A	1.11	N/A	< 1	N/A	0.35*	N/A	0.633*	< 1	N/A	8.62	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.347*	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	0.494*	2.61	0.622*	< 1	N/A	0.235*	< 1	0.73*	< 1	N/A	< 1	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	2.01	0.669*	< 1	N/A	0.241*	< 1	0.523*	< 1	< 1	6.26	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	2.03	N/A	< 1	N/A	< 1	N/A	0.743*	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
2-Butanone, ug/L (CAS NO - 78-93-3)	2/8/2008	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.91	N/A	2.85	N/A	< 0.91	< 0.91	N/A	< 0.91	N/A	< 0.91	< 0.91	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.91	N/A	N/A	N/A	1.67	< 0.91	N/A	1.7	N/A	< 0.91	1.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 10	N/A	19.1	< 10	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 10	N/A	N/A	N/A	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	6/15/2010	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 10	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	3/15/2011	< 10	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 10	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	8/28/2012	< 10	N/A	N/A	N/A	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/28/2012	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	2/28/2013	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	2.11*	< 10	N/A	N/A	N/A	< 10	< 10
	10/22/2013	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	2/19/2014	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 10	< 10	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/28/2014	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 10	N/A	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	0.53*	< 10	N/A	N/A	N/A	< 10	< 10
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	0.726*	N/A	N/A	N/A	< 10	< 10	< 10	< 10	1.15*	< 10	0.763*	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 10	N/A	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	3/29/2017	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	8/7/2017	< 10	N/A	N/A	N/A	< 10	1.09*	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	5/21/2018	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	< 10
	5/21/2018	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	5/7/2019	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	4/7/2020	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	< 10	< 10
	9/23/2020	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	7/27/2021	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	< 10	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	3/1/2022	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	8/16/2022	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	< 10	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	11/18/2024	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	N/A	< 10
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
2-Hexanone, ug/L (CAS NO - 591-78-6)	2/8/2008	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 1.76	N/A	< 1.76	N/A	< 1.76	< 1.76	N/A	< 1.76	N/A	< 1.76	< 1.76	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 1.76	N/A	N/A	N/A	< 1.76	< 1.76	N/A	< 1.76	N/A	< 1.76	< 1.76	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 10	N/A	N/A	N/A	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
2-Hexanone, ug/L (CAS NO - 591-78-6)	12/29/2009	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A
	6/15/2010	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 10	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	3/15/2011	< 10	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 10	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	8/28/2012	< 10	N/A	N/A	N/A	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/28/2012	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	2/28/2013	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10	< 10
	10/22/2013	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	2/19/2014	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 10	< 10	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/28/2014	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 10	N/A	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 10	N/A	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	3/29/2017	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	8/7/2017	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	5/21/2018	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	< 10
	5/21/2018	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	5/7/2019	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	4/7/2020	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	< 10	< 10
	9/23/2020	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	7/27/2021	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	< 10	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/1/2022	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	8/16/2022	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	< 10	N/A
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	< 10	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 10	N/A	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	11/18/2024	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	N/A	< 10
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
4-Methyl-2-Pentanone, ug/L (CAS NO - 108-10-1)	2/8/2008	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.31	N/A	< 0.31	N/A	< 0.31	< 0.31	N/A	< 0.31	N/A	< 0.31	< 0.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.31	N/A	N/A	N/A	< 0.31	< 0.31	N/A	< 0.31	N/A	< 0.31	< 0.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 10	N/A	N/A	N/A	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 10	< 10	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A
	6/15/2010	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 10	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	3/15/2011	< 10	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 10	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	8/28/2012	< 10	N/A	N/A	N/A	< 10	10.8	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/28/2012	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	2/28/2013	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10	< 10
	10/22/2013	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
4-Methyl-2-Pentanone, ug/L (CAS NO - 108-10-1)	2/19/2014	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	2/19/2014	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 10	< 10	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/28/2014	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 10	N/A	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 10	N/A	N/A	N/A	< 10	N/A	< 10	0.514*	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	3/29/2017	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	8/7/2017	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	5/21/2018	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	< 10
	5/21/2018	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	5/7/2019	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	4/7/2020	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	< 10	< 10
	9/23/2020	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	7/27/2021	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	< 10	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/1/2022	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	8/16/2022	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	< 10	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	N/A	< 10
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	11/18/2024	< 10	N/A	< 10	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	N/A	< 10
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
Acetone, ug/L (CAS NO - 67-64-1)	2/8/2008	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 4.62	N/A	19.3	N/A	< 4.62	< 4.62	N/A	< 4.62	N/A	4.71	26.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 4.62	N/A	N/A	N/A	< 4.62	< 4.62	N/A	< 4.62	N/A	< 4.62	6.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 10	N/A	15.3	< 10	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 10	N/A	N/A	N/A	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A	< 10	11	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	6/15/2010	N/A	< 10	N/A	N/A	N/A	N/A	45.4	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 10	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	3/15/2011	< 10	< 10	N/A	N/A	< 10	< 10	< 10	< 10	37.4	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 10	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	16.5	N/A
	8/28/2012	< 10	N/A	N/A	N/A	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/28/2012	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	2/28/2013	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	198	< 10	3.09*	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/22/2013	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	122	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	2/19/2014	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 10	< 10	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/28/2014	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 10	N/A	N/A	N/A	< 10	N/A	< 10	< 10	5.07*	< 10	< 10	2.1*	< 10	N/A	N/A	N/A	1.87*	< 10
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 10	N/A	N/A	N/A	< 10	< 10	< 10	3.39	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 10	N/A	N/A	N/A	< 10	N/A	1.9*	1.99*	< 10	1.98*	N/A	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	1.85*	N/A	N/A	N/A
	3/29/2017	2.81*	N/A	N/A	N/A	2.48*	2.69*	2.82*	3.27*	4.38*	3.8*	1.84*	4.43*	2.53*	< 10	2*	N/A	< 10	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.25*	5*	N/A	N/A	N/A
	8/7/2017	3.67*	N/A	N/A	N/A	1.96*	3.93*	3.63*	3.77*	2.69*	4.63*	N/A	< 10	3.18*	3.79*	2.13*	N/A	3.82*	4.3*
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.38*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	2.26*	N/A	N/A	N/A
	5/21/2018	< 10	3.17*	N/A	< 10	< 10	< 10	5.12*	3.76*	3.25*	3.23*	< 10	3.6*	< 10	< 10	< 10	N/A	N/A	4.28*
	5/21/2018	N/A	N/A	N/A	N/A	3.18*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	5.28*	< 10	6.46*	< 10	< 10	< 10	< 10	N/A	< 10	15.2
	5/7/2019	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	3.65*	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Acetone, ug/L (CAS NO - 67-64-1)	10/1/2019	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	3.14*	< 10	N/A	< 10	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	4/7/2020	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	4.8*	< 10	3.12*	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	< 10	< 10
	9/23/2020	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	5.04*	< 10	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.25*	N/A	N/A
	7/27/2021	< 10	N/A	N/A	< 10	< 10	N/A	N/A	11.1	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	< 10	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/1/2022	< 10	N/A	N/A	< 10	< 10	< 10	3.34*	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	4.21*	< 10	< 10
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	8/16/2022	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	< 10	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 10	N/A	< 10	< 10	< 10	< 10	3.65*	3.77*	< 10	< 10	N/A	< 10	< 10	< 10	< 10	11.1	< 10	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.6	N/A	N/A
	11/18/2024	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	3.45*	N/A	< 10
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.68*	N/A	N/A
Acrylonitrile, ug/L (CAS NO - 107-13-1)	2/8/2008	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 1.28	N/A	< 1.28	N/A	< 1.28	< 1.28	N/A	< 1.28	N/A	< 1.28	< 1.28	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 1.28	N/A	N/A	N/A	< 1.28	< 1.28	N/A	< 1.28	N/A	< 1.28	< 1.28	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 10	N/A	N/A	N/A	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	6/15/2010	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 10	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	3/15/2011	< 10	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 10	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	8/28/2012	< 10	N/A	N/A	N/A	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/28/2012	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	2/28/2013	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/22/2013	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	2/19/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 10	< 10	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/28/2014	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 10	N/A	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 10	N/A	N/A	N/A	< 10	N/A	< 10	2.26*	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	3/29/2017	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	8/7/2017	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	5/21/2018	< 10	< 10	< 10	< 10	< 10	< 10	< 10	2.2*	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	5/21/2018	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	5/7/2019	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	4/7/2020	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	< 10	< 10
	9/23/2020	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	7/27/2021	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	< 10	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/1/2022	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	8/16/2022	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	< 10	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	11/18/2024	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	N/A	< 10
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Benzene, ug/L (CAS NO - 71-43-2)	2/8/2008	< 0.5	N/A	N/A	N/A	< 0.5	0.55	< 0.5	< 0.5	N/A	< 0.5	0.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.16	N/A	< 0.16	N/A	< 0.16	0.17	N/A	0.402	N/A	< 0.16	0.353	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.16	N/A	N/A	N/A	< 0.16	0.54	N/A	0.18	N/A	0.24	0.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.5	N/A	< 0.5	< 0.5	< 0.5	< 0.5	N/A	< 0.5	N/A	< 0.5	0.55	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.5	N/A	N/A	N/A	< 0.5	0.58	N/A	< 0.5	N/A	< 0.5	0.59	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.5	N/A	< 0.5	< 0.5	< 0.5	0.68	N/A	< 0.5	N/A	< 0.5	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	N/A	< 0.5	0.66	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	0.72	N/A	< 0.5	N/A	N/A	0.72	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 0.5	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	2.42	< 0.5	N/A	N/A	N/A	N/A	< 0.5
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.82	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 0.5	< 0.5	< 0.5	N/A	< 0.5	< 0.5	< 0.5	0.58	N/A	< 0.5	0.55	2.2	< 0.5	N/A	N/A	N/A	N/A	< 0.5
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.43	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A
	6/15/2010	N/A	< 0.5	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	2.22	< 0.5	N/A	N/A	N/A	N/A	< 0.5
	8/27/2010	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	2.86	N/A	N/A	2.59	< 0.5	N/A	N/A	N/A	< 0.5	< 0.5
	8/27/2010	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 0.5	< 0.5	N/A	N/A	< 0.5	0.53	< 0.5	0.8	2.69	N/A	0.96	2.17	< 0.5	N/A	N/A	N/A	< 0.5	< 0.5
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.19	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.09	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A
	3/15/2011	< 0.5	< 0.5	N/A	N/A	< 0.5	< 0.5	< 0.5	0.58	1.58	< 0.5	0.69	1.37	< 0.5	N/A	N/A	N/A	< 0.5	< 0.5
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	1.93	N/A	N/A	1.37	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.5	N/A	N/A	N/A	N/A	< 0.5	< 0.5	0.52	1.72	< 0.5	0.62	0.98	< 0.5	N/A	N/A	N/A	N/A	< 0.5
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 0.5	N/A	N/A	1.38	< 0.5	< 0.5	< 0.5	< 0.5	1.93	< 0.5	0.72	1.41	< 0.5	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A
	8/28/2012	< 0.5	N/A	N/A	N/A	< 0.5	0.83	N/A	0.61	1.58	< 0.5	0.75	1.06	< 0.5	N/A	N/A	N/A	0.73	< 0.5
	8/28/2012	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	0.61	N/A
	2/28/2013	< 0.5	N/A	N/A	N/A	< 0.5	0.966	< 0.5	< 0.5	1.37	< 0.5	0.62	0.972	< 0.5	N/A	N/A	N/A	1.24	< 0.5
	2/28/2013	N/A	N/A	N/A	N/A	N/A	0.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 0.5	N/A	N/A	N/A	< 0.5	0.343*	0.125*	0.539	1.66	< 0.5	0.625	1.32	< 0.5	N/A	N/A	N/A	0.836	< 0.5
	10/22/2013	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 0.5	N/A	N/A	N/A	< 0.5	0.426*	< 0.5	0.559	2.24	< 0.5	< 0.5	0.84	< 0.5	N/A	N/A	N/A	N/A	< 0.5
	2/19/2014	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 0.5	< 0.5	N/A	N/A	< 0.5	N/A	< 0.5	0.443*	2.33	< 0.5	< 0.5	1.47	< 0.5	N/A	N/A	N/A	2.15	< 0.5
	10/28/2014	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 0.5	N/A	N/A	N/A	< 0.5	N/A	< 0.5	0.191*	1.01	< 0.5	0.617	0.769	< 0.5	N/A	N/A	N/A	2.52	< 0.5
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 0.5	N/A	N/A	N/A	< 0.5	0.261*	< 0.5	< 0.5	1.64	< 0.5	0.255*	1.98	< 0.5	N/A	N/A	N/A	3.54	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 0.5	N/A	N/A	N/A	< 0.5	< 0.5	< 0.5	0.288*	1.96	< 0.5	0.79	2.14	< 0.5	N/A	N/A	N/A	3.04	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 0.5	N/A	N/A	N/A	< 0.5	N/A	0.202*	0.449*	2.42	< 0.5	N/A	1.23	< 0.5	N/A	N/A	N/A	2.1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.713	< 0.5	N/A	N/A	N/A
	3/29/2017	< 0.5	N/A	N/A	N/A	< 0.5	< 0.5	< 0.5	0.517	0.878	< 0.5	0.396*	1.75	< 0.5	0.857	< 0.5	N/A	5.46	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.37	< 0.5	N/A	N/A	N/A
	8/7/2017	< 0.5	N/A	N/A	N/A	< 0.5	0.141*	0.16*	0.276*	1.85	< 0.5	N/A	1.14	< 0.5	3.3	< 0.5	N/A	2.79	< 0.5
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.1	< 0.5	N/A	N/A	N/A
	5/21/2018	< 0.5	< 0.5	N/A	< 0.5	< 0.5	< 0.5	< 0.5	0.48*	1.18	< 0.5	< 0.5	0.751	< 0.5	3.04	< 0.5	N/A	N/A	< 0.5
	5/21/2018	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A
	9/25/2018	< 0.5	N/A	N/A	N/A	< 0.5	0.451*	< 0.5	0.451*	0.517	< 0.5	0.596	0.62	< 0.5	2.79	< 0.5	N/A	4.06	< 0.5
	5/7/2019	< 0.5	N/A	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.84	< 0.5	< 0.5	0.863	< 0.5	1.02	< 0.5	N/A	4.59	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.82	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 0.5	N/A	N/A	< 0.5	< 0.5	< 0.5	0.57	0.472*	0.494*	< 0.5	< 0.5	0.686	< 0.5	2.39	< 0.5	N/A	3.01	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A
	4/7/2020	< 0.5	N/A	N/A	< 0.5	< 0.5	< 0.5	< 0.5	0.541	1.29	< 0.5	0.229*	0.916	< 0.5	0.72	< 0.5	N/A	3.82	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.992	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 0.5	N/A	N/A	< 0.5	< 0.5	N/A	N/A	0.438*	N/A	< 0.5	N/A	0.651	N/A	0.752	< 0.5	N/A	4.17	< 0.5
	9/23/2020	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 0.5	N/A	N/A	< 0.5	< 0.5	< 0.5	< 0.5	0.453*	1.08	< 0.5	N/A	0.807	0.369*	0.303*	< 0.5	< 0.5	4.27	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A
	7/27/2021	< 0.5	N/A	N/A	< 0.5	< 0.5	N/A	N/A	0.391*	N/A	< 0.5	N/A	0.699	N/A	0.384*	< 0.5	< 0.5	2.2	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A
	3/1/2022	< 0.5	N/A	N/A	< 0.5	< 0.5	< 0.5	< 0.5	0.325*	0.331*	< 0.5	N/A	0.754	< 0.5	< 0.5	< 0.5	< 0.5	1.79	< 0.5
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A
	8/16/2022	< 0.5	N/A	N/A	< 0.5	< 0.5	N/A	N/A	0.442*	N/A	< 0.5	N/A	0.896	N/A	1.02	< 0.5	< 0.5	4.27	< 0.5
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.501	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 0.5	N/A	N/A	N/A	< 0.5	N/A	N/A	0.489*	N/A	< 0.5	N/A	0.76	N/A	1.04	< 0.5	N/A	4.78	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.743	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 0.5	< 0.5	< 0.5	0.771	< 0.5	< 0.5	< 0.5	0.333*	< 0.5	< 0.5	N/A	0.573	< 0.5	1.59	< 0.5	N/A	< 0.5	< 0.5
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 0.5	N/A	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.294*	< 0.5	< 0.5	N/A	0.584	< 0.5	0.654	< 0.5	< 0.5	3.01	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A
	11/18/2024	< 0.5	N/A	N/A	< 0.5	< 0.5	N/A	N/A	< 0.5	N/A	< 0.5	N/A	0.466*	N/A	0.953	< 0.5	< 0.5	N/A	< 0.5
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A
Bromochloromethane, ug/L (CAS NO - 74-97-5)	2/8/2008	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.76	N/A	< 0.76	N/A	< 0.76	< 0.76	N/A	< 0.76	N/A	< 0.76	< 0.76	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.76	N/A	N/A	N/A	< 0.76	< 0.76	N/A	< 0.76	N/A	< 0.76	< 0.76	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 5	N/A	N/A	N/A	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 5	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 5	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	< 5	< 5
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	6/15/2010	N/A	< 5	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	8/27/2010	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	8/27/2010	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 5	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	3/15/2011	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	< 5	< 5
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Bromochloromethane, ug/L (CAS NO - 74-97-5)	7/21/2011	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 5	N/A	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	8/28/2012	< 5	N/A	N/A	N/A	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	8/28/2012	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A
	2/28/2013	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/22/2013	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	2/19/2014	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 5	< 5	N/A	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/28/2014	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 5	N/A	N/A	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	< 5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A
	3/29/2017	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A
	8/7/2017	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A
	5/21/2018	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	< 5
	5/21/2018	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5
	5/7/2019	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	4/7/2020	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	N/A	< 5	< 5
	9/23/2020	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	7/27/2021	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	< 5	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	3/1/2022	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	8/16/2022	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 5	N/A	N/A	N/A	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	N/A	< 5	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	N/A	< 5
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	11/18/2024	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	N/A	< 5
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
Bromodichloromethane, ug/L (CAS NO - 75-27-4)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.2	N/A	< 0.2	N/A	< 0.2	< 0.2	N/A	< 0.2	N/A	< 0.2	< 0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.2	N/A	N/A	N/A	< 0.2	< 0.2	N/A	< 0.2	N/A	< 0.2	< 0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 5	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 5	< 5	N/A	N/A	< 5	< 5	< 10	< 5	N/A	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 10	< 5
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	< 1	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	< 1	< 1	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Bromodichloromethane, ug/L (CAS NO - 75-27-4)	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/1/2022	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Bromoform, ug/L (CAS NO - 75-25-2)	2/8/2008	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.43	N/A	< 0.43	N/A	< 0.43	< 0.43	N/A	< 0.43	N/A	< 0.43	< 0.43	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.43	N/A	N/A	N/A	< 0.43	< 0.43	N/A	< 0.43	N/A	< 0.43	< 0.43	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 5	N/A	N/A	N/A	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 20	N/A	< 20	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 50	< 50	< 50	N/A	< 50	< 50	< 50	< 50	N/A	< 50	< 50	< 50	< 50	N/A	N/A	N/A	N/A	< 50
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	6/15/2010	N/A	< 5	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	8/27/2010	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	8/27/2010	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 5	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	3/15/2011	< 5	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 5	N/A	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	8/28/2012	< 5	N/A	N/A	N/A	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	8/28/2012	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A
	2/28/2013	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	2/28/2013	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/22/2013	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	2/19/2014	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 5	< 5	N/A	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/28/2014	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 5	N/A	N/A	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 5	N/A	N/A	N/A	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	< 5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A
	3/29/2017	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A
	8/7/2017	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A
	5/21/2018	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5
	5/21/2018	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5
	5/7/2019	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A
	4/7/2020	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	N/A	< 5	< 5
	9/23/2020	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	7/27/2021	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	< 5	N/A
	7/27/2021	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	3/1/2022	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Bromoform, ug/L (CAS NO - 75-25-2)	8/16/2022	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 5	N/A	N/A	N/A	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	N/A	< 5	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	N/A	< 5
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	11/18/2024	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	N/A	< 5
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
Bromomethane, ug/L (CAS NO - 74-83-9)	2/8/2008	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.48	N/A	< 0.48	N/A	< 0.48	< 0.48	N/A	< 0.48	N/A	< 0.48	< 0.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.48	N/A	N/A	N/A	< 0.48	< 0.48	N/A	< 0.48	N/A	< 0.48	< 0.48	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 4	N/A	< 4	< 4	< 4	< 4	N/A	< 4	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 4	N/A	N/A	N/A	< 4	< 4	N/A	< 4	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 4	N/A	< 4	< 4	< 4	< 4	N/A	< 4	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 4	N/A	< 4	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 4	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 4	< 4	< 4	N/A	< 4	< 4	< 4	< 4	N/A	< 4	< 4	< 4	< 4	N/A	N/A	N/A	N/A	< 4
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	6/15/2010	N/A	< 4	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	< 4	< 4	N/A	N/A	N/A	< 4	N/A
	8/27/2010	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	8/27/2010	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 4	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4	N/A	< 4	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	3/15/2011	< 4	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	< 4	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 20	N/A	N/A	N/A	N/A	< 4	< 4	< 4	< 20	< 4	< 4	< 20	< 20	N/A	N/A	N/A	N/A	< 20
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	8/28/2012	< 4	N/A	N/A	N/A	< 4	< 4	N/A	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	N/A	< 4	< 4
	8/28/2012	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	< 4	N/A
	2/28/2013	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	10/22/2013	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	N/A	< 4
	2/19/2014	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 4	< 4	N/A	N/A	< 4	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	10/28/2014	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 4	N/A	N/A	N/A	< 4	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	< 4	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 4	N/A	N/A	N/A	< 4	< 4	< 4	0.438*	< 4	< 4	< 4	0.346*	< 4	N/A	N/A	N/A	< 4	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 4	N/A	N/A	N/A	< 4	N/A	< 4	< 4	< 4	0.32*	N/A	0.289*	< 4	N/A	N/A	N/A	0.232*	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	< 4	N/A	N/A
	3/29/2017	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	0.26*	< 4	0.222*	< 4	N/A	< 4	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	< 4	N/A	N/A	N/A
	8/7/2017	< 4	N/A	N/A	0.287*	0.316*	< 4	< 4	< 4	0.268*	N/A	N/A	< 4	< 4	0.228*	< 4	N/A	< 4	< 4
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	< 4	N/A	N/A	N/A
	5/21/2018	< 4	< 4	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	< 4
	5/21/2018	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	< 4
	5/7/2019	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	3.16*	3.17*	< 4	N/A	< 4	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	4/7/2020	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 4	N/A	N/A	< 4	< 4	N/A	N/A	< 4	N/A	< 4	N/A	< 4	N/A	< 4	< 4	N/A	< 4	< 4
	9/23/2020	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	6/3/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	7/27/2021	< 4	N/A	< 4	< 4	< 4	N/A	< 4	< 4	N/A	< 4	< 4	< 4	N/A	< 4	< 4	< 4	< 4	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	3/1/2022	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	8/16/2022	< 4	N/A	N/A	< 4	2.43*	N/A	N/A	< 4	N/A	< 4	N/A	1.14*	N/A	2.11*	< 4	1.32*	1.62*	1.52*
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.55*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 4	N/A	N/A	< 4	N/A	N/A	N/A	< 4	N/A	< 4	N/A	< 4	N/A	< 4	< 4	N/A	< 4	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	< 4	< 4	< 4	N/A	< 4	< 4
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 4	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	11/18/2024	< 4	N/A	N/A	< 4	< 4	N/A	N/A	< 4	N/A	< 4	N/A	< 4	N/A	< 4	< 4	< 4	N/A	< 4
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
Carbon Disulfide, ug/L (CAS NO - 75-15-0)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.18	N/A	1.76	N/A	< 0.18	< 0.18	N/A	< 0.18	N/A	< 0.18	1.55	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	0.21	N/A	N/A	N/A	< 0.18	< 0.18	N/A	< 0.18	N/A	< 0.18	< 0.18	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	1.27	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	4.31	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 5	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Carbon Disulfide, ug/L (CAS NO - 75-15-0)	4/8/2010	< 10	< 10	< 10	N/A	< 10	< 10	< 1	< 10	N/A	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	8/27/2010	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 10	< 1	< 10	< 1	N/A	< 10	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 4	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	1.18	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	6.66	2.02	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	1.69	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	1.4	0.39*	0.253*	0.603*	0.714*	< 1	0.17*	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	0.373*	< 1
	2/19/2014	N/A	N/A	N/A	N/A	0.451*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	0.308*	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	0.879*	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	0.828*	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	0.849*	0.26*	0.245*	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	0.205*	0.182*
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	0.556*
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	0.669*	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	0.492*	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	0.572*	1.05
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.566*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/17/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1
	5/25/2023	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	0.75*	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Carbon Tetrachloride, ug/L (CAS NO - 56-23-5)	2/8/2008	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.31	N/A	< 0.31	N/A	< 0.31	< 0.31	N/A	< 0.31	N/A	< 0.31	< 0.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/22/2008	< 0.31	N/A	N/A	N/A	< 0.31	< 0.31	N/A	< 0.31	N/A	< 0.31	< 0.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 2	N/A	< 2	< 2	< 2	< 2	N/A	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 2	N/A	N/A	N/A	< 2	< 2	N/A	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 2	N/A	< 2	< 2	< 2	< 2	N/A	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 5	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 2	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	N/A	< 2
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 5	< 5	< 5	N/A	< 5	< 5	< 4	< 5	N/A	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 4	< 4
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	6/15/2010	N/A	< 2	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	N/A	< 2
	8/27/2010	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	8/27/2010	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 2	< 2	N/A	N/A	< 2	< 5	< 2	< 5	< 2	N/A	< 5	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	3/15/2011	< 2	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	< 4	< 2
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	< 2	N/A	< 2	N/A	N/A	N/A	N/A	N/A	< 2
	10/20/2011	< 2	N/A	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	N/A	< 2
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	8/28/2012	< 2	N/A	N/A	N/A	< 2	< 2	N/A	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	8/28/2012	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	< 4	N/A
	2/28/2013	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	10/22/2013	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Carbon Tetrachloride, ug/L (CAS NO - 56-23-5)	2/19/2014	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	N/A	< 2
	2/19/2014	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 2	< 2	N/A	N/A	< 2	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	10/28/2014	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 2	N/A	N/A	N/A	< 2	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	< 2	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	< 2	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 2	N/A	N/A	N/A	< 2	N/A	< 2	< 2	< 2	< 2	N/A	< 2	N/A	N/A	N/A	N/A	< 2	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A
	3/29/2017	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	< 2	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A
	8/7/2017	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	N/A	< 2	< 2	< 2	< 2	N/A	< 2	< 2
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A
	5/21/2018	< 2	< 2	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	< 2
	5/21/2018	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	< 2	< 2
	5/7/2019	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	< 2	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	< 2	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A
	4/7/2020	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	< 2	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 2	N/A	N/A	< 2	< 2	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	< 2	< 2	N/A	< 2	< 2
	9/23/2020	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	< 2	< 2	< 2	< 2	< 2	< 2	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	7/27/2021	< 2	N/A	N/A	< 2	< 2	N/A	N/A	< 2	N/A	< 2	N/A	< 2	N/A	< 2	< 2	< 2	< 2	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	3/1/2022	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	< 2	N/A	< 2	< 2	< 2	< 2	< 2
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	8/16/2022	< 2	N/A	N/A	< 2	< 2	N/A	N/A	< 2	N/A	< 2	N/A	< 2	N/A	< 2	< 2	< 2	< 2	< 2
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 2	N/A	N/A	< 2	< 2	N/A	N/A	< 2	N/A	< 2	N/A	< 2	N/A	< 2	< 2	N/A	< 2	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	< 2	< 2	< 2	< 2	< 2	N/A	< 2
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 2	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	< 2	< 2	< 2	< 2	< 2	< 2	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	11/18/2024	< 2	N/A	< 2	< 2	< 2	N/A	N/A	< 2	N/A	< 2	N/A	< 2	< 2	< 2	< 2	< 2	N/A	< 2
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
Chlorobenzene, ug/L (CAS NO - 108-90-7)	2/8/2008	< 1	N/A	N/A	N/A	< 1	9.65	< 1	1.61	N/A	2.64	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.17	N/A	< 0.17	N/A	< 0.17	1.49	N/A	32.3	N/A	3.79	< 0.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.17	N/A	N/A	N/A	< 0.17	16	N/A	13.1	N/A	8.27	< 0.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	5.36	N/A	18.4	N/A	11.2	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	5.61	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	25.8	N/A	17.9	N/A	2.65	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	1.73	< 1	< 1	17.6	N/A	19.6	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	3.95	2.07	16.4	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	19.6	N/A	9.52	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	N/A	2.55	N/A	N/A	N/A	N/A	5.81	< 1	N/A	N/A	N/A	N/A	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.76	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	1.05	N/A	< 1	5.78	3.12	26.3	N/A	< 1	< 1	19.9	< 1	N/A	N/A	N/A	N/A	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	20.8	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	26.4	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	13.7	1.99	11.5	< 1	N/A	< 1	18.8	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20.4	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	13.5	1.98	17.7	< 1	< 1	< 1	12.1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	13.3	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	10.8	4.54	20.7	1.01	< 1	< 1	9.55	< 1	N/A	N/A	N/A	< 1	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	1.44	< 1	< 1	< 1	< 1	< 1	< 1	< 1	10.4	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	15.2	N/A	24.1	< 1	< 1	< 1	7.43	< 1	N/A	N/A	N/A	1.26	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	< 1	N/A	N/A	N/A	N/A	N/A	2.03	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	1.37	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	26	< 1	6.35	< 1	< 1	< 1	6.41	< 1	N/A	N/A	N/A	4.2	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	33.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	3.92	1.6	30.3	1.07	< 1	0.441*	9.31	< 1	N/A	N/A	N/A	3.09	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	6.85	1.57	36.9	< 1	< 1	< 1	6.79	< 1	N/A	N/A	N/A	< 1	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	0.553*	45.9	1.31	< 1	< 1	8.09	< 1	N/A	N/A	N/A	6.03	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	0.285*	8.71	0.614*	< 1	0.387*	8.93	< 1	N/A	N/A	N/A	6.14	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	0.461*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	1.09	0.495*	6.42	0.97*	< 1	< 1	16.8	< 1	N/A	N/A	N/A	8.42	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	9.63	0.717*	< 1	< 1	20.5	< 1	N/A	N/A	N/A	8.09	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	26.4	0.828*	< 1	N/A	7.59	< 1	N/A	N/A	N/A	6.19	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	1.29	0.23*	31.4	0.651*	< 1	0.397*	18.5	< 1	< 1	< 1	N/A	10.4	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	1.6	0.649*	8.34	0.743*	0.251*	N/A	7.12	< 1	0.33*	< 1	N/A	7.95	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.3*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.493*	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	1.68	< 1	36.5	0.62*	< 1	< 1	2.75	< 1	0.404*	< 1	N/A	< 1	< 1
	5/21/2018	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	16.7	< 1	33.5	< 1	< 1	0.745*	< 1	< 1	< 1	< 1	N/A	10.1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	1.05	< 1	26.7	0.749*	< 1	< 1	7.53	< 1	< 1	< 1	N/A	10.7	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.761*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	4.98	3.92	28.1	< 1	< 1	< 1	3.55	< 1	0.502*	< 1	N/A	10.8	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Chlorobenzene, ug/L (CAS NO - 108-90-7)	4/7/2020	< 1	N/A	N/A	< 1	< 1	2.49	< 1	25.3	0.534*	< 1	< 1	7.75	< 1	< 1	< 1	N/A	10.9	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8.03	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	29.2	N/A	< 1	N/A	2.57	N/A	< 1	< 1	N/A	9.26	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	31.1	< 1	< 1	N/A	6.37	< 1	< 1	< 1	< 1	12.3	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	25.8	N/A	< 1	N/A	4.51	N/A	< 1	< 1	< 1	9.7	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	21.2	< 1	< 1	N/A	7.12	< 1	< 1	< 1	< 1	11	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	22.2	N/A	< 1	N/A	6.02	N/A	0.448*	< 1	< 1	11	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	28.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	< 1	N/A	N/A	32.5	N/A	< 1	N/A	5.9	N/A	< 1	< 1	N/A	12.5	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.04	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	0.579*	25.2	< 1	< 1	N/A	3.34	< 1	0.552*	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	18.9	< 1	< 1	N/A	2.57	< 1	< 1	< 1	< 1	9.16	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	19.7	N/A	< 1	N/A	1.58	N/A	0.554*	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Chlorodibromomethane, ug/L (CAS NO - 124-48-1)	2/8/2008	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.26	N/A	< 0.26	N/A	< 0.26	< 0.26	< 0.26	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.26	N/A	N/A	N/A	< 0.26	< 0.26	N/A	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 5	N/A	N/A	N/A	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 10	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 20	< 20	< 20	N/A	< 20	< 20	< 20	< 20	N/A	< 20	< 20	< 20	< 20	N/A	N/A	N/A	N/A	< 20
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	6/15/2010	N/A	< 5	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 5	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	3/15/2011	< 5	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 5	N/A	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	8/28/2012	< 5	N/A	N/A	N/A	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	8/28/2012	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A
	2/28/2013	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	2/28/2013	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/22/2013	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	2/19/2014	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 5	< 5	N/A	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/28/2014	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 5	N/A	N/A	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 5	N/A	N/A	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A
	3/29/2017	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A
	8/7/2017	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A
	5/21/2018	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	< 5
	5/21/2018	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5
	5/7/2019	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	4/7/2020	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	N/A	< 5	< 5
	9/23/2020	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	7/27/2021	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	< 5	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	3/1/2022	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	8/16/2022	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 5	N/A	N/A	N/A	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	N/A	< 5	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	N/A	< 5
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	11/18/2024	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	N/A	< 5
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Chloroethane, ug/L (CAS NO - 75-00-3)	2/8/2008	< 4	N/A	N/A	N/A	< 4	< 4	**6.29**	< 4	N/A	< 4	**111**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.5	N/A	< 0.5	N/A	< 0.5	**0.787**	N/A	**1.48**	N/A	< 0.5	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.5	N/A	N/A	N/A	< 0.5	< 0.5	N/A	< 0.5	N/A	**1.34**	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 4	N/A	< 4	< 4	< 4	< 4	N/A	< 4	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 4	N/A	N/A	N/A	< 4	< 4	N/A	< 4	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 4	N/A	< 4	< 4	< 4	< 4	N/A	< 4	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 4	< 4	< 4	< 4	**17.6**	< 4	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	**38.5**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 4	N/A	< 4	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 4	N/A	N/A	N/A	N/A	**48.3**	N/A	N/A	N/A	N/A	**14.8**	< 4	N/A	N/A	N/A	N/A	< 4
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**22.4**	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 4	< 4	< 4	N/A	< 4	< 4	**39.2**	< 4	N/A	< 4	< 4	**24.5**	< 4	N/A	N/A	N/A	N/A	< 4
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**8.99**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	6/15/2010	N/A	< 4	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	**29.8**	< 4	N/A	N/A	N/A	< 4	< 4
	8/27/2010	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	**11.6**	N/A	N/A	**31.9**	< 4	N/A	N/A	N/A	< 4	< 4
	8/27/2010	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 4	< 4	N/A	N/A	< 4	< 4	**25.7**	< 4	**6.04**	N/A	< 4	**24.7**	< 4	N/A	N/A	N/A	< 4	< 4
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**23.7**	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**4.99**	< 4	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	3/15/2011	< 4	< 4	N/A	N/A	< 4	< 4	**21.1**	< 4	**5.66**	< 4	< 4	**19.3**	< 4	N/A	N/A	N/A	< 4	< 4
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	**11.8**	N/A	N/A	**16.8**	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 4	N/A	N/A	N/A	N/A	< 4	**29.9**	< 4	**7.25**	< 4	< 4	**14.8**	< 4	N/A	N/A	N/A	N/A	< 4
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 4	N/A	< 4	< 4	< 4	< 4	**10.1**	< 4	**11.2**	< 4	< 4	**17.9**	< 4	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**4.55**	N/A
	8/28/2012	< 4	N/A	N/A	N/A	< 4	< 4	N/A	< 4	**5.98**	< 4	< 4	**15.7**	< 4	N/A	N/A	N/A	**5.98**	< 4
	8/28/2012	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	**19.2**	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	**4.63**	N/A
	2/28/2013	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	**4.49**	< 4	< 4	**17**	< 4	N/A	N/A	N/A	**5.22**	< 4
	2/28/2013	N/A	N/A	N/A	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 4	N/A	N/A	N/A	< 4	< 4	**17.3**	< 4	**4.52**	< 4	< 4	**17.7**	< 4	N/A	N/A	N/A	**5.66**	< 4
	10/22/2013	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 4	N/A	N/A	N/A	< 4	< 4	**18.5**	< 4	**6.06**	< 4	< 4	**18.6**	< 4	N/A	N/A	N/A	< 4	< 4
	2/19/2014	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 4	< 4	N/A	N/A	< 4	N/A	**4.67**	< 4	**9.76**	< 4	< 4	**21.9**	< 4	N/A	N/A	N/A	**7.35**	< 4
	10/28/2014	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 4	N/A	N/A	N/A	< 4	N/A	**9.93**	< 4	**5.94**	< 4	< 4	**15.5**	< 4	N/A	N/A	N/A	**9.22**	< 4
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	**8.58**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 4	N/A	N/A	N/A	< 4	< 4	**9.95**	< 4	**6.16**	< 4	< 4	**20.2**	< 4	N/A	N/A	N/A	**11**	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 4	N/A	N/A	N/A	< 4	< 4	7.89*	< 4	**4.82**	< 4	< 4	**25.1**	< 4	N/A	N/A	N/A	**9.63**	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 4	N/A	N/A	N/A	< 4	N/A	**16.6**	< 4	**4.05**	< 4	N/A	**15.7**	< 4	N/A	N/A	N/A	**7.7**	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**6.31**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.53*	< 4	N/A	N/A	N/A
	3/29/2017	< 4	N/A	N/A	N/A	< 4	< 4	**5.26**	< 4	3.34*	< 4	< 4	**27.3**	< 4	2.14*	< 4	N/A	**7.52**	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.82*	< 4	N/A	N/A	N/A
	8/7/2017	< 4	N/A	N/A	N/A	< 4	< 4	**14.8**	< 4	3.39*	< 4	N/A	**16.8**	< 4	3.8*	< 4	N/A	**8.1**	< 4
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**4.74**	< 4	N/A	N/A	N/A
	5/21/2018	< 4	< 4	N/A	< 4	< 4	< 4	**4.72**	< 4	2.25*	< 4	< 4	**10.1**	< 4	3.76*	< 4	N/A	N/A	< 4
	5/21/2018	N/A	N/A	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 4	N/A	N/A	N/A	< 4	< 4	**6.97**	< 4	< 4	< 4	< 4	**9.12**	< 4	3.78*	< 4	N/A	**5.15**	< 4
	5/7/2019	< 4	N/A	N/A	< 4	< 4	< 4	3.22*	< 4	1.81*	< 4	< 4	**14.6**	< 4	2.99*	< 4	N/A	**4.52**	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 4	N/A	N/A	< 4	< 4	< 4	**30.5**	< 4	< 4	< 4	< 4	**12.1**	< 4	**4.16**	< 4	N/A	**5.93**	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	4/7/2020	< 4	N/A	< 4	< 4	< 4	< 4	**5.83**	< 4	0.855*	< 4	< 4	**17.5**	< 4	2.58*	< 4	N/A	**6.61**	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**17.8**	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 4	N/A	N/A	< 4	< 4	N/A	N/A	< 4	N/A	< 4	N/A	**15**	N/A	< 4	< 4	N/A	**6.48**	< 4
	9/23/2020	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 4	N/A	N/A	< 4	< 4	< 4	**6.67**	< 4	< 4	< 4	N/A	**25**	< 4	2.99*	< 4	< 4	**4.89**	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	7/27/2021	< 4	N/A	N/A	< 4	< 4	N/A	N/A	< 4	N/A	< 4	N/A	**19.5**	N/A	2.68*	< 4	< 4	**5.15**	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	3/1/2022	< 4	N/A	N/A	< 4	< 4	< 4	**15.7**	< 4	< 4	< 4	N/A	**17.7**	< 4	1.6*	< 4	< 4	**6.06**	< 4
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	8/16/2022	< 4	N/A	N/A	< 4	< 4	N/A	N/A	< 4	N/A	< 4	N/A	**24**	N/A	3.12*	< 4	< 4	**4.48**	< 4
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 4	N/A	N/A	N/A	< 4	N/A	N/A	< 4	N/A	< 4	N/A	**18.4**	N/A	2.58*	< 4	N/A	**5.75**	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**16.3**	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 4	< 4	< 4	1.46*	< 4	< 4	**15.9**	< 4	< 4	< 4	N/A	**18.6**	< 4	3.89*	< 4	N/A	N/A	< 4
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 4	N/A	< 4	< 4	< 4	< 4	1.85*	< 4	< 4	< 4	N/A	**13.2**	< 4	2.05*	< 4	< 4	1.53*	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	11/18/2024	< 4	N/A	N/A	< 4	< 4	N/A	N/A	< 4	N/A	< 4	N/A	**13.1**	N/A	3.19*	< 4	< 4	N/A	< 4
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
Chloroform, ug/L (CAS NO - 67-66-3)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.17	N/A	< 0.17	N/A	< 0.17	< 0.17	N/A	< 0.17	N/A	< 0.17	< 0.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.17	N/A	N/A	N/A	< 0.17	< 0.17	N/A	< 0.17	N/A	< 0.17	< 0.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	< 1	N/A	< 1	< 1	< 2	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 2
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Chloroform, ug/L (CAS NO - 67-66-3)	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	< 1	< 1	< 2	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	5/21/2018	< 3	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	< 3
	5/21/2018	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 3	N/A	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3
	5/7/2019	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A
	4/7/2020	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 3	N/A	N/A	< 3	< 3	N/A	N/A	< 3	N/A	< 3	N/A	< 3	N/A	< 3	< 3	N/A	< 3	< 3
	9/23/2020	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	7/27/2021	< 3	N/A	N/A	< 3	< 3	N/A	N/A	< 3	N/A	< 3	N/A	< 3	N/A	< 3	< 3	< 3	< 3	N/A
	7/27/2021	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	3/1/2022	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A
	8/16/2022	< 3	N/A	N/A	< 3	< 3	N/A	N/A	< 3	N/A	< 3	N/A	< 3	N/A	< 3	< 3	< 3	< 3	< 3
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 3	N/A	N/A	N/A	< 3	N/A	N/A	< 3	N/A	< 3	N/A	< 3	N/A	< 3	< 3	< 3	N/A	< 3
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	< 3	< 3	N/A	N/A	< 3
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	11/18/2024	< 3	N/A	N/A	< 3	< 3	N/A	N/A	< 3	N/A	< 3	N/A	< 3	N/A	< 3	< 3	< 3	N/A	< 3
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
Chloromethane, ug/L (CAS NO - 74-87-3)	2/8/2008	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.2	N/A	< 0.2	N/A	< 0.2	< 0.2	N/A	< 0.2	N/A	< 0.2	< 0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.2	N/A	N/A	N/A	< 0.2	< 0.2	N/A	0.25	N/A	< 0.2	0.51	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 3	N/A	< 3	< 3	< 3	< 3	N/A	< 3	N/A	< 3	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 3	N/A	N/A	N/A	< 3	< 3	N/A	< 3	N/A	< 3	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 3	N/A	< 3	< 3	< 3	< 3	N/A	< 3	N/A	< 3	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 3	N/A	< 3	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 3	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 3	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	< 3	N/A	< 3
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A
	6/15/2010	N/A	< 3	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	< 3	< 3	N/A	N/A	N/A	N/A	< 3
	8/27/2010	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	< 3	< 3	N/A	N/A	N/A	< 3	< 3
	8/27/2010	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 3	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	< 3	< 3	< 3
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	< 3	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	3/15/2011	< 3	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	< 3	< 3
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	< 3	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 3	N/A	N/A	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	N/A	< 3
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	8/28/2012	< 3	N/A	N/A	N/A	< 3	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	< 3	< 3
	8/28/2012	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	< 3	N/A
	2/28/2013	< 3	N/A	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	< 3	< 3
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 3	N/A	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	< 3	< 3
	10/22/2013	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	< 3	< 3
	2/19/2014	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 3	< 3	N/A	N/A	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	< 3	< 3
	10/28/2014	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 3	N/A	N/A	N/A	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	< 3	< 3
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 3	N/A	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	< 3	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 3	N/A	N/A	N/A	< 3	< 3	< 3	0.394*	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	< 3	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 3	N/A	N/A	N/A	< 3	N/A	< 3	< 3	< 3	< 3	N/A	< 3	< 3	N/A	N/A	N/A	< 3	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Chloromethane, ug/L (CAS NO - 74-87-3)	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	< 3	N/A	N/A	N/A
	3/29/2017	< 3	N/A	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	0.418*	N/A	N/A	N/A
	8/7/2017	< 3	N/A	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	< 3	< 3	N/A	< 3	< 3
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.39*	< 3	N/A	N/A	N/A
	5/21/2018	< 3	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3
	5/21/2018	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 3	N/A	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3
	5/7/2019	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A
	4/7/2020	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 3	N/A	N/A	< 3	< 3	N/A	N/A	< 3	N/A	< 3	N/A	< 3	N/A	< 3	< 3	N/A	< 3	< 3
	9/23/2020	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	7/27/2021	< 3	N/A	N/A	< 3	< 3	N/A	N/A	< 3	N/A	< 3	N/A	< 3	N/A	< 3	< 3	< 3	< 3	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	3/1/2022	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A
	8/16/2022	< 3	N/A	N/A	< 3	< 3	N/A	N/A	< 3	N/A	< 3	N/A	< 3	N/A	< 3	< 3	< 3	< 3	N/A
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 3	N/A	N/A	< 3	< 3	N/A	N/A	< 3	N/A	< 3	N/A	< 3	N/A	< 3	< 3	N/A	< 3	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	< 3	< 3	N/A	N/A	< 3
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	11/18/2024	< 3	N/A	N/A	< 3	< 3	N/A	N/A	< 3	N/A	< 3	N/A	< 3	N/A	< 3	< 3	< 3	< 3	< 3
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
cis-1,2-Dichloroethene, ug/L (CAS NO - 156-59-2)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	**1.47**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.37	N/A	< 0.37	N/A	< 0.37	< 0.37	N/A	**2.45**	N/A	< 0.37	< 0.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.37	N/A	N/A	N/A	< 0.37	< 0.37	N/A	**0.53**	N/A	< 0.37	**1.01**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	**1.1**	N/A	< 1	**1.05**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	N/A	**1.18**	N/A	N/A	N/A	N/A	**2.27**	< 1	N/A	N/A	N/A	N/A	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**2.03**	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	< 1	N/A	< 1	< 1	**2.4**	**1.48**	N/A	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**6.25**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	**2.28**	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	**1.64**	< 1	**4.33**	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**4.61**	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	**1.65**	< 1	**4.53**	< 1	< 1	< 1	< 1	N/A	N/A	N/A	**1.09**	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	**4.49**	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	**3.76**	< 1	**4.76**	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	**1.06**	< 1	**5.11**	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**1.83**	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	**1.31**	N/A	**1.05**	**5.15**	< 1	< 1	**1.05**	< 1	N/A	N/A	N/A	**2.56**	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	**1.66**	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	**2.35**	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	**1.12**	< 1	< 1	**3.52**	< 1	< 1	< 1	< 1	N/A	N/A	N/A	**2.63**	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	**1.59**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	**1.33**	**1.09**	0.885*	**3.69**	< 1	0.377*	0.93*	< 1	N/A	N/A	N/A	**2.63**	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	**1.18**	**1.2**	< 1	**4.22**	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	**1.04**	**3.68**	< 1	< 1	**1.23**	< 1	N/A	N/A	N/A	**1.79**	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	0.249*	**2.77**	< 1	0.363*	0.404*	< 1	N/A	N/A	N/A	**1.31**	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	**1.39**	< 1	< 1	**2.69**	< 1	< 1	0.131*	< 1	N/A	N/A	N/A	0.499*	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	0.813*	< 1	0.297*	**2.24**	< 1	0.461*	0.362*	< 1	N/A	N/A	N/A	**1.4**	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	0.201*	0.826*	**1.9**	< 1	N/A	**2.65**	< 1	N/A	N/A	N/A	**1.13**	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**1.85**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**12**	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	0.44*	< 1	0.421*	**1.69**	< 1	0.221*	0.655*	< 1	**10.8**	< 1	N/A	**1.23**	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**11.3**	< 1	N/A	N/A	N/A
	8/7/2017	0.148*	N/A	N/A	N/A	< 1	**1.1**	< 1	0.236*	**1.5**	< 1	N/A	**2.94**	< 1	**19.1**	< 1	N/A	**1.16**	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**21.3**	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	< 1	< 1	< 1	0.676*	< 1	0.892*	**1.2**	< 1	< 1	**3.21**	< 1	**21.6**	< 1	N/A	< 1	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	0.784*	< 1	< 1	0.369*	**3.5**	< 1	**23.6**	< 1	N/A	0.946*	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	0.66*	< 1	< 1	**2.51**	< 1	**18.3**	< 1	N/A	0.689*	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.62*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	0.645*	< 1	< 1	< 1	**3.35**	< 1	**25.7**	< 1	N/A	0.553*	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	0.399*	0.347*	< 1	< 1	**2.78**	< 1	**20.4**	< 1	N/A	0.797*	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**2.84**	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	0.384*	N/A	< 1	N/A	**3.33**	N/A	**22.7**	< 1	N/A	0.798*	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	0.71*	< 1	0.798*	0.329*	< 1	N/A	**2.46**	< 1	**16.8**	< 1	< 1	**1.02**	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	0.673*	N/A	< 1	N/A	**2.78**	N/A	**18.1**	< 1	< 1	0.517*	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	0.497*	< 1	0.453*	0.389*	< 1	N/A	**2.62**	< 1	**13.9**	< 1	< 1	0.378*	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
cis-1,2-Dichloroethene, ug/L (CAS NO - 156-59-2)	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	0.502*	N/A	< 1	N/A	2.74	N/A	22.1	< 1	< 1	0.864*	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.663*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	< 1	N/A	N/A	1.31	N/A	< 1	N/A	2.85	N/A	19.9	< 1	N/A	0.813*	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.86	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	0.892*	< 1	0.472*	< 1	< 1	N/A	3.2	< 1	24	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	1.65	< 1	0.461*	< 1	< 1	N/A	3.21	< 1	21.7	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	0.479*	N/A	< 1	N/A	3.22	N/A	22.1	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
cis-1,3-Dichloropropene, ug/L (CAS NO - 10061-01-5)	2/8/2008	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.23	N/A	< 0.23	N/A	< 0.23	< 0.23	N/A	< 0.23	N/A	< 0.23	< 0.23	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.23	N/A	N/A	N/A	< 0.23	< 0.23	N/A	< 0.23	N/A	< 0.23	< 0.23	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 5	N/A	N/A	N/A	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 5	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 5	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 10	< 10	< 10	N/A	< 10	< 10	< 20	< 10	N/A	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 20
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	6/15/2010	N/A	< 5	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 5	< 5	N/A	N/A	< 5	< 10	< 5	< 10	< 5	N/A	< 10	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	3/15/2011	< 5	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 5	N/A	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	8/28/2012	< 5	N/A	N/A	N/A	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	< 5	< 5
	8/28/2012	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A
	2/28/2013	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/22/2013	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	2/19/2014	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 5	< 5	N/A	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/28/2014	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 5	N/A	N/A	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 5	N/A	N/A	N/A	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	< 5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A
	3/29/2017	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A
	8/7/2017	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A
	5/21/2018	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	< 5
	5/21/2018	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5
	5/7/2019	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	4/7/2020	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	N/A	< 5	< 5
	9/23/2020	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	6/3/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	7/27/2021	< 5	N/A	< 5	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	3/1/2022	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	8/16/2022	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 5	N/A	N/A	N/A	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	N/A	< 5	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	N/A	< 5
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	11/18/2024	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	N/A	< 5
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
Ethylbenzene, ug/L (CAS NO - 100-41-4)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.25	N/A	< 0.25	N/A	< 0.25	< 0.25	N/A	< 0.25	N/A	< 0.25	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.25	N/A	N/A	N/A	< 0.25	< 0.25	N/A	< 0.25	N/A	< 0.25	< 0.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Ethylbenzene, ug/L (CAS NO - 100-41-4)	4/8/2010	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**5.44**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	0.788*	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.415*	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.495*	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A
	7/27/2021	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	< 1	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Iodomethane, ug/L (CAS NO - 74-88-4)	2/8/2008	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.4	N/A	< 0.4	N/A	< 0.4	< 0.4	N/A	< 0.4	N/A	< 0.4	< 0.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.4	N/A	N/A	N/A	< 0.4	< 0.4	N/A	< 0.4	N/A	< 0.4	< 0.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 10	N/A	N/A	N/A	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 50	N/A	< 50	N/A	N/A	N/A	< 50	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 20	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	< 20	< 20	N/A	N/A	N/A	< 20
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 50	N/A
	6/15/2010	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 10	< 10	N/A	N/A	< 20	< 10	< 10	< 20	< 10	N/A	< 20	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	3/15/2011	< 10	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 50	< 10
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	< 10	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 20	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 20	< 10	< 10	< 20	< 20	N/A	N/A	N/A	N/A	< 20
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	8/28/2012	< 10	N/A	N/A	N/A	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/28/2012	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A
	2/28/2013	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	3.19*	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/22/2013	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	2/19/2014	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Iodomethane, ug/L (CAS NO - 74-88-4)	10/28/2014	< 10	< 10	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/28/2014	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 10	N/A	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 10	N/A	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	3/29/2017	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	8/7/2017	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	5/21/2018	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	< 10
	5/21/2018	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	5/7/2019	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/7/2020	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/16/2022	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	< 10	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	< 10	N/A	N/A	< 10
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	11/18/2024	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	N/A	< 10
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
Methylene Bromide, ug/L (CAS NO - 74-95-3)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.3	N/A	< 0.3	N/A	< 0.3	< 0.3	N/A	< 0.3	N/A	< 0.3	< 0.3	< 0.3	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.3	N/A	N/A	N/A	< 0.3	< 0.3	N/A	< 0.3	N/A	< 0.3	< 0.3	< 0.3	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	< 1	< 1	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	< 1	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Methylene Bromide, ug/L (CAS NO - 74-95-3)	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Methylene Chloride, ug/L (CAS NO - 75-09-2)	2/8/2008	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.45	N/A	< 0.45	N/A	< 0.45	< 0.45	N/A	< 0.45	N/A	< 0.45	< 0.45	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.45	N/A	N/A	N/A	< 0.45	0.48	N/A	< 0.45	N/A	< 0.45	0.56	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 5	N/A	N/A	N/A	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 5	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 5	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	6/15/2010	N/A	< 5	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	8/27/2010	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	8/27/2010	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 5	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A	N/A	< 5	< 5
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	3/15/2011	< 5	< 5	N/A	N/A	< 5	< 10	< 5	< 10	< 5	< 10	< 10	< 10	< 5	N/A	N/A	N/A	< 5	< 5
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 5	N/A	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	8/28/2012	< 5	N/A	N/A	N/A	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	8/28/2012	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A
	2/28/2013	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 5	N/A	N/A	N/A	0.202*	< 5	< 5	< 5	0.436*	< 5	< 5	0.453*	< 5	N/A	N/A	N/A	< 5	< 5
	10/22/2013	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	2/19/2014	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 5	< 5	N/A	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	0.407*	< 5
	10/28/2014	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 5	N/A	N/A	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	0.661*	< 5
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 5	N/A	N/A	N/A	< 5	< 5	< 5	0.203	< 5	< 5	< 5	0.333*	< 5	N/A	N/A	N/A	0.702*	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	0.399*	N/A	N/A	N/A	< 5	0.331*	0.878*	0.23*	0.684*	0.694*	0.674*	0.637*	< 5	N/A	N/A	N/A	0.946*	N/A
	2/23/2016	N/A	N/A	N/A	N/A	0.29*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 5	N/A	N/A	N/A	< 5	N/A	0.336*	0.229*	< 5	< 5	N/A	0.589*	< 5	N/A	N/A	N/A	0.493*	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.443*	< 5	N/A	N/A	N/A
	3/29/2017	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	0.443*	< 5	0.307*	< 5	N/A	0.282*	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	0.268*	N/A	N/A	N/A
	8/7/2017	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	0.329*	< 5	0.387*	< 5	N/A	< 5	< 5
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.282*	< 5	N/A	N/A	N/A
	5/21/2018	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	< 5
	5/21/2018	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5
	5/7/2019	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	4/7/2020	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 5	N/A	N/A	< 5	< 5	< 5	N/A	< 5	< 5	N/A	< 5	< 5	N/A	< 5	< 5	N/A	< 5	< 5
	9/23/2020	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	7/27/2021	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	< 5	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	3/1/2022	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	8/16/2022	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	N/A	< 5	< 5
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	N/A	< 5
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	11/18/2024	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	N/A	< 5
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Styrene, ug/L (CAS NO - 100-42-5)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.19	N/A	< 0.19	N/A	< 0.19	< 0.19	N/A	< 0.19	N/A	< 0.19	< 0.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.19	N/A	N/A	N/A	< 0.19	< 0.19	N/A	< 0.19	N/A	< 0.19	< 0.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 2	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 2	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	N/A	< 2
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	< 1	N/A	< 1	< 1	< 4	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 4
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	8/27/2010	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	0.191*	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	5/21/2018	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Tetrachloroethene, ug/L (CAS NO - 127-18-4)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.38	N/A	< 0.38	N/A	< 0.38	< 0.38	N/A	< 0.38	N/A	< 0.38	< 0.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.38	N/A	N/A	N/A	< 0.38	< 0.38	N/A	< 0.38	N/A	< 0.38	< 0.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Tetrachloroethene, ug/L (CAS NO - 127-18-4)	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.189*	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A	0.209*	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.24	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.79*	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	0.75*	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.301*	< 1	2.08	< 1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.1	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.53	< 1	N/A	N/A	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	2.14	< 1	N/A	< 1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.92	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	0.764*	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	0.856*	< 1	< 1	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	0.975*	< 1	< 1	< 1	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	0.982*	< 1	< 1	< 1	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	0.635*	< 1	N/A	< 1	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	1.77	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	1.27	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Toluene, ug/L (CAS NO - 108-88-3)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.14	N/A	< 0.14	< 0.14	< 0.14	< 0.14	N/A	< 0.14	N/A	< 0.14	< 0.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.14	N/A	N/A	N/A	< 0.14	< 0.14	N/A	< 0.14	N/A	< 0.14	< 0.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/13/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	0.336*	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	1.03	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.235*	< 1	N/A	N/A	N/A	0.171*	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	0.153*	< 1	< 1	< 1	0.319*	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Toluene, ug/L (CAS NO - 108-88-3)	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	0.32*	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.25*	< 1	< 1	< 1	N/A	0.257*	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.198*	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	7.43	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.509*	N/A	N/A
	7/27/2021	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	0.531*	< 1	< 1	< 1	< 1	0.461*	N/A	0.656*	< 1	< 1	< 1	< 1	< 1	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	< 1	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	3.01	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
trans-1,2-Dichloroethene, ug/L (CAS NO - 156-60-5)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.31	N/A	< 0.31	N/A	< 0.31	< 0.31	N/A	< 0.31	N/A	< 0.31	< 0.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.31	N/A	N/A	N/A	< 0.31	< 0.31	N/A	< 0.31	N/A	< 0.31	< 0.31	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.328*	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.266*	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.265*	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.356*	< 1	0.544*	< 1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.629*	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.43*	< 1	0.436*	< 1	N/A	N/A	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.494*	< 1	0.703*	< 1	N/A	< 1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.351*	< 1	0.666*	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.299*	< 1	0.488*	< 1	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.327*	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	0.358*	N/A	0.589*	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.297*	< 1	0.374*	< 1	< 1	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	0.321*	N/A	0.424*	< 1	< 1	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
trans-1,2-Dichloroethene, ug/L (CAS NO - 156-60-5)	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	0.285*	N/A	0.609*	< 1	< 1	< 1	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	0.338*	< 1	N/A	< 1	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.277*	< 1	0.489*	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	0.298*	N/A	0.463*	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
trans-1,3-Dichloropropene, ug/L (CAS NO - 10061-02-6)	2/8/2008	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.17	N/A	< 0.17	N/A	< 0.17	< 0.17	N/A	< 0.17	N/A	< 0.17	< 0.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.17	N/A	N/A	N/A	< 0.17	< 0.17	N/A	< 0.17	N/A	< 0.17	< 0.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 5	N/A	N/A	N/A	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 5	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 10	< 10	< 10	N/A	< 10	< 10	< 20	< 10	N/A	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 20
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A
	6/15/2010	N/A	< 5	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A	< 5
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 5	< 5	N/A	N/A	< 5	< 10	< 5	< 10	< 5	N/A	< 10	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 5	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	3/15/2011	< 5	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 5	N/A	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	8/28/2012	< 5	N/A	N/A	N/A	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	8/28/2012	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A
	2/28/2013	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/22/2013	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	2/19/2014	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 5	< 5	N/A	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/28/2014	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 5	N/A	N/A	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	< 5	< 5	< 5
	7/15/2015	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	N/A	N/A	< 5	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 5	N/A	N/A	N/A	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	< 5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A
	3/29/2017	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A
	8/7/2017	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A
	5/21/2018	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5
	5/21/2018	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 5	N/A	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5
	5/7/2019	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A
	4/7/2020	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	N/A	< 5	< 5
	9/23/2020	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 5	N/A	N/A	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A
	7/27/2021	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	< 5	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	3/1/2022	< 5	N/A	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A
	8/16/2022	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	< 5	< 5
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 5	N/A	N/A	N/A	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	N/A	< 5	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	N/A	< 5	< 5	< 5	< 5	< 5	< 5	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	11/18/2024	< 5	N/A	N/A	< 5	< 5	N/A	N/A	< 5	N/A	< 5	N/A	< 5	N/A	< 5	< 5	< 5	N/A	< 5
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
trans-1,4-Dichloro-2-Butene, ug/L (CAS NO - 110-57-6)	2/8/2008	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 1.8	N/A	< 1.8	N/A	< 1.8	< 1.8	N/A	< 1.8	N/A	< 1.8	< 1.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 1.8	N/A	N/A	N/A	< 1.8	< 1.8	N/A	< 1.8	N/A	< 1.8	< 1.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 10	N/A	N/A	N/A	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
trans-1,4-Dichloro-2-Butene, ug/L (CAS NO - 110-57-6)	12/29/2009	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	6/15/2010	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/27/2010	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 10	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	3/15/2011	< 10	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 10	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 20	N/A	N/A	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	8/28/2012	< 10	N/A	N/A	N/A	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	8/28/2012	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	2/28/2013	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	2/28/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 10	N/A	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/22/2013	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	N/A	< 10
	2/19/2014	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 10	< 10	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/28/2014	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 10	N/A	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 10	N/A	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	3/29/2017	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	< 10	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	8/7/2017	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	5/21/2018	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	< 10
	5/21/2018	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	5/7/2019	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	4/7/2020	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	< 10	< 10
	9/23/2020	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	7/27/2021	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	< 10	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	3/1/2022	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	8/16/2022	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	< 10	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	N/A	< 10
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	11/18/2024	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	N/A	< 10
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
Trichloroethene, ug/L (CAS NO - 79-01-6)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.24	N/A	< 0.24	N/A	< 0.24	< 0.24	< 0.24	< 0.24	N/A	< 0.24	< 0.24	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.24	N/A	N/A	N/A	< 0.24	< 0.24	N/A	< 0.24	N/A	< 0.24	< 0.24	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.525*	< 1	N/A	N/A	N/A	< 1	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Trichloroethene, ug/L (CAS NO - 79-01-6)	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.23*	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	N/A	0.734*	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.5	< 1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.281*	< 1	1.25	< 1	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.3	< 1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	1	< 1	2.49	< 1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.64	< 1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.926*	< 1	4.1	< 1	N/A	N/A	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.913*	< 1	4.67	< 1	N/A	< 1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	4.63	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	0.846*	< 1	4.77	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.05	< 1	4.9	< 1	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.961*	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	0.829*	N/A	4.53	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.679*	< 1	3.61	< 1	< 1	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	0.746*	N/A	4.88	< 1	< 1	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.598*	< 1	3.27	< 1	< 1	< 1	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	0.733*	N/A	4.95	< 1	< 1	< 1	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	< 1	N/A	0.816*	N/A	4.85	< 1	N/A	< 1	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.702*	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.652*	< 1	4.58	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.665*	< 1	4.61	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	< 1	< 1	N/A	< 1	N/A	< 1	N/A	< 1	N/A	0.552*	N/A	4.39	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Trichlorofluoromethane, ug/L (CAS NO - 75-69-4)	2/8/2008	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.26	N/A	< 0.26	N/A	< 0.26	< 0.26	N/A	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.26	N/A	N/A	N/A	< 0.26	< 0.26	N/A	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 4	N/A	< 4	< 4	< 4	< 4	N/A	< 4	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 4	N/A	N/A	N/A	< 4	< 4	N/A	< 4	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 4	N/A	< 4	< 4	< 4	< 4	N/A	< 4	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	< 4	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 4	N/A	< 4	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 4	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	< 4	< 4	N/A	N/A	N/A	N/A	< 4
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 4	< 4	< 4	N/A	< 4	< 4	< 4	< 4	N/A	< 4	< 4	< 4	< 4	N/A	N/A	N/A	N/A	< 4
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	6/15/2010	N/A	< 4	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	< 4	< 4	N/A	N/A	N/A	N/A	< 4
	8/27/2010	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	8/27/2010	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 4	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	3/15/2011	< 4	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	< 4	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 4	N/A	N/A	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	8/28/2012	< 4	N/A	N/A	N/A	< 5	< 4	N/A	< 4	< 4	< 4	< 5	< 4	< 5	N/A	N/A	N/A	< 5	< 4
	8/28/2012	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	< 4	N/A
	2/28/2013	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	10/22/2013	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	2/19/2014	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 4	< 4	N/A	N/A	< 4	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	10/28/2014	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 4	N/A	N/A	N/A	< 4	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	< 4	< 4
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	< 4	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	N/A	N/A	< 4	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 4	N/A	N/A	N/A	< 4	N/A	< 4	< 4	< 4	< 4	N/A	< 4	< 4	N/A	N/A	N/A	< 4	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	< 4	N/A	N/A	N/A
	3/29/2017	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	< 4	N/A	N/A	N/A
	8/7/2017	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	< 4	< 4	< 4	N/A	< 4	< 4
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	< 4	N/A	N/A	N/A
	5/21/2018	< 4	< 4	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	< 4
	5/21/2018	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 4	N/A	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	< 4
	5/7/2019	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Trichlorofluoromethane, ug/L (CAS NO - 75-69-4)	4/7/2020	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 4	N/A	N/A	< 4	< 4	N/A	N/A	< 4	N/A	< 4	N/A	< 4	N/A	< 4	< 4	N/A	< 4	< 4
	9/23/2020	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	7/27/2021	< 4	N/A	N/A	< 4	< 4	N/A	N/A	< 4	N/A	< 4	N/A	< 4	N/A	< 4	< 4	< 4	< 4	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	3/1/2022	< 4	N/A	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A
	8/16/2022	< 4	N/A	N/A	< 4	< 4	N/A	N/A	< 4	N/A	< 4	N/A	< 4	N/A	< 4	< 4	< 4	< 4	< 4
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 4	N/A	N/A	N/A	< 4	N/A	N/A	< 4	N/A	< 4	N/A	< 4	N/A	< 4	< 4	N/A	< 4	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	< 4	< 4	< 4	N/A	N/A	< 4
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 4	N/A	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	N/A	< 4	< 4	< 4	< 4	< 4	< 4	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	11/18/2024	< 4	N/A	N/A	< 4	< 4	N/A	N/A	< 4	N/A	< 4	N/A	< 4	N/A	0.645*	< 4	< 4	N/A	< 4
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
Vinyl Acetate, ug/L (CAS NO - 108-05-4)	2/8/2008	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 1.36	N/A	< 1.36	N/A	< 1.36	< 1.36	< 1.36	< 1.36	N/A	< 1.36	< 1.36	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 1.36	N/A	N/A	N/A	< 1.36	< 1.36	N/A	< 1.36	N/A	< 1.36	< 1.36	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 2	N/A	< 2	< 2	< 2	< 2	N/A	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 2	N/A	N/A	N/A	< 2	< 2	N/A	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 2	N/A	< 2	< 2	< 2	< 2	N/A	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 2	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	< 2	< 2	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	< 2	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 4	< 4	< 4	N/A	< 4	< 4	< 2	< 4	N/A	< 4	< 4	< 4	< 4	N/A	N/A	N/A	N/A	< 2
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	6/15/2010	N/A	< 2	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	8/27/2010	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	8/27/2010	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 5	< 5	N/A	N/A	< 5	< 2	< 5	< 2	< 5	N/A	< 2	< 5	< 5	N/A	N/A	N/A	< 5	< 5
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	3/15/2011	< 2	< 2	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 2	N/A	N/A	N/A	N/A	< 50	< 50	< 50	< 2	< 50	< 50	< 2	< 2	N/A	N/A	N/A	N/A	< 2
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 20	N/A	N/A	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	8/28/2012	< 4	N/A	N/A	N/A	< 10	< 4	N/A	< 4	< 4	< 4	< 10	< 4	< 10	N/A	N/A	N/A	< 10	< 4
	8/28/2012	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	2/28/2013	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	10/22/2013	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	N/A	< 2
	2/19/2014	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 10	< 10	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	10/28/2014	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 10	N/A	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	< 10
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 10	N/A	N/A	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	3/29/2017	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	N/A	< 10	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A
	8/7/2017	< 10	N/A	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A
	5/21/2018	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	N/A	< 10
	5/21/2018	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	5/7/2019	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	4/7/2020	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	< 10	< 10
	9/23/2020	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	7/27/2021	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	< 10	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	3/1/2022	< 10	N/A	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A
	8/16/2022	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	< 10	< 10
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	< 10	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	N/A	N/A	< 10
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	N/A	< 10	< 10	< 10	< 10	< 10	< 10	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	11/18/2024	< 10	N/A	N/A	< 10	< 10	N/A	N/A	< 10	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	N/A	< 10
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Vinyl Chloride, ug/L (CAS NO - 75-01-4)	2/8/2008	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.26	N/A	< 0.26	N/A	< 0.26	< 0.26	N/A	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.26	N/A	N/A	N/A	< 0.26	< 0.26	N/A	< 0.26	N/A	< 0.26	< 0.26	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	3.02	< 1	N/A	N/A	N/A	N/A	< 1
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.1	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 1	< 1	< 1	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	2.01	< 1	N/A	N/A	N/A	N/A	< 1
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.06	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	6/15/2010	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	1.45	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	1.11	< 1	N/A	N/A	N/A	< 1	< 1
	8/27/2010	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 1	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	N/A	< 1	1.34	< 1	N/A	N/A	N/A	< 1	< 1
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.79	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	3/15/2011	< 1	< 1	N/A	N/A	< 1	< 1	< 1	1.14	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 1	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	8/28/2012	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	< 1	< 1	< 4	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	1.19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 1	N/A	N/A	N/A	< 1	0.241*	< 1	0.451*	< 1	< 1	< 1	0.627*	< 1	N/A	N/A	N/A	0.193*	< 1
	10/22/2013	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	1.12	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	< 1
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	< 1	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	0.282*	< 1	< 1	< 1	< 1	< 1	0.272*	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	< 1	< 1	0.137*	< 1	< 1	< 1	0.214*	< 1	N/A	N/A	N/A	0.312*	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	0.2*	< 1	< 1	N/A	1.05	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.833*	<1	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	0.281*	0.17*	< 1	< 1	0.393*	< 1	0.84*	<1	N/A	0.159*	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.96*	<1	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	0.199*	< 1	N/A	1.17	< 1	2	<1	N/A	< 1	< 1
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.53	<1	N/A	N/A	N/A
	5/21/2018	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.37	< 1	1.49	<1	N/A	N/A	< 1
	5/21/2018	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	<1	N/A	N/A	N/A
	9/25/2018	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.51	< 1	2.64	< 1	N/A	< 1	< 1
	5/7/2019	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.19	< 1	1.53	< 1	N/A	< 1	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 1	N/A	N/A	< 1	< 1	< 1	0.229*	< 1	< 1	< 1	< 1	1.19	< 1	2.14	< 1	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	4/7/2020	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.68	< 1	1.3	< 1	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.54	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	0.605*	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	2.89	N/A	3.43	< 1	N/A	< 1	< 1
	9/23/2020	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	1.42	< 1	1.35	< 1	< 1	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	7/27/2021	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	1.36	N/A	1.52	< 1	< 1	< 1	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	3/1/2022	< 1	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.91*	< 1	0.672*	<1	< 1	< 1	< 1
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A
	8/16/2022	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	1.38	N/A	2.14	< 1	< 1	< 1	< 1
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	< 1	N/A	1.05	N/A	1.63	< 1	N/A	< 1	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.16	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.861*	< 1	1.76	< 1	N/A	N/A	< 1
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	0.712*	< 1	1.02	< 1	< 1	< 1	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	11/18/2024	< 1	N/A	N/A	< 1	< 1	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	1.67	< 1	< 1	N/A	< 1
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
Xylenes, total, ug/L (CAS NO - 1330-20-7)	2/8/2008	< 3	N/A	N/A	N/A	< 3	< 3	< 3	< 3	N/A	< 3	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.3	N/A	< 0.3	N/A	< 0.3	< 0.3	N/A	< 0.3	N/A	< 0.3	< 0.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.3	N/A	N/A	N/A	< 0.3	< 0.3	N/A	< 0.3	N/A	< 0.3	< 0.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 3	N/A	< 3	< 3	< 3	< 3	N/A	< 3	N/A	< 3	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 3	N/A	N/A	N/A	< 3	< 3	N/A	< 3	N/A	< 3	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 3	N/A	< 3	< 3	< 3	< 3	N/A	< 3	N/A	< 3	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	N/A	N/A	N/A	N/A	< 3	N/A	< 3	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	< 6	N/A	N/A	N/A	< 6	N/A	N/A	N/A	N/A	< 6	< 6	N/A	N/A	N/A	N/A	< 6	< 6
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 6	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	< 3	< 3	< 3	N/A	< 3	< 3	< 6	< 3	N/A	< 3	< 3	< 3	< 3	N/A	N/A	N/A	N/A	< 6
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/7/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 8	N/A
	6/15/2010	N/A	< 3	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	< 3	< 3	N/A	N/A	N/A	N/A	< 3
	8/27/2010	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	< 3	< 3	N/A	N/A	N/A	< 3	< 3
	8/27/2010	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	< 3	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	< 3	N/A	N/A	N/A	< 3	< 3
	10/13/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	< 3	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A
	3/15/2011	< 3	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	N/A	< 3	< 3
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Appendix I VOC Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Xylenes, total, ug/L (CAS NO - 1330-20-7)	7/21/2011	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	< 3	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 3	N/A	N/A	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	N/A	< 3
	10/20/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A
	4/25/2012	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	N/A	N/A
	5/31/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A
	8/28/2012	< 3	N/A	N/A	N/A	< 3	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	< 3	< 3
	8/28/2012	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	< 3	N/A
	2/28/2013	< 3	N/A	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	< 3	< 3
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	< 3	N/A	N/A	N/A	< 3	< 3	< 3	< 3	0.215*	< 3	< 3	< 3	< 3	N/A	N/A	N/A	< 3	< 3
	10/22/2013	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/19/2014	< 3	N/A	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	N/A	< 3
	2/19/2014	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 3	< 3	N/A	N/A	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	< 3	< 3
	10/28/2014	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	< 3	N/A	N/A	N/A	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	< 3	< 3
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 3	N/A	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	< 3	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 3	N/A	N/A	N/A	< 3	< 3	< 3	0.236*	< 3	< 3	< 3	< 3	< 3	N/A	N/A	N/A	< 3	N/A
	2/23/2016	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 3	N/A	N/A	N/A	< 3	N/A	< 3	0.177*	< 3	< 3	N/A	< 3	< 3	N/A	N/A	N/A	< 3	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	< 3	N/A	N/A	N/A
	3/29/2017	< 3	N/A	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.16*	< 3	N/A	N/A	N/A
	8/7/2017	< 3	N/A	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	< 3	< 3	N/A	< 3	< 3
	8/7/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	< 3	N/A	N/A	N/A
	5/21/2018	< 3	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	N/A	< 3
	5/21/2018	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	< 3	N/A	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3
	5/7/2019	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A
	4/7/2020	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A
	9/23/2020	< 3	N/A	N/A	< 3	< 3	N/A	N/A	< 3	N/A	< 3	N/A	< 3	N/A	< 3	< 3	N/A	< 3	< 3
	9/23/2020	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 3	N/A	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.997*	N/A	N/A
	7/27/2021	< 3	N/A	N/A	< 3	< 3	N/A	N/A	< 3	N/A	< 3	N/A	< 3	N/A	< 3	< 3	< 3	< 3	N/A
	7/27/2021	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	3/1/2022	0.488*	N/A	N/A	< 3	0.69*	0.541*	0.557*	< 3	0.51*	0.564*	N/A	0.609*	0.511*	< 3	0.72*	< 3	1.09*	1.61*
	3/1/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.471*	N/A	N/A	N/A
	8/16/2022	< 3	N/A	N/A	< 3	< 3	N/A	N/A	< 3	N/A	< 3	N/A	< 3	N/A	< 3	< 3	< 3	< 3	< 3
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	< 3	N/A	N/A	N/A	< 3	N/A	N/A	< 3	N/A	< 3	N/A	< 3	N/A	< 3	< 3	N/A	< 3	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	< 3	< 3	N/A	N/A	< 3
	11/14/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/11/2024	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	N/A	< 3	< 3	< 3	< 3	< 3	< 3	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	11/18/2024	< 3	N/A	N/A	< 3	< 3	N/A	N/A	< 3	N/A	< 3	N/A	< 3	N/A	< 3	< 3	< 3	N/A	< 3
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
M&P-Xylene, ug/L (CAS NO - 179601-23-1)	8/28/2012	< 2	N/A	N/A	N/A	< 2	< 2	N/A	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	8/28/2012	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A
	2/28/2013	< 2	N/A	N/A	N/A	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	N/A	N/A	N/A	< 2	< 2
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
O-Xylene, ug/L (CAS NO - 95-47-6)	8/28/2012	< 1	N/A	N/A	N/A	< 1	< 1	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	8/28/2012	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	2/28/2013	< 1	N/A	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	< 1	< 1
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

Denotes Detection.

Denotes Confirmed Outlier. Statistically Excluded.

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

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
1,1-Dichloropropene, ug/L (CAS NO - 563-58-6)	8/27/2009	N/A	N/A	< 1	< 1	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 4	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
1,2,4,5-Tetrachlorobenzene, ug/L (CAS NO - 95-94-3)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
1,2,4-Trichlorobenzene, ug/L (CAS NO - 120-82-1)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 5	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
1,3,5-Trinitrobenzene, ug/L (CAS NO - 99-35-4)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
1,3-Dichlorobenzene, ug/L (CAS NO - 541-73-1)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	0.28*	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
1,3-Dichlorobenzene, ug/L (CAS NO - 541-73-1)	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
1,3-Dichloropropane, ug/L (CAS NO - 142-28-9)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
1,3-Dinitrobenzene, ug/L (CAS NO - 99-65-0)	8/27/2009	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	< 10.4	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
1,4-Naphthoquinone, ug/L (CAS NO - 130-15-4)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
1,4-Phenylenediamine, ug/L (CAS NO - 106-50-3)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
1-Naphthylamine, ug/L (CAS NO - 134-32-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	0.6*	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
1-Naphthylamine, ug/L (CAS NO - 134-32-7)	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
2,2-Dichloropropane, ug/L (CAS NO - 594-20-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 4	N/A	< 4	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 4	N/A	< 4	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 4	< 4	< 4	N/A	< 4	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	< 4	N/A	N/A	N/A	< 4	N/A	N/A	N/A	< 4	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	< 4	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 4	< 4	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	< 4	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	< 4	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	< 4	N/A	N/A	N/A	< 4	< 4	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A
2,3,4,6-Tetrachlorophenol, ug/L (CAS NO - 58-90-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
2,4,5-T [2C], ug/L (CAS NO - 93-76-5)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.2	N/A	< 0.2	N/A	< 0.2	< 0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.53	N/A	< 0.56	N/A	N/A	< 0.56	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.24	N/A	N/A	< 0.24	N/A	< 0.24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 1	< 1.1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	< 1.1	N/A	N/A	N/A	< 1	N/A	< 0.29	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.29	< 0.33	N/A	N/A	< 0.29	< 0.31	N/A	N/A	< 0.3	N/A	N/A	N/A	< 0.29	N/A
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	< 1.1	N/A	N/A	N/A	< 1.14	N/A	N/A	< 1.04	N/A	N/A	N/A	< 1.12	N/A
	2/19/2014	N/A	N/A	N/A	N/A	N/A	< 1.01	N/A	N/A	N/A	< 1.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.03	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	N/A	N/A	N/A	N/A	N/A	< 1.13	N/A	N/A	N/A	< 1.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	N/A	N/A	N/A	N/A	N/A	< 1.09	N/A	N/A	N/A	< 1.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 1.18	< 1.11	N/A	< 1.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 1.11	N/A	N/A	N/A	N/A	< 1.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.17	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 1.01	N/A	N/A	N/A	< 1.05	N/A	N/A	< 1.09	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.01	< 1.08	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.06	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.08	N/A	< 1.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.16	N/A	N/A	< 0.168	N/A	N/A	N/A	N/A	N/A	N/A	< 0.162	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.154	N/A	N/A	< 0.149	N/A	N/A	N/A	< 0.148	< 0.147	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.156	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.155	N/A
2,4,5-TP [Silvex] [2C], ug/L (CAS NO - 93-72-1)	8/27/2009	N/A	N/A	N/A	N/A	N/A	1.1	N/A	< 0.2	N/A	0.94	< 0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	< 0.5	< 0.5	N/A	N/A	< 0.52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.53	N/A	< 0.56	N/A	N/A	< 0.56	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	< 0.52	N/A	N/A	N/A	< 0.5	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.24	N/A	N/A	< 0.24	N/A	< 0.24	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 1	< 1.1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	< 1.1	N/A	N/A	N/A	< 1	N/A	< 0.29	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.29	< 0.33	N/A	N/A	< 0.29	< 0.31	N/A	N/A	< 0.3	N/A	N/A	N/A	< 0.29	N/A
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	< 1.1	N/A	N/A	N/A	< 1.14	N/A	N/A	< 1.04	N/A	N/A	N/A	< 1.12	N/A
	2/19/2014	N/A	N/A	N/A	N/A	N/A	< 1.01	N/A	N/A	N/A	< 1.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.03	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	N/A	N/A	N/A	N/A	N/A	< 1.13	N/A	N/A	N/A	< 1.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	N/A	N/A	N/A	N/A	N/A	< 1.09	N/A	N/A	N/A	< 1.07	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 1.18	< 1.11	N/A	< 1.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 1.11	N/A	N/A	N/A	N/A	< 1.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.17	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 1.01	N/A	N/A	N/A	< 1.05	N/A	N/A	< 1.09	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.01	< 1.08	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.06	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.08	N/A	< 1.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.0533	N/A	N/A	< 0.0559	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0541	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A	< 0.5	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.0514	N/A	N/A	< 0.0495	N/A	N/A	N/A	< 0.0492	0.2	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.052	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0517	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.04	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
2,4,5-Trichlorophenol, ug/L (CAS NO - 95-95-4)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
2,4,6-Trichlorophenol, ug/L (CAS NO - 88-06-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
2,4-D [2C], ug/L (CAS NO - 94-75-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 1.1	N/A	< 1.1	N/A	N/A	< 1.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.45	N/A	N/A	N/A	0.77	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 1	< 1.1	< 1	< 1	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	< 0.47	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.47	N/A	N/A	N/A	< 0.47	N/A	N/A	N/A	< 0.48	N/A	N/A	N/A	< 0.47	N/A
	2/28/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.13	N/A	N/A	N/A	< 1.04	N/A	N/A	N/A	< 1.12	N/A
	2/19/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.06	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 1.18	< 1.11	< 1.11	< 1.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 1.11	N/A	N/A	N/A	N/A	< 1.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.17	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 1.01	N/A	N/A	N/A	< 1.05	N/A	N/A	< 1.09	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.01	< 1.08	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.06	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.89	N/A	< 1.08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.64	N/A	< 0.642	< 0.671	N/A	N/A	N/A	N/A	N/A	N/A	< 0.65	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.617	N/A	< 0.579	< 0.594	N/A	N/A	N/A	< 0.59	< 0.589	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.624	N/A	N/A	N/A	N/A	N/A	< 1.06	N/A	N/A	< 0.621	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2,4-Dichlorophenol, ug/L (CAS NO - 120-83-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
2,4-Dimethylphenol, ug/L (CAS NO - 105-67-9)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
2,4-Dimethylphenol, ug/L (CAS NO - 105-67-9)	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
2,4-Dinitrophenol, ug/L (CAS NO - 51-28-5)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 20	N/A	< 20	N/A	< 20	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 20	N/A	< 20	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 20	< 20	< 20	< 20	N/A	< 20	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A	N/A	< 20	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20.2	N/A	N/A	N/A	< 21.1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 20.8	< 21.1	N/A	< 20.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 21.7	N/A	N/A	N/A	N/A	< 21.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 21.3	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	< 20	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 21.3	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 22.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 21.3	N/A	< 22.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 20.8	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A	< 20.8	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 18.5	N/A	N/A	N/A	N/A	N/A	N/A	< 19.2	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	< 18.9	N/A	N/A	N/A	< 20	< 20	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A
2,4-Dinitrotoluene, ug/L (CAS NO - 121-14-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
2,6-Dichlorophenol, ug/L (CAS NO - 87-65-0)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
2,6-Dinitrotoluene, ug/L (CAS NO - 606-20-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
2-Acetylaminofluorene, ug/L (CAS NO - 53-96-3)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
2-Acetylaminofluorene, ug/L (CAS NO - 53-96-3)	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
2-Chloronaphthalene, ug/L (CAS NO - 91-58-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
2-Chlorophenol, ug/L (CAS NO - 95-57-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
2-Methylnaphthalene, ug/L (CAS NO - 91-57-6)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
2-Methylphenol, ug/L (CAS NO - 95-48-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
2-Naphthylamine, ug/L (CAS NO - 91-59-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
2-Naphthylamine, ug/L (CAS NO - 91-59-8)	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
2-Nitroaniline, ug/L (CAS NO - 88-74-4)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
2-Nitrophenol, ug/L (CAS NO - 88-75-5)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
3,3-Dichlorobenzidine, ug/L (CAS NO - 91-94-1)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 50.5	N/A	N/A	N/A	< 52.6	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 52.1	< 52.6	N/A	< 50.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 54.3	N/A	N/A	N/A	N/A	< 52.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 53.2	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 50	N/A	N/A	N/A	< 50	N/A	N/A	< 50	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
3,3-Dimethylbenzidine, ug/L (CAS NO - 119-93-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
3/4-Methylphenol, ug/L (CAS NO - T-34MP)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
3/4-Methylphenol, ug/L (CAS NO - T-34MP)	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	166	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 11.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	< 10	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3-Chloropropene, ug/L (CAS NO - 107-05-1)	8/27/2009	N/A	N/A	N/A	N/A	< 2	N/A	< 2	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 2	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 2	< 2	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 4	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	< 2	< 2	< 2	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 2	< 2	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
3-Methylcholanthrene, ug/L (CAS NO - 56-49-5)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
3-Nitroaniline, ug/L (CAS NO - 99-09-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	1.11*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
4,4´-DDD, ug/L (CAS NO - 72-54-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	N/A	N/A	N/A	< 0.0337	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	0.0201*	0.0142*	N/A	0.00253*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	N/A	N/A	N/A	< 0.0348	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	N/A	0.00353*	N/A	N/A	0.0144*	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00848*	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0344	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 0.0615	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
4,4`-DDE, ug/L (CAS NO - 72-55-9)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0.0416**	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	2/28/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00565*	< 0.0333	N/A	N/A	N/A	< 0.0337	N/A
	2/19/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00935*	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.16	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00476*	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0251*	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	< 0.0323	N/A	0.00308*	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	N/A	N/A	N/A	< 0.0348	< 0.17	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	0.00286*	N/A	N/A	N/A	< 0.0337	N/A	N/A	0.0114*	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00842*	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0233*	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.0615	N/A	N/A	< 0.064	N/A	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A
4,4`-DDT, ug/L (CAS NO - 50-29-3)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	N/A	N/A	N/A	N/A	< 0.0337	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	0.0244*	0.0195*	N/A	0.0234*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	N/A	N/A	N/A	< 0.0348	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00426*	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	N/A	0.00477*	N/A	N/A	0.0117*	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00783*	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0766	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0688	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	< 0.064	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.0615	N/A	< 0.064	< 0.064	N/A	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0893	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0904	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A
4,6-Dinitro-2-methylphenol, ug/L (CAS NO - 534-52-1)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
4-Aminobiphenyl, ug/L (CAS NO - 92-67-1)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
4-Bromophenyl phenyl ether, ug/L (CAS NO - 101-55-3)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
4-Bromophenyl phenyl ether, ug/L (CAS NO - 101-55-3)	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
4-Chloro-3-methylphenol, ug/L (CAS NO - 59-50-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
4-Chloroaniline, ug/L (CAS NO - 106-47-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
4-Chlorophenyl phenyl ether, ug/L (CAS NO - 7005-72-3)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
4-Nitroaniline, ug/L (CAS NO - 100-01-6)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
4-Nitrophenol, ug/L (CAS NO - 100-02-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
4-Nitrophenol, ug/L (CAS NO - 100-02-7)	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
5-Nitro-o-toluidine, ug/L (CAS NO - 99-55-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
7,12-Dimethylbenz [a] anthracene, ug/L (CAS NO - 57-97-6)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Acenaphthene, ug/L (CAS NO - 83-32-9)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Acenaphthylene, ug/L (CAS NO - 208-96-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Acetonitrile, ug/L (CAS NO - 75-05-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10000	N/A	< 10000	N/A	< 10000	< 10000	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10000	N/A	< 10000	N/A	N/A	< 10000	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10000	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10000	N/A	N/A	N/A	< 10000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10000	< 10000	< 10000	N/A	< 10000	< 10000	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10000	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10000	N/A	N/A	N/A	< 10000	N/A	N/A	N/A	< 10000	N/A	N/A	N/A	< 10000	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Acetonitrile, ug/L (CAS NO - 75-05-8)	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10000	N/A	N/A	N/A	< 10000	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10000	< 10000	N/A	< 10000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10000	N/A	N/A	N/A	N/A	372*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10000	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10000	N/A	N/A	N/A	< 10000	N/A	N/A	< 10000	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10000	< 10000	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10000	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10000	N/A	< 10000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10000	N/A	N/A	< 10000	N/A	N/A	N/A	N/A	N/A	N/A	< 10000	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 10000	N/A	N/A	N/A	N/A	N/A	N/A	< 10000	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10000	N/A	N/A	< 10000	N/A	N/A	N/A	< 10000	< 10000	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10000	N/A
Acetophenone, ug/L (CAS NO - 98-86-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Acrolein, ug/L (CAS NO - 107-02-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Aldrin, ug/L (CAS NO - 309-00-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	N/A	N/A	N/A	N/A	< 0.0337	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	< 0.0323	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	N/A	N/A	N/A	< 0.0348	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	N/A	< 0.0337	N/A	N/A	0.0258*	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0344	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.0615	N/A	N/A	< 0.064	N/A	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A
Anthracene, ug/L (CAS NO - 120-12-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Benzo [a] anthracene, ug/L (CAS NO - 56-55-3)	8/27/2009	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Benzo [a] anthracene, ug/L (CAS NO - 56-55-3)	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Benzo [a] pyrene, ug/L (CAS NO - 50-32-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	1.49*	N/A	N/A	N/A	N/A	1.43*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Benzo [b] fluoranthene, ug/L (CAS NO - 205-99-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	0.915*	N/A	N/A	N/A	N/A	0.876*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Benzo [g,h,i] perylene, ug/L (CAS NO - 191-24-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	1.44*	N/A	N/A	N/A	N/A	1.41*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Benzo [k] fluoranthene, ug/L (CAS NO - 207-08-9)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	0.367*	N/A	N/A	N/A	N/A	0.361*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Benzyl alcohol, ug/L (CAS NO - 100-51-6)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Alpha-BHC, ug/L (CAS NO - 319-84-6)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.16	N/A	< 0.16	N/A	N/A	< 0.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.64	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	N/A	N/A	N/A	< 0.0337	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	0.00456*	< 0.0333	N/A	0.00489*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	N/A	N/A	N/A	< 0.0348	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00706*	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	N/A	0.00189*	N/A	N/A	< 0.033	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	0.0463	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A
	12/20/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0575	N/A	N/A	N/A	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.046	N/A	N/A	N/A	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0567	N/A	N/A	N/A	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0498	N/A	N/A	N/A	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0426	N/A	N/A	N/A	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	0.0068*	N/A	N/A	N/A	N/A	N/A	N/A	0.0696	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0344	N/A	< 0.0344	N/A	N/A	N/A	0.0633	N/A	N/A	N/A	N/A
	3/1/2022	< 0.064	N/A	N/A	N/A	N/A	< 0.064	< 0.064	N/A	< 0.064	N/A	N/A	N/A	< 0.064	0.102	< 0.064	< 0.064	N/A	N/A
	8/16/2022	< 0.0604	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	0.0648	< 0.0593	N/A	N/A	N/A
	5/25/2023	< 0.0593	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0593	N/A	N/A	N/A	N/A
	11/14/2023	< 0.064	N/A	N/A	N/A	N/A	< 0.0615	< 0.0604	N/A	< 0.064	N/A	N/A	N/A	< 0.064	0.0628*	< 0.064	N/A	N/A	N/A
	6/11/2024	< 0.0962	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0895	< 0.0938	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A	N/A	N/A	N/A	0.0232*	< 0.0926	N/A	N/A	N/A
Beta-BHC, ug/L (CAS NO - 319-85-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	0.164	N/A	< 0.16	N/A	N/A	< 0.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.64	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	0.0347	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	< 0.032	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/28/2013	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	< 0.0333	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	N/A	N/A	< 0.0337	N/A
	2/19/2014	N/A	N/A	N/A	N/A	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	N/A	N/A	N/A	N/A	N/A	< 0.0333	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	0.00662*	N/A	0.022*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	N/A	N/A	N/A	< 0.0348	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00995*	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.0337	< 0.032	N/A	N/A	< 0.0337	N/A	N/A	0.0267*	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	< 0.0333	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0344	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.0615	N/A	N/A	< 0.064	N/A	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A
Delta-BHC, ug/L (CAS NO - 319-86-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.16	N/A	< 0.16	N/A	N/A	< 0.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.64	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0617	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	2/28/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	< 0.0333	N/A	N/A	N/A	< 0.0337	N/A
	2/19/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00406*	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00796*	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.16	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00412*	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	< 0.0323	N/A	< 0.0323	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	N/A	N/A	N/A	0.00385*	< 0.17	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00252*	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	N/A	< 0.0337	N/A	N/A	< 0.033	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	0.00293*	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00632*	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0344	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.0615	N/A	N/A	< 0.064	N/A	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Gamma-BHC [Lindane], ug/L (CAS NO - 58-89-9)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.16	N/A	< 0.16	N/A	N/A	< 0.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.64	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	N/A	N/A	N/A	< 0.0337	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	0.00359*	< 0.0333	N/A	< 0.0323	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	0.00347*	N/A	N/A	N/A	N/A	< 0.0348	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00556*	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	0.00519*	N/A	N/A	N/A	0.00207*	N/A	N/A	0.0126*	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	0.0165*	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00798*	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	0.00648*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0344	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.0615	N/A	N/A	< 0.064	N/A	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A
Bis[2-chloroethoxy]methane, ug/L (CAS NO - 111-91-1)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Bis[2-chloroethyl]ether, ug/L (CAS NO - 111-44-4)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Bis[2-chloroisopropyl]ether, ug/L (CAS NO - 108-60-1)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Bis[2-ethylhexyl]phthalate, ug/L (CAS NO - 117-81-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.1	N/A	N/A	N/A	20.4	N/A
	2/19/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.22*	N/A	N/A	N/A	2.69*	N/A
	11/12/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.35*	N/A	N/A	N/A	2.32*	N/A
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.436*	N/A	N/A	N/A	< 10.2	N/A
	7/15/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.46*	N/A	N/A	N/A	3.3*	N/A
	2/23/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.49*	N/A	N/A	N/A	1.32*	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	0.622*	0.716*	N/A	0.591*	N/A	N/A	N/A	0.584*	N/A	N/A	N/A	0.57*	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	2.08*	N/A	N/A	N/A	N/A	1.93*	N/A	< 11	N/A	N/A	N/A	< 10.5	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	< 10.5	N/A	N/A	N/A	< 11.1	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Bis[2-ethylhexyl]phthalate, ug/L (CAS NO - 117-81-7)	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Butyl benzyl phthalate, ug/L (CAS NO - 85-68-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	1.12*	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Chlordane, ug/L (CAS NO - 57-74-9)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 2	N/A	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 2	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 2	< 2	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.08	N/A	N/A	N/A	< 2.11	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 2.08	< 2.08	N/A	< 2.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 2.2	N/A	N/A	N/A	N/A	< 2.17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 2.11	N/A	N/A	N/A	< 2.11	N/A	N/A	< 2.06	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.08	< 2.08	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.13	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 2.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.15	N/A	< 2.15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 1.92	N/A	N/A	< 2	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.82	N/A
	11/18/2024	< 1.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.85	N/A	N/A	N/A
Alpha-Chlordane, ug/L (CAS NO - 5103-71-9)	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
Gamma-Chlordane, ug/L (CAS NO - 5566-34-7)	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
Chlorobenzilate, ug/L (CAS NO - 510-15-6)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Chloroprene, ug/L (CAS NO - 126-99-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 4	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
Chrysene, ug/L (CAS NO - 218-01-9)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Chrysene, ug/L (CAS NO - 218-01-9)	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
Cyanide, mg/L (CAS NO - 57-12-5)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	< 0.01	N/A	< 0.01	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	< 0.01	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.01	< 0.01	< 0.01	N/A	< 0.01	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	< 0.01	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	< 0.01	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	0.00664*	< 0.01	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	0.0132	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.01	< 0.01	N/A	N/A	< 0.01	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	< 0.01	N/A	N/A	N/A	N/A
	7/10/2018	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	0.00514*	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A	N/A	< 0.01	N/A	N/A	N/A	< 0.01	< 0.01	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.01	N/A
Diallate [cis or trans], ug/L (CAS NO - 2303-16-4)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
Dibenz [a,h] anthracene, ug/L (CAS NO - 53-70-3)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	1.84*	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
Dibenzofuran, ug/L (CAS NO - 132-64-9)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Dichlorodifluoromethane, ug/L (CAS NO - 75-71-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 3	N/A	< 3	N/A	< 3	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 3	N/A	< 3	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 3	< 3	< 3	< 3	N/A	< 3	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 3	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.447*	N/A	N/A	N/A	< 3	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	0.659*	0.397*	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	< 3	< 3	N/A	N/A	N/A	N/A	0.348*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	17	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	< 3	N/A	N/A	1.8*	N/A	N/A	N/A	N/A	N/A	N/A
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	29	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	16.2	N/A	N/A	N/A	N/A
	7/10/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.4	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	29	N/A	N/A	< 3	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.1	N/A	N/A	N/A	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	19.9	N/A	N/A	N/A	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	26	N/A	N/A	N/A	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	19.4	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	< 3	N/A	N/A	N/A	19.8	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	< 3	N/A	N/A	N/A	N/A	19.7	N/A	< 3	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 3	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	28.7	N/A	N/A	N/A	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	23.1	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A	< 3	N/A	N/A	N/A	< 3	25.4	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 3	N/A	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20.1	N/A	N/A	N/A	N/A
Dieldrin, ug/L (CAS NO - 60-57-1)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	N/A	N/A	N/A	N/A	< 0.0337	N/A
	7/15/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	< 0.0323	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	N/A	N/A	N/A	< 0.0348	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	N/A	< 0.0337	N/A	N/A	0.00228*	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00379*	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0344	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.0615	N/A	N/A	< 0.064	N/A	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A
Diethyl phthalate, ug/L (CAS NO - 84-66-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	0.574*	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	0.505*	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Dimethoate, ug/L (CAS NO - 60-51-5)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	1.19*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Dimethyl phthalate, ug/L (CAS NO - 131-11-3)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	0.298*	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Dimethyl phthalate, ug/L (CAS NO - 131-11-3)	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Dimethylaminoazobenzene, ug/L (CAS NO - 60-11-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	3.38*	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Di-n-butyl phthalate, ug/L (CAS NO - 84-74-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	0.672*	N/A	N/A	N/A	N/A	0.642*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Di-n-octyl phthalate, ug/L (CAS NO - 117-84-0)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20.2	N/A	N/A	N/A	< 21.1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	1.68*	< 21.1	N/A	< 20.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 21.7	N/A	N/A	N/A	N/A	< 21.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 21.3	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	< 20	N/A	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 21.3	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	< 22.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 21.3	N/A	< 22.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 20.8	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A	< 20.8	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 18.5	N/A	N/A	N/A	N/A	N/A	N/A	< 19.2	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	< 18.9	N/A	N/A	N/A	< 20	< 20	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A
Dinoseb, ug/L (CAS NO - 88-85-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Diphenylamine, ug/L (CAS NO - 122-39-4)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Diphenylamine, ug/L (CAS NO - 122-39-4)	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Disulfoton, ug/L (CAS NO - 298-04-4)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Endosulfan I, ug/L (CAS NO - 959-98-8)	8/27/2009	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00461*	N/A	N/A	N/A	0.00752*	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	< 0.0323	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	N/A	N/A	N/A	< 0.0348	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00673*	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	N/A	< 0.0337	N/A	N/A	< 0.033	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	0.00633*	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00316*	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	0.0154*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0344	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.0615	N/A	N/A	< 0.064	N/A	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A
Endosulfan II, ug/L (CAS NO - 33213-65-9)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0747	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	2/28/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0181*	< 0.0333	N/A	N/A	N/A	< 0.0337	N/A
	2/19/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00415*	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0362	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0889*	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0348	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	< 0.0323	N/A	< 0.0323	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	N/A	N/A	N/A	< 0.0348	< 0.17	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	N/A	< 0.0337	N/A	N/A	< 0.033	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0337	< 0.0333	< 0.0333	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0344	N/A	N/A	N/A	N/A	0.00361*	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	N/A	N/A	N/A	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0332	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	0.0105*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0344	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 0.0615	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A
Endosulfan sulfate, ug/L (CAS NO - 1031-07-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	N/A	N/A	N/A	< 0.0337	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	< 0.0323	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	N/A	N/A	N/A	< 0.0348	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00619*	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	N/A	< 0.0337	N/A	N/A	0.00807*	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	0.0697	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0352	< 0.0344	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.064	< 0.064	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Endosulfan sulfate, ug/L (CAS NO - 1031-07-8)	8/16/2022	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.0615	< 0.0604	N/A	< 0.064	N/A	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0902	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A
Endrin, ug/L (CAS NO - 72-20-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	N/A	N/A	N/A	< 0.0337	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	0.00442*	N/A	< 0.0323	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	N/A	N/A	N/A	0.00281*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00486*	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	0.00217*	N/A	N/A	N/A	0.00267*	N/A	N/A	0.015*	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	0.0126*	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0146*	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	0.00467*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0344	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.0615	N/A	N/A	< 0.064	N/A	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A
Endrin aldehyde, ug/L (CAS NO - 7421-93-4)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	N/A	N/A	< 0.0333	N/A	N/A	N/A	< 0.0337	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	0.0176*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	N/A	N/A	N/A	< 0.0348	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	0.0158*	N/A	N/A	N/A	< 0.0337	N/A	N/A	0.0201*	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0493	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/7/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0688	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	< 0.064	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.0615	N/A	< 0.064	< 0.064	N/A	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0893	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0904	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A
Ethyl Methacrylate, ug/L (CAS NO - 97-63-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 2	N/A	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 2	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 2	< 2	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	< 2	< 2	< 2	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
Ethyl Methanesulfonate, ug/L (CAS NO - 62-50-0)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Famphur, ug/L (CAS NO - 52-85-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 20	N/A	< 20	N/A	< 20	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 20	N/A	< 20	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 20	< 20	< 20	N/A	< 20	< 20	< 20	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A	N/A	< 20	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20.2	N/A	N/A	N/A	< 21.1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 20.8	< 21.1	N/A	< 20.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 21.7	N/A	N/A	N/A	N/A	< 21.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Famphur, ug/L (CAS NO - 52-85-7)	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 21.3	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Fluoranthene, ug/L (CAS NO - 206-44-0)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Fluorene, ug/L (CAS NO - 86-73-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Heptachlor, ug/L (CAS NO - 76-44-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.16	N/A	0.516	N/A	N/A	< 0.16	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.64	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	0.0464	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	< 0.032	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	2/28/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.153	N/A	N/A	N/A	< 0.034	< 0.0333	N/A	N/A	N/A	< 0.0337	N/A
	2/19/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0124*	N/A	N/A	N/A	< 0.0337	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0117*	N/A	N/A	N/A	0.0187*	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00849*	N/A	N/A	N/A	0.0136*	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.034	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0235*	N/A	N/A	N/A	< 0.0348	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	0.012*	N/A	< 0.0323	N/A	< 0.0323	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	< 0.0344	N/A	N/A	< 0.0348	< 0.17	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0149*	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	< 0.0337	< 0.0337	N/A	N/A	< 0.033	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	N/A	N/A	< 0.0333	0.054	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A	N/A	< 0.034	N/A
	12/20/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0277*	N/A	N/A	N/A	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0166*	N/A	N/A	N/A	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0134*	N/A	N/A	N/A	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0215*	N/A	N/A	N/A	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0217*	N/A	N/A	N/A	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A	N/A	N/A	N/A	N/A	N/A	0.0148*	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0344	N/A	< 0.0344	N/A	N/A	N/A	< 0.0344	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	< 0.064	N/A	< 0.064	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	< 0.064	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 0.0615	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A
Heptachlor Epoxide, ug/L (CAS NO - 1024-57-3)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	N/A	N/A	N/A	< 0.0337	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	< 0.0323	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	N/A	N/A	N/A	< 0.0348	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	N/A	< 0.0337	N/A	N/A	< 0.033	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	0.00645*	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0344	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Heptachlor Epoxide, ug/L (CAS NO - 1024-57-3)	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.0615	N/A	N/A	< 0.064	N/A	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A
Hexachlorobenzene, ug/L (CAS NO - 118-74-1)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10.6	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Hexachlorobutadiene, ug/L (CAS NO - 87-68-3)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Hexachlorocyclopentadiene, ug/L (CAS NO - 77-47-4)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 20.2	N/A	N/A	N/A	< 21.1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 20.8	< 21.1	N/A	< 20.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 21.7	N/A	N/A	N/A	N/A	< 21.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 21.3	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 20	N/A	N/A	N/A	< 20	N/A	N/A	< 20	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Hexachloroethane, ug/L (CAS NO - 67-72-1)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
Hexachloropropene, ug/L (CAS NO - 1888-71-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Hexachloropropene, ug/L (CAS NO - 1888-71-7)	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Indeno [1,2,3-cd] pyrene, ug/L (CAS NO - 193-39-5)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	1.68*	N/A	N/A	N/A	N/A	1.55*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Isobutanol, mg/L (CAS NO - 78-83-1)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	N/A	0.258*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.64*	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Isodrin, ug/L (CAS NO - 465-73-6)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Isophorone, ug/L (CAS NO - 78-59-1)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Isosafrole, ug/L (CAS NO - 120-58-1)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Isosafrole, ug/L (CAS NO - 120-58-1)	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Kepone, ug/L (CAS NO - 143-50-0)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Methacrylonitrile, ug/L (CAS NO - 126-98-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 1	< 1	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Methapyrilene, ug/L (CAS NO - 91-80-5)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Methoxychlor, ug/L (CAS NO - 72-43-5)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	< 0.032	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.032	< 0.032	< 0.032	N/A	< 0.032	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A	N/A	N/A	< 0.032	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	N/A	N/A	N/A	< 0.0337	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	< 0.0323	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.0352	N/A	N/A	N/A	N/A	< 0.0348	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0027*	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.0337	N/A	N/A	N/A	< 0.0337	N/A	N/A	< 0.033	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0333	< 0.0333	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.0198*	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.034	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.13	N/A	< 0.0344	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0688	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	< 0.064	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.064	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 0.0615	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	< 0.064	< 0.064	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0893	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0911	N/A
	11/18/2024	< 0.09	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0904	N/A	N/A	N/A	N/A	N/A	N/A	< 0.0926	N/A	N/A	N/A
Methyl Methacrylate, ug/L (CAS NO - 80-62-6)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 2	N/A	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 2	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 2	< 2	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 2	< 2	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Methyl Methacrylate, ug/L (CAS NO - 80-62-6)	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A
Methyl Methanesulfonate, ug/L (CAS NO - 66-27-3)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	0.624*	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Naphthalene, ug/L (CAS NO - 91-20-3)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 5	N/A	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 5	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 5	< 5	< 5	< 5	N/A	< 5	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 5	N/A	N/A	< 5	N/A	N/A	N/A	< 5	< 5	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 5	N/A
Nitrobenzene, ug/L (CAS NO - 98-95-3)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
N-Nitrosodiethylamine, ug/L (CAS NO - 55-18-5)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
N-Nitrosodimethylamine, ug/L (CAS NO - 62-75-9)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	1.08*	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
N-Nitrosodimethylamine, ug/L (CAS NO - 62-75-9)	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
N-Nitrosodi-n-butylamine, ug/L (CAS NO - 924-16-3)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
N-Nitrosodi-n-propylamine, ug/L (CAS NO - 621-64-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
N-Nitrosodiphenylamine, ug/L (CAS NO - 86-30-6)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
N-Nitrosomethylethylamine, ug/L (CAS NO - 10595-95-6)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
N-Nitrosopiperidine, ug/L (CAS NO - 100-75-4)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
N-Nitrosopiperidine, ug/L (CAS NO - 100-75-4)	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
N-Nitrosopyrrolidine, ug/L (CAS NO - 930-55-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
O,O,O-Triethyl Phosphorothioate, ug/L (CAS NO - 126-68-1)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
O-Toluidine, ug/L (CAS NO - 95-53-4)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Parathion-Ethyl, ug/L (CAS NO - 56-38-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Parathion-Methyl, ug/L (CAS NO - 298-00-0)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Parathion-Methyl, ug/L (CAS NO - 298-00-0)	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
PCB-1016, ug/L (CAS NO - 12674-11-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	< 0.8	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	< 0.8	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 16	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 1.01	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 1.29	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A	N/A	< 0.86	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.833	< 0.825	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.825	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.808	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.93	N/A	N/A	< 0.842	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.825	< 0.842	N/A	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.851	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.86	N/A	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.769	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.82	N/A
PCB-1221, ug/L (CAS NO - 11104-28-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	< 0.8	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	< 0.8	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 16	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 1.01	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 1.29	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A	N/A	< 0.86	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.833	< 0.825	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.825	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.808	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.93	N/A	N/A	< 0.842	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.825	< 0.842	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.851	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.86	N/A	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.769	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.82	N/A
PCB-1232, ug/L (CAS NO - 11141-16-5)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	< 0.8	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	< 0.8	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 16	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 1.01	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 1.29	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A	N/A	< 0.86	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.833	< 0.825	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.825	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.808	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.93	N/A	N/A	< 0.842	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.825	< 0.842	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.851	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.86	N/A	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.769	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.82	N/A
PCB-1242, ug/L (CAS NO - 53469-21-9)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	< 0.8	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	< 0.8	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 16	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 1.01	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 1.29	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A	N/A	< 0.86	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.833	< 0.825	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.825	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.808	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.93	N/A	N/A	< 0.842	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.825	< 0.842	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.851	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.86	N/A	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.769	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.82	N/A
PCB-1248, ug/L (CAS NO - 12672-29-6)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	< 0.8	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	< 0.8	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 16	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
PCB-1248, ug/L (CAS NO - 12672-29-6)	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 1.01	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 1.29	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A	N/A	< 0.86	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.833	< 0.825	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.825	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.808	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.93	N/A	N/A	< 0.842	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.825	< 0.842	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.851	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.86	N/A	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.769	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.82	N/A
PCB-1254, ug/L (CAS NO - 11097-69-1)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	< 0.8	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	< 0.8	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 16	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 1.01	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 1.29	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A	N/A	< 0.86	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.833	< 0.825	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.825	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.808	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.93	N/A	N/A	< 0.842	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.825	< 0.842	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.851	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.86	N/A	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.769	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.82	N/A
PCB-1260, ug/L (CAS NO - 11096-82-5)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	< 0.8	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	< 0.8	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 16	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.8	< 0.8	< 0.8	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 1.01	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 1.29	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A	N/A	< 0.86	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 0.833	< 0.825	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 0.825	N/A	N/A	N/A	N/A	< 0.842	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.808	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.93	N/A	N/A	< 0.842	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.825	< 0.842	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.842	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 0.851	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 0.86	N/A	< 0.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A	< 0.8	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 0.769	N/A	N/A	< 0.8	N/A	N/A	N/A	< 0.8	< 0.8	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.82	N/A
Pentachlorobenzene, ug/L (CAS NO - 608-93-5)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Pentachloronitrobenzene, ug/L (CAS NO - 82-68-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Pentachlorophenol [2C], ug/L (CAS NO - 87-86-5)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	2.06*	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.59*	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Phenacetin, ug/L (CAS NO - 62-44-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Phenanthrene, ug/L (CAS NO - 85-01-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Phenol, ug/L (CAS NO - 108-95-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	69.3	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 11.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	< 10	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phorate, ug/L (CAS NO - 298-02-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Phorate, ug/L (CAS NO - 298-02-2)	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Pronamide, ug/L (CAS NO - 23950-58-5)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 10	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	1.03*	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Propionitrile, ug/L (CAS NO - 107-12-0)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Pyrene, ug/L (CAS NO - 129-00-0)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Safrole, ug/L (CAS NO - 94-59-7)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Sulfide, mg/L (CAS NO - 18496-25-8)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A	1.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.6	1.5	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	0.53	N/A	N/A	N/A	0.4	N/A	N/A	< 0.12	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	< 1	< 1	0.81	< 1	0.81	< 1	2.1	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	< 1	N/A	< 1	< 0.12	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 0.23	N/A	N/A	N/A	< 0.23	N/A	< 0.23	1.3	0.35	N/A	N/A	N/A	1.8	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	N/A	< 0.23	N/A	N/A	N/A	N/A	N/A	< 0.23	N/A	N/A	N/A	0.34	N/A
	2/28/2013	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	10/22/2013	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	0.927*	N/A	3.84	< 1	< 1	N/A	N/A	N/A	1.13	N/A
	2/19/2014	N/A	N/A	N/A	N/A	0.261*	N/A	< 1	N/A	< 1	N/A	0.408*	0.702*	0.147*	N/A	N/A	N/A	N/A	N/A
	2/19/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	< 1	N/A	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	0.485*	< 1	N/A	N/A	N/A	< 1	N/A
	10/28/2014	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - HMSP

Other Constituents	Sample Date	MW4-89 UPG	MW-41 UPG	GW-Lag-00 DNG	GWLag-C-1W DNG	MW1-99 DNG	MW2-93 DNG	MW4-90 DNG	MW4-93 DNG	MW7-90R DNG	MW7-93 DNG	MW9-90 DNG	MW-37 DNG	MW-38 DNG	MW-39R DNG	MW-40R DNG	MW-43 DNG	PZ-10 DNG	PZ-11 DNG
Sulfide, mg/L (CAS NO - 18496-25-8)	3/18/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	< 1	N/A	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	7/15/2015	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1	N/A	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	2/23/2016	N/A	N/A	N/A	N/A	0.352*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	< 1	N/A	N/A	N/A	0.255*	N/A	< 1	0.654*	< 1	< 1	N/A	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	< 1	N/A	N/A	N/A	< 1	< 1	< 1	N/A	< 1	N/A	< 1	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	8/7/2017	< 1	N/A	N/A	N/A	< 1	N/A	< 1	N/A	< 1	N/A	N/A	< 1	< 1	N/A	N/A	N/A	< 1	N/A
	5/21/2018	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	2.15	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.816*	N/A	N/A	< 1	N/A	N/A	< 1	N/A
	12/20/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	5/7/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	< 1	N/A	N/A	< 1	N/A
	10/1/2019	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.448*	N/A	N/A	< 1	N/A	N/A	< 1	N/A
	4/7/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	9/23/2020	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.25	N/A	< 1	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	< 1	N/A	N/A	N/A	N/A	< 1	N/A	< 1	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	0.318*	N/A	N/A	0.27*	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 1	N/A	< 1	2.38	N/A	N/A	N/A	< 1	< 1	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Thionazin, ug/L (CAS NO - 297-97-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 10	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 10	< 10	< 10	N/A	< 10	< 10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.1	N/A	N/A	N/A	< 10.5	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 10.4	< 10.5	N/A	< 10.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 10.9	N/A	N/A	N/A	N/A	< 10.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	< 10	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10.6	N/A	< 11.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	< 10.4	N/A	< 10.4	N/A	< 10	N/A	N/A	N/A	N/A	< 10.4	N/A	N/A	< 10.4	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 9.26	N/A	N/A	N/A	N/A	N/A	N/A	< 9.62	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	< 9.43	N/A	N/A	N/A	< 10	< 10	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A
Toxaphene, ug/L (CAS NO - 8001-35-2)	8/27/2009	N/A	N/A	N/A	N/A	N/A	< 2	N/A	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/8/2010	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/13/2010	N/A	N/A	N/A	N/A	N/A	< 2	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/9/2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	7/21/2011	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 2	< 2	< 2	N/A	< 2	< 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/25/2012	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.69	N/A	N/A	N/A	N/A	N/A	N/A
	8/28/2012	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A	N/A	N/A	< 2	N/A
	2/28/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	10/22/2013	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.13	< 2.08	N/A	N/A	N/A	< 2.11	N/A
	2/19/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.11	N/A	N/A	N/A	N/A	N/A	N/A
	10/28/2014	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.08	N/A	N/A	N/A	N/A	N/A	N/A
	3/18/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 10	N/A	N/A	N/A	N/A	N/A	N/A
	7/15/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.13	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.17	N/A	N/A	N/A	N/A	N/A	N/A
	9/7/2016	N/A	N/A	N/A	N/A	N/A	N/A	< 2.08	< 2.08	N/A	< 2.02	N/A	< 2.02	N/A	N/A	N/A	N/A	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	< 2.2	N/A	N/A	N/A	N/A	< 2.17	< 10.6	N/A	N/A	N/A	N/A	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A
	8/7/2017	N/A	N/A	N/A	N/A	< 2.11	N/A	N/A	N/A	< 2.11	N/A	N/A	< 2.06	N/A	N/A	N/A	N/A	N/A	N/A
	5/21/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.08	< 2.08	N/A	N/A	N/A	N/A
	9/25/2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.13	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	< 2.13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/27/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 2.15	N/A	< 2.15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3/1/2022	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A
	8/16/2022	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A	< 2	N/A	N/A	N/A	N/A	N/A	N/A
	11/14/2023	N/A	N/A	N/A	N/A	N/A	< 1.92	N/A	N/A	< 2	N/A	N/A	N/A	< 2	< 2	N/A	N/A	N/A	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.92	N/A
	11/18/2024	< 1.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.85	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 C-2

Summary of Groundwater Chemistry – CAMP

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - CAMP

Total Metals Constituents	Sample Date	MW1-99 DNG	MW4-93 DNG	MW5-90 DNG	MW6-90 DNG	MW6-93 DNG	MW-38 DNG	MW-39R DNG	MW-43 DNG	MW-44 DNG
Arsenic, mg/L (CAS NO - 7440-38-2)	2/8/2008	0.00422	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.001	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	0.116	0.00126	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.001	0.00183	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.001	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.001	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	< 0.001	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	0.00215	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	4/8/2010	< 0.001	0.0011	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	4/8/2010	N/A	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/15/2010	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	8/27/2010	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	10/13/2010	< 0.002	< 0.003	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A
	3/15/2011	< 0.002	< 0.024	N/A	N/A	N/A	< 0.005	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	7/21/2011	< 0.004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.001	< 0.003	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	4/25/2012	< 0.001	0.00117	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	8/28/2012	< 0.001	< 0.001	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	2/28/2013	< 0.001	0.0023	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	10/22/2013	< 0.001	< 0.001	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	10/23/2013	N/A	N/A	N/A	N/A	0.00125	N/A	N/A	N/A	N/A
	2/19/2014	< 0.001	< 0.002	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	2/19/2014	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/20/2014	N/A	N/A	N/A	0.00514	0.000853	N/A	N/A	N/A	N/A
	10/28/2014	< 0.002	< 0.003	N/A	N/A	N/A	< 0.001	N/A	N/A	N/A
	10/28/2014	< 0.001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/30/2014	N/A	N/A	< 0.001	< 0.001	N/A	N/A	N/A	N/A	N/A
	3/18/2015	0.0019	0.00108	N/A	N/A	N/A	< 0.002	N/A	0.00723	0.00221
	7/15/2015	< 0.002	< 0.002	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A
	7/15/2015	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/16/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0.00589**
	7/17/2015	N/A	N/A	< 0.002	N/A	N/A	N/A	N/A	**0.00734**	N/A
	2/22/2016	< 0.002	N/A	< 0.002	< 0.002	N/A	N/A	N/A	N/A	N/A
	2/22/2016	< 0.002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/23/2016	N/A	< 0.002	N/A	N/A	N/A	< 0.002	N/A	N/A	N/A
	9/7/2016	< 0.002	0.000776*	< 0.002	< 0.002	N/A	< 0.002	N/A	N/A	< 0.002
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	0.00163*	N/A	N/A
	3/29/2017	< 0.002	0.000553*	N/A	N/A	N/A	< 0.002	0.00161*	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	0.00148*	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	**0.00213**	N/A	N/A
	8/7/2017	< 0.002	< 0.002	N/A	N/A	N/A	< 0.002	0.00125*	**0.00774**	0.000729*
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	0.000955*	N/A	N/A
	5/21/2018	0.000578*	0.00112*	0.000709*	< 0.002	N/A	< 0.002	0.00179*	**0.00536**	**0.00201**
	5/21/2018	0.000655*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	**0.00167**	**0.00404**	< 0.002	< 0.002	N/A	**0.00178**	**0.00248**	**0.00858**	< 0.002
	9/25/2018	N/A	N/A	**0.00104**	N/A	N/A	N/A	N/A	N/A	N/A
	5/7/2019	< 0.002	< 0.002	N/A	N/A	N/A	< 0.002	0.00148*	N/A	N/A
	10/1/2019	< 0.002	0.000872*	< 0.002	< 0.002	0.0019*	< 0.002	0.00169*	**0.00759**	< 0.002
	4/7/2020	< 0.002	0.00112*	0.00123*	< 0.002	0.0018*	< 0.002	**0.00255**	**0.00334**	< 0.002
	9/23/2020	< 0.002	0.000891*	N/A	N/A	N/A	N/A	0.00162*	N/A	N/A
	9/23/2020	0.00115*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	< 0.002	< 0.002	**0.00209**	< 0.002	0.00169*	< 0.002	0.00143*	**0.00425**	0.00157*
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0.00433**	N/A
	7/27/2021	**0.00207**	0.0012*	N/A	N/A	N/A	N/A	0.00112*	**0.00544**	N/A
	7/27/2021	0.00167*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0.0037**	N/A
	3/1/2022	< 0.002	0.0013*	< 0.002	< 0.002	0.00182*	< 0.002	0.000894*	**0.00337**	0.00106*
	8/16/2022	< 0.002	0.000788*	N/A	N/A	N/A	N/A	0.00143*	**0.00645**	N/A
	8/16/2022	N/A	0.000851*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	0.000585*	0.000921*	N/A	N/A	N/A	N/A	0.0014*	N/A	N/A
	11/14/2023	0.000565*	0.0019*	N/A	N/A	N/A	< 0.002	0.00145*	N/A	< 0.002
	6/11/2024	0.00143*	**0.00351**	0.000874*	< 0.002	**0.00231**	< 0.002	0.00129*	**0.00725**	0.000799*
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0.00684**	N/A
	11/18/2024	0.00178*	**0.0068**	< 0.002	N/A	N/A	N/A	0.00114*	**0.00603**	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0.00608**	N/A
Cobalt, mg/L (CAS NO - 7440-48-4)	2/8/2008	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/29/2008	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/2/2008	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/11/2008	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/11/2008	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/23/2009	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8/27/2009	< 0.02	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/19/2009	N/A	< 0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/29/2009	N/A	N/A	N/A	N/A	N/A	< 0.02	N/A	N/A	N/A
	4/8/2010	< 0.00155	0.0125	N/A	N/A	N/A	0.00224	N/A	N/A	N/A
	4/8/2010	N/A	0.0109	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6/15/2010	N/A	N/A	N/A	N/A	N/A	< 0.00155	N/A	N/A	N/A
	8/27/2010	N/A	N/A	N/A	N/A	N/A	0.00301	N/A	N/A	N/A
	10/13/2010	< 0.00155	0.00294	N/A	N/A	N/A	< 0.00155	N/A	N/A	N/A
	3/15/2011	0.00589	0.0182	N/A	N/A	N/A	0.00685	N/A	N/A	N/A
	3/15/2011	N/A	N/A	N/A	N/A	N/A	0.00516	N/A	N/A	N/A
	7/21/2011	0.0105	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/20/2011	< 0.00155	0.00881	N/A	N/A	N/A	< 0.00155	N/A	N/A	N/A
	10/20/2011	N/A	N/A	N/A	N/A	N/A	< 0.00155	N/A	N/A	N/A
	4/25/2012	< 0.00155	0.00407	N/A	N/A	N/A	< 0.00155	N/A	N/A	N/A
	8/28/2012	< 0.00155	0.00985	N/A	N/A	N/A	< 0.00155	N/A	N/A	N/A
	11/14/2012	N/A	N/A	N/A	N/A	N/A	< 0.00155	N/A	N/A	N/A
	2/28/2013	0.00243	0.0113	N/A	N/A	N/A	0.00132	N/A	N/A	N/A
	10/22/2013	< 0.00132	0.00948	N/A	N/A	N/A	< 0.00132	N/A	N/A	N/A
	2/19/2014	< 0.00132	0.00516	N/A	N/A	N/A	< 0.00132	N/A	N/A	N/A
	2/19/2014	< 0.00132	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2/20/2014	N/A	N/A	N/A	0.113	N/A	N/A	N/A	N/A	N/A
	10/28/2014	0.00317	0.00977	N/A	N/A	N/A	0.00326	N/A	N/A	N/A
	10/28/2014	< 0.00241	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/30/2014	N/A	N/A	< 0.00241	0.00971	N/A	N/A	N/A	N/A	N/A
	3/18/2015	0.00247	0.00153	N/A	N/A	N/A	0.000193	N/A	N/A	N/A
	7/15/2015	0.000159*	**0.00369**	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A
	7/15/2015	0.000134*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/17/2015	N/A	N/A	0.000098*	N/A	N/A	N/A	N/A	N/A	N/A
	2/22/2016	0.000158*	N/A	0.000279*	0.000075*	N/A	N/A	N/A	N/A	N/A
	2/23/2016	0.000124*	**0.00942**	N/A	N/A	N/A	< 0.0005	N/A	N/A	N/A
	9/7/2016	**0.000738**	**0.0121**	< 0.0005	0.000177*	N/A	< 0.0005	N/A	N/A	0.000086*
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	**0.00606**	N/A	N/A

SCS ENGINEERS

Summary of Groundwater Chemistry
Des Moines County Area Regional Sanitary Landfill - 29-SDP-01-76P - CAMP

Total Metals Constituents	Sample Date	MW1-99 DNG	MW4-93 DNG	MW5-90 DNG	MW6-90 DNG	MW6-93 DNG	MW-38 DNG	MW-39R DNG	MW-43 DNG	MW-44 DNG
Cobalt, mg/L (CAS NO - 7440-48-4)	3/29/2017	0.000254*	**0.0093**	N/A	N/A	N/A	< 0.0005	**0.00394**	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	**0.0043**	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	**0.0034**	N/A	N/A
	8/7/2017	0.000443*	**0.0021**	N/A	N/A	N/A	< 0.0005	**0.00351**	**0.000727**	**0.000574**
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	**0.00256**	N/A	N/A
	5/21/2018	0.000231*	**0.0111**	N/A	N/A	N/A	< 0.0005	**0.00218**	**0.000964**	0.000099*
	5/21/2018	0.000227*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	0.000436*	**0.00967**	< 0.001	N/A	N/A	< 0.001	**0.00174**	**0.00199**	< 0.0005
	5/7/2019	0.000162*	**0.00898**	N/A	N/A	N/A	< 0.0005	**0.00144**	N/A	N/A
	10/1/2019	0.000308*	**0.0107**	N/A	N/A	N/A	< 0.0005	**0.00149**	N/A	N/A
	4/7/2020	0.000147*	**0.00405**	N/A	N/A	N/A	< 0.0005	**0.00142**	N/A	N/A
	4/1/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0.00181**	N/A
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0.0018**	N/A
	7/27/2021	**0.00165**	**0.0126**	N/A	N/A	N/A	N/A	**0.00125**	**0.00184**	N/A
	7/27/2021	**0.00178**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0.00135**	N/A
	3/1/2022	< 0.0005	**0.0134**	N/A	N/A	N/A	N/A	**0.00162**	**0.00122**	N/A
	8/16/2022	0.000235*	**0.0105**	N/A	N/A	N/A	N/A	**0.00138**	**0.00236**	N/A
	8/16/2022	N/A	**0.0143**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	**0.000671**	**0.00852**	N/A	N/A	N/A	N/A	**0.00176**	N/A	N/A
	11/14/2023	**0.00103**	**0.0119**	N/A	N/A	N/A	< 0.0005	**0.00129**	N/A	N/A
	6/11/2024	**0.00213**	**0.0164**	N/A	N/A	N/A	N/A	**0.00128**	**0.00213**	N/A
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0.00205**	N/A
	11/18/2024	**0.00268**	**0.0498**	N/A	N/A	N/A	N/A	**0.00141**	**0.00215**	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0.0022**	N/A
Total Suspended Solids, mg/L (CAS NO - TSS)	2/19/2014	N/A	45	N/A	N/A	N/A	142	N/A	N/A	N/A
	10/28/2014	302	16.3	N/A	N/A	N/A	404	N/A	N/A	N/A
	10/28/2014	85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10/30/2014	N/A	N/A	62.5	2230	N/A	N/A	N/A	N/A	N/A
	3/18/2015	36	79.6	105	274	N/A	19.4	N/A	1940	109
	7/15/2015	**2**	**20.7**	N/A	N/A	N/A	**2.75**	N/A	N/A	N/A
	7/15/2015	**1.88**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7/16/2015	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**480**
	7/17/2015	N/A	N/A	**3.67**	**7.83**	N/A	N/A	N/A	**110**	N/A
	2/22/2016	N/A	N/A	**49.3**	**3**	N/A	N/A	N/A	N/A	N/A
	2/23/2016	< 1.88	1.13*	N/A	N/A	N/A	< 1.88	N/A	N/A	N/A
	9/7/2016	**4.5**	**10.8**	1.25*	**8.63**	N/A	1*	N/A	N/A	**4**
	1/31/2017	N/A	N/A	N/A	N/A	N/A	N/A	**365**	N/A	N/A
	3/29/2017	**4.4**	**2.25**	N/A	N/A	N/A	**2.75**	**113**	N/A	N/A
	3/29/2017	N/A	N/A	N/A	N/A	N/A	N/A	**79.5**	N/A	N/A
	5/24/2017	N/A	N/A	N/A	N/A	N/A	N/A	**6.25**	N/A	N/A
	8/7/2017	**2.5**	**21.6**	N/A	N/A	N/A	< 1.88	**2.13**	**54.1**	**149**
	11/28/2017	N/A	N/A	N/A	N/A	N/A	N/A	**2.88**	N/A	N/A
	5/21/2018	1.38*	**3.25**	**1.88**	**5.13**	N/A	0.75*	**2.88**	**32.6**	**5.5**
	5/21/2018	**1.88**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9/25/2018	**1.88**	**4.88**	**3.87**	**9.12**	N/A	**2.88**	1.5*	**41.5**	**4**
	9/25/2018	N/A	N/A	**6.5**	N/A	N/A	N/A	N/A	N/A	N/A
	5/7/2019	0.875*	**3.13**	N/A	N/A	N/A	< 1.88	0.75*	N/A	N/A
	10/1/2019	1.13*	**15.3**	1.25*	**6.87**	**53.4**	0.875*	**4.38**	**42**	**6**
	4/7/2020	< 1.88	1*	**2**	**6.87**	**25.3**	< 1.88	**1.88**	**50**	**24**
	9/23/2020	**3.75**	**16.8**	N/A	N/A	N/A	N/A	**3.13**	N/A	N/A
	9/23/2020	**1.88**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4/1/2021	0.875*	**14.8**	1*	**2**	**34**	0.75*	**3.5**	**50.7**	**25.3**
	6/9/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**25**	N/A
	7/27/2021	**3.38**	**17.2**	N/A	N/A	N/A	N/A	**1.88**	**34.6**	N/A
	7/27/2021	**4.25**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12/2/2021	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**49**	N/A
	3/1/2022	< 5	**5.33**	< 5	**9**	**34.7**	< 5	2*	**57**	3*
	8/16/2022	1.38*	**7.25**	N/A	N/A	N/A	N/A	**2.63**	**13.3**	N/A
	8/16/2022	N/A	**6.25**	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5/25/2023	**3.63**	**28.3**	N/A	N/A	N/A	N/A	1.38*	N/A	N/A
	11/14/2023	**3.63**	**46.5**	N/A	N/A	N/A	**2.38**	1.25*	N/A	**31.7**
	6/11/2024	**4.88**	**16.8**	< 1.88	**10.1**	**22.5**	< 1.88	**10.5**	**32**	**79.3**
	6/11/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**23**	N/A
	11/18/2024	**6.67**	**13.8**	**2.75**	N/A	N/A	N/A	1.63*	**22**	N/A
	11/18/2024	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**17**	N/A

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

Denotes Detection.
Denotes Confirmed Outlier. Statistically Excluded.

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

Appendix D

Statistical Method and Output

STATISTICAL METHOD AND OUTPUT

Purpose

The purpose of this document is to provide the statistical evaluation of groundwater analytical data collected from the groundwater monitoring network of the Des Moines County Regional Sanitary Landfill (Landfill).

Statistical Method

Diagnostic and Exploratory Evaluations and Tests of Assumptions

Both the detection and assessment/post-assessment monitoring statistical programs include diagnostic and exploratory evaluations and statistical tests of assumptions, as appropriate, including the following:

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

Management of Non-Detect Data

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

Management of Outliers

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

Management of Data (ND data < 75%)

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

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

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

Management of Data (ND data ≥ 75%)

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

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

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

Detection Monitoring Statistical Program

The detection monitoring statistical program for the Landfill is defined by Iowa Administrative Code (IAC) 567-113.10(4)"g". Interwell and intrawell prediction limits with retesting were selected as the appropriate statistical method for the determination of statistically significant increases (SSIs) over background for inorganic constituents with historic detections in background. Prediction limits were established using the processes below.

Interwell Prediction Limits with Retesting

Interwell prediction limits are completed on a majority of HMSP wells.

- If the dataset has a normal distribution (or can be transformed to a normal distribution using Ladder of Powers), parametric interwell prediction limits are calculated if at least five datasets have been collected from the background monitoring point(s).
- If the dataset does not have a normal distribution (and cannot be transformed to a normal distribution using Ladder of Powers) or has greater than 50% non-detects, nonparametric interwell prediction limits are calculated if at least five datasets has been collected from the background monitoring point(s).
- If an SSI above the prediction limit in indicated, retesting samples using the 1-of-2 retesting scheme are collected. If the retesting result exceeds the prediction limit, the SSI is confirmed, and the monitoring point is placed into the assessment monitoring program. If the retesting sample concentration is below the prediction limit, the SSI is not confirmed, and the monitoring point continues in the detection monitoring program.

Intrawell Prediction Limits with Retesting

Intrawell prediction limits are completed on monitoring point GW-Lagoon-Cell 1W and monitoring well PZ-11, when a sample is obtained.

- If the dataset has a normal distribution (or can be transformed to a normal distribution using Ladder of Powers), parametric intrawell prediction limits are calculated if at least five datasets have been collected from the background dataset.

- If the dataset does not have a normal distribution (and can not be transformed to a normal distribution using Ladder of Powers) or has greater than 50% non-detects, non-parametric intrawell prediction limits are calculated if at least five datasets have been collected from the background dataset.

- If an SSI above the prediction limit is indicated, retesting samples using the 1-of-2 retesting scheme is collected prior to the next regularly scheduled sampling event with temporal sample spacing consideration to provide samples with greater independence. If the retesting results exceeds the prediction limit, the SSI is confirmed, and the monitoring point is placed into the assessment monitoring program. If the retesting sample concentration is below the prediction limit, the SSI is not confirmed, and the monitoring point continues in the detection monitoring program.

Updating the Background Dataset for Intrawell Prediction Limits

Following the collection of the fifth background sample, if no SSI is confirmed for any two-year period, the intrawell background dataset will be updated using the following procedure:

- Test the new dataset for normal distribution either outright or through a transformation using Ladder of Powers using the Shapiro-Wilk test.

- Test the new dataset for statistically significant outliers using the Ohio EPA Method, and remove the confirmed outliers (see the "Management of Outliers" section).

- Test the new dataset for statistically significant trends using the Mann-Kendall/Sen's Slope trend test. If a statistically significantly increasing trend is detected, the monitoring point will be placed into the assessment monitoring program or treated with the leachate, whichever is appropriate.

- If the dataset has a normal distribution and no statistically significant increasing trend is present, a two-sample Welch's t-test at a 0.01 significance level is performed to compare current background to the most recent two years of detection monitoring data. If the Welch's t-test is significant and shows that the most recent two years of concentration data appear to be increasing, the background will not be updated.

- If the dataset does not have a normal distribution and no statistically significant increasing trend is present, a two-sample non-parametric Wilcoxon rank-sum test (also known as the Mann-Whitney test) at a 0.01 significance level is performed to compare current background to the most recent two years of detection monitoring data. If the Wilcoxon rank-sum test is significant and shows that the most recent two years of concentration data appear to be increasing, the background will not be updated.

- If the Welch's t-test or the Wilcoxon rank-sum tests are not significant, the most recent two years of detection data will be added to the intrawell background dataset.

The process will repeat every two years (4 sampling events) in which an SSI is not confirmed.

Double Quantification Method

The quasi-statistical "double quantification" method is used for constituents not detected in the background monitoring points. If a constituent is detected in the compliance dataset that has not been historically detected in the background dataset, that constituent must be retested before the next regularly scheduled sampling event. If the retesting results confirm the original detection with a quantifiable detection, the SSI is confirmed, and the monitoring point must be placed into the assessment monitoring program.

Assessment Monitoring/ Corrective Action Statistical Program

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

Confidence Intervals or Confidence Bands

- A parametric confidence interval around a normal mean is calculated if the dataset has a normal distribution and no statistically significant trend is present.

- A non-parametric confidence interval around a median is calculated if the dataset does not have a normal distribution and no statistically significant trend is present.

- Non-parametric confidence bands around a Theil-Sen trend line are calculated if the dataset has a statistically significant trend.

In the event that the lower confidence limit or any part of the lower confidence band, as appropriate, exceeds the GWPS, then the monitoring point is declared out of compliance, and an assessment of corrective measures (ACM) is required.

Statistical Software Output

Sanitas™ statistical software is used to perform the statistical evaluations. Graphical output for the 1st and 2nd 2024 statistical evaluations is included in Attachments A and B of this appendix, respectively.

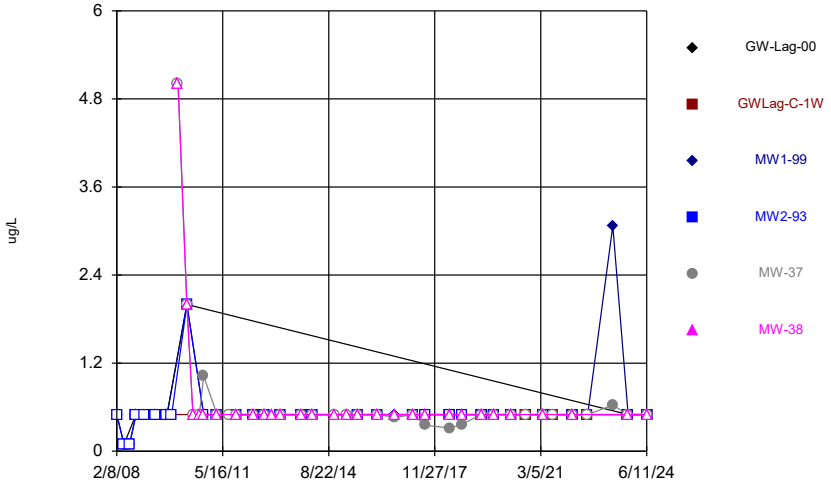
Attachment A

1st 2024 Semi-Annual Statistical Output

Timeseries Tables and Graphs

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

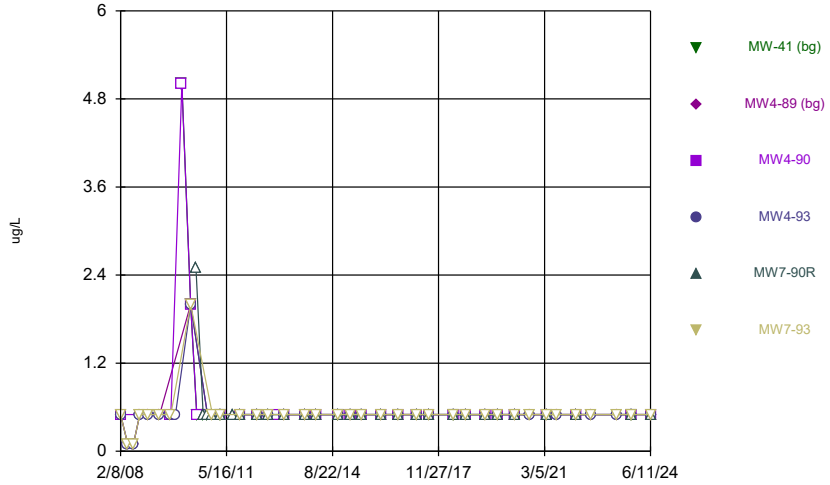
Time Series



Constituent: 1,1,1-Trichloroethane Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

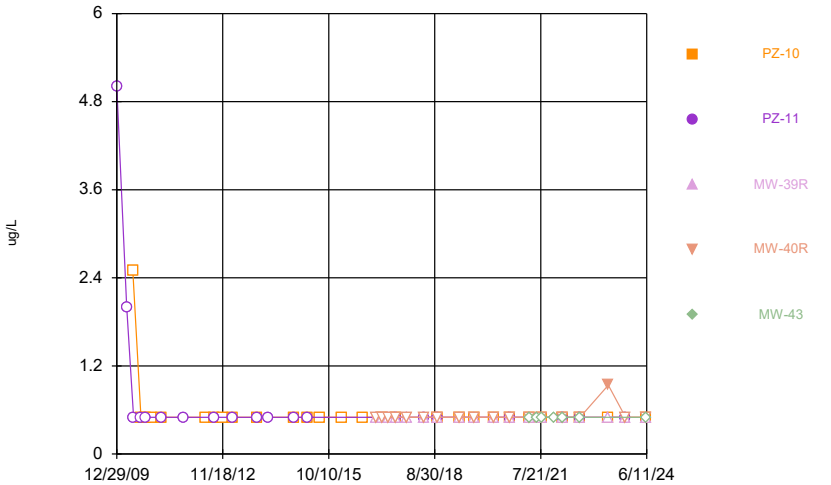
Time Series



Constituent: 1,1,1-Trichloroethane Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

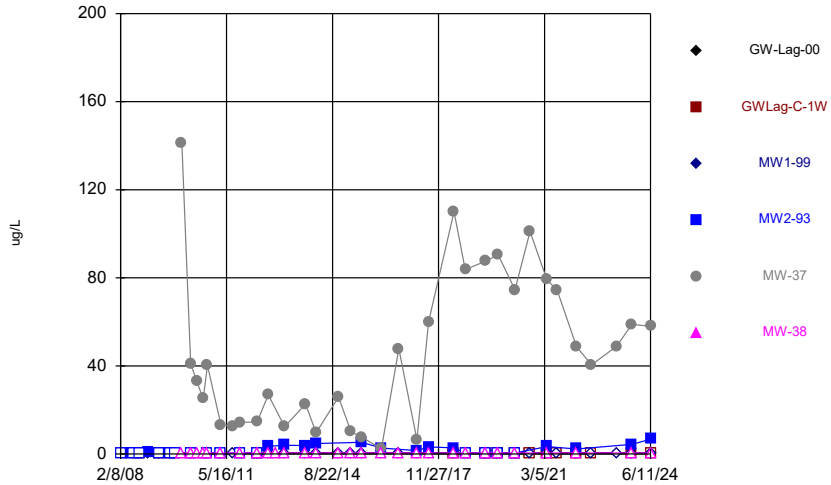
Time Series



Constituent: 1,1,1-Trichloroethane Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

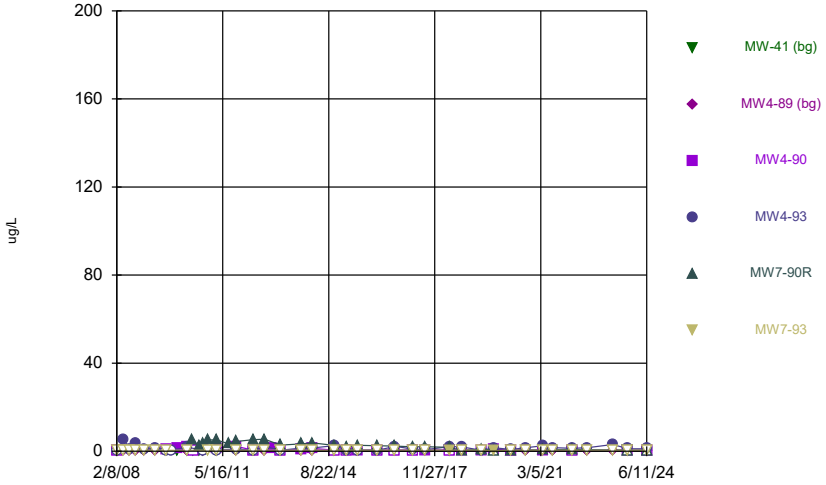
Time Series



Constituent: 1,1-Dichloroethane Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

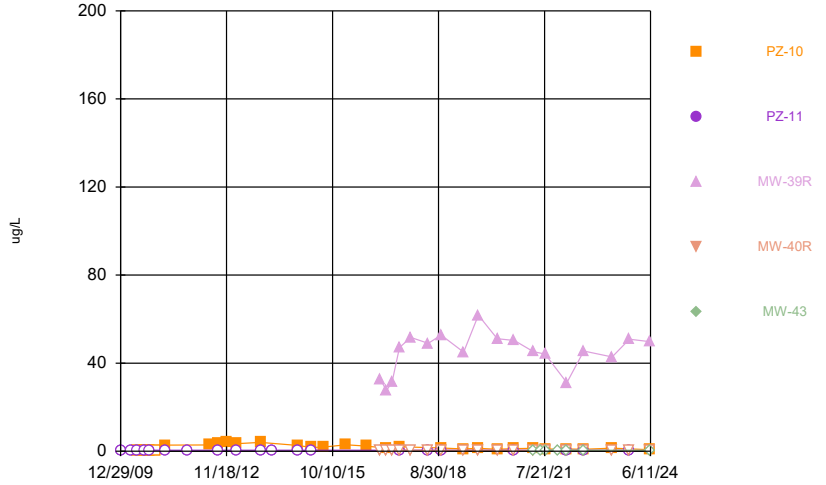
Time Series



Constituent: 1,1-Dichloroethane Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

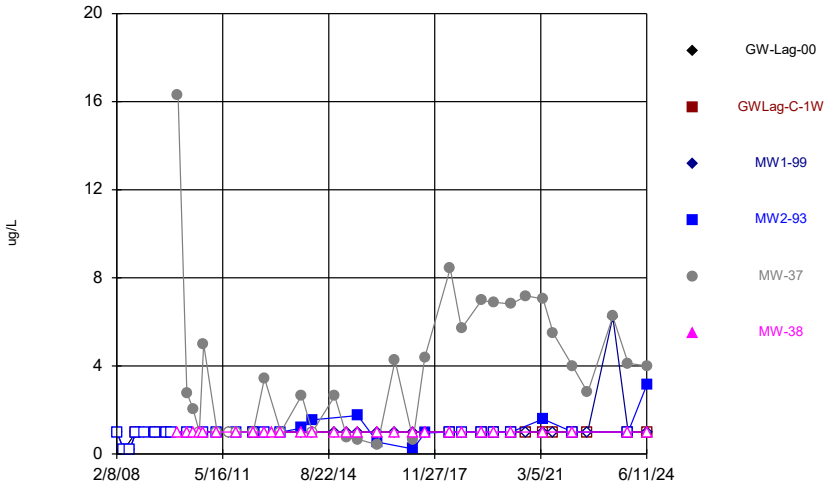
Time Series



Constituent: 1,1-Dichloroethane Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

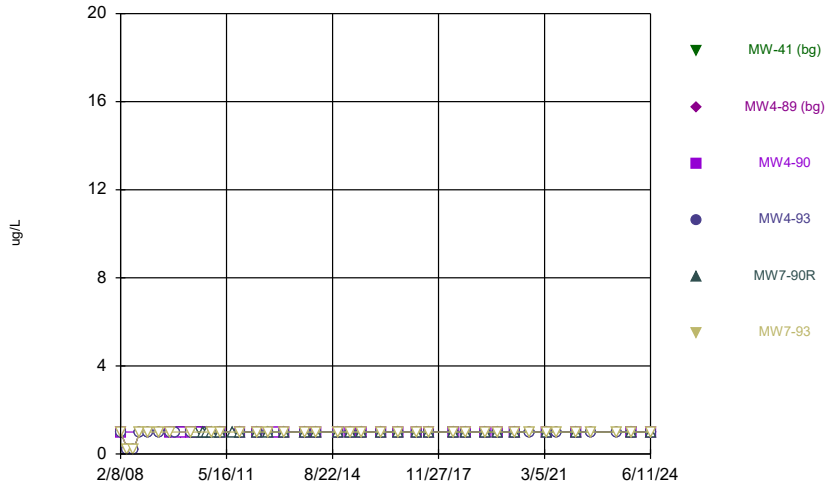
Time Series



Constituent: 1,1-Dichloroethene Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

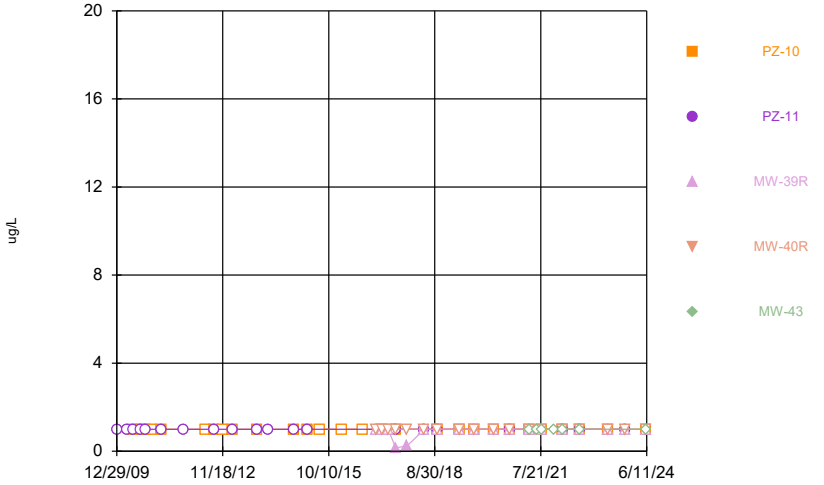
Time Series



Constituent: 1,1-Dichloroethene Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

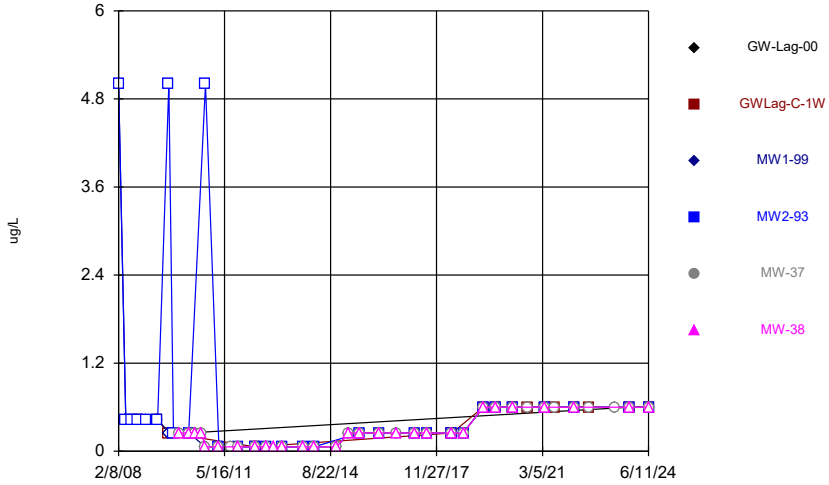
Time Series



Constituent: 1,1-Dichloroethene Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

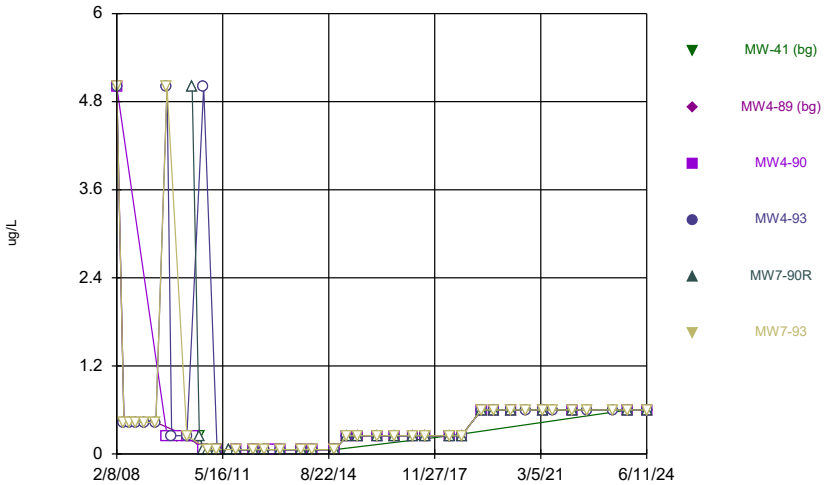
Time Series



Constituent: 1,2-Dibromo-3-Chloropropane Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Serie
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

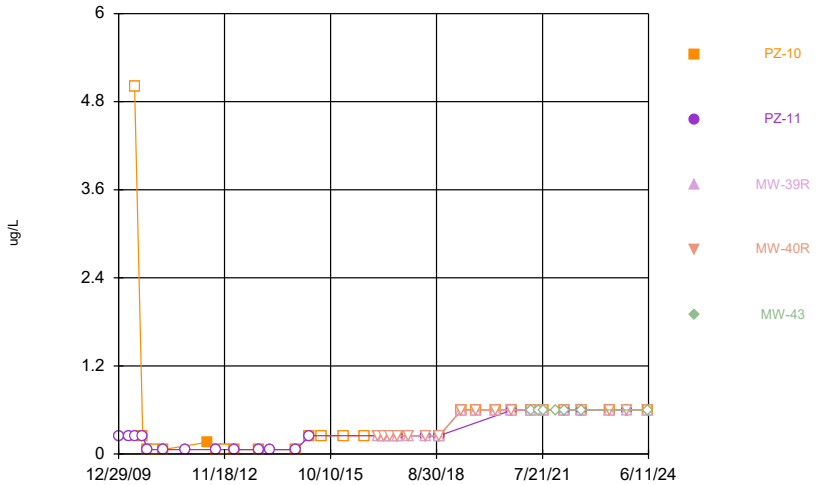
Time Series



Constituent: 1,2-Dibromo-3-Chloropropane Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Serie
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

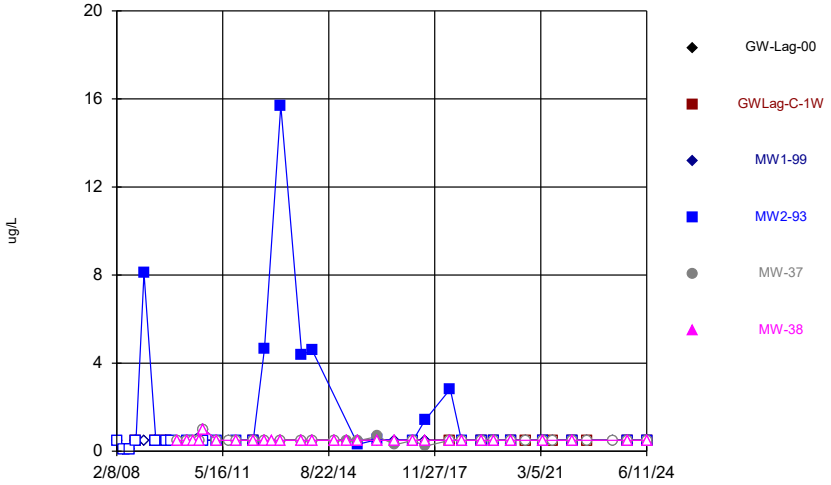
Time Series



Constituent: 1,2-Dibromo-3-Chloropropane Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Serie
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

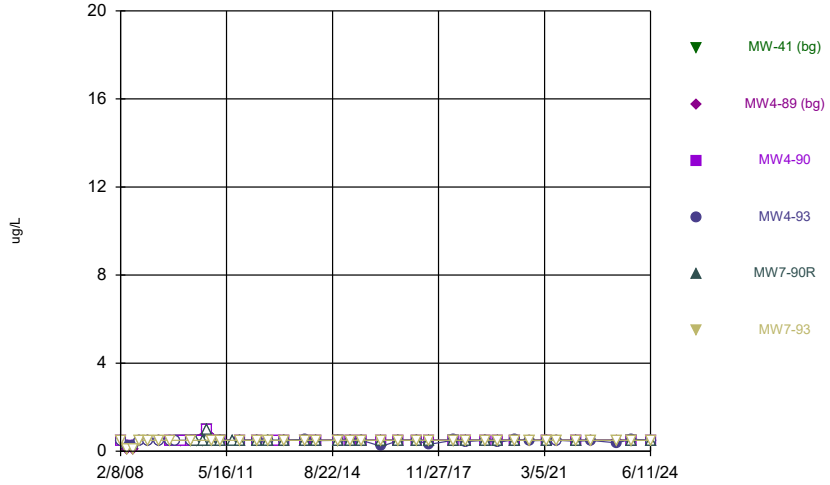
Time Series



Constituent: 1,2-Dichlorobenzene Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

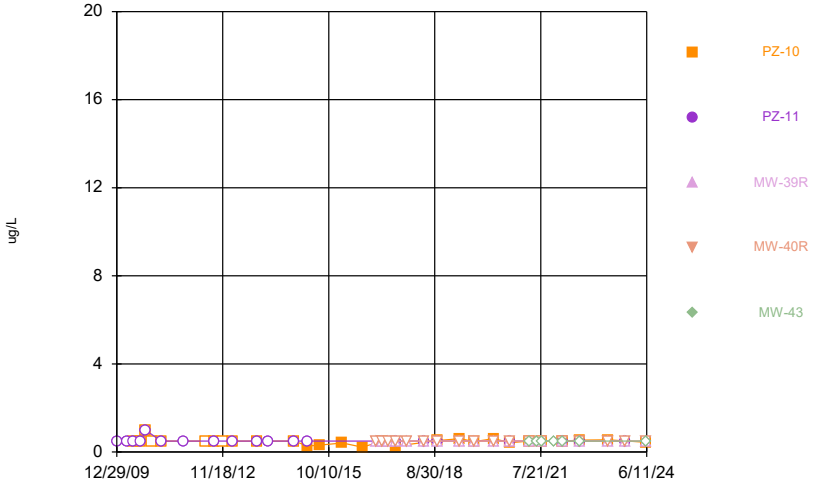
Time Series



Constituent: 1,2-Dichlorobenzene Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

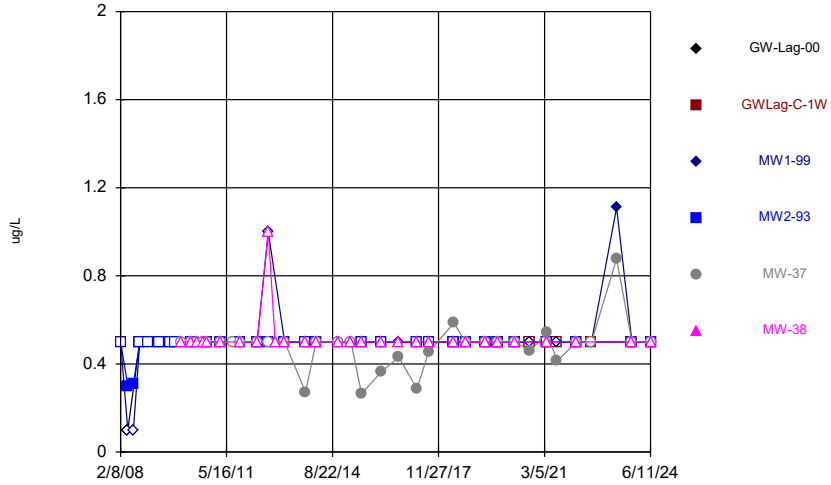
Time Series



Constituent: 1,2-Dichlorobenzene Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

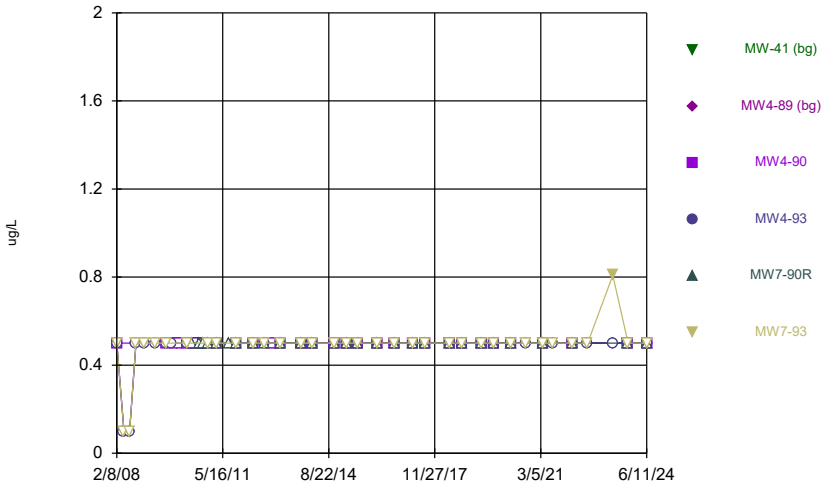
Time Series



Constituent: 1,2-Dichloroethane Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

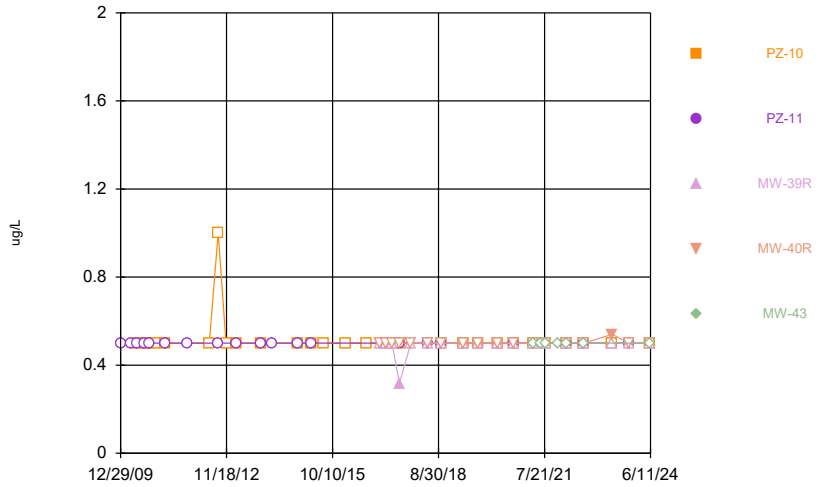
Time Series



Constituent: 1,2-Dichloroethane Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

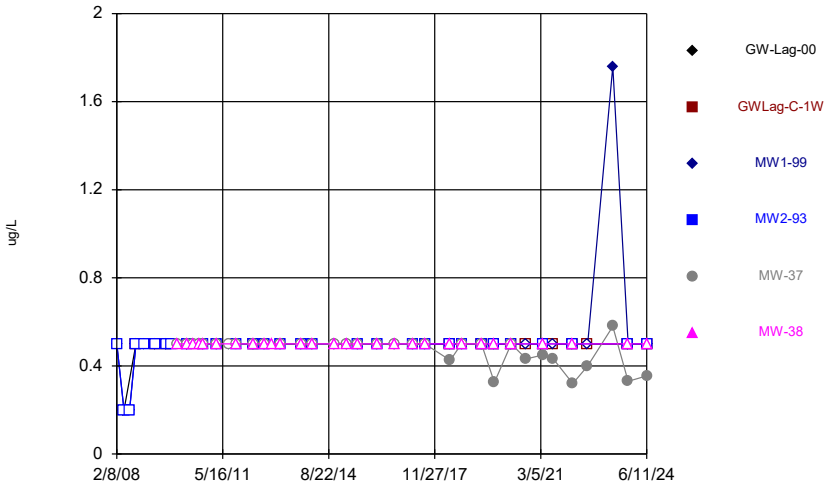
Time Series



Constituent: 1,2-Dichloroethane Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

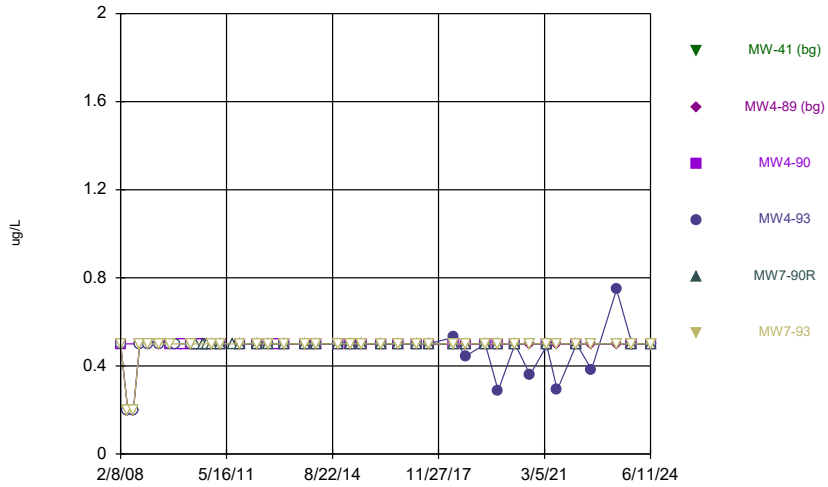
Time Series



Constituent: 1,2-Dichloropropane Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

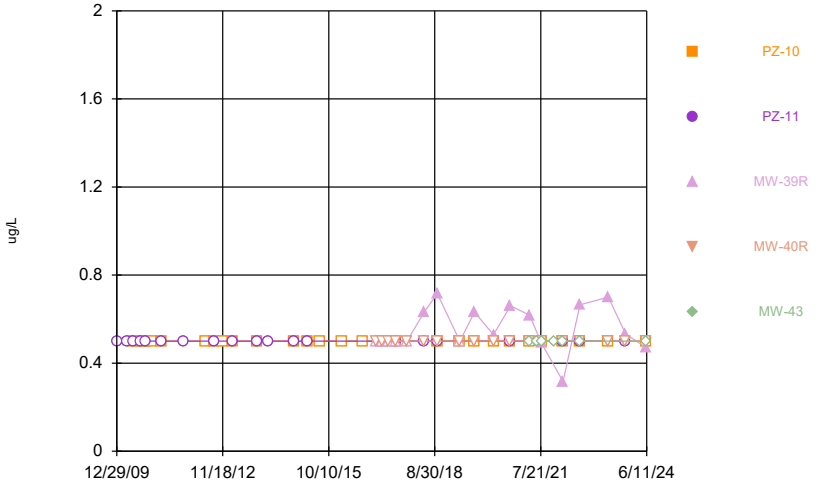
Time Series



Constituent: 1,2-Dichloropropane Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

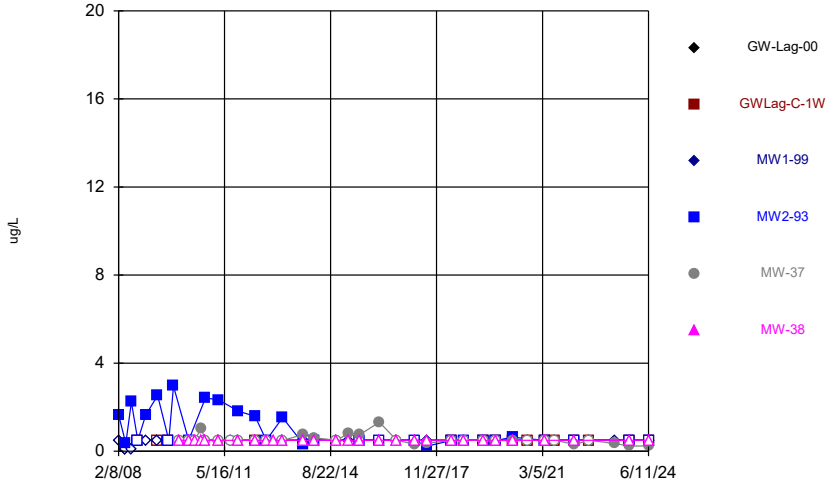
Time Series



Constituent: 1,2-Dichloropropane Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

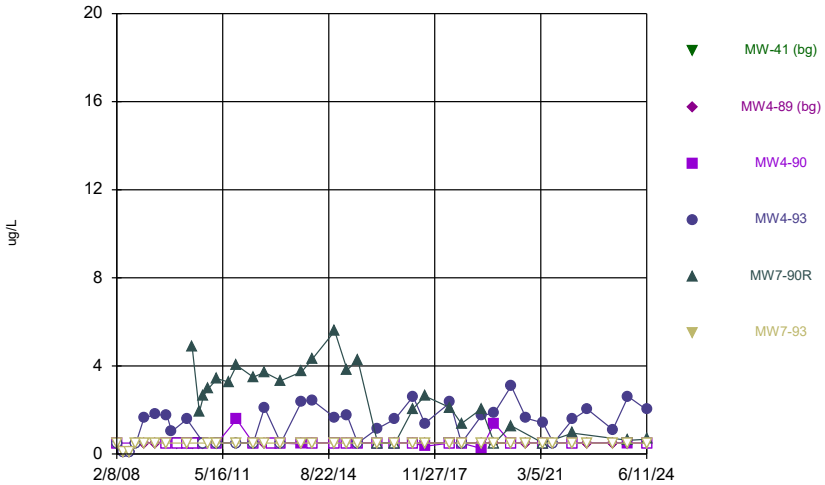
Time Series



Constituent: 1,4-Dichlorobenzene Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

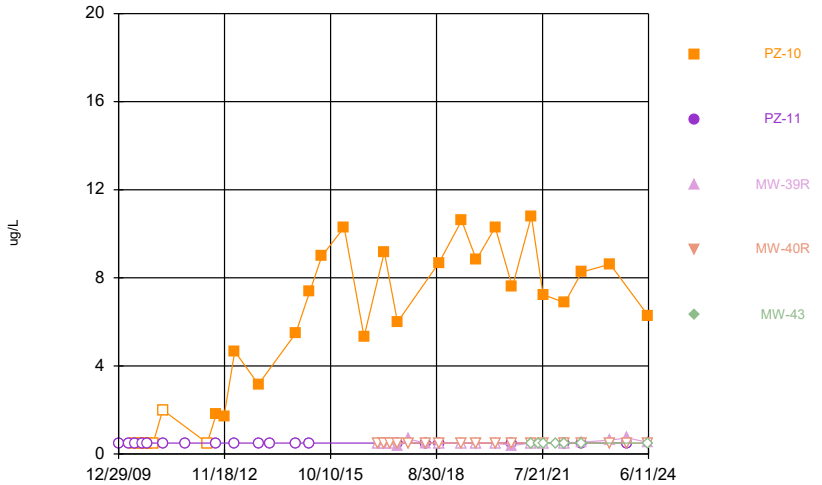
Time Series



Constituent: 1,4-Dichlorobenzene Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

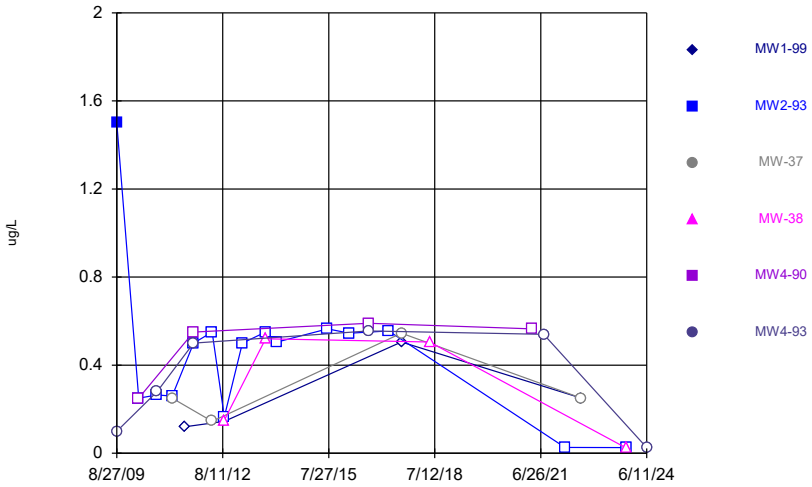
Time Series



Constituent: 1,4-Dichlorobenzene Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

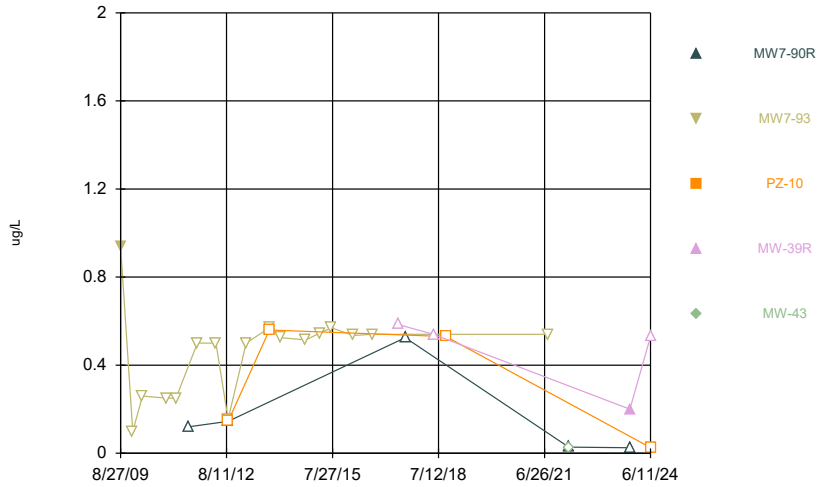
Time Series



Constituent: 2,4,5-TP [Silvex] [2C] Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

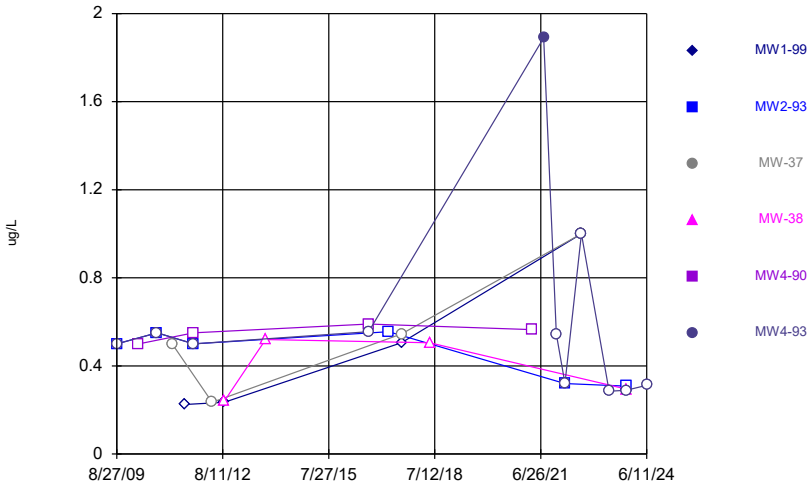
Time Series



Constituent: 2,4,5-TP [Silvex] [2C] Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

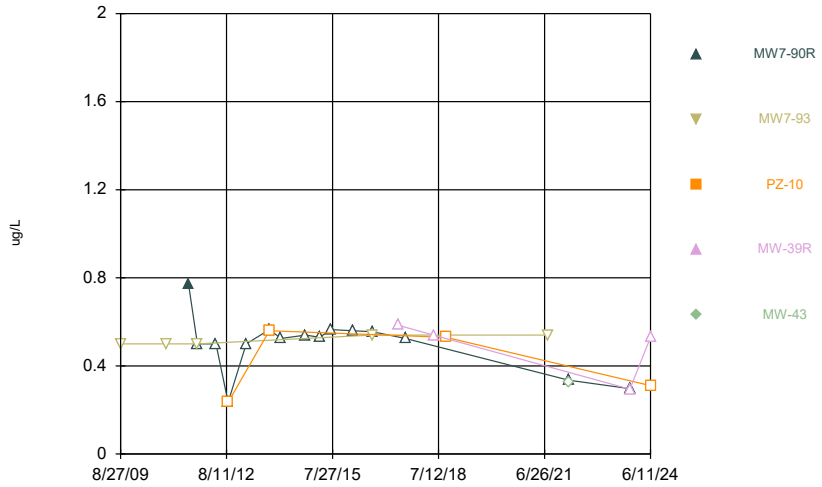
Time Series



Constituent: 2,4-D [2C] Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

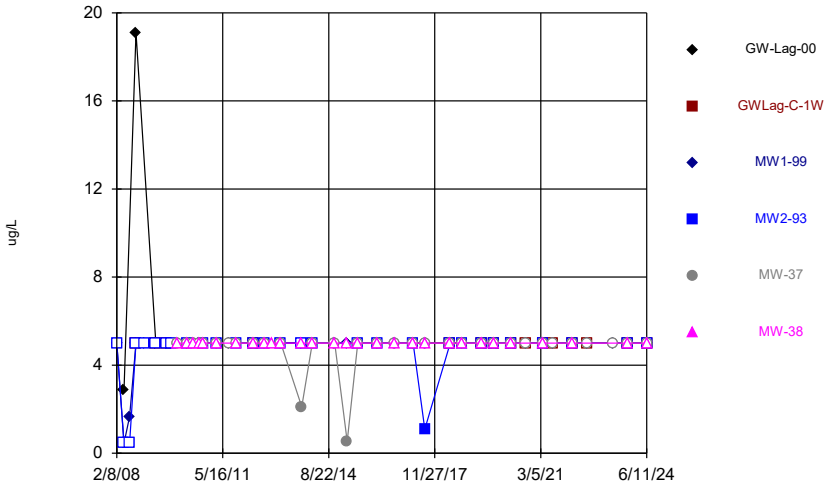
Time Series



Constituent: 2,4-D [2C] Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

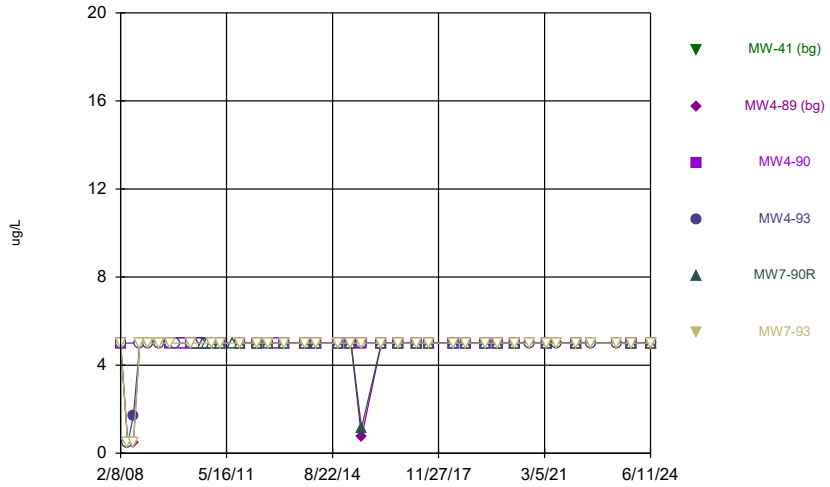
Time Series



Constituent: 2-Butanone Analysis Run 11/6/2024 11:38 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

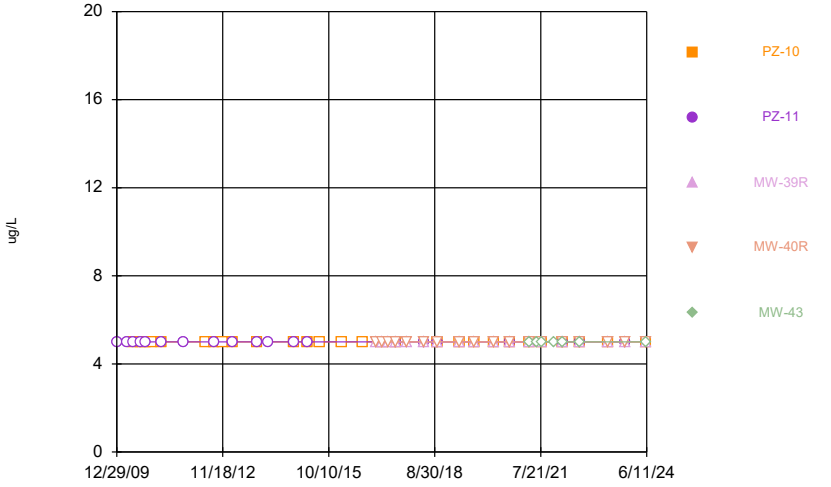
Time Series



Constituent: 2-Butanone Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

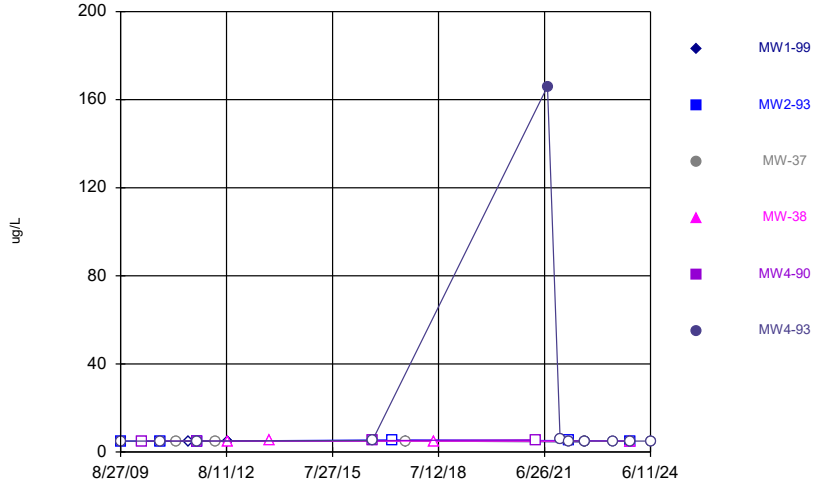
Time Series



Constituent: 2-Butanone Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

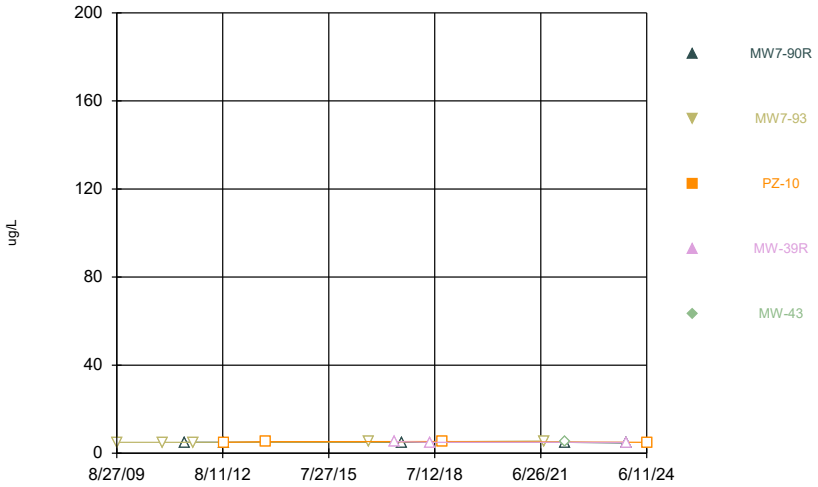
Time Series



Constituent: 3/4-Methylphenol Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

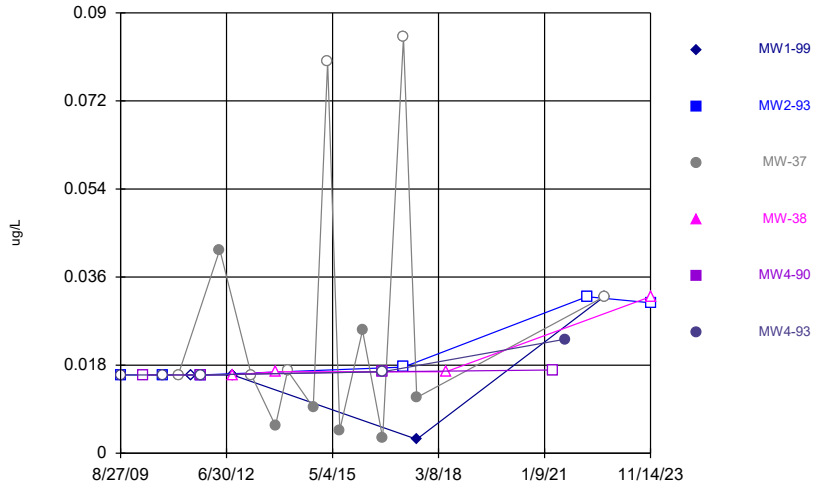
Time Series



Constituent: 3/4-Methylphenol Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

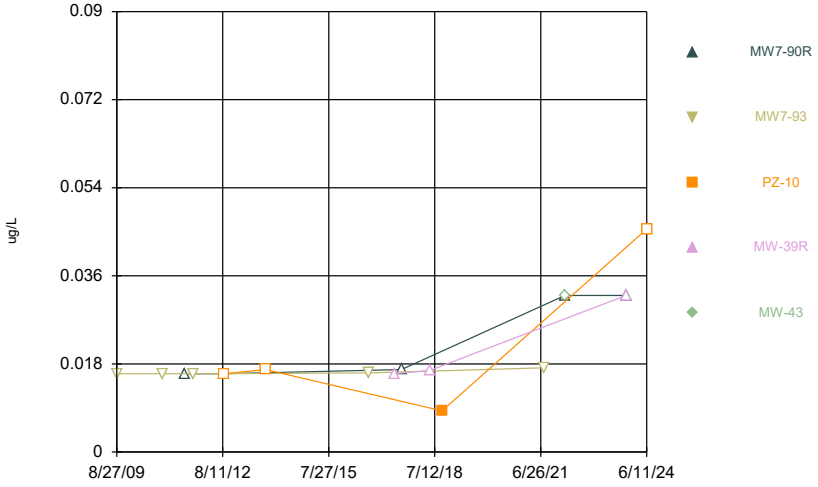
Time Series



Constituent: 4,4`-DDE Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

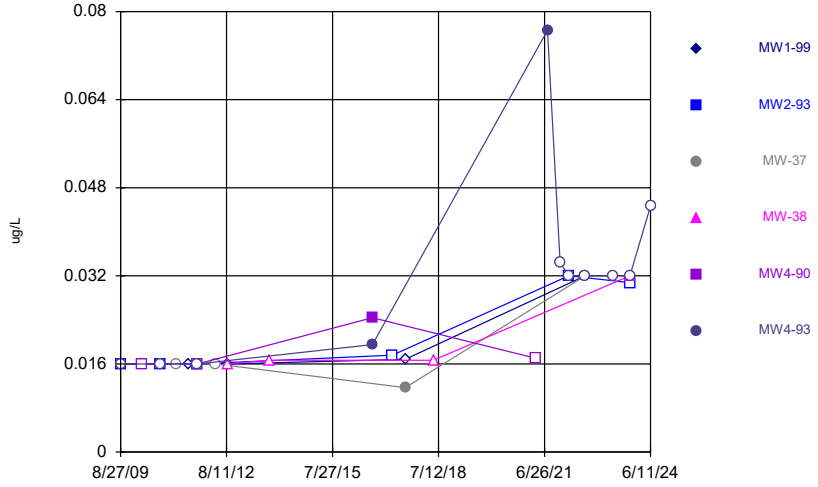
Time Series



Constituent: 4,4`-DDE Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

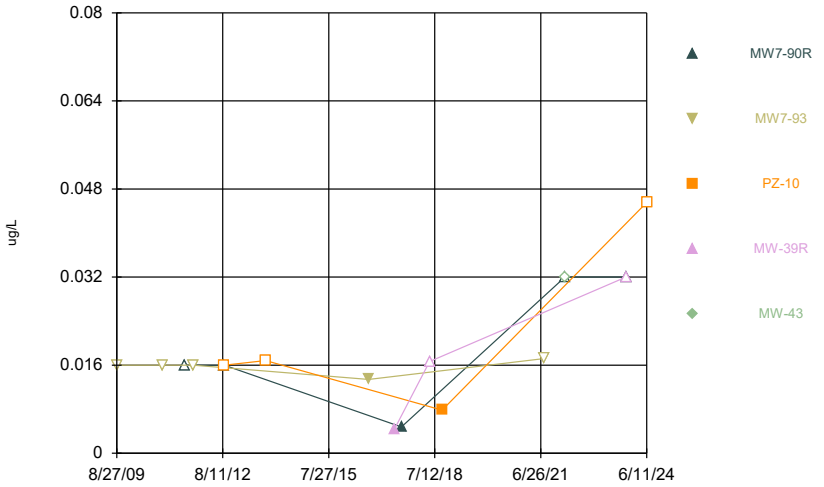
Time Series



Constituent: 4,4`-DDT Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

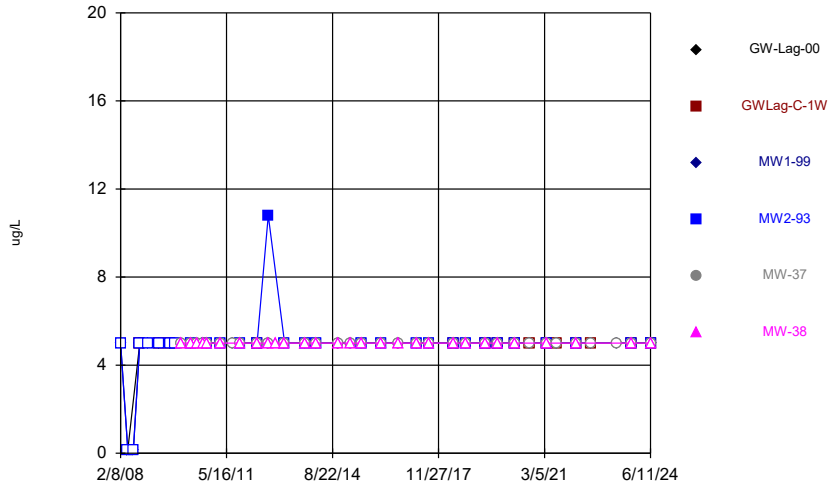
Time Series



Constituent: 4,4`-DDT Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

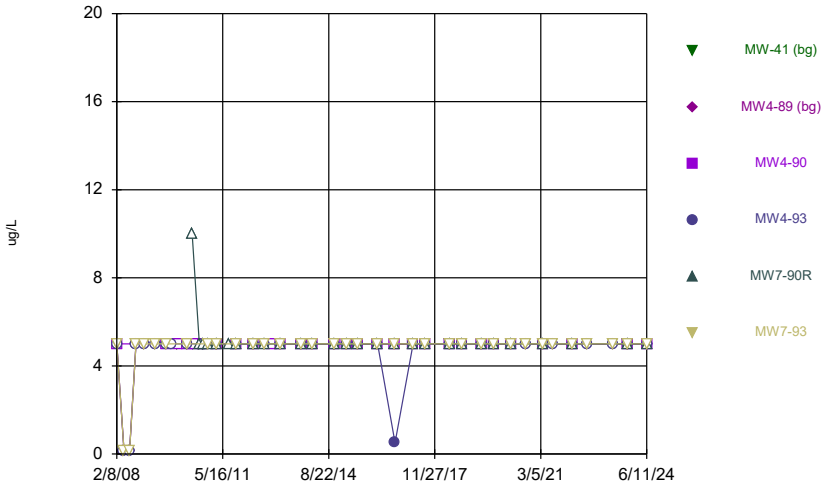
Time Series



Constituent: 4-Methyl-2-Pentanone Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

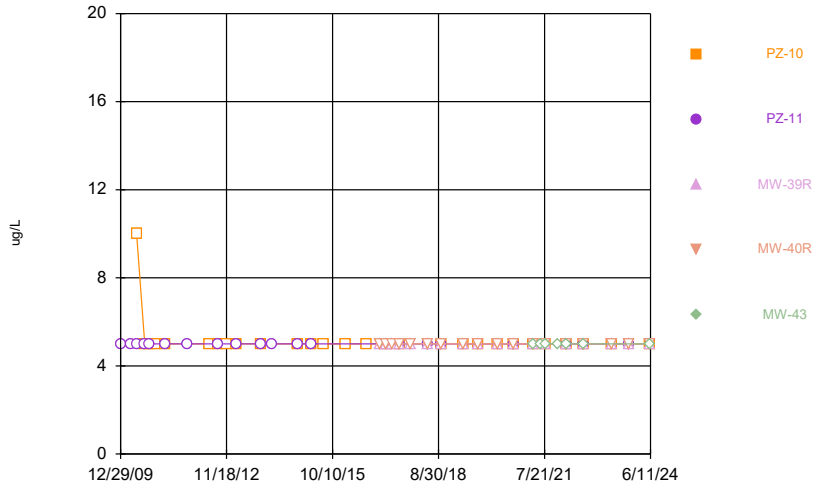
Time Series



Constituent: 4-Methyl-2-Pentanone Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

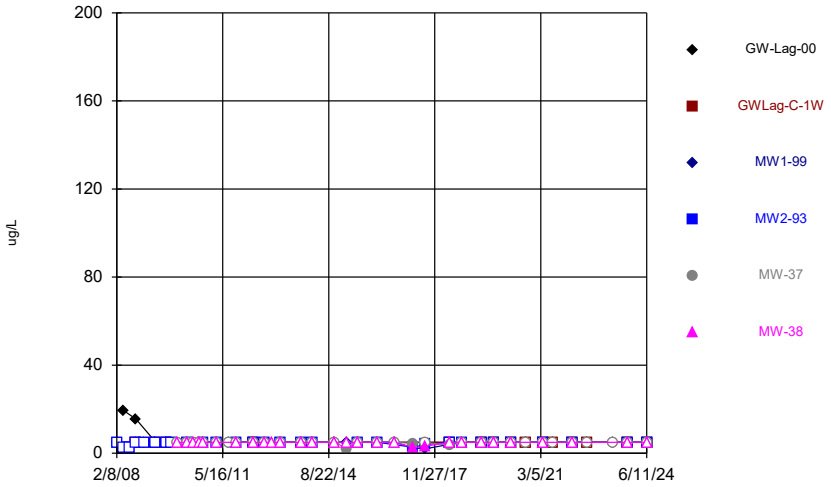
Time Series



Constituent: 4-Methyl-2-Pentanone Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

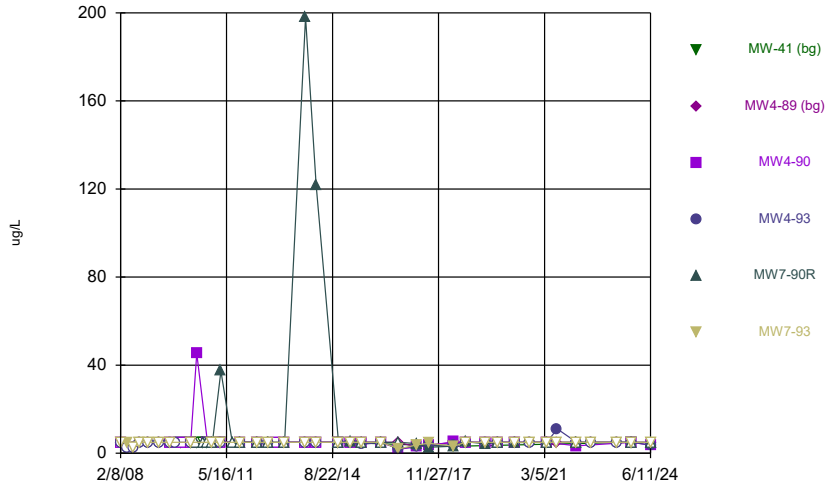
Time Series



Constituent: Acetone Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

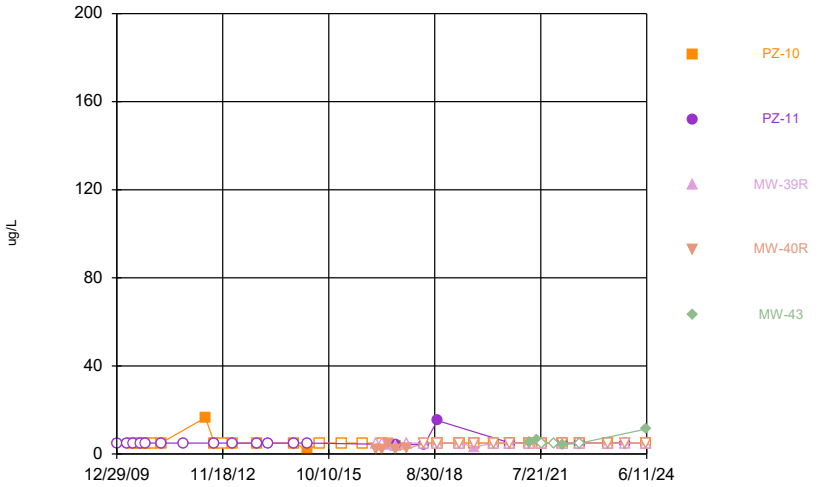
Time Series



Constituent: Acetone Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

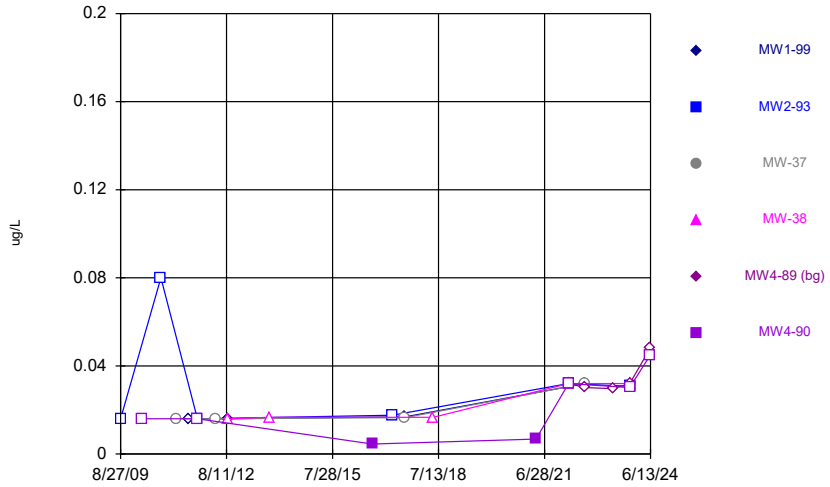
Time Series



Constituent: Acetone Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

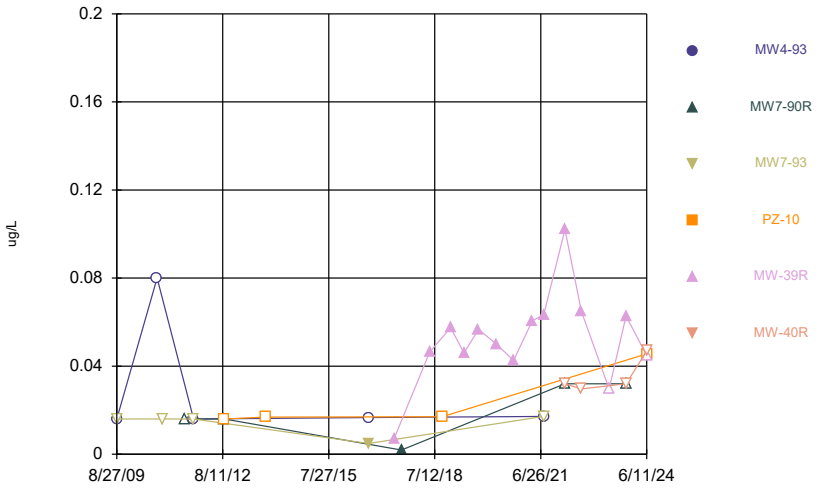
Time Series



Constituent: alpha-BHC Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

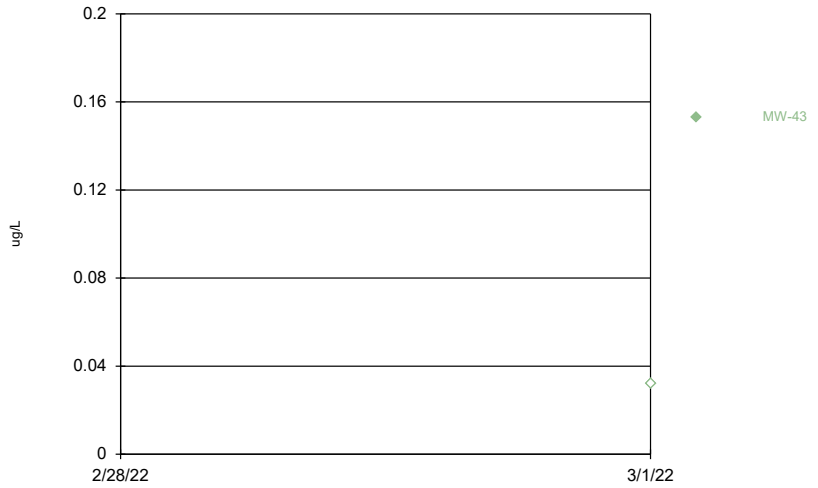
Time Series



Constituent: alpha-BHC Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

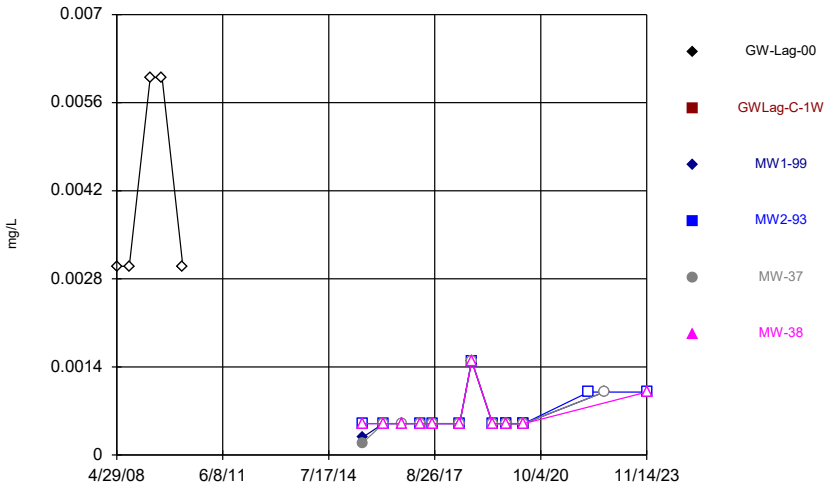
Time Series



Constituent: alpha-BHC Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

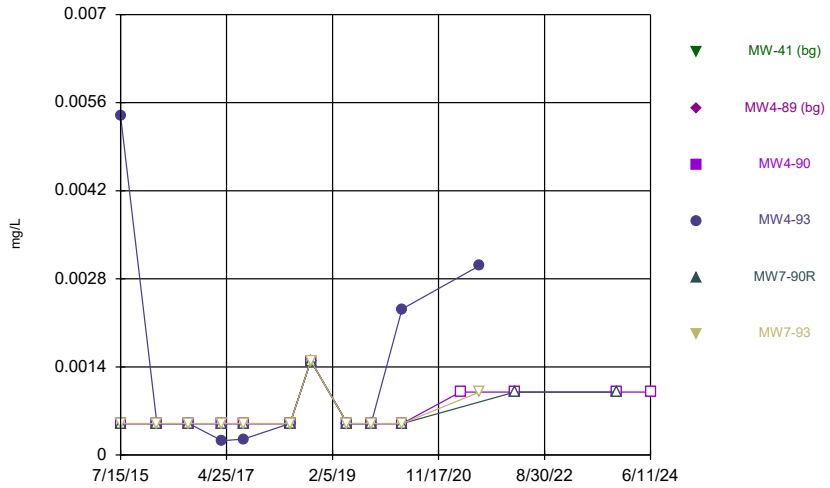
Time Series



Constituent: Antimony Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

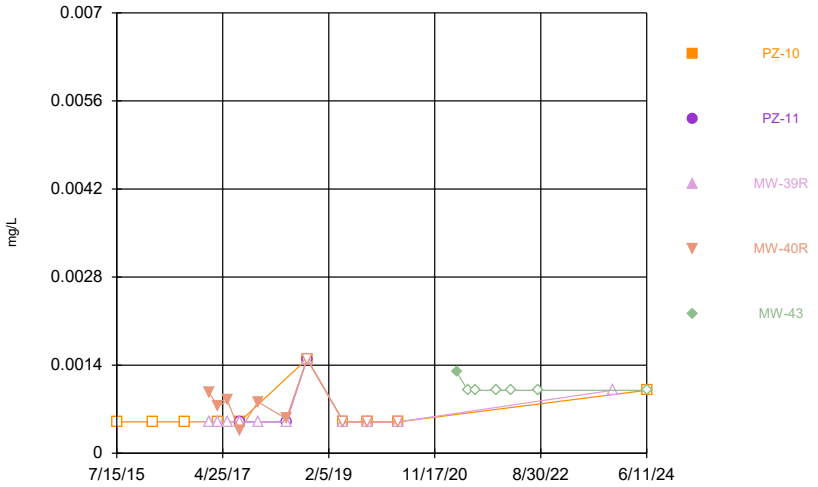
Time Series



Constituent: Antimony Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

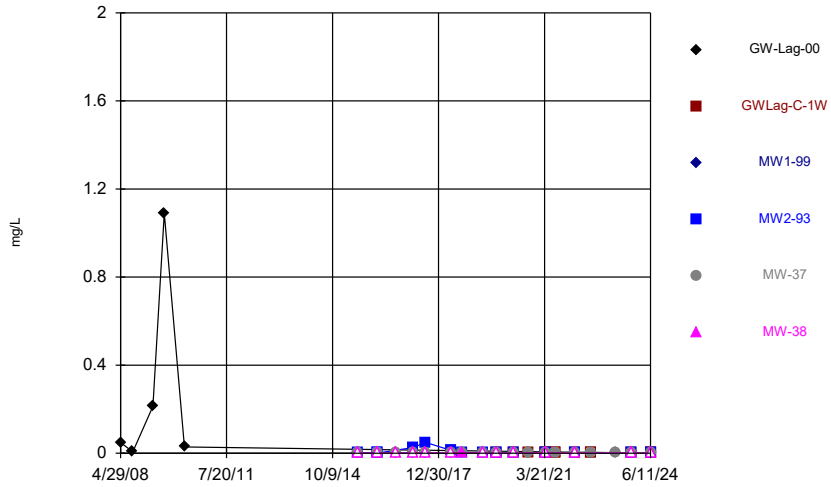
Time Series



Constituent: Antimony Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

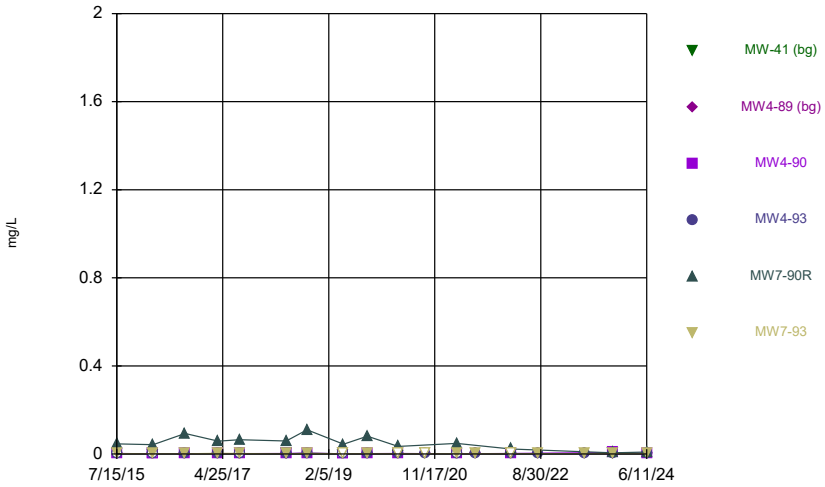
Time Series



Constituent: Arsenic Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

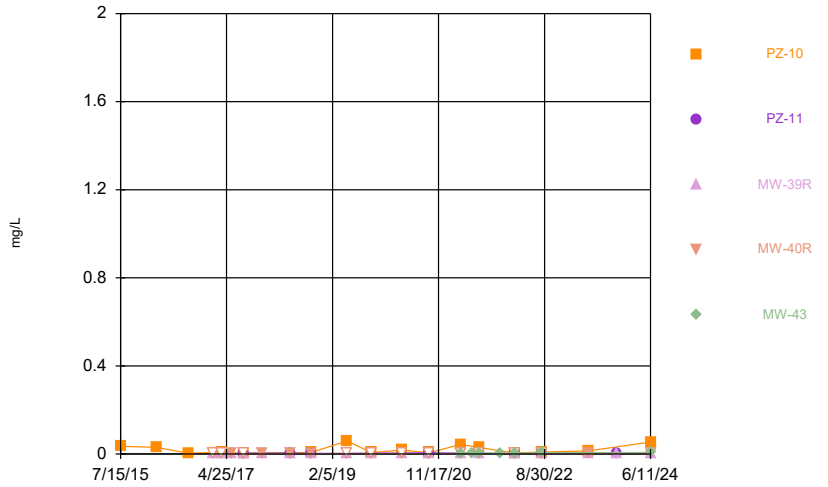
Time Series



Constituent: Arsenic Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

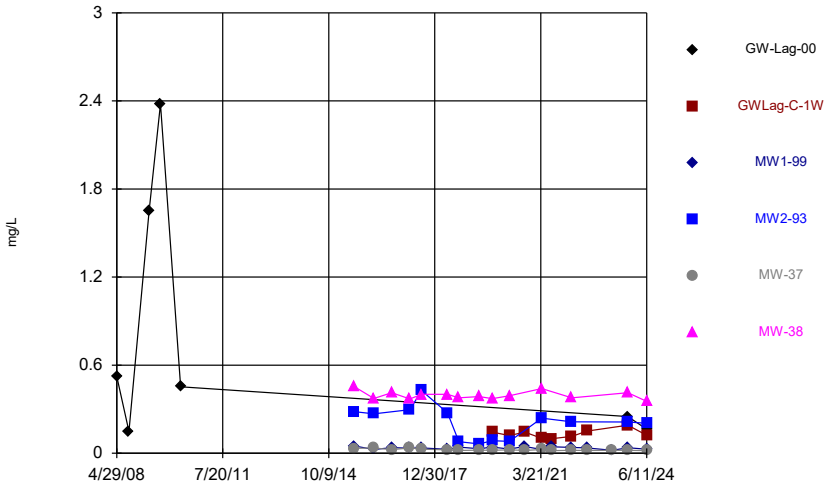
Time Series



Constituent: Arsenic Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

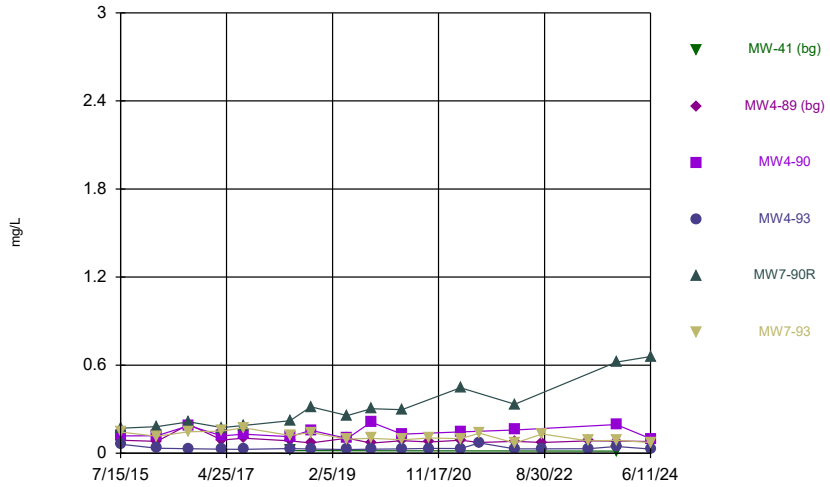
Time Series



Constituent: Barium Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

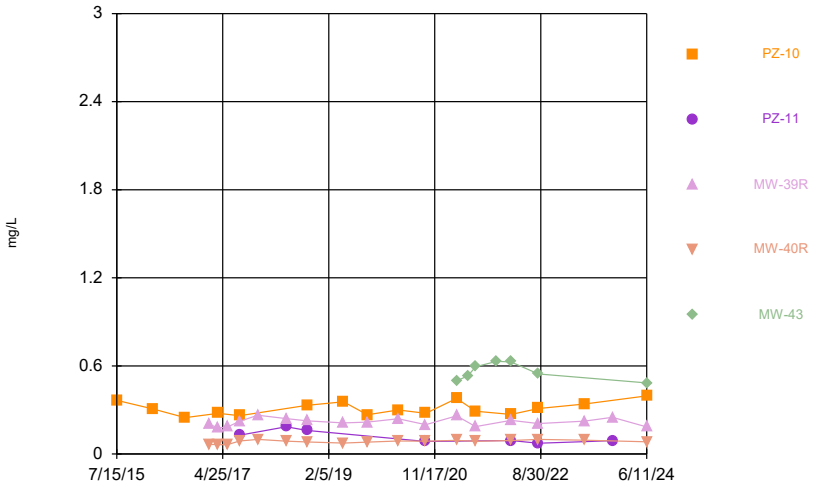
Time Series



Constituent: Barium Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

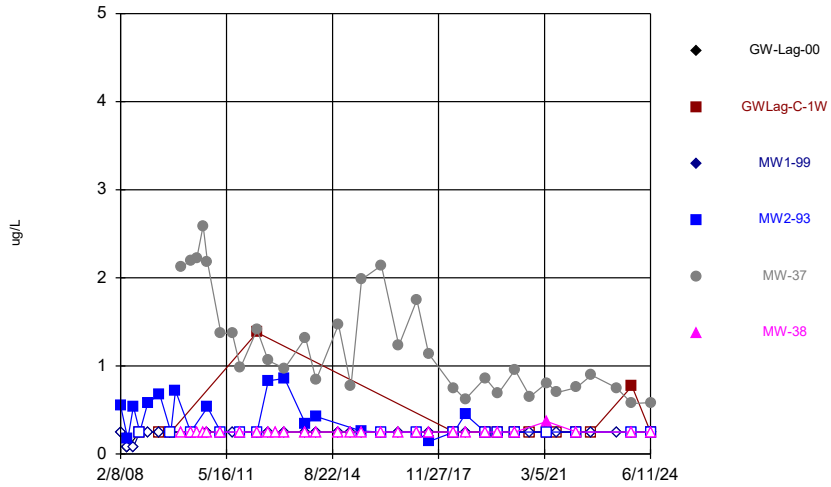
Time Series



Constituent: Barium Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

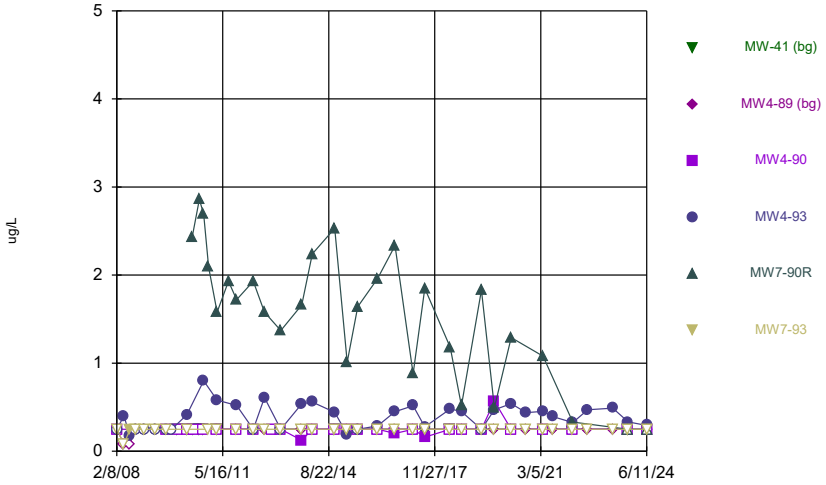
Time Series



Constituent: Benzene Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

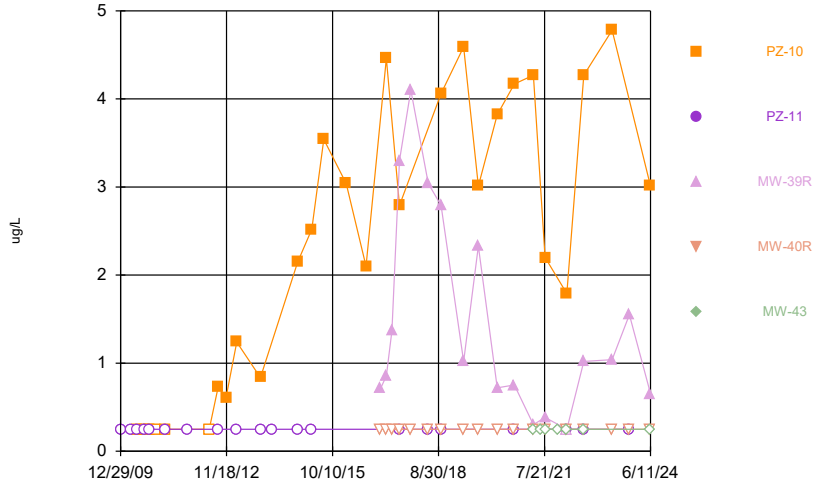
Time Series



Constituent: Benzene Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

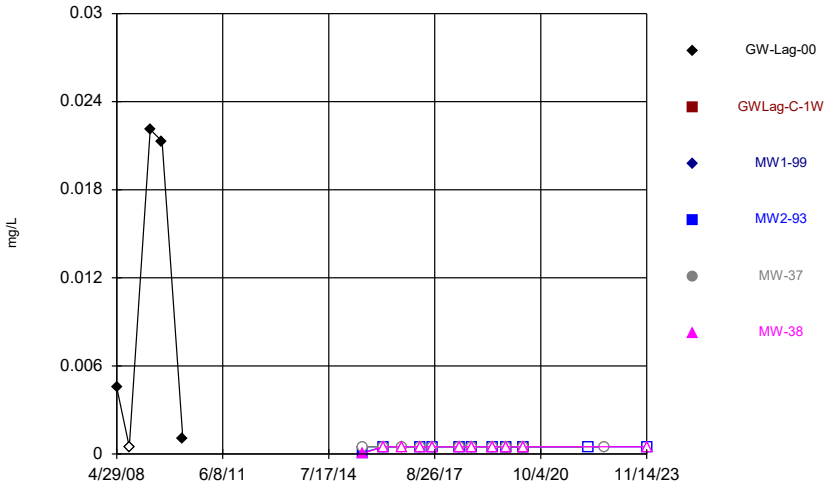
Time Series



Constituent: Benzene Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

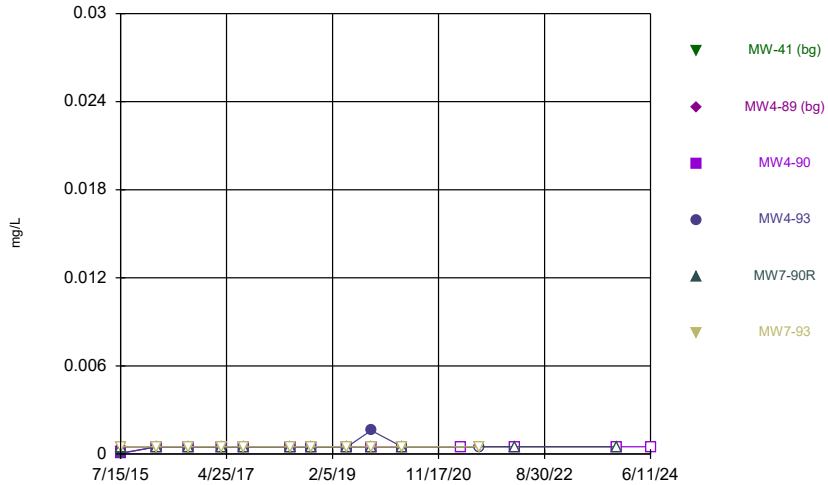
Time Series



Constituent: Beryllium Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

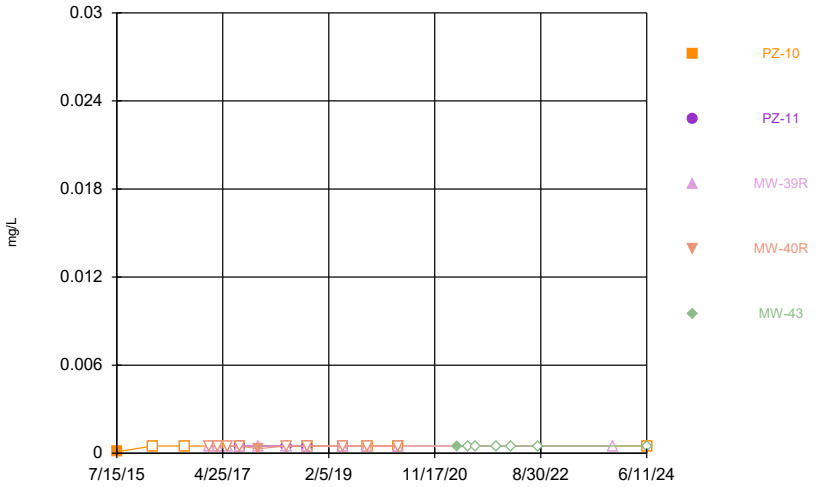
Time Series



Constituent: Beryllium Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

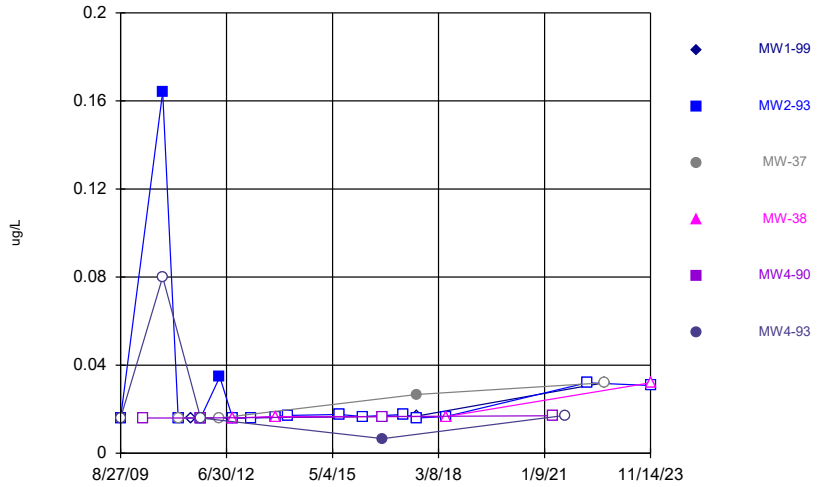
Time Series



Constituent: Beryllium Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

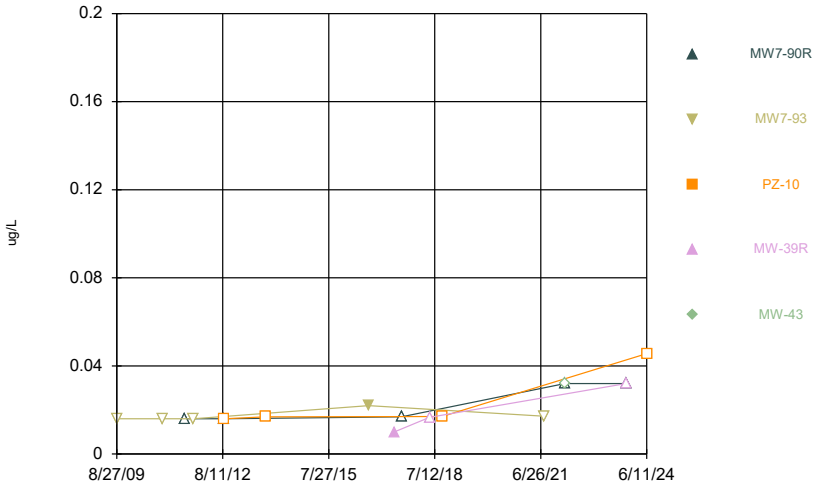
Time Series



Constituent: beta-BHC Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

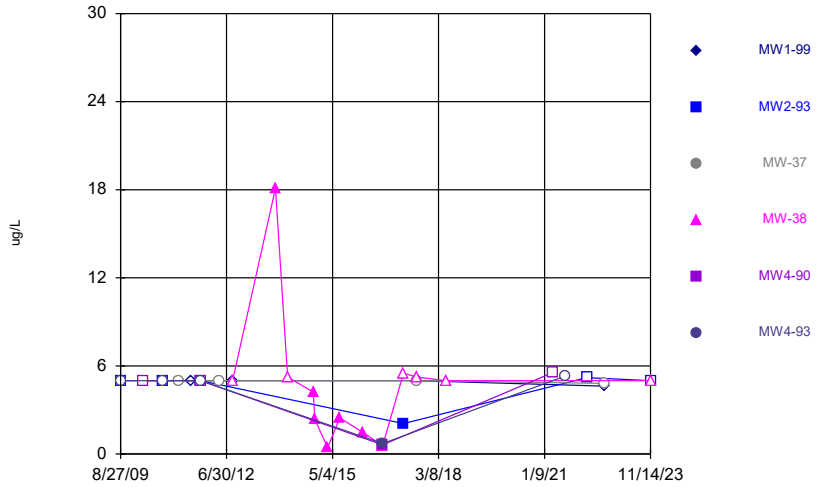
Time Series



Constituent: beta-BHC Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

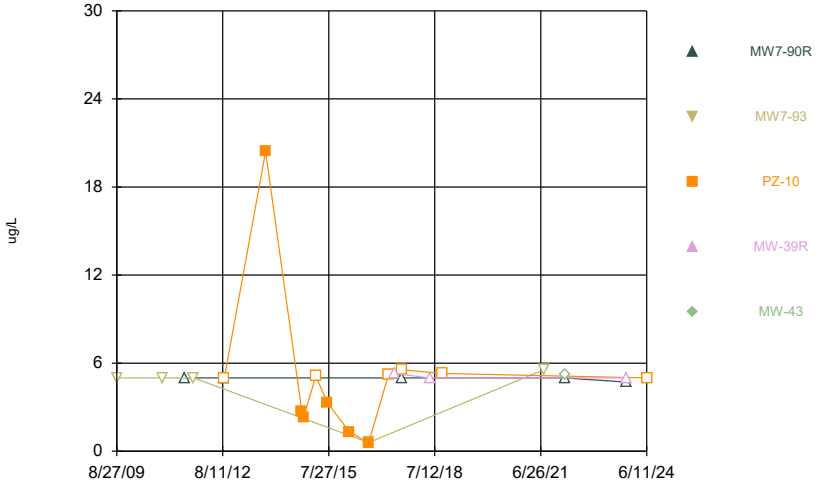
Time Series



Constituent: Bis[2-ethylhexyl]phthalate Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

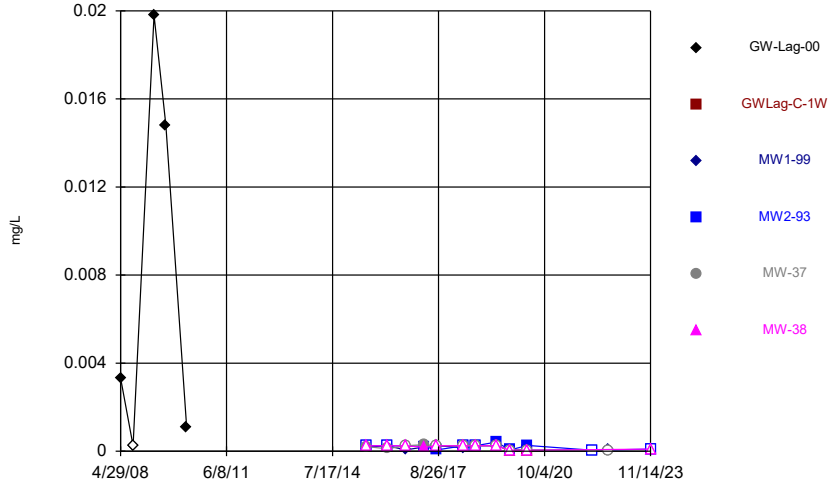
Time Series



Constituent: Bis[2-ethylhexyl]phthalate Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

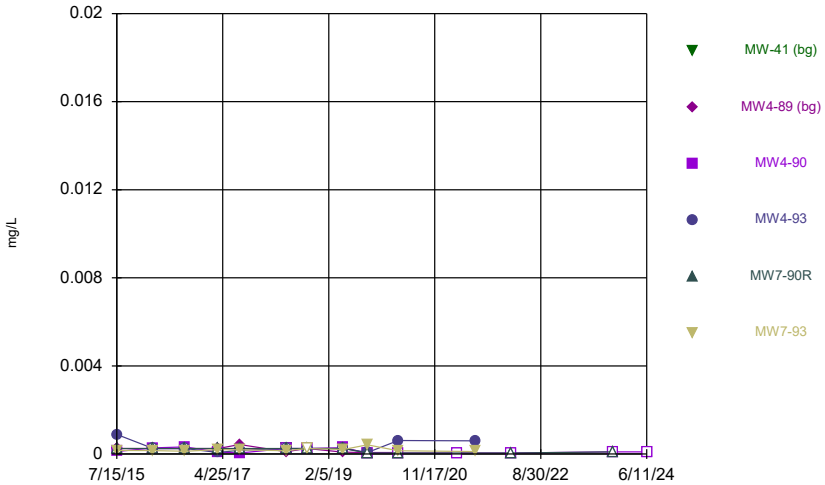
Time Series



Constituent: Cadmium Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

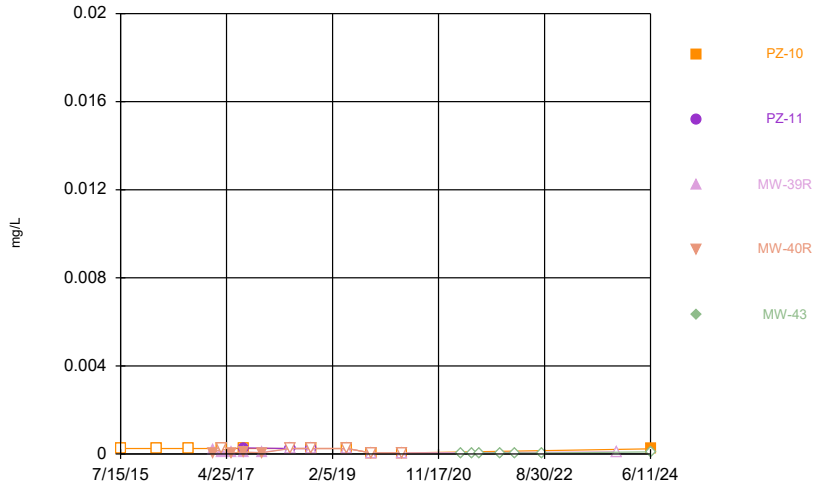
Time Series



Constituent: Cadmium Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

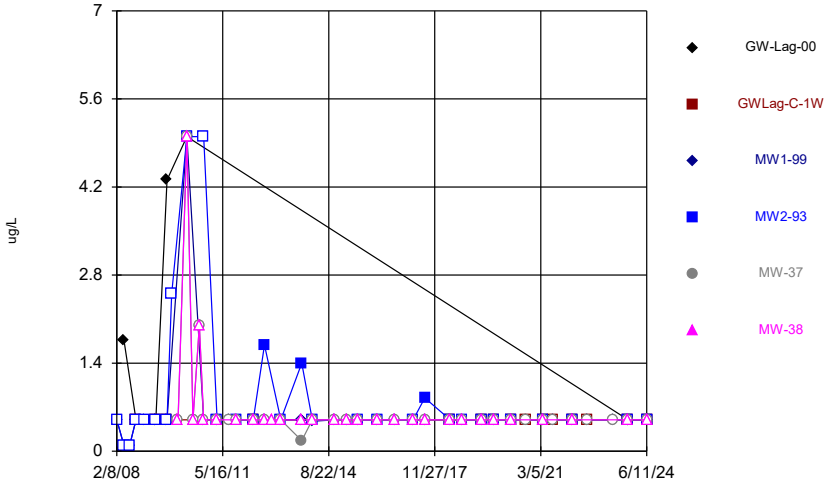
Time Series



Constituent: Cadmium Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

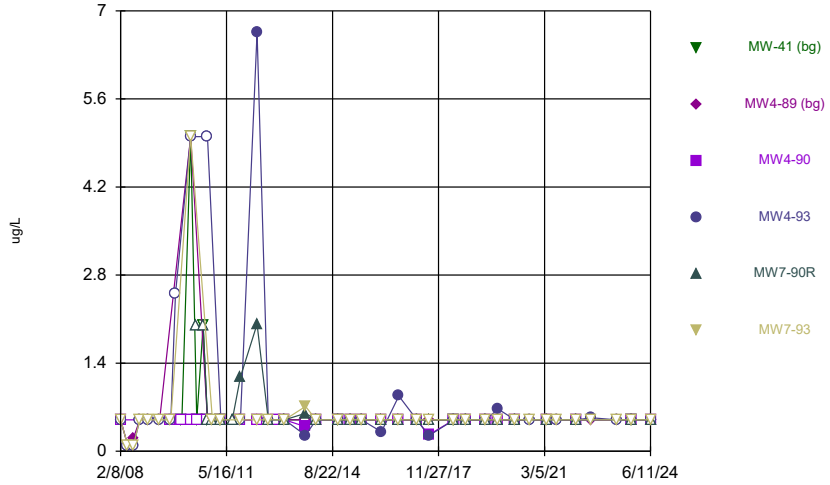
Time Series



Constituent: Carbon Disulfide Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

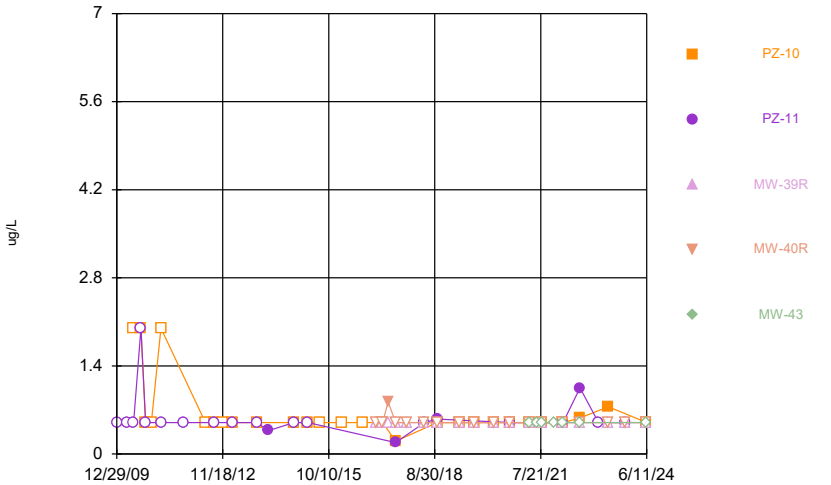
Time Series



Constituent: Carbon Disulfide Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

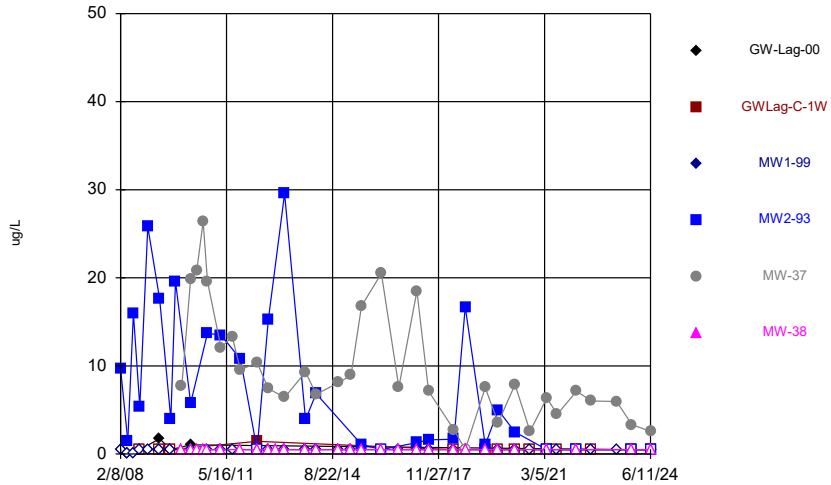
Time Series



Constituent: Carbon Disulfide Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

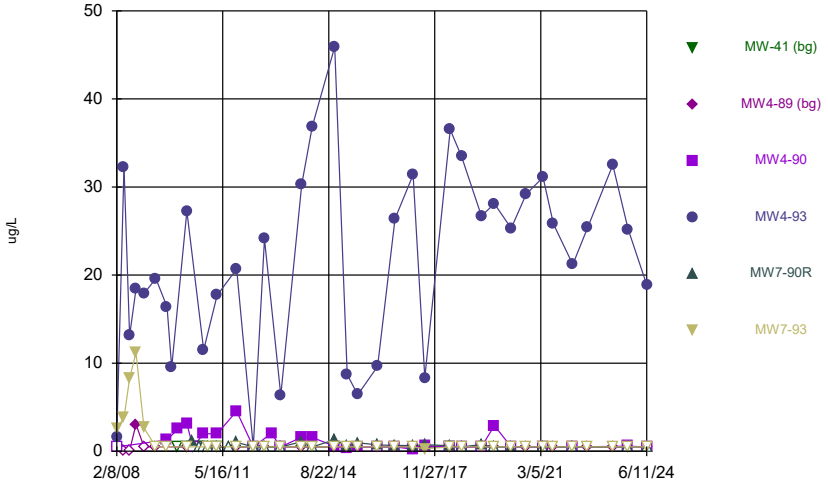
Time Series



Constituent: Chlorobenzene Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

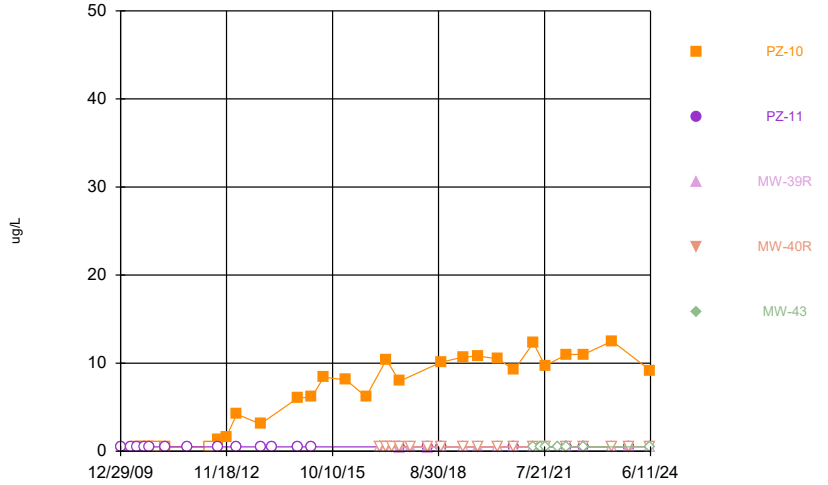
Time Series



Constituent: Chlorobenzene Analysis Run 11/6/2024 11:39 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

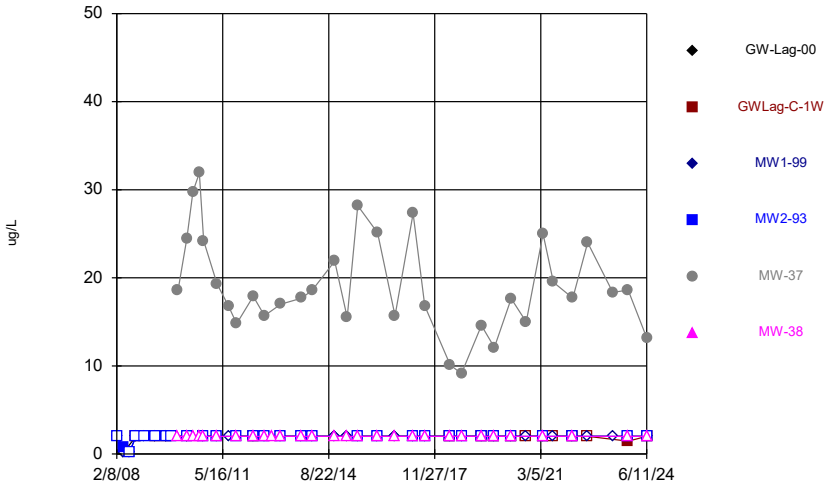
Time Series



Constituent: Chlorobenzene Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

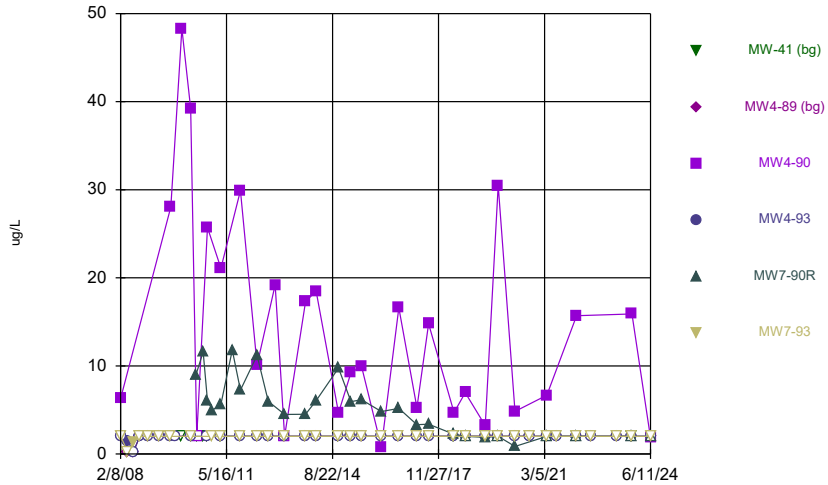
Time Series



Constituent: Chloroethane Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

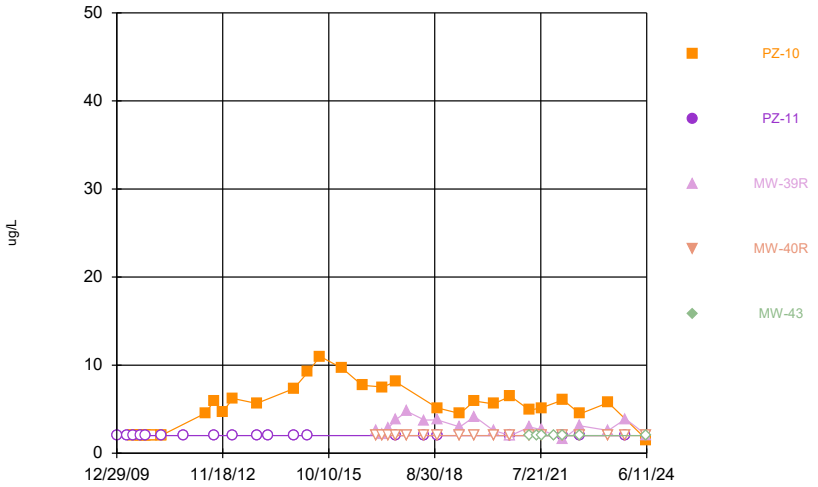
Time Series



Constituent: Chloroethane Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

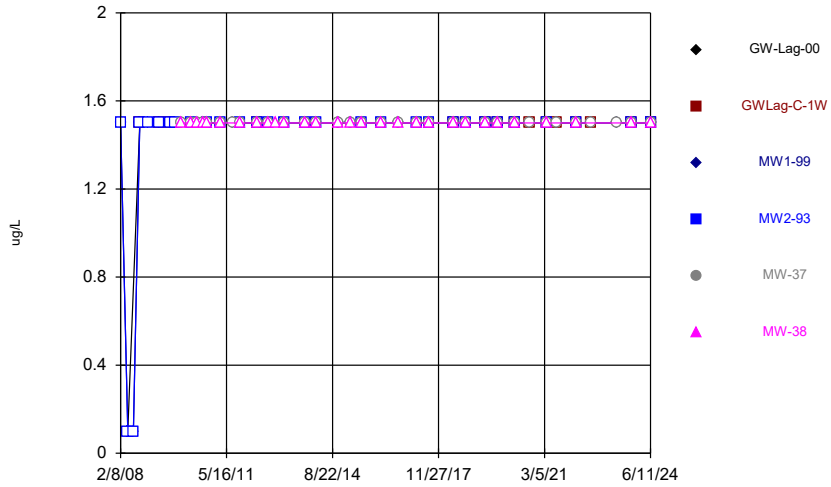
Time Series



Constituent: Chloroethane Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

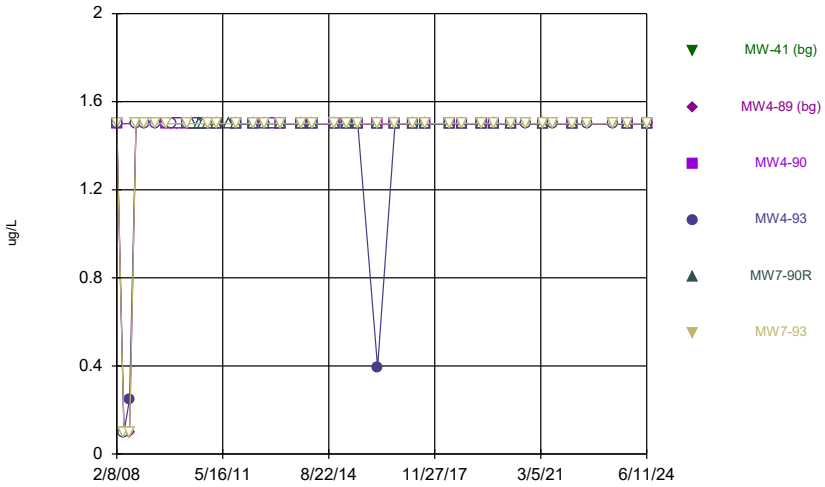
Time Series



Constituent: Chloromethane Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

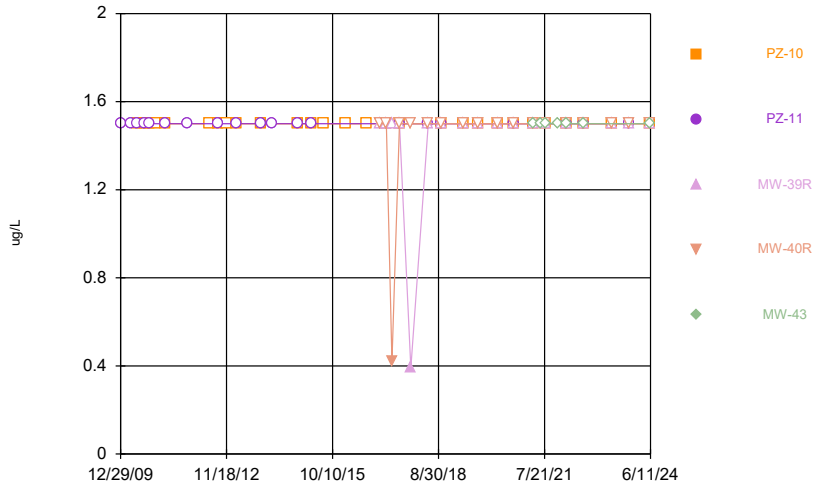
Time Series



Constituent: Chloromethane Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

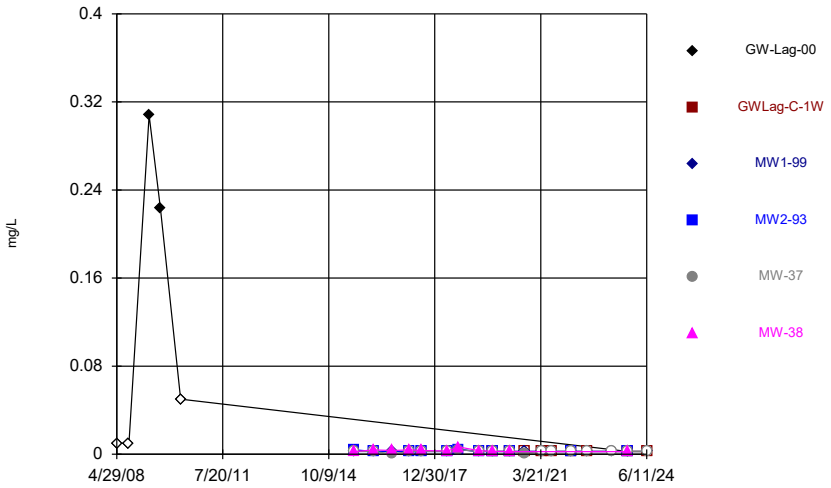
Time Series



Constituent: Chloromethane Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

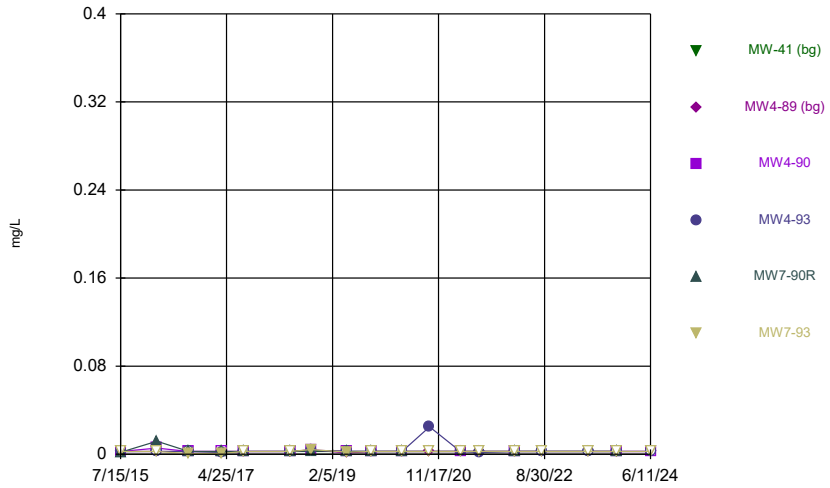
Time Series



Constituent: Chromium Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

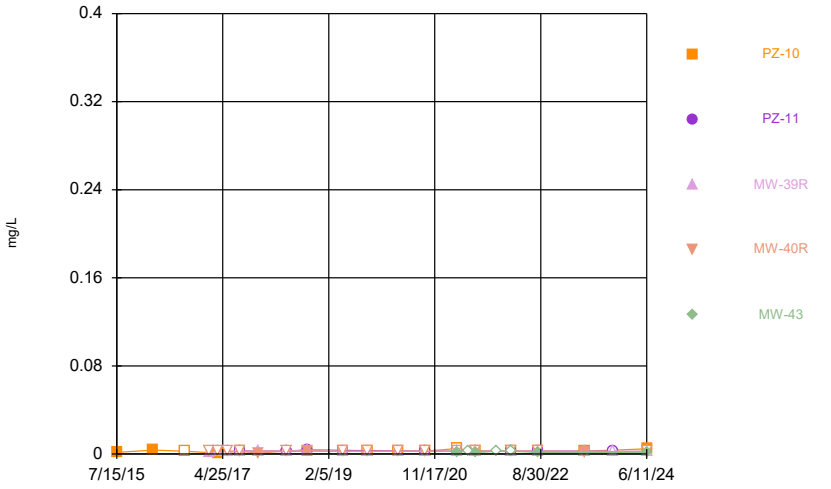
Time Series



Constituent: Chromium Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

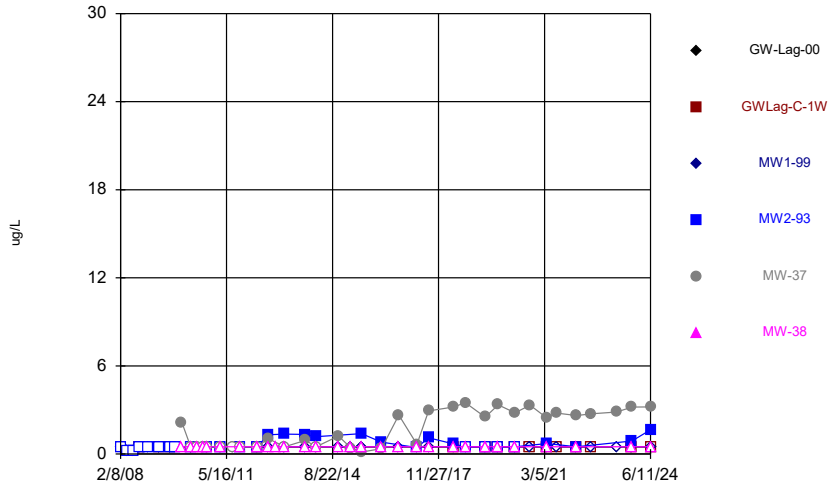
Time Series



Constituent: Chromium Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

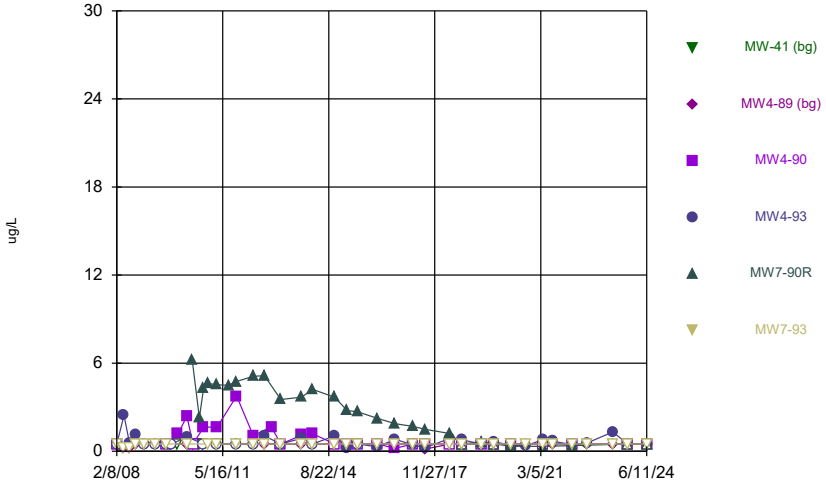
Time Series



Constituent: cis-1,2-Dichloroethene Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

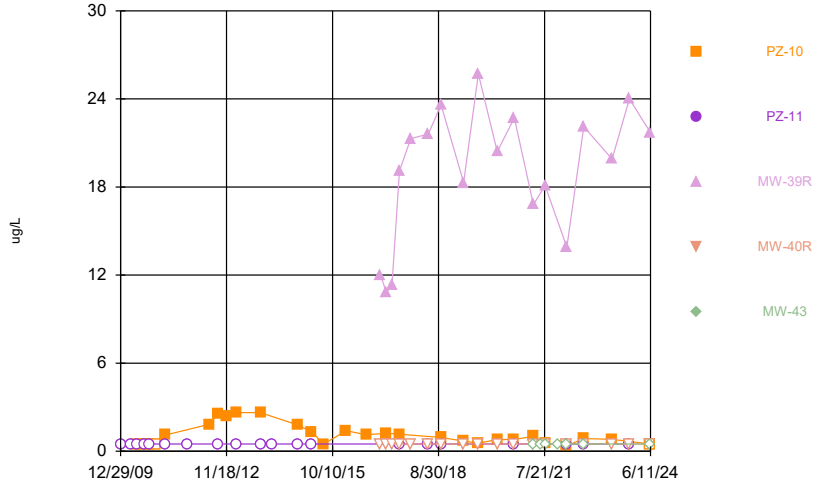
Time Series



Constituent: cis-1,2-Dichloroethene Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

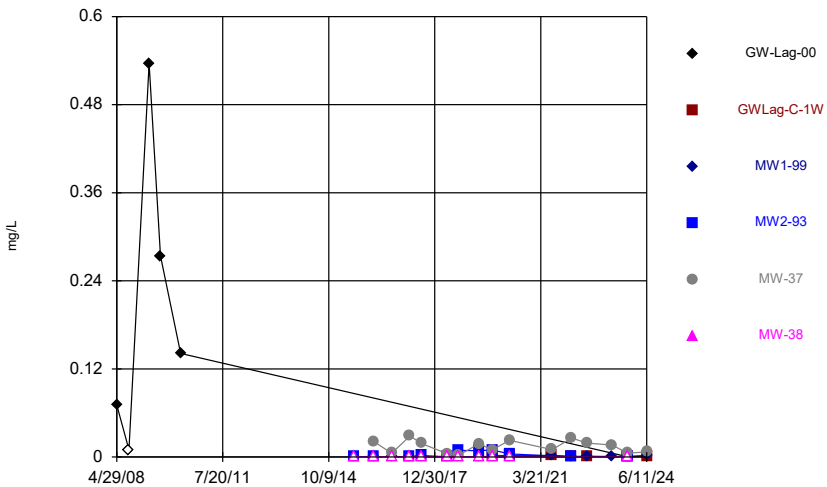
Time Series



Constituent: cis-1,2-Dichloroethene Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

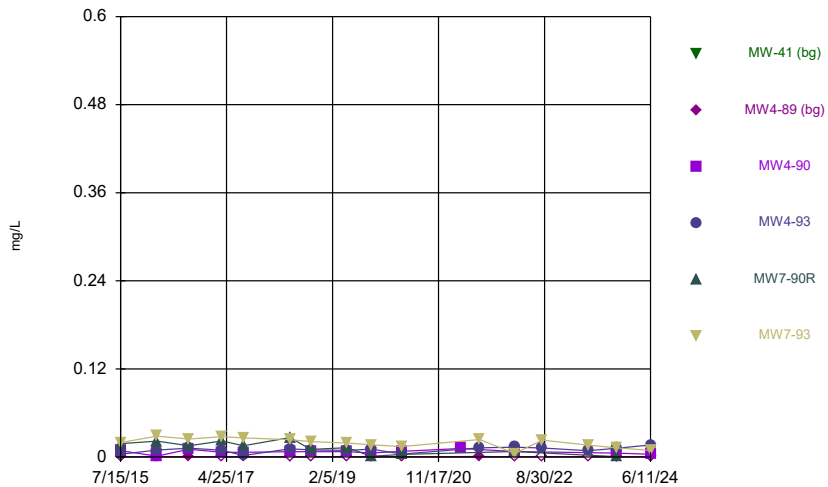
Time Series



Constituent: Cobalt Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

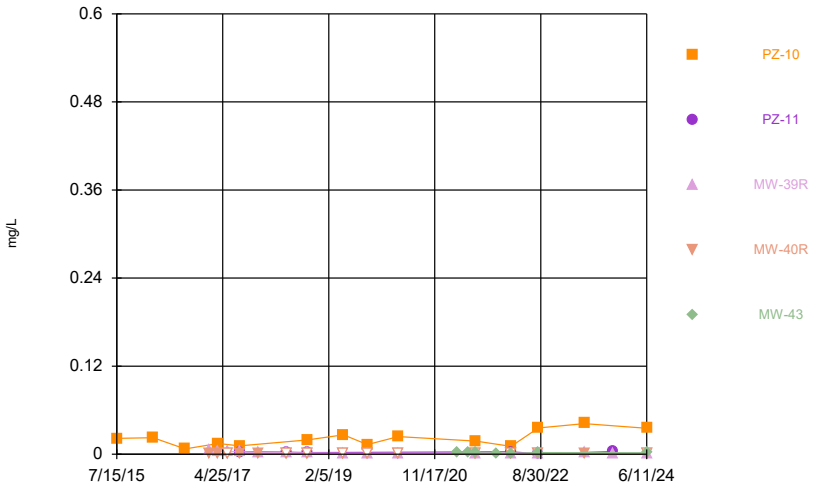
Time Series



Constituent: Cobalt Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

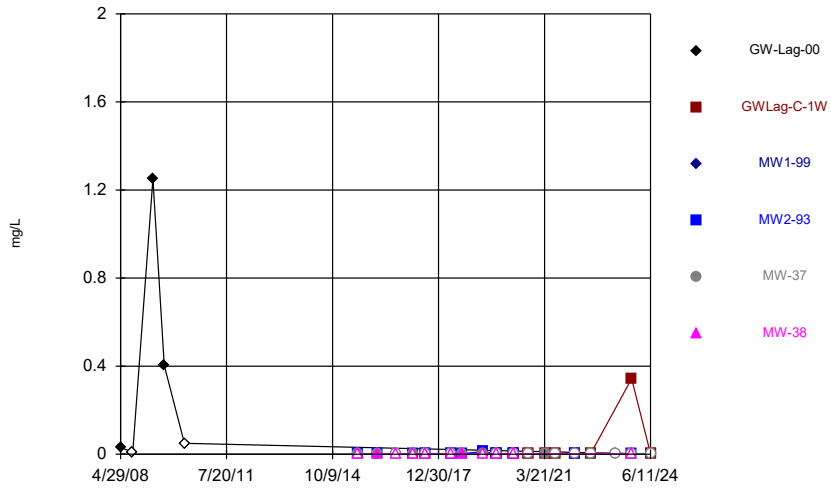
Time Series



Constituent: Cobalt Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

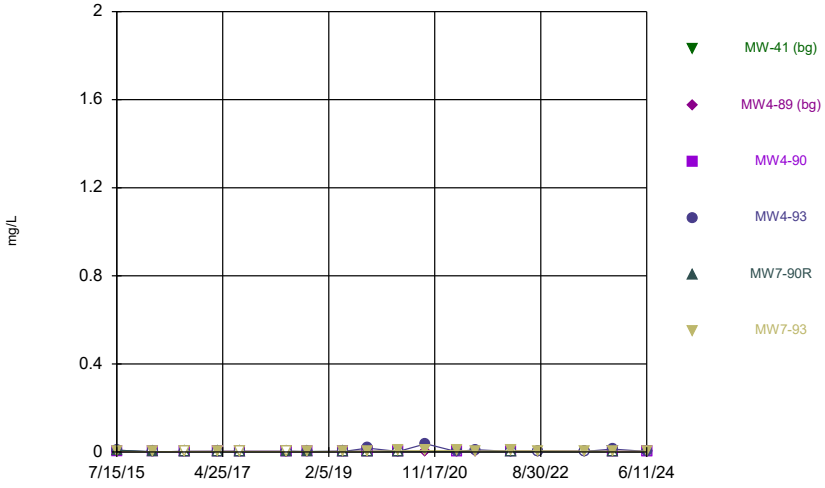
Time Series



Constituent: Copper Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

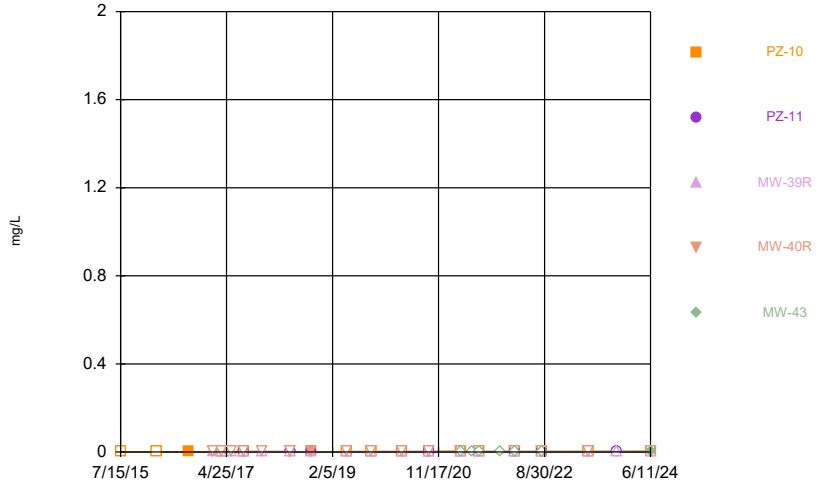
Time Series



Constituent: Copper Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

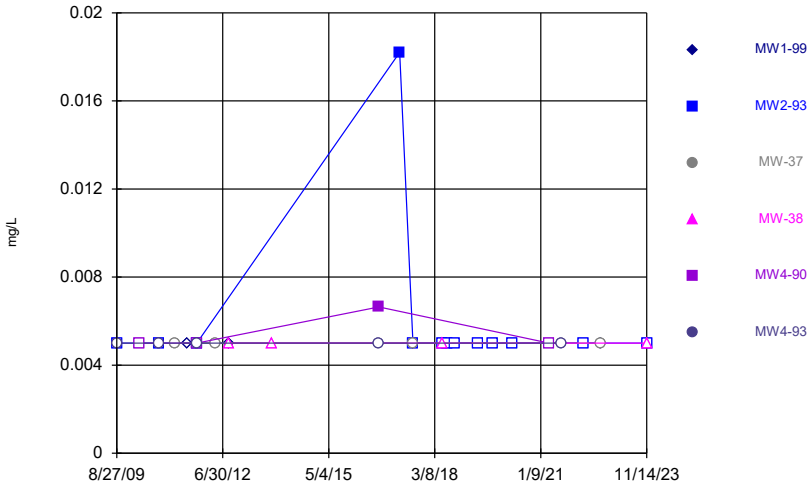
Time Series



Constituent: Copper Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

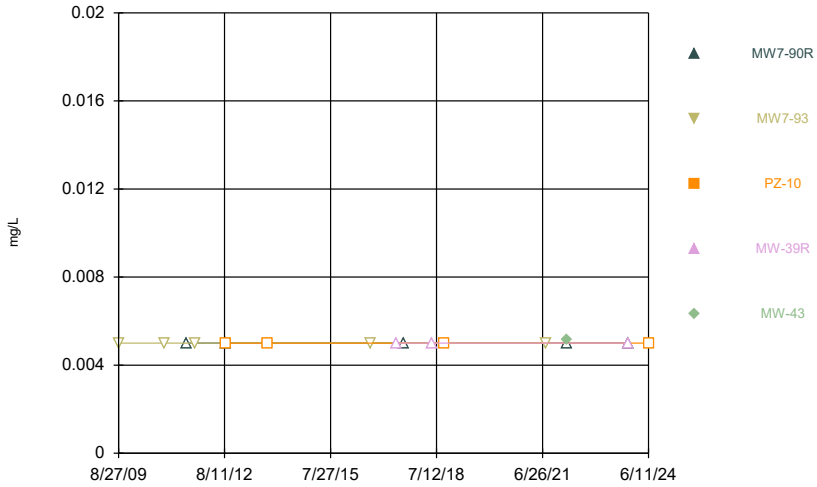
Time Series



Constituent: Cyanide Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

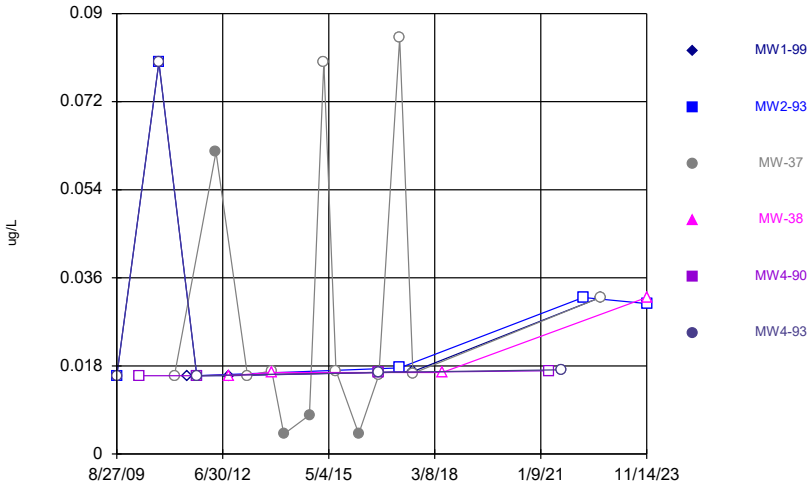
Time Series



Constituent: Cyanide Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

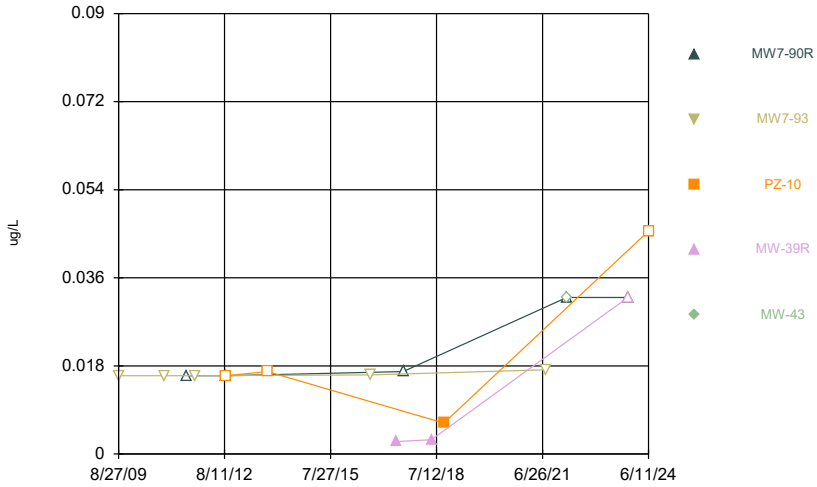
Time Series



Constituent: delta-BHC Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

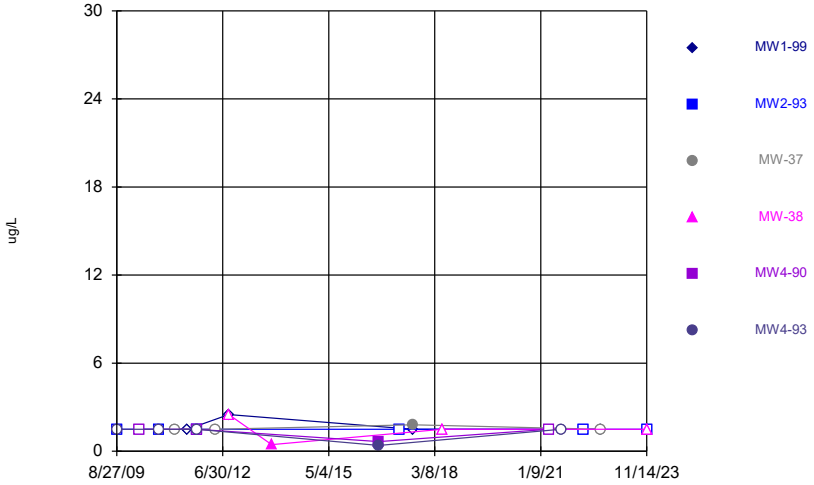
Time Series



Constituent: delta-BHC Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

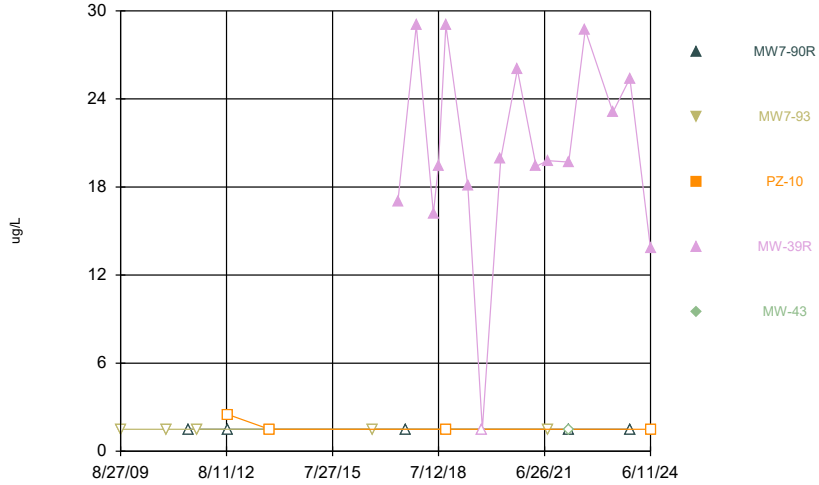
Time Series



Constituent: Dichlorodifluoromethane Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

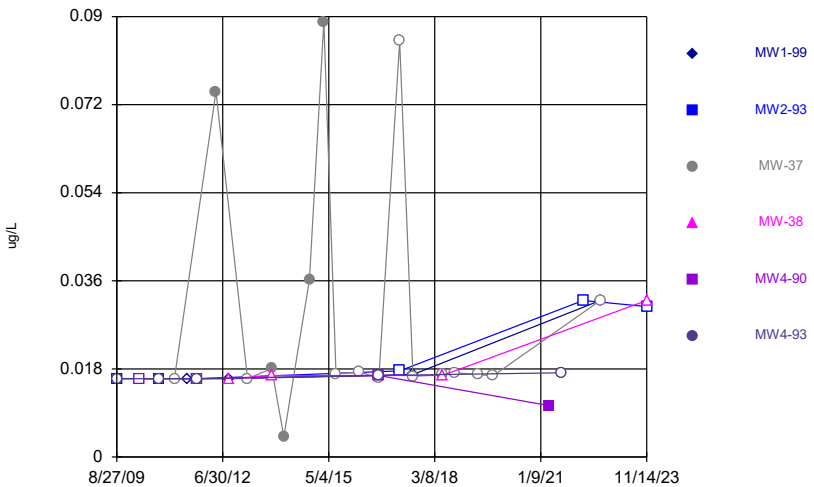
Time Series



Constituent: Dichlorodifluoromethane Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

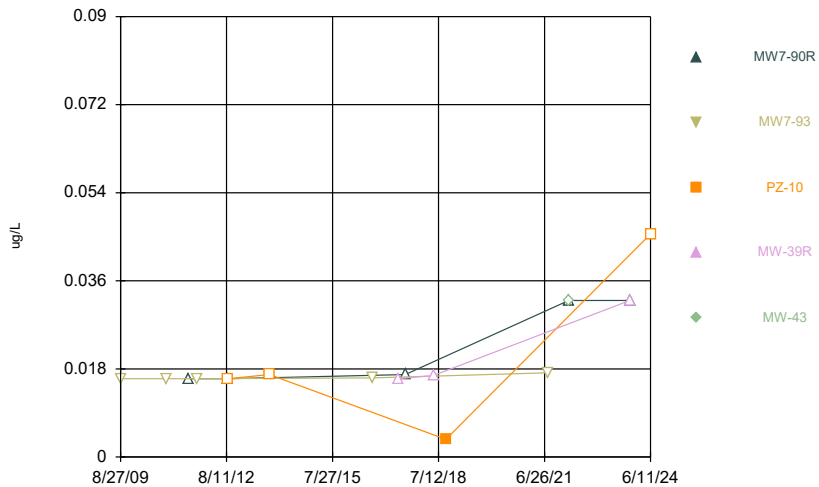
Time Series



Constituent: Endosulfan II Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

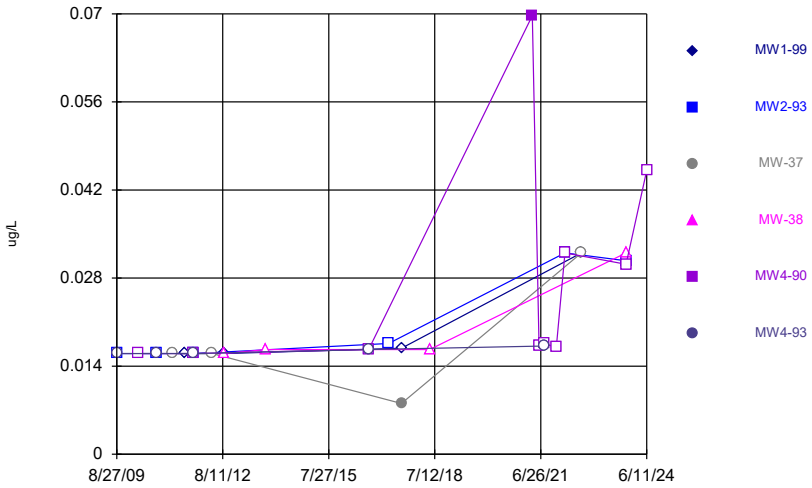
Time Series



Constituent: Endosulfan II Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

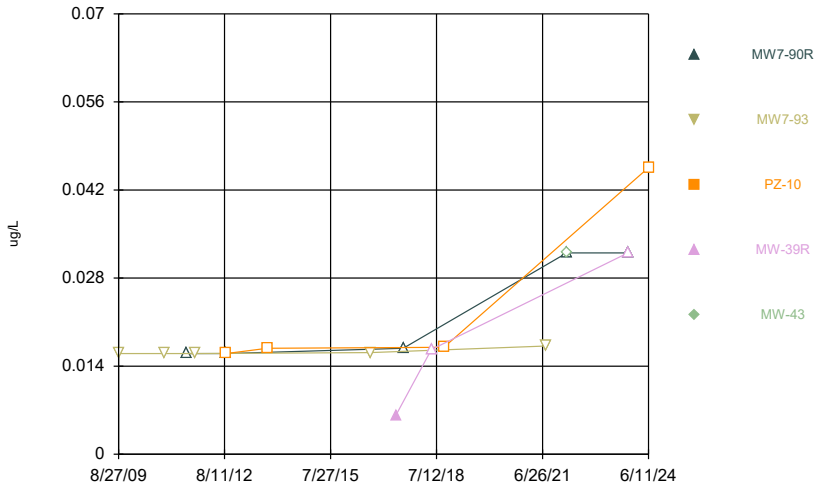
Time Series



Constituent: Endosulfan sulfate Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

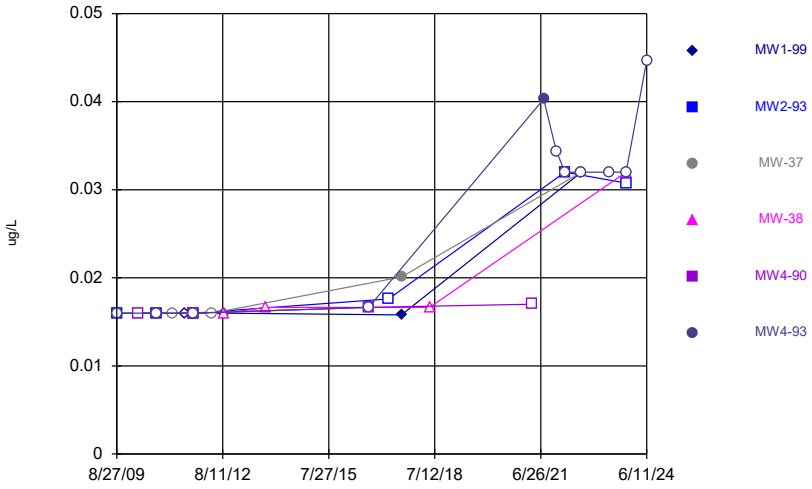
Time Series



Constituent: Endosulfan sulfate Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

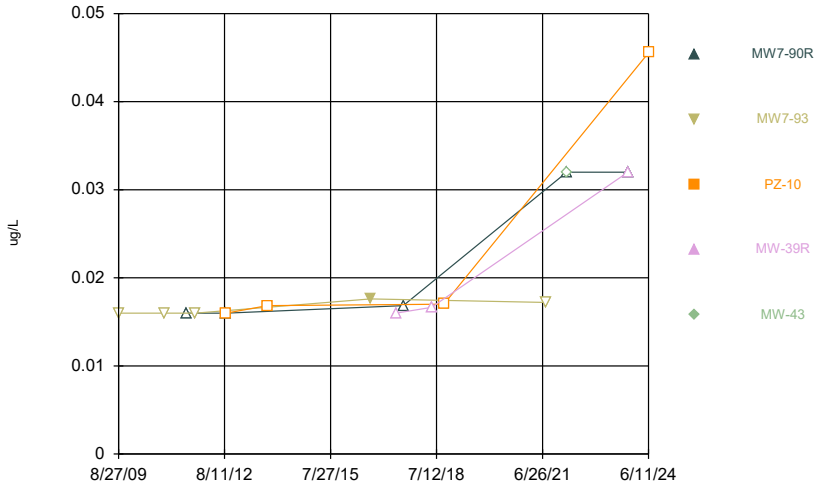
Time Series



Constituent: Endrin aldehyde Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

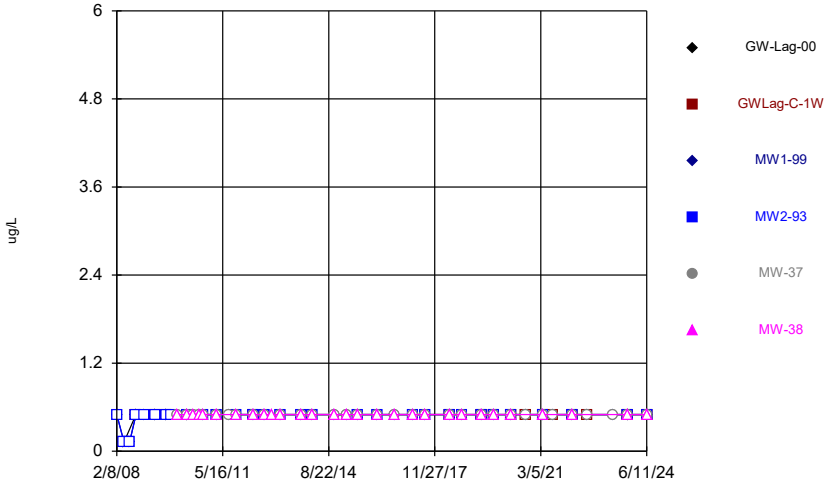
Time Series



Constituent: Endrin aldehyde Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

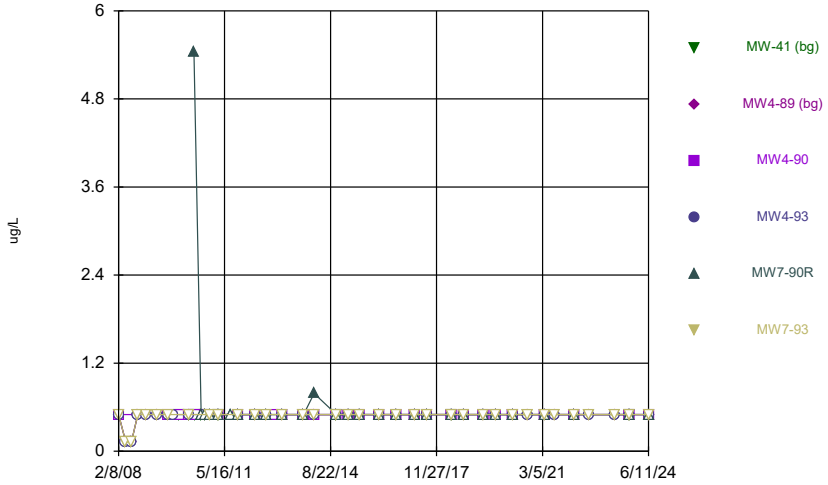
Time Series



Constituent: Ethylbenzene Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

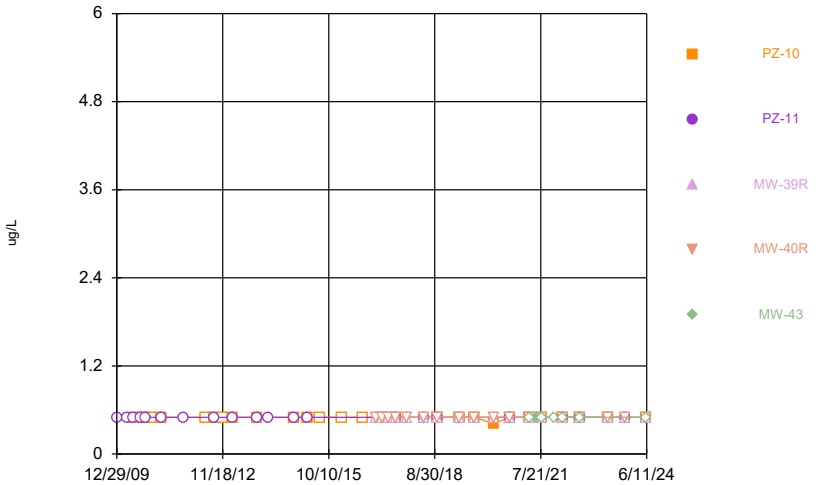
Time Series



Constituent: Ethylbenzene Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

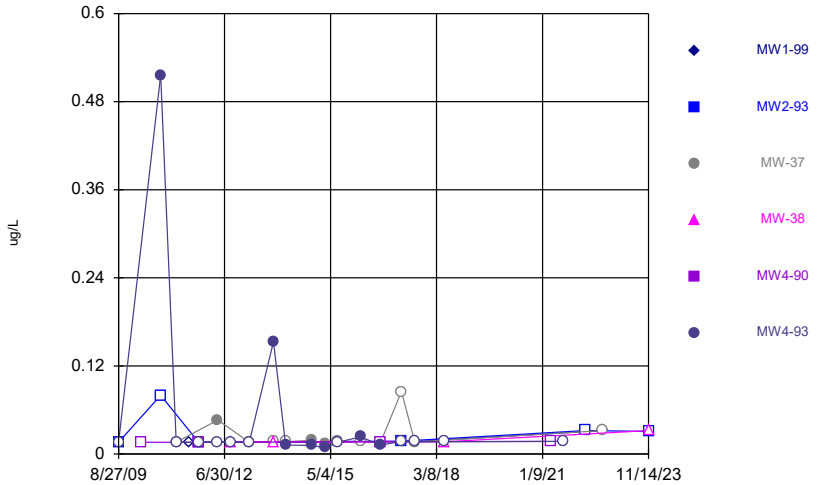
Time Series



Constituent: Ethylbenzene Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

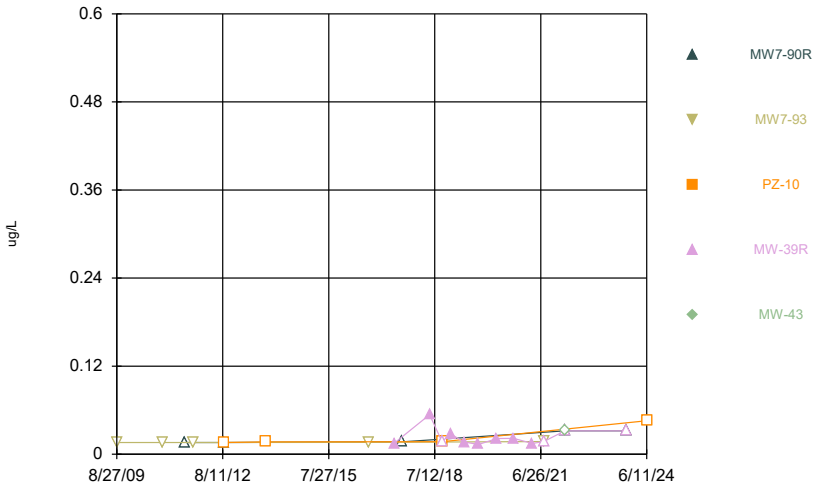
Time Series



Constituent: Heptachlor Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

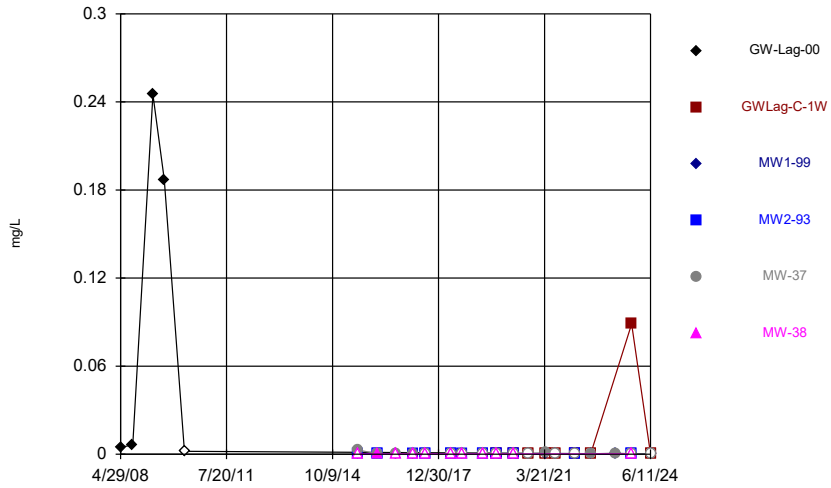
Time Series



Constituent: Heptachlor Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

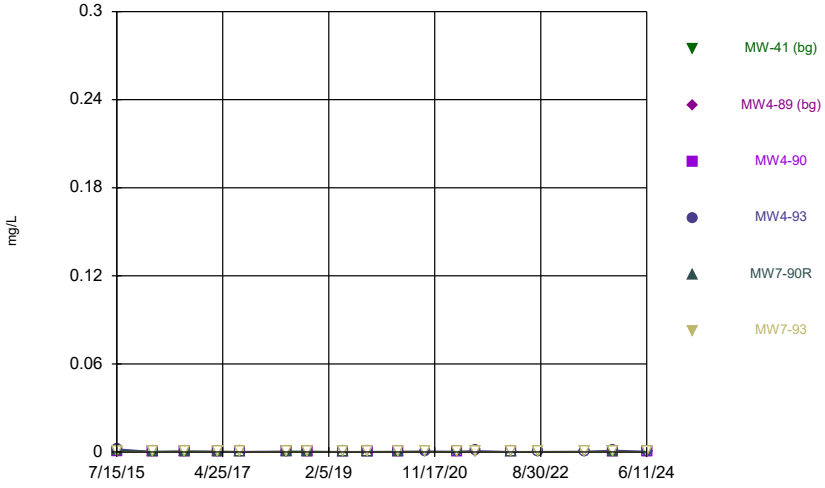
Time Series



Constituent: Lead Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

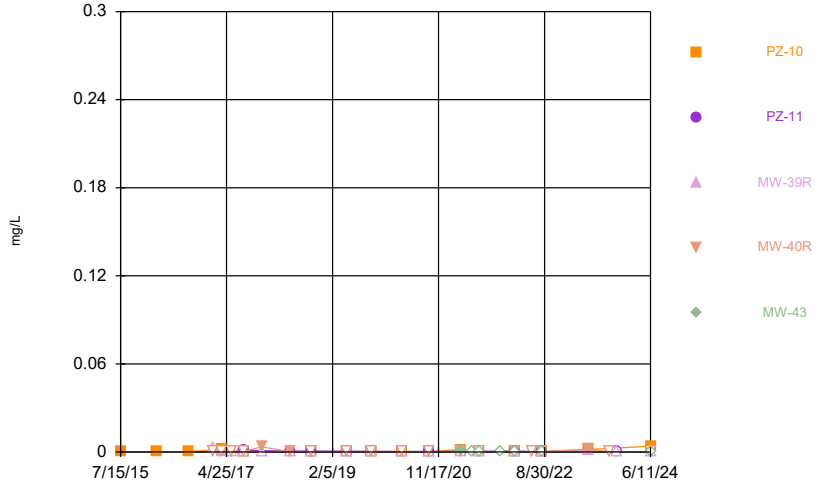
Time Series



Constituent: Lead Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

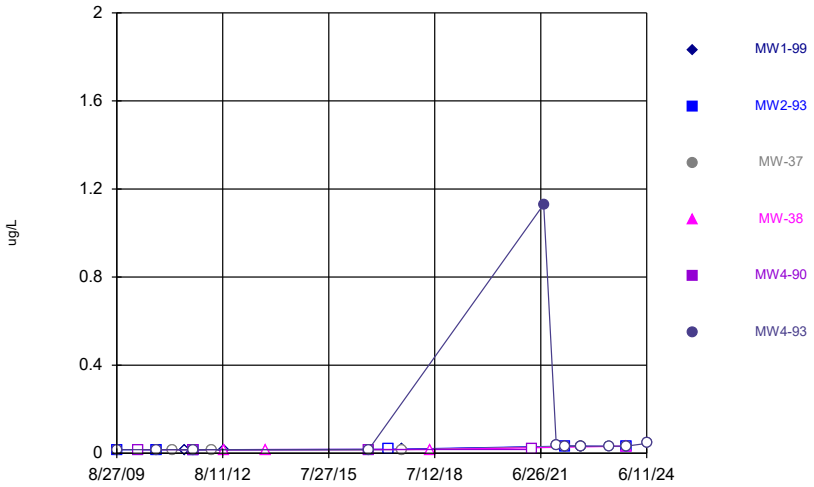
Time Series



Constituent: Lead Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

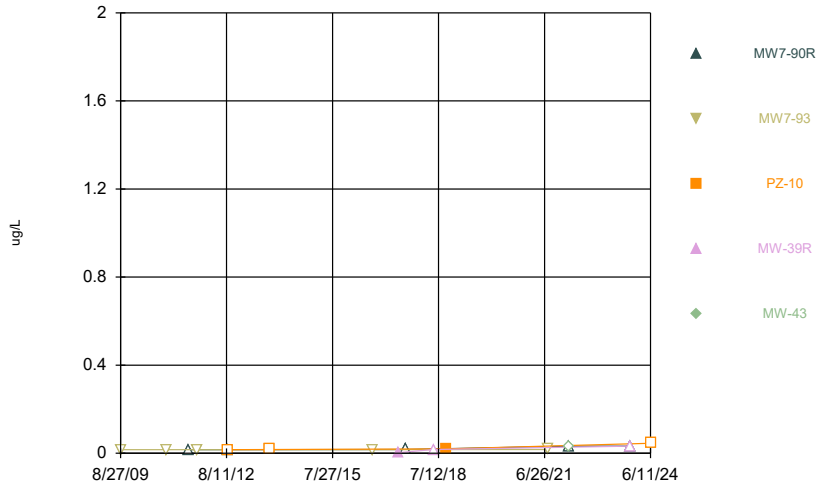
Time Series



Constituent: Methoxychlor Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

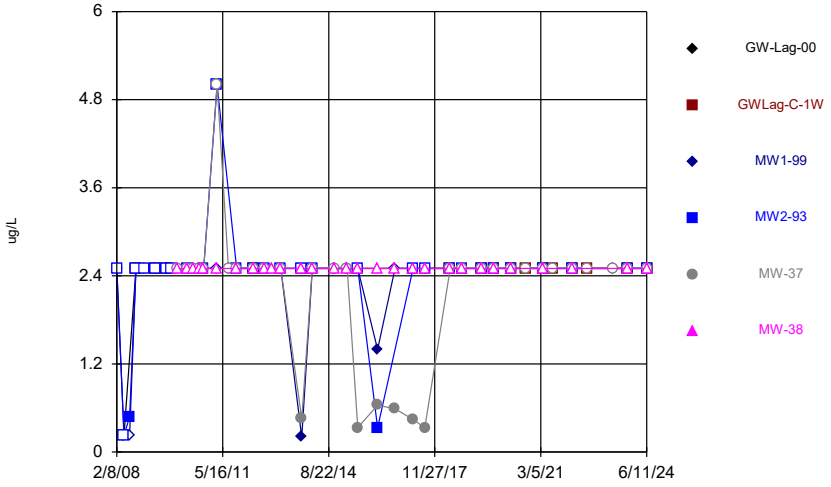
Time Series



Constituent: Methoxychlor Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

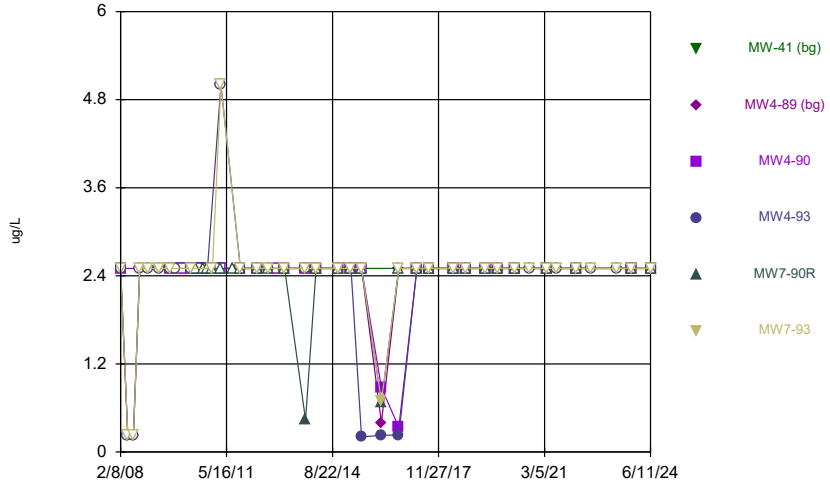
Time Series



Constituent: Methylene Chloride Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

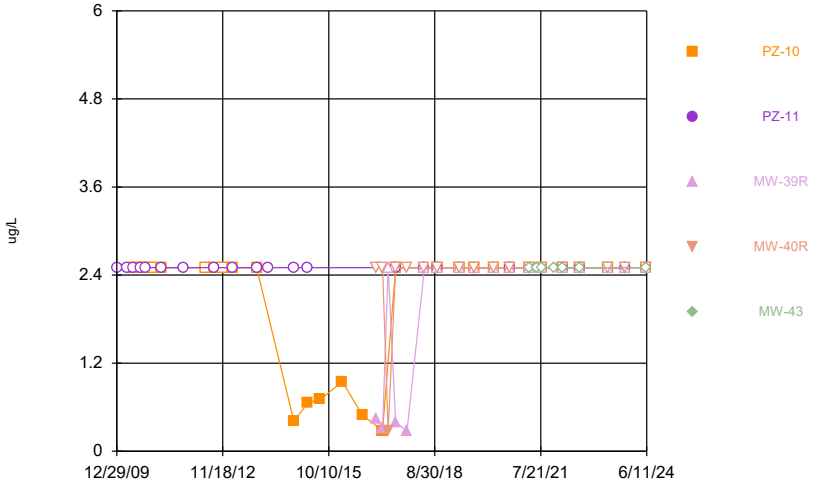
Time Series



Constituent: Methylene Chloride Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

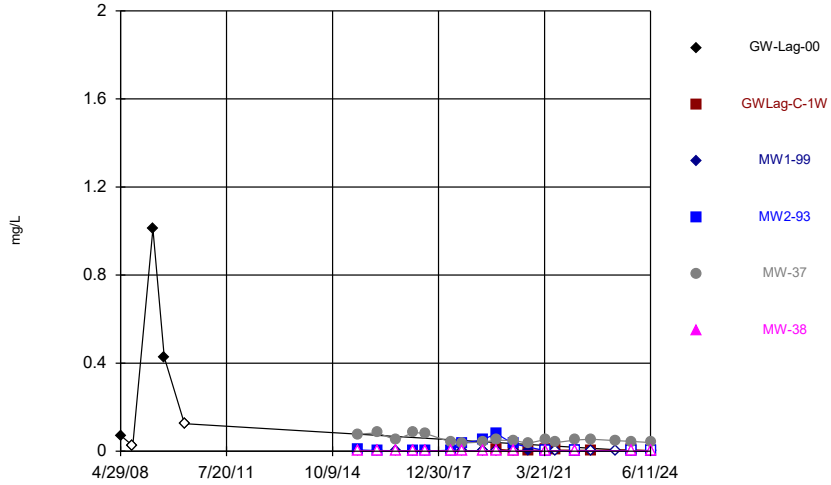
Time Series



Constituent: Methylene Chloride Analysis Run 11/6/2024 11:40 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

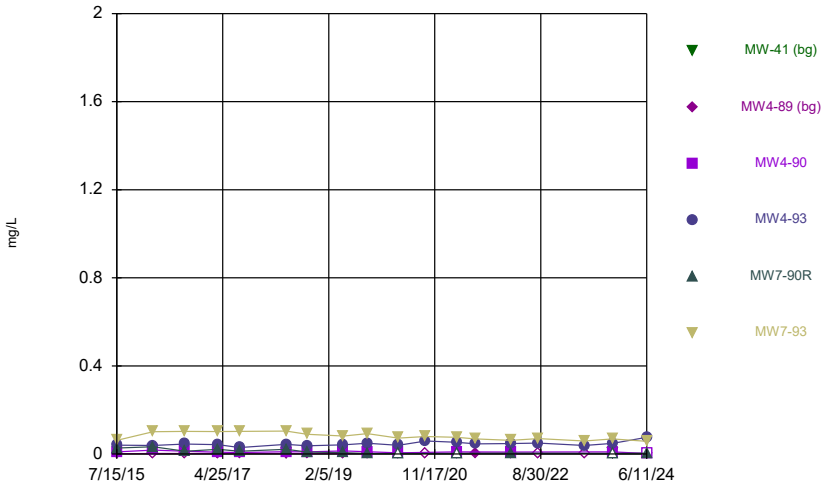
Time Series



Constituent: Nickel Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

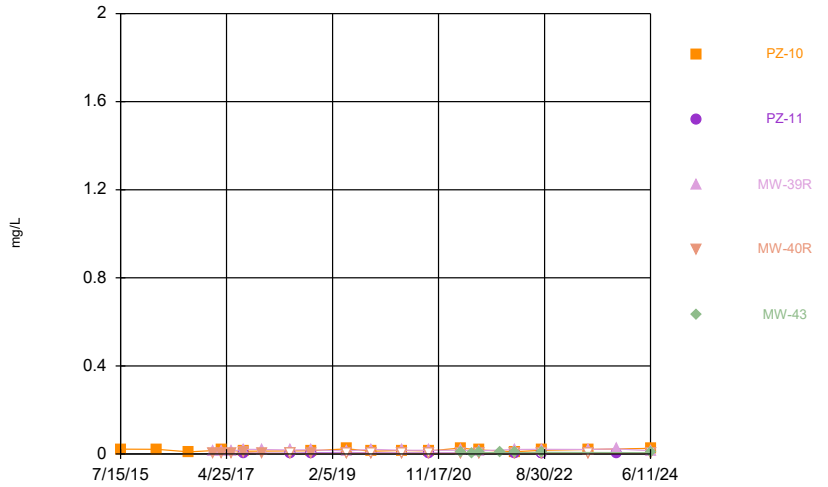
Time Series



Constituent: Nickel Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

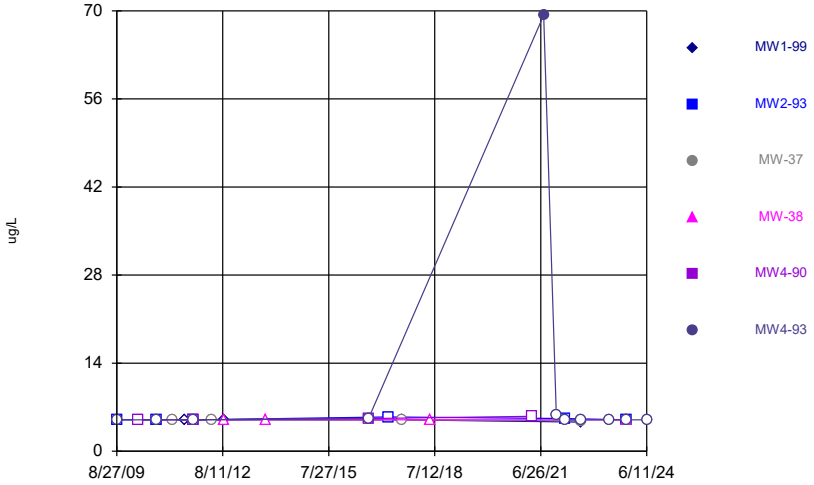
Time Series



Constituent: Nickel Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

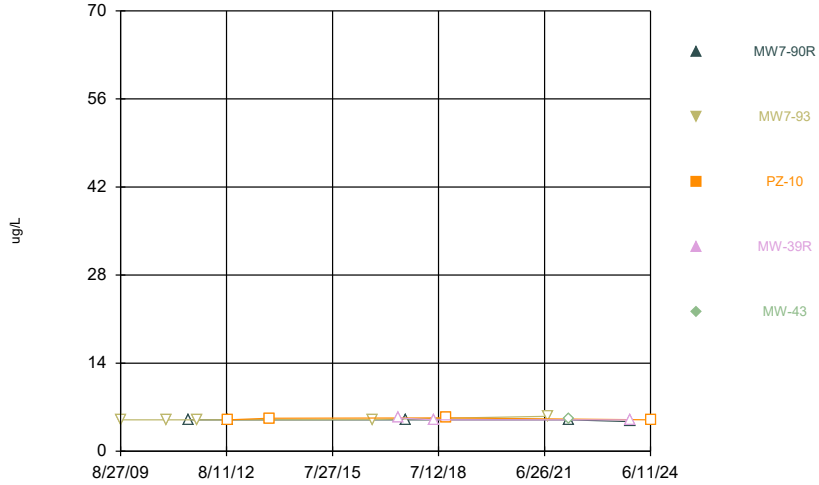
Time Series



Constituent: Phenol Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

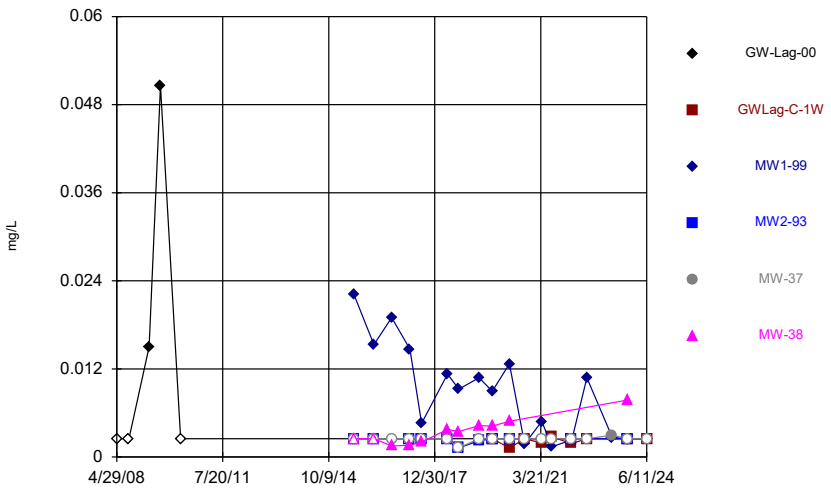
Time Series



Constituent: Phenol Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

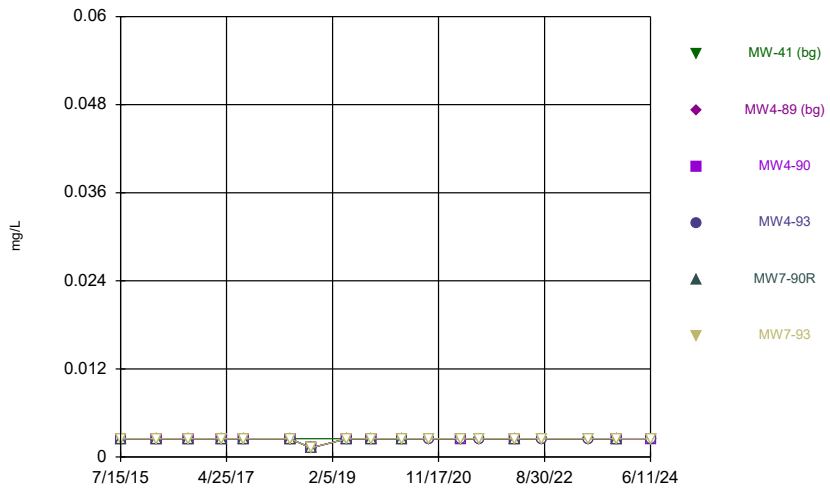
Time Series



Constituent: Selenium Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

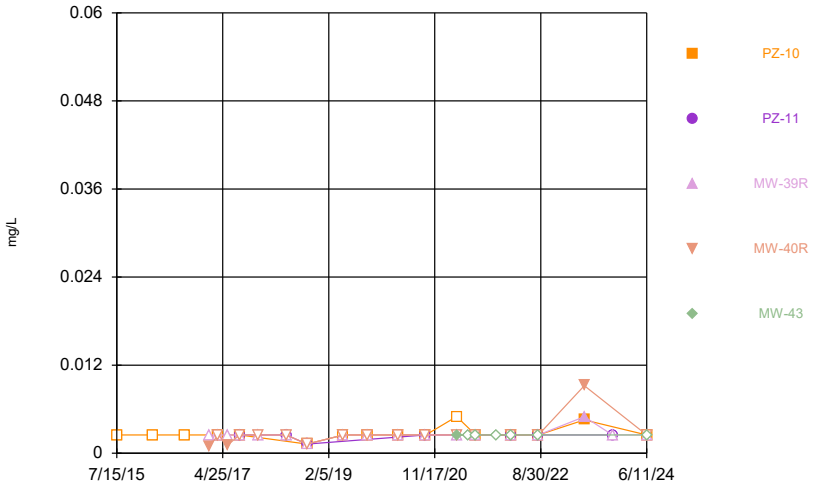
Time Series



Constituent: Selenium Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

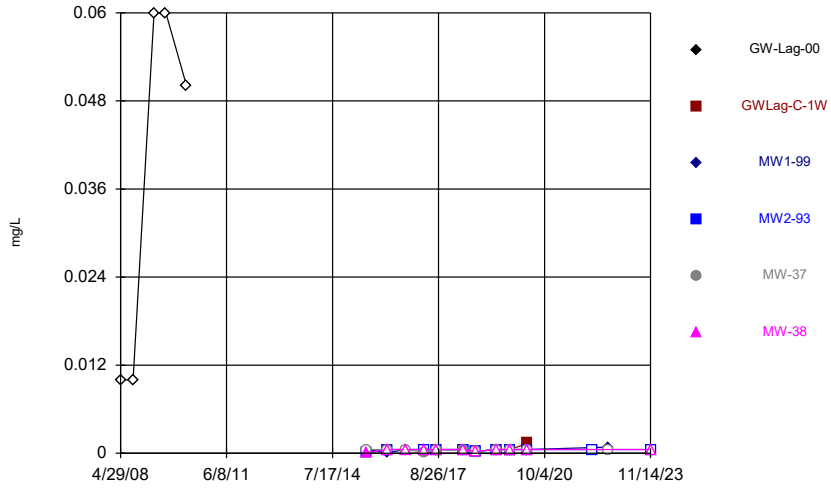
Time Series



Constituent: Selenium Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

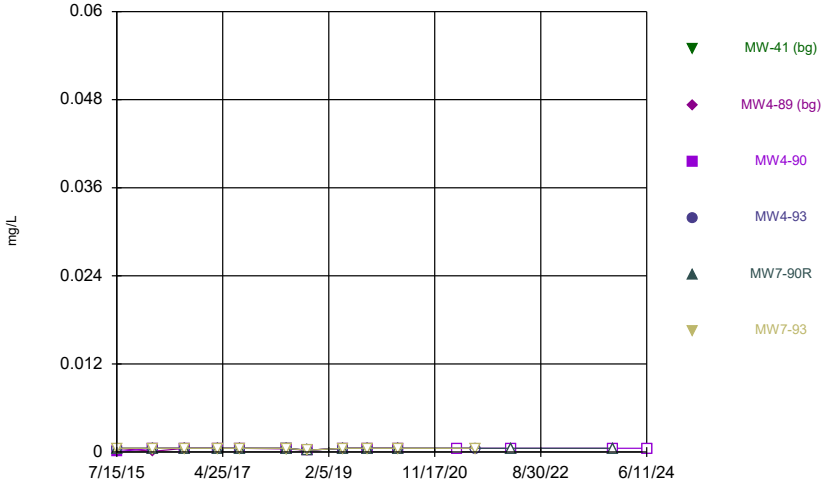
Time Series



Constituent: Silver Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

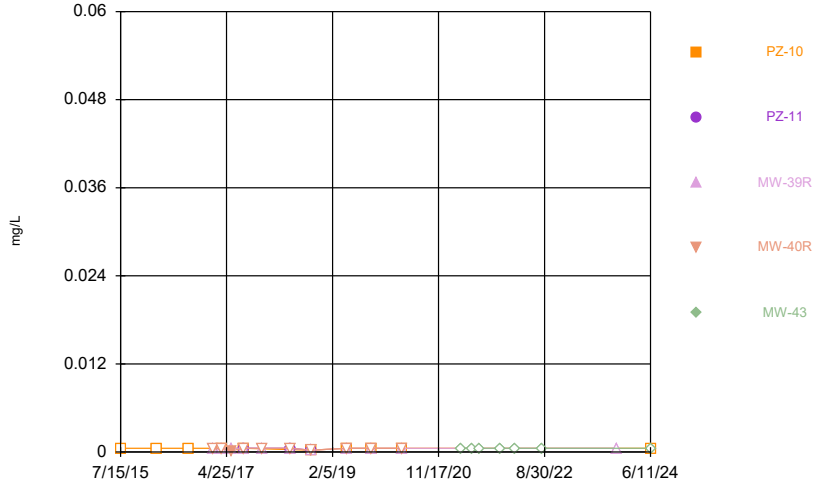
Time Series



Constituent: Silver Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

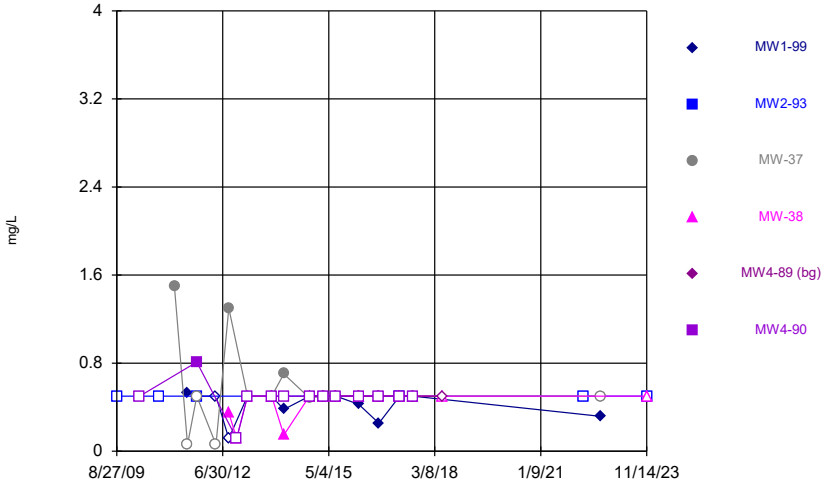
Time Series



Constituent: Silver Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

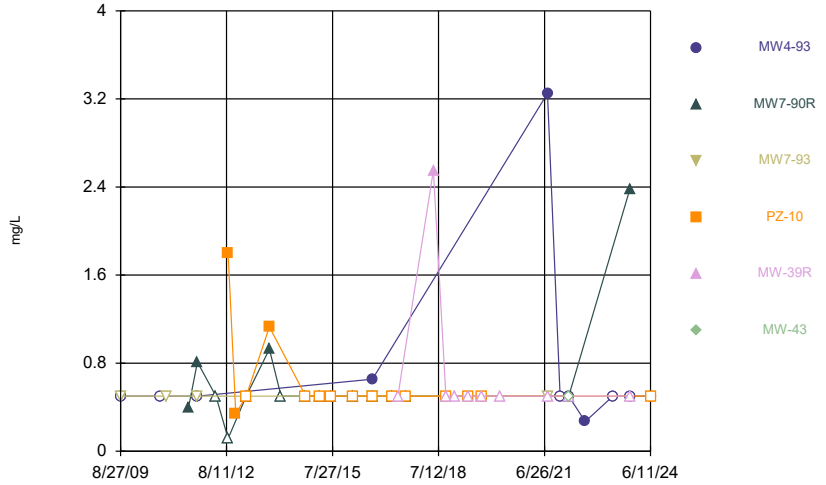
Time Series



Constituent: Sulfide Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

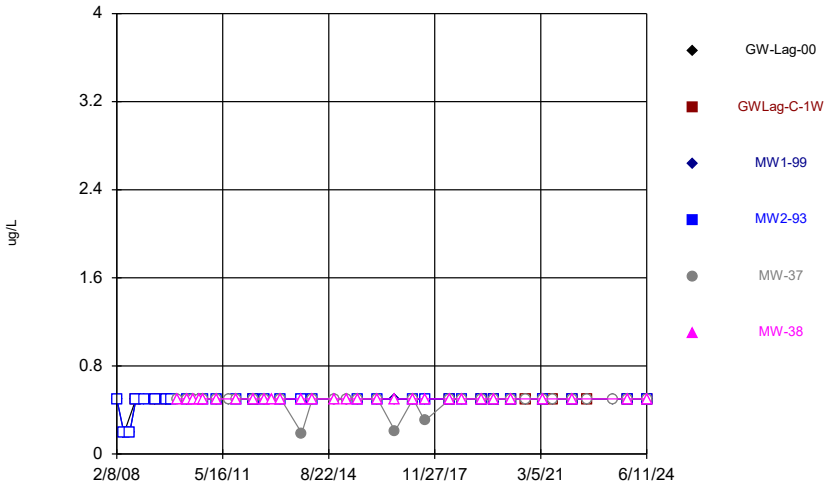
Time Series



Constituent: Sulfide Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

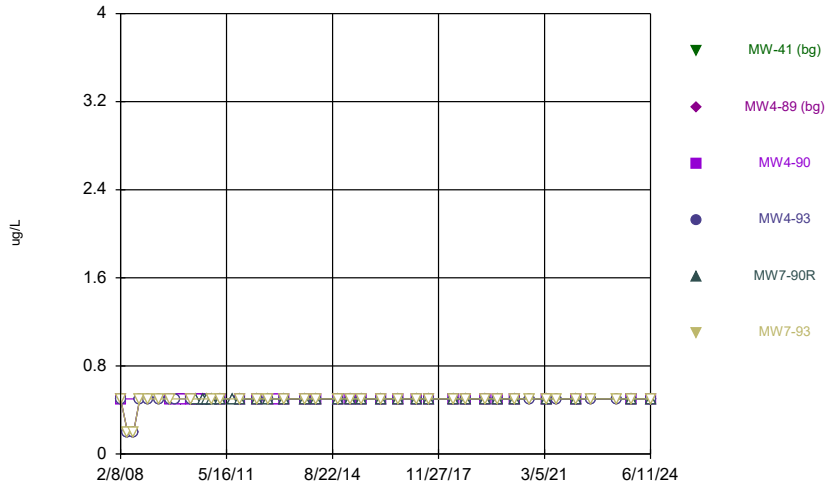
Time Series



Constituent: Tetrachloroethene Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

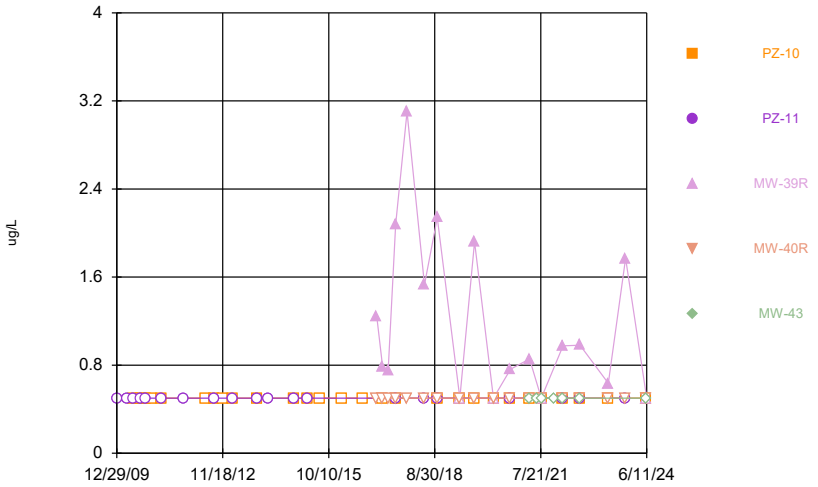
Time Series



Constituent: Tetrachloroethene Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

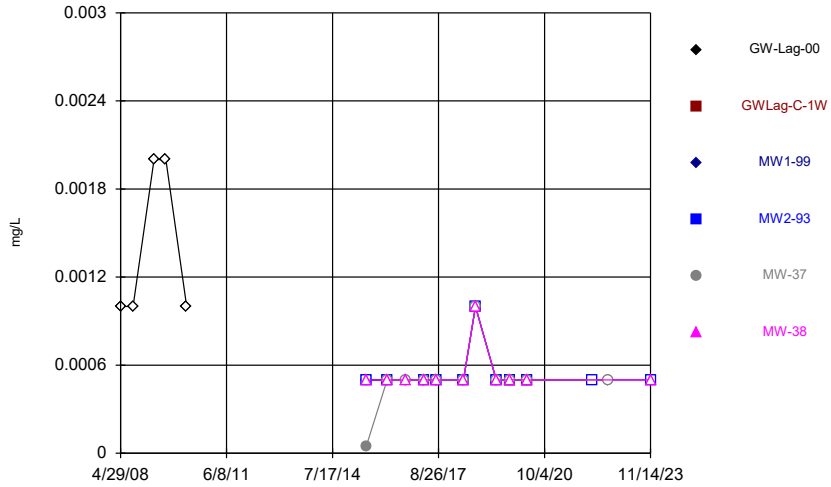
Time Series



Constituent: Tetrachloroethene Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

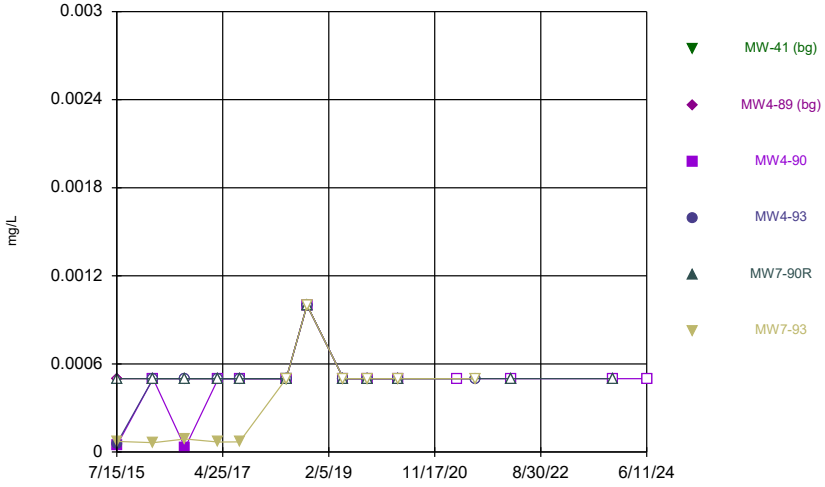
Time Series



Constituent: Thallium Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

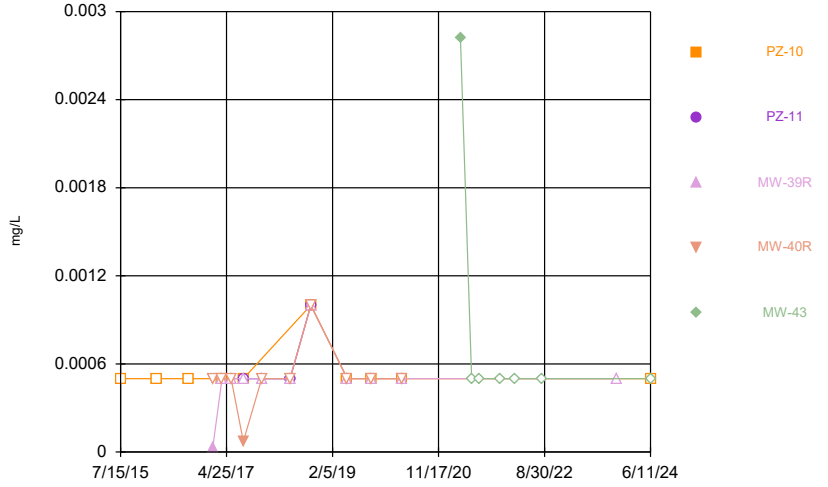
Time Series



Constituent: Thallium Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

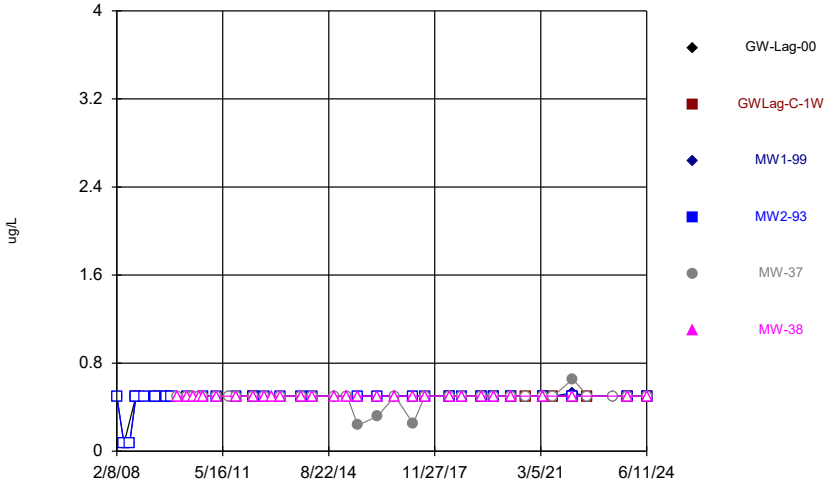
Time Series



Constituent: Thallium Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

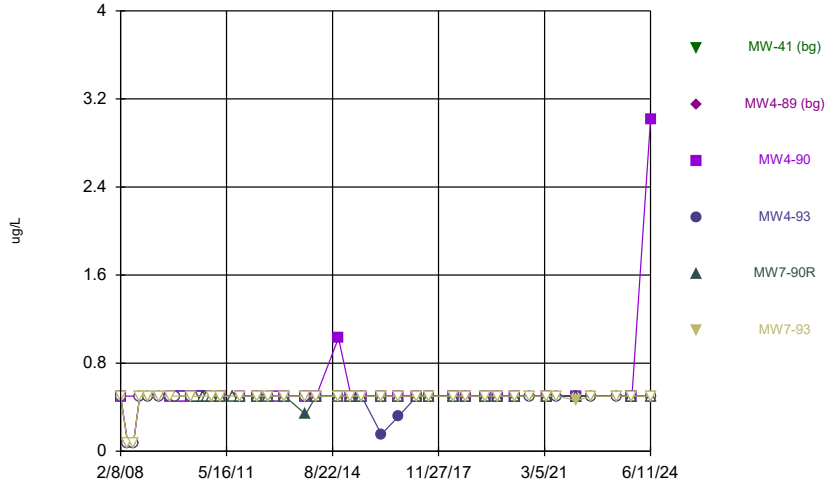
Time Series



Constituent: Toluene Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

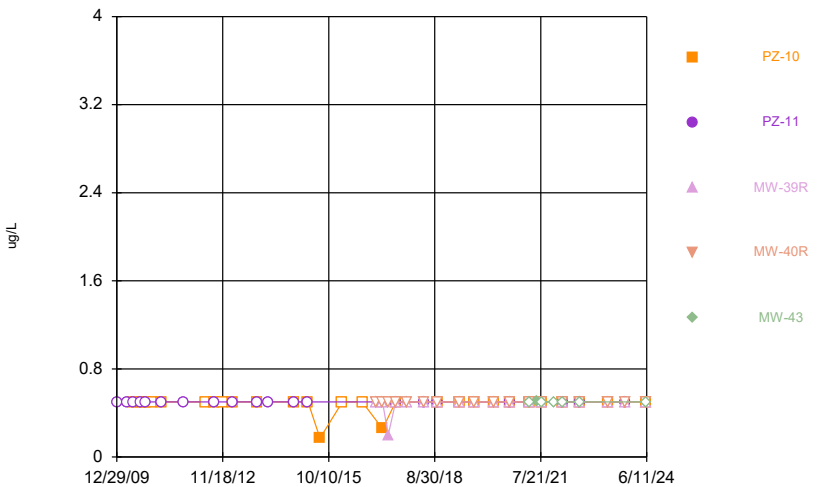
Time Series



Constituent: Toluene Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

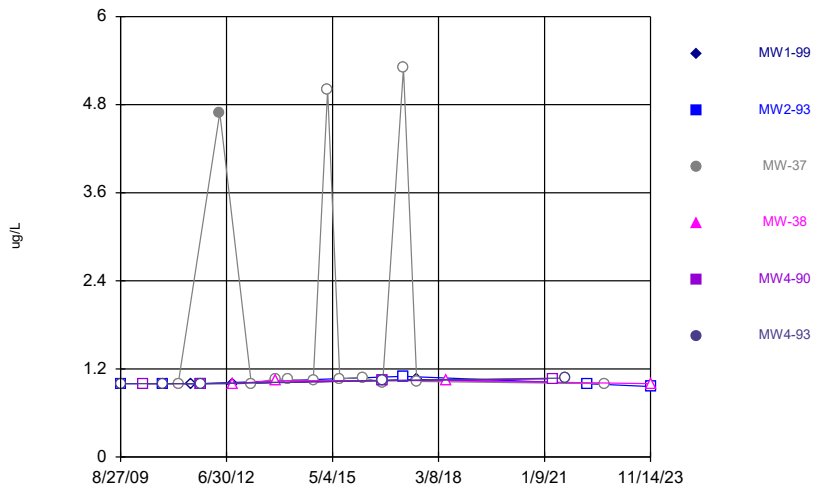
Time Series



Constituent: Toluene Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

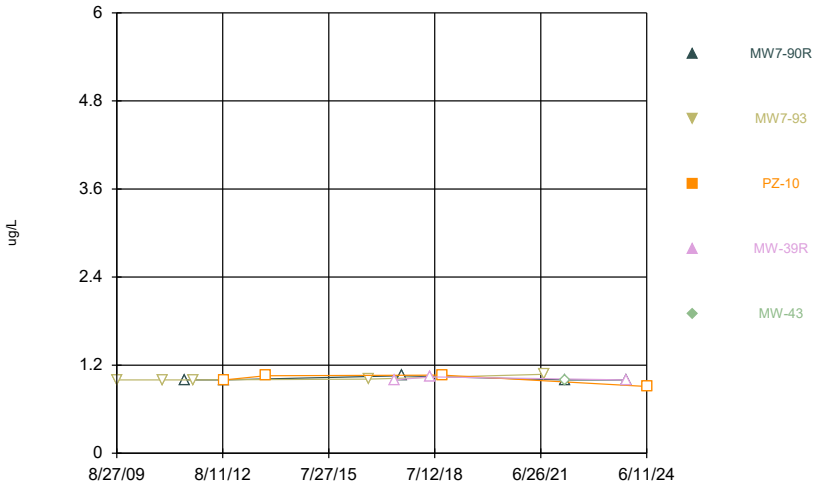
Time Series



Constituent: Toxaphene Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

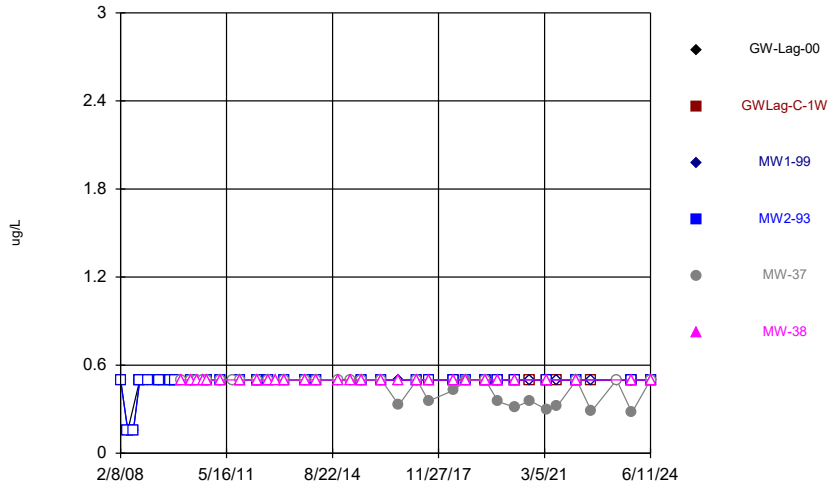
Time Series



Constituent: Toxaphene Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

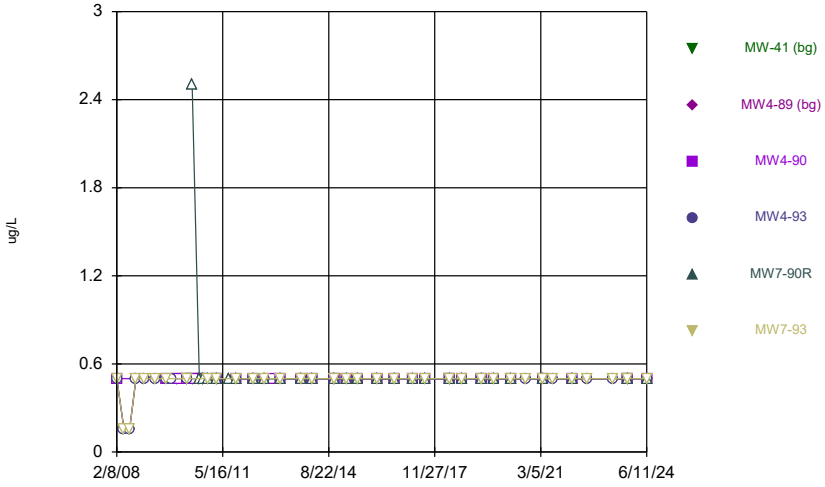
Time Series



Constituent: trans-1,2-Dichloroethene Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

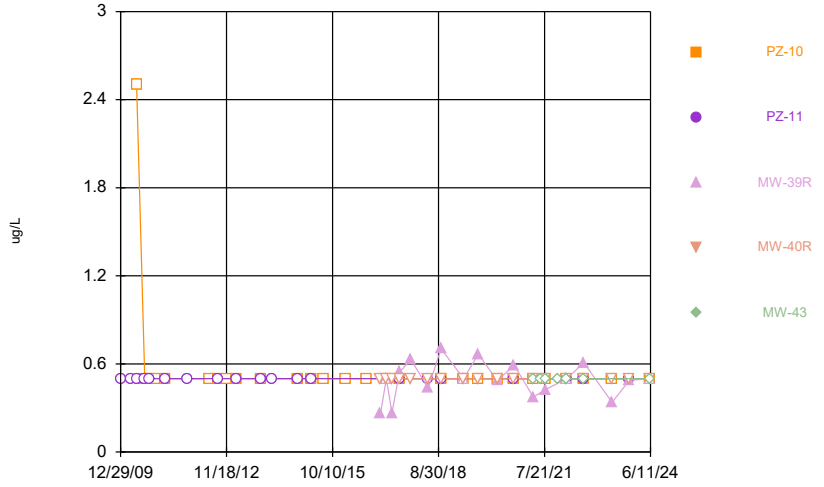
Time Series



Constituent: trans-1,2-Dichloroethene Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

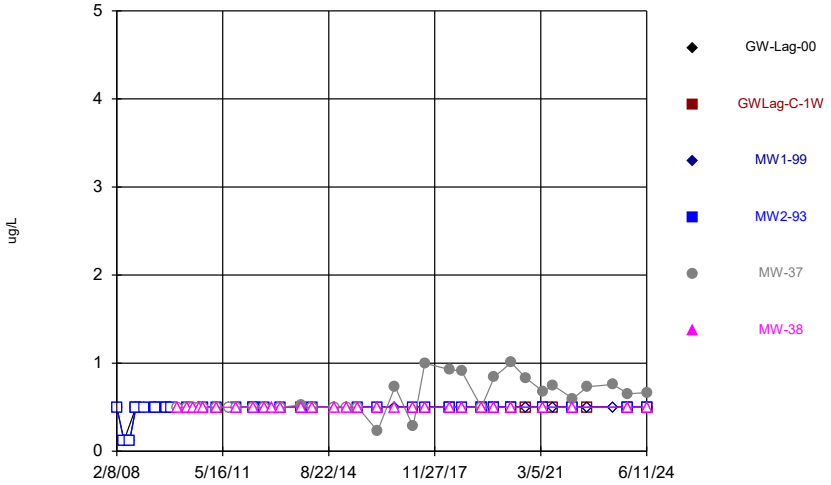
Time Series



Constituent: trans-1,2-Dichloroethene Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

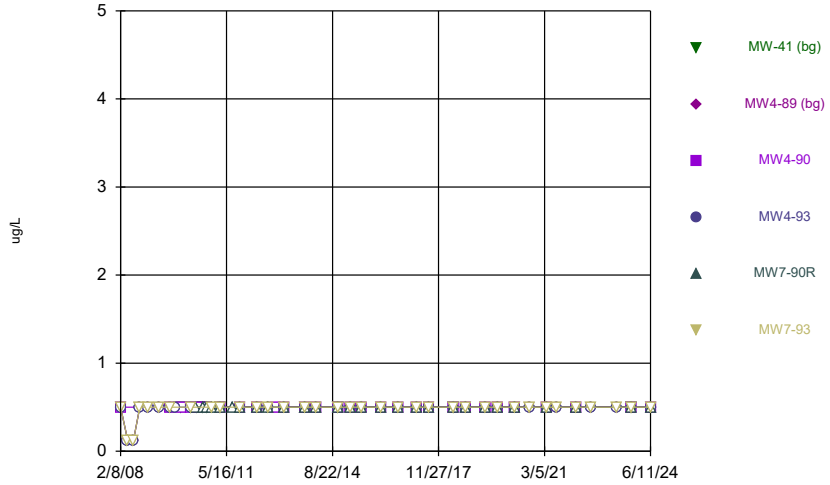
Time Series



Constituent: Trichloroethene Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

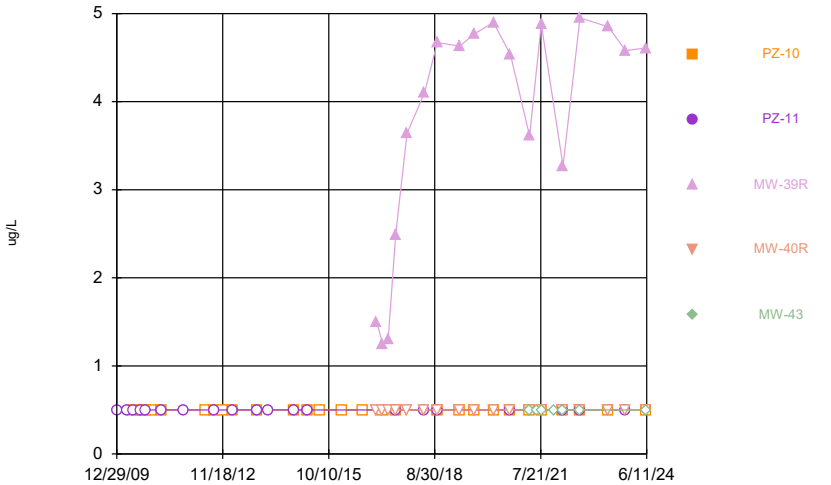
Time Series



Constituent: Trichloroethene Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

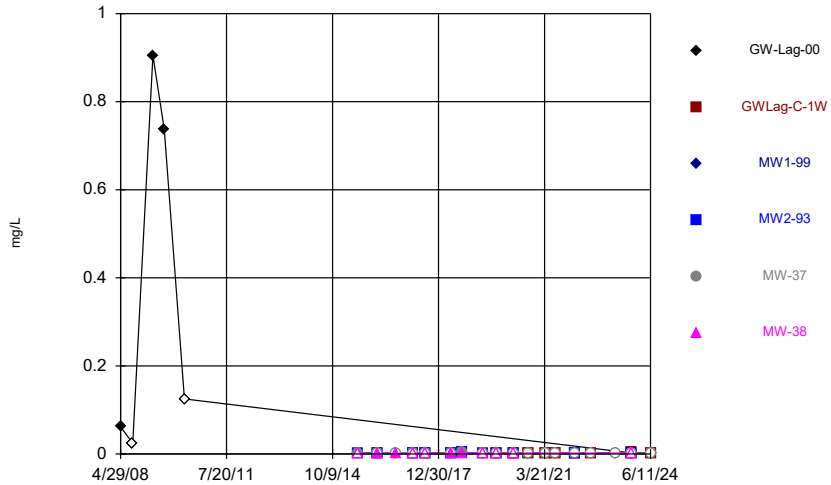
Time Series



Constituent: Trichloroethene Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

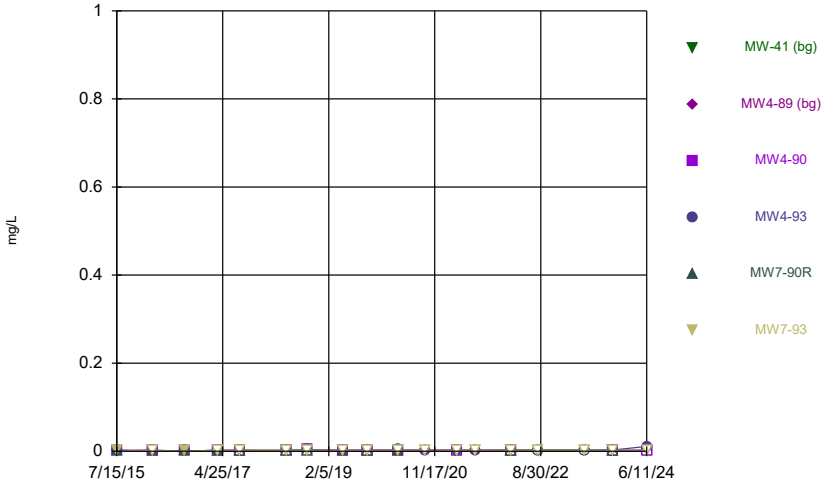
Time Series



Constituent: Vanadium Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

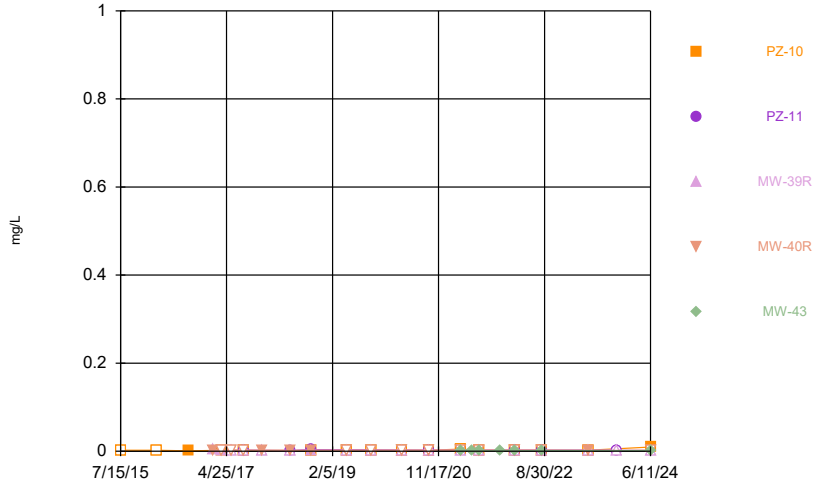
Time Series



Constituent: Vanadium Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

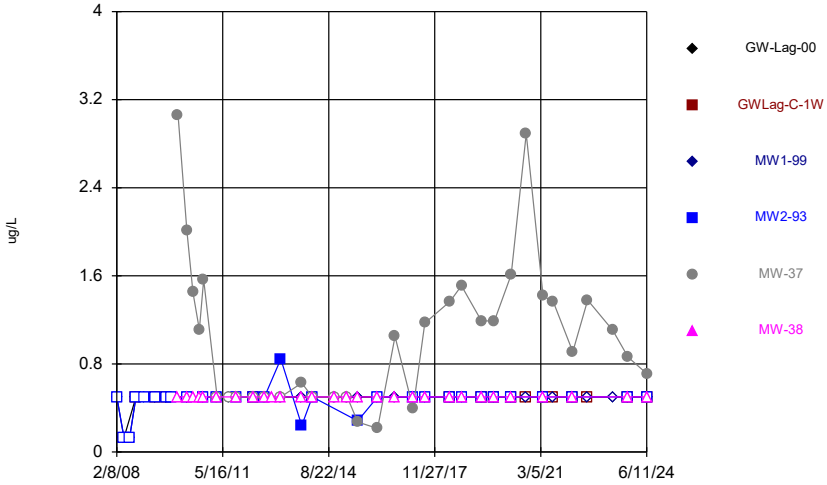
Time Series



Constituent: Vanadium Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

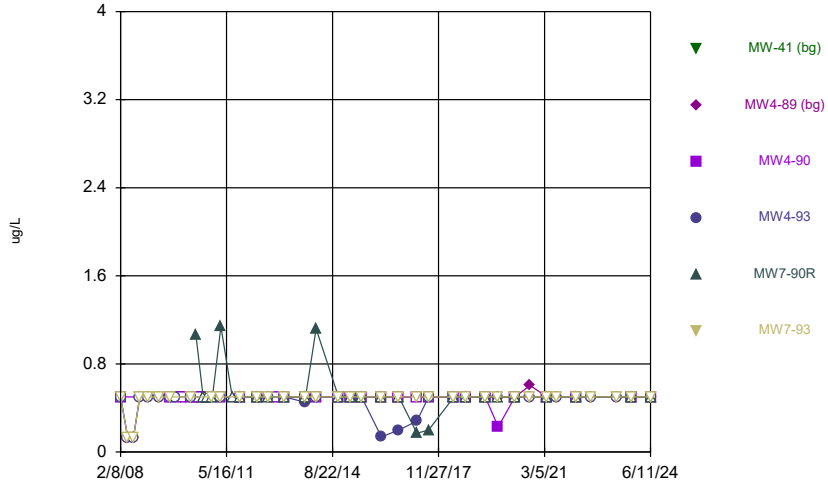
Time Series



Constituent: Vinyl Chloride Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

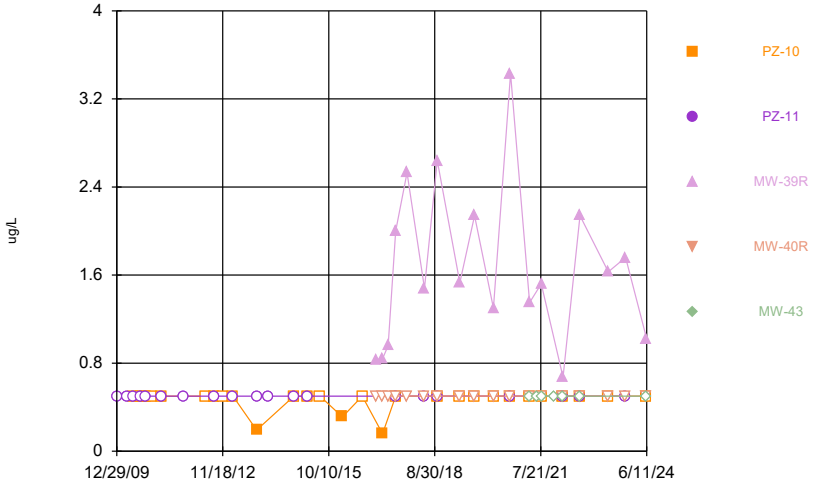
Time Series



Constituent: Vinyl Chloride Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

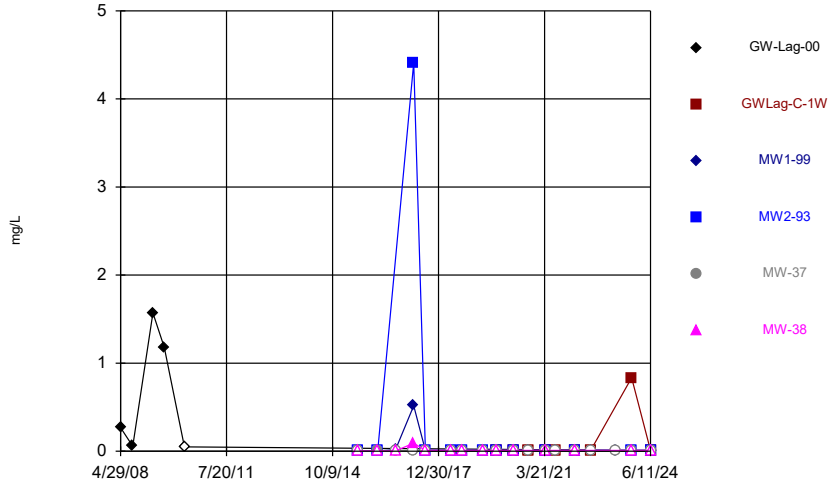
Time Series



Constituent: Vinyl Chloride Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

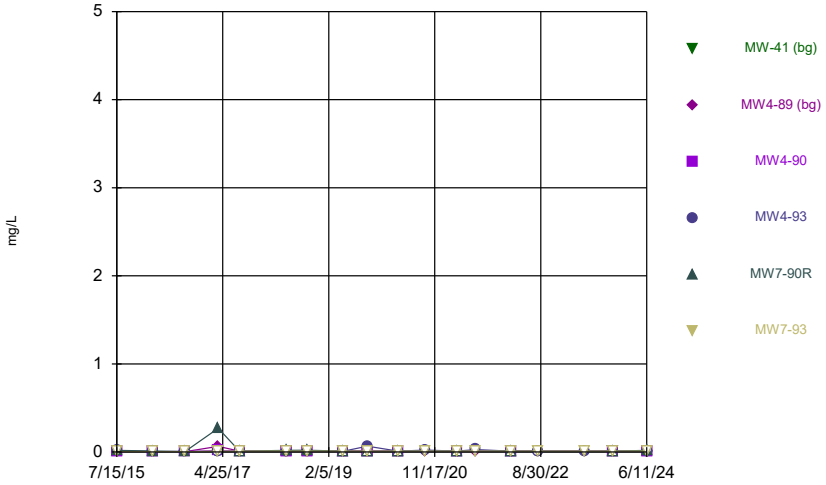
Time Series



Constituent: Zinc Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

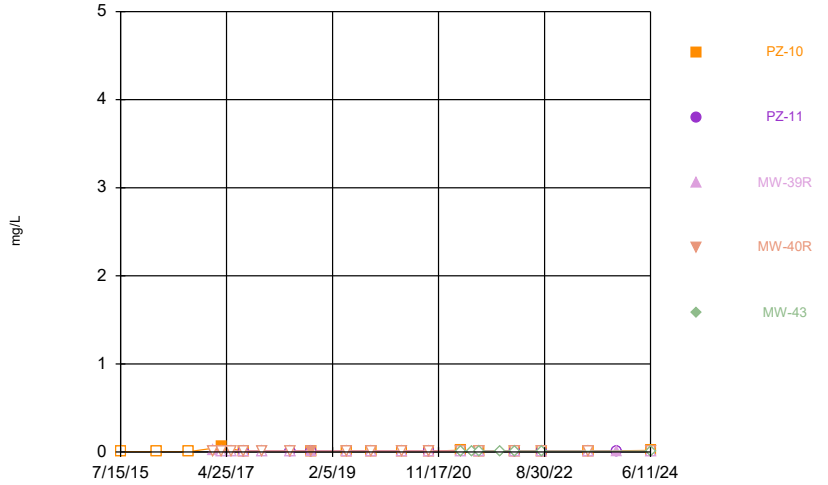
Time Series



Constituent: Zinc Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Zinc Analysis Run 11/6/2024 11:41 AM View: 2024 SSN Time Series
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Outliers Tables and Graphs

Outlier Analysis

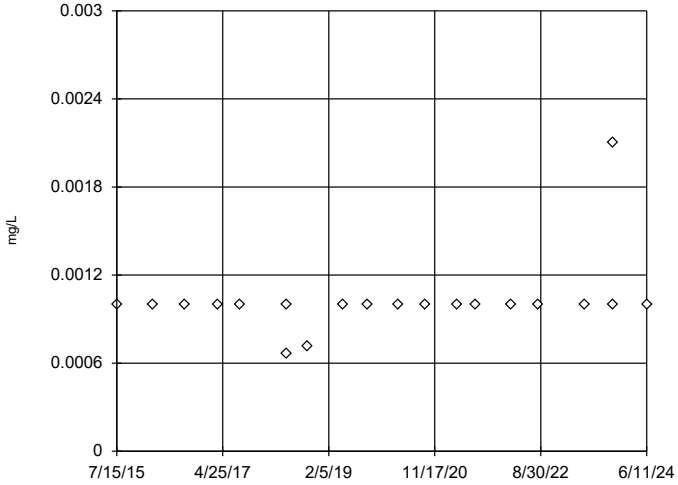
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master Printed 10/21/2024, 4:06 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Normality Test
Arsenic (mg/L)	MW-41,MW4-89	No	n/a	n/a w/combined bg	OH	NaN	20	0.001024	n/a
Barium (mg/L)	**MW-41,MW4-89**	**Yes**	**0.197,0.018,0.0151**	**n/a w/combined bg**	**Dixon/OH**	**0.01**	**20**	**0.08226**	**ShapiroWilk**
Cadmium (mg/L)	MW4-89,MW-41	No	n/a	n/a w/combined bg	EPA/OH	0.05	11	0.0002052	ShapiroWilk
Chromium (mg/L)	MW-41,MW4-89	No	n/a	n/a w/combined bg	OH	NaN	20	0.002507	n/a
Cobalt (mg/L)	**MW-41,MW4-89**	**Yes**	**0.000512,0.0005,0...**	**n/a w/combined bg**	**NP (nrm)/OH**	**NaN**	**18**	**0.0003049**	**ShapiroWilk**
Copper (mg/L)	MW-41,MW4-89	No	n/a	n/a w/combined bg	OH	NaN	20	0.002284	n/a
Lead (mg/L)	MW-41,MW4-89	No	n/a	n/a w/combined bg	OH	NaN	20	0.0002505	n/a
Nickel (mg/L)	MW-41,MW4-89	No	n/a	n/a w/combined bg	OH	NaN	20	0.002396	n/a
Silver (mg/L)	MW-41,MW4-89	No	n/a	n/a w/combined bg	OH	NaN	11	0.0004338	n/a
Vanadium (mg/L)	MW-41,MW4-89	No	n/a	n/a w/combined bg	OH	NaN	20	0.002391	n/a
Zinc (mg/L)	**MW-41,MW4-89**	**Yes**	**0.0635**	**n/a w/combined bg**	**OH**	**NaN**	**20**	**0.0119**	**n/a**

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 20

No statistical outliers.

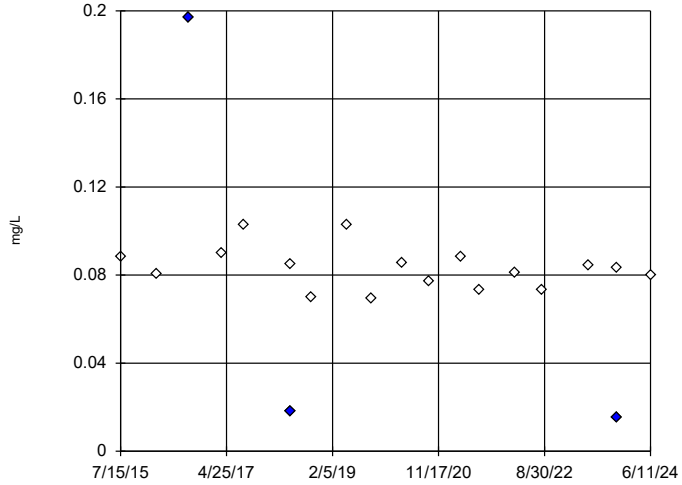
Constituent: Arsenic Analysis Run 10/21/2024 4:00 PM View: 2024 SSN Outliers

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

Dixon's Outlier Test / Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 20

Statistical outliers are drawn as solid.
Testing for 1 high and 2 low outliers.
Mean = 0.08226.
Std. Dev. = 0.03504.
0.103: c = 0.7402
tabl = 0.535.
0.018: c = 0.6118
tabl = 0.535.
Alpha = 0.01.

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9281
Critical = 0.851
The distribution, after removal of suspect values, was found to be normally distributed.

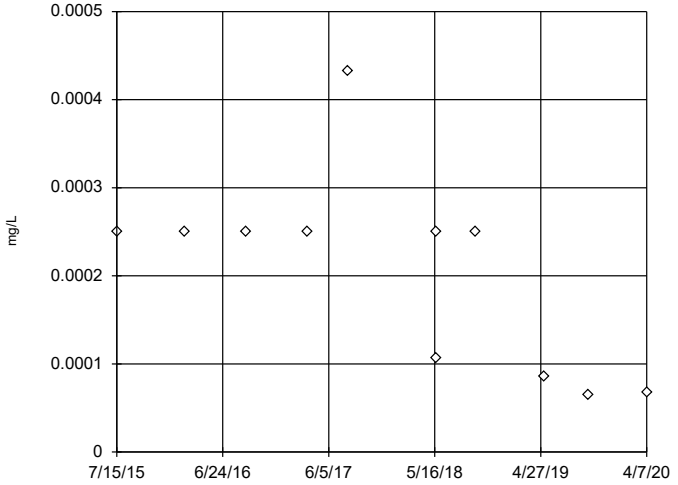
Constituent: Barium Analysis Run 10/21/2024 4:00 PM View: 2024 SSN Outliers

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

EPA Screening (suspected outliers for Dixon's Test)

MW4-89,MW-41



n = 11

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Ohio method in use.
Mean 0.0002052, std. dev. 0.0001126, critical Tn 2.234

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.8301
Critical = 0.792
The distribution was found to be normally distributed.

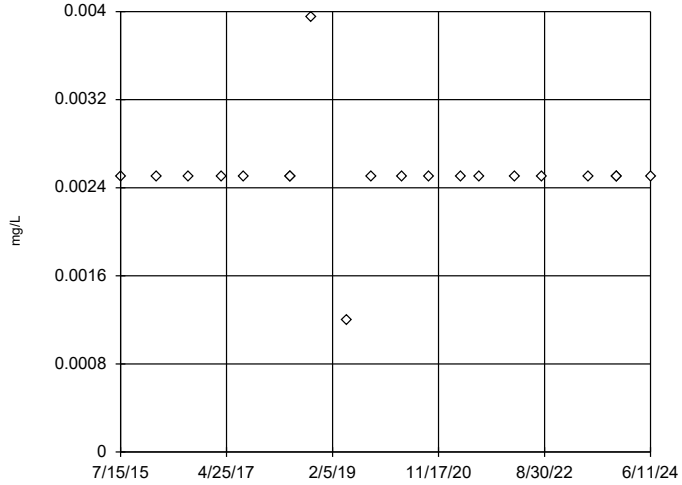
Constituent: Cadmium Analysis Run 10/21/2024 4:00 PM View: 2024 SSN Outliers

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 20

No statistical outliers.

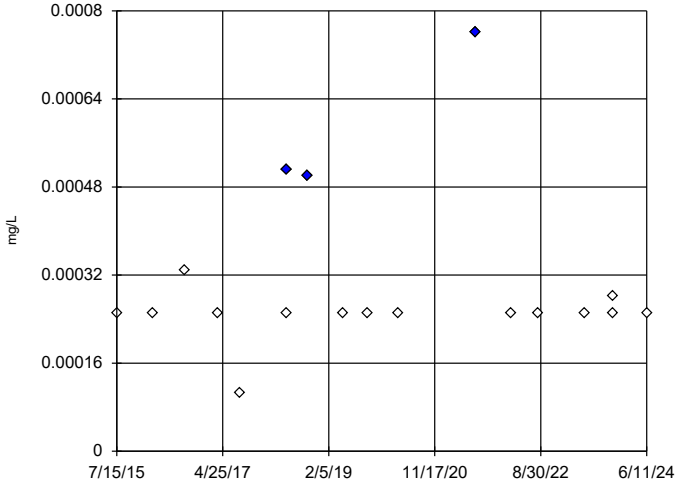
Constituent: Chromium Analysis Run 10/21/2024 4:00 PM View: 2024 SSN Outliers

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 18

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

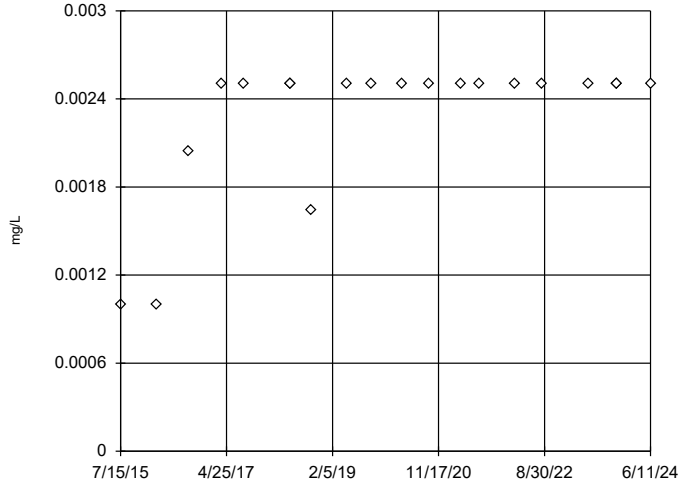
High cutoff = 0.000468, low cutoff = 0.0000865, based on IQR multiplier of 3.

Constituent: Cobalt Analysis Run 10/21/2024 4:00 PM View: 2024 SSN Outliers
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 20

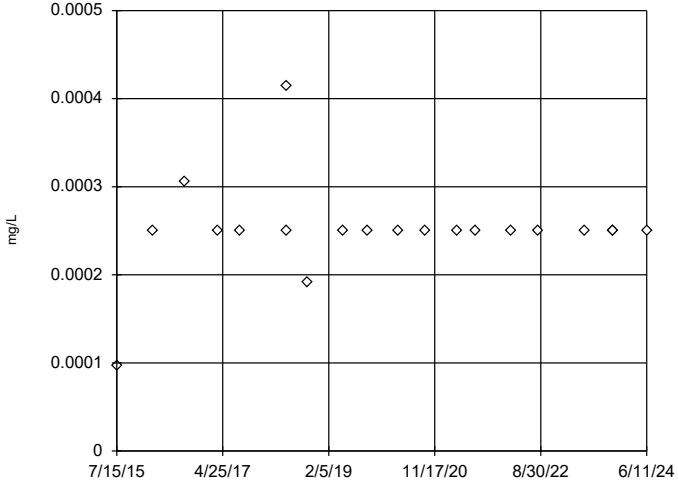
No statistical outliers.

Constituent: Copper Analysis Run 10/21/2024 4:00 PM View: 2024 SSN Outliers
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 20

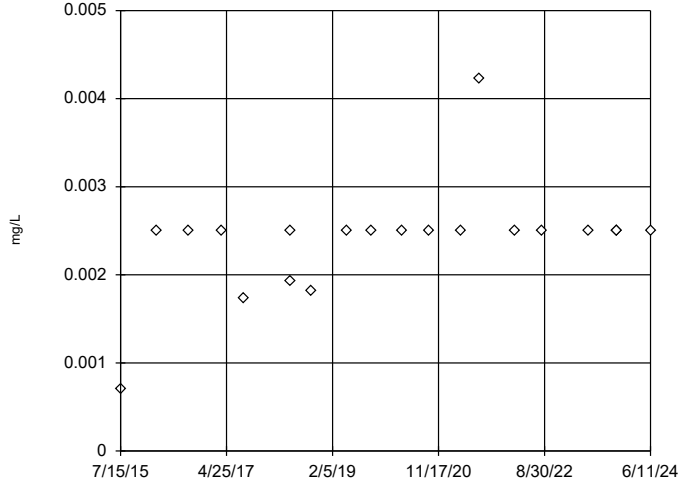
No statistical outliers.

Constituent: Lead Analysis Run 10/21/2024 4:00 PM View: 2024 SSN Outliers
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 20

No statistical outliers.

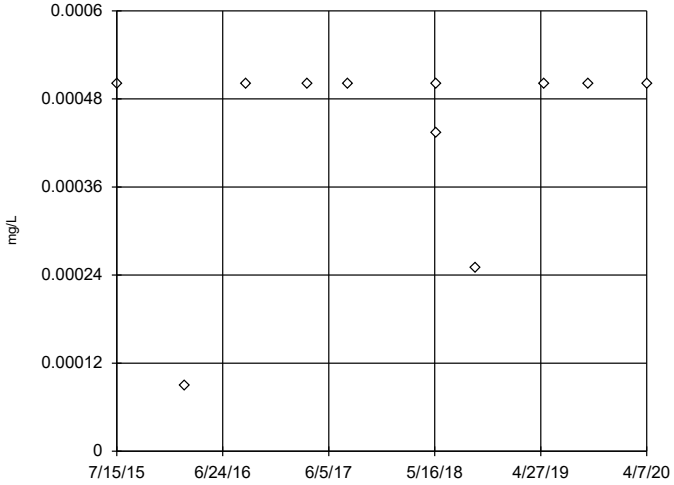
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.7416
Critical = 0.858
The distribution was found to be normally distrib-uted.

Constituent: Nickel Analysis Run 10/21/2024 4:00 PM View: 2024 SSN Outliers
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 11

No statistical outliers.

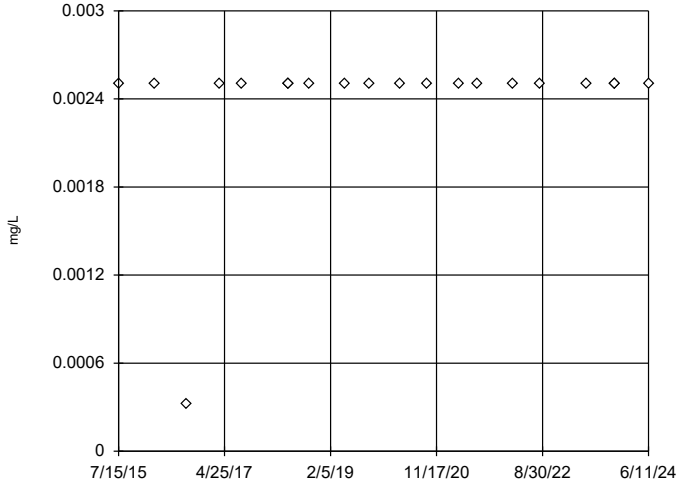
Constituent: Silver Analysis Run 10/21/2024 4:00 PM View: 2024 SSN Outliers

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 20

No statistical outliers.

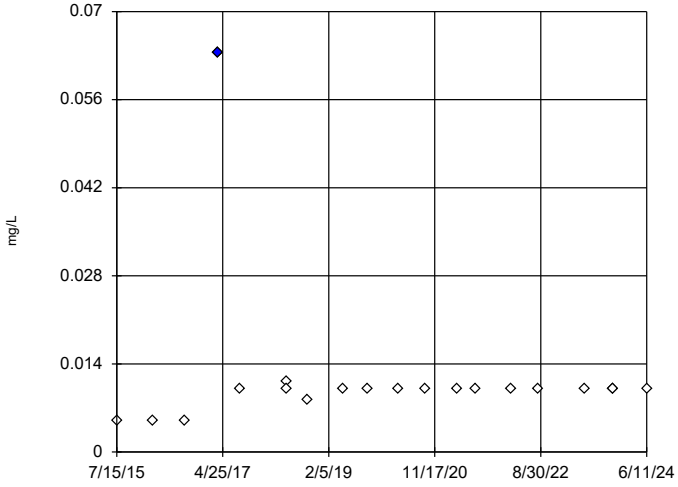
Constituent: Vanadium Analysis Run 10/21/2024 4:00 PM View: 2024 SSN Outliers

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 20

Statistical outlier is drawn as solid.
Outlier per Ohio method.

Constituent: Zinc Analysis Run 10/21/2024 4:00 PM View: 2024 SSN Outliers

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Prediction Limit Table and Graphs

Prediction Limit

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master Printed 10/24/2024, 9:51 AM

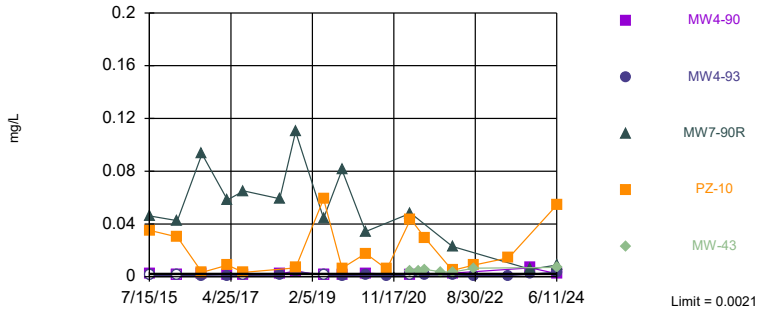
Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Arsenic (mg/L)	**MW4-90**	**0.0021**	**n/a**	**6/11/2024**	**0.00229**	**Yes**	**20**	**85**	**n/a**	**0.003535**	**NP Inter (NDs) 1 of 2**
Arsenic (mg/L)	**MW4-93**	**0.0021**	**n/a**	**6/11/2024**	**0.00351**	**Yes**	**20**	**85**	**n/a**	**0.003535**	**NP Inter (NDs) 1 of 2**
Arsenic (mg/L)	**MW7-90R**	**0.0021**	**n/a**	**6/11/2024**	**0.00886**	**Yes**	**20**	**85**	**n/a**	**0.003535**	**NP Inter (NDs) 1 of 2**
Arsenic (mg/L)	**PZ-10**	**0.0021**	**n/a**	**6/11/2024**	**0.0542**	**Yes**	**20**	**85**	**n/a**	**0.003535**	**NP Inter (NDs) 1 of 2**
Arsenic (mg/L)	**MW-43**	**0.0021**	**n/a**	**6/11/2024**	**0.007045**	**Yes**	**20**	**85**	**n/a**	**0.003535**	**NP Inter (NDs) 1 of 2**
Barium (mg/L)	MW1-99	0.197	n/a	6/11/2024	0.0273	No	20	0	n/a	0.003535	NP Inter (normality) ...
Barium (mg/L)	**MW2-93**	**0.197**	**n/a**	**6/11/2024**	**0.204**	**Yes**	**20**	**0**	**n/a**	**0.003535**	**NP Inter (normality) ...**
Barium (mg/L)	MW-37	0.197	n/a	6/11/2024	0.0178	No	20	0	n/a	0.003535	NP Inter (normality) ...
Barium (mg/L)	**MW-38**	**0.197**	**n/a**	**6/11/2024**	**0.354**	**Yes**	**20**	**0**	**n/a**	**0.003535**	**NP Inter (normality) ...**
Barium (mg/L)	MW4-90	0.197	n/a	6/11/2024	0.0996	No	20	0	n/a	0.003535	NP Inter (normality) ...
Barium (mg/L)	MW4-93	0.197	n/a	6/11/2024	0.0292	No	20	0	n/a	0.003535	NP Inter (normality) ...
Barium (mg/L)	**MW7-90R**	**0.197**	**n/a**	**6/11/2024**	**0.659**	**Yes**	**20**	**0**	**n/a**	**0.003535**	**NP Inter (normality) ...**
Barium (mg/L)	MW7-93	0.197	n/a	6/11/2024	0.0735	No	20	0	n/a	0.003535	NP Inter (normality) ...
Barium (mg/L)	**PZ-10**	**0.197**	**n/a**	**6/11/2024**	**0.396**	**Yes**	**20**	**0**	**n/a**	**0.003535**	**NP Inter (normality) ...**
Barium (mg/L)	MW-39R	0.197	n/a	6/11/2024	0.185	No	20	0	n/a	0.003535	NP Inter (normality) ...
Barium (mg/L)	MW-40R	0.197	n/a	6/11/2024	0.0835	No	20	0	n/a	0.003535	NP Inter (normality) ...
Barium (mg/L)	**MW-43**	**0.197**	**n/a**	**6/11/2024**	**0.484**	**Yes**	**20**	**0**	**n/a**	**0.003535**	**NP Inter (normality) ...**
Cadmium (mg/L)	PZ-10	0.000433	n/a	6/11/2024	0.000233	No	11	54.55	n/a	0.008452	NP Inter (NDs) 1 of 2
Cobalt (mg/L)	**MW1-99**	**0.000761**	**n/a**	**6/11/2024**	**0.00213**	**Yes**	**18**	**72.22**	**n/a**	**0.004248**	**NP Inter (NDs) 1 of 2**
Cobalt (mg/L)	**MW-37**	**0.000761**	**n/a**	**6/11/2024**	**0.00706**	**Yes**	**18**	**72.22**	**n/a**	**0.004248**	**NP Inter (NDs) 1 of 2**
Cobalt (mg/L)	**MW4-90**	**0.000761**	**n/a**	**6/11/2024**	**0.00374**	**Yes**	**18**	**72.22**	**n/a**	**0.004248**	**NP Inter (NDs) 1 of 2**
Cobalt (mg/L)	**MW4-93**	**0.000761**	**n/a**	**6/11/2024**	**0.0164**	**Yes**	**18**	**72.22**	**n/a**	**0.004248**	**NP Inter (NDs) 1 of 2**
Cobalt (mg/L)	**MW7-93**	**0.000761**	**n/a**	**6/11/2024**	**0.00902**	**Yes**	**18**	**72.22**	**n/a**	**0.004248**	**NP Inter (NDs) 1 of 2**
Cobalt (mg/L)	**PZ-10**	**0.000761**	**n/a**	**6/11/2024**	**0.0353**	**Yes**	**18**	**72.22**	**n/a**	**0.004248**	**NP Inter (NDs) 1 of 2**
Cobalt (mg/L)	**MW-39R**	**0.000761**	**n/a**	**6/11/2024**	**0.00128**	**Yes**	**18**	**72.22**	**n/a**	**0.004248**	**NP Inter (NDs) 1 of 2**
Cobalt (mg/L)	**MW-43**	**0.000761**	**n/a**	**6/11/2024**	**0.00209**	**Yes**	**18**	**72.22**	**n/a**	**0.004248**	**NP Inter (NDs) 1 of 2**
Copper (mg/L)	**PZ-10**	**0.0025**	**n/a**	**6/11/2024**	**0.00553**	**Yes**	**20**	**90**	**n/a**	**0.003535**	**NP Inter (NDs) 1 of 2**
Lead (mg/L)	**PZ-10**	**0.000415**	**n/a**	**6/11/2024**	**0.00394**	**Yes**	**20**	**80**	**n/a**	**0.003535**	**NP Inter (NDs) 1 of 2**
Nickel (mg/L)	**MW-37**	**0.00423**	**n/a**	**6/11/2024**	**0.0395**	**Yes**	**20**	**75**	**n/a**	**0.003535**	**NP Inter (NDs) 1 of 2**
Nickel (mg/L)	**MW4-93**	**0.00423**	**n/a**	**6/11/2024**	**0.0756**	**Yes**	**20**	**75**	**n/a**	**0.003535**	**NP Inter (NDs) 1 of 2**
Nickel (mg/L)	**MW7-93**	**0.00423**	**n/a**	**6/11/2024**	**0.0575**	**Yes**	**20**	**75**	**n/a**	**0.003535**	**NP Inter (NDs) 1 of 2**
Nickel (mg/L)	**PZ-10**	**0.00423**	**n/a**	**6/11/2024**	**0.0259**	**Yes**	**20**	**75**	**n/a**	**0.003535**	**NP Inter (NDs) 1 of 2**
Nickel (mg/L)	**MW-39R**	**0.00423**	**n/a**	**6/11/2024**	**0.015**	**Yes**	**20**	**75**	**n/a**	**0.003535**	**NP Inter (NDs) 1 of 2**
Nickel (mg/L)	**MW-43**	**0.00423**	**n/a**	**6/11/2024**	**0.00592**	**Yes**	**20**	**75**	**n/a**	**0.003535**	**NP Inter (NDs) 1 of 2**
Vanadium (mg/L)	**MW4-93**	**0.0025**	**n/a**	**6/11/2024**	**0.0109**	**Yes**	**20**	**95**	**n/a**	**0.003535**	**NP Inter (NDs) 1 of 2**
Vanadium (mg/L)	**PZ-10**	**0.0025**	**n/a**	**6/11/2024**	**0.0095**	**Yes**	**20**	**95**	**n/a**	**0.003535**	**NP Inter (NDs) 1 of 2**

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Exceeds Limit: MW4-90, MW4-93, MW7-90R, PZ-10, MW-43

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 20 background values. 85% NDs. Annual per-constituent alpha = 0.1008. Individual comparison alpha = 0.003535 (1 of 2). Comparing 5 points to limit. Assumes 10 future values.

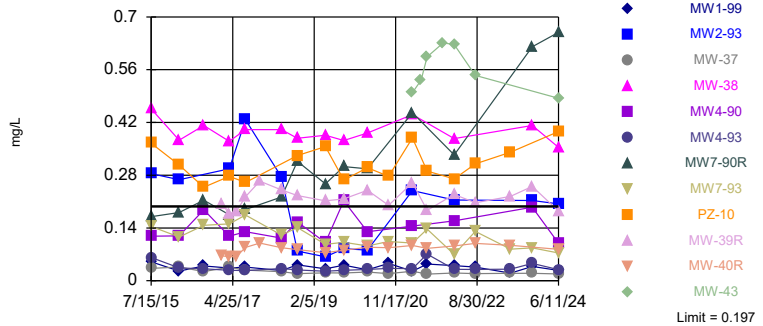
Constituent: Arsenic Analysis Run 10/24/2024 9:50 AM View: 2024 SSN Prediction Limits
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

Exceeds Limit: MW2-93, MW-38, MW7-90R, PZ-10, MW-43

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 20 background values. Annual per-constituent alpha = 0.1008. Individual comparison alpha = 0.003535 (1 of 2). Comparing 12 points to limit. Assumes 3 future values.

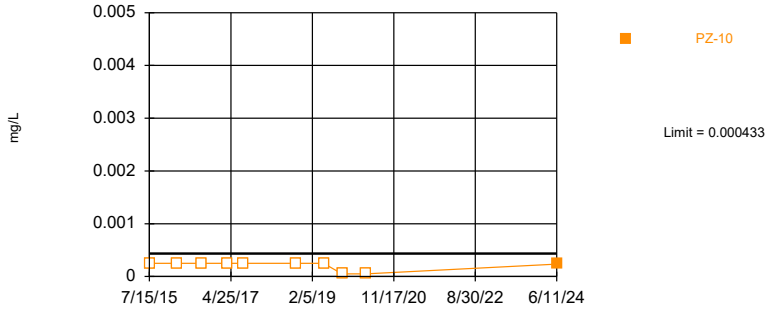
Constituent: Barium Analysis Run 10/24/2024 9:50 AM View: 2024 SSN Prediction Limits
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 11 background values. 54.55% NDs. Annual per-constituent alpha = 0.2248. Individual comparison alpha = 0.008452 (1 of 2). Assumes 14 future values.

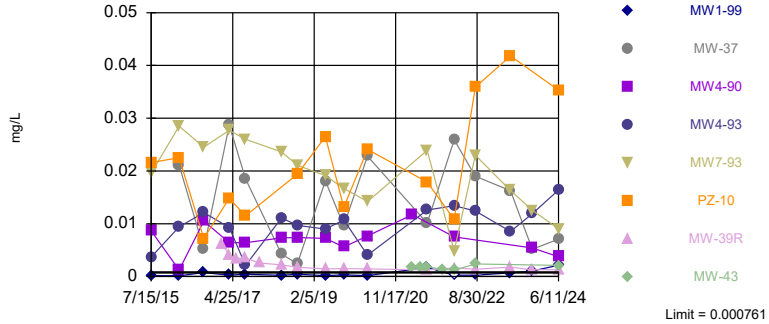
Constituent: Cadmium Analysis Run 10/24/2024 9:50 AM View: 2024 SSN Prediction Limits
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Exceeds Limit: MW1-99, MW-37, MW4-90, MW4-93, MW7-93, PZ-10, MW-39R, MW-43

Prediction Limit

Interwell Non-parametric



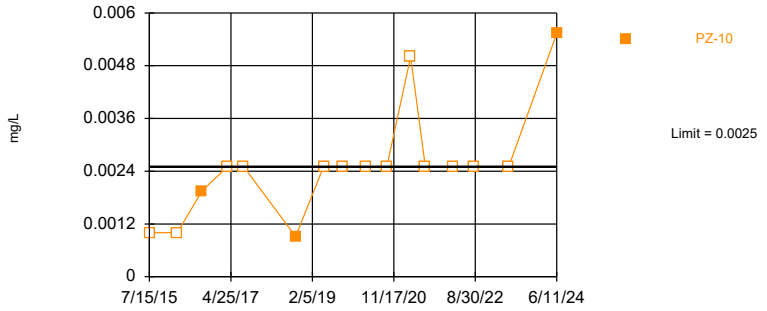
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 18 background values. 72.22% NDs. Annual per-constituent alpha = 0.1199. Individual comparison alpha = 0.004248 (1 of 2). Comparing 8 points to limit. Assumes 7 future values.

Constituent: Cobalt Analysis Run 10/24/2024 9:50 AM View: 2024 SSN Prediction Limits
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.
Exceeds Limit: PZ-10

Prediction Limit

Interwell Non-parametric



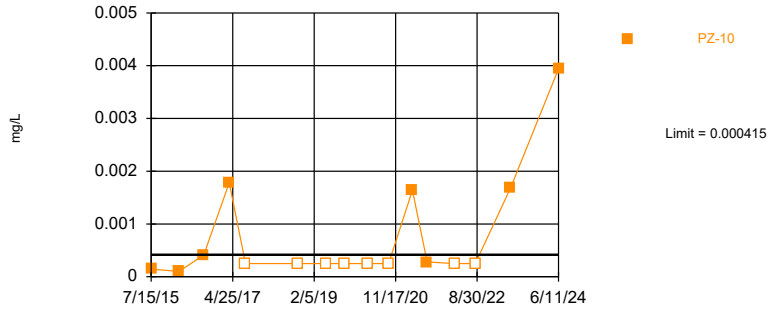
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 20 background values. 90% NDs. Annual per-constituent alpha = 0.1008. Individual comparison alpha = 0.003535 (1 of 2). Assumes 14 future values.

Constituent: Copper Analysis Run 10/24/2024 9:50 AM View: 2024 SSN Prediction Limits
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.
Exceeds Limit: PZ-10

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 20 background values. 80% NDs. Annual per-constituent alpha = 0.1008. Individual comparison alpha = 0.003535 (1 of 2). Assumes 14 future values.

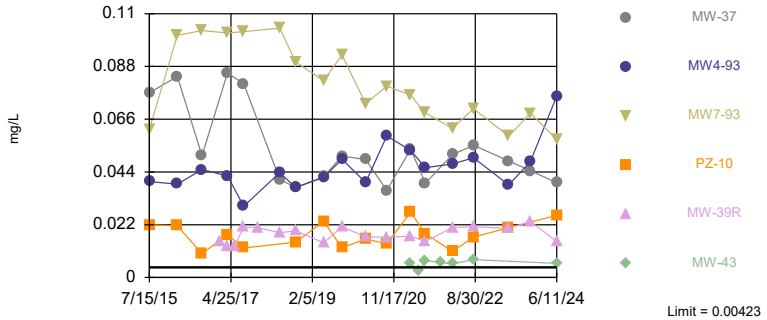
Constituent: Lead Analysis Run 10/24/2024 9:50 AM View: 2024 SSN Prediction Limits
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

Exceeds Limit: MW-37, MW4-93, MW7-93, PZ-10, MW-39R, MW-43

Prediction Limit

Interwell Non-parametric



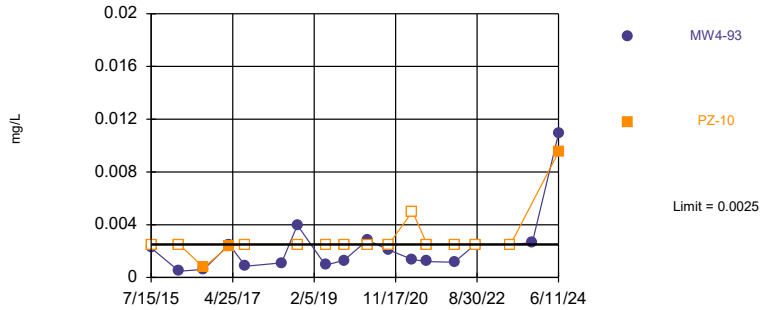
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 20 background values. 75% NDs. Annual per-constituent alpha = 0.1008. Individual comparison alpha = 0.003535 (1 of 2). Comparing 6 points to limit. Assumes 9 future values.

Constituent: Nickel Analysis Run 10/24/2024 9:50 AM View: 2024 SSN Prediction Limits
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.
Exceeds Limit: MW4-93, PZ-10

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 20 background values. 95% NDs. Annual per-constituent alpha = 0.1008. Individual comparison alpha = 0.003535 (1 of 2). Comparing 2 points to limit. Assumes 13 future values.

Constituent: Vanadium Analysis Run 10/24/2024 9:50 AM View: 2024 SSN Prediction Limits
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Prediction Limit

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master Printed 10/23/2024, 3:08 PM

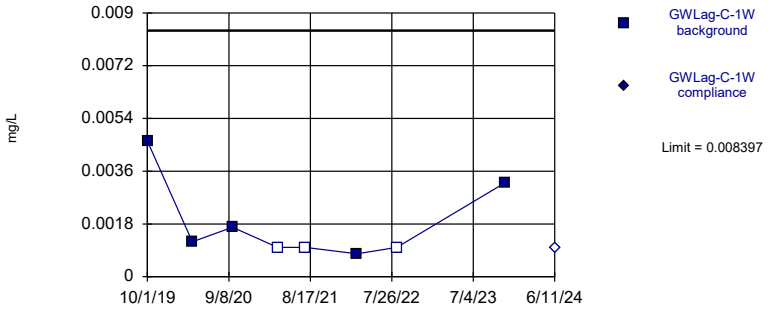
Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Arsenic (mg/L)	GWLag-C-1W	0.008397	n/a	6/11/2024	0.001ND	No	8	37.5	sqrt(x)	0.0002701	Param Intra 1 of 2
Barium (mg/L)	GWLag-C-1W	0.2488	n/a	6/11/2024	0.122	No	8	0	No	0.0002701	Param Intra 1 of 2
Cobalt (mg/L)	GWLag-C-1W	0.005207	n/a	6/11/2024	0.000864	No	6	0	No	0.0002701	Param Intra 1 of 2
Copper (mg/L)	GWLag-C-1W	0.343	n/a	6/11/2024	0.0025ND	No	8	75	n/a	0.02144	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWLag-C-1W	0.0887	n/a	6/11/2024	0.00025ND	No	8	87.5	n/a	0.02144	NP Intra (NDs) 1 of 2
Nickel (mg/L)	GWLag-C-1W	0.01334	n/a	6/11/2024	0.00304J	No	8	0	No	0.0002701	Param Intra 1 of 2
Selenium (mg/L)	GWLag-C-1W	0.003919	n/a	6/11/2024	0.0025ND	No	8	50	No	0.0002701	Param Intra 1 of 2
Vanadium (mg/L)	GWLag-C-1W	0.00344	n/a	6/11/2024	0.0025ND	No	8	75	n/a	0.02144	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWLag-C-1W	0.834	n/a	6/11/2024	0.01ND	No	8	87.5	n/a	0.02144	NP Intra (NDs) 1 of 2

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.04146, Std. Dev.=0.01322, n=8, 37.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7979, critical = 0.749. Kappa = 3.795 (c=13, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0002701.

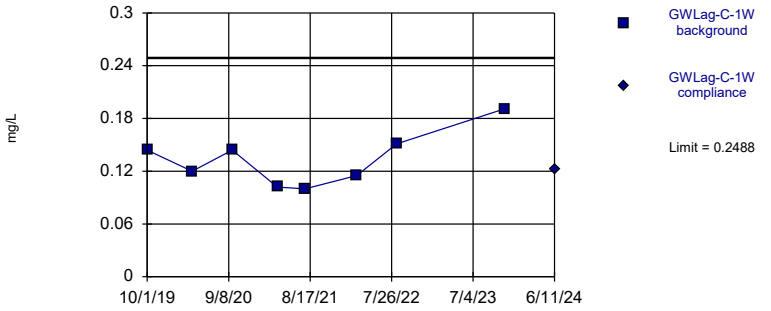
Constituent: Arsenic Analysis Run 10/23/2024 3:07 PM View: 2024 SSN Intrawell PL CW-Lag-C-1W
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1334, Std. Dev.=0.03041, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9156, critical = 0.749. Kappa = 3.795 (c=13, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0002701.

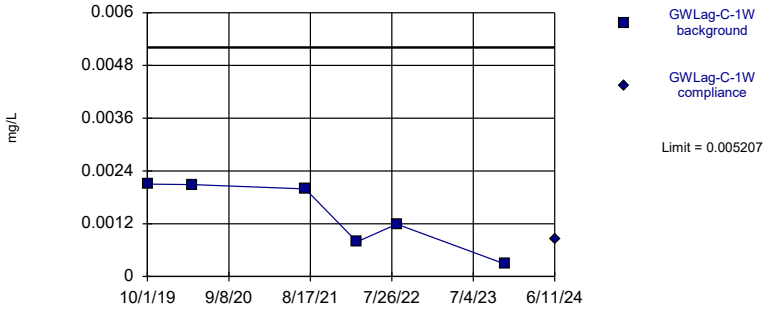
Constituent: Barium Analysis Run 10/23/2024 3:07 PM View: 2024 SSN Intrawell PL CW-Lag-C-1W
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.001407, Std. Dev.=0.0007715, n=6. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8629, critical = 0.713. Kappa = 4.926 (c=13, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0002701.

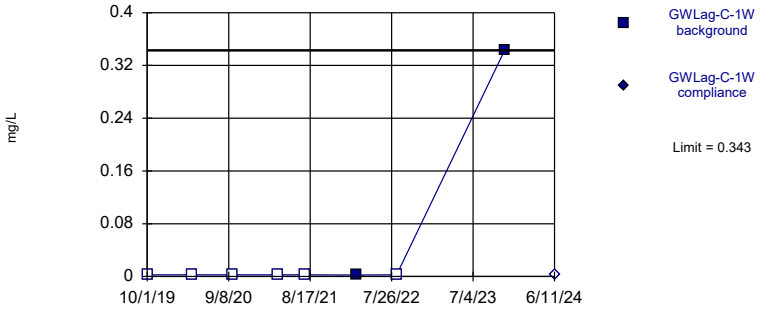
Constituent: Cobalt Analysis Run 10/23/2024 3:07 PM View: 2024 SSN Intrawell PL CW-Lag-C-1W
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 75% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

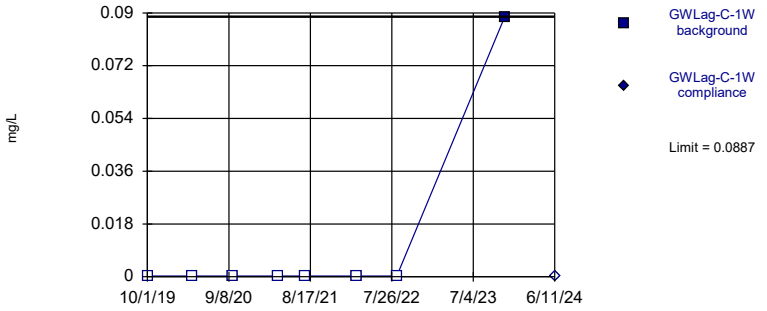
Constituent: Copper Analysis Run 10/23/2024 3:07 PM View: 2024 SSN Intrawell PL CW-Lag-C-1W
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 87.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

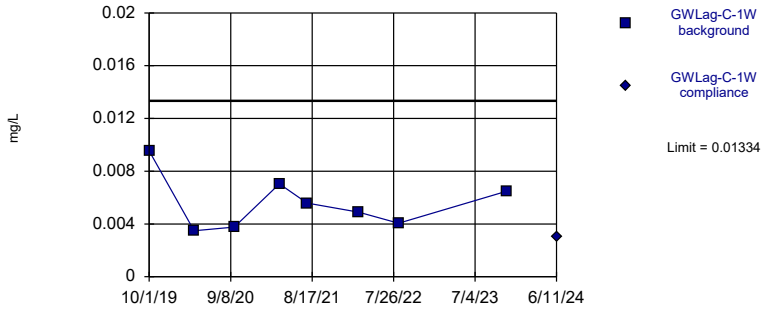
Constituent: Lead Analysis Run 10/23/2024 3:07 PM View: 2024 SSN Intrawell PL CW-Lag-C-1W
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.005605, Std. Dev.=0.002038, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9154, critical = 0.749. Kappa = 3.795 (c=13, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0002701.

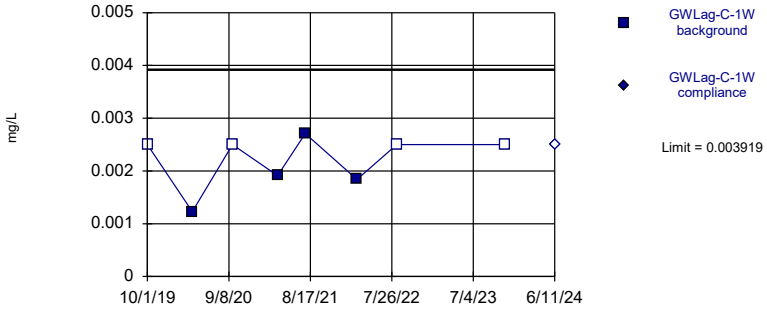
Constituent: Nickel Analysis Run 10/23/2024 3:07 PM View: 2024 SSN Intrawell PL CW-Lag-C-1W
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.001923, Std. Dev.=0.000526, n=8, 50% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8219, critical = 0.749. Kappa = 3.795 (c=13, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0002701.

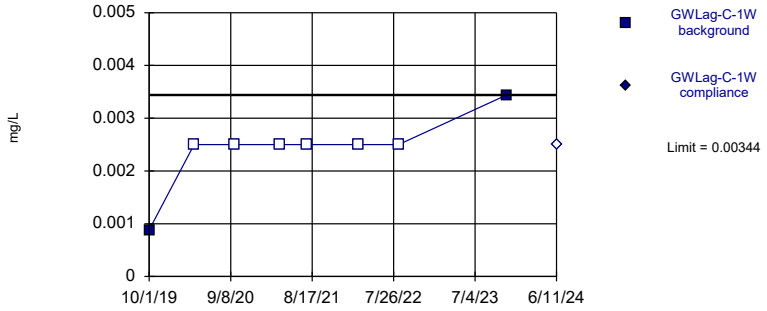
Constituent: Selenium Analysis Run 10/23/2024 3:07 PM View: 2024 SSN Intrawell PL CW-Lag-C-1W
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 75% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

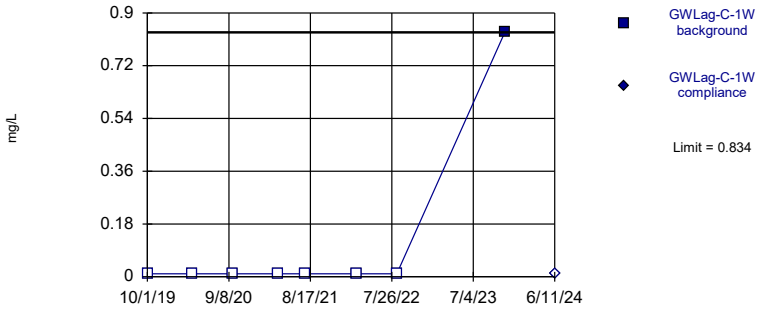
Constituent: Vanadium Analysis Run 10/23/2024 3:07 PM View: 2024 SSN Intrawell PL CW-Lag-C-1W
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Sanitas™ v.9.6.37 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 87.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Zinc Analysis Run 10/23/2024 3:07 PM View: 2024 SSN Intrawell PL CW-Lag-C-1W

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW Sanitas Master

Mann-Kendall Trend Table and Graphs

Trend Test

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit Printed 11/6/2024, 10:51 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Alpha	Method
1,1,1-Trichloroethane (ug/L)	MW1-99	0	3	21	No	8	87.5	0.01	NP
1,1-Dichloroethane (ug/L)	MW2-93	0.9388	20	21	No	8	50	0.01	NP
1,1-Dichloroethane (ug/L)	MW4-93	-0.1556	-13	-21	No	8	0	0.01	NP
1,1-Dichloroethane (ug/L)	MW-37	-12.48	-12	-21	No	8	0	0.01	NP
1,1-Dichloroethane (ug/L)	MW-39R	0.2045	2	21	No	8	0	0.01	NP
1,1-Dichloroethane (ug/L)	PZ-10	-0.05333	-4	-21	No	8	0	0.01	NP
1,1-Dichloroethene (ug/L)	MW1-99	0	3	21	No	8	87.5	0.01	NP
1,1-Dichloroethene (ug/L)	MW2-93	0	9	21	No	8	75	0.01	NP
1,1-Dichloroethene (ug/L)	MW-37	-0.9031	-14	-21	No	8	0	0.01	NP
1,2-Dichloroethane (ug/L)	MW1-99	0	3	21	No	8	87.5	0.01	NP
1,2-Dichloropropane (ug/L)	MW1-99	0	3	21	No	8	87.5	0.01	NP
1,4-Dichlorobenzene (ug/L)	MW4-90	0	-2	-21	No	8	62.5	0.01	NP
1,4-Dichlorobenzene (ug/L)	MW4-93	0.1997	8	21	No	8	12.5	0.01	NP
1,4-Dichlorobenzene (ug/L)	MW7-90R	-0.136	-9	-21	No	8	25	0.01	NP
1,4-Dichlorobenzene (ug/L)	PZ-10	-0.519	-10	-21	No	8	0	0.01	NP
2,4,5-TP [Silvex] [2C] (ug/L)	MW-39R	-0.02658	-4	-8	No	4	75	0.01	NP
2,4-D [2C] (ug/L)	MW4-93	-0.04145	-14	-21	No	8	87.5	0.01	NP
3/4-Methylphenol (ug/L)	MW4-93	-0.036	-14	-21	No	8	87.5	0.01	NP
4,4`-DDT (ug/L)	MW4-93	0	2	21	No	8	75	0.01	NP
Acetone (ug/L)	MW4-93	0	-9	-21	No	8	75	0.01	NP
Acetone (ug/L)	MW-43	0	-2	-18	No	7	42.86	0.01	NP
Antimony (mg/L)	MW4-93	0.0005332	21	21	No	8	50	0.01	NP
Arsenic (mg/L)	MW1-99	-0.00009816	-9	-21	No	8	37.5	0.01	NP
Arsenic (mg/L)	MW2-93	-0.0001916	-12	-21	No	8	0	0.01	NP
Arsenic (mg/L)	MW4-90	0.0001935	6	21	No	8	12.5	0.01	NP
Arsenic (mg/L)	MW4-93	0.0003245	14	21	No	8	12.5	0.01	NP
Arsenic (mg/L)	MW7-90R	-0.01383	-20	-21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-37	-0.0002171	-4	-21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-38	0	-7	-21	No	8	87.5	0.01	NP
Arsenic (mg/L)	MW-43	0.0008742	7	18	No	7	0	0.01	NP
Arsenic (mg/L)	PZ-10	0.003252	4	21	No	8	0	0.01	NP
Barium (mg/L)	MW1-99	-0.004552	-12	-21	No	8	0	0.01	NP
Barium (mg/L)	MW2-93	0.02685	12	21	No	8	0	0.01	NP
Barium (mg/L)	MW4-90	0.0002997	0	21	No	8	0	0.01	NP
Barium (mg/L)	MW4-93	-0.0008501	-10	-21	No	8	0	0.01	NP
Barium (mg/L)	MW7-90R	0.06633	18	21	No	8	0	0.01	NP
Barium (mg/L)	MW7-93	-0.007863	-10	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-37	-0.0004274	-3	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-38	0.0008889	0	21	No	8	0	0.01	NP
Barium (mg/L)	MW-39R	-0.002255	-2	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-43	0.01096	1	18	No	7	0	0.01	NP
Barium (mg/L)	PZ-10	0.01771	10	21	No	8	0	0.01	NP
Benzene (ug/L)	MW4-90	0	-3	-21	No	8	87.5	0.01	NP
Benzene (ug/L)	MW4-93	-0.03357	-6	-21	No	8	0	0.01	NP
Benzene (ug/L)	MW7-90R	-0.06332	-17	-21	No	8	25	0.01	NP
Benzene (ug/L)	MW-37	-0.02533	-6	-21	No	8	0	0.01	NP
Benzene (ug/L)	MW-39R	0.1592	10	21	No	8	12.5	0.01	NP
Benzene (ug/L)	PZ-10	0.1218	3	21	No	8	0	0.01	NP
Beryllium (mg/L)	MW4-93	0	3	21	No	8	87.5	0.01	NP
Cadmium (mg/L)	MW2-93	-9.9e-7	-1	-21	No	8	50	0.01	NP

Trend Test

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit Printed 11/6/2024, 10:51 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Alpha	Method
Cadmium (mg/L)	MW4-93	0.0001086	15	21	No	8	37.5	0.01	NP
Cadmium (mg/L)	MW7-93	-0.000013	-4	-21	No	8	12.5	0.01	NP
Cadmium (mg/L)	PZ-10	-0.000002274	-13	-21	No	8	87.5	0.01	NP
Chlorobenzene (ug/L)	MW2-93	-0.7527	-18	-21	No	8	50	0.01	NP
Chlorobenzene (ug/L)	MW4-90	0	1	21	No	8	75	0.01	NP
Chlorobenzene (ug/L)	MW4-93	-2.127	-12	-21	No	8	0	0.01	NP
Chlorobenzene (ug/L)	MW-37	-0.3814	-7	-21	No	8	0	0.01	NP
Chlorobenzene (ug/L)	PZ-10	0.1525	3	21	No	8	0	0.01	NP
Chloroethane (ug/L)	MW4-90	-0.0009881	0	21	No	8	0	0.01	NP
Chloroethane (ug/L)	MW-37	-0.6782	-6	-21	No	8	0	0.01	NP
Chloroethane (ug/L)	PZ-10	-0.4159	-10	-21	No	8	0	0.01	NP
Chromium (mg/L)	MW4-93	0	-8	-21	No	8	62.5	0.01	NP
Chromium (mg/L)	MW-38	-0.0003554	-18	-21	No	8	0	0.01	NP
cis-1,2-Dichloroethene (ug/L)	MW2-93	0.08501	12	21	No	8	50	0.01	NP
cis-1,2-Dichloroethene (ug/L)	MW4-93	-0.007807	0	21	No	8	0	0.01	NP
cis-1,2-Dichloroethene (ug/L)	MW-37	0.1787	10	21	No	8	0	0.01	NP
cis-1,2-Dichloroethene (ug/L)	MW-39R	1.347	6	21	No	8	0	0.01	NP
cis-1,2-Dichloroethene (ug/L)	PZ-10	-0.06852	-4	-21	No	8	12.5	0.01	NP
Cobalt (mg/L)	MW1-99	0.00021	12	21	No	8	12.5	0.01	NP
Cobalt (mg/L)	MW2-93	-0.0003611	-6	-21	No	8	12.5	0.01	NP
Cobalt (mg/L)	MW4-90	-0.0003886	-8	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW4-93	0.001165	8	21	No	8	0	0.01	NP
Cobalt (mg/L)	MW7-90R	-0.003426	-18	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW7-93	-0.001437	-10	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-37	-0.001851	-8	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-39R	-0.00003477	-6	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-43	0.00008757	3	18	No	7	0	0.01	NP
Cobalt (mg/L)	PZ-10	0.003321	8	21	No	8	0	0.01	NP
Copper (mg/L)	MW2-93	0	-8	-21	No	8	62.5	0.01	NP
Copper (mg/L)	MW4-93	0	1	21	No	8	37.5	0.01	NP
Copper (mg/L)	MW7-90R	0	7	21	No	8	75	0.01	NP
Copper (mg/L)	MW7-93	-0.0005651	-16	-21	No	8	0	0.01	NP
Copper (mg/L)	PZ-10	0	5	21	No	8	87.5	0.01	NP
Dichlorodifluoromethane (ug/L)	MW-39R	-0.1796	-2	-21	No	8	0	0.01	NP
Endosulfan sulfate (ug/L)	MW4-90	0.002921	10	21	No	8	87.5	0.01	NP
Endrin aldehyde (ug/L)	MW4-93	0	4	21	No	8	87.5	0.01	NP
Lead (mg/L)	MW4-93	0	-1	-21	No	8	37.5	0.01	NP
Lead (mg/L)	MW7-90R	0	4	21	No	8	50	0.01	NP
Lead (mg/L)	MW-37	0	-2	-21	No	8	62.5	0.01	NP
Lead (mg/L)	MW-39R	0	3	21	No	8	87.5	0.01	NP
Lead (mg/L)	MW-43	0	-6	-18	No	7	85.71	0.01	NP
Lead (mg/L)	PZ-10	0.0002456	12	21	No	8	50	0.01	NP
Methoxychlor (ug/L)	MW4-93	0	2	21	No	8	87.5	0.01	NP
Nickel (mg/L)	MW2-93	-0.009178	-16	-21	No	8	50	0.01	NP
Nickel (mg/L)	MW4-90	-0.0007737	-14	-21	No	8	12.5	0.01	NP
Nickel (mg/L)	MW4-93	-0.001479	-2	-21	No	8	0	0.01	NP
Nickel (mg/L)	MW7-90R	-0.0002823	-5	-21	No	8	37.5	0.01	NP
Nickel (mg/L)	MW7-93	-0.005133	-20	-21	No	8	0	0.01	NP
Nickel (mg/L)	MW-37	-0.00102	0	21	No	8	0	0.01	NP
Nickel (mg/L)	MW-39R	0.001426	7	21	No	8	0	0.01	NP

Trend Test

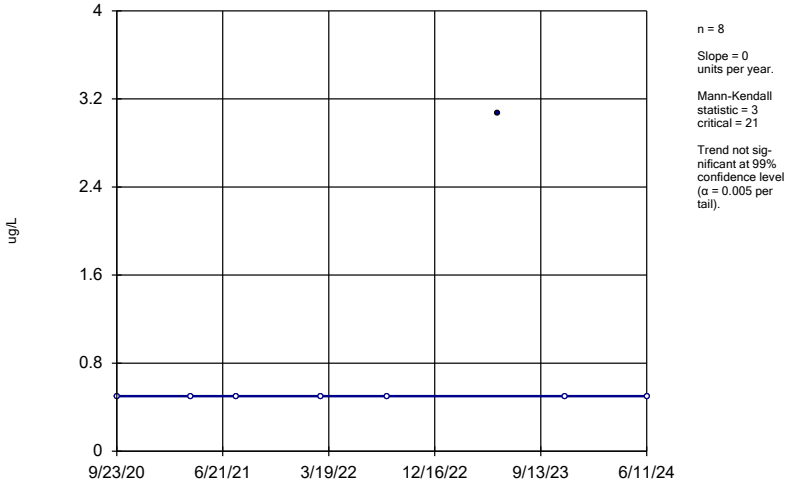
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit Printed 11/6/2024, 10:51 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Alpha	Method
Nickel (mg/L)	MW-43	0.0002465	5	18	No	7	0	0.01	NP
Nickel (mg/L)	PZ-10	0.001648	8	21	No	8	0	0.01	NP
Phenol (ug/L)	MW4-93	-0.036	-14	-21	No	8	87.5	0.01	NP
Selenium (mg/L)	MW1-99	0.000145	5	21	No	8	25	0.01	NP
Selenium (mg/L)	**MW-38**	**0.0009226**	**24**	**21**	**Yes**	**8**	**0**	**0.01**	**NP**
Sulfide (mg/L)	MW4-93	-0.009917	-10	-21	No	8	62.5	0.01	NP
Sulfide (mg/L)	MW7-90R	0	7	21	No	8	87.5	0.01	NP
Tetrachloroethene (ug/L)	MW-39R	0.04454	3	21	No	8	25	0.01	NP
Thallium (mg/L)	MW-43	0	-6	-18	No	7	85.71	0.01	NP
Toluene (ug/L)	MW4-90	0	7	21	No	8	87.5	0.01	NP
Trichloroethene (ug/L)	MW-39R	0.03683	4	21	No	8	0	0.01	NP
Vanadium (mg/L)	MW4-93	0.0005761	15	21	No	8	25	0.01	NP
Vanadium (mg/L)	PZ-10	0	5	21	No	8	87.5	0.01	NP
Vinyl Chloride (ug/L)	**MW-37**	**-0.3075**	**-22**	**-21**	**Yes**	**8**	**0**	**0.01**	**NP**
Vinyl Chloride (ug/L)	MW-39R	-0.2393	-4	-21	No	8	0	0.01	NP
Zinc (mg/L)	MW4-93	-0.001653	-8	-21	No	8	50	0.01	NP
Zinc (mg/L)	MW7-90R	0	-1	-21	No	8	75	0.01	NP

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW1-99

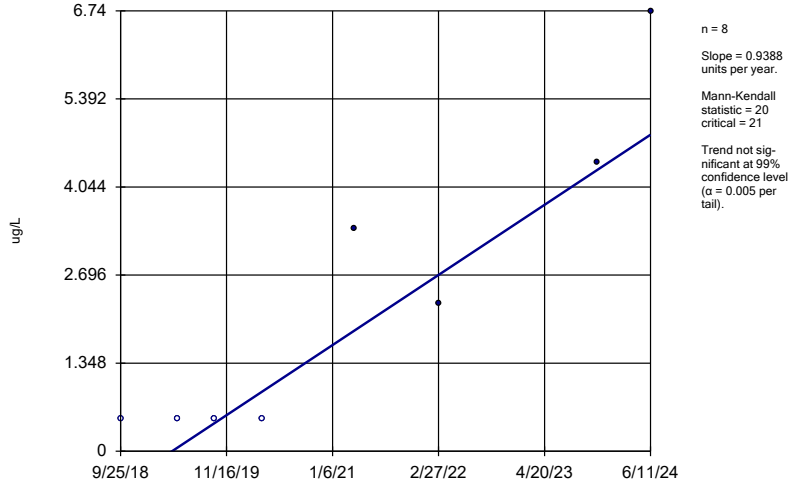


Constituent: 1,1,1-Trichloroethane Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2-93

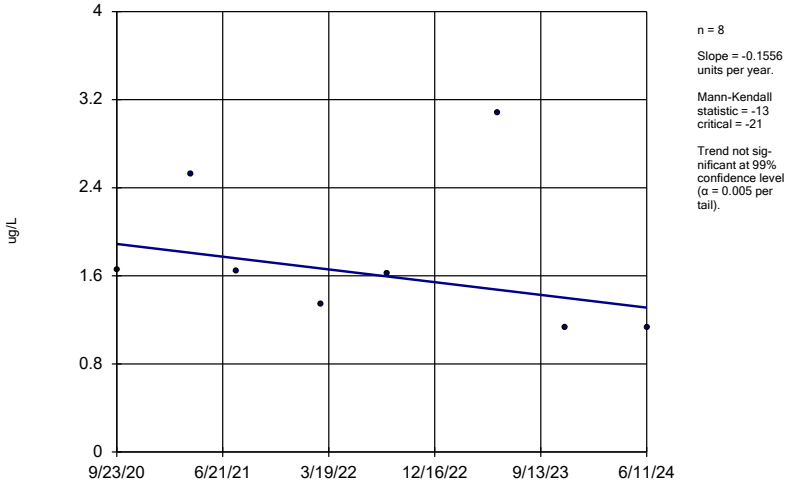


Constituent: 1,1-Dichloroethane Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-93

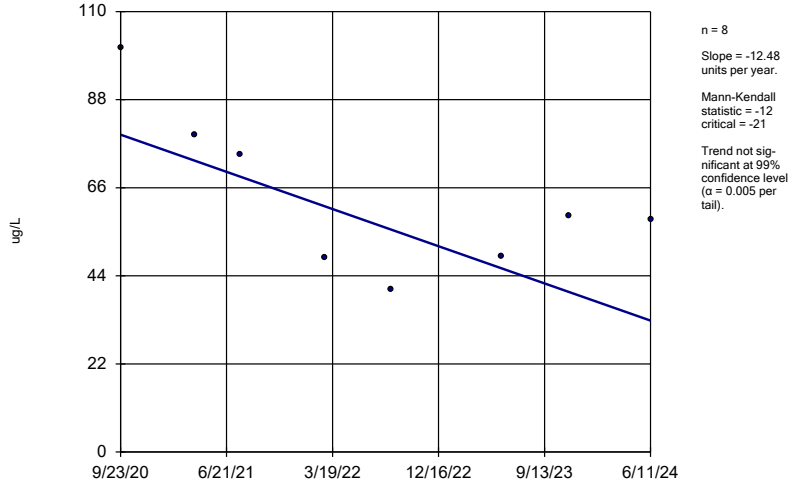


Constituent: 1,1-Dichloroethane Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37

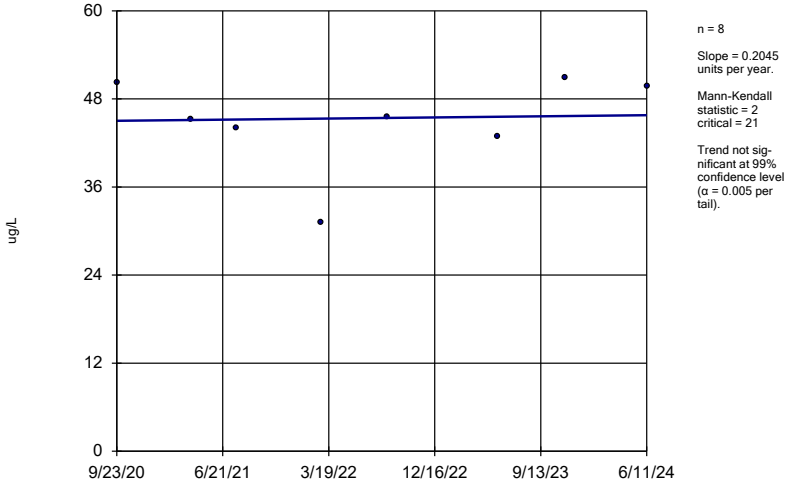


Constituent: 1,1-Dichloroethane Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-39R



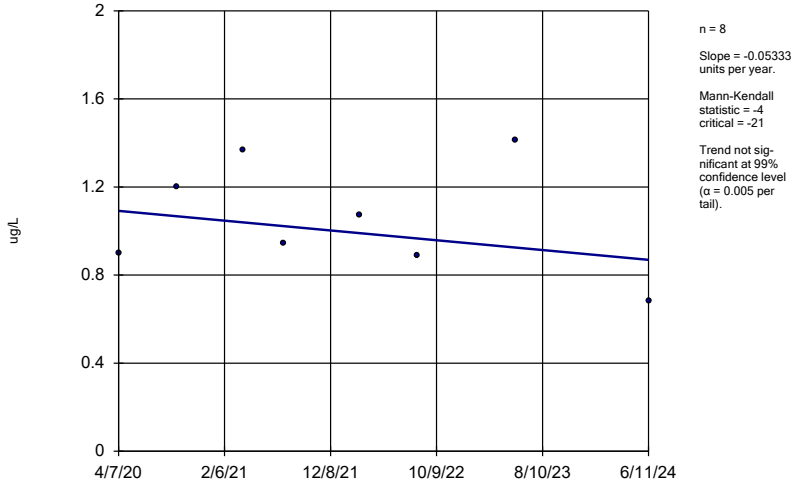
Constituent: 1,1-Dichloroethane Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



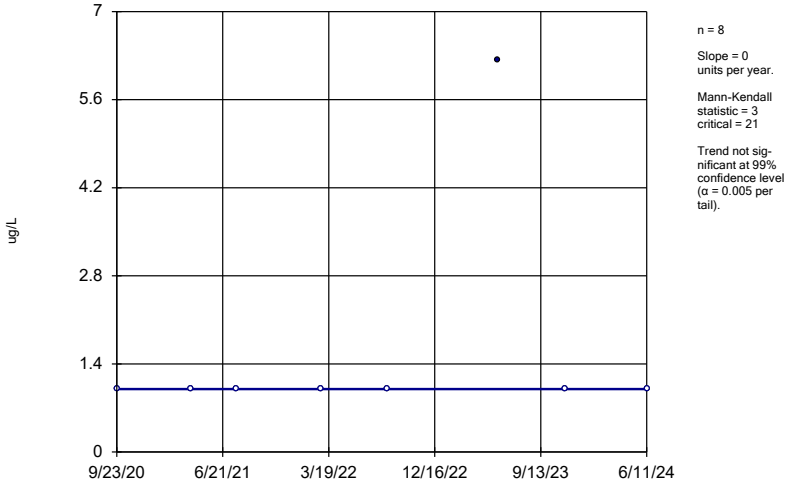
Constituent: 1,1-Dichloroethane Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW1-99



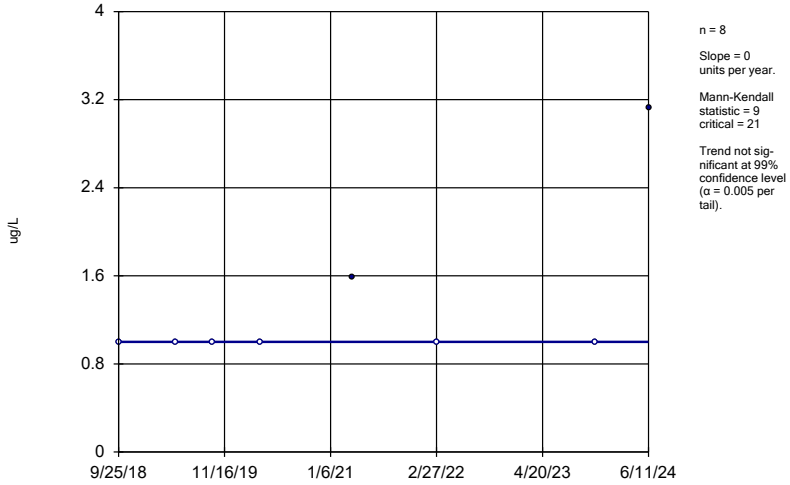
Constituent: 1,1-Dichloroethene Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2-93



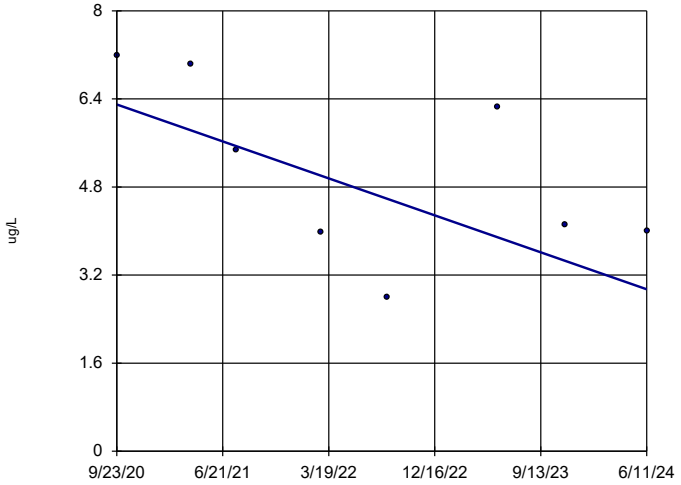
Constituent: 1,1-Dichloroethene Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



Constituent: 1,1-Dichloroethene Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

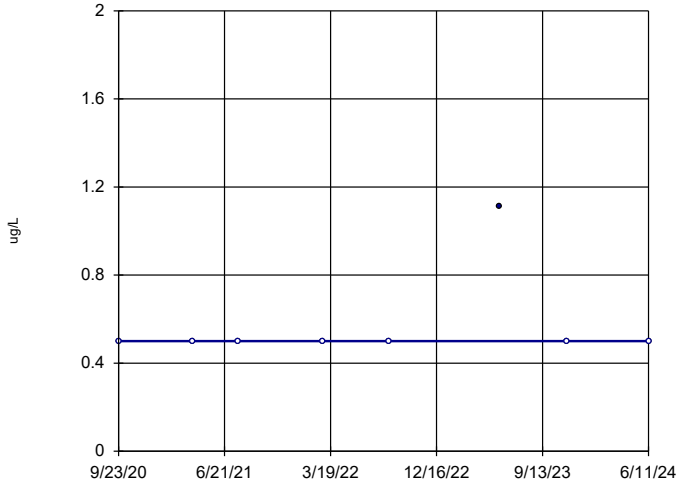
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW1-99



Constituent: 1,2-Dichloroethane Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

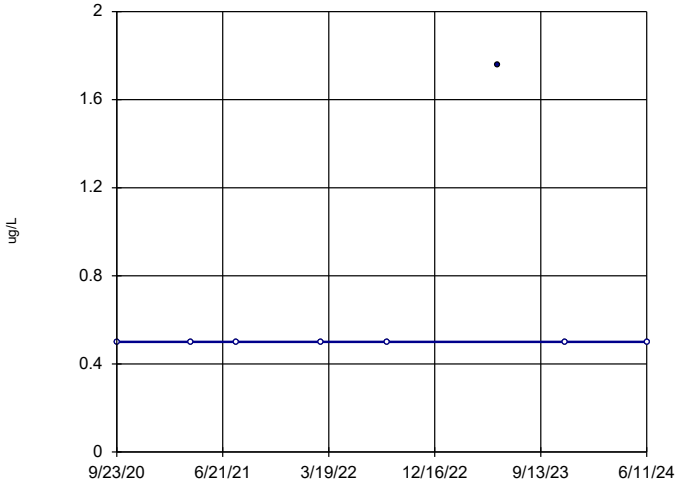
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW1-99



Constituent: 1,2-Dichloropropane Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

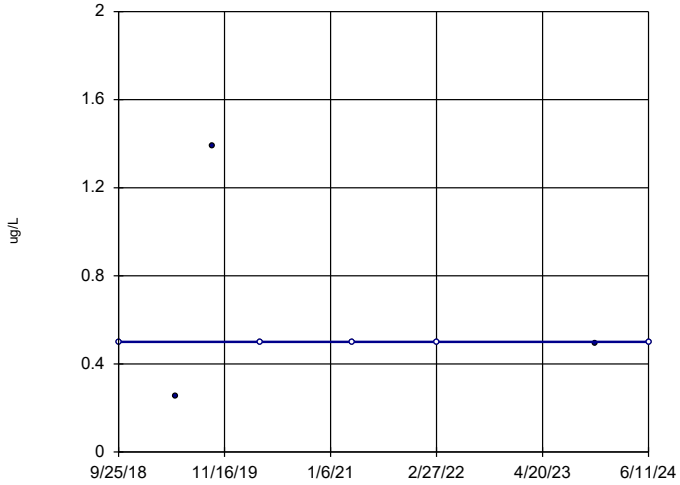
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-90



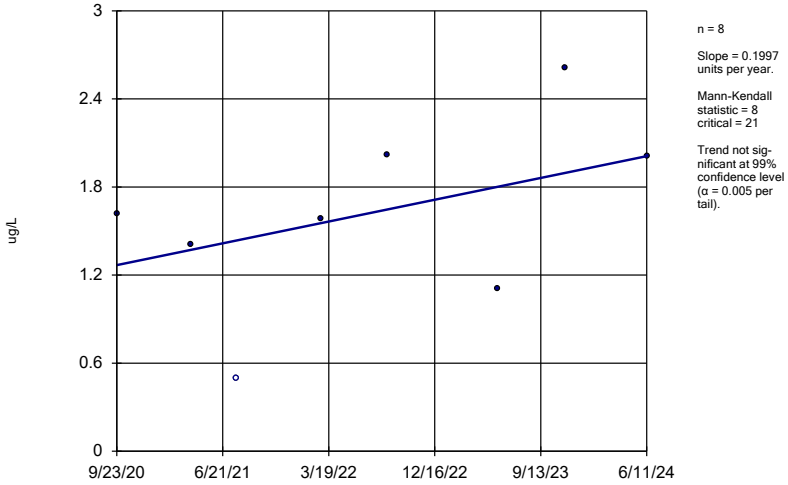
Constituent: 1,4-Dichlorobenzene Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0.1997 units per year.

Mann-Kendall statistic = 8
critical = 21

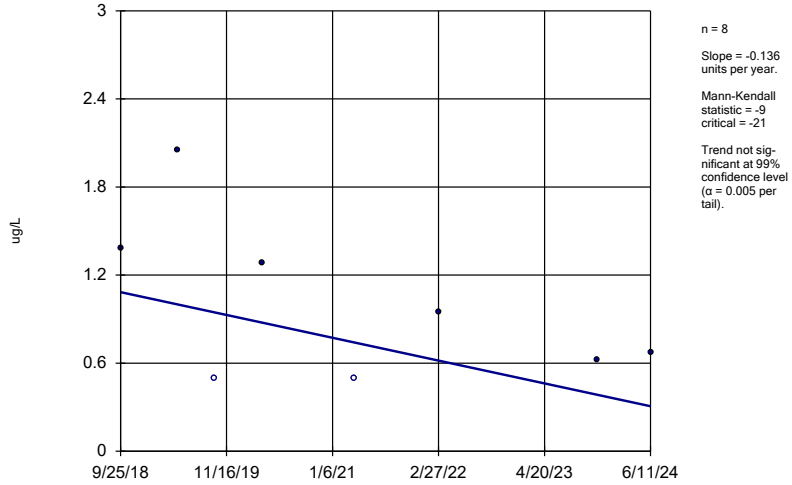
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: 1,4-Dichlorobenzene Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7-90R



n = 8

Slope = -0.136 units per year.

Mann-Kendall statistic = -9
critical = -21

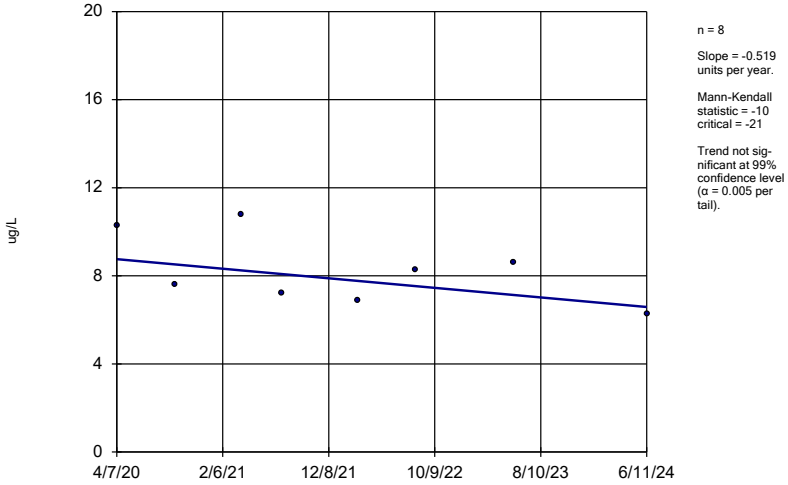
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: 1,4-Dichlorobenzene Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



n = 8

Slope = -0.519 units per year.

Mann-Kendall statistic = -10
critical = -21

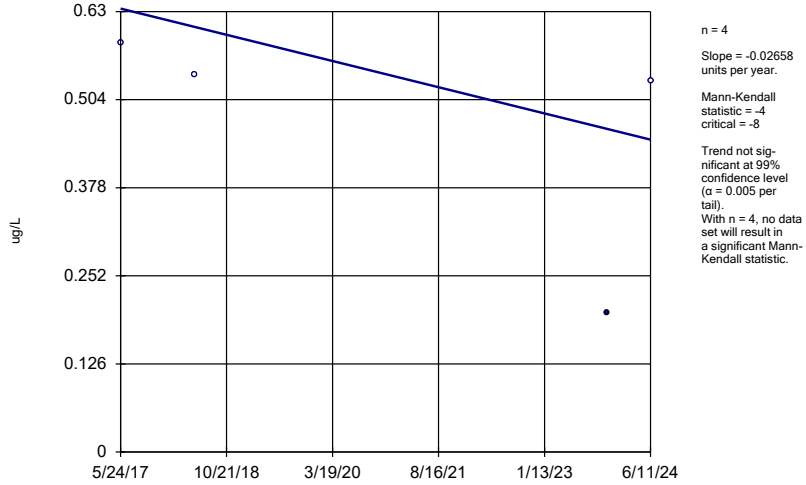
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: 1,4-Dichlorobenzene Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-39R



n = 4

Slope = -0.02658 units per year.

Mann-Kendall statistic = -4
critical = -8

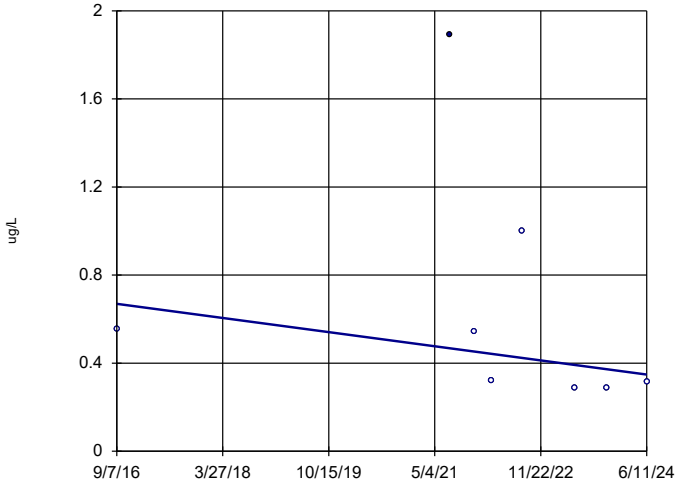
Trend not significant at 99% confidence level (α = 0.005 per tail).
With n = 4, no data set will result in a significant Mann-Kendall statistic.

Constituent: 2,4,5-TP [Silvex] [2C] Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = -0.04145 units per year.

Mann-Kendall statistic = -14
critical = -21

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

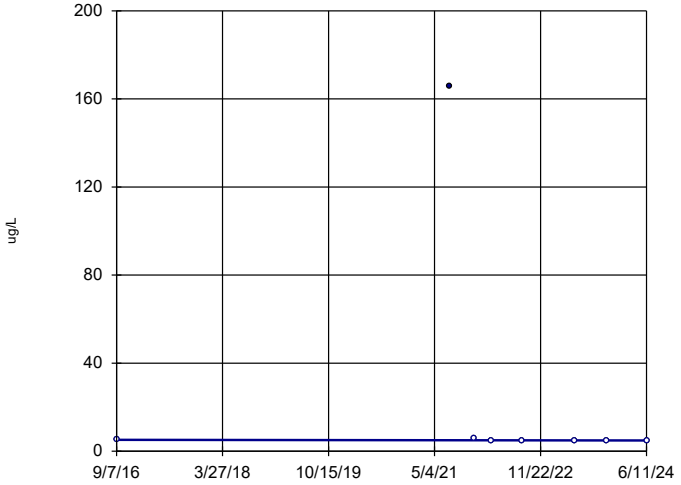
Constituent: 2,4-D [2C] Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = -0.036 units per year.

Mann-Kendall statistic = -14
critical = -21

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

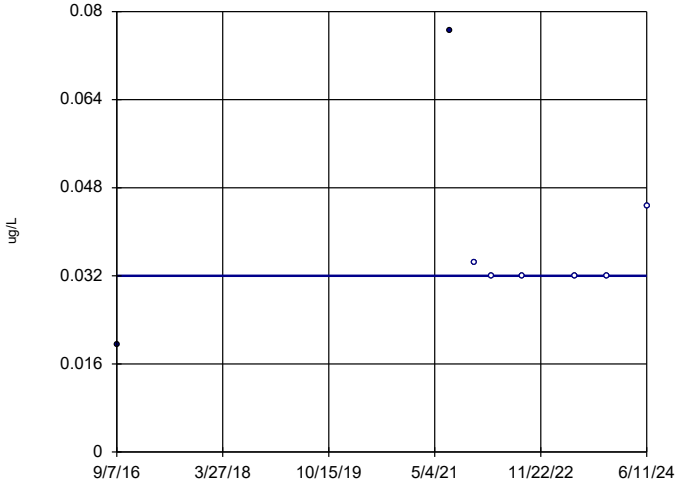
Constituent: 3/4-Methylphenol Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = 2
critical = 21

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

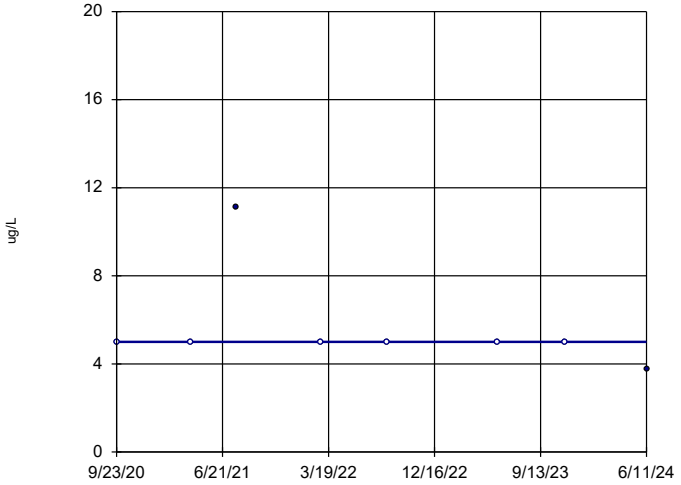
Constituent: 4,4`-DDT Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = -9
critical = -21

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

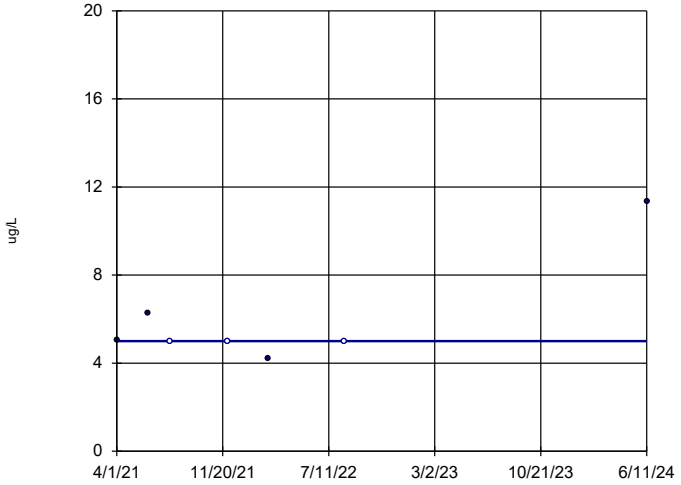
Constituent: Acetone Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-43



n = 7

Slope = 0 units per year.

Mann-Kendall statistic = -2
critical = -18

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

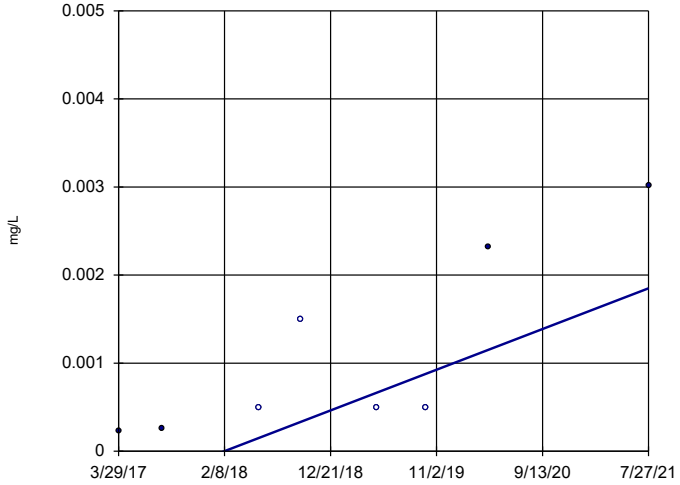
Constituent: Acetone Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0.0005332 units per year.

Mann-Kendall statistic = 21
critical = 21

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

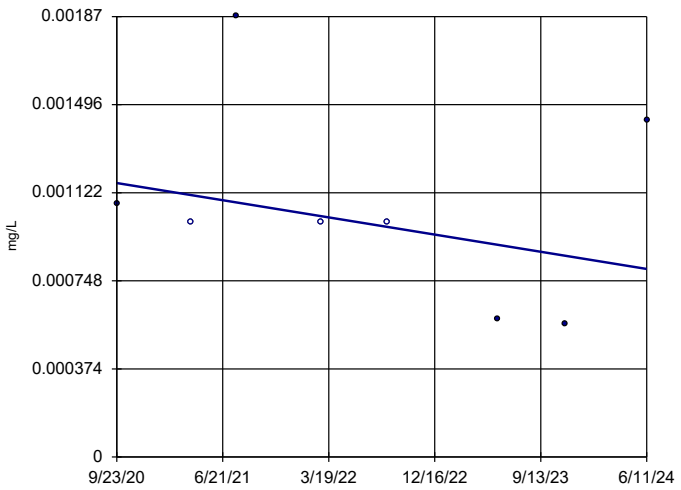
Constituent: Antimony Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW1-99



n = 8

Slope = -0.00009816 units per year.

Mann-Kendall statistic = -9
critical = -21

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

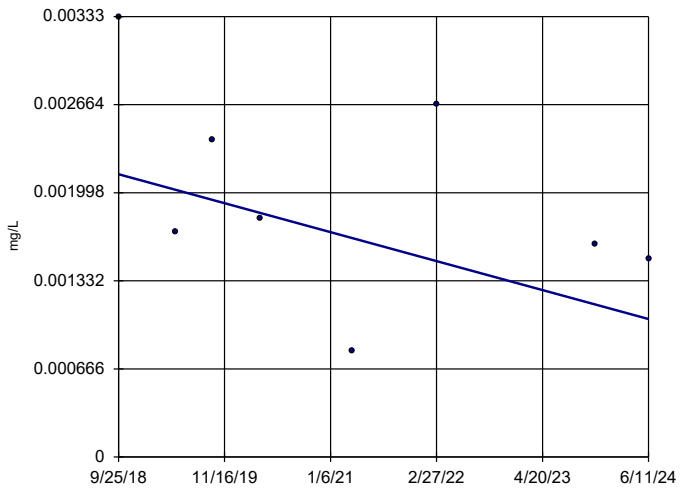
Constituent: Arsenic Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW2-93



n = 8

Slope = -0.0001916 units per year.

Mann-Kendall statistic = -12
critical = -21

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

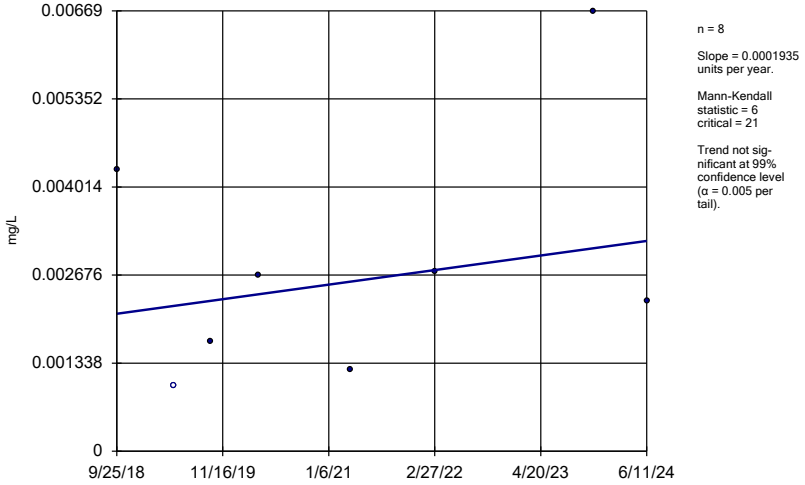
Constituent: Arsenic Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-90



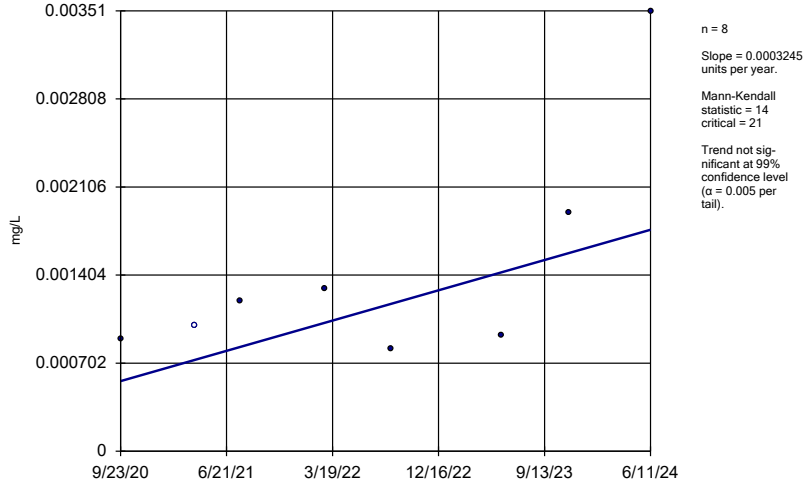
Constituent: Arsenic Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



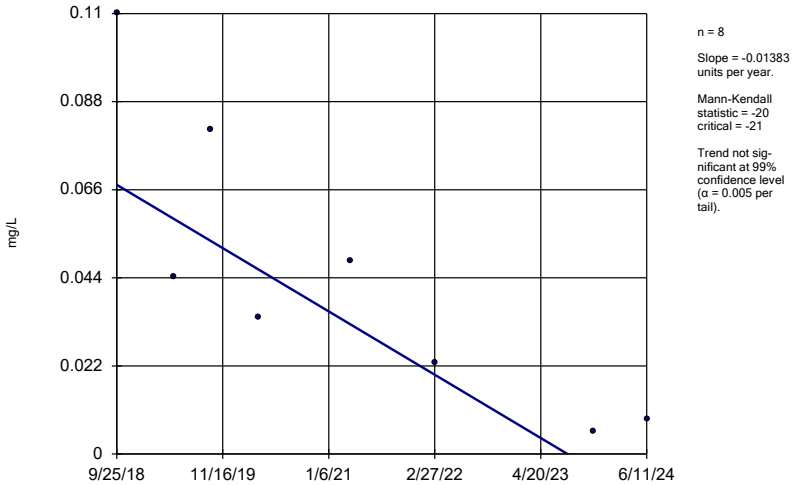
Constituent: Arsenic Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW7-90R



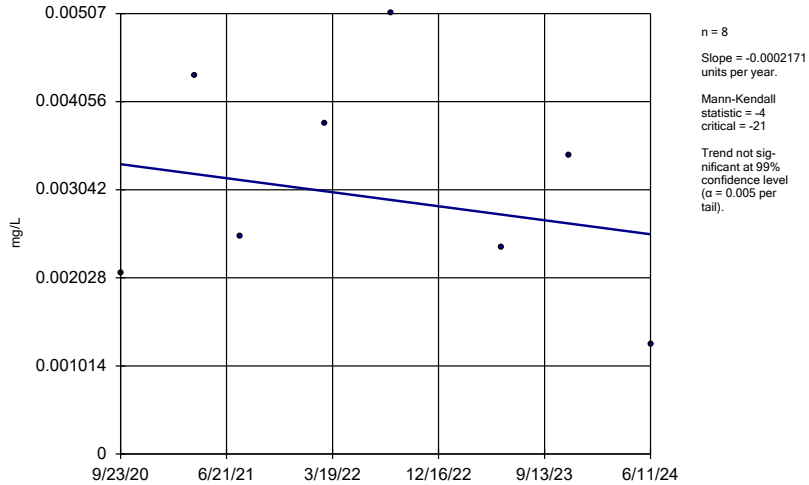
Constituent: Arsenic Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



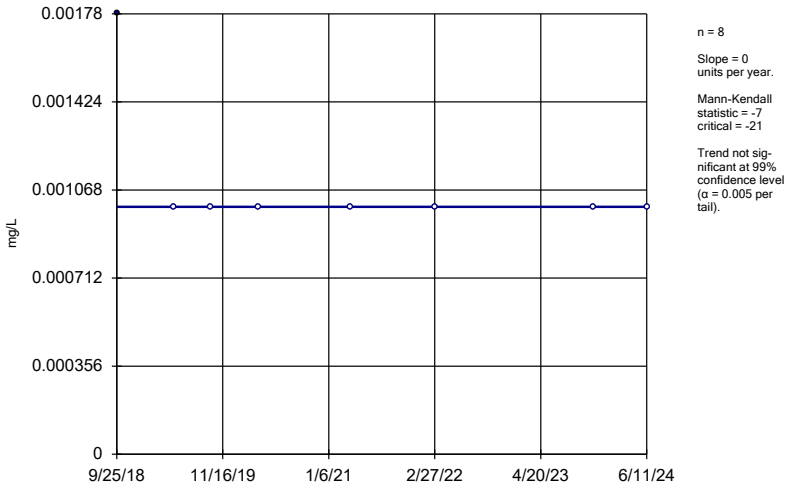
Constituent: Arsenic Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-38



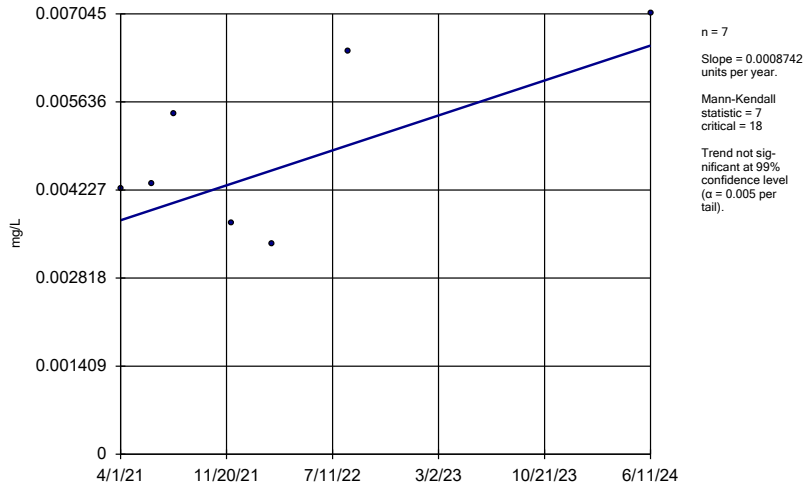
Constituent: Arsenic Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-43



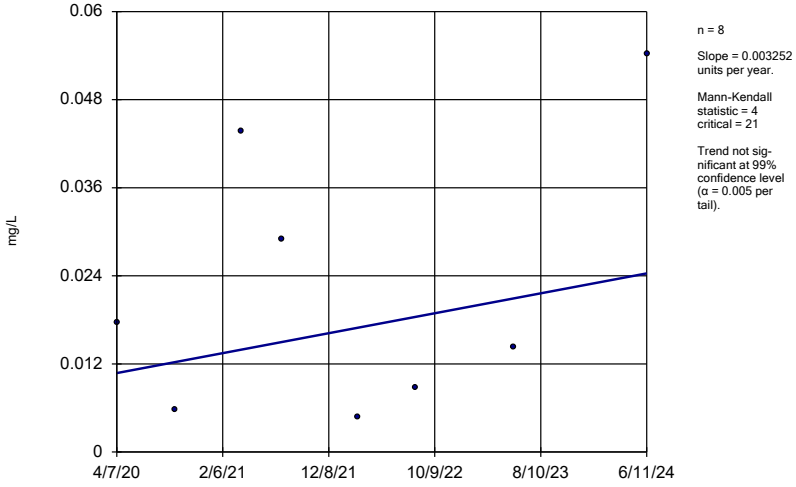
Constituent: Arsenic Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



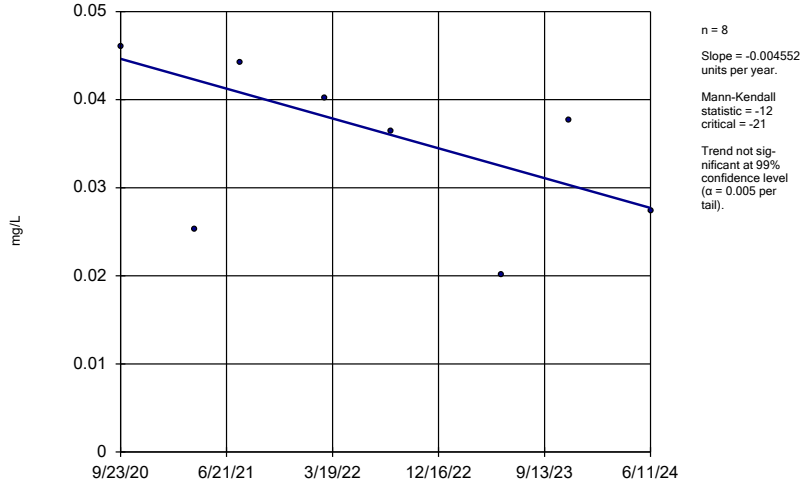
Constituent: Arsenic Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW1-99



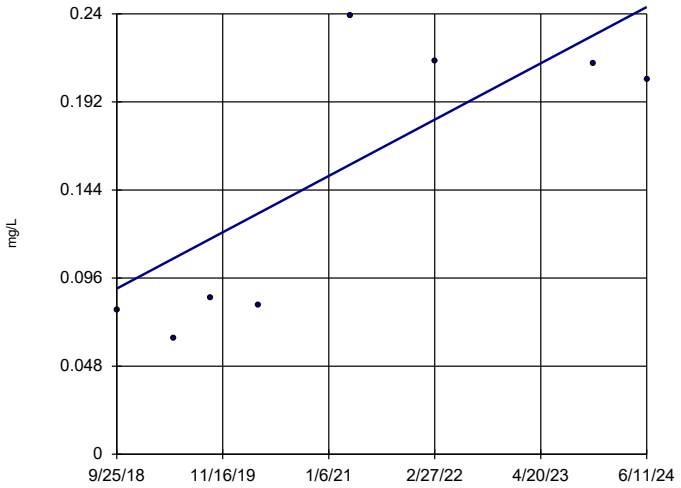
Constituent: Barium Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW2-93



n = 8

Slope = 0.02685 units per year.

Mann-Kendall statistic = 12
critical = 21

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

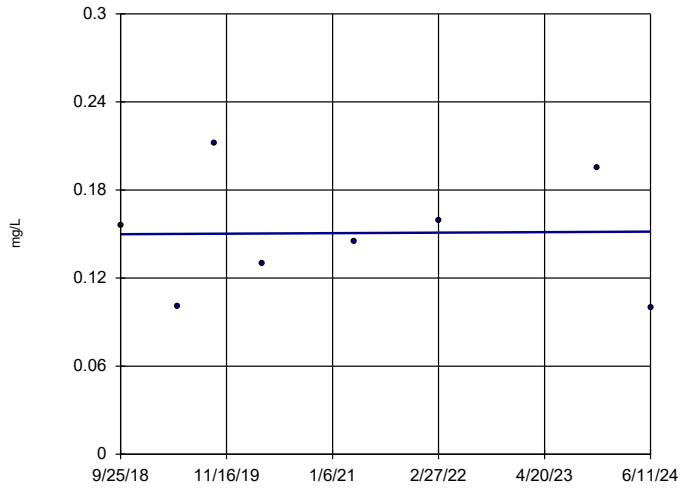
Constituent: Barium Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-90



n = 8

Slope = 0.0002997 units per year.

Mann-Kendall statistic = 0
critical = 21

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

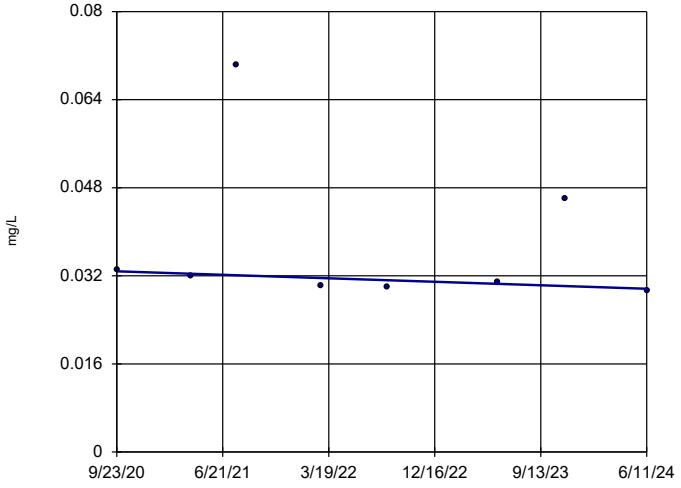
Constituent: Barium Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-93



n = 8

Slope = -0.0008501 units per year.

Mann-Kendall statistic = -10
critical = -21

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

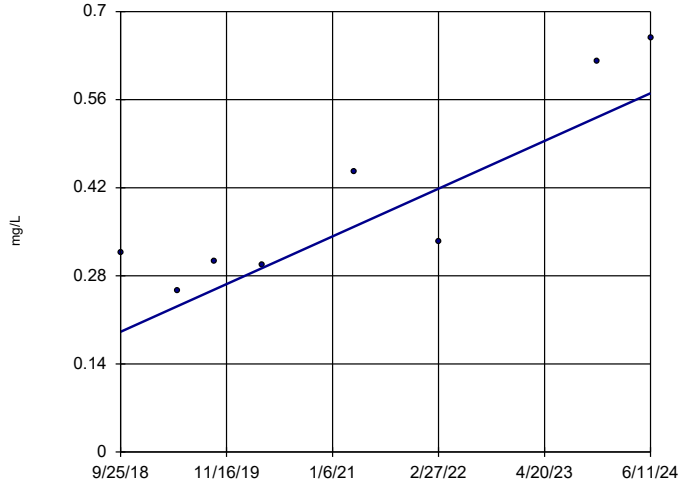
Constituent: Barium Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW7-90R



n = 8

Slope = 0.06633 units per year.

Mann-Kendall statistic = 18
critical = 21

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

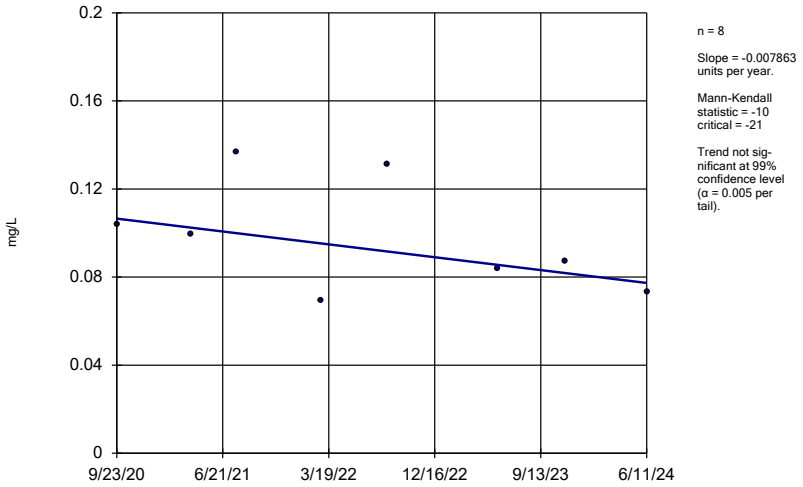
Constituent: Barium Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW7-93



n = 8

Slope = -0.007863 units per year.

Mann-Kendall statistic = -10
critical = -21

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

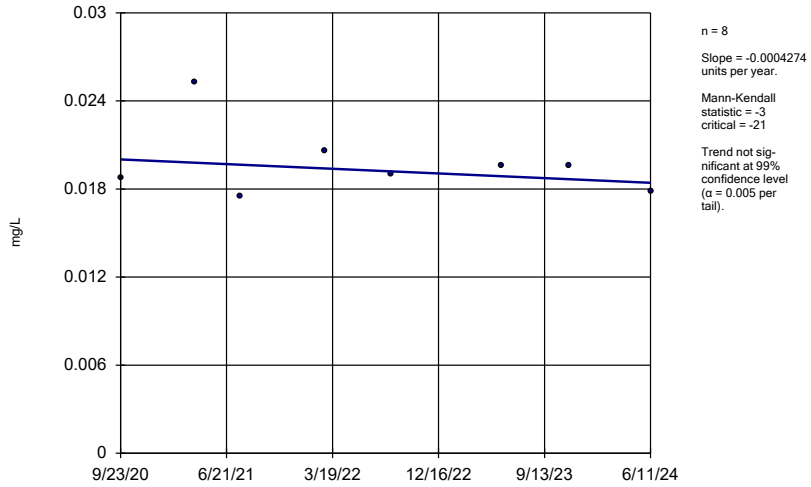
Constituent: Barium Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



n = 8

Slope = -0.0004274 units per year.

Mann-Kendall statistic = -3
critical = -21

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

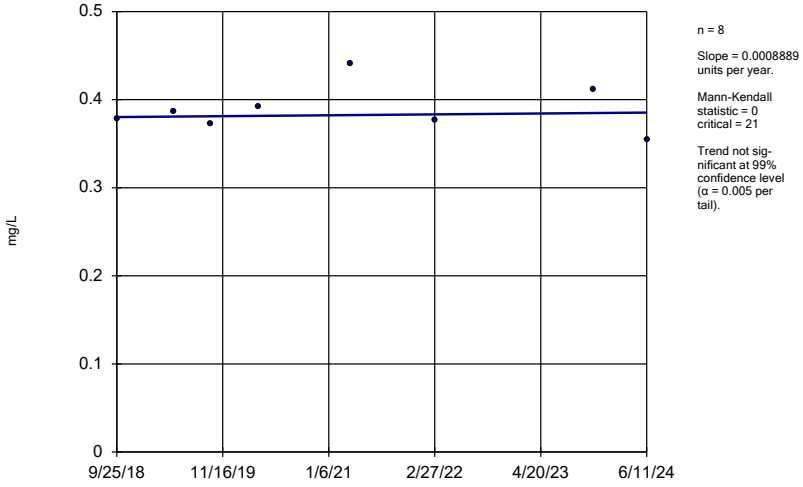
Constituent: Barium Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-38



n = 8

Slope = 0.0008889 units per year.

Mann-Kendall statistic = 0
critical = 21

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

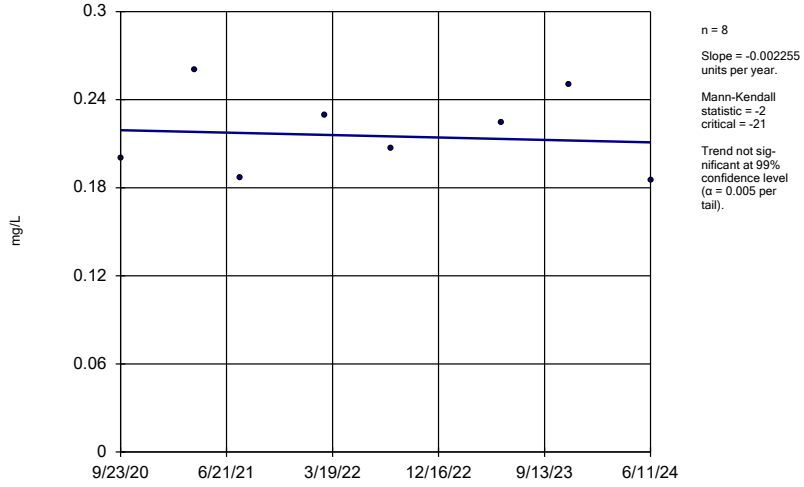
Constituent: Barium Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-39R



n = 8

Slope = -0.002255 units per year.

Mann-Kendall statistic = -2
critical = -21

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

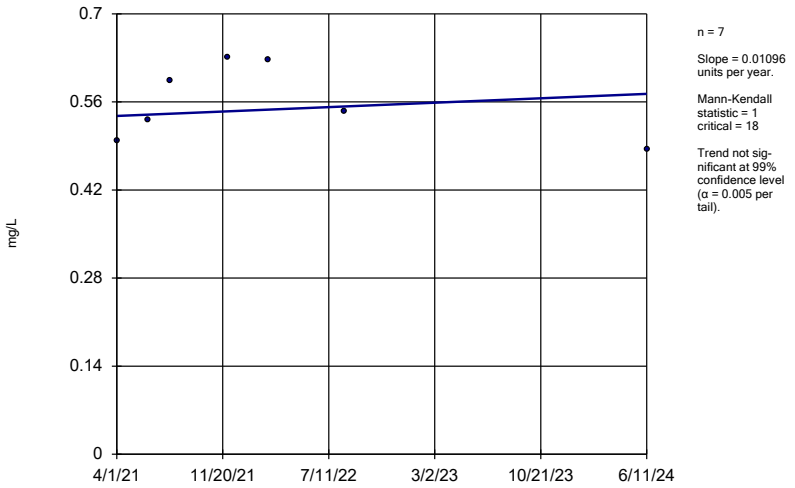
Constituent: Barium Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-43



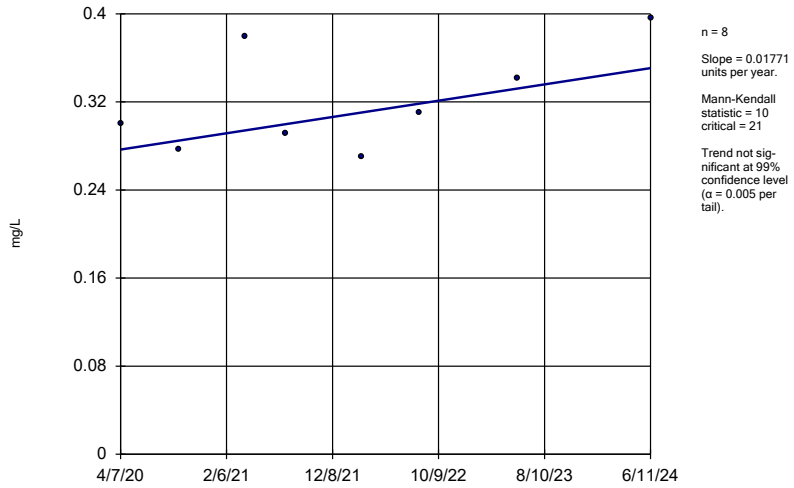
Constituent: Barium Analysis Run 11/6/2024 10:48 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



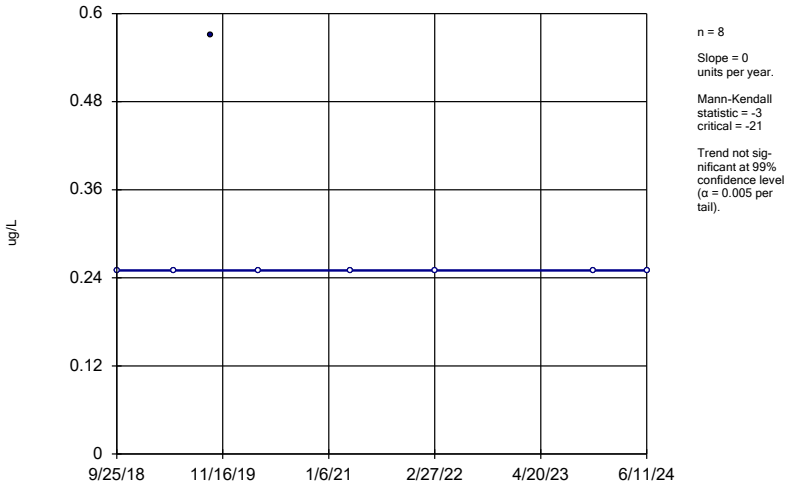
Constituent: Barium Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-90



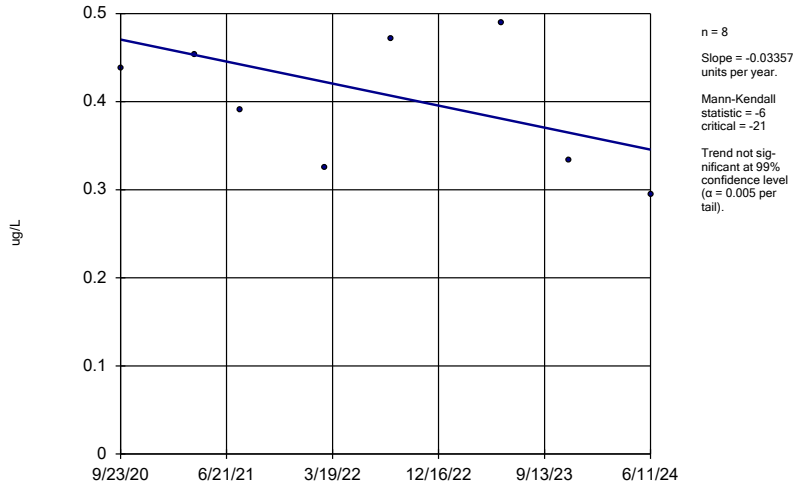
Constituent: Benzene Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-93



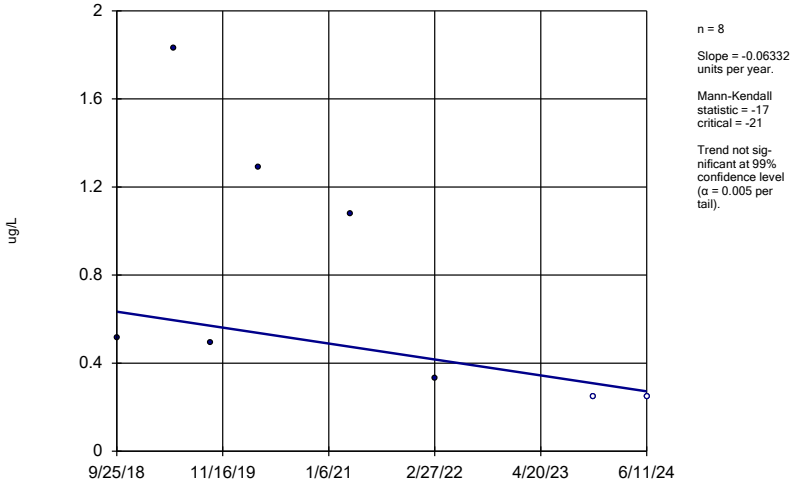
Constituent: Benzene Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7-90R



n = 8

Slope = -0.06332 units per year.

Mann-Kendall statistic = -17
critical = -21

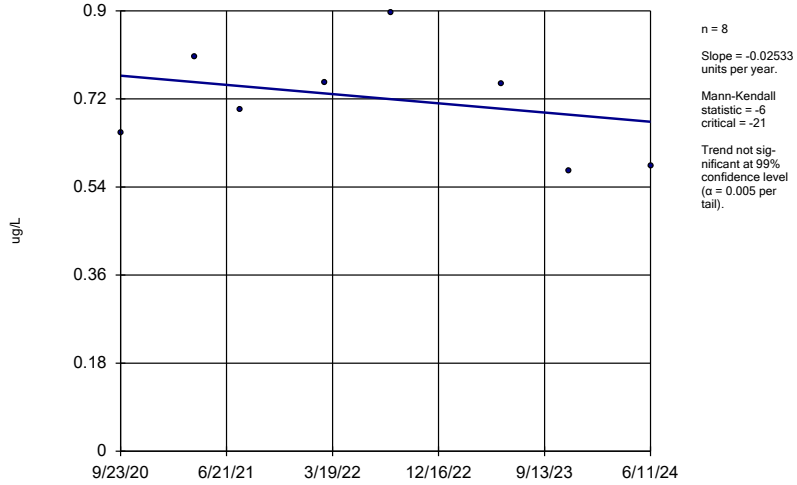
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Benzene Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



n = 8

Slope = -0.02533 units per year.

Mann-Kendall statistic = -6
critical = -21

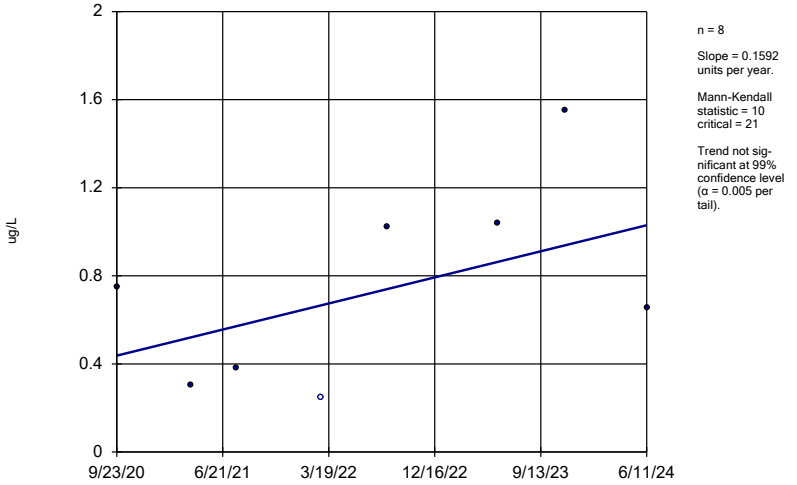
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Benzene Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-39R



n = 8

Slope = 0.1592 units per year.

Mann-Kendall statistic = 10
critical = 21

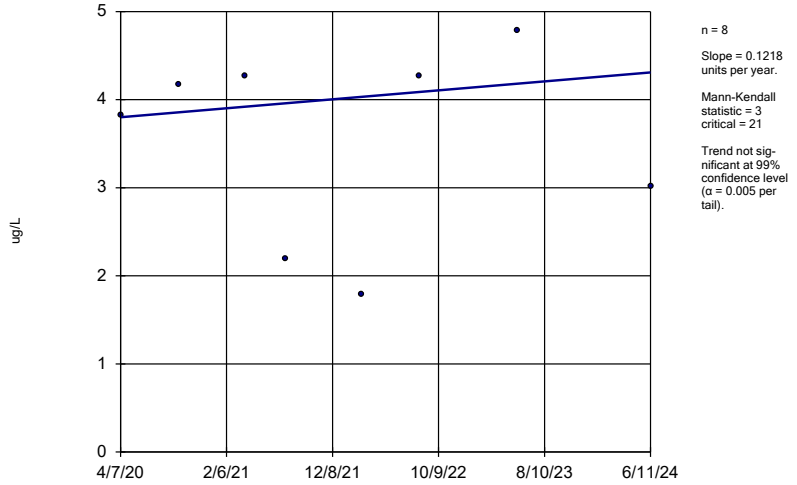
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Benzene Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



n = 8

Slope = 0.1218 units per year.

Mann-Kendall statistic = 3
critical = 21

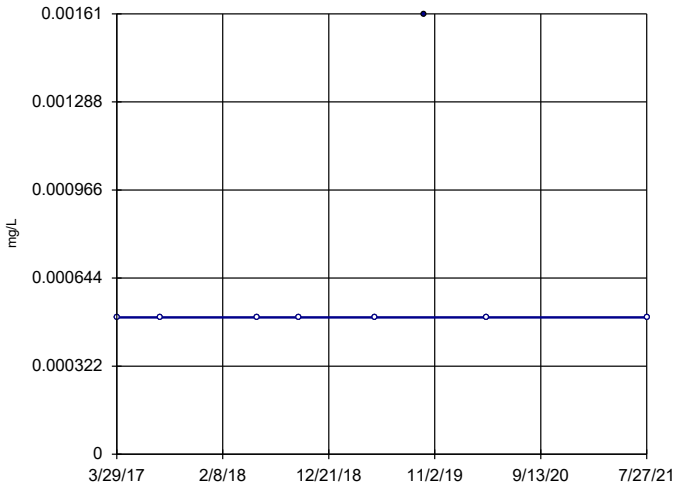
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Benzene Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = 3
critical = 21

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

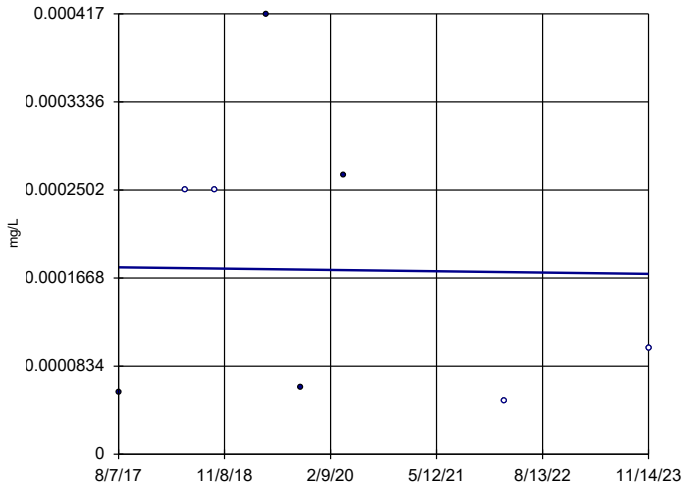
Constituent: Beryllium Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2-93



n = 8

Slope = -9.9e-7 units per year.

Mann-Kendall statistic = -1
critical = -21

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

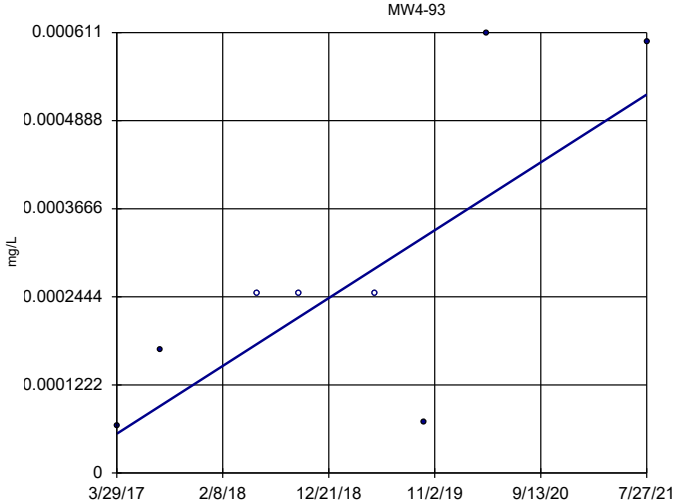
Constituent: Cadmium Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0.0001086 units per year.

Mann-Kendall statistic = 15
critical = 21

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

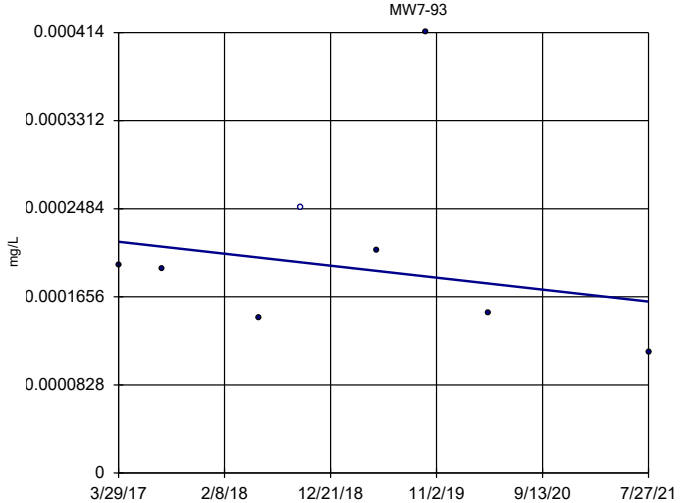
Constituent: Cadmium Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7-93



n = 8

Slope = -0.000013 units per year.

Mann-Kendall statistic = -4
critical = -21

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

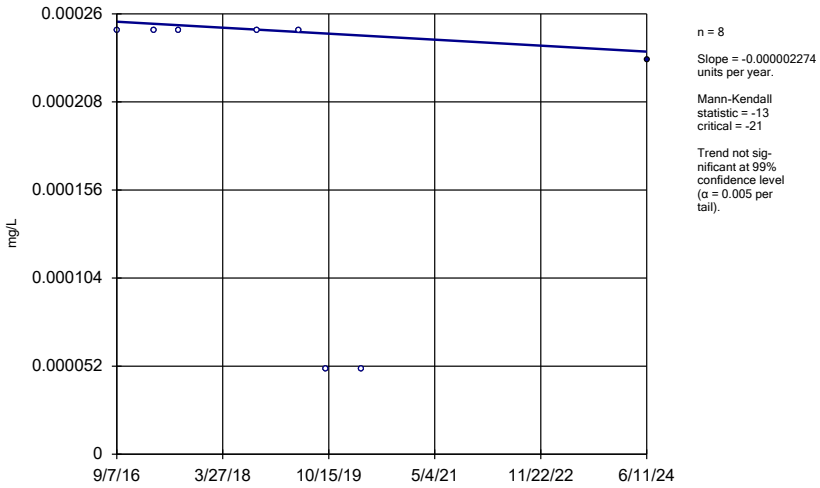
Constituent: Cadmium Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

PZ-10



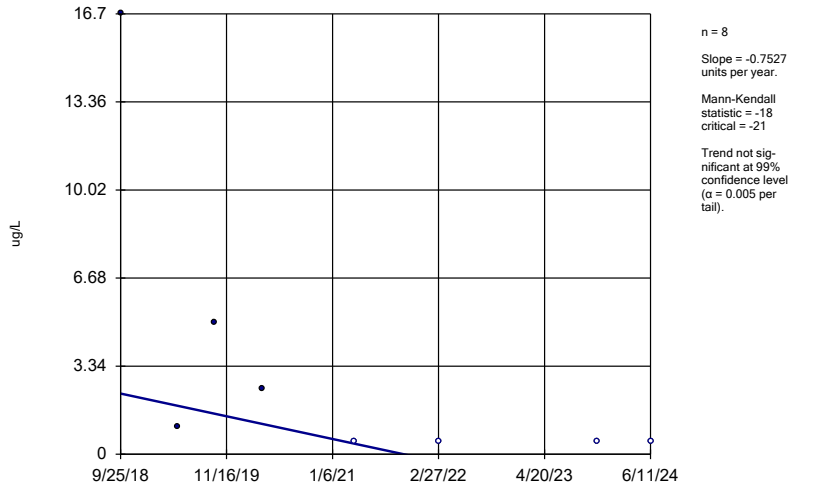
Constituent: Cadmium Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2-93



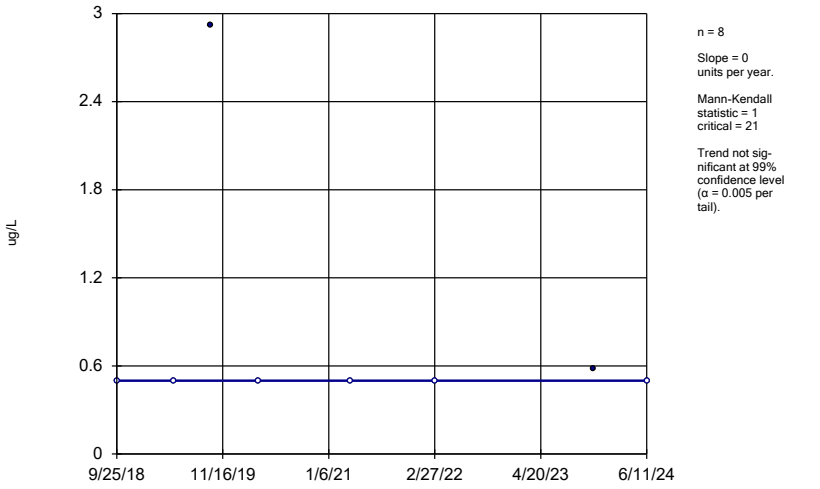
Constituent: Chlorobenzene Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-90



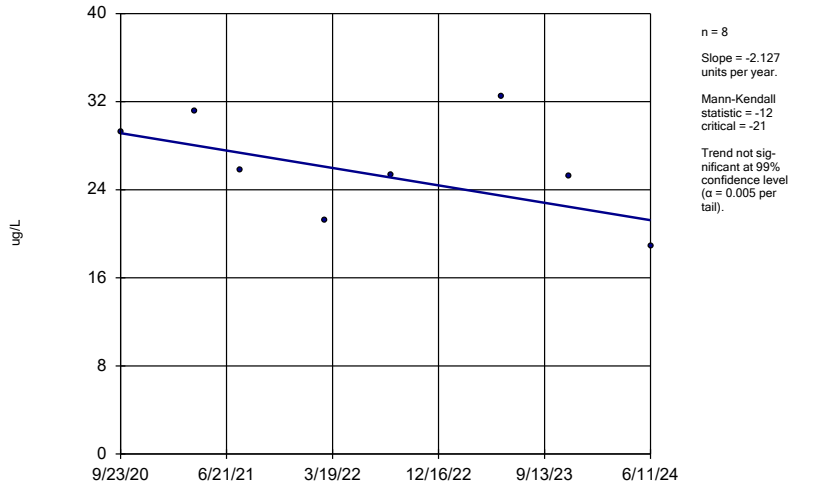
Constituent: Chlorobenzene Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-93



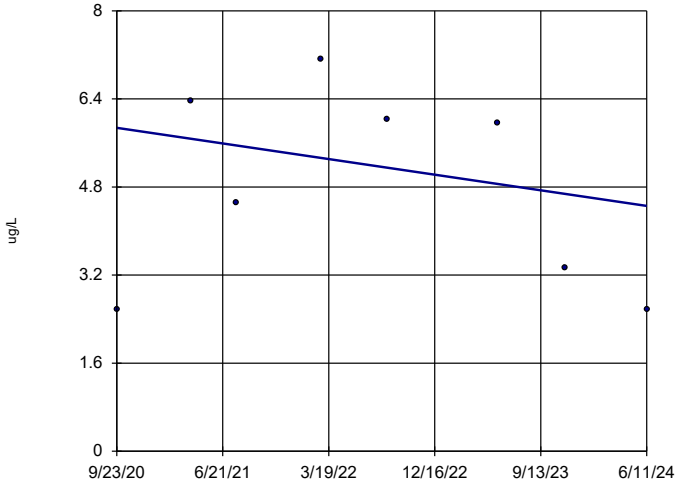
Constituent: Chlorobenzene Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



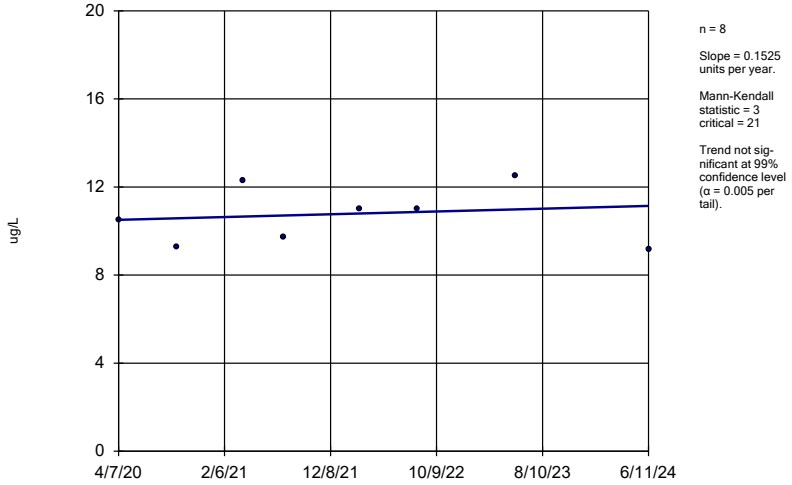
Constituent: Chlorobenzene Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



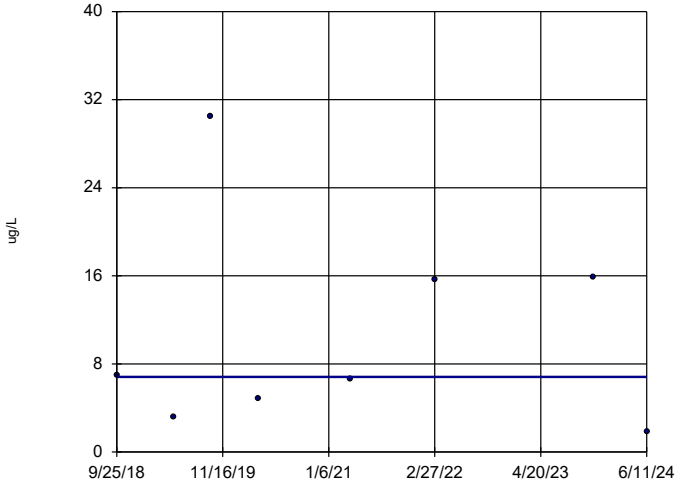
Constituent: Chlorobenzene Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-90



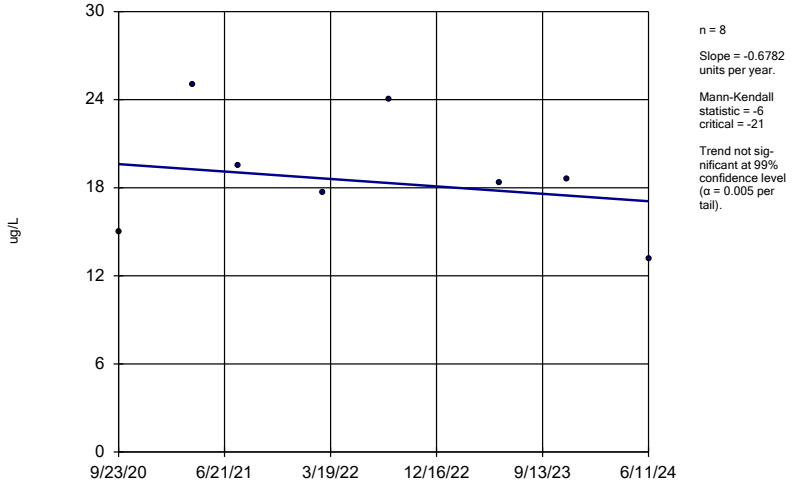
Constituent: Chloroethane Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



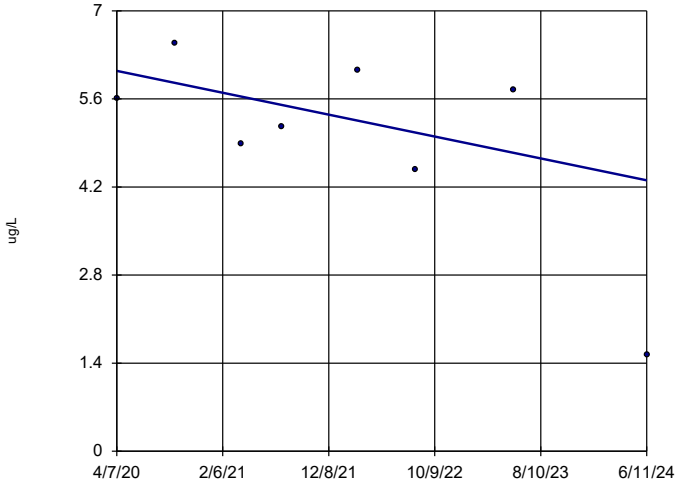
Constituent: Chloroethane Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



n = 8

Slope = -0.4159 units per year.

Mann-Kendall statistic = -10
critical = -21

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

Constituent: Chloroethane Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

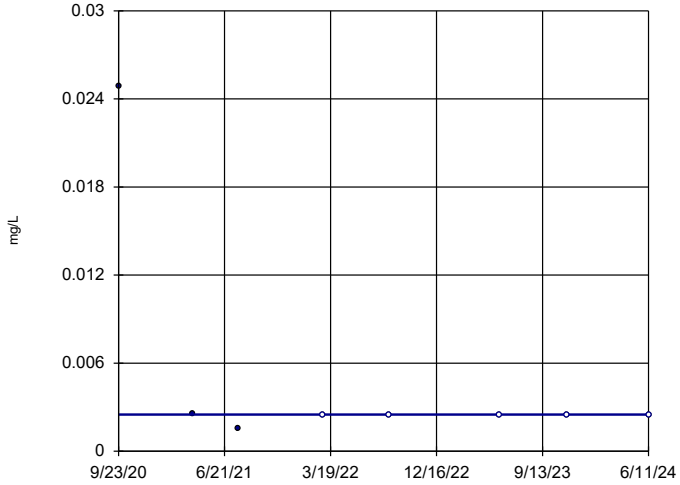
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = -8
critical = -21

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

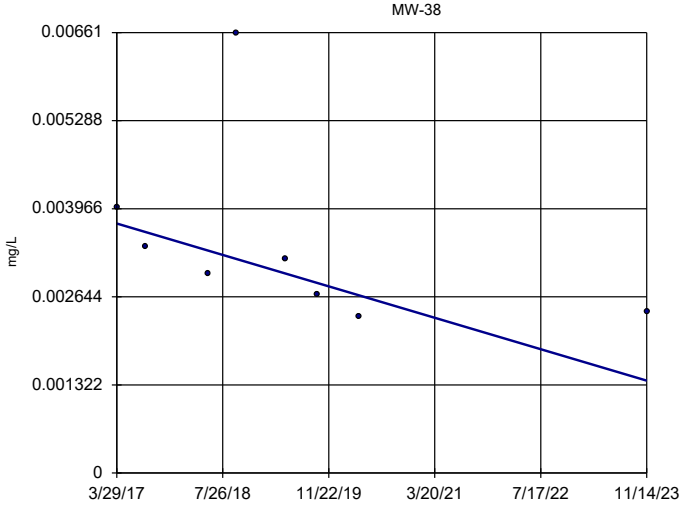
Constituent: Chromium Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-38



n = 8

Slope = -0.0003554 units per year.

Mann-Kendall statistic = -18
critical = -21

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

Constituent: Chromium Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

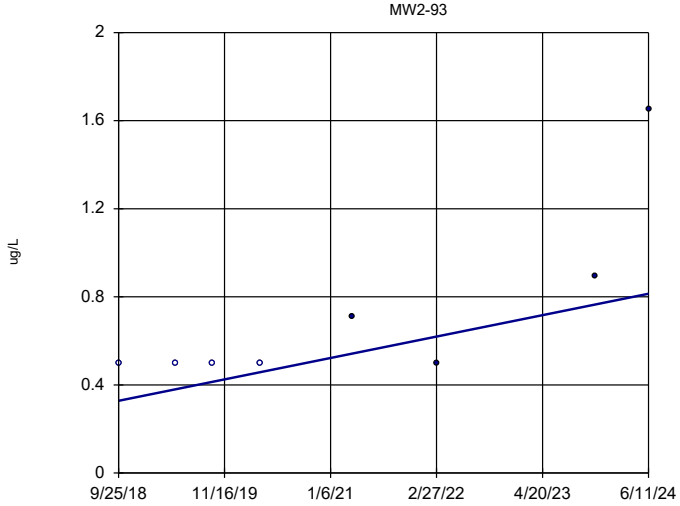
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2-93



n = 8

Slope = 0.08501 units per year.

Mann-Kendall statistic = 12
critical = 21

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

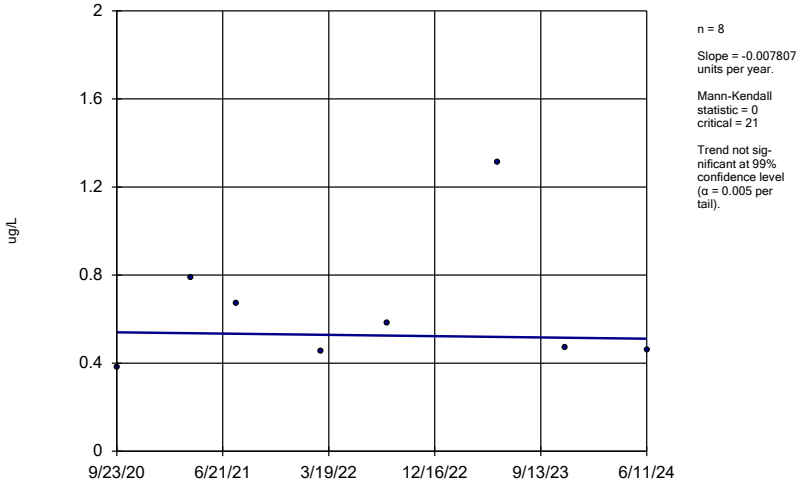
Constituent: cis-1,2-Dichloroethene Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-93



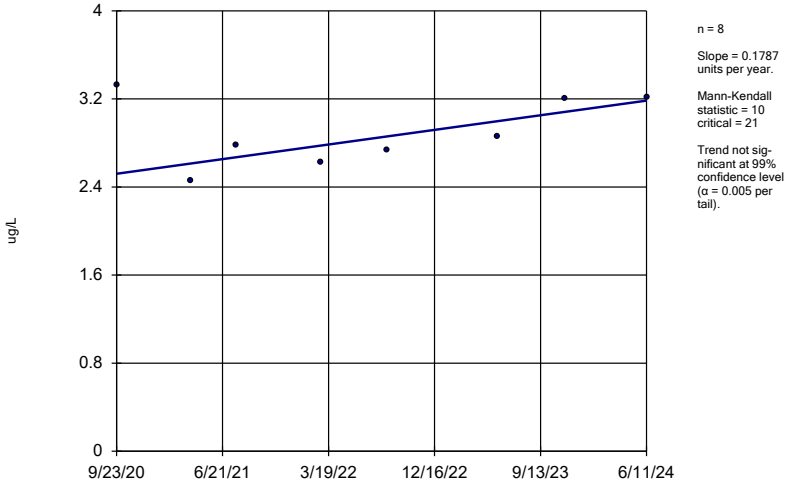
Constituent: cis-1,2-Dichloroethene Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



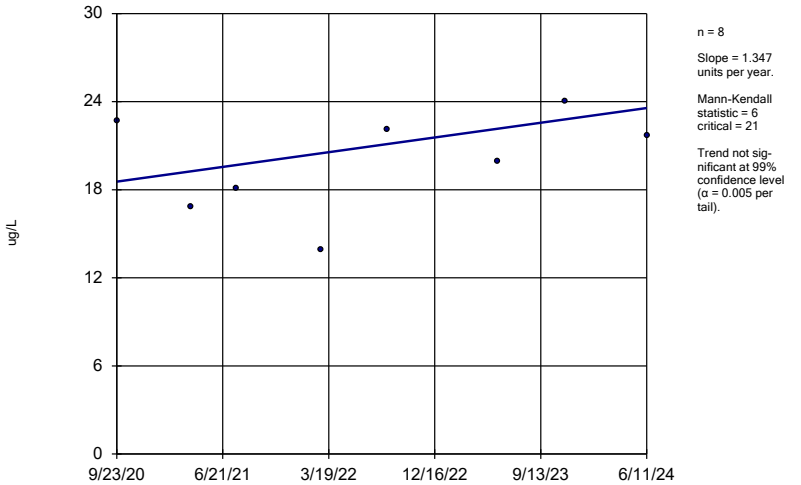
Constituent: cis-1,2-Dichloroethene Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-39R



Constituent: cis-1,2-Dichloroethene Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

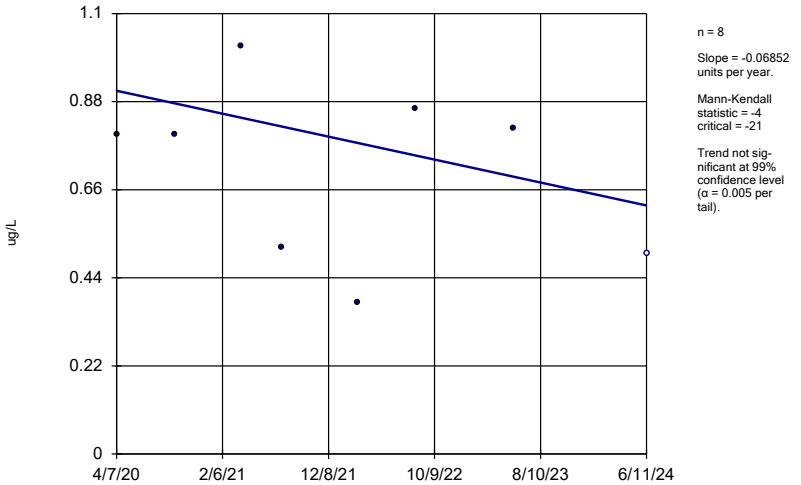
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

PZ-10



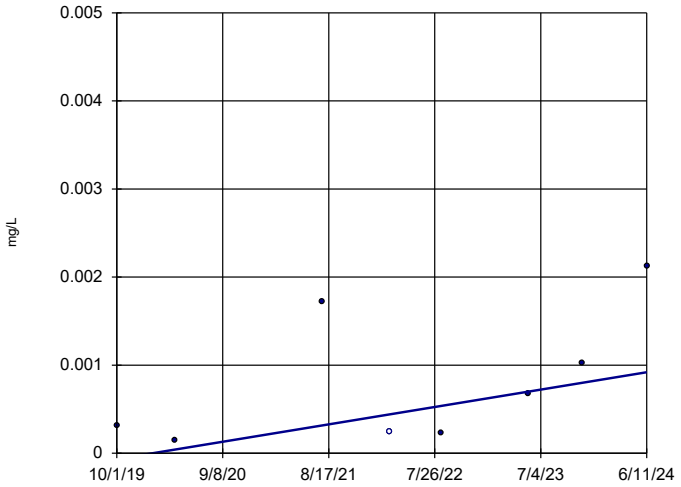
Constituent: cis-1,2-Dichloroethene Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW1-99



n = 8

Slope = 0.00021 units per year.

Mann-Kendall statistic = 12
critical = 21

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

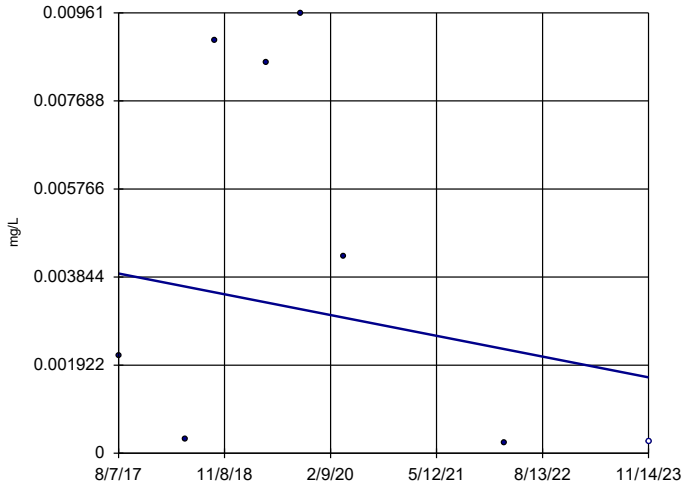
Constituent: Cobalt Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2-93



n = 8

Slope = -0.0003611 units per year.

Mann-Kendall statistic = -6
critical = -21

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

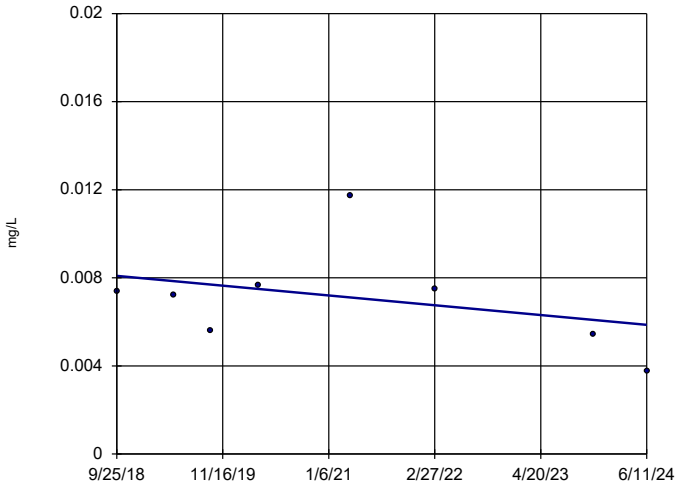
Constituent: Cobalt Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-90



n = 8

Slope = -0.0003886 units per year.

Mann-Kendall statistic = -8
critical = -21

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

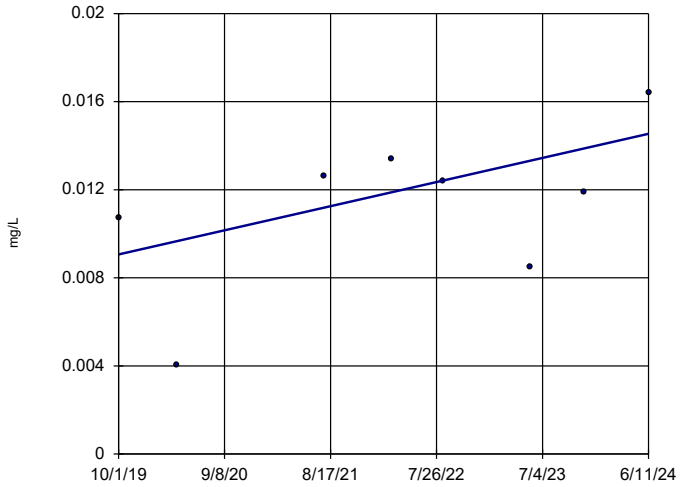
Constituent: Cobalt Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0.001165 units per year.

Mann-Kendall statistic = 8
critical = 21

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

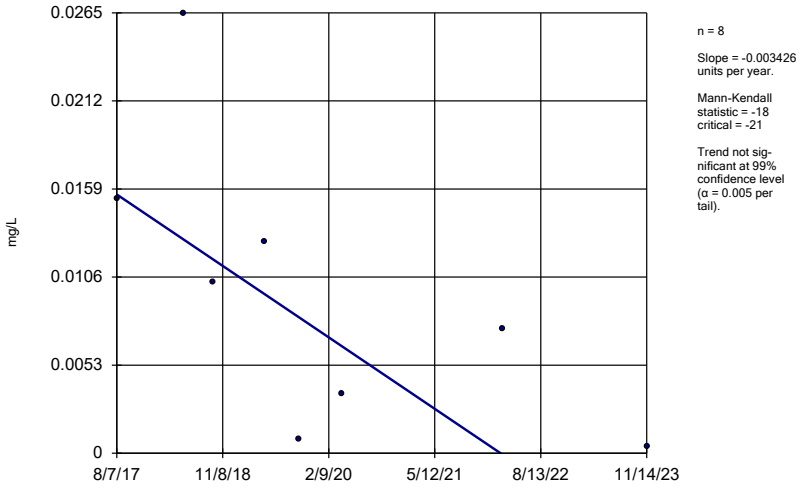
Constituent: Cobalt Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW7-90R



n = 8

Slope = -0.003426 units per year.

Mann-Kendall statistic = -18
critical = -21

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

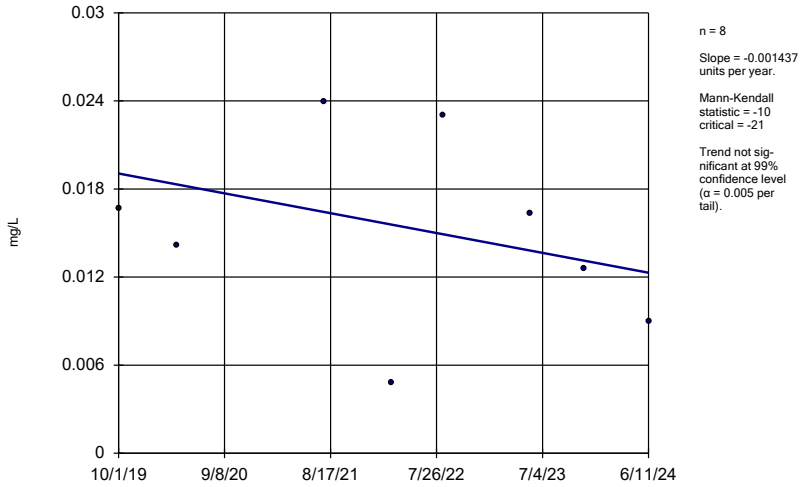
Constituent: Cobalt Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW7-93



n = 8

Slope = -0.001437 units per year.

Mann-Kendall statistic = -10
critical = -21

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

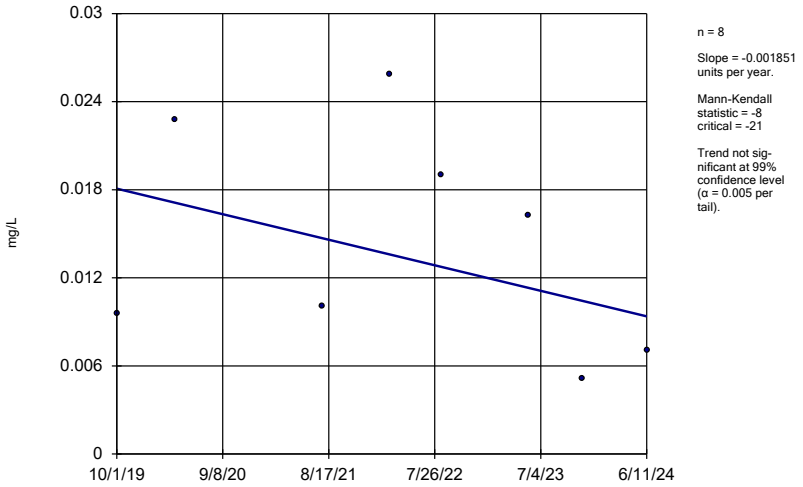
Constituent: Cobalt Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



n = 8

Slope = -0.001851 units per year.

Mann-Kendall statistic = -8
critical = -21

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

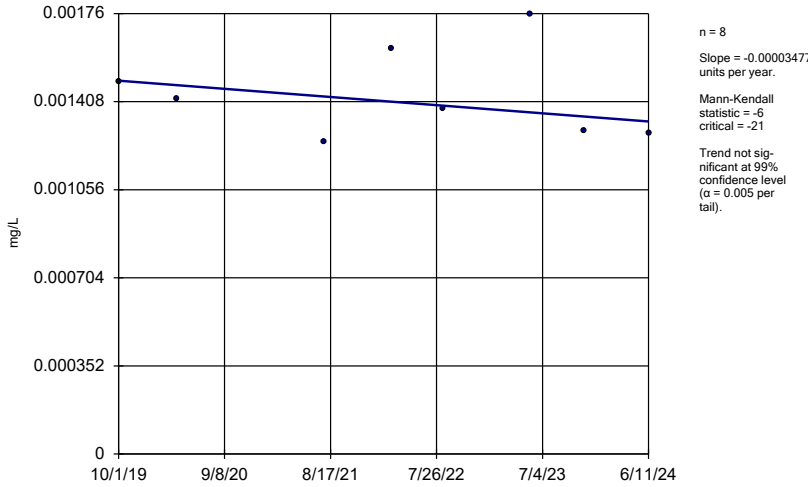
Constituent: Cobalt Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-39R



n = 8

Slope = -0.00003477 units per year.

Mann-Kendall statistic = -6
critical = -21

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

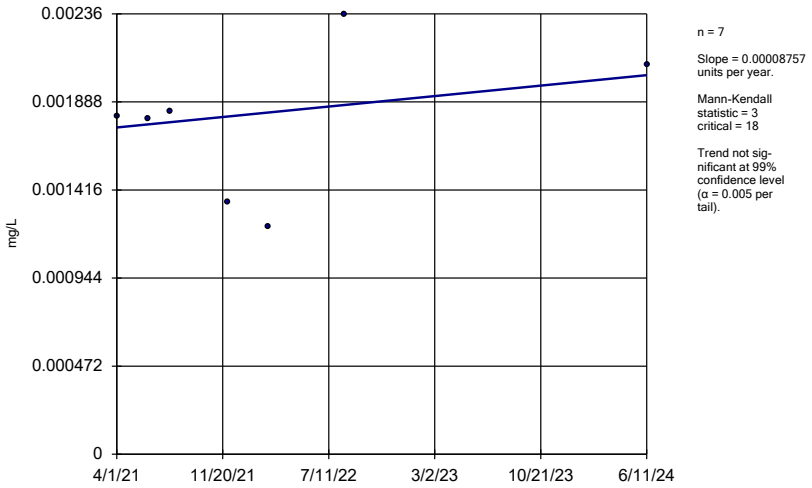
Constituent: Cobalt Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-43



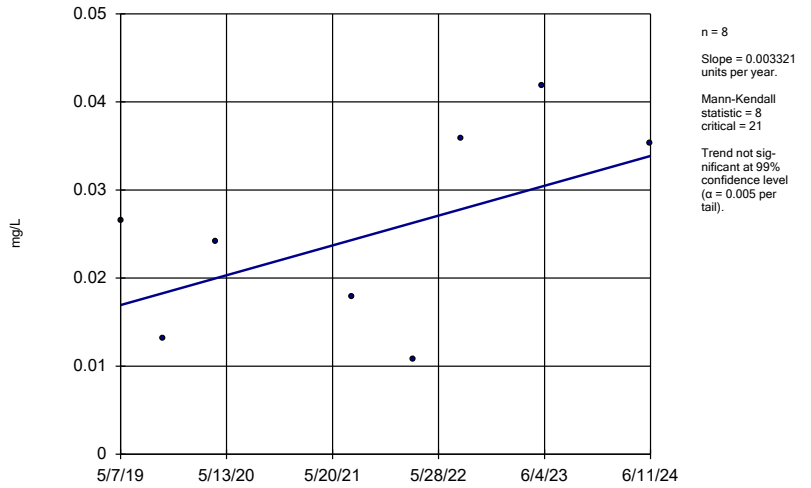
Constituent: Cobalt Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



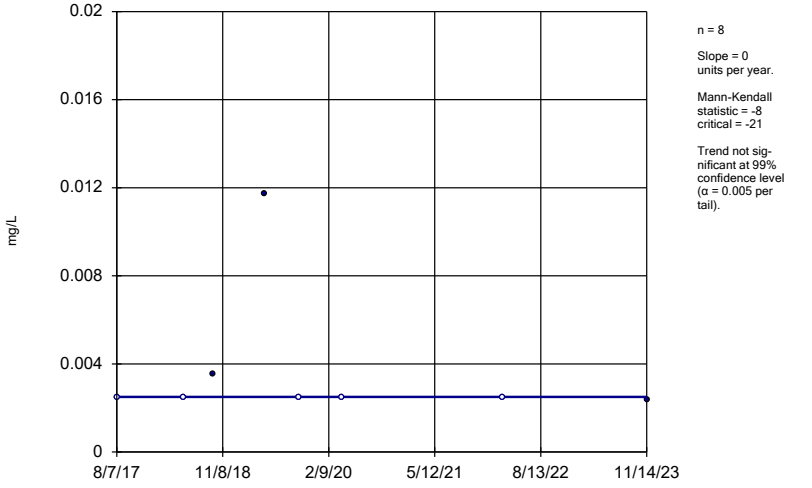
Constituent: Cobalt Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2-93



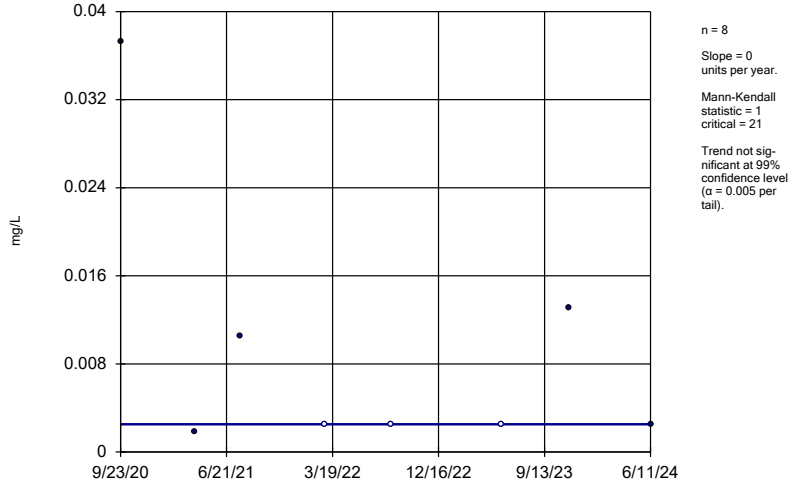
Constituent: Copper Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



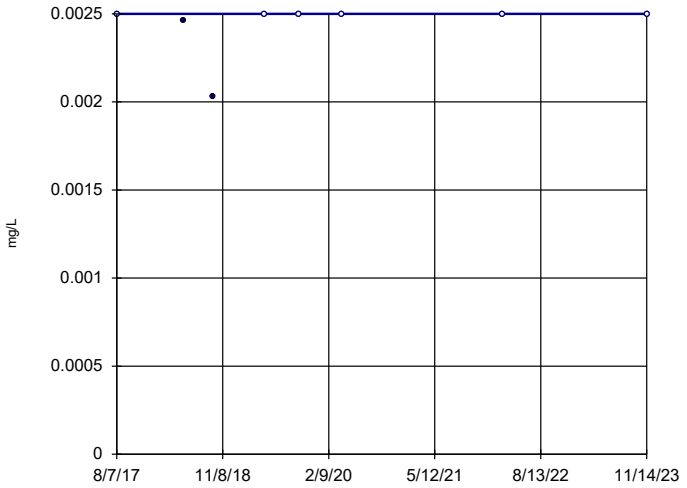
Constituent: Copper Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7-90R



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = 7
critical = 21

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

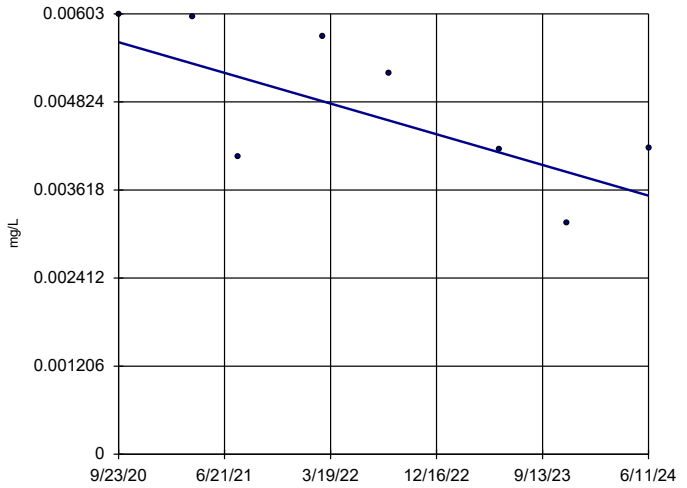
Constituent: Copper Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW7-93



n = 8

Slope = -0.0005651 units per year.

Mann-Kendall statistic = -16
critical = -21

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

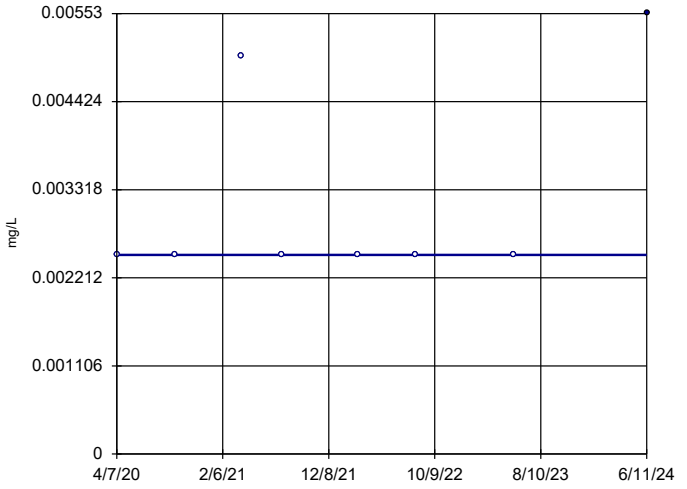
Constituent: Copper Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

PZ-10



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = 5
critical = 21

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

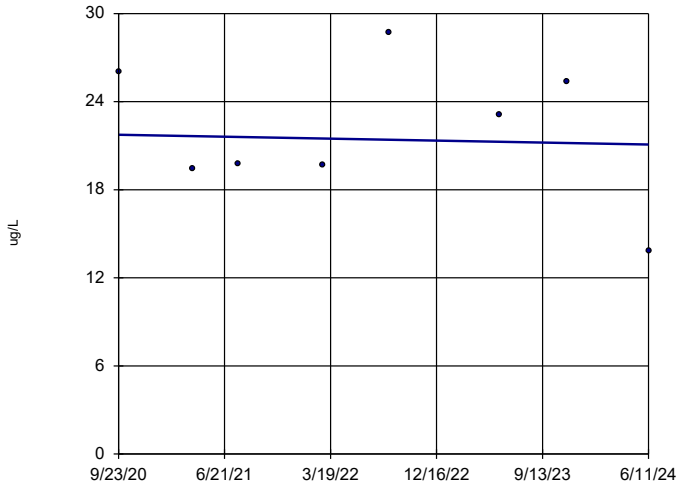
Constituent: Copper Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-39R



n = 8

Slope = -0.1796 units per year.

Mann-Kendall statistic = -2
critical = -21

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

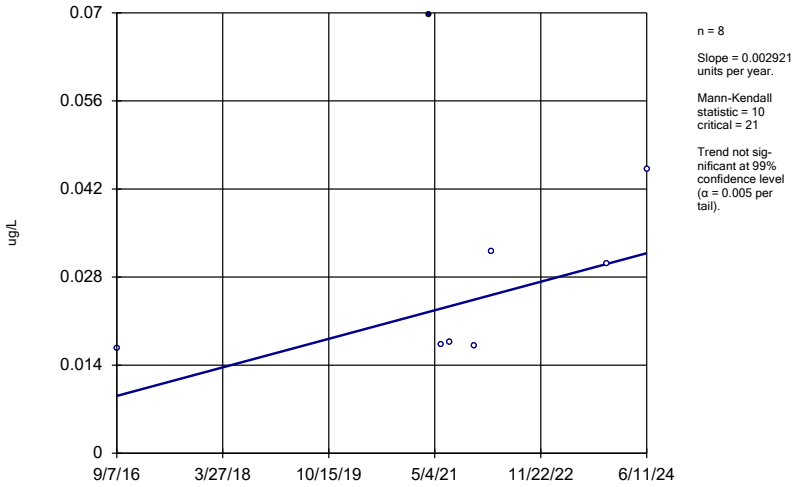
Constituent: Dichlorodifluoromethane Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-90



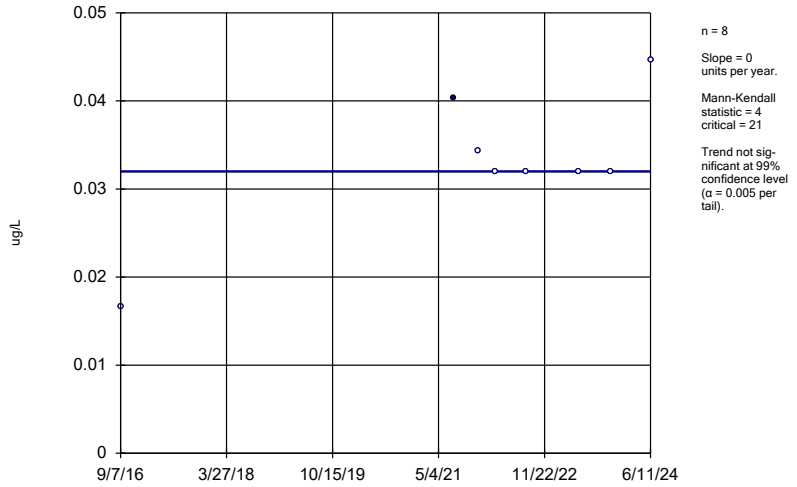
Constituent: Endosulfan sulfate Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



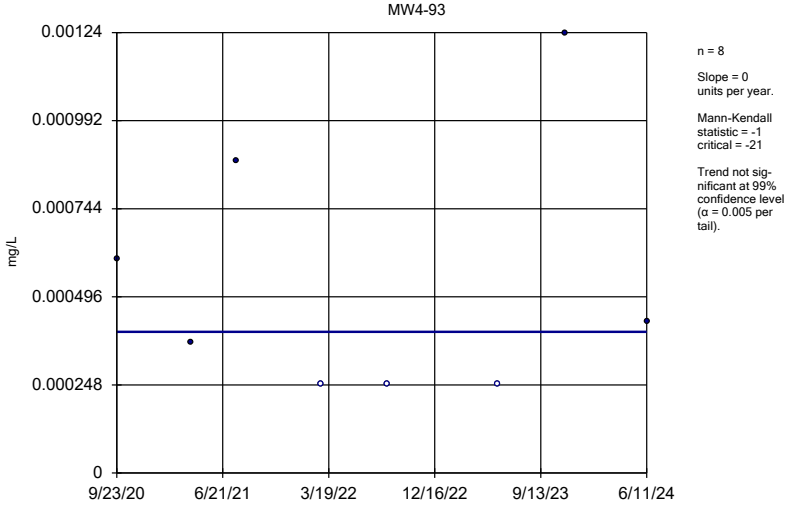
Constituent: Endrin aldehyde Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



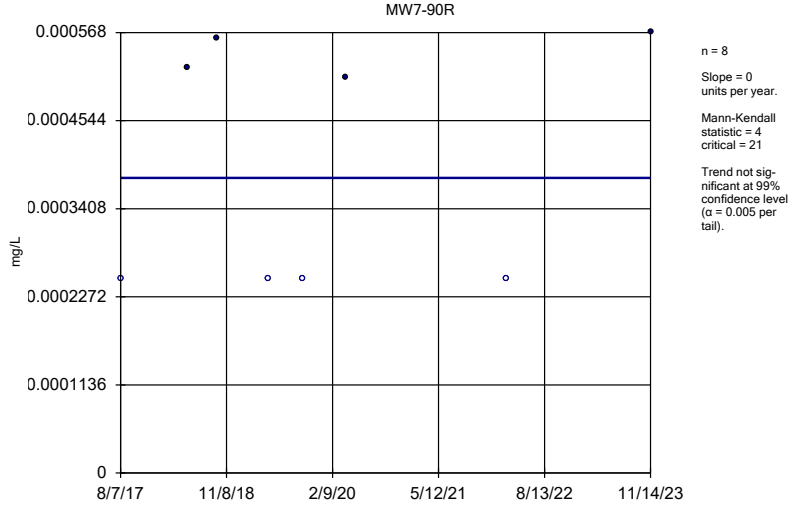
Constituent: Lead Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7-90R



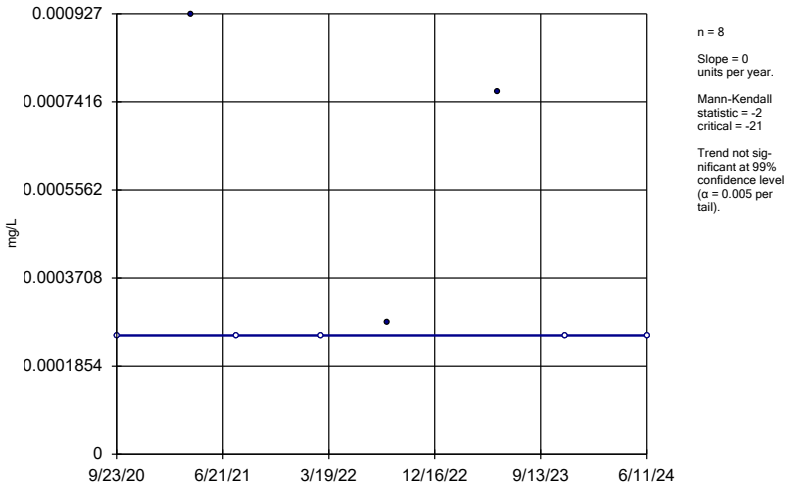
Constituent: Lead Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-37



n = 8

Slope = 0
units per year.

Mann-Kendall
statistic = -2
critical = -21

Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

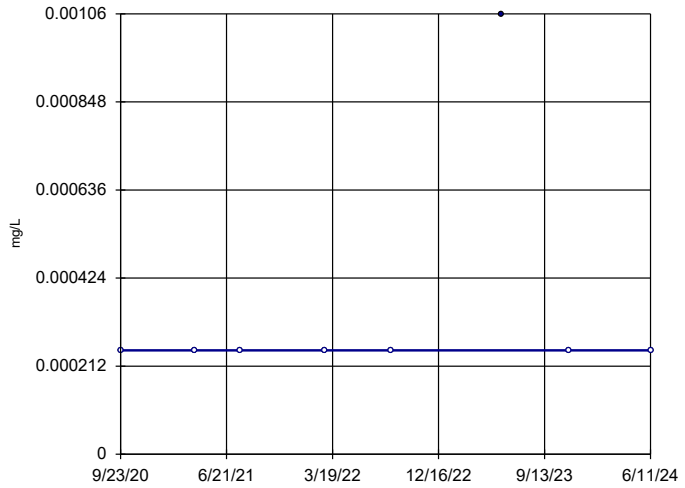
Constituent: Lead Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-39R



n = 8

Slope = 0
units per year.

Mann-Kendall
statistic = 3
critical = 21

Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

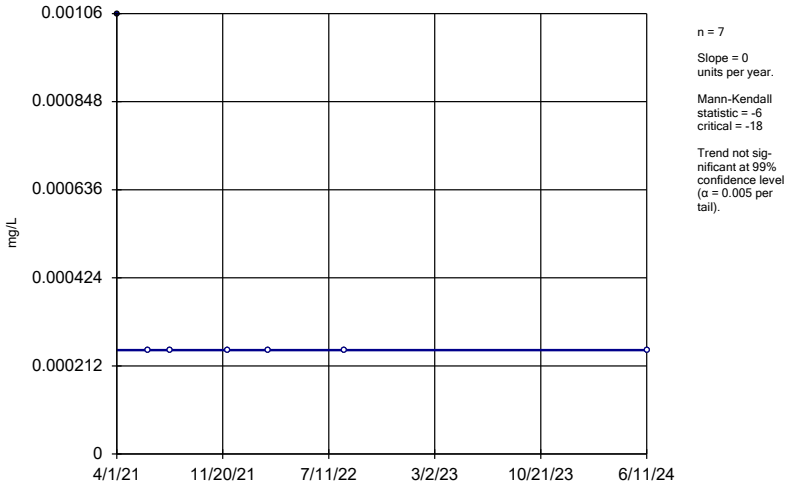
Constituent: Lead Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-43



n = 7

Slope = 0
units per year.

Mann-Kendall
statistic = -6
critical = -18

Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

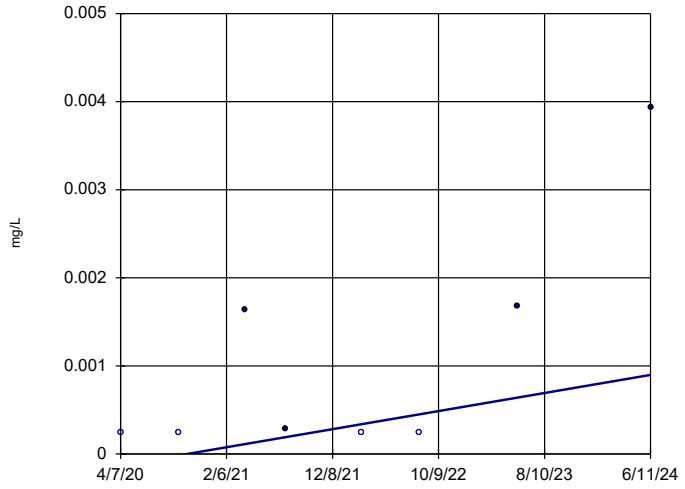
Constituent: Lead Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

PZ-10



n = 8

Slope = 0.0002456
units per year.

Mann-Kendall
statistic = 12
critical = 21

Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

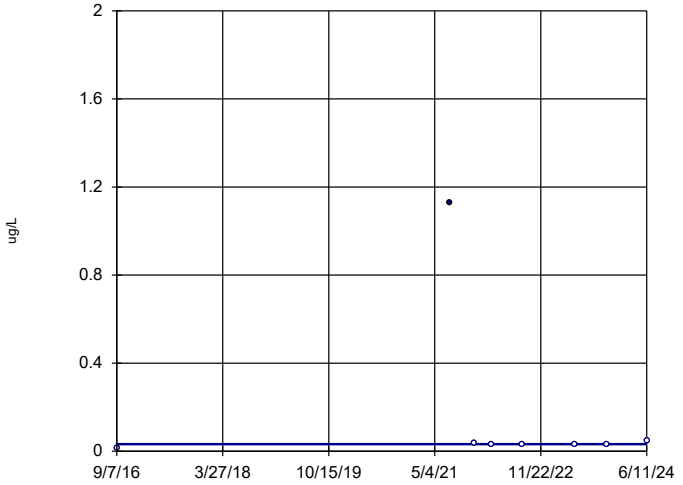
Constituent: Lead Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0
units per year.

Mann-Kendall
statistic = 2
critical = 21

Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

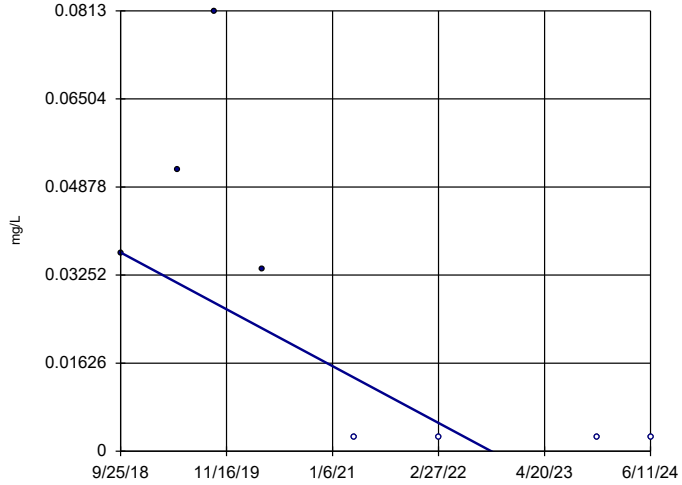
Constituent: Methoxychlor Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2-93



n = 8

Slope = -0.009178
units per year.

Mann-Kendall
statistic = -16
critical = -21

Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

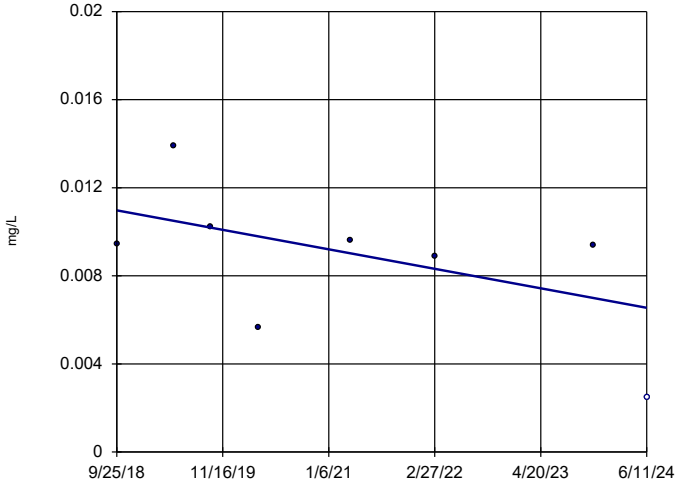
Constituent: Nickel Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-90



n = 8

Slope = -0.0007737
units per year.

Mann-Kendall
statistic = -14
critical = -21

Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

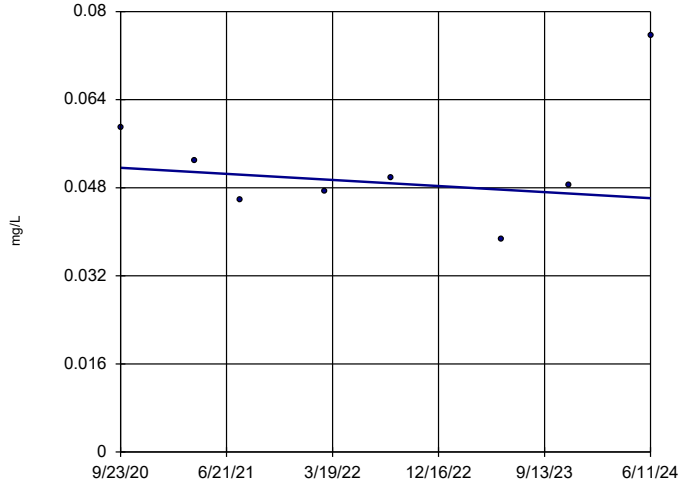
Constituent: Nickel Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-93



n = 8

Slope = -0.001479
units per year.

Mann-Kendall
statistic = -2
critical = -21

Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

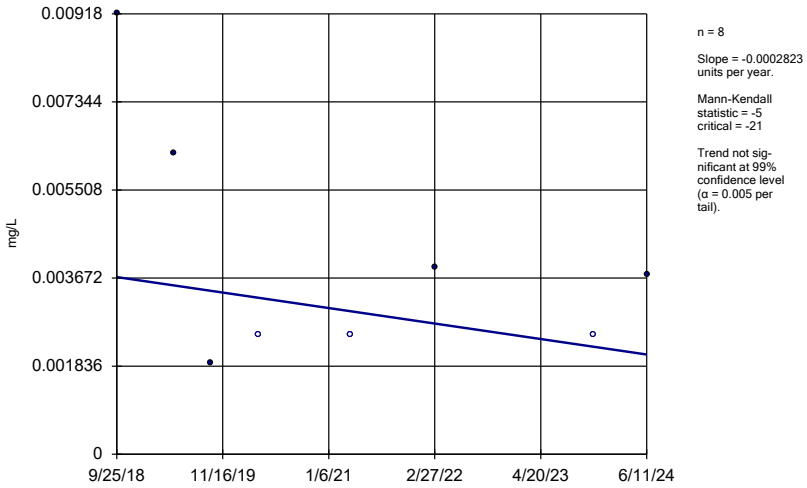
Constituent: Nickel Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7-90R



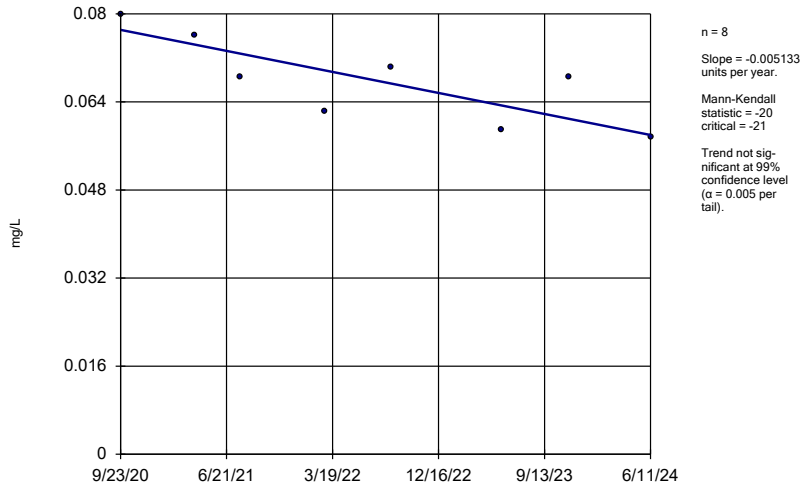
Constituent: Nickel Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW7-93



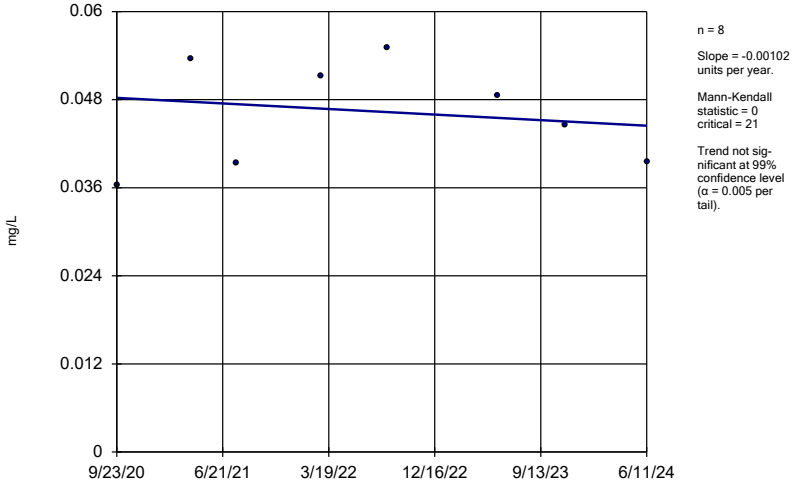
Constituent: Nickel Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



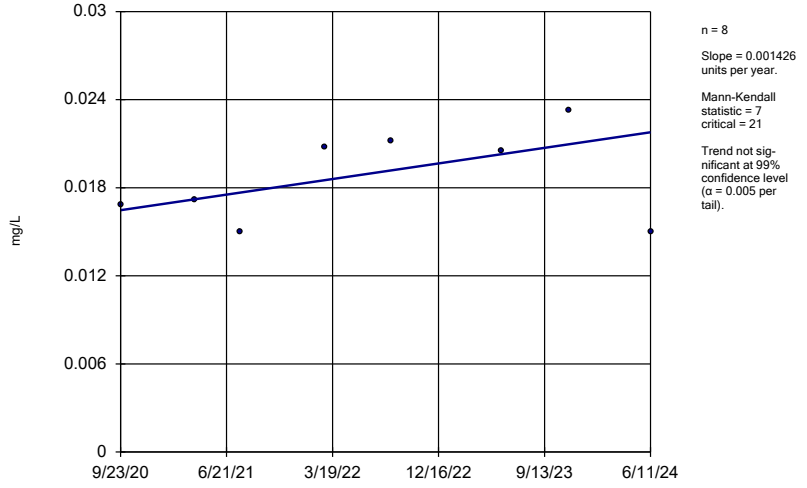
Constituent: Nickel Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-39R



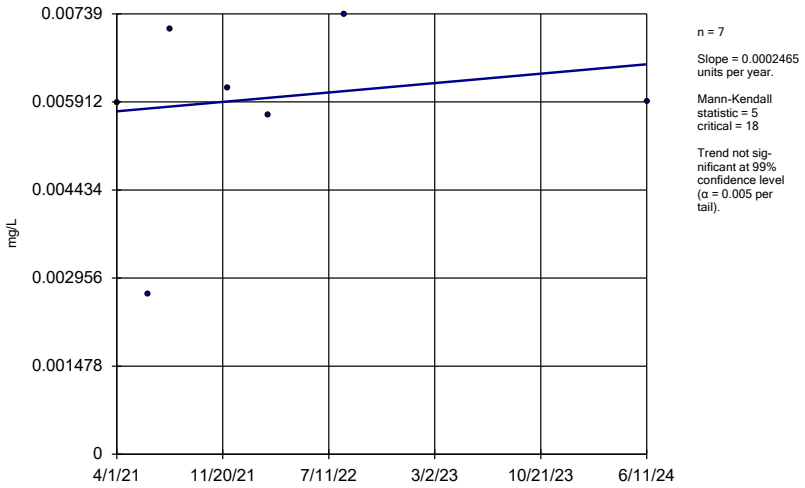
Constituent: Nickel Analysis Run 11/6/2024 10:49 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-43



n = 7

Slope = 0.0002465 units per year.

Mann-Kendall statistic = 5
critical = 18

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

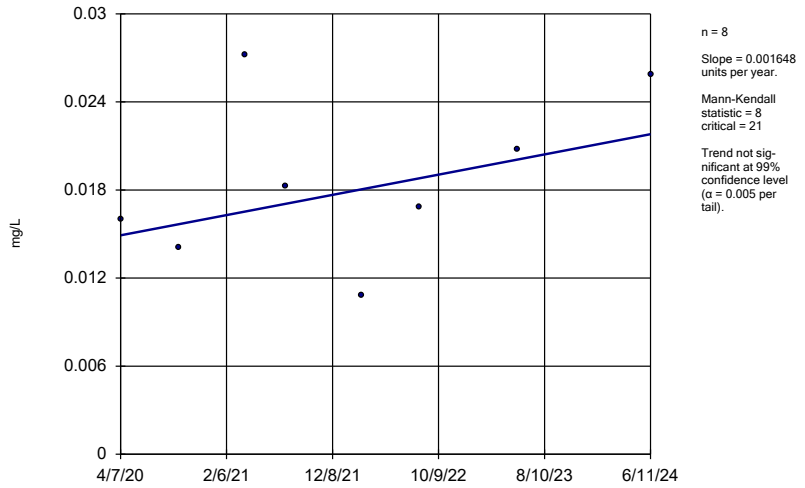
Constituent: Nickel Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



n = 8

Slope = 0.001648 units per year.

Mann-Kendall statistic = 8
critical = 21

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

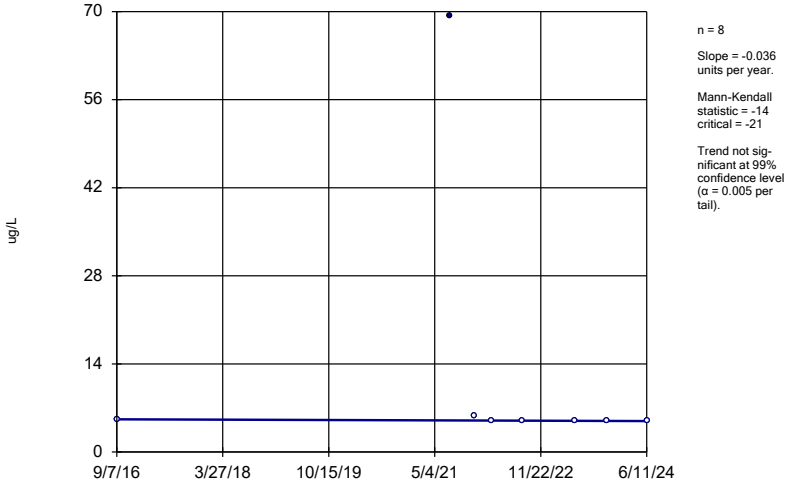
Constituent: Nickel Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = -0.036 units per year.

Mann-Kendall statistic = -14
critical = -21

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

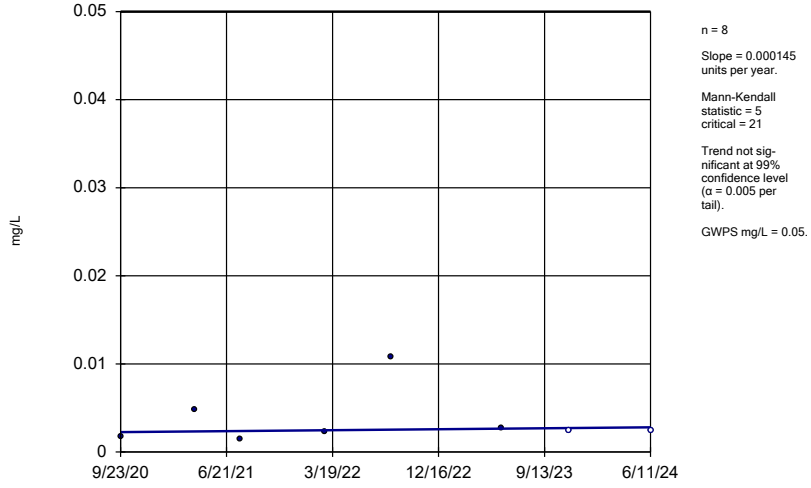
Constituent: Phenol Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW1-99



n = 8

Slope = 0.000145 units per year.

Mann-Kendall statistic = 5
critical = 21

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

GWPS mg/L = 0.05.

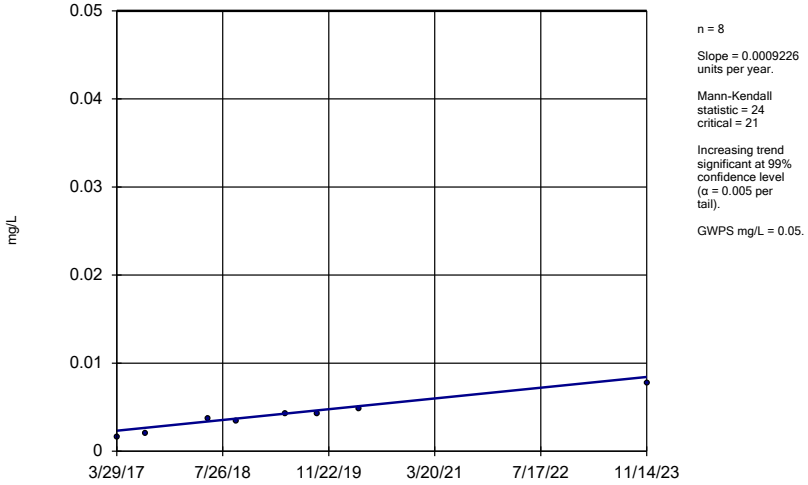
Constituent: Selenium Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-38



n = 8

Slope = 0.0009226 units per year.

Mann-Kendall statistic = 24 critical = 21

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

GWPS mg/L = 0.05.

Constituent: Selenium Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

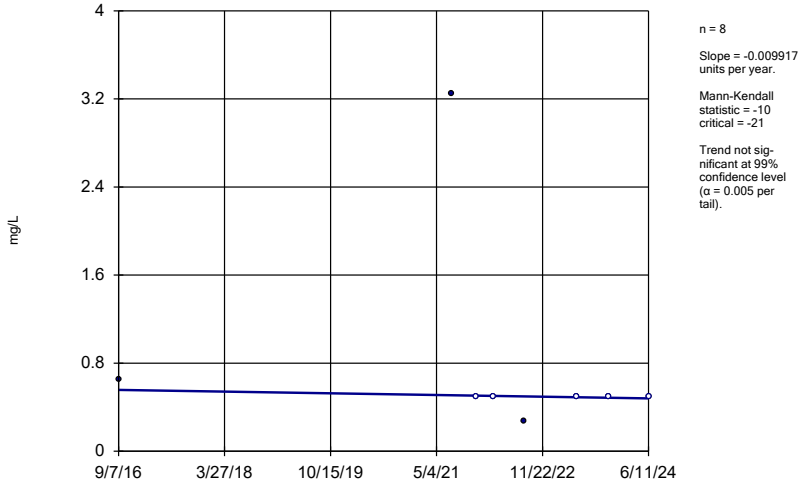
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = -0.009917 units per year.

Mann-Kendall statistic = -10 critical = -21

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

Constituent: Sulfide Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

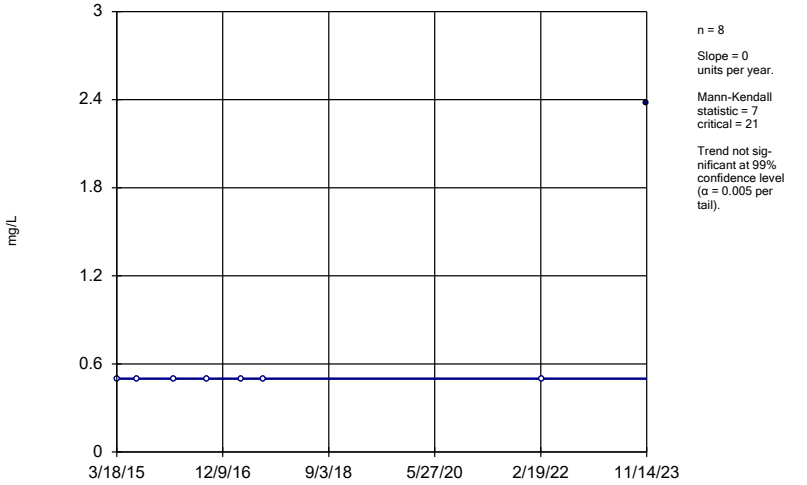
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7-90R



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = 7 critical = 21

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

Constituent: Sulfide Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

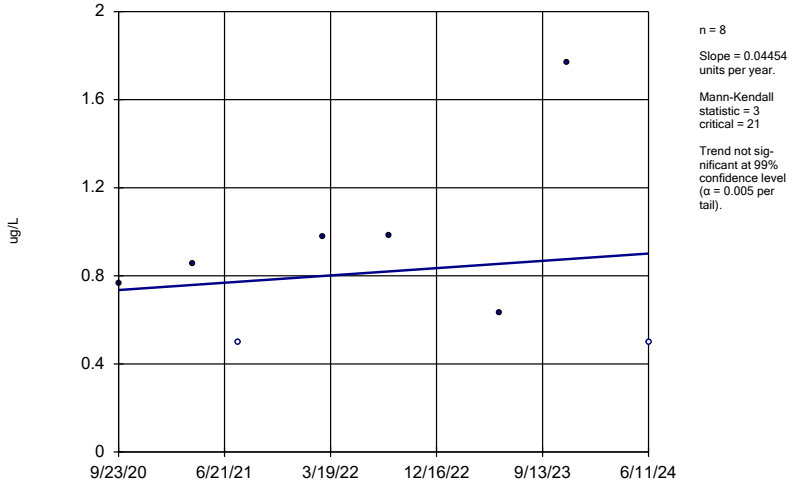
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-39R



n = 8

Slope = 0.04454 units per year.

Mann-Kendall statistic = 3 critical = 21

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

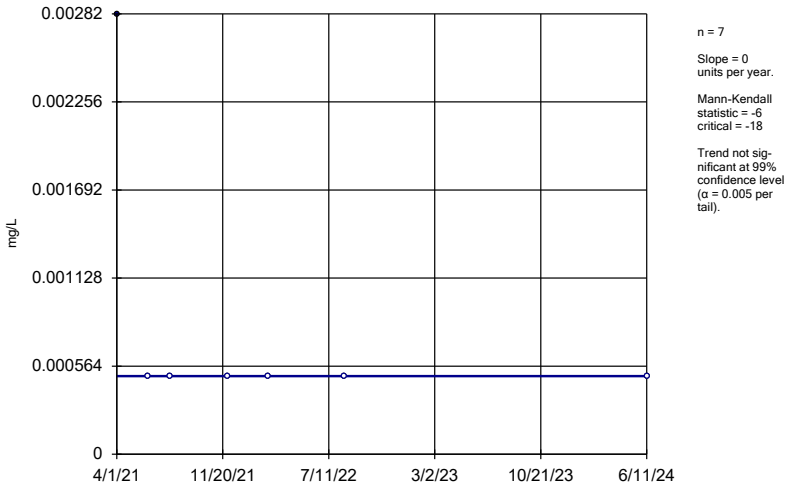
Constituent: Tetrachloroethene Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-43



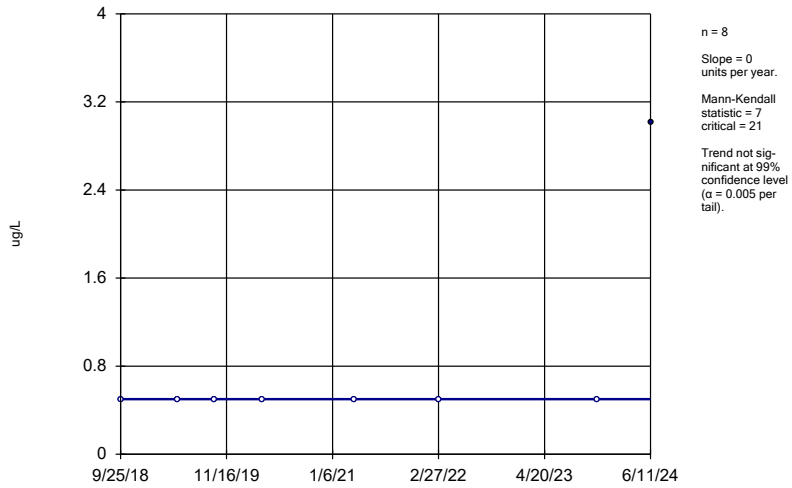
Constituent: Thallium Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-90



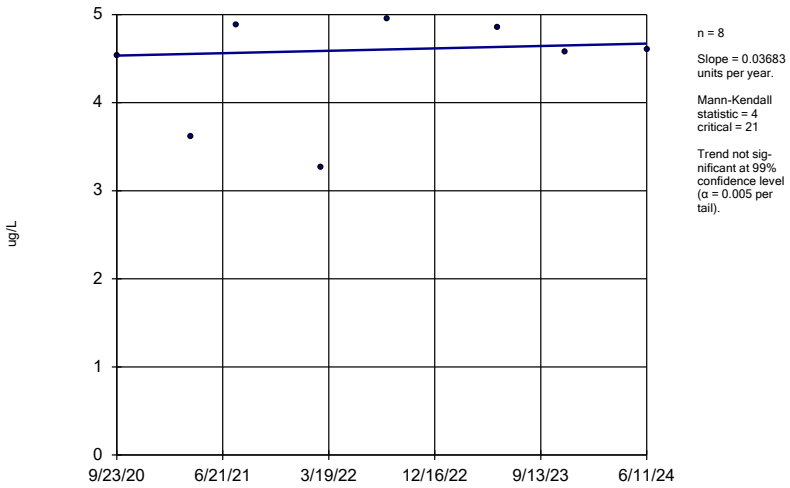
Constituent: Toluene Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-39R



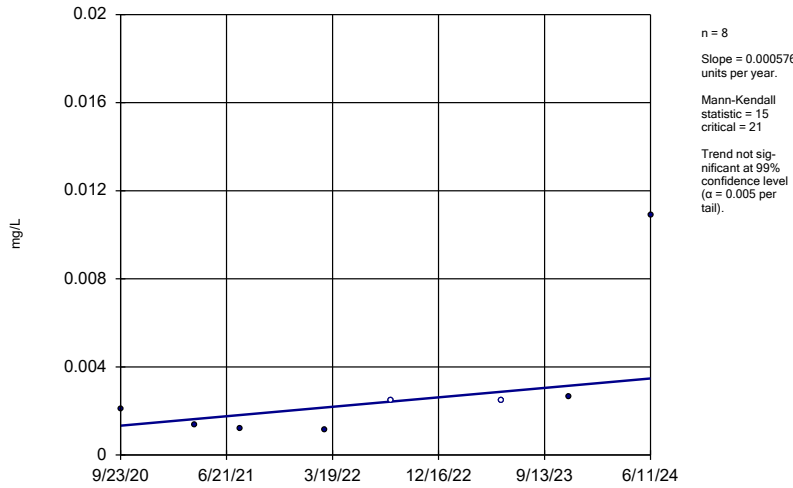
Constituent: Trichloroethene Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



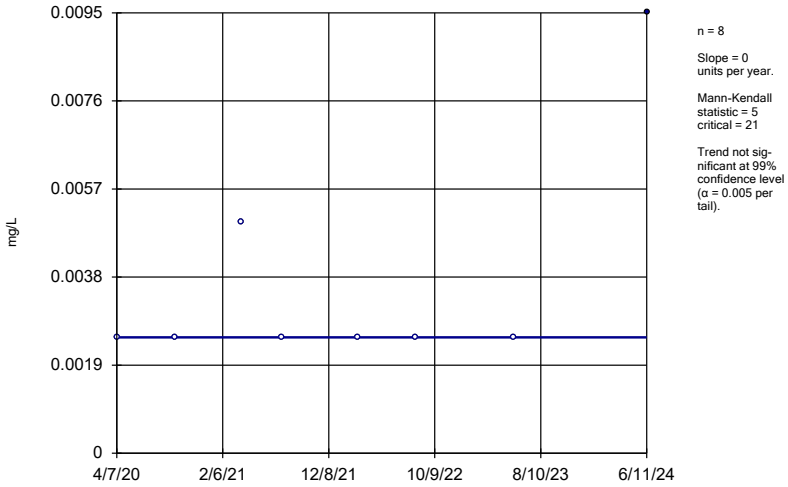
Constituent: Vanadium Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

PZ-10



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = 5
critical = 21

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

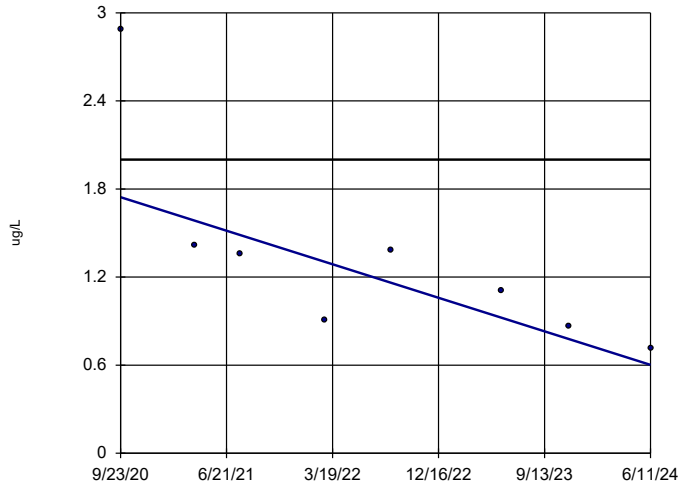
Constituent: Vanadium Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



n = 8

Slope = -0.3075 units per year.

Mann-Kendall statistic = -22
critical = -21

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

GWPS ug/L = 2.

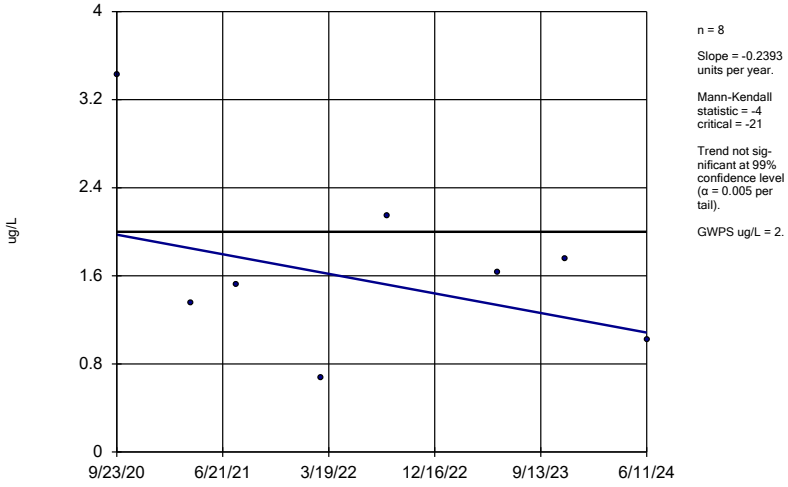
Constituent: Vinyl Chloride Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-39R



n = 8

Slope = -0.2393 units per year.

Mann-Kendall statistic = -4
critical = -21

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

GWPS ug/L = 2.

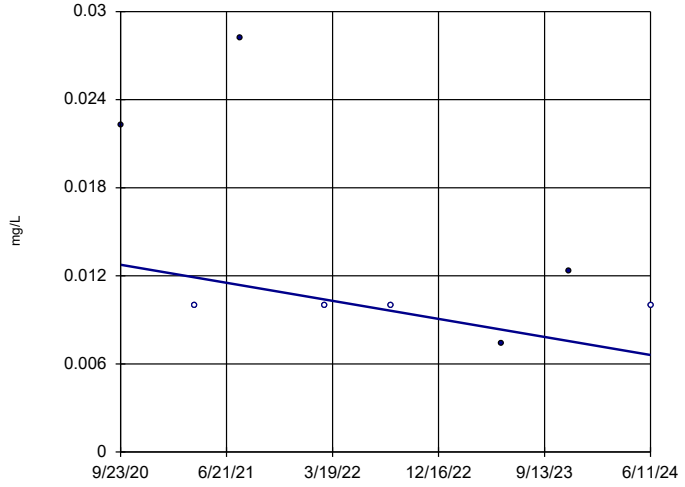
Constituent: Vinyl Chloride Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = -0.001653 units per year.

Mann-Kendall statistic = -8
critical = -21

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

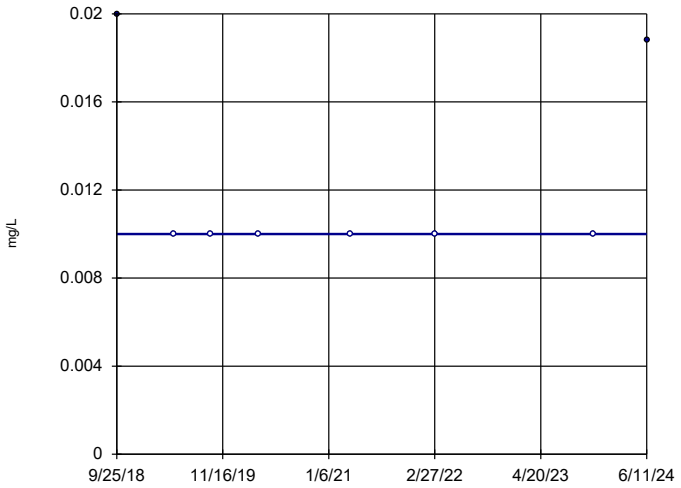
Constituent: Zinc Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7-90R



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = -1
critical = -21

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

Constituent: Zinc Analysis Run 11/6/2024 10:50 AM View: 2024 SSN MK

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Confidence Interval Table and Graphs

Confidence Interval

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit Printed 11/6/2024, 11:56 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
1,1,1-Trichloroethane (ug/L)	MW1-99	3.07	0.5	200	No	8	87.5	No	0.004	NP (NDs)
1,1-Dichloroethane (ug/L)	MW2-93	4.704	0.501	140	No	8	50	No	0.01	Param.
1,1-Dichloroethane (ug/L)	MW4-93	2.497	1.033	140	No	8	0	No	0.01	Param.
1,1-Dichloroethane (ug/L)	MW-37	84.82	42.56	140	No	8	0	No	0.01	Param.
1,1-Dichloroethane (ug/L)	MW-39R	51.7	38.2	140	No	8	0	No	0.01	Param.
1,1-Dichloroethane (ug/L)	PZ-10	1.327	0.788	140	No	8	0	No	0.01	Param.
1,1-Dichloroethene (ug/L)	MW1-99	6.23	1	7	No	8	87.5	No	0.004	NP (NDs)
1,1-Dichloroethene (ug/L)	MW2-93	3.13	1	7	No	8	75	No	0.004	NP (NDs)
1,1-Dichloroethene (ug/L)	MW-37	6.817	3.389	7	No	8	0	No	0.01	Param.
1,2-Dichloroethane (ug/L)	MW1-99	1.11	0.5	5	No	8	87.5	No	0.004	NP (NDs)
1,2-Dichloropropane (ug/L)	MW1-99	1.76	0.5	5	No	8	87.5	No	0.004	NP (NDs)
1,4-Dichlorobenzene (ug/L)	MW4-90	1.39	0.253	75	No	8	62.5	No	0.004	NP (NDs)
1,4-Dichlorobenzene (ug/L)	MW4-93	2.284	0.931	75	No	8	12.5	No	0.01	Param.
1,4-Dichlorobenzene (ug/L)	MW7-90R	1.548	0.5629	75	No	8	25	No	0.01	Param.
1,4-Dichlorobenzene (ug/L)	PZ-10	9.95	6.535	75	No	8	0	No	0.01	Param.
2,4,5-TP [Silvex] [2C] (ug/L)	MW-39R	0.585	0.2	50	No	4	75	No	0.0625	NP (NDs)
2,4-D [2C] (ug/L)	MW4-93	1.89	0.285	70	No	8	87.5	No	0.004	NP (NDs)
3/4-Methylphenol (ug/L)	MW4-93	166	5	70	No	8	87.5	No	0.004	NP (NDs)
4,4`-DDT (ug/L)	MW4-93	0.0766	0.0195	0.51	No	8	75	No	0.004	NP (NDs)
Acetone (ug/L)	MW4-93	11.1	3.77	6300	No	8	75	No	0.004	NP (NDs)
Acetone (ug/L)	MW-43	11.35	4.21	6300	No	7	42.86	No	0.008	NP (normality)
alpha-BHC (ug/L)	**MW-39R**	**0.08056**	**0.04314**	**0.028**	**Yes**	**8**	**25**	**No**	**0.01**	**Param.**
Antimony (mg/L)	MW4-93	0.002035	0	0.006	No	8	50	No	0.01	Param.
Arsenic (mg/L)	MW1-99	0.001636	0.0005742	0.01	No	8	37.5	No	0.01	Param.
Arsenic (mg/L)	MW2-93	0.002811	0.001143	0.01	No	8	0	No	0.01	Param.
Arsenic (mg/L)	MW4-90	0.004804	0.0008314	0.01	No	8	12.5	No	0.01	Param.
Arsenic (mg/L)	MW4-93	0.00351	0.0008195	0.01	No	8	12.5	No	0.004	NP (normality)
Arsenic (mg/L)	MW7-90R	0.08237	0.006384	0.01	No	8	0	No	0.01	Param.
Arsenic (mg/L)	MW-37	0.004463	0.001763	0.01	No	8	0	No	0.01	Param.
Arsenic (mg/L)	MW-38	0.00178	0.001	0.01	No	8	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-43	0.006607	0.003274	0.01	No	7	0	No	0.01	Param.
Arsenic (mg/L)	PZ-10	0.04177	0.002745	0.01	No	8	0	No	0.01	Param.
Barium (mg/L)	MW1-99	0.04463	0.0247	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW2-93	0.2278	0.06685	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW4-90	0.1924	0.107	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW4-93	0.0704	0.0292	2	No	8	0	No	0.004	NP (normality)
Barium (mg/L)	MW7-90R	0.5692	0.2393	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW7-93	0.1247	0.07176	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-37	0.02237	0.01718	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-38	0.4174	0.3606	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-39R	0.2473	0.1882	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-43	0.6294	0.4883	2	No	7	0	No	0.01	Param.
Barium (mg/L)	PZ-10	0.3702	0.2708	2	No	8	0	No	0.01	Param.
Benzene (ug/L)	MW4-90	0.57	0.25	5	No	8	87.5	No	0.004	NP (NDs)
Benzene (ug/L)	MW4-93	0.4781	0.3205	5	No	8	0	No	0.01	Param.
Benzene (ug/L)	MW7-90R	1.337	0.2546	5	No	8	25	No	0.01	Param.
Benzene (ug/L)	MW-37	0.8318	0.5971	5	No	8	0	No	0.01	Param.
Benzene (ug/L)	MW-39R	1.216	0.2719	5	No	8	12.5	No	0.01	Param.
Benzene (ug/L)	PZ-10	4.687	2.39	5	No	8	0	No	0.01	Param.
Beryllium (mg/L)	MW4-93	0.00161	0.0005	0.004	No	8	87.5	No	0.004	NP (NDs)

Confidence Interval

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit Printed 11/6/2024, 11:56 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Cadmium (mg/L)	MW2-93	0.0003015	0.000006864	0.005	No	8	50	No	0.01	Param.
Cadmium (mg/L)	MW4-93	0.0004631	0	0.005	No	8	37.5	No	0.01	Param.
Cadmium (mg/L)	MW7-93	0.0003076	0.0001104	0.005	No	8	12.5	No	0.01	Param.
Cadmium (mg/L)	PZ-10	0.00025	0.00005	0.005	No	8	87.5	No	0.004	NP (NDs)
Chlorobenzene (ug/L)	MW2-93	16.7	0.5	100	No	8	50	No	0.004	NP (normality)
Chlorobenzene (ug/L)	MW4-90	2.92	0.5	100	No	8	75	No	0.004	NP (NDs)
Chlorobenzene (ug/L)	MW4-93	31.11	21.21	100	No	8	0	No	0.01	Param.
Chlorobenzene (ug/L)	MW-37	6.724	2.893	100	No	8	0	No	0.01	Param.
Chlorobenzene (ug/L)	PZ-10	12.03	9.321	100	No	8	0	No	0.01	Param.
Chloroethane (ug/L)	MW4-90	20.86	0.5466	2800	No	8	0	No	0.01	Param.
Chloroethane (ug/L)	MW-37	23.18	14.66	2800	No	8	0	No	0.01	Param.
Chloroethane (ug/L)	PZ-10	6.626	3.362	2800	No	8	0	No	0.01	Param.
Chromium (mg/L)	MW4-93	0.0249	0.00158	0.1	No	8	62.5	No	0.004	NP (NDs)
Chromium (mg/L)	MW-38	0.004921	0.001987	0.1	No	8	0	No	0.01	Param.
cis-1,2-Dichloroethene (ug/L)	MW2-93	1.65	0.497	70	No	8	50	No	0.004	NP (normality)
cis-1,2-Dichloroethene (ug/L)	MW4-93	0.9599	0.321	70	No	8	0	No	0.01	Param.
cis-1,2-Dichloroethene (ug/L)	MW-37	3.231	2.568	70	No	8	0	No	0.01	Param.
cis-1,2-Dichloroethene (ug/L)	MW-39R	23.52	16.28	70	No	8	0	No	0.01	Param.
cis-1,2-Dichloroethene (ug/L)	PZ-10	0.9435	0.4782	70	No	8	12.5	No	0.01	Param.
Cobalt (mg/L)	MW1-99	0.001608	0.00001303	0.004646	No	8	12.5	No	0.01	Param.
Cobalt (mg/L)	MW2-93	0.008723	0	0.004646	No	8	12.5	No	0.01	Param.
Cobalt (mg/L)	MW4-90	0.0095	0.004557	0.004646	No	8	0	No	0.01	Param.
Cobalt (mg/L)	**MW4-93**	**0.01514**	**0.007356**	**0.004646**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	MW7-90R	0.01886	0.0004254	0.004646	No	8	0	No	0.01	Param.
Cobalt (mg/L)	**MW7-93**	**0.02193**	**0.008198**	**0.004646**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	**MW-37**	**0.02258**	**0.006389**	**0.004646**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	MW-39R	0.001626	0.001246	0.004646	No	8	0	No	0.01	Param.
Cobalt (mg/L)	MW-43	0.002251	0.001312	0.004646	No	7	0	No	0.01	Param.
Cobalt (mg/L)	**PZ-10**	**0.0377**	**0.01365**	**0.004646**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Copper (mg/L)	MW2-93	0.0117	0.00237	1.3	No	8	62.5	No	0.004	NP (NDs)
Copper (mg/L)	MW4-93	0.0373	0.00189	1.3	No	8	37.5	No	0.004	NP (normality)
Copper (mg/L)	MW7-90R	0.0025	0.00203	1.3	No	8	75	No	0.004	NP (NDs)
Copper (mg/L)	MW7-93	0.005945	0.003691	1.3	No	8	0	No	0.01	Param.
Copper (mg/L)	PZ-10	0.00553	0.0025	1.3	No	8	87.5	No	0.004	NP (NDs)
Dichlorodifluoromethane (ug/L)	MW-39R	27.02	16.96	1000	No	8	0	No	0.01	Param.
Endosulfan sulfate (ug/L)	MW4-90	0.0697	0.01665	0.0333	No	8	87.5	No	0.004	NP (NDs)
Endrin aldehyde (ug/L)	MW4-93	0.04465	0.01665	2.1	No	8	87.5	No	0.004	NP (NDs)
Lead (mg/L)	MW4-93	0.0009012	0.0002762	0.015	No	8	37.5	No	0.01	Param.
Lead (mg/L)	MW7-90R	0.000568	0.00025	0.015	No	8	50	No	0.004	NP (normality)
Lead (mg/L)	MW-37	0.000927	0.00025	0.015	No	8	62.5	No	0.004	NP (NDs)
Lead (mg/L)	MW-39R	0.00106	0.00025	0.015	No	8	87.5	No	0.004	NP (NDs)
Lead (mg/L)	MW-43	0.00106	0.00025	0.015	No	7	85.71	No	0.008	NP (NDs)
Lead (mg/L)	PZ-10	0.00394	0.00025	0.015	No	8	50	No	0.004	NP (normality)
Methoxychlor (ug/L)	MW4-93	1.13	0.01665	40	No	8	87.5	No	0.004	NP (NDs)
Nickel (mg/L)	MW2-93	0.05607	0	0.1	No	8	50	No	0.01	Param.
Nickel (mg/L)	MW4-90	0.01226	0.005149	0.1	No	8	12.5	No	0.01	Param.
Nickel (mg/L)	MW4-93	0.06398	0.04042	0.1	No	8	0	No	0.01	Param.
Nickel (mg/L)	MW7-90R	0.006693	0.001939	0.1	No	8	37.5	No	0.01	Param.
Nickel (mg/L)	MW7-93	0.07609	0.05937	0.1	No	8	0	No	0.01	Param.
Nickel (mg/L)	MW-37	0.05356	0.03844	0.1	No	8	0	No	0.01	Param.

Confidence Interval

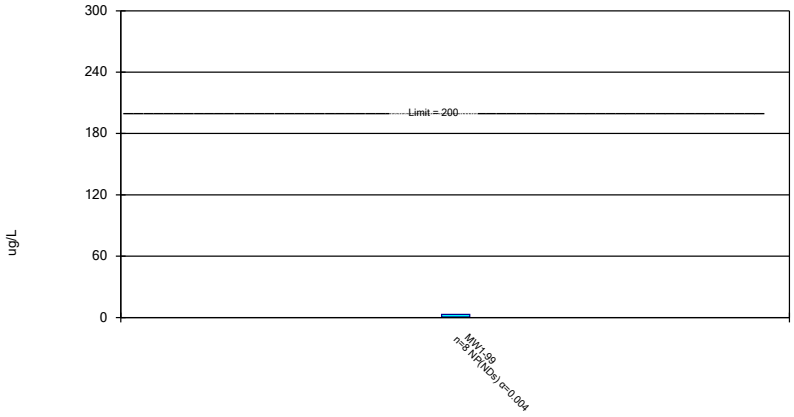
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit Printed 11/6/2024, 11:56 AM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Nickel (mg/L)	MW-39R	0.02204	0.01541	0.1	No	8	0	No	0.01	Param.
Nickel (mg/L)	MW-43	0.007663	0.004011	0.1	No	7	0	No	0.01	Param.
Nickel (mg/L)	PZ-10	0.02472	0.01275	0.1	No	8	0	No	0.01	Param.
Phenol (ug/L)	MW4-93	69.3	5	2000	No	8	87.5	No	0.004	NP (NDs)
Selenium (mg/L)	MW1-99	0.0108	0.001405	0.05	No	8	25	No	0.004	NP (normality)
Sulfide (mg/L)	MW4-93	3.25	0.27	1	No	8	62.5	No	0.004	NP (NDs)
Sulfide (mg/L)	MW7-90R	2.38	0.5	1	No	8	87.5	No	0.004	NP (NDs)
Tetrachloroethene (ug/L)	MW-39R	1.309	0.608	5	No	8	25	No	0.01	Param.
Thallium (mg/L)	MW-43	0.00282	0.0005	0.002	No	7	85.71	No	0.008	NP (NDs)
Toluene (ug/L)	MW4-90	3.01	0.5	1000	No	8	87.5	No	0.004	NP (NDs)
Trichloroethene (ug/L)	MW-39R	5.072	3.748	5	No	8	0	No	0.01	Param.
Vanadium (mg/L)	MW4-93	0.0109	0.00116	0.035	No	8	25	No	0.004	NP (normality)
Vanadium (mg/L)	PZ-10	0.0095	0.0025	0.035	No	8	87.5	No	0.004	NP (NDs)
Vinyl Chloride (ug/L)	MW-39R	2.574	0.8063	2	No	8	0	No	0.01	Param.
Zinc (mg/L)	MW4-93	0.0282	0.00741	2	No	8	50	No	0.004	NP (normality)
Zinc (mg/L)	MW7-90R	0.02	0.01	2	No	8	75	No	0.004	NP (NDs)

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

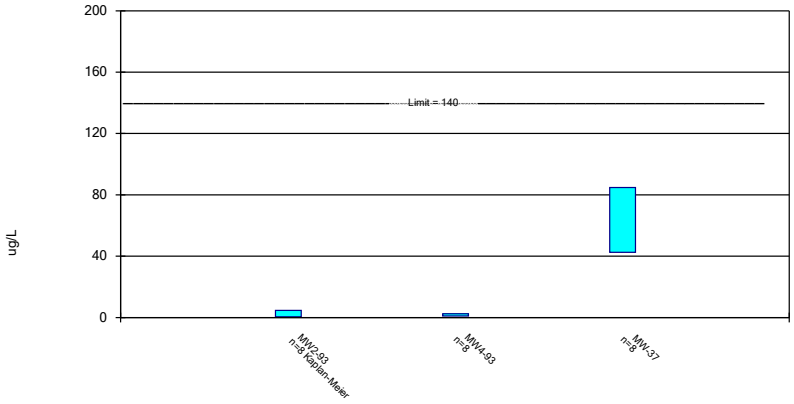


Constituent: 1,1,1-Trichloroethane Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

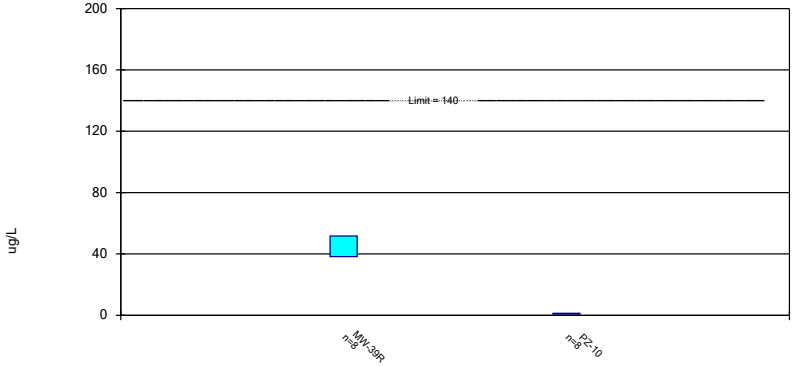


Constituent: 1,1-Dichloroethane Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

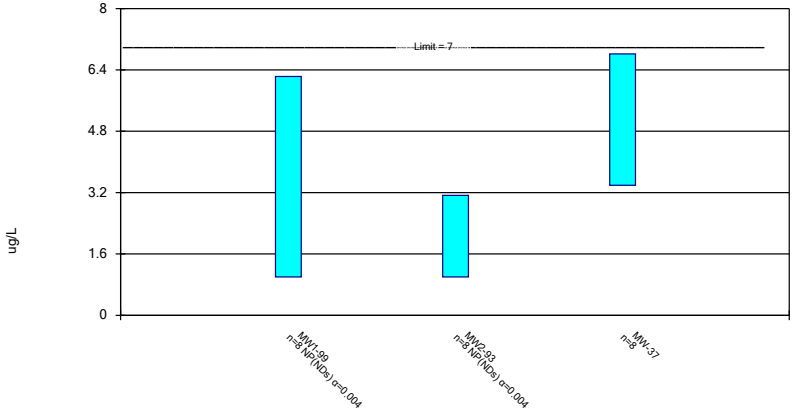


Constituent: 1,1-Dichloroethane Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

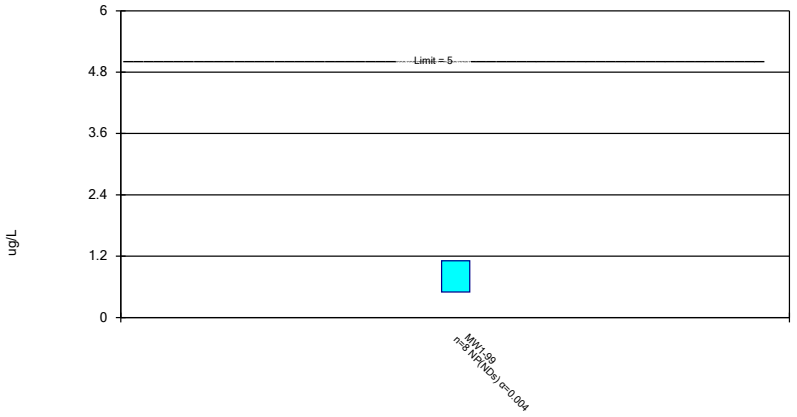


Constituent: 1,1-Dichloroethene Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

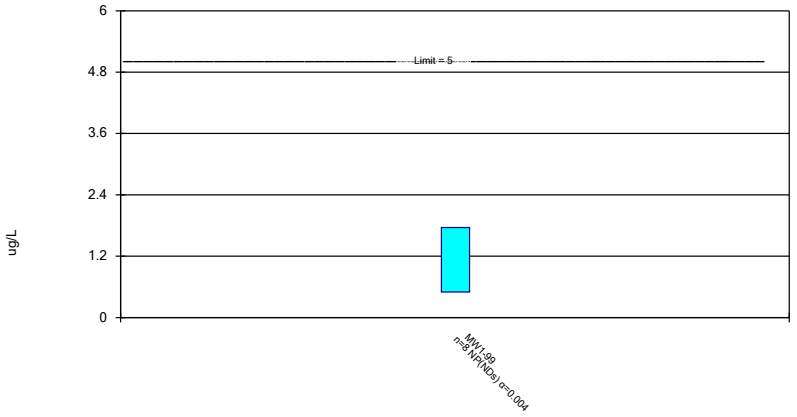


Constituent: 1,2-Dichloroethane Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

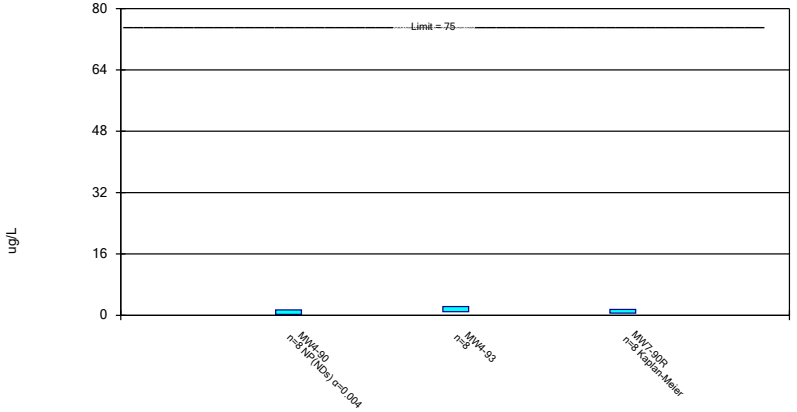


Constituent: 1,2-Dichloropropane Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

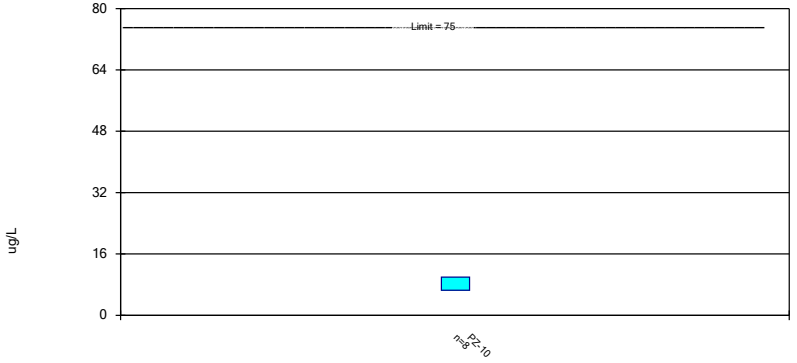


Constituent: 1,4-Dichlorobenzene Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

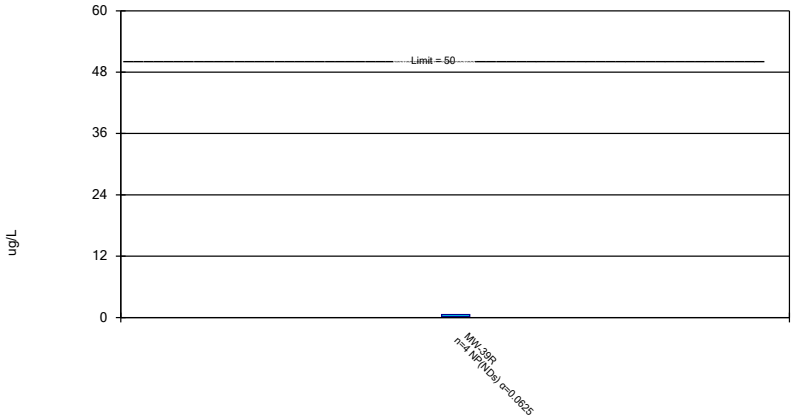


Constituent: 1,4-Dichlorobenzene Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

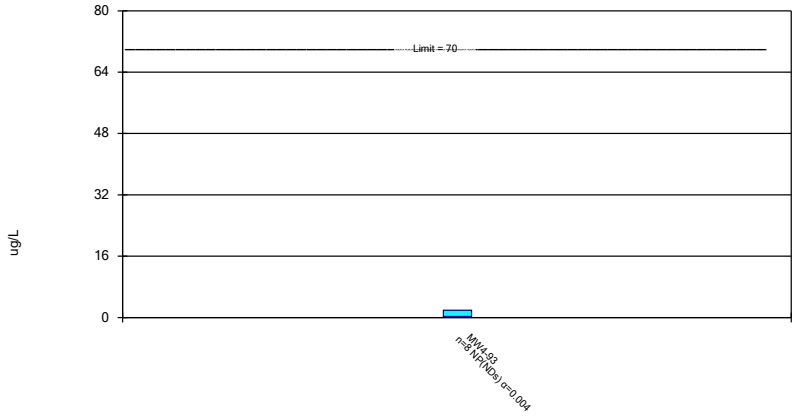


Constituent: 2,4,5-TP [Silvex] [2C] Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

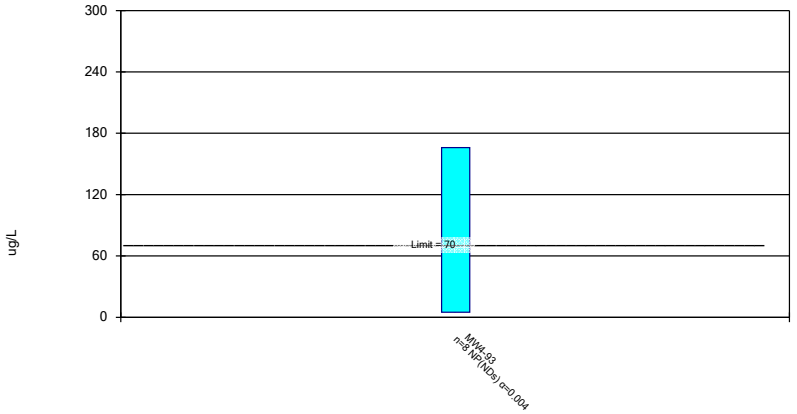


Constituent: 2,4-D [2C] Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

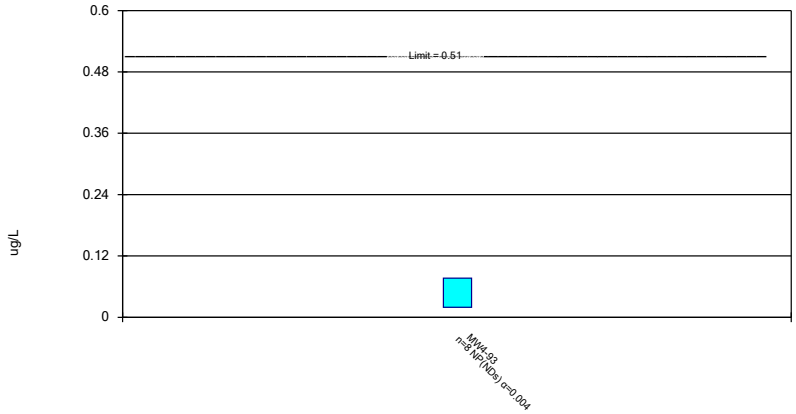


Constituent: 3/4-Methylphenol Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

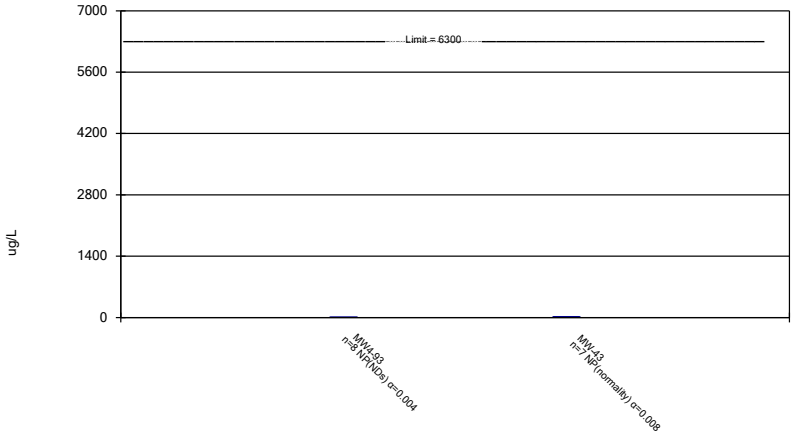


Constituent: 4,4`-DDT Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

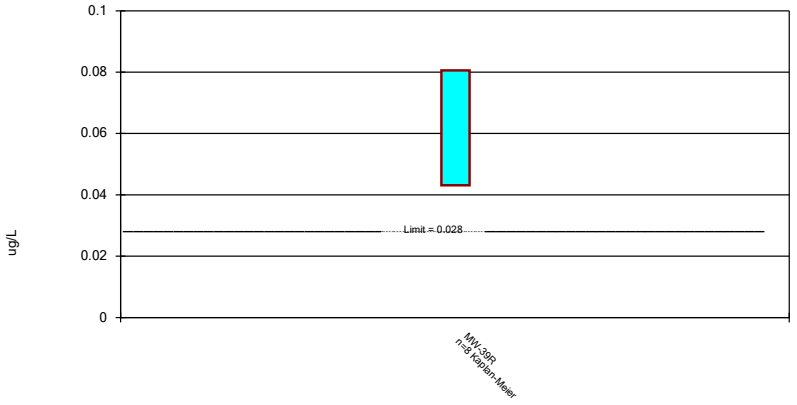


Constituent: Acetone Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

Compliance limit is exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

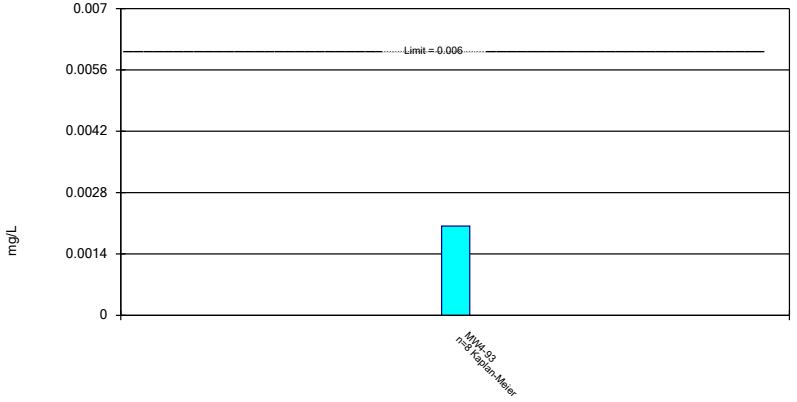


Constituent: alpha-BHC Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

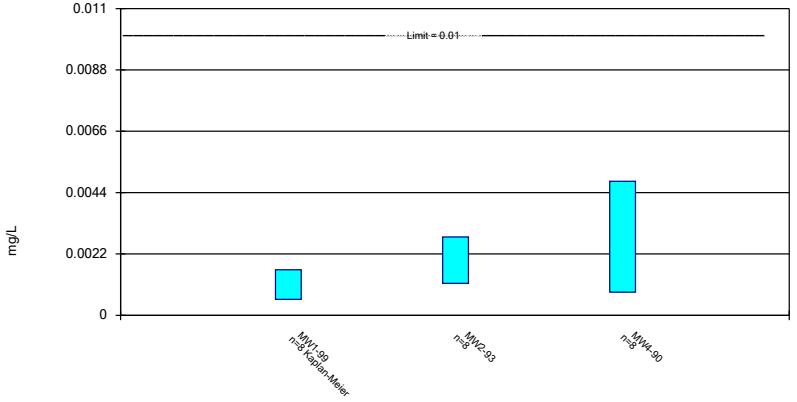


Constituent: Antimony Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

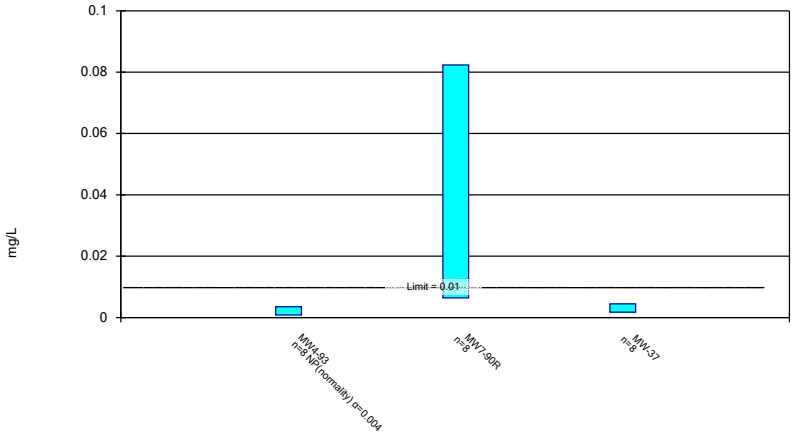


Constituent: Arsenic Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

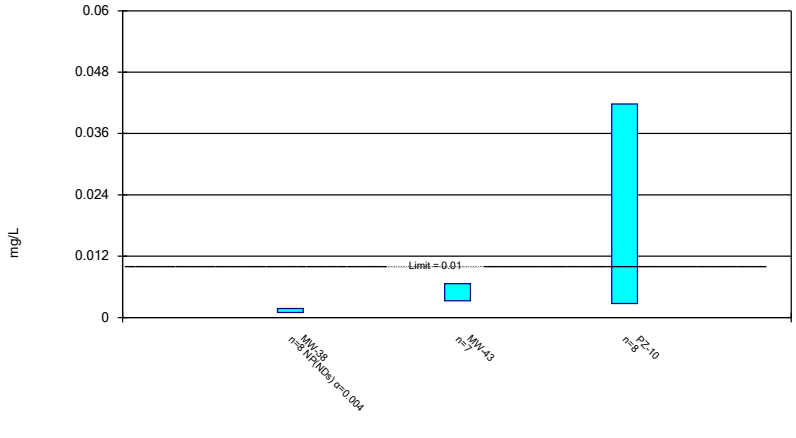


Constituent: Arsenic Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

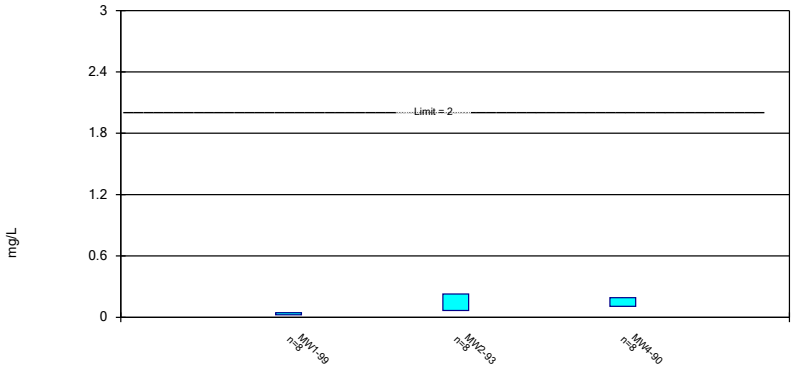


Constituent: Arsenic Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

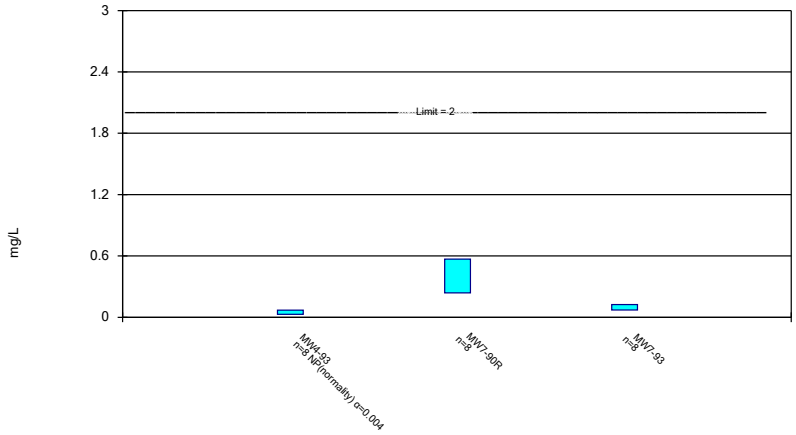


Constituent: Barium Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

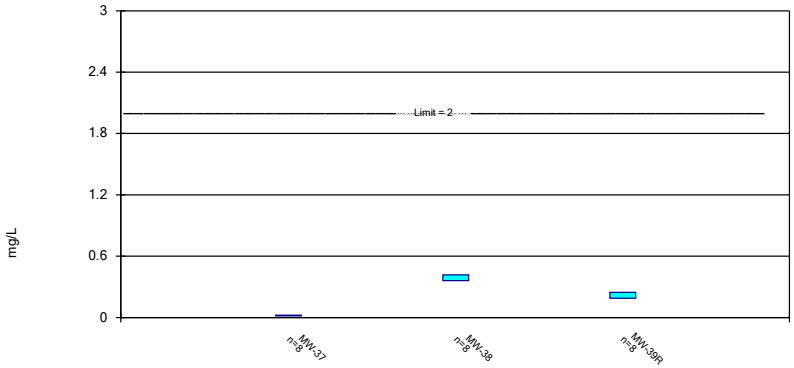


Constituent: Barium Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

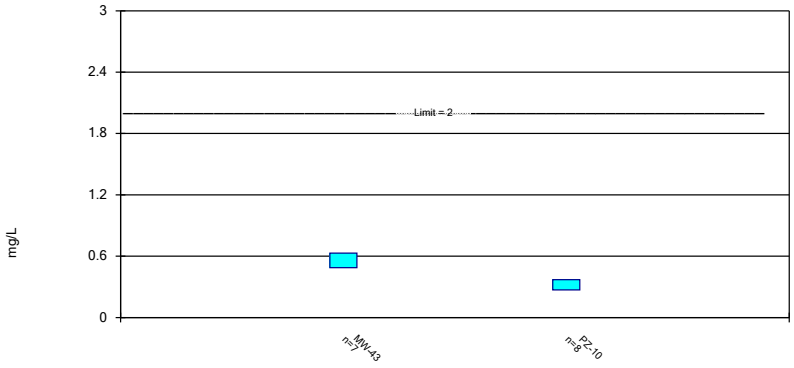


Constituent: Barium Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

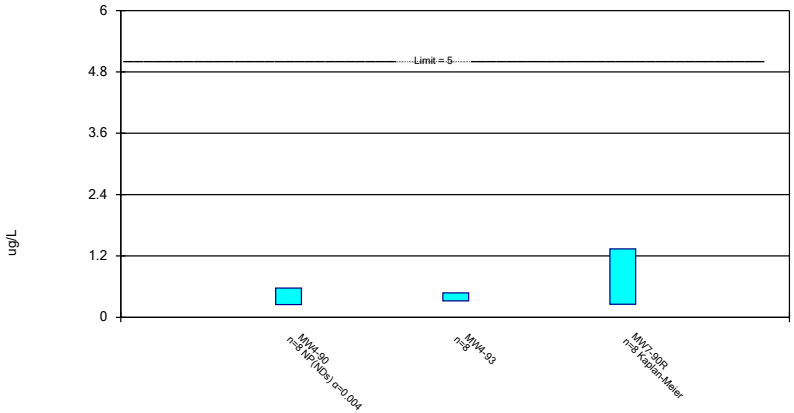


Constituent: Barium Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

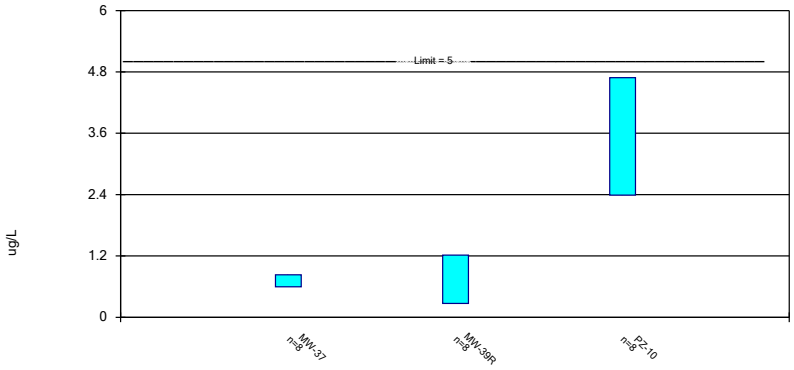


Constituent: Benzene Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

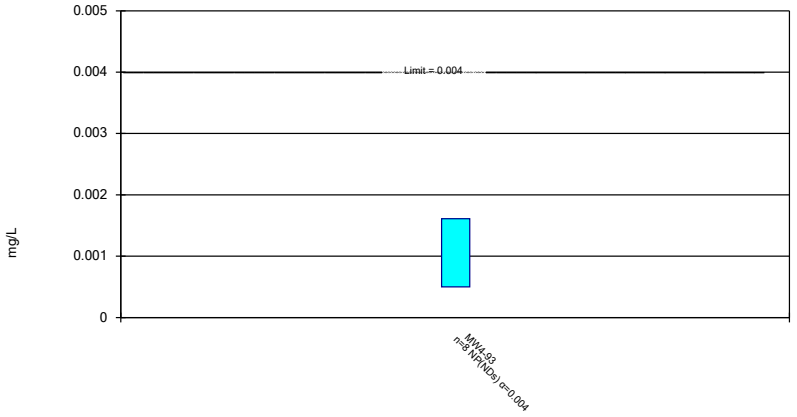


Constituent: Benzene Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

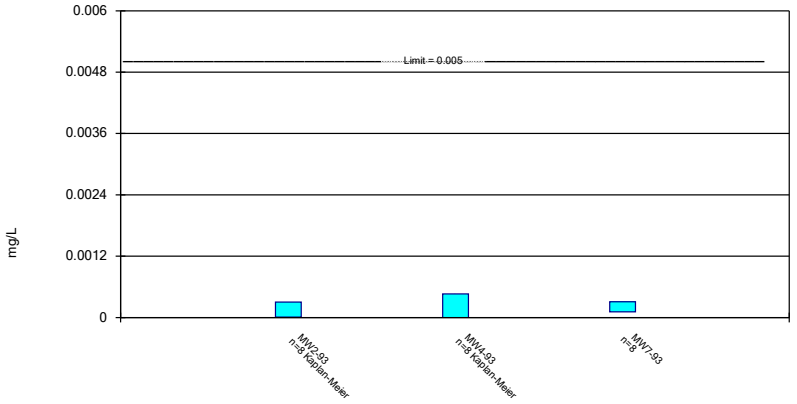


Constituent: Beryllium Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

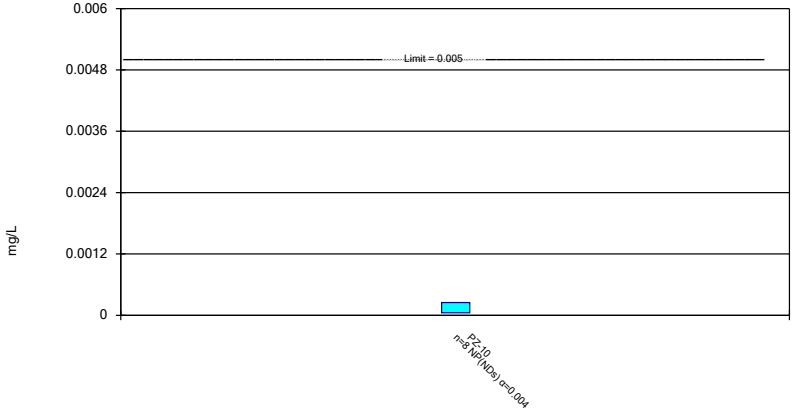


Constituent: Cadmium Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

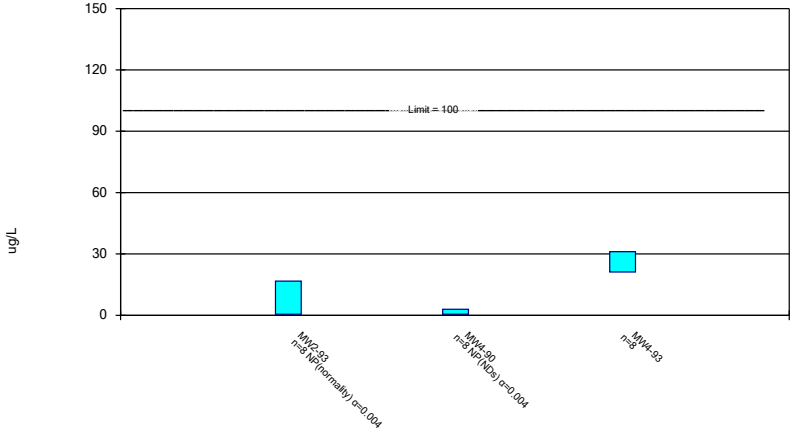


Constituent: Cadmium Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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



Constituent: Chlorobenzene Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

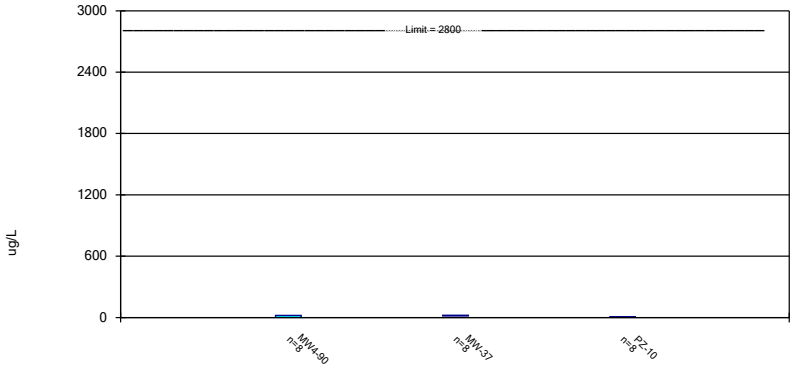
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

Constituent: Chlorobenzene Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

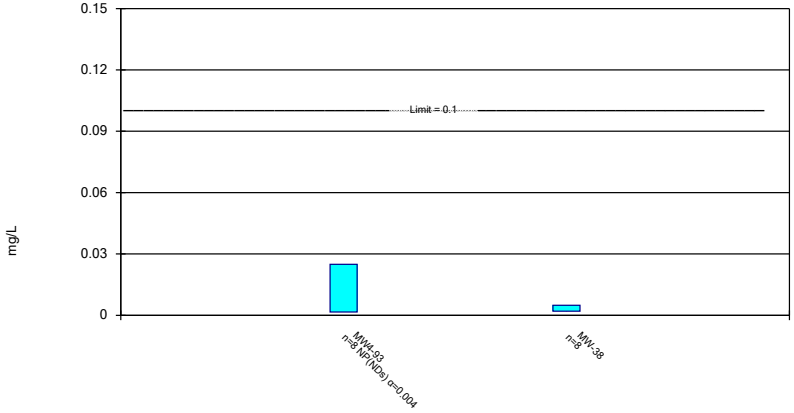


Constituent: Chloroethane Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

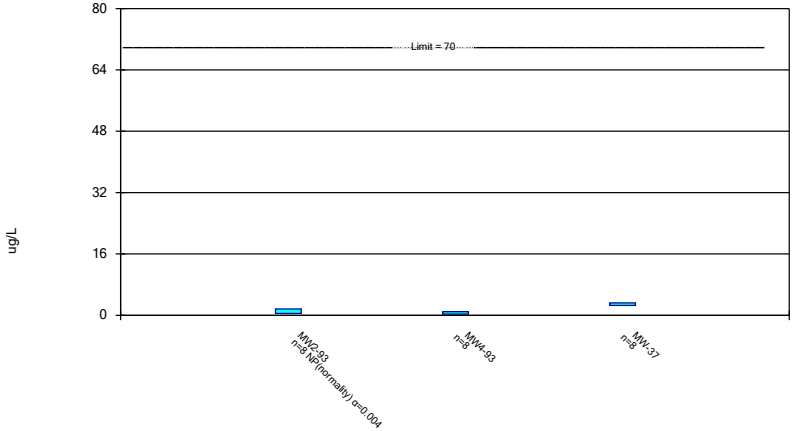


Constituent: Chromium Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

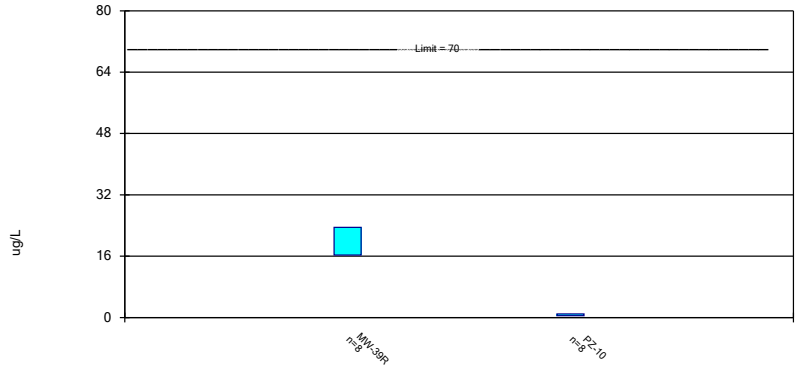


Constituent: cis-1,2-Dichloroethene Analysis Run 11/6/2024 11:52 AM View: 2024 SSN Confidence Interv
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

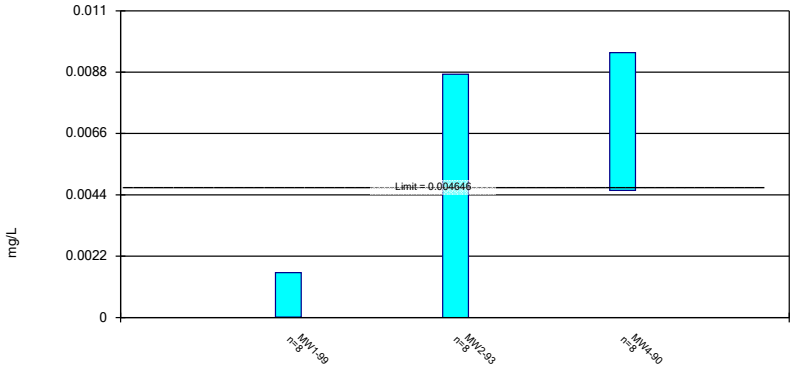


Constituent: cis-1,2-Dichloroethene Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interv
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

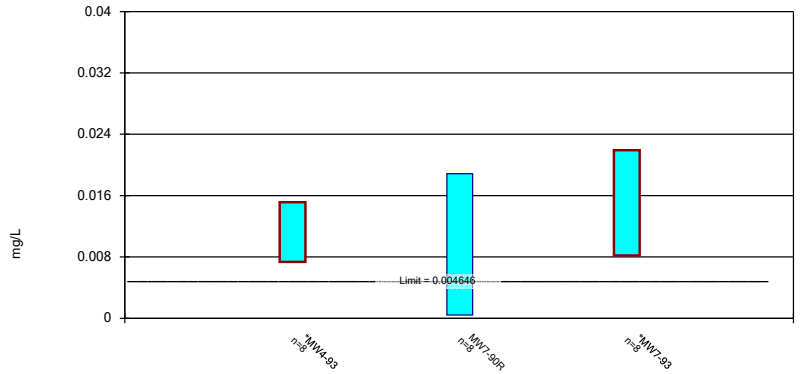


Constituent: Cobalt Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

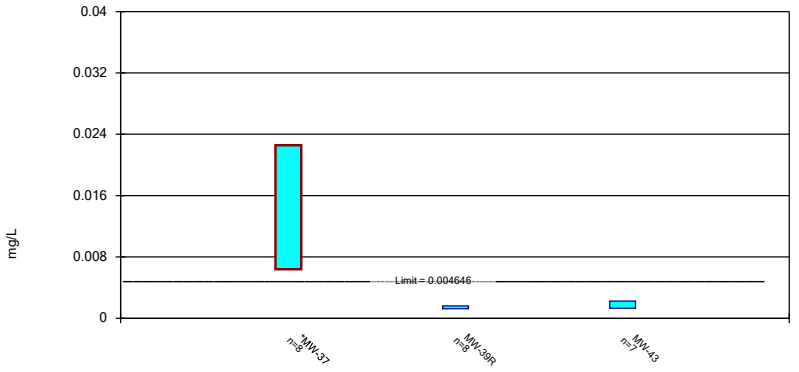


Constituent: Cobalt Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

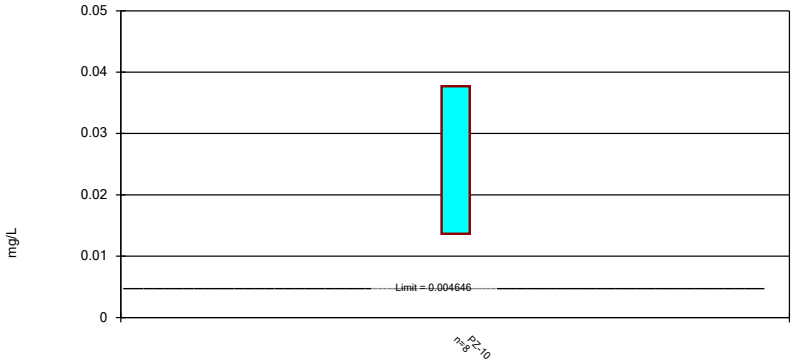


Constituent: Cobalt Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

Compliance limit is exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

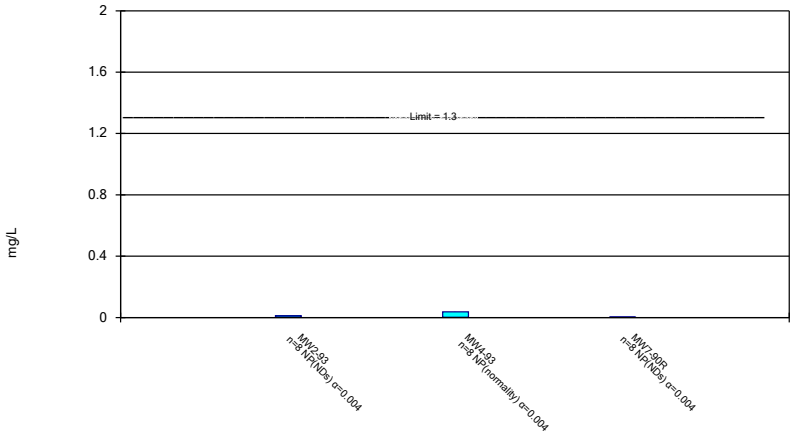


Constituent: Cobalt Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Copper Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

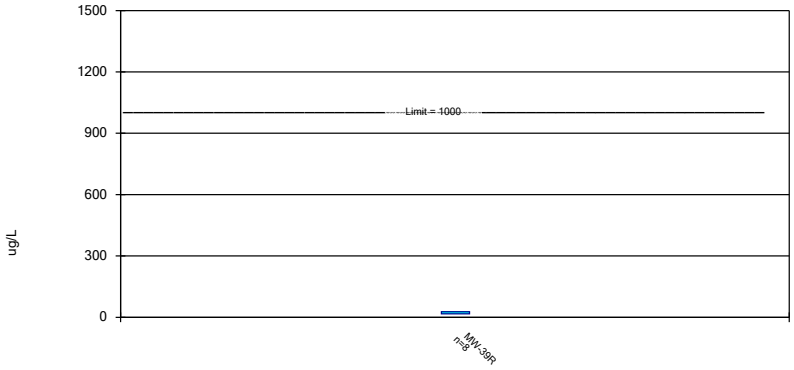
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.

Constituent: Copper Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

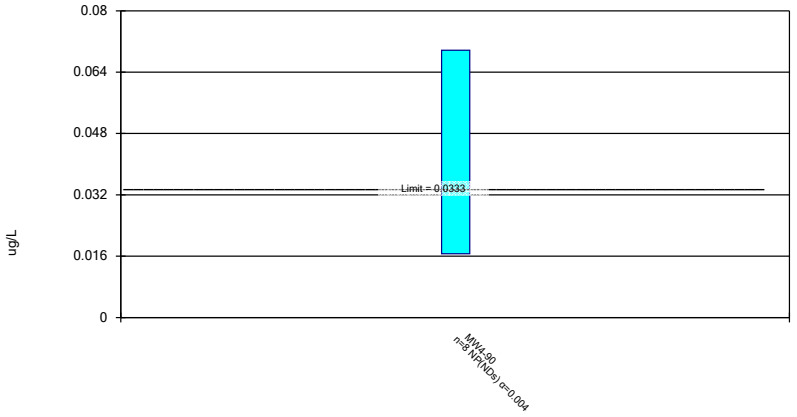


Constituent: Dichlorodifluoromethane Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Inter
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

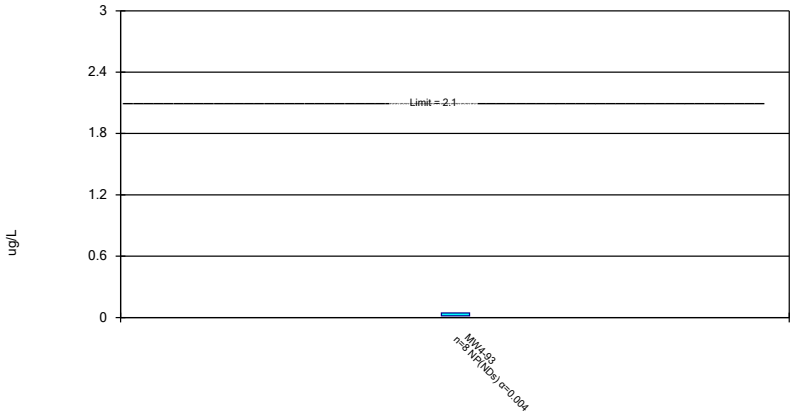


Constituent: Endosulfan sulfate Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

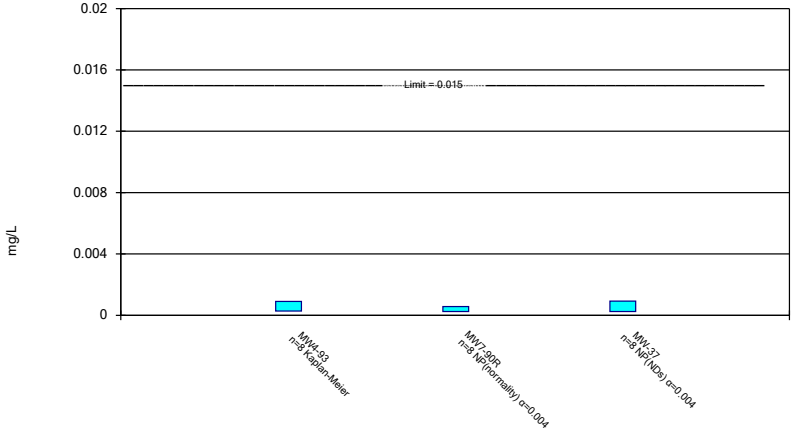


Constituent: Endrin aldehyde Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

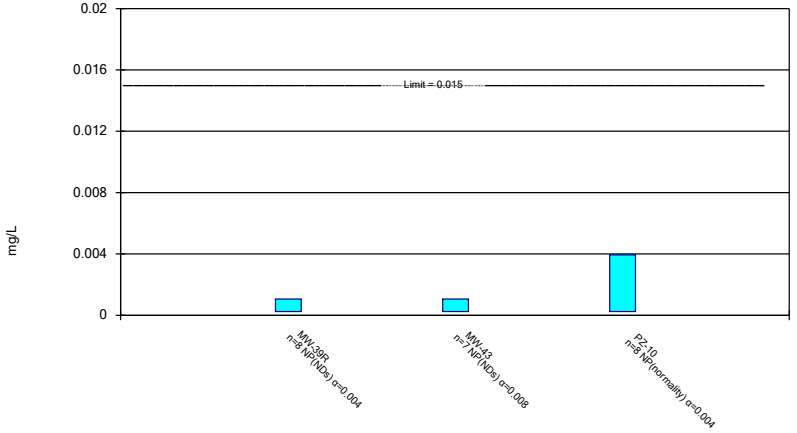


Constituent: Lead Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

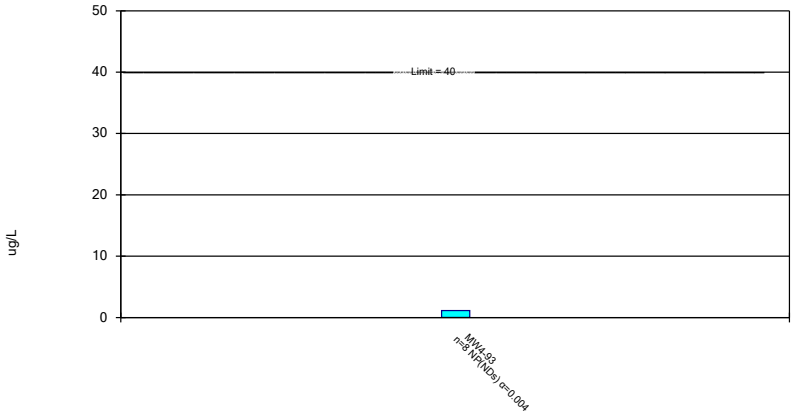


Constituent: Lead Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

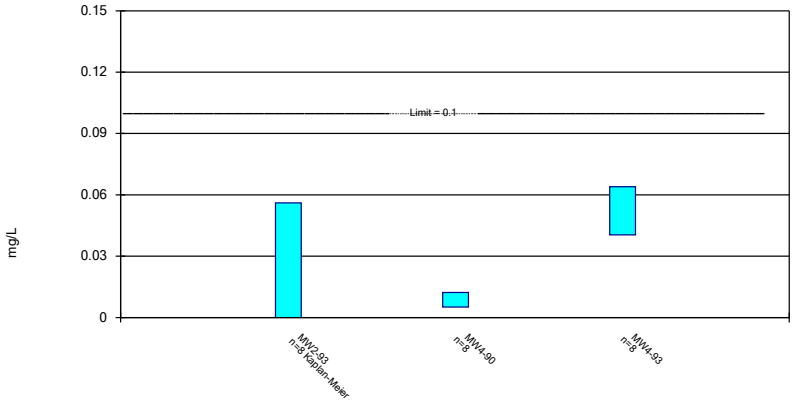


Constituent: Methoxychlor Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

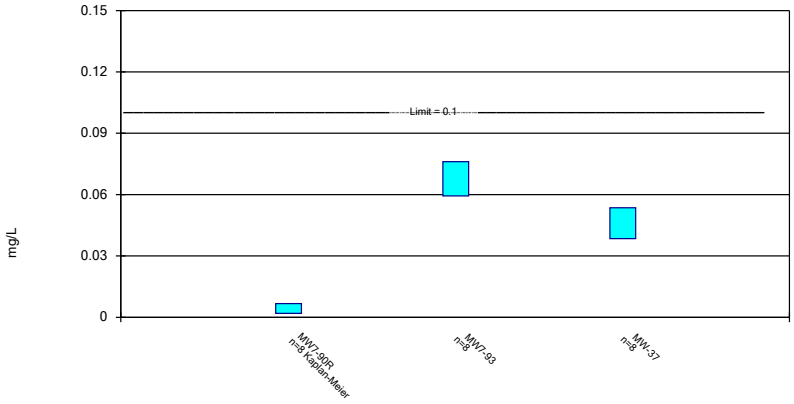


Constituent: Nickel Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

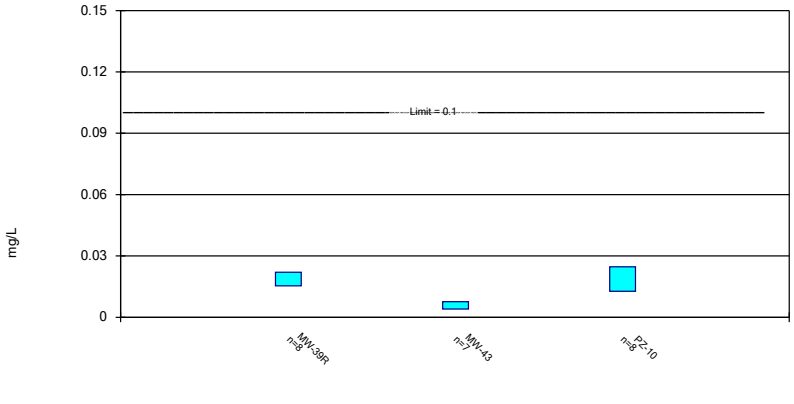


Constituent: Nickel Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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



Constituent: Nickel Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

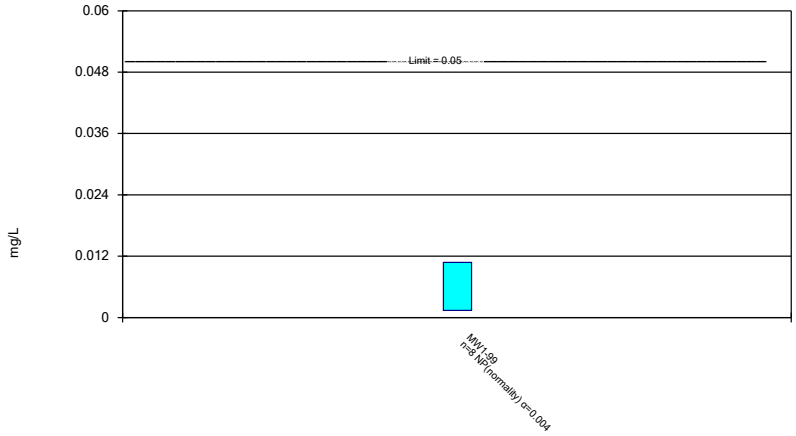
Compliance Limit is not exceeded.

Constituent: Phenol Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

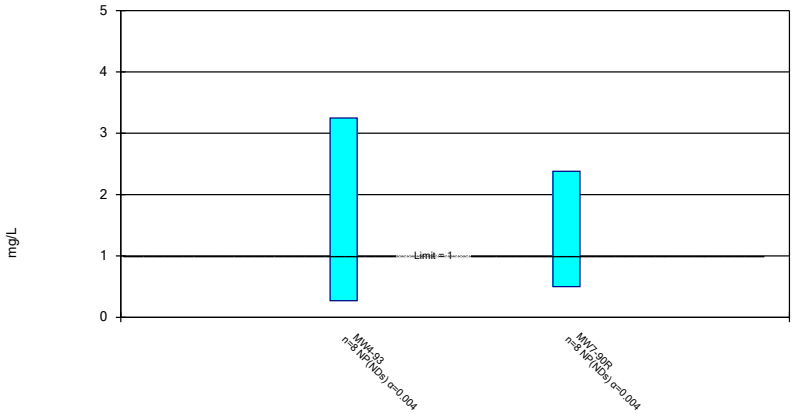


Constituent: Selenium Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

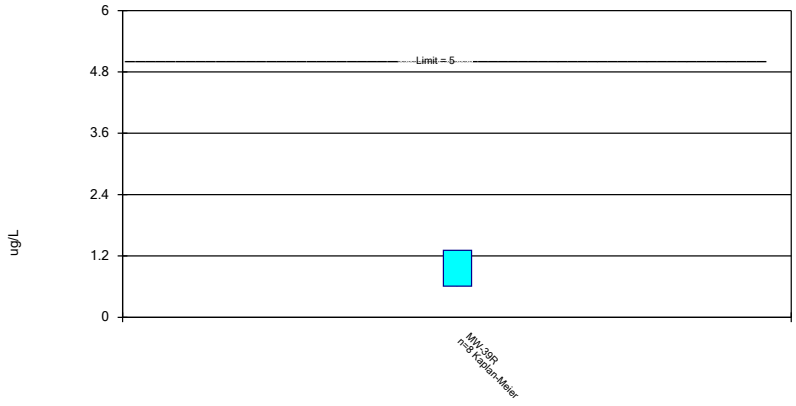


Constituent: Sulfide Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

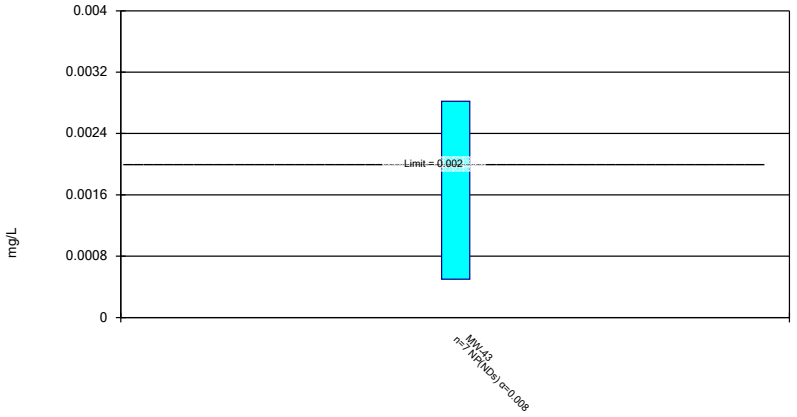


Constituent: Tetrachloroethene Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

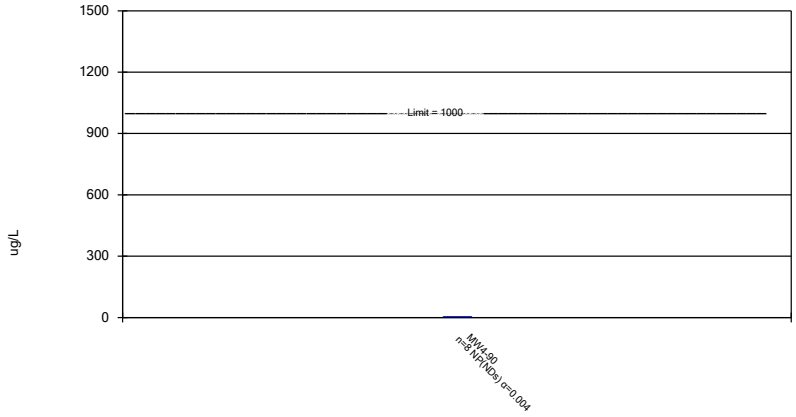


Constituent: Thallium Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

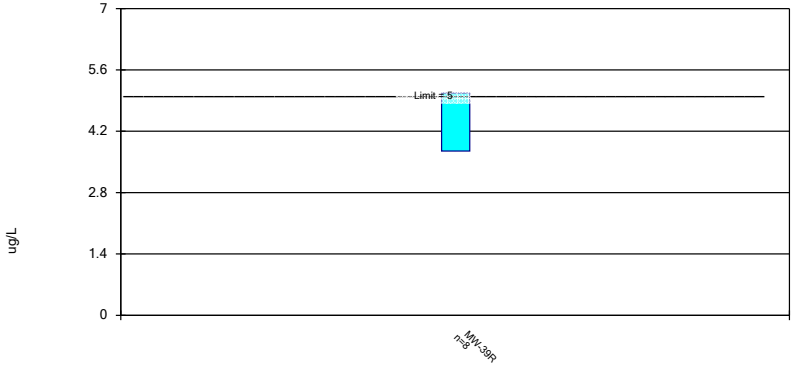


Constituent: Toluene Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

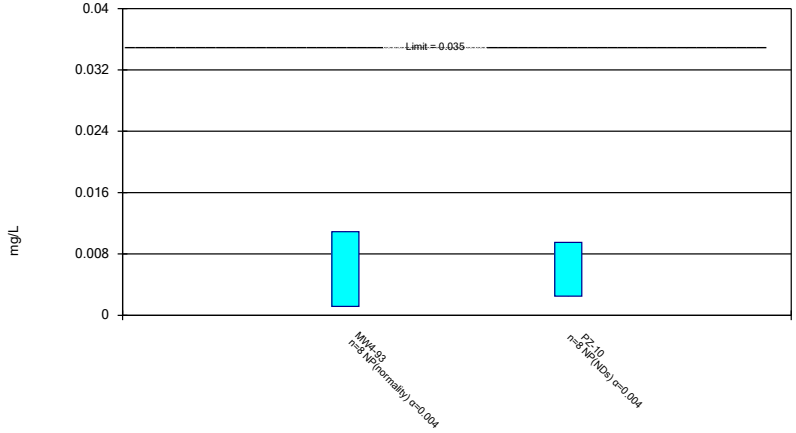


Constituent: Trichloroethene Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

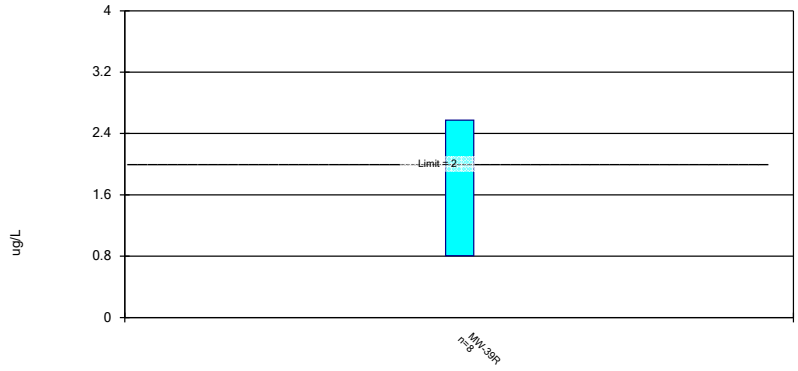


Constituent: Vanadium Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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



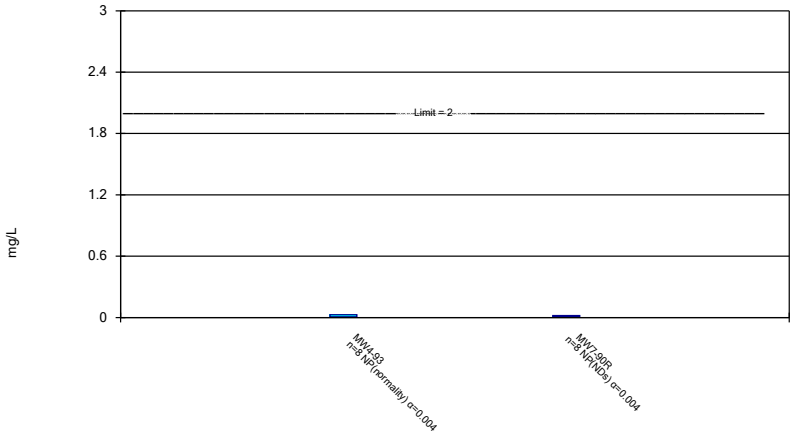
Constituent: Vinyl Chloride Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Zinc Analysis Run 11/6/2024 11:53 AM View: 2024 SSN Confidence Interval

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Theil-Sen Confidence Bands Summary Table and Graphs

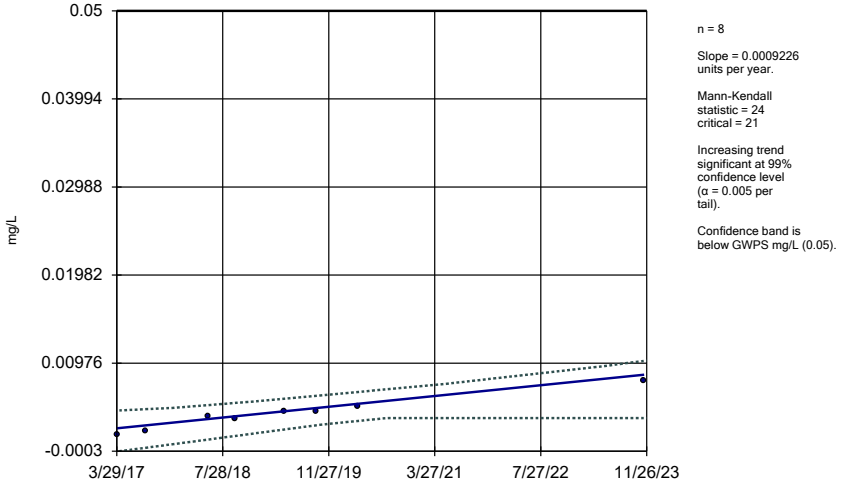
Trend Test

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit Printed 10/24/2024, 12:20 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Alpha	Method
Selenium (mg/L)	**MW-38**	**0.0009226**	**24**	**21**	**Yes**	**8**	**0**	**0.01**	**NP**
Vinyl Chloride (ug/L)	**MW-37**	**-0.3075**	**-22**	**-21**	**Yes**	**8**	**0**	**0.01**	**NP**

Sen's Slope and 99% Confidence Band

MW-38



n = 8

Slope = 0.0009226 units per year.

Mann-Kendall statistic = 24
critical = 21

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Confidence band is below GWPS mg/L (0.05).

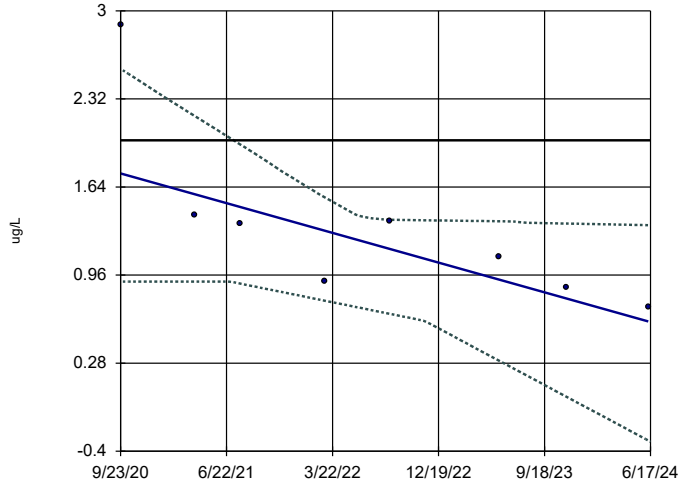
Constituent: Selenium Analysis Run 10/24/2024 12:18 PM View: 2024 SSN Theil Sen

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

Sanitas™ v.10.0.23 Software licensed to SCS Engineers. UG

Sen's Slope and 99% Confidence Band

MW-37



n = 8

Slope = -0.3075 units per year.

Mann-Kendall statistic = -22
critical = -21

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Confidence band intersects GWPS ug/L (2) on 07/25/21.

Constituent: Vinyl Chloride Analysis Run 10/24/2024 12:18 PM View: 2024 SSN Theil Sen

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-SSN-MasterAM-edit

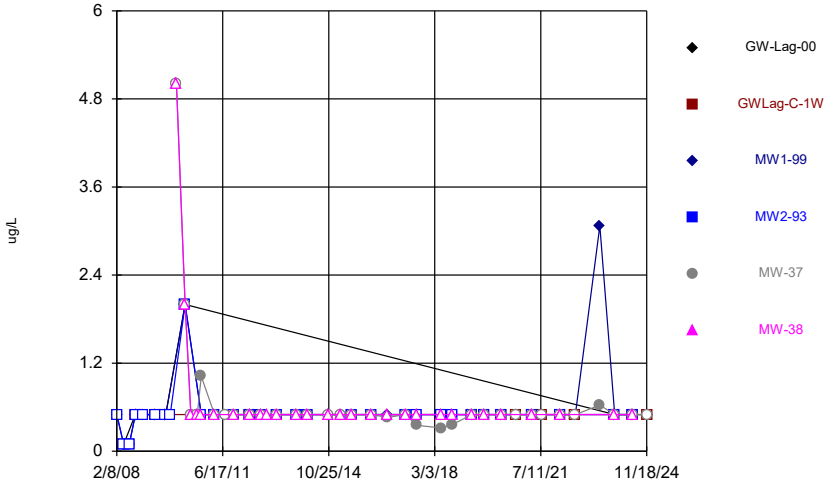
Attachment B

2nd 2024 Semi-Annual Statistical Output

Time Series Table and Graphs

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

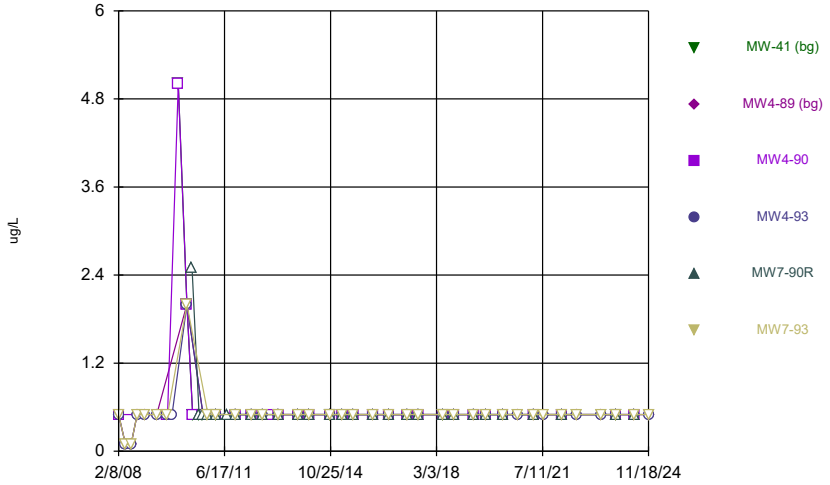
Time Series



Constituent: 1,1,1-Trichloroethane Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

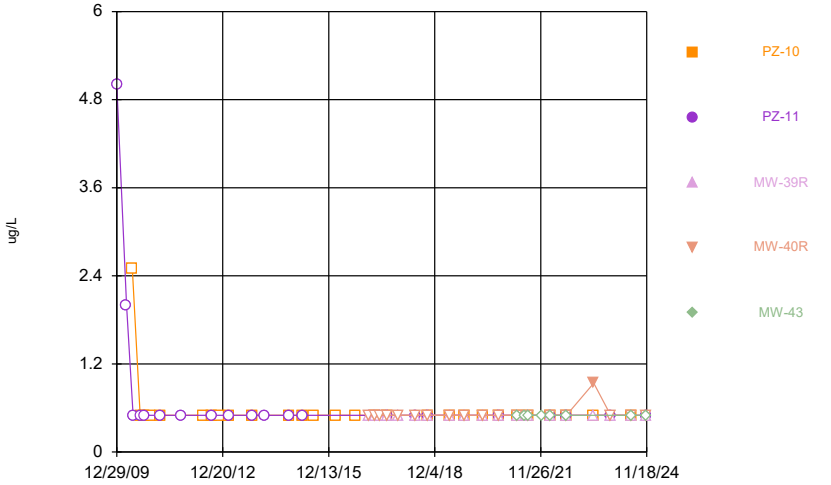
Time Series



Constituent: 1,1,1-Trichloroethane Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

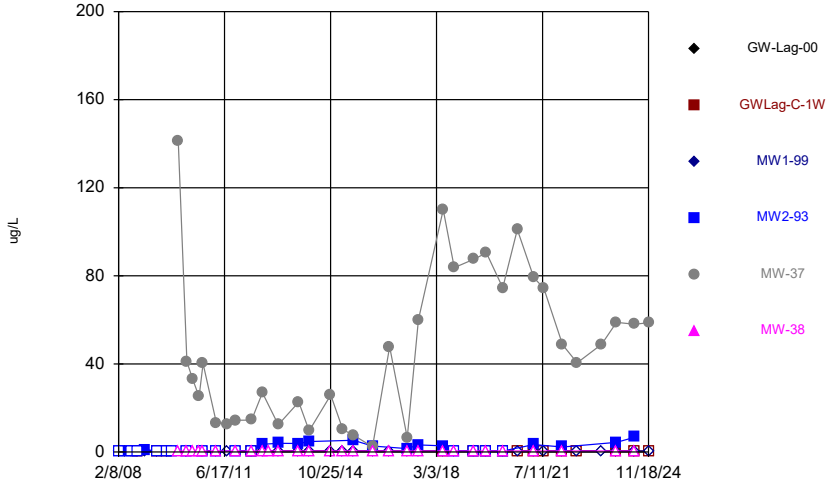
Time Series



Constituent: 1,1,1-Trichloroethane Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

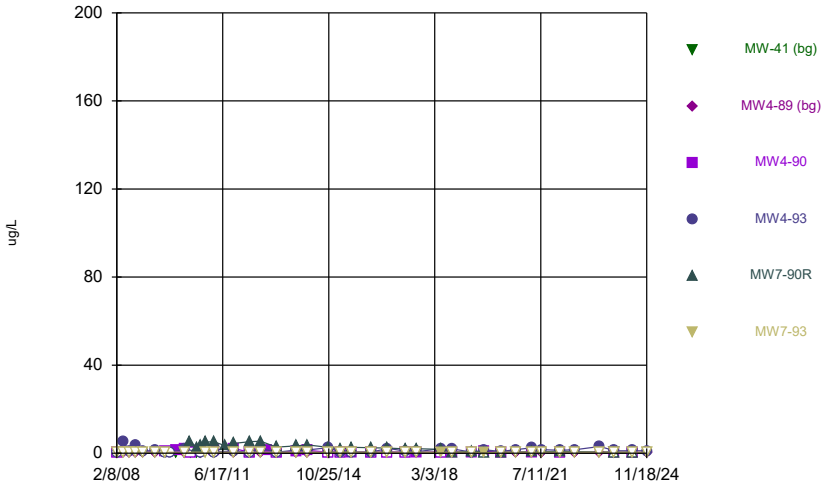
Time Series



Constituent: 1,1-Dichloroethane Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

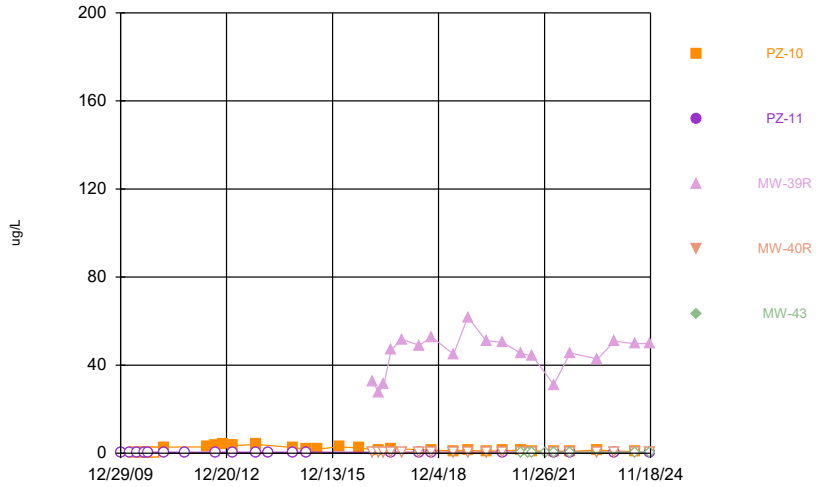
Time Series



Constituent: 1,1-Dichloroethane Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

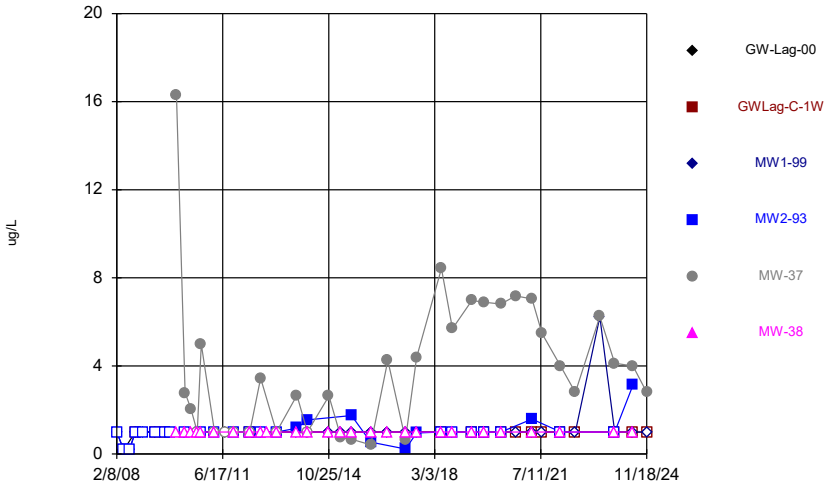
Time Series



Constituent: 1,1-Dichloroethane Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

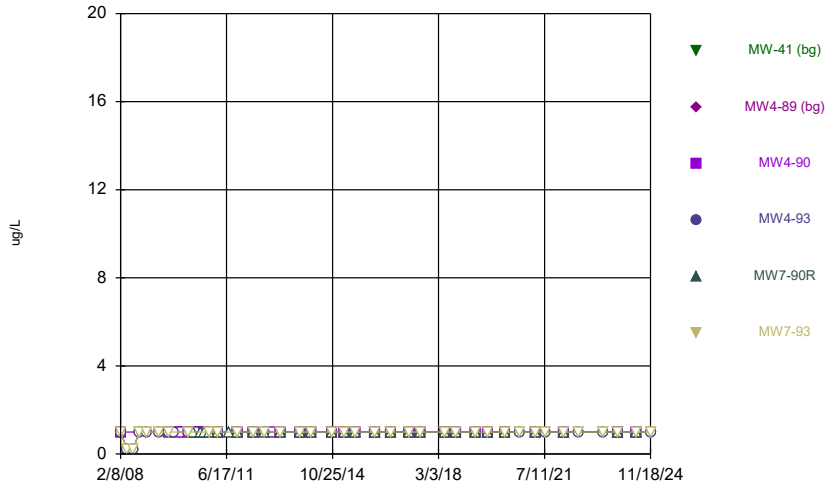
Time Series



Constituent: 1,1-Dichloroethene Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

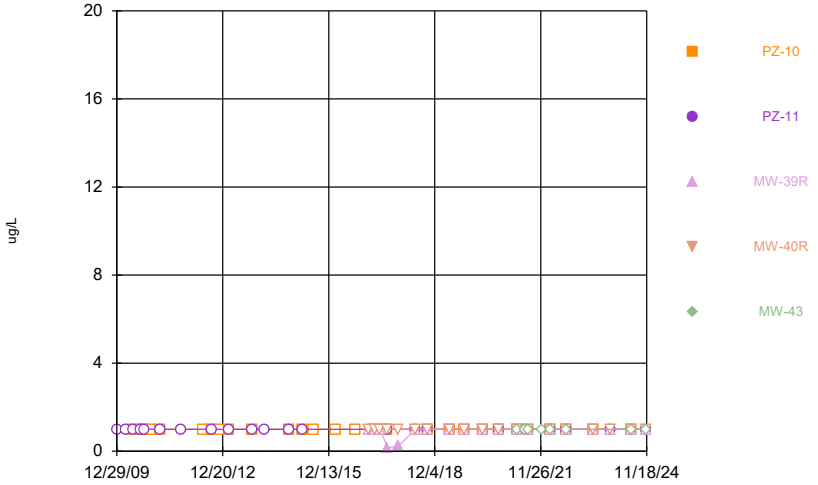
Time Series



Constituent: 1,1-Dichloroethene Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

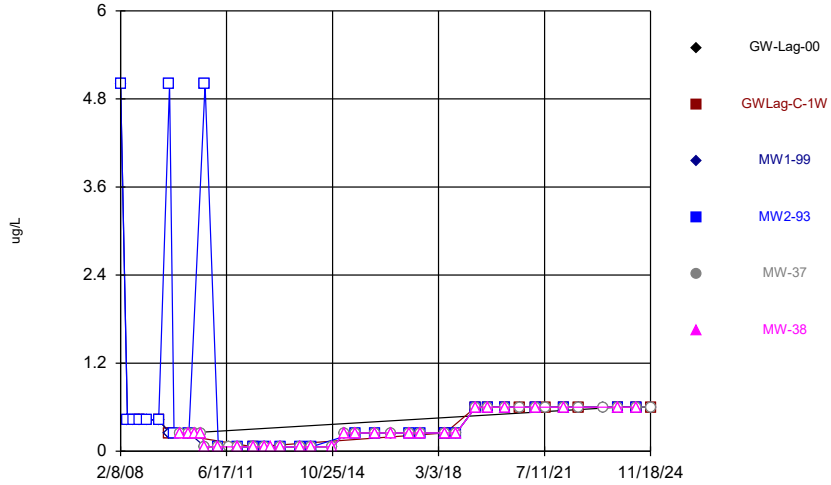
Time Series



Constituent: 1,1-Dichloroethene Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

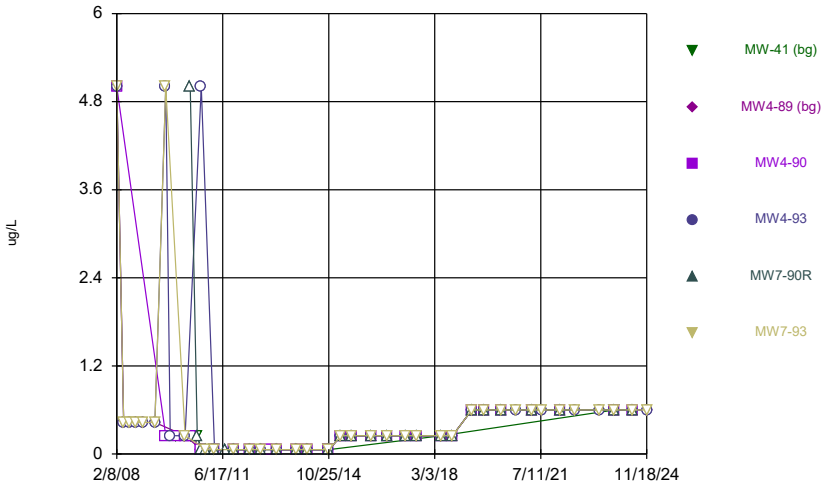
Time Series



Constituent: 1,2-Dibromo-3-Chloropropane Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeser
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

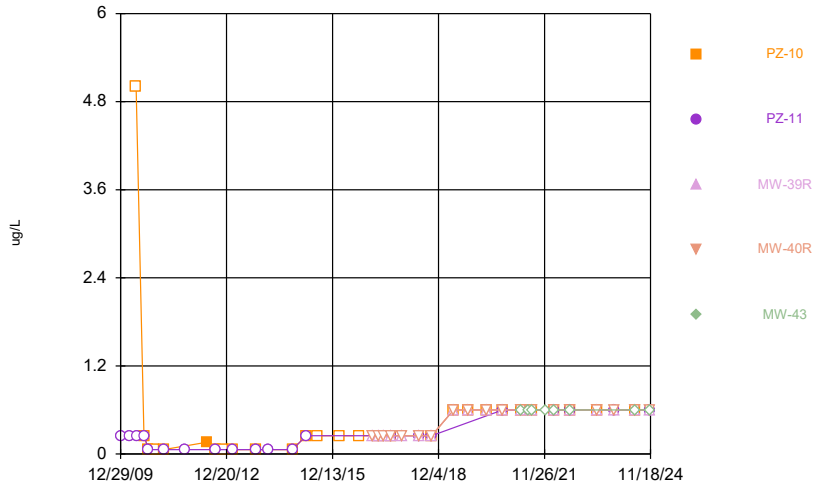
Time Series



Constituent: 1,2-Dibromo-3-Chloropropane Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeser
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

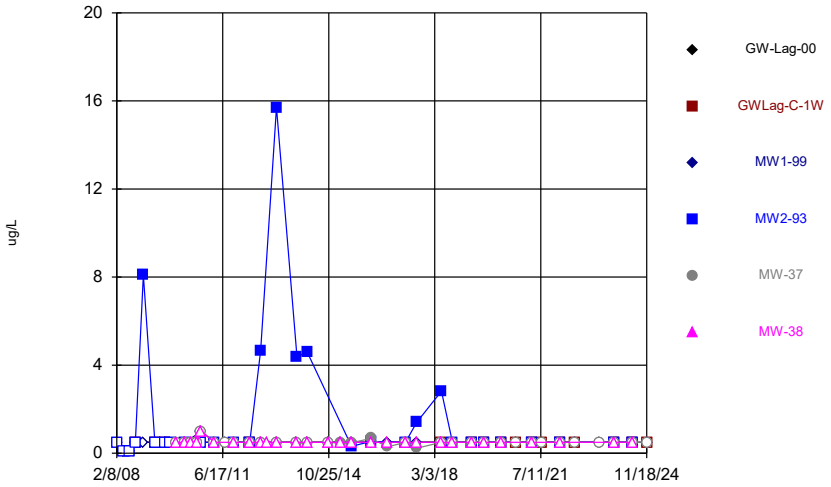
Time Series



Constituent: 1,2-Dibromo-3-Chloropropane Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeser
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

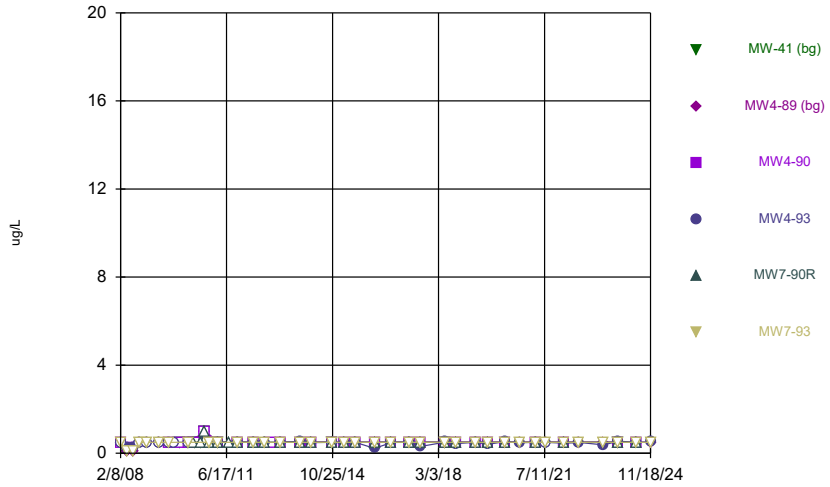
Time Series



Constituent: 1,2-Dichlorobenzene Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

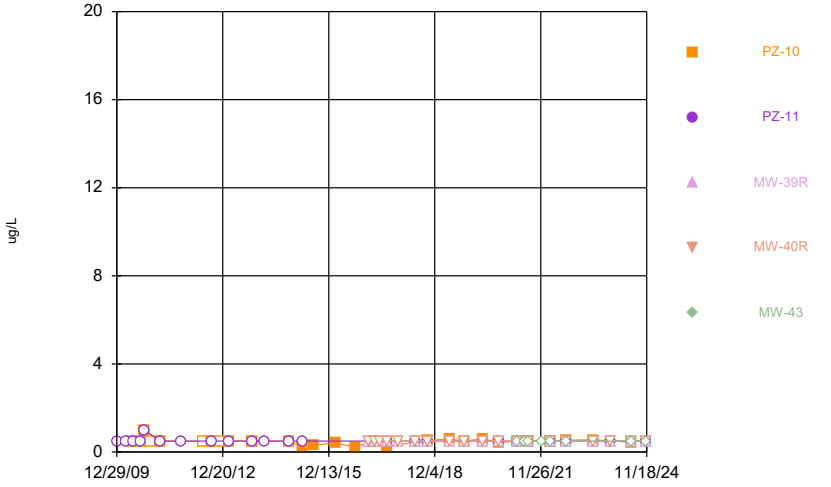
Time Series



Constituent: 1,2-Dichlorobenzene Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

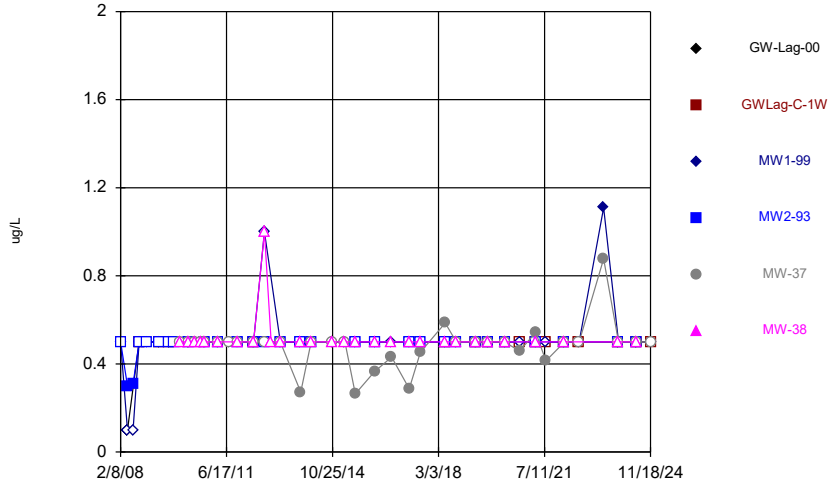
Time Series



Constituent: 1,2-Dichlorobenzene Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

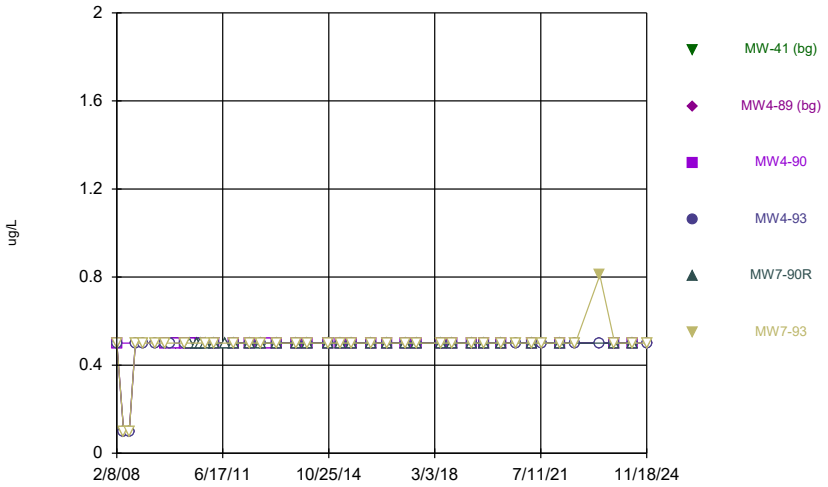
Time Series



Constituent: 1,2-Dichloroethane Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

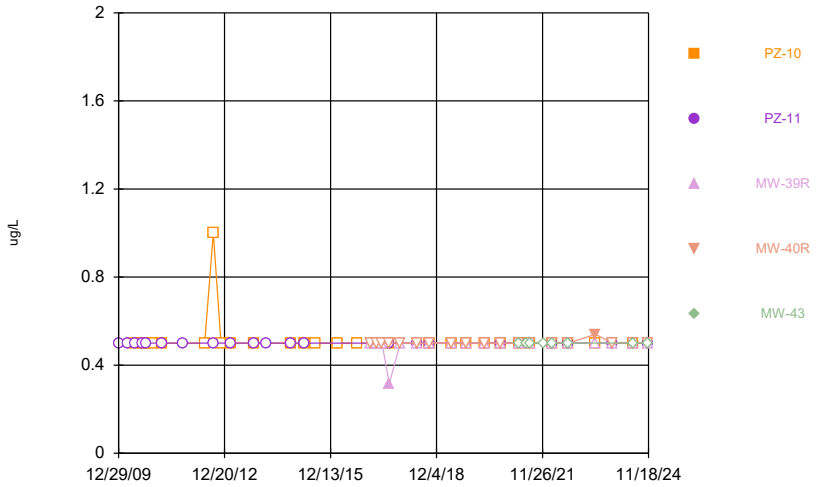
Time Series



Constituent: 1,2-Dichloroethane Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

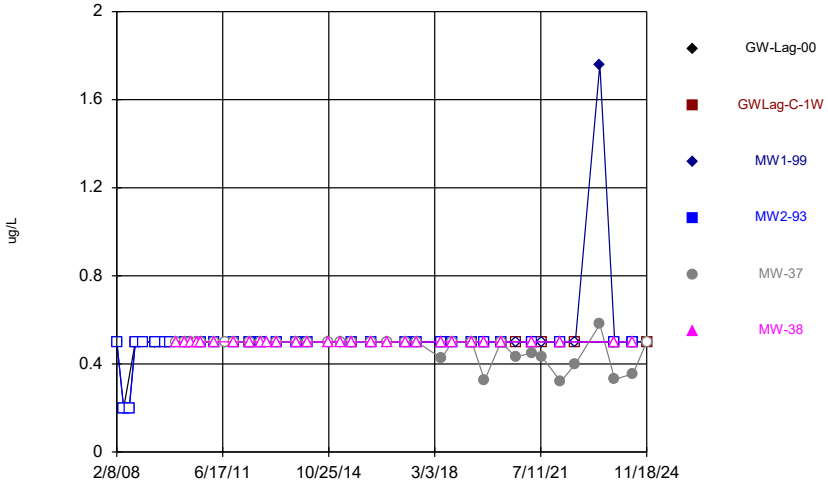
Time Series



Constituent: 1,2-Dichloroethane Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

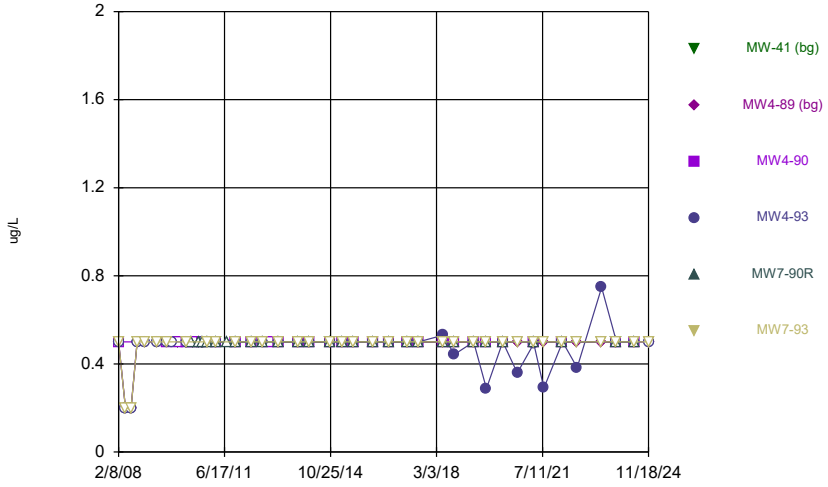
Time Series



Constituent: 1,2-Dichloropropane Analysis Run 1/24/2025 12:19 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

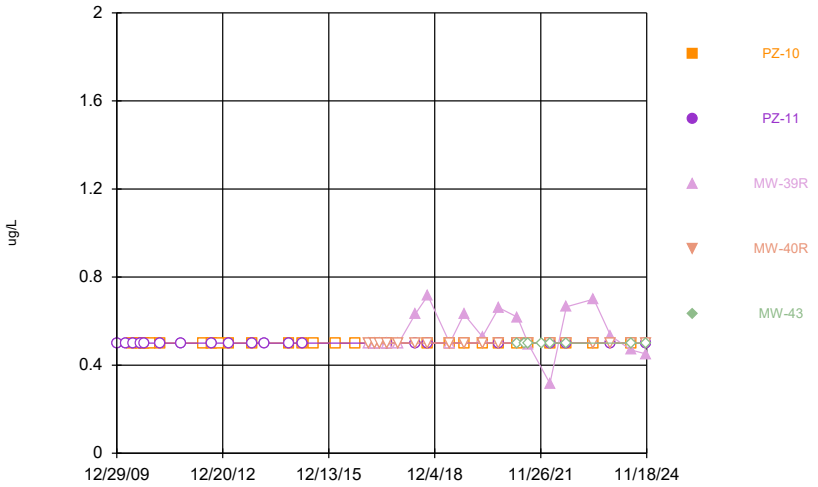
Time Series



Constituent: 1,2-Dichloropropane Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

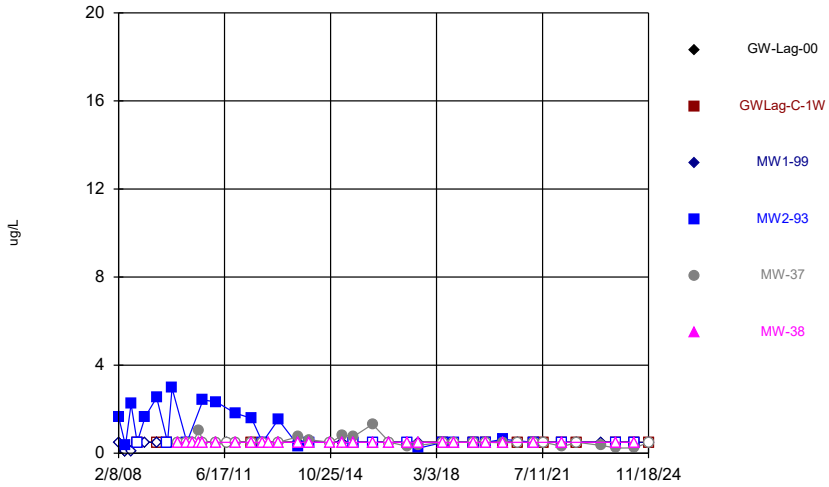
Time Series



Constituent: 1,2-Dichloropropane Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

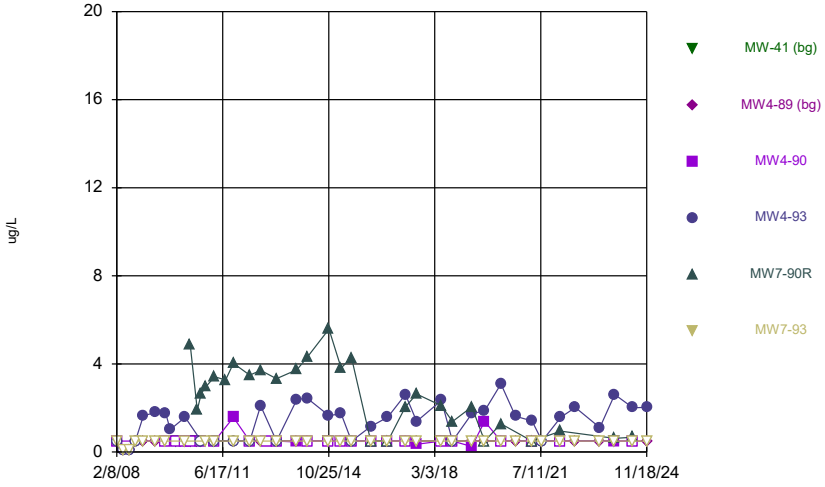
Time Series



Constituent: 1,4-Dichlorobenzene Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

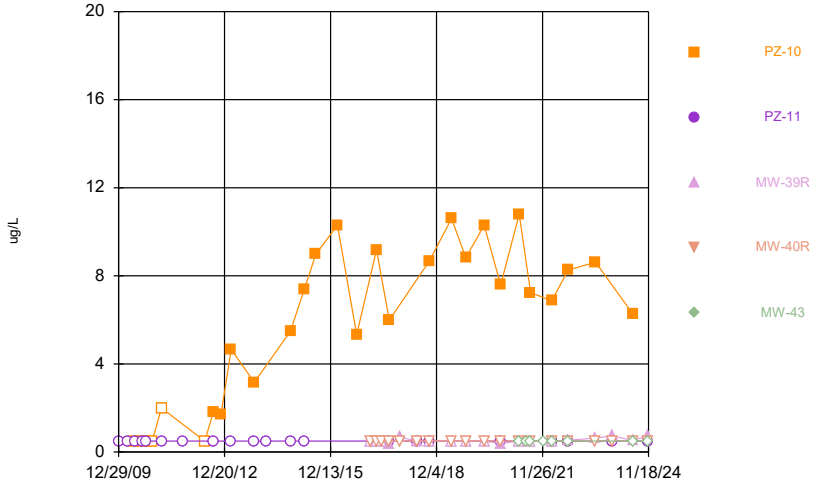
Time Series



Constituent: 1,4-Dichlorobenzene Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

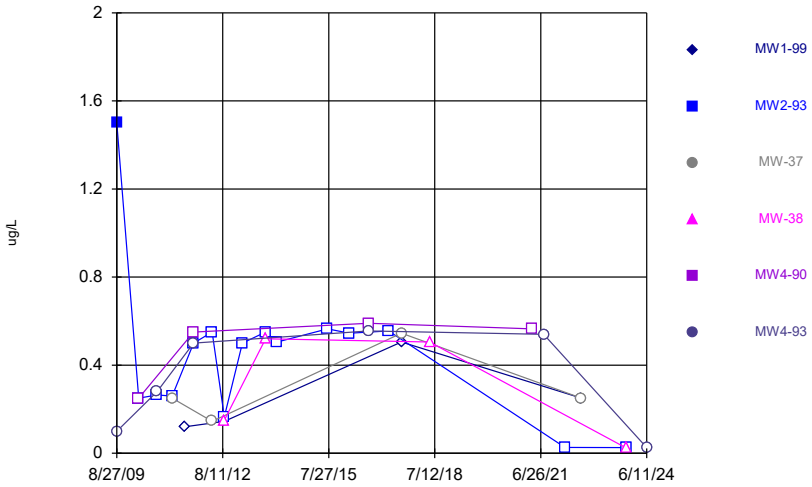
Time Series



Constituent: 1,4-Dichlorobenzene Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

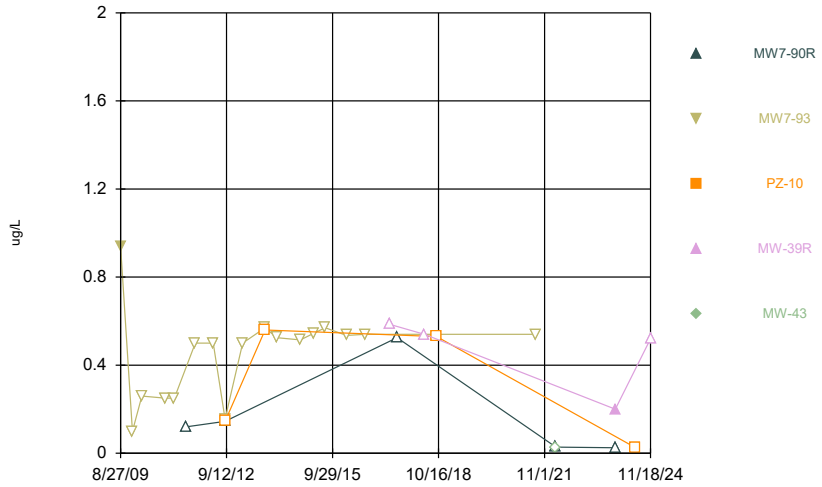
Time Series



Constituent: 2,4,5-TP [Silvex] [2C] Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

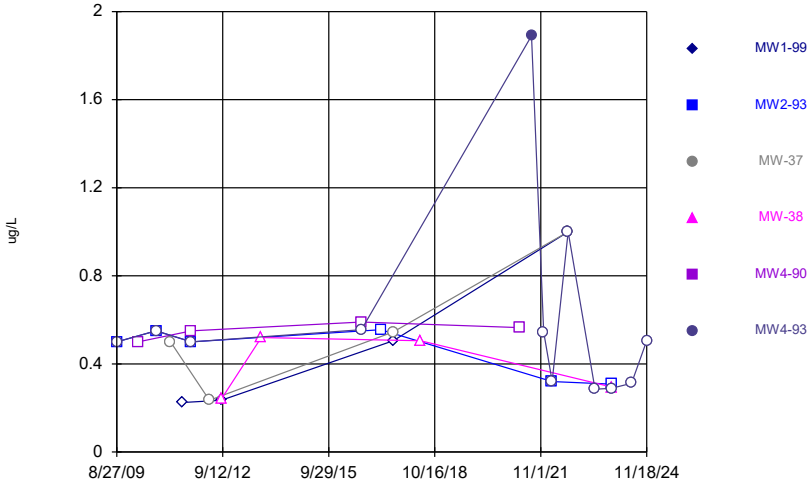
Time Series



Constituent: 2,4,5-TP [Silvex] [2C] Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

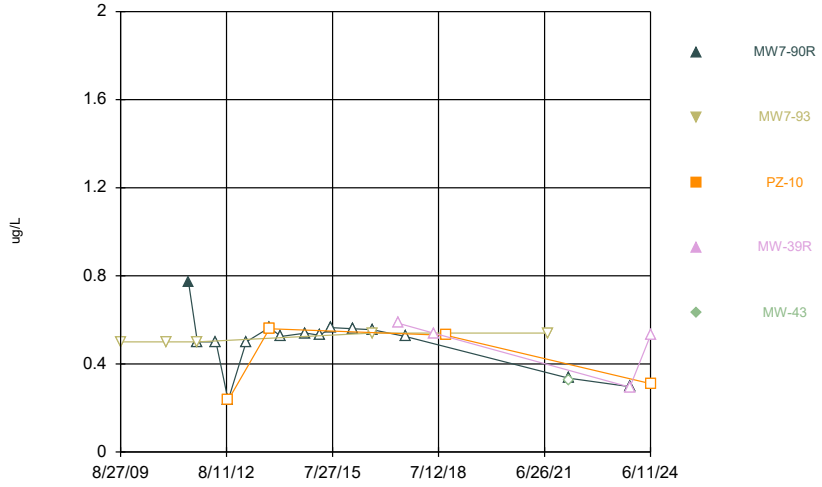
Time Series



Constituent: 2,4-D [2C] Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

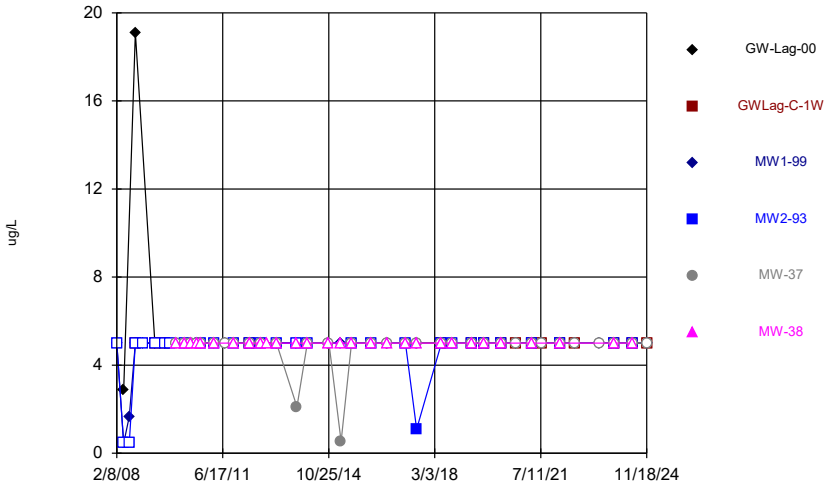
Time Series



Constituent: 2,4-D [2C] Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

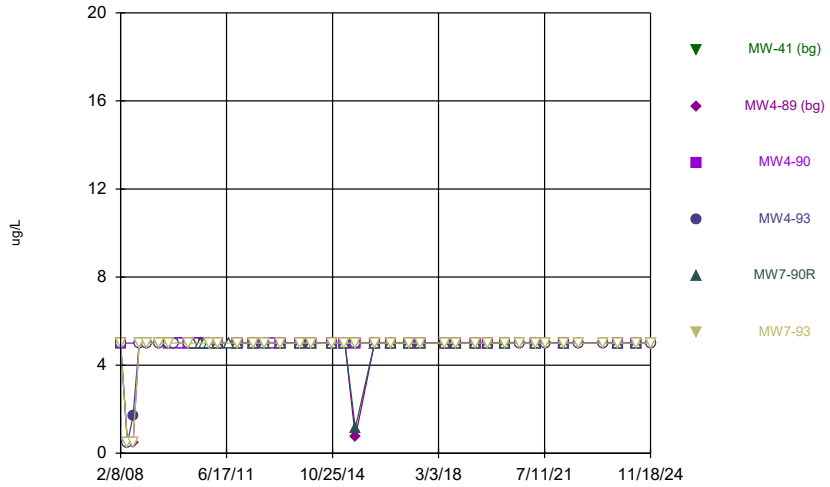
Time Series



Constituent: 2-Butanone Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

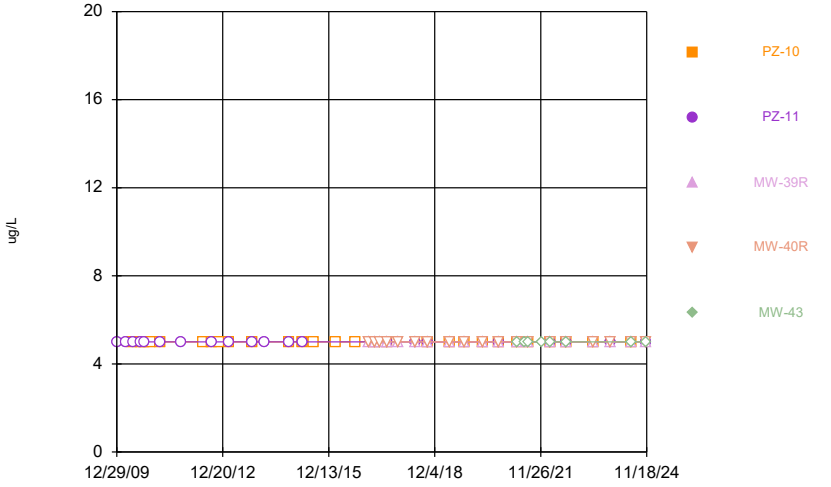
Time Series



Constituent: 2-Butanone Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

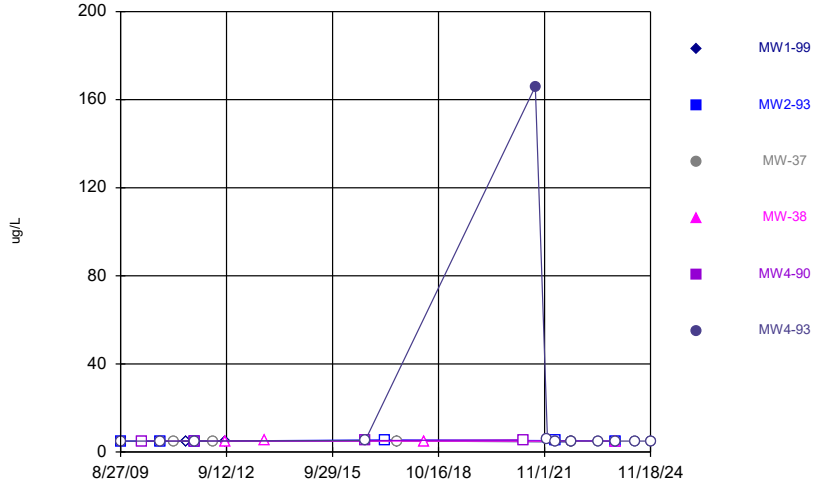
Time Series



Constituent: 2-Butanone Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

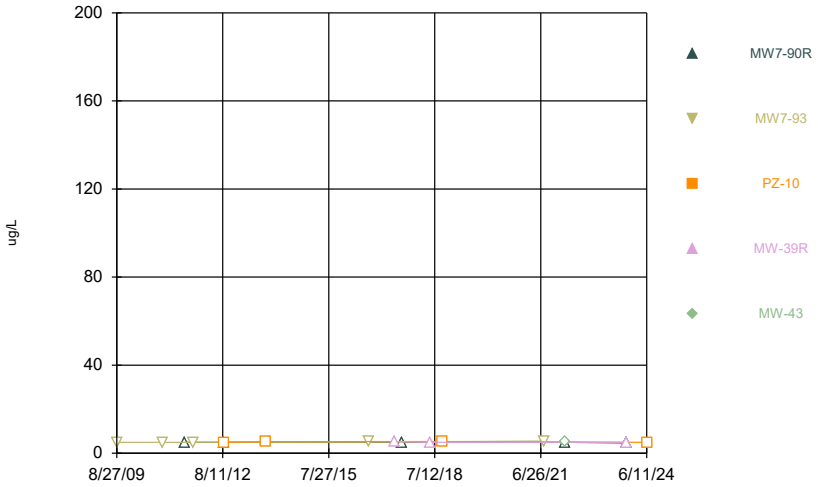
Time Series



Constituent: 3/4-Methylphenol Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

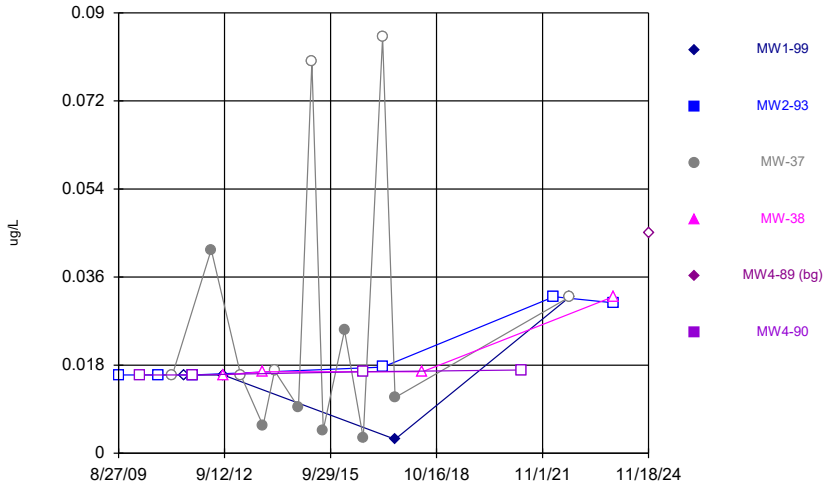
Time Series



Constituent: 3/4-Methylphenol Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

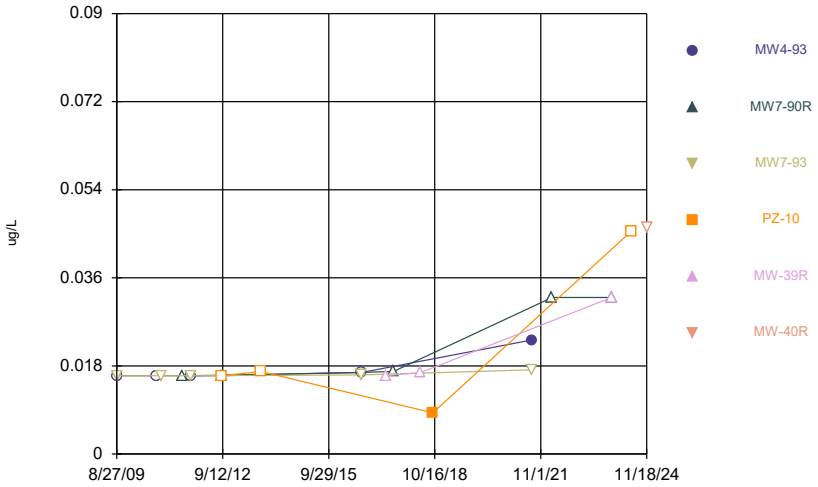
Time Series



Constituent: 4,4`-DDE Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

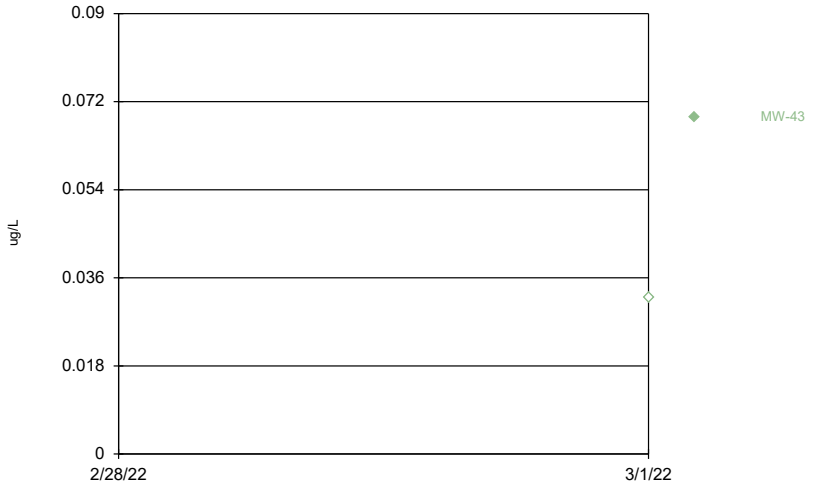
Time Series



Constituent: 4,4`-DDE Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

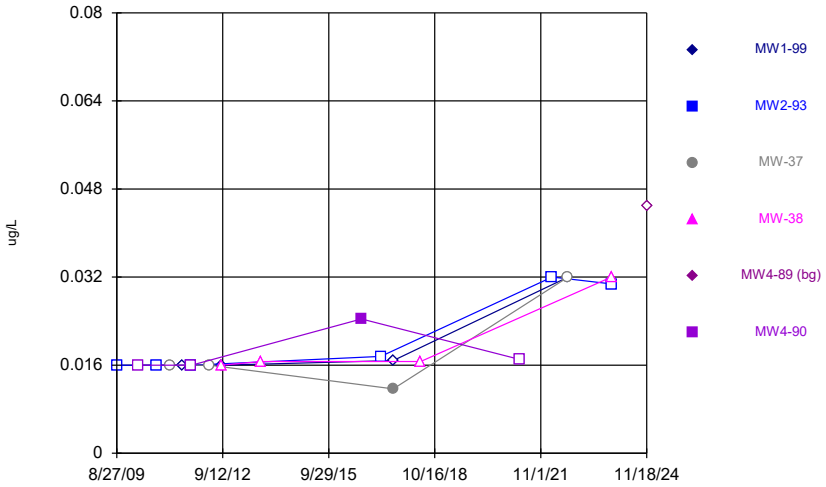
Time Series



Constituent: 4,4`-DDE Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

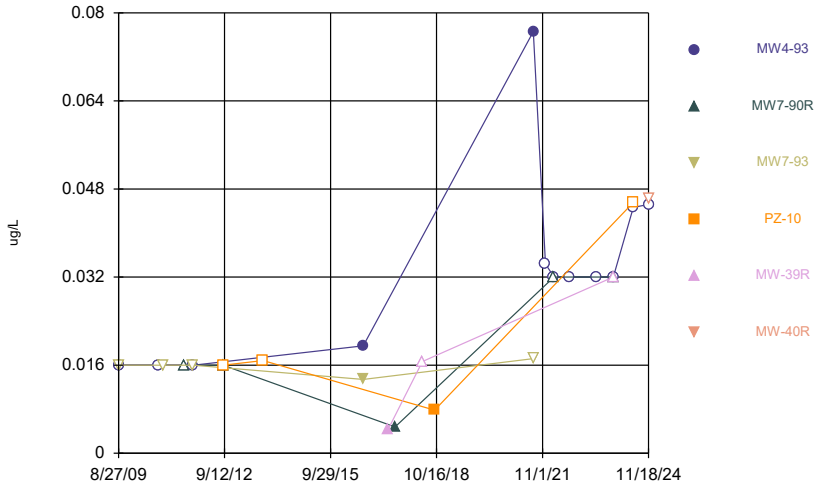
Time Series



Constituent: 4,4`-DDT Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

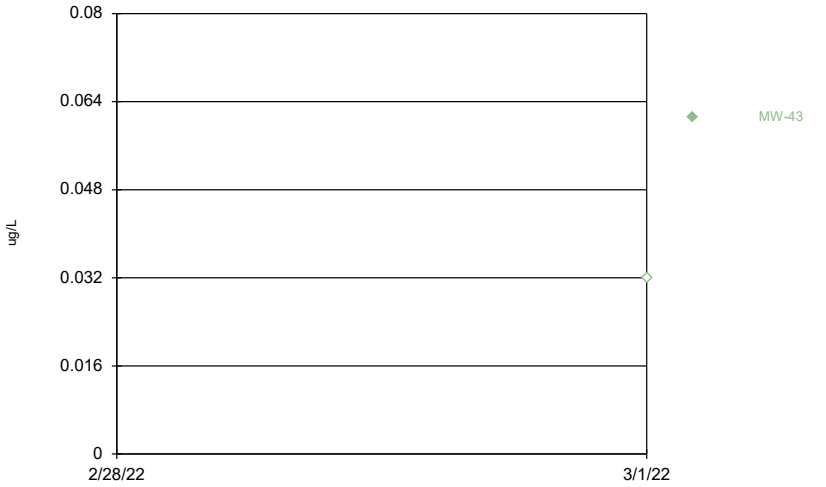
Time Series



Constituent: 4,4`-DDT Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

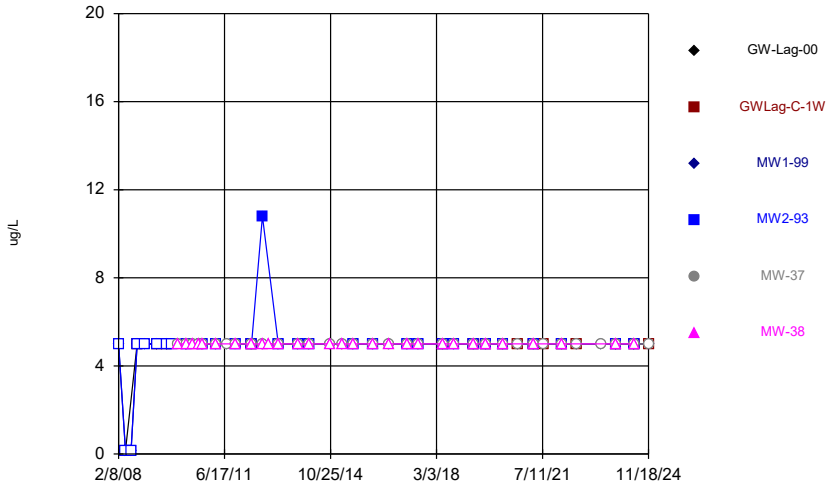
Time Series



Constituent: 4,4`-DDT Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

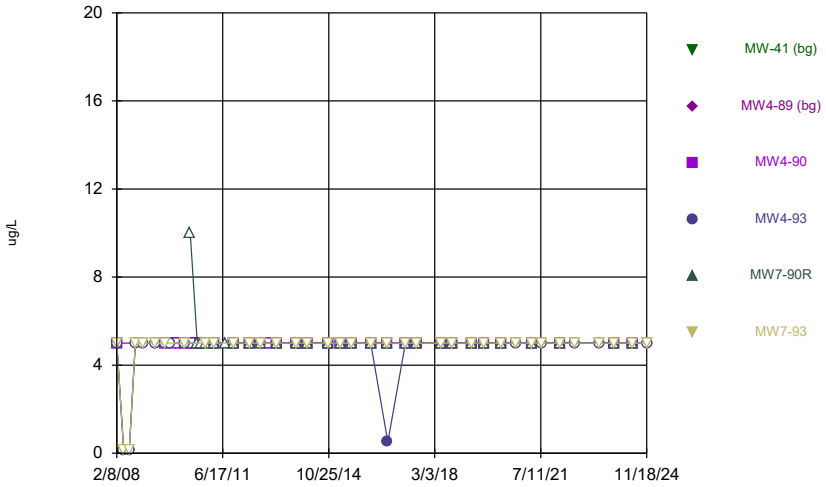
Time Series



Constituent: 4-Methyl-2-Pentanone Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

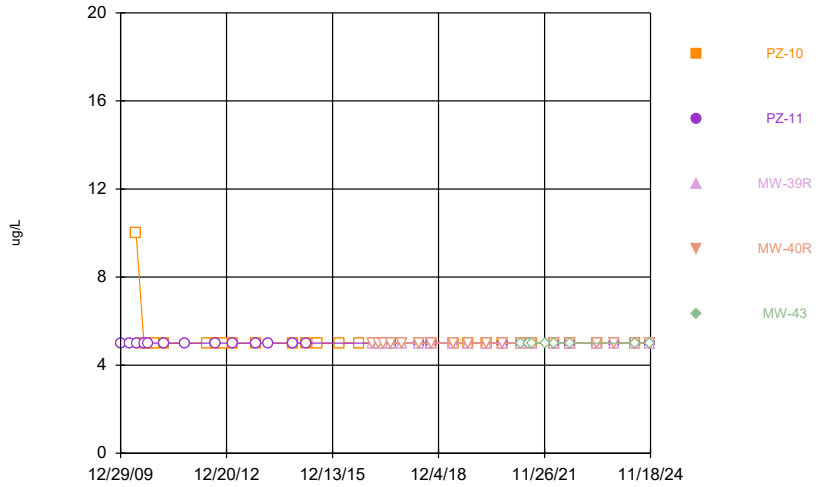
Time Series



Constituent: 4-Methyl-2-Pentanone Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

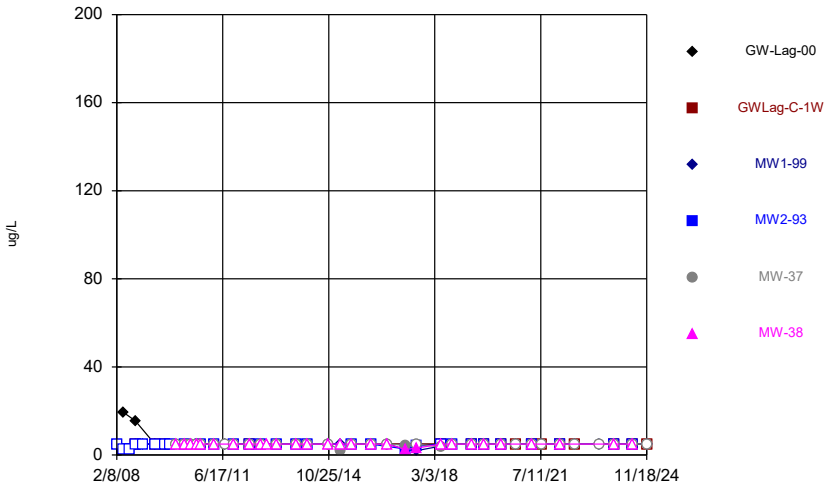
Time Series



Constituent: 4-Methyl-2-Pentanone Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

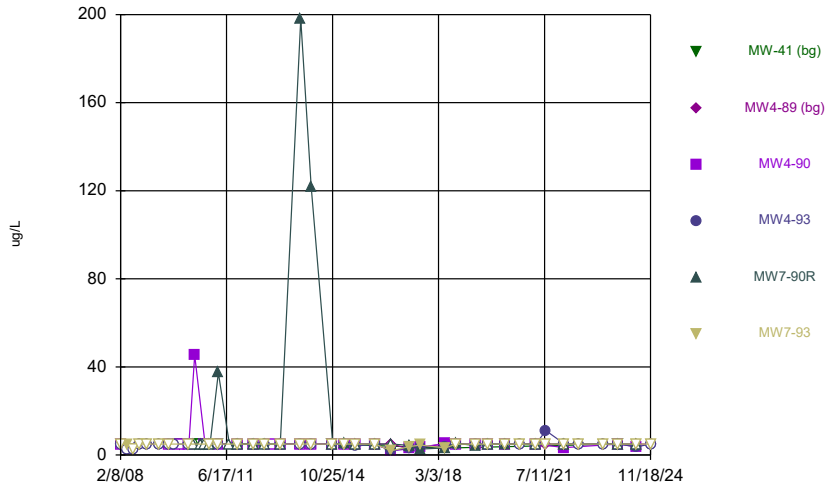
Time Series



Constituent: Acetone Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

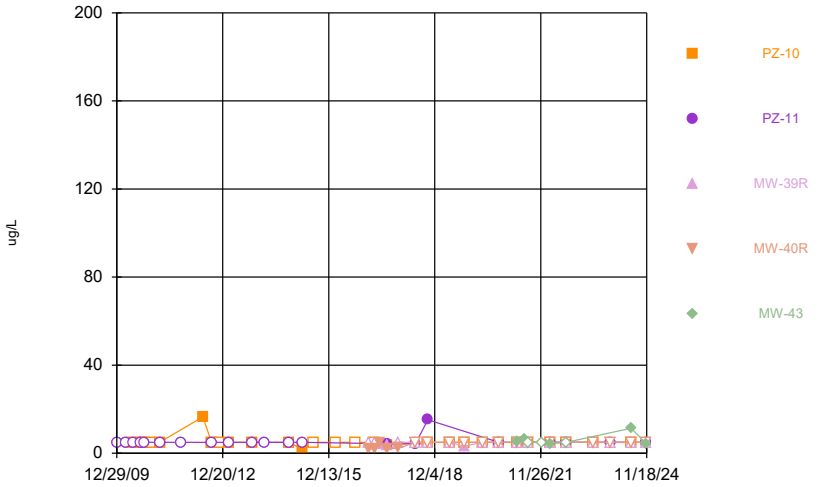
Time Series



Constituent: Acetone Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

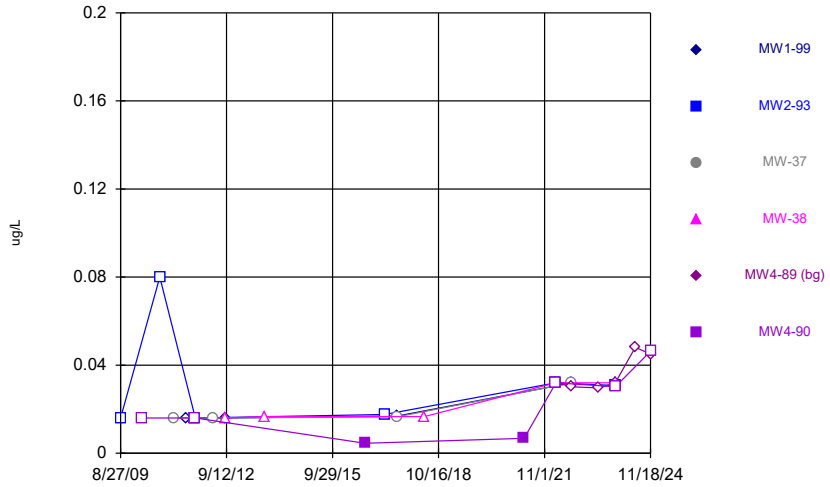
Time Series



Constituent: Acetone Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

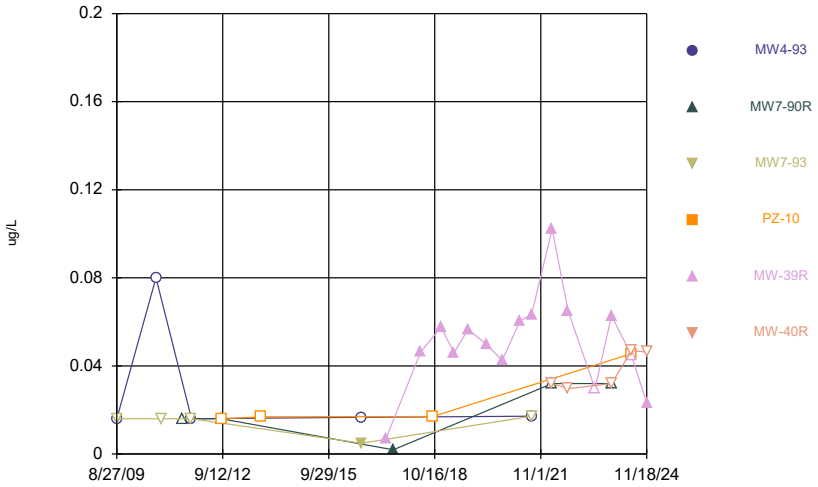
Time Series



Constituent: alpha-BHC Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

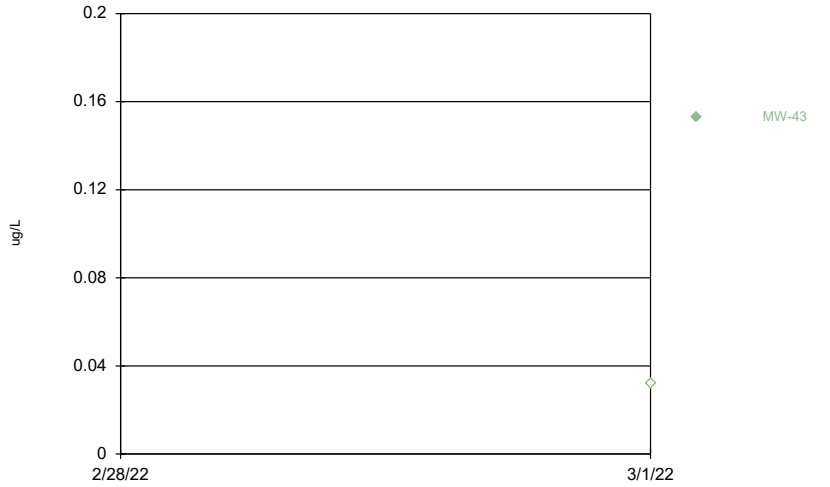
Time Series



Constituent: alpha-BHC Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

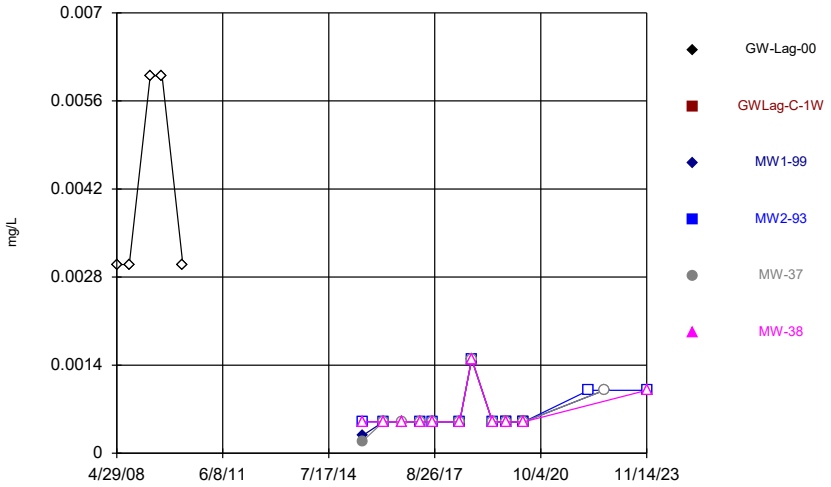
Time Series



Constituent: alpha-BHC Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

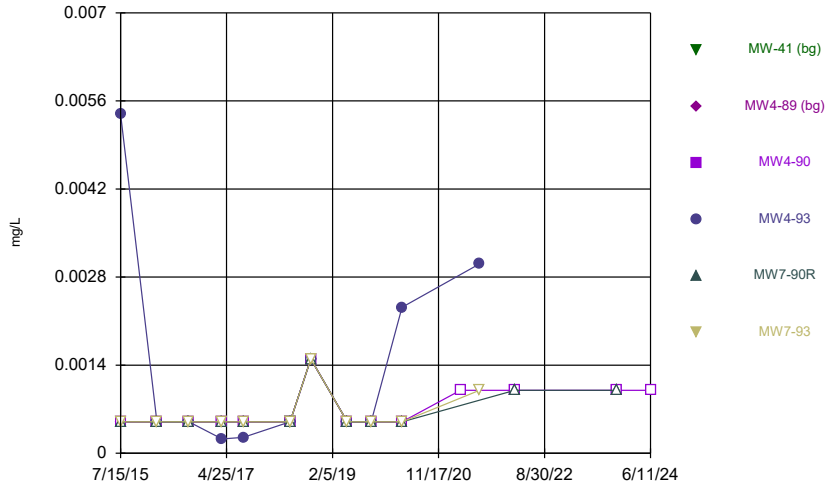
Time Series



Constituent: Antimony Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

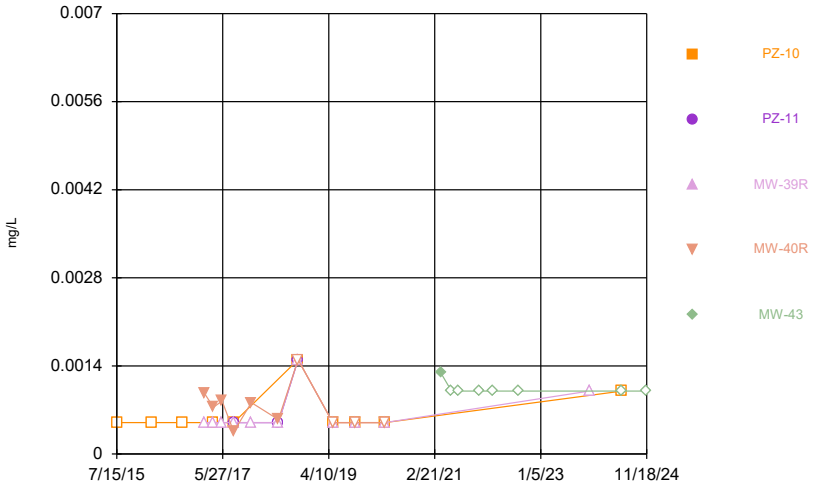
Time Series



Constituent: Antimony Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

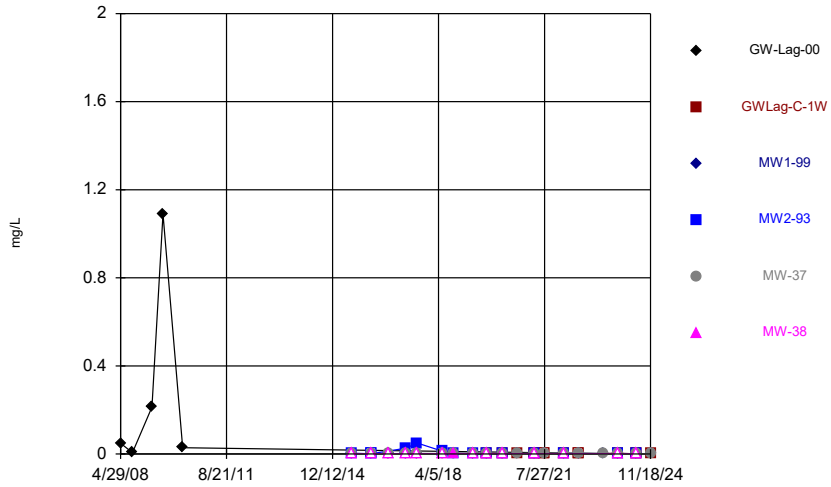
Time Series



Constituent: Antimony Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

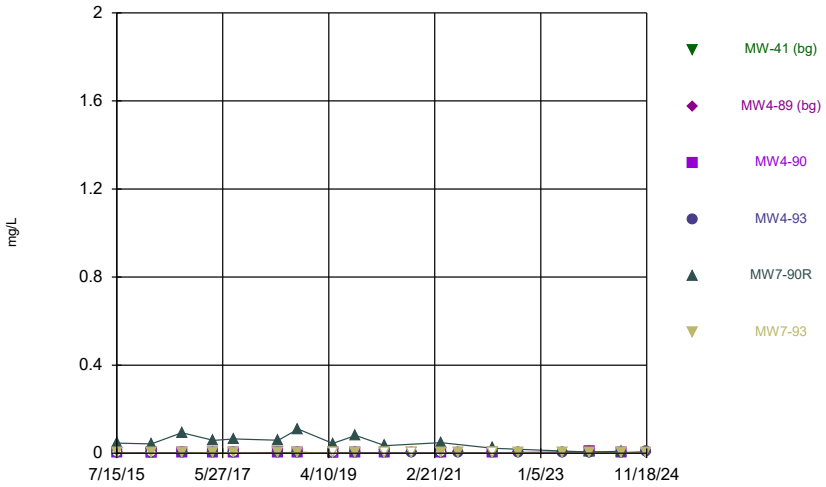
Time Series



Constituent: Arsenic Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

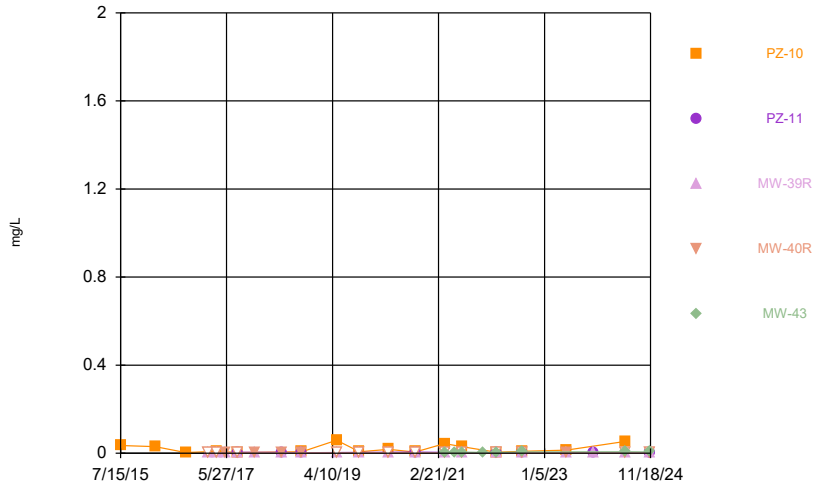
Time Series



Constituent: Arsenic Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

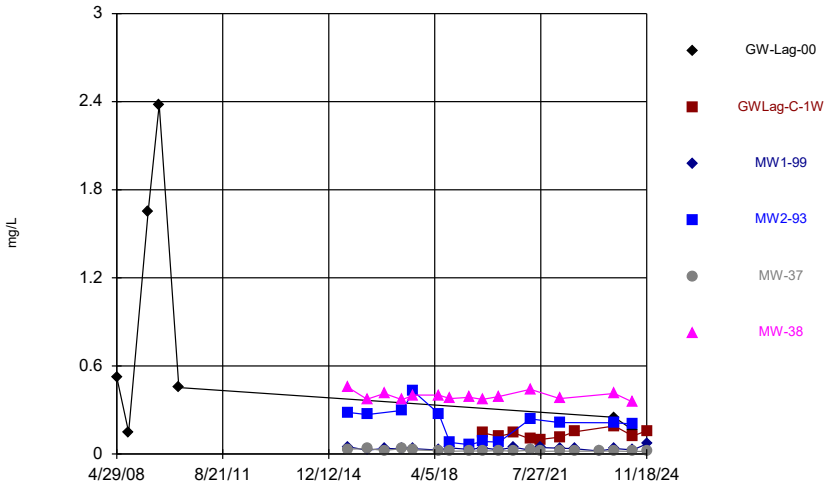
Time Series



Constituent: Arsenic Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

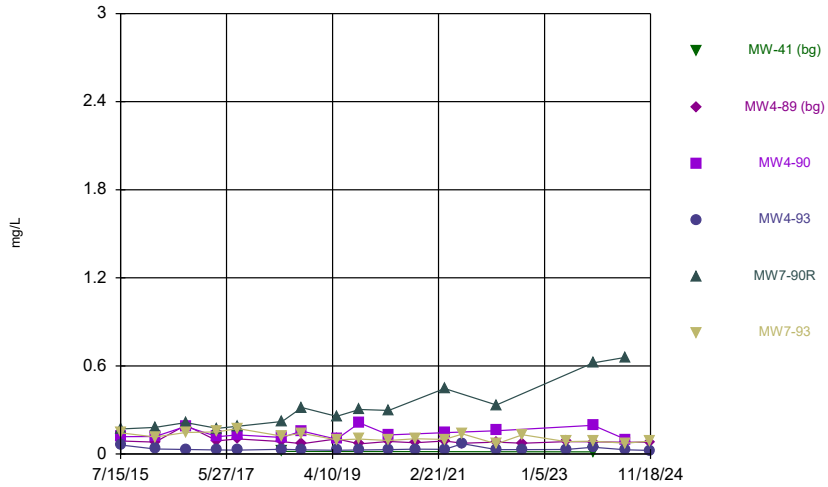
Time Series



Constituent: Barium Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

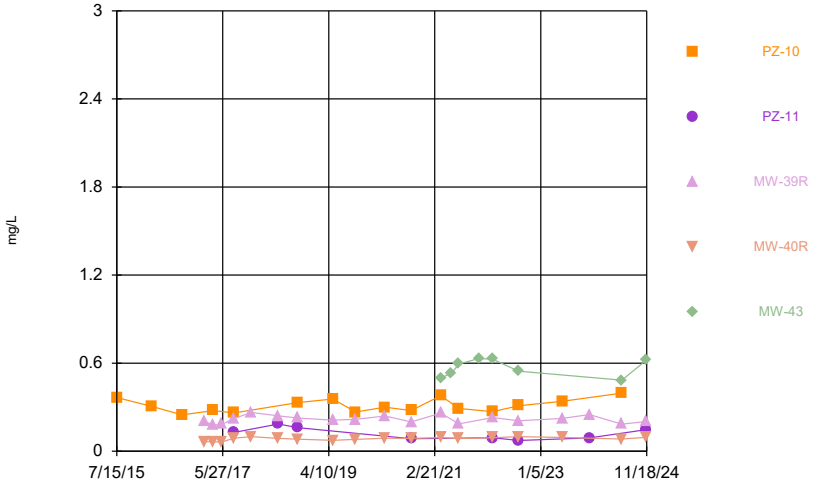
Time Series



Constituent: Barium Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

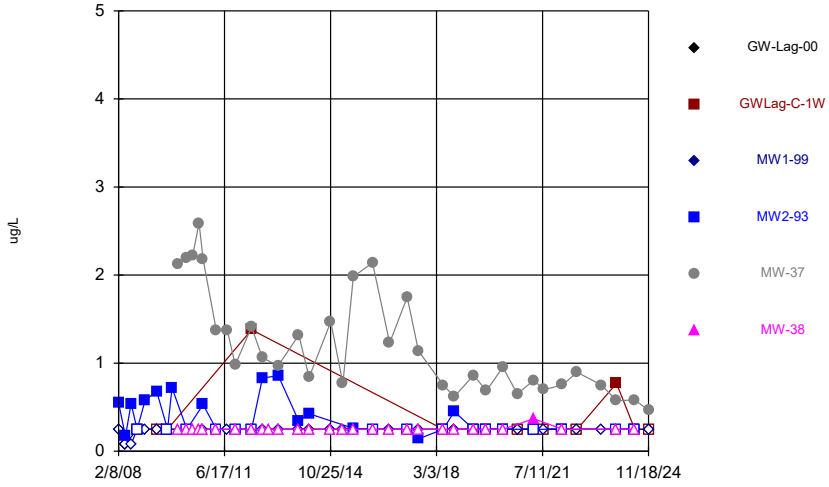
Time Series



Constituent: Barium Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

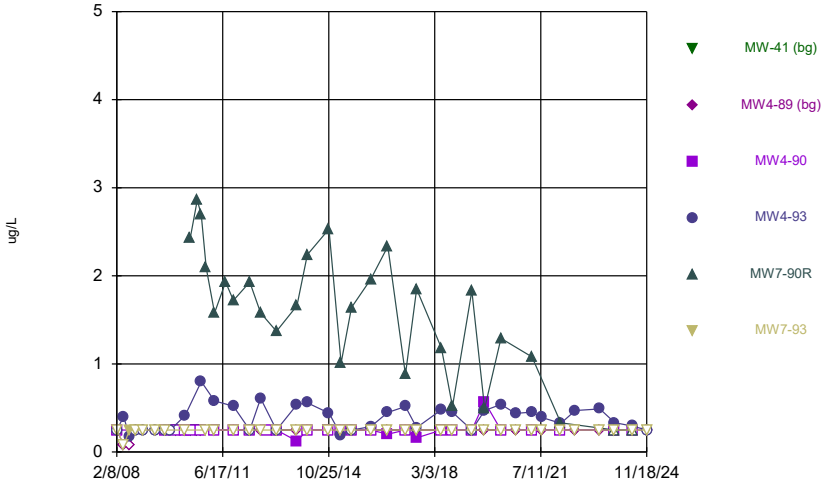
Time Series



Constituent: Benzene Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

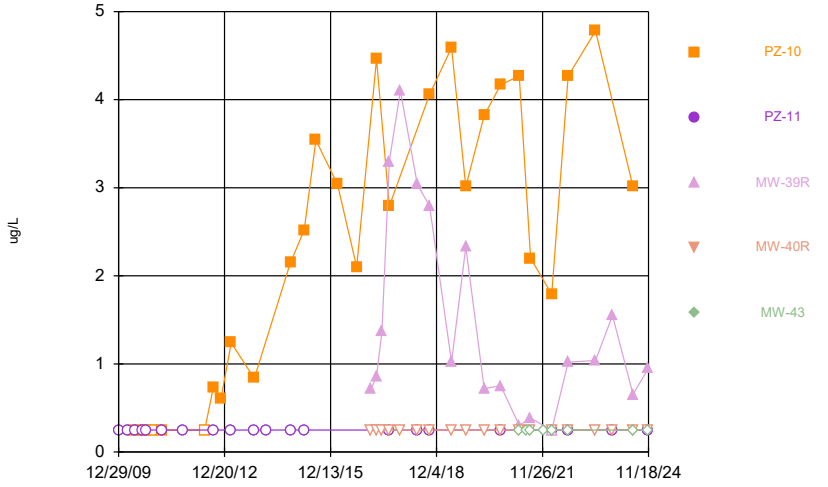
Time Series



Constituent: Benzene Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

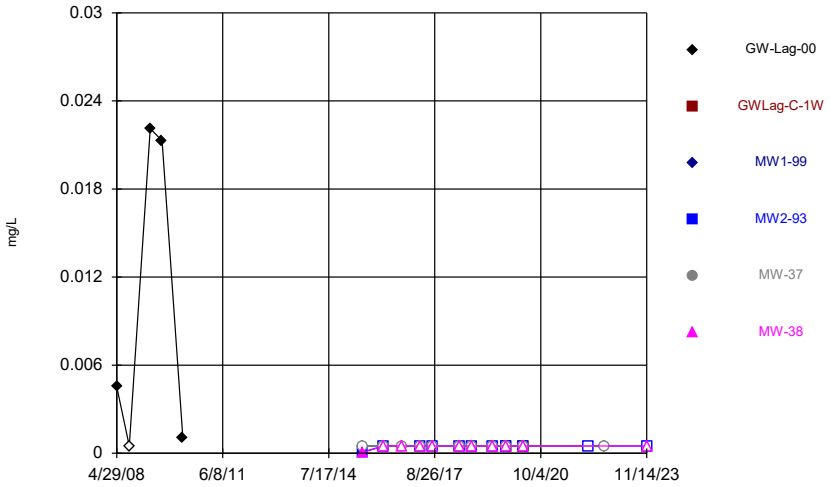
Time Series



Constituent: Benzene Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

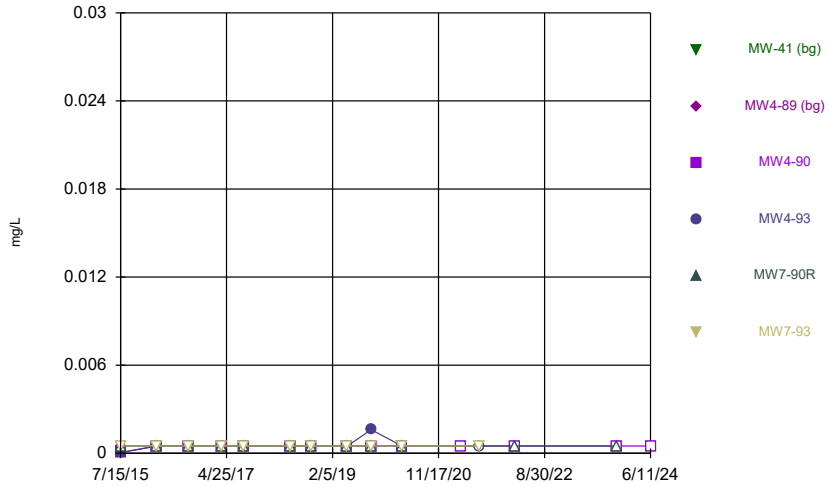
Time Series



Constituent: Beryllium Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

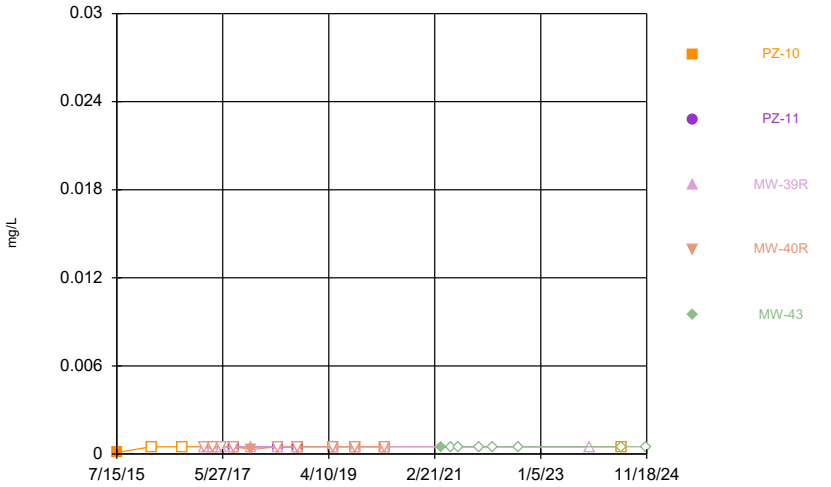
Time Series



Constituent: Beryllium Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

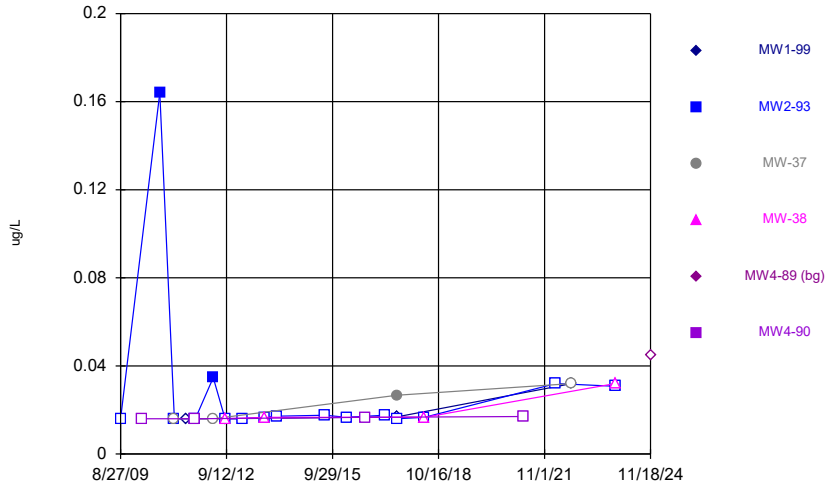
Time Series



Constituent: Beryllium Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

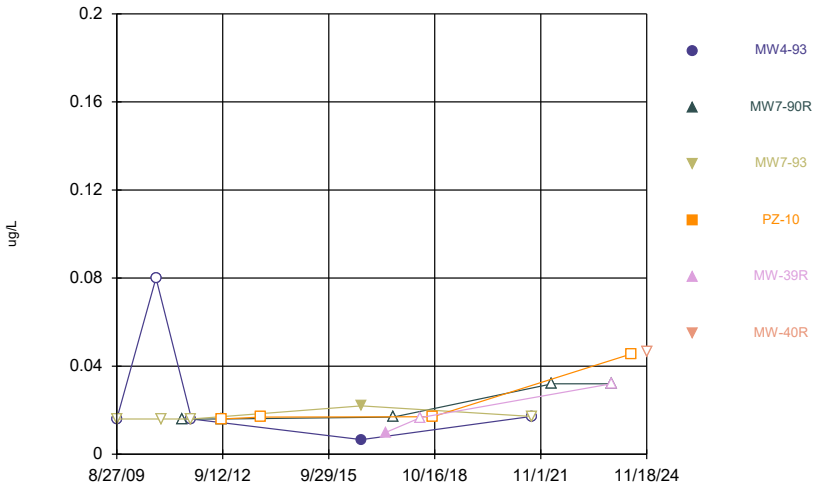
Time Series



Constituent: beta-BHC Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

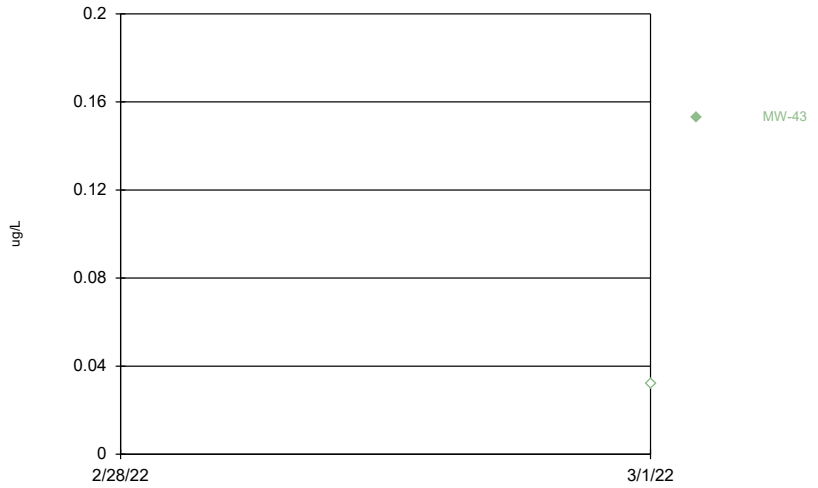
Time Series



Constituent: beta-BHC Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

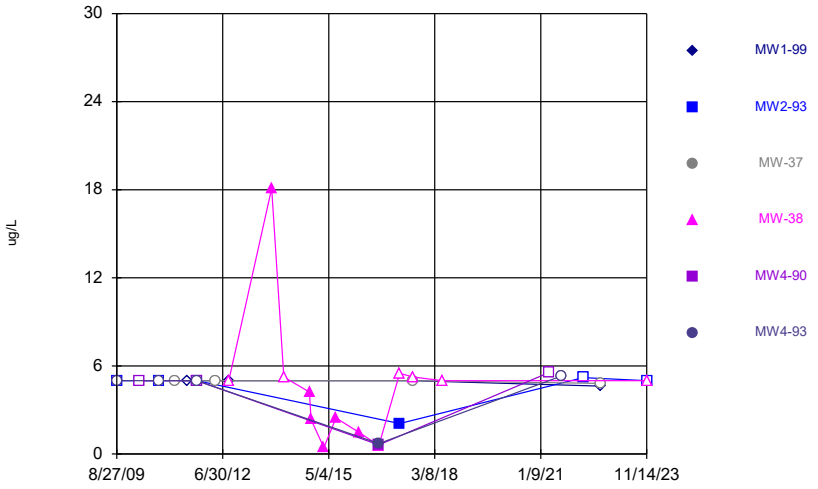
Time Series



Constituent: beta-BHC Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

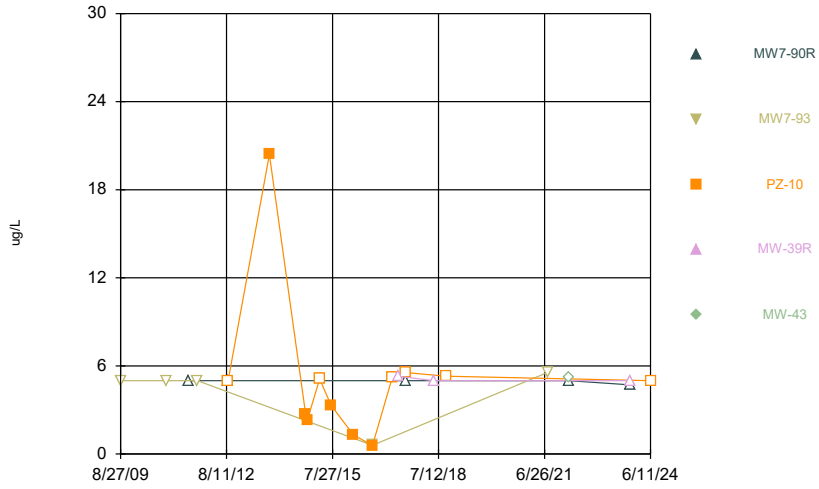
Time Series



Constituent: Bis[2-ethylhexyl]phthalate Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

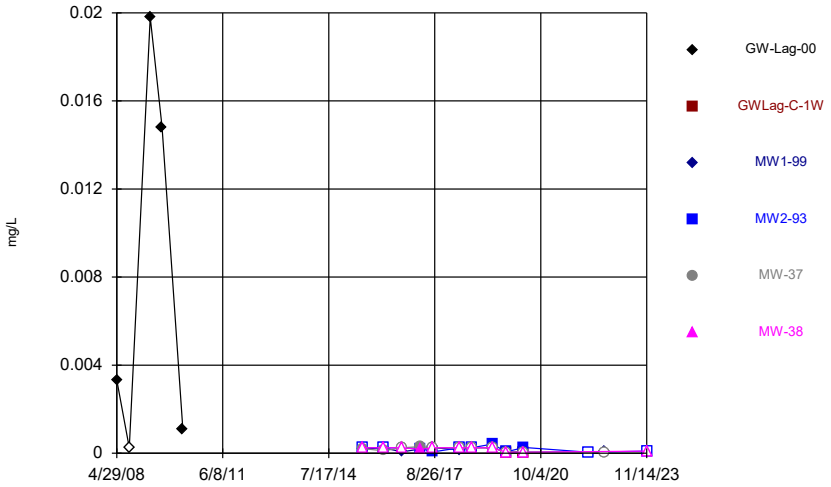
Time Series



Constituent: Bis[2-ethylhexyl]phthalate Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

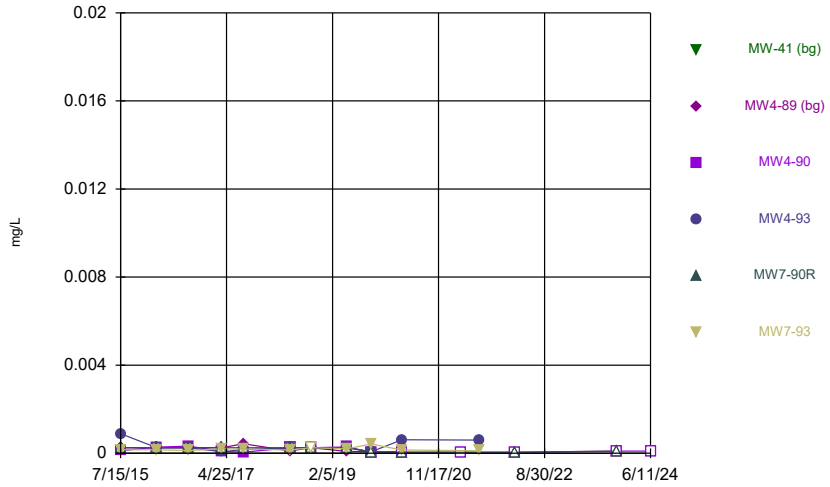
Time Series



Constituent: Cadmium Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

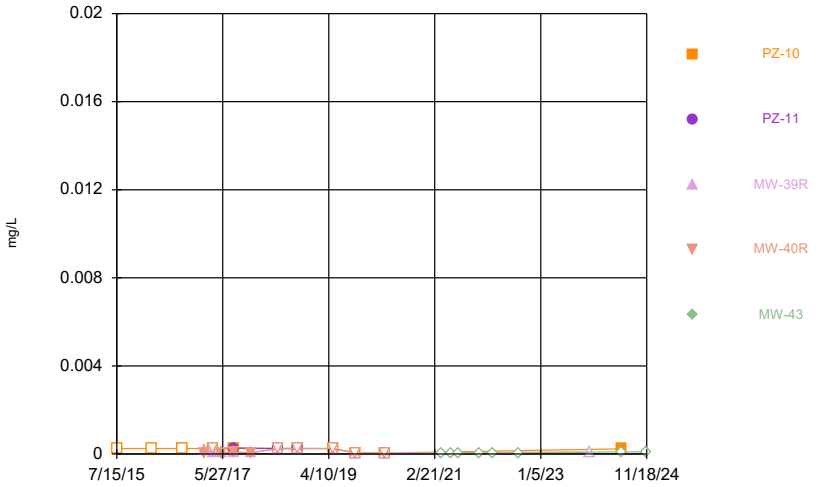
Time Series



Constituent: Cadmium Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

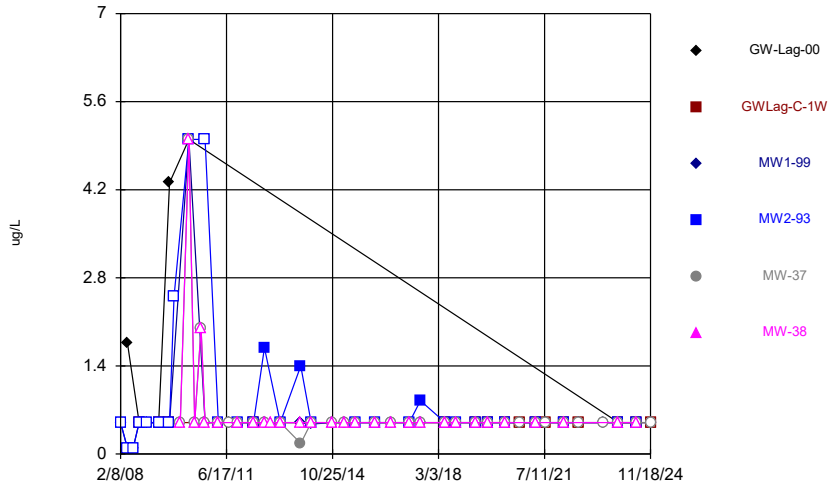
Time Series



Constituent: Cadmium Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

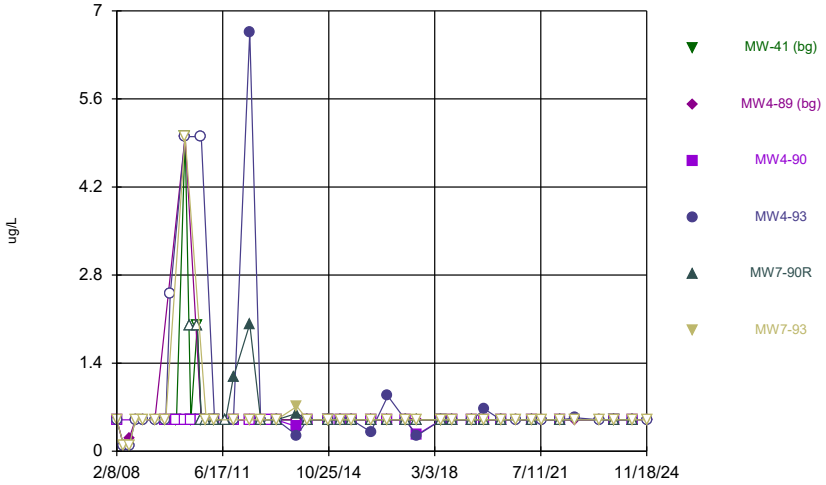
Time Series



Constituent: Carbon Disulfide Analysis Run 1/24/2025 12:20 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

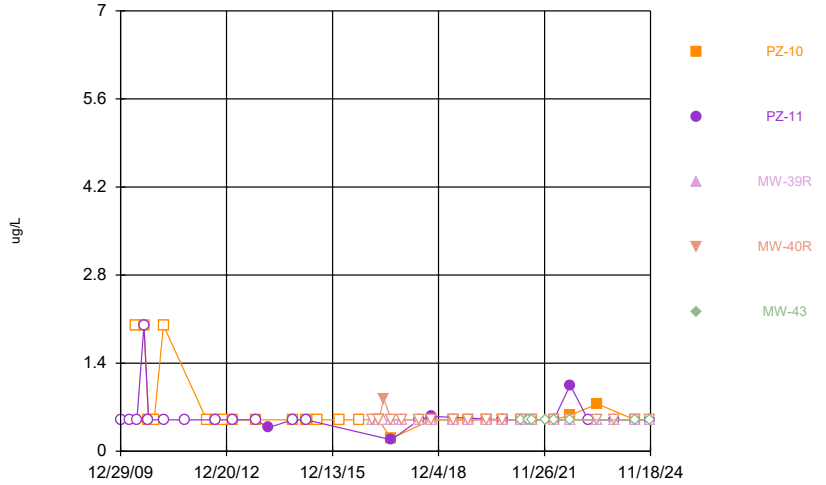
Time Series



Constituent: Carbon Disulfide Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

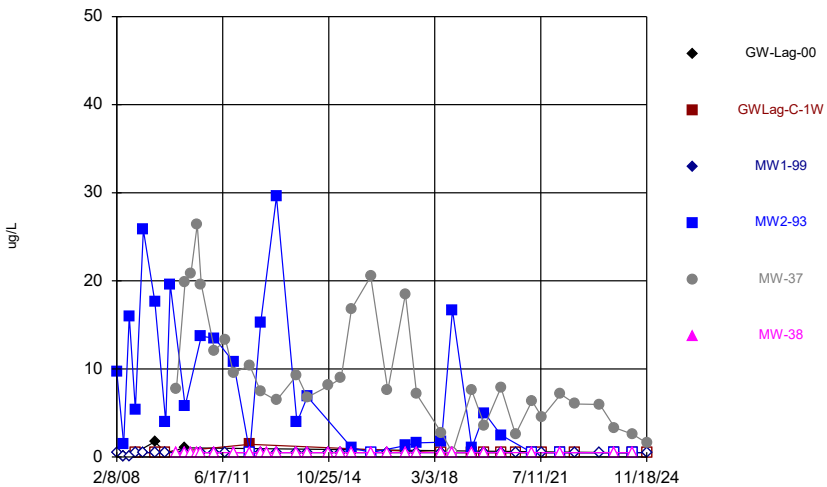
Time Series



Constituent: Carbon Disulfide Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

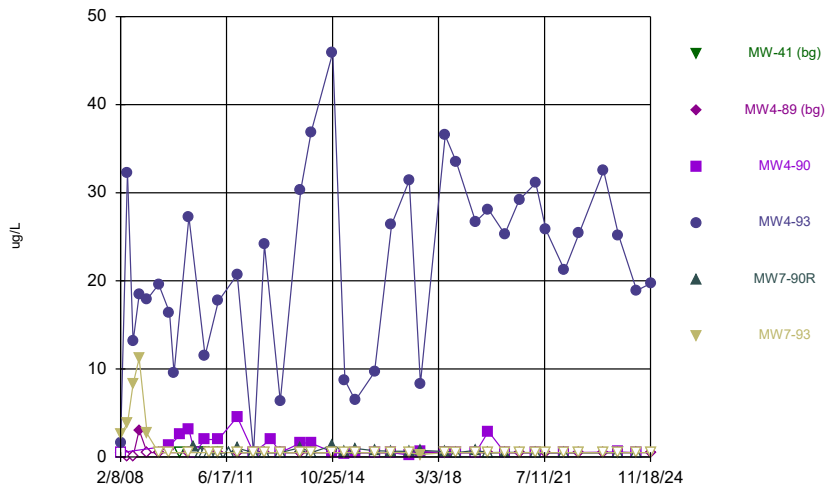
Time Series



Constituent: Chlorobenzene Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

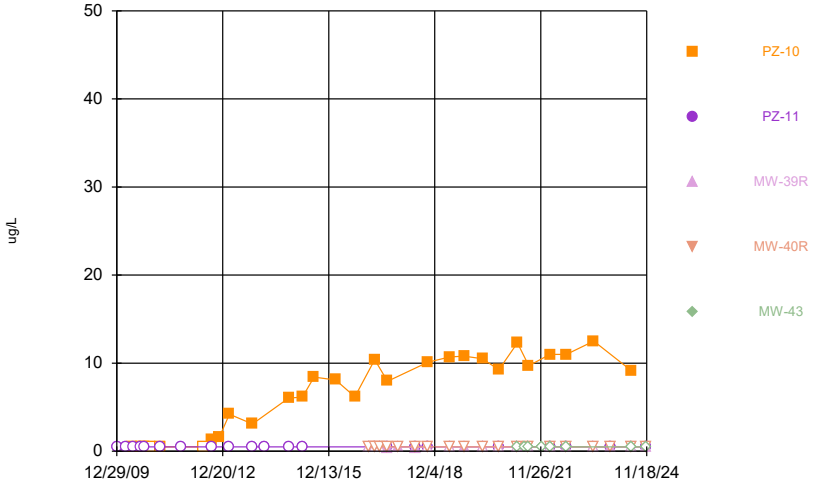
Time Series



Constituent: Chlorobenzene Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

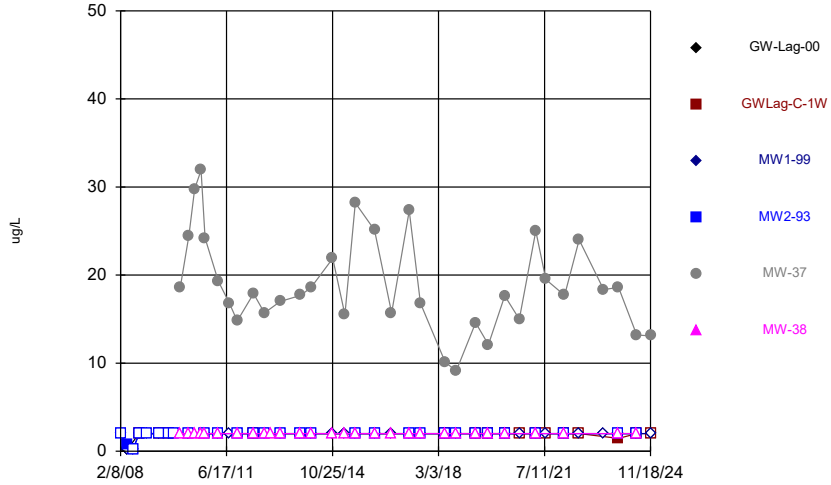
Time Series



Constituent: Chlorobenzene Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

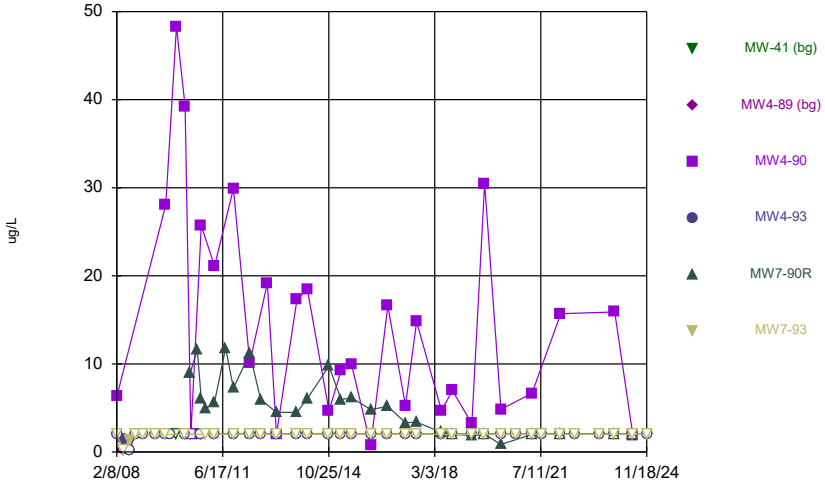
Time Series



Constituent: Chloroethane Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

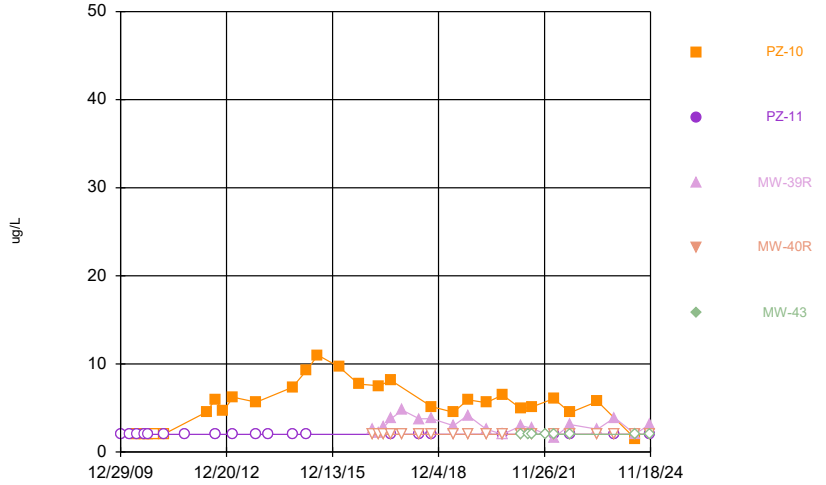
Time Series



Constituent: Chloroethane Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

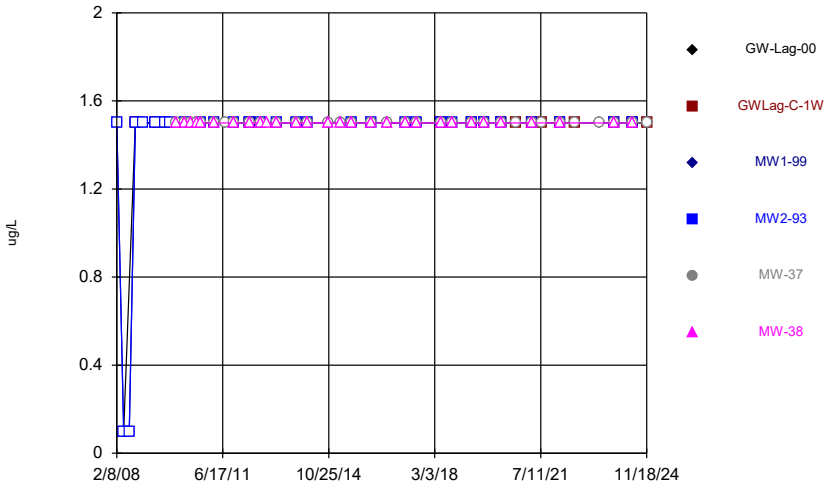
Time Series



Constituent: Chloroethane Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

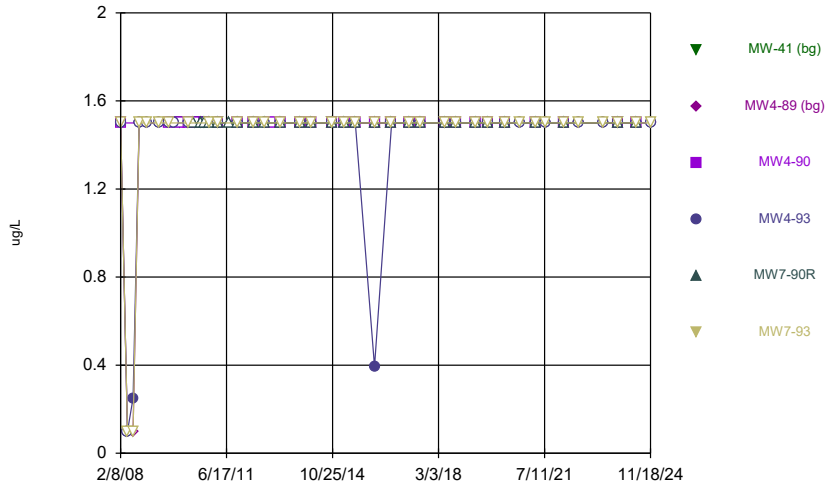
Time Series



Constituent: Chloromethane Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

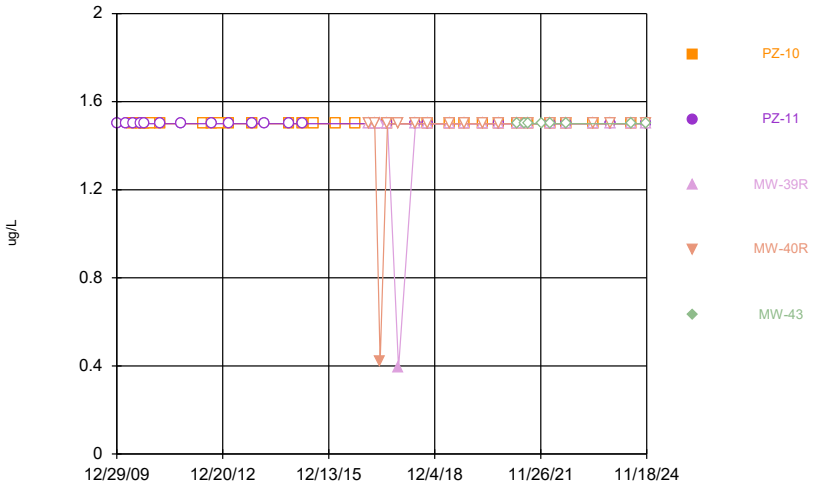
Time Series



Constituent: Chloromethane Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

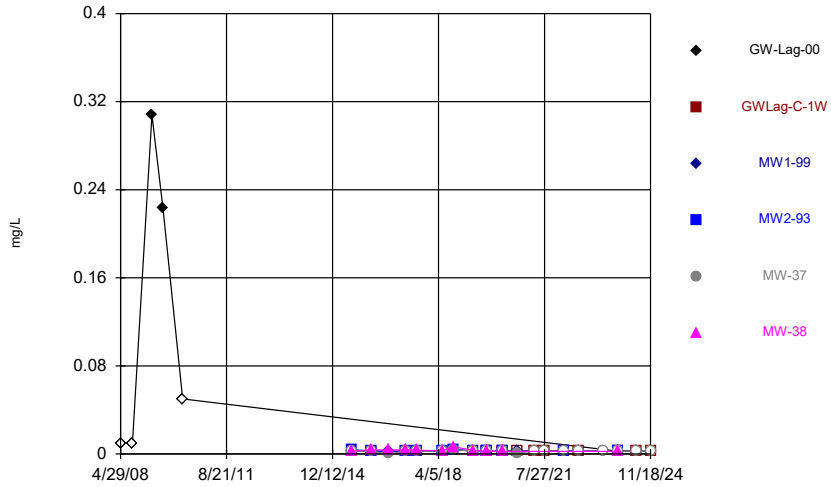
Time Series



Constituent: Chloromethane Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

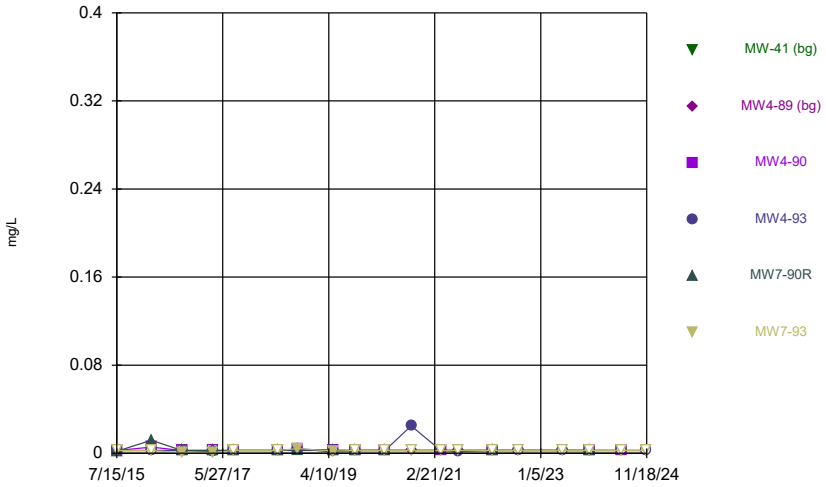
Time Series



Constituent: Chromium Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

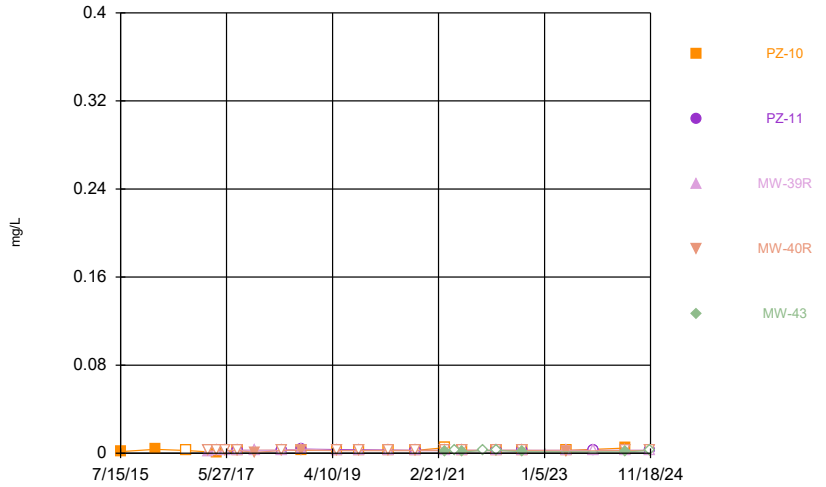
Time Series



Constituent: Chromium Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

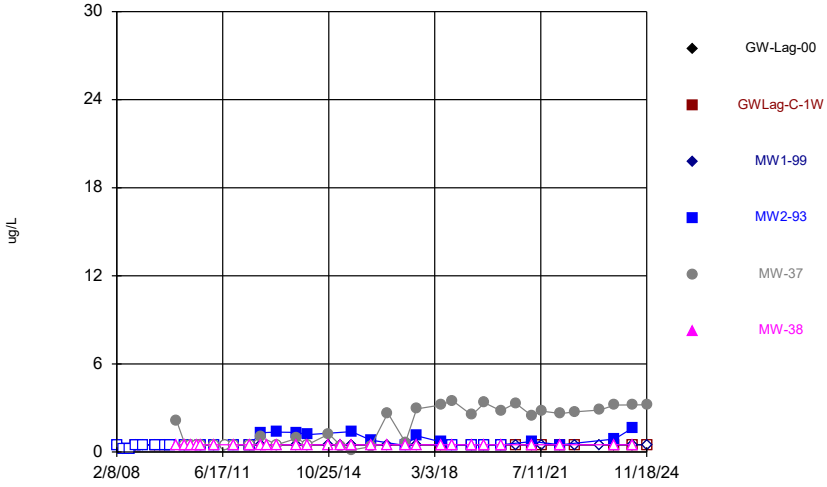
Time Series



Constituent: Chromium Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

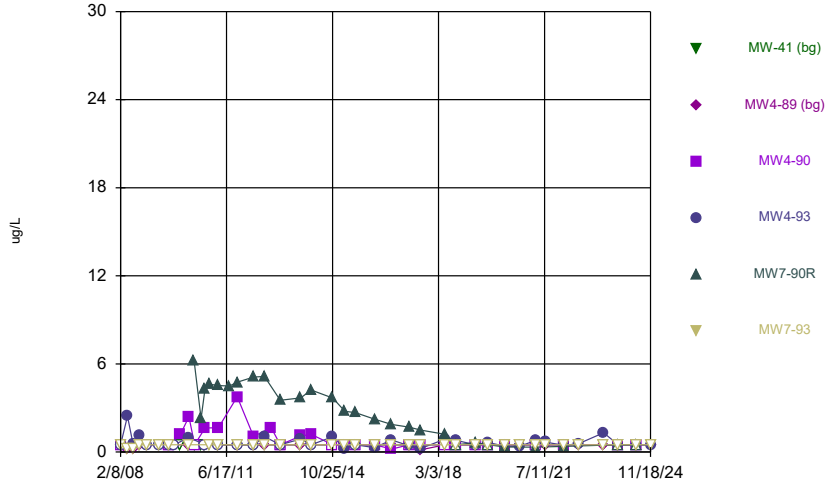
Time Series



Constituent: cis-1,2-Dichloroethene Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

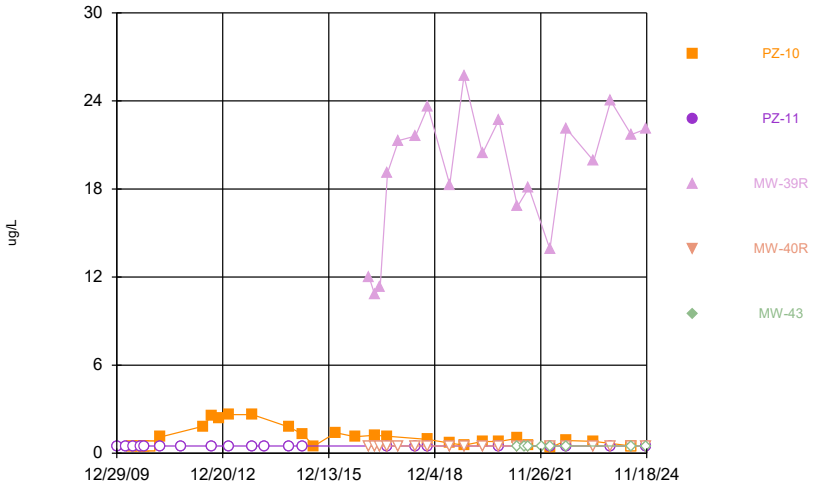
Time Series



Constituent: cis-1,2-Dichloroethene Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

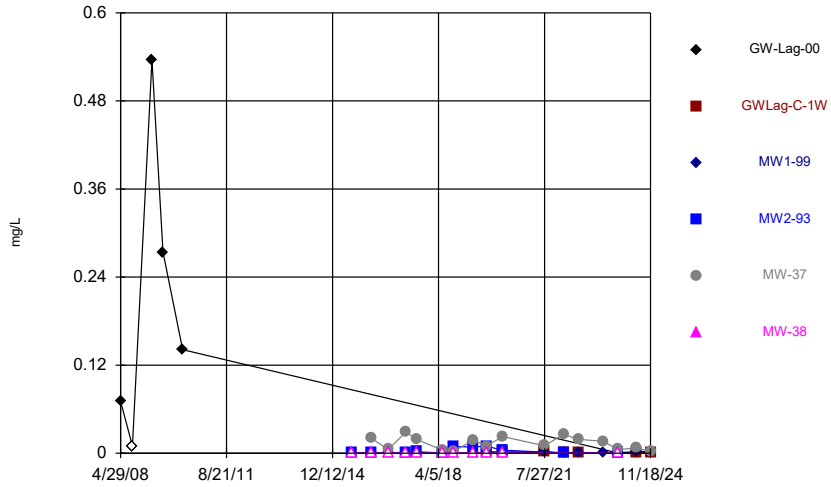
Time Series



Constituent: cis-1,2-Dichloroethene Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

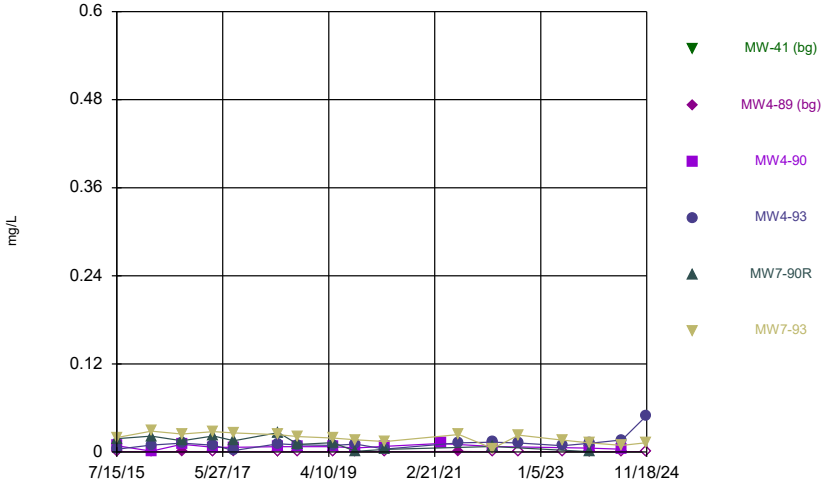
Time Series



Constituent: Cobalt Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

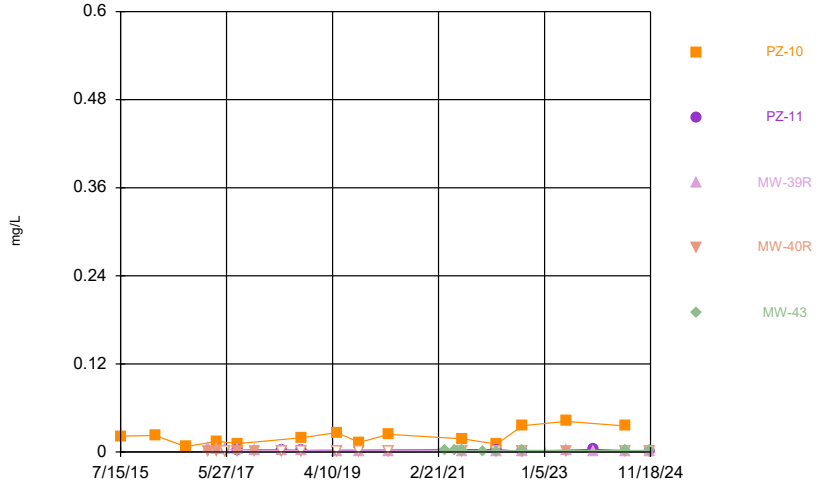
Time Series



Constituent: Cobalt Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

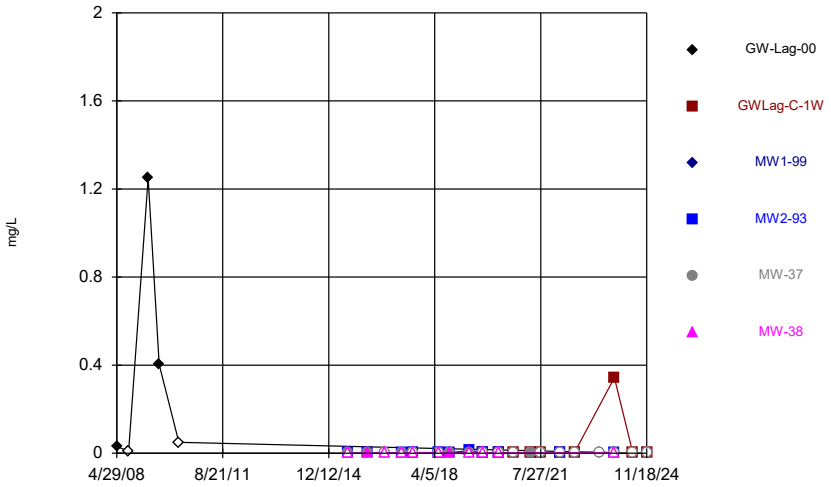
Time Series



Constituent: Cobalt Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

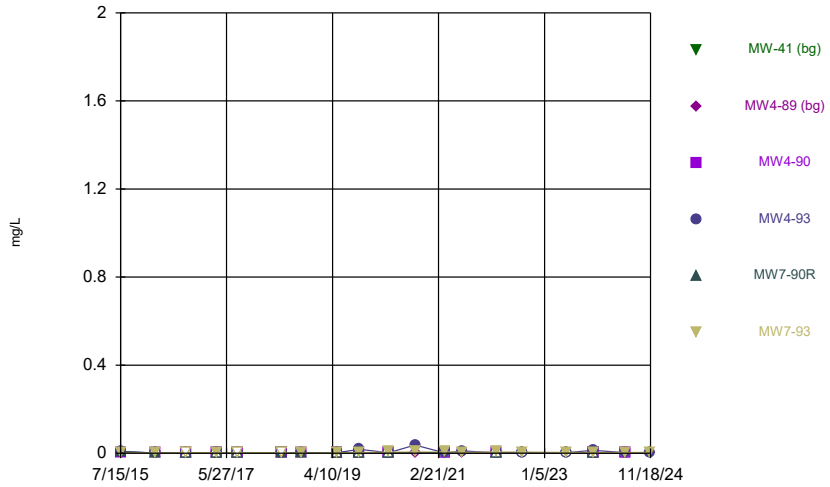
Time Series



Constituent: Copper Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

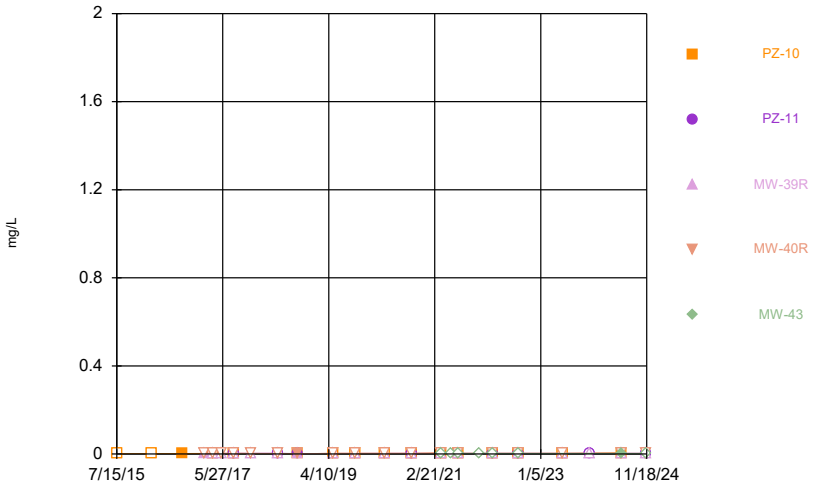
Time Series



Constituent: Copper Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

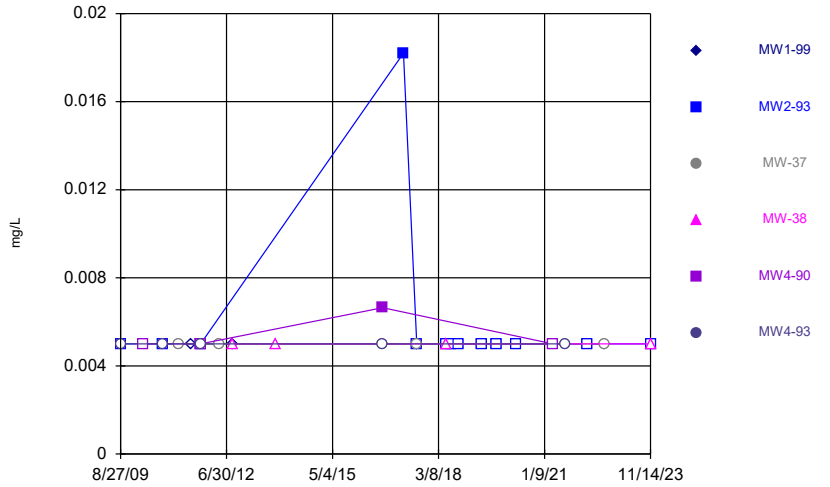
Time Series



Constituent: Copper Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

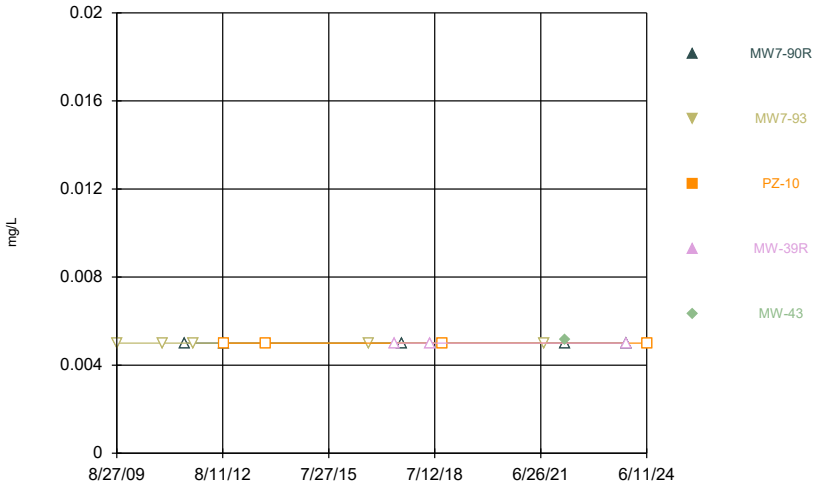
Time Series



Constituent: Cyanide Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

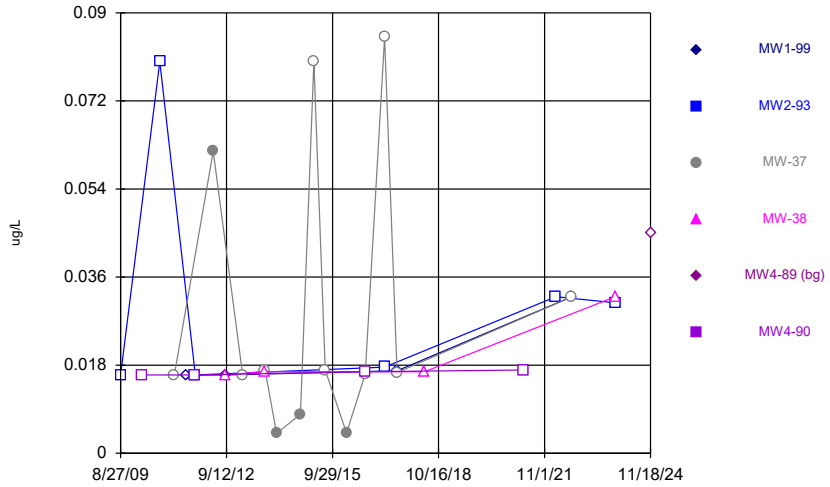
Time Series



Constituent: Cyanide Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

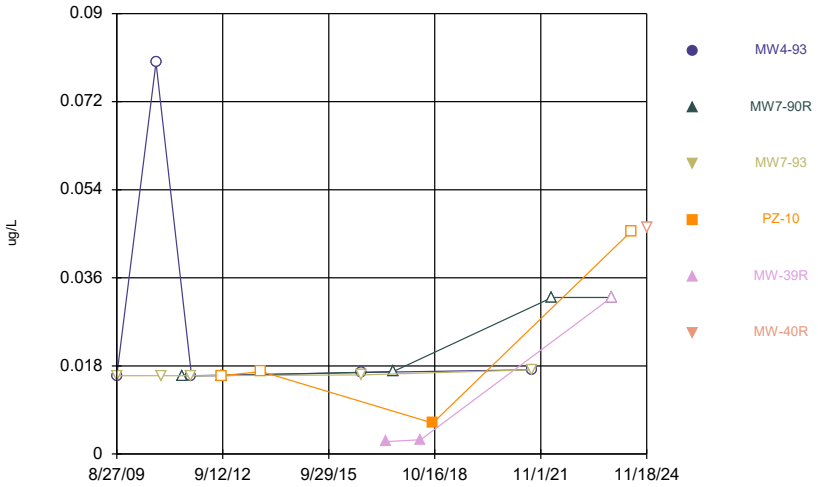
Time Series



Constituent: delta-BHC Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

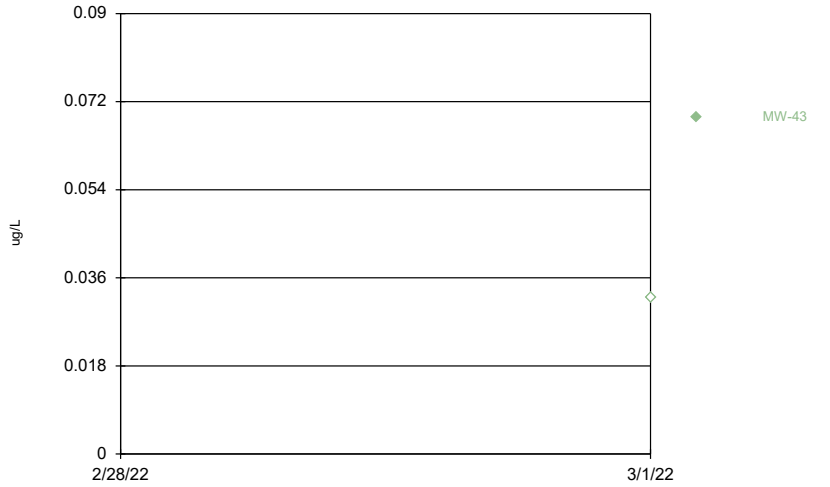
Time Series



Constituent: delta-BHC Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

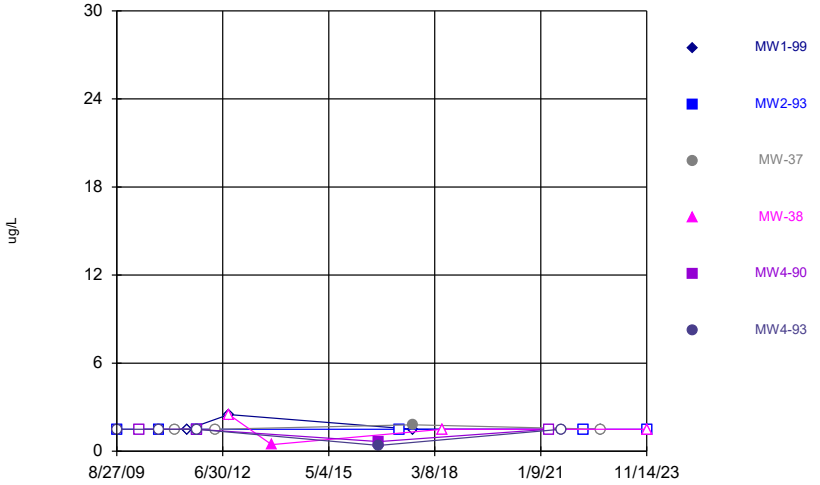
Time Series



Constituent: delta-BHC Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

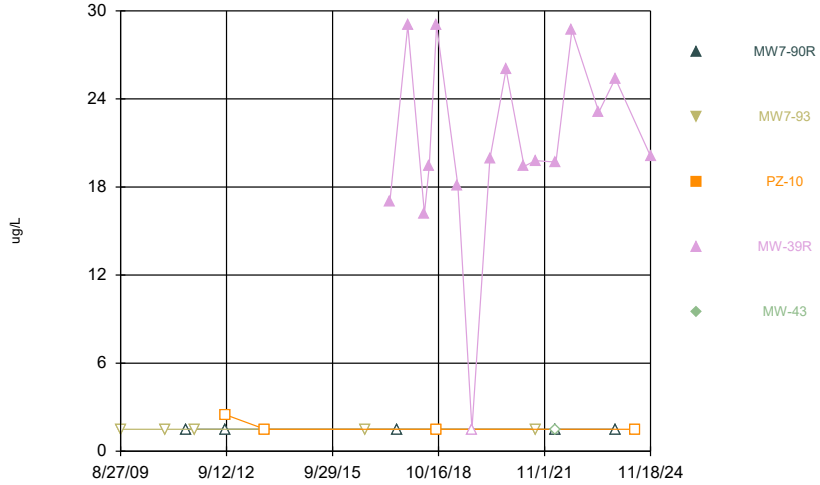
Time Series



Constituent: Dichlorodifluoromethane Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

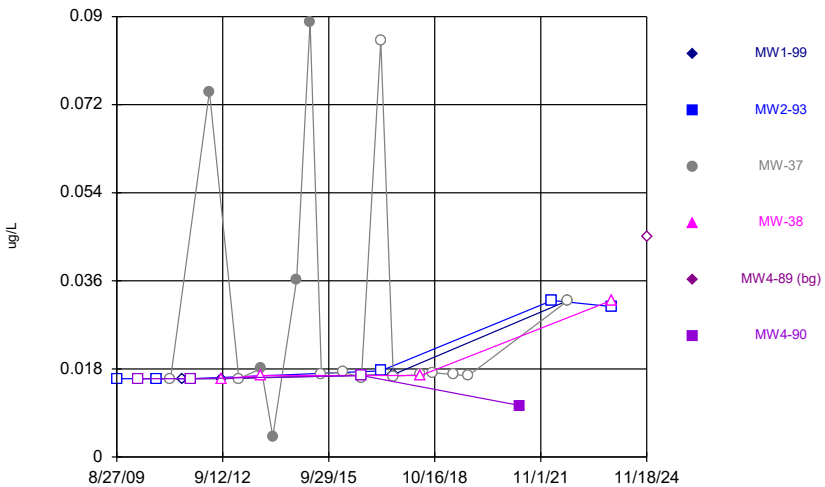
Time Series



Constituent: Dichlorodifluoromethane Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

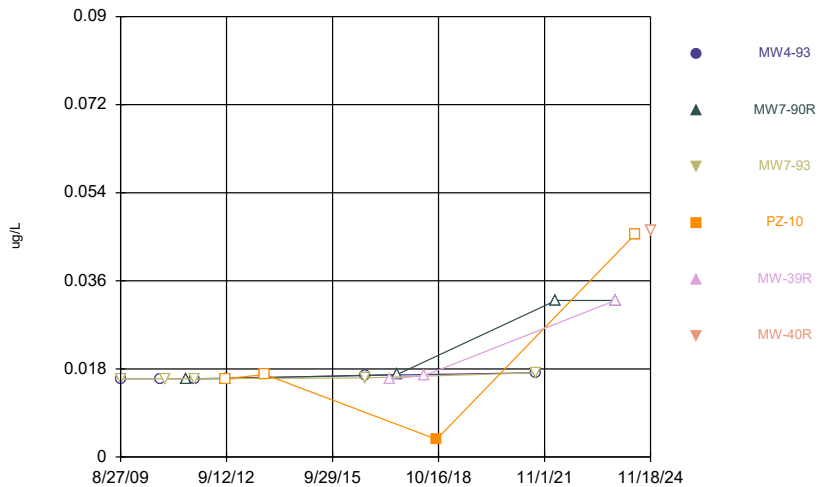
Time Series



Constituent: Endosulfan II Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

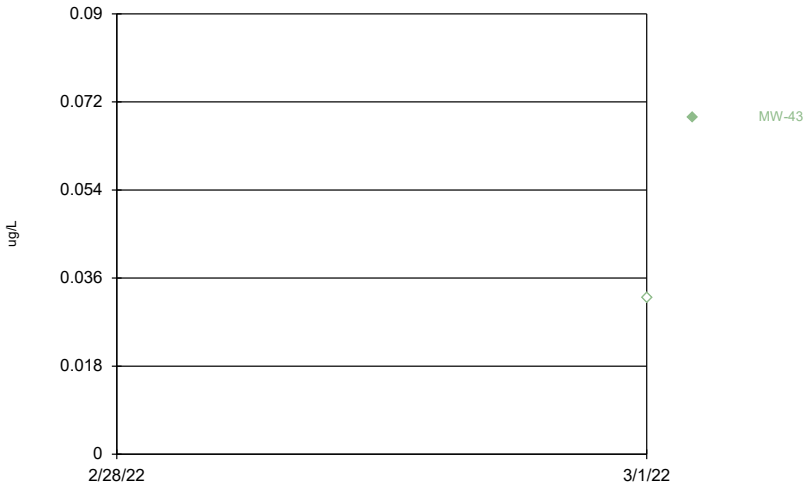
Time Series



Constituent: Endosulfan II Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

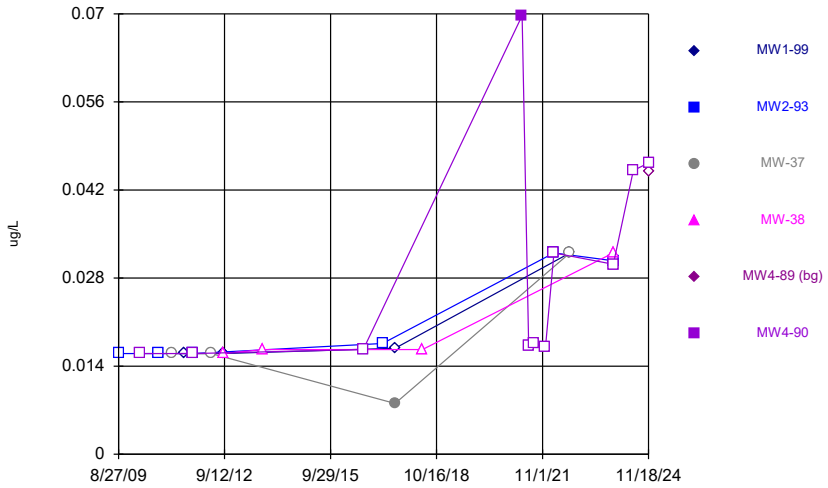
Time Series



Constituent: Endosulfan II Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

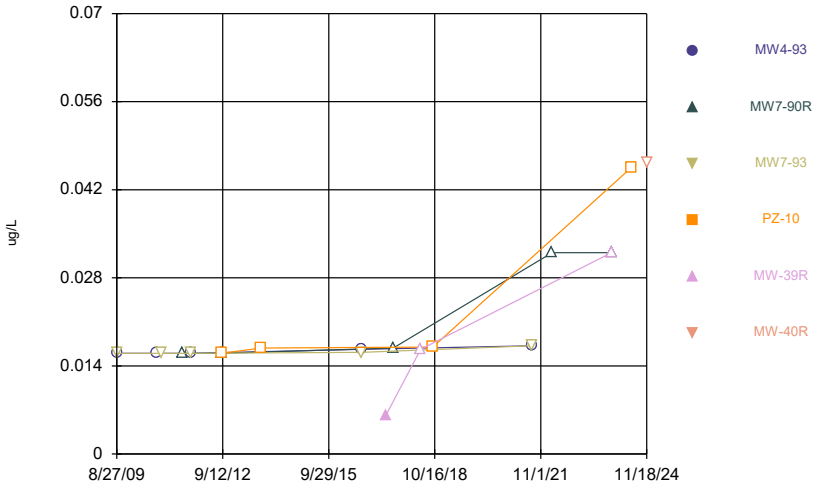
Time Series



Constituent: Endosulfan sulfate Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

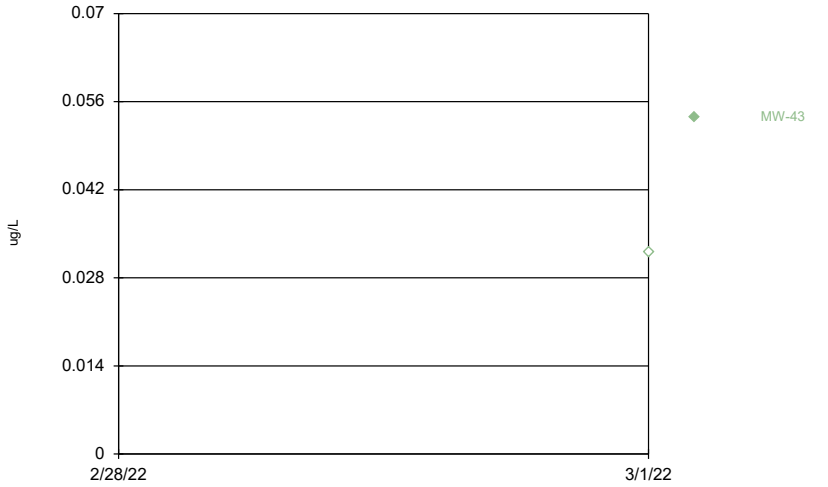
Time Series



Constituent: Endosulfan sulfate Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

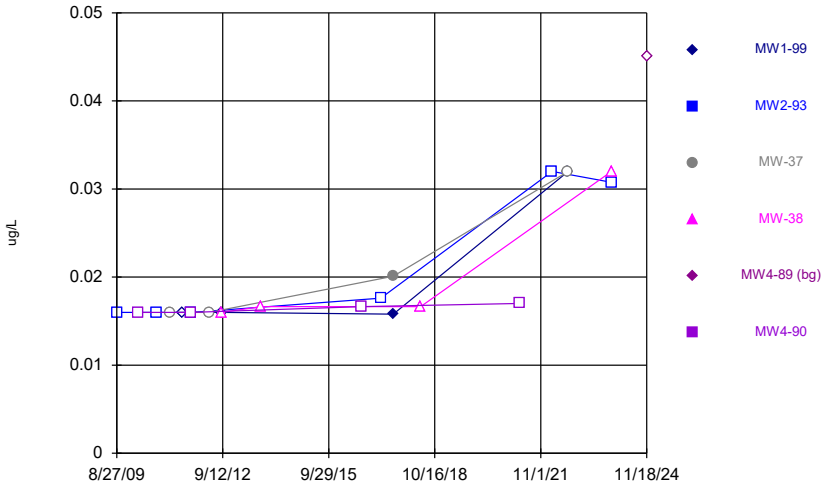
Time Series



Constituent: Endosulfan sulfate Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

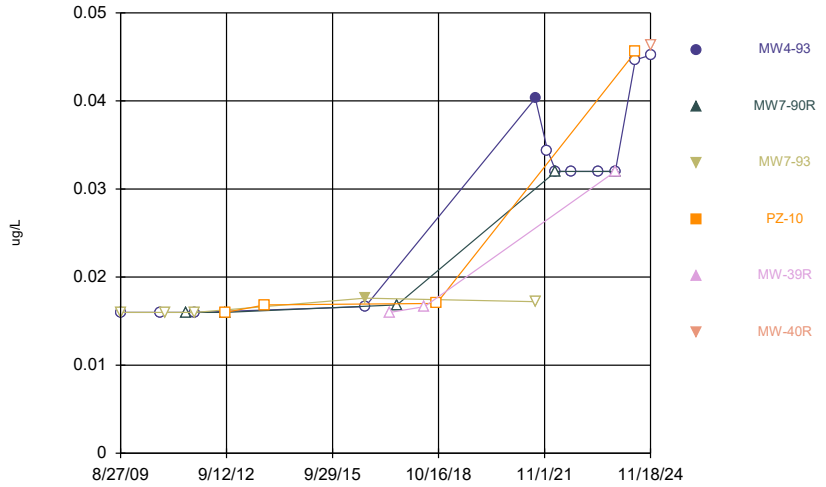
Time Series



Constituent: Endrin aldehyde Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

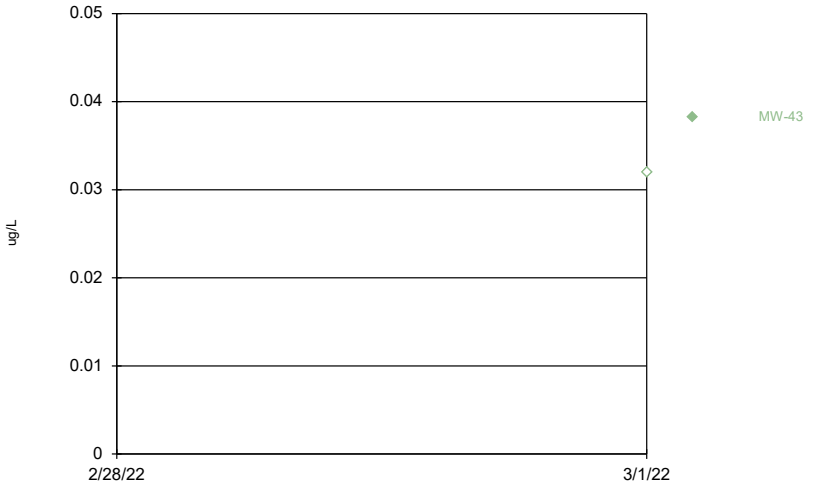
Time Series



Constituent: Endrin aldehyde Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

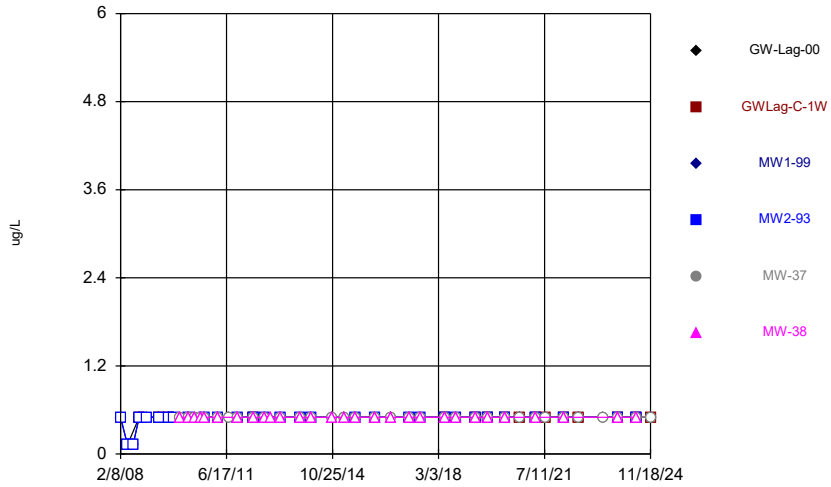
Time Series



Constituent: Endrin aldehyde Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

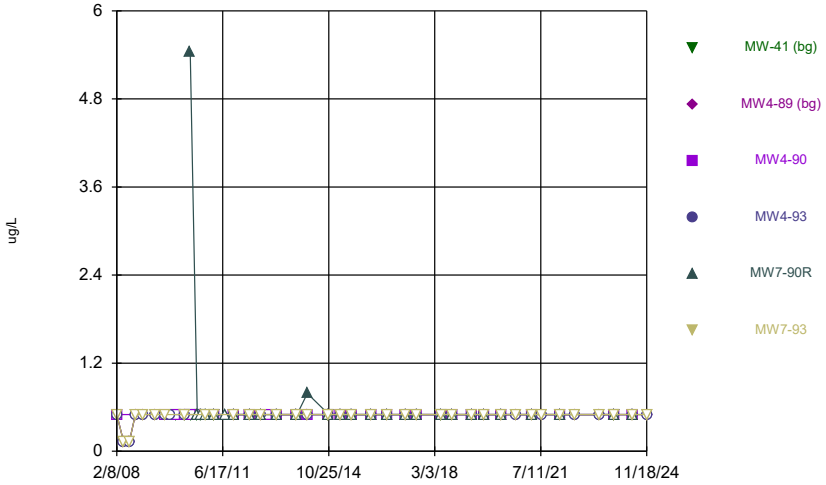
Time Series



Constituent: Ethylbenzene Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

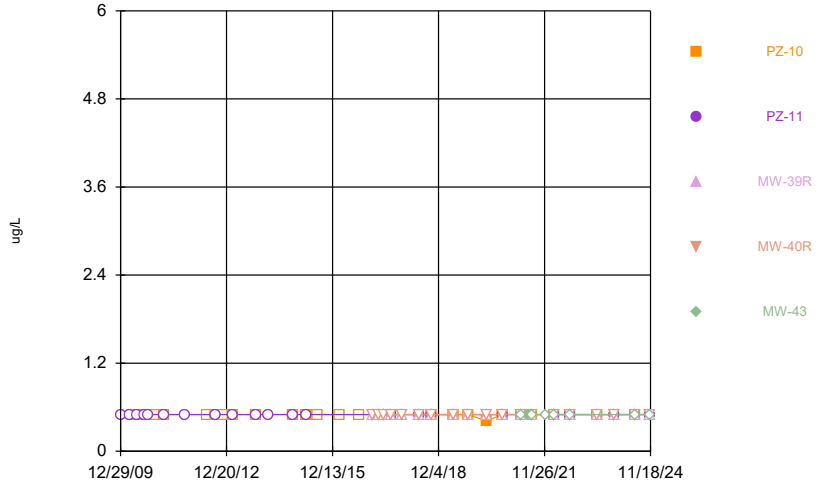
Time Series



Constituent: Ethylbenzene Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

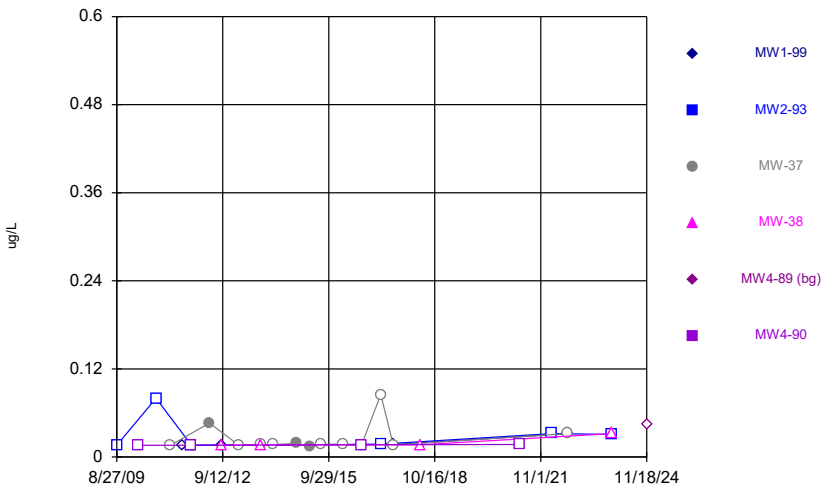
Time Series



Constituent: Ethylbenzene Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

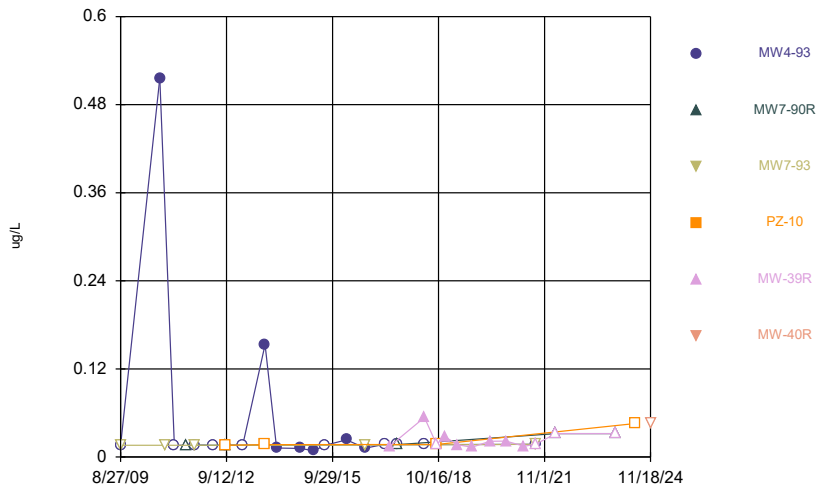
Time Series



Constituent: Heptachlor Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

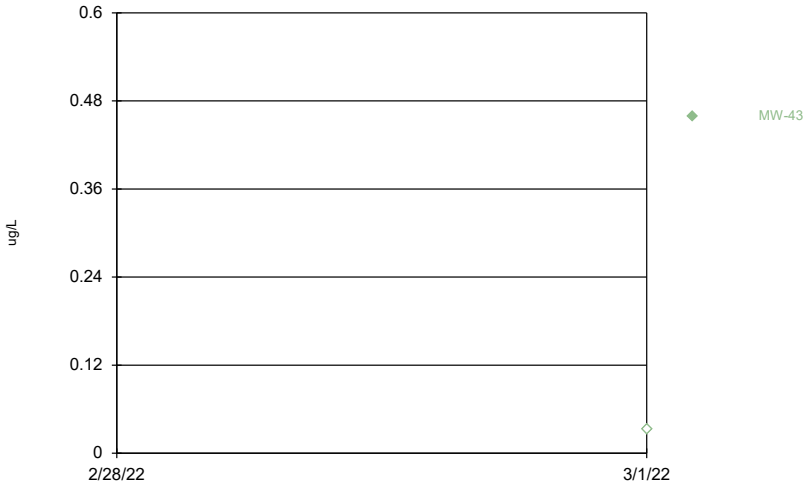
Time Series



Constituent: Heptachlor Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

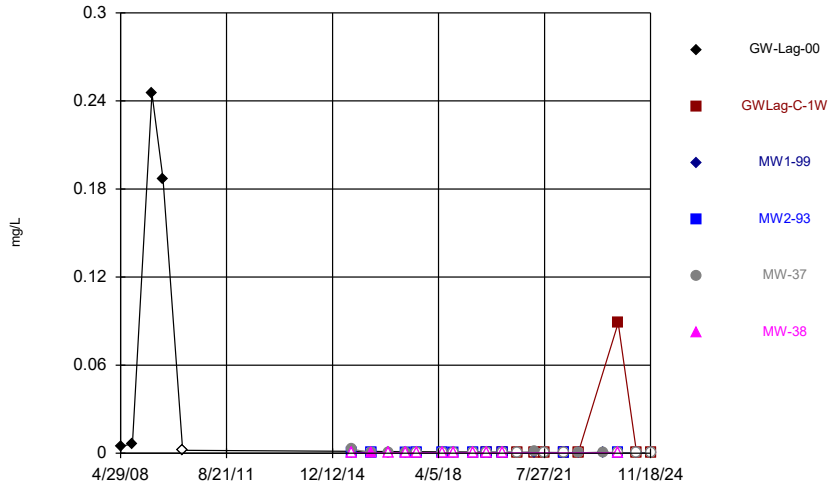
Time Series



Constituent: Heptachlor Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

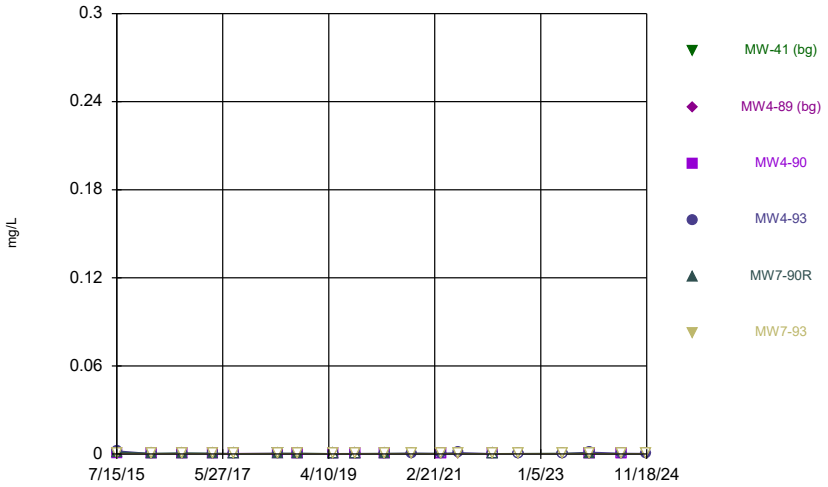
Time Series



Constituent: Lead Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

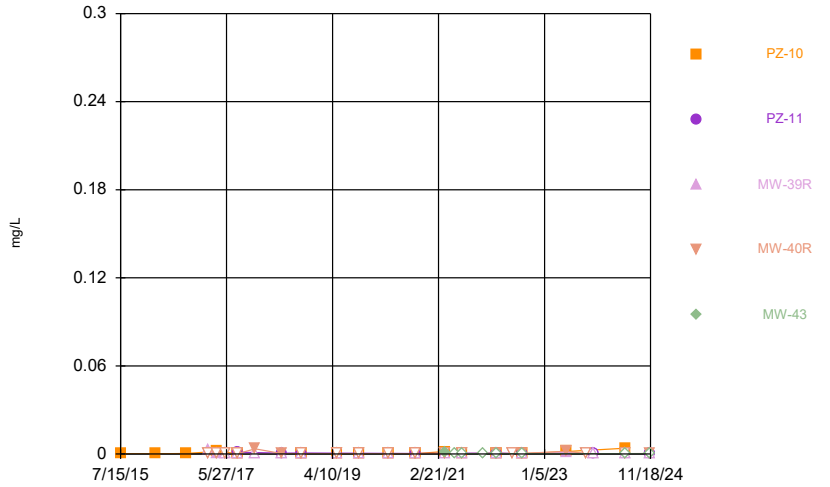
Time Series



Constituent: Lead Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

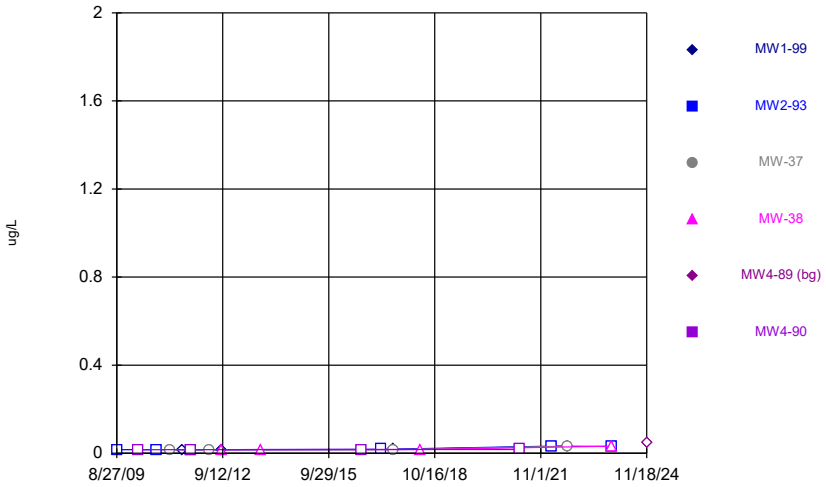
Time Series



Constituent: Lead Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

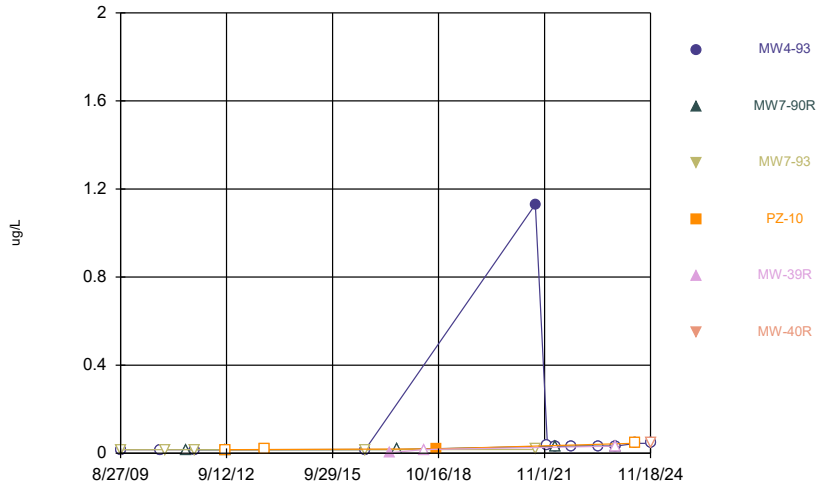
Time Series



Constituent: Methoxychlor Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

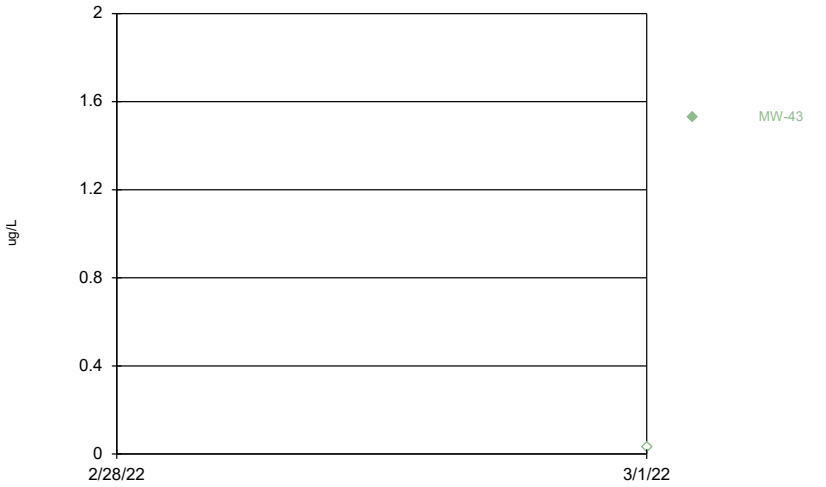
Time Series



Constituent: Methoxychlor Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

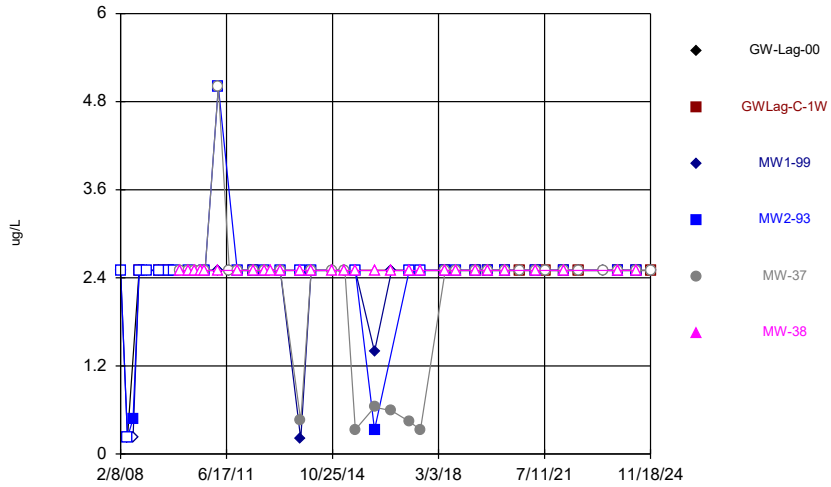
Time Series



Constituent: Methoxychlor Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

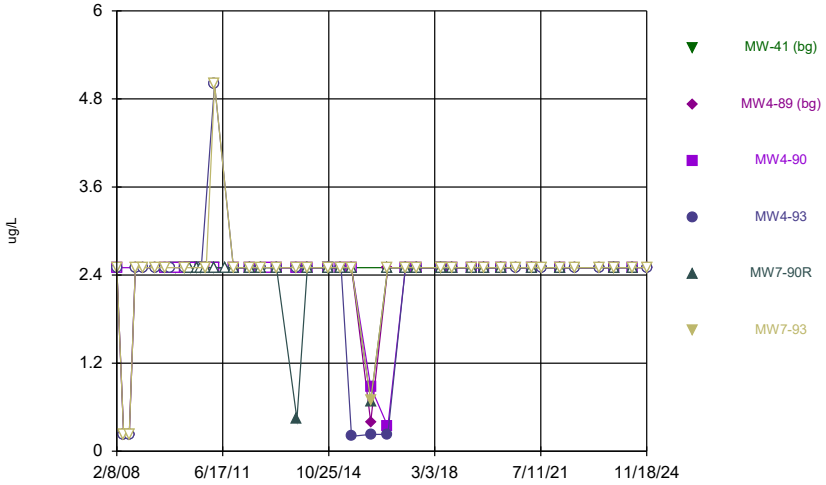
Time Series



Constituent: Methylene Chloride Analysis Run 1/24/2025 12:21 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

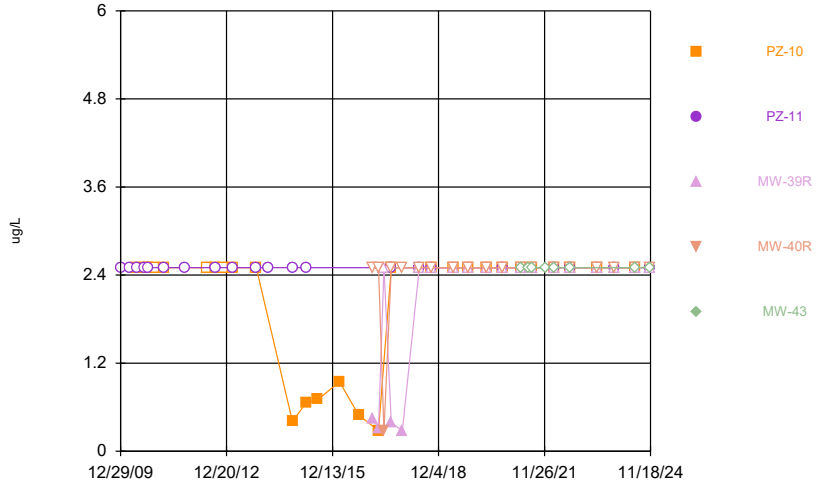
Time Series



Constituent: Methylene Chloride Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

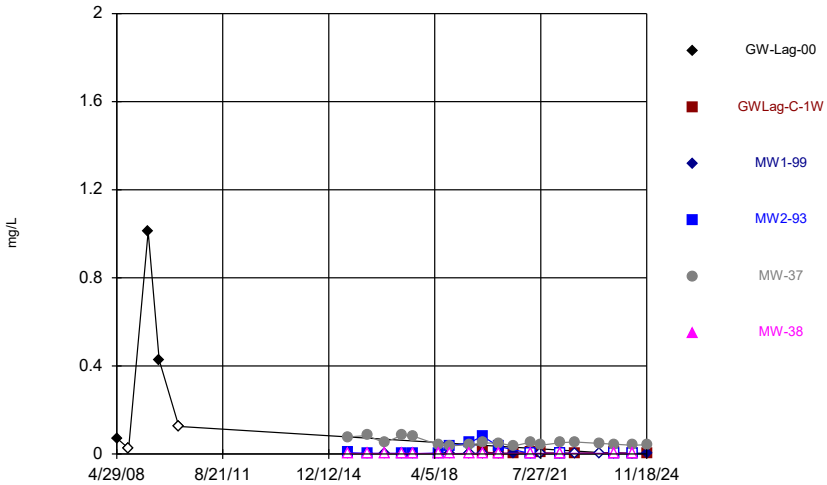
Time Series



Constituent: Methylene Chloride Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

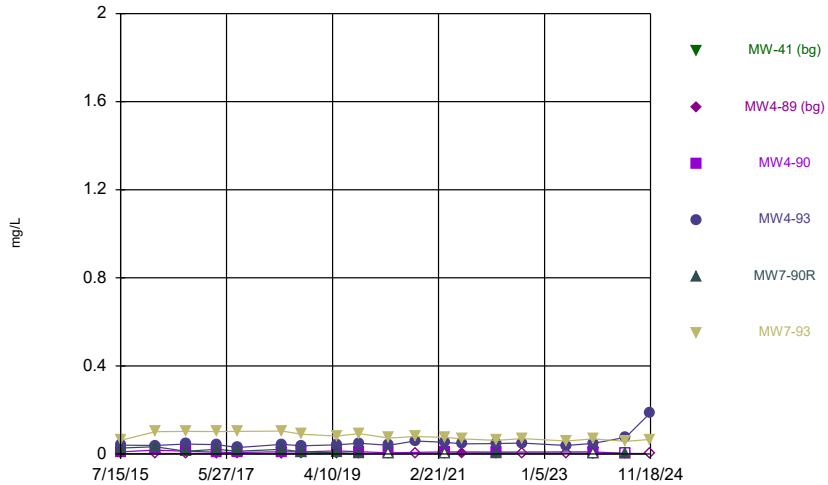
Time Series



Constituent: Nickel Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

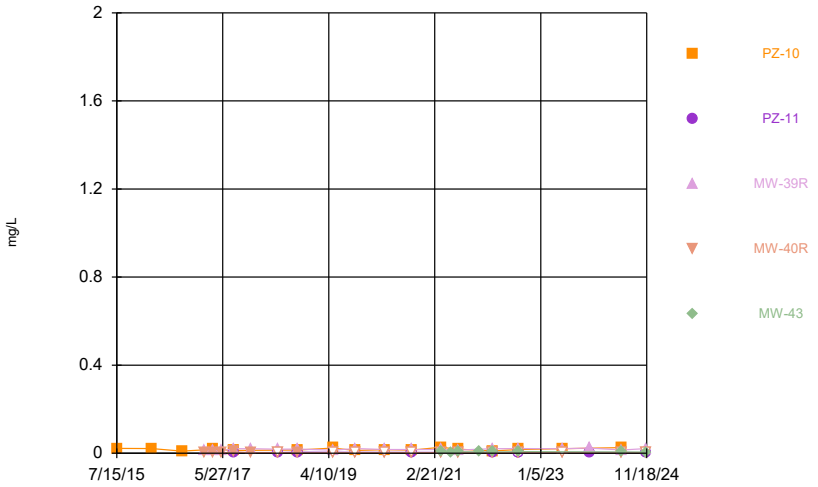
Time Series



Constituent: Nickel Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

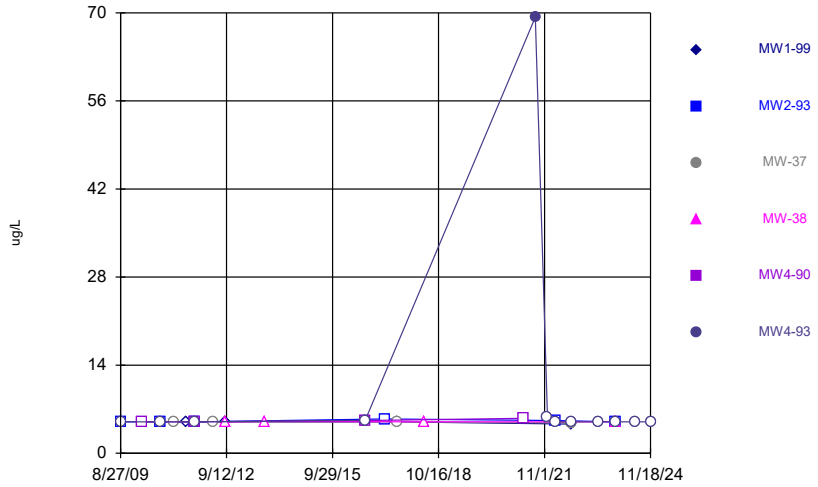
Time Series



Constituent: Nickel Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

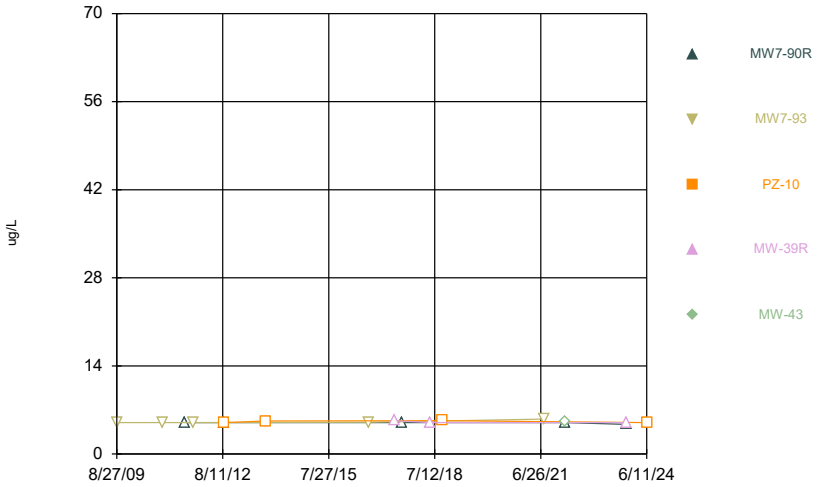
Time Series



Constituent: Phenol Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

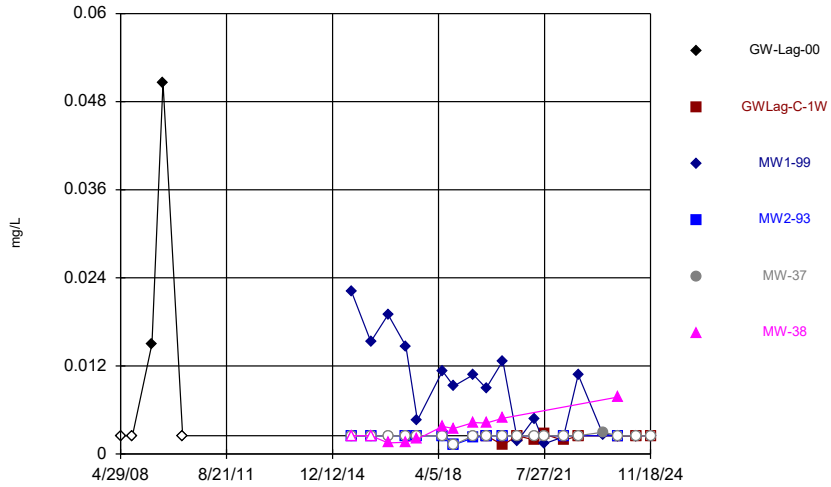
Time Series



Constituent: Phenol Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

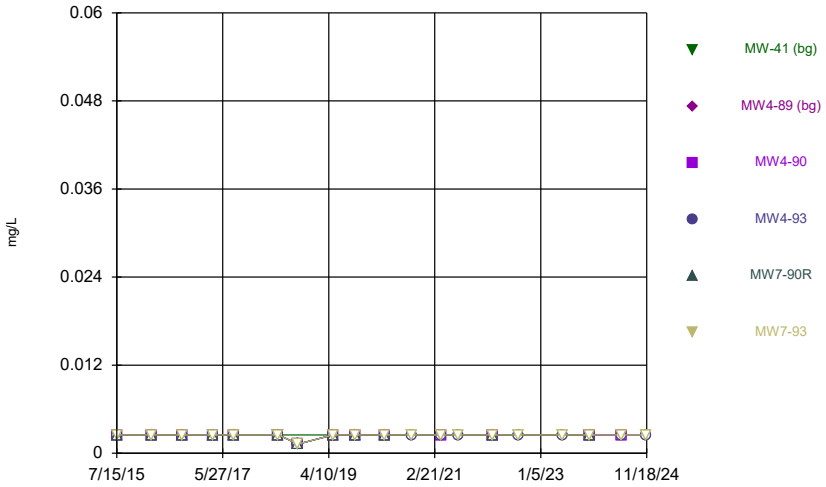
Time Series



Constituent: Selenium Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

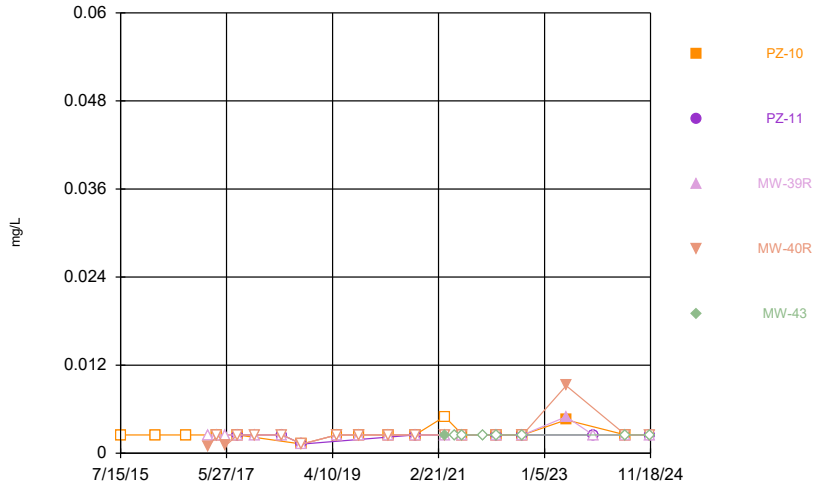
Time Series



Constituent: Selenium Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

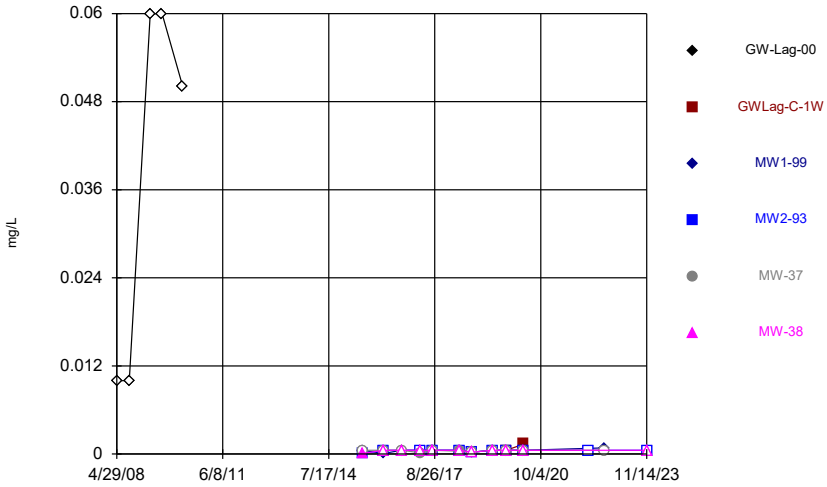
Time Series



Constituent: Selenium Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

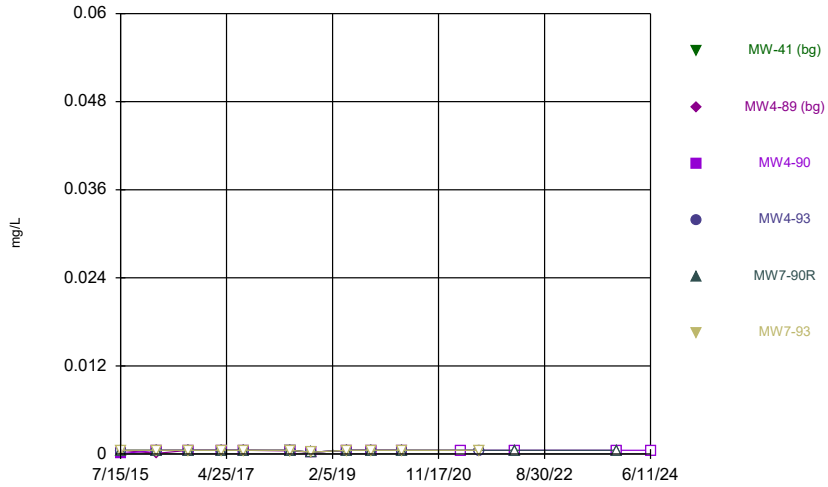
Time Series



Constituent: Silver Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

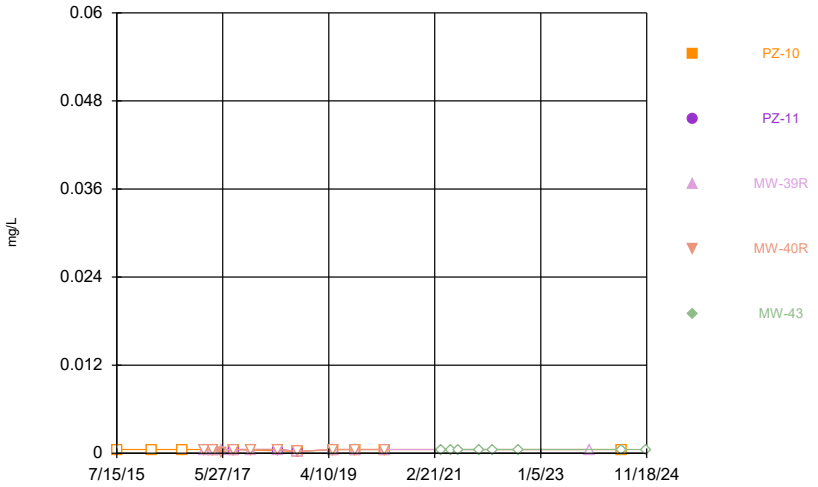
Time Series



Constituent: Silver Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

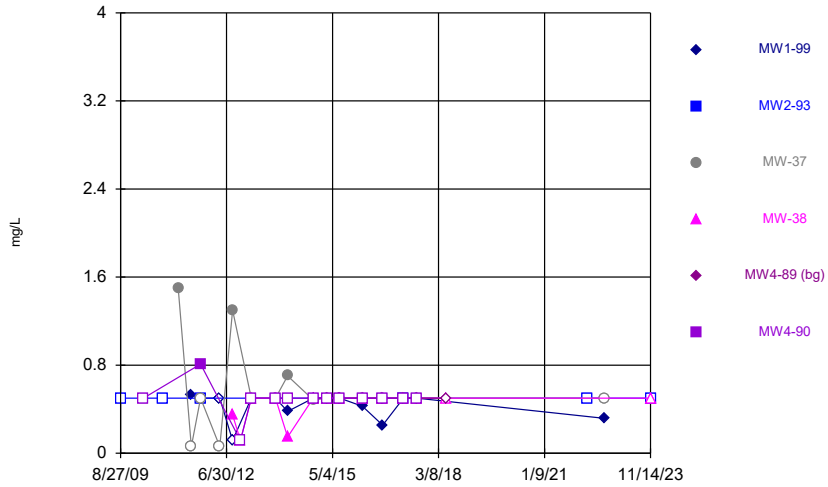
Time Series



Constituent: Silver Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

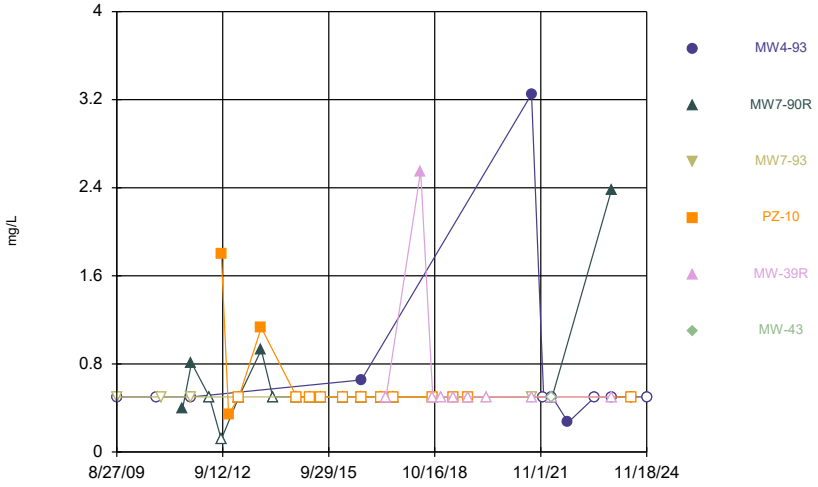
Time Series



Constituent: Sulfide Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

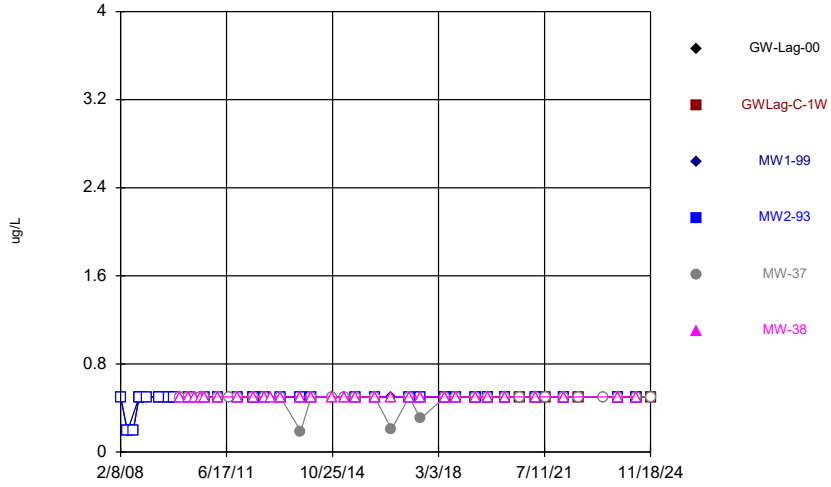
Time Series



Constituent: Sulfide Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

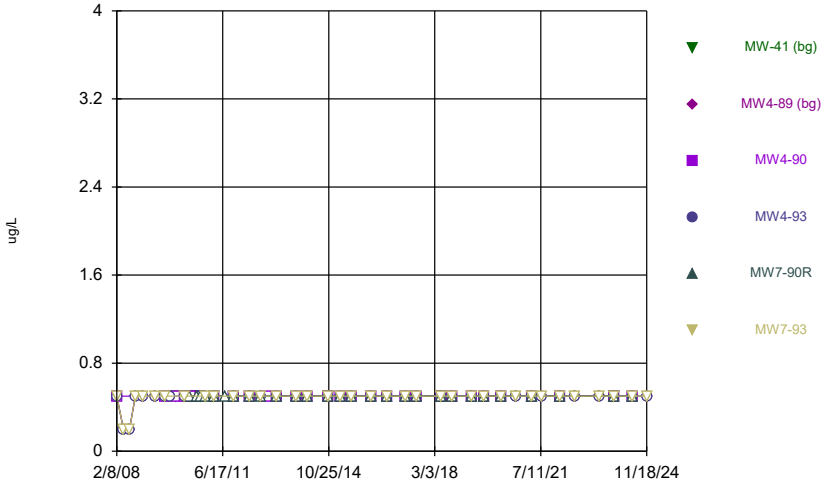
Time Series



Constituent: Tetrachloroethene Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

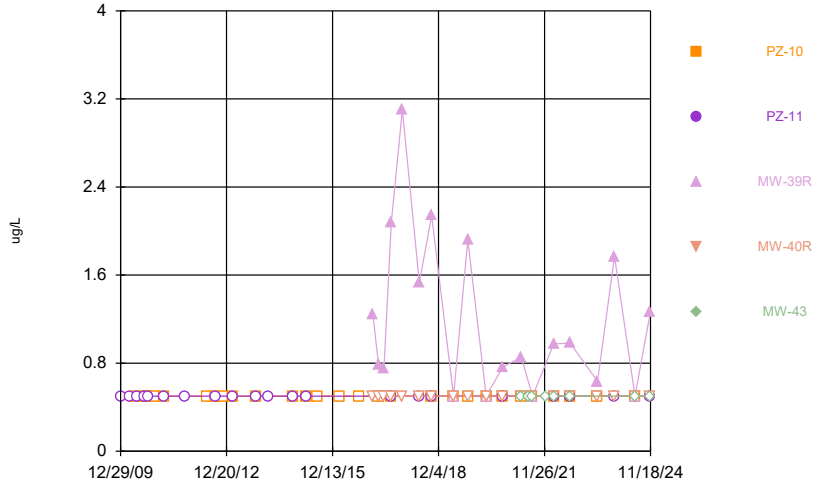
Time Series



Constituent: Tetrachloroethene Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

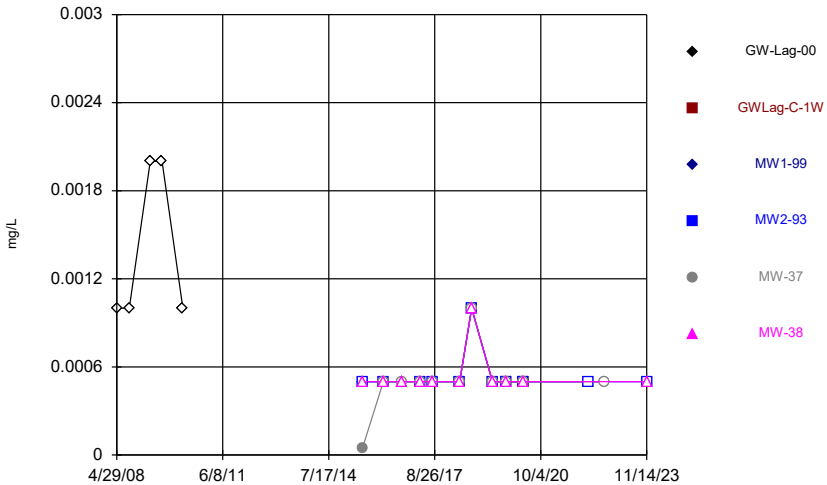
Time Series



Constituent: Tetrachloroethene Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

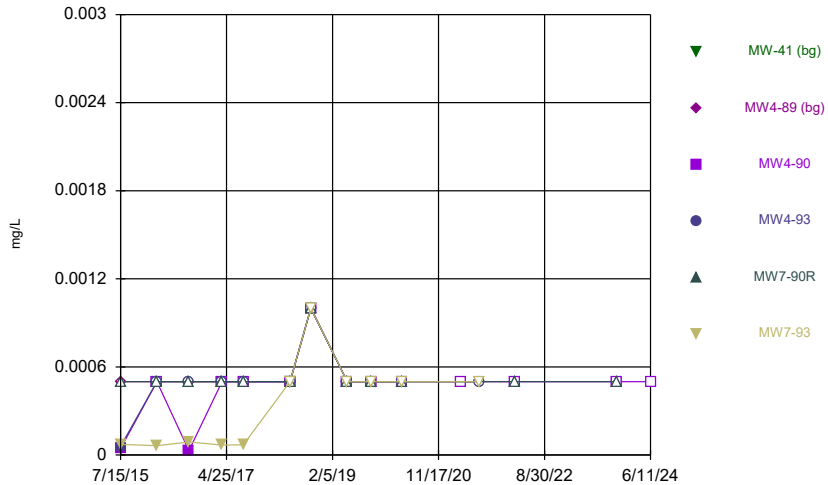
Time Series



Constituent: Thallium Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

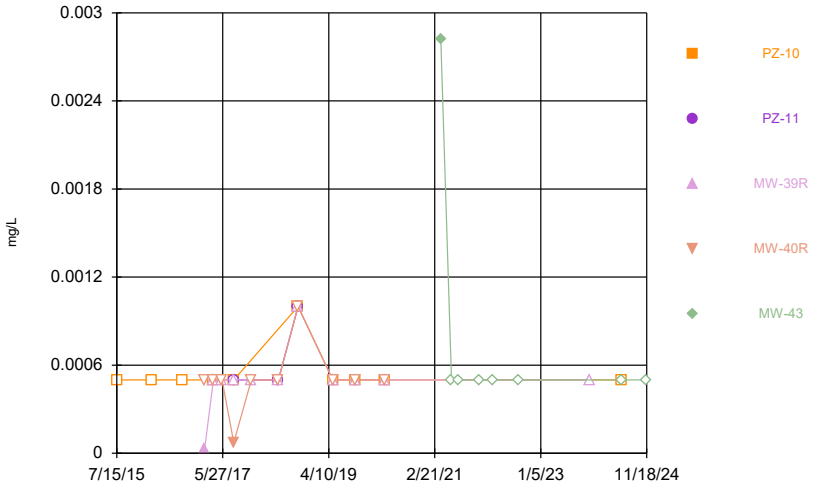
Time Series



Constituent: Thallium Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

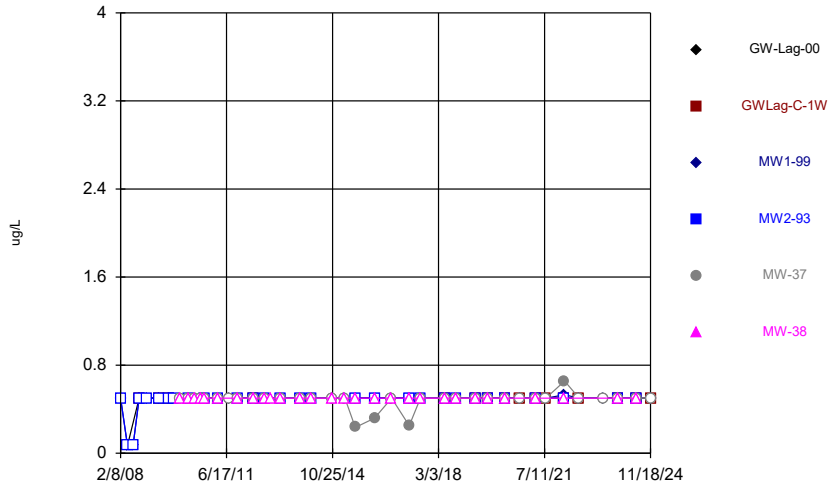
Time Series



Constituent: Thallium Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

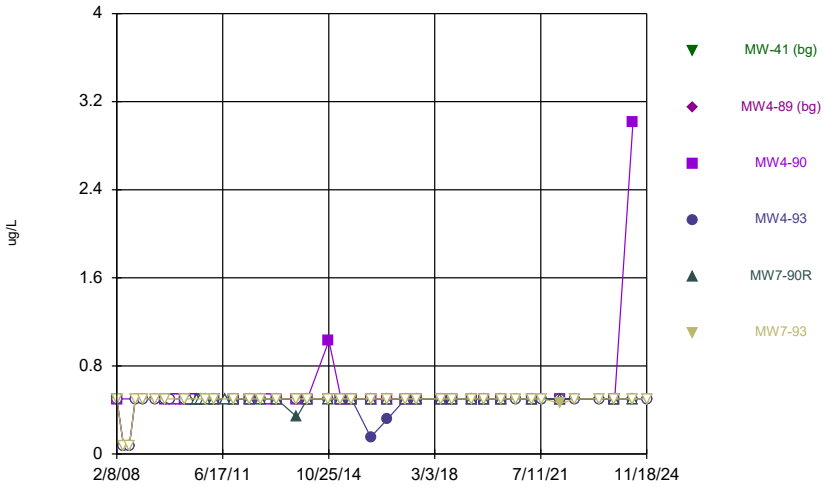
Time Series



Constituent: Toluene Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

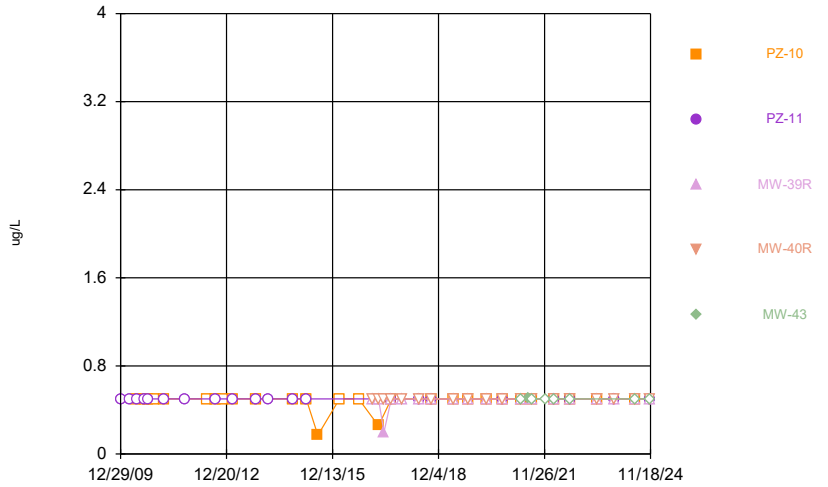
Time Series



Constituent: Toluene Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

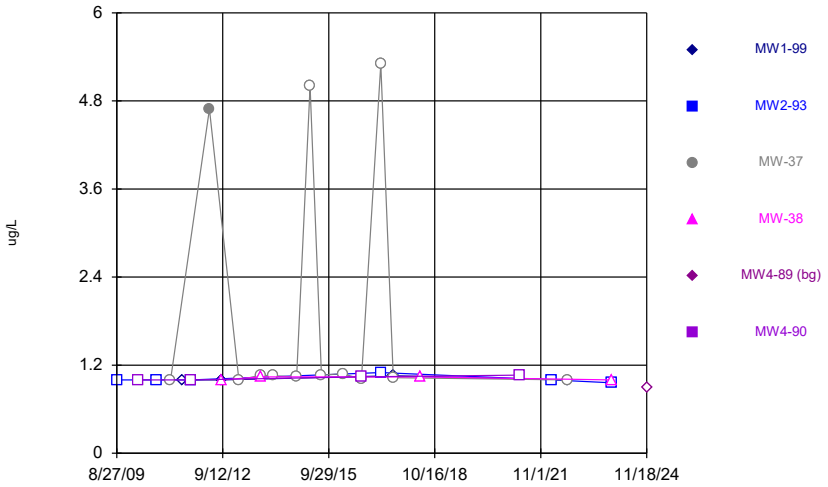
Time Series



Constituent: Toluene Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

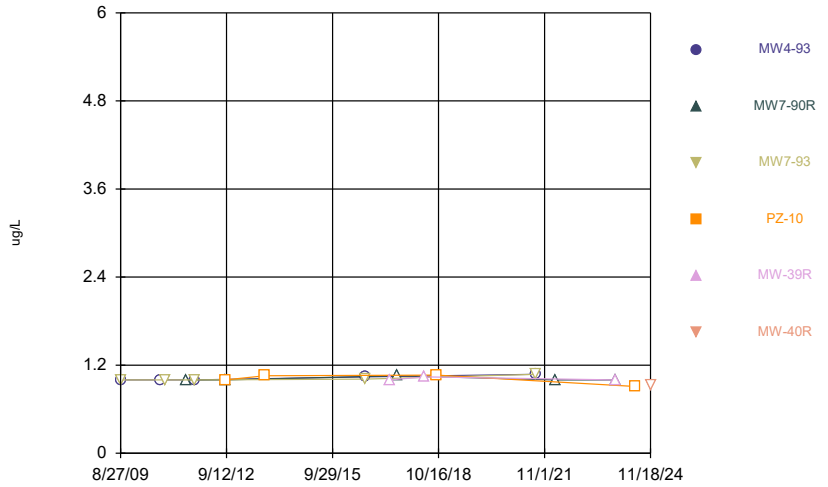
Time Series



Constituent: Toxaphene Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

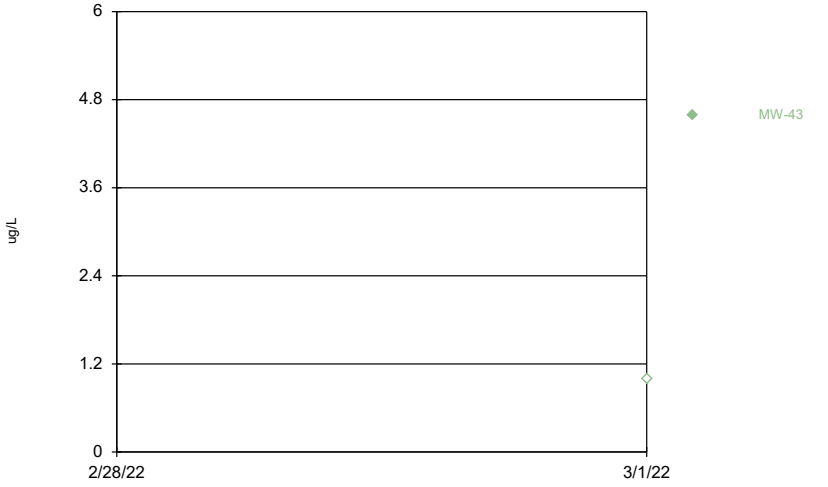
Time Series



Constituent: Toxaphene Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

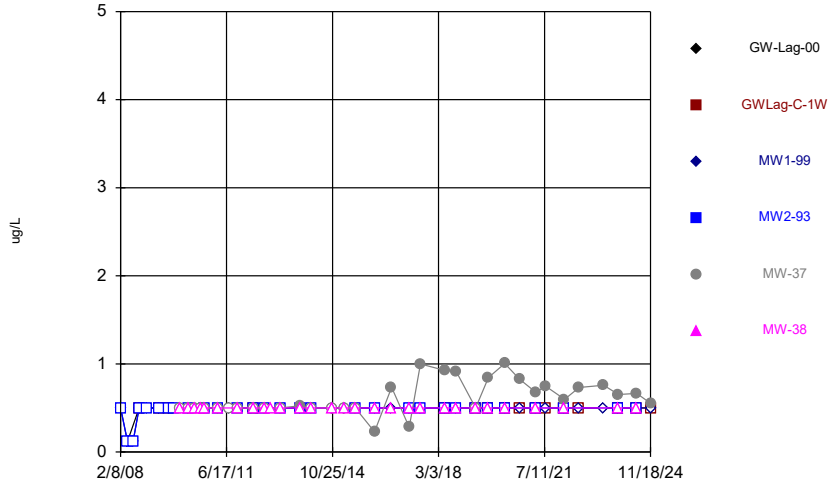
Time Series



Constituent: Toxaphene Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

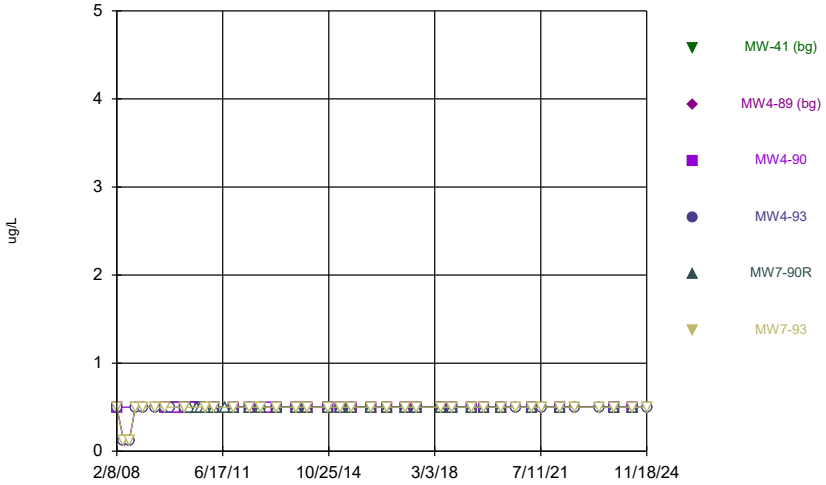
Time Series



Constituent: Trichloroethene Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

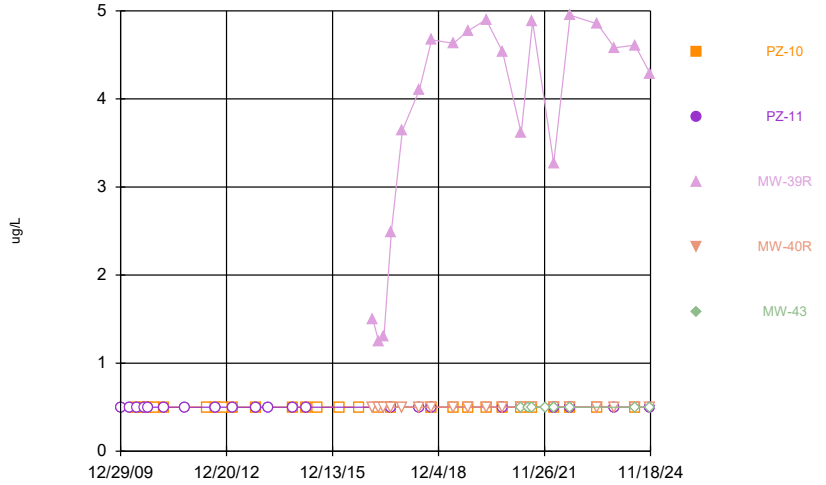
Time Series



Constituent: Trichloroethene Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

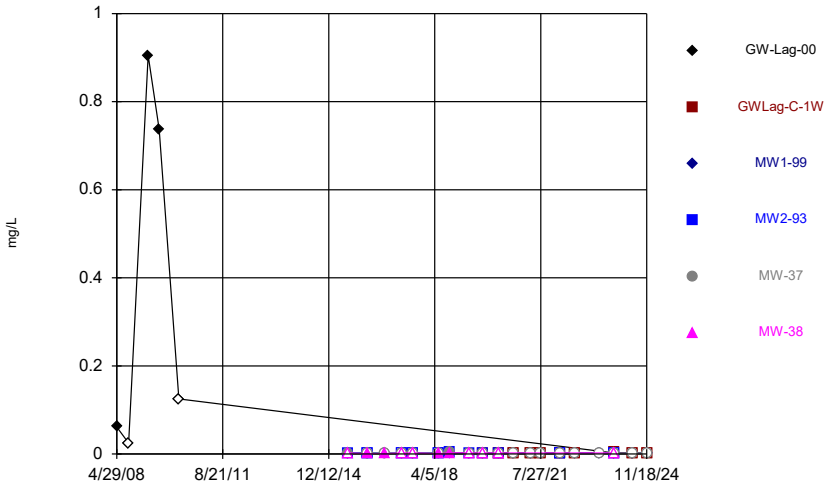
Time Series



Constituent: Trichloroethene Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

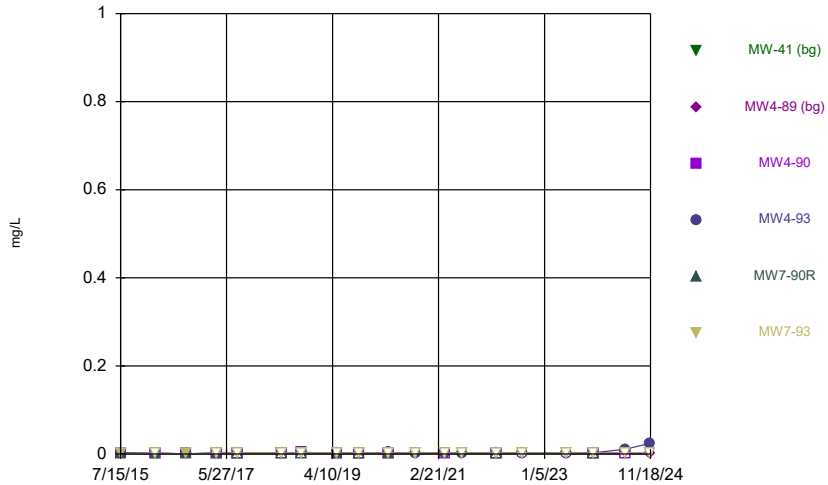
Time Series



Constituent: Vanadium Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

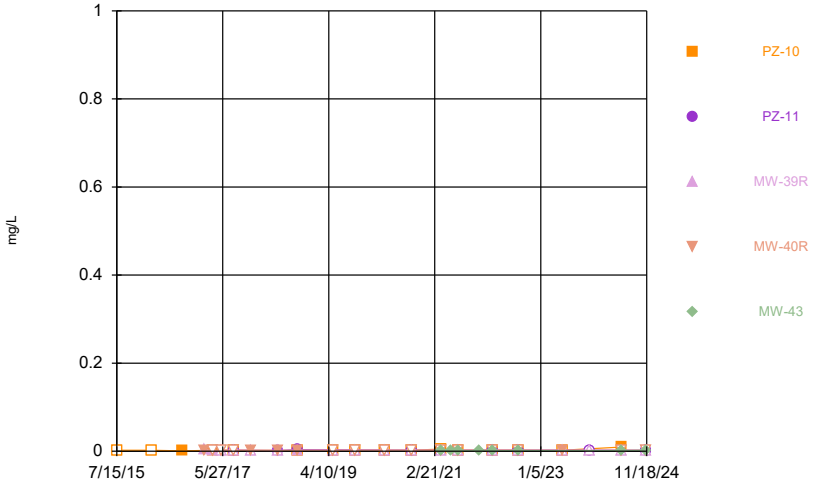
Time Series



Constituent: Vanadium Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

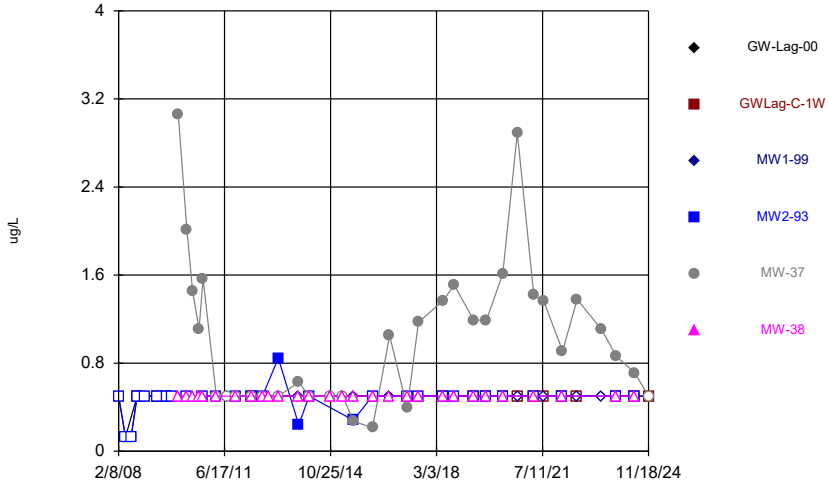
Time Series



Constituent: Vanadium Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

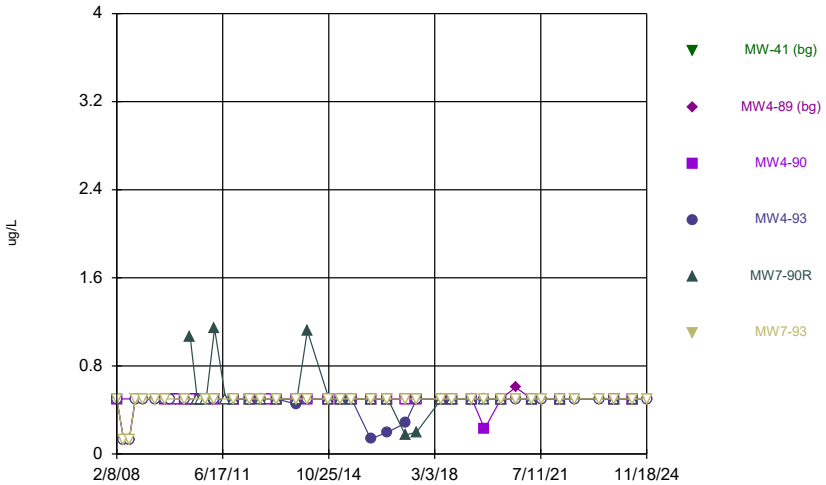
Time Series



Constituent: Vinyl Chloride Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

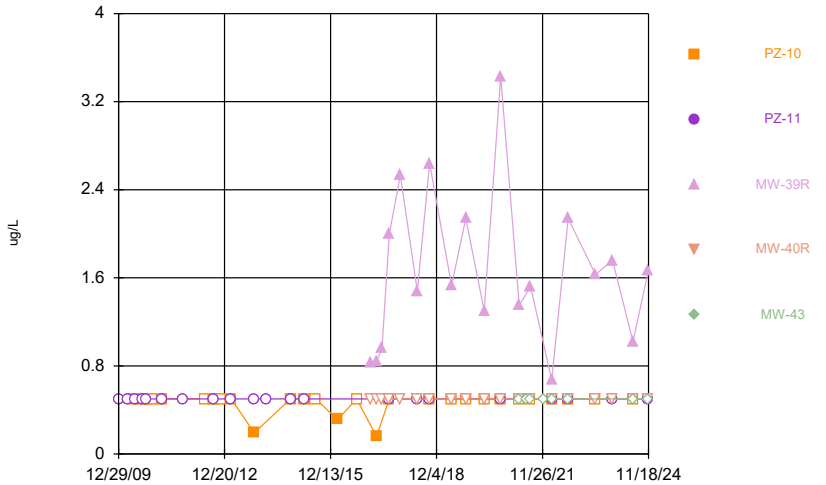
Time Series



Constituent: Vinyl Chloride Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

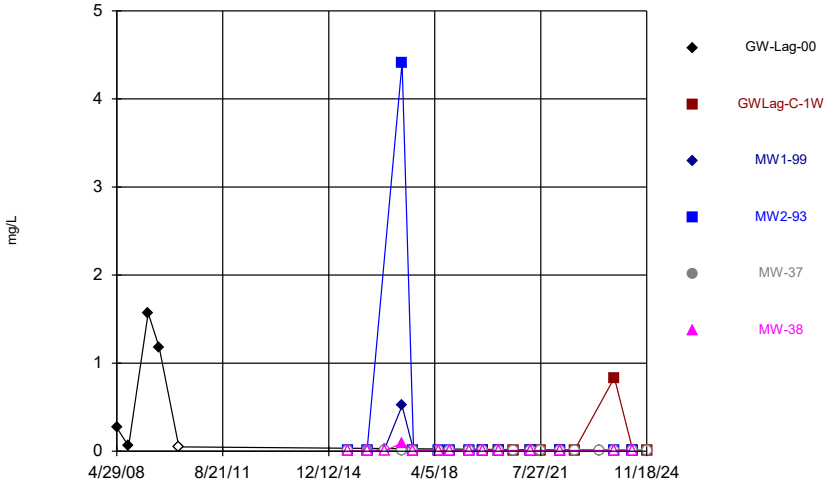
Time Series



Constituent: Vinyl Chloride Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

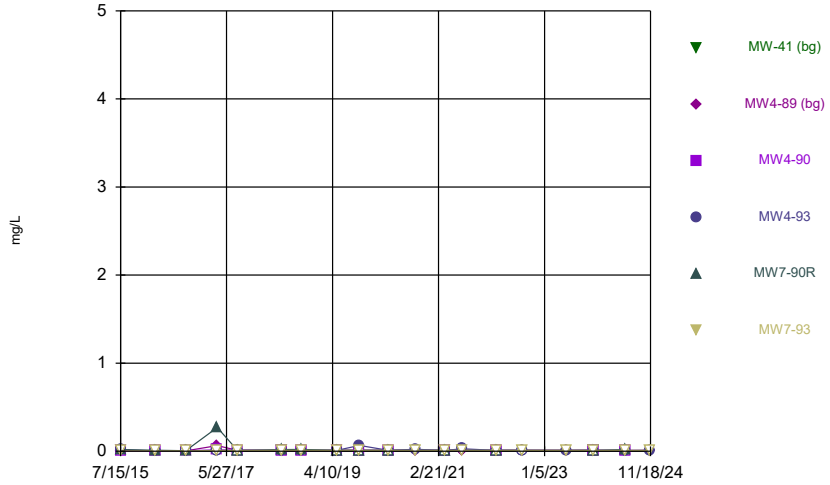
Time Series



Constituent: Zinc Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

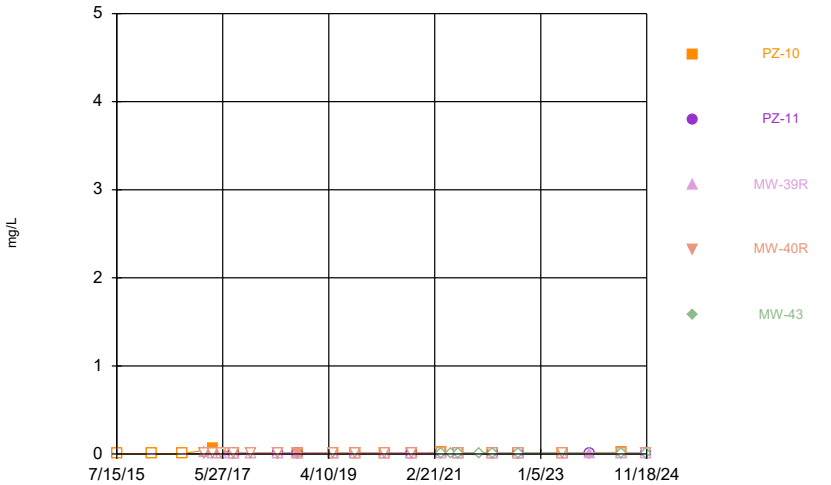
Time Series



Constituent: Zinc Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Time Series



Constituent: Zinc Analysis Run 1/24/2025 12:22 PM View: 2024 AWQR Timeseries
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Outliers Table and Graphs

BG Outlier Analysis

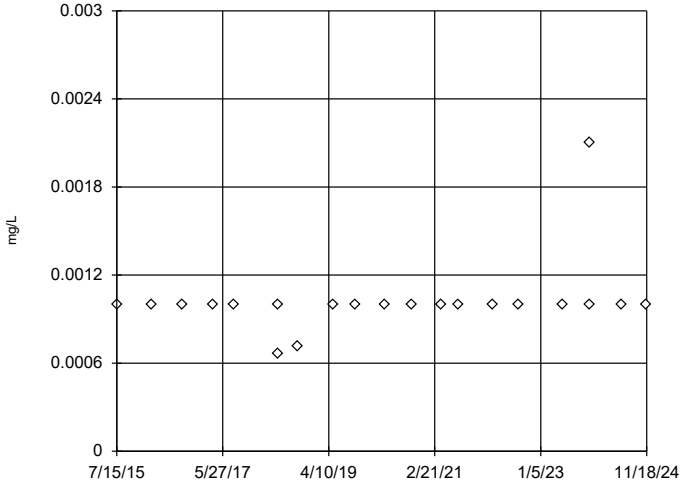
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master Printed 1/24/2025, 2:15 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Arsenic (mg/L)	MW-41,MW4-89	No	n/a	n/a w/combined bg	OH	NaN	21	0.001023	0.000264	n/a	n/a
Barium (mg/L)	**MW-41,MW4-89**	**Yes**	**0.197,0.0151,0.018**	**n/a w/combined bg**	**Rosner/OH**	**0.01**	**21**	**0.08218**	**0.03415**	**normal**	**ShapiroWilk**
Chromium (mg/L)	MW-41,MW4-89	No	n/a	n/a w/combined bg	OH	NaN	21	0.002507	0.0004354	n/a	n/a
Cobalt (mg/L)	**MW-41,MW4-89**	**Yes**	**0.000512,0.000106,0.0005,0.000761**	**n/a w/combined bg**	**NP (nrm)/OH**	**NaN**	**19**	**0.000302**	**0.0001431**	**unknown**	**ShapiroWilk**
Copper (mg/L)	MW-41,MW4-89	No	n/a	n/a w/combined bg	OH	NaN	21	0.002294	0.0004776	n/a	n/a
Lead (mg/L)	MW-41,MW4-89	No	n/a	n/a w/combined bg	OH	NaN	21	0.0002504	0.0000535	n/a	n/a
Nickel (mg/L)	MW-41,MW4-89	No	n/a	n/a w/combined bg	OH	NaN	21	0.002401	0.0006071	n/a	n/a
Vanadium (mg/L)	MW-41,MW4-89	No	n/a	n/a w/combined bg	OH	NaN	21	0.002396	0.0004751	n/a	n/a
Zinc (mg/L)	**MW-41,MW4-89**	**Yes**	**0.0635**	**n/a w/combined bg**	**OH**	**NaN**	**21**	**0.01181**	**0.01199**	**n/a**	**n/a**

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 21

No statistical outliers.

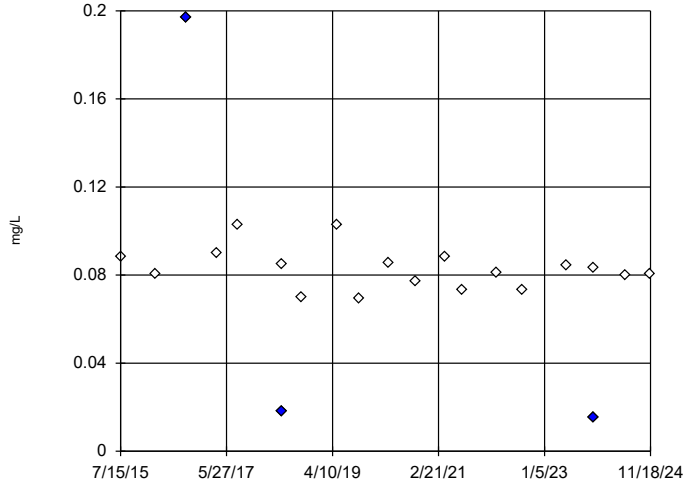
Constituent: Arsenic Analysis Run 1/24/2025 2:12 PM View: 2024 AWQR Outliers

Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Rosner's Outlier Test / Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 21

Statistical outliers are drawn as solid.

k = 3
r = 3.519
Tabulated value = 3.158
Alpha = 0.01

Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9244
Critical = 0.858
The distribution, after removal of suspect values, was found to be normally distributed.

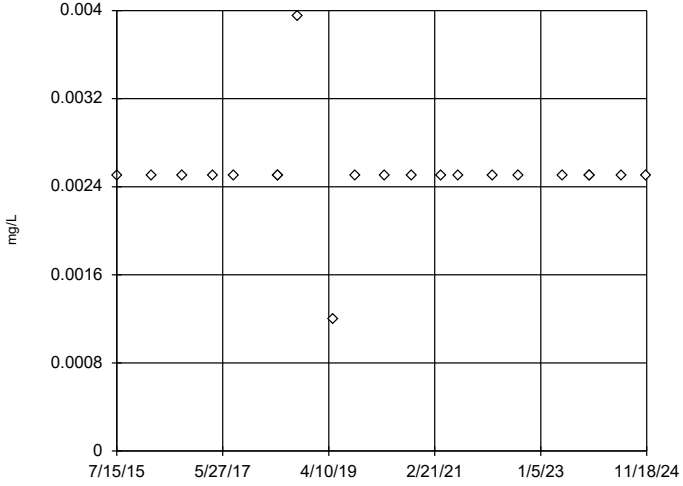
Constituent: Barium Analysis Run 1/24/2025 2:12 PM View: 2024 AWQR Outliers

Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 21

No statistical outliers.

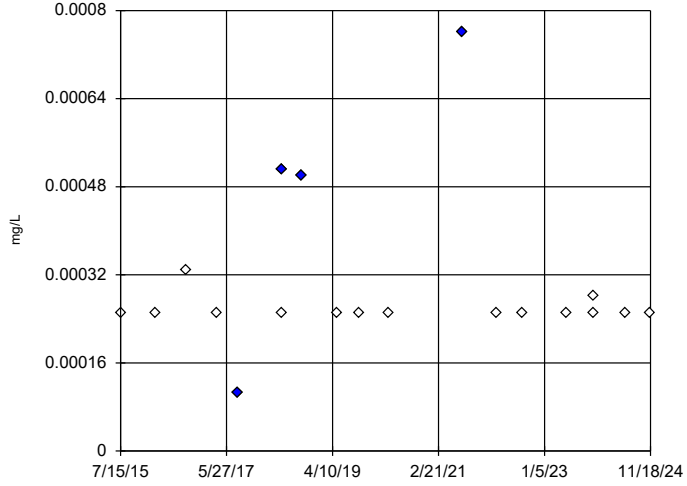
Constituent: Chromium Analysis Run 1/24/2025 2:12 PM View: 2024 AWQR Outliers

Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Tukey's Outlier Screening / Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 19

Outliers are drawn as solid.
Tukey's method used in lieu of parametric test because the Shapiro Wilk normality test failed at the 0.01 alpha level.

High cutoff = 0.000374, low cutoff = 0.000157, based on IQR multiplier of 3.

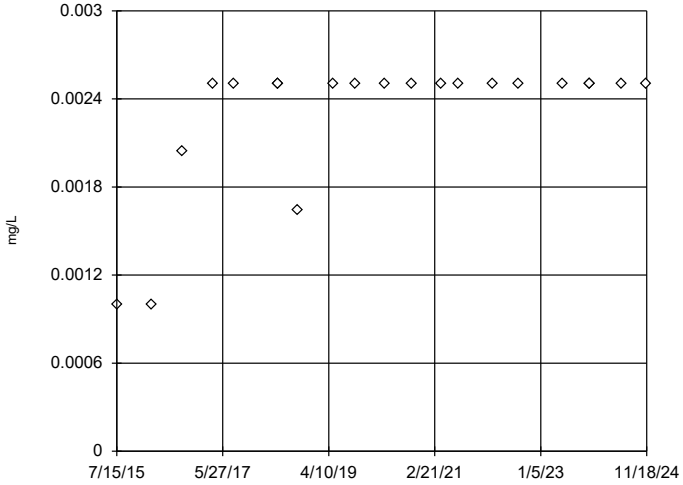
Constituent: Cobalt Analysis Run 1/24/2025 2:13 PM View: 2024 AWQR Outliers

Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 21

No statistical outliers.

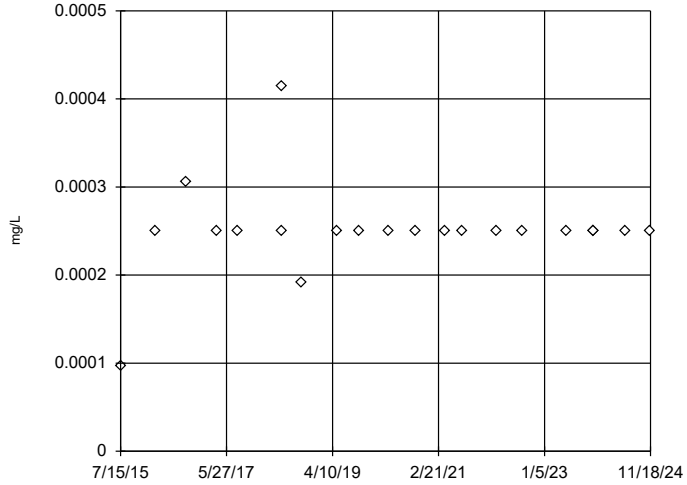
Constituent: Copper Analysis Run 1/24/2025 2:13 PM View: 2024 AWQR Outliers

Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 21

No statistical outliers.

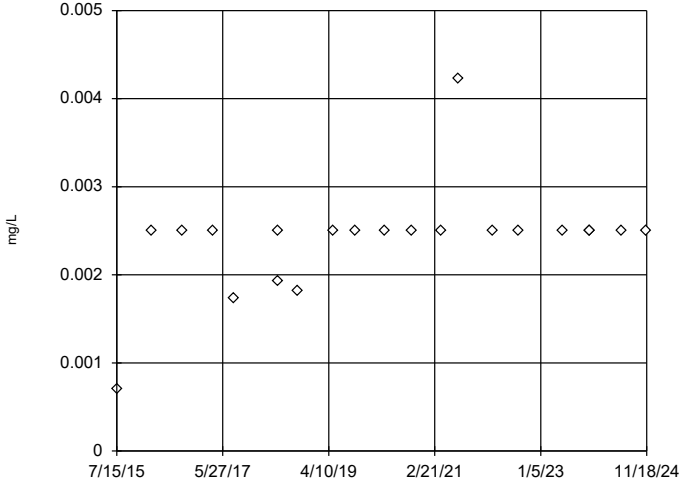
Constituent: Lead Analysis Run 1/24/2025 2:13 PM View: 2024 AWQR Outliers

Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 21

No statistical outliers.

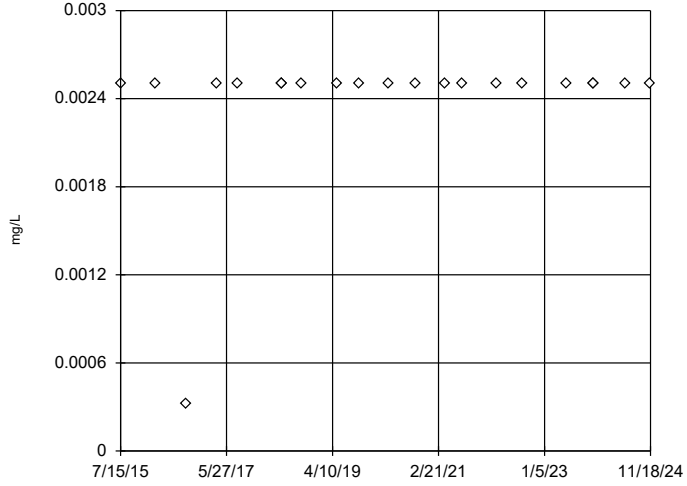
Constituent: Nickel Analysis Run 1/24/2025 2:13 PM View: 2024 AWQR Outliers

Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 21

No statistical outliers.

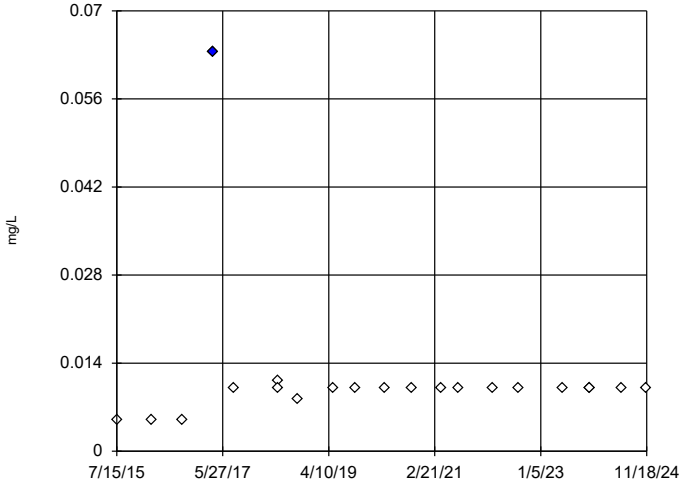
Constituent: Vanadium Analysis Run 1/24/2025 2:13 PM View: 2024 AWQR Outliers

Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm, Pooled Background

MW-41,MW4-89



n = 21

Statistical outlier is drawn as solid.
Outlier per Ohio method.

Constituent: Zinc Analysis Run 1/24/2025 2:13 PM View: 2024 AWQR Outliers

Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

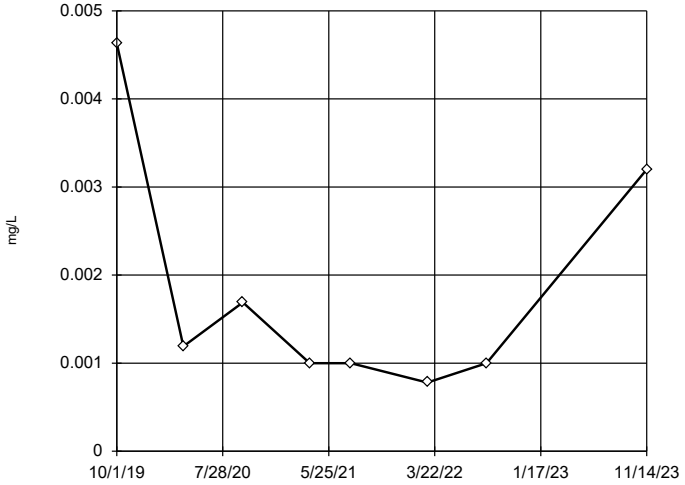
GWLag-C-1W BG Outlier Analysis

Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master Printed 1/24/2025, 1:24 PM

Constituent	Well	Outlier	Value(s)	Date(s)	Method	Alpha	N	Mean	Std. Dev.	Distribution	Normality Test
Arsenic (mg/L)	GWLag-C-1W	No	n/a	n/a	EPA/OH	0.05	8	0.001811	0.001379	ln(x)	ShapiroWilk
Barium (mg/L)	GWLag-C-1W	No	n/a	n/a	EPA/OH	0.05	8	0.1334	0.03041	normal	ShapiroWilk
Cobalt (mg/L)	GWLag-C-1W	No	n/a	n/a	EPA/OH	0.05	6	0.001407	0.0007715	normal	ShapiroWilk
Copper (mg/L)	**GWLag-C-1W**	**Yes**	**0.343**	**11/14/2023**	**OH**	**NaN**	**8**	**0.04503**	**0.1204**	**n/a**	**n/a**
Lead (mg/L)	**GWLag-C-1W**	**Yes**	**0.0887**	**11/14/2023**	**OH**	**NaN**	**8**	**0.01131**	**0.03127**	**n/a**	**n/a**
Nickel (mg/L)	GWLag-C-1W	No	n/a	n/a	EPA/OH	0.05	8	0.005605	0.002038	normal	ShapiroWilk
Selenium (mg/L)	GWLag-C-1W	No	n/a	n/a	Dixon/OH	0.01	8	0.002211	0.0005034	normal	ShapiroWilk
Vanadium (mg/L)	GWLag-C-1W	No	n/a	n/a	OH	NaN	8	0.002415	0.0007014	n/a	n/a
Zinc (mg/L)	**GWLag-C-1W**	**Yes**	**0.834**	**11/14/2023**	**OH**	**NaN**	**8**	**0.113**	**0.2913**	**n/a**	**n/a**

EPA Screening (suspected outliers for Dixon's Test)

GWLag-C-1W



n = 8

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Ohio method in use.
Mean 0.001811, std. dev. 0.001379, critical Tn 2.032

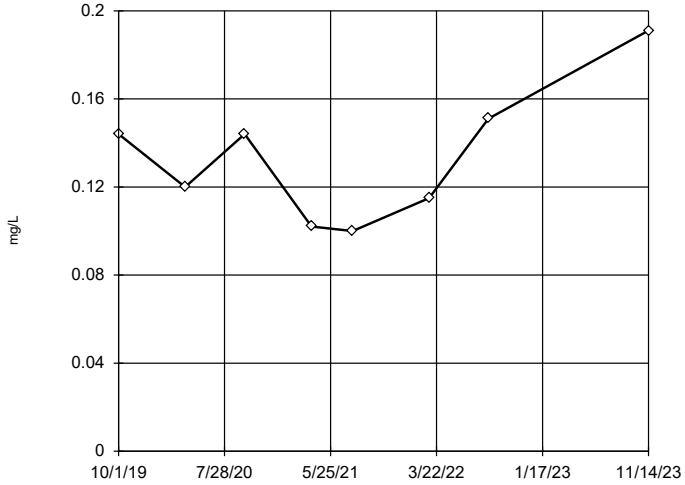
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.8452
Critical = 0.749 (after natural log transformation)
The distribution was found to be log-normal.

Constituent: Arsenic Analysis Run 1/24/2025 12:46 PM View: 2024 AWQR GWLag-C-1W BGPL
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

EPA Screening (suspected outliers for Dixon's Test)

GWLag-C-1W



n = 8

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Ohio method in use.
Mean 0.1334, std. dev. 0.03041, critical Tn 2.032

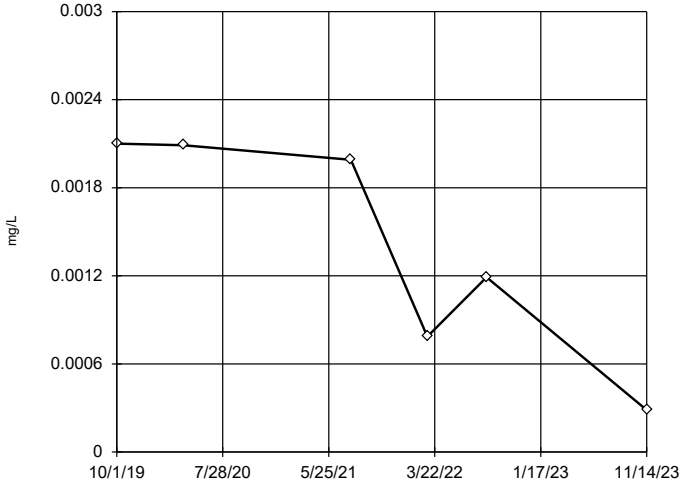
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9156
Critical = 0.749
The distribution was found to be normally distributed.

Constituent: Barium Analysis Run 1/24/2025 12:46 PM View: 2024 AWQR GWLag-C-1W BGPL
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

EPA Screening (suspected outliers for Dixon's Test)

GWLag-C-1W



n = 6

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Ohio method in use.
Mean 0.001407, std. dev. 0.0007715, critical Tn 1.822

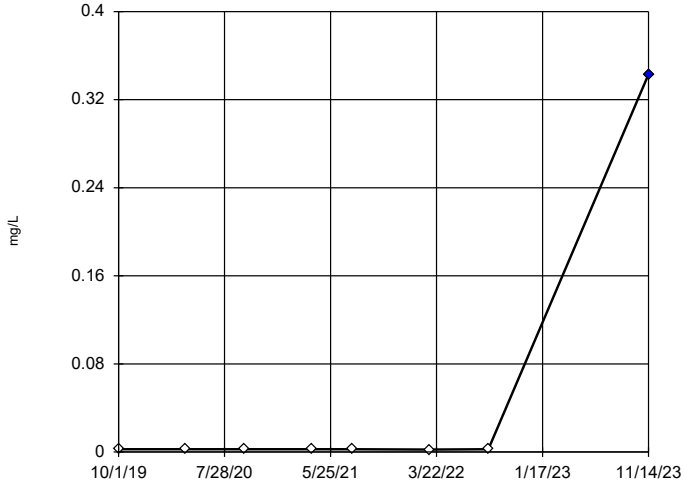
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.8629
Critical = 0.713
The distribution was found to be normally distributed.

Constituent: Cobalt Analysis Run 1/24/2025 12:46 PM View: 2024 AWQR GWLag-C-1W BGPL
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm

GWLag-C-1W



n = 8

Statistical outlier is drawn as solid.
Outlier per Ohio method.

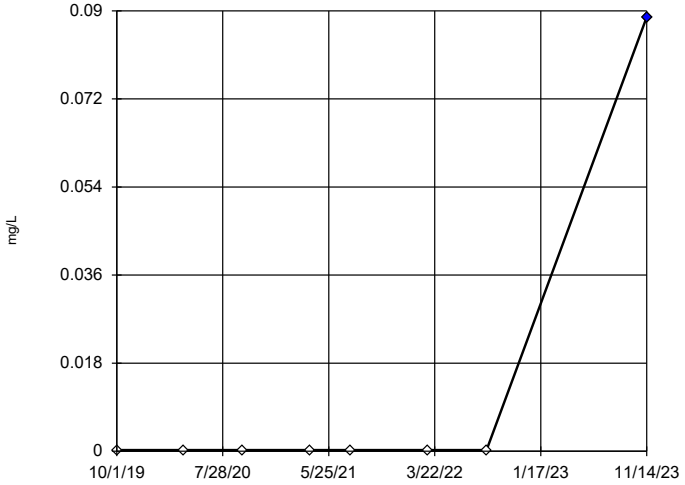
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.8629
Critical = 0.713
The distribution, after removal of suspect value, was found to be normally distributed.

Constituent: Copper Analysis Run 1/24/2025 12:46 PM View: 2024 AWQR GWLag-C-1W BGPL
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm

GWLag-C-1W



n = 8

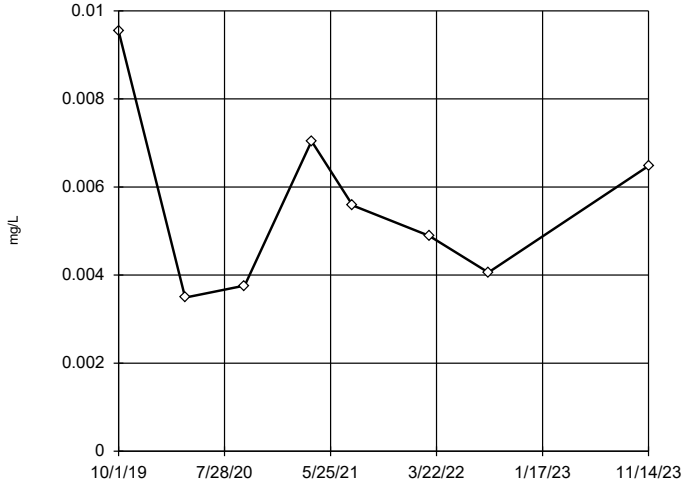
Statistical outlier is drawn as solid.
Outlier per Ohio method.

Constituent: Lead Analysis Run 1/24/2025 12:46 PM View: 2024 AWQR GWLag-C-1W BGPL
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

EPA Screening (suspected outliers for Dixon's Test)

GWLag-C-1W



n = 8

Dixon's will not be run.
No suspect values identified or unable to establish suspect values.
Ohio method in use.
Mean 0.005605, std. dev. 0.002038, critical Tn 2.032

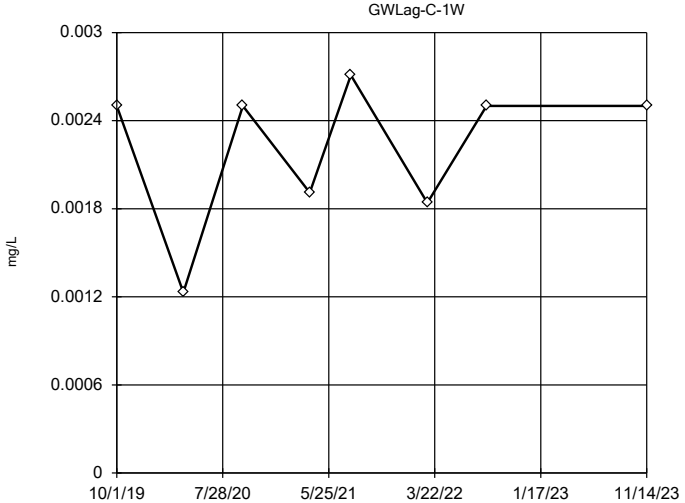
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.9154
Critical = 0.749
The distribution was found to be normally distributed.

Constituent: Nickel Analysis Run 1/24/2025 12:46 PM View: 2024 AWQR GWLag-C-1W BGPL
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Dixon's Outlier Test / Ohio EPA 0715 Outlier Algorithm

GWLag-C-1W



n = 8

No statistical outliers.
Testing for 1 low outlier.
Mean = 0.002211.
Std. Dev. = 0.0005034.
0.00123 (J): c = 0.4803
tabl = 0.683.
Alpha = 0.01.

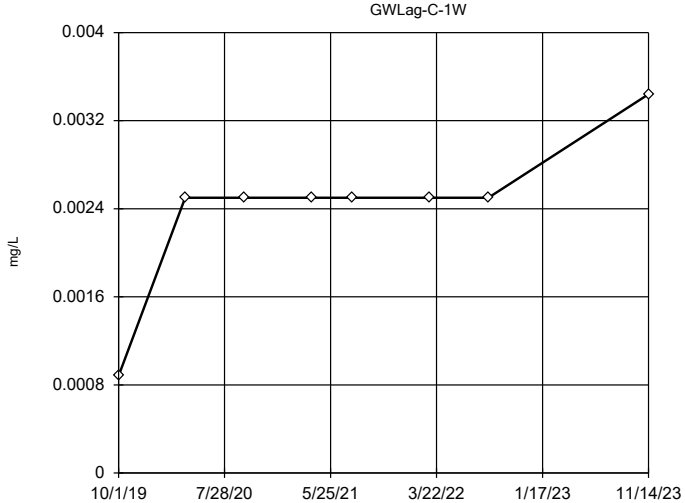
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.7723
Critical = 0.73
The distribution was found to be normally distributed.

Constituent: Selenium Analysis Run 1/24/2025 12:46 PM View: 2024 AWQR GWLag-C-1W BGPL
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm

GWLag-C-1W



n = 8

No statistical outliers.

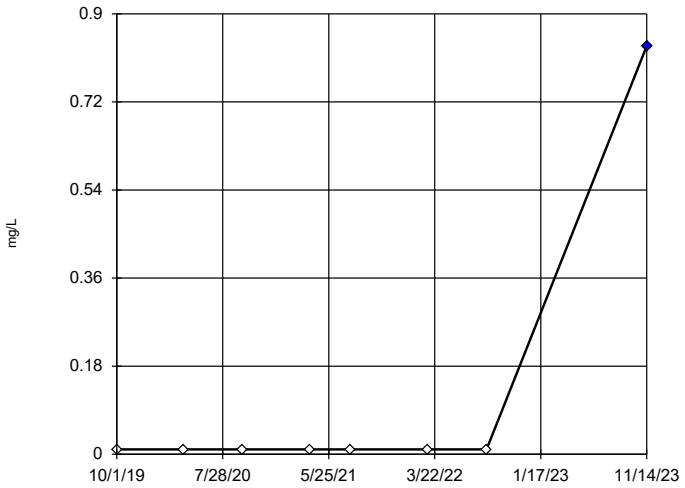
Normality test used:
Shapiro Wilk@alpha = 0.01
Calculated = 0.7723
Critical = 0.73
The distribution was found to be normally distributed.

Constituent: Vanadium Analysis Run 1/24/2025 12:46 PM View: 2024 AWQR GWLag-C-1W BGPL
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Ohio EPA 0715 Outlier Algorithm

GWLag-C-1W



n = 8

Statistical outlier is drawn as solid.
Outlier per Ohio method.

Constituent: Zinc Analysis Run 1/24/2025 12:46 PM View: 2024 AWQR GWLag-C-1W BGPL

Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Prediction Limits Table and Graphs

Interwell Prediction Limit

Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master Printed 1/24/2025, 2:09 PM

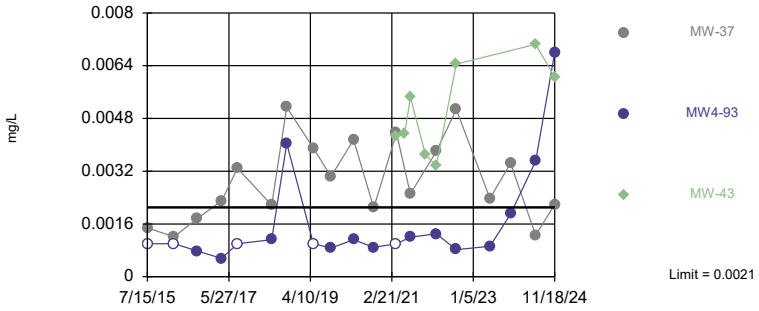
Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Arsenic (mg/L)	**MW-37**	**0.0021**	**n/a**	**11/18/2024**	**0.00219**	**Yes**	**21**	**85.71**	**n/a**	**0.003318**	**NP Inter (NDs) 1 of 2**
Arsenic (mg/L)	**MW4-93**	**0.0021**	**n/a**	**11/18/2024**	**0.0068**	**Yes**	**21**	**85.71**	**n/a**	**0.003318**	**NP Inter (NDs) 1 of 2**
Arsenic (mg/L)	**MW-43**	**0.0021**	**n/a**	**11/18/2024**	**0.006055**	**Yes**	**21**	**85.71**	**n/a**	**0.003318**	**NP Inter (NDs) 1 of 2**
Barium (mg/L)	MW1-99	0.197	n/a	11/18/2024	0.0693	No	21	0	n/a	0.003318	NP Inter (normality) ...
Barium (mg/L)	MW-37	0.197	n/a	11/18/2024	0.0177	No	21	0	n/a	0.003318	NP Inter (normality) ...
Barium (mg/L)	MW4-93	0.197	n/a	11/18/2024	0.0243	No	21	0	n/a	0.003318	NP Inter (normality) ...
Barium (mg/L)	MW7-93	0.197	n/a	11/18/2024	0.0888	No	21	0	n/a	0.003318	NP Inter (normality) ...
Barium (mg/L)	**MW-39R**	**0.197**	**n/a**	**11/18/2024**	**0.203**	**Yes**	**21**	**0**	**n/a**	**0.003318**	**NP Inter (normality) ...**
Barium (mg/L)	MW-40R	0.197	n/a	11/18/2024	0.095	No	21	0	n/a	0.003318	NP Inter (normality) ...
Barium (mg/L)	**MW-43**	**0.197**	**n/a**	**11/18/2024**	**0.623**	**Yes**	**21**	**0**	**n/a**	**0.003318**	**NP Inter (normality) ...**
Cobalt (mg/L)	**MW1-99**	**0.000761**	**n/a**	**11/18/2024**	**0.00268**	**Yes**	**19**	**73.68**	**n/a**	**0.00389**	**NP Inter (NDs) 1 of 2**
Cobalt (mg/L)	**MW-37**	**0.000761**	**n/a**	**11/18/2024**	**0.00265**	**Yes**	**19**	**73.68**	**n/a**	**0.00389**	**NP Inter (NDs) 1 of 2**
Cobalt (mg/L)	**MW4-93**	**0.000761**	**n/a**	**11/18/2024**	**0.0498**	**Yes**	**19**	**73.68**	**n/a**	**0.00389**	**NP Inter (NDs) 1 of 2**
Cobalt (mg/L)	**MW7-93**	**0.000761**	**n/a**	**11/18/2024**	**0.0127**	**Yes**	**19**	**73.68**	**n/a**	**0.00389**	**NP Inter (NDs) 1 of 2**
Cobalt (mg/L)	**MW-39R**	**0.000761**	**n/a**	**11/18/2024**	**0.00141**	**Yes**	**19**	**73.68**	**n/a**	**0.00389**	**NP Inter (NDs) 1 of 2**
Cobalt (mg/L)	**MW-43**	**0.000761**	**n/a**	**11/18/2024**	**0.002175**	**Yes**	**19**	**73.68**	**n/a**	**0.00389**	**NP Inter (NDs) 1 of 2**
Nickel (mg/L)	**MW-37**	**0.00423**	**n/a**	**11/18/2024**	**0.0422**	**Yes**	**21**	**76.19**	**n/a**	**0.003318**	**NP Inter (NDs) 1 of 2**
Nickel (mg/L)	**MW4-93**	**0.00423**	**n/a**	**11/18/2024**	**0.188**	**Yes**	**21**	**76.19**	**n/a**	**0.003318**	**NP Inter (NDs) 1 of 2**
Nickel (mg/L)	**MW7-93**	**0.00423**	**n/a**	**11/18/2024**	**0.0663**	**Yes**	**21**	**76.19**	**n/a**	**0.003318**	**NP Inter (NDs) 1 of 2**
Nickel (mg/L)	**MW-39R**	**0.00423**	**n/a**	**11/18/2024**	**0.0212**	**Yes**	**21**	**76.19**	**n/a**	**0.003318**	**NP Inter (NDs) 1 of 2**
Nickel (mg/L)	**MW-43**	**0.00423**	**n/a**	**11/18/2024**	**0.005515**	**Yes**	**21**	**76.19**	**n/a**	**0.003318**	**NP Inter (NDs) 1 of 2**
Vanadium (mg/L)	**MW4-93**	**0.0025**	**n/a**	**11/18/2024**	**0.0246**	**Yes**	**21**	**95.24**	**n/a**	**0.003318**	**NP Inter (NDs) 1 of 2**

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Exceeds Limit: MW-37, MW4-93, MW-43

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 85.71% NDs. Annual per-constituent alpha = 0.09489. Individual comparison alpha = 0.003318 (1 of 2). Comparing 3 points to limit. Assumes 12 future values.

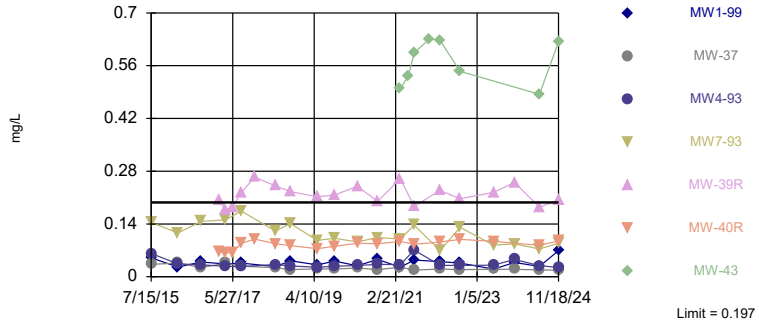
Constituent: Arsenic Analysis Run 1/24/2025 2:07 PM View: 2024 AWQR Prediction Limits
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Exceeds Limit: MW-39R, MW-43

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 21 background values. Annual per-constituent alpha = 0.09489. Individual comparison alpha = 0.003318 (1 of 2). Comparing 7 points to limit. Assumes 8 future values.

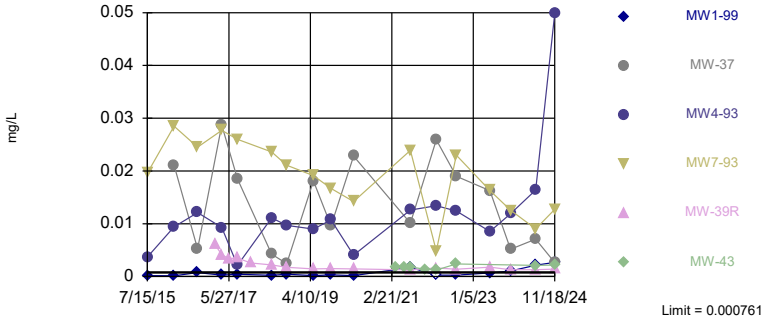
Constituent: Barium Analysis Run 1/24/2025 2:07 PM View: 2024 AWQR Prediction Limits
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Exceeds Limit: MW1-99, MW-37, MW4-93, MW7-93, MW-39R, MW-43

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 19 background values. 73.68% NDs. Annual per-constituent alpha = 0.1104. Individual comparison alpha = 0.00389 (1 of 2). Comparing 6 points to limit. Assumes 9 future values.

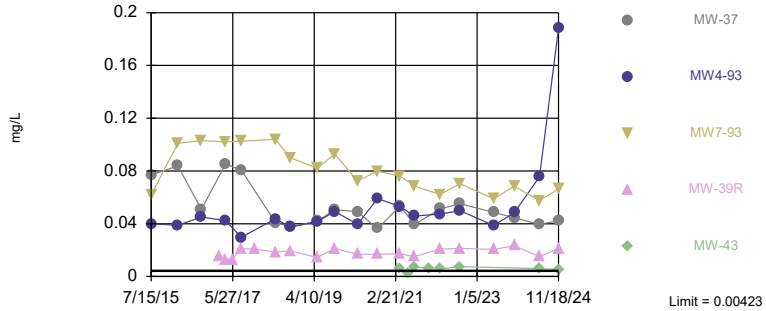
Constituent: Cobalt Analysis Run 1/24/2025 2:07 PM View: 2024 AWQR Prediction Limits
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Exceeds Limit: MW-37, MW4-93, MW7-93, MW-39R, MW-43

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 76.19% NDs. Annual per-constituent alpha = 0.09489. Individual comparison alpha = 0.003318 (1 of 2). Comparing 5 points to limit. Assumes 10 future values.

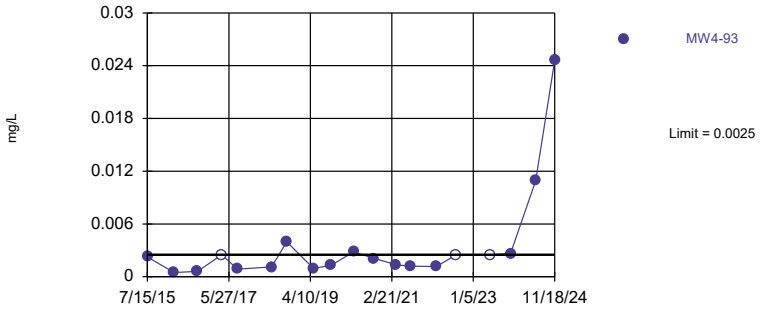
Constituent: Nickel Analysis Run 1/24/2025 2:07 PM View: 2024 AWQR Prediction Limits
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Exceeds Limit: MW4-93

Prediction Limit

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 21 background values. 95.24% NDs. Annual per-constituent alpha = 0.09489. Individual comparison alpha = 0.003318 (1 of 2). Assumes 14 future values.

Constituent: Vanadium Analysis Run 1/24/2025 2:07 PM View: 2024 AWQR Prediction Limits

Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

GWLag-C-1W IntraPrediction Limit

Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master Printed 1/24/2025, 1:53 PM

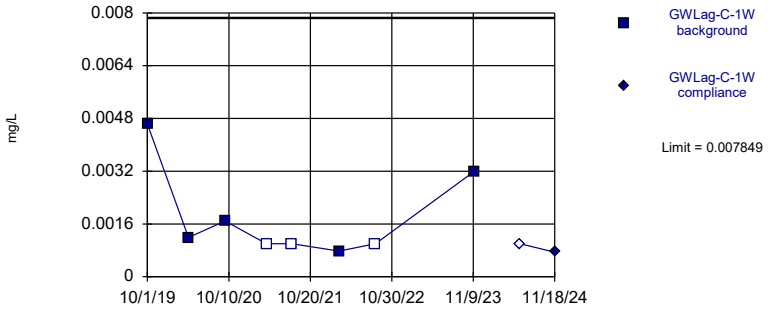
Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	%NDs	Transform	Alpha	Method
Arsenic (mg/L)	GWLag-C-1W	0.007849	n/a	11/18/2024	0.000746J	No	8	37.5	sqrt(x)	0.0003901	Param Intra 1 of 2
Barium (mg/L)	GWLag-C-1W	0.2418	n/a	11/18/2024	0.158	No	8	0	No	0.0003901	Param Intra 1 of 2
Cobalt (mg/L)	GWLag-C-1W	0.004924	n/a	11/18/2024	0.00141	No	6	0	No	0.0003901	Param Intra 1 of 2
Copper (mg/L)	GWLag-C-1W	0.343	n/a	11/18/2024	0.0025ND	No	8	75	n/a	0.02144	NP Intra (NDs) 1 of 2
Lead (mg/L)	GWLag-C-1W	0.0887	n/a	11/18/2024	0.00025ND	No	8	87.5	n/a	0.02144	NP Intra (NDs) 1 of 2
Nickel (mg/L)	GWLag-C-1W	0.01287	n/a	11/18/2024	0.00314J	No	8	0	No	0.0003901	Param Intra 1 of 2
Selenium (mg/L)	GWLag-C-1W	0.003798	n/a	11/18/2024	0.0025ND	No	8	50	No	0.0003901	Param Intra 1 of 2
Vanadium (mg/L)	GWLag-C-1W	0.00344	n/a	11/18/2024	0.0025ND	No	8	75	n/a	0.02144	NP Intra (NDs) 1 of 2
Zinc (mg/L)	GWLag-C-1W	0.834	n/a	11/18/2024	0.01ND	No	8	87.5	n/a	0.02144	NP Intra (NDs) 1 of 2

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (based on square root transformation) (after Kaplan-Meier Adjustment): Mean=0.04146, Std. Dev.=0.01322, n=8, 37.5% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.7979, critical = 0.749. Kappa = 3.565 (c=9, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0003901.

Constituent: Arsenic Analysis Run 1/24/2025 1:51 PM View: 2024 AWQR GWLag-C-1W IntraPL

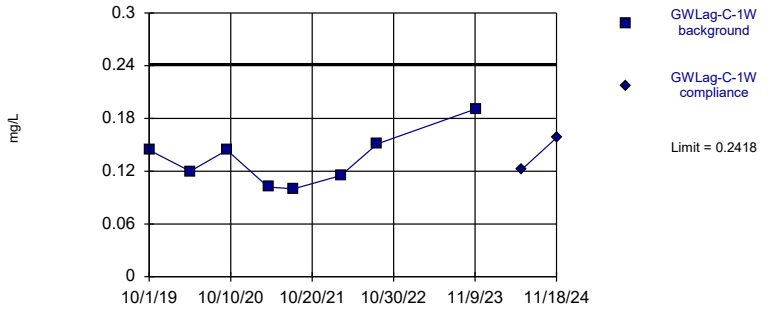
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.1334, Std. Dev.=0.03041, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9156, critical = 0.749. Kappa = 3.565 (c=9, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0003901.

Constituent: Barium Analysis Run 1/24/2025 1:51 PM View: 2024 AWQR GWLag-C-1W IntraPL

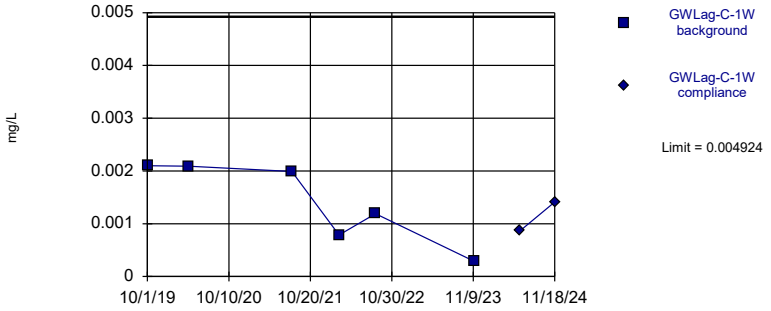
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.001407, Std. Dev.=0.0007715, n=6. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8629, critical = 0.713. Kappa = 4.559 (c=9, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0003901.

Constituent: Cobalt Analysis Run 1/24/2025 1:51 PM View: 2024 AWQR GWLag-C-1W IntraPL

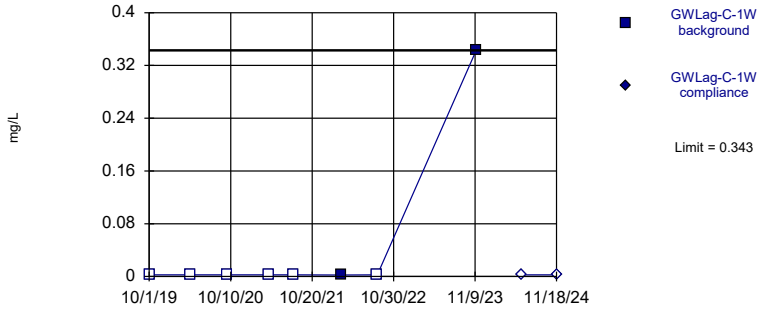
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 75% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Copper Analysis Run 1/24/2025 1:51 PM View: 2024 AWQR GWLag-C-1W IntraPL

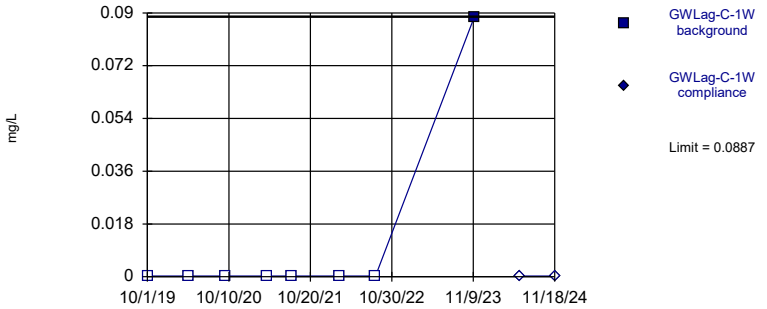
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 87.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

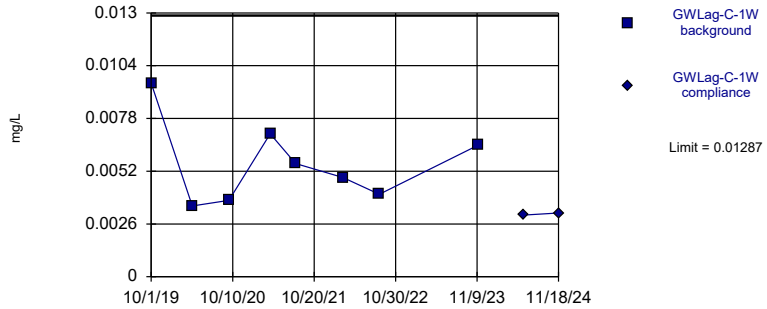
Constituent: Lead Analysis Run 1/24/2025 1:51 PM View: 2024 AWQR GWLag-C-1W IntraPL
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary: Mean=0.005605, Std. Dev.=0.002038, n=8. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9154, critical = 0.749. Kappa = 3.565 (c=9, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0003901.

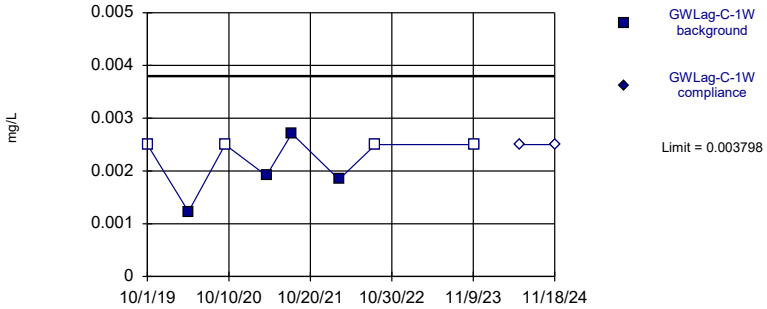
Constituent: Nickel Analysis Run 1/24/2025 1:51 PM View: 2024 AWQR GWLag-C-1W IntraPL
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Parametric



Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.001923, Std. Dev.=0.000526, n=8, 50% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8219, critical = 0.749. Kappa = 3.565 (c=9, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0003901.

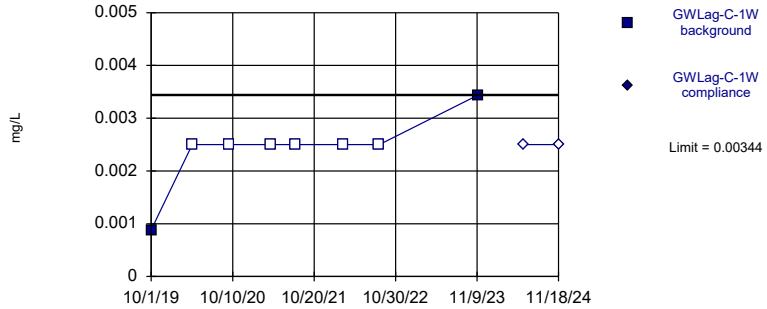
Constituent: Selenium Analysis Run 1/24/2025 1:51 PM View: 2024 AWQR GWLag-C-1W IntraPL
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 75% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

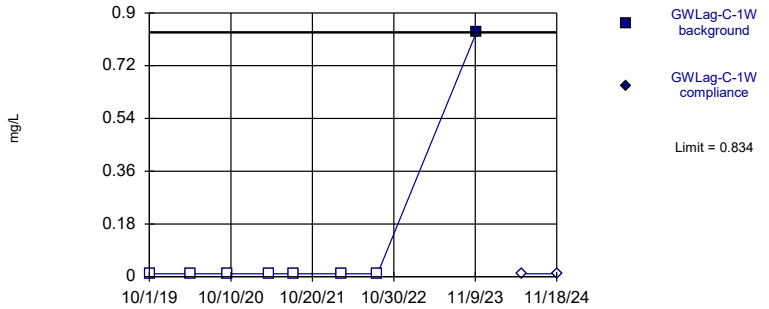
Constituent: Vanadium Analysis Run 1/24/2025 1:51 PM View: 2024 AWQR GWLag-C-1W IntraPL
Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 8 background values. 87.5% NDs. Well-constituent pair annual alpha = 0.04242. Individual comparison alpha = 0.02144 (1 of 2).

Constituent: Zinc Analysis Run 1/24/2025 1:51 PM View: 2024 AWQR GWLag-C-1W IntraPL

Des Moines County Regional SLF Client: SCS Engineers Data: Des Moines County LF Master

Mann-Kendall Trend Table and Graphs

Trend Test

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM Printed 1/24/2025, 3:18 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Alpha	Method
1,1,1-Trichloroethane (ug/L)	MW1-99	0	1	21	No	8	87.5	0.01	NP
1,1-Dichloroethane (ug/L)	MW2-93	0.9388	20	21	No	8	50	0.01	NP
1,1-Dichloroethane (ug/L)	MW4-93	-0.1994	-17	-21	No	8	0	0.01	NP
1,1-Dichloroethane (ug/L)	MW-37	-3.135	-4	-21	No	8	0	0.01	NP
1,1-Dichloroethane (ug/L)	MW-39R	1.848	12	21	No	8	0	0.01	NP
1,1-Dichloroethane (ug/L)	PZ-10	-0.05333	-4	-21	No	8	0	0.01	NP
1,1-Dichloroethene (ug/L)	MW1-99	0	1	21	No	8	87.5	0.01	NP
1,1-Dichloroethene (ug/L)	MW2-93	0	9	21	No	8	75	0.01	NP
1,1-Dichloroethene (ug/L)	MW-37	-0.8781	-12	-21	No	8	0	0.01	NP
1,2-Dichloroethane (ug/L)	MW1-99	0	1	21	No	8	87.5	0.01	NP
1,2-Dichloropropane (ug/L)	MW1-99	0	1	21	No	8	87.5	0.01	NP
1,4-Dichlorobenzene (ug/L)	MW4-90	0	-2	-21	No	8	62.5	0.01	NP
1,4-Dichlorobenzene (ug/L)	MW4-93	0.2611	14	21	No	8	12.5	0.01	NP
1,4-Dichlorobenzene (ug/L)	MW7-90R	-0.136	-9	-21	No	8	25	0.01	NP
1,4-Dichlorobenzene (ug/L)	PZ-10	-0.519	-10	-21	No	8	0	0.01	NP
2,4,5-TP [Silvex] [2C] (ug/L)	MW-39R	-0.02702	-4	-8	No	4	75	0.01	NP
2,4-D [2C] (ug/L)	MW4-93	-0.1116	-10	-21	No	8	87.5	0.01	NP
3/4-Methylphenol (ug/L)	MW4-93	0	-13	-21	No	8	87.5	0.01	NP
4,4`-DDT (ug/L)	MW4-93	0	0	21	No	8	87.5	0.01	NP
Acetone (ug/L)	MW4-93	0	-9	-21	No	8	75	0.01	NP
Acetone (ug/L)	MW-43	-0.09219	-9	-21	No	8	37.5	0.01	NP
alpha-BHC (ug/L)	MW-39R	-0.01065	-12	-21	No	8	25	0.01	NP
Antimony (mg/L)	MW4-93	0.0005332	21	21	No	8	50	0.01	NP
Arsenic (mg/L)	MW1-99	0	-1	-21	No	8	37.5	0.01	NP
Arsenic (mg/L)	MW2-93	-0.0001916	-12	-21	No	8	0	0.01	NP
Arsenic (mg/L)	MW4-90	0.0001935	6	21	No	8	12.5	0.01	NP
Arsenic (mg/L)	MW4-93	0.000794	16	21	No	8	12.5	0.01	NP
Arsenic (mg/L)	MW7-90R	-0.01383	-20	-21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-37	-0.0005943	-14	-21	No	8	0	0.01	NP
Arsenic (mg/L)	MW-38	0	-7	-21	No	8	87.5	0.01	NP
Arsenic (mg/L)	MW-43	0.0005292	10	21	No	8	0	0.01	NP
Arsenic (mg/L)	PZ-10	0.003252	4	21	No	8	0	0.01	NP
Barium (mg/L)	MW1-99	0.0008342	2	21	No	8	0	0.01	NP
Barium (mg/L)	MW2-93	0.02685	12	21	No	8	0	0.01	NP
Barium (mg/L)	MW4-90	0.0002997	0	21	No	8	0	0.01	NP
Barium (mg/L)	MW4-93	-0.001801	-14	-21	No	8	0	0.01	NP
Barium (mg/L)	MW7-90R	0.06633	18	21	No	8	0	0.01	NP
Barium (mg/L)	MW7-93	-0.006522	-6	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-37	-0.0009385	-11	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-38	0.0008889	0	21	No	8	0	0.01	NP
Barium (mg/L)	MW-39R	-0.006806	-8	-21	No	8	0	0.01	NP
Barium (mg/L)	MW-43	0.01868	4	21	No	8	0	0.01	NP
Barium (mg/L)	PZ-10	0.01771	10	21	No	8	0	0.01	NP
Benzene (ug/L)	MW4-90	0	-3	-21	No	8	87.5	0.01	NP
Benzene (ug/L)	MW4-93	-0.04775	-12	-21	No	8	12.5	0.01	NP
Benzene (ug/L)	MW7-90R	-0.06332	-17	-21	No	8	25	0.01	NP
Benzene (ug/L)	MW-37	-0.08187	-16	-21	No	8	0	0.01	NP
Benzene (ug/L)	MW-39R	0.2157	12	21	No	8	12.5	0.01	NP
Benzene (ug/L)	PZ-10	0.1218	3	21	No	8	0	0.01	NP
Beryllium (mg/L)	MW4-93	0	3	21	No	8	87.5	0.01	NP

Trend Test

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM Printed 1/24/2025, 3:18 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Alpha	Method
Cadmium (mg/L)	MW2-93	-9.9e-7	-1	-21	No	8	50	0.01	NP
Cadmium (mg/L)	MW4-93	0.0001086	15	21	No	8	37.5	0.01	NP
Cadmium (mg/L)	MW7-93	-0.000013	-4	-21	No	8	12.5	0.01	NP
Cadmium (mg/L)	PZ-10	-0.000002274	-13	-21	No	8	87.5	0.01	NP
Chlorobenzene (ug/L)	MW2-93	-0.7527	-18	-21	No	8	50	0.01	NP
Chlorobenzene (ug/L)	MW4-90	0	1	21	No	8	75	0.01	NP
Chlorobenzene (ug/L)	MW4-93	-2.324	-14	-21	No	8	0	0.01	NP
Chlorobenzene (ug/L)	MW-37	-1.328	-20	-21	No	8	0	0.01	NP
Chlorobenzene (ug/L)	PZ-10	0.1525	3	21	No	8	0	0.01	NP
Chloroethane (ug/L)	MW4-90	-0.0009881	0	21	No	8	0	0.01	NP
Chloroethane (ug/L)	MW-37	-2.734	-18	-21	No	8	0	0.01	NP
Chloroethane (ug/L)	PZ-10	-0.4159	-10	-21	No	8	0	0.01	NP
Chromium (mg/L)	MW-38	-0.0003554	-18	-21	No	8	0	0.01	NP
cis-1,2-Dichloroethene (ug/L)	MW2-93	0.08501	12	21	No	8	50	0.01	NP
cis-1,2-Dichloroethene (ug/L)	MW4-93	-0.07019	-8	-21	No	8	0	0.01	NP
cis-1,2-Dichloroethene (ug/L)	**MW-37**	**0.2063**	**24**	**21**	**Yes**	**8**	**0**	**0.01**	**NP**
cis-1,2-Dichloroethene (ug/L)	MW-39R	1.501	15	21	No	8	0	0.01	NP
cis-1,2-Dichloroethene (ug/L)	PZ-10	-0.06852	-4	-21	No	8	12.5	0.01	NP
Cobalt (mg/L)	MW1-99	0.0005113	18	21	No	8	12.5	0.01	NP
Cobalt (mg/L)	MW2-93	-0.0003611	-6	-21	No	8	12.5	0.01	NP
Cobalt (mg/L)	MW4-90	-0.0003886	-8	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW4-93	0.002575	12	21	No	8	0	0.01	NP
Cobalt (mg/L)	MW7-90R	-0.003426	-18	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW7-93	-0.001829	-8	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-37	-0.004626	-18	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-39R	-0.000009561	-2	-21	No	8	0	0.01	NP
Cobalt (mg/L)	MW-43	0.0000984	8	21	No	8	0	0.01	NP
Cobalt (mg/L)	PZ-10	0.003321	8	21	No	8	0	0.01	NP
Copper (mg/L)	MW2-93	0	-8	-21	No	8	62.5	0.01	NP
Copper (mg/L)	MW4-93	0.000166	11	21	No	8	37.5	0.01	NP
Copper (mg/L)	MW7-90R	0	7	21	No	8	75	0.01	NP
Copper (mg/L)	MW7-93	-0.000615	-14	-21	No	8	0	0.01	NP
Copper (mg/L)	PZ-10	0	5	21	No	8	87.5	0.01	NP
Dichlorodifluoromethane (ug/L)	MW-39R	0.1698	4	21	No	8	0	0.01	NP
Endosulfan sulfate (ug/L)	MW4-90	0.005409	8	21	No	8	87.5	0.01	NP
Endrin aldehyde (ug/L)	MW4-93	0	4	21	No	8	87.5	0.01	NP
Lead (mg/L)	MW4-93	0.000006051	3	21	No	8	37.5	0.01	NP
Lead (mg/L)	MW7-90R	0	4	21	No	8	50	0.01	NP
Lead (mg/L)	MW-37	0	-8	-21	No	8	62.5	0.01	NP
Lead (mg/L)	MW-39R	0	1	21	No	8	87.5	0.01	NP
Lead (mg/L)	MW-43	0	-7	-21	No	8	87.5	0.01	NP
Lead (mg/L)	PZ-10	0.0002456	12	21	No	8	50	0.01	NP
Methoxychlor (ug/L)	MW4-93	0	0	21	No	8	87.5	0.01	NP
Nickel (mg/L)	MW2-93	-0.009178	-16	-21	No	8	50	0.01	NP
Nickel (mg/L)	MW4-90	-0.0007737	-14	-21	No	8	12.5	0.01	NP
Nickel (mg/L)	MW4-93	0.006359	10	21	No	8	0	0.01	NP
Nickel (mg/L)	MW7-90R	-0.0002823	-5	-21	No	8	37.5	0.01	NP
Nickel (mg/L)	MW7-93	-0.002394	-14	-21	No	8	0	0.01	NP
Nickel (mg/L)	MW-37	-0.003208	-10	-21	No	8	0	0.01	NP
Nickel (mg/L)	MW-39R	0.0009846	8	21	No	8	0	0.01	NP

Trend Test

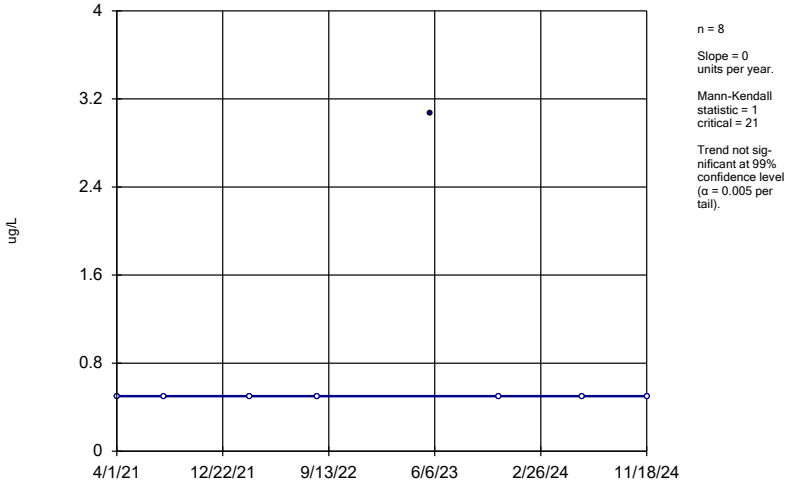
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM Printed 1/24/2025, 3:18 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Alpha	Method
Nickel (mg/L)	MW-43	-0.00002931	0	21	No	8	0	0.01	NP
Nickel (mg/L)	PZ-10	0.001648	8	21	No	8	0	0.01	NP
Phenol (ug/L)	MW4-93	0	-13	-21	No	8	87.5	0.01	NP
Selenium (mg/L)	MW1-99	0	-1	-21	No	8	37.5	0.01	NP
Selenium (mg/L)	**MW-38**	**0.0009226**	**24**	**21**	**Yes**	**8**	**0**	**0.01**	**NP**
Sulfide (mg/L)	MW4-93	0	-5	-21	No	8	75	0.01	NP
Sulfide (mg/L)	MW7-90R	0	7	21	No	8	87.5	0.01	NP
Tetrachloroethene (ug/L)	MW-39R	0.1	7	21	No	8	25	0.01	NP
Thallium (mg/L)	MW-43	0	-7	-21	No	8	87.5	0.01	NP
Toluene (ug/L)	MW4-90	0	7	21	No	8	87.5	0.01	NP
Trichloroethene (ug/L)	MW-39R	-0.05514	-2	-21	No	8	0	0.01	NP
Vanadium (mg/L)	MW4-93	0.002067	21	21	No	8	25	0.01	NP
Vanadium (mg/L)	PZ-10	0	5	21	No	8	87.5	0.01	NP
Vinyl Chloride (ug/L)	**MW-37**	**-0.2392**	**-22**	**-21**	**Yes**	**8**	**12.5**	**0.01**	**NP**
Vinyl Chloride (ug/L)	MW-39R	0.07411	6	21	No	8	0	0.01	NP
Zinc (mg/L)	MW4-93	0	1	21	No	8	50	0.01	NP
Zinc (mg/L)	MW7-90R	0	-1	-21	No	8	75	0.01	NP

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW1-99

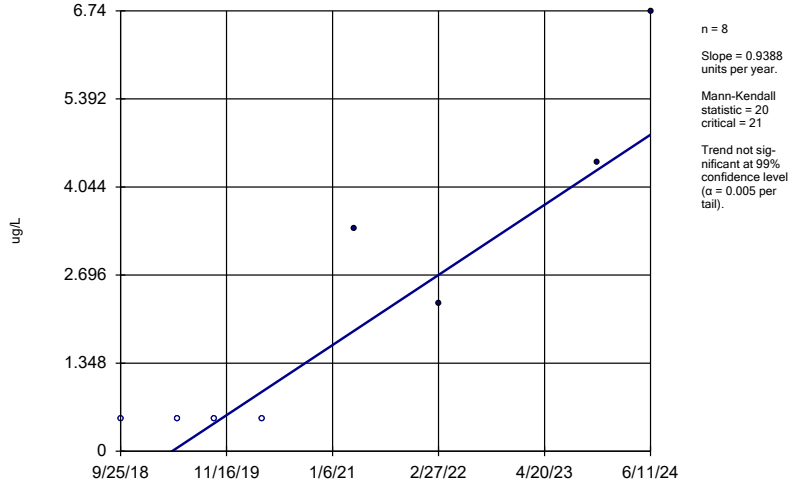


Constituent: 1,1,1-Trichloroethane Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2-93

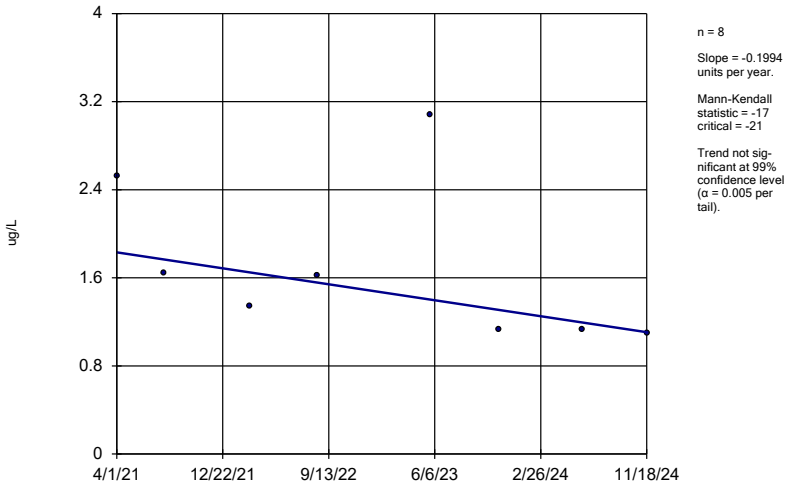


Constituent: 1,1-Dichloroethane Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-93

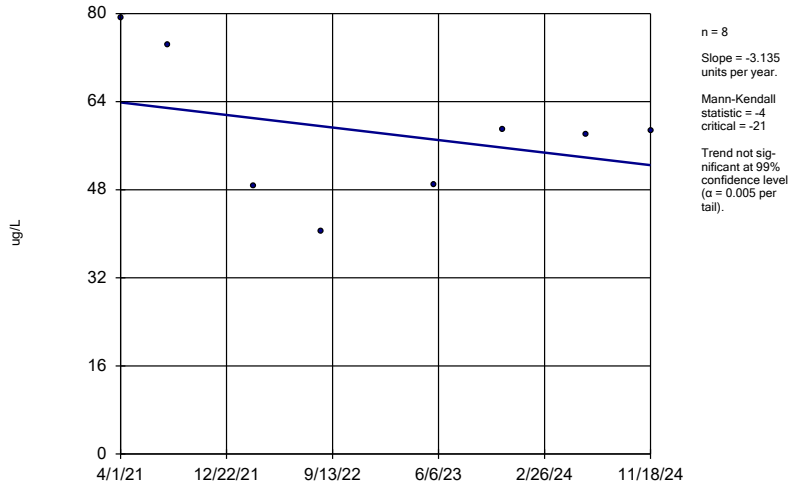


Constituent: 1,1-Dichloroethane Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37

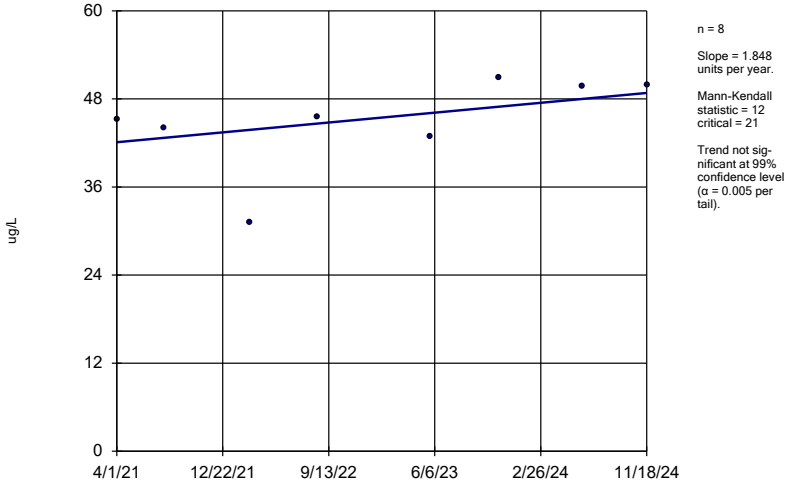


Constituent: 1,1-Dichloroethane Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-39R



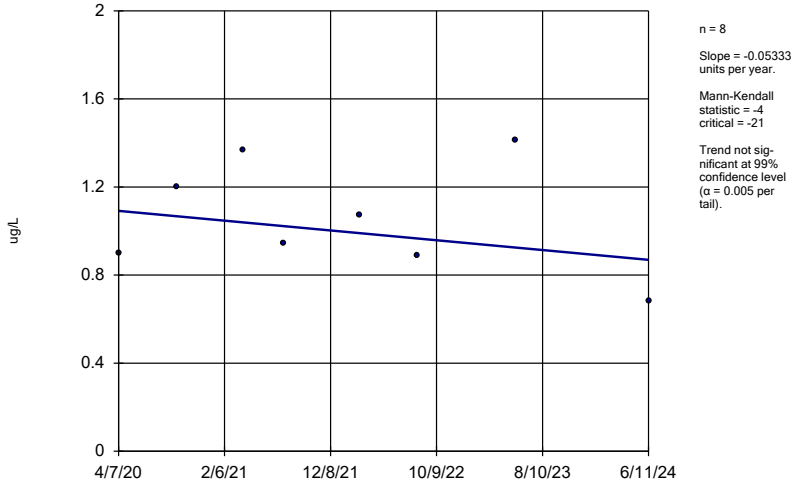
Constituent: 1,1-Dichloroethane Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



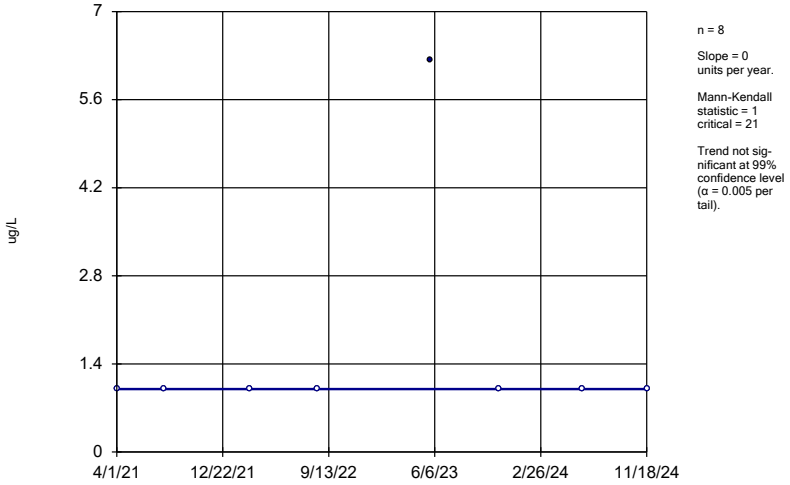
Constituent: 1,1-Dichloroethane Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW1-99



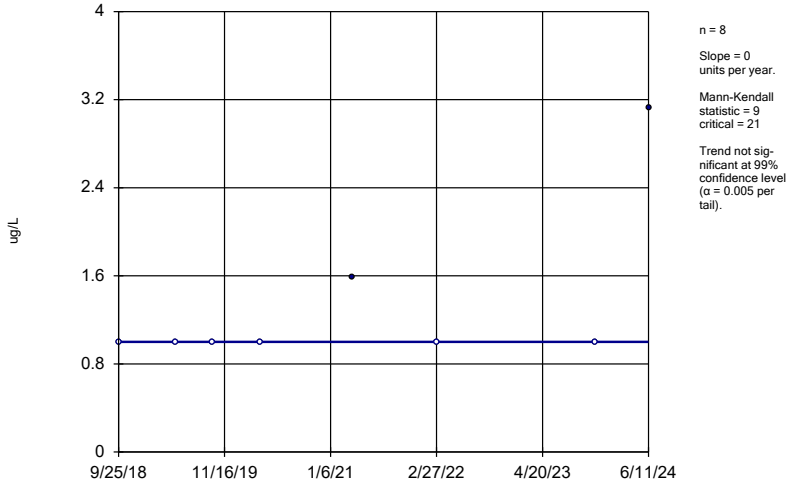
Constituent: 1,1-Dichloroethene Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2-93



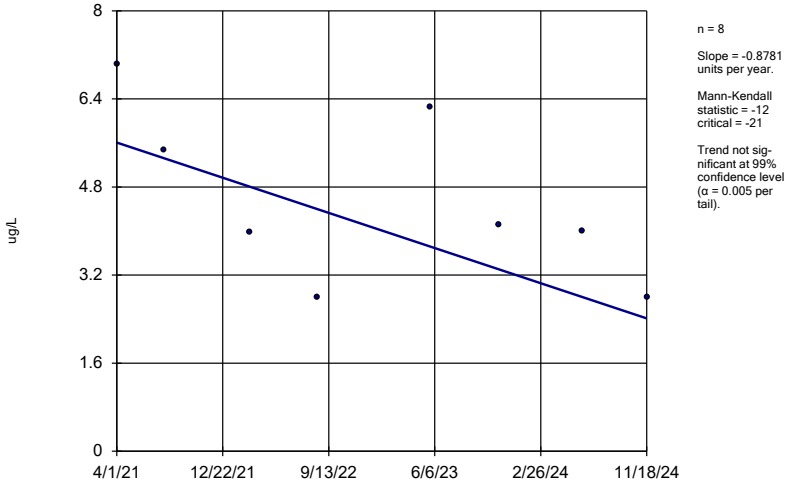
Constituent: 1,1-Dichloroethene Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



Constituent: 1,1-Dichloroethene Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall

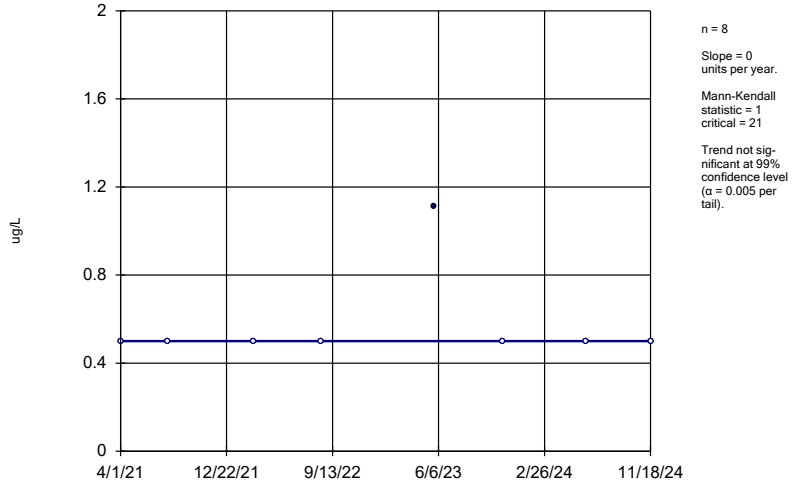
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW1-99



Constituent: 1,2-Dichloroethane Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall

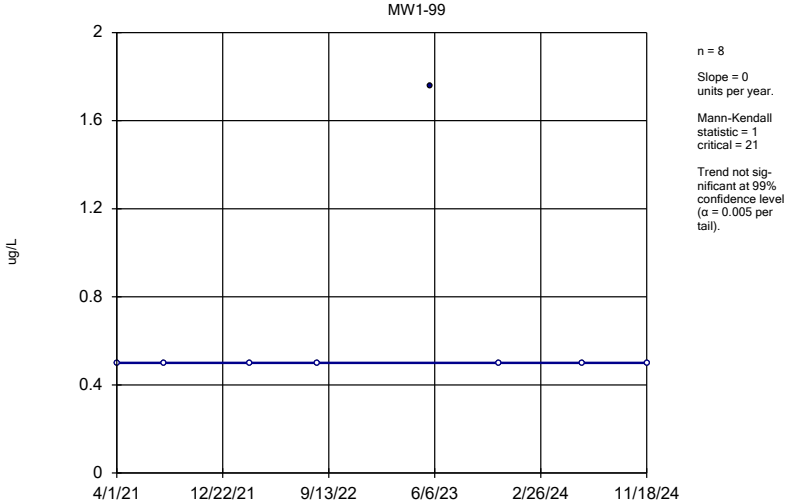
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW1-99



Constituent: 1,2-Dichloropropane Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall

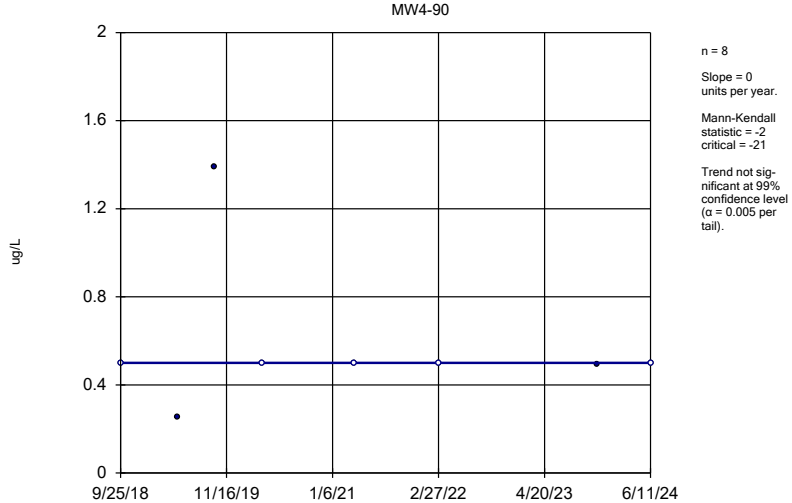
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-90



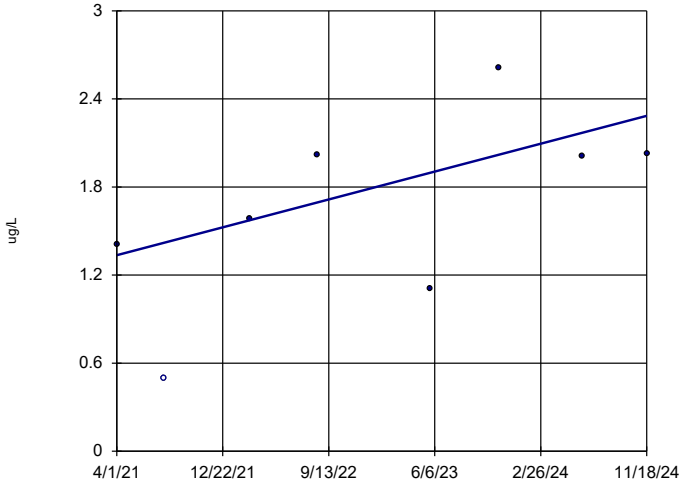
Constituent: 1,4-Dichlorobenzene Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0.2611 units per year.

Mann-Kendall statistic = 14
critical = 21

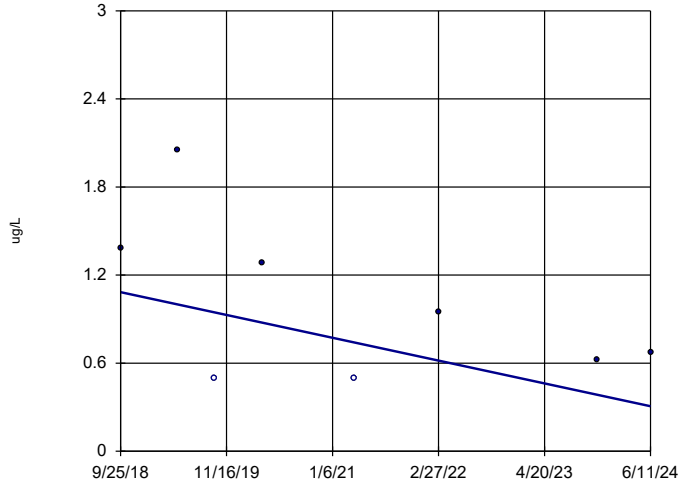
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: 1,4-Dichlorobenzene Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7-90R



n = 8

Slope = -0.136 units per year.

Mann-Kendall statistic = -9
critical = -21

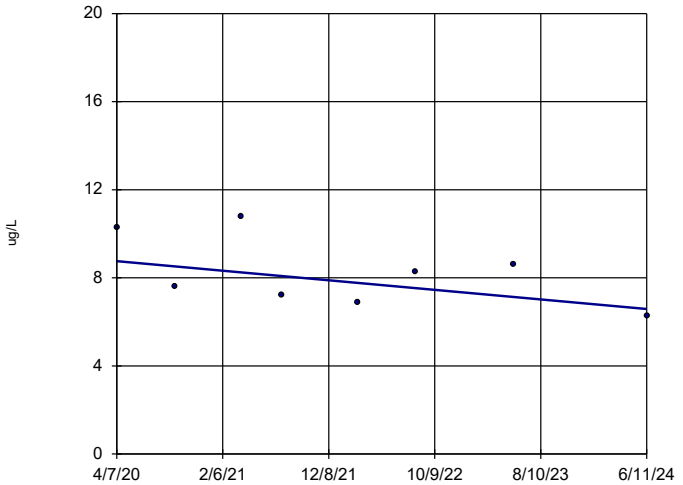
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: 1,4-Dichlorobenzene Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



n = 8

Slope = -0.519 units per year.

Mann-Kendall statistic = -10
critical = -21

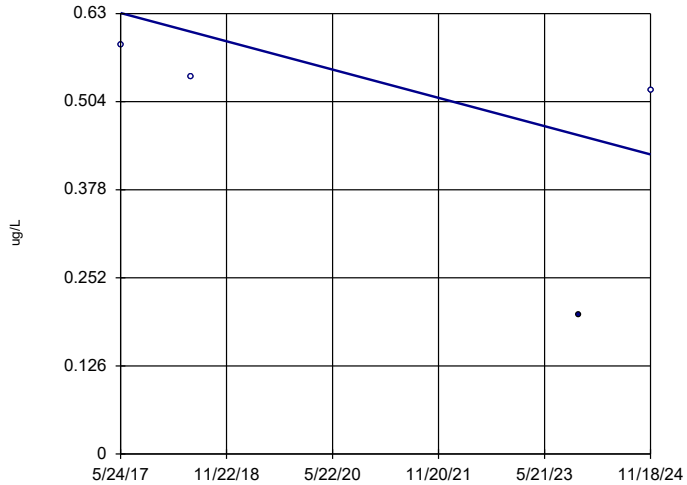
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: 1,4-Dichlorobenzene Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-39R



n = 4

Slope = -0.02702 units per year.

Mann-Kendall statistic = -4
critical = -8

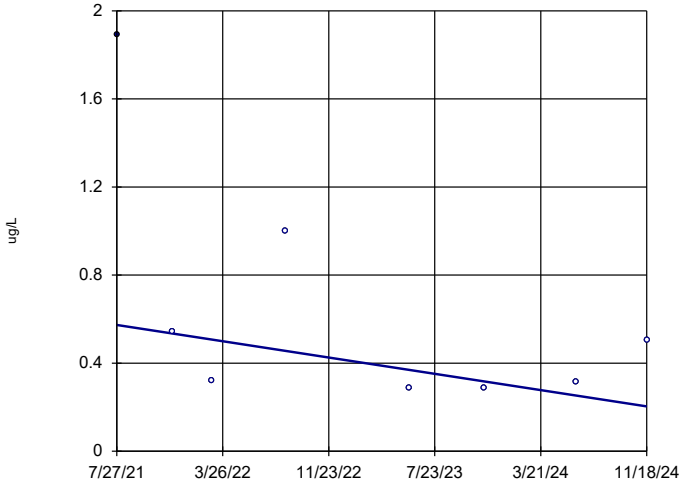
Trend not significant at 99% confidence level (α = 0.005 per tail).
With n = 4, no data set will result in a significant Mann-Kendall statistic.

Constituent: 2,4,5-TP [Silvex] [2C] Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = -0.1116 units per year.

Mann-Kendall statistic = -10
critical = -21

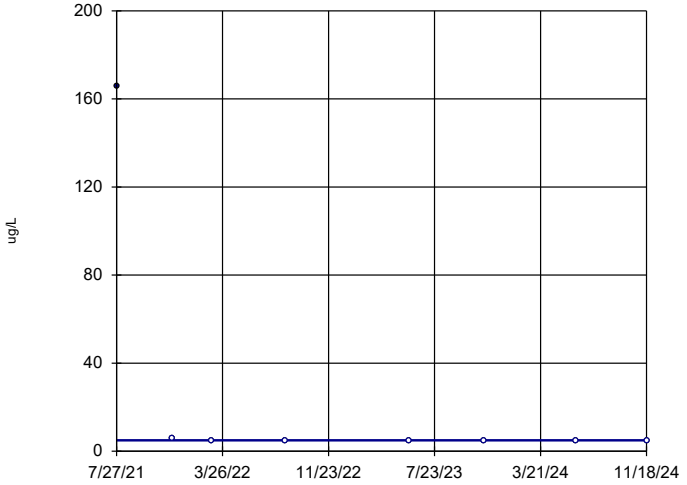
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: 2,4-D [2C] Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = -13
critical = -21

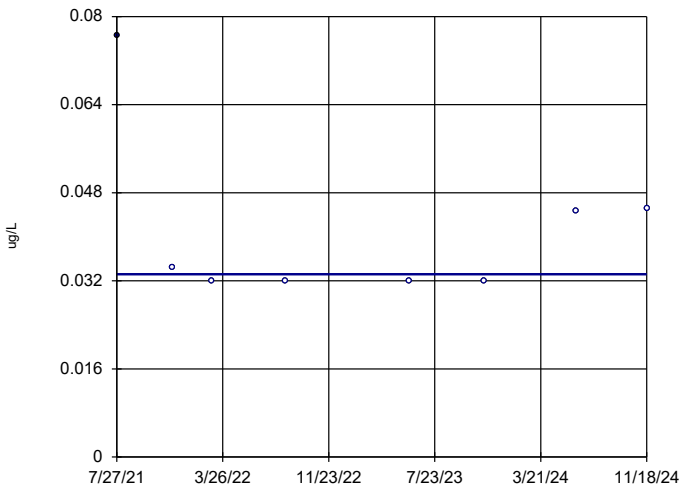
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: 3/4-Methylphenol Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = 0
critical = 21

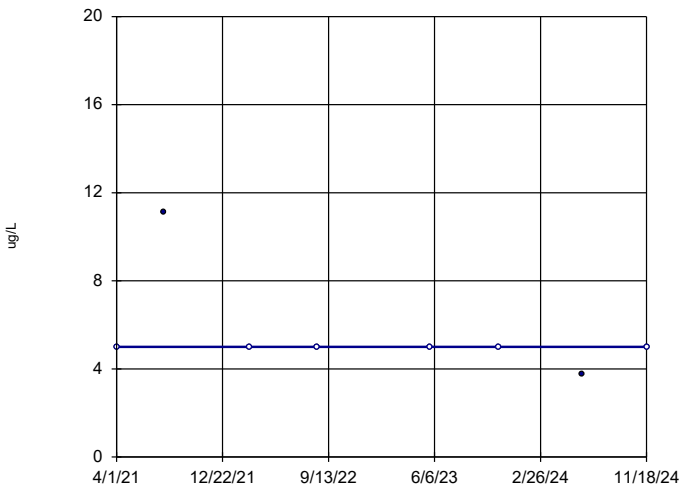
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: 4,4`-DDT Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = -9
critical = -21

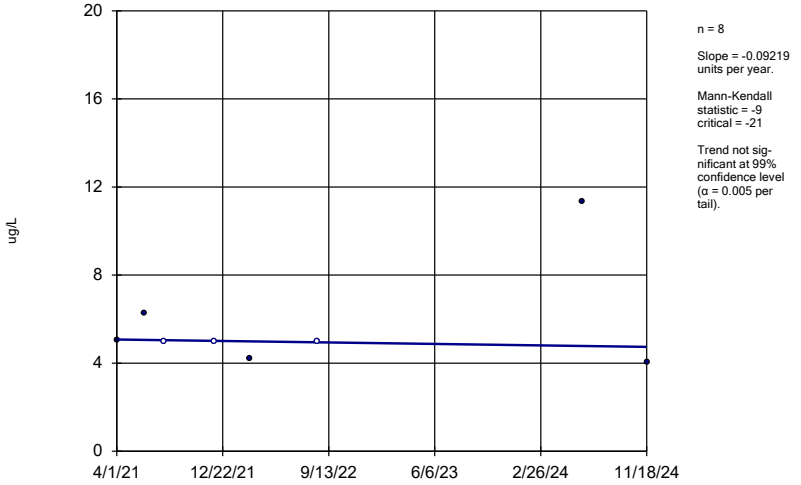
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Acetone Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-43



n = 8

Slope = -0.09219 units per year.

Mann-Kendall statistic = -9
critical = -21

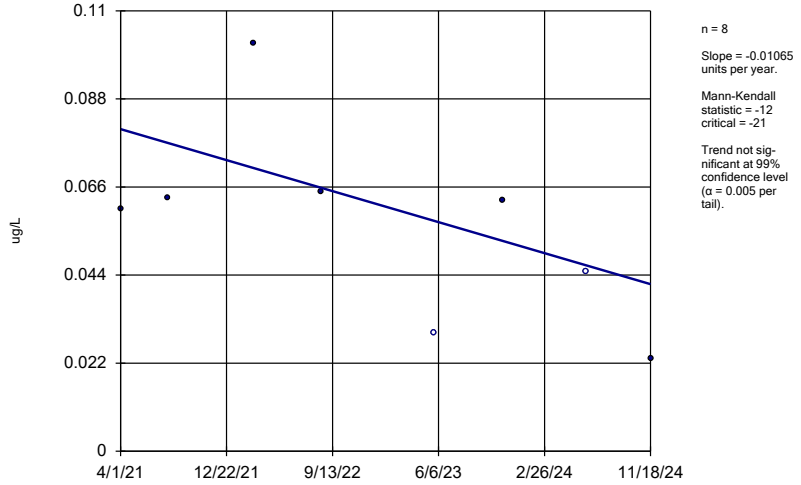
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Acetone Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-39R



n = 8

Slope = -0.01065 units per year.

Mann-Kendall statistic = -12
critical = -21

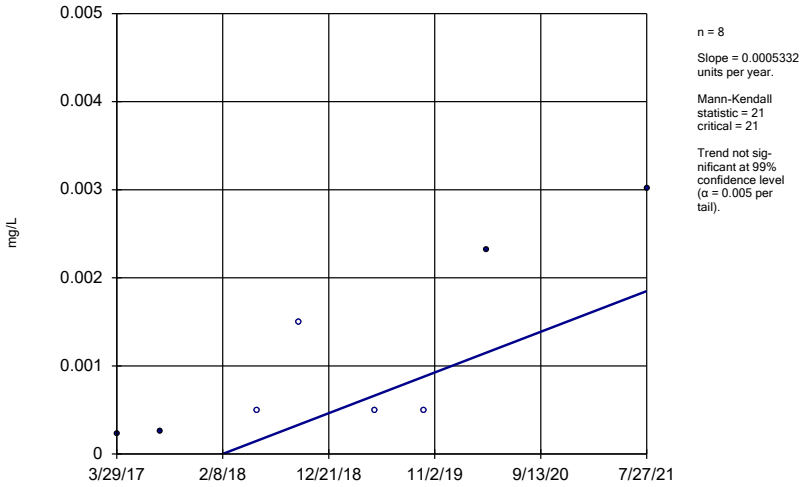
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: alpha-BHC Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0.0005332 units per year.

Mann-Kendall statistic = 21
critical = 21

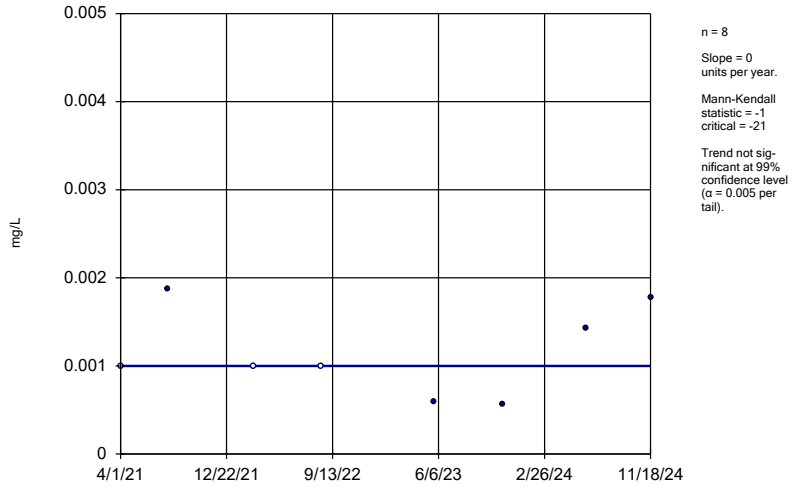
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Antimony Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW1-99



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = -1
critical = -21

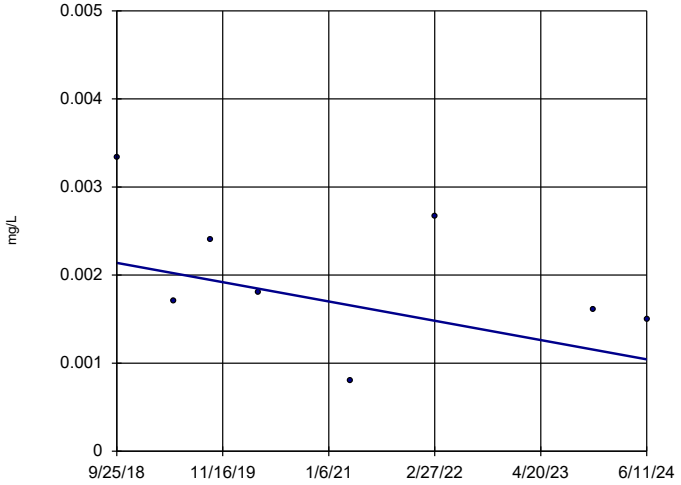
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Arsenic Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW2-93



n = 8

Slope = -0.0001916 units per year.

Mann-Kendall statistic = -12
critical = -21

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

Constituent: Arsenic Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall

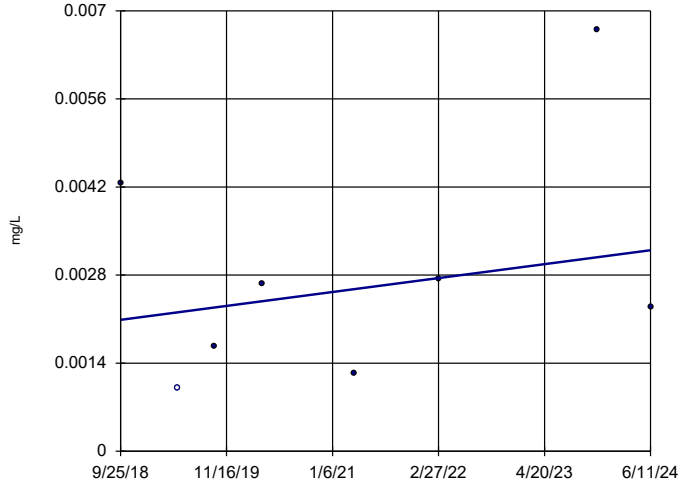
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-90



n = 8

Slope = 0.0001935 units per year.

Mann-Kendall statistic = 6
critical = 21

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

Constituent: Arsenic Analysis Run 1/24/2025 3:12 PM View: 2024AWQR-Mann_Kendall

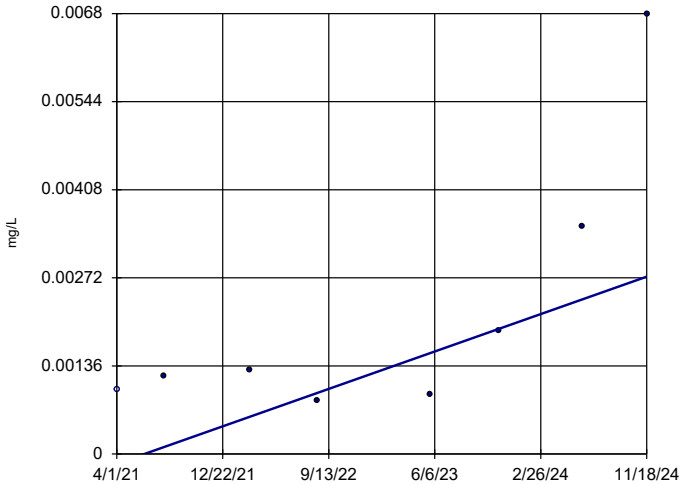
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0.000794 units per year.

Mann-Kendall statistic = 16
critical = 21

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

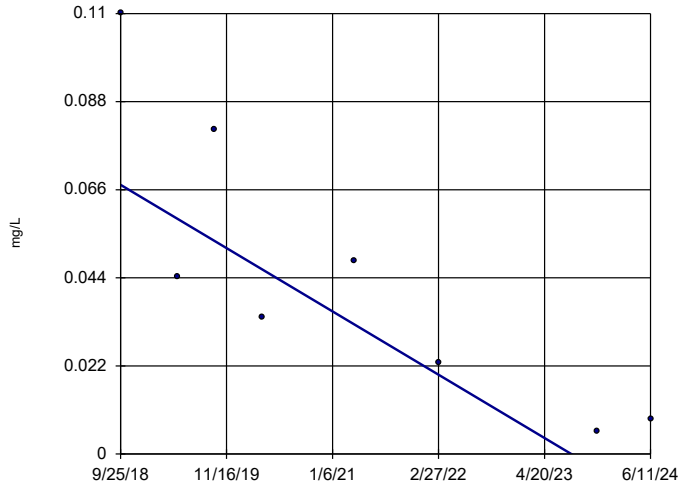
Constituent: Arsenic Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW7-90R



n = 8

Slope = -0.01383 units per year.

Mann-Kendall statistic = -20
critical = -21

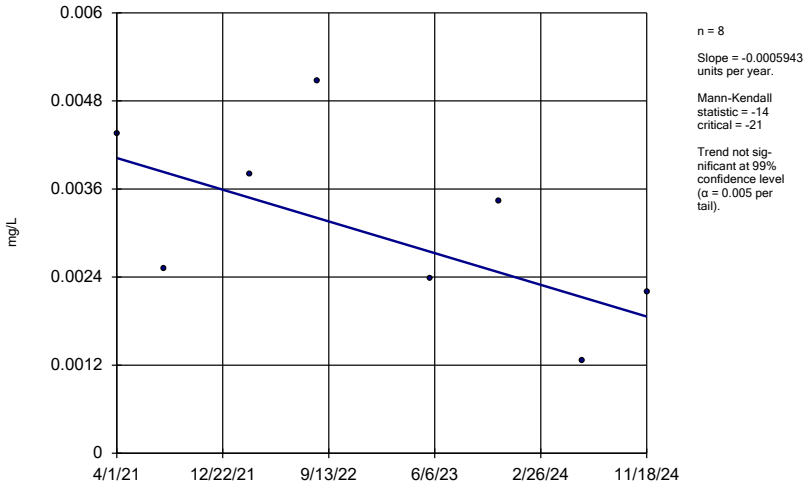
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Arsenic Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sen's Slope Estimator

MW-37



n = 8

Slope = -0.0005943 units per year.

Mann-Kendall statistic = -14
critical = -21

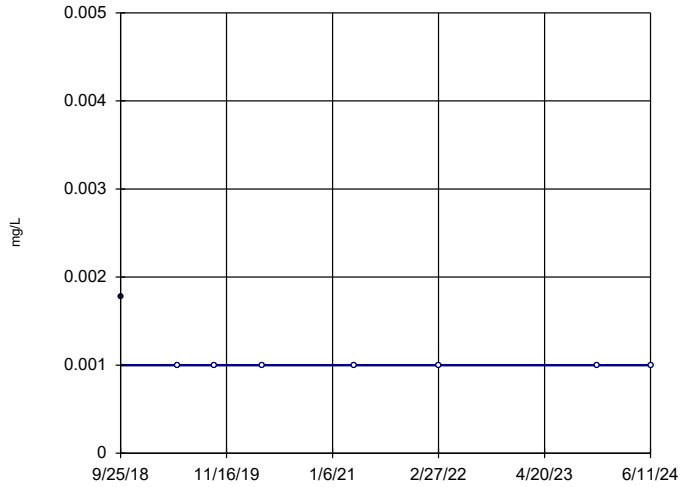
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Arsenic Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-38



n = 8

Slope = 0 units per year.

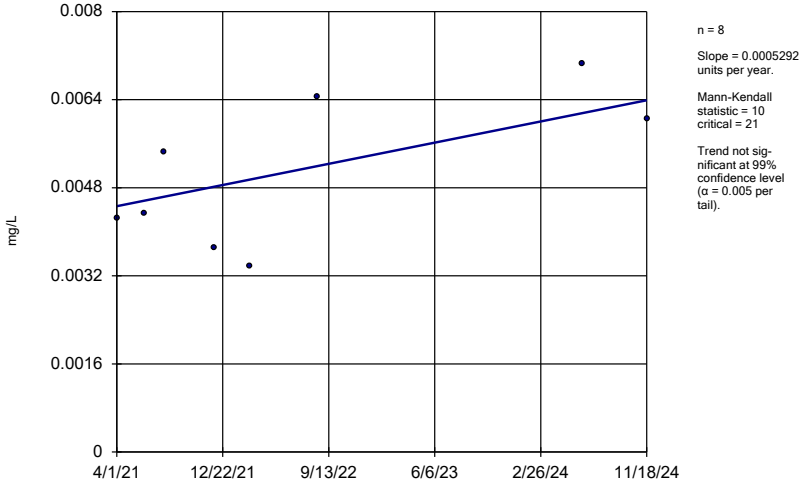
Mann-Kendall statistic = -7
critical = -21

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

Constituent: Arsenic Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sen's Slope Estimator

MW-43



n = 8

Slope = 0.0005292 units per year.

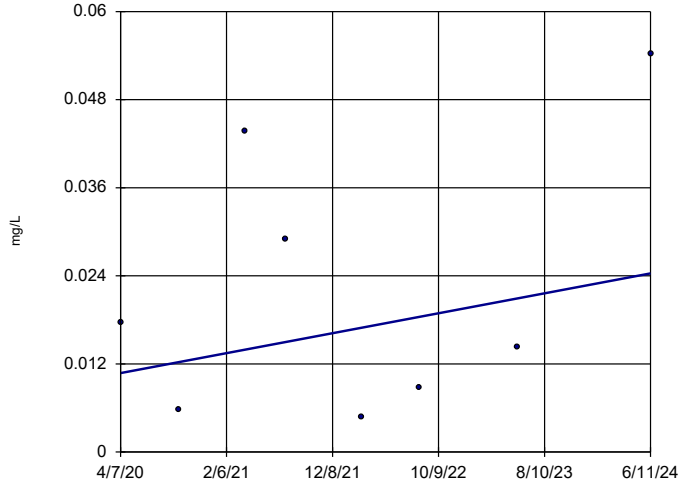
Mann-Kendall statistic = 10
critical = 21

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

Constituent: Arsenic Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sen's Slope Estimator

PZ-10



n = 8

Slope = 0.003252 units per year.

Mann-Kendall statistic = 4
critical = 21

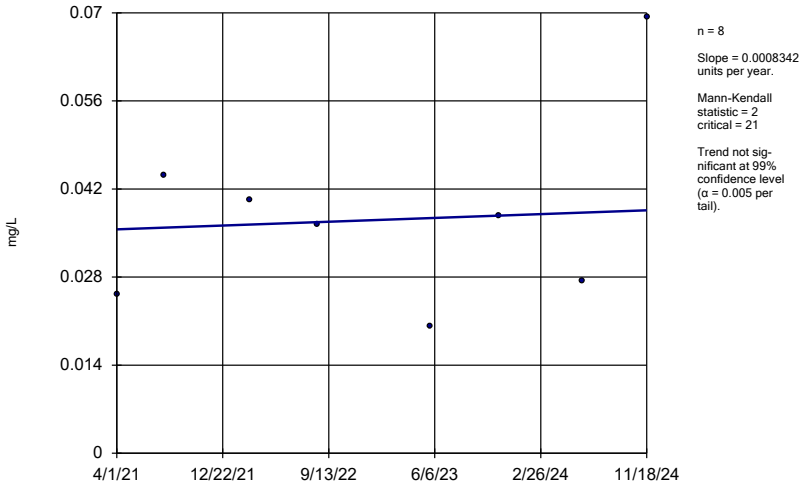
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Arsenic Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW1-99



n = 8

Slope = 0.0008342 units per year.

Mann-Kendall statistic = 2
critical = 21

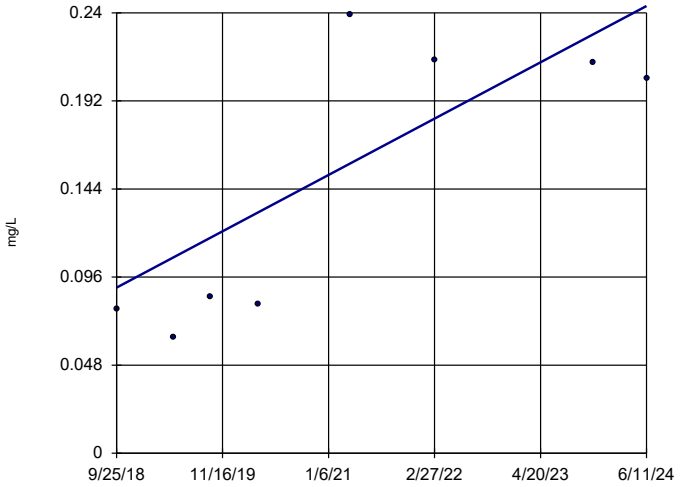
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Barium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW2-93



n = 8

Slope = 0.02685 units per year.

Mann-Kendall statistic = 12
critical = 21

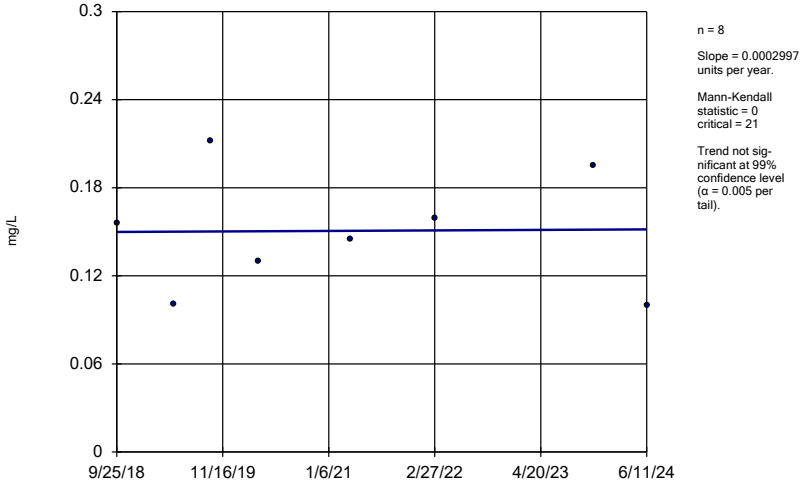
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Barium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-90



n = 8

Slope = 0.0002997 units per year.

Mann-Kendall statistic = 0
critical = 21

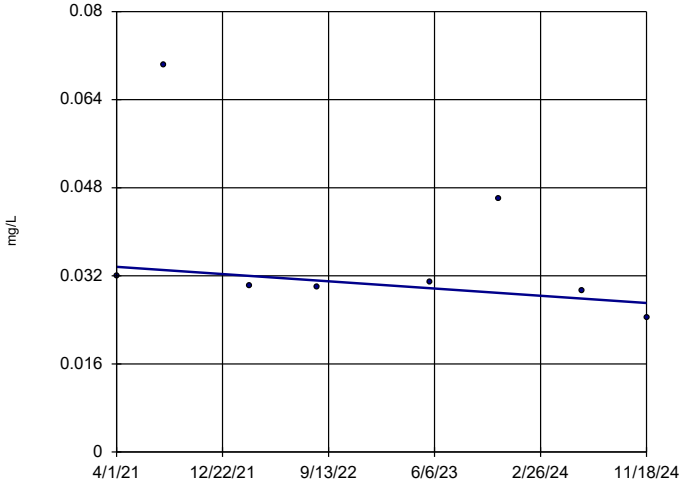
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Barium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-93



n = 8

Slope = -0.001801 units per year.

Mann-Kendall statistic = -14
critical = -21

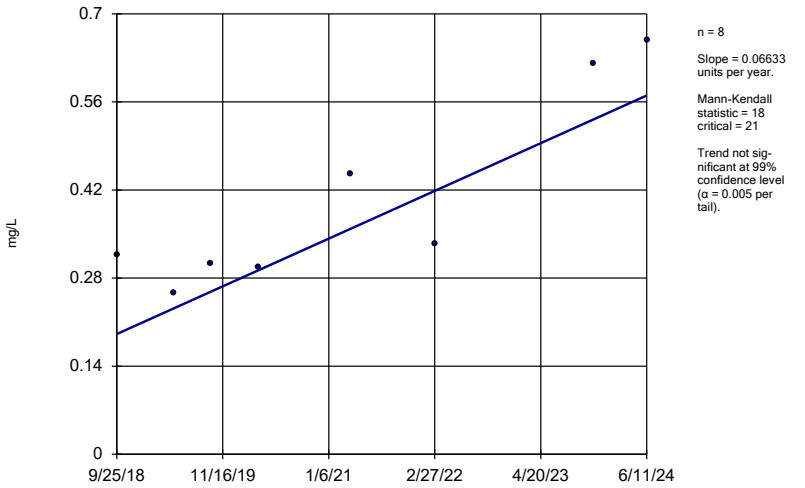
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Barium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW7-90R



n = 8

Slope = 0.06633 units per year.

Mann-Kendall statistic = 18
critical = 21

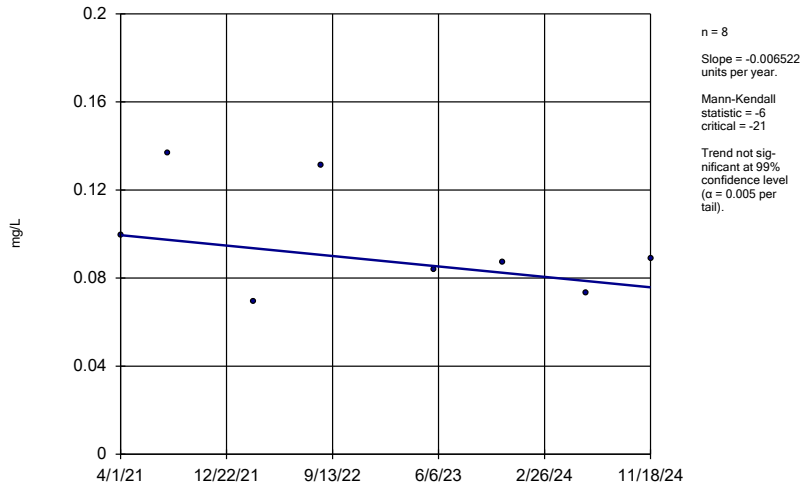
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Barium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW7-93



n = 8

Slope = -0.006522 units per year.

Mann-Kendall statistic = -6
critical = -21

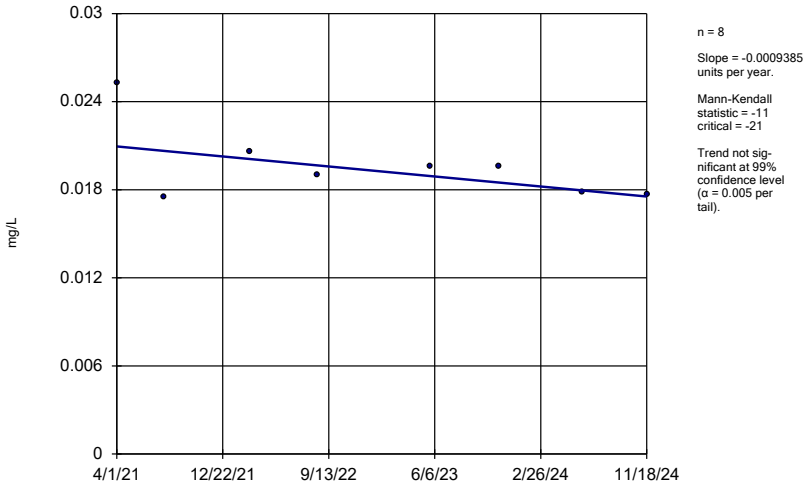
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Barium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



n = 8

Slope = -0.0009385 units per year.

Mann-Kendall statistic = -11
critical = -21

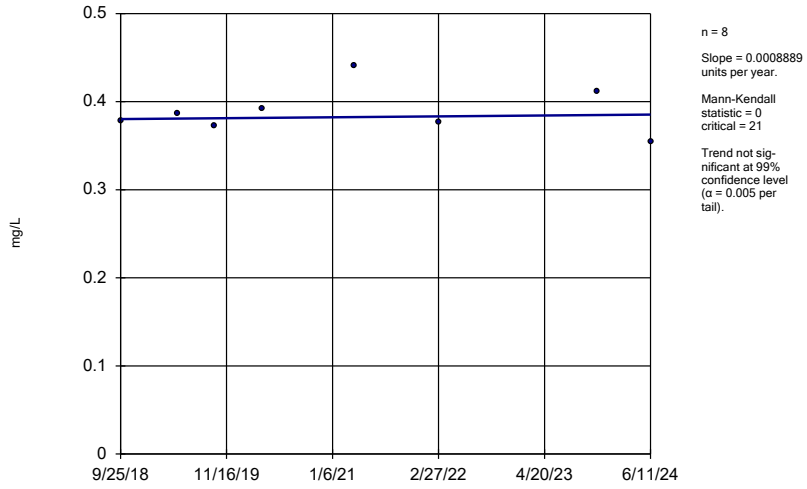
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Barium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-38



n = 8

Slope = 0.0008889 units per year.

Mann-Kendall statistic = 0
critical = 21

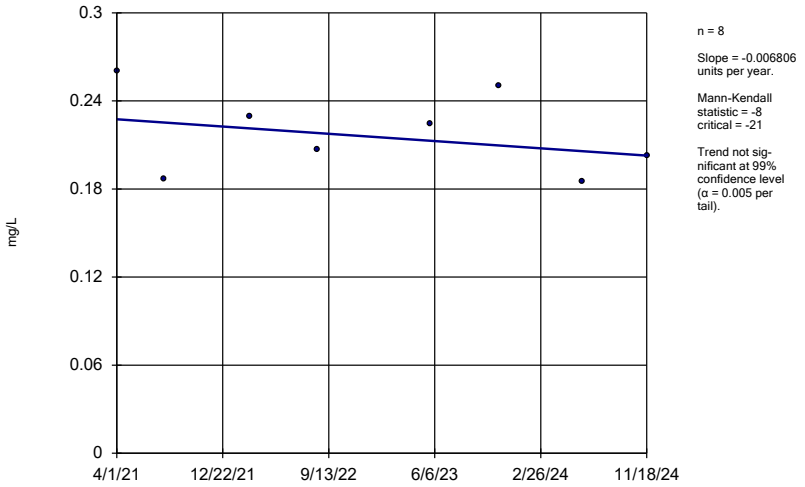
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Barium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-39R



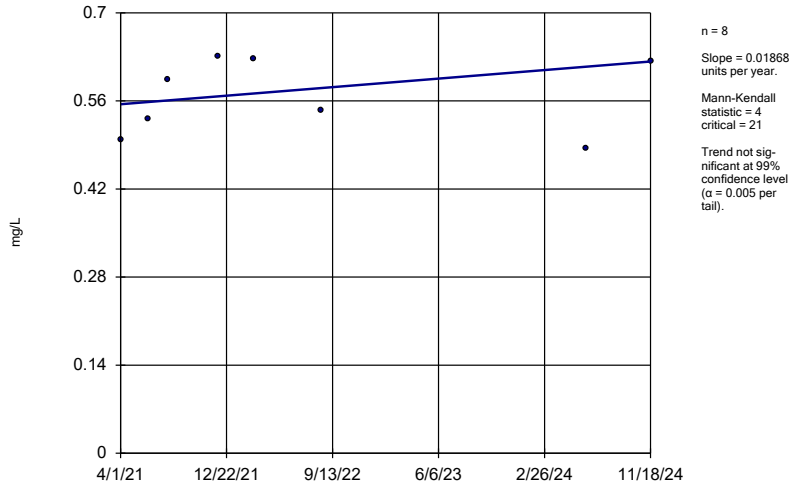
Constituent: Barium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-43



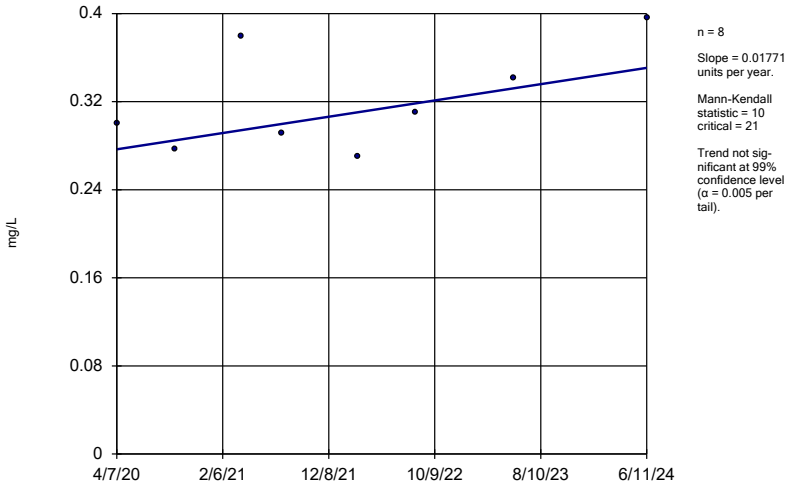
Constituent: Barium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



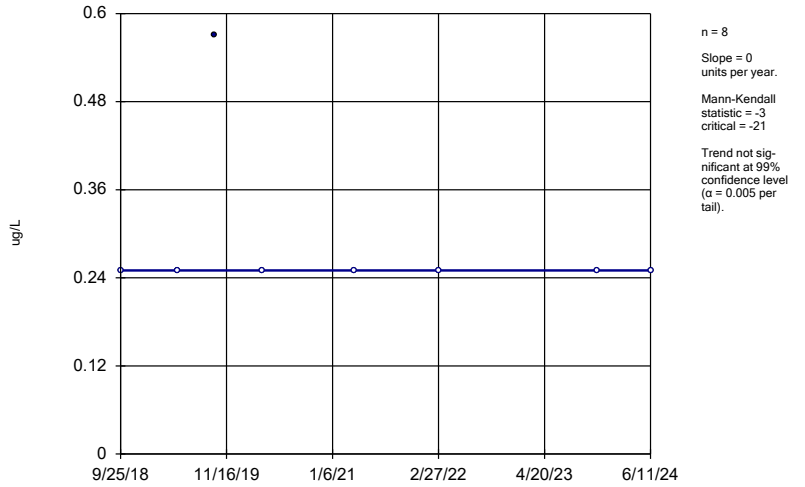
Constituent: Barium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-90



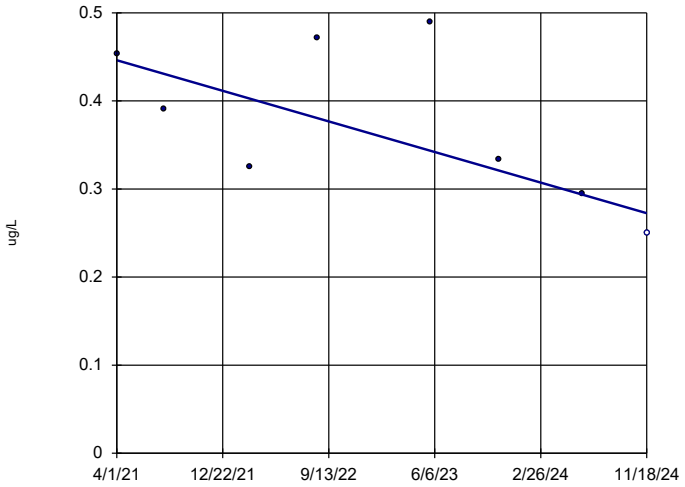
Constituent: Benzene Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = -0.04775 units per year.

Mann-Kendall statistic = -12
critical = -21

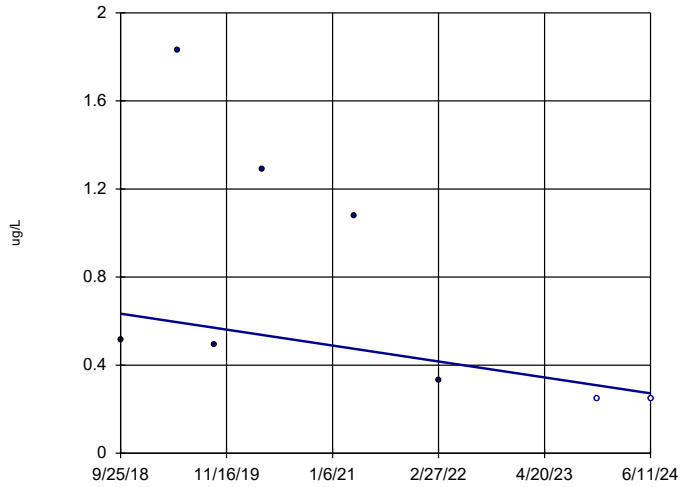
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Benzene Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7-90R



n = 8

Slope = -0.06332 units per year.

Mann-Kendall statistic = -17
critical = -21

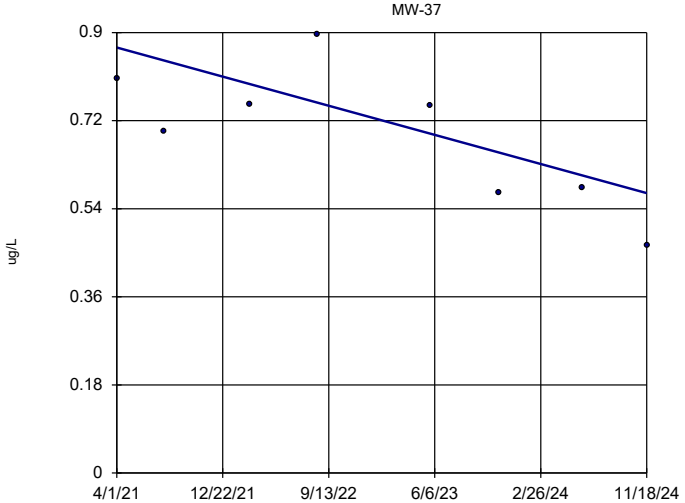
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Benzene Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



n = 8

Slope = -0.08187 units per year.

Mann-Kendall statistic = -16
critical = -21

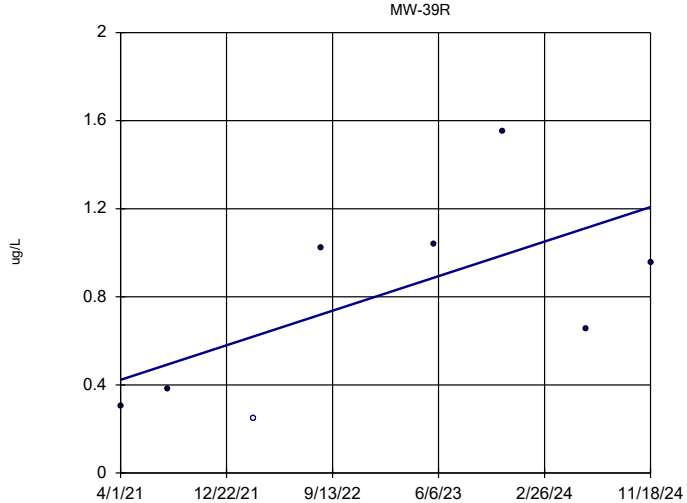
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Benzene Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-39R



n = 8

Slope = 0.2157 units per year.

Mann-Kendall statistic = 12
critical = 21

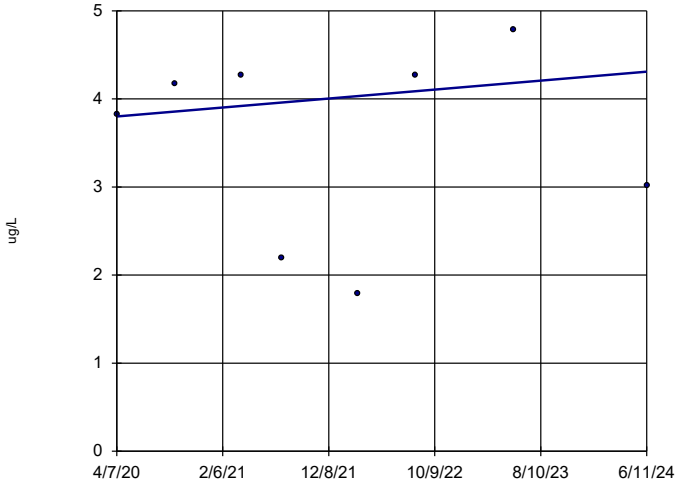
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Benzene Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



n = 8

Slope = 0.1218 units per year.

Mann-Kendall statistic = 3 critical = 21

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

Constituent: Benzene Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall

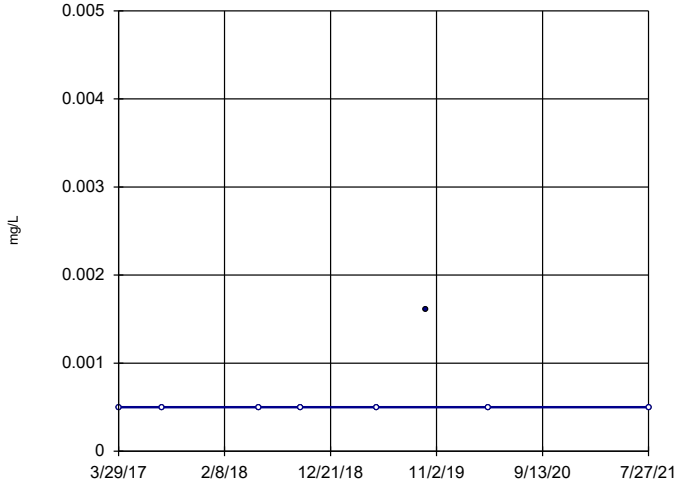
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = 3 critical = 21

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

Constituent: Beryllium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall

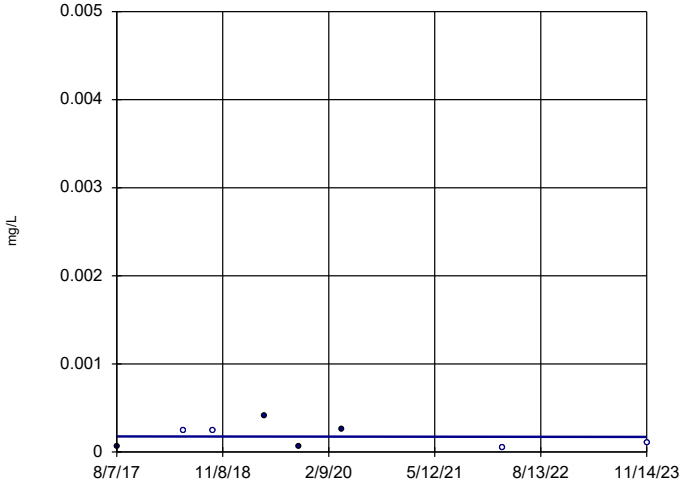
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2-93



n = 8

Slope = -9.9e-7 units per year.

Mann-Kendall statistic = -1 critical = -21

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

Constituent: Cadmium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall

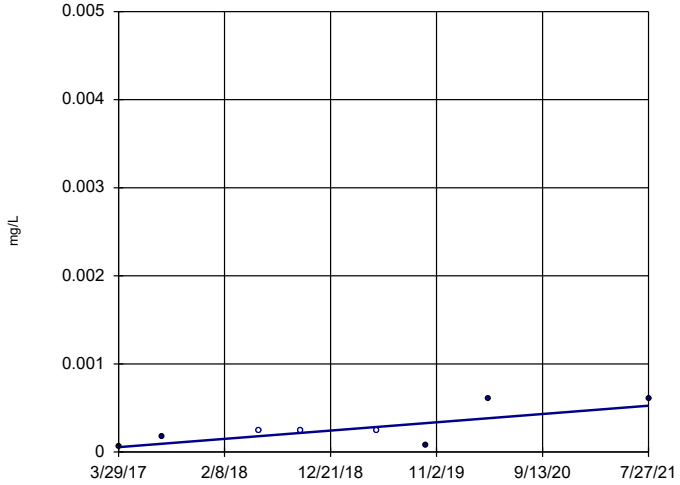
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0.0001086 units per year.

Mann-Kendall statistic = 15 critical = 21

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

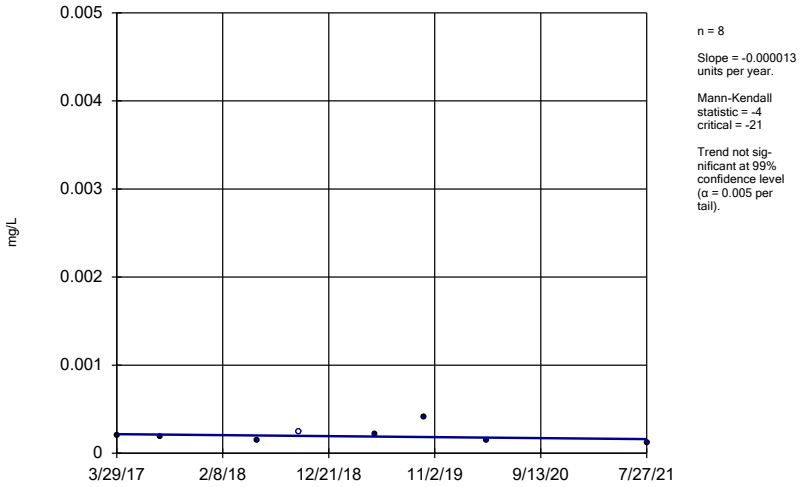
Constituent: Cadmium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7-93



n = 8

Slope = -0.000013 units per year.

Mann-Kendall statistic = -4
critical = -21

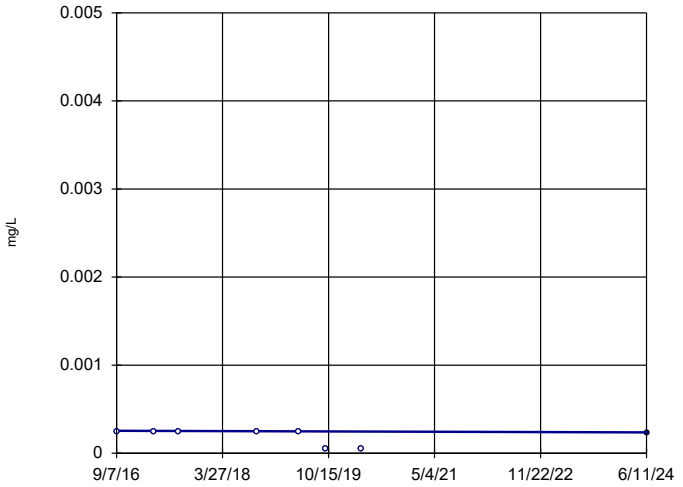
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cadmium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

PZ-10



n = 8

Slope = -0.000002274 units per year.

Mann-Kendall statistic = -13
critical = -21

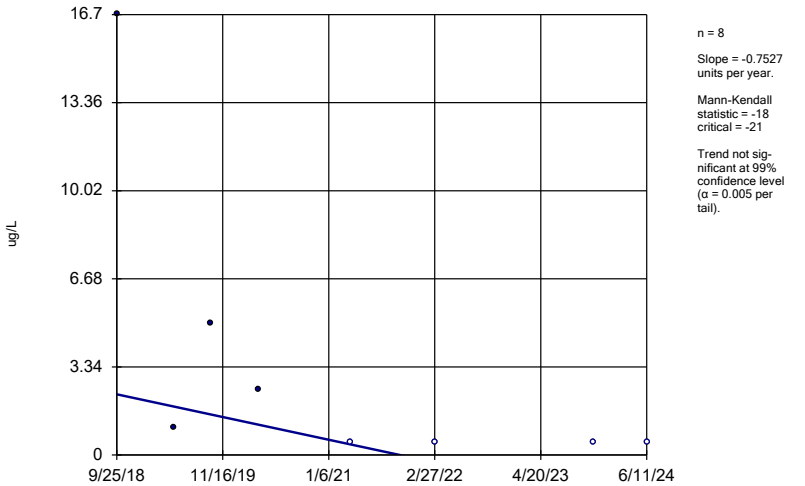
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cadmium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2-93



n = 8

Slope = -0.7527 units per year.

Mann-Kendall statistic = -18
critical = -21

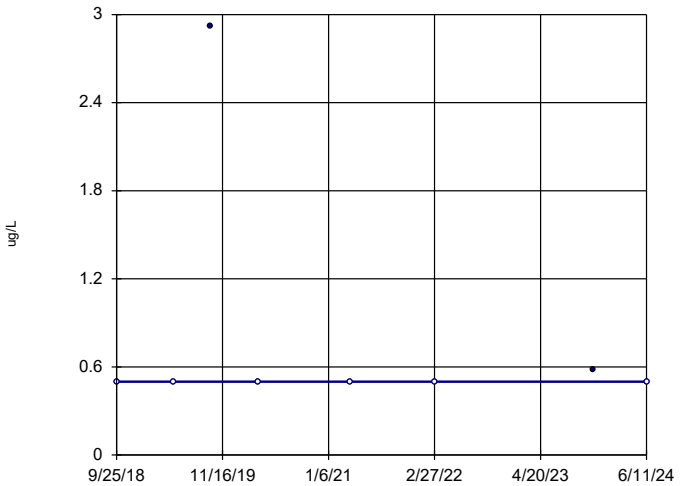
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chlorobenzene Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-90



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = 1
critical = 21

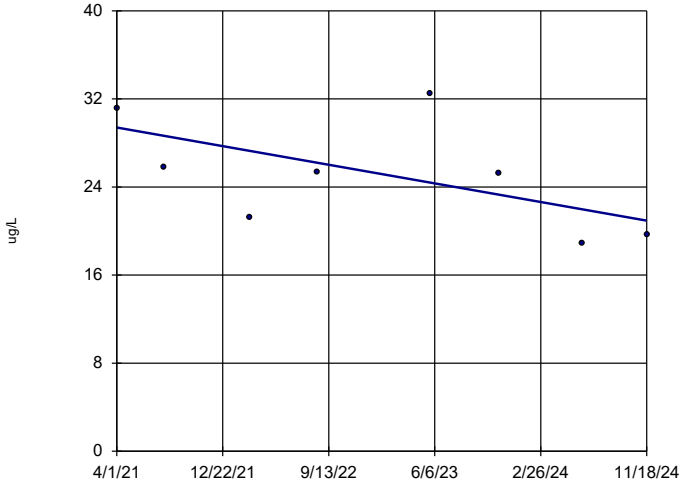
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chlorobenzene Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-93



n = 8

Slope = -2.324 units per year.

Mann-Kendall statistic = -14
critical = -21

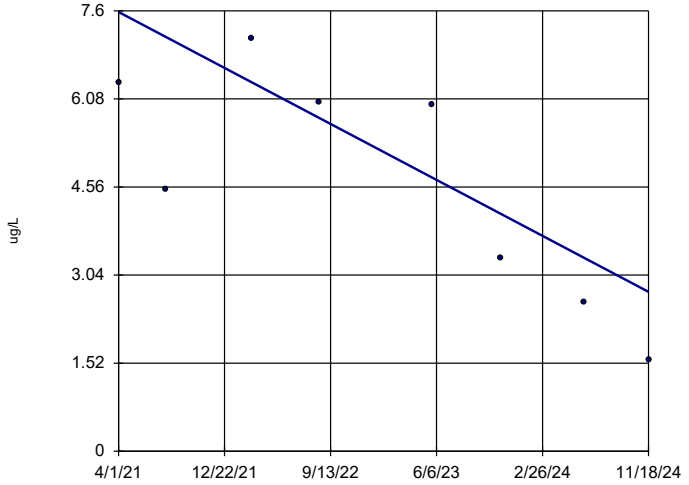
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chlorobenzene Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



n = 8

Slope = -1.328 units per year.

Mann-Kendall statistic = -20
critical = -21

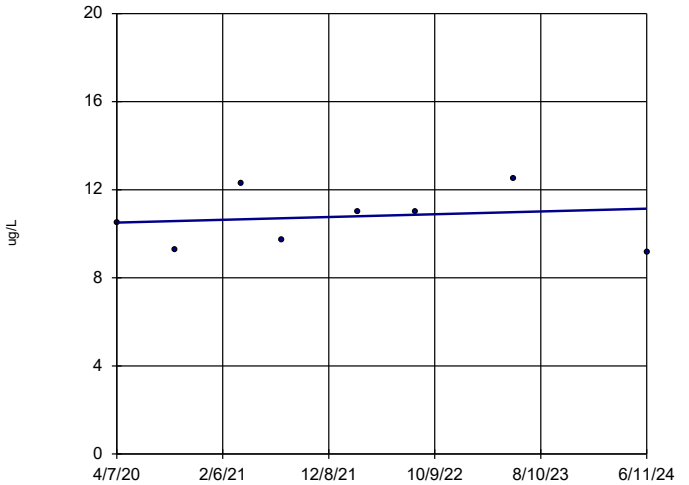
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chlorobenzene Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



n = 8

Slope = 0.1525 units per year.

Mann-Kendall statistic = 3
critical = 21

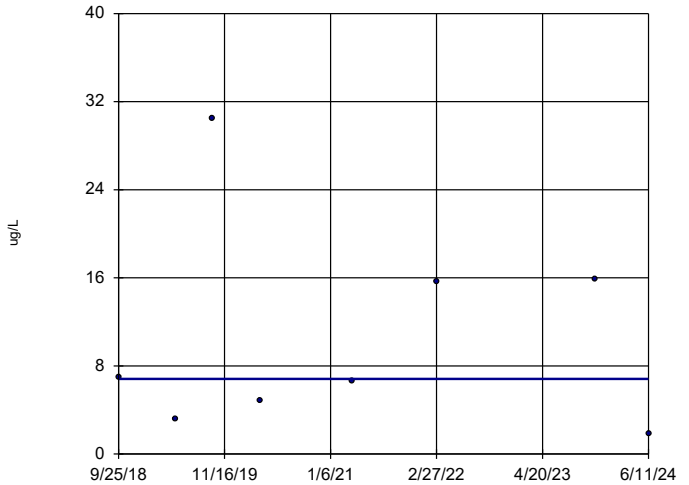
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chlorobenzene Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-90



n = 8

Slope = -0.0009881 units per year.

Mann-Kendall statistic = 0
critical = 21

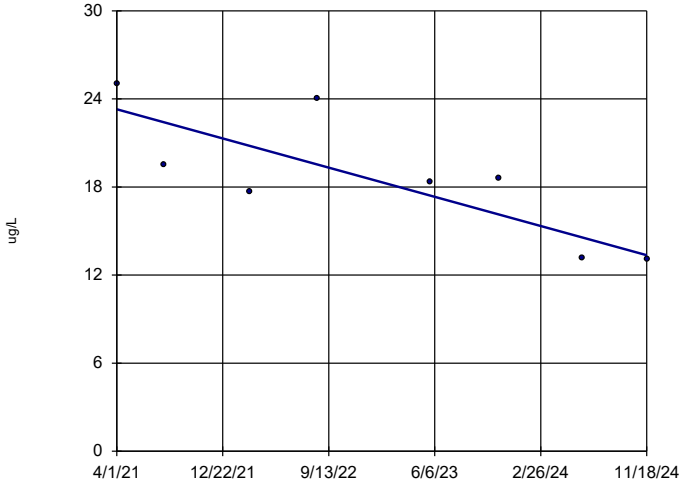
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloroethane Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



n = 8

Slope = -2.734 units per year.

Mann-Kendall statistic = -18
critical = -21

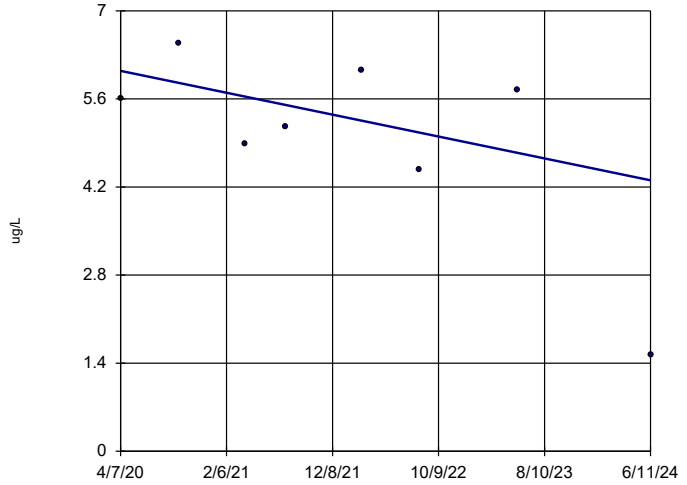
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloroethane Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



n = 8

Slope = -0.4159 units per year.

Mann-Kendall statistic = -10
critical = -21

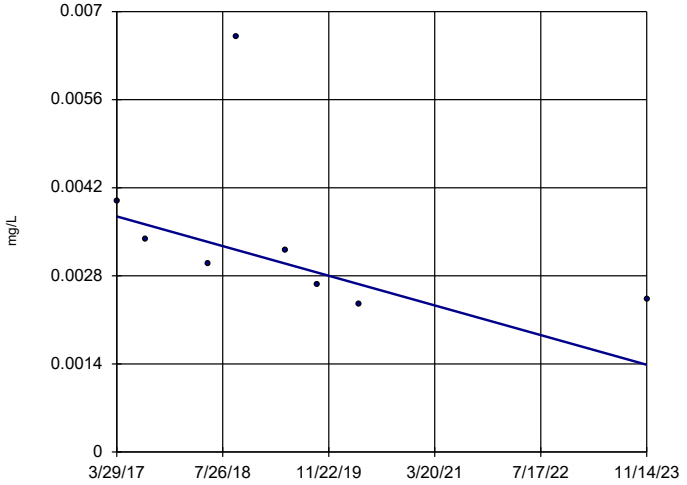
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloroethane Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-38



n = 8

Slope = -0.0003554 units per year.

Mann-Kendall statistic = -18
critical = -21

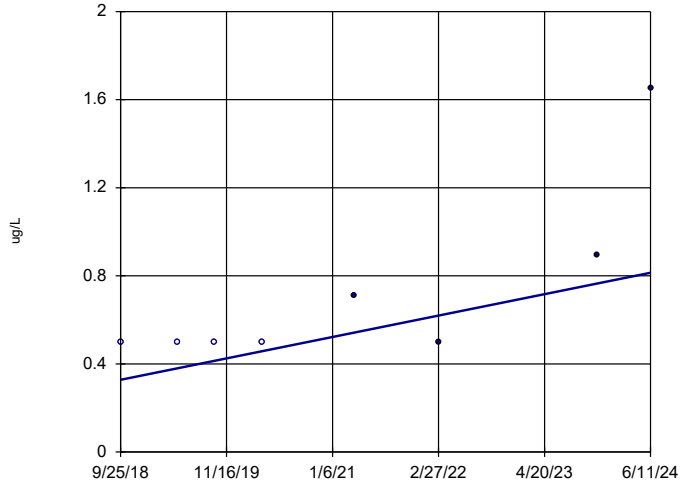
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chromium Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2-93



n = 8

Slope = 0.08501 units per year.

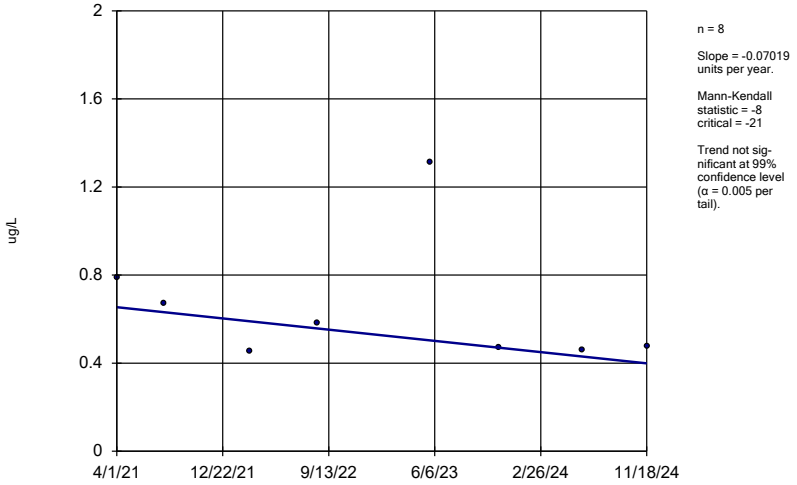
Mann-Kendall statistic = 12
critical = 21

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

Constituent: cis-1,2-Dichloroethene Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sen's Slope Estimator

MW4-93



n = 8

Slope = -0.07019 units per year.

Mann-Kendall statistic = -8
critical = -21

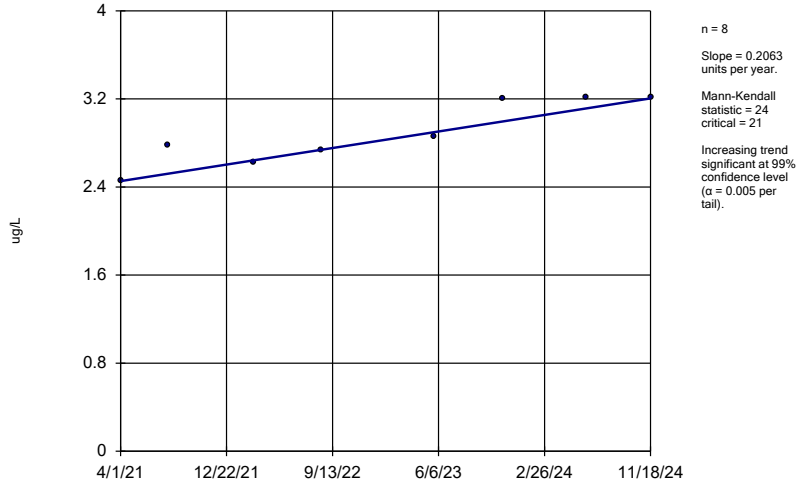
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: cis-1,2-Dichloroethene Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



n = 8

Slope = 0.2063 units per year.

Mann-Kendall statistic = 24
critical = 21

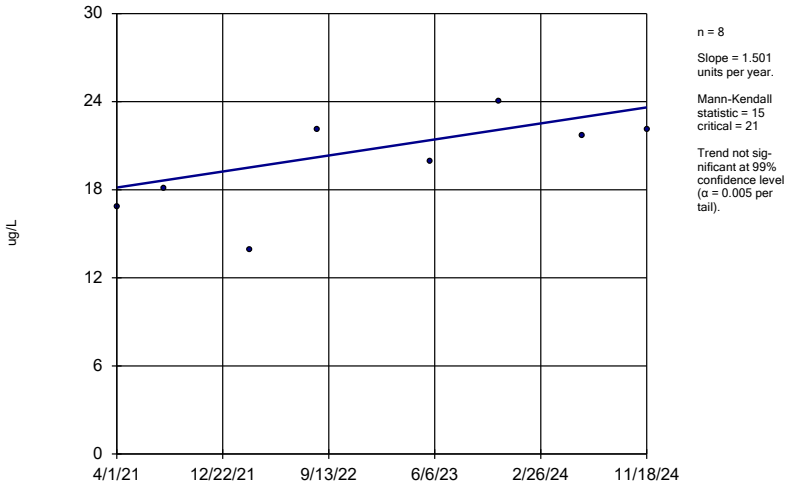
Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: cis-1,2-Dichloroethene Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-39R



n = 8

Slope = 1.501 units per year.

Mann-Kendall statistic = 15
critical = 21

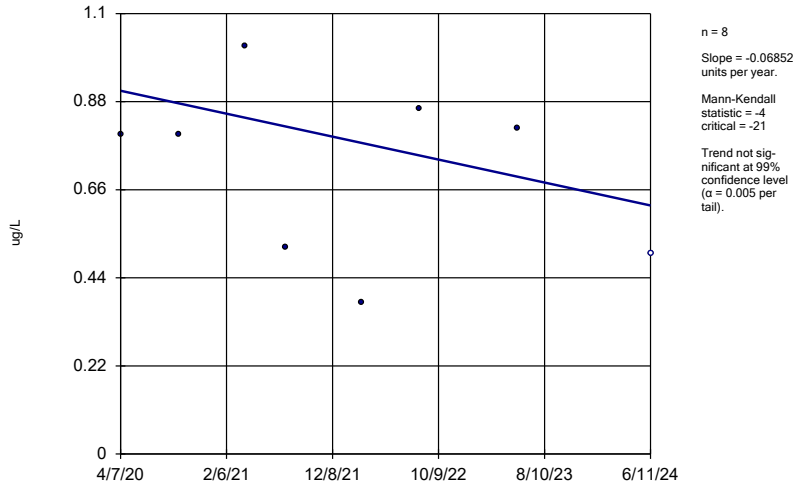
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: cis-1,2-Dichloroethene Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

PZ-10



n = 8

Slope = -0.06852 units per year.

Mann-Kendall statistic = -4
critical = -21

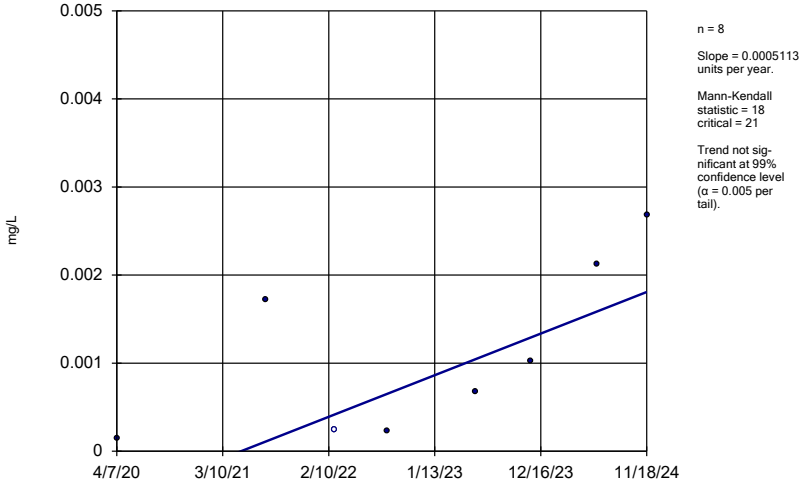
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: cis-1,2-Dichloroethene Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW1-99



n = 8

Slope = 0.0005113 units per year.

Mann-Kendall statistic = 18
critical = 21

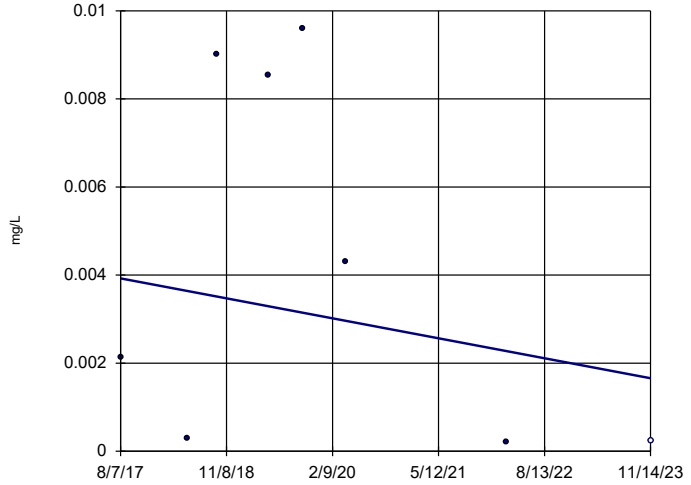
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2-93



n = 8

Slope = -0.0003611 units per year.

Mann-Kendall statistic = -6
critical = -21

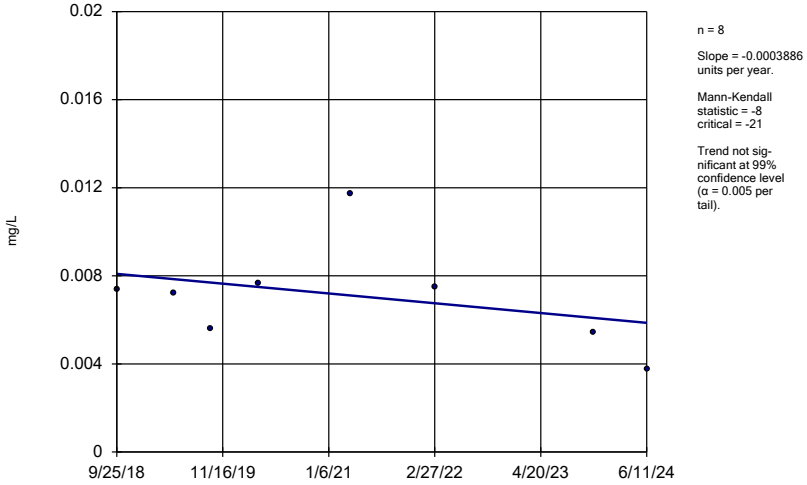
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-90



n = 8

Slope = -0.0003886 units per year.

Mann-Kendall statistic = -8
critical = -21

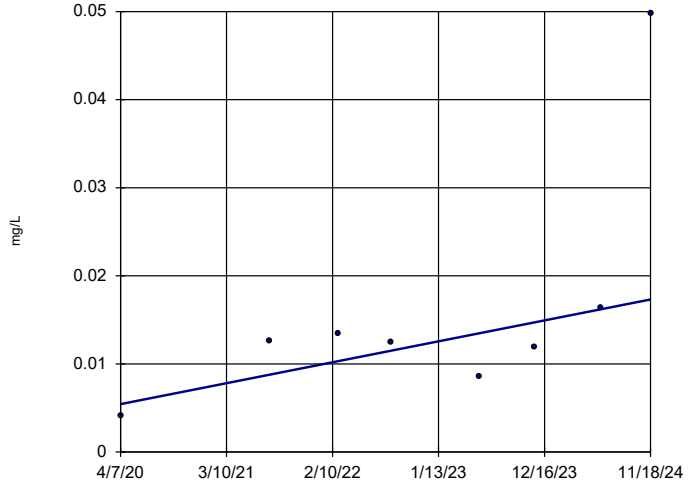
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0.002575 units per year.

Mann-Kendall statistic = 12
critical = 21

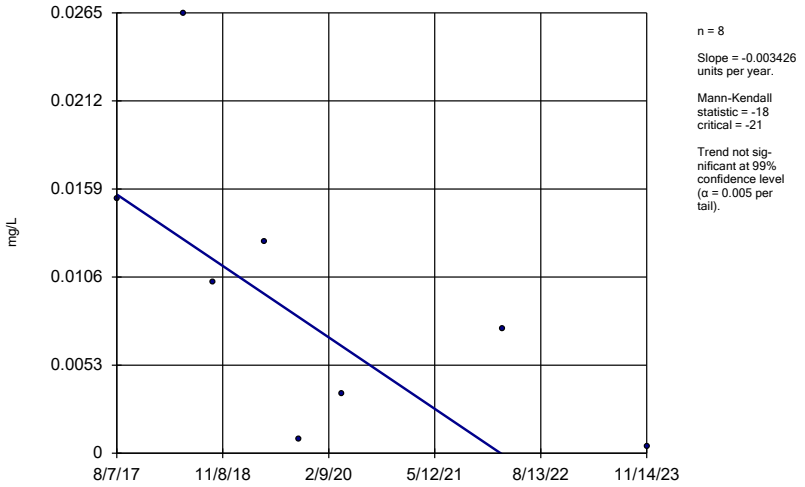
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW7-90R



n = 8

Slope = -0.003426 units per year.

Mann-Kendall statistic = -18
critical = -21

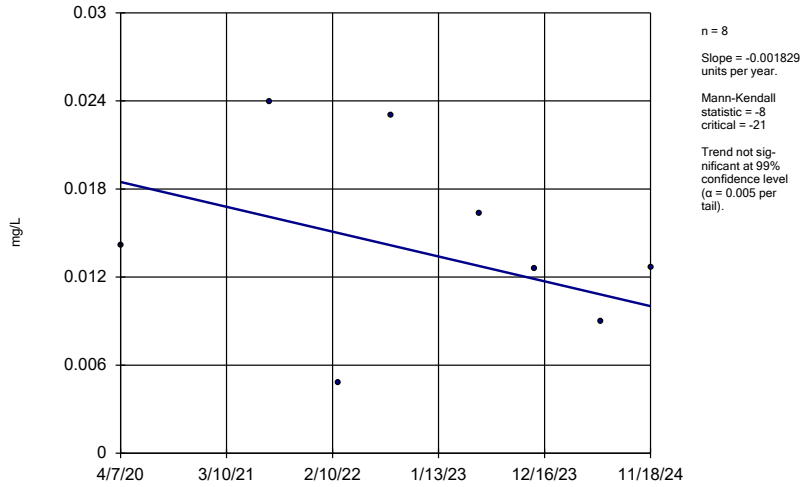
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW7-93



n = 8

Slope = -0.001829 units per year.

Mann-Kendall statistic = -8
critical = -21

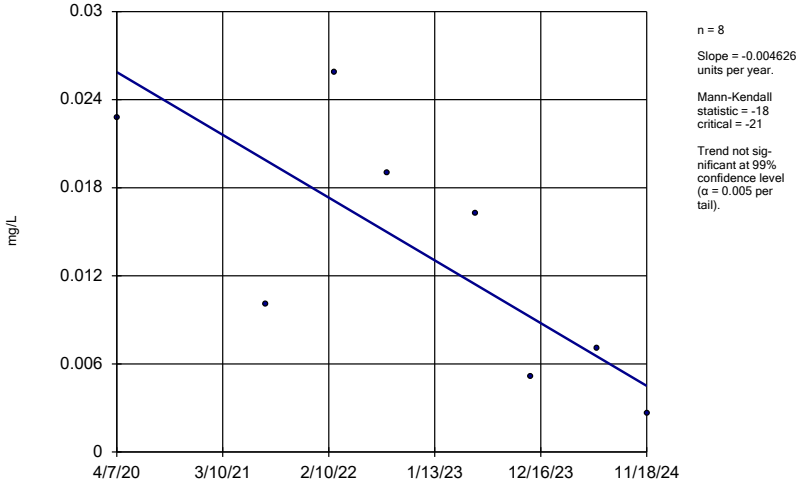
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



n = 8

Slope = -0.004626 units per year.

Mann-Kendall statistic = -18
critical = -21

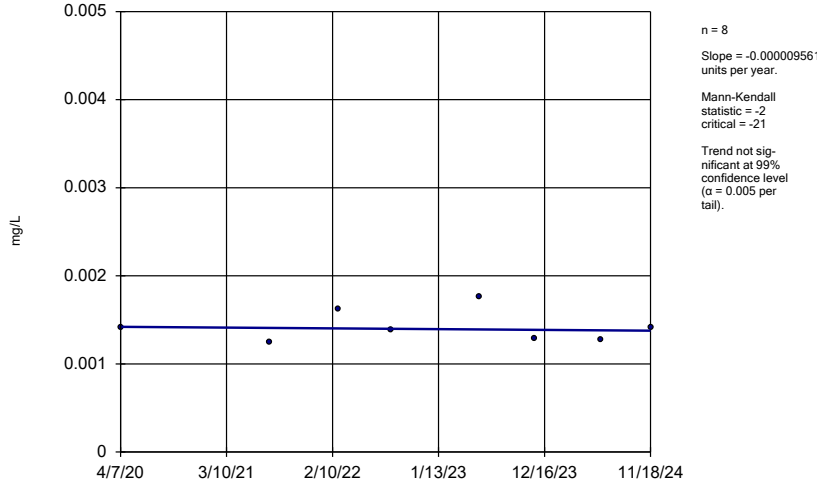
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-39R



n = 8

Slope = -0.000009561 units per year.

Mann-Kendall statistic = -2
critical = -21

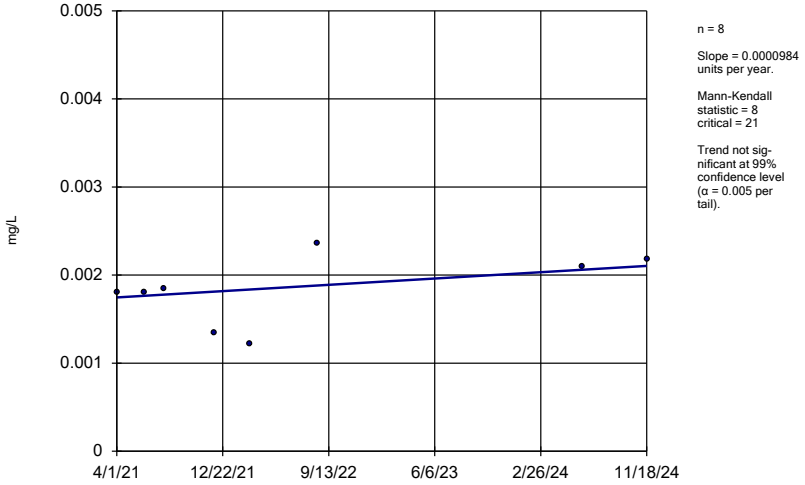
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-43



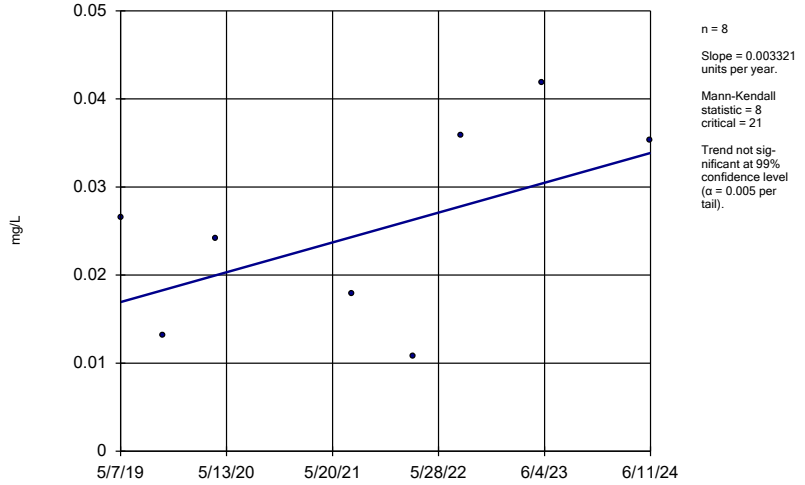
Constituent: Cobalt Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



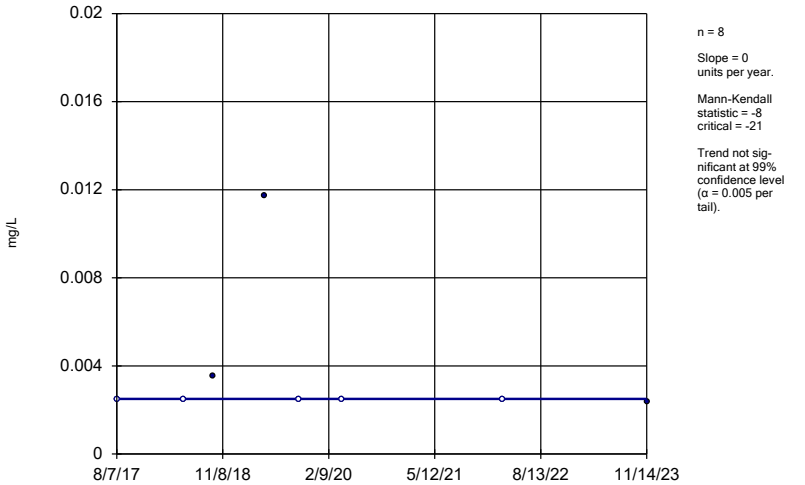
Constituent: Cobalt Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2-93



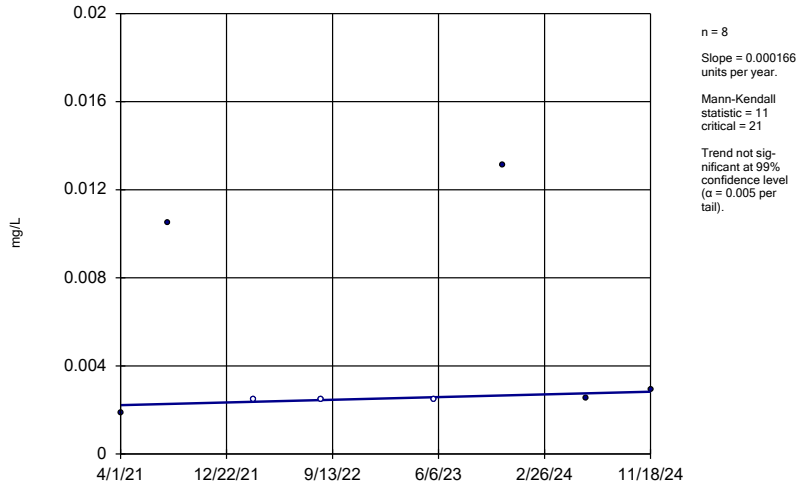
Constituent: Copper Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



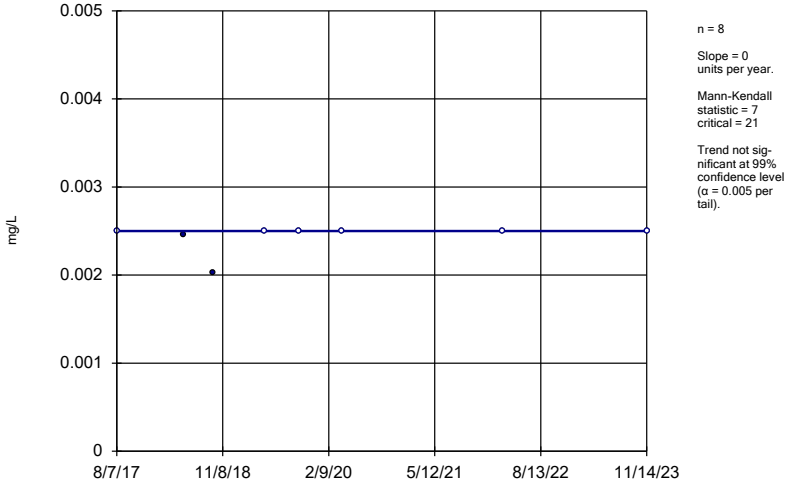
Constituent: Copper Analysis Run 1/24/2025 3:13 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7-90R

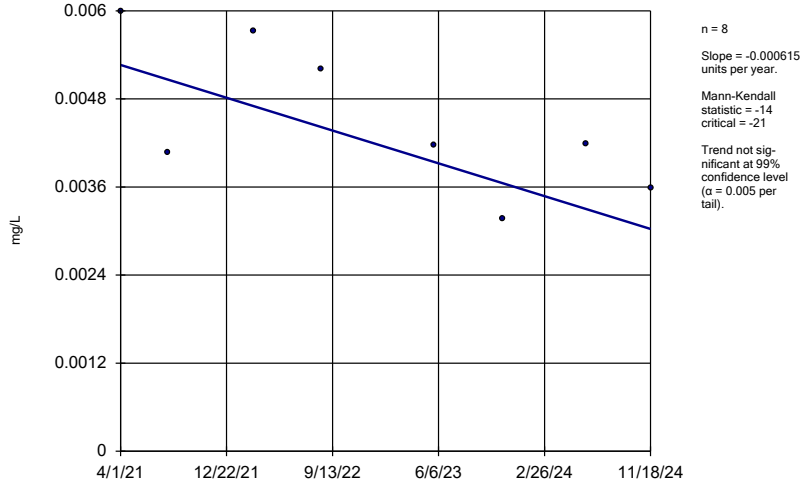


Constituent: Copper Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW7-93

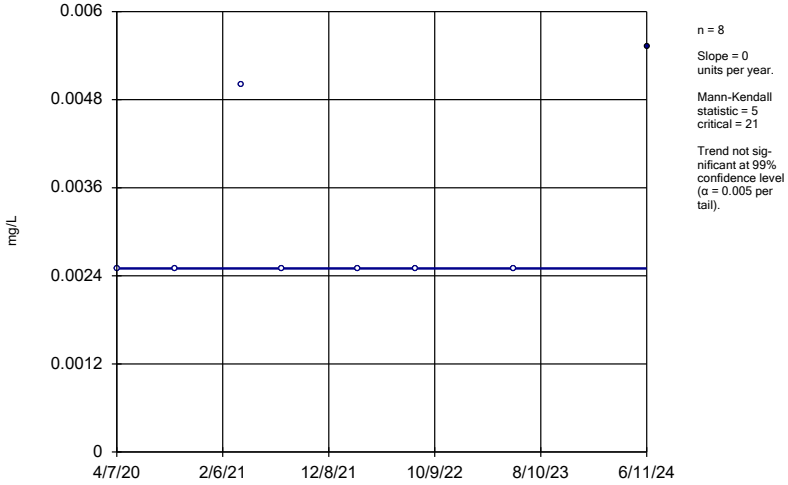


Constituent: Copper Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

PZ-10

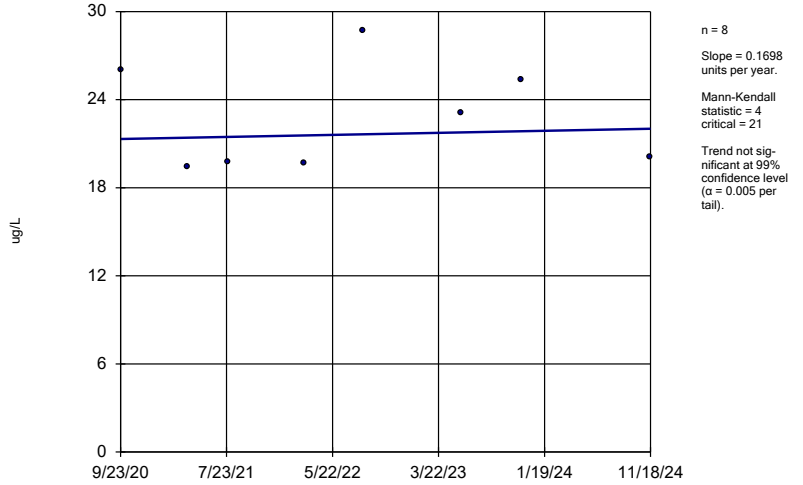


Constituent: Copper Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-39R

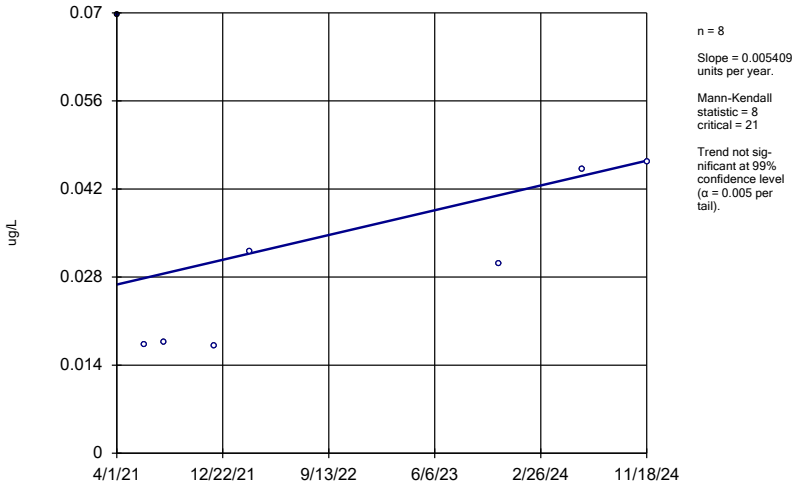


Constituent: Dichlorodifluoromethane Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-90

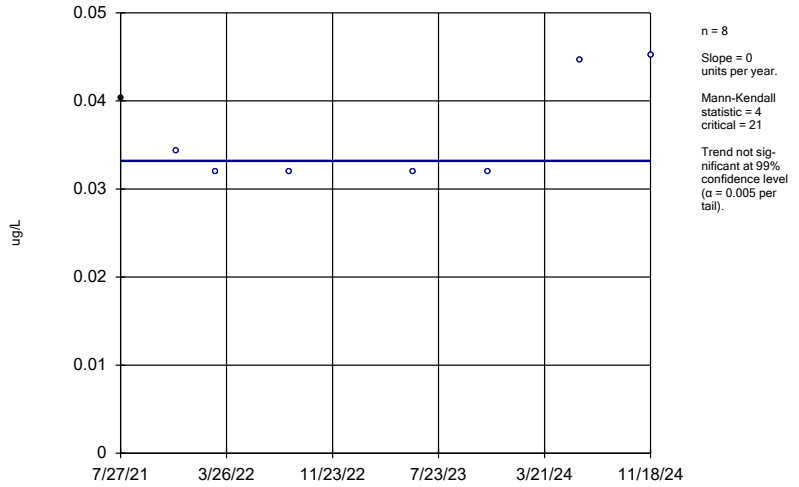


Constituent: Endosulfan sulfate Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93

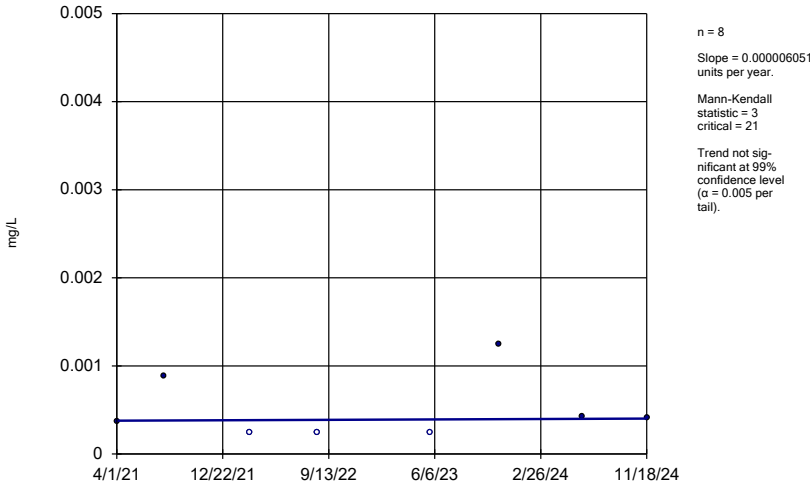


Constituent: Endrin aldehyde Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93

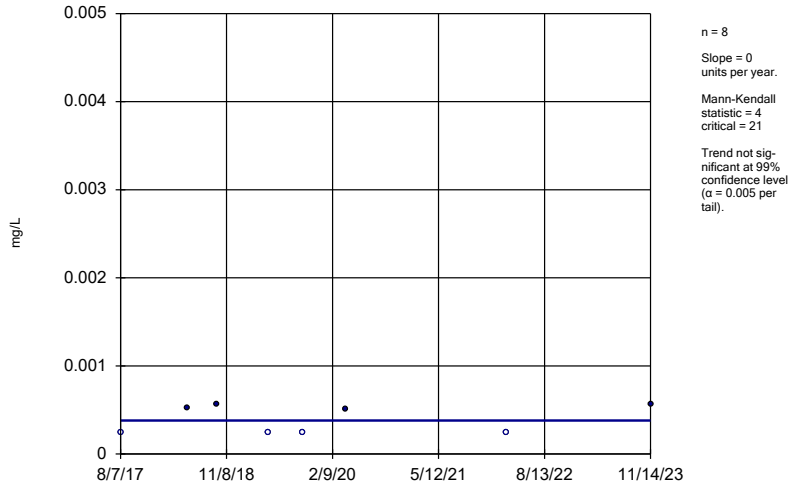


Constituent: Lead Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7-90R

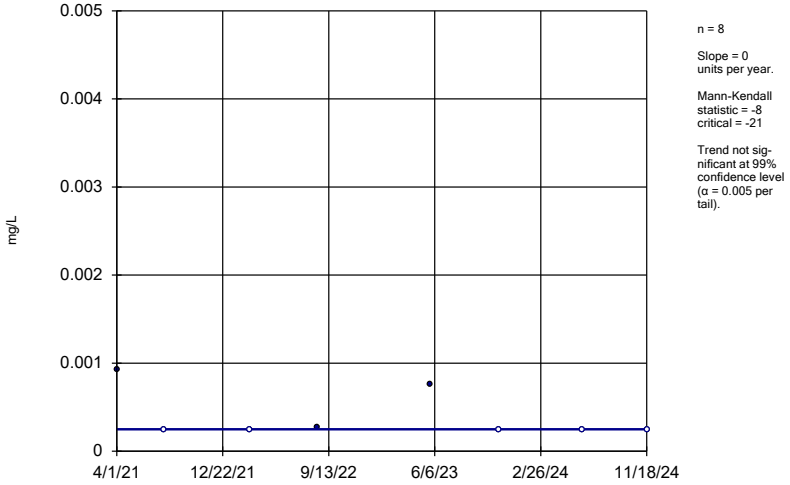


Constituent: Lead Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-37



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = -8
critical = -21

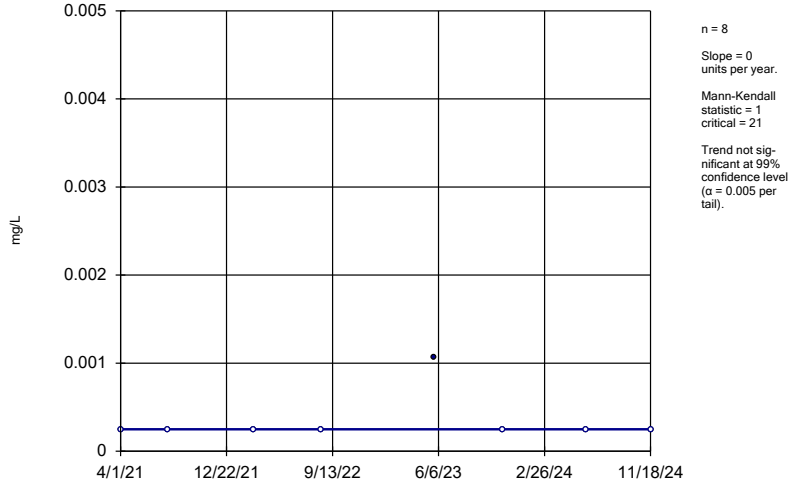
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Lead Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-39R



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = 1
critical = 21

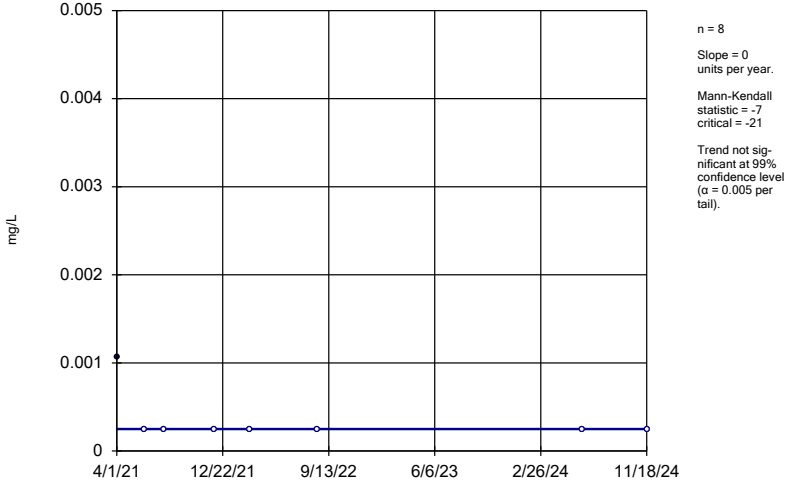
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Lead Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-43



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = -7
critical = -21

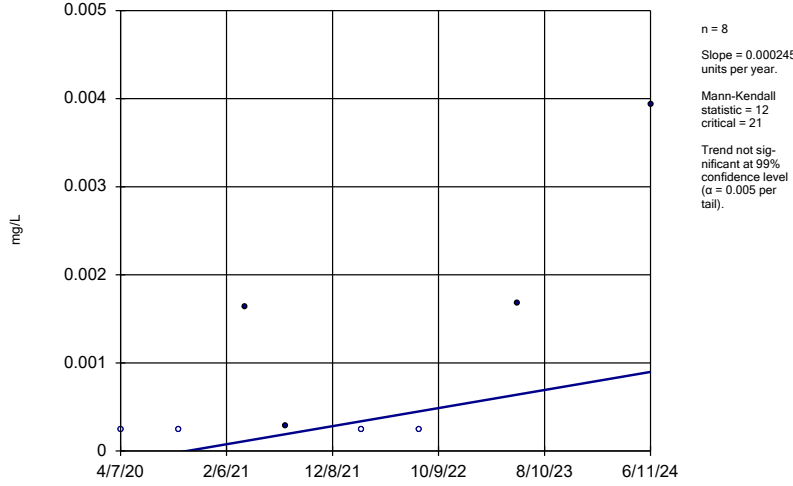
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Lead Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

PZ-10



n = 8

Slope = 0.0002456 units per year.

Mann-Kendall statistic = 12
critical = 21

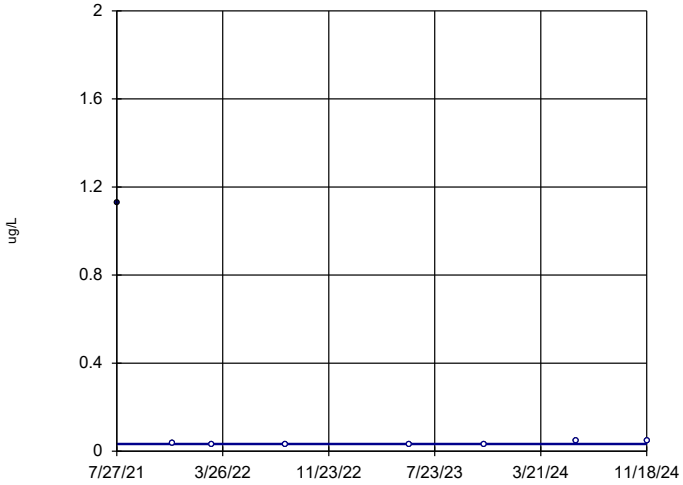
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Lead Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0
units per year.

Mann-Kendall
statistic = 0
critical = 21

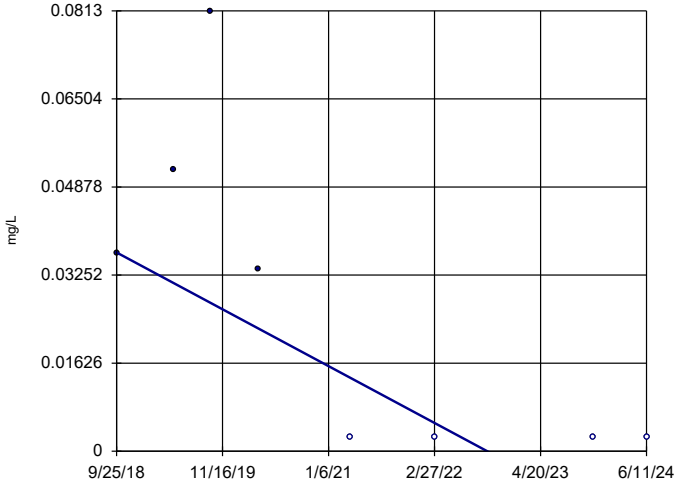
Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Methoxychlor Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW2-93



n = 8

Slope = -0.009178
units per year.

Mann-Kendall
statistic = -16
critical = -21

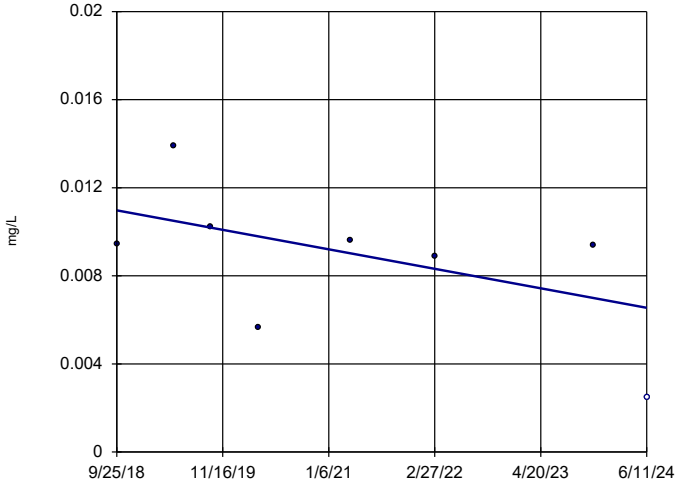
Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Nickel Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-90



n = 8

Slope = -0.0007737
units per year.

Mann-Kendall
statistic = -14
critical = -21

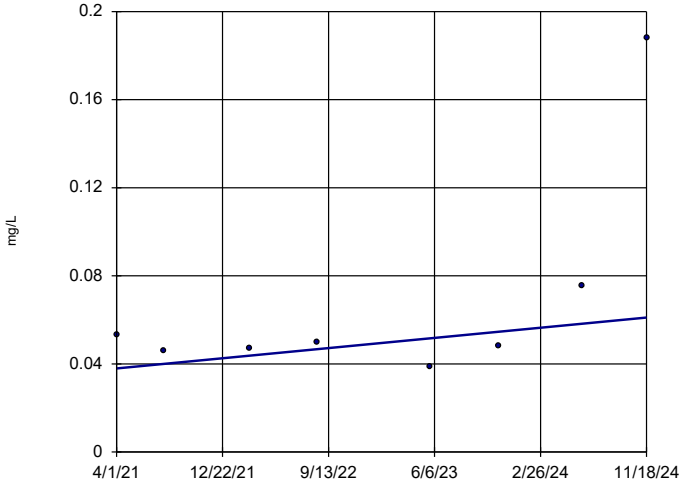
Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Nickel Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW4-93



n = 8

Slope = 0.006359
units per year.

Mann-Kendall
statistic = 10
critical = 21

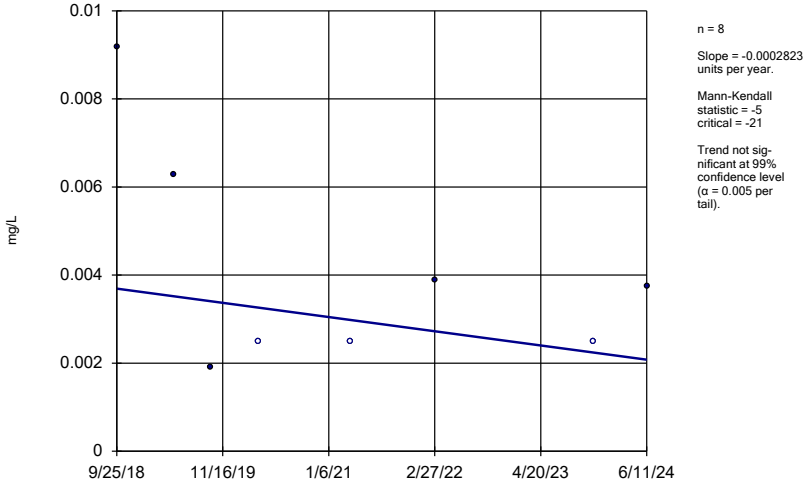
Trend not sig-
nificant at 99%
confidence level
(α = 0.005 per
tail).

Constituent: Nickel Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7-90R



n = 8

Slope = -0.0002823 units per year.

Mann-Kendall statistic = -5
critical = -21

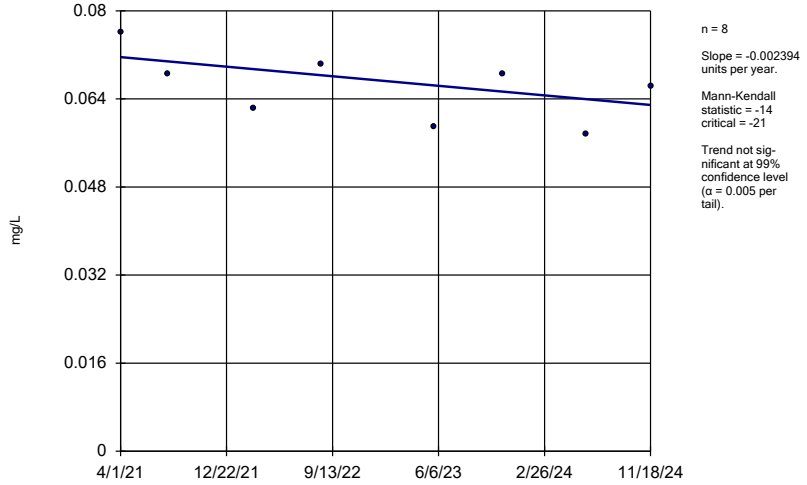
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Nickel Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW7-93



n = 8

Slope = -0.002394 units per year.

Mann-Kendall statistic = -14
critical = -21

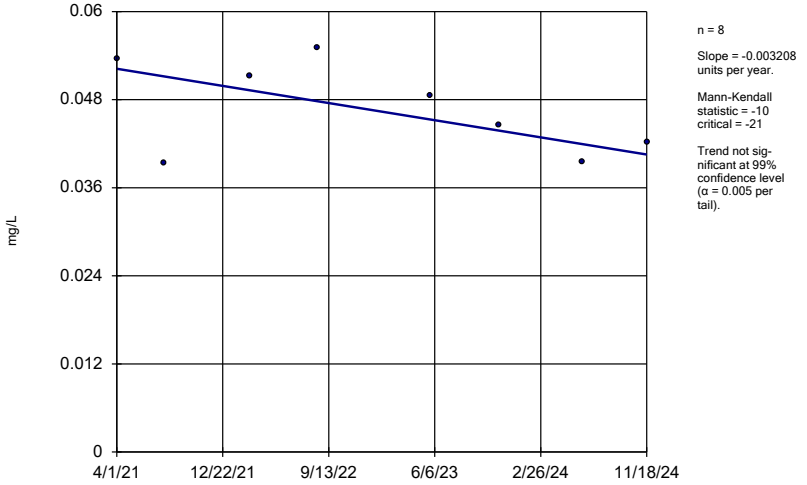
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Nickel Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-37



n = 8

Slope = -0.003208 units per year.

Mann-Kendall statistic = -10
critical = -21

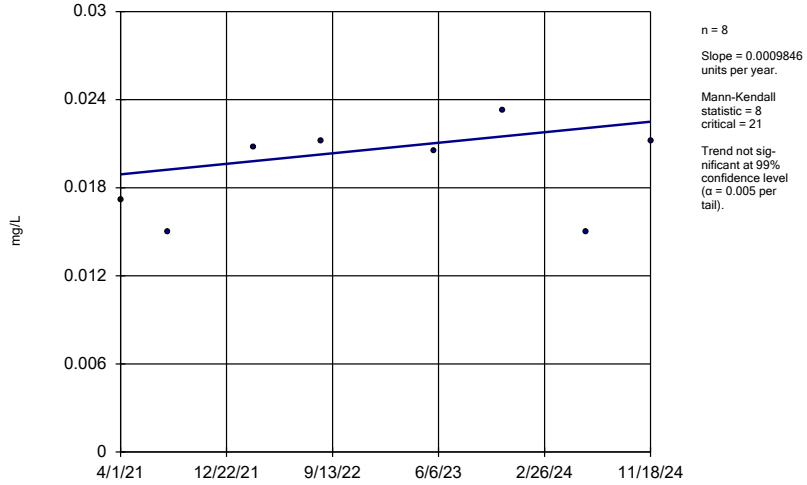
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Nickel Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-39R



n = 8

Slope = 0.0009846 units per year.

Mann-Kendall statistic = 8
critical = 21

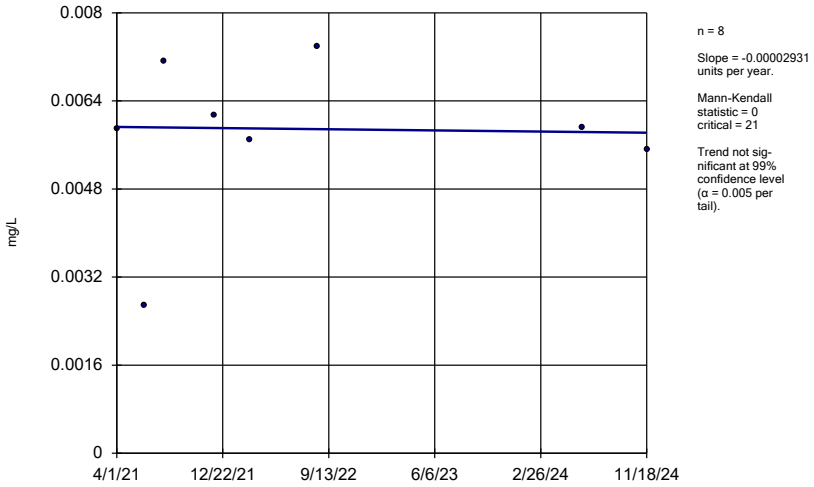
Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Nickel Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-43



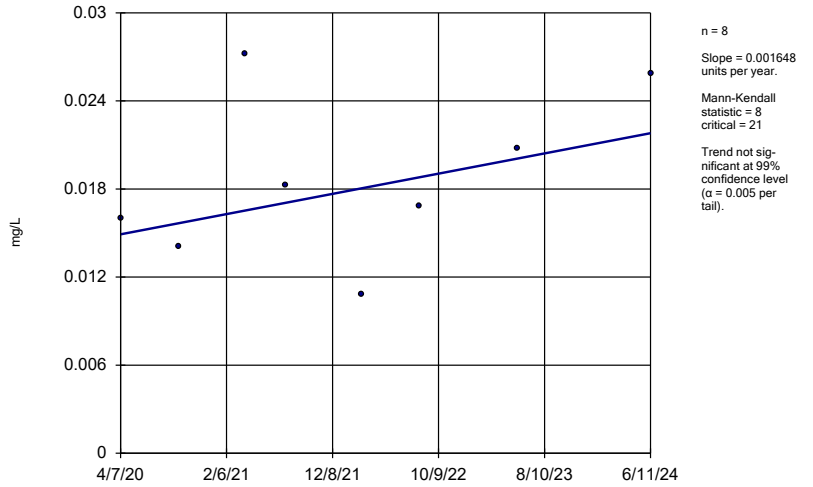
Constituent: Nickel Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

PZ-10



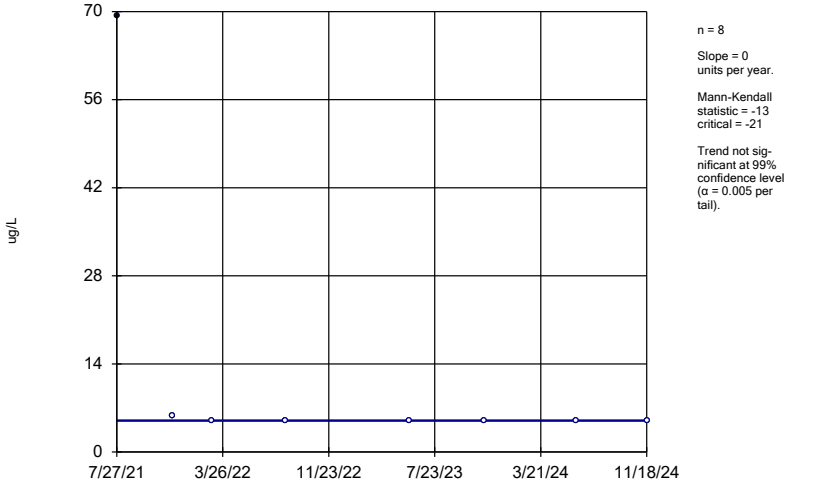
Constituent: Nickel Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



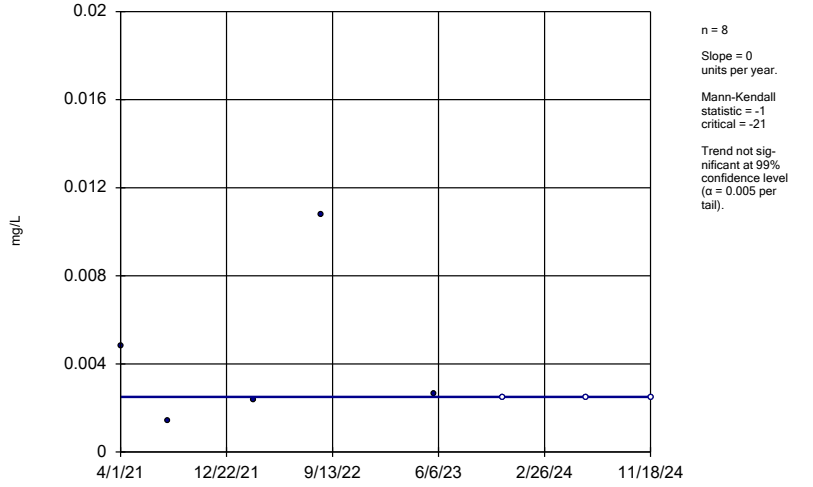
Constituent: Phenol Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW1-99



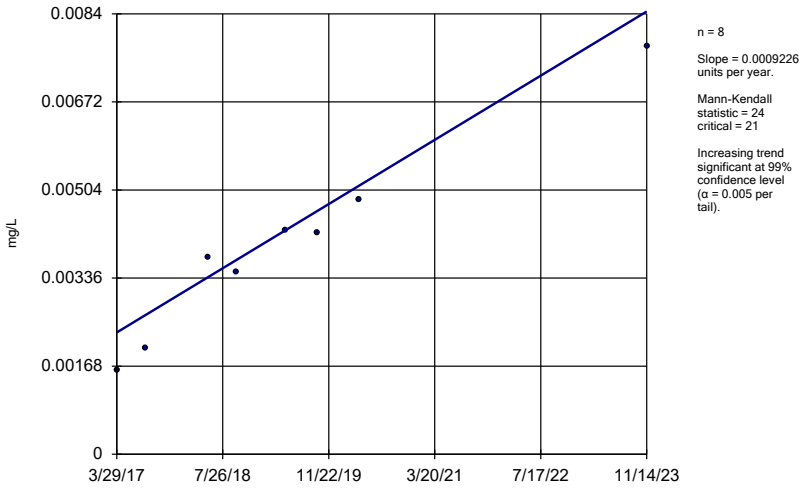
Constituent: Selenium Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-38



Constituent: Selenium Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall

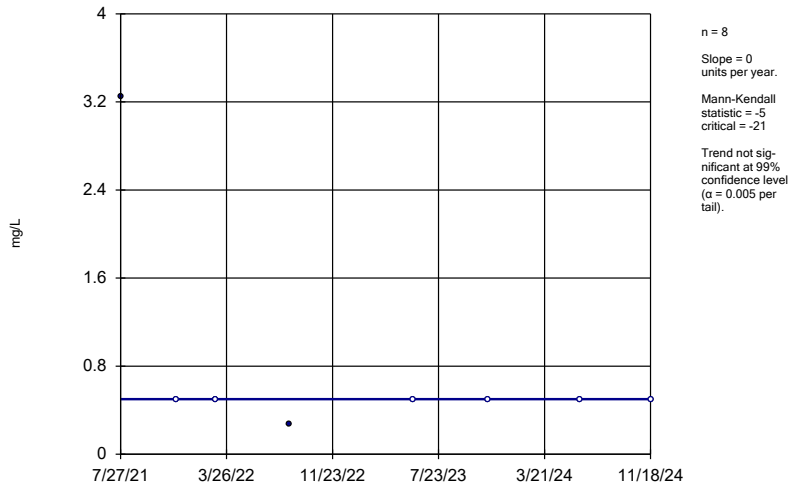
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93



Constituent: Sulfide Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall

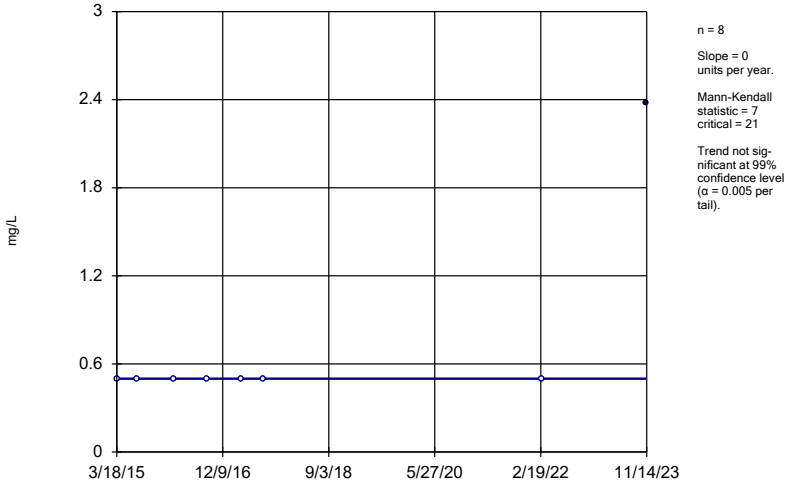
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7-90R



Constituent: Sulfide Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall

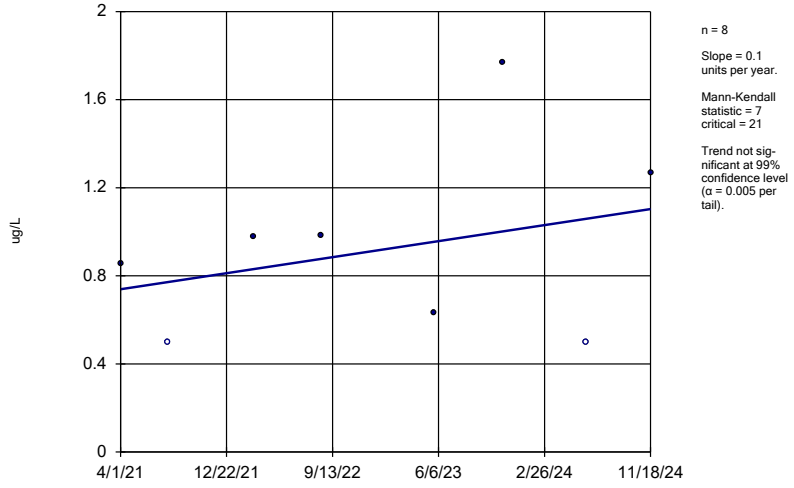
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-39R



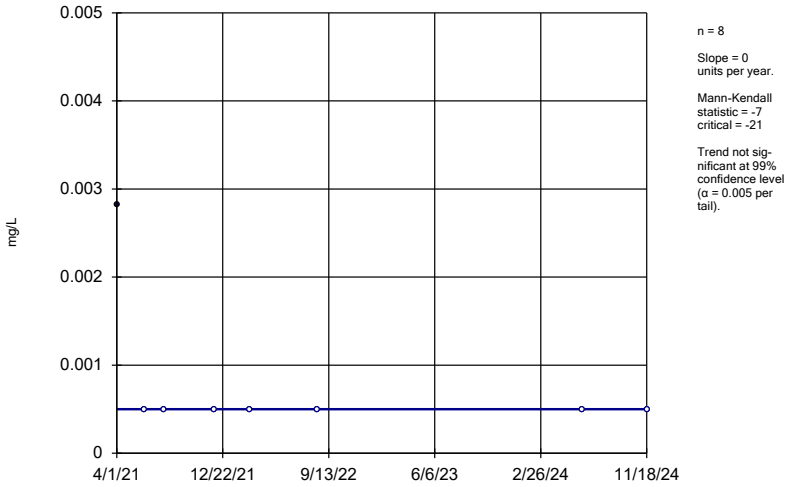
Constituent: Tetrachloroethene Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-43

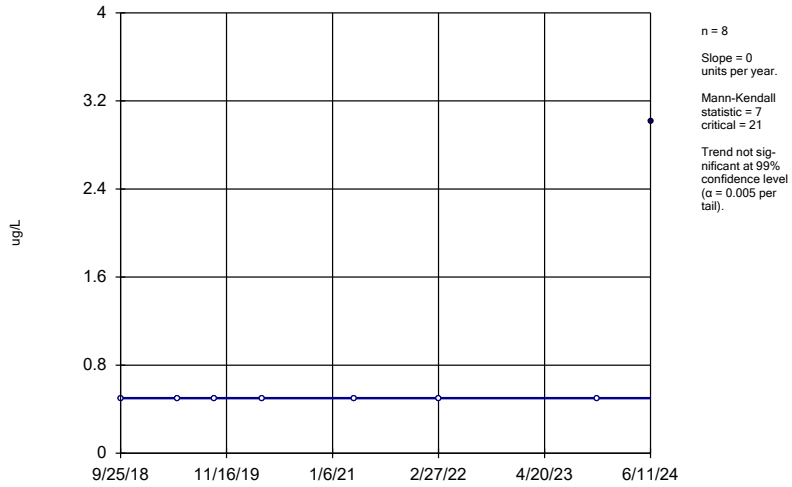


Constituent: Thallium Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-90

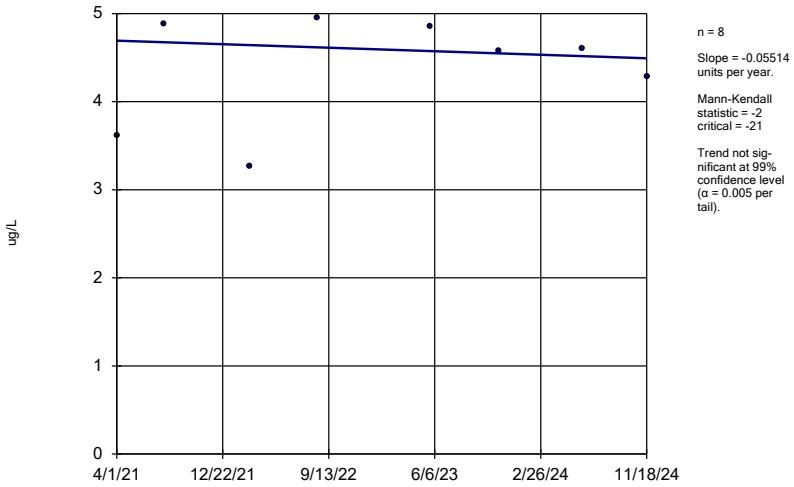


Constituent: Toluene Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-39R

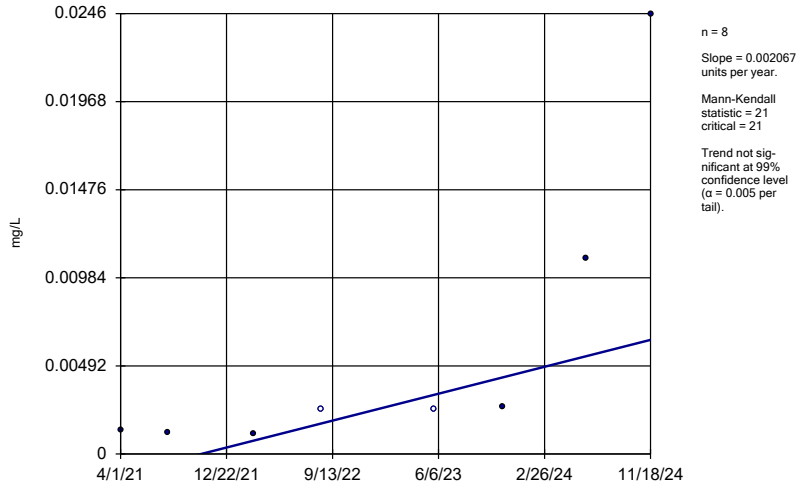


Constituent: Trichloroethene Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93

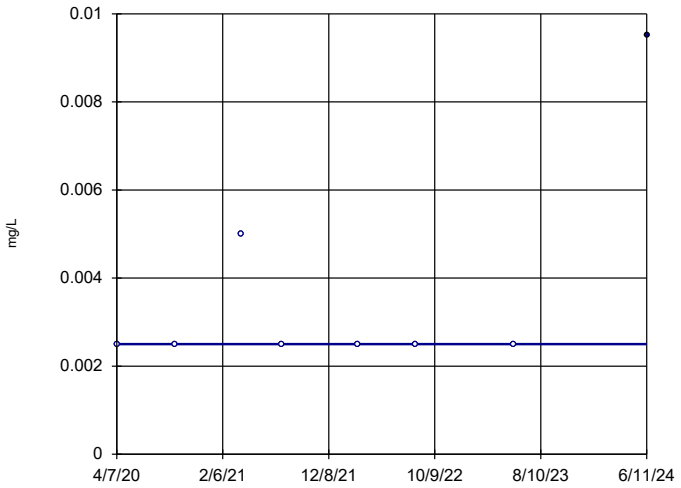


Constituent: Vanadium Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

PZ-10

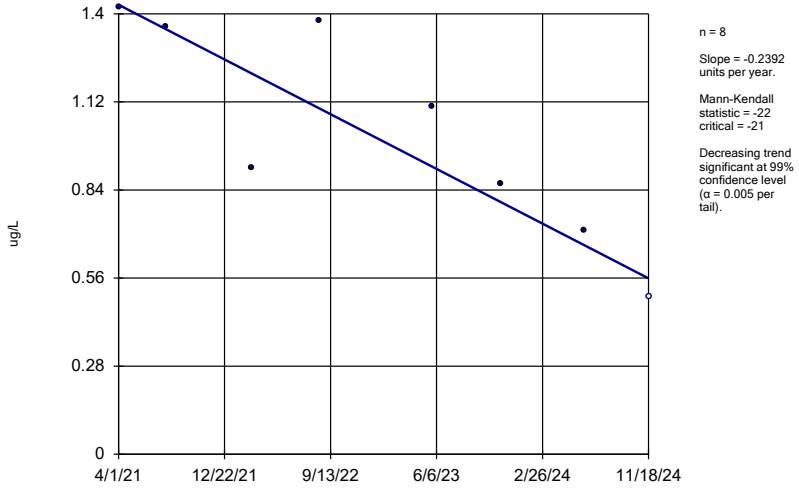


Constituent: Vanadium Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-37

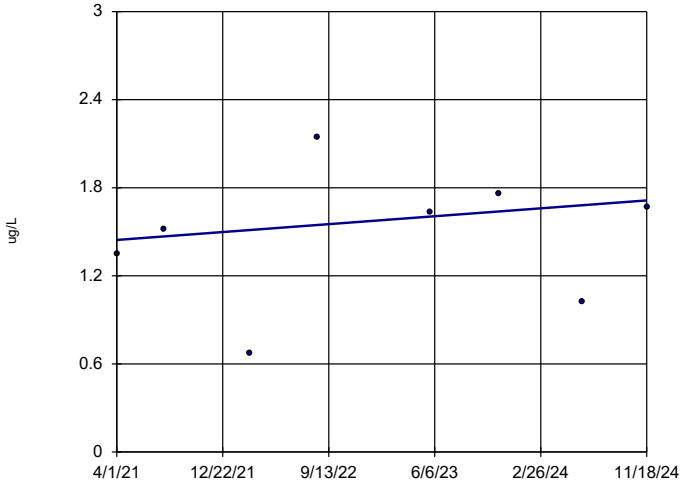


Constituent: Vinyl Chloride Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope Estimator

MW-39R

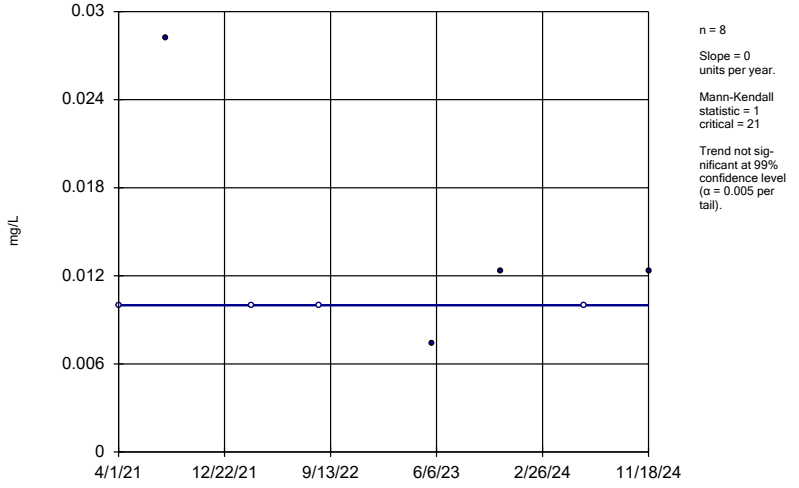


Constituent: Vinyl Chloride Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW4-93

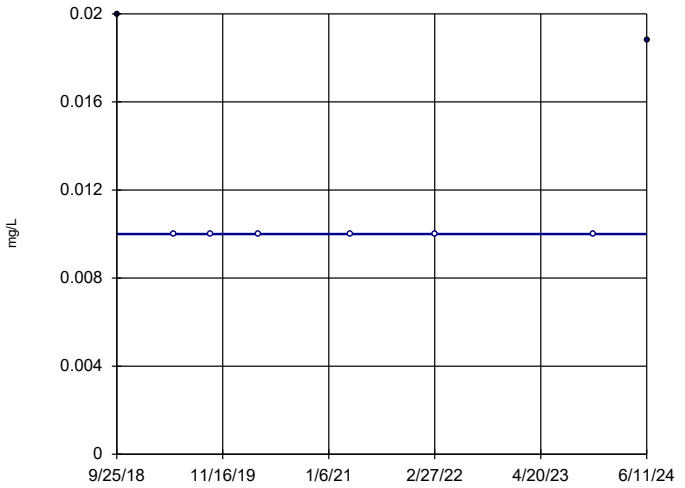


Constituent: Zinc Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG
Hollow symbols indicate censored values.

Sen's Slope Estimator

MW7-90R



n = 8

Slope = 0 units per year.

Mann-Kendall statistic = -1
critical = -21

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

Constituent: Zinc Analysis Run 1/24/2025 3:14 PM View: 2024AWQR-Mann_Kendall

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Confidence Interval Table and Graphs

Confidence Interval

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM Printed 1/24/2025, 3:56 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
1,1,1-Trichloroethane (ug/L)	MW1-99	3.07	0.5	200	No	8	87.5	No	0.004	NP (NDs)
1,1-Dichloroethane (ug/L)	MW2-93	4.704	0.501	140	No	8	50	No	0.01	Param.
1,1-Dichloroethane (ug/L)	MW4-93	2.468	0.9217	140	No	8	0	No	0.01	Param.
1,1-Dichloroethane (ug/L)	MW-37	72.22	44.58	140	No	8	0	No	0.01	Param.
1,1-Dichloroethane (ug/L)	MW-39R	51.6	38.2	140	No	8	0	No	0.01	Param.
1,1-Dichloroethane (ug/L)	PZ-10	1.327	0.788	140	No	8	0	No	0.01	Param.
1,1-Dichloroethene (ug/L)	MW1-99	6.23	1	7	No	8	87.5	No	0.004	NP (NDs)
1,1-Dichloroethene (ug/L)	MW2-93	3.13	1	7	No	8	75	No	0.004	NP (NDs)
1,1-Dichloroethene (ug/L)	MW-37	6.202	2.909	7	No	8	0	No	0.01	Param.
1,2-Dichloroethane (ug/L)	MW1-99	1.11	0.5	5	No	8	87.5	No	0.004	NP (NDs)
1,2-Dichloropropane (ug/L)	MW1-99	1.76	0.5	5	No	8	87.5	No	0.004	NP (NDs)
1,4-Dichlorobenzene (ug/L)	MW4-90	1.39	0.253	75	No	8	62.5	No	0.004	NP (NDs)
1,4-Dichlorobenzene (ug/L)	MW4-93	2.354	0.9639	75	No	8	12.5	No	0.01	Param.
1,4-Dichlorobenzene (ug/L)	MW7-90R	1.548	0.5629	75	No	8	25	No	0.01	Param.
1,4-Dichlorobenzene (ug/L)	PZ-10	9.95	6.535	75	No	8	0	No	0.01	Param.
2,4,5-TP [Silvex] [2C] (ug/L)	MW-39R	0.585	0.2	50	No	4	75	No	0.0625	NP (NDs)
2,4-D [2C] (ug/L)	MW4-93	1.89	0.285	70	No	8	87.5	No	0.004	NP (NDs)
3/4-Methylphenol (ug/L)	MW4-93	166	5	70	No	8	87.5	No	0.004	NP (NDs)
4,4`-DDT (ug/L)	MW4-93	0.0766	0.032	0.51	No	8	87.5	No	0.004	NP (NDs)
Acetone (ug/L)	MW4-93	11.1	3.77	6300	No	8	75	No	0.004	NP (NDs)
Acetone (ug/L)	MW-43	11.35	4.065	6300	No	8	37.5	No	0.004	NP (normality)
alpha-BHC (ug/L)	**MW-39R**	**0.08231**	**0.03008**	**0.028**	**Yes**	**8**	**25**	**No**	**0.01**	**Param.**
Antimony (mg/L)	MW4-93	0.002035	0	0.006	No	8	50	No	0.01	Param.
Arsenic (mg/L)	MW1-99	0.001847	0.0006447	0.01	No	8	37.5	No	0.01	Param.
Arsenic (mg/L)	MW2-93	0.002811	0.001143	0.01	No	8	0	No	0.01	Param.
Arsenic (mg/L)	MW4-90	0.004804	0.0008314	0.01	No	8	12.5	No	0.01	Param.
Arsenic (mg/L)	MW4-93	0.0068	0.0008195	0.01	No	8	12.5	No	0.004	NP (normality)
Arsenic (mg/L)	MW7-90R	0.08237	0.006384	0.01	No	8	0	No	0.01	Param.
Arsenic (mg/L)	MW-37	0.004464	0.001788	0.01	No	8	0	No	0.01	Param.
Arsenic (mg/L)	MW-38	0.00178	0.001	0.01	No	8	87.5	No	0.004	NP (NDs)
Arsenic (mg/L)	MW-43	0.006519	0.003641	0.01	No	8	0	No	0.01	Param.
Arsenic (mg/L)	PZ-10	0.04177	0.002745	0.01	No	8	0	No	0.01	Param.
Barium (mg/L)	MW1-99	0.05369	0.02144	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW2-93	0.2278	0.06685	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW4-90	0.1924	0.107	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW4-93	0.0704	0.0243	2	No	8	0	No	0.004	NP (normality)
Barium (mg/L)	MW7-90R	0.5692	0.2393	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW7-93	0.1229	0.06978	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-37	0.02233	0.01695	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-38	0.4174	0.3606	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-39R	0.2474	0.1888	2	No	8	0	No	0.01	Param.
Barium (mg/L)	MW-43	0.6299	0.5038	2	No	8	0	No	0.01	Param.
Barium (mg/L)	PZ-10	0.3702	0.2708	2	No	8	0	No	0.01	Param.
Benzene (ug/L)	MW4-90	0.57	0.25	5	No	8	87.5	No	0.004	NP (NDs)
Benzene (ug/L)	MW4-93	0.4698	0.2818	5	No	8	12.5	No	0.01	Param.
Benzene (ug/L)	MW7-90R	1.337	0.2546	5	No	8	25	No	0.01	Param.
Benzene (ug/L)	MW-37	0.8408	0.5419	5	No	8	0	No	0.01	Param.
Benzene (ug/L)	MW-39R	1.248	0.2905	5	No	8	12.5	No	0.01	Param.
Benzene (ug/L)	PZ-10	4.687	2.39	5	No	8	0	No	0.01	Param.
Beryllium (mg/L)	MW4-93	0.00161	0.0005	0.004	No	8	87.5	No	0.004	NP (NDs)

Confidence Interval

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM Printed 1/24/2025, 3:56 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Cadmium (mg/L)	MW2-93	0.0003015	0.000006864	0.005	No	8	50	No	0.01	Param.
Cadmium (mg/L)	MW4-93	0.0004631	0	0.005	No	8	37.5	No	0.01	Param.
Cadmium (mg/L)	MW7-93	0.0003076	0.0001104	0.005	No	8	12.5	No	0.01	Param.
Cadmium (mg/L)	PZ-10	0.00025	0.00005	0.005	No	8	87.5	No	0.004	NP (NDs)
Chlorobenzene (ug/L)	MW2-93	16.7	0.5	100	No	8	50	No	0.004	NP (normality)
Chlorobenzene (ug/L)	MW4-90	2.92	0.5	100	No	8	75	No	0.004	NP (NDs)
Chlorobenzene (ug/L)	MW4-93	30.26	19.69	100	No	8	0	No	0.01	Param.
Chlorobenzene (ug/L)	MW-37	6.811	2.559	100	No	8	0	No	0.01	Param.
Chlorobenzene (ug/L)	PZ-10	12.03	9.321	100	No	8	0	No	0.01	Param.
Chloroethane (ug/L)	MW4-90	20.86	0.5466	2800	No	8	0	No	0.01	Param.
Chloroethane (ug/L)	MW-37	23.27	14.09	2800	No	8	0	No	0.01	Param.
Chloroethane (ug/L)	PZ-10	6.626	3.362	2800	No	8	0	No	0.01	Param.
Chromium (mg/L)	MW-38	0.004921	0.001987	0.1	No	8	0	No	0.01	Param.
cis-1,2-Dichloroethene (ug/L)	MW2-93	1.65	0.497	70	No	8	50	No	0.004	NP (normality)
cis-1,2-Dichloroethene (ug/L)	MW4-93	1.31	0.453	70	No	8	0	No	0.004	NP (normality)
cis-1,2-Dichloroethene (ug/L)	MW-39R	23.38	16.27	70	No	8	0	No	0.01	Param.
cis-1,2-Dichloroethene (ug/L)	PZ-10	0.9435	0.4782	70	No	8	12.5	No	0.01	Param.
Cobalt (mg/L)	MW1-99	0.002129	0.00008563	0.004646	No	8	12.5	No	0.01	Param.
Cobalt (mg/L)	MW2-93	0.008723	0	0.004646	No	8	12.5	No	0.01	Param.
Cobalt (mg/L)	MW4-90	0.0095	0.004557	0.004646	No	8	0	No	0.01	Param.
Cobalt (mg/L)	MW4-93	0.0498	0.00405	0.004646	No	8	0	No	0.004	NP (normality)
Cobalt (mg/L)	MW7-90R	0.01886	0.0004254	0.004646	No	8	0	No	0.01	Param.
Cobalt (mg/L)	**MW7-93**	**0.02144**	**0.007688**	**0.004646**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Cobalt (mg/L)	MW-37	0.02274	0.004497	0.004646	No	8	0	No	0.01	Param.
Cobalt (mg/L)	MW-39R	0.001615	0.001237	0.004646	No	8	0	No	0.01	Param.
Cobalt (mg/L)	MW-43	0.002245	0.001416	0.004646	No	8	0	No	0.01	Param.
Cobalt (mg/L)	**PZ-10**	**0.0377**	**0.01365**	**0.004646**	**Yes**	**8**	**0**	**No**	**0.01**	**Param.**
Copper (mg/L)	MW2-93	0.0117	0.00237	1.3	No	8	62.5	No	0.004	NP (NDs)
Copper (mg/L)	MW4-93	0.0131	0.00189	1.3	No	8	37.5	No	0.004	NP (normality)
Copper (mg/L)	MW7-90R	0.0025	0.00203	1.3	No	8	75	No	0.004	NP (NDs)
Copper (mg/L)	MW7-93	0.005589	0.003435	1.3	No	8	0	No	0.01	Param.
Copper (mg/L)	PZ-10	0.00553	0.0025	1.3	No	8	87.5	No	0.004	NP (NDs)
Dichlorodifluoromethane (ug/L)	MW-39R	26.56	18.99	1000	No	8	0	No	0.01	Param.
Endosulfan sulfate (ug/L)	MW4-90	0.0697	0.017	0.0333	No	8	87.5	No	0.004	NP (NDs)
Endrin aldehyde (ug/L)	MW4-93	0.0452	0.032	2.1	No	8	87.5	No	0.004	NP (NDs)
Lead (mg/L)	MW4-93	0.0008836	0.0002494	0.015	No	8	37.5	No	0.01	Param.
Lead (mg/L)	MW7-90R	0.000568	0.00025	0.015	No	8	50	No	0.004	NP (normality)
Lead (mg/L)	MW-37	0.000927	0.00025	0.015	No	8	62.5	No	0.004	NP (NDs)
Lead (mg/L)	MW-39R	0.00106	0.00025	0.015	No	8	87.5	No	0.004	NP (NDs)
Lead (mg/L)	MW-43	0.00106	0.00025	0.015	No	8	87.5	No	0.004	NP (NDs)
Lead (mg/L)	PZ-10	0.00394	0.00025	0.015	No	8	50	No	0.004	NP (normality)
Methoxychlor (ug/L)	MW4-93	1.13	0.032	40	No	8	87.5	No	0.004	NP (NDs)
Nickel (mg/L)	MW2-93	0.05607	0	0.1	No	8	50	No	0.01	Param.
Nickel (mg/L)	MW4-90	0.01226	0.005149	0.1	No	8	12.5	No	0.01	Param.
Nickel (mg/L)	MW4-93	0.188	0.0386	0.1	No	8	0	No	0.004	NP (normality)
Nickel (mg/L)	MW7-90R	0.006693	0.001939	0.1	No	8	37.5	No	0.01	Param.
Nickel (mg/L)	MW7-93	0.07262	0.05947	0.1	No	8	0	No	0.01	Param.
Nickel (mg/L)	MW-37	0.05335	0.04013	0.1	No	8	0	No	0.01	Param.
Nickel (mg/L)	MW-39R	0.02259	0.01596	0.1	No	8	0	No	0.01	Param.
Nickel (mg/L)	MW-43	0.00731	0.004284	0.1	No	8	0	No	0.01	Param.

Confidence Interval

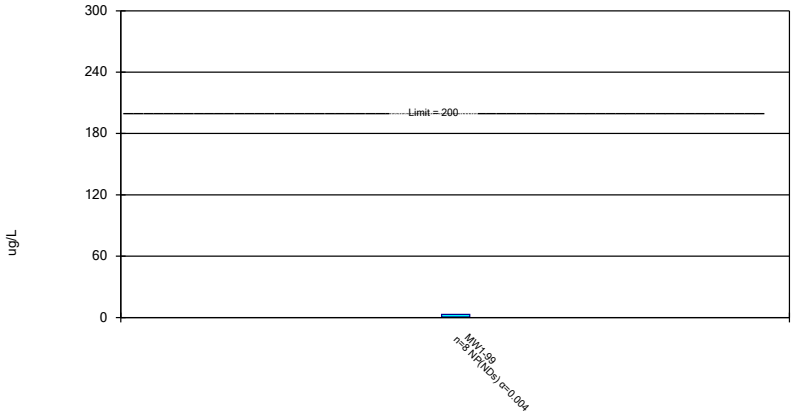
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM Printed 1/24/2025, 3:56 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	%NDs	Transform	Alpha	Method
Nickel (mg/L)	PZ-10	0.02472	0.01275	0.1	No	8	0	No	0.01	Param.
Phenol (ug/L)	MW4-93	69.3	5	2000	No	8	87.5	No	0.004	NP (NDs)
Selenium (mg/L)	MW1-99	0.0108	0.001405	0.05	No	8	37.5	No	0.004	NP (normality)
Sulfide (mg/L)	MW4-93	3.25	0.27	1	No	8	75	No	0.004	NP (NDs)
Sulfide (mg/L)	MW7-90R	2.38	0.5	1	No	8	87.5	No	0.004	NP (NDs)
Tetrachloroethene (ug/L)	MW-39R	1.381	0.6725	5	No	8	25	No	0.01	Param.
Thallium (mg/L)	MW-43	0.00282	0.0005	0.002	No	8	87.5	No	0.004	NP (NDs)
Toluene (ug/L)	MW4-90	3.01	0.5	1000	No	8	87.5	No	0.004	NP (NDs)
Trichloroethene (ug/L)	MW-39R	5.04	3.718	5	No	8	0	No	0.01	Param.
Vanadium (mg/L)	MW4-93	0.0246	0.00116	0.035	No	8	25	No	0.004	NP (normality)
Vanadium (mg/L)	PZ-10	0.0095	0.0025	0.035	No	8	87.5	No	0.004	NP (NDs)
Vinyl Chloride (ug/L)	MW-39R	1.953	0.987	2	No	8	0	No	0.01	Param.
Zinc (mg/L)	MW4-93	0.0282	0.00741	2	No	8	50	No	0.004	NP (normality)
Zinc (mg/L)	MW7-90R	0.02	0.01	2	No	8	75	No	0.004	NP (NDs)

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

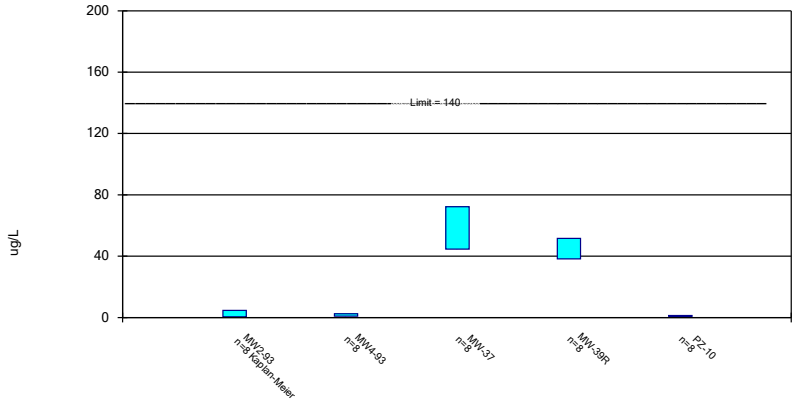


Constituent: 1,1,1-Trichloroethane Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interv
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

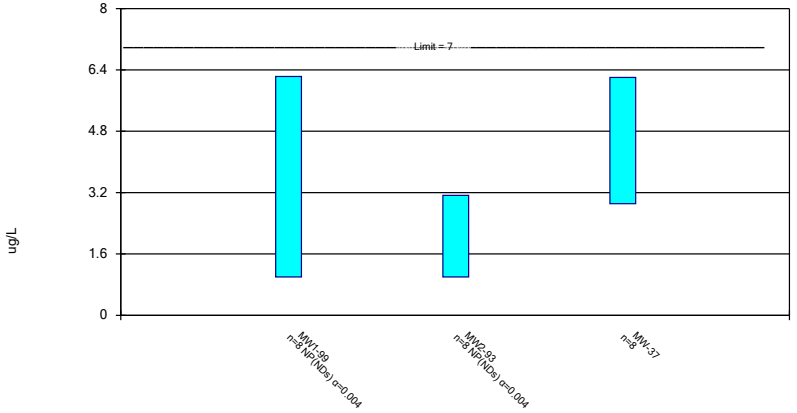


Constituent: 1,1-Dichloroethane Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

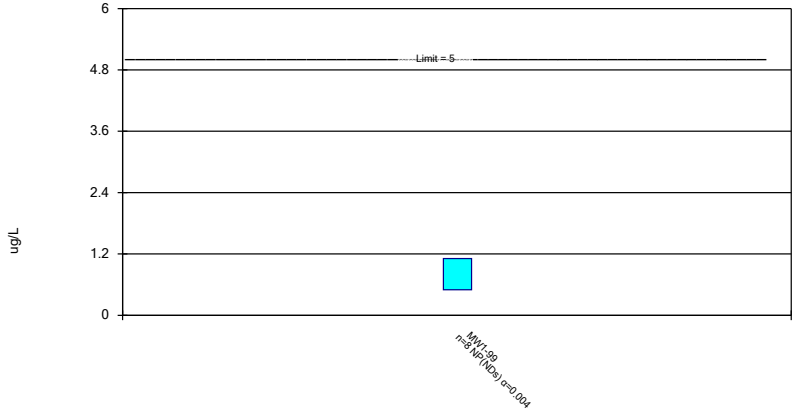


Constituent: 1,1-Dichloroethene Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

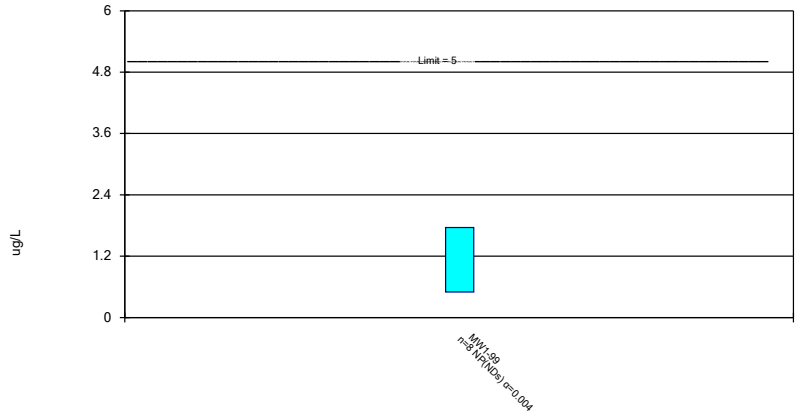


Constituent: 1,2-Dichloroethane Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



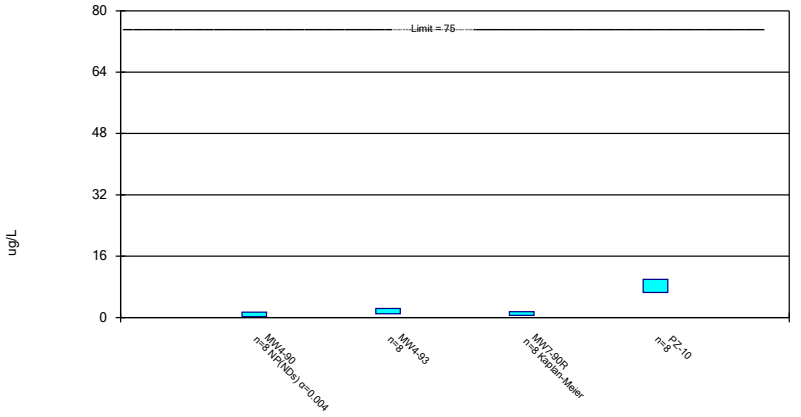
Constituent: 1,2-Dichloropropane Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interva

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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



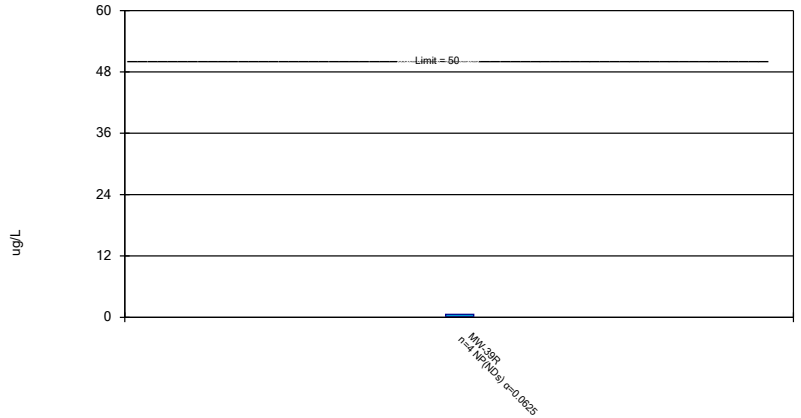
Constituent: 1,4-Dichlorobenzene Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interv

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



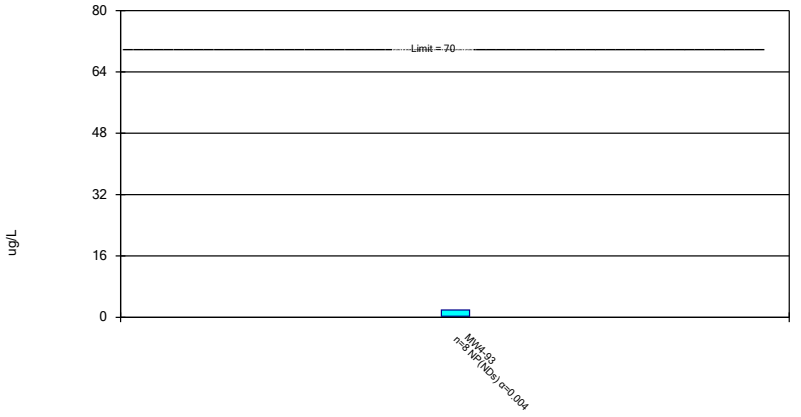
Constituent: 2,4,5-TP [Silvex] [2C] Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interv

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



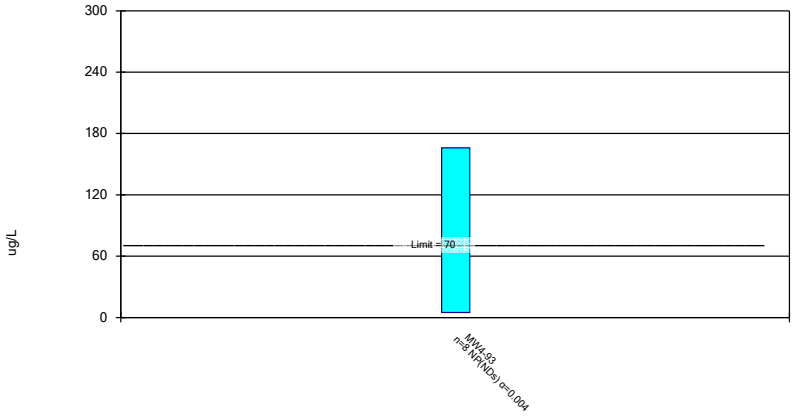
Constituent: 2,4-D [2C] Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

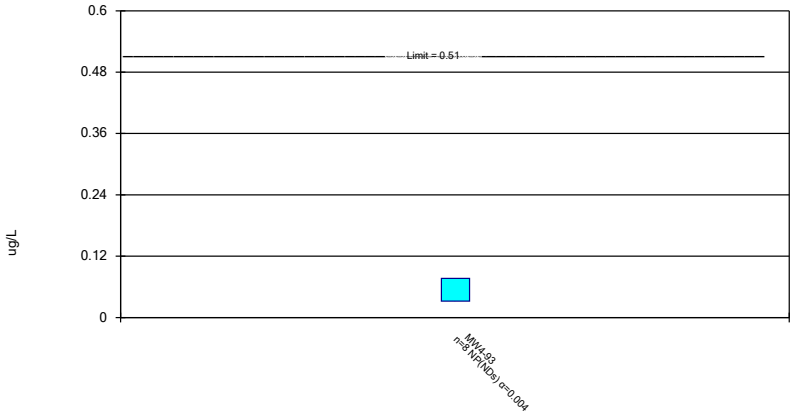


Constituent: 3/4-Methylphenol Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

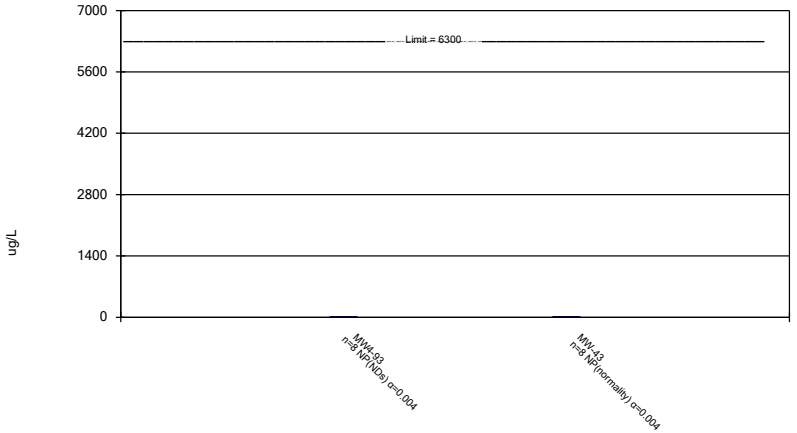


Constituent: 4,4`-DDT Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

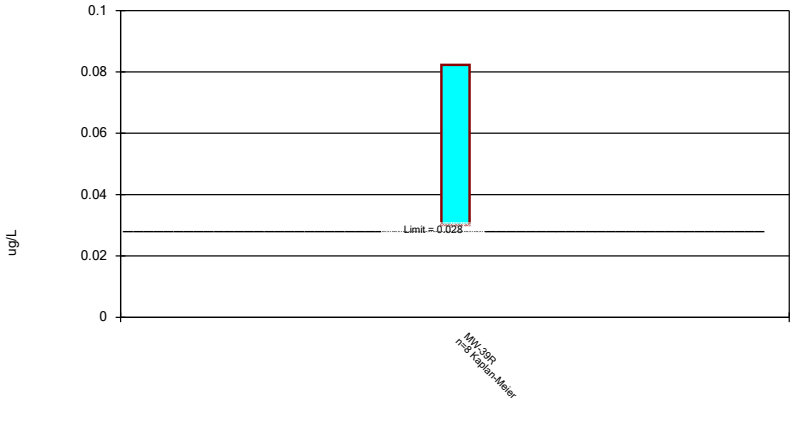


Constituent: Acetone Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

Compliance limit is exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

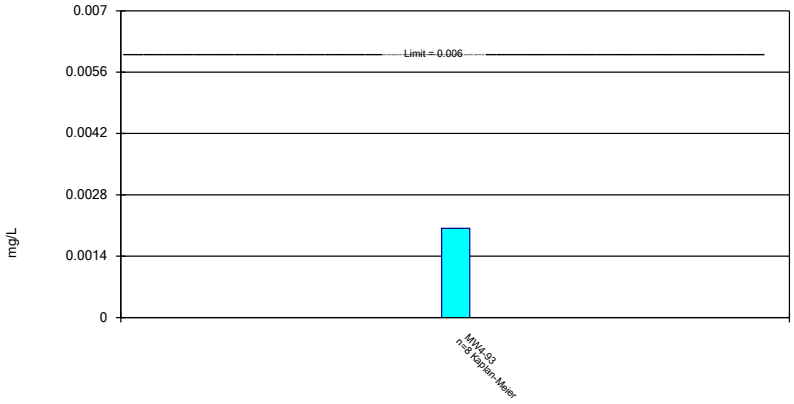


Constituent: alpha-BHC Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

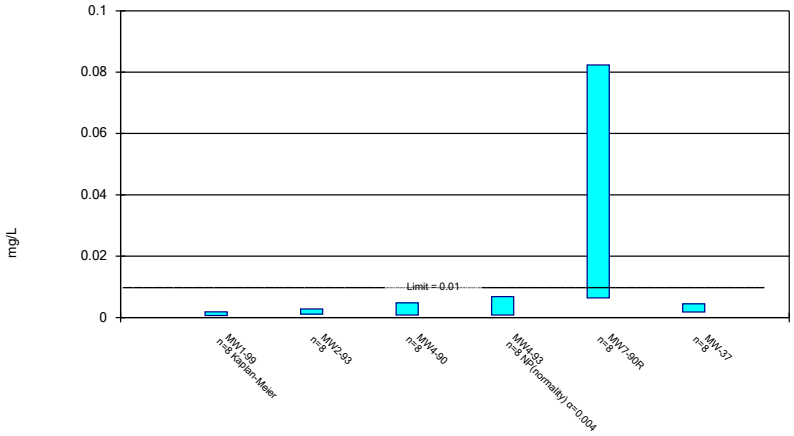


Constituent: Antimony Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

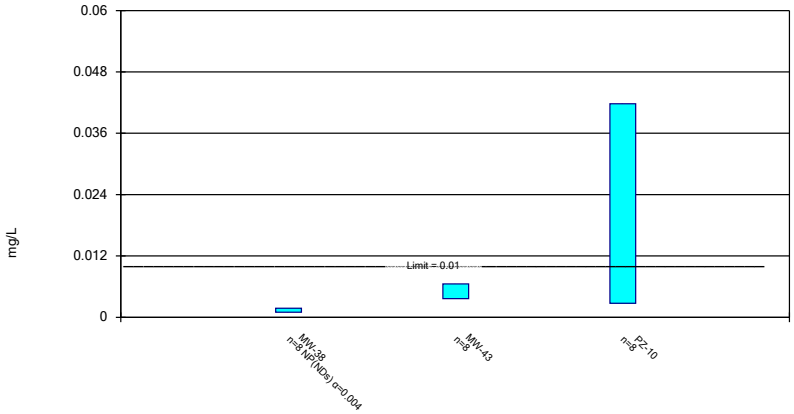


Constituent: Arsenic Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

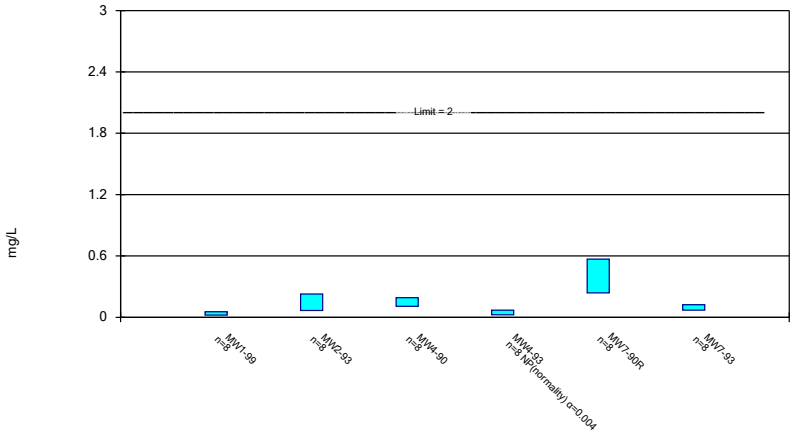


Constituent: Arsenic Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

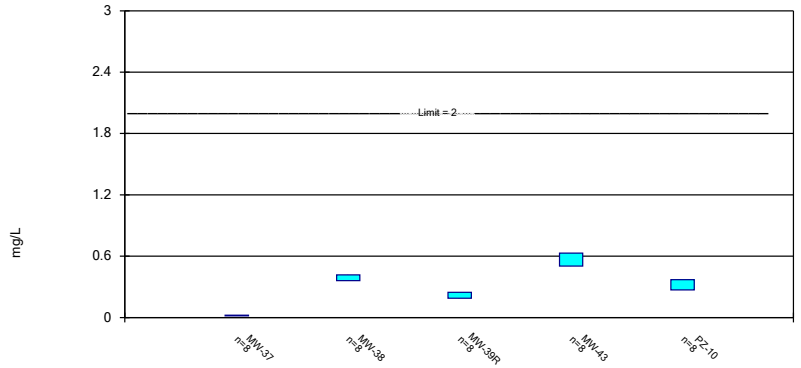


Constituent: Barium Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

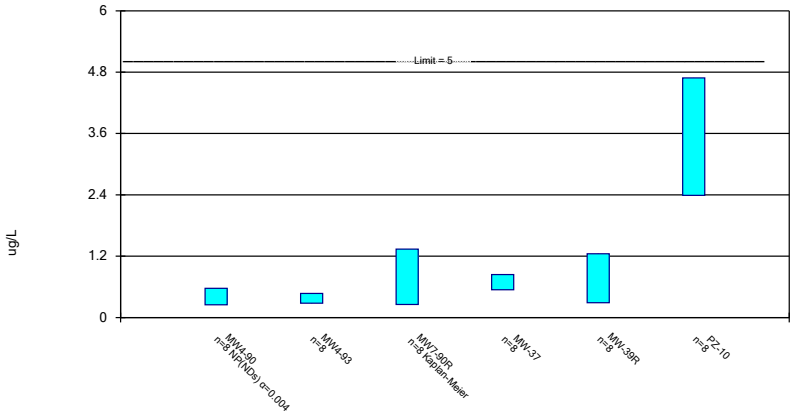


Constituent: Barium Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

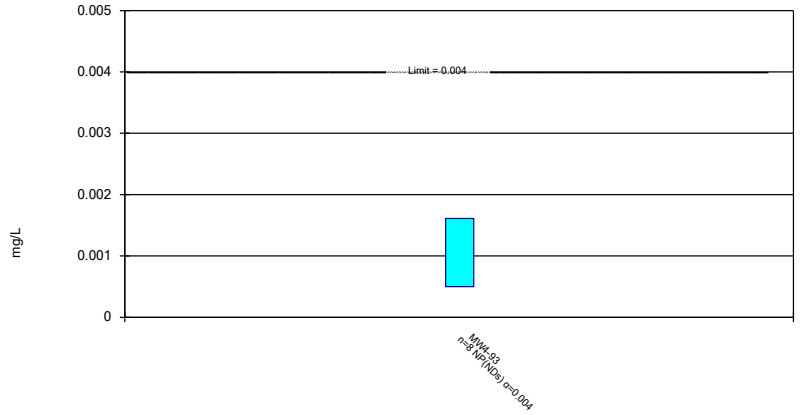


Constituent: Benzene Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

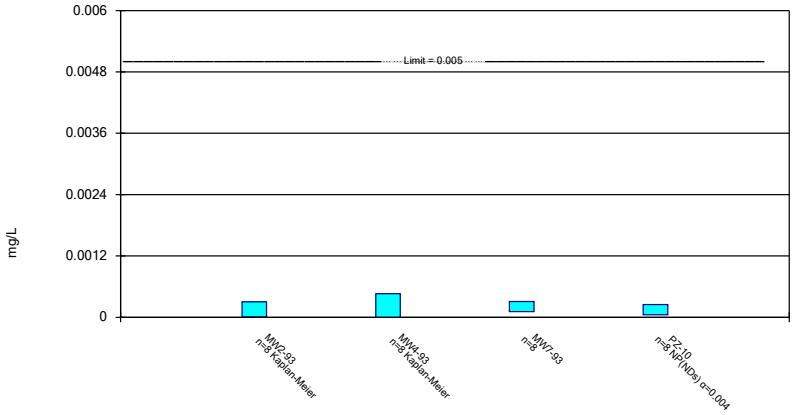


Constituent: Beryllium Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

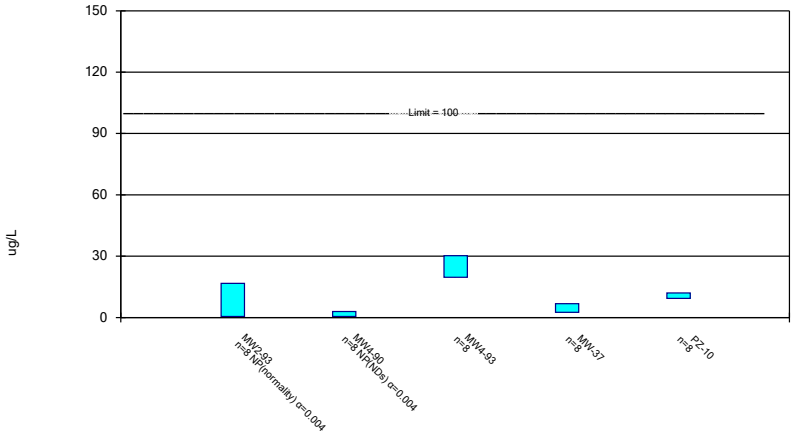


Constituent: Cadmium Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

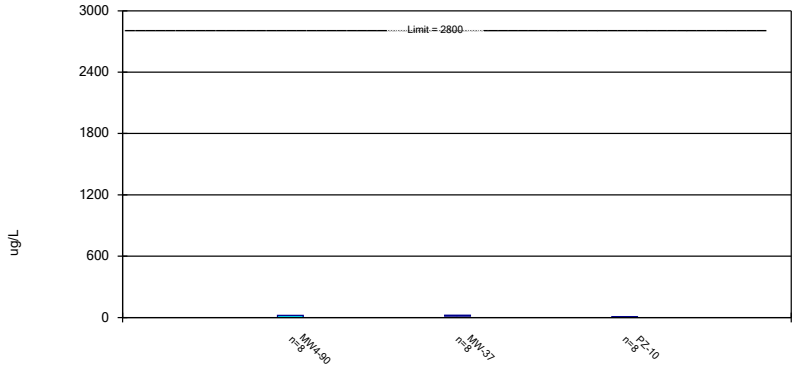


Constituent: Chlorobenzene Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

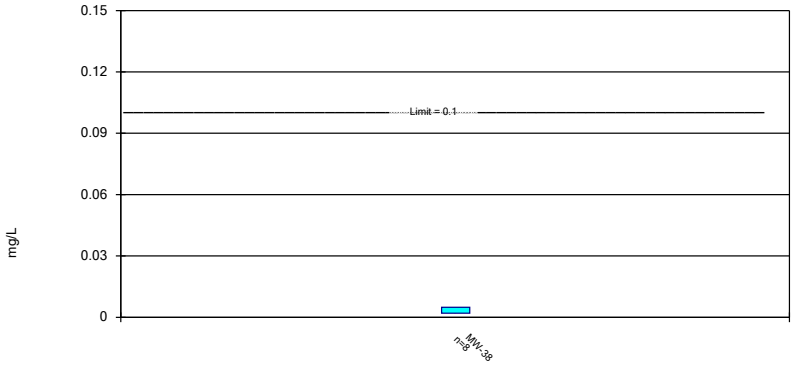


Constituent: Chloroethane Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

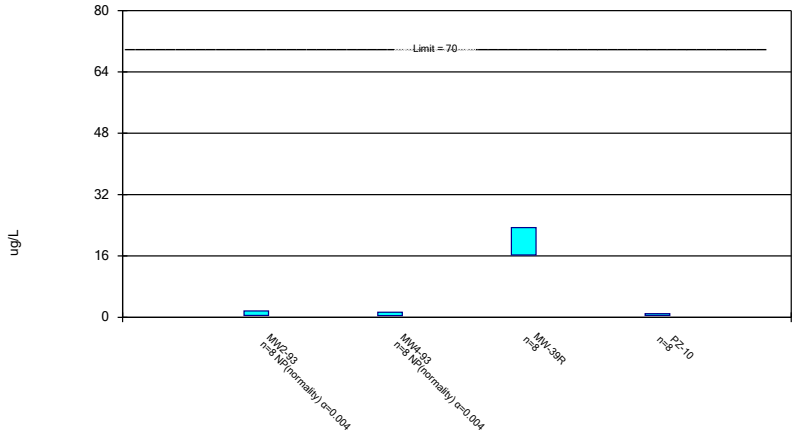


Constituent: Chromium Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

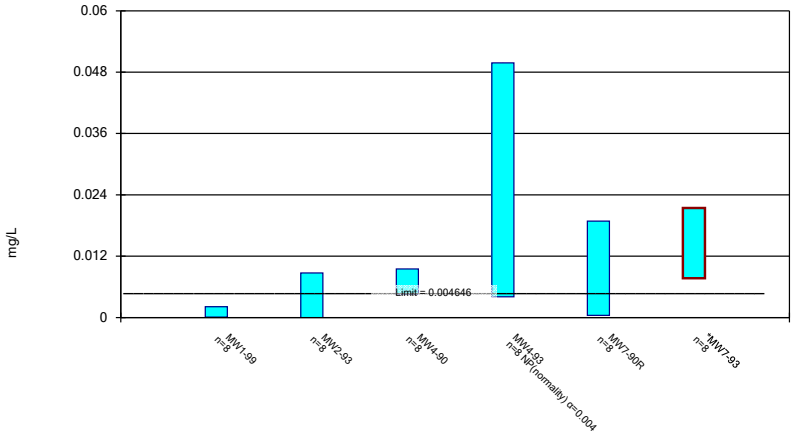


Constituent: cis-1,2-Dichloroethene Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Inter
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk at Alpha = 0.01.

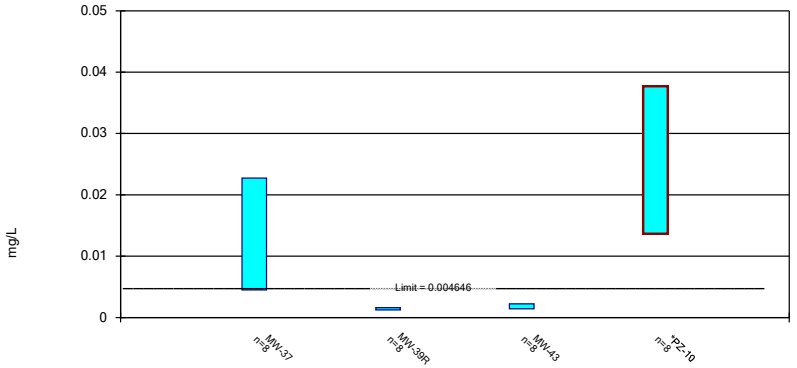


Constituent: Cobalt Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk at Alpha = 0.01.

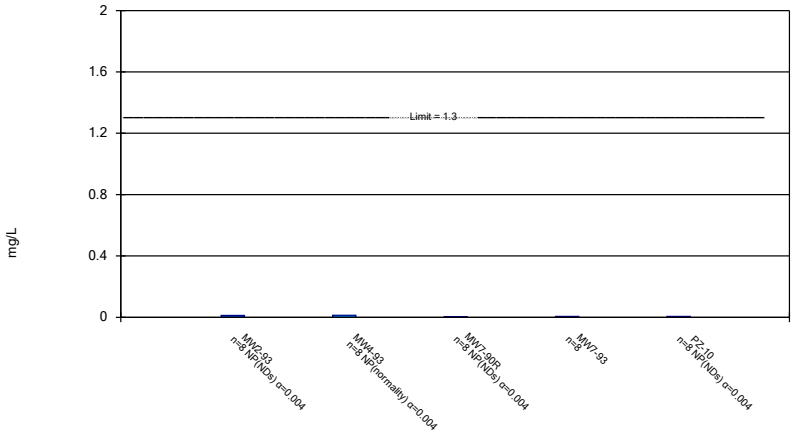


Constituent: Cobalt Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

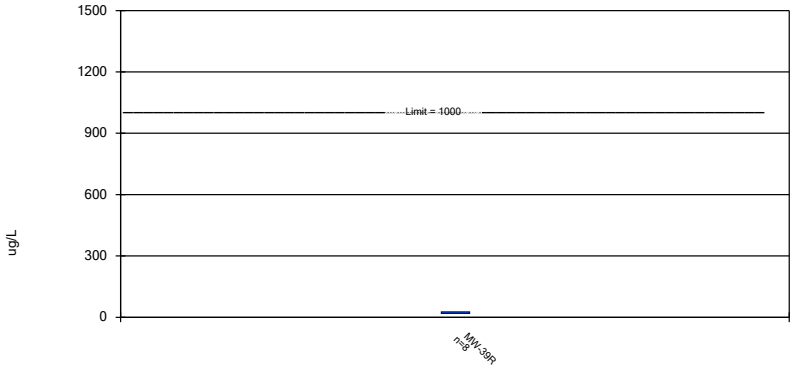


Constituent: Copper Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

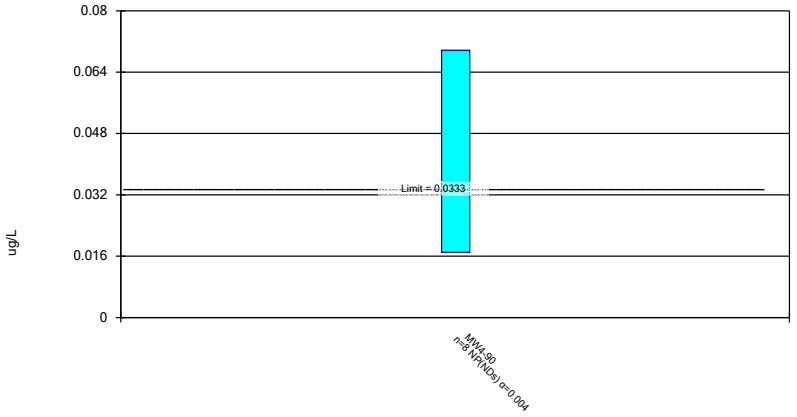


Constituent: Dichlorodifluoromethane Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Int
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

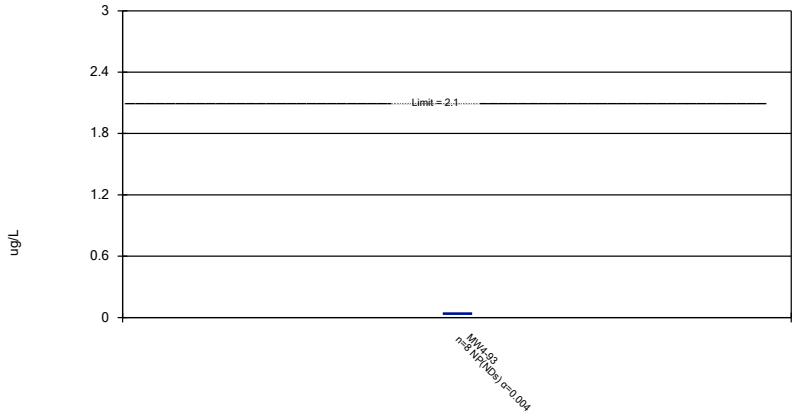


Constituent: Endosulfan sulfate Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

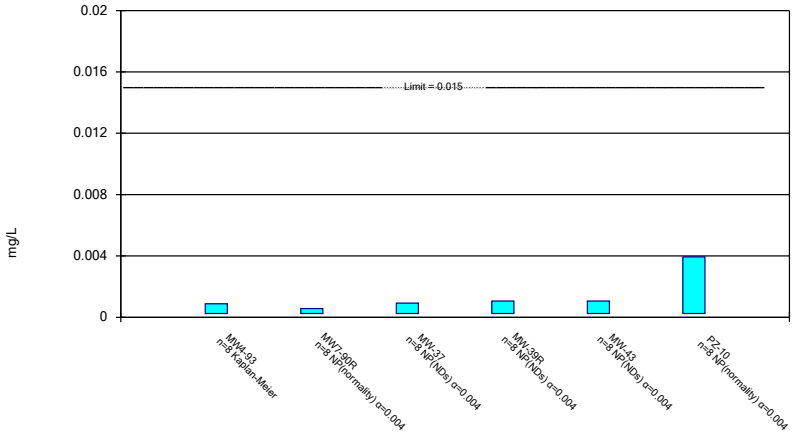


Constituent: Endrin aldehyde Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

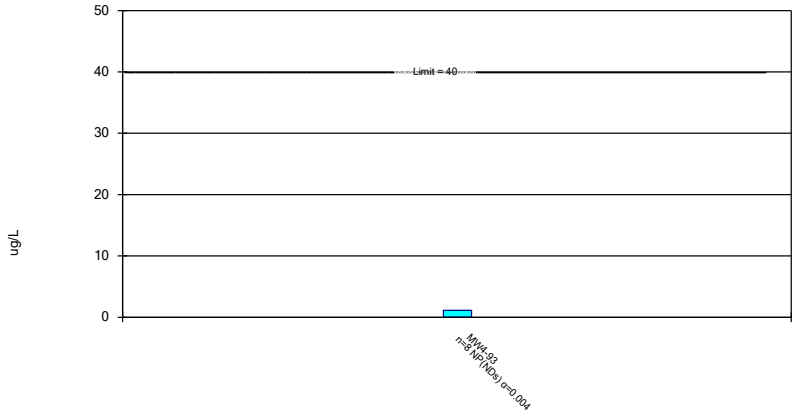


Constituent: Lead Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

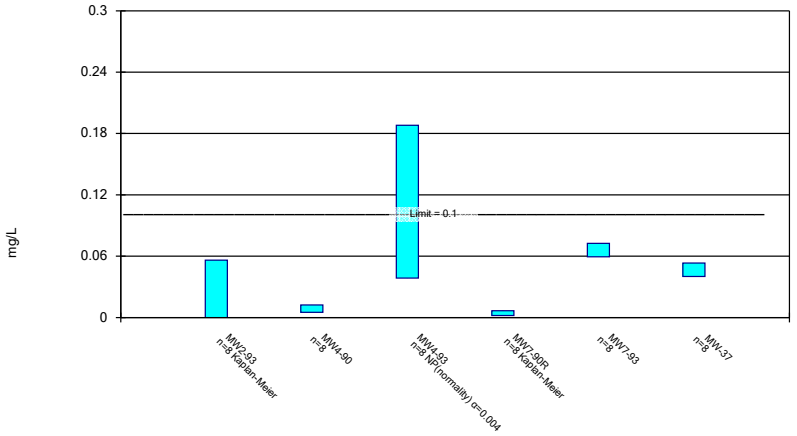


Constituent: Methoxychlor Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric and Non-Parametric (NP) Confidence Interval

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

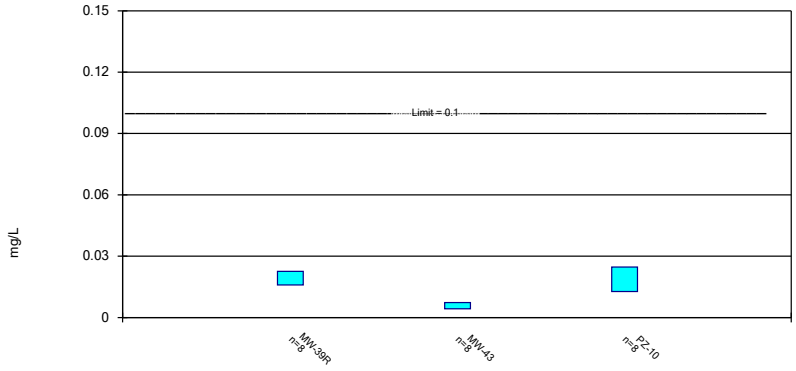


Constituent: Nickel Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

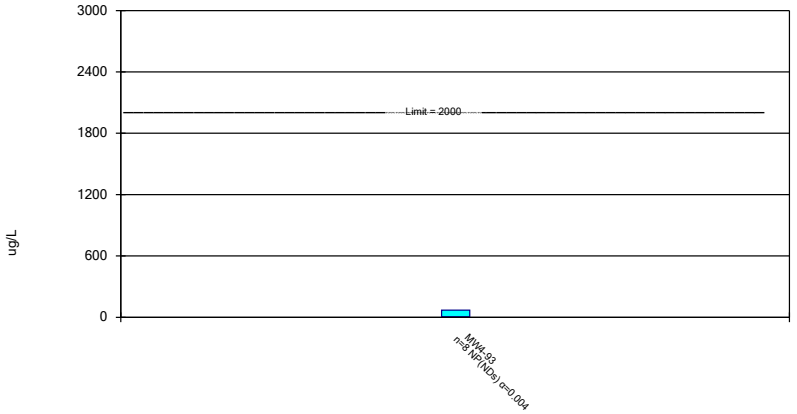


Constituent: Nickel Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

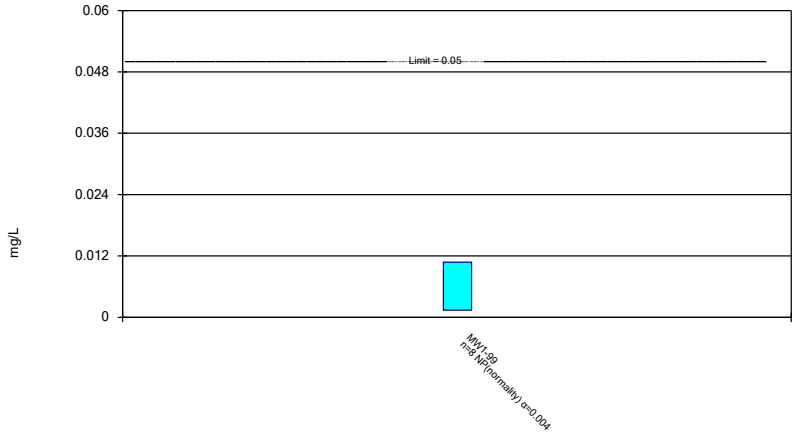


Constituent: Phenol Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

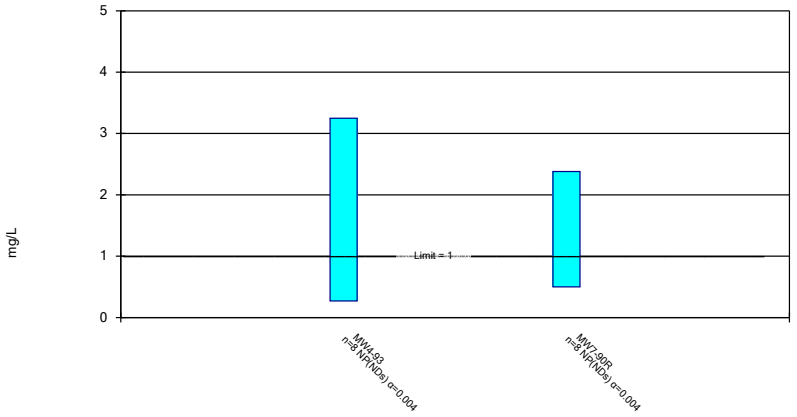


Constituent: Selenium Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

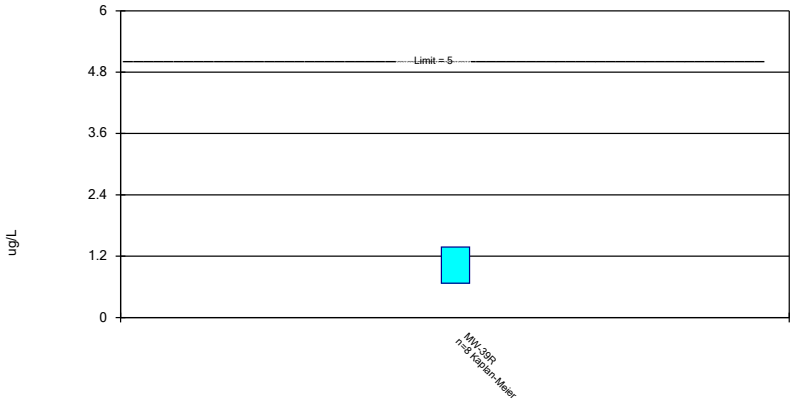


Constituent: Sulfide Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

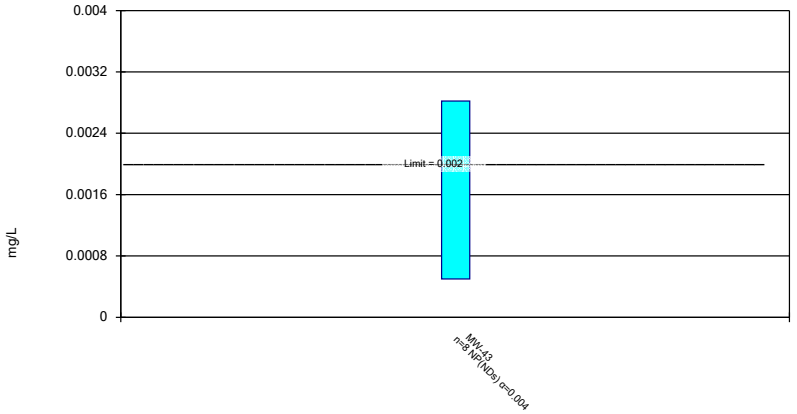


Constituent: Tetrachloroethene Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

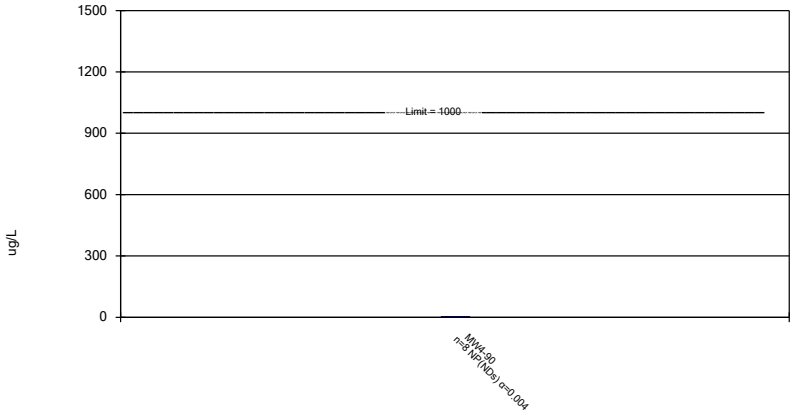


Constituent: Thallium Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

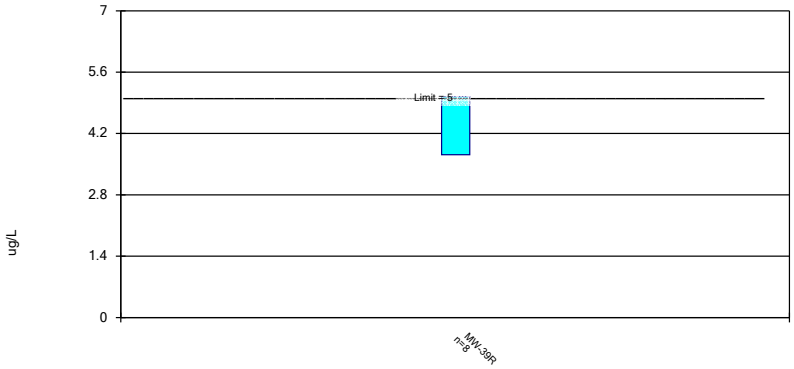


Constituent: Toluene Analysis Run 1/24/2025 3:53 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

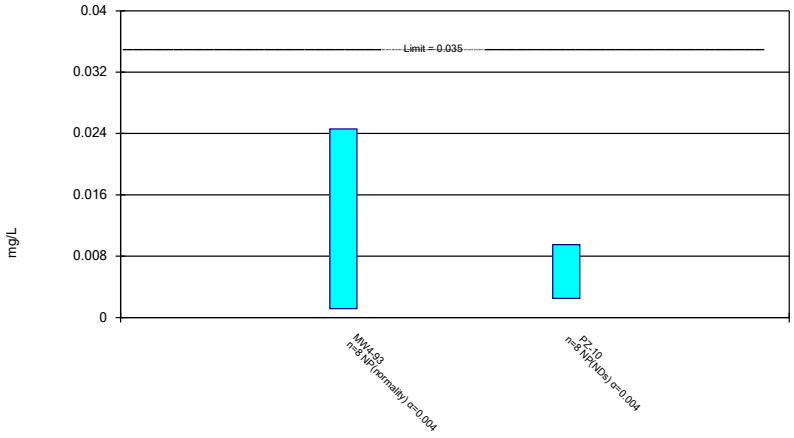


Constituent: Trichloroethene Analysis Run 1/24/2025 3:54 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

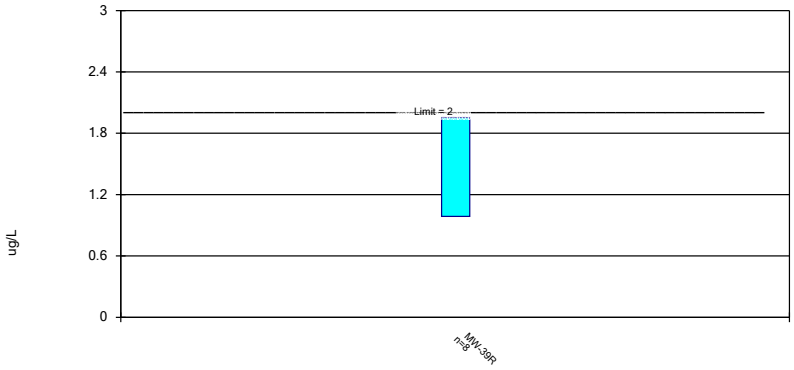


Constituent: Vanadium Analysis Run 1/24/2025 3:54 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Parametric Confidence Interval

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

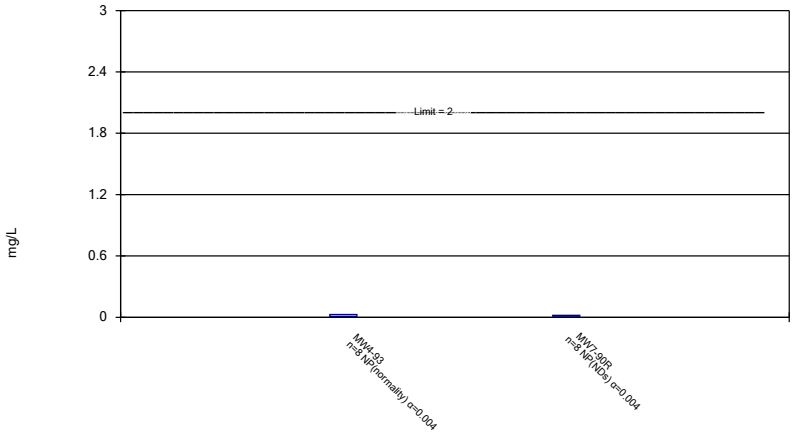


Constituent: Vinyl Chloride Analysis Run 1/24/2025 3:54 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Constituent: Zinc Analysis Run 1/24/2025 3:54 PM View: 2024AWQR-Confidence_Interval
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Theil-Sen Confidence Bands Summary Table and Graphs

Theil Sen/Trend Test

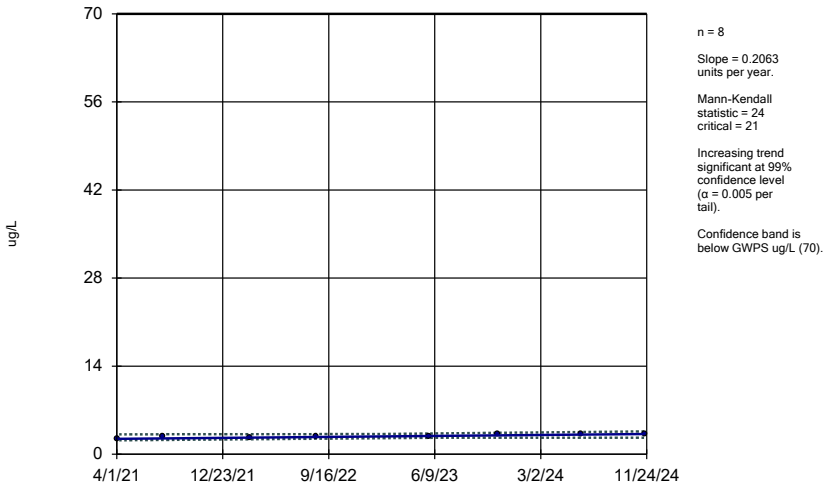
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM Printed 1/24/2025, 4:02 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Alpha	Method
cis-1,2-Dichloroethene (ug/L)	**MW-37**	**0.2063**	**24**	**21**	**Yes**	**8**	**0**	**0.01**	**NP**
Selenium (mg/L)	**MW-38**	**0.0009226**	**24**	**21**	**Yes**	**8**	**0**	**0.01**	**NP**
Vinyl Chloride (ug/L)	**MW-37**	**-0.2392**	**-22**	**-21**	**Yes**	**8**	**12.5**	**0.01**	**NP**

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope and 99% Confidence Band

MW-37



n = 8

Slope = 0.2063 units per year.

Mann-Kendall statistic = 24
critical = 21

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Confidence band is below GWPS ug/L (70).

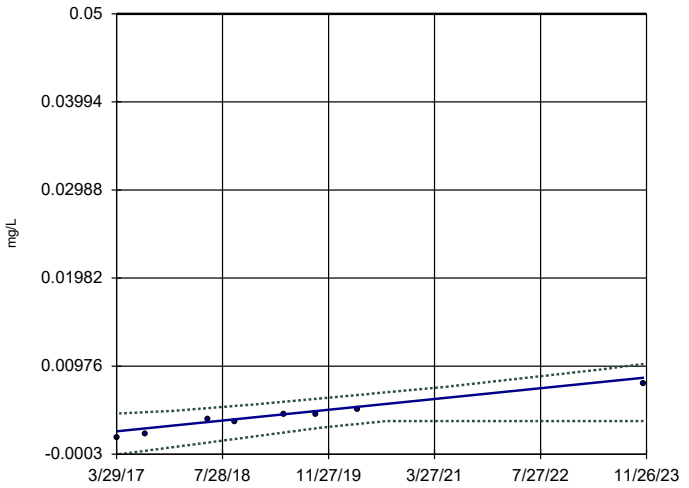
Constituent: cis-1,2-Dichloroethene Analysis Run 1/24/2025 4:01 PM View: 2024AWQR-Theil_Sen

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Sen's Slope and 99% Confidence Band

MW-38



n = 8

Slope = 0.0009226 units per year.

Mann-Kendall statistic = 24
critical = 21

Increasing trend significant at 99% confidence level (α = 0.005 per tail).

Confidence band is below GWPS ug/L (0.05).

Constituent: Selenium Analysis Run 1/24/2025 4:01 PM View: 2024AWQR-Theil_Sen

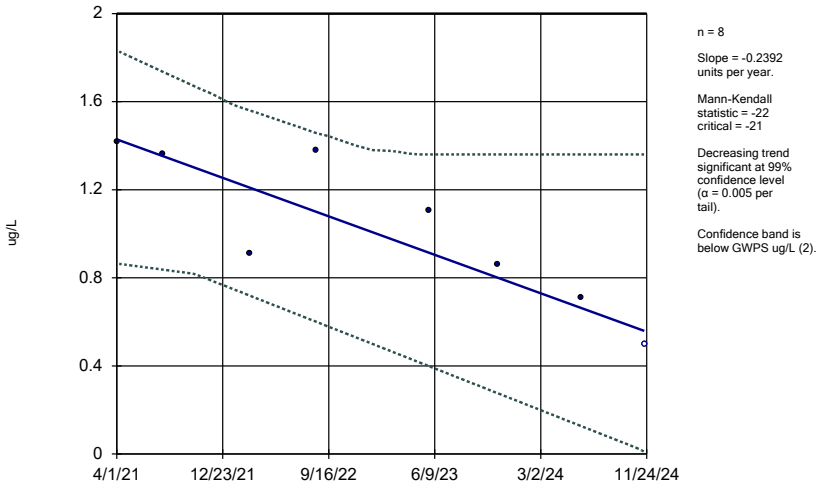
Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Sanitas™ v.10.0.24 Software licensed to SCS Engineers. UG

Hollow symbols indicate censored values.

Sen's Slope and 99% Confidence Band

MW-37



n = 8

Slope = -0.2392 units per year.

Mann-Kendall statistic = -22
critical = -21

Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Confidence band is below GWPS ug/L (2).

Constituent: Vinyl Chloride Analysis Run 1/24/2025 4:01 PM View: 2024AWQR-Theil_Sen

Des Moines County Regional SLF Client: SCS Engineers Data: DMCSW-2024-AWQR-MasterAM

Appendix E

Leachate Control System Performance Evaluation Report

2024 LEACHATE CONTROL SYSTEM PERFORMANCE EVALUATION REPORT
FOR
DES MOINES COUNTY REGIONAL SANITARY LANDFILL

WEST BURLINGTON, IOWA

SUBMITTAL DATE: FEBUARY 2025

PREPARED FOR:
DES MOINES COUNTY REGIONAL SOLID WASTE COMMISSION

PREPARED BY:
SCS ENGINEERS

Table of Contents

Section 1.0 Description of Existing Leachate Control System 1-1

1.1 LOCATION OF CONTROL SYSTEM 1-1

1.2 EFFECTIVENESS OF THE LEACHATE CONTROL SYSTEM 1-1

1.3 APPROVED CHANGES TO SYSTEM 1-3

1.4 PROPOSED CHANGES TO SYSTEM 1-3

Section 2.0 Maintenance 2-1

2.1 MAINTENANCE PERFORMED ON PUMPS, VALVES, TANKS, LAGOONS, CONTROLS, ETC. 2-1

2.2 RECOMMENDATIONS 2-1

List of Figures

Figure E-1 Site Map with Leachate System 2-2

Attachments

ATTACHMENT A LEACHATE MANAGEMENT SUMMARY

ATTACHMENT B HISTORICAL LEACHATE COLUMN THICKNESSES

ATTACHMENT C HISTORICAL LEACHATE COLUMN THICKNESS GRAPHS

ATTACHMENT D LEACHATE ANALYTICAL DATA SHEETS

Section 1.0
Description of Existing Leachate Control System

SCS Engineers (SCS), on behalf of the Des Moines County Regional Solid Waste Commission (Commission), has prepared this Leachate Control System Performance Evaluation Report (LCSPER) for the Des Moines County Regional Sanitary Landfill (Landfill). This LCSPER was prepared in general accordance with the requirements of Iowa Administrative Code (IAC) 567-113.7(5)"b"(14) and additional Iowa Department of Natural Resources (DNR) requirements specified in the Landfill's operating permit issued on January 3, 2024 (Doc #108566). This LCSPER describes the leachate control system monitoring program, provides an evaluation of the effectiveness of the system, and, if necessary, makes recommendations for additional control measures. The reporting period for this LCSPER is January through December 2024.

1.1 Location of Control System

The Landfill is generally described as a portion of the SW ¼ of the SE ¼ and a portion of the SW ¼ of Section 15; a portion of the E ½ of the SE ¼ and a portion of the E ½ of the NW ¼ of Section 21; the N ½ of the SW ¼ , the W ½ of the NW ¼, and a portion of the E ½ of the NW ¼ of Section 22, all in Township 70 North, Range 3 West, Des Moines County, Iowa.

The constructed areas include Cells 1 and 2 (alternatively clay-lined Subtitle D cells), Cells 3, 4, and 5 (Subtitle D composite-lined cells) and associated abutments, Cell 1 West (clay-lined construction and demolition (C & D) cell), and a closed area that does not have a constructed liner (unlined area). Leachate is collected from the lined areas and abutments via leachate underdrains and from the unlined area via toe drains and extraction wells. In addition, groundwater from the underdrains beneath Cells 1, 3, and 4 is collected and treated with the leachate. A supervisory control and data acquisition (SCADA) system is used to monitor a majority of the leachate control system.

The leachate column thickness is required to be less than 15 feet in a portion of the unlined areas as noted in the 2007 Supplemental Leachate Control Plan (SLCP). The remainder of the unlined areas require the "lowest possible leachate head" as they are not over a Subtitle D-compliant liner and do not have a leachate drainage layer. The lined areas require maintenance of less than 12 inches of leachate thickness over the liner.

1.2 Effectiveness of the Leachate Control System

The Leachate Management Summary table in Attachment A provides monthly leachate column thicknesses for the Landfill. As noted above, most of the unlined areas leachate wells were required to have a leachate column thickness less than 15 feet; this requirement was met during the 2024 reporting period. Lined area leachate wells require maintenance of thickness less than 12 inches over the liner, this requirement was met with the exception of leachate wells LPZ-6, LM-1, LM-2, and an erroneous measurement at leachate well LPZ-3 in March 2024. LPZ-6 is in the Cell 5 sump, and approximately 2 feet below the liner. Thichness measurements in LM-1 and LM-2 were consistent with the prior reporting period.

Leachate thickness trends are described below, and a historical table and graphs are included in Attachments B and C, respectively.

Unlined Cells

LW-3 – Leachate thicknesses during this reporting period were generally stable with column thickness around 16 feet and within the historical range.

LW-4R – Leachate column thickness was high in Q1 with a thickness of 12.99 in February but remained below 4 feet for the remaining months during the 2024 reporting period with a low of 2.13 feet in July 2024.

LW-6R – Leachate thicknesses were generally stable with column thickness of approximately 3 feet with the exception of 11.47 feet in June. Thicknesses were within the historical range.

LW-7R – Leachate thicknesses ranged from 6.33 feet in March 2024 to 16.65 feet in September 2024 and were within the historical range. No measurement was available for November 2024 due to equipment malfunction.

LW-8R – Leachate thicknesses were generally stable with a column thickness of approximately 11 feet throughout the reporting period and were within the historical range.

LW-9R – Leachate thicknesses ranged from 5.22 in October 2024 to 11.94 in July 2024 and were withing the historic range.

LW-10 – Leachate thicknesses during this period were generally stable around 5.7 feet and were within the historical range.

LW-11R – Leachate column thicknesses were higher at the beginning of this period; the largest column thickness was 9.47 in January 2024. Column thickness decreased in March and remained generally stable around 7 feet for the remainder of this period.

LW-12R – Leachate thickness measurements ranged from 9.57 in January 2024, to 19.22 in May 2024. Column thickness remained within the historical range.

LW-13R – Leachate thicknesses measurements were generally stable around 14 feet throughout the reporting period.

LW-14 – Leachate thicknesses measurements were generally stable around 3.95 feet, the exception of 7.55 feet was measured in July 2024. No measurement was available in November 2024.

LW-15 – Leachate thicknesses measurements ranged from 4.70 feet in November 2024 to 11.17 feet in February 2024 and were within the historical range.

LW-16 – Leachate thicknesses during this period were generally stable around 6.30 feet and were within the historical range.

Lined Cells

LPZ-3 – The piezometer was dry during most of this period with some measurements of 0.10 feet, with the exception of one measurement that measured 27.90 in March 2024. This measurement appears erroneous.

LPZ-4 – The piezometer was dry during most of this period with measurements of 0.10 feet in quarter one and quarter four.

LPZ-5 – The piezometer measurements ranged from 0.10 feet in January 2024 to 0.40 feet in December 2024. Four of the months were reported dry.

LPZ-6 – The piezometer measurements were generally stable around 3.10 feet. No measurements were available for December 2024.

LPZ-7 – The piezometer measurements were generally stable around 0.28 feet with the exception of 11.58 feet in December 2024. This measurement appear erroneous and will be verified with the 2025 measurements.

LPZ-C1W – The piezometer measurements ranged from 0.10 feet in January 2024 to 0.40 feet in December 2024. Four of the months were reported dry.

LM-1 – The piezometer measurements were generally stable around 9.00 feet and were within historical range.

LM-2 – The piezometer measurements were stable at 12.63 feet throughout the period and were within the historical range.

1.3 Approved Changes to System

There were no approved changes to the monitoring or control systems during this reporting period.

1.4 Proposed Changes to System

There are no proposed changes to the monitoring or control systems at this time.

Section 2.0
Maintenance

2.1 Maintenance Performed on Pumps, Valves, Tanks, Lagoons, Controls, etc.

No maintenance was performed during the 2024 reporting period.

2.2 Recommendations

SCS recommends the following to maintain leachate control at the Des Moines County Regional Sanitary Landfill:

- Continue monthly measurements of leachate head levels in leachate piezometers. In addition, as leachate levels are collected, continue measuring the total depth of each leachate piezometer in order to maintain a record of leachate well extensions as they occur during filling operations or to verify the integrity of the leachate piezometers in the closed area.
- Continue recording the volume of leachate pumped to the City of West Burlington Wastewater Treatment Plant via the direct force main.
- Continue recording the volume of leachate recirculated in the leachate recirculation blanket and injection trench systems as well as by surface application methods.
- Continue cleaning the leachate collection system once every three years or more frequently if leachate head or the volume of leachate collected indicates cleanout is necessary.

E 2275500 E 2276000 E 2276500 E 2277000 E 2277500 E 2278000 E 2278500 E 2279000 E 2279500 E 2280000

N 320000 N 319500 N 319000 N 318500 N 318000 N 317500 N 317000 N 316500

COMPOST AREA
YARD WASTE DROP-OFF AREA
WEST LAGOON
CELL 1W AND WEST LAGOON PUMP STATION
CELL 1W
CELL 1
CELL 2
CELL 3
CELL 4
CELL 5
BORROW AREA
AREA 1A
AREA 1B
AREA 1C
AREA 4B
AREA 4C
UNLINED AREA (CLOSED)
CITY/COUNTY AREA (CLOSED)
EAST LAGOON
GLASS PROCESSING AREA
MAINTENANCE SHOP
AST
RECIRCULATION AND EAST LAGOON PUMP STATION
MAIN LIFT STATION LS-1
NEW PUMP STATION, PS-1, DAY TANK, DT, WEST BURLINGTON LIFT STATION, LS-2
EVAPORATOR
OFFICE/SCALE HOUSE/HHM-REGIONAL COLLECTION CENTER
SCALE
PUBLIC SOLID WASTE DROP-OFF AREA
GEO POND
WINDMILL

GW-LAGOONS-CELL-1W
GW-LAGOONS-2
GW-LAGOONS-00
GW-SUMP2
GWP-1W
GWP-1
LFGW-W1
LFGW-W2

PZ1-98 PZ2-98 PZ-10 PZ-11
LW-1 LW-3 LW-4R (PUMP) LW-4-NEW (NOT USED) LW-4-OLD (NOT USED) LW-7 LW-7R (PUMP) LW-8R (PUMP) LW-9R (PUMP) LW-10 (PUMP) LW-11R (PUMP) LW-12 (PUMP) LW-12R LW-13R (PUMP) LW-14 (PUMP) LW-15 (PUMP) LW-16 LW-6R (PUMP) LW-2
PZ-6A (NOT USED) PZ-7A (NOT USED) PZ-8R (NOT USED) PZ-9A (NOT USED)
LPZ-1R (NOT USED) LPZ-2R (NOT USED) LPZ-3 LPZ-5 LPZ-6 LPZ-7 LPZ1C1W
LM-1 LM-2
MW1-97 MW2-98 MW3-98 MW4-98 MW1-99 MW2-99 MW1-93 MW2-93 MW3-93 MW4-93 MW5-93 MW-37 MW-38 MW-39 MW-39R MW-40 MW-40R MW-41 MW-43 MW-44 MW4-89 MW4-90 MW5-90 MW6-90 MW7-90R MW8-90R MW9-90 P6B-90 P6C-90 P8B-90 P8C-90 P9B-90 MW6-93

WASTE PROP FML EAST SS

LEGEND

- EXISTING GROUND SURFACE (2 FT. CONTOUR INTERVAL)
- APPROXIMATE EXISTING WASTE BOUNDARY
- LOCATED EXISTING WASTE BOUNDARY
- FUTURE WASTE BOUNDARY
- FML BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- BUILDING
- GRAVEL ROAD
- PAVED ROAD
- FENCELINE
- CULVERT
- EXISTING CELL BOUNDARY
- UNDERGROUND ELECTRIC LINE
- MONITORING WELL
- LEACHATE EXTRACTION WELL
- LEACHATE PIEZOMETER
- GROUNDWATER PIEZOMETER
- LANDFILL GAS WELL
- GROUND WATER UNDERDRAIN DISCHARGE
- SURVEY CONTROL/BENCHMARK
- TREE LINE
- SINGLE TREE
- POLE
- LEACHATE PIPING (SOLID/PERF.)
- LEACHATE CLEANOUT
- LEACHATE MANHOLE
- LEACHATE VALVE
- LEACHATE LIFT STATION
- LEACHATE MONITORING POINT LOCATION

200 0 200 400
SCALE FEET

REV.	DATE	CK BY
	-	-
	-	-
	-	-
	-	-
	-	-
	-	-

SHEET TITLE
SITE MAP WITH LEACHATE SYSTEM

PROJECT TITLE
DES MOINES COUNTY REGIONAL SANITARY LANDFILL 2024 LCSPER

CLIENT
DES MOINES COUNTY REGIONAL SOLID WASTE COMMISSION
13758 WASHINGTON ROAD
WEST BURLINGTON, IA 52655

SCS ENGINEERS
1690 ALL STATE COURT, SUITE 100
WEST DES MOINES, IA 50265
PH. (515) 631-6160

PROJ. NO. 27224414.25
DSN. BY: CTC
DWN. BY: CTC
CHK. BY: BM
PROJ. MGR: BM

CADD FILE: DMCSW_2023 LCSPER.DWG

DATE: 4/5/24

FIGURE NO.
E-1

\\DES-FS01\DESMOINES\PROJECT\27223154.24\DATA AND CALCULATIONS\LCSPER\CAD\DMCSW_2023 LCSPER.DWG

Attachment A

Leachate Management Summary

Leachate Management Summary
2024 Leachate Collection System Performance Evaluation Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Month	Unlined Cells - Column Thickness (ft) [1]													Lined Cells - Maximum Head on Liner (ft) [1,2]								Volume Recirculated (gal)		Pumped to City of West Burlington WWTP (gal)	Precipitation (in) [3]
	LW-3	LW-4R	LW-6R	LW-7R	LW-8R	LW-9R	LW-10	LW-11R	LW-12R	LW-13R	LW-14	LW-15	LW-16	LPZ-3	LPZ-4	LPZ-5	LPZ-6	LPZ-7	LPZ-C1W	LM-1	LM-2	Trenches	Working Face		
January	17.60	10.66	3.50	13.84	11.35	7.77	6.30	9.47	9.57	14.08	4.52	8.35	5.95	0.10	0.10	0.10	2.34	0.28	0.10	9.01	12.63			0	1.91
February	15.20	12.99	2.91	12.48	11.37	7.67	5.60	9.08	10.38	14.21	7.41	11.14	6.46	0.10	0.10	0.20	3.02	0.28	0.20	9.02	12.63			688,099	0.04
March	DRY	2.43	2.90	6.33	11.32	7.60	5.70	6.70	10.32	14.14	7.17	8.62	6.26	27.90	DRY	DRY	3.07	0.27	DRY	9.01	12.63			1,307,121	5.42
April	17.40	2.25	2.93	11.85	11.66	7.88	5.70	6.75	10.26	14.12	3.95	11.17	6.23	DRY	DRY	0.20	3.32	0.28	0.20	9.01	12.63			1,224,184	7.00
May	17.20	2.38	3.09	10.79	11.75	8.23	5.70	6.92	19.22	14.18	3.93	4.85	6.39	DRY	DRY	0.20	3.17	0.27	0.20	9.02	12.63			885,001	3.18
June	16.90	2.34	4.26	11.47	11.59	8.09	5.70	6.75	18.73	14.24	3.97	4.92	6.30	DRY	DRY	0.10	3.33	0.27	0.10	9.02	12.63			0	2.98
July	16.70	2.13	11.44	6.62	11.62	11.94	5.60	6.82	17.09	14.13	7.55	4.85	6.26	DRY	DRY	DRY	3.26	0.28	DRY	9.00	12.63			0	6.69
August	16.30	4.38	2.85	6.66	11.69	5.25	6.20	6.92	10.32	14.18	3.95	4.86	6.27	DRY	DRY	DRY	3.24	0.28	DRY	9.01	12.63			822,580	1.34
September	16.50	3.88	2.85	16.65	11.16	5.45	6.20	6.50	10.32	14.11	3.89	9.85	6.40	0.10	DRY	DRY	3.31	0.28	DRY	9.01	12.63			0	0.61
October	15.70	4.32	3.04	11.86	11.31	5.22	5.90	8.35	10.38	13.86	3.91	11.07	5.89	0.10	0.10	0.10	3.27	0.27	0.10	9.02	12.63			0	1.85
November	15.60	4.28	3.25	NM	10.45	5.29	5.80	6.70	10.36	13.64	NM	4.70	6.01	0.10	0.10	0.10	3.25	0.28	0.10	9.01	12.63			684,155	2.54
December	15.30	4.07	2.87	6.87	10.63	5.24	5.90	6.89	10.11	13.90	3.95	11.11	6.05	DRY	DRY	0.40	NM	11.58	0.40	9.00	12.63			0	0.84
Reporting Period Total																						0	0	5,611,140	34.40

Notes:

(1) Levels for points in "Unlined Cells", with the exception of LW-3 and LW-16, shall be less than 15'; levels for points in "Lined Cells" shall be less than 12".

(2) LPZ-6 is in the Cell 5 sump, approximately 2' below the liner surface. LPZ-7 is on the Cell 5 liner.

(3) Precipitation data obtained from weather station located in Burlington, Iowa (approximately 3.4 miles from landfill).
URL: https://www.wunderground.com/history/daily/us/ia/burlington/KBRL

(4) Measurments not collected by SCADA are collected by landfill staff.

NM- Not Measured, transducer malfunction.

Comments:

1) The operating permit issued January 3, 2024 (Doc #108566) requires monthly leachate head level and elevation measurements.
2) The operating permit issued January 3, 2024 (Doc #108566) requires the permit holder to record the volume of leachate collected and transported to the treatment works.
3) Reporting Period: January 2024 through December 2024.
4) Approved Changes to Leachate Collection System: See Section 1.3.
5) Proposed Changes to Leachate Collection System: See Section 1.4.
6) Date of Last Cleaning and Inspection: October 2022.
7) Date of Next Cleaning and Inspection: October 2025.
8) Volume of Leachate Recirculated: 0 gallons.
9) Volume of Leachate Treated Off-Site: Approximately 5,611,140 gallons of leachate were pumped to the City of West Burlington POTW via the direct connection.
10) Volume of Leachate Treated On-Site: The evaporator system was not operated during the reporting period.
11) The total storage capacity of the three leachate lagoons is approximately 1,924,969 gallons (956,711 gallons in east lagoons, 968,258 gallons in west lagoon).
12) Historical leachate levels and graphs are provided in Attachments B and C, respectively.
13) Laboratory testing results of the leachate samples are provided in Attachment D.

Attachment B

Historical Leachate Column Thicknesses

Leachate Management Summary
2024 Leachate Collection System Performance Evaluation Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Month	Unlined Cells - Column Thickness (ft) [1]													Lined Cells - Maximum Head on Liner (ft) [1,2]								Volume Recirculated (gal)		Pumped to City of West Burlington WWTP (gal)	Precipitation (in) [3]
	LW-3	LW-4R	LW-6R	LW-7R	LW-8R	LW-9R	LW-10	LW-11R	LW-12R	LW-13R	LW-14	LW-15	LW-16	LPZ-3	LPZ-4	LPZ-5	LPZ-6	LPZ-7	LPZ-C1W	LM-1	LM-2	Trenches	Working Face		
January	17.60	10.66	3.50	13.84	11.35	7.77	6.30	9.47	9.57	14.08	4.52	8.35	5.95	0.10	0.10	0.10	2.34	0.28	0.10	9.01	12.63			0	1.91
February	15.20	12.99	2.91	12.48	11.37	7.67	5.60	9.08	10.38	14.21	7.41	11.14	6.46	0.10	0.10	0.20	3.02	0.28	0.20	9.02	12.63			688,099	0.04
March	DRY	2.43	2.90	6.33	11.32	7.60	5.70	6.70	10.32	14.14	7.17	8.62	6.26	27.90	DRY	DRY	3.07	0.27	DRY	9.01	12.63			1,307,121	5.42
April	17.40	2.25	2.93	11.85	11.66	7.88	5.70	6.75	10.26	14.12	3.95	11.17	6.23	DRY	DRY	0.20	3.32	0.28	0.20	9.01	12.63			1,224,184	7.00
May	17.20	2.38	3.09	10.79	11.75	8.23	5.70	6.92	19.22	14.18	3.93	4.85	6.39	DRY	DRY	0.20	3.17	0.27	0.20	9.02	12.63			885,001	3.18
June	16.90	2.34	4.26	11.47	11.59	8.09	5.70	6.75	18.73	14.24	3.97	4.92	6.30	DRY	DRY	0.10	3.33	0.27	0.10	9.02	12.63			0	2.98
July	16.70	2.13	11.44	6.62	11.62	11.94	5.60	6.82	17.09	14.13	7.55	4.85	6.26	DRY	DRY	DRY	3.26	0.28	DRY	9.00	12.63			0	6.69
August	16.30	4.38	2.85	6.66	11.69	5.25	6.20	6.92	10.32	14.18	3.95	4.86	6.27	DRY	DRY	DRY	3.24	0.28	DRY	9.01	12.63			822,580	1.34
September	16.50	3.88	2.85	16.65	11.16	5.45	6.20	6.50	10.32	14.11	3.89	9.85	6.40	0.10	DRY	DRY	3.31	0.28	DRY	9.01	12.63			0	0.61
October	15.70	4.32	3.04	11.86	11.31	5.22	5.90	8.35	10.38	13.86	3.91	11.07	5.89	0.10	0.10	0.10	3.27	0.27	0.10	9.02	12.63			0	1.85
November	15.60	4.28	3.25	NM	10.45	5.29	5.80	6.70	10.36	13.64	NM	4.70	6.01	0.10	0.10	0.10	3.25	0.28	0.10	9.01	12.63			684,155	2.54
December	15.30	4.07	2.87	6.87	10.63	5.24	5.90	6.89	10.11	13.90	3.95	11.11	6.05	DRY	DRY	0.40	NM	11.58	0.40	9.00	12.63			0	0.84
Reporting Period Total																						0	0	5,611,140	34.40

Notes:

(1) Levels for points in "Unlined Cells", with the exception of LW-3 and LW-16, shall be less than 15'; levels for points in "Lined Cells" shall be less than 12".

(2) LPZ-6 is in the Cell 5 sump, approximately 2' below the liner surface. LPZ-7 is on the Cell 5 liner.

(3) Precipitation data obtained from weather station located in Burlington, Iowa (approximately 3.4 miles from landfill).
URL: https://www.wunderground.com/history/daily/us/ia/burlington/KBRL

(4) Measurments not collected by SCADA are collected by landfill staff.

NM- Not Measured, transducer malfunction.

Comments:

1) The operating permit issued January 3, 2024 (Doc #108566) requires monthly leachate head level and elevation measurements.
2) The operating permit issued January 3, 2024 (Doc #108566) requires the permit holder to record the volume of leachate collected and transported to the treatment works.
3) Reporting Period: January 2024 through December 2024.
4) Approved Changes to Leachate Collection System: See Section 1.3.
5) Proposed Changes to Leachate Collection System: See Section 1.4.
6) Date of Last Cleaning and Inspection: October 2022.
7) Date of Next Cleaning and Inspection: October 2025.
8) Volume of Leachate Recirculated: 0 gallons.
9) Volume of Leachate Treated Off-Site: Approximately 5,611,140 gallons of leachate were pumped to the City of West Burlington POTW via the direct connection.
10) Volume of Leachate Treated On-Site: The evaporator system was not operated during the reporting period.
11) The total storage capacity of the three leachate lagoons is approximately 1,924,969 gallons (956,711 gallons in east lagoons, 968,258 gallons in west lagoon).
12) Historical leachate levels and graphs are provided in Attachments B and C, respectively.
13) Laboratory testing results of the leachate samples are provided in Attachment D.

Historical Leachate Column Thicknesses
2023 Leachate Control System Performance Evaluation Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Leachate Piezometer		Date of Measurement																										
		10/24/05	4/3/06	10/12/06	3/28/07	10/4/07	4/29/08	9/12/08	4/23/09	5/18/2009*	6/24/2009*	7/2/09	8/5/09	8/28/2009*	9/10/09	10/7/09	11/5/09	12/1/09	1/14/10	2/19/10	3/19/10	4/28/10	5/25/10	6/7/2010*	7/23/10	8/18/10	9/17/10	10/20/10*	10/27/10
LW-3	FLUID LEVEL	Dry	Dry	Dry	Dry	8.50	Dry	22.10	8.30	14.35	7.21	15.40	Dry	Dry	Dry	Dry	Dry	Dry	Dry	NM	NM	5.00	NM	0.00	NM	5.70	6.20	5.34	10.00
	MEASURED PIEZO DEPTH	22.30	22.20	22.00	22.26	NM	23.00	23.20	22.35	22.00	22.00	22.20	22.30	22.01	22.20	22.30	22.40	22.20	22.10	22.80	22.30	22.40	22.40	22.20	22.40	28.10	28.00	27.90	28.00
	MEASURED COLUMN THICKNESS	0.00	0.00	0.00	0.00	NA	0.00	1.10	13.90	7.85	14.99	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.20	0.00	22.20	0.00	22.50	22.00	22.86	18.20
LW-4R (3)	FLUID LEVEL	Installed May 2009, collapsed, and replaced														24.40	24.70	24.90	25.00	NM	NM	29.96	29.96	30.04	30.09	54.99	51.89	61.00	57.84
	MEASURED PIEZO DEPTH															49.80	55.20	55.70	60.50	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS															55.60	55.30	55.10	55.00	NA	NA	53.64	53.64	53.56	53.51	28.61	31.71	22.60	25.76
LW-6R	FLUID LEVEL	Installed May 2009								32.10	25.72	25.90	26.10	25.85	26.30	24.60	23.90	25.90	27.20	NM	NM	29.36	37.67	51.18	52.68	42.56	50.01	44.38	45.24
	MEASURED PIEZO DEPTH									72.20	68.90	72.10	70.90	68.45	70.20	69.20	68.30	69.30	67.80	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS									42.90	49.28	49.10	48.90	49.15	48.70	50.40	51.10	49.10	44.80	NA	NA	48.74	40.43	26.92	25.42	35.54	28.09	33.72	32.86
LW-7R	FLUID LEVEL	Installed May 2009								13.60	24.97	25.30	25.60	25.45	26.60	26.60	26.40	26.00	25.80	NM	NM	30.43	59.41	73.50	75.82	65.12	70.95	78.11	79.31
	MEASURED PIEZO DEPTH									87.60	84.70	90.10	90.20	82.00	89.90	87.20	81.80	80.80	79.20	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS									81.40	70.03	69.70	69.40	69.55	68.40	68.40	68.60	69.00	65.20	NA	NA	69.17	40.19	26.10	23.78	34.48	28.65	21.49	20.29
LW-8R	FLUID LEVEL	Installed May 2009								28.80	23.91	23.70	23.50	22.90	24.30	24.30	24.00	24.00	24.30	NM	NM	30.89	56.16	49.69	55.49	66.06	66.01	61.71	57.14
	MEASURED PIEZO DEPTH									77.60	75.00	81.50	81.70	73.60	76.40	76.40	76.00	74.00	72.50	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS									56.20	61.09	61.30	61.50	62.10	60.70	60.70	61.00	61.00	53.70	NA	NA	58.71	33.44	39.91	34.11	23.54	23.59	27.89	32.46
LW-9R	FLUID LEVEL	Installed May 2009								28.80	25.82	25.90	25.30	24.67	25.10	25.50	25.50	25.90	25.60	NM	26.00	25.60	26.80	26.15	27.10	28.10	27.30	26.94	28.10
	MEASURED PIEZO DEPTH									77.60	64.90	68.00	67.40	67.00	67.20	67.00	66.20	66.20	66.10	NM	66.40	65.70	66.00	65.90	65.80	65.10	64.70	63.40	64.70
	MEASURED COLUMN THICKNESS									41.80	44.78	44.70	45.30	45.93	45.50	45.10	45.10	44.70	45.00	NA	44.60	45.00	43.80	44.45	43.50	42.50	43.30	43.66	42.50
LW-10	FLUID LEVEL	3.90	5.00	9.00	6.60	5.00	4.32	4.10	9.98	10.00	9.05	10.50	7.80	10.40	8.00	10.00	10.60	10.80	11.10	10.30	NM	10.10	9.90	10.00	10.20	Dry	Dry	Dry	Dry
	MEASURED PIEZO DEPTH	11.28	11.00	11.00	11.00	11.13	12.00	12.00	10.90	10.20	10.90	11.10	11.20	10.98	11.20	11.20	11.30	11.30	11.30	11.20	11.00	11.20	11.20	10.32	11.20	11.30	14.80	12.70	14.80
	MEASURED COLUMN THICKNESS	7.38	6.00	2.00	4.40	6.13	7.68	7.90	1.02	1.00	1.95	0.50	3.20	0.60	3.00	1.00	0.40	0.20	0.00	0.80	NA	1.00	1.20	1.10	0.90	0.00	0.00	0.00	0.00
LW-11R	FLUID LEVEL	Approved by the DNR January 2010																		NM	NM	NM	Dry	NM	Dry	Dry	Dry	Dry	Dry
	MEASURED PIEZO DEPTH																			NM	NM	NM	9.00	NM	9.00	9.00	17.90	17.70	17.90
	MEASURED COLUMN THICKNESS																			NA	NA	NA	0.00	NA	0.00	0.00	0.00	0.00	0.00
LW-12R	FLUID LEVEL	Installed May 2019																											
	MEASURED PIEZO DEPTH																												
	MEASURED COLUMN THICKNESS																												
LW-13R	FLUID LEVEL	Installed May 2019																											
	MEASURED PIEZO DEPTH																												
	MEASURED COLUMN THICKNESS																												
LW-14	FLUID LEVEL	Installed May 2009								32.80	28.49	28.60	30.50	29.31	29.10	31.30	26.90	26.90	28.10	NM	NM	29.39	49.49	33.01	49.46	43.32	50.80	40.59	39.26
	MEASURED PIEZO DEPTH									57.60	57.60	57.80	57.70	57.30	57.40	57.40	58.40	57.50	57.30	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS									27.20	31.51	31.40	29.50	30.69	30.90	28.70	33.10	33.10	32.70	NA	NA	33.71	13.61	30.09	13.64	19.78	12.30	22.51	23.84
LW-15	FLUID LEVEL	Installed May 2009								37.30	38.76	39.20	38.80	37.91	38.00	38.60	37.60	37.60	37.50	NM	NM	40.16	40.14	40.01	39.95	40.39	40.38	40.33	39.81
	MEASURED PIEZO DEPTH									49.20	49.10	49.30	49.00	49.20	49.40	49.40	49.30	49.30	49.20	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS									12.70	11.24	10.80	11.20	12.09	12.00	11.40	12.40	12.40	2.60	NA	NA	12.94	12.96	13.09	13.15	12.71	12.72	12.77	13.29
LW-16	FLUID LEVEL	Installed May 2019																											
	MEASURED PIEZO DEPTH																												
	MEASURED COLUMN THICKNESS																												
LPZ-3 (7)	FLUID LEVEL	NM	NM	NM	NM	NM	NM	NM	10.70	10.10	11.34	11.60	11.90	10.41	12.00	11.90	10.80	14.50	12.00	7.80	17.90	17.90	Dry	11.43	Dry	Dry	Dry	Dry	Dry
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	18.20	17.70	17.85	18.00	18.00	17.90	18.00	18.00	17.90	17.90	17.90	17.80	17.90	18.00	18.00	17.72	18.00	18.10	17.90	17.80	17.90
	MEASURED COLUMN THICKNESS	NA	NA	NA	NA	NA	NA	NA	7.20	7.80	6.56	6.30	6.00	7.49	5.90	6.00	7.10	3.40	5.90	10.10	0.00	0.00	0.00	6.47	0.00	0.00	0.00	0.00	0.00
LPZ-4 (8)	FLUID LEVEL	NM	NM	NM	NM	NM	NM	NM	3.20	2.10	2.84	3.50	3.60	1.95	3.60	3.50	2.40	3.20	3.60	11.90	11.90	11.90	11.60	9.45	11.20	10.40	10.50	Dry	10.00
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	11.91	10.70	11.80	11.90	11.90	11.60	11.90	11.90	11.90	11.90	12.00	12.00	11.90	11.90	11.90	11.80	11.90	11.90	11.90	11.60	11.90
	MEASURED COLUMN THICKNESS	NA	NA	NA	NA	NA	NA	NA	8.70	9.80	9.06	8.40	8.30	9.95	8.30	8.40	9.50	8.70	8.30	0.00	0.00	0.00	0.30	2.45	0.70	1.50	1.40	0.00	1.90
LPZ-5	FLUID LEVEL	Approved by the DNR January 2010																		NM	NM	NM	Dry	12.60	Dry	Dry	Dry	13.41	13.00
	MEASURED PIEZO DEPTH																			NM	NM	NM	13.70	13.60	13.70	13.70	13.70	13.50	13.70
	MEASURED COLUMN THICKNESS																			NA	NA	NA	0.00	1.10	0.00	0.00	0.00	0.29	0.70
LPZ-C1W (9)	FLUID LEVEL	Approved by the DNR January 2010																		NM	NM	NM	Dry	NM	Dry	Dry	Dry	Dry	Dry
	MEASURED PIEZO DEPTH																			NM	NM	NM	9.00	NM	9.00	9.00	17.90	17.70	17.90
	MEASURED COLUMN THICKNESS																			NA	NA	NA	0.00	NA	0.00	0.00	0.00	0.00	0.00
																	11/24/09	12/01/09	01/14/10	02/19/10	03/19/10	04/28/10	05/25/10	06/07/10	06/25/10	08/18/10	09/17/10	10/20/10*	10/27/10
LM-1	Cell 1	Approved by the DNR October 2009															14.1	NM	NM	NM	11.90	11.90	11.90	11.90	0.50	NM	NM	NM	NM
LM-2	Cell 2	Approved by the DNR October 2009															21.9	NM	NM	NM	7.20	6.20	5.80	5.40	5.40	NM	NM	NM	NM
LPZ-6	Cell 5 Sump	Installed October 2018																											
LPZ-7	Cell 5	Installed October 2018																											

Historical Leachate Column Thicknesses
2023 Leachate Control System Performance Evaluation Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Leachate Piezometer		Date of Measurement																											
		11/26/10	12/21/10	1/27/11	2/28/11	3/16/2011*	3/25/11	4/29/11	5/20/11	6/30/11	7/29/11	8/30/11	9/21/11	10/27/11	11/30/11	12/29/11	1/30/12	2/29/12	3/30/12	4/27/12	5/25/12	6/29/12	7/31/12	8/24/12	8/30/2012*	9/28/12	10/24/12	11/30/12	12/31/12
LW-3	FLUID LEVEL	11.20	12.20	9.50	11.00	6.71	11.90	12.50	11.70	6.10	11.90	7.50	10.60	11.30	11.80	12.60	12.70	13.00	14.60	14.20	13.50	13.40	16.20	18.30	18.21	21.20	21.40	20.50	13.60
	MEASURED PIEZO DEPTH	27.80	27.90	28.00	28.20	27.91	28.20	28.20	28.20	28.00	28.20	28.30	28.40	28.20	28.30	28.30	28.30	28.20	28.20	28.30	28.30	28.30	28.30	28.20	28.27	28.10	28.10	28.10	28.10
	MEASURED COLUMN THICKNESS	17.00	16.00	18.70	17.20	21.49	16.30	15.70	16.50	22.10	16.30	20.70	17.60	16.90	16.40	15.60	15.50	15.20	13.60	14.00	14.70	14.80	12.00	9.90	9.99	7.00	6.80	7.70	14.60
LW-4R (3)	FLUID LEVEL	48.76	55.59	NM	NM	45.53	50.38	49.99	48.21	53.70	53.38	53.40	44.57	48.52	42.13	54.85	53.36	52.96	52.05	51.06	51.19	51.44	40.34	55.03	55.70	55.53	74.59	NM	77.42
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	34.84	28.01	NA	NA	38.07	33.22	33.61	35.39	29.90	32.22	32.20	41.03	37.08	43.47	30.75	32.24	32.64	33.55	34.54	34.41	34.16	45.26	26.97	26.30	26.47	7.41	NA	4.58
LW-6R	FLUID LEVEL	54.19	51.57	41.06	59.27	59.29	59.27	59.28	57.54	59.29	58.65	58.65	52.68	54.03	45.82	58.61	58.60	58.53	58.60	58.57	53.21	51.28	52.79	52.72	51.73	69.15	69.10	69.07	54.10
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	23.91	26.53	37.04	18.83	18.81	18.83	18.82	20.56	18.81	19.45	19.45	25.42	24.07	32.28	19.49	19.50	19.57	19.50	19.53	24.89	26.82	25.31	21.08	22.07	4.65	4.70	4.73	19.70
LW-7R	FLUID LEVEL	78.95	78.43	67.56	66.17	69.74	78.50	77.07	67.27	76.16	51.15	74.11	63.97	83.99	NM	81.96	81.36	81.97	81.73	81.38	81.73	81.57	81.41	81.50	74.82	72.50	83.36	70.28	73.90
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	20.65	21.17	32.04	33.43	29.86	21.10	22.53	32.33	23.44	50.45	27.49	37.63	17.61	NA	19.64	20.24	19.63	19.87	20.22	19.87	20.03	20.19	9.50	16.18	18.50	7.64	20.72	17.10
LW-8R	FLUID LEVEL	65.44	65.22	59.26	59.01	59.03	58.14	62.38	63.76	64.61	64.25	64.24	56.06	57.80	51.22	64.55	64.55	64.53	64.62	64.55	64.59	64.59	64.48	64.71	64.86	73.40	73.33	60.00	73.31
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	24.16	24.38	30.34	30.59	30.57	31.46	27.22	25.84	24.99	25.35	25.36	33.54	31.80	38.38	25.05	25.05	25.07	24.98	25.05	25.01	25.01	25.12	20.49	20.34	11.80	11.87	25.20	11.89
LW-9R	FLUID LEVEL	28.00	27.90	28.20	27.70	28.63	32.60	34.20	31.30	27.40	28.40	27.40	27.30	28.30	27.40	29.40	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	45.21	NA
	MEASURED PIEZO DEPTH	63.90	63.80	63.60	64.90	63.31	64.80	64.80	63.70	63.40	63.80	63.90	63.80	63.70	63.70	63.70	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NM	NM
	MEASURED COLUMN THICKNESS	42.60	42.70	42.40	42.90	41.97	38.00	36.40	39.30	43.20	42.20	43.20	43.30	42.30	43.20	41.20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.79	NA
LW-10	FLUID LEVEL	Dry	NM	14.20	13.80	Dry	14.20	14.10	14.20	13.10	13.00	13.20	13.30	13.80	8.90	14.00	14.80	14.20	14.30	14.40	14.60	14.50	13.20	13.40	9.92	13.50	NM	10.20	10.20
	MEASURED PIEZO DEPTH	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.90	14.90	14.80	14.80	14.70	14.70	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	14.93	15.00	NM	14.90	14.90
	MEASURED COLUMN THICKNESS	0.00	0.00	0.60	1.00	0.00	0.60	0.70	0.60	1.70	1.80	1.60	1.50	1.00	5.90	0.80	0.00	0.60	0.50	0.40	0.20	0.30	1.60	1.40	4.88	1.30	NA	4.60	4.60
LW-11R	FLUID LEVEL	Dry	Dry	15.50	11.00	Dry	16.50	13.20	Dry	13.90	11.40	11.20	11.90	17.90	12.00	17.90	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	37.62	NA
	MEASURED PIEZO DEPTH	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NM	NM
	MEASURED COLUMN THICKNESS	0.00	0.00	2.40	6.90	0.00	1.40	4.70	0.00	4.00	6.50	6.70	6.00	0.00	5.90	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.38	NA
LW-12R	FLUID LEVEL	Installed May 2019																											
	MEASURED PIEZO DEPTH																												
	MEASURED COLUMN THICKNESS																												
LW-13R	FLUID LEVEL	Installed May 2019																											
	MEASURED PIEZO DEPTH																												
	MEASURED COLUMN THICKNESS																												
LW-14	FLUID LEVEL	49.00	49.03	45.45	48.50	48.25	45.79	44.10	48.05	48.28	48.28	48.25	45.10	46.02	39.90	49.27	45.49	44.27	43.89	43.54	43.87	43.68	43.45	43.35	43.47	50.64	50.57	NM	55.45
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	14.10	14.07	17.65	14.60	14.85	17.31	19.00	15.05	14.82	14.82	14.85	18.00	17.08	23.20	13.83	17.61	18.83	19.21	19.56	19.23	19.42	19.65	17.45	17.33	10.16	10.23	NA	5.35
LW-15	FLUID LEVEL	40.23	39.82	39.84	39.66	39.61	39.62	39.63	39.63	39.78	38.89	38.86	38.94	39.28	39.37	38.72	38.71	38.58	38.66	38.79	38.53	38.65	38.48	38.68	38.78	46.23	45.45	38.53	37.17
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	12.87	13.28	13.26	13.44	13.49	13.48	13.47	13.47	13.32	14.21	14.24	14.16	13.82	13.73	14.38	14.39	14.52	14.44	14.31	14.57	14.45	14.62	13.82	13.72	6.27	7.05	13.97	15.33
LW-16	FLUID LEVEL	Installed May 2019																											
	MEASURED PIEZO DEPTH																												
	MEASURED COLUMN THICKNESS																												
LPZ-3 (7)	FLUID LEVEL	Dry	Dry	17.90	17.90	Dry	17.90	Dry	Dry	17.30	Dry	17.90	17.90	18.10	18.10	17.90	18.00	18.00	18.00	18.00	17.90	17.90	17.90	17.90	18.30	26.90	26.90	27.10	27.10
	MEASURED PIEZO DEPTH	17.90	18.00	18.00	18.40	17.80	18.00	18.00	17.90	17.90	17.90	17.90	17.90	18.10	18.10	18.10	18.10	18.10	18.00	18.10	17.90	17.90	17.90	17.90	27.91	26.90	26.90	27.10	27.10
	MEASURED COLUMN THICKNESS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LPZ-4 (8)	FLUID LEVEL	10.50	9.90	Dry	10.10	Dry	9.60	11.10	11.80	10.60	11.90	11.60	11.90	11.90	11.80	10.80	11.90	11.70	11.90	11.90	11.90	Dry	Dry	11.90	Dry	Dry	11.90	11.90	11.90
	MEASURED PIEZO DEPTH	11.90	11.80	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90
	MEASURED COLUMN THICKNESS	1.40	2.00	0.00	1.80	0.00	2.30	0.80	0.10	1.30	0.00	0.30	0.00	0.00	0.10	1.10	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LPZ-5	FLUID LEVEL	Dry	Dry	8.70	3.50	Dry	13.00	6.80	Dry	6.10	8.00	6.70	5.50	13.70	4.90	13.70	13.70	13.80	13.70	13.70	13.70	Dry	Dry	Dry	Dry	Dry	Dry	Dry	6.30
	MEASURED PIEZO DEPTH	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.80	13.80	13.70	13.70	13.70	13.70	13.70	13.71	13.70	13.70	13.70	13.70
	MEASURED COLUMN THICKNESS	0.00	0.00	5.00	10.20	0.00	0.70	6.90	0.00	7.60	5.70	7.00	8.20	0.00	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.40
LPZ-C1W (9)	FLUID LEVEL	Dry	Dry	15.50	11.00	Dry	16.50	13.20	Dry	13.90	11.40	11.20	11.90	17.90	12.00	17.90	17.90	17.80	17.70	17.90	17.90	Dry	Dry	Dry	Dry	Dry	Dry	Dry	11.60
	MEASURED PIEZO DEPTH	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.68	17.90	17.90	17.80	12.90
	MEASURED COLUMN THICKNESS	0.00	0.00	2.40	6.90	0.00	1.40	4.70	0.00	4.00	6.50	6.70	6.00	0.00	5.90	0.00	0.00	0.10	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30
		11/26/10	**12/21/10**	**01/27/11**	**02/28/11**	**03/16/11**	**03/25/11**	**04/29/11**	**05/20/11**	**06/30/11**	**07/29/11**	**08/30/11**	**09/21/11**	**10/27/11**	**11/30/11**	**12/29/11**	**01/30/12**	**02/29/12**	**03/30/12**	**04/27/12**	**05/25/12**	**06/29/12**	**07/31/12**	**08/24/12**	**08/30/12**	**09/28/12**	**10/24/12**	**11/30/12**	**12/31/12**
LM-1	Cell 1	8.92	8.92	8.93	8.93	NM	8.94	8.97	8.99	9.01	9.02	9.04	9.04	9.05	9.06	9.12	9.12	9.04	NM	NM	NM	NM	NM	9.34	9.30	9.44	9.24	9.35	9.39
LM-2	Cell 2	10.87	10.43	11.71	11.31	NM	11.55	11.50	10.79	11.48	11.36	11.05	11.03	11.20	10.11	10.31	10.16	11.01	11.28	11.11	11.17	10.40	7.66	7.57	6.17	6.67	6.77	7.04	6.91
LPZ-6	Cell 5 Sump	Installed October 2018																											
LPZ-7	Cell 5	Installed October 2018																											

Historical Leachate Column Thicknesses
2023 Leachate Control System Performance Evaluation Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Leachate Piezometer		Date of Measurement											
		1/25/13	2/28/13	3/22/13	4/30/13	5/31/13	6/27/13	7/31/13	8/30/13	9/30/13	10/31/13	11/29/13	12/31/13[17]
LW-3	FLUID LEVEL	14.00	11.30	9.30	11.00	10.60	14.50	14.60	14.70	18.70	19.30	19.50	19.50
	MEASURED PIEZO DEPTH	28.10	28.00	28.00	28.00	28.00	29.00	28.00	28.00	28.00	28.00	28.00	28.00
	MEASURED COLUMN THICKNESS	14.20	16.90	18.90	17.20	17.60	13.70	13.60	13.50	9.50	8.90	8.70	8.70
LW-4R[3]	FLUID LEVEL	77.42	67.45	77.49	77.74	77.74	77.57	77.33	77.52	70.23	77.85	76.80	55.33
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	4.58	14.55	4.51	4.26	4.26	4.43	4.67	4.48	11.77	4.15	5.20	26.67
LW-6R	FLUID LEVEL	69.10	56.10	69.07	69.15	69.12	69.02	67.75	69.12	69.12	69.07	69.49	54.61
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	4.70	17.70	4.73	4.65	4.68	4.78	6.05	4.68	4.68	4.73	4.31	19.19
LW-7R	FLUID LEVEL	78.42	76.51	83.01	83.38	83.47	81.56	79.57	83.28	79.72	84.46	83.26	83.70
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	12.58	14.49	7.99	7.62	7.53	9.44	11.43	7.72	11.28	6.54	7.74	7.30
LW-8R	FLUID LEVEL	73.39	66.66	72.25	73.34	73.61	74.35	73.61	71.83	59.55	62.58	75.53	NM
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	11.81	18.54	12.95	11.86	11.59	10.85	11.59	13.37	25.65	22.62	9.67	NA
LW-9R	FLUID LEVEL	45.15	42.70	45.32	38.68	28.10	45.43	45.20	45.37	44.83	45.78	44.73	27.94
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	7.85	10.30	7.68	14.32	24.90	7.57	7.80	7.63	8.17	7.22	8.27	25.06
LW-10	FLUID LEVEL	12.20	10.20	10.20	10.80	11.70	11.80	10.00	10.50	10.60	NM	9.80	10.10
	MEASURED PIEZO DEPTH	14.90	14.90	14.90	14.90	14.90	14.90	14.90	14.90	14.90	NM	14.70	14.70
	MEASURED COLUMN THICKNESS	2.60	4.60	4.60	4.00	3.10	3.00	4.80	4.30	4.20	NA	5.00	4.70
LW-11R	FLUID LEVEL	40.12	37.07	40.18	39.79	39.76	39.62	39.36	39.53	37.32	39.89	38.84	31.33
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	7.88	10.93	7.82	8.21	8.24	8.38	8.64	8.47	10.68	8.11	9.16	16.67
LW-12R	FLUID LEVEL	Installed May 2019											
	MEASURED PIEZO DEPTH												
	MEASURED COLUMN THICKNESS												
LW-13R	FLUID LEVEL	Installed May 2019											
	MEASURED PIEZO DEPTH												
	MEASURED COLUMN THICKNESS												
LW-14	FLUID LEVEL	55.43	50.92	45.57	55.60	43.05	55.32	55.11	55.26	55.24	55.59	54.50	48.45
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	5.37	9.88	15.23	5.20	17.75	5.48	5.69	5.54	5.56	5.21	6.30	12.35
LW-15	FLUID LEVEL	37.20	34.26	37.29	37.25	37.49	37.57	37.66	37.74	37.59	37.79	37.70	32.57
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	15.30	18.24	15.21	15.25	15.01	14.93	14.84	14.76	14.91	14.71	14.80	19.93
LW-16	FLUID LEVEL	Installed May 2019											
	MEASURED PIEZO DEPTH												
	MEASURED COLUMN THICKNESS												
LPZ-3[7]	FLUID LEVEL	27.10	27.10	27.00	27.10	27.00	27.00	27.00	27.10	27.10	27.10	27.10	27.00
	MEASURED PIEZO DEPTH	27.10	27.10	27.10	27.10	27.10	27.10	27.10	27.10	27.10	27.10	27.10	27.00
	MEASURED COLUMN THICKNESS	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
LPZ-4[8]	FLUID LEVEL	11.90	11.90	11.60	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90
	MEASURED PIEZO DEPTH	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90
	MEASURED COLUMN THICKNESS	DRY	DRY	0.30	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
LPZ-5	FLUID LEVEL	5.50	5.30	3.60	5.40	13.20	13.70	7.90	6.90	6.20	13.50	13.50	13.40
	MEASURED PIEZO DEPTH	13.70	13.90	13.90	13.90	13.70	13.70	13.70	13.70	13.70	13.50	13.50	13.40
	MEASURED COLUMN THICKNESS	8.20	8.40	10.10	8.30	0.50	DRY	5.80	6.80	7.50	0.20	DRY	DRY
LPZ-C1W[9]	FLUID LEVEL	12.00	12.00	10.40	12.20	NM	17.90	15.20	13.70	13.20	17.90	17.90	17.90
	MEASURED PIEZO DEPTH	17.90	17.90	17.90	17.90	NM	17.90	17.90	17.90	17.90	17.90	17.90	17.90
	MEASURED COLUMN THICKNESS	5.9	5.9	7.5	5.7	NA	DRY	2.7	4.2	4.7	DRY	DRY	DRY
		01/25/13	**02/28/13**	**03/22/13**	**04/30/13**	**05/31/13**	**06/27/13**	**07/31/13**	**08/30/13**	**09/30/13**	**10/31/13**	**11/29/13**	**12/31/13**
LM-1	Cell 1	9.39	9.29	9.26	9.10	9.08	9.13	9.23	9.10	8.93	9.55	NM	NM
LM-2	Cell 2	7.01	6.77	6.92	6.76	NM	6.77	6.84	6.92	6.88	6.90	7.07	7.33
LPZ-6	Cell 5 Sump	Installed October 2018											
LPZ-7	Cell 5	Installed October 2018											

Leachate Piezometer		Date of Measurement											
		1/30/14	2/27/14	3/31/14	4/30/14	5/31/14	6/30/14[23]	7/31/14	8/29/14	9/30/14	10/31/14	11/28/14	12/31/14[24]
LW-3	FLUID LEVEL	19.60	14.70	12.90	13.20	11.80	11.50	12.00	16.30	16.80	13.80	15.70	NM
	MEASURED PIEZO DEPTH	28.00	28.00	28.00	28.00	28.00	28.20	28.20	28.20	28.20	28.10	28.10	28.10
	MEASURED COLUMN THICKNESS	8.60	13.50	15.30	15.00	16.40	16.70	16.20	11.90	11.40	14.40	12.50	NA
LW-4R[3]	FLUID LEVEL	46.10	77.21	77.59	77.32	76.98	61.75	49.19	44.81	76.89	76.32	54.76	76.00
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	35.90	4.79	4.41	4.68	5.02	20.25	32.81	37.19	5.11	5.68	27.24	6.00
LW-6R	FLUID LEVEL	52.13	53.85	63.58	52.36	50.39	44.27	42.62	41.44	69.11	69.81	54.34	69.89
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	21.67	19.95	10.22	21.44	23.41	29.53	31.18	32.36	4.69	3.99	19.46	3.91
LW-7R	FLUID LEVEL	83.97	68.91	55.25	53.06	51.78	50.50	49.62	48.88	48.20	47.35	47.05	47.19
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	7.03	22.09	35.75	37.94	39.22	40.50	41.38	42.12	42.80	43.65	43.95	43.81
LW-8R	FLUID LEVEL	NM	63.73	74.10	73.99	73.71	74.06	54.51	50.74	NM	73.87	61.66	72.41
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	NA	21.47	11.10	11.21	11.49	11.14	30.69	34.46	NA	11.33	23.54	12.79
LW-9R	FLUID LEVEL	26.21	24.64	36.44	45.46	45.12	45.45	27.58	25.15	45.25	44.92	31.36	44.59
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	26.79	28.36	16.56	7.54	7.88	7.55	25.42	27.85	7.75	8.08	21.64	8.41
LW-10	FLUID LEVEL	10.30	8.30	9.80	9.50	9.80	8.90	10.20	10.40	10.60	9.60	9.00	9.40
	MEASURED PIEZO DEPTH	14.70	14.00	14.00	14.00	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
	MEASURED COLUMN THICKNESS	4.50	6.50	5.00	5.30	5.00	5.90	4.60	4.40	4.20	5.20	5.80	5.40
LW-11R	FLUID LEVEL	30.72	39.20	33.14	39.61	39.25	39.62	31.52	30.28	39.35	38.94	32.75	33.20
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	17.28	8.80	14.86	8.39	8.75	8.38	16.48	17.72	8.65	9.06	15.25	14.80
LW-12R	FLUID LEVEL	Installed May 2019											
	MEASURED PIEZO DEPTH												
	MEASURED COLUMN THICKNESS												
LW-13R	FLUID LEVEL	Installed May 2019											
	MEASURED PIEZO DEPTH												
	MEASURED COLUMN THICKNESS												
LW-14	FLUID LEVEL	38.89	54.85	55.23	37.64	47.72	54.57	42.16	37.28	55.17	55.03	42.60	55.16
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	21.91	5.95	5.57	23.16	13.08	6.23	18.64	23.52	5.63	5.77	18.20	5.64
LW-15	FLUID LEVEL	30.96	37.73	37.76	37.75	37.84	37.85	30.63	30.67	37.78	37.76	31.71	37.77
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	21.54	14.77	14.74	14.75	14.66	14.65	21.87	21.83	14.72	14.74	20.79	14.73
LW-16	FLUID LEVEL	Installed May 2019											
	MEASURED PIEZO DEPTH												
	MEASURED COLUMN THICKNESS												
LPZ-3[7]	FLUID LEVEL	26.90	23.40	26.70	27.00	27.00	26.90	26.90	26.90	26.90	26.90	26.90	26.90
	MEASURED PIEZO DEPTH	27.00	27.00	27.00	27.00	27.00	26.90	26.90	26.90	26.90	26.90	26.90	26.90
	MEASURED COLUMN THICKNESS	DRY	3.50	0.20	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
LPZ-4[8]	FLUID LEVEL	11.70	6.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90
	MEASURED PIEZO DEPTH	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90
	MEASURED COLUMN THICKNESS	0.20	5.00	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
LPZ-5	FLUID LEVEL	13.70	13.60	13.70	6.70	13.00	9.80	13.70	13.70	13.70	11.30	11.90	11.80
	MEASURED PIEZO DEPTH	13.70	13.60	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70
	MEASURED COLUMN THICKNESS	DRY	DRY	DRY	7.00	0.70	3.90	DRY	DRY	DRY	2.40	1.80	1.90
LPZ-C1W[9]	FLUID LEVEL	17.90	17.90	17.90	11.90	17.00	14.80	17.90	17.90	17.90	17.90	15.80	15.90
	MEASURED PIEZO DEPTH	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90	17.90
	MEASURED COLUMN THICKNESS	DRY	DRY	DRY	6.0	0.9	3.1	DRY	DRY	DRY	DRY	2.1	2.0
		01/30/14	**02/27/14**	**03/31/14**	**04/30/14**	**05/31/14**	**06/30/14**	**07/31/14**	**08/29/14**	**09/30/14**	**10/31/14**	**11/28/14**	**12/31/14**
LM-1	Cell 1	NM	NM	NM	NM	8.96	8.975	8.98	8.98	8.98	8.98	8.98	9.00
LM-2	Cell 2	7.01	7.35	7.42	8.26	6.68	6.8	6.73	6.59	6.7	NM	NM	6.82
LPZ-6	Cell 5 Sump	Installed October 2018											
LPZ-7	Cell 5	Installed October 2018											

Leachate Piezometer		Date of Measurement				
		1/30/15[25]	2/20/15[26]	3/31/15	4/30/15	
LW-3	FLUID LEVEL	10.90	11.20	15.60	15.70	
	MEASURED PIEZO DEPTH	28.10	28.10	28.10	28.10	
	MEASURED COLUMN THICKNESS	17.30	17.00	12.60	12.50	
LW-4R[3]	FLUID LEVEL	75.89	66.94	77.59	76.03	
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	
	MEASURED COLUMN THICKNESS	6.11	15.06	4.41	5.97	
LW-6R	FLUID LEVEL	69.24	NM	63.58	67.20	
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	
	MEASURED COLUMN THICKNESS	4.56	NA	10.22	6.60	
LW-7R	FLUID LEVEL	63.56	59.59	55.25	58.95	
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	
	MEASURED COLUMN THICKNESS	27.44	31.41	35.75	32.05	
LW-8R	FLUID LEVEL	54.11	51.23	74.10	74.19	
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	
	MEASURED COLUMN THICKNESS	31.09	33.97	11.10	11.01	
LW-9R	FLUID LEVEL	44.65	44.25	36.44	45.21	
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	
	MEASURED COLUMN THICKNESS	8.35	8.75	16.56	7.79	
LW-10	FLUID LEVEL	10.80	8.90	10.60	8.90	
	MEASURED PIEZO DEPTH	14.80	14.80	14.80	14.80	
	MEASURED COLUMN THICKNESS	4.00	5.90	4.20	5.90	
LW-11R	FLUID LEVEL	38.82	36.29	39.41	39.37	
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	
	MEASURED COLUMN THICKNESS	9.18	11.71	8.59	8.63	
LW-12R	FLUID LEVEL					
	MEASURED PIEZO DEPTH					
	MEASURED COLUMN THICKNESS					
LW-13R	FLUID LEVEL					
	MEASURED PIEZO DEPTH					
	MEASURED COLUMN THICKNESS					
LW-14	FLUID LEVEL	55.03	55.77	55.23	56.07	
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	
	MEASURED COLUMN THICKNESS	5.77	5.03	5.57	4.73	
LW-15	FLUID LEVEL	37.82	36.05	37.76	37.86	
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	
	MEASURED COLUMN THICKNESS	14.68	16.45	14.74	14.64	
LW-16	FLUID LEVEL					
	MEASURED PIEZO DEPTH					
	MEASURED COLUMN THICKNESS					
LPZ-3[7]	FLUID LEVEL	26.90	26.90	26.90	26.90	
	MEASURED PIEZO DEPTH	26.90	26.90	26.90	26.90	
	MEASURED COLUMN THICKNESS	DRY	DRY	DRY	DRY	
LPZ-4[8]	FLUID LEVEL	11.90	11.80	11.90	11.90	
	MEASURED PIEZO DEPTH	11.90	11.90	11.90	11.90	
	MEASURED COLUMN THICKNESS	DRY	0.10	DRY	DRY	
LPZ-5	FLUID LEVEL	13.50	13.60	13.60	12.60	
	MEASURED PIEZO DEPTH	13.70	13.60	13.60	13.60	
	MEASURED COLUMN THICKNESS	0.20	0.10	0.10	1.10	
LPZ-C1W[9]	FLUID LEVEL	17.70	17.90	17.90	17.80	
	MEASURED PIEZO DEPTH	17.90	17.90	17.90	17.90	
	MEASURED COLUMN THICKNESS	0.2	DRY	DRY	0.1	
		01/30/15	**02/20/15**	**03/31/15**	**04/30/15**	
LM-1	Cell 1	8.97	9.19	8.96	8.96	
LM-2	Cell 2	7.64	6.74	7.42	6.75	
LPZ-6	Cell 5 Sump					
LPZ-7	Cell 5					

Historical Leachate Column Thicknesses
2023 Leachate Control System Performance Evaluation Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Leachate Piezometer		Date of Measurement																												
		5/28/15	06/25/15 [27]	7/30/15	8/31/15	9/25/15	10/26/15	11/30/15	12/30/15 [28]	1/30/16	2/29/16	3/31/16	4/29/16	5/25/16 [29]	6/17/16 [30]	7/29/16 [31]	8/25/16 [32]	9/29/16	10/10/16 [33]	11/09/16	12/20/16	01/31/17	2/23/17 [34]	3/15/17 [35]	04/19/17	5/3/17 [36]	6/21/17 [37]	07/25/17	8/24/17 [38]
LW-3	FLUID LEVEL	12.00	13.10	13.80	12.10	18.20	16.80	11.10	11.90	12.60	12.90	10.80	11.70	12.80	12.00	16.00	12.30	12.20	12.20	11.60	27.00	12.40	12.10	12.00	10.00	13.40	11.90	11.80	11.60
	MEASURED PIEZO DEPTH	28.00	28.40	28.20	27.90	28.20	28.20	NM	28.20	28.20	28.10	28.20	28.30	28.00	27.90	28.20	28.10	26.90	28.20	28.00	28.00	28.30	27.30	28.10	27.90	28.00	28.10	28.10	28.00
	MEASURED COLUMN THICKNESS	16.20	15.10	14.40	16.10	10.00	11.40	17.10	16.30	15.60	15.30	17.40	16.50	15.40	16.20	12.20	15.90	16.00	16.00	16.60	1.20	15.80	16.10	16.20	18.20	14.80	16.30	16.40	16.60
LW-4R [3]	FLUID LEVEL	75.66	68.23	75.40	46.86	74.82	74.61	74.88	57.39	74.99	48.97	75.04	74.30	74.42	74.27	74.33	74.19	74.85	73.96	50.75	74.00	73.99	74.20	73.41	73.80	73.65	73.84	73.63	73.69
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	6.34	13.77	6.60	35.14	7.18	7.39	7.12	24.61	7.01	33.03	6.96	7.70	7.58	7.73	7.67	7.81	7.15	8.04	31.25	8.00	8.01	7.80	8.59	8.20	8.35	8.16	8.37	8.31
LW-6R	FLUID LEVEL	49.72	43.74	40.57	43.25	65.76	54.82	47.27	43.10	43.07	48.68	61.39	54.06	56.84	68.61	68.75	53.82	68.42	68.41	51.40	68.45	68.85	69.04	65.94	68.78	68.58	52.82	68.58	68.61
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	24.08	30.06	33.23	30.55	8.04	18.98	26.53	30.70	30.73	25.12	12.41	19.74	16.96	5.19	5.05	19.98	5.38	5.39	22.40	5.35	4.95	4.76	7.86	5.02	5.22	20.98	5.22	5.19
LW-7R	FLUID LEVEL	58.55	66.55	65.85	62.02	81.71	65.56	63.55	63.63	82.80	82.46	83.17	82.46	82.63	70.82	68.18	68.34	68.24	68.24	67.37	67.89	82.53	75.70	70.34	83.02	82.85	74.39	80.88	83.04
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	32.45	24.45	25.15	28.98	9.29	25.44	27.45	27.37	8.20	8.54	7.83	8.54	8.37	20.18	22.82	22.66	22.76	22.76	23.63	23.11	8.47	15.30	20.66	7.98	8.15	16.61	10.12	7.96
LW-8R	FLUID LEVEL	74.06	69.11	74.11	54.42	74.11	65.56	59.64	53.23	74.74	74.47	74.96	74.28	74.47	74.32	74.40	64.89	74.18	74.17	59.21	74.22	74.67	74.18	73.31	73.25	73.25	73.26	73.99	73.87
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	11.14	16.09	11.09	30.78	11.09	19.64	25.56	31.97	10.46	10.73	10.24	10.92	10.73	10.88	10.80	20.31	11.02	11.03	25.99	10.98	10.53	11.02	11.89	11.95	11.95	11.94	11.21	11.33
LW-9R	FLUID LEVEL	45.05	30.36	45.14	26.89	45.11	45.01	45.27	45.04	45.66	45.40	45.84	45.19	47.46	47.38	29.23	25.34	25.62	28.77	24.08	25.95	25.89	43.12	28.79	27.92	25.04	23.54	42.46	30.34
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	7.95	22.64	7.86	26.11	7.89	7.99	7.73	7.96	7.34	7.60	7.16	7.81	5.54	5.62	23.77	27.66	27.38	24.23	28.92	27.05	27.11	9.88	24.21	25.08	27.96	29.46	10.54	22.66
LW-10	FLUID LEVEL	10.00	10.80	14.30	9.90	NM	NM	14.70	13.10	14.00	14.10	13.90	13.60	14.60	14.70	14.00	13.90	13.60	14.40	11.40	9.90	13.00	7.60	9.50	9.50	10.60	10.20	12.40	9.50
	MEASURED PIEZO DEPTH	14.60	14.60	14.70	14.60	NM	NM	14.80	14.80	14.70	14.80	14.80	14.80	14.80	14.80	14.70	14.80	14.70	14.80	14.80	14.80	14.00	14.80	14.70	14.80	14.70	14.80	14.80	14.40
	MEASURED COLUMN THICKNESS	4.80	4.00	0.50	4.90	NA	NA	0.10	1.70	0.80	0.70	0.90	1.20	0.20	0.10	0.80	0.90	1.20	0.40	3.40	4.90	1.80	7.20	5.30	5.30	4.20	4.60	2.40	5.30
LW-11R	FLUID LEVEL	39.21	34.53	39.20	31.53	39.06	39.02	32.05	31.94	31.58	30.47	39.96	39.35	39.47	39.39	27.77	32.24	39.15	39.09	36.28	37.10	31.77	38.63	38.82	39.26	39.34	39.40	39.16	39.17
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	8.79	13.47	8.80	16.47	8.94	8.98	15.95	16.06	16.42	17.53	8.04	8.65	8.53	8.61	20.23	15.76	8.85	8.91	11.72	10.90	16.23	9.37	9.18	8.74	8.66	8.60	8.84	8.83
LW-12R	FLUID LEVEL	Installed May 2019																											
	MEASURED PIEZO DEPTH																												
	MEASURED COLUMN THICKNESS																												
LW-13R	FLUID LEVEL	Installed May 2019																											
	MEASURED PIEZO DEPTH																												
	MEASURED COLUMN THICKNESS																												
LW-14	FLUID LEVEL	55.00	51.12	15.56	44.13	52.06	53.03	53.40	50.33	48.32	46.01	48.84	44.21	55.10	55.03	55.21	55.11	54.93	54.93	44.78	54.97	55.28	55.45	54.59	55.22	55.07	55.33	55.12	55.13
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	5.80	9.68	45.24	16.67	8.74	7.77	7.40	10.47	12.48	14.79	11.96	16.59	5.70	5.77	5.59	5.69	5.87	5.87	16.02	5.83	5.52	5.35	6.21	5.58	5.73	5.47	5.68	5.67
LW-15	FLUID LEVEL	37.88	37.46	37.90	27.59	37.89	37.86	37.98	33.90	44.83	44.86	44.84	45.03	45.05	45.06	45.04	45.03	45.03	45.03	35.79	45.03	44.58	44.34	44.22	43.75	43.27	41.95	41.83	41.78
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	14.62	15.04	14.60	24.91	14.61	14.64	14.52	18.60	7.67	7.64	7.66	7.47	7.45	7.44	7.46	7.47	7.47	7.47	16.71	7.47	7.92	8.16	8.28	8.75	9.23	10.55	10.67	10.72
LW-16	FLUID LEVEL	Installed May 2019																											
	MEASURED PIEZO DEPTH																												
	MEASURED COLUMN THICKNESS																												
LPZ-3 [7]	FLUID LEVEL	26.80	26.70	26.90	27.00	26.90	26.60	26.80	26.90	26.90	26.80	26.90	26.90	26.90	26.90	27.00	26.90	26.90	26.90	26.90	26.90	26.90	26.90	26.90	26.90	26.80	26.70	27.00	26.10
	MEASURED PIEZO DEPTH	26.80	26.80	26.90	27.00	26.90	26.90	26.90	26.90	26.90	26.80	26.90	26.90	26.90	26.90	27.00	26.90	26.90	26.90	26.90	26.90	26.90	26.90	26.90	26.90	26.90	26.90	27.00	26.80
	MEASURED COLUMN THICKNESS	0.10	0.20	DRY	DRY	DRY	0.30	0.10	DRY	DRY	0.10	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	0.10	0.20	DRY	0.80
LPZ-4 [8]	FLUID LEVEL	11.90	11.90	11.90	11.90	7.30	8.70	11.90	11.90	11.90	11.90	11.85	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.80	11.80
	MEASURED PIEZO DEPTH	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90
	MEASURED COLUMN THICKNESS	DRY	DRY	DRY	DRY	4.60	3.20	DRY	DRY	DRY	DRY	0.05	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	0.10	0.10
LPZ-5	FLUID LEVEL	13.30	2.30	4.60	2.00	8.70	9.80	11.20	1.70	13.70	13.50	13.60	13.60	13.60	13.70	13.70	13.70	13.70	13.70	13.60	13.40	13.70	13.00	11.90	13.10	13.60	13.50	13.40	13.50
	MEASURED PIEZO DEPTH	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.60	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.60	13.70	13.70	13.70
	MEASURED COLUMN THICKNESS	0.40	11.4 [27]	9.10	11.70	5.00	3.90	2.50	12.00	DRY	0.20	0.10	0.10	0.10	DRY	DRY	DRY	DRY	DRY	0.10	0.30	DRY	0.70	1.80	0.60	0.10	0.20	0.30	0.20
LPZ-C1W [9]	FLUID LEVEL	17.90	17.00	21.50	18.90	22.80	27.00	26.50	18.60	27.90	27.80	27.80	27.90	27.80	27.90	27.90	27.80	27.80	27.90	27.50	26.90	27.70	26.90	27.70	27.60	27.90	27.90	27.90	27.60
	MEASURED PIEZO DEPTH	17.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.80	27.90	27.90	27.90	27.90	27.90	27.90	27.80
	MEASURED COLUMN THICKNESS	DRY	10.9	6.4	9.0	5.1	0.9	1.4	9.3	DRY	0.1	0.1	DRY	0.1	DRY	DRY	0.1	0.1	DRY	0.4	1.0	0.2	1.0	0.2	0.3	DRY	DRY	DRY	0.3
		05/28/15	**06/25/15**	**07/30/15**	**08/31/15**	**09/25/15**	**10/26/15**	**11/30/15**	**12/30/15**	**01/30/16**	**02/29/16**	**03/31/16**	**04/29/16**	**05/25/16**	**06/17/16**	**07/29/16**	**08/25/16**	**09/29/16**	**10/10/16**	**11/09/16**	**12/20/16**	**01/31/17**	**02/23/17**	**03/15/17**	**04/19/17**	**05/03/17**	**06/21/17**	**07/25/17**	**08/24/17**
LM-1	Cell 1	8.95	8.98	8.94	8.94	8.93	8.92	8.92	8.92	8.91	8.91	8.90	8.90	8.90	N/A	8.90	N/A	8.98	8.98	8.99	8.99	9.00	9.01	9.01	9.00	9.01	9.01	9.01	9.01
LM-2	Cell 2	6.78	8.42	6.49	6.94	6.79	6.5	6.84	6.57	6.73	6.48	6.73	6.60	6.49	6.70	6.54	6.52	6.46	6.43	6.77	6.51	6.24	12.75	6.20	6.19	6.17	6.16	NM	NM
LPZ-6	Cell 5 Sump	Installed October 2018																											
LPZ-7	Cell 5	Installed October 2018																											

Historical Leachate Column Thicknesses
2023 Leachate Control System Performance Evaluation Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Leachate Piezometer		Date of Measurement																											
		9/26/17 [39]	10/13/17	11/20/17 [40]	12/19/17	1/31/18 [41]	02/23/18	03/28/18	4/17/18 [42]	05/24/18	06/21/18	07/31/18	08/20/18	09/21/18	10/25/18	11/13/18 [43]	12/17/18	1/15/19 [44]	2/13/19 [45]	3/28/19 [46]	04/30/19	05/23/19	06/26/19	07/31/19	08/28/19	09/24/19	10/31/19 [47]	11/22/19	12/31/19
LW-3	FLUID LEVEL	12.80	12.90	12.50	13.60	14.80	6.20	8.60	10.00	11.30	12.80	14.90	14.00	13.20	12.30	11.00	9.30	NM	9.80	14.90	16.10	8.90	11.50	11.60	12.00	12.20	12.10	11.30	10.00
	MEASURED PIEZO DEPTH	28.10	28.00	28.00	26.10	27.10	28.00	27.90	28.20	28.10	28.20	24.10	24.20	28.20	28.20	28.20	28.20	NM	28.20	28.20	28.20	28.00	28.00	28.20	28.00	28.00	28.00	28.10	28.20
	MEASURED COLUMN THICKNESS	15.40	15.30	15.70	14.60	13.40	22.00	19.60	18.20	16.90	15.40	13.30	14.20	15.00	15.90	17.20	18.90	NA	18.40	13.30	12.10	19.30	16.70	16.60	16.20	16.00	16.10	16.90	18.20
LW-4R [3]	FLUID LEVEL	73.82	73.77	73.89	73.76	73.88	73.51	73.78	73.83	73.85	74.34	74.18	74.49	75.03	74.70	74.96	74.64	55.13	74.98	66.49	72.55	75.32	47.17	78.55	78.56	78.54	NM	NM	78.54
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	8.18	8.23	8.11	8.24	8.12	8.49	8.22	8.17	8.15	7.66	7.82	7.51	6.97	7.30	7.04	7.36	26.87	7.02	15.51	9.45	6.68	34.83	3.45	3.44	3.46	NM	NA	3.46
LW-6R	FLUID LEVEL	68.75	68.64	60.32	60.43	56.72	55.41	52.74	51.97	50.94	50.38	71.02	71.33	65.62	70.62	64.59	61.76	69.04	61.85	53.83	56.42	53.30	51.12	63.45	61.89	62.47	61.18	61.91	55.97
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	5.05	5.16	13.48	13.37	17.08	18.39	21.06	21.83	22.86	23.42	2.78	2.47	8.18	3.18	9.21	12.04	4.76	11.95	19.97	17.38	20.50	22.68	10.35	11.91	11.33	12.62	11.89	17.83
LW-7R	FLUID LEVEL	72.80	83.32	83.68	73.55	69.53	68.94	68.54	83.56	83.60	84.36	84.44	81.98	84.96	NM	82.29	78.80	78.36	84.93	84.86	69.92	67.79	82.63	70.10	82.50	74.75	69.77	68.78	70.53
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	18.20	7.68	7.32	17.45	21.47	22.06	22.46	7.44	7.40	6.64	6.56	9.02	6.04	NA	8.71	12.20	12.64	6.07	6.14	21.08	23.21	8.37	20.90	8.50	16.25	21.23	22.22	20.47
LW-8R	FLUID LEVEL	74.08	83.32	75.34	42.04	49.47	52.49	44.27	59.62	56.68	62.76	62.59	63.77	63.68	64.44	57.58	61.79	54.56	58.29	54.63	56.10	53.48	58.08	54.12	58.52	58.92	55.38	59.17	55.85
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	11.12	1.88	9.86	43.16	35.73	32.71	40.93	25.58	28.52	22.44	22.61	21.43	21.52	20.76	27.62	23.41	30.64	26.91	30.57	29.10	31.72	27.12	31.08	26.68	26.28	29.82	26.03	29.35
LW-9R	FLUID LEVEL	40.12	42.39	32.38	31.20	40.36	32.89	31.09	29.54	27.12	26.20	30.84	25.24	23.92	24.49	24.98	23.49	22.81	22.52	22.69	25.84	22.73	24.15	28.06	25.69	25.00	24.49	24.26	26.25
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	12.88	10.61	20.62	21.80	12.64	20.11	21.91	23.46	25.88	26.80	22.16	27.76	29.08	28.51	28.02	29.51	30.19	30.48	30.31	27.16	30.27	28.85	24.94	27.31	28.00	28.51	28.74	26.75
LW-10	FLUID LEVEL	12.70	10.30	6.50	10.80	13.60	6.60	9.60	9.40	9.70	9.50	9.80	9.50	9.70	9.10	9.40	9.40	NM	9.60	9.60	9.90	9.40	10.50	9.60	9.50	9.40	9.50	8.50	8.50
	MEASURED PIEZO DEPTH	14.70	14.20	14.70	14.70	14.40	14.70	14.70	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	NM	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
	MEASURED COLUMN THICKNESS	2.10	4.50	8.30	4.00	1.20	8.20	5.20	5.40	5.10	5.30	5.00	5.30	5.10	5.70	5.40	5.40	NA	5.20	5.20	4.90	5.40	4.30	5.20	5.30	5.40	5.30	6.30	6.30
LW-11R	FLUID LEVEL	39.40	39.17	38.48	39.24	NM	NM	39.15	35.16	39.04	39.14	38.42	38.69	38.37	38.31	38.36	31.41	31.15	31.02	30.62	30.37	30.24	33.08	39.93	40.07	40.20	40.02	39.93	40.25
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	8.60	8.83	9.52	8.76	NM	NM	8.85	12.84	8.96	8.86	9.58	9.31	9.63	9.69	9.64	16.59	16.85	16.98	17.38	17.63	17.76	14.92	8.07	7.93	7.80	7.98	8.07	7.75
LW-12R	FLUID LEVEL	Installed May 2019																						72.26	72.27	72.26	NM	72.29	72.28
	MEASURED PIEZO DEPTH																							NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS																							9.74	9.73	9.74	NA	9.71	9.72
LW-13R	FLUID LEVEL	Installed May 2019																						96.95	93.66	96.82	96.83	96.88	96.76
	MEASURED PIEZO DEPTH																							NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS																							14.05	17.34	14.18	14.17	14.12	14.24
LW-14	FLUID LEVEL	55.26	55.22	55.41	55.41	55.50	55.01	55.32	55.36	55.42	55.92	55.63	55.93	55.69	55.67	55.90	55.57	55.76	55.88	17.47	48.30	48.01	50.90	57.48	57.48	57.47	57.46	57.44	57.45
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	5.54	5.58	5.39	5.39	5.30	5.79	5.48	5.44	5.38	4.88	5.17	4.87	5.11	5.13	4.90	5.23	5.04	4.92	43.33	12.50	12.79	9.90	3.32	3.32	3.33	3.34	3.36	3.35
LW-15	FLUID LEVEL	32.90	33.36	40.88	39.39	38.38	36.69	36.85	36.04	39.05	39.21	39.16	39.09	39.44	30.01	39.84	39.74	38.38	34.55	27.41	25.76	39.23	38.97	38.30	37.47	37.01	36.70	33.78	27.61
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	19.60	19.14	11.62	13.11	14.12	15.81	15.65	16.46	13.45	13.29	13.34	13.41	13.06	22.49	12.66	12.76	14.12	17.95	25.09	26.74	13.27	13.53	14.20	15.03	15.49	15.80	18.72	24.89
LW-16	FLUID LEVEL	Installed May 2019																										38.11	38.53
	MEASURED PIEZO DEPTH																											NM	NM
	MEASURED COLUMN THICKNESS																											6.89	6.47
LPZ-3 [7]	FLUID LEVEL	26.90	26.70	27.00	27.00	26.90	27.00	26.90	26.90	27.00	26.90	26.80	26.50	26.80	26.80	26.70	26.70	NM	22.20	26.40	26.50	26.90	25.50	26.60	26.10	26.90	26.30	26.60	24.00
	MEASURED PIEZO DEPTH	26.90	26.90	27.00	27.00	26.90	27.00	26.90	26.90	27.00	26.90	26.80	26.90	26.90	26.90	26.90	26.90	NM	26.90	26.90	26.90	26.90	26.90	26.90	26.90	26.90	26.90	26.90	26.80
	MEASURED COLUMN THICKNESS	DRY	0.20	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	0.10	0.40	0.10	0.10	0.20	0.20	NA	4.70	0.50	0.40	DRY	1.40	0.30	0.80	DRY	0.60	0.30	2.90
LPZ-4 [8]	FLUID LEVEL	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.50	11.50	11.90	11.90	11.90	NM	11.70	11.40	11.30	11.40	11.00	11.60	11.50	11.30	11.40	10.60	8.00
	MEASURED PIEZO DEPTH	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	NM	11.90	11.90	11.90	11.80	11.90	11.90	11.90	11.80	11.80	13.60	11.90
	MEASURED COLUMN THICKNESS	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	0.40	0.40	DRY	DRY	DRY	NA	0.20	0.50	0.60	0.50	0.90	0.30	0.40	0.60	0.50	1.30	3.90
LPZ-5	FLUID LEVEL	13.70	13.30	13.00	13.70	13.70	13.60	9.60	10.60	13.40	11.20	13.70	11.20	13.70	12.50	4.10	4.00	NM	4.10	10.50	10.20	10.20	9.90	10.80	7.00	9.60	9.30	8.10	5.60
	MEASURED PIEZO DEPTH	13.70	13.50	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.90	13.70	13.70	13.70	13.70	NM	13.70	13.70	13.70	13.70	13.70	13.70	13.60	13.70	13.60	13.70	13.60
	MEASURED COLUMN THICKNESS	DRY	0.40	0.70	DRY	DRY	0.10	4.10	3.10	0.30	2.50	DRY	2.50	DRY	1.20	9.60	9.70	NA	9.60	3.20	3.50	3.50	3.80	2.90	6.70	4.10	4.40	5.60	8.10
LPZ-C1W [9]	FLUID LEVEL	27.80	27.80	28.00	27.80	27.90	27.80	13.70	27.70	27.90	27.70	27.70	27.60	27.50	26.30	20.50	20.40	NM	20.80	27.10	27.30	26.90	26.70	23.00	24.00	23.70	23.50	23.10	23.00
	MEASURED PIEZO DEPTH	27.90	27.90	28.00	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.80	27.90	27.90	27.90	27.70	27.90	NM	27.90	27.90	27.90	27.90	27.90	27.90	27.80	27.90	27.90	27.90	27.90
	MEASURED COLUMN THICKNESS	0.1	0.1	DRY	0.1	DRY	0.10	14.20	0.20	DRY	0.20	0.20	0.30	0.40	1.60	7.40	7.5	NA	7.10	0.80	0.60	1.00	1.20	4.90	3.90	4.20	4.40	4.80	4.90
		09/26/17	**10/13/17**	**11/20/17**	**12/19/17**	**01/31/18**	**02/23/18**	**03/28/18**	**04/17/18**	**05/24/18**	**06/21/18**	**07/31/18**	**08/20/18**	**09/21/18**	**10/25/18**	**11/13/18**	**12/17/18**	**01/15/19**	**02/13/19**	**03/28/19**	**04/30/19**	**05/23/19**	**06/26/19**	**07/31/19**	**08/28/19**	**09/24/19**	**10/31/19**	**11/22/19**	**12/31/19**
LM-1	Cell 1	9.01	9.01	9.02	9.02	9.02	9.02	9.02	9.02	9.02	9.02	9.02	9.02	9.03	9.03	9.03	9.03	9.04	9.04	9.04	9.04	9.04	9.04	9.04	9.04	9.04	9.04	NM	NM
LM-2	Cell 2	5.99	NM	NM	NM	6.34	6.29	6.29	6.25	6.30	6.29	6.95	7.08	6.64	6.58	6.29	6.44	6.34	7.15	6.85	6.58	6.56	6.68	6.73	6.79	6.77	6.81	6.45	6.43
LPZ-6	Cell 5 Sump	Installed October 2018														NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
LPZ-7	Cell 5	Installed October 2018														0.13	NM	NM	NM	NM	NM	NM	NM	0.21	0.21	0.22	0.22	0.80	0.72

Historical Leachate Column Thicknesses
2023 Leachate Control System Performance Evaluation Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Leachate Piezometer		Date of Measurement																													
		01/31/20	02/26/20	03/26/20	04/30/20	05/28/20	6/24/20 [48]	7/31/20 [49,50]	08/28/20	9/25/20 [51]	10/30/20	11/23/20	12/21/20	01/25/21	02/18/21	03/29/21	04/30/21	05/28/21	06/30/21	07/25/21	08/25/21	09/24/21	10/27/21	11/23/21	12/14/21	01/26/22	02/14/22	03/02/22	04/25/22	05/24/22	06/20/22	07/13/22	08/24/22
LW-3	FLUID LEVEL	10.60	11.30	10.70	11.10	10.90	11.00	10.80	10.50	11.30	11.70	11.90	11.10	10.90	10.60	10.20	10.40	11.10	10.90	10.80	11.20	11.40	11.70	11.60	11.60	11.60	12.30	11.90	9.90	10.00	10.10	10.30	10.50
	MEASURED PIEZO DEPTH	28.20	28.20	28.20	28.10	28.10	28.10	28.10	28.10	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	NM	28.20	NM	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20
	MEASURED COLUMN THICKNESS	17.60	16.90	17.50	17.10	17.30	17.20	17.40	17.70	16.90	16.50	16.30	17.10	17.30	17.60	18.00	17.80	17.10	17.30	17.40	17.00	16.80	16.50	16.60	16.60	16.60	15.90	16.30	18.30	18.20	18.10	17.90	17.70
LW-4R [3]	FLUID LEVEL	78.54	NM	NM	NM	78.50	78.47	NM	67.47	68.19	68.30	78.32	79.33	79.26	79.22	76.00	79.32	79.27	56.26	52.07	49.62	47.27	45.74	49.52	69.05	50.94	49.55	79.33	79.25	79.22	79.26	79.30	79.36
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	3.46	NA	NA	NA	3.50	3.53	NA	14.53	13.81	13.70	3.68	2.67	2.74	2.78	6.00	2.68	2.73	25.74	29.93	32.38	34.73	36.26	32.48	12.95	31.06	32.45	2.67	2.75	2.78	2.74	2.70	2.64
LW-6R	FLUID LEVEL	60.86	59.70	53.70	52.21	71.32	66.14	56.46	63.30	61.96	63.30	66.75	62.96	70.82	60.87	70.62	63.17	61.96	57.12	54.00	52.03	51.24	50.96	50.93	51.79	50.15	50.01	49.47	50.27	70.80	70.77	70.90	70.76
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	12.94	14.10	20.10	21.59	2.48	7.66	17.34	10.50	11.84	10.50	7.05	10.84	2.98	12.93	3.18	10.63	11.84	16.68	19.80	21.77	22.56	22.84	22.87	22.01	23.65	23.79	24.33	23.53	3.00	3.03	2.90	3.04
LW-7R	FLUID LEVEL	68.55	67.98	67.14	66.56	74.68	76.20	67.98	70.89	68.92	75.09	76.22	72.03	76.28	76.85	84.02	76.91	79.28	74.88	72.18	71.25	70.05	69.07	70.17	72.46	69.75	69.14	76.93	81.85	77.35	81.13	84.51	79.79
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	22.45	23.02	23.86	24.44	16.32	14.80	23.02	20.11	22.08	15.91	14.78	18.97	14.72	14.15	6.98	14.09	11.72	16.12	18.82	19.75	20.95	21.93	20.83	18.54	21.25	21.86	14.07	9.15	13.65	9.87	6.49	11.21
LW-8R	FLUID LEVEL	56.83	53.22	52.80	56.71	74.36	74.38	74.34	74.61	74.43	74.06	71.50	73.92	74.46	71.84	74.48	74.24	72.24	59.88	56.18	53.75	51.94	50.63	58.95	68.44	55.82	54.43	74.46	74.68	74.90	74.46	74.57	74.59
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	28.37	31.98	32.40	28.49	10.84	10.82	10.86	10.59	10.77	11.14	13.70	11.28	10.74	13.36	10.72	10.96	12.96	25.32	29.02	31.45	33.26	34.57	26.25	16.76	29.38	30.77	10.74	10.52	10.30	10.74	10.63	10.61
LW-9R	FLUID LEVEL	29.28	27.56	31.46	36.77	47.46	47.50	47.47	37.26	40.66	47.15	41.58	40.16	44.77	42.07	46.31	46.22	44.50	31.25	28.67	26.87	25.94	25.53	29.38	37.25	NM	26.08	46.34	41.19	46.62	46.38	46.63	43.91
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	23.72	25.44	21.54	16.23	5.54	5.50	5.53	15.74	12.34	5.85	11.42	12.84	8.23	10.93	6.69	6.78	8.50	21.75	24.33	26.13	27.06	27.47	23.62	15.75	NA	26.92	6.66	11.81	6.38	6.62	6.37	9.09
LW-10	FLUID LEVEL	9.30	9.50	9.40	9.10	8.90	9.20	9.40	9.20	9.30	9.30	8.50	9.10	9.50	9.60	9.40	9.10	9.30	9.40	9.40	9.00	8.80	9.10	9.20	9.30	9.40	9.60	9.50	9.60	9.40	9.00	9.20	9.20
	MEASURED PIEZO DEPTH	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	NM	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
	MEASURED COLUMN THICKNESS	5.50	5.30	5.40	5.70	5.90	5.60	5.40	5.60	5.50	5.50	6.30	5.70	5.30	5.20	5.40	5.70	5.50	5.40	5.40	5.80	6.00	5.70	5.60	5.50	5.40	5.20	5.30	5.20	5.40	5.80	5.60	5.60
LW-11R	FLUID LEVEL	33.19	33.06	40.23	40.13	42.00	42.24	42.19	NM	NM	41.97	39.65	42.34	42.00	34.15	40.92	40.46	33.90	33.76	32.22	32.58	32.38	30.56	32.76	35.57	32.06	32.00	39.66	38.23	38.82	40.75	41.26	41.19
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	14.81	14.94	7.77	7.87	6.00	5.76	5.81	NA	NA	6.03	8.35	5.66	6.00	13.85	7.08	7.54	14.10	14.24	15.78	15.42	15.62	17.44	15.24	12.43	15.94	16.00	8.34	9.77	9.16	7.25	6.74	6.81
LW-12R	FLUID LEVEL	72.26	72.27	72.25	72.24	72.80	72.21	72.18	72.16	72.15	72.20	70.38	72.17	72.21	70.83	72.18	72.16	67.50	59.65	55.00	53.15	51.51	50.64	58.44	67.96	NM	54.62	72.34	72.16	72.16	72.16	72.13	72.13
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	9.74	9.73	9.75	9.76	9.20	9.79	9.82	9.84	9.85	9.80	11.62	9.83	9.79	11.17	9.82	9.84	14.50	22.35	27.00	28.85	30.49	31.36	23.56	14.04	NA	27.38	9.66	9.84	9.84	9.84	9.87	9.87
LW-13R	FLUID LEVEL	96.52	96.75	96.81	96.85	96.86	96.87	96.89	96.85	96.82	96.92	96.89	96.90	96.94	96.59	96.94	96.79	95.73	74.99	63.11	53.15	NM	49.60	70.05	89.63	61.75	57.99	96.51	97.26	97.40	97.40	97.48	97.60
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	14.48	14.25	14.19	14.15	14.14	14.13	14.11	14.15	14.18	14.08	14.11	14.10	14.06	14.41	14.06	14.21	15.27	36.01	47.89	57.85	NA	61.40	40.95	21.37	49.25	53.01	14.49	13.74	13.60	13.60	13.52	13.40
LW-14	FLUID LEVEL	57.45	57.45	57.47	57.49	57.49	57.49	57.49	57.49	57.48	57.47	56.95	57.48	57.44	57.43	57.46	57.47	51.33	50.75	47.06	44.62	43.75	42.76	51.65	56.13	47.03	45.73	57.46	54.10	57.46	57.48	57.49	57.50
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	3.35	3.35	3.33	3.31	3.31	3.31	3.31	3.31	3.32	3.33	3.85	3.32	3.36	3.37	3.34	3.33	9.47	10.05	13.74	16.18	17.05	18.04	9.15	4.67	13.77	15.07	3.34	6.70	3.34	3.32	3.31	3.30
LW-15	FLUID LEVEL	25.47	26.26	21.51	21.32	44.34	37.92	38.06	37.31	36.32	38.62	39.84	38.54	40.57	47.97	47.97	47.95	47.99	47.97	47.98	47.99	NM	48.01	48.02	48.02	48.03	48.03	48.01	40.51	42.33	45.32	43.06	45.73
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	27.03	26.24	30.99	31.18	8.16	14.58	14.44	15.19	16.18	13.88	12.66	13.96	11.93	4.53	4.53	4.55	4.51	4.53	4.52	4.51	NA	4.49	4.48	4.48	4.47	4.47	4.49	11.99	10.17	7.18	9.44	6.77
LW-16	FLUID LEVEL	38.82	38.55	37.55	36.71	35.98	37.14	39.02	38.92	38.92	38.57	38.95	39.15	38.40	38.86	37.68	38.01	37.06	37.82	37.34	37.81	38.66	NM	40.48	40.49	NM	40.50	40.50	40.31	40.49	40.51	40.47	38.64
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	6.18	6.45	7.45	8.29	9.02	7.86	5.98	6.08	6.08	6.43	6.05	5.85	6.60	6.14	7.32	6.99	7.94	7.18	7.66	7.19	6.34	NA	4.52	4.51	NA	4.50	4.50	4.69	4.51	4.49	4.53	6.36
LPZ-3 [7]	FLUID LEVEL	22.00	26.70	26.50	26.30	26.10	26.00	36.00	35.10	36.20	38.20	38.40	38.40	38.30	38.00	38.30	38.40	38.40	38.30	38.10	38.30	38.00	38.20	38.10	38.30	38.20	38.30	38.30	38.10	38.00	38.40	38.30	38.40
	MEASURED PIEZO DEPTH	26.90	26.90	26.80	26.80	26.80	26.80	37.10	37.10	36.90	38.20	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	NM	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40
	MEASURED COLUMN THICKNESS	4.90	0.20	0.40	0.60	0.80	0.90	0.90	1.80	0.70	DRY	DRY	DRY	0.10	0.40	0.10	DRY	DRY	0.10	0.30	0.10	0.40	0.20	0.30	0.10	0.20	0.10	0.10	0.30	0.40	DRY	0.10	DRY
LPZ-4 [8]	FLUID LEVEL	11.00	11.70	11.90	11.30	11.40	11.50	11.10	11.00	11.60	11.90	11.90	11.90	11.80	11.50	11.90	11.80	11.80	11.60	11.30	11.70	11.60	11.70	11.70	11.90	11.60	11.80	11.90	11.80	11.80	11.90	11.80	11.90
	MEASURED PIEZO DEPTH	11.90	11.70	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.80	11.80	11.80	11.80	11.80	11.70	11.80	NM	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90
	MEASURED COLUMN THICKNESS	0.90	0.20	DRY	0.60	0.50	0.40	0.80	0.90	0.30	DRY	DRY	DRY	0.10	0.40	DRY	0.10	0.10	0.30	0.60	0.20	0.30	0.20	0.20	DRY	0.30	0.10	DRY	0.10	0.10	DRY	0.10	DRY
LPZ-5	FLUID LEVEL	9.40	9.20	13.00	10.60	10.90	8.80	7.70	7.50	7.50	4.50	4.60	5.50	7.10	7.40	10.00	12.70	3.50	2.90	2.80	4.20	12.00	13.50	13.40	13.50	13.40	13.60	13.60	13.50	13.40	13.60	13.60	13.70
	MEASURED PIEZO DEPTH	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	NM	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70
	MEASURED COLUMN THICKNESS	4.30	4.50	0.70	3.10	2.80	4.90	6.00	6.20	6.20	9.20	9.10	8.20	6.60	6.30	3.70	1.00	10.20	10.80	10.90	9.50	1.70	0.20	0.30	0.20	0.30	0.10	0.10	0.20	0.30	0.10	0.10	DRY
LPZ-C1W [9]	FLUID LEVEL	26.30	25.70	26.10	25.30	25.50	25.90	23.80	23.50	24.70	21.20	21.20	22.10	23.70	23.10	27.20	27.00	20.00	19.20	19.00	20.80	22.90	27.70	27.40	27.60	27.70	27.80	27.90	27.60	27.40	27.80	27.80	27.90
	MEASURED PIEZO DEPTH	27.90	27.80	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.80	27.80	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	NM	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90
	MEASURED COLUMN THICKNESS	1.60	2.20	1.80	2.60	2.40	2.00	4.10	4.40	3.20	6.70	6.70	5.80	4.20	4.80	0.70	0.90	7.90	8.70	8.90	7.10	5.00	0.20	0.50	0.30	0.20	0.10	DRY	0.30	0.50	0.10	0.10	DRY
		01/31/20	**02/26/20**	**03/26/20**	**04/30/20**	**05/28/20**	**06/24/20**	**07/31/20**	**08/28/20**	**09/25/20**	**10/30/20**	**11/23/20**	**12/21/20**	**01/25/21**	**02/18/21**	**03/29/21**	**04/30/21**	**05/28/21**	**06/30/21**	**07/25/21**	**08/25/21**	**09/24/21**	**10/27/21**	**11/23/21**	**12/14/21**	**01/26/22**	**02/14/22**	**03/02/22**	**04/25/22**	**05/24/22**	**06/20/22**	**07/13/22**	**08/24/22**
LM-1	Cell 1	NM	NM	NM	NM	9.05	9.04	9.04	9.04	9.04	9.05	9.04	9.05	9.05	9.09	9.04	9.04	9.05	9.05	9.08	9.04	9.04	9.04	NM	9.04	9.05	9.04	9.04	9.04	9.04	9.03	9.03	9.03
LM-2	Cell 2	6.53	6.34	6.63	6.62	NM	NM	NM	NM	NM	6.52	6.55	6.57	6.39	6.61	6.74	6.51	6.46	6.53	6.46	6.42	6.21	6.70	6.62	6.37	6.55	6.63	6.62	6.85	6.71	6.40	6.38	6.52
LPZ-6	Cell 5 Sump	3.24	3.24	3.25	3.26	3.26	3.28	3.29	3.29	3.29	3.33	3.30	3.27	3.31	3.30	3.25	3.28	3.19	3.19	3.20	3.21	3.21	3.19	3.18	3.20	3.21	3.21	3.19	3.20	3.20	3.20	3.19	3.20
LPZ-7	Cell 5	2.49	2.52	0.73	0.75	0.28	0.22	0.24	NM	NM	0.29	0.87	0.20	0.24	0.24	0.25	0.26	0.38	0.30	0.26	0.27	0.27	0.27	0.26	0.26	0.26	0.27	0.27	0.27	0.27	0.28	0.28	0.27

Historical Leachate Column Thicknesses
2023 Leachate Control System Performance Evaluation Report
Des Moines County Regional Sanitary Landfill
Permit No. 29-SDP-01-76P

Leachate Piezometer		Date of Measurement																											
		09/14/22	10/24/22	11/29/22	12/15/22	01/31/23	02/20/23	03/14/23	04/28/23	05/23/23	06/20/23	07/13/23	08/31/23	09/22/23	10/30/23	11/29/23	12/15/23	01/29/24	02/22/24	03/13/24	04/22/24	05/30/24	06/10/24	07/24/24	08/20/24	09/20/24	10/31/24	11/25/24	12/17/24
LW-3	FLUID LEVEL	11.00	11.30	10.70	10.90	11.80	10.50	10.60	12.50	12.10	14.70	13.50	14.20	13.30	11.00	11.80	12.00	10.60	13.00	28.20	10.80	11.00	11.30	11.50	11.90	11.70	12.50	12.60	12.90
	MEASURED PIEZO DEPTH	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20	28.20
	MEASURED COLUMN THICKNESS	17.20	16.90	17.50	17.30	16.40	17.70	17.60	15.70	16.10	13.50	14.70	14.00	14.90	17.20	16.40	16.20	17.60	15.20	DRY	17.40	17.20	16.90	16.70	16.30	16.50	15.70	15.60	15.30
LW-4R (3)	FLUID LEVEL	68.32	79.44	67.99	56.10	52.86	51.11	50.00	48.33	79.62	74.55	68.79	60.81	54.90	79.75	78.35	71.04	71.34	69.01	79.57	79.75	79.62	79.66	79.87	77.62	78.12	77.68	77.72	77.93
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	13.68	2.56	14.01	25.90	29.14	30.89	32.00	33.67	2.38	7.45	13.21	21.19	27.10	2.25	3.65	10.96	10.66	12.99	2.43	2.25	2.38	2.34	2.13	4.38	3.88	4.32	4.28	4.07
LW-6R	FLUID LEVEL	63.44	70.83	70.72	60.70	54.28	52.35	51.30	50.36	70.95	70.81	70.74	63.23	60.88	70.80	70.78	70.70	70.30	70.89	70.90	70.87	70.71	69.54	62.36	70.95	70.95	70.76	70.55	70.93
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	10.36	2.97	3.08	13.10	19.52	21.45	22.50	23.44	2.85	2.99	3.06	10.57	12.92	3.00	3.02	3.10	3.50	2.91	2.90	2.93	3.09	4.26	11.44	2.85	2.85	3.04	3.25	2.87
LW-7R	FLUID LEVEL	78.01	84.57	81.02	75.60	73.14	72.42	71.90	71.12	84.53	82.75	83.97	80.83	76.88	84.62	83.82	81.40	77.16	78.52	84.67	79.15	80.21	79.53	84.38	84.34	74.35	79.14	NM	84.13
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	12.99	6.43	9.98	15.40	17.86	18.58	19.10	19.88	6.47	8.25	7.03	10.17	14.12	6.38	7.18	9.60	13.84	12.48	6.33	11.85	10.79	11.47	6.62	6.66	16.65	11.86	NA	6.87
LW-8R	FLUID LEVEL	66.10	75.02	70.37	60.33	56.64	54.41	53.10	51.77	74.44	74.69	72.01	68.93	52.20	64.81	74.66	74.40	73.85	73.83	73.88	73.54	73.45	73.61	73.58	73.51	74.04	73.89	74.75	74.57
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	19.10	10.18	14.83	24.87	28.56	30.79	32.10	33.43	10.76	10.51	13.19	16.27	33.00	20.39	10.54	10.80	11.35	11.37	11.32	11.66	11.75	11.59	11.62	11.69	11.16	11.31	10.45	10.63
LW-9R	FLUID LEVEL	33.00	46.95	34.89	28.61	26.90	25.78	24.76	24.46	24.00	23.81	42.95	20.47	21.92	22.10	22.20	44.79	45.23	45.33	45.40	45.12	44.77	44.91	41.06	47.75	47.55	47.78	47.71	47.76
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	20.00	6.05	18.11	24.39	26.10	27.22	28.24	28.54	29.00	29.19	10.05	32.53	31.08	30.90	30.80	8.21	7.77	7.67	7.60	7.88	8.23	8.09	11.94	5.25	5.45	5.22	5.29	5.24
LW-10	FLUID LEVEL	9.10	9.20	9.00	9.10	9.20	9.30	8.90	8.90	9.40	9.00	9.20	9.20	9.00	9.10	9.30	9.30	8.50	9.20	9.10	9.10	9.10	9.10	9.20	8.60	8.60	8.90	9.00	8.90
	MEASURED PIEZO DEPTH	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
	MEASURED COLUMN THICKNESS	5.70	5.60	5.80	5.70	5.60	5.50	5.90	5.90	5.40	5.80	5.60	5.60	5.80	5.70	5.50	5.50	6.30	5.60	5.70	5.70	5.70	5.70	5.60	6.20	6.20	5.90	5.80	5.90
LW-11R	FLUID LEVEL	38.36	41.55	39.99	39.19	37.25	37.79	36.85	36.57	37.63	40.55	41.18	40.87		40.66	41.05	40.80	38.53	38.92	41.30	41.25	41.08	41.25	41.18	41.08	41.50	39.65	41.30	41.11
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	9.64	6.45	8.01	8.81	10.75	10.21	11.15	11.43	10.37	7.45	6.82	7.13	48.00	7.34	6.95	7.20	9.47	9.08	6.70	6.75	6.92	6.75	6.82	6.92	6.50	8.35	6.70	6.89
LW-12R	FLUID LEVEL	65.95	72.08	69.21	64.99						72.03	71.93	67.86	60.03	64.25	71.65	71.68	72.43	71.62	71.68	71.74	62.78	63.27	64.91	71.68	71.68	71.62	71.64	71.89
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	16.05	9.92	12.79	17.01	82.00	82.00	82.00	82.00	82.00	9.97	10.07	14.14	21.97	17.75	10.35	10.32	9.57	10.38	10.32	10.26	19.22	18.73	17.09	10.32	10.32	10.38	10.36	10.11
LW-13R	FLUID LEVEL	85.88	97.41	28.35	28.35					96.75	97.14	97.30	82.45	67.96	97.41	97.20	97.01	96.92	96.79	96.86	96.88	96.82	96.76	96.87	96.82	96.89	97.14	97.36	97.10
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	25.12	13.59	82.65	82.65	111.00	111.00	111.00	111.00	14.25	13.86	13.70	28.55	43.04	13.59	13.80	13.99	14.08	14.21	14.14	14.12	14.18	14.24	14.13	14.18	14.11	13.86	13.64	13.90
LW-14	FLUID LEVEL	54.68	57.52	56.16	49.89	47.04	45.38	43.99	43.36	47.72	57.51	57.55	57.53	50.80	57.48	57.48	57.50	56.28	53.39	53.63	56.85	56.87	56.83	53.25	56.85	56.91	56.89	NM	56.85
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	6.12	3.28	4.64	10.91	13.76	15.42	16.81	17.44	13.08	3.29	3.25	3.27	10.00	3.32	3.32	3.30	4.52	7.41	7.17	3.95	3.93	3.97	7.55	3.95	3.89	3.91	NA	3.95
LW-15	FLUID LEVEL	41.27	41.34	41.33	41.34	41.33	41.17	41.11	41.13	41.62	47.65	47.49	47.58		41.70	43.68	45.10	44.15	41.36	43.88	41.33	47.65	47.58	47.65	47.64	42.65	41.43	47.80	41.39
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	11.23	11.16	11.17	11.16	11.17	11.33	11.39	11.37	10.88	4.85	5.01	4.92	52.50	10.80	8.82	7.40	8.35	11.14	8.62	11.17	4.85	4.92	4.85	4.86	9.85	11.07	4.70	11.11
LW-16	FLUID LEVEL	38.58	38.71	38.85	38.83			38.61		38.71	38.77	38.77	38.26	38.73	39.05	38.99	39.34	39.05	38.54	38.74	38.77	38.61	38.70	38.74	38.73	38.60	39.11	38.99	38.95
	MEASURED PIEZO DEPTH	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
	MEASURED COLUMN THICKNESS	6.42	6.29	6.15	6.17	45.00	45.00	6.39	45.00	6.29	6.23	6.23	6.74	6.27	5.95	6.01	5.66	5.95	6.46	6.26	6.23	6.39	6.30	6.26	6.27	6.40	5.89	6.01	6.05
LPZ-3 (7)	FLUID LEVEL	38.40	38.30	38.40	38.30	38.40	38.30	38.30	38.30	38.40	38.40	38.40	38.40	38.30	38.40	38.40	38.30	38.30	38.30	10.50	38.40	38.40	38.40	38.40	38.40	38.40	38.30	38.30	38.40
	MEASURED PIEZO DEPTH	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40	38.40
	MEASURED COLUMN THICKNESS	DRY	0.10	DRY	0.10	DRY	0.10	0.10	0.10	DRY	DRY	DRY	DRY	0.10	DRY	DRY	0.10	0.10	0.10	27.9	DRY	DRY	DRY	DRY	DRY	DRY	0.10	0.10	DRY
LPZ-4 (8)	FLUID LEVEL	11.90	11.80	11.90	11.80	11.90	11.80	11.80	11.80	11.80	11.90	11.90	11.90	11.80	11.90	11.90	11.80	11.80	11.80	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.80	11.80	11.90
	MEASURED PIEZO DEPTH	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90	11.90
	MEASURED COLUMN THICKNESS	DRY	0.10	DRY	0.10	DRY	0.10	0.10	0.10	0.10	DRY	DRY	DRY	0.10	DRY	DRY	0.10	0.10	0.10	DRY	DRY	DRY	DRY	DRY	DRY	DRY	0.10	0.10	DRY
LPZ-5	FLUID LEVEL	13.70	13.50	13.60	13.60	13.70	7.50	11.70	13.60	13.60	13.60	13.70	13.70	13.50	13.70	13.70	13.70	13.60	13.50	13.70	13.50	13.50	13.60	13.70	13.70	13.70	13.60	13.60	13.30
	MEASURED PIEZO DEPTH	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70	13.70
	MEASURED COLUMN THICKNESS	DRY	0.20	0.10	0.10	DRY	6.20	2.00	0.10	0.10	0.10	DRY	DRY	0.20	DRY	DRY	DRY	0.10	0.20	DRY	0.20	0.20	0.10	DRY	DRY	DRY	0.10	0.10	0.40
LPZ-C1W (9)	FLUID LEVEL	27.90	27.70	27.80	27.80	27.90	24.00	27.60	27.60	27.70	27.80	27.80	27.90	27.80	27.90	27.90	27.80	27.80	27.70	27.90	27.70	27.70	27.80	27.90	27.90	27.90	27.80	27.80	27.90
	MEASURED PIEZO DEPTH	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90	27.90
	MEASURED COLUMN THICKNESS	DRY	0.20	0.10	0.10	DRY	3.90	0.30	0.30	0.20	0.10	0.10	DRY	0.10	DRY	DRY	0.10	0.10	0.20	DRY	0.20	0.20	0.10	DRY	DRY	DRY	0.10	0.10	DRY
		09/14/22	10/24/22	11/29/22	12/15/22	01/31/23	02/20/23	03/14/23	04/28/23	05/23/23	06/20/23	07/13/23	08/31/23	09/22/23	10/30/23	11/29/23	12/15/23	01/29/24	02/22/24	03/13/24	04/22/24	05/30/24	06/10/24	07/24/24	08/20/24	09/20/24	10/31/24	11/25/24	12/17/24
LM-1	Cell 1	9.03	9.02	9.02	9.02	9.02	9.02	9.02	9.02	9.02	9.02	9.02	9.02	9.02	9.02	9.02	9.02	9.01	9.02	9.01	9.01	9.02	9.02	9.00	9.01	9.01	9.02	9.01	9.00
LM-2	Cell 2	6.58	6.80	6.80	6.94	6.85	6.64	6.94	6.92	6.82	6.68	6.53	12.63	12.63	12.63	12.63	12.63	12.63	12.63	12.63	12.63	12.63	12.63	12.63	12.63	12.63	12.63	12.63	12.63
LPZ-6	Cell 5 Sump	3.19	3.21	3.19	3.34	3.20	3.18	3.05	3.45	3.21	3.20	3.28	3.19	3.57	3.29	3.24	3.20	2.34	3.02	3.07	3.32	3.17	3.33	3.26	3.24	3.31	3.27	3.25	NM
LPZ-7	Cell 5	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.28	0.28	0.28	0.27	0.28	0.27	0.27	0.28	0.28	0.28	0.27	0.28	0.27	0.27	0.28	0.28	0.28	0.27	0.28	11.58

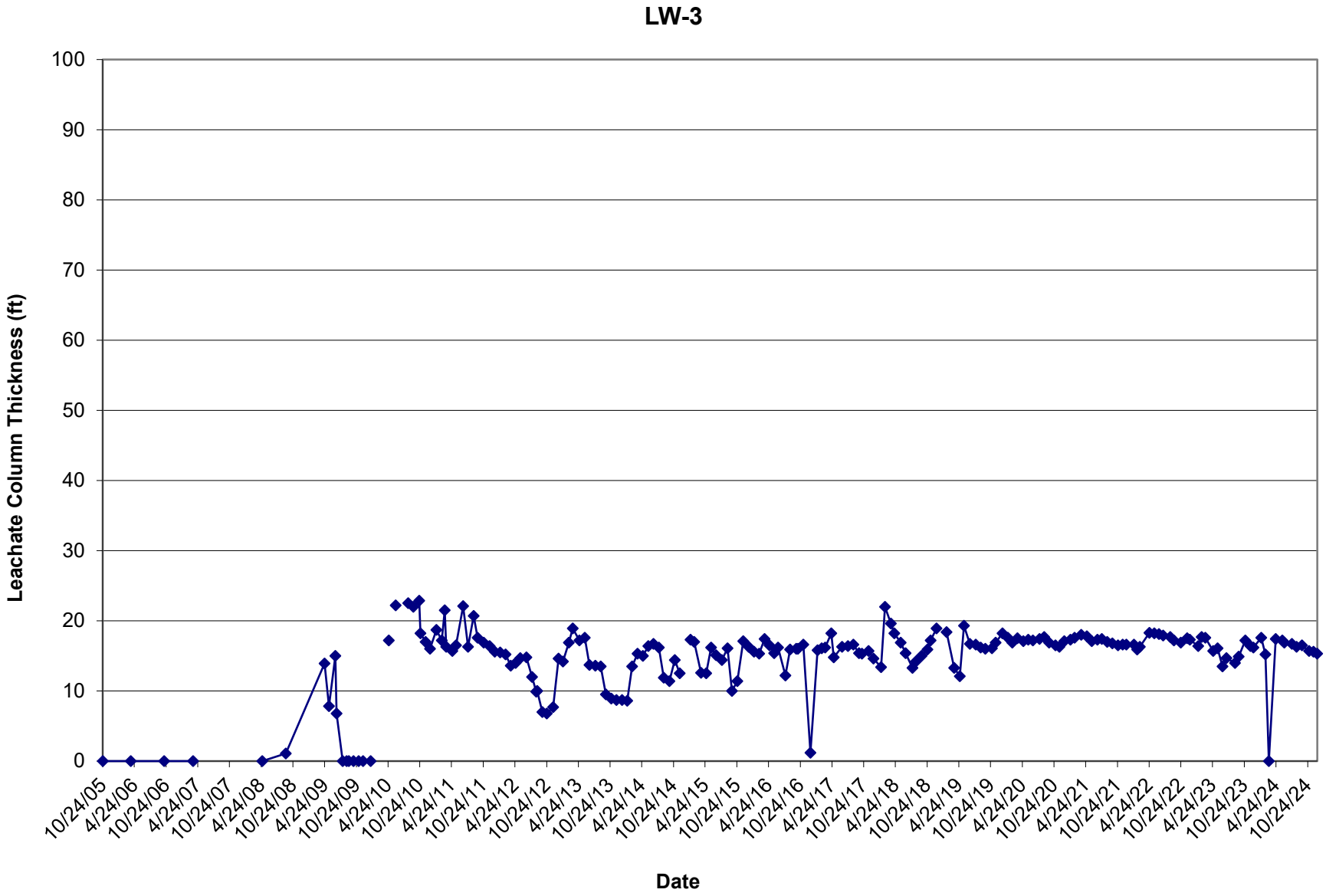
Notes:

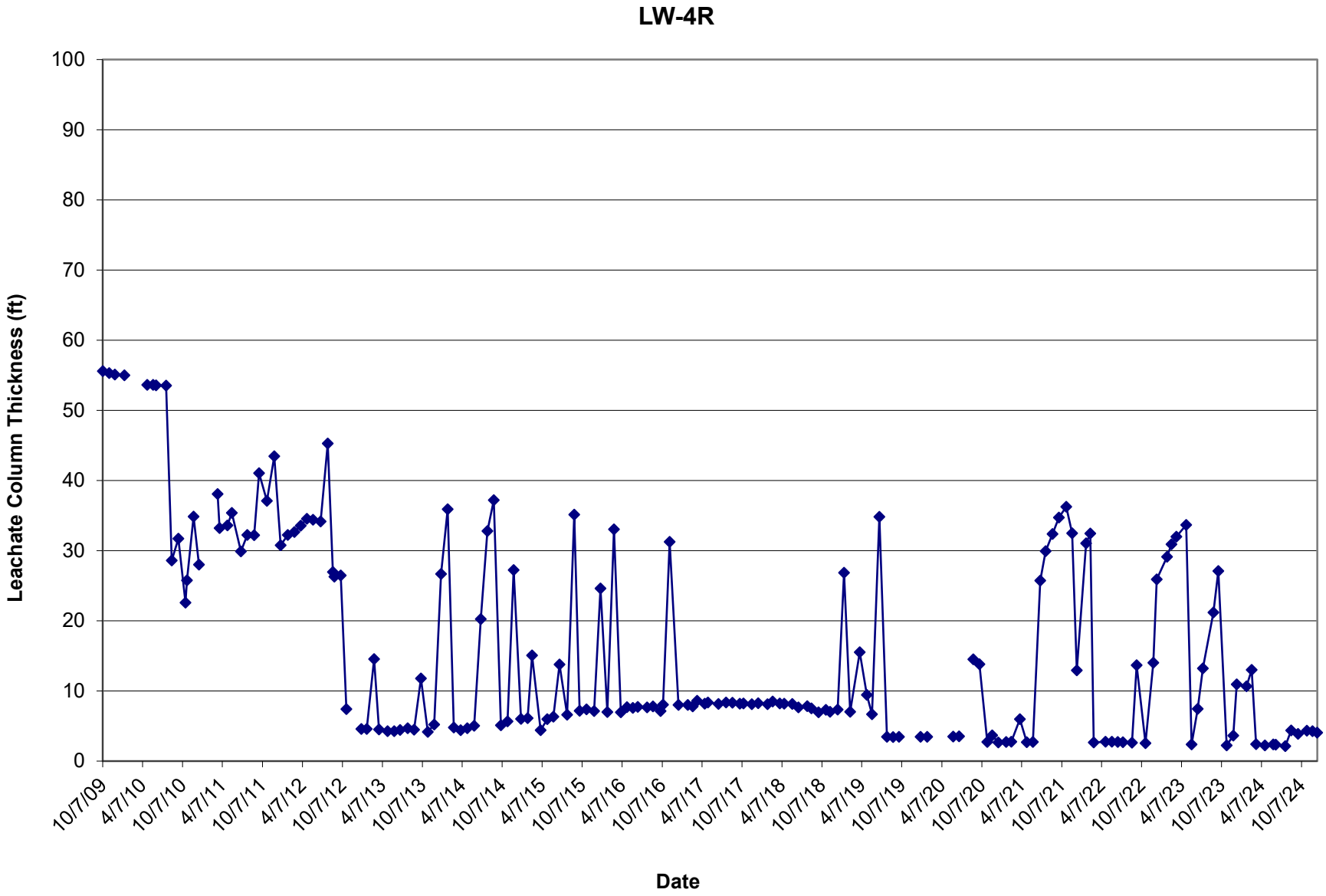
Measured Column Thickness is based on average total depths in 2009 (excluding anomalies) or as-built information when available.
NM = Not measured, NV = Not valid data, NA=Not available, NI=Not Installed

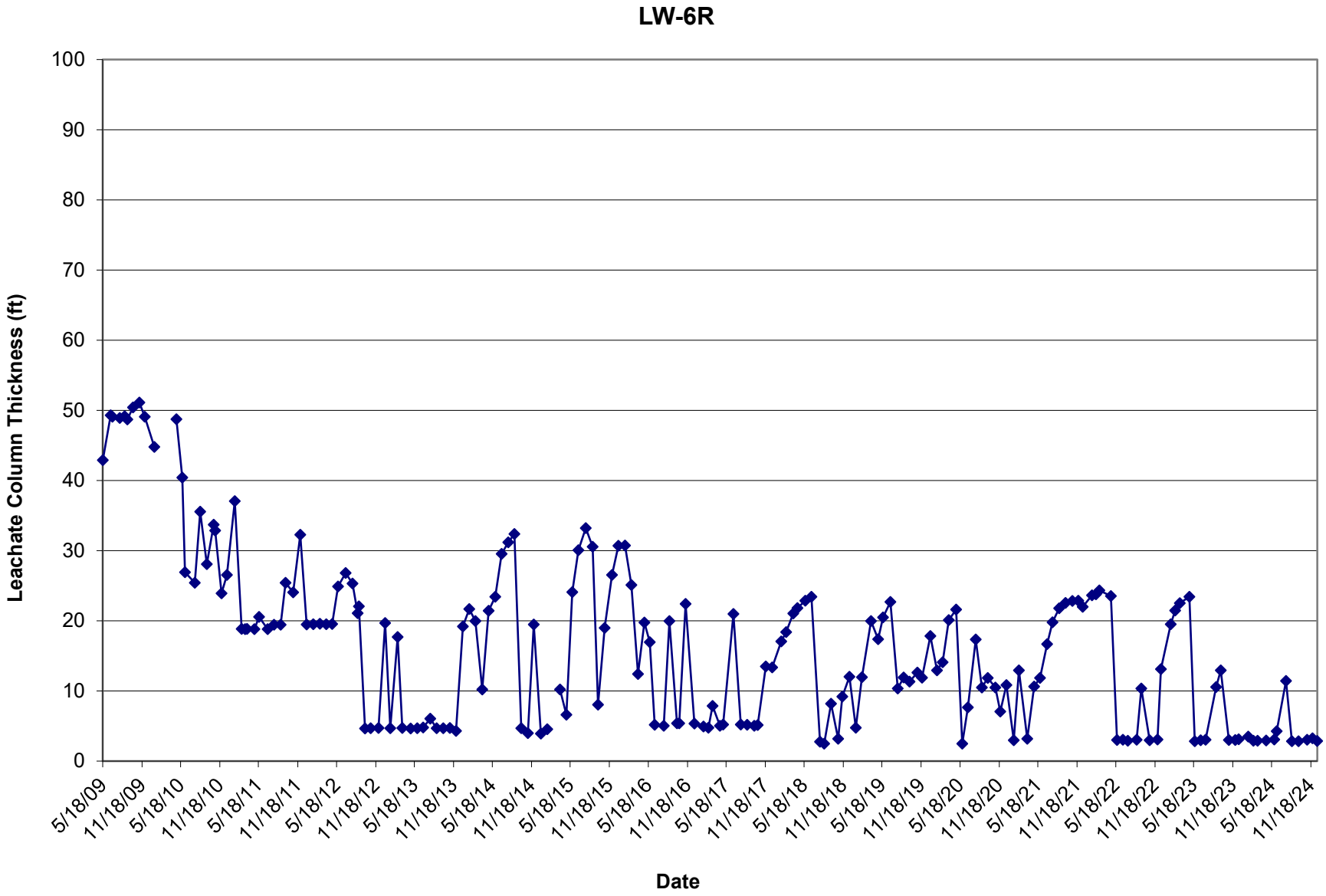
(1) LW-1 historically had a kink around 8.3 feet, but is measurable to the total depth. A kink near 30 feet was noted on 9/17/2010 that prevented measurements.
(2) LW-4-OLD may have been hit during drilling of LW-4R, which may have jeopardized the integrity.
(3) LW-4R was redrilled after a ground surface collapse occurred following drilling.
(4) Historically, PZ-6 may have been measured and reported as LW-6. PZ-6 total depth is approximately 18 feet.
(5) LW-7 has a kink around 21 feet, but is measurable to the total depth through 2/28/2011 after which it appeared to be impassable. The original kink was documented as the bottom of piezometer on some monthly measurements, which results in erroneous thickness measurements in 2009.
(6) LPZ-1 and LPZ-2 were destroyed and/or kinked in 2008 and 2009, respectively, which resulted in erroneous thickness measurements. These piezometers were originally named LW-1 and LW-2. The names were changed to LPZ-1 and LPZ-2 sometime after April 2002. LPZ-1 and LPZ-2 were replaced with LPZ-1R and LPZ-2R.
(7) LPZ-3 is in Cell 4. Extended 9.0 feet in September 2012.
(8) LPZ-4 is in the leachate line of cell 3.
(9) LPZ-C1W extended 8.9 feet September 2010.
(10) LW-4R and LW-7R extended approximately 2' in July 2011.
(11) SCADA data polled from same day as manual measurements. If data is unavailable, the next closest (earlier) data is used. Where specific locations had extended periods of no data (i.e. transducer, radio, or other issue), fluid level noted as NM and thickness noted as NA.
(12) Where the fluid level exceeds the documented well depth, the resulting thickness is noted as 0.
(13) LPZ-1R kinked and prevented measurements after 10/20/2010.
(14) SCADA levels taken from 10/10/12 because radio went down.
(15) LW-4-NEW was noted to have a kink in 2011, which has prevented measurements.
(16) Transducers died in LW-4R and LW-14. No data was collected during November 2012
(17) SCADA data taken from 12/16/2013 due to air compressor going down
(18) Transducer died in LW-8R in Dec. 2013
(19) LM-1 and LM-2 replace LPZ-1R and LPZ-2R measurements due to kinks
(20) LW-4-OLD, LW-4-NEW, LW-6, LW-7, and LPZ-8R kinked and prevent measurement
(21) LW-9 and LW-11 replaced by LW-9R and LW-11R in Nov. 2012
(22) Equation corrections to 2013 data made on 6/6/2014 for LW-2, LPZ-3, and LPZ-5 resulted in minor column thickness changes
(23) Based on recent data trends, pumps 4R, 6R, 7R, and 8R may require cleaning to maintain consistent operation.
(24) Leachate level for LW-7R taken from 12/09/2014 data; closest date of available data.
(25) Leachate level for LW-6R taken from 1/6/2015 data; closest date of available data.
(26) Leachate level for LW-9R taken from 2/05/15 data, LW-11R from 2/18/15 data; closest date of available data.
(27) Lift station was inoperable due to a bad relay.
(28) Leachate level for LW-11R taken from 12/23/2015 data; closest date of available data.
(29) Leachate level for LM-1, LW-6R, and LW-13 taken from 05/10/16 data; closest date of available data.
(30) Leachate level for LW-6R, LW-13 taken from 6/29/16 data; closest date of available data. No June 2016 data available for LM-1.
(31) Leachate level for LM-1 taken from 7/12/16 data; closest date of available data.
(32) No August 2016 data available for LM-1.
(33) Leachate level for LW-11R taken from 10/25/16 data; closest date of available data.
(34) LW-12 levels measured on 2/2/17, LW-13 measured on 2/15/17, LM-2 on 2/23/17.
(35) LW-13 levels measured on 3/10/17.
(36) LW-11R levels measured on 5/4/17.
(37) LW-12 levels measured on 6/20/17. LM-2 levels measured on 6/1/17.
(38) LW-12 levels measured on 8/09/17.
(39) LW-13, LM-1 levels measured on 9/17/17, LM-2 levels measured on 9/6/17.
(40) LW-13 levels measured on 11/13/17.
(41) LW-6R levels measured on 1/29/18.
(42) LW-8R levels measured on 04/26/18.
(43) LM-1 levels measured on 11/21,18; LW-4R, LW-6R, LW-7R, LW-8R, LW-9R, LW-11R, LW-14, LW-15, measured on 11/15/18.
(44) LW-7R levels measured on 1/11/19; measurements by landfill staff not available.
(45) LW-7R levels measured on 2/2/19.
(46) LW-11R levels measured on 3/4/19; LW-14 measured on 3/25/19.
(47) LM-1 measured on 10/13/19.
(48) LW-4R measured on 6/22/20.
(49) LPZ-3 was extended by 10', to 36.9', on 7/27/2020.
(50) LW-11R and LPZ-7 measured on 7/14/20.
(51) LW-4R measured on 9/16/20; LW-9R measured on 9/13/20.
* Measured by Evora. Other measured by Landfill staff.

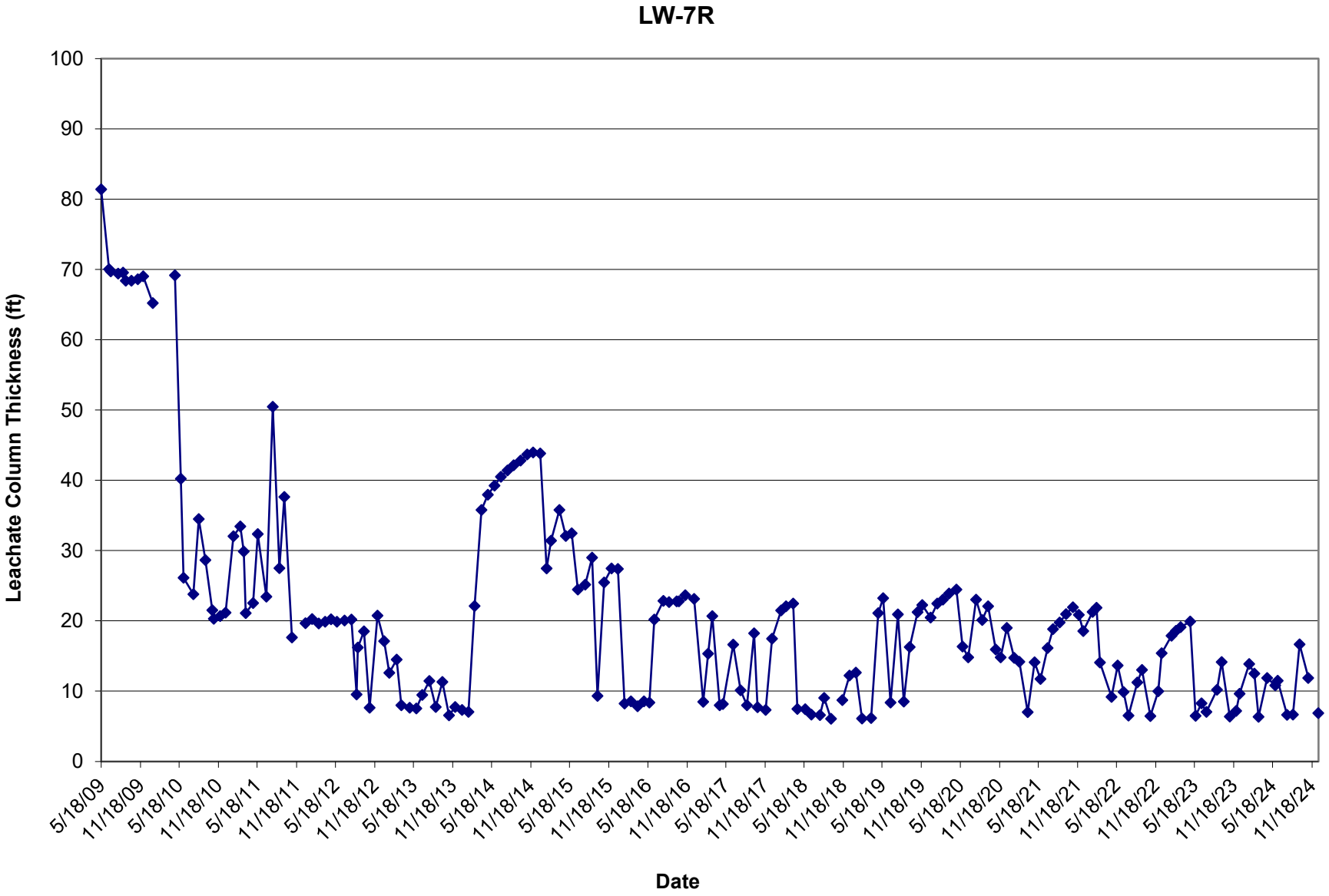
Attachment C

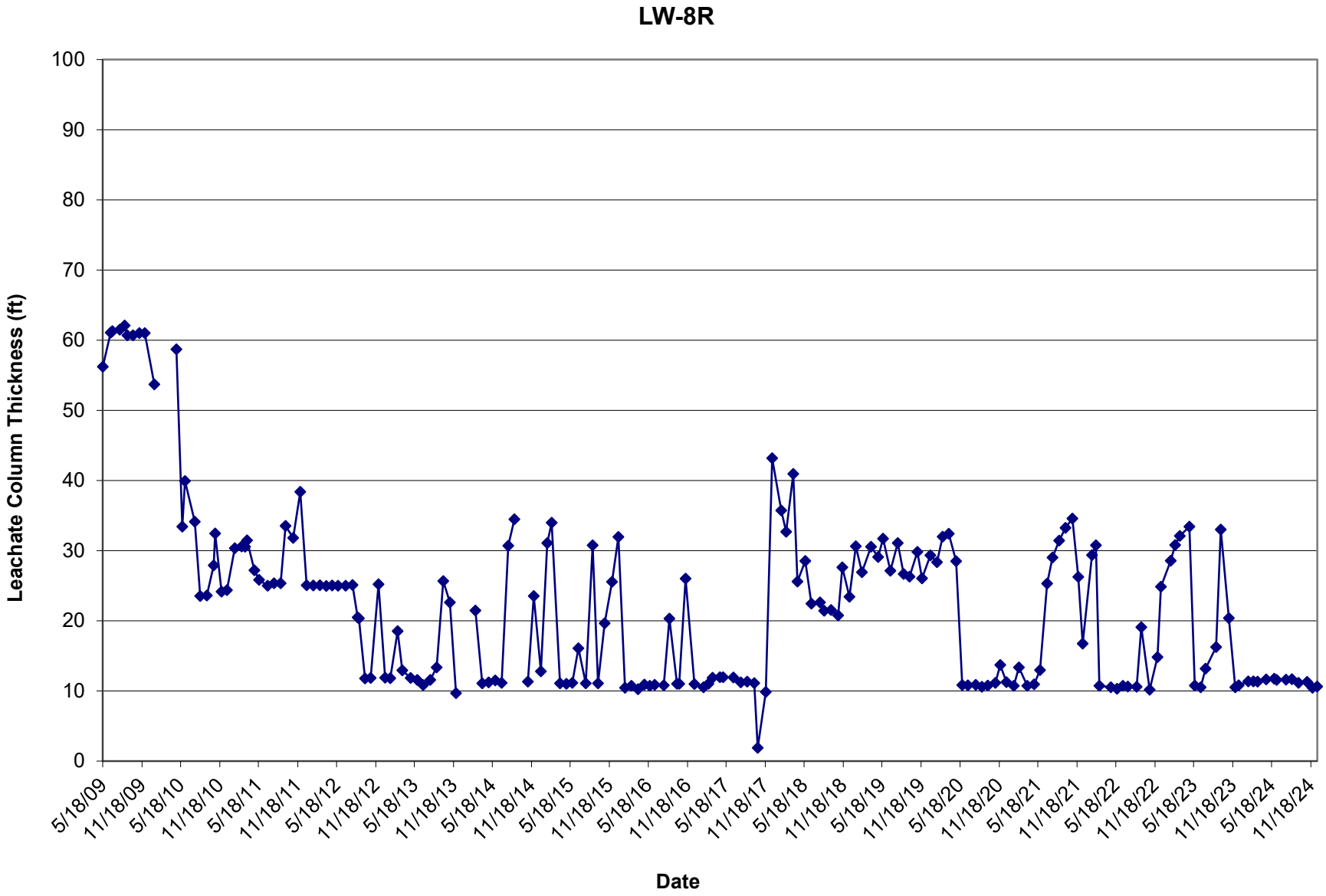
Historical Leachate Column Thickness Graphs

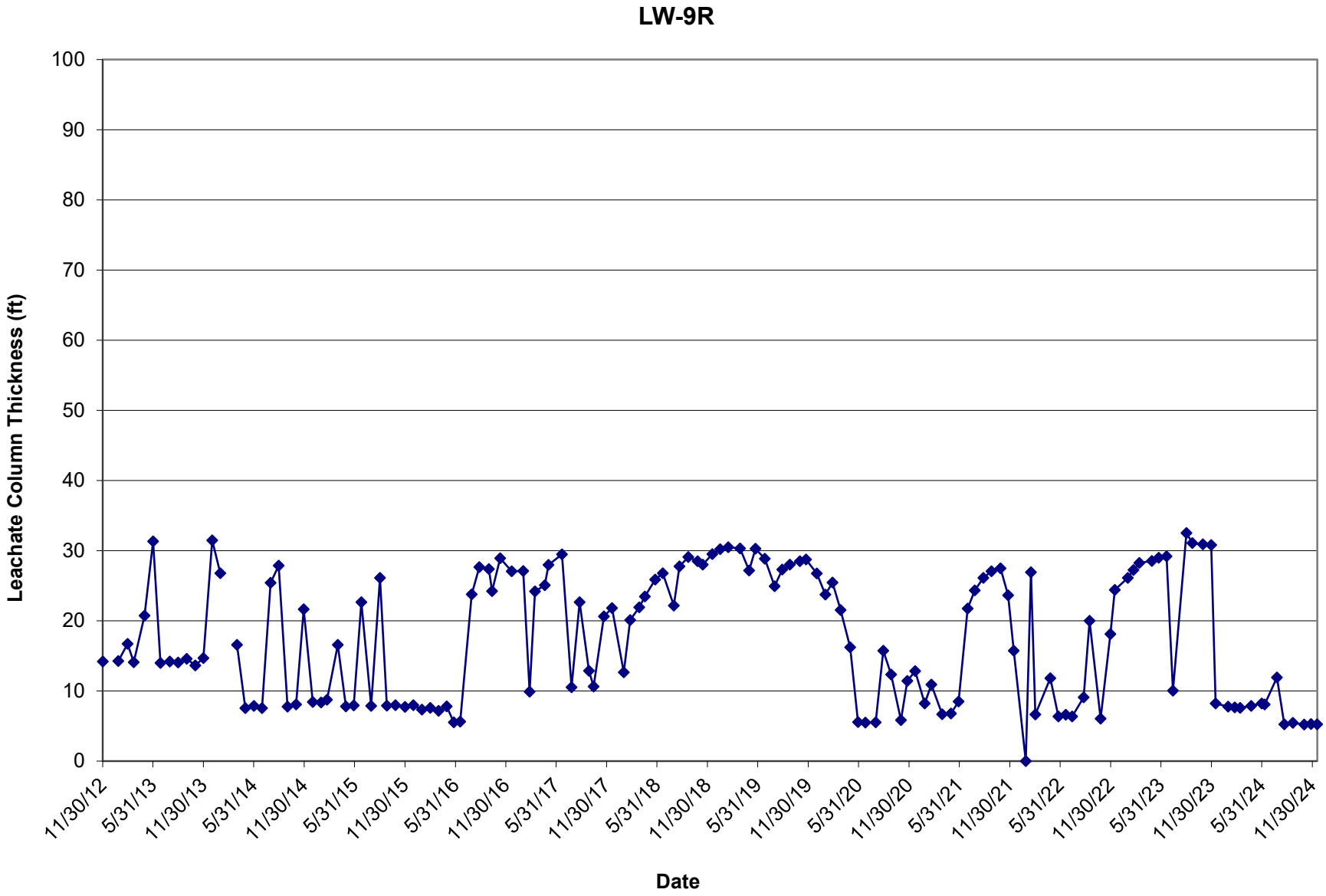

LW-3
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
10/24/05
4/24/06
10/24/06
4/24/07
10/24/07
4/24/08
10/24/08
4/24/09
10/24/09
4/24/10
10/24/10
4/24/11
10/24/11
4/24/12
10/24/12
4/24/13
10/24/13
4/24/14
10/24/14
4/24/15
10/24/15
4/24/16
10/24/16
4/24/17
10/24/17
4/24/18
10/24/18
4/24/19
10/24/19
4/24/20
10/24/20
4/24/21
10/24/21
4/24/22
10/24/22
4/24/23
10/24/23
4/24/24
10/24/24
Date

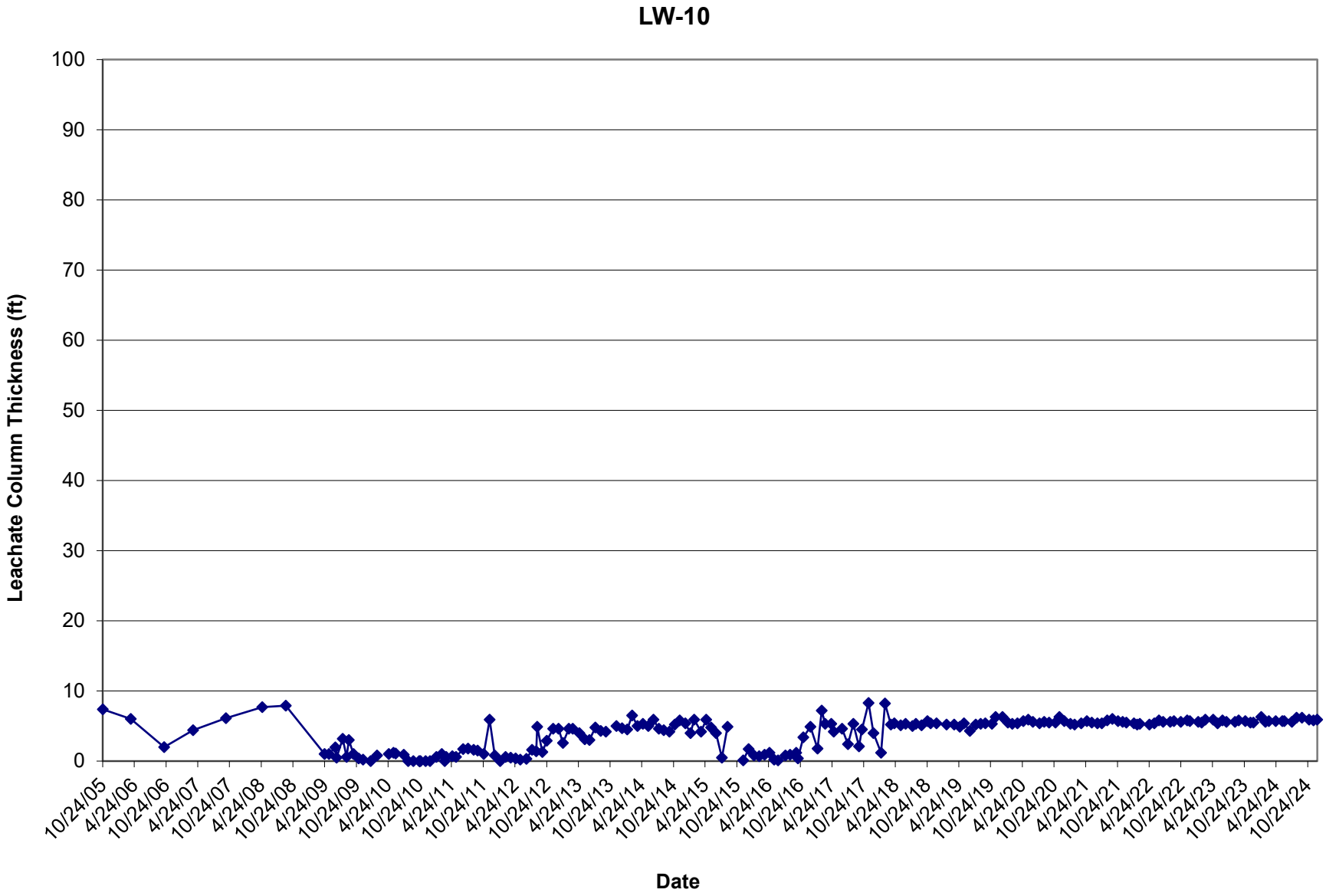

LW-4R
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
10/7/09
4/7/10
10/7/10
4/7/11
10/7/11
4/7/12
10/7/12
4/7/13
10/7/13
4/7/14
10/7/14
4/7/15
10/7/15
4/7/16
10/7/16
4/7/17
10/7/17
4/7/18
10/7/18
4/7/19
10/7/19
4/7/20
10/7/20
4/7/21
10/7/21
4/7/22
10/7/22
4/7/23
10/7/23
4/7/24
10/7/24
Date

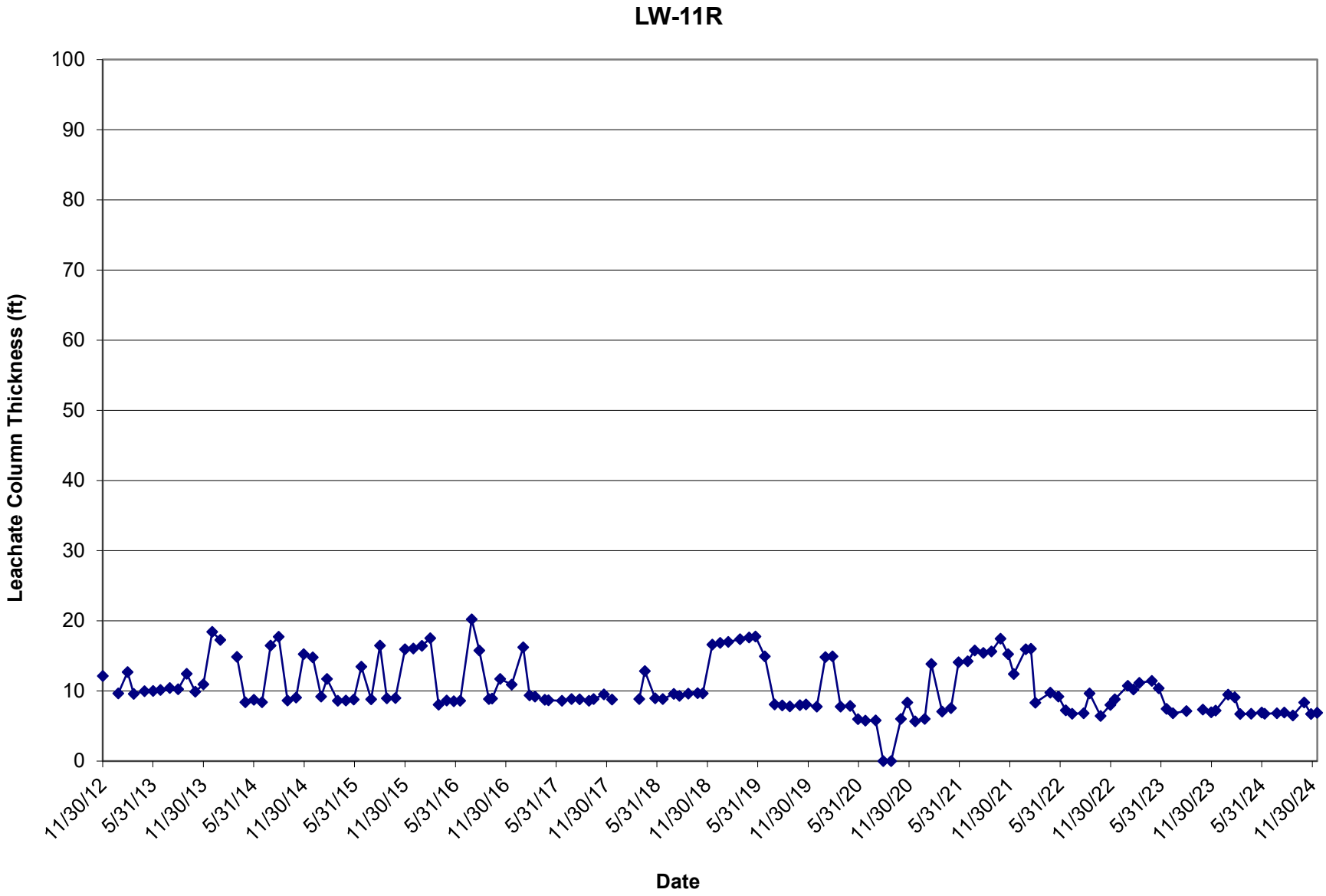

LW-6R
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
5/18/09
11/18/09
5/18/10
11/18/10
5/18/11
11/18/11
5/18/12
11/18/12
5/18/13
11/18/13
5/18/14
11/18/14
5/18/15
11/18/15
5/18/16
11/18/16
5/18/17
11/18/17
5/18/18
11/18/18
5/18/19
11/18/19
5/18/20
11/18/20
5/18/21
11/18/21
5/18/22
11/18/22
5/18/23
11/18/23
5/18/24
11/18/24
Date

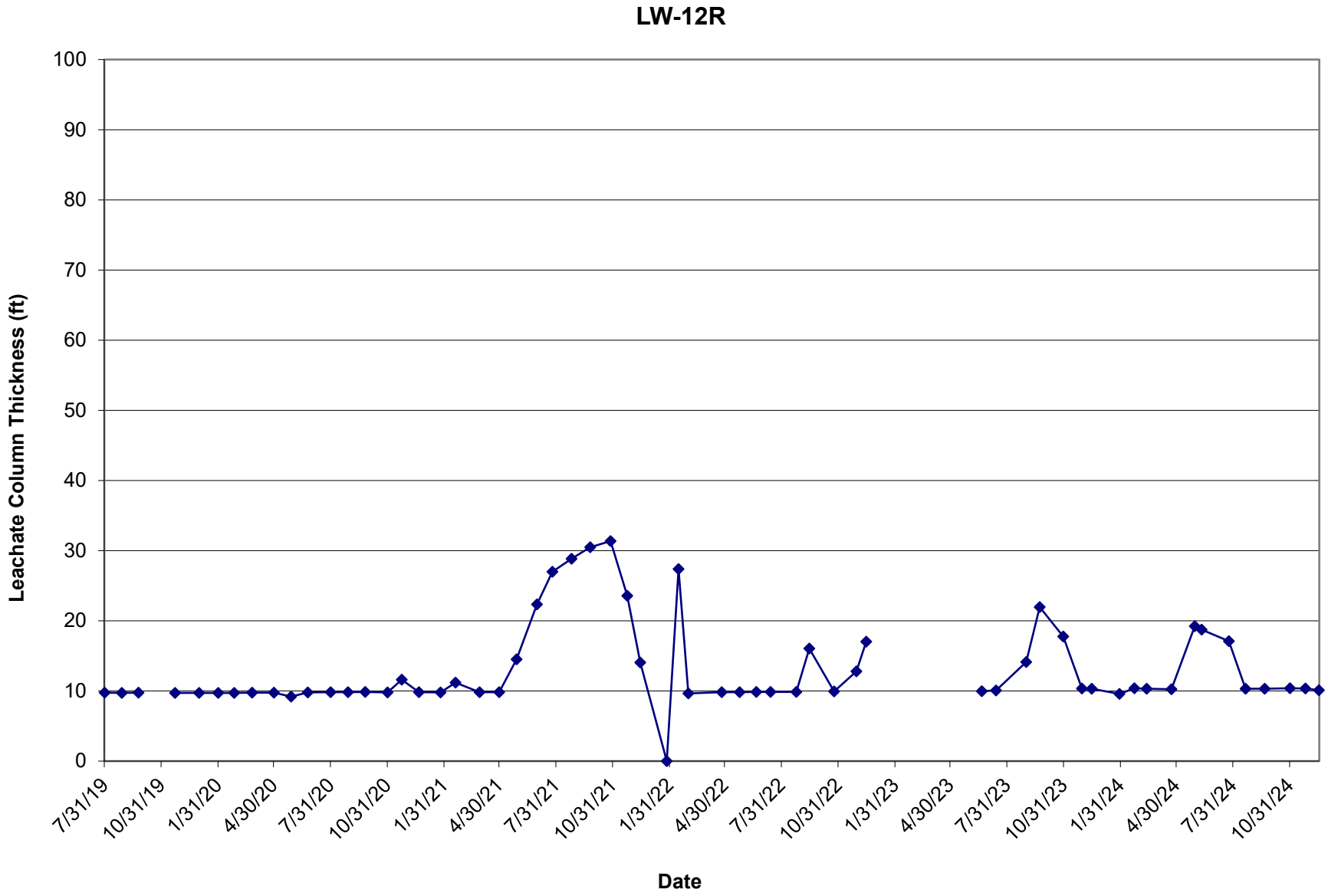

LW-7R
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
5/18/09
11/18/09
5/18/10
11/18/10
5/18/11
11/18/11
5/18/12
11/18/12
5/18/13
11/18/13
5/18/14
11/18/14
5/18/15
11/18/15
5/18/16
11/18/16
5/18/17
11/18/17
5/18/18
11/18/18
5/18/19
11/18/19
5/18/20
11/18/20
5/18/21
11/18/21
5/18/22
11/18/22
5/18/23
11/18/23
5/18/24
11/18/24
Date

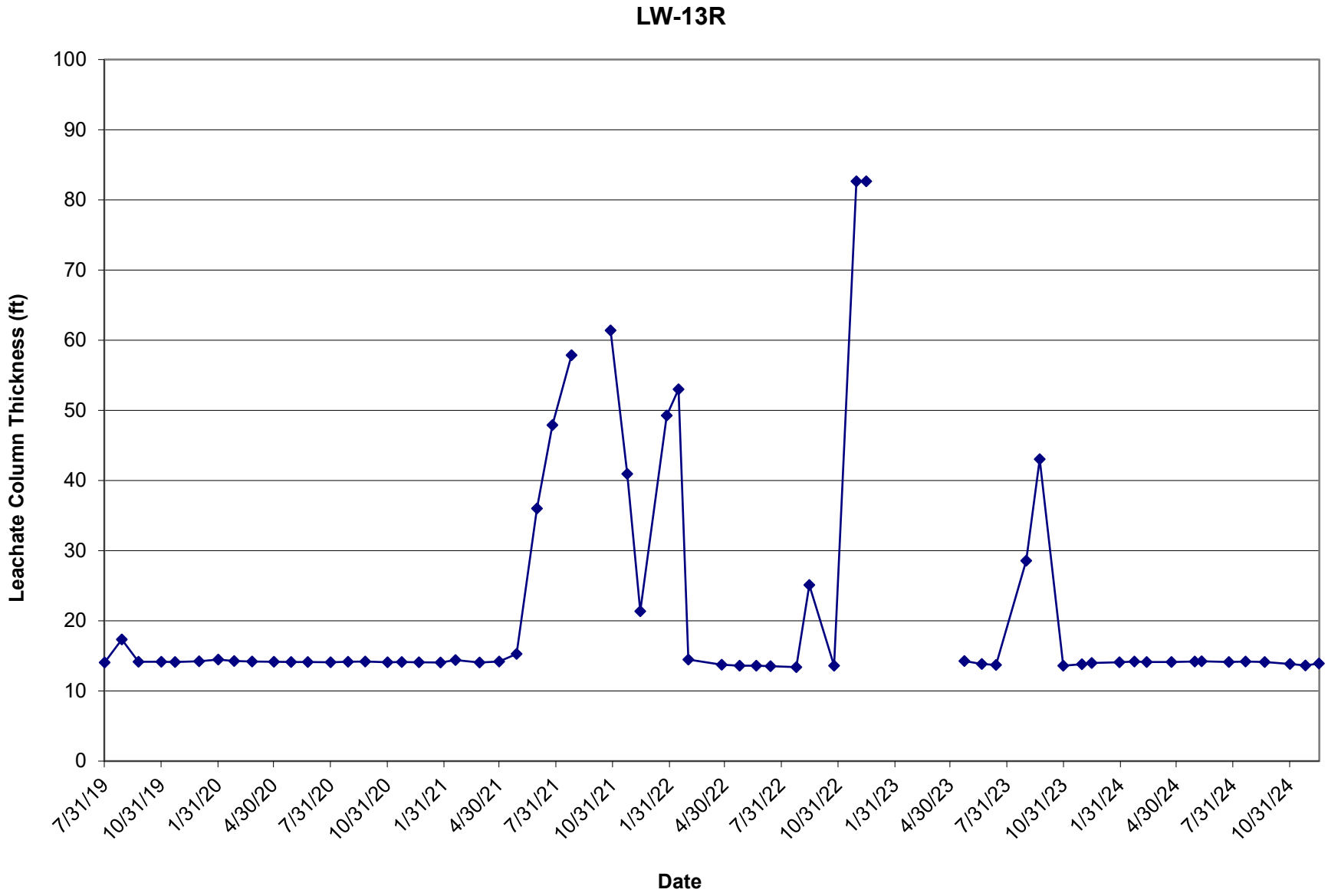

LW-8R
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
5/18/09
11/18/09
5/18/10
11/18/10
5/18/11
11/18/11
5/18/12
11/18/12
5/18/13
11/18/13
5/18/14
11/18/14
5/18/15
11/18/15
5/18/16
11/18/16
5/18/17
11/18/17
5/18/18
11/18/18
5/18/19
11/18/19
5/18/20
11/18/20
5/18/21
11/18/21
5/18/22
11/18/22
5/18/23
11/18/23
5/18/24
11/18/24
Date

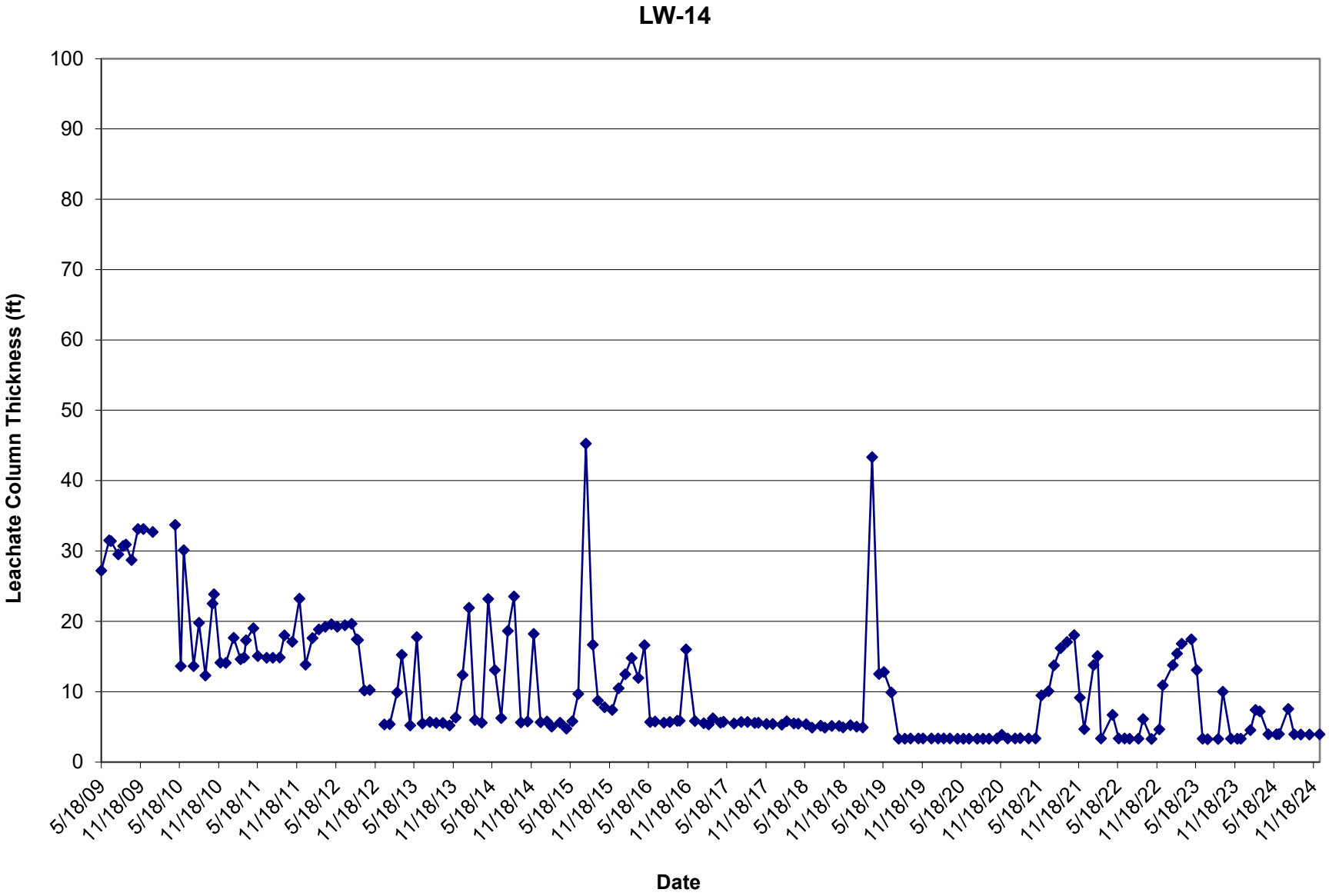

LW-9R
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
11/30/12
5/31/13
11/30/13
5/31/14
11/30/14
5/31/15
11/30/15
5/31/16
11/30/16
5/31/17
11/30/17
5/31/18
11/30/18
5/31/19
11/30/19
5/31/20
11/30/20
5/31/21
11/30/21
5/31/22
11/30/22
5/31/23
11/30/23
5/31/24
11/30/24
Date

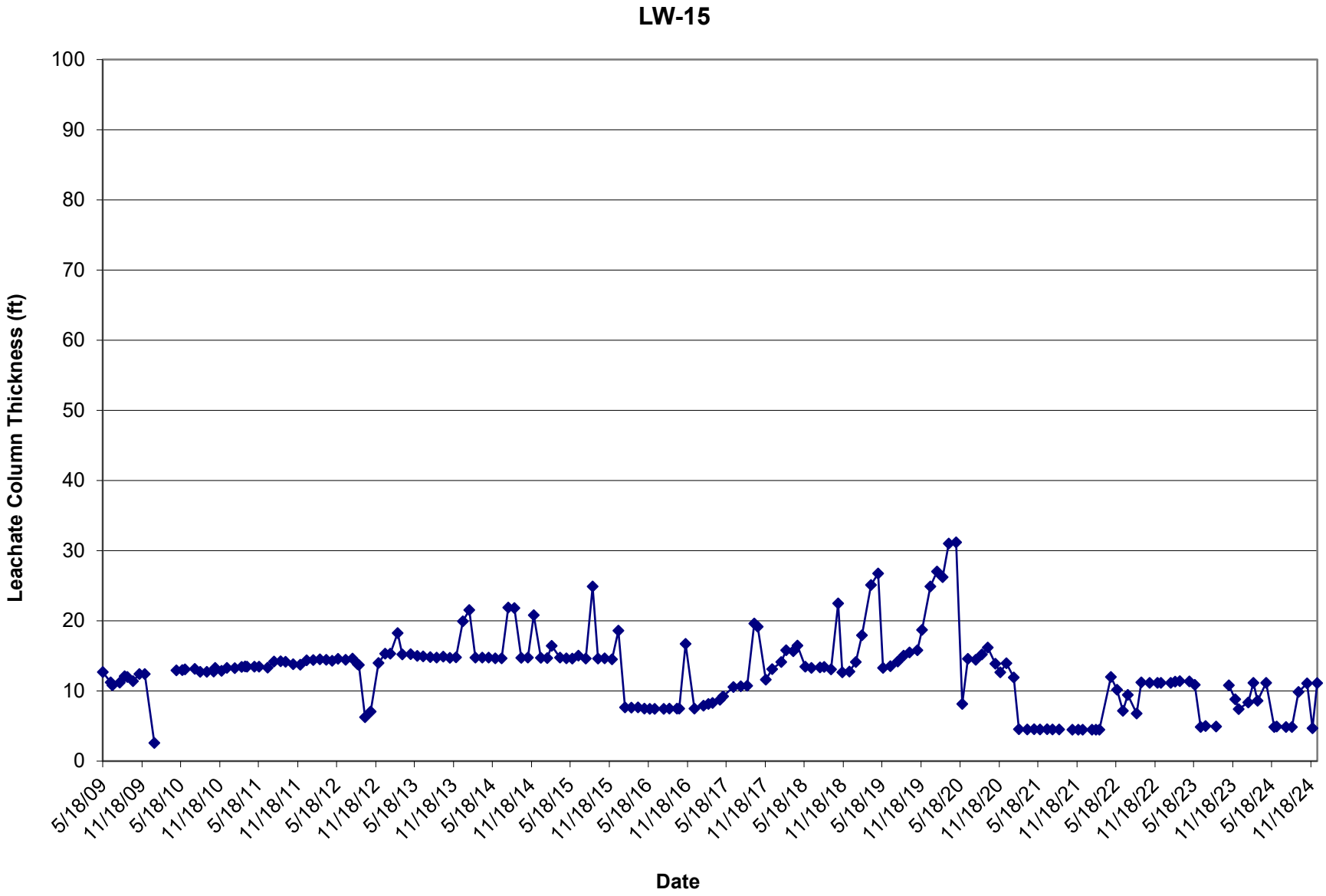

LW-10
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
10/24/05
4/24/06
10/24/06
4/24/07
10/24/07
4/24/08
10/24/08
4/24/09
10/24/09
4/24/10
10/24/10
4/24/11
10/24/11
4/24/12
10/24/12
4/24/13
10/24/13
4/24/14
10/24/14
4/24/15
10/24/15
4/24/16
10/24/16
4/24/17
10/24/17
4/24/18
10/24/18
4/24/19
10/24/19
4/24/20
10/24/20
4/24/21
10/24/21
4/24/22
10/24/22
4/24/23
10/24/23
4/24/24
10/24/24
Date

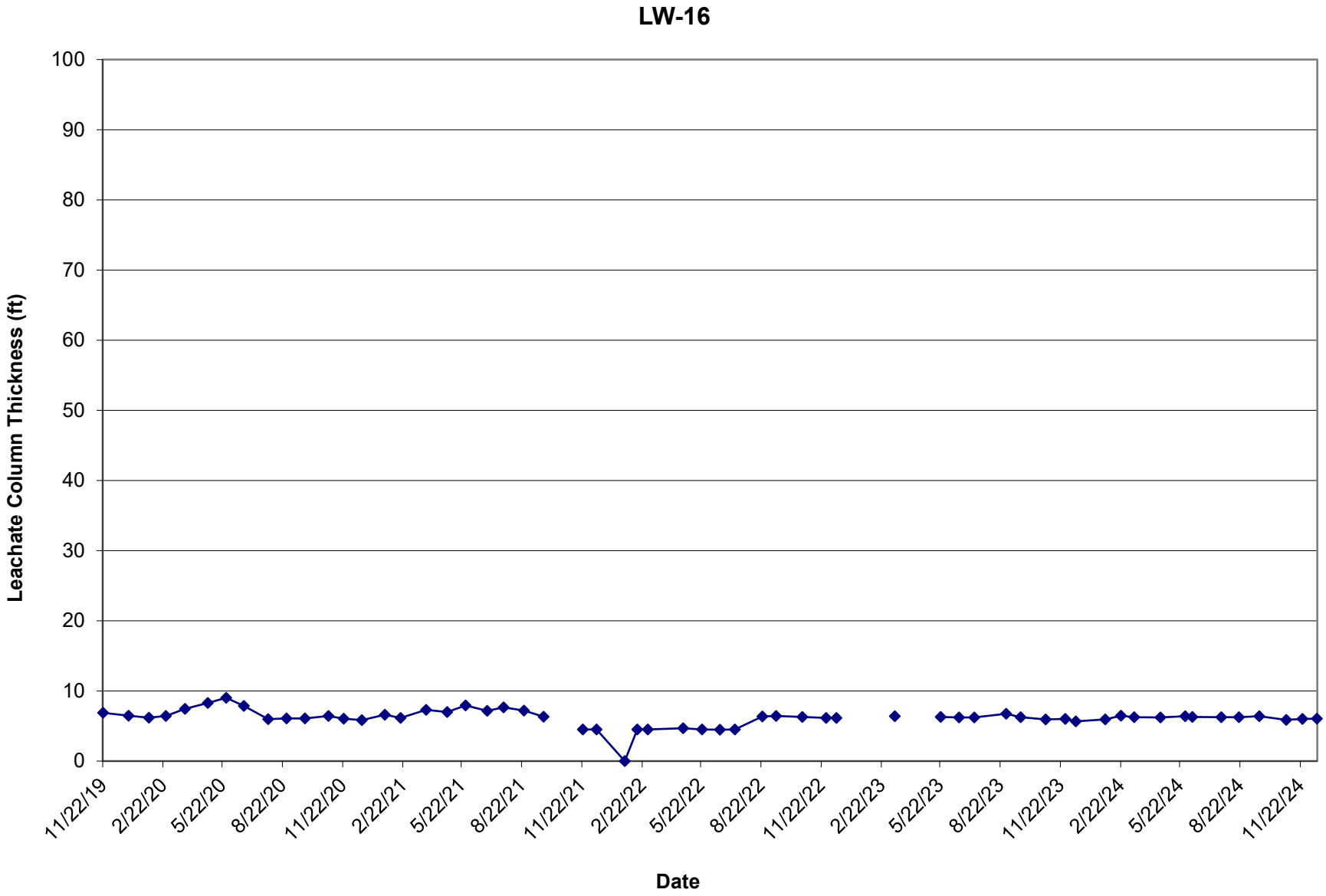

LW-11R
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
11/30/12
5/31/13
11/30/13
5/31/14
11/30/14
5/31/15
11/30/15
5/31/16
11/30/16
5/31/17
11/30/17
5/31/18
11/30/18
5/31/19
11/30/19
5/31/20
11/30/20
5/31/21
11/30/21
5/31/22
11/30/22
5/31/23
11/30/23
5/31/24
11/30/24
Date

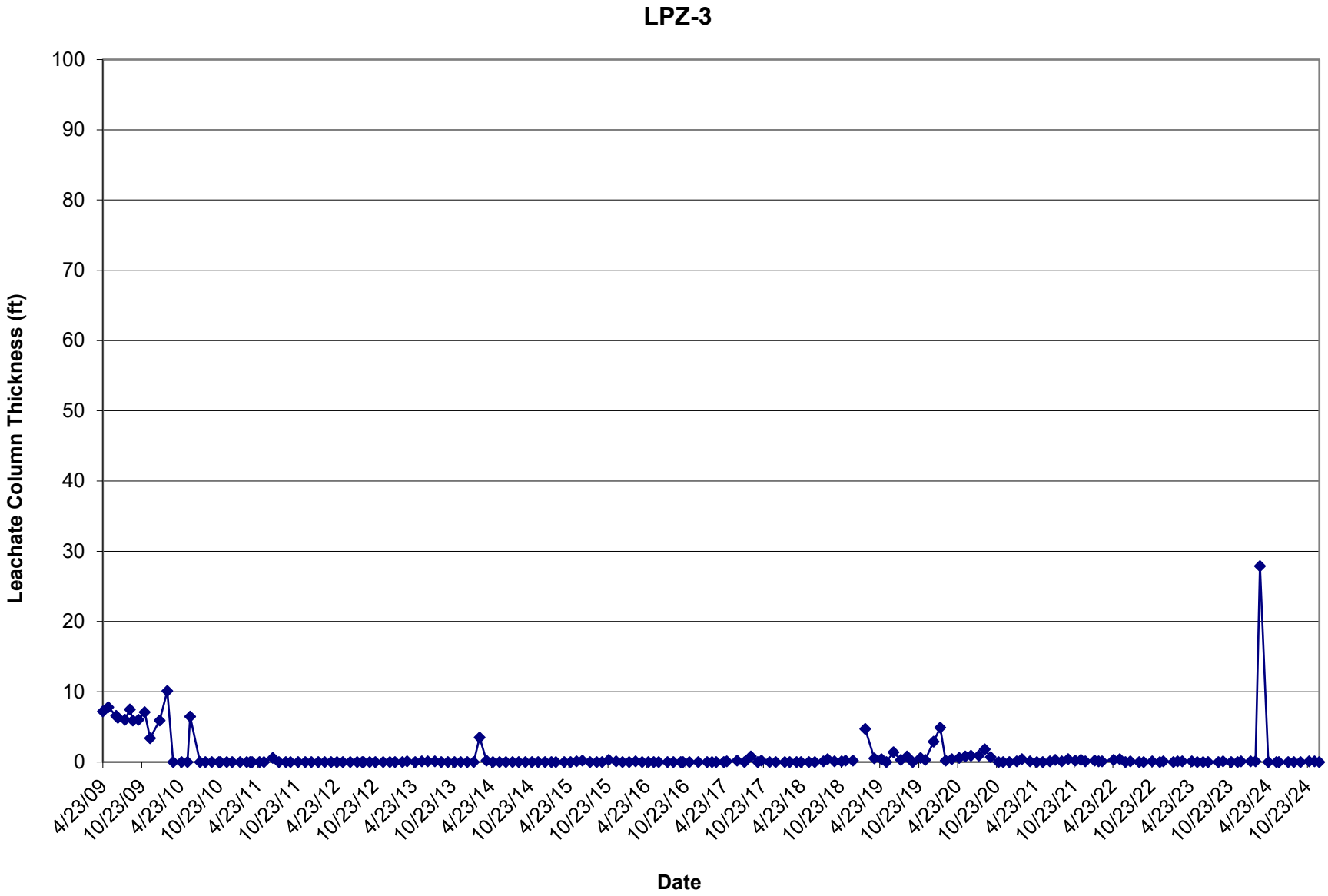

LW-12R
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
7/31/19
10/31/19
1/31/20
4/30/20
7/31/20
10/31/20
1/31/21
4/30/21
7/31/21
10/31/21
1/31/22
4/30/22
7/31/22
10/31/22
1/31/23
4/30/23
7/31/23
10/31/23
1/31/24
4/30/24
7/31/24
10/31/24
Date

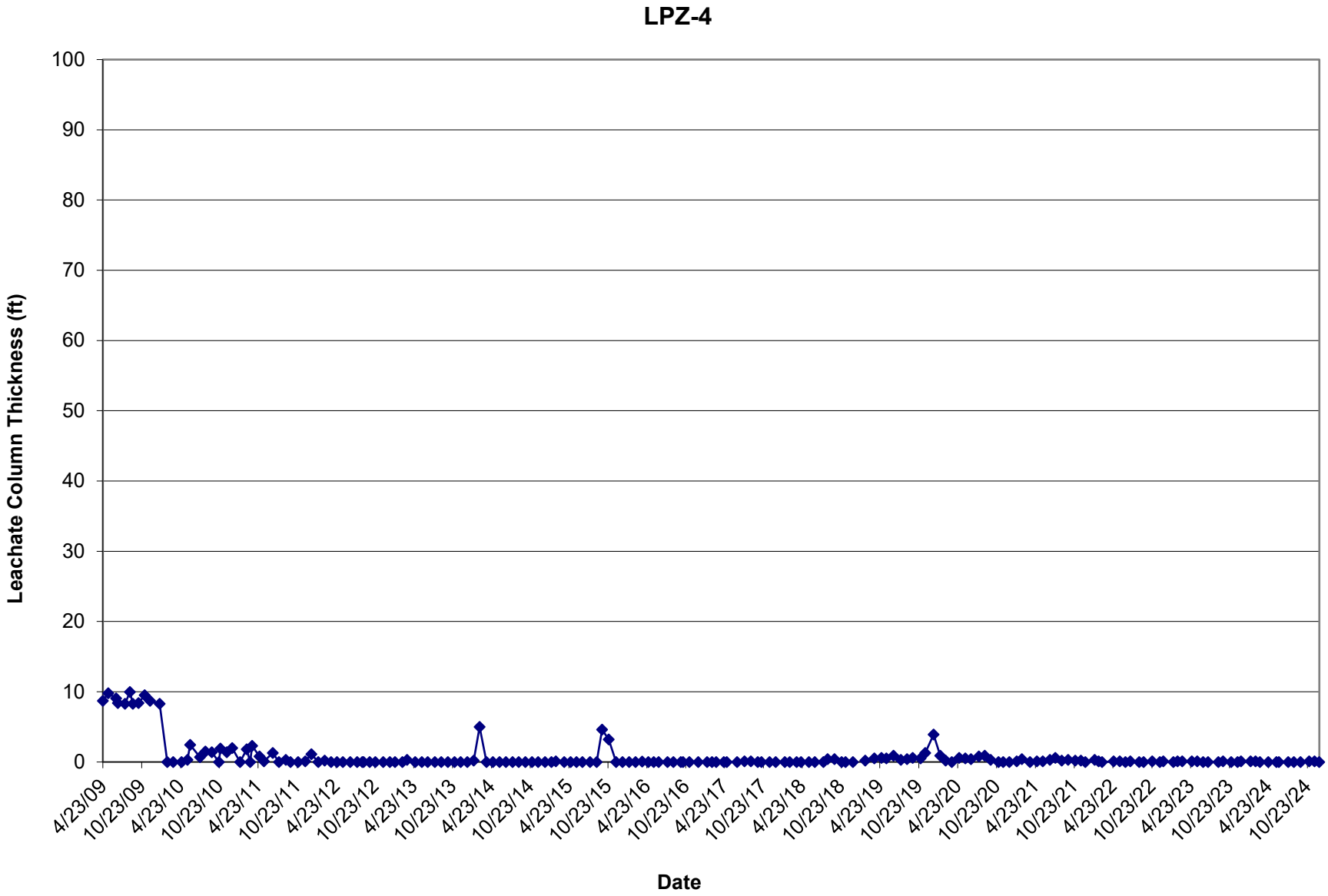

LW-13R
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
7/31/19
10/31/19
1/31/20
4/30/20
7/31/20
10/31/20
1/31/21
4/30/21
7/31/21
10/31/21
1/31/22
4/30/22
7/31/22
10/31/22
1/31/23
4/30/23
7/31/23
10/31/23
1/31/24
4/30/24
7/31/24
10/31/24
Date

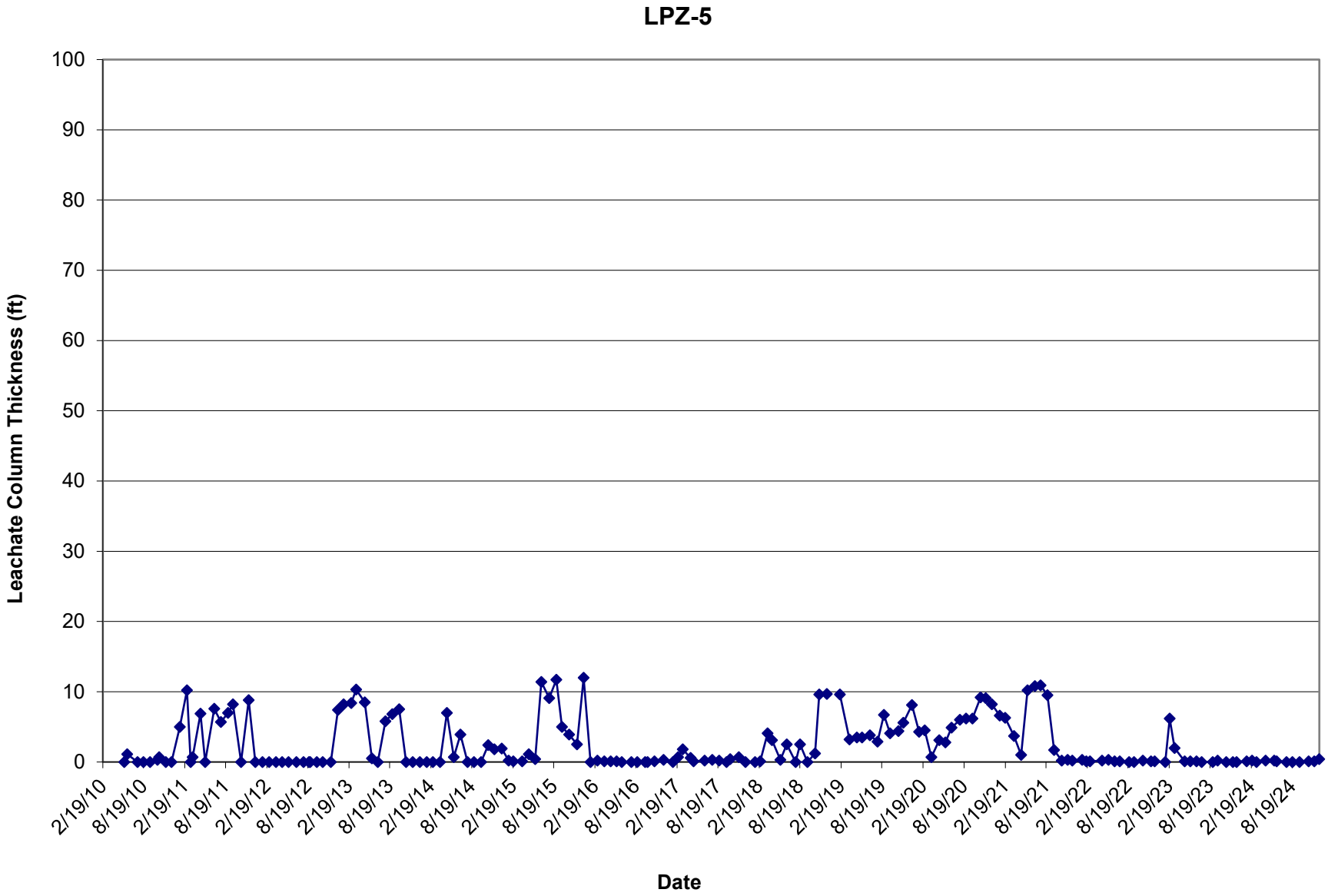

LW-14
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
5/18/09
11/18/09
5/18/10
11/18/10
5/18/11
11/18/11
5/18/12
11/18/12
5/18/13
11/18/13
5/18/14
11/18/14
5/18/15
11/18/15
5/18/16
11/18/16
5/18/17
11/18/17
5/18/18
11/18/18
5/18/19
11/18/19
5/18/20
11/18/20
5/18/21
11/18/21
5/18/22
11/18/22
5/18/23
11/18/23
5/18/24
11/18/24
Date

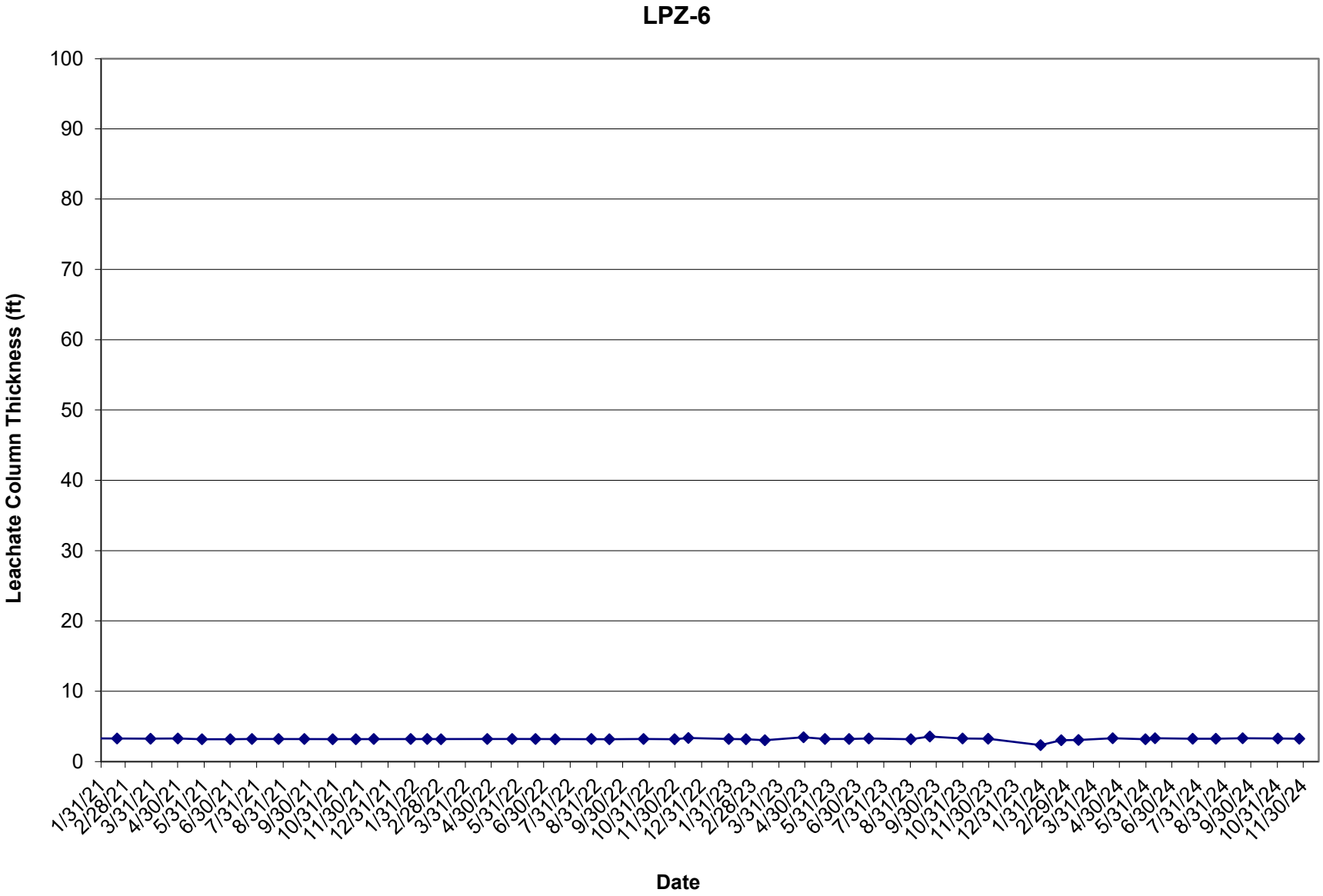

LW-15
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
5/18/09
11/18/09
5/18/10
11/18/10
5/18/11
11/18/11
5/18/12
11/18/12
5/18/13
11/18/13
5/18/14
11/18/14
5/18/15
11/18/15
5/18/16
11/18/16
5/18/17
11/18/17
5/18/18
11/18/18
5/18/19
11/18/19
5/18/20
11/18/20
5/18/21
11/18/21
5/18/22
11/18/22
5/18/23
11/18/23
5/18/24
11/18/24
Date

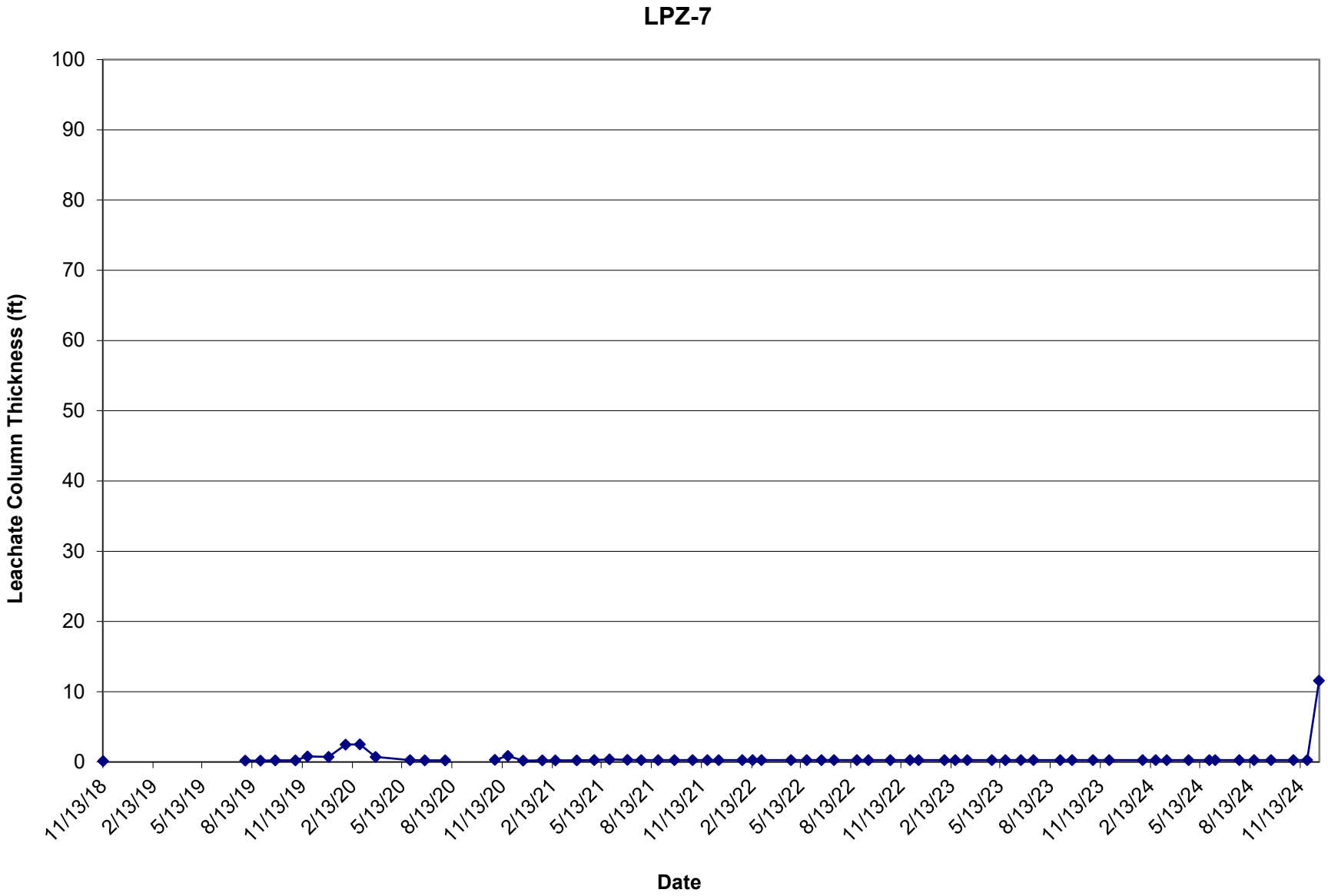

LW-16
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
11/22/19
2/22/20
5/22/20
8/22/20
11/22/20
2/22/21
5/22/21
8/22/21
11/22/21
2/22/22
5/22/22
8/22/22
11/22/22
2/22/23
5/22/23
8/22/23
11/22/23
2/22/24
5/22/24
8/22/24
11/22/24
Date

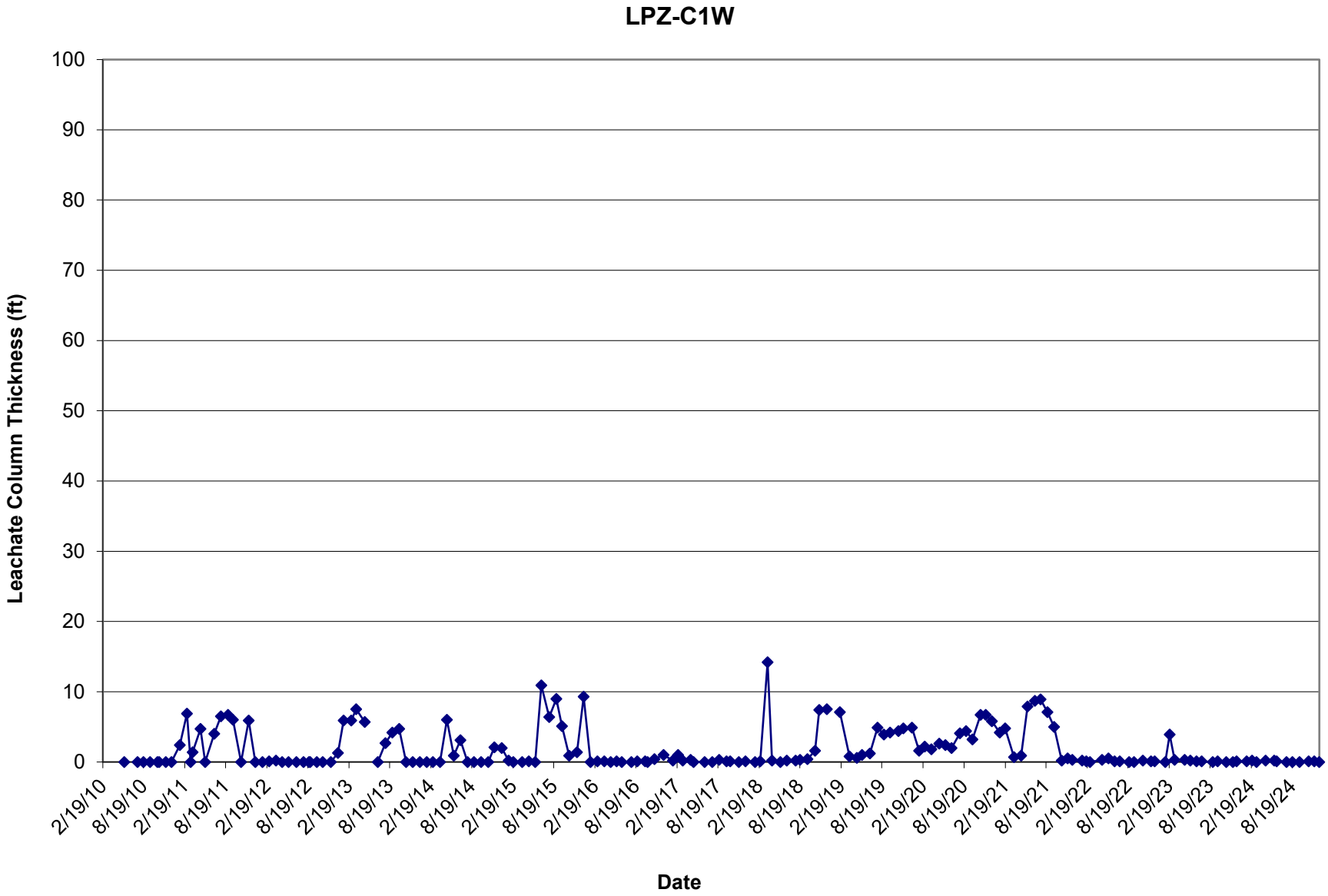

LPZ-3
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
4/23/09
10/23/09
4/23/10
10/23/10
4/23/11
10/23/11
4/23/12
10/23/12
4/23/13
10/23/13
4/23/14
10/23/14
4/23/15
10/23/15
4/23/16
10/23/16
4/23/17
10/23/17
4/23/18
10/23/18
4/23/19
10/23/19
4/23/20
10/23/20
4/23/21
10/23/21
4/23/22
10/23/22
4/23/23
10/23/23
4/23/24
10/23/24
Date

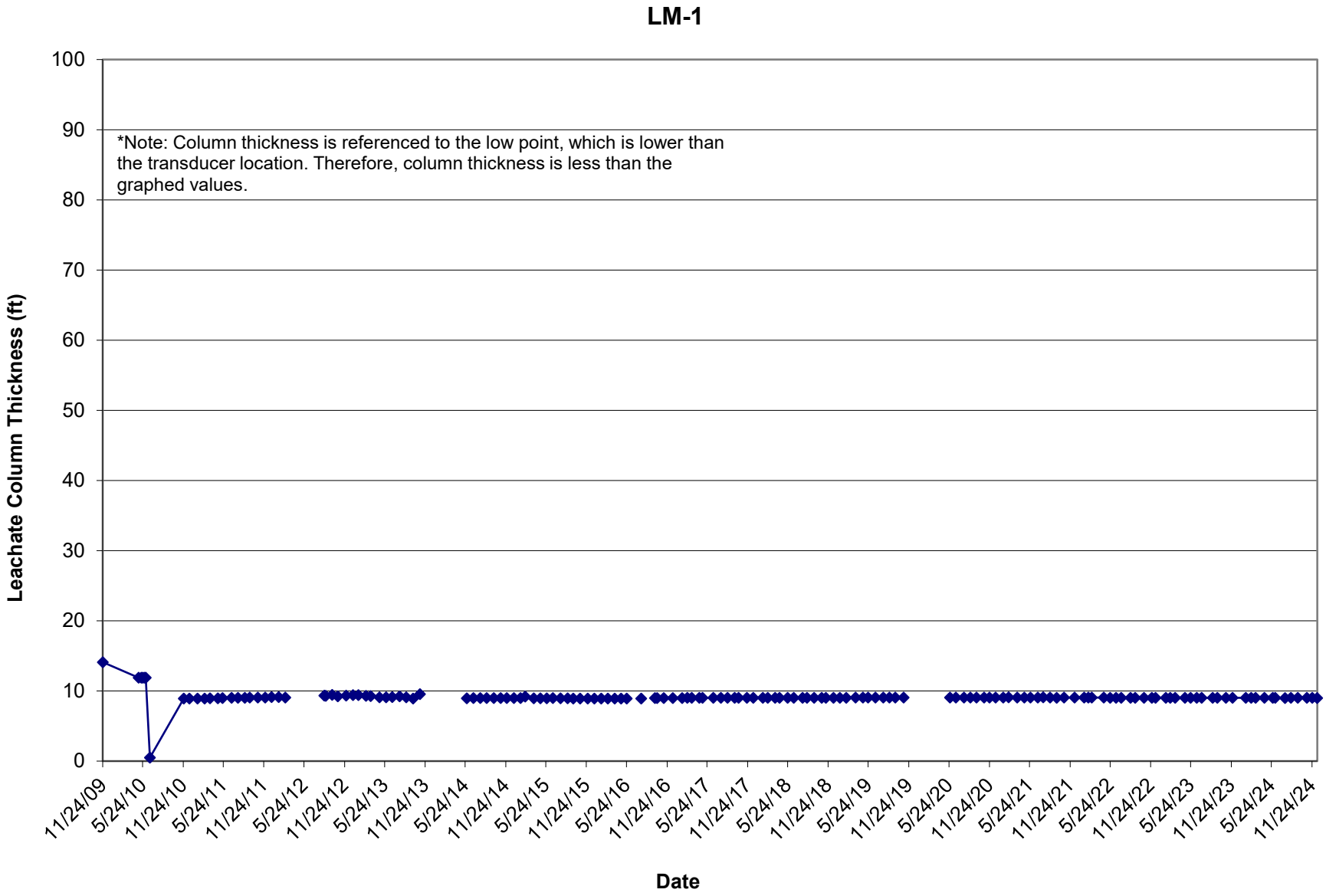

LPZ-4
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
4/23/09
10/23/09
4/23/10
10/23/10
4/23/11
10/23/11
4/23/12
10/23/12
4/23/13
10/23/13
4/23/14
10/23/14
4/23/15
10/23/15
4/23/16
10/23/16
4/23/17
10/23/17
4/23/18
10/23/18
4/23/19
10/23/19
4/23/20
10/23/20
4/23/21
10/23/21
4/23/22
10/23/22
4/23/23
10/23/23
4/23/24
10/23/24
Date

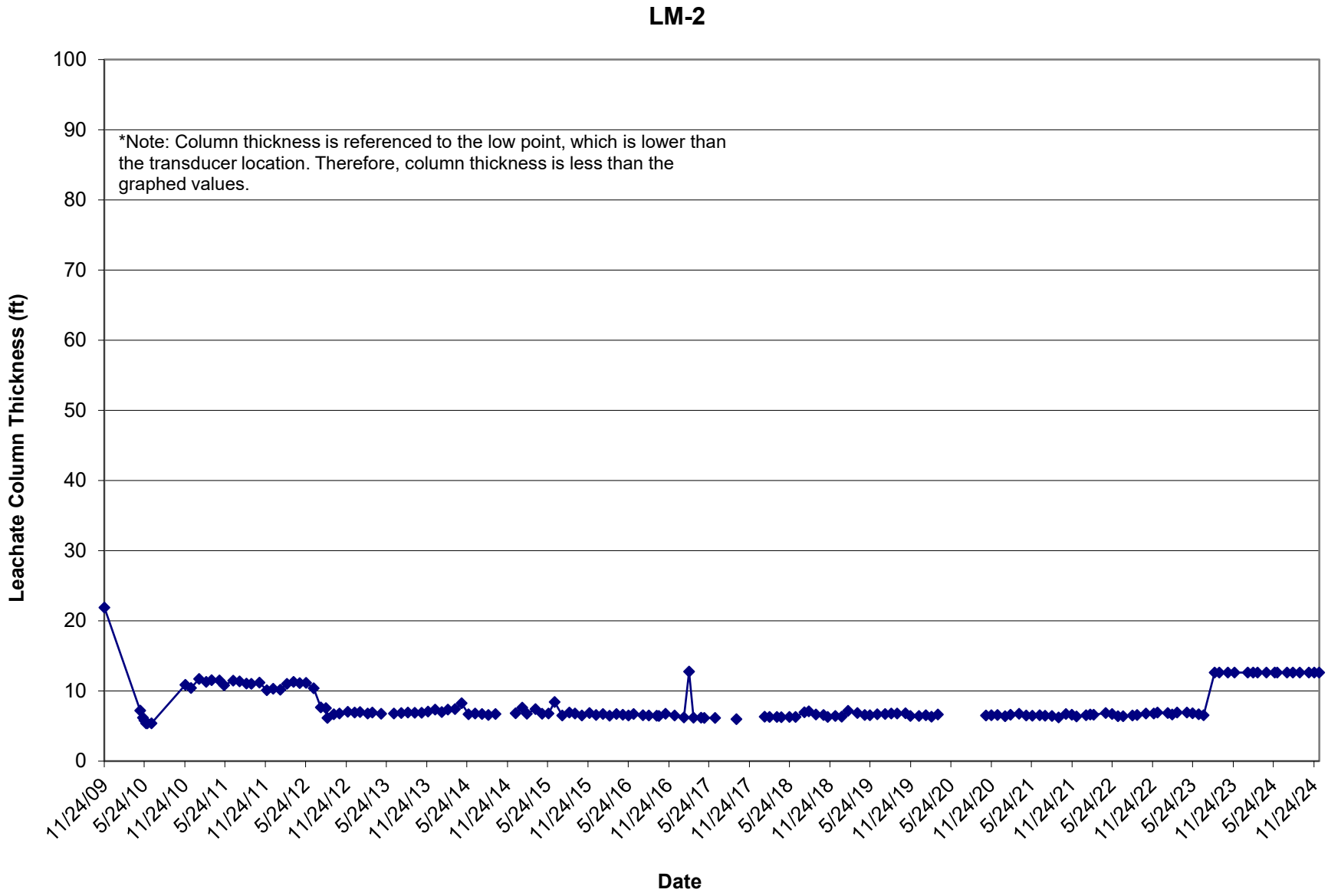

LPZ-5
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
2/19/10
8/19/10
2/19/11
8/19/11
2/19/12
8/19/12
2/19/13
8/19/13
2/19/14
8/19/14
2/19/15
8/19/15
2/19/16
8/19/16
2/19/17
8/19/17
2/19/18
8/19/18
2/19/19
8/19/19
2/19/20
8/19/20
2/19/21
8/19/21
2/19/22
8/19/22
2/19/23
8/19/23
2/19/24
8/19/24
Date


LPZ-6
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
1/31/21
2/28/21
3/31/21
4/30/21
5/31/21
6/30/21
7/31/21
8/31/21
9/30/21
10/31/21
11/30/21
12/31/21
1/31/22
2/28/22
3/31/22
4/30/22
5/31/22
6/30/22
7/31/22
8/31/22
9/30/22
10/31/22
11/30/22
12/31/22
1/31/23
2/28/23
3/31/23
4/30/23
5/31/23
6/30/23
7/31/23
8/31/23
9/30/23
10/31/23
11/30/23
12/31/23
1/31/24
2/29/24
3/31/24
4/30/24
5/31/24
6/30/24
7/31/24
8/31/24
9/30/24
10/31/24
11/30/24
Date


LPZ-7
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
11/13/18
2/13/19
5/13/19
8/13/19
11/13/19
2/13/20
5/13/20
8/13/20
11/13/20
2/13/21
5/13/21
8/13/21
11/13/21
2/13/22
5/13/22
8/13/22
11/13/22
2/13/23
5/13/23
8/13/23
11/13/23
2/13/24
5/13/24
8/13/24
11/13/24
Date


LPZ-C1W
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
2/19/10
8/19/10
2/19/11
8/19/11
2/19/12
8/19/12
2/19/13
8/19/13
2/19/14
8/19/14
2/19/15
8/19/15
2/19/16
8/19/16
2/19/17
8/19/17
2/19/18
8/19/18
2/19/19
8/19/19
2/19/20
8/19/20
2/19/21
8/19/21
2/19/22
8/19/22
2/19/23
8/19/23
2/19/24
8/19/24
Date


LM-1
*Note: Column thickness is referenced to the low point, which is lower than the transducer location. Therefore, column thickness is less than the graphed values.
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
11/24/09
5/24/10
11/24/10
5/24/11
11/24/11
5/24/12
11/24/12
5/24/13
11/24/13
5/24/14
11/24/14
5/24/15
11/24/15
5/24/16
11/24/16
5/24/17
11/24/17
5/24/18
11/24/18
5/24/19
11/24/19
5/24/20
11/24/20
5/24/21
11/24/21
5/24/22
11/24/22
5/24/23
11/24/23
5/24/24
11/24/24
Date


LM-2
*Note: Column thickness is referenced to the low point, which is lower than the transducer location. Therefore, column thickness is less than the graphed values.
Leachate Column Thickness (ft)
100
90
80
70
60
50
40
30
20
10
0
11/24/09
5/24/10
11/24/10
5/24/11
11/24/11
5/24/12
11/24/12
5/24/13
11/24/13
5/24/14
11/24/14
5/24/15
11/24/15
5/24/16
11/24/16
5/24/17
11/24/17
5/24/18
11/24/18
5/24/19
11/24/19
5/24/20
11/24/20
5/24/21
11/24/21
5/24/22
11/24/22
5/24/23
11/24/23
5/24/24
11/24/24
Date

Attachment D

Leachate Analytical Data Sheets

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Evora Consulting
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 02/16/24 12:06
Date Reported: 02/26/24 15:39
Project: Wastewater - 1st Week of Jan, April, July
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW (Ja, Ap, Ju, Oc) 1st samp of wk Compos			**Date Sampled: 02/14/24 7:24**		**Date Received: 02/16/24 12:06**	
Lab No.: 24B1605-01			**Sampled by: BP**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	02/19/24 15:07	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	02/19/24 15:07	kc	EPA 200.7	
Copper	0.0159	mg/L	02/19/24 15:07	kc	EPA 200.7	
Nickel	0.0246	mg/L	02/19/24 15:07	kc	EPA 200.7	
Lead	<0.00200	mg/L	02/19/24 15:07	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW (Ja, Ap, Ju, Oc) 2nd samp of wk Compo			**Date Sampled: 02/15/24 7:10**		**Date Received: 02/16/24 12:06**	
Lab No.: 24B1605-02			**Sampled by: BP**			
Classical Chemistry Parameters						
Ammonia as N	130	mg/L	02/20/24 14:44	jc	Timberline	
Biochemical Oxygen Demand	22	mg/L	02/16/24 13:56	JB	SM 5210 B-2001	
Fats, Oil & Grease (total)	4.2	mg/L	02/22/24 9:39	kt	EPA 1664 A	
Total Kjeldahl Nitrogen	136	mg/L	02/26/24 13:43	jc	Hach 10242	
Total Suspended Solids	40	mg/L	02/21/24 10:21	kt	USGS I-3765-85	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	02/19/24 15:10	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	02/19/24 15:10	kc	EPA 200.7	
Copper	<0.00300	mg/L	02/19/24 15:10	kc	EPA 200.7	
Nickel	0.0238	mg/L	02/19/24 15:10	kc	EPA 200.7	
Lead	<0.00200	mg/L	02/19/24 15:10	kc	EPA 200.7	
Volatile Organic Compounds						
Benzene	<0.0200	mg/L	02/23/24 13:10	kc	EPA 624.1	
Ethylbenzene	<0.0200	mg/L	02/23/24 13:10	kc	EPA 624.1	
Toluene	<0.0200	mg/L	02/23/24 13:10	kc	EPA 624.1	
Xylenes (total)	<0.0600	mg/L	02/23/24 13:10	kc	EPA 624.1	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Evora Consulting	Project:	Wastewater - 1st Week of Jan, April, July, Oct	
13758 Washinton Rd		Send COC with Report	**Reported:**
West Burlington IA, 52655	Client Contact:	Eric Houtz	02/26/24 15:39

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW (Ja, Ap, Ju, Oc) 2nd samp of wk grab G			**Date Sampled: 02/15/24 7:25**		**Date Received: 02/16/24 12:06**	
Lab No.: 24B1605-03			**Sampled by: BP**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	02/15/24 7:25	BP	SM 4500 H + B	

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Evora Consulting
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 02/23/24 12:50
Date Reported: 03/01/24 11:31
Project: Wastewater - 3rd, 5th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 1st samp of wk Composite			**Date Sampled: 02/21/24 7:15**		**Date Received: 02/23/24 12:50**	
Lab No.: 24B2314-01			**Sampled by: JW**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	02/26/24 14:29	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	02/26/24 14:29	kc	EPA 200.7	
Copper	<0.00300	mg/L	02/26/24 14:29	kc	EPA 200.7	
Nickel	0.0247	mg/L	02/26/24 14:29	kc	EPA 200.7	
Lead	<0.00200	mg/L	02/26/24 14:29	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 2nd samp of wk Composit			**Date Sampled: 02/22/24 7:15**		**Date Received: 02/23/24 12:50**	
Lab No.: 24B2314-02			**Sampled by: JW**			
Classical Chemistry Parameters						
Ammonia as N	137	mg/L	02/27/24 11:32	jc	Timberline	
Biochemical Oxygen Demand	29	mg/L	02/23/24 13:10	JB	SM 5210 B-2001	
Total Kjeldahl Nitrogen	131	mg/L	02/28/24 16:15	jc	Hach 10242	
Total Suspended Solids	30	mg/L	02/26/24 15:33	kt	USGS I-3765-85	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	02/26/24 14:32	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	02/26/24 14:32	kc	EPA 200.7	
Copper	<0.00300	mg/L	02/26/24 14:32	kc	EPA 200.7	
Nickel	0.0238	mg/L	02/26/24 14:32	kc	EPA 200.7	
Lead	<0.00200	mg/L	02/26/24 14:32	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 2nd samp of wk grab Grab			**Date Sampled: 02/22/24 7:20**		**Date Received: 02/23/24 12:50**	
Lab No.: 24B2314-03			**Sampled by: JW**			
Classical Chemistry Parameters						
Field pH	8	pH Units	02/22/24 7:20	JW	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Evora Consulting	Project:	Wastewater - 3rd, 5th Week of Month	
13758 Washinton Rd		Send COC with Report	**Reported:**
West Burlington IA, 52655	Client Contact:	Eric Houtz	03/01/24 11:31

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Evora Consulting
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 03/01/24 13:00
Date Reported: 03/08/24 14:04
Project: Wastewater - 2nd, 4th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 1st samp of wk Composite			**Date Sampled: 02/28/24 7:39**		**Date Received: 03/01/24 13:00**	
Lab No.: 24C0106-01			**Sampled by: JW CD**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	03/04/24 12:56	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	03/04/24 12:56	kc	EPA 200.7	
Copper	<0.00300	mg/L	03/04/24 12:56	kc	EPA 200.7	
Nickel	0.0229	mg/L	03/04/24 12:56	kc	EPA 200.7	
Lead	<0.00200	mg/L	03/04/24 12:56	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk Composit			**Date Sampled: 02/29/24 8:30**		**Date Received: 03/01/24 13:00**	
Lab No.: 24C0106-02			**Sampled by: JW BP**			
Classical Chemistry Parameters						
Ammonia as N	136	mg/L	03/04/24 14:43	jc	Timberline	
Biochemical Oxygen Demand	28	mg/L	03/01/24 13:11	JB	SM 5210 B-2001	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	03/04/24 13:04	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	03/04/24 13:04	kc	EPA 200.7	
Copper	<0.00300	mg/L	03/04/24 13:04	kc	EPA 200.7	
Nickel	0.0229	mg/L	03/04/24 13:04	kc	EPA 200.7	
Lead	<0.00200	mg/L	03/04/24 13:04	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk grab Grab			**Date Sampled: 02/29/24 8:30**		**Date Received: 03/01/24 13:00**	
Lab No.: 24C0106-03			**Sampled by: JW BP**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	02/29/24 8:30	JW BP	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 03/08/24 10:59
Date Reported: 03/15/24 16:42
Project: Wastewater - 1st Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-1st samp of wk Composite			**Date Sampled: 03/06/24 7:00**		**Date Received: 03/08/24 10:59**	
Lab No.: 24C0806-01			**Sampled by: JW**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	03/11/24 15:47	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	03/11/24 15:47	kc	EPA 200.7	
Copper	<0.00300	mg/L	03/11/24 15:47	kc	EPA 200.7	
Nickel	0.0206	mg/L	03/11/24 15:47	kc	EPA 200.7	
Lead	<0.00200	mg/L	03/11/24 15:47	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-2nd samp of wk grab Grab			**Date Sampled: 03/07/24 7:40**		**Date Received: 03/08/24 10:59**	
Lab No.: 24C0806-02			**Sampled by: JW**			
Classical Chemistry Parameters						
Volatile Organic Compounds						
Benzene	<0.00200	mg/L	03/13/24 14:02	kc	EPA 624.1	
Ethylbenzene	<0.00200	mg/L	03/13/24 14:02	kc	EPA 624.1	
Toluene	<0.00200	mg/L	03/13/24 14:02	kc	EPA 624.1	
Xylenes (total)	<0.00600	mg/L	03/13/24 14:02	kc	EPA 624.1	
Field pH	8	pH Units	03/07/24 7:40	JW	SM 4500 H + B	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-2nd samp of wk Composite			**Date Sampled: 03/07/24 7:30**		**Date Received: 03/08/24 10:59**	
Lab No.: 24C0806-03			**Sampled by: JW**			
Classical Chemistry Parameters						
Ammonia as N	116	mg/L	03/08/24 14:23	jc	Timberline	
Biochemical Oxygen Demand	19	mg/L	03/08/24 14:16	JB	SM 5210 B-2001	
Total Kjeldahl Nitrogen	121	mg/L	03/13/24 11:56	jc	Hach 10242	
Total Suspended Solids	32	mg/L	03/13/24 9:54	kt	USGS I-3765-85	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Des Moines County Landfill	Project:	Wastewater - 1st Week of Month	
13758 Washinton Rd		Send COC with Report	**Reported:**
West Burlington IA, 52655	Client Contact:	Eric Houtz	03/15/24 16:42

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-2nd samp of wk Composite			**Date Sampled: 03/07/24 7:30**		**Date Received: 03/08/24 10:59**	
Lab No.: 24C0806-03			**Sampled by: JW**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	03/11/24 15:56	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	03/11/24 15:56	kc	EPA 200.7	
Copper	<0.00300	mg/L	03/11/24 15:56	kc	EPA 200.7	
Nickel	0.0210	mg/L	03/11/24 15:56	kc	EPA 200.7	
Lead	<0.00200	mg/L	03/11/24 15:56	kc	EPA 200.7	

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 03/15/24 14:40
Date Reported: 03/21/24 11:51
Project: Wastewater - 2nd, 4th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 1st samp of wk Composite			**Date Sampled: 03/13/24 7:44**		**Date Received: 03/15/24 14:40**	
Lab No.: 24C1521-01			**Sampled by: BP**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	03/18/24 14:54	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	03/18/24 14:54	kc	EPA 200.7	
Copper	<0.00300	mg/L	03/18/24 14:54	kc	EPA 200.7	
Nickel	0.0181	mg/L	03/18/24 14:54	kc	EPA 200.7	
Lead	<0.00200	mg/L	03/18/24 14:54	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk Composit			**Date Sampled: 03/14/24 8:00**		**Date Received: 03/15/24 14:40**	
Lab No.: 24C1521-02			**Sampled by: JW**			
Classical Chemistry Parameters						
Ammonia as N	99.0	mg/L	03/20/24 10:40	jc	Timberline	
Biochemical Oxygen Demand	20	mg/L	03/15/24 14:10	JB	SM 5210 B-2001	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	03/18/24 15:03	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	03/18/24 15:03	kc	EPA 200.7	
Copper	<0.00300	mg/L	03/18/24 15:03	kc	EPA 200.7	
Nickel	0.0176	mg/L	03/18/24 15:03	kc	EPA 200.7	
Lead	<0.00200	mg/L	03/18/24 15:03	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk grab Grab			**Date Sampled: 03/14/24 8:00**		**Date Received: 03/15/24 14:40**	
Lab No.: 24C1521-03			**Sampled by: JW**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	03/14/24 8:00	JW	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 03/22/24 12:06
Date Reported: 03/29/24 17:01
Project: Wastewater - 3rd, 5th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 1st samp of wk Composite			**Date Sampled: 03/20/24 7:10**		**Date Received: 03/22/24 12:06**	
Lab No.: 24C2208-01			**Sampled by: BP**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	03/25/24 14:59	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	03/25/24 14:59	kc	EPA 200.7	
Copper	<0.00300	mg/L	03/25/24 14:59	kc	EPA 200.7	
Nickel	0.0155	mg/L	03/25/24 14:59	kc	EPA 200.7	
Lead	<0.00200	mg/L	03/25/24 14:59	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 2nd samp of wk Composit			**Date Sampled: 03/21/24 7:20**		**Date Received: 03/22/24 12:06**	
Lab No.: 24C2208-02			**Sampled by: BP**			
Classical Chemistry Parameters						
Ammonia as N	90.7	mg/L	03/27/24 11:57	jc	Timberline	
Biochemical Oxygen Demand	17	mg/L	03/22/24 14:06	kt	SM 5210 B-2001	
Total Kjeldahl Nitrogen	78.2	mg/L	03/26/24 11:55	jc	Hach 10242	
Total Suspended Solids	34	mg/L	03/25/24 10:05	kt	USGS I-3765-85	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	03/25/24 15:02	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	03/25/24 15:02	kc	EPA 200.7	
Copper	<0.00300	mg/L	03/25/24 15:02	kc	EPA 200.7	
Nickel	0.0150	mg/L	03/25/24 15:02	kc	EPA 200.7	
Lead	<0.00200	mg/L	03/25/24 15:02	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 2nd samp of wk grab Grab			**Date Sampled: 03/21/24 10:50**		**Date Received: 03/22/24 12:06**	
Lab No.: 24C2208-03			**Sampled by: BP**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	03/21/24 10:50	BP	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Des Moines County Landfill	Project:	Wastewater - 3rd, 5th Week of Month	
13758 Washinton Rd		Send COC with Report	**Reported:**
West Burlington IA, 52655	Client Contact:	Eric Houtz	03/29/24 17:01

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 03/29/24 12:04
Date Reported: 04/03/24 18:03
Project: Wastewater - 2nd, 4th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 1st samp of wk Composite			**Date Sampled: 03/27/24 7:20**		**Date Received: 03/29/24 12:04**	
Lab No.: 24C2905-01			**Sampled by: BP**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	04/01/24 14:42	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	04/01/24 14:42	kc	EPA 200.7	
Copper	<0.00300	mg/L	04/01/24 14:42	kc	EPA 200.7	
Nickel	0.0475	mg/L	04/01/24 14:42	kc	EPA 200.7	
Lead	<0.00200	mg/L	04/01/24 14:42	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk Composit			**Date Sampled: 03/28/24 6:15**		**Date Received: 03/29/24 12:04**	
Lab No.: 24C2905-02			**Sampled by: BP**			
Classical Chemistry Parameters						
Ammonia as N	86.5	mg/L	04/01/24 14:52	jc	Timberline	
Biochemical Oxygen Demand	16	mg/L	03/29/24 14:03	JB	SM 5210 B-2001	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	04/01/24 14:45	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	04/01/24 14:45	kc	EPA 200.7	
Copper	<0.00300	mg/L	04/01/24 14:45	kc	EPA 200.7	
Nickel	0.0233	mg/L	04/01/24 14:45	kc	EPA 200.7	
Lead	<0.00200	mg/L	04/01/24 14:45	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk grab Grab			**Date Sampled: 03/28/24 6:25**		**Date Received: 03/29/24 12:04**	
Lab No.: 24C2905-03			**Sampled by: BP**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	03/28/24 6:25	BP	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 04/05/24 11:47
Date Reported: 04/16/24 14:28
Project: Wastewater - 1st Week of Jan, April, July
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW (Ja, Ap, Ju, Oc) 1st samp of wk Compos			**Date Sampled: 04/03/24 7:10**		**Date Received: 04/05/24 11:47**	
Lab No.: 24D0509-01			**Sampled by: BP**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	04/08/24 16:50	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	04/08/24 16:50	kc	EPA 200.7	
Copper	<0.00300	mg/L	04/08/24 16:50	kc	EPA 200.7	
Nickel	0.0215	mg/L	04/08/24 16:50	kc	EPA 200.7	
Lead	<0.00200	mg/L	04/08/24 16:50	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW (Ja, Ap, Ju, Oc) 2nd samp of wk Compo			**Date Sampled: 04/04/24 8:30**		**Date Received: 04/05/24 11:47**	
Lab No.: 24D0509-02			**Sampled by: BP**			
Classical Chemistry Parameters						
Ammonia as N	79.3	mg/L	04/08/24 9:23	kt	Timberline	
Biochemical Oxygen Demand	16	mg/L	04/05/24 14:50	JB	SM 5210 B-2001	
Total Kjeldahl Nitrogen	71.1	mg/L	04/09/24 15:00	KT	Hach 10242	
Total Suspended Solids	28	mg/L	04/08/24 7:29	kt	USGS I-3765-85	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	04/08/24 16:53	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	04/08/24 16:53	kc	EPA 200.7	
Copper	<0.00300	mg/L	04/08/24 16:53	kc	EPA 200.7	
Nickel	0.0204	mg/L	04/08/24 16:53	kc	EPA 200.7	
Lead	<0.00200	mg/L	04/08/24 16:53	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW (Ja, Ap, Ju, Oc) 2nd samp of wk grab G			**Date Sampled: 04/05/24 9:15**		**Date Received: 04/05/24 11:47**	
Lab No.: 24D0509-03			**Sampled by: BP**			
Classical Chemistry Parameters						
Fats, Oil & Grease (total)	<1.0	mg/L	04/11/24 11:33	kt	EPA 1664 A	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Des Moines County Landfill	Project:	Wastewater - 1st Week of Jan, April, July, Oct	
13758 Washinton Rd		Send COC with Report	**Reported:**
West Burlington IA, 52655	Client Contact:	Eric Houtz	04/16/24 14:28

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW (Ja, Ap, Ju, Oc) 2nd samp of wk grab G			**Date Sampled: 04/05/24 9:15**		**Date Received: 04/05/24 11:47**	
Lab No.: 24D0509-03			**Sampled by: BP**			
Volatile Organic Compounds						
Benzene	<0.00200	mg/L	04/08/24 12:18	kc	EPA 624.1	
Ethylbenzene	<0.00200	mg/L	04/08/24 12:18	kc	EPA 624.1	
Toluene	<0.00200	mg/L	04/08/24 12:18	kc	EPA 624.1	
Xylenes (total)	<0.00600	mg/L	04/08/24 12:18	kc	EPA 624.1	
Field pH	8.0	pH Units	04/05/24 9:15	BP	SM 4500 H + B	

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 04/05/24 12:12
Date Reported: 04/16/24 14:33
Project: Wastewater - 3rd, 5th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 1st samp of wk Composite			**Date Sampled: 04/03/24 7:10**		**Date Received: 04/05/24 12:12**	
Lab No.: 24D0510-01			**Sampled by: BP**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	04/08/24 16:56	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	04/08/24 16:56	kc	EPA 200.7	
Copper	<0.00300	mg/L	04/08/24 16:56	kc	EPA 200.7	
Nickel	0.0236	mg/L	04/08/24 16:56	kc	EPA 200.7	
Lead	<0.00200	mg/L	04/08/24 16:56	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 2nd samp of wk Composit			**Date Sampled: 04/04/24 8:30**		**Date Received: 04/05/24 12:12**	
Lab No.: 24D0510-02			**Sampled by: BP**			
Classical Chemistry Parameters						
Ammonia as N	78.5	mg/L	04/08/24 9:26	kt	Timberline	
Biochemical Oxygen Demand	14	mg/L	04/05/24 14:50	JB	SM 5210 B-2001	
Total Kjeldahl Nitrogen	116	mg/L	04/12/24 0:00	kt	Hach 10242	
Total Suspended Solids	32	mg/L	04/08/24 7:29	kt	USGS I-3765-85	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	04/08/24 16:59	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	04/08/24 16:59	kc	EPA 200.7	
Copper	<0.00300	mg/L	04/08/24 16:59	kc	EPA 200.7	
Nickel	0.0235	mg/L	04/08/24 16:59	kc	EPA 200.7	
Lead	<0.00200	mg/L	04/08/24 16:59	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 2nd samp of wk grab Grab			**Date Sampled: 04/04/24 9:15**		**Date Received: 04/05/24 12:12**	
Lab No.: 24D0510-03			**Sampled by: BP**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	04/04/24 9:15	BP	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Des Moines County Landfill	Project:	Wastewater - 3rd, 5th Week of Month	
13758 Washinton Rd		Send COC with Report	**Reported:**
West Burlington IA, 52655	Client Contact:	Eric Houtz	04/16/24 14:33

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 04/12/24 13:37
Date Reported: 04/26/24 16:42
Project: Wastewater - 1st Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-1st samp of wk Composite			**Date Sampled: 04/10/24 7:30**		**Date Received: 04/12/24 13:37**	
Lab No.: 24D1212-01			**Sampled by: JW**			
Metals by EPA 200 Series Methods						
Silver	<0.00100	mg/L	04/16/24 13:34	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	04/16/24 13:34	kc	EPA 200.7	
Copper	<0.00300	mg/L	04/16/24 13:34	kc	EPA 200.7	
Nickel	0.0172	mg/L	04/16/24 13:34	kc	EPA 200.7	
Lead	<0.00200	mg/L	04/16/24 13:34	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-2nd samp of wk Composite			**Date Sampled: 04/11/24 13:00**		**Date Received: 04/12/24 13:37**	
Lab No.: 24D1212-02			**Sampled by: JW**			
Classical Chemistry Parameters						
Ammonia as N	46.3	mg/L	04/18/24 13:24	jc	Timberline	
Biochemical Oxygen Demand	16	mg/L	04/12/24 13:14	JB	SM 5210 B-2001	
Total Kjeldahl Nitrogen	99.4	mg/L	04/19/24 15:02	jc	Hach 10242	
Total Suspended Solids	40	mg/L	04/16/24 9:55	kt	USGS I-3765-85	
Metals by EPA 200 Series Methods						
Silver	<0.00100	mg/L	04/16/24 13:37	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	04/16/24 13:37	kc	EPA 200.7	
Copper	<0.00300	mg/L	04/16/24 13:37	kc	EPA 200.7	
Nickel	0.0187	mg/L	04/16/24 13:37	kc	EPA 200.7	
Lead	<0.00200	mg/L	04/16/24 13:37	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-2nd samp of wk grab Grab			**Date Sampled: 04/11/24 13:00**		**Date Received: 04/12/24 13:37**	
Lab No.: 24D1212-03			**Sampled by: JW**			
Classical Chemistry Parameters						

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Des Moines County Landfill	Project:	Wastewater - 1st Week of Month	
13758 Washinton Rd		Send COC with Report	**Reported:**
West Burlington IA, 52655	Client Contact:	Eric Houtz	04/26/24 16:42

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-2nd samp of wk grab Grab			**Date Sampled: 04/11/24 13:00**		**Date Received: 04/12/24 13:37**	
Lab No.: 24D1212-03			**Sampled by: JW**			
Volatile Organic Compounds						
Benzene	<0.00200	mg/L	04/15/24 13:15	kc	EPA 624.1	
Ethylbenzene	<0.00200	mg/L	04/15/24 13:15	kc	EPA 624.1	
Toluene	<0.00200	mg/L	04/15/24 13:15	kc	EPA 624.1	
Xylenes (total)	<0.00600	mg/L	04/15/24 13:15	kc	EPA 624.1	
Field pH	8.0	pH Units	04/11/24 13:00	JW	SM 4500 H + B	

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 04/19/24 12:51
Date Reported: 04/26/24 16:47
Project: Wastewater - 2nd, 4th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 1st samp of wk Composite			**Date Sampled: 04/17/24 7:00**		**Date Received: 04/19/24 12:51**	
Lab No.: 24D1907-01			**Sampled by: Eric Houtz**			
Metals by EPA 200 Series Methods						
Silver	0.000500	mg/L	04/22/24 16:45	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	04/22/24 16:45	kc	EPA 200.7	
Copper	<0.00300	mg/L	04/22/24 16:45	kc	EPA 200.7	
Nickel	0.0197	mg/L	04/22/24 16:45	kc	EPA 200.7	
Lead	<0.00200	mg/L	04/22/24 16:45	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk Composit			**Date Sampled: 04/18/24 10:30**		**Date Received: 04/19/24 12:51**	
Lab No.: 24D1907-02			**Sampled by: JW**			
Classical Chemistry Parameters						
Ammonia as N	66.2	mg/L	04/22/24 14:44	jc	Timberline	
Biochemical Oxygen Demand	19	mg/L	04/19/24 13:04	JB	SM 5210 B-2001	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	04/22/24 16:48	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	04/22/24 16:48	kc	EPA 200.7	
Copper	<0.00300	mg/L	04/22/24 16:48	kc	EPA 200.7	
Nickel	0.0203	mg/L	04/22/24 16:48	kc	EPA 200.7	
Lead	<0.00200	mg/L	04/22/24 16:48	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk grab Grab			**Date Sampled: 04/19/24 10:30**		**Date Received: 04/19/24 12:51**	
Lab No.: 24D1907-03			**Sampled by: JW**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	04/19/24 10:30	JW	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 04/26/24 13:45
Date Reported: 05/03/24 14:36
Project: Wastewater - 3rd, 5th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 1st samp of wk Composite			**Date Sampled: 04/24/24 7:15**		**Date Received: 04/26/24 13:45**	
Lab No.: 24D2612-01			**Sampled by: JW**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	04/29/24 15:30	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	04/29/24 15:30	kc	EPA 200.7	
Copper	<0.00300	mg/L	04/29/24 15:30	kc	EPA 200.7	
Nickel	0.0192	mg/L	04/29/24 15:30	kc	EPA 200.7	
Lead	<0.00200	mg/L	04/29/24 15:30	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 2nd samp of wk Composit			**Date Sampled: 04/25/24 7:30**		**Date Received: 04/26/24 13:45**	
Lab No.: 24D2612-02			**Sampled by: BP**			
Classical Chemistry Parameters						
Ammonia as N	56.5	mg/L	04/30/24 11:06	jc	Timberline	
Biochemical Oxygen Demand	19	mg/L	04/26/24 14:25	JB	SM 5210 B-2001	
Total Kjeldahl Nitrogen	62.9	mg/L	05/02/24 11:17	jc	Hach 10242	
Total Suspended Solids	25	mg/L	04/30/24 11:13	kt	USGS I-3765-85	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	04/29/24 15:33	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	04/29/24 15:33	kc	EPA 200.7	
Copper	<0.00300	mg/L	04/29/24 15:33	kc	EPA 200.7	
Nickel	0.0191	mg/L	04/29/24 15:33	kc	EPA 200.7	
Lead	<0.00200	mg/L	04/29/24 15:33	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 2nd samp of wk grab Grab			**Date Sampled: 04/26/24 0:00**		**Date Received: 04/26/24 13:45**	
Lab No.: 24D2612-03			**Sampled by: BP**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	04/26/24 0:00	BP	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Des Moines County Landfill	Project:	Wastewater - 3rd, 5th Week of Month	
13758 Washinton Rd		Send COC with Report	**Reported:**
West Burlington IA, 52655	Client Contact:	Eric Houtz	05/03/24 14:36

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 05/03/24 11:05
Date Reported: 05/14/24 16:47
Project: Wastewater - 2nd, 4th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 1st samp of wk Composite			**Date Sampled: 05/01/24 8:40**		**Date Received: 05/03/24 11:05**	
Lab No.: 24E0306-01			**Sampled by: BP**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	05/06/24 15:50	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	05/06/24 15:50	kc	EPA 200.7	
Copper	<0.00300	mg/L	05/06/24 15:50	kc	EPA 200.7	
Nickel	0.0198	mg/L	05/06/24 15:50	kc	EPA 200.7	
Lead	<0.00200	mg/L	05/06/24 15:50	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk Composit			**Date Sampled: 05/02/24 7:45**		**Date Received: 05/03/24 11:05**	
Lab No.: 24E0306-02			**Sampled by: JW**			
Classical Chemistry Parameters						
Ammonia as N	57.7	mg/L	05/08/24 15:15	jc	Timberline	
Biochemical Oxygen Demand	12	mg/L	05/03/24 13:04	JB	SM 5210 B-2001	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	05/06/24 15:53	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	05/06/24 15:53	kc	EPA 200.7	
Copper	<0.00300	mg/L	05/06/24 15:53	kc	EPA 200.7	
Nickel	0.0196	mg/L	05/06/24 15:53	kc	EPA 200.7	
Lead	<0.00200	mg/L	05/06/24 15:53	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk grab Grab			**Date Sampled: 05/02/24 7:45**		**Date Received: 05/03/24 11:05**	
Lab No.: 24E0306-03			**Sampled by: JW**			
Classical Chemistry Parameters						
Field pH	8	pH Units	05/02/24 7:45	JW	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 05/10/24 12:12
Date Reported: 05/17/24 14:08
Project: Wastewater - 1st Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-1st samp of wk Composite			**Date Sampled: 05/08/24 7:10**		**Date Received: 05/10/24 12:12**	
Lab No.: 24E1009-01			**Sampled by: BP**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	05/14/24 13:16	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	05/14/24 13:16	kc	EPA 200.7	
Copper	<0.00300	mg/L	05/14/24 13:16	kc	EPA 200.7	
Nickel	0.0210	mg/L	05/14/24 13:16	kc	EPA 200.7	
Lead	<0.00200	mg/L	05/14/24 13:16	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-2nd samp of wk Composite			**Date Sampled: 05/09/24 7:30**		**Date Received: 05/10/24 12:12**	
Lab No.: 24E1009-02			**Sampled by: BP**			
Classical Chemistry Parameters						
Ammonia as N	52.7	mg/L	05/13/24 14:30	jc	Timberline	
Biochemical Oxygen Demand	14	mg/L	05/10/24 13:12	JB	SM 5210 B-2001	
Total Kjeldahl Nitrogen	60.7	mg/L	05/16/24 13:16	jc	Hach 10242	
Total Suspended Solids	29	mg/L	05/14/24 15:48	kt	USGS I-3765-85	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	05/14/24 13:19	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	05/14/24 13:19	kc	EPA 200.7	
Copper	<0.00300	mg/L	05/14/24 13:19	kc	EPA 200.7	
Nickel	0.0188	mg/L	05/14/24 13:19	kc	EPA 200.7	
Lead	<0.00200	mg/L	05/14/24 13:19	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-2nd samp of wk grab Grab			**Date Sampled: 05/09/24 7:56**		**Date Received: 05/10/24 12:12**	
Lab No.: 24E1009-03			**Sampled by: BP**			
Classical Chemistry Parameters						

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Des Moines County Landfill	Project:	Wastewater - 1st Week of Month	
13758 Washinton Rd		Send COC with Report	**Reported:**
West Burlington IA, 52655	Client Contact:	Eric Houtz	05/17/24 14:08

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-2nd samp of wk grab Grab			**Date Sampled: 05/09/24 7:56**		**Date Received: 05/10/24 12:12**	
Lab No.: 24E1009-03			**Sampled by: BP**			
Volatile Organic Compounds						
Benzene	<0.0200	mg/L	05/14/24 13:17	kc	EPA 624.1	
Ethylbenzene	<0.0200	mg/L	05/14/24 13:17	kc	EPA 624.1	
Toluene	<0.0200	mg/L	05/14/24 13:17	kc	EPA 624.1	
Xylenes (total)	<0.0600	mg/L	05/14/24 13:17	kc	EPA 624.1	
Field pH	8.0	pH Units	05/09/24 7:56	BP	SM 4500 H + B	

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 05/17/24 11:45
Date Reported: 05/23/24 13:19
Project: Wastewater - 2nd, 4th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 1st samp of wk Composite			**Date Sampled: 05/15/24 8:10**		**Date Received: 05/17/24 11:45**	
Lab No.: 24E1712-01			**Sampled by: BP**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	05/20/24 14:56	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	05/20/24 14:56	kc	EPA 200.7	
Copper	<0.00300	mg/L	05/20/24 14:56	kc	EPA 200.7	
Nickel	0.0192	mg/L	05/20/24 14:56	kc	EPA 200.7	
Lead	<0.00200	mg/L	05/20/24 14:56	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk Composit			**Date Sampled: 05/16/24 7:45**		**Date Received: 05/17/24 11:45**	
Lab No.: 24E1712-02			**Sampled by: BP**			
Classical Chemistry Parameters						
Ammonia as N	107	mg/L	05/20/24 14:42	jc	Timberline	
Biochemical Oxygen Demand	14	mg/L	05/17/24 13:52	JB	SM 5210 B-2001	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	05/20/24 14:59	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	05/20/24 14:59	kc	EPA 200.7	
Copper	<0.00300	mg/L	05/20/24 14:59	kc	EPA 200.7	
Nickel	0.0230	mg/L	05/20/24 14:59	kc	EPA 200.7	
Lead	<0.00200	mg/L	05/20/24 14:59	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk grab Grab			**Date Sampled: 05/17/24 0:00**		**Date Received: 05/17/24 11:45**	
Lab No.: 24E1712-03			**Sampled by:**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	05/17/24 0:00		SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 05/24/24 11:14
Date Reported: 06/03/24 10:35
Project: Wastewater - 3rd, 5th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 1st samp of wk Composite			**Date Sampled: 05/22/24 7:10**		**Date Received: 05/24/24 11:14**	
Lab No.: 24E2407-01			**Sampled by: BP**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	05/28/24 14:55	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	05/28/24 14:55	kc	EPA 200.7	
Copper	<0.00300	mg/L	05/28/24 14:55	kc	EPA 200.7	
Nickel	0.0288	mg/L	05/28/24 14:55	kc	EPA 200.7	
Lead	<0.00200	mg/L	05/28/24 14:55	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 2nd samp of wk Composit			**Date Sampled: 05/23/24 7:50**		**Date Received: 05/24/24 11:14**	
Lab No.: 24E2407-02			**Sampled by: BP**			
Classical Chemistry Parameters						
Ammonia as N	129	mg/L	05/29/24 14:57	jc	Timberline	
Biochemical Oxygen Demand	18	mg/L	05/24/24 13:20	JB	SM 5210 B-2001	
Total Kjeldahl Nitrogen	145	mg/L	05/30/24 9:25	jc	Hach 10242	
Total Suspended Solids	41	mg/L	05/28/24 15:03	kt	USGS I-3765-85	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	05/28/24 14:58	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	05/28/24 14:58	kc	EPA 200.7	
Copper	<0.00300	mg/L	05/28/24 14:58	kc	EPA 200.7	
Nickel	0.0309	mg/L	05/28/24 14:58	kc	EPA 200.7	
Lead	<0.00200	mg/L	05/28/24 14:58	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 2nd samp of wk grab Grab			**Date Sampled: 05/23/24 8:05**		**Date Received: 05/24/24 11:14**	
Lab No.: 24E2407-03			**Sampled by: BP**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	05/23/24 8:05	BP	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Des Moines County Landfill	Project:	Wastewater - 3rd, 5th Week of Month	
13758 Washinton Rd		Send COC with Report	**Reported:**
West Burlington IA, 52655	Client Contact:	Eric Houtz	06/03/24 10:35

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 05/31/24 11:27
Date Reported: 06/11/24 14:46
Project: Wastewater - 2nd, 4th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 1st samp of wk Composite			**Date Sampled: 05/29/24 7:05**		**Date Received: 05/31/24 11:27**	
Lab No.: 24E3108-01			**Sampled by: BP**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	06/04/24 12:10	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	06/04/24 12:10	kc	EPA 200.7	
Copper	<0.00300	mg/L	06/04/24 12:10	kc	EPA 200.7	
Nickel	0.0362	mg/L	06/04/24 12:10	kc	EPA 200.7	
Lead	<0.00200	mg/L	06/04/24 12:10	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk Composit			**Date Sampled: 05/30/24 7:15**		**Date Received: 05/31/24 11:27**	
Lab No.: 24E3108-02			**Sampled by: BP**			
Classical Chemistry Parameters						
Ammonia as N	122	mg/L	06/03/24 14:26	jc	Timberline	
Biochemical Oxygen Demand	32	mg/L	06/06/24 13:33	JB	SM 5210 B-2001	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	06/04/24 12:13	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	06/04/24 12:13	kc	EPA 200.7	
Copper	<0.00300	mg/L	06/04/24 12:13	kc	EPA 200.7	
Nickel	0.0373	mg/L	06/04/24 12:13	kc	EPA 200.7	
Lead	<0.00200	mg/L	06/04/24 12:13	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk grab Grab			**Date Sampled: 05/30/24 7:35**		**Date Received: 05/31/24 11:27**	
Lab No.: 24E3108-03			**Sampled by: BP**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	05/30/24 7:35	BP	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 08/09/24 13:10
Date Reported: 08/23/24 12:20
Project: Wastewater - 1st Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-1st samp of wk Composite			**Date Sampled: 08/07/24 7:30**		**Date Received: 08/09/24 13:10**	
Lab No.: 24H0920-01			**Sampled by: CD JW**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	08/13/24 13:14	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	08/13/24 13:14	kc	EPA 200.7	
Copper	0.00378	mg/L	08/13/24 13:14	kc	EPA 200.7	
Nickel	0.0348	mg/L	08/13/24 13:14	kc	EPA 200.7	
Lead	<0.00200	mg/L	08/13/24 13:14	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-2nd samp of wk Composite			**Date Sampled: 08/08/24 7:30**		**Date Received: 08/09/24 13:10**	
Lab No.: 24H0920-02			**Sampled by: CD JW**			
Classical Chemistry Parameters						
Ammonia as N	145	mg/L	08/13/24 14:14	jc	Timberline	
Biochemical Oxygen Demand	22	mg/L	08/09/24 13:27	JB	SM 5210 B-2001	
Total Kjeldahl Nitrogen	157	mg/L	08/14/24 15:58	jc	Hach 10242	
Total Suspended Solids	29	mg/L	08/15/24 10:12	rw	USGS I-3765-85	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	08/13/24 13:17	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	08/13/24 13:17	kc	EPA 200.7	
Copper	0.0144	mg/L	08/13/24 13:17	kc	EPA 200.7	
Nickel	0.0356	mg/L	08/13/24 13:17	kc	EPA 200.7	
Lead	<0.00200	mg/L	08/13/24 13:17	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-2nd samp of wk grab Grab			**Date Sampled: 08/08/24 7:30**		**Date Received: 08/09/24 13:10**	
Lab No.: 24H0920-03			**Sampled by: CD JW**			
Classical Chemistry Parameters						

Analysis Certified by:

Randall Wanke, Ph.D.

DRAFT REPORT, DATA SUBJECT TO CHANGE

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Des Moines County Landfill	Project:	Wastewater - 1st Week of Month	
13758 Washinton Rd		Send COC with Report	**Reported:**
West Burlington IA, 52655	Client Contact:	Eric Houtz	08/23/24 12:20

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-2nd samp of wk grab Grab			**Date Sampled: 08/08/24 7:30**		**Date Received: 08/09/24 13:10**	
Lab No.: 24H0920-03			**Sampled by: CD JW**			
Volatile Organic Compounds						
Benzene	<0.0200	mg/L	08/09/24 15:46	kc	EPA 624.1	
Ethylbenzene	<0.0200	mg/L	08/09/24 15:46	kc	EPA 624.1	
Toluene	<0.0200	mg/L	08/09/24 15:46	kc	EPA 624.1	
Xylenes (total)	<0.0600	mg/L	08/09/24 15:46	kc	EPA 624.1	
Field pH	8.0	pH Units	08/08/24 7:30	CD JW	SM 4500 H + B	

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 08/09/24 13:04
Date Reported: 08/23/24 12:23
Project: Wastewater - 1st Week of Jan, April, July
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW (Ja, Ap, Ju, Oc) 1st samp of wk Compos			**Date Sampled: 08/07/24 7:30**		**Date Received: 08/09/24 13:04**	
Lab No.: 24H0918-01			**Sampled by: CD JW**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	08/13/24 13:08	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	08/13/24 13:08	kc	EPA 200.7	
Copper	0.00430	mg/L	08/13/24 13:08	kc	EPA 200.7	
Nickel	0.0344	mg/L	08/13/24 13:08	kc	EPA 200.7	
Lead	<0.00200	mg/L	08/13/24 13:08	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW (Ja, Ap, Ju, Oc) 2nd samp of wk Compo			**Date Sampled: 08/08/24 7:30**		**Date Received: 08/09/24 13:04**	
Lab No.: 24H0918-02			**Sampled by: CD JW**			
Classical Chemistry Parameters						
Ammonia as N	133	mg/L	08/13/24 14:12	jc	Timberline	
Biochemical Oxygen Demand	23	mg/L	08/09/24 13:27	JB	SM 5210 B-2001	
Total Kjeldahl Nitrogen	140	mg/L	08/14/24 15:58	jc	Hach 10242	
Total Suspended Solids	28	mg/L	08/15/24 10:12	rw	USGS I-3765-85	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	08/13/24 13:11	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	08/13/24 13:11	kc	EPA 200.7	
Copper	<0.00300	mg/L	08/13/24 13:11	kc	EPA 200.7	
Nickel	0.0347	mg/L	08/13/24 13:11	kc	EPA 200.7	
Lead	<0.00200	mg/L	08/13/24 13:11	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW (Ja, Ap, Ju, Oc) 2nd samp of wk grab G			**Date Sampled: 08/08/24 7:30**		**Date Received: 08/09/24 13:04**	
Lab No.: 24H0918-03			**Sampled by: CD JW**			
Classical Chemistry Parameters						
Fats, Oil & Grease (total)	11.6	mg/L	08/21/24 8:48	kt	EPA 1664 A	

Analysis Certified by:

Randall Wanke, Ph.D.

DRAFT REPORT, DATA SUBJECT TO CHANGE

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Des Moines County Landfill	Project:	Wastewater - 1st Week of Jan, April, July, Oct	
13758 Washinton Rd		Send COC with Report	**Reported:**
West Burlington IA, 52655	Client Contact:	Eric Houtz	08/23/24 12:23

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW (Ja, Ap, Ju, Oc) 2nd samp of wk grab G			**Date Sampled: 08/08/24 7:30**		**Date Received: 08/09/24 13:04**	
Lab No.: 24H0918-03			**Sampled by: CD JW**			
Volatile Organic Compounds						
Benzene	<0.0200	mg/L	08/09/24 15:03	kc	EPA 624.1	
Ethylbenzene	<0.0200	mg/L	08/09/24 15:03	kc	EPA 624.1	
Toluene	<0.0200	mg/L	08/09/24 15:03	kc	EPA 624.1	
Xylenes (total)	<0.0600	mg/L	08/09/24 15:03	kc	EPA 624.1	
Field pH	8.0	pH Units	08/08/24 7:30	CD JW	SM 4500 H + B	

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 08/16/24 11:17
Date Reported: 08/27/24 04:17
Project: Wastewater - 2nd, 4th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 1st samp of wk Composite			**Date Sampled: 08/14/24 7:00**		**Date Received: 08/16/24 11:17**	
Lab No.: 24H1607-01			**Sampled by: JW LS**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	08/19/24 12:57	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	08/19/24 12:57	kc	EPA 200.7	
Copper	<0.00300	mg/L	08/19/24 12:57	kc	EPA 200.7	
Nickel	0.0274	mg/L	08/19/24 12:57	kc	EPA 200.7	
Lead	<0.00200	mg/L	08/19/24 12:57	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk Composit			**Date Sampled: 08/15/24 8:15**		**Date Received: 08/16/24 11:17**	
Lab No.: 24H1607-02			**Sampled by: JW LS**			
Classical Chemistry Parameters						
Ammonia as N	67.1	mg/L	08/21/24 13:50	jc	Timberline	
Biochemical Oxygen Demand	46	mg/L	08/21/24 13:46	rw	SM 5210 B-2001	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	08/19/24 13:00	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	08/19/24 13:00	kc	EPA 200.7	
Copper	<0.00300	mg/L	08/19/24 13:00	kc	EPA 200.7	
Nickel	0.0262	mg/L	08/19/24 13:00	kc	EPA 200.7	
Lead	<0.00200	mg/L	08/19/24 13:00	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk grab Grab			**Date Sampled: 08/16/24 0:00**		**Date Received: 08/16/24 11:17**	
Lab No.: 24H1607-03			**Sampled by: JW LS**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	08/16/24 0:00	JW LS	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 08/23/24 11:54
Date Reported: 08/29/24 06:15
Project: Wastewater - 3rd, 5th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 1st samp of wk Composite			**Date Sampled: 08/21/24 7:30**		**Date Received: 08/23/24 11:54**	
Lab No.: 24H2307-01			**Sampled by: JW**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	08/26/24 15:28	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	08/26/24 15:28	kc	EPA 200.7	
Copper	<0.00300	mg/L	08/26/24 15:28	kc	EPA 200.7	
Nickel	0.0254	mg/L	08/26/24 15:28	kc	EPA 200.7	
Lead	<0.00200	mg/L	08/26/24 15:28	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 2nd samp of wk Composit			**Date Sampled: 08/22/24 14:00**		**Date Received: 08/23/24 11:54**	
Lab No.: 24H2307-02			**Sampled by: JW BP**			
Classical Chemistry Parameters						
Ammonia as N	54.7	mg/L	08/27/24 11:40	jc	Timberline	
Biochemical Oxygen Demand	26	mg/L	08/23/24 14:05	JB	SM 5210 B-2001	
Total Kjeldahl Nitrogen	67.9	mg/L	08/28/24 15:36	jc	Hach 10242	
Total Suspended Solids	37	mg/L	08/28/24 13:30	kt	USGS I-3765-85	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	08/26/24 15:31	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	08/26/24 15:31	kc	EPA 200.7	
Copper	<0.00300	mg/L	08/26/24 15:31	kc	EPA 200.7	
Nickel	0.0257	mg/L	08/26/24 15:31	kc	EPA 200.7	
Lead	<0.00200	mg/L	08/26/24 15:31	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 2nd samp of wk grab Grab			**Date Sampled: 08/22/24 14:00**		**Date Received: 08/23/24 11:54**	
Lab No.: 24H2307-03			**Sampled by: JW BP**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	08/22/24 14:00	JW BP	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Des Moines County Landfill	Project:	Wastewater - 3rd, 5th Week of Month	
13758 Washinton Rd		Send COC with Report	**Reported:**
West Burlington IA, 52655	Client Contact:	Eric Houtz	08/29/24 06:15

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 08/30/24 12:07
Date Reported: 09/06/24 13:11
Project: Wastewater - 2nd, 4th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 1st samp of wk Composite			**Date Sampled: 08/28/24 7:15**		**Date Received: 08/30/24 12:07**	
Lab No.: 24H3009-01			**Sampled by: CD**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	09/03/24 12:13	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	09/03/24 12:13	kc	EPA 200.7	
Copper	<0.00300	mg/L	09/03/24 12:13	kc	EPA 200.7	
Nickel	0.0278	mg/L	09/03/24 12:13	kc	EPA 200.7	
Lead	<0.00200	mg/L	09/03/24 12:13	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk Composit			**Date Sampled: 08/29/24 10:30**		**Date Received: 08/30/24 12:07**	
Lab No.: 24H3009-02			**Sampled by: JW**			
Classical Chemistry Parameters						
Ammonia as N	37.2	mg/L	09/04/24 11:33	jc	Timberline	
Biochemical Oxygen Demand	42	mg/L	08/30/24 13:24	kt	SM 5210 B-2001	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	09/03/24 12:16	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	09/03/24 12:16	kc	EPA 200.7	
Copper	<0.00300	mg/L	09/03/24 12:16	kc	EPA 200.7	
Nickel	0.0210	mg/L	09/03/24 12:16	kc	EPA 200.7	
Lead	<0.00200	mg/L	09/03/24 12:16	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk grab Grab			**Date Sampled: 08/29/24 10:30**		**Date Received: 08/30/24 12:07**	
Lab No.: 24H3009-03			**Sampled by: JW**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	08/29/24 10:30	JW	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 11/08/24 11:30
Date Reported: 11/21/24 05:24
Project: Wastewater - 1st Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-1st samp of wk Composite			**Date Sampled: 11/06/24 8:30**		**Date Received: 11/08/24 11:30**	
Lab No.: 24K0805-01			**Sampled by: JW**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	11/14/24 17:09	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	11/14/24 17:09	kc	EPA 200.7	
Copper	<0.00300	mg/L	11/14/24 17:09	kc	EPA 200.7	
Nickel	0.0229	mg/L	11/14/24 17:09	kc	EPA 200.7	
Lead	<0.00200	mg/L	11/14/24 17:09	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-2nd samp of wk Composite			**Date Sampled: 11/07/24 7:30**		**Date Received: 11/08/24 11:30**	
Lab No.: 24K0805-02			**Sampled by: JW**			
Classical Chemistry Parameters						
Ammonia as N	65.2	mg/L	11/13/24 13:58	jc	Timberline	
Biochemical Oxygen Demand	23	mg/L	11/08/24 13:27	JB	SM 5210 B-2001	
Total Kjeldahl Nitrogen	98.1	mg/L	11/15/24 15:02	jc	Hach 10242	
Total Suspended Solids	58	mg/L	11/12/24 11:18	kt	USGS I-3765-85	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	11/14/24 17:12	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	11/14/24 17:12	kc	EPA 200.7	
Copper	<0.00300	mg/L	11/14/24 17:12	kc	EPA 200.7	
Nickel	0.0225	mg/L	11/14/24 17:12	kc	EPA 200.7	
Lead	<0.00200	mg/L	11/14/24 17:12	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-2nd samp of wk grab Grab			**Date Sampled: 11/07/24 7:30**		**Date Received: 11/08/24 11:30**	
Lab No.: 24K0805-03			**Sampled by: JW**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	11/07/24 7:30	JW	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Des Moines County Landfill	Project:	Wastewater - 1st Week of Month	
13758 Washinton Rd		Send COC with Report	**Reported:**
West Burlington IA, 52655	Client Contact:	Eric Houtz	11/21/24 05:24

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 1st wk-2nd samp of wk grab Grab			**Date Sampled: 11/07/24 7:30**		**Date Received: 11/08/24 11:30**	
Lab No.: 24K0805-03			**Sampled by: JW**			
Volatile Petroleum Hydrocarbons (GC)						
Benzene	<2.00	ug/L	11/13/24 20:58	P5ZC	OA-1 (GC)	
Ethylbenzene	<2.00	ug/L	11/13/24 20:58	P5ZC	OA-1 (GC)	
Toluene	<2.00	ug/L	11/13/24 20:58	P5ZC	OA-1 (GC)	
Xylenes, Total	<6.00	ug/L	11/13/24 20:58	P5ZC	OA-1 (GC)	
Field pH	8.0	pH Units	11/07/24 7:30	JW	SM 4500 H + B	

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 11/08/24 11:34
Date Reported: 11/21/24 05:41
Project: Wastewater - 1st Week of Jan, April, July
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW (Ja, Ap, Ju, Oc) 1st samp of wk Compos			**Date Sampled: 11/06/24 8:30**		**Date Received: 11/08/24 11:34**	
Lab No.: 24K0806-01			**Sampled by: JW**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	11/14/24 17:14	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	11/14/24 17:14	kc	EPA 200.7	
Copper	<0.00300	mg/L	11/14/24 17:14	kc	EPA 200.7	
Nickel	0.0224	mg/L	11/14/24 17:14	kc	EPA 200.7	
Lead	<0.00200	mg/L	11/14/24 17:14	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW (Ja, Ap, Ju, Oc) 2nd samp of wk Compo			**Date Sampled: 11/07/24 7:30**		**Date Received: 11/08/24 11:34**	
Lab No.: 24K0806-02			**Sampled by: JW**			
Classical Chemistry Parameters						
Ammonia as N	72.3	mg/L	11/13/24 14:01	jc	Timberline	
Biochemical Oxygen Demand	28	mg/L	11/08/24 13:27	JB	SM 5210 B-2001	
Total Kjeldahl Nitrogen	88.5	mg/L	11/15/24 15:02	jc	Hach 10242	
Total Suspended Solids	60	mg/L	11/12/24 11:18	kt	USGS I-3765-85	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	11/14/24 17:16	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	11/14/24 17:16	kc	EPA 200.7	
Copper	<0.00300	mg/L	11/14/24 17:16	kc	EPA 200.7	
Nickel	0.0228	mg/L	11/14/24 17:16	kc	EPA 200.7	
Lead	<0.00200	mg/L	11/14/24 17:16	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW (Ja, Ap, Ju, Oc) 2nd samp of wk grab G			**Date Sampled: 11/07/24 7:30**		**Date Received: 11/08/24 11:34**	
Lab No.: 24K0806-03			**Sampled by: JW**			
Classical Chemistry Parameters						
Fats, Oil & Grease (total)	4.6	mg/L	11/15/24 11:19	kt	EPA 1664 A	

Analysis Certified by:

Randall Wanke, Ph.D.

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Des Moines County Landfill	Project:	Wastewater - 1st Week of Jan, April, July, Oct	
13758 Washinton Rd		Send COC with Report	**Reported:**
West Burlington IA, 52655	Client Contact:	Eric Houtz	11/21/24 05:41

Field pH	8.0	pH Units	11/07/24 7:30	JW	SM 4500 H + B	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW (Ja, Ap, Ju, Oc) 2nd samp of wk grab G			**Date Sampled: 11/07/24 7:30**		**Date Received: 11/08/24 11:34**	
Lab No.: 24K0806-03			**Sampled by: JW**			
Volatile Petroleum Hydrocarbons (GC)						
Benzene	<2.00	ug/L	11/13/24 22:26	P5ZC	OA-1 (GC)	
Ethylbenzene	<2.00	ug/L	11/13/24 22:26	P5ZC	OA-1 (GC)	
Toluene	<2.00	ug/L	11/13/24 22:26	P5ZC	OA-1 (GC)	
Xylenes, Total	<6.00	ug/L	11/13/24 22:26	P5ZC	OA-1 (GC)	
Field pH	8.0	pH Units	11/07/24 7:30	JW	SM 4500 H + B	

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 11/15/24 12:41
Date Reported: 11/21/24 16:05
Project: Wastewater - 2nd, 4th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 1st samp of wk Composite			**Date Sampled: 11/13/24 7:00**		**Date Received: 11/15/24 12:41**	
Lab No.: 24K1517-01			**Sampled by: JW**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	11/19/24 12:21	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	11/19/24 12:21	kc	EPA 200.7	
Copper	0.00476	mg/L	11/19/24 12:21	kc	EPA 200.7	
Nickel	0.0242	mg/L	11/19/24 12:21	kc	EPA 200.7	
Lead	<0.00200	mg/L	11/19/24 12:21	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk Composit			**Date Sampled: 11/14/24 8:00**		**Date Received: 11/15/24 12:41**	
Lab No.: 24K1517-02			**Sampled by: JW**			
Classical Chemistry Parameters						
Ammonia as N	69.7	mg/L	11/19/24 14:46	jc	Timberline	
Biochemical Oxygen Demand	22	mg/L	11/15/24 12:59	JB	SM 5210 B-2001	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	11/19/24 12:24	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	11/19/24 12:24	kc	EPA 200.7	
Copper	0.00423	mg/L	11/19/24 12:24	kc	EPA 200.7	
Nickel	0.0239	mg/L	11/19/24 12:24	kc	EPA 200.7	
Lead	<0.00200	mg/L	11/19/24 12:24	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 2,4 wk - 2nd samp of wk grab Grab			**Date Sampled: 11/14/24 8:00**		**Date Received: 11/15/24 12:41**	
Lab No.: 24K1517-03			**Sampled by: JW**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	11/14/24 8:00	JW	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Laboratory Report

Des Moines County Landfill
Eric Houtz
13758 Washinton Rd
West Burlington,IA 52655

Date Received: 11/22/24 10:47
Date Reported: 12/05/24 10:51
Project: Wastewater - 3rd, 5th Week of Month
Send COC with Report

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 1st samp of wk Composite			**Date Sampled: 11/20/24 8:10**		**Date Received: 11/22/24 10:47**	
Lab No.: 24K2208-01			**Sampled by: JS**			
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	11/25/24 14:41	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	11/25/24 14:41	kc	EPA 200.7	
Copper	0.00950	mg/L	11/25/24 14:41	kc	EPA 200.7	
Nickel	0.0254	mg/L	11/25/24 14:41	kc	EPA 200.7	
Lead	<0.00200	mg/L	11/25/24 14:41	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 2nd samp of wk Composit			**Date Sampled: 11/21/24 8:10**		**Date Received: 11/22/24 10:47**	
Lab No.: 24K2208-02			**Sampled by: JS**			
Classical Chemistry Parameters						
Ammonia as N	84.2	mg/L	11/27/24 12:58	jc	Timberline	
Biochemical Oxygen Demand	<24	mg/L	11/22/24 13:54	JB	SM 5210 B-2001	
Total Kjeldahl Nitrogen	94.7	mg/L	12/03/24 15:36	jc	Hach 10242	
Total Suspended Solids	50	mg/L	11/26/24 13:53	kt	USGS I-3765-85	
Metals by EPA 200 Series Methods						
Silver	<0.000500	mg/L	11/25/24 14:45	kc	EPA 200.7	
Cadmium	<0.000400	mg/L	11/25/24 14:45	kc	EPA 200.7	
Copper	0.00436	mg/L	11/25/24 14:45	kc	EPA 200.7	
Nickel	0.0259	mg/L	11/25/24 14:45	kc	EPA 200.7	
Lead	<0.00200	mg/L	11/25/24 14:45	kc	EPA 200.7	

Analyte	Result	Units	Analyzed	Analyst	Method	Notes
Sample ID: WW wkly 3,5 wk - 2nd samp of wk grab Grab			**Date Sampled: 11/21/24 7:10**		**Date Received: 11/22/24 10:47**	
Lab No.: 24K2208-03			**Sampled by: JS**			
Classical Chemistry Parameters						
Field pH	8.0	pH Units	11/21/24 7:10	JS	SM 4500 H + B	

Analysis Certified by:

Randall Wanke, Ph.D.

Amy Dobbelare For Randall Wanke, Laboratory Director

Randal Wanke, Laboratory Director

IA DNR lab #113

QCAnalytical Services, LLC
1798 Iowa Drive, LeClaire, IA 52753 • qcanalytical.net
O: 563-289-3373 • Fx: 563-289-5526

Des Moines County Landfill	Project:	Wastewater - 3rd, 5th Week of Month	
13758 Washinton Rd		Send COC with Report	**Reported:**
West Burlington IA, 52655	Client Contact:	Eric Houtz	12/05/24 10:51

Appendix F

Landfill Gas Annual Report

The methane monitoring network in Figure 1 of this report shows the revised monitoring network for the upcoming reporting period outlined in the Permit Renewal Application dated October 01, 2023 (Doc #107815) and approved by the DNR on January 3, 2024 (Doc #108566). Methane measurements collected during this reporting period, summarized in the tables below, reflect the monitoring network applicable to the previous reporting period as shown Figure 1 of the 2023 Landfill Gas Annual Report (Doc #108848). There were no compliance exceedances measured during this reporting period.

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of Facility: Des Moines County Sanitary Landfill

Date of Measurement: February 22, 2024

Monitoring Equipment Used: GEM 5000

Equipment Calibration Date: 4/4/2023

Equipment Calibration Time:

Weather Conditions:

Temperature: 61°F

Barometric Pressure: 29.08

Other:

Name of Sampler: J. Wooldridge
B. Porter

Sample Point	Type	Methane Concentration (% LEL)	Comments
#1 Household Hazardous Waste Building	Indoor	0.0	
#2 Public Drop-off Area	Outdoor	0.0	
#3 New maintenance building	Indoor	0.0	
#4 East Lagoon	Outdoor	0.0	
#5 East Aeration Basin	Outdoor	0.0	
#6 West Lagoon	Outdoor	0.0	
#7 NW Corner-MW1-97	Outdoor	0.0	
#9 MW1-93	Outdoor	0.0	
#10 MW6-93	Outdoor	0.0	
#11 MW3-98	Outdoor	0.0	
#12 New scale	Outdoor	0.0	
#13 New office/HHM	Indoor	0.0	
#14 LFGW-W1	Subsurface	0.0	
#15 LFGW-W2	Subsurface	0.0	
#16 GW-Lagoon-00	Subsurface	0.0	
#17 GW-SUMP	Subsurface	0.0	
#18 GUCO-1	Subsurface	0.0	
• #19 GUCO-2	Subsurface	62.2	
• #32 GUCO-15	Subsurface	0.0	No Notification Required
• #33 GUCO-16	Subsurface	63.3	No Notification Required
#34 MW6-90	Outdoor	0.0	
#35 Compressor Shed	Indoor	0.0	
#36 GUCO-17	Subsurface	0.0	
• # 37 GUCO-18	Subsurface	61.3	No Notification Required

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of Facility: Des Moines County Sanitary Landfill

Date of Measurement: June 10, 2024

Monitoring Equipment Used: GEM 5000

Equipment Calibration Date: 4/15/24

Equipment Calibration Time:

Weather Conditions:

Temperature: 67° F

Barometric Pressure: 29.42

Other: Sunny

Name of Sampler: J. Wooldridge
B. Porter

Sample Point	Type	Methane Concentration (% LEL)	Comments
#1 Household Hazardous Waste Building	Indoor	0	
#2 Public Drop-off Area	Outdoor	0	
#3 New maintenance building	Indoor	0	
#4 East Lagoon	Outdoor	0	
#5 East Aeration Basin	Outdoor	0	
#6 West Lagoon	Outdoor	0	
#7 NW Corner-MW1-97	Outdoor	0	
#9 MW1-93	Outdoor	0	
#10 MW6-93	Outdoor	0	
#11 MW3-98	Outdoor	0	
#12 New scale	Outdoor	0	
#13 New office/HHM	Indoor	0	
#14 LFGW-W1	Subsurface	0	
#15 LFGW-W2	Subsurface	0	
#16 GW-Lagoon-00	Subsurface	0	
#17 GW-SUMP	Subsurface	0	
#18 GUCO-1	Subsurface	0	
#19 GUCO-2	Subsurface	60.5	
#32 GUCO-15	Subsurface	0	No Notification Required
#33 GUCO-16	Subsurface	61.2	No Notification Required
#34 MW6-90	Outdoor	0	
#35 Compressor Shed	Indoor	0	
#36 GUCO-17	Subsurface	0	
# 37 GUCO-18	Subsurface	58.1	No Notification Required

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of Facility: Des Moines County Sanitary Landfill

Date of Measurement: August 20, 2024

Weather Conditions: Partly Sunny

Temperature: 65°F

Barometric Pressure: 29.71

Other:

Monitoring Equipment Used: GEM 5000

Equipment Calibration Date: 4/15/24

Equipment Calibration Time:

Name of Sampler: J. Wooldridge
B. Porter

Sample Point	Type	Methane Concentration (% LEL)	Comments
#1 Household Hazardous Waste Building	Indoor	0	
#2 Public Drop-off Area	Outdoor	0	
#3 New maintenance building	Indoor	0	
#4 East Lagoon	Outdoor	0	
#5 East Aeration Basin	Outdoor	0	
#6 West Lagoon	Outdoor	0	
#7 NW Corner-MW1-97	Outdoor	0	
#9 MW1-93	Outdoor	0	
#10 MW6-93	Outdoor	0	
#11 MW3-98	Outdoor	0	
#12 New scale	Outdoor	0	
#13 New office/HHM	Indoor	0	
#14 LFGW-W1	Subsurface	0	
#15 LFGW-W2	Subsurface	0	
#16 GW-Lagoon-00	Subsurface	0	
#17 GW-SUMP	Subsurface	0	
#18 GUCO-1	Subsurface	0	
#19 GUCO-2	Subsurface	39.9	
#32 GUCO-15	Subsurface	0	No Notification Required
#33 GUCO-16	Subsurface	61.7	No Notification Required
#34 MW6-90	Outdoor	0	
#35 Compressor Shed	Indoor	0	
#36 GUCO-17	Subsurface	0	
# 37 GUCO-18	Subsurface	48.3	No Notification Required

Landfill Gas Monitoring - Field Measurement Recording Sheet

Name of Facility: Des Moines County Sanitary Landfill

Date of Measurement: 11-25-24

Monitoring Equipment Used: Gem 500

Equipment Calibration Date: 4-15-24

Equipment Calibration Time: _____

Name of Sampler: Jesse Woolridge

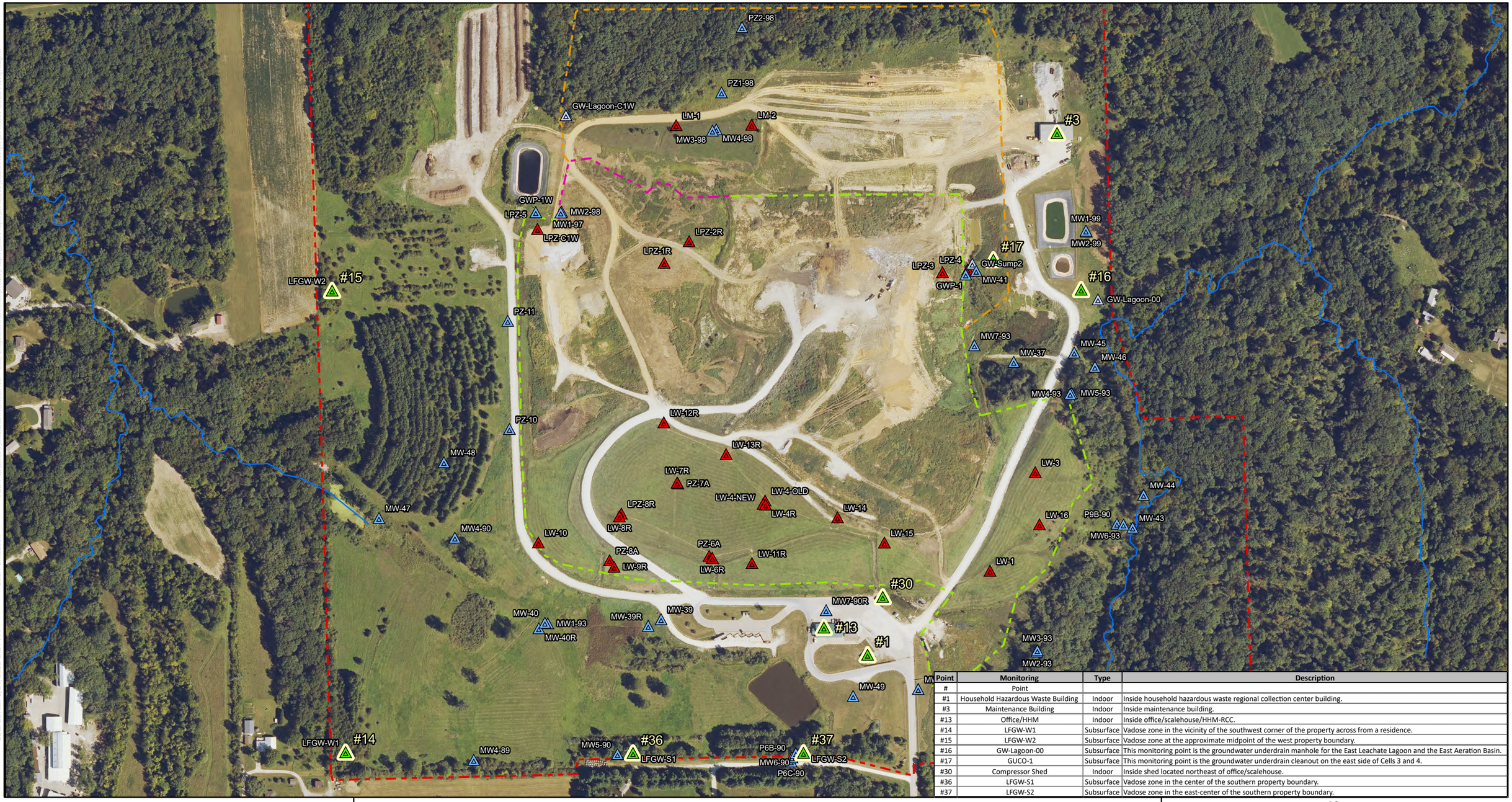
Weather Conditions: mostly cloudy

Temperature: 46° F

Barometric Pressure: 29.35

Other: _____

Sample Point	Type	Methane Concentration (% LEL)	Comments
#1 Household Hazardous Waste Building	Indoor	0	
#2 Public Drop-off Area	Outdoor	0	
#3 New maintenance building	Indoor	0	
#4 East Lagoon	Outdoor	0	
#5 East Aeration Basin	Outdoor	0	
#6 West Lagoon	Outdoor	0	
#7 NW Corner-MW1-97	Outdoor	0	
#9 MW1-93	Outdoor	0	
#10 MW8-93	Outdoor	0	
#11 MW3-98	Outdoor	0	
#12 New scale	Outdoor	0	
#13 New office/99M	Indoor	0	
#14 LFGW-W1	Subsurface	0	
#15 LFGW-W2	Subsurface	0	
#16 GW-Lagoon-00	Subsurface	0	
#17 GW-SUMP	Subsurface	0	
#18 GUCO-1	Subsurface	0	
#19 GUCO-2	Subsurface	60.1	
#32 GUCO-15	Subsurface	0	No Notification Required
#33 GUCO-16	Subsurface	62.5	No Notification Required
#34 MW6-00	Outdoor	0	
#35 Compressor Shed	Indoor	0	
#36 GUCO-17	Subsurface	0	
#37 GUCO-18	Subsurface	45.7	No Notification Required



Point	Monitoring	Type	Description
#	Point		
#1	Household Hazardous Waste Building	Indoor	Inside household hazardous waste regional collection center building.
#3	Maintenance Building	Indoor	Inside maintenance building.
#13	Office/HHM	Indoor	Inside office/scalehouse/HHM-RCC.
#14	LFGW-W1	Subsurface	Vadose zone in the vicinity of the southwest corner of the property across from a residence.
#15	LFGW-W2	Subsurface	Vadose zone at the approximate midpoint of the west property boundary.
#16	GW-Lagoon-00	Subsurface	This monitoring point is the groundwater underdrain manhole for the East Leachate Lagoon and the East Aeration Basin.
#17	GUCO-1	Subsurface	This monitoring point is the groundwater underdrain cleanout on the east side of Cells 3 and 4.
#30	Compressor Shed	Indoor	Inside shed located northeast of office/scalehouse.
#36	LFGW-S1	Subsurface	Vadose zone in the center of the southern property boundary.
#37	LFGW-S2	Subsurface	Vadose zone in the east-center of the southern property boundary.

SCS ENGINEERS
environmental consultants and contractors

Methane Monitoring Network

Legend

- Methane Monitoring Point
- Monitoring Well
- Groundwater Underdrain
- Leachate Monitoring Point
- Landfill Gas Well
- Future Waste Boundary
- Approximate Waste Boundary
- Located Waste Boundary
- Approximate Property Boundary
- Stream

Des Moines County Regional Sanitary Landfill
West Burlington, Iowa
Project No:27224414.25
Drawing Date: February 2025

Figure 1

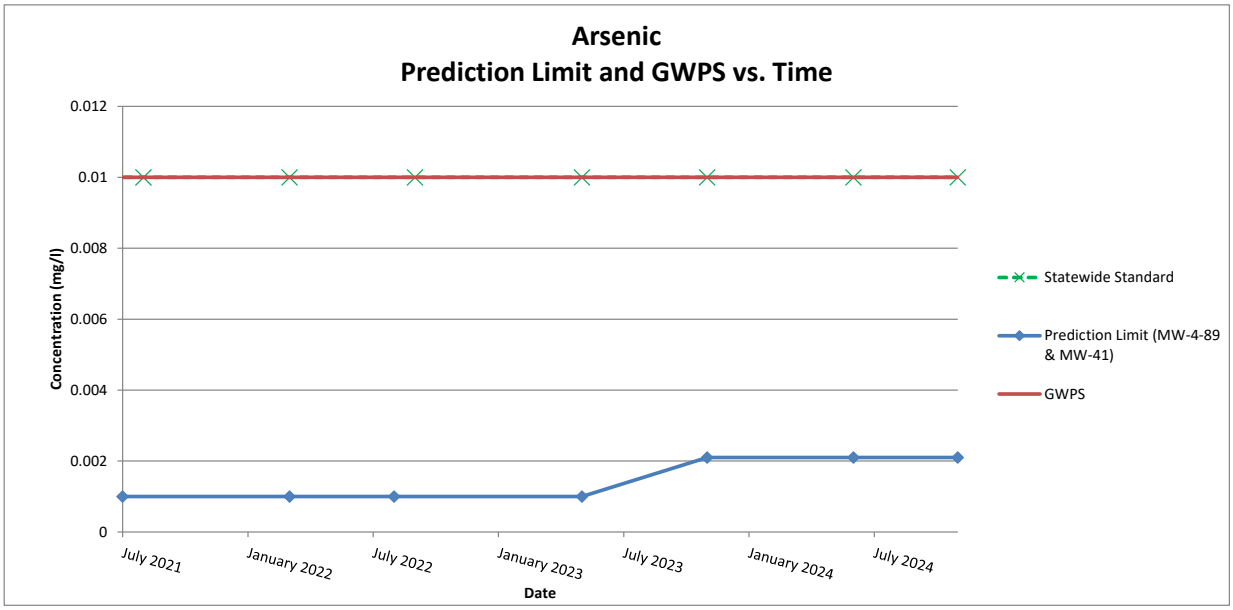
N W E S

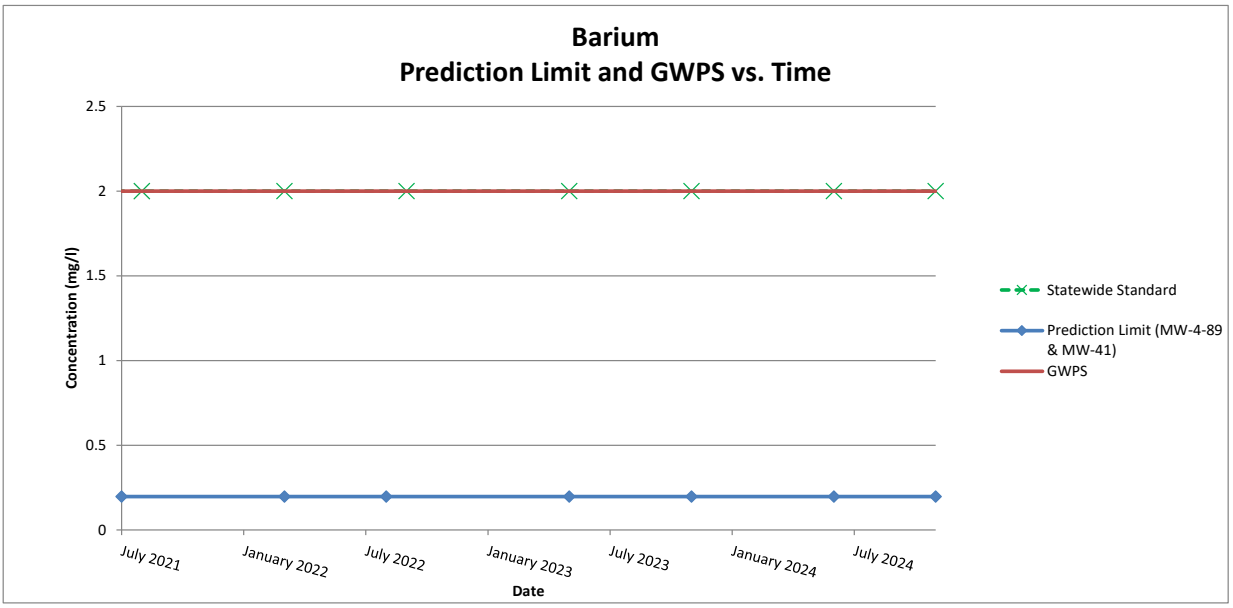
0 190 380 760 1,140 Feet

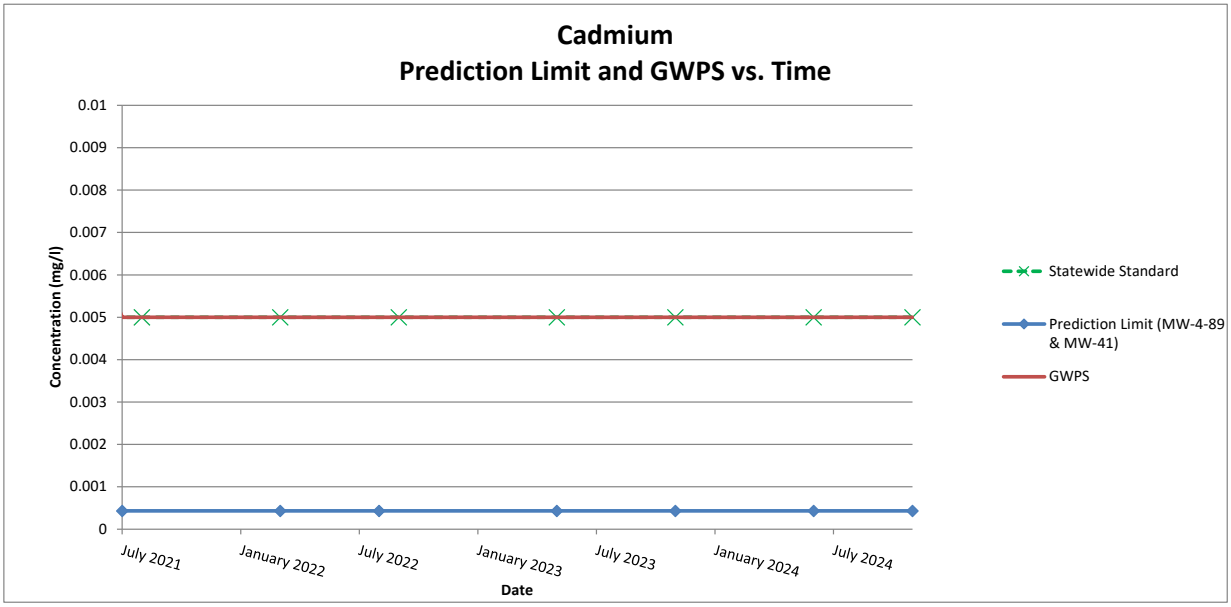
Path: C:\Users\bmadson\OneDrive - SCS Engineers\Desktop\GIS\Maps\Site Maps\DMCSW 2023 AWOR\DMCSW_2023_AWOR.aprx
User: bmadson
Date Saved: 2/24/2025 2:24 PM
Esri, CGIAR, USGS, Esri, TomTom, Garmin, Foursquare, FAO, METI/NASA, USGS, USDA/NAIP, Iowa State University GIS Facility

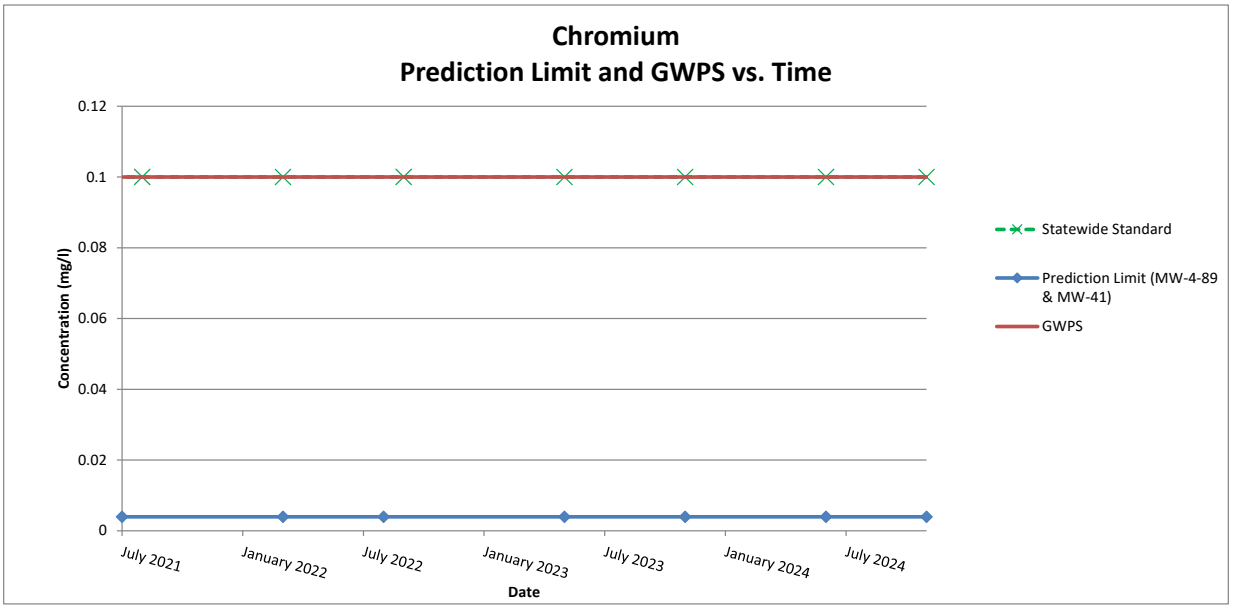
Appendix G

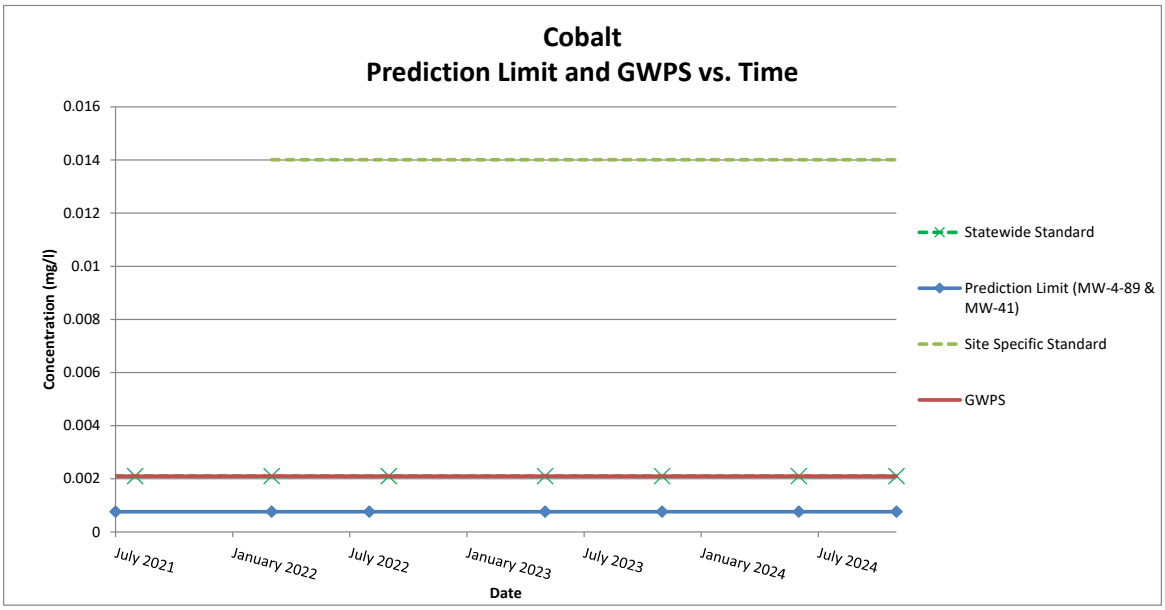
Standards History Graphs

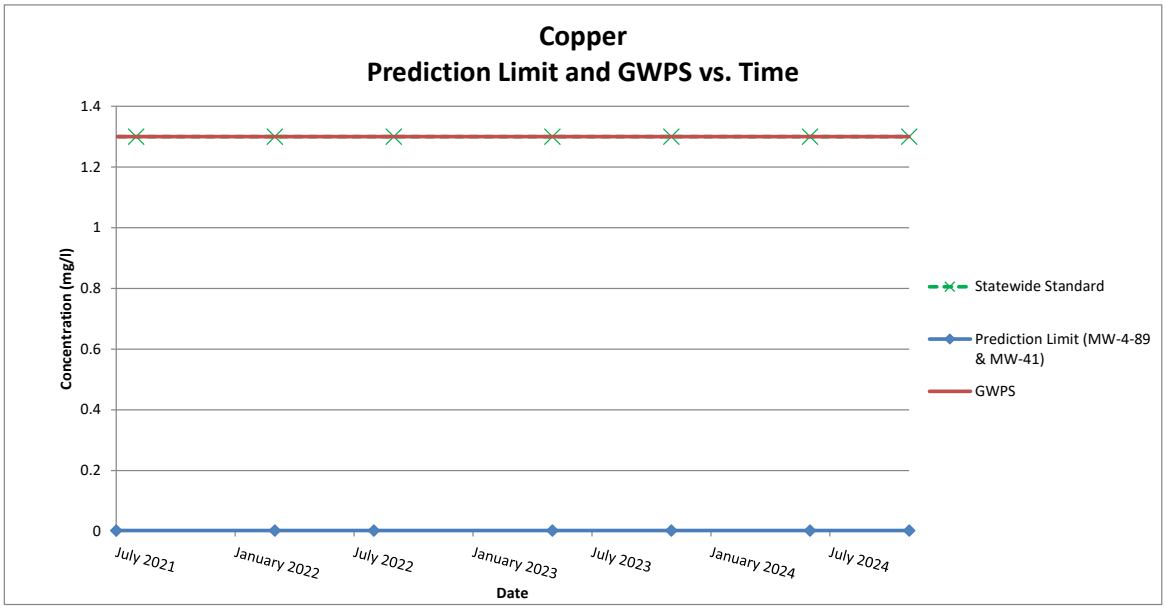

Arsenic
Prediction Limit and GWPS vs. Time
0.012
0.01
0.008
0.006
0.004
0.002
0
Concentration (mg/l)
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
Date
Statewide Standard
Prediction Limit (MW-4-89 & MW-41)
GWPS

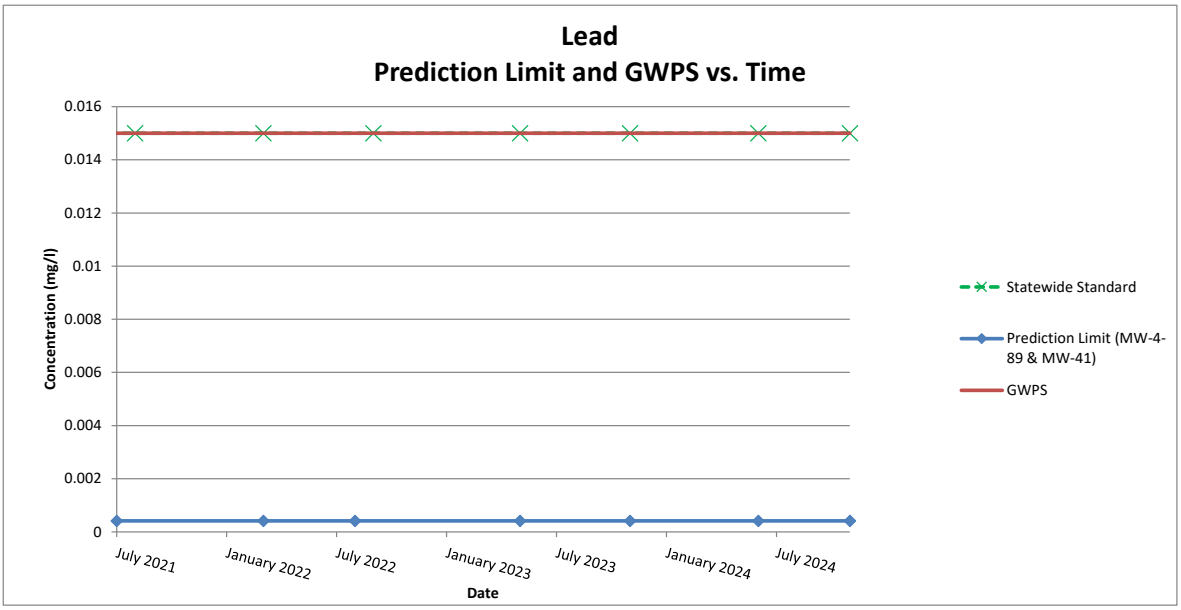

Barium
Prediction Limit and GWPS vs. Time
2.5
2
1.5
1
0.5
0
Concentration (mg/l)
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
Date
Statewide Standard
Prediction Limit (MW-4-89 & MW-41)
GWPS

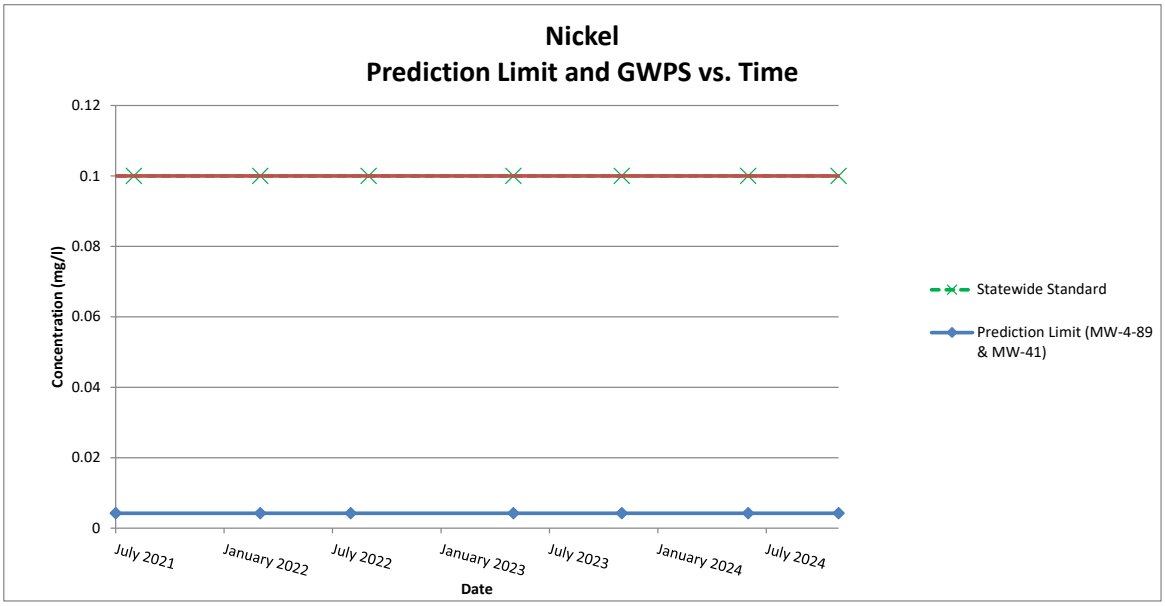

Cadmium
Prediction Limit and GWPS vs. Time
0.01
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0
Concentration (mg/l)
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
Date
Statewide Standard
Prediction Limit (MW-4-89 & MW-41)
GWPS

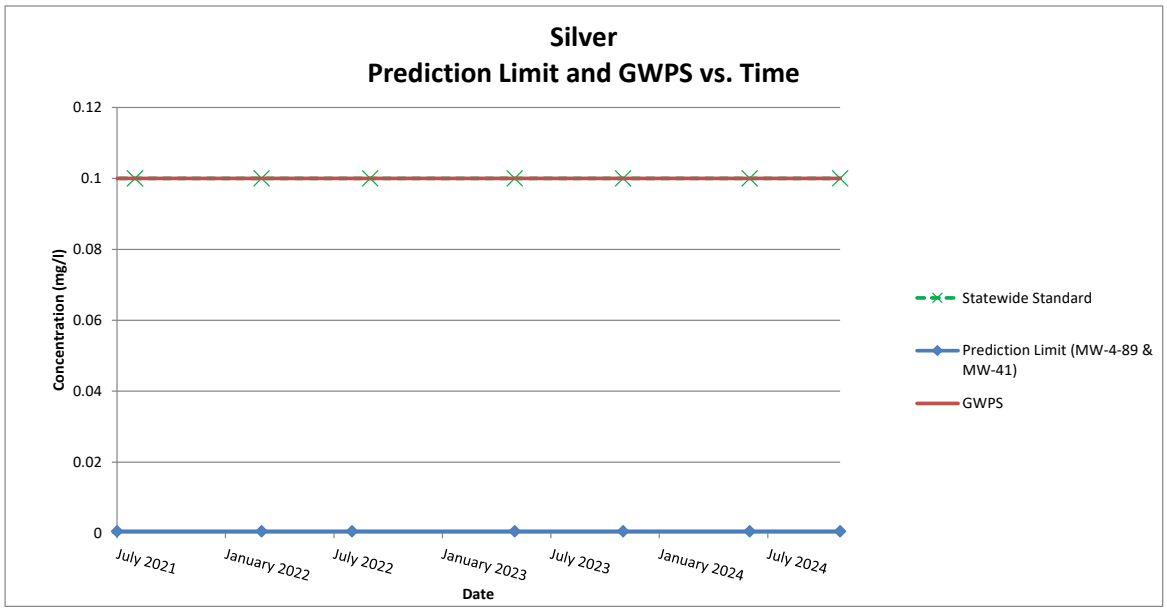

Chromium
Prediction Limit and GWPS vs. Time
0.12
0.1
0.08
0.06
0.04
0.02
0
Concentration (mg/l)
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
Date
Statewide Standard
Prediction Limit (MW-4-89 & MW-41)
GWPS

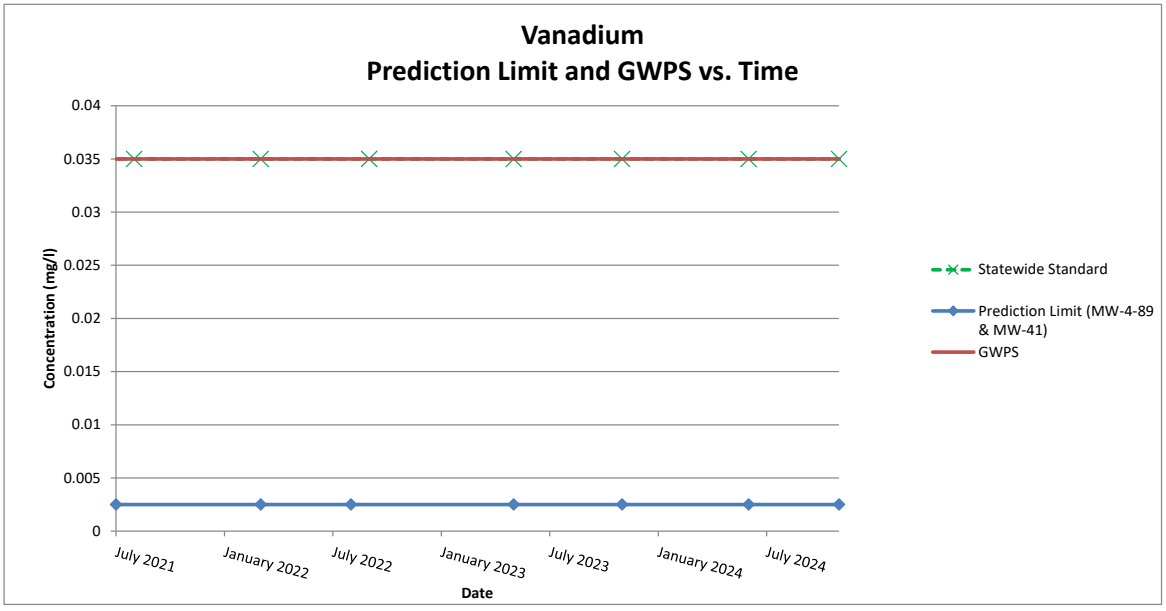

Cobalt
Prediction Limit and GWPS vs. Time
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
Concentration (mg/l)
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
Date
Statewide Standard
Prediction Limit (MW-4-89 & MW-41)
Site Specific Standard
GWPS

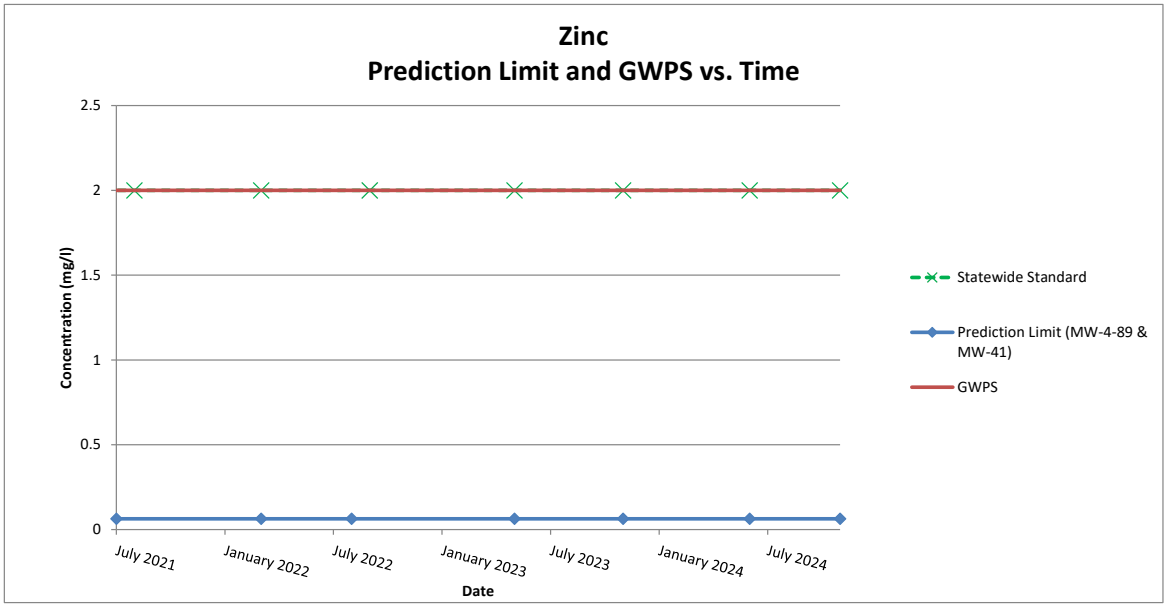

Copper
Prediction Limit and GWPS vs. Time
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Concentration (mg/l)
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
Date
Statewide Standard
Prediction Limit (MW-4-89 & MW-41)
GWPS


Lead
Prediction Limit and GWPS vs. Time
0.016
0.014
0.012
0.01
0.008
0.006
0.004
0.002
0
Concentration (mg/l)
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
Date
Statewide Standard
Prediction Limit (MW-4-89 & MW-41)
GWPS


Nickel
Prediction Limit and GWPS vs. Time
0.12
0.1
0.08
0.06
0.04
0.02
0
Concentration (mg/l)
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
Date
Statewide Standard
Prediction Limit (MW-4-89 & MW-41)


Silver
Prediction Limit and GWPS vs. Time
0.12
0.1
0.08
0.06
0.04
0.02
0
Concentration (mg/l)
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
Date
Statewide Standard
Prediction Limit (MW-4-89 & MW-41)
GWPS


Vanadium
Prediction Limit and GWPS vs. Time
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
Concentration (mg/l)
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
Date
Statewide Standard
Prediction Limit (MW-4-89 & MW-41)
GWPS


Zinc
Prediction Limit and GWPS vs. Time
2.5
2
1.5
1
0.5
0
Concentration (mg/l)
July 2021
January 2022
July 2022
January 2023
July 2023
January 2024
July 2024
Date
Statewide Standard
Prediction Limit (MW-4-89 & MW-41)
GWPS