

2025 ANNUAL GROUNDWATER QUALITY REPORT

FOR THE

GRUNDY COUNTY SANITARY LANDFILL

**38-SDP-1-75C
GRUNDY COUNTY, IOWA**

by:

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6033-25A.320

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Certification

Prepared by: 

Date: 1-13-2026

Printed: Todd Whipple, CPG

Section 1.0 Background Information

1.1 Report Priority

The Owner desires to end regulatory oversight of the post-closure monitoring. The Owner desires to adopt an Environmental Covenant (EC) for the facility and have the Closure Permit rescinded. The Owner requests that the IDNR visit the site in the Spring of 2026 to initiate the proposed pursuit of an EC.

The request for an EC first occurred in the 2023 Annual Water Quality Report (AWQR) dated February 23, 2024 (Doc #109353). The IDNR responded on July 11, 2024 (Doc #110446) requesting a trend analysis on the wells and compounds that exceeded the prediction limit. The trend analysis was provided to IDNR on December 23, 2024 (Doc #110532). The 2024 (AWQR) was also filed about the same time (December 19, 2024 – Doc #111520). The 2024 AWQR and the 2024 trend analysis again included requests to pursue an Environmental Covenant for the facility.

On February 19, 2025 the IDNR responded to the 2024 AWQR and the 2024 trend analysis in Doc #112348 denying the EC without clear explanation. Further the February 19, 2025 IDNR requested supplemental follow-up sampling for bis(2-ethylhexyl)phthalate.

On April 23, 2025 HLW presented the results of the bis(2-ethylhexyl)phthalate testing (Doc #112923). The document demonstrates that the bis(2-ethylhexyl)phthalate is of no consequence at the site. Further, the April 23, 2025 HLW Letter (Doc #112923) requested an IDNR update on pursuit of an EC. Supplemental information was also provided to give some historical perspective related to the rule in effect at the time of closure (2007) and the trend analysis. Response to the April 23, 2025 HLW Letter Report was received November 24, 2025 (Doc #114844). The request for an EC is still suspended until chlorobenzene at MW-14 is more fully addressed and a Reduction-Termination Plan is submitted that satisfies requirements. The IDNR Letter dated November 24, 2025 (Doc #114844) also reduces site work to annual chlorobenzene sampling at MW-14, annual gas monitoring, and an annual engineering inspection.

Water quality findings in 2025 have been determined to be in conformance with applicable rule (Iowa Administrative Code (IAC) 567-113). Water quality is highly similar to the findings from the previous years (2021 - 2024). Water quality findings validate that the water quality is static over time and that there are no Statistically Significant Levels (SSL) that require the consideration of corrective measures.

On February 19, 2025 the IDNR indicated that a Spring Site visit would be scheduled at the site to further evaluate the requested EC. The site visit has not yet been performed.

It is recommended that detection and assessment monitoring continue as outlined in Table 1, unless IDNR consider suspending sampling and reporting activities in 2026 while an Environmental Covenant is being developed.

1.2 Period of Report Coverage

Water quality data evaluation is based on a running compilation of data beginning in April, 2012. Statistical evaluations herein are updated based on the 2025 annual water quality data collected October 9, 2025.

1.3 Current Site Map

Figure 1 is attached illustrating the current site features, monitoring well locations, and gas monitoring locations.

1.4 Site Status and Applicable Rules

Site Location

The Grundy County Sanitary Landfill is located in portions of the NE $\frac{1}{4}$ and the NW $\frac{1}{4}$ of Section 3, T87N, R17W, Grundy County, Iowa. The site encompasses approximately 29 acres. The facility operates under the Iowa Department of Natural Resources (IDNR) Permit Number 38-SDP-1-75C.

Landfill Layout

The site is situated in gently rolling terrain and adjacent properties are cultivated farm ground. Surface runoff from the site follows site topography and flows radially from the closed landfill area. The site drainage ultimately ends up in Black Hawk Creek.

The facility includes a closed landfill area of approximately 13 acres.

Applicable Rules

Groundwater monitoring at the site is conducted in accordance with Iowa Administrative Code (IAC) 567-113 as per the variance approved August 28, 2012.

1.5 Summary of Hydrologic Monitoring System Plan (HMSP)

The HMSP includes five (5) monitoring wells. MW-15A is the designated background/upgradient well for the facility. Historic data collected from MW-18 (no longer sampled) is also included in the background data set. The Site Plan and the approved monitoring network are illustrated on Figure 1.

Monitoring Well Maintenance Performance Reevaluation activities associated with the HMSP monitoring wells are discussed in the information presented in Appendix A.

Prior to April 24, 2012, monitoring was performed according to Iowa Administrative Code 567-103 and 113 that predated current IAC 567, Chapter 113. For a summary of testing performed

under the previous rule see document #79353. In addition, full Appendix II samples were collected on 4/16/2009 from all fourteen (14) site monitoring wells that existed on that date.

Sampling in accordance with current IAC 567, Chapter 113 and the IDNR Letter dated November 24, 2025 (Doc #114844) is summarized in the table below.

Table 1 -- Hydrologic Monitoring System Plan (HMSP) – Current Year (2025) and 2026 Planned

WELL	Monitoring Phase	2025		2026		Appendix II Sample History
		April 2025	October 2025	April 2026	October 2026	
MW-15 (b)	Water Level Only					4/16/09
MW-15A (b)	Detection Monitoring	⁽¹⁾ = bis(2-EH)P	Appendix I	No Sample	No Sample	
MW-18 (b)	Water Level Only					4/16/09
MW-3	Water Level Only					4/16/09
MW-4	Water Level Only					4/16/09, 4/4/17, 4/12/18
MW-5	Water Level Only					4/16/09, 10/17/14, 10/4/19
MW-9	Assessment Monitoring	⁽¹⁾ = bis(2-EH)P	Appendix I	No Sample	No Sample	4/16/09, 10/17/14, 10/4/19, 4/17/24
MW-10	Water Level Only					4/16/09, 4/4/17, 4/12/18
MW-11	Assessment Monitoring	⁽¹⁾ = bis(2-EH)P	Appendix I	No Sample	No Sample	4/16/09, 4/4/17, 4/12/18, 10/4/23
MW-12	Water Level Only					4/16/09
MW-13	Assessment Monitoring	⁽¹⁾ = bis(2-EH)P	Appendix I	No Sample	No Sample	4/16/09, 10/17/14, 10/4/19, 4/17/24
MW-14	Assessment Monitoring	⁽¹⁾ = bis(2-EH)P	Appendix I	Chlorobenzene	No Sample	4/16/09, 10/17/14, 10/4/19, 4/17/24

(b) background well

⁽¹⁾ = bis(2-ethylhexyl)phthalate

Section 2.0 Reporting Period Monitoring Activities

Appendix B includes information related to the Monitoring Activities at this facility. A summary of all well testing beginning April 24, 2012 is included in Appendix B.1.

Field sampling information for the April 3, 2025 and the October 9, 2025 sampling episodes is included on the field forms (IDNR Form 542-1322) in Appendix B.2.

A comprehensive summary of Analytical Data for the episodes between October 17, 2006 and October 9, 2025 is included in Appendix C.

2.1 Current Detection Monitoring Activities

The background wells are MW-15A and MW-18. Numerous semi-annual sampling episodes for MW-18 collected between October 16, 2024 and April 6, 2022 are included in the background data pool. MW-18 is now retained as a water level monitoring point moving forward.

2.2 Current Assessment Monitoring Activities

Downgradient *assessment* monitoring wells include MW-9, MW-11, MW-13, and MW-14. Each assessment monitoring well has had a minimum of four (4) rounds of full Appendix II sampling performed to date. The Revised Closure Permit dated September 28, 2023 (Doc # 107802) allows a five (5) year frequency for full Appendix II sampling. The on-going supplemental sampling for detected compounds bis(2-ethylhexyl) phthalate, phorate, and thionazin in assessment monitoring wells has been relaxed to the same five (5) year frequency for full Appendix II sampling.

2.3 Current Corrective Action Activities and Monitoring

An Ecolotree® buffer is in place as a water quality maintenance system at this facility. The Closed Landfill has been retrofitted with a slurry wall and a leachate collection toe drain system on the north, east, and south sides of the fill in order to eliminate historic leachate seeps.

Note that the IDNR Field Office Inspection Report (9/3/2025 – Doc 113800) requires all remaining Ecolotrees to be removed from the cap on the north side of the site. The Grundy County Landfill Commission agrees with this requirement.

Section 3.0 Data Evaluation and Summary

Statistical Evaluations are prepared by Otter Creek Environmental Services for each monitoring episode. The Groundwater Statistics Report for the Grundy County Sanitary Landfill, Annual Monitoring Event in 2025, dated October, 2025 is included in Appendix D.1.

A summary of field measured turbidity is included in Appendix D.2. A running summary of detections that exceed a prediction limit is included in Appendix D.3. Updated trend analysis tables and graphs are included in Appendix D.4.

The Keystone Analytical Reports for the laboratory testing April 3, 2025 and the October 9, 2025 is included in Appendix E.

QUALITY ASSURANCE/QUALITY CONTROL

A blind duplicate sample was collected at MW-13 during the October 9, 2025 sampling episode.

The purpose of the field duplicate is to evaluate the precision of sample collection and analysis process from the field through the laboratory. The calculation of the Relative Percent Difference (RPD) for duplicate pair results is used as a means to evaluate the precision.

The Quality Control (QC) limit for the RPD on field duplicates is established at thirty percent (30%) for duplicate pairs that have reported concentrations five (5) times greater than the laboratory Reporting Limit. For samples and respective duplicates with reported analyte concentrations nearer the Reporting Limit, the RPD calculations demonstrate greater variability and the RPD can be very large. RPD values are considered nonrepresentative in the following conditions:

- a) Both the original and the duplicate results are less than five (5) times the Reporting Limit.
- b) One or both results are qualified, flagged, or estimated.
- c) One or both results are non-detected.

The results of the blind duplicate and the monitoring well results for October 9, 2025 were within the limits established and indicate that the data quality is acceptable without restriction.

BACKGROUND DATA VALIDATION

On July 10, 2014 an unnumbered Permit Amendment and Memo was issued by the IDNR regarding turbidity (Doc # 80714). A TSS and Field Turbidity Evaluation Report was prepared and submitted on March 24, 2015 (Doc# 82785) and was approved by IDNR on May 20, 2015 (Doc #83406). A summary of field measured turbidity is included in Appendix D.2.

The background data utilized herein has been restricted to include only sample results that have been collected by “No Purge” methods in order to avoid turbidity related issues that may have been associated with historic sample collection methods.

Upgradient Data, Table 1, Attachment B, to the October 2025 Statistical Evaluation Report (Appendix D.1) includes a summary of the most current background data. Any water quality results that are statistical outliers are tagged with an asterisk in the background data and the data would be excluded from use in the calculation of prediction limits. The Site Prediction Limits, Table 5, Attachment B established in the October 2025 Statistical Evaluation Report (Appendix D.1) is based on the validated background.

STATISTICALLY SIGNIFICANT INCREASES (SSI)

The detected concentrations of each compound are compared to the site prediction limit for each respective compound. For detection monitoring wells, any detected concentration for a compound that is in excess of the calculated site prediction limit is recorded as a Statistically Significant Increase (SSI). In 2025, there were no new SSI recorded in detection monitoring wells.

For wells in assessment monitoring (MW-9, MW-11, MW-13, and MW-14), concentrations that exceed a prediction limit are also recorded in the table below, but they are not SSI, rather the result is compared to a GWPS. A running summary of detections that exceed a prediction limit is included in Appendix D.3. In 2025, the detections that exceed the prediction limit are summarized in Table 2 below.

Table 2 – Compounds Exceeding a Prediction Limit

2025	
MW-9**	Arsenic
	Barium
	Nickel
	1,4-dichlorobenzene
	Chlorobenzene
MW-11**	none
MW-13**	Barium
	Cobalt
	Nickel
	1,4-dichlorobenzene
	Chlorobenzene
MW-14**	Chloroethane
	Arsenic
	Barium
	Copper
	Nickel
	1,4-dichlorobenzene
	Benzene
	Chlorobenzene

*** Monitoring well is an Assessment monitoring point and water quality is compared to GWPS, rather than site prediction limits.*

This report serves as notice to the operating record in accordance with IAC 567-113.10(5)c.

ASSESSMENT MONITORING SUMMARY

Assessment monitoring, including the full Appendix II list, has been performed at each well where a historic SSI is recorded (at the Assessment Monitoring Wells). Compounds detected to date beyond the Appendix I list are limited to bis(2-ethylhexyl) phthalate at MW-9, MW-11, MW-13, and MW-14; phorate at MW-9, MW-11, and MW-13; and thionazin at MW-14.

The summary of detections to date is presented in Table 3a-3c. The full Appendix II sample collection events are highlighted in green.

Table 3a - Bis(2-ethylhexyl)phthalate (ug/L) GWPS = 6.0 ug/L

Date	MW-9	MW-11	MW-13	MW-14
4/17/2009	<8	<8	<8	<8
4/24/2013	8.0	NT	<8	<8
10/08/2013	<10	NT	NT	NT
4/24/2014	<10	NT	NT	NT
10/17/2014	<8	NT	<8	<8
4/1/2015	<10	NT	NT	NT
10/2/2015	<10	NT	NT	NT
4/19/2016	<10	NT	NT	NT
10/10/2016	<10	NT	NT	NT
4/4/2017	<10	<8	NT	NT
10/18/2017	NT	NT	NT	NT
4/12/2018	<6	23.0	NT	NT
10/23/2018	<6	<6	NT	NT
4/8/2019	<6	NT	NT	NT
10/4/2019	<6	NT	<6	<6
4/9/2020	NT	NT	NT	NT
10/1/2020	NT	NT	NT	NT
4/1/2021	NT	NT	NT	NT
10/4/2021	NT	NT	NT	NT
4/6/2022	NT	NT	NT	NT
10/4/2023	NT	9.0	NT	NT
4/17/2024	8.0	<6	7.0	72.0
4/3/2025	<6	<6	<6	<6
10/9/2025	NT	NT	NT	NT

Table 3b - phorate (ug/L) *GWPS = 1.4 ug/L*

Date	MW-9	MW-11	MW-13	MW-14
4/17/2009	<0.4	<0.4	<0.4	<0.4
4/24/2013	<0.4	NT	<0.4	<0.4
10/17/2014	3.0	NT	2.0	7.1
4/1/2015	<0.4	NT	<0.4	<0.4
10/2/2015	1.2	NT	0.4	2.8
4/19/2016	<0.4	NT	<0.4	<0.4
10/10/2016	2.5	NT	0.8	2.8
4/4/2017	1.5	2.4	<0.4	<0.4
10/18/2017	<0.4	<0.4	<0.4	<0.4
4/12/2018	<0.4	<0.4	<0.4	<0.4
10/23/2018	<0.4	<0.4	<0.4	<0.4
4/8/2019	<0.4	<0.4	<0.4	<0.4
10/4/2019	<0.4	<0.4	<0.4	<0.4
4/9/2020	NT	NT	NT	NT
10/1/2020	NT	NT	NT	NT
4/1/2021	NT	NT	NT	NT
10/4/2021	NT	NT	NT	NT
4/6/2022	NT	NT	NT	NT
10/4/2023	NT	<0.4	NT	NT
4/17/2024	<0.4	NT	<0.4	<0.4
10/9/2025	NT	NT	NT	NT

Table 3c - thionazin (ug/L) *GWPS = none*

Date	MW-9	MW-11	MW-13	MW-14
4/17/2009	<0.4	<0.4	<0.4	<0.4
4/24/2013	<0.4	NT	<0.4	<0.4
10/17/2014	<0.4	NT	<0.4	0.5
4/1/2015	NT	NT	NT	<0.4
10/2/2015	NT	NT	NT	<0.4
4/4/2017	NT	<0.4	NT	<0.4
10/18/2017	NT	NT	NT	<0.4
4/12/2018	<0.4	<0.4	<0.4	<0.4
10/23/2018	NT	NT	NT	<0.4
4/8/2019	NT	NT	NT	<0.4
10/4/2019	<0.4	<0.4	<0.4	<0.4
4/9/2020	NT	NT	NT	NT
10/1/2020	NT	NT	NT	NT
4/1/2021	NT	NT	NT	NT
10/4/2021	NT	NT	NT	NT
4/6/2022	NT	NT	NT	NT
10/4/2023	NT	<0.4	NT	NT
4/17/2024	<0.4	NT	<0.4	<0.4
10/9/2025	NT	NT	NT	NT

Review of the results for bis(2-ethylhexyl) phthalate, phorate, and thionazin indicate that the compounds are uncommon and do not indicate any pattern or trends for detection. The April 23, 2025 HLW Letter (Doc #112923) is offered as supporting information related to the bis (2-ethylhexyl)phthalate testing. IDNR approved this interpretation in the IDNR Letter dated November 24, 2025 (Doc #114844).

Permit Amendment #4 dated May 20, 2015 (Doc# 83407) allows a five (5) year frequency for full Appendix II sampling, rather than annually. The on-going supplemental sampling for detected compounds bis(2-ethylhexyl) phthalate and thionazin in the assessment monitoring wells was relaxed to the same five (5) year frequency for full Appendix II sampling as allowed in the August 27, 2019 IDNR Letter (Doc # 95813). Semi-annual phorate sampling ceased after three (3) years of non-detection.

SITE SPECIFIC GWPS

Review of the inorganic Prediction Limits that are based on the restricted/validated background data (Table 5 of Attachment B in the Statistical Evaluation Reports in Appendix D) indicates that the prediction limit for cobalt (11.6 ug/L) calculated from the background data exceeds the published IAC 567, Chapter 137 Statewide Standard (2.1 ug/L). The Site-Specific GWPS should not be set lower than the Site Prediction Limit. For this report, the prediction limit for cobalt (11.6 ug/L) is utilized as the Site-Specific GWPS. For all other compounds the published IAC 567, Chapter 137 Statewide Standard are utilized as the GWPS.

STATISTICALLY SIGNIFICANT LEVELS (SSL)

The detected values that exceed site prediction limits are utilized to calculate the Confidence Interval (the 95% lower confidence limits (LCL) and the 95% upper control limits (UCL)) in accordance with the 2009 Unified Guidance for Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities by US EPA. The 95% LCL values are compared to applicable GWPS. Any 95% LCL value that exceeds an applicable GWPS is recorded as an SSL. All wells with a recorded SSL require the plume of impact to be defined in the horizontal and vertical directions and required completion of an Assessment of Corrective Measures (ACM).

The SSL Evaluation for 2025 is based on data collected since October, 2014. The Confidence Intervals (95% LCL and 95% UCL) are calculated during each statistical evaluation based on the most recent four (4) data points.

Tables Summarizing the results, the prediction limits, the Confidence Intervals, and the GWPS are prepared and are included in Appendix F.

On the Summary Tables in Appendix F, the concentrations that exceed the Prediction Limit (SSI) are highlighted in brown. Any 95% LCL value that exceeds the GWPS would be highlighted in yellow. *Note that there are no 95% LCL values recorded that exceed a GWPS.*

As illustrated in the tables in Appendix F, there are no SSL recorded to date. There is no requirement to perform Assessment of Corrective Measures.

IN-PLACE WATER QUALITY MAINTENANCE SYSTEMS

An Ecolotree® buffer is in place as a water quality maintenance system at this facility. Maintenance on the landfill Ecolotree® Cap *will be discontinued in 2026*.

The IDNR Field Office Inspection Report (9/3/2025 – Doc 113800) requires all remaining Ecolotrees to be removed from the cap on the north side of the site. The Grundy County Landfill Commission agrees with this requirement.

The Closed Landfill has been retrofitted with a slurry wall and a leachate/groundwater collection toe drain system on the north, east, and south sides of the fill. The retrofit collection system was installed to eliminate seeps but also appears to function to control the water table system and flow paths at this facility. The system is interpreted to be performing as designed. This system is more fully discussed in the Leachate Control System Performance Evaluation Report incorporated in a later section of this report.

ASSESSMENT OF CORRECTIVE MEASURES (ACM) EVALUATION

Corrective Measures are not required at this facility.

RESPONSES TO WATER QUALITY RESULTS

Based on the minor nature of the water quality findings reported herein to date (the few recorded prediction limit exceedances), a recommendation is made that water quality testing and other post-closure care monitoring cease under the current closure permit. It is recommended that going forward, the post closure care and maintenance be managed by the Grundy County Landfill Commission under an Environmental Covenant (EC) filed and recorded on the deed specific to the landfill facility, rather than under the Closure Permit issued by IDNR.

Updated trend analysis tables and graphs are included in Appendix D.4. The trend analysis supports the request to pursue an EC.

The supplemental sampling for bis (2-ethylhexyl)phthalate in April 2025 (Doc # 112923) also supports the request to pursue an EC.

The supplemental chlorobenzene testing at MW-14 (required by the IDNR Letter dated November 24, 2025 (Doc #114844)) will be performed in 2026 and the requested Reduction-Termination Plan will be submitted in 2026 in satisfaction of the IDNR request to do so (Doc #114844).

MONITORING WELL MAINTENANCE PERFORMANCE EVALUATION

The HMSP and the existing HMSP monitoring points are interpreted to be effective for on-going detection, assessment, and corrective action monitoring at the facility. Monitoring Well Maintenance Performance Reevaluation activities associated with the HMSP monitoring wells are discussed in the information presented in Appendix A.

LEACHATE COLLECTION SYSTEM PERFORMANCE EVALUATION

See Appendix G.

GAS MONITORING EVALUATION

See Appendix H.

Section 4.0 Recommendations & Requests

Corrective Action monitoring is not warranted based on the water quality data reported.

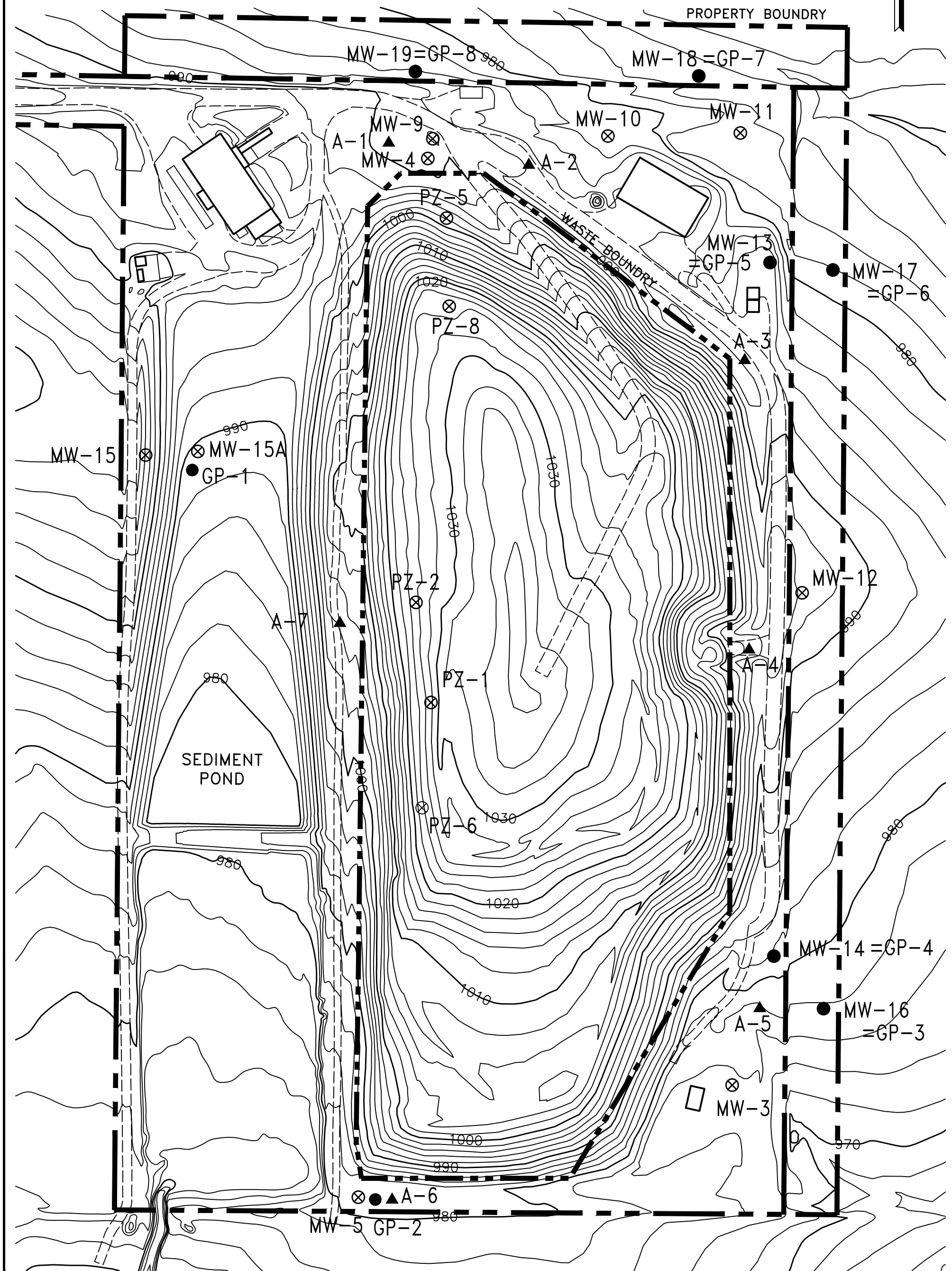
The supplemental chlorobenzene testing at MW-14 (required by the IDNR Letter dated November 24, 2025 (Doc #114844)) will be performed in 2026 and the requested Reduction-Termination Plan (RTP) will be submitted in 2026 in satisfaction of the IDNR request to do so (Doc #114844).

We will again request IDNR participation in developing an Environmental Covenant for the facility in order to rescind the Closure Permit for the facility. We will again request a site visit by IDNR in the Summer of 2026, following submittal of the chlorobenzene test result from MW-14 and the submittal of the RTP.

Figures

- ▲ A-1 = AMBIENT AIR GAS MONITORING POINT
● GP-1 = SUBSURFACE GAS PROBE

0 100 200 400
SURVEY DATE: AUG 27, 2008



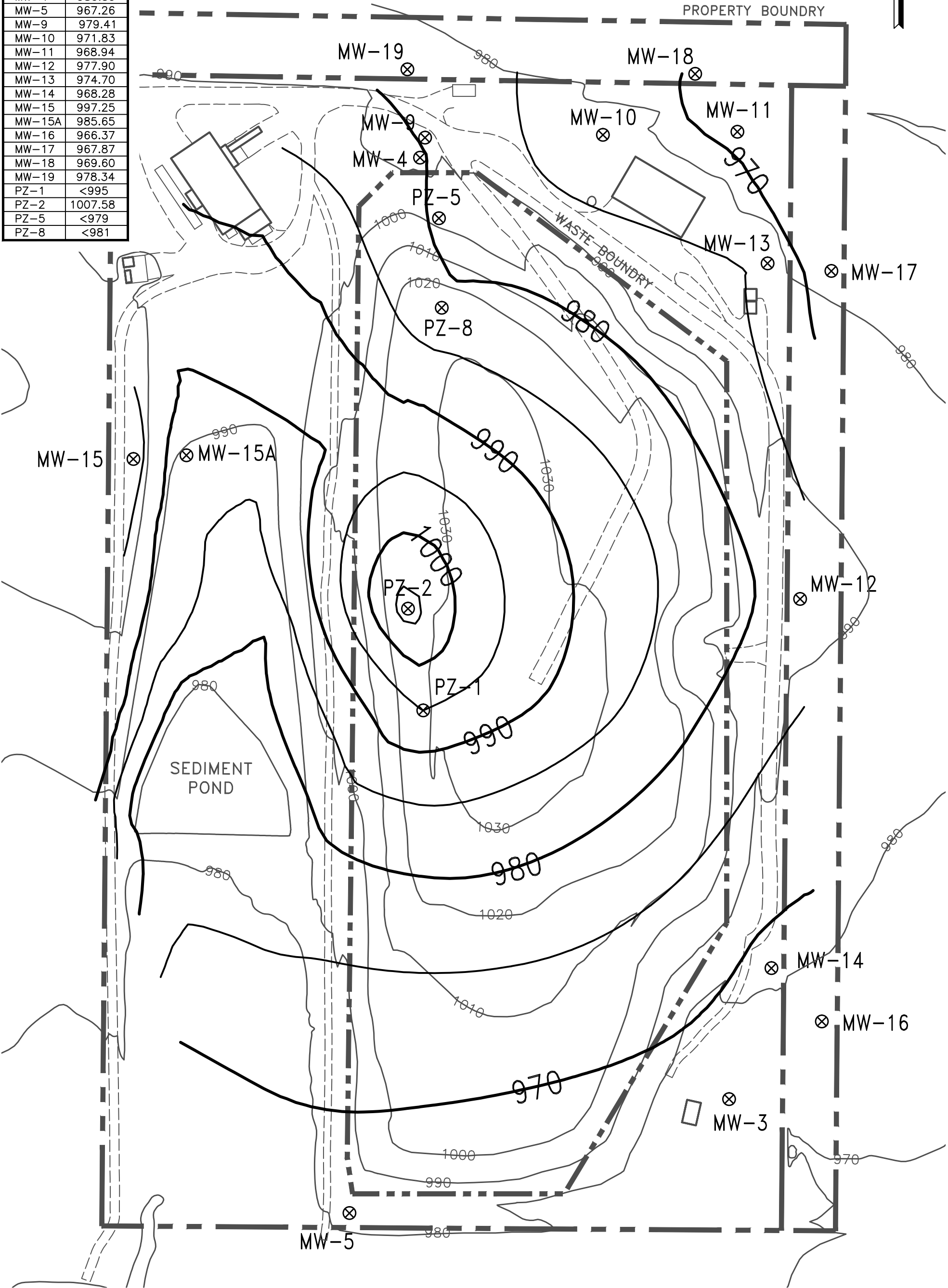
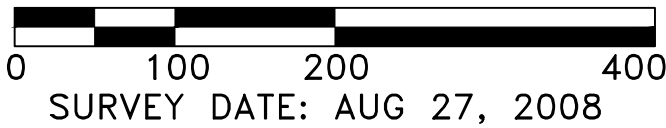
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SITE PLAN WITH
GAS MONITORING LOCATIONS
GRUNDY COUNTY SANITARY LANDFILL
GRUNDY CENTER, IOWA

FIGURE: 1

REVISION	NO.	DATE
DRAWN DRA	PROJECT NO. 6033	DATE 12-6-25

WATER ELEVATION OCTOBER 9, 2025	
WELL	ELEV.
MW-3	968.61
MW-4	980.59
MW-5	967.26
MW-9	979.41
MW-10	971.83
MW-11	968.94
MW-12	977.90
MW-13	974.70
MW-14	968.28
MW-15	997.25
MW-15A	985.65
MW-16	966.37
MW-17	967.87
MW-18	969.60
MW-19	978.34
PZ-1	<995
PZ-2	1007.58
PZ-5	<979
PZ-8	<981



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GROUNDWATER CONTOURS
GRUNDY COUNTY SANITARY LANDFILL
GRUNDY CENTER, IOWA

FIGURE: 2

REVISION	NO.	DATE
DRAWN DRA	PROJECT NO. 6033-14A	DATE 12-6-25

Appendix A

Monitoring Well Maintenance and Performance Re-evaluation

MONITORING WELL MAINTENANCE AND PERFORMANCE REEVALUATION

The table below outlines the status of well performance and maintenance activities as required by IAC 567-113.10(2) f.

Years	2014	2015	2016	2017	2018	2019
Annual water-quality report	X	X	X	X	X	X
High and low water levels	X	X	X	X	X	X
Six-month water levels	X	X	X	X	X	X
Well-depth measurement	X	X	X	X	X	X
Evaluation of recharge rates and chemistry	X		X		X	

X, completed; O, scheduled.

Future Assessment

Years	2020	2021	2022	2023	2024	2025
Annual water-quality report	X	X	X	X	X	X
High and low water levels	X	X	X	X	X	X
Six-month water levels	X	X	X	X	X	X
Well-depth measurement	X	X	X	X	X	X
Evaluation of recharge rates and chemistry	X		X		X	

X, completed; O, scheduled.

Monitoring Well Performance Reevaluation for wells is performed in accordance with IAC-567 113.10(2)f as per the variance approved August 28, 2012.

High & Low Water Levels

Water elevation data is included in the attached Tables A1. The maximum depth to water and the minimum depth to water are included at the bottom of each column. The variations over seasonal events are typically less than 10 ft across the site through time.

A Water Table Contour Map (Figure 2) dated October 9, 2025 is included with this report. The Water Table Contour Map illustrates the water table surface.

Well Depth & Sedimentation

Well depth measurements were made on October 9, 2025. Review of the measurement data included on the field measurement forms in Appendix B indicate that well sedimentation is estimated to be less than 1.5 feet at all site monitoring wells, except MW-11 (2.83 ft).

Well Recharge Rates & Chemistry

The 2001 AWQR (Doc# 25065) includes a summary of horizontal hydraulic conductivity testing results for numerous wells. Horizontal hydraulic conductivities ranged between 10^{-4} cm/sec and 10^{-6} cm/sec.

Well recovery data was again collected on April 17, 2024. Review of the field data for the April 17, 2024 sampling episode indicates that the water levels within each well recover to approximately 90+% at all wells, in 6 hours or less.

Based on this recorded data, recharge to the individual wells remains sufficient to promote collection of representative water quality samples and the wells are functioning as intended. Monitoring well recharge reevaluation is due biennially according to 113.10(2)f, and should be evaluated again in October 2026.

Based on the apparent static condition of the water table across the site, it appears that the semi-annual water elevation data is sufficient to adequately monitor the hydrologic condition of the site.

No changes or modifications to the site monitoring wells are recommended.

Appendix A.1 - Historic Water Elevation Data

Water Elevation Data
Grundy County Sanitary Landfill
38-SDP-1-75C

Well/TOC	MW-3 978.44		MW-4 991.14		MW-5 982.96		MW-9 991.63		MW-10 984.28		MW-11 978.78		MW-12 995.41		MW-13 986.9	
	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation
04/24/13	4.34	974.10	5.39	985.75	13.83	969.13	7.05	984.58	5.54	978.74	4.93	973.85	19.20	976.21	8.40	978.50
06/13/13	4.79	973.65	7.70	983.44	13.93	969.03	9.43	982.20	9.61	974.67	6.83	971.95	16.59	978.82	8.82	978.08
10/08/13	10.98	967.46	11.60	979.54	17.74	965.22	13.41	978.22	12.97	971.31	11.45	967.33	18.79	976.62	13.26	973.64
12/19/13	11.78	966.66	11.95	979.19	17.71	965.25	13.80	977.83	13.14	971.14	11.96	966.82	19.62	975.79	14.22	972.68
04/23/14	9.80	968.64	7.35	983.79	15.15	967.81	9.00	982.63	11.50	972.78	9.30	969.48	19.90	975.51	11.00	975.90
10/16/14	11.00	967.44	11.45	979.69	15.30	967.66	12.50	979.13	12.70	971.58	10.00	968.78	18.40	977.01	12.35	974.55
01/08/15	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
04/01/15	10.25	968.19	9.45	981.69	15.84	967.12	11.30	980.33	12.50	971.78	9.60	969.18	18.40	977.01	12.40	974.50
06/09/15	NR	NR	NR	NR	NR	NR	9.95	981.68	NR	NR	NR	NR	NR	NR	NR	NR
10/02/15	9.85	968.59	10.10	981.04	15.75	967.21	11.85	979.78	12.30	971.98	9.70	969.08	17.70	977.71	12.75	974.15
11/24/15	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	9.71	969.07	17.90	977.51	NR	NR
04/19/16	6.65	971.79	8.55	982.59	14.57	968.39	10.50	981.13	10.95	973.33	8.18	970.60	16.34	979.07	10.72	976.18
10/10/16	7.72	970.72	9.17	981.97	14.75	968.21	11.00	980.63	11.16	973.12	8.31	970.47	16.44	978.97	10.85	976.05
01/09/17	NR	NR	9.80	981.34	NR	NR	NR	NR	NR	NR	9.07	969.71	NR	NR	12.46	974.44
04/04/17	3.40	975.04	6.27	984.87	13.21	969.75	7.75	983.88	4.75	979.53	3.58	975.20	17.13	978.28	9.32	977.58
10/18/17	7.78	970.66	8.07	983.07	14.49	968.47	9.62	982.01	9.81	974.47	7.78	971.00	18.00	977.41	11.65	975.25
04/12/18	8.85	969.59	8.18	982.96	14.70	968.26	9.76	981.87	11.32	972.96	8.64	970.14	17.97	977.44	11.60	975.30
10/23/18	5.25	973.19	8.55	982.59	14.03	968.93	10.52	981.11	10.07	974.21	6.80	971.98	15.27	980.14	9.40	977.50
04/08/19	7.00	971.44	7.70	983.44	14.15	968.81	9.12	982.51	9.71	974.57	7.22	971.56	17.08	978.33	11.54	975.36
10/04/19	5.93	972.51	8.22	982.92	13.91	969.05	9.11	982.52	8.16	976.12	6.88	971.90	17.83	977.58	11.90	975.00
04/09/20	6.41	972.03	7.87	983.27	13.98	968.98	9.49	982.14	10.63	973.65	7.85	970.93	16.81	978.60	9.90	977.00
10/01/20	10.66	967.78	10.41	980.73	15.69	967.27	11.96	979.67	12.75	971.53	10.71	968.07	18.25	977.16	13.11	973.79
04/01/21	5.92	972.52	7.14	984.00	14.33	968.63	8.78	982.85	10.52	973.76	7.63	971.15	18.33	977.08	9.45	977.45
10/04/21	11.79	966.65	11.31	979.83	16.11	966.85	12.70	978.93	13.10	971.18	11.10	967.68	19.14	976.27	13.73	973.17
04/06/22	6.41	972.03	7.69	983.45	14.13	968.83	8.92	982.71	10.49	973.79	7.13	971.65	17.91	977.50	10.62	976.28
10/14/22	11.61	966.83	12.42	978.72	15.90	967.06	13.99	977.64	13.30	970.98	11.51	967.27	18.91	976.50	14.02	972.88
04/19/23	9.69	968.75	8.70	982.44	14.80	968.16	10.36	981.27	11.78	972.50	8.88	969.90	18.71	976.70	10.59	976.31
10/04/23	12.64	965.80	12.95	978.19	17.83	965.13	14.62	977.01	13.35	970.93	12.30	966.48	19.81	975.60	14.48	972.42
04/17/24	10.24	968.20	8.97	982.17	14.51	968.45	9.49	982.14	11.75	972.53	10.41	968.37	20.36	975.05	12.90	974.00
10/22/24	10.99	967.45	11.60	979.54	16.53	966.43	13.31	978.32	13.02	971.26	10.96	967.82	18.50	976.91	12.60	974.30
04/03/25	9.00	969.44	8.47	982.67	14.69	968.27	9.29	982.34	11.92	972.36	8.53	970.25	18.56	976.85	11.24	975.66
10/09/25	9.83	968.61	10.55	980.59	15.70	967.26	12.22	979.41	12.45	971.83	9.84	968.94	17.51	977.90	12.20	974.70
minimum	3.40	965.80	5.39	978.19	13.21	965.13	7.05	977.01	4.75	970.93	3.58	966.48	15.27	975.05	8.40	972.42
maximum	12.64	975.04	12.95	985.75	17.83	969.75	14.62	984.58	13.35	979.53	12.30	975.20	20.36	980.14	14.48	978.50

Water Elevation Data
Grundy County Sanitary Landfill
38-SDP-1-75C

Well/TOC	MW-14 983.63		MW-15 1012.46		MW-15A 992.32		MW-16 979.99		MW-17 980.24		MW-18 978.32		MW-19 986.66	
Date	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation	Water Depth	Water Elevation
04/24/13	11.73	971.90	NR	NR	NR	NR	13.69	966.30	8.29	971.95	4.45	973.87	6.67	979.99
06/13/13	10.72	972.91	NR	NR	NR	NR	9.12	970.87	7.96	972.28	6.05	972.27	9.55	977.11
10/08/13	16.29	967.34	NR	NR	7.69	984.63	14.85	965.14	12.77	967.47	10.13	968.19	12.06	974.60
12/19/13	17.10	966.53	NR	NR	11.70	980.62	15.78	964.21	13.17	967.07	10.56	967.76	12.15	974.51
04/23/14	15.40	968.23	NR	NR	4.70	987.62	16.00	963.99	12.40	967.84	7.70	970.62	9.40	977.26
10/16/14	16.00	967.63	NR	NR	4.70	987.62	14.60	965.39	12.80	967.44	8.30	970.02	10.70	975.96
01/08/15	NR	NR	NR	NR	4.65	987.67	NR	NR	NR	NR	NR	NR	NR	NR
04/01/15	16.10	967.53	NR	NR	4.30	988.02	14.90	965.09	12.10	968.14	8.20	970.12	10.70	975.96
06/09/15	13.50	970.13	NR	NR	6.34	985.98	NR	NR	NR	NR	7.05	971.27	NR	NR
10/02/15	15.70	967.93	NR	NR	5.80	986.52	14.05	965.94	12.10	968.14	8.20	970.12	10.90	975.76
11/24/15	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
04/19/16	12.80	970.83	13.15	999.31	4.90	987.42	11.15	968.84	10.31	969.93	7.10	971.22	10.38	976.28
10/10/16	13.18	970.45	12.60	999.86	5.65	986.67	11.40	968.59	10.45	969.79	7.15	971.17	10.41	976.25
01/09/17	NR	NR	NR	NR	NR	NR	NR	NR	11.65	968.59	NR	NR	NR	NR
04/04/17	10.67	972.96	NR	NR	3.05	989.27	11.82	968.17	9.05	971.19	3.63	974.69	7.63	979.03
10/18/17	14.00	969.63	NR	NR	3.83	988.49	14.20	965.79	10.93	969.31	6.30	972.02	9.00	977.66
04/12/18	15.12	968.51	15.58	996.88	4.10	988.22	14.42	965.57	11.45	968.79	7.35	970.97	9.74	976.92
10/23/18	11.47	972.16	15.21	997.25	3.38	988.94	9.82	970.17	8.98	971.26	6.08	972.24	10.20	976.46
04/08/19	13.77	969.86	14.80	997.66	3.15	989.17	12.75	967.24	10.52	969.72	6.12	972.20	9.53	977.13
10/04/19	13.25	970.38	15.20	997.26	3.43	988.89	14.34	965.65	11.65	968.59	6.20	972.12	7.33	979.33
04/09/20	13.12	970.51	13.54	998.92	4.00	988.32	11.67	968.32	10.28	969.96	6.93	971.39	9.69	976.97
10/01/20	16.40	967.23	16.81	995.65	6.94	985.38	14.78	965.21	12.97	967.27	9.64	968.68	10.73	975.93
04/01/21	13.41	970.22	13.11	999.35	4.30	988.02	13.45	966.54	10.18	970.06	7.15	971.17	8.95	977.71
10/04/21	17.05	966.58	17.84	994.62	7.72	984.60	15.71	964.28	13.06	967.18	9.85	968.47	11.09	975.57
04/06/22	13.60	970.03	13.72	998.74	3.68	988.64	13.65	966.34	9.96	970.28	6.88	971.44	9.02	977.64
10/14/22	16.90	966.73	17.79	994.67	8.58	983.74	15.27	964.72	13.27	966.97	10.42	967.90	12.38	974.28
04/19/23	15.85	967.78	14.33	998.13	4.85	987.47	14.92	965.07	11.60	968.64	8.01	970.31	10.19	976.47
10/04/23	17.53	966.10	18.30	994.16	10.84	981.48	16.18	963.81	13.36	966.88	11.38	966.94	13.43	973.23
04/17/24	16.61	967.02	14.23	998.23	3.49	988.83	16.91	963.08	13.04	967.20	9.24	969.08	9.40	977.26
10/22/24	16.32	967.31	17.27	995.19	8.40	983.92	14.61	965.38	12.79	967.45	10.17	968.15	12.19	974.47
04/03/25	15.47	968.16	14.60	997.86	3.62	988.70	14.90	965.09	11.77	968.47	7.95	970.37	9.78	976.88
10/09/25	15.35	968.28	15.21	997.25	6.67	985.65	13.62	966.37	12.37	967.87	8.72	969.60	11.32	975.34
minimum	10.67	966.10	12.60	994.16	3.05	980.62	9.12	963.08	7.96	966.88	3.63	966.94	6.67	973.23
maximum	17.53	972.96	18.30	999.86	11.70	989.27	16.91	970.87	13.36	972.28	11.38	974.69	13.43	979.99

Appendix B

Monitoring Activities Information

Appendix B.1 – Summary of All Well Testing Activities

Table B.1 -- Itemized Summary of Hydrologic Monitoring (to date)

<u>WELL</u>	<u>4/13/09</u>	<u>4/24/12</u>	<u>9/19/12</u>	<u>4/24/13</u>	<u>10/8/13</u>
MW-15 (b)	Appendix II	Appendix I	Appendix I	Appendix I	---
MW-15A (b)	---	---	---	---	Appendix I
MW-3	Appendix II	Appendix I	Appendix I	Appendix I	Appendix I
MW-4	Appendix II	Appendix I	Appendix I	Appendix I	Appendix I
MW-5	Appendix II	Appendix I	Appendix I	Appendix II	Appendix I
MW-9	Appendix II	Appendix I	Appendix I	Appendix II	Appendix I ⁽¹⁾
MW-10	Appendix II	Appendix I	Appendix I	Appendix I	Appendix I
MW-11	Appendix II	Appendix I	Appendix I	Appendix I	Appendix I
MW-12	Appendix II	Appendix I	Appendix I	Appendix I	Appendix I
MW-13	Appendix II	Appendix I	Appendix I	Appendix II	Appendix I
MW-14	Appendix II	Appendix I	Appendix I	Appendix II	Appendix I
MW-16	Appendix II	Appendix I	Appendix I	Appendix II	Appendix I ⁽⁵⁾
MW-17	Appendix II	Appendix I	Appendix I	Appendix I	Appendix I
MW-18	Appendix II	Appendix I	Appendix I	Appendix I	Appendix I
MW-19	Appendix II	Appendix I	Appendix I	Appendix II	Appendix I

continued -- Itemized Summary of Hydrologic Monitoring (to date)

<u>WELL</u>	<u>4/24/14</u>	<u>10/16/14</u>	<u>1/8/15</u>	<u>4/1/15</u>	<u>6/9/15</u>
MW-15 (b)	---	---			
MW-15A (b)	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-3	Appendix I	Appendix I		Appendix I	
MW-4	Appendix I	Appendix I		Appendix I	
MW-5	Appendix I	Appendix II		Appendix I ⁽⁴⁾	
MW-9	Appendix I ⁽¹⁾	Appendix II		Appendix I ^(1,3)	Barium
MW-10	Appendix I	Appendix I		Appendix I	
MW-11	Appendix I	Appendix I		Appendix I	
MW-12	Appendix I	Appendix I		Appendix I	
MW-13	Appendix I	Appendix II		Appendix I ⁽³⁾	
MW-14	Appendix I	Appendix II		Appendix I ^(3,4)	Barium+Nickel
MW-16	Appendix I ⁽⁵⁾	Appendix I ⁽⁵⁾		Appendix I ^(3,4)	
MW-17	Appendix I	Appendix I		Appendix I ⁽³⁾	
MW-18	Appendix I	Appendix I		Appendix I	Appendix I
MW-19	Appendix I	Appendix II		Appendix I ^(1,2,3)	
Duplicate	At MW-15A	At MW-16		At MW-12	

continued -- Itemized Summary of Hydrologic Monitoring (to date)

<u>WELL</u>	<u>10/2/15</u>	<u>11/24/15</u>	<u>4/19/16</u>	<u>10/10/16</u>	<u>1/9/17</u>
MW-15 (b)	---	---		Appendix I	
MW-15A (b)	Appendix I		Appendix I	Appendix I	
MW-3	Appendix I		Appendix I	Appendix I	
MW-4	Appendix I		Appendix I	Appendix I	(R) – As+Ba
MW-5	Appendix I ⁽⁴⁾		Appendix I ⁽⁴⁾	Appendix I ⁽⁴⁾	
MW-9	Appendix I ^(1,3)		Appendix I ^(1,3)	Appendix I ^(1,3)	
MW-10	Appendix I		Appendix I	Appendix I	
MW-11	Appendix I	Cobalt	Appendix I	Appendix I	(R) - Ni
MW-12	Appendix I	Nickel	Appendix I	Appendix I	
MW-13	Appendix I ⁽³⁾		Appendix I ⁽³⁾	Appendix I ⁽³⁾	(R) - Cd
MW-14	Appendix I ^(3,4)		Appendix I ^(3,4)	Appendix I ^(3,4)	
MW-16	Appendix I ^(3,4)		Appendix I ^(3,4)	Appendix I ^(3,4)	
MW-17	Appendix I ⁽³⁾		Appendix I ⁽³⁾	Appendix I ⁽³⁾	(R) - Ba
MW-18 (b)	Appendix I		Appendix I	Appendix I	
MW-19	Appendix I ^(1,2,3)		Appendix I ^(1,2,3)	Appendix I ^(1,2,3)	
Duplicate	At MW-15A		At MW-3	At MW-5	

continued -- Itemized Summary of Hydrologic Monitoring (to date)

<u>WELL</u>	<u>4/4/17</u>	<u>10/18/17</u>	<u>4/12/18</u>	<u>10/23/18</u>
MW-15 (b)	---	---		
MW-15A (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-18 (b)	Appendix I	Appendix I	Appendix I	Appendix I
MW-3	Appendix I	Appendix I	Appendix I	Appendix I
MW-4	Appendix II	Appendix I	Appendix II	Appendix I
MW-5	Appendix I ⁽⁴⁾	Appendix I ⁽⁴⁾	Appendix I ⁽⁴⁾	Appendix I ⁽⁴⁾
MW-9	Appendix I ^(1,3)	Appendix I ^(1,3)	Appendix I ^(1,3)	Appendix I ^(1,3)
MW-10	Appendix II	Appendix I ⁽³⁾	Appendix II	Appendix I ^(1,3)
MW-11	Appendix II	Appendix I ⁽³⁾	Appendix II	Appendix I ^(1,3)
MW-12	Appendix I	Appendix I ⁽³⁾	Appendix I	Appendix I
MW-13	Appendix I ⁽³⁾	Appendix I ⁽³⁾	Appendix I ⁽³⁾	Appendix I ⁽³⁾
MW-14	Appendix I ^(3,4)	Appendix I ^(3,4)	Appendix I ^(3,4)	Appendix I ^(3,4)
MW-16	Appendix I ^(3,4)	Appendix I ^(3,4)	---	---
MW-17	Appendix I ⁽³⁾	Appendix I ⁽³⁾	---	---
MW-19	Appendix I ^(1,2,3)	Appendix I ^(1,3)	---	---
Duplicate	At MW-3	At MW-15A	At MW-4	At MW-5

continued -- Itemized Summary of Hydrologic Monitoring (to date)

WELL	4/8/19	10/4/19	4/9/2020	10/1/2020	4/1/2021	10/4/2021
MW-15A (b)	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-18 (b)	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-3	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-4	Appendix I ⁽⁵⁾	Appendix I ⁽⁵⁾	Appendix I ⁽⁵⁾	Appendix I ⁽⁵⁾	Appendix I	Appendix I
MW-5	Appendix I ⁽⁴⁾	Appendix II	Appendix I ⁽⁵⁾	Appendix I ⁽⁵⁾	Appendix I	Appendix I
MW-9	Appendix I ^(1,3)	Appendix II	Appendix I ⁽⁵⁾	Appendix I ⁽⁵⁾	Appendix I	Appendix I
MW-10	Appendix I ⁽³⁾	Appendix I ⁽³⁾	Appendix I ⁽⁵⁾	Appendix I ⁽⁵⁾	Appendix I	Appendix I
MW-11	Appendix I ⁽³⁾	Appendix I ⁽³⁾	Appendix I ⁽⁵⁾	Appendix I ⁽⁵⁾	Appendix I	Appendix I
MW-12	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
MW-13	Appendix I ⁽³⁾	Appendix II	Appendix I ⁽⁵⁾	Appendix I ⁽⁵⁾	Appendix I	Appendix I
MW-14	Appendix I ^(3,4)	Appendix II	Appendix I ⁽⁵⁾	Appendix I ⁽⁵⁾	Appendix I	Appendix I
Duplicate	At MW-5	At MW-18	At MW-3	At MW-10	At MW-5	At MW-4

continued -- Itemized Summary of Hydrologic Monitoring (to date)

WELL	4/6/2022	10/4/2023	4/17/2024	4/3/2025	10/9/2025
MW-15A (b)	Appendix I	Appendix I	Appendix I	(1)	Appendix I
MW-18 (b)	Appendix I	---			
MW-3	Appendix I	---			
MW-4	Appendix I	---			
MW-5	Appendix I	---			
MW-9	Appendix I	Appendix I	Appendix II	(1)	Appendix I
MW-10	Appendix I	---			
MW-11	Appendix I	Appendix II	Appendix I ⁽¹⁾	(1)	Appendix I
MW-12	Appendix I	---			
MW-13	Appendix I	Appendix I	Appendix II	(1)	Appendix I
MW-14	Appendix I	Appendix I	Appendix II	(1)	Appendix I
Duplicate	At MW-3	At MW-15A	At MW-14		At MW-13

(b) background well

(R) Ni = Resample Nickel

(1) = bis(2ethylhexyl) phthalate

(2) = sulfide

(3) = phorate

(4) = thionazin (0,0-diethyl 0-2-pyrazinyl phosphorothioate)

(5) = Appendix I plus no detected Appendix II compounds performed in accordance with 113.10(6)d.2.

Appendix B.2 - Field Sampling Forms

Grundy County Sanitary Landfill
PERMIT # 38-SDP-1-75C

4/3/2025

Sampled by: Glenn Hunter

Weather conditions: Overcast, breezy, 37 degrees

IDNR Form 542-1322

Monitoring Well: MW 9 (dg)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	991.63
Well Depth	22.78
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	991.63
Well Depth	22.78
Top Screen	978.00
Bottom Screen	968.00
Bottom Well	968.00
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	17.50
Top sample	974.13
Bottom sample	970.13
Turbidity(NTU)	

red

Date	Time	Water Level	Water Elevation	Notes
4/3/2025	9:28	9.29	982.34	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10			0.00
Appendix I	Metals	150			0.00
Appendix I	VOC	240			0.00
Full Appendix II	10 more containers	5620			
Supplemental	BEHP	1 - qt		946	
Supplemental	Phorate	1 - qt			
Supplemental					
Total			0	946	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	991.63	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	22.78	Before purging	4/3/2025	9:28	9.29	982.34		0.0	
		After purging				991.63			
		Top of Screen after construction				978.00			
						4.34	feet above (+) or below (-) top screen		
		Bottom of Well after construction				968.00			
		Bottom of Well	4/3/2025		23.00	968.63			
						0.63	feet sedimentation		
		Before Sampling				991.63			
		Recovery				991.63			
		Recovery				991.63			
		Recovery				991.63			
		Recovery				991.63			

IDNR Form 542-1322

Monitoring Well: MW 11 (dg)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	978.78
Well Depth	20.55
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	978.78
Well Depth	20.55
Top Screen	965.40
Bottom Screen	955.40
Bottom Well	955.40
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	15.00
Top sample	963.78
Bottom sample	959.78
Turbidity(NTU)	

Date	Time	Water Level	Water Elevation	Notes
4/3/2025	9:07	8.53	970.25	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10			0.00
Appendix I	Metals	150			0.00
Appendix I	VOC	240			0.00
Full Appendix II	10 more containers	5620			
TSS	TSS	1 - qt			
Supplemental	BEHP	1 - qt		946	
Supplemental	Phorate				
Total			0	946	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	978.78	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	20.55	Before purging	4/3/2025	9:07	8.53	970.25		0.0	
		After purging				978.78			
		Top of Screen after construction				965.40			
						4.85	feet above (+) or below (-) top screen		
		Bottom of Well after construction				955.40			
		Bottom of Well	4/3/2025		20.55	958.23			
						2.83	feet sedimentation		
		Before Sampling				978.78			
		Recovery				978.78	no drawdown		
		Recovery				978.78			
		Recovery				978.78			
		Recovery				978.78			

IDNR Form 542-1322

Monitoring Well: MW 13 (dg)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	986.9
Well Depth	19.00
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	986.9
Well Depth	19.95
Top Screen	977.00
Bottom Screen	967.00
Bottom Well	967.00
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.50
Top sample	972.40
Bottom sample	968.40
Turbidity(NTU)	

Date	Time	Water Level	Water Elevation	Notes
4/3/2025	8:57	11.24	975.66	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10			0.00
Appendix I	Metals	150			0.00
Appendix I	VOC	240			0.00
Full Appendix II	10 more containers	5620			
TSS	TSS	1 - qt			
Supplemental	BEHP	1 - qt		946	
Supplemental	Phorate				
Total			0	946	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	986.9	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	19.00	Before purging	4/3/2025	8:57	11.24	975.66		0.0	
		After purging				986.90			
		Top of Screen after construction				977.00			
						-1.34	feet above (+) or below (-) top screen		
		Bottom of Well after construction				967.00			
		Bottom of Well	4/3/2025		19.95	966.95			
						-0.05	feet sedimentation		
		Before Sampling				986.90			
		Recovery				986.90			
		Recovery				986.90			
		Recovery				986.90			
		Recovery				986.90			

IDNR Form 542-1322

Monitoring Well: MW 14 (dg)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	983.62
Well Depth	20.00
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	983.63
Well Depth	20.25
Top Screen	973.50
Bottom Screen	963.50
Bottom Well	963.50
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	16.50
Top sample	967.13
Bottom sample	963.13
Turbidity(NTU)	

Date	Time	Water Level	Water Elevation	Notes
4/3/2025	8:45	15.47	968.16	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10			0.00
Appendix I	Metals	150			0.00
Appendix I	VOC	240			0.00
Full Appendix II	10 more containers	5620			
TSS	TSS	1 - qt			
Supplemental	BEPH	1 - qt		946	
Supplemental					
Total			0	946	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	983.63	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	20.00	Before purging	4/3/2025	8:45	15.47	968.16		0.0	
		After purging				983.63			
		Top of Screen after construction				973.50			
						-5.34	feet above (+) or below (-) top screen		
		Bottom of Well after construction				963.50			
		Bottom of Well	4/3/2025		20.25	963.38			
						-0.12	feet sedimentation		
		Before Sampling				983.63			
		Recovery				983.63			
		Recovery				983.63			
		Recovery				983.63			
		Recovery				983.63			

IDNR Form 542-1322

Monitoring Well: MW 15A (ug)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	992.32
Well Depth	18.00
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	992.32
Well Depth	15.75
Top Screen	985.13
Bottom Screen	975.13
Bottom Well	975.13
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	10.00
Top sample	982.32
Bottom sample	978.32
Turbidity(NTU)	

Date	Time	Water Level	Water Elevation	Notes
4/3/2025	8:25	3.62	988.7	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		0.00
Appendix I	Metals	150	150		0.00
Appendix I	VOC	240	240		0.00
Full Appendix II	10 more containers	5620			
TSS	TSS	1 - qt			
Supplemental	BEHP	1 - qt		946	
Supplemental					
Total			400	946	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	992.32	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	18.00	Before purging	4/3/2025	8:25	3.62	988.70	4	1.7	no
		After purging				992.32			
		Top of Screen after construction				985.13			
						3.57	feet above (+) or below (-) top screen		
		Bottom of Well after construction				975.13			
		Bottom of Well	4/3/2025		15.75	976.57			
						1.44	feet sedimentation		
		Before Sampling				992.32			
		Recovery				992.32			
		Recovery				992.32			
		Recovery				992.32			
		Recovery				992.32			

Grundy County Sanitary Landfill
PERMIT # 38-SDP-1-75C

10/9/2025

Sampled by: Glenn Hunter

Weather conditions: Sunny, light breeze, 52-68 degrees

IDNR Form 542-1322

Monitoring Well: MW 9 (dg)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	991.63
Well Depth	22.78
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	991.63
Well Depth	22.78
Top Screen	978.00
Bottom Screen	968.00
Bottom Well	968.00
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	17.00
Top sample	974.63
Bottom sample	970.63
Turbidity(NTU)	4.53

Date	Time	Water Level	Water Elevation	Notes
10/9/2025	11:20	12.22	979.41	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		4.53
Appendix I	Metals	150	150		4.53
Appendix I	VOC	240	240		4.53
Full Appendix II	10 more containers	5620			
TSS	BEHP	1 - qt			
Supplemental	Phorate	1 - qt			
Supplemental					
Total			400	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	991.63	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	22.78	Before purging	10/9/2025	11:20	12.22	979.41		0.0	
		After purging				991.63			
		Top of Screen after construction				978.00			
						1.41	feet above (+) or below (-) top screen		
		Bottom of Well after construction				968.00			
		Bottom of Well	10/9/2025		23.00	968.63			
						0.63	feet sedimentation		
		Before Sampling				991.63			
		Recovery				991.63			
		Recovery				991.63			
		Recovery				991.63			
		Recovery				991.63			

IDNR Form 542-1322

Monitoring Well: MW 11 (dg)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	978.78
Well Depth	20.55
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	978.78
Well Depth	20.55
Top Screen	965.40
Bottom Screen	955.40
Bottom Well	955.40
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.00
Top sample	964.78
Bottom sample	960.78
Turbidity(NTU)	2.02

Date	Time	Water Level	Water Elevation	Notes
10/9/2025	10:55	9.84	968.94	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		2.02
Appendix I	Metals	150	150		2.02
Appendix I	VOC	240	240		2.02
Full Appendix II	10 more containers	5620	5620		
TSS	TSS	1 - qt			
Supplemental	BEHP	1 - qt			
Supplemental	Phorate				
Total			6020	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	978.78	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	20.55	Before purging	10/9/2025	10:55	9.84	968.94		0.0	
		After purging				978.78			
		Top of Screen after construction				965.40			
						3.54	feet above (+) or below (-) top screen		
		Bottom of Well after construction				955.40			
		Bottom of Well	10/9/2025		20.55	958.23			
						2.83	feet sedimentation		
		Before Sampling				978.78			
		Recovery				978.78	no drawdown		
		Recovery				978.78			
		Recovery				978.78			
		Recovery				978.78			

IDNR Form 542-1322

Monitoring Well: MW 13 (dg)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	986.9
Well Depth	19.00
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	986.9
Well Depth	19.95
Top Screen	977.00
Bottom Screen	967.00
Bottom Well	967.00
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.00
Top sample	972.90
Bottom sample	968.90
Turbidity(NTU)	6.53

Date	Time	Water Level	Water Elevation	Notes
10/9/2025	10:40	12.2	974.7	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		6.53
Appendix I	Metals	150	150		6.53
Appendix I	VOC	240	240		6.53
Full Appendix II	10 more containers	5620			
TSS	TSS	1 - qt			
Supplemental	BEHP	1 - qt			
Supplemental	Phorate				
Total			400	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	986.9	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	19.00	Before purging	10/9/2025	10:40	12.2	974.70		0.0	
		After purging				986.90			
		Top of Screen after construction				977.00			
						-2.30	feet above (+) or below (-) top screen		
		Bottom of Well after construction				967.00			
		Bottom of Well	10/9/2025		19.95	966.95			
						-0.05	feet sedimentation		
		Before Sampling				986.90			
		Recovery				986.90			
		Recovery				986.90			
		Recovery				986.90			
		Recovery				986.90			

IDNR Form 542-1322

Monitoring Well: MW 14 (dg)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	983.62
Well Depth	20.00
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	983.63
Well Depth	20.25
Top Screen	973.50
Bottom Screen	963.50
Bottom Well	963.50
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	15.00
Top sample	968.63
Bottom sample	964.63
Turbidity(NTU)	38.10

Date	Time	Water Level	Water Elevation	Notes
10/9/2025	10:22	15.35	968.28	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		38.10
Appendix I	Metals	150	150		38.10
Appendix I	VOC	240	240		38.10
Full Appendix II	10 more containers	5620			
TSS	TSS	1 - qt			
Supplemental	Phorate/Thionazin	1 - qt			
Supplemental					
Total			400	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	983.63	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	20.00	Before purging	10/9/2025	10:22	15.35	968.28		0.0	
		After purging				983.63			
		Top of Screen after construction				973.50			
						-5.22	feet above (+) or below (-) top screen		
		Bottom of Well after construction				963.50			
		Bottom of Well	10/9/2025		20.25	963.38			
						-0.12	feet sedimentation		
		Before Sampling				983.63			
		Recovery				983.63			
		Recovery				983.63			
		Recovery				983.63			
		Recovery				983.63			

IDNR Form 542-1322

Monitoring Well: MW 15A (ug)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	992.32
Well Depth	18.00
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	992.32
Well Depth	15.75
Top Screen	985.13
Bottom Screen	975.13
Bottom Well	975.13
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	10.00
Top sample	982.32
Bottom sample	978.32
Turbidity(NTU)	5.52

Date	Time	Water Level	Water Elevation	Notes
10/9/2025	9:47	6.67	985.65	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		5.52
Appendix I	Metals	150	150		5.52
Appendix I	VOC	240	240		5.52
Full Appendix II	10 more containers	5620			
TSS	TSS	1 - qt			
Supplemental	BEHP	1 - qt			
Supplemental					
Total			400	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	992.32	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	18.00	Before purging	10/9/2025	9:47	6.67	985.65		0.0	
		After purging				992.32			
		Top of Screen after construction				985.13			
						0.52	feet above (+) or below (-) top screen		
		Bottom of Well after construction				975.13			
		Bottom of Well	10/9/2025		15.75	976.57			
						1.44	feet sedimentation		
		Before Sampling				992.32			
		Recovery				992.32			
		Recovery				992.32			
		Recovery				992.32			
		Recovery				992.32			

Appendix C

Water Quality Summary Tables

Table 1

Analytical Data Summary for MW-11

Constituents	Units	4/24/2014	10/15/2014	4/1/2015	10/2/2015	11/24/2015	4/19/2016	10/10/2016	1/9/2017
(3,4)-methylphenol	ug/L								
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1		<1	<1	
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1		<1	<1	
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1		<1	<1	
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1		<1	<1	
1,1-dichloroethane	ug/L	<1	<1	<1	<1		<1	<1	
1,1-dichloroethene	ug/L	<1	<1	<1	<1		<1	<1	
1,1-dichloropropene	ug/L								
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1		<1	<1	
1,2,4,5-tetrachlorobenzene	ug/L								
1,2,4-trichlorobenzene	ug/L								
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1		<1	<1	
1,2-dibromoethane	ug/L	<1	<1	<1	<1		<1	<1	
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1		<1	<1	
1,2-dichloroethane	ug/L	<1	<1	<1	<1		<1	<1	
1,2-dichloropropane	ug/L	<1	<1	<1	<1		<1	<1	
1,2-dinitrobenzene	ug/L								
1,3,5-trinitrobenzene	ug/L								
1,3-dichlorobenzene	ug/L								
1,3-dichloropropane	ug/L								
1,3-dinitrobenzene	ug/L								
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1		<1	<1	
1,4-naphthoquinone	ug/L								
1,4-phenylenediamine	ug/L								
1-naphthylamine	ug/L								
2,2-dichloropropane	ug/L								
2,3,4,6-tetrachlorophenol	ug/L								
2,4,5-t	ug/L								
2,4,5-tp (silvex)	ug/L								
2,4,5-trichlorophenol	ug/L								
2,4,6-trichlorophenol	ug/L								
2,4-d	ug/L								
2,4-dichlorophenol	ug/L								
2,4-dimethylphenol	ug/L								
2,4-dinitrophenol	ug/L								
2,4-dinitrotoluene	ug/L								
2,6-dichlorophenol	ug/L								
2,6-dinitrotoluene	ug/L								
2-acetylaminofluorene	ug/L								
2-butanone	ug/L	<5	<5	<5	<5		<5	<5	
2-chloronaphthalene	ug/L								
2-chlorophenol	ug/L								
2-hexanone	ug/L	<5	<5	<5	<5		<5	<5	
2-methylnaphthalene	ug/L								
2-methylphenol	ug/L								
2-naphthylamine	ug/L								
2-nitroaniline	ug/L								
2-nitrophenol	ug/L								
3,3'-dichlorobenzidine	ug/L								
3,3'-dimethylbenzidine	ug/L								
3-methylcholanthrene	ug/L								
3-nitroaniline	ug/L								
4,4'-ddd	ug/L								
4,4'-dde	ug/L								
4,4'-ddt	ug/L								
4,6-dinitro-2-methylphenol	ug/L								
4-aminobiphenyl	ug/L								
4-bromophenyl phenyl ether	ug/L								
4-chloro-3-methylphenol	ug/L								
4-chloroaniline	ug/L								
4-chlorophenyl phenyl ether	ug/L								
4-methyl-2-pentanone	ug/L	<5	<5	<5	<5		<5	<5	
4-nitroaniline	ug/L								
4-nitrophenol	ug/L								
5-nitro-o-toluidine	ug/L								
7,12-dimethylbenz(a)anthracene	ug/L								
Acenaphthene	ug/L								
Acenaphthylene	ug/L								
Acetone	ug/L	<10	<10	<10	<10		<10	<10	
Acetonitrile	ug/L								
Acetophenone	ug/L								
Acrolein	ug/L								
Acrylonitrile	ug/L	<5	<5	<5	<5		<5	<5	
Aldrin	ug/L								
Allyl chloride	ug/L								
Alpha-bhc	ug/L								
Anthracene	ug/L								

* - The displayed value is the arithmetic mean of multiple database matches.

Table 1

Analytical Data Summary for MW-11

Constituents	4/4/2017	10/18/2017	1/12/2018	4/12/2018	10/23/2018	4/8/2019	10/4/2019	4/9/2020	10/1/2020
(3,4)-methylphenol	<8			<8					
1,1,1,2-tetrachloroethane	<1	<1		<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1		<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1		<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1		<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1		<1	<1	<1	<1	<1	<1
1,1-dichloroethene	<1	<1		<1	<1	<1	<1	<1	<1
1,1-dichloropropene	<1			<1					
1,2,3-trichloropropane	<1	<1		<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	<8			<8					
1,2,4-trichlorobenzene	<1			<1					
1,2-dibromo-3-chloropropane	<1	<1		<1	<1	<1	<1	<5	<5
1,2-dibromoethane	<1	<1		<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1		<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1		<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1		<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene	<8			<8					
1,3,5-trinitrobenzene	<8			<8					
1,3-dichlorobenzene	<1			<1					
1,3-dichloropropane	<1			<1					
1,3-dinitrobenzene	<8			<8					
1,4-dichlorobenzene	<1	<1		<1	<1	<1	<1	<1	<1
1,4-naphthoquinone	<8			<8					
1,4-phenylenediamine	<8			<8					
1-naphthylamine	<8			<8					
2,2-dichloropropane	<1			<1					
2,3,4,6-tetrachlorophenol	<8			<8					
2,4,5-t	<5			<5					
2,4,5-tp (silvex)	<5			<5					
2,4,5-trichlorophenol	<8			<8					
2,4,6-trichlorophenol	<8			<8					
2,4-d	<2			<2					
2,4-dichlorophenol	<8			<8					
2,4-dimethylphenol	<8			<8					
2,4-dinitrophenol	<8			<8					
2,4-dinitrotoluene	<8			<8					
2,6-dichlorophenol	<8			<8					
2,6-dinitrotoluene	<8			<8					
2-acetylaminofluorene	<8			<8					
2-butanone	<5	<5		<5	<5	<5	<5	<5	<5
2-chloronaphthalene	<8			<8					
2-chlorophenol	<8			<8					
2-hexanone	<5	<5		<5	<5	<5	<5	<5	<5
2-methylnaphthalene	<8			<8					
2-methylphenol	<8			<8					
2-naphthylamine	<8			<8					
2-nitroaniline	<8			<8					
2-nitrophenol	<8			<8					
3,3'-dichlorobenzidine	<8			<8					
3,3'-dimethylbenzidine	<8			<8					
3-methylcholanthrene	<8			<8					
3-nitroaniline	<8			<8					
4,4'-ddd	<.05			<.05					
4,4'-dde	<.05			<.05					
4,4'-ddt	<.05			<.05					
4,6-dinitro-2-methylphenol	<8			<8					
4-aminobiphenyl	<8			<8					
4-bromophenyl phenyl ether	<8			<8					
4-chloro-3-methylphenol	<8			<8					
4-chloroaniline	<8			<8					
4-chlorophenyl phenyl ether	<8			<8					
4-methyl-2-pentanone	<5	<5		<5	<5	<5	<5	<5	<5
4-nitroaniline	<8			<8					
4-nitrophenol	<8			<8					
5-nitro-o-toluidine	<8			<8					
7,12-dimethylbenz(a)anthracene	<8			<8					
Acenaphthene	<8			<8					
Acenaphthylene	<8			<8					
Acetone	<10	<10		<10	<10	<10	<10	<10	<10
Acetonitrile	<10			<10					
Acetophenone	<8			<8					
Acrolein	<10			<10					
Acrylonitrile	<5	<5		<5	<5	<5	<5	<5	<5
Aldrin	<.05			<.05					
Allyl chloride	<1			<1					
Alpha-bhc	<.05			<.05					
Anthracene	<8			<8					

* - The displayed value is the arithmetic mean of multiple database matches.

Table 1

Analytical Data Summary for MW-11

Constituents	4/1/2021	10/4/2021	4/6/2022	10/4/2023	4/17/2024	4/3/2025	10/9/2025
(3,4)-methylphenol				<8			
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1		<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1		<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1		<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1		<1
1,1-dichloroethane	<1	<1	<1	<1	<1		<1
1,1-dichloroethene	<1	<1	<1	<1	<1		<1
1,1-dichloropropene				<1			
1,2,3-trichloropropane	<1	<1	<1	<1	<1		<1
1,2,4,5-tetrachlorobenzene				<8			
1,2,4-trichlorobenzene				<1			
1,2-dibromo-3-chloropropane	<5	<5	<5	<1	<5		<5
1,2-dibromoethane	<1	<1	<1	<1	<1		<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1		<1
1,2-dichloroethane	<1	<1	<1	<1	<1		<1
1,2-dichloropropane	<1	<1	<1	<1	<1		<1
1,2-dinitrobenzene				<8			
1,3,5-trinitrobenzene				<8			
1,3-dichlorobenzene				<1			
1,3-dichloropropane				<1			
1,3-dinitrobenzene				<8			
1,4-dichlorobenzene	<1	<1	<1	<1	<1		<1
1,4-naphthoquinone				<8			
1,4-phenylenediamine				<8			
1-naphthylamine				<8			
2,2-dichloropropane				<1			
2,3,4,6-tetrachlorophenol				<8			
2,4,5-t				<5			
2,4,5-tp (silvex)				<5			
2,4,5-trichlorophenol				<8			
2,4,6-trichlorophenol				<8			
2,4-d				<2			
2,4-dichlorophenol				<8			
2,4-dimethylphenol				<8			
2,4-dinitrophenol				<8			
2,4-dinitrotoluene				<8			
2,6-dichlorophenol				<8			
2,6-dinitrotoluene				<8			
2-acetylaminofluorene				<8			
2-butanone	<5	<5	<10	<5	<10		<10
2-chloronaphthalene				<8			
2-chlorophenol				<8			
2-hexanone	<5	<5	<5	<5	<5		<5
2-methylnaphthalene				<8			
2-methylphenol				<8			
2-naphthylamine				<8			
2-nitroaniline				<8			
2-nitrophenol				<8			
3,3'-dichlorobenzidine				<8			
3,3'-dimethylbenzidine				<8			
3-methylcholanthrene				<8			
3-nitroaniline				<8			
4,4'-ddd				<.05			
4,4'-dde				<.05			
4,4'-ddt				<.05			
4,6-dinitro-2-methylphenol				<8			
4-aminobiphenyl				<8			
4-bromophenyl phenyl ether				<8			
4-chloro-3-methylphenol				<8			
4-chloroaniline				<8			
4-chlorophenyl phenyl ether				<8			
4-methyl-2-pentanone	<5	<5	<5	<5	<5		<5
4-nitroaniline				<8			
4-nitrophenol				<8			
5-nitro-o-toluidine				<8			
7,12-dimethylbenz(a)anthracene				<8			
Acenaphthene				<8			
Acenaphthylene				<8			
Acetone	<10	<10	<10	<10	<10		<10
Acetonitrile				<10			
Acetophenone				<8			
Acrolein				<10			
Acrylonitrile	<5	<5	<5	<5	<5		<5
Aldrin				<.05			
Allyl chloride				<1			
Alpha-bhc				<.05			
Anthracene				<8			

* - The displayed value is the arithmetic mean of multiple database matches.

Table 1

Analytical Data Summary for MW-11

Constituents	Units	4/24/2014	10/15/2014	4/1/2015	10/2/2015	11/24/2015	4/19/2016	10/10/2016	1/9/2017
Antimony, total	ug/L	<2	<2	<2	<2		<2	<2	
Arochlor 1016	ug/L								
Arochlor 1221	ug/L								
Arochlor 1232	ug/L								
Arochlor 1242	ug/L								
Arochlor 1248	ug/L								
Arochlor 1254	ug/L								
Arochlor 1260	ug/L								
Arsenic, total	ug/L	<4	<4	<4	<4		<4	<4	
Azobenzene	ug/L								
Barium, total	ug/L	155	204	224	472		154	152	
Benzene	ug/L	<1	<1	<1	<1		<1	<1	
Benzo(a)anthracene	ug/L								
Benzo(a)pyrene	ug/L								
Benzo(b)fluoranthene	ug/L								
Benzo(g,h,i)perylene	ug/L								
Benzo(k)fluoranthene	ug/L								
Benzyl alcohol	ug/L								
Beryllium, total	ug/L	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0	
Beta-bhc	ug/L								
Bis (2-chloroethoxy) methane	ug/L								
Bis(2-chloroethyl) ether	ug/L								
Bis(2-chloroisopropyl) ether	ug/L								
Bis(2-ethylhexyl) phthalate	ug/L								
Bromochloromethane	ug/L	<1	<1	<1	<1		<1	<1	
Bromodichloromethane	ug/L	<1	<1	<1	<1		<1	<1	
Bromoform	ug/L	<1	<1	<1	<1		<1	<1	
Bromomethane	ug/L	<1	<1	<1	<1		<1	<1	
Butyl benzyl phthalate	ug/L								
Cadmium, total	ug/L	1.4	1.5	<.8	1.9		1.2	<.8	
Carbon disulfide	ug/L	<1	<1	<1	<1		<1	<1	
Carbon tetrachloride	ug/L	<1	<1	<1	<1		<1	<1	
Chlordane	ug/L								
Chlorobenzene	ug/L	<1.0	<1.0	<1.0	<1.0		<1.0	<1.0	
Chlorobenzilate	ug/L								
Chloroethane	ug/L	<1	<1	<1	<1		<1	<1	
Chloroform	ug/L	<1	<1	<1	<1		<1	<1	
Chloromethane	ug/L	<1	<1	<1	<1		<1	<1	
Chloroprene	ug/L								
Chromium, total	ug/L	<8	<8	<8	<8		<8	<8	
Chrysene	ug/L								
Cis-1,2-dichloroethene	ug/L	<1	<1	<1	<1		<1	<1	
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1		<1	<1	
Cobalt, total	ug/L	<4.0	7.5	2.7	12.8	3.4	<.8	<.8	
Copper, total	ug/L	<4.0	<4.0	<4.0	7.5		<4.0	<4.0	
Cyanide, total	mg/L								
Delta-bhc	ug/L								
Diallate	ug/L								
Dibenzo(a,h)anthracene	ug/L								
Dibenzofuran	ug/L								
Dibromochloromethane	ug/L	<1	<1	<1	<1		<1	<1	
Dibromomethane	ug/L	<1	<1	<1	<1		<1	<1	
Dichlorodifluoromethane	ug/L								
Dieldrin	ug/L								
Diethyl phthalate	ug/L								
Dimethoate	ug/L								
Dimethylphthalate	ug/L								
Di-n-butyl phthalate	ug/L								
Di-n-octyl phthalate	ug/L								
Dinoseb	ug/L								
Diphenylamine	ug/L								
Disulfoton	ug/L								
Endosulfan i	ug/L								
Endosulfan ii	ug/L								
Endosulfan sulfate	ug/L								
Endrin	ug/L								
Endrin aldehyde	ug/L								
Ethyl methacrylate	ug/L								
Ethyl methanesulfonate	ug/L								
Ethylbenzene	ug/L	<1	<1	<1	<1		<1	<1	
Famphur	ug/L								
Fluoranthene	ug/L								
Fluorene	ug/L								
Gamma-bhc (lindane)	ug/L								
Heptachlor	ug/L								
Heptachlor epoxide	ug/L								
Hexachlorobenzene	ug/L								

* - The displayed value is the arithmetic mean of multiple database matches.

Table 1

Analytical Data Summary for MW-11

Constituents	4/4/2017	10/18/2017	1/12/2018	4/12/2018	10/23/2018	4/8/2019	10/4/2019	4/9/2020	10/1/2020
Antimony, total	<2	<2		<2	<2	<2	<2	<2	<2
Arochlor 1016	<.1			<.1					
Arochlor 1221	<.2			<.2					
Arochlor 1232	<.2			<.2					
Arochlor 1242	<.2			<.2					
Arochlor 1248	<.2			<.2					
Arochlor 1254	<.1			<.1					
Arochlor 1260	<.1			<.1					
Arsenic, total	<4	<4		<4	<4	<4	<4	<4	<4
Azobenzene	<8			<8					
Barium, total	282	236		162	118	444	279	227	293
Benzene	<1	<1		<1	<1	<1	<1	<1	<1
Benzo(a)anthracene	<8			<8					
Benzo(a)pyrene	<8			<8					
Benzo(b)fluoranthene	<8			<8					
Benzo(g,h,i)perylene	<8			<8					
Benzo(k)fluoranthene	<8			<8					
Benzyl alcohol	<8			<8					
Beryllium, total	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Beta-bhc	<.05			<.05					
Bis (2-chloroethoxy) methane	<8			<8					
Bis(2-chloroethyl) ether	<8			<8					
Bis(2-chloroisopropyl) ether	<8			<8					
Bis(2-ethylhexyl) phthalate	<8			23	<6				
Bromochloromethane	<1	<1		<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1		<1	<1	<1	<1	<1	<1
Bromoform	<1	<1		<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1		<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate	<8			<8					
Cadmium, total	<.8	<.8		<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1		<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1		<1	<1	<1	<1	<1	<1
Chlordane	<.1			<.1					
Chlorobenzene	<1.0	2.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzilate	<8			<8					
Chloroethane	<1	<1		<1	<1	<1	<1	<1	<1
Chloroform	<1	<1		<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1		<1	<1	<1	<1	<1	<1
Chloroprene	<1			<1					
Chromium, total	<8	<8		<8	<8	<8	<8	<8	<8
Chrysene	<8			<8					
Cis-1,2-dichloroethene	<1	<1		<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1		<1	<1	<1	<1	<1	<1
Cobalt, total	1.8	3.5		<8	<8	28.7	16.7	10.5	20.6
Copper, total	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide, total	<.005			<.005					
Delta-bhc	<.05			<.05					
Diallate	<8			<8					
Dibenzo(a,h)anthracene	<8			<8					
Dibenzofuran	<8			<8					
Dibromochloromethane	<1	<1		<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1		<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	<1			<1					
Dieldrin	<.05			<.05					
Diethyl phthalate	<8			<8					
Dimethoate	<.4			<.4					
Dimethylphthalate	<8			<8					
Di-n-butyl phthalate	<8			<8					
Di-n-octyl phthalate	<8			<8					
Dinoseb	<.5			<.5					
Diphenylamine	<8			<8					
Disulfoton	<.4			<.4					
Endosulfan i	<.05			<.05					
Endosulfan ii	<.05			<.05					
Endosulfan sulfate	<.05			<.05					
Endrin	<.05			<.05					
Endrin aldehyde	<.05			<.05					
Ethyl methacrylate	<10			<10					
Ethyl methanesulfonate	<8			<8					
Ethylbenzene	<1	<1		<1	<1	<1	<1	<1	<1
Famphur	<.4			<.4					
Fluoranthene	<8			<8					
Fluorene	<8			<8					
Gamma-bhc (lindane)	<.05			<.05					
Heptachlor	<.05			<.05					
Heptachlor epoxide	<.05			<.05					
Hexachlorobenzene	<.05			<.05					

* - The displayed value is the arithmetic mean of multiple database matches.

Table 1

Analytical Data Summary for MW-11

Constituents	4/1/2021	10/4/2021	4/6/2022	10/4/2023	4/17/2024	4/3/2025	10/9/2025
Antimony, total	<2	<2	<2	<2	<2		1
Arochlor 1016				<2			
Arochlor 1221				<2			
Arochlor 1232				<2			
Arochlor 1242				<2			
Arochlor 1248				<2			
Arochlor 1254				<2			
Arochlor 1260				<2			
Arsenic, total	<4	<4	<4	<4	<4		<2
Azobenzene				<8			
Barium, total	203	270	342	243	236		192
Benzene	<1	<1	<1	<1	<1		<1
Benzo(a)anthracene				<8			
Benzo(a)pyrene				<8			
Benzo(b)fluoranthene				<8			
Benzo(g,h,i)perylene				<8			
Benzo(k)fluoranthene				<8			
Benzyl alcohol				<8			
Beryllium, total	<4.0	<4.0	<4.0	<4.0	<4.0		<.5
Beta-bhc				<.05			
Bis (2-chloroethoxy) methane				<8			
Bis(2-chloroethyl) ether				<8			
Bis(2-chloroisopropyl) ether				<8			
Bis(2-ethylhexyl) phthalate				9	<6	<6	
Bromochloromethane	<1	<1	<1	<1	<1		<1
Bromodichloromethane	<1	<1	<1	<1	<1		<1
Bromoform	<1	<1	<1	<1	<1		<1
Bromomethane	<1	<1	<1	<1	<1		<1
Butyl benzyl phthalate				<8			
Cadmium, total	.9	<.8	5.8	<.8	<.8		.6
Carbon disulfide	<1	<1	<1	<1	<1		<1
Carbon tetrachloride	<1	<1	<1	<1	<1		<1
Chlordane				<1			
Chlorobenzene	<1.0	<1.0	<1.0	<1.0	<1.0		<1.0
Chlorobenzilate				<8			
Chloroethane	<1	<1	<1	<1	<1		<1
Chloroform	<1	<1	<1	<1	<1		<1
Chloromethane	<1	<1	<1	<1	<1		<1
Chloroprene				<1			
Chromium, total	<8	<8	<8	<8	<8		1
Chrysene				<8			
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1		<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1		<1
Cobalt, total	9.2	14.8	1.7	8.3	3.9		5.0
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0		<5.0
Cyanide, total				<.005			
Delta-bhc				<.05			
Diallate				<8			
Dibenzo(a,h)anthracene				<8			
Dibenzofuran				<8			
Dibromochloromethane	<1	<1	<1	<1	<1		<1
Dibromomethane	<1	<1	<1	<1	<1		<1
Dichlorodifluoromethane				<1			
Dieldrin				<.05			
Diethyl phthalate				<8			
Dimethoate				<.4			
Dimethylphthalate				<8			
Di-n-butyl phthalate				<8			
Di-n-octyl phthalate				<8			
Dinoseb				<.5			
Diphenylamine				<8			
Disulfoton				<.4			
Endosulfan i				<.05			
Endosulfan ii				<.05			
Endosulfan sulfate				<.05			
Endrin				<.05			
Endrin aldehyde				<.05			
Ethyl methacrylate				<10			
Ethyl methanesulfonate				<8			
Ethylbenzene	<1	<1	<1	<1	<1		<1
Famphur				<.4			
Fluoranthene				<8			
Fluorene				<8			
Gamma-bhc (lindane)				<.05			
Heptachlor				<.05			
Heptachlor epoxide				<.05			
Hexachlorobenzene				<.05			

* - The displayed value is the arithmetic mean of multiple database matches.

Table 1

Analytical Data Summary for MW-11

Constituents	Units	4/24/2014	10/15/2014	4/1/2015	10/2/2015	11/24/2015	4/19/2016	10/10/2016	1/9/2017
Hexachlorobutadiene	ug/L								
Hexachlorocyclopentadiene	ug/L								
Hexachloroethane	ug/L								
Hexachloropropene	ug/L								
Indeno(1,2,3-cd)pyrene	ug/L								
Isobutanol	mg/L								
Isodrin	ug/L								
Isophorone	ug/L								
Isosafrole	ug/L								
Kepone	ug/L								
Lead, total	ug/L	<4	<4	<4	<4		<4	<4	
Mercury, total	ug/L								
Methacrylonitrile	ug/L								
Methapyrilene	ug/L								
Methoxychlor	ug/L								
Methyl iodide	ug/L	<1	<1	<1	<1		<1	<1	
Methyl methacrylate	ug/L								
Methyl methanesulfonate	ug/L								
Methyl parathion	ug/L								
Methylene chloride	ug/L	<5	<5	<5	<5		<5	<5	
Naphthalene	ug/L								
Nickel, total	ug/L	<4.0	7.5	<4.0	24.6		9.6	12.7	53.1
Nitrobenzene	ug/L								
N-nitrosodiethylamine	ug/L								
N-nitrosodimethylamine	ug/L								
N-nitrosodi-n-butylamine	ug/L								
N-nitroso-di-n-propylamine	ug/L								
N-nitrosodiphenylamine	ug/L								
N-nitrosomethylethylamine	ug/L								
N-nitrosopiperidine	ug/L								
N-nitrosopyrrolidine	ug/L								
O,o,o-triethyl phosphorothioate	ug/L								
O-toluidine	ug/L								
Parathion	ug/L								
P-dimethylaminoazobenzene	ug/L								
Pentachlorobenzene	ug/L								
Pentachloronitrobenzene (pcnb)	ug/L								
Pentachlorophenol	ug/L								
Phenacetin	ug/L								
Phenanthrene	ug/L								
Phenol	ug/L								
Phorate	ug/L								
Pronamide	ug/L								
Propionitrile	ug/L								
Pyrene	ug/L								
Safrole	ug/L								
Selenium, total	ug/L	<4	<4	<4	<4		<4	<4	
Silver, total	ug/L	<4	<4	<4	<4		<4	<4	
Solids, total suspended	mg/L		56	39					
Styrene	ug/L	<1	<1	<1	<1		<1	<1	
Sulfide, total	mg/L								
Tetrachloroethene	ug/L	<1	<1	<1	<1		<1	<1	
Thallium, total	ug/L	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0	
Thionazin	ug/L								
Tin, total	ug/L								
Toluene	ug/L	<1	<1	<1	<1		<1	<1	
Toxaphene	ug/L								
Trans-1,2-dichloroethene	ug/L	<1	<1	<1	<1		<1	<1	
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1		<1	<1	
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5		<5	<5	
Trichloroethene	ug/L	<1	<1	<1	<1		<1	<1	
Trichlorofluoromethane	ug/L	<1	<1	<1	<1		<1	<1	
Vanadium, total	ug/L	<20	<20	<20	<20		<20	<20	
Vinyl acetate	ug/L	<5	<5	<5	<5		<5	<5	
Vinyl chloride	ug/L	<1	<1	<1	<1		<1	<1	
Xylenes, total	ug/L	<2	<2	<2	<2		<2	<2	
Zinc, total	ug/L	9.9	14.1	9.0	38.2		8.8	<8.0	

* - The displayed value is the arithmetic mean of multiple database matches.

Table 1

Analytical Data Summary for MW-11

Constituents	4/4/2017	10/18/2017	1/12/2018	4/12/2018	10/23/2018	4/8/2019	10/4/2019	4/9/2020	10/1/2020
Hexachlorobutadiene	<8			<8					
Hexachlorocyclopentadiene	<8			<8					
Hexachloroethane	<8			<8					
Hexachloropropene	<8			<8					
Indeno(1,2,3-cd)pyrene	<8			<8					
Isobutanol	<1			<1					
Isodrin	<8			<8					
Isophorone	<8			<8					
Isosafrole	<8			<8					
Kepone	<8			<8					
Lead, total	<4	<4		<4	<4	<4	<4	<4	<4
Mercury, total	<.5			<.5					
Methacrylonitrile	<1			<1					
Methapyrene	<8			<8					
Methoxychlor	<.05			<.05					
Methyl iodide	<1	<1		<1	<1	<1	<1	<1	<1
Methyl methacrylate	<1			<1					
Methyl methanesulfonate	<8			<8					
Methyl parathion	<.4			<.4					
Methylene chloride	<5	<5		<5	<5	<5	<5	<5	<5
Naphthalene	<8			<8					
Nickel, total	15.1	13.3		<4.0	4.7	16.6	8.0	9.5	16.7
Nitrobenzene	<8			<8					
N-nitrosodiethylamine	<8			<8					
N-nitrosodimethylamine	<8			<8					
N-nitrosodi-n-butylamine	<8			<8					
N-nitroso-di-n-propylamine	<8			<8					
N-nitrosodiphenylamine	<8			<8					
N-nitrosomethylethylamine	<8			<8					
N-nitrosopiperidine	<8			<8					
N-nitrosopyrrolidine	<8			<8					
O,o,o-triethyl phosphorothioate	<.4			<.4					
O-toluidine	<8			<8					
Parathion	<.4			<.4					
P-dimethylaminoazobenzene	<8			<8					
Pentachlorobenzene	<8			<8					
Pentachloronitrobenzene (pcnb)	<8			<8					
Pentachlorophenol	<8			<8					
Phenacetin	<8			<8					
Phenanthrene	<8			<8					
Phenol	<8			<8					
Phorate	2.4	<.4		<.4	<.4	<.4	<.4		
Pronamide	<8			<8					
Propionitrile	<10			<10					
Pyrene	<8			<8					
Safrole	<8			<8					
Selenium, total	<4	<4		<4	<4	<4	<4	<4	<4
Silver, total	<4	<4		<4	<4	<4	<4	<4	<4
Solids, total suspended									
Styrene	<1	<1		<1	<1	<1	<1	<1	<1
Sulfide, total	<.1			<.1					
Tetrachloroethene	<1	<1		<1	<1	<1	<1	<1	<1
Thallium, total	<4.0	<4.0		<4.0	<4.0	<2.0	<2.0	<2.0	<2.0
Thionazin	<.4			<.4			<.4		
Tin, total	<20			<20					
Toluene	<1	<1		<1	<1	<1	<1	<1	<1
Toxaphene	<.2			<.2					
Trans-1,2-dichloroethene	<1	<1		<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1		<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5		<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1		<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1		<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20		<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5		<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1		<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2		<2	<2	<2	<2	<2	<2
Zinc, total	<8.0	<8.0		<8.0	10.5	26.7	11.7	<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 1

Analytical Data Summary for MW-11

Constituents	4/1/2021	10/4/2021	4/6/2022	10/4/2023	4/17/2024	4/3/2025	10/9/2025
Hexachlorobutadiene				<8			
Hexachlorocyclopentadiene				<8			
Hexachloroethane				<8			
Hexachloropropene				<8			
Indeno(1,2,3-cd)pyrene				<8			
Isobutanol				<1			
Isodrin				<8			
Isophorone				<8			
Isosafrole				<8			
Kepone				<8			
Lead, total	<4	<4	<4	<4	<4		<1
Mercury, total				<.5			
Methacrylonitrile				<1			
Methapyrilene				<8			
Methoxychlor				<.05			
Methyl iodide	<1	<1	<1	<2	<1		<1
Methyl methacrylate				<1			
Methyl methanesulfonate				<8			
Methyl parathion				<.4			
Methylene chloride	<5	<5	<5	<5	<5		<5
Naphthalene				<8			
Nickel, total	8.3	4.2	10.7	7.4	4.6		8.7
Nitrobenzene				<8			
N-nitrosodiethylamine				<8			
N-nitrosodimethylamine				<8			
N-nitrosodi-n-butylamine				<8			
N-nitroso-di-n-propylamine				<8			
N-nitrosodiphenylamine				<8			
N-nitrosomethylethylamine				<8			
N-nitrosopiperidine				<8			
N-nitrosopyrrolidine				<8			
O,o,o-triethyl phosphorothioate				<.4			
O-toluidine				<8			
Parathion				<.4			
P-dimethylaminoazobenzene				<8			
Pentachlorobenzene				<8			
Pentachloronitrobenzene (pcnb)				<8			
Pentachlorophenol				<8			
Phenacetin				<8			
Phenanthrene				<8			
Phenol				<8			
Phorate				<.4			
Pronamide				<8			
Propionitrile				<10			
Pyrene				<8			
Safrole				<8			
Selenium, total	<4	<4	<4	<4	<4		<2
Silver, total	<4	<4	<4	<4	<4		<5
Solids, total suspended							
Styrene	<1	<1	<1	<1	<1		<1
Sulfide, total				<.1			
Tetrachloroethene	<1	<1	<1	<1	<1		<1
Thallium, total	<2.0	<2.0	<2.0	<2.0	<2.0		<.5
Thionazin				<.4			
Tin, total				<20			
Toluene	<1	<1	<1	<1	<1		<1
Toxaphene				<.2			
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1		<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1		<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5		<5
Trichloroethene	<1	<1	<1	<1	<1		<1
Trichlorofluoromethane	<1	<1	<1	<1	<1		<1
Vanadium, total	<20	<20	<20	<20	<20		<2
Vinyl acetate	<5	<5	<5	<5	<5		<5
Vinyl chloride	<1	<1	<1	<1	<1		<1
Xylenes, total	<2	<2	<2	<2	<2		<2
Zinc, total	<20.0	<20.0	<20.0	<20.0	<20.0		<5.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 2

Analytical Data Summary for MW-13

Constituents	Units	4/24/2014	10/15/2014	4/1/2015	10/2/2015	4/19/2016	10/10/2016	1/9/2017	4/4/2017
(3,4)-methylphenol	ug/L		<8						
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1		<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1		<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1		<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1		<1
1,1-dichloroethane	ug/L	1	<1	<1	<1	<1	<1		<1
1,1-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1		<1
1,1-dichloropropene	ug/L		<1						
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1		<1
1,2,4,5-tetrachlorobenzene	ug/L		<8						
1,2,4-trichlorobenzene	ug/L		<1						
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1		<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1		<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1		<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1		<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1		<1
1,2-dinitrobenzene	ug/L		<8						
1,3,5-trinitrobenzene	ug/L		<8						
1,3-dichlorobenzene	ug/L		<1						
1,3-dichloropropane	ug/L		<1						
1,3-dinitrobenzene	ug/L		<8						
1,4-dichlorobenzene	ug/L	<1.0	<1.0	<1.0	2.7	3.5	2.5		<1.0
1,4-naphthoquinone	ug/L		<8						
1,4-phenylenediamine	ug/L		<8						
1-naphthylamine	ug/L		<8						
2,2-dichloropropane	ug/L		<1						
2,3,4,6-tetrachlorophenol	ug/L		<8						
2,4,5-t	ug/L		<.5						
2,4,5-tp (silvex)	ug/L		<.5						
2,4,5-trichlorophenol	ug/L		<8						
2,4,6-trichlorophenol	ug/L		<8						
2,4-d	ug/L		<2						
2,4-dichlorophenol	ug/L		<8						
2,4-dimethylphenol	ug/L		<8						
2,4-dinitrophenol	ug/L		<8						
2,4-dinitrotoluene	ug/L		<8						
2,6-dichlorophenol	ug/L		<8						
2,6-dinitrotoluene	ug/L		<8						
2-acetylaminofluorene	ug/L		<8						
2-butanone	ug/L	<5	<5	<5	<5	<5	<5		<5
2-chloronaphthalene	ug/L		<8						
2-chlorophenol	ug/L		<8						
2-hexanone	ug/L	<5	<5	<5	<5	<5	<5		<5
2-methylnaphthalene	ug/L		<8						
2-methylphenol	ug/L		<8						
2-naphthylamine	ug/L		<8						
2-nitroaniline	ug/L		<8						
2-nitrophenol	ug/L		<8						
3,3'-dichlorobenzidine	ug/L		<8						
3,3'-dimethylbenzidine	ug/L		<8						
3-methylcholanthrene	ug/L		<8						
3-nitroaniline	ug/L		<8						
4,4'-ddd	ug/L		<.05						
4,4'-dde	ug/L		<.05						
4,4'-ddt	ug/L		<.05						
4,6-dinitro-2-methylphenol	ug/L		<8						
4-aminobiphenyl	ug/L		<8						
4-bromophenyl phenyl ether	ug/L		<8						
4-chloro-3-methylphenol	ug/L		<8						
4-chloroaniline	ug/L		<8						
4-chlorophenyl phenyl ether	ug/L		<8						
4-methyl-2-pentanone	ug/L	<5	<5	<5	<5	<5	<5		<5
4-nitroaniline	ug/L		<8						
4-nitrophenol	ug/L		<8						
5-nitro-o-toluidine	ug/L		<8						
7,12-dimethylbenz(a)anthracene	ug/L		<8						
Acenaphthene	ug/L		<8						
Acenaphthylene	ug/L		<8						
Acetone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		<10.0
Acetonitrile	ug/L		<10						
Acetophenone	ug/L		<8						
Acrolein	ug/L		<10						
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5		<5
Aldrin	ug/L		<.05						
Allyl chloride	ug/L		<1						
Alpha-bhc	ug/L		<.05						
Anthracene	ug/L		<8						

* - The displayed value is the arithmetic mean of multiple database matches.

Table 2

Analytical Data Summary for MW-13

Constituents	10/18/2017	1/12/2018	4/12/2018	10/23/2018	4/8/2019	10/4/2019	4/9/2020	10/1/2020	4/1/2021
(3,4)-methylphenol						<8			
1,1,1,2-tetrachloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	<1		<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene						<1			
1,2,3-trichloropropane	<1		<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene						<8			
1,2,4-trichlorobenzene						<1			
1,2-dibromo-3-chloropropane	<1		<1	<1	<1	<1	<5	<5	<5
1,2-dibromoethane	<1		<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1		<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1		<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene						<8			
1,3,5-trinitrobenzene						<8			
1,3-dichlorobenzene						<1			
1,3-dichloropropane						<1			
1,3-dinitrobenzene						<8			
1,4-dichlorobenzene	2.0		<1.0	5.9	3.7	4.1	1.9	2.7	<1.0
1,4-naphthoquinone						<8			
1,4-phenylenediamine						<8			
1-naphthylamine						<8			
2,2-dichloropropane						<1			
2,3,4,6-tetrachlorophenol						<8			
2,4,5-t						<.5			
2,4,5-tp (silvex)						<.5			
2,4,5-trichlorophenol						<8			
2,4,6-trichlorophenol						<8			
2,4-d						<2			
2,4-dichlorophenol						<8			
2,4-dimethylphenol						<8			
2,4-dinitrophenol						<8			
2,4-dinitrotoluene						<8			
2,6-dichlorophenol						<8			
2,6-dinitrotoluene						<8			
2-acetylaminofluorene						<8			
2-butanone	<5		<5	<5	<5	<5	<5	<5	<5
2-chloronaphthalene						<8			
2-chlorophenol						<8			
2-hexanone	<5		<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene						<8			
2-methylphenol						<8			
2-naphthylamine						<8			
2-nitroaniline						<8			
2-nitrophenol						<8			
3,3'-dichlorobenzidine						<8			
3,3'-dimethylbenzidine						<8			
3-methylcholanthrene						<8			
3-nitroaniline						<8			
4,4'-ddd						<.05			
4,4'-dde						<.05			
4,4'-ddt						<.05			
4,6-dinitro-2-methylphenol						<8			
4-aminobiphenyl						<8			
4-bromophenyl phenyl ether						<8			
4-chloro-3-methylphenol						<8			
4-chloroaniline						<8			
4-chlorophenyl phenyl ether						<8			
4-methyl-2-pentanone	<5		<5	<5	<5	<5	<5	<5	<5
4-nitroaniline						<8			
4-nitrophenol						<8			
5-nitro-o-toluidine						<8			
7,12-dimethylbenz(a)anthracene						<8			
Acenaphthene						<8			
Acenaphthylene						<8			
Acetone	17.7		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acetonitrile						<10			
Acetophenone						<8			
Acrolein						<10			
Acrylonitrile	<5		<5	<5	<5	<5	<5	<5	<5
Aldrin						<.05			
Allyl chloride						<1			
Alpha-bhc						<.05			
Anthracene						<8			

* - The displayed value is the arithmetic mean of multiple database matches.

Table 2

Analytical Data Summary for MW-13

Constituents	10/4/2021	4/6/2022	10/4/2023	4/17/2024	4/3/2025	10/9/2025
(3,4)-methylphenol				<8		
1,1,1,2-tetrachloroethane	<1	<1	<1	<1		<1
1,1,1-trichloroethane	<1	<1	<1	<1		<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1		<1
1,1,2-trichloroethane	<1	<1	<1	<1		<1
1,1-dichloroethane	<1	<1	<1	<1		<1
1,1-dichloroethene	<1	<1	<1	<1		<1
1,1-dichloropropene				<1		
1,2,3-trichloropropane	<1	<1	<1	<1		<1
1,2,4,5-tetrachlorobenzene				<8		
1,2,4-trichlorobenzene				<1		
1,2-dibromo-3-chloropropane	<5	<5	<5	<1		<5
1,2-dibromoethane	<1	<1	<1	<1		<1
1,2-dichlorobenzene	<1	<1	<1	<1		<1
1,2-dichloroethane	<1	<1	<1	<1		<1
1,2-dichloropropane	<1	<1	<1	<1		<1
1,2-dinitrobenzene				<8		
1,3,5-trinitrobenzene				<8		
1,3-dichlorobenzene				<1		
1,3-dichloropropane				<1		
1,3-dinitrobenzene				<8		
1,4-dichlorobenzene	2.3	1.4	2.6	2.4		5.4
1,4-naphthoquinone				<8		
1,4-phenylenediamine				<8		
1-naphthylamine				<8		
2,2-dichloropropane				<1		
2,3,4,6-tetrachlorophenol				<8		
2,4,5-t				<.5		
2,4,5-tp (silvex)				<.5		
2,4,5-trichlorophenol				<8		
2,4,6-trichlorophenol				<8		
2,4-d				<2		
2,4-dichlorophenol				<8		
2,4-dimethylphenol				<8		
2,4-dinitrophenol				<8		
2,4-dinitrotoluene				<8		
2,6-dichlorophenol				<8		
2,6-dinitrotoluene				<8		
2-acetylaminofluorene				<8		
2-butanone	<5	<10	<10	<5		<10
2-chloronaphthalene				<8		
2-chlorophenol				<8		
2-hexanone	<5	<5	<5	<5		<5
2-methylnaphthalene				<8		
2-methylphenol				<8		
2-naphthylamine				<8		
2-nitroaniline				<8		
2-nitrophenol				<8		
3,3'-dichlorobenzidine				<8		
3,3'-dimethylbenzidine				<8		
3-methylcholanthrene				<8		
3-nitroaniline				<8		
4,4'-ddd				<.05		
4,4'-dde				<.05		
4,4'-ddt				<.05		
4,6-dinitro-2-methylphenol				<8		
4-aminobiphenyl				<8		
4-bromophenyl phenyl ether				<8		
4-chloro-3-methylphenol				<8		
4-chloroaniline				<8		
4-chlorophenyl phenyl ether				<8		
4-methyl-2-pentanone	<5	<5	<5	<5		<5
4-nitroaniline				<8		
4-nitrophenol				<8		
5-nitro-o-toluidine				<8		
7,12-dimethylbenz(a)anthracene				<8		
Acenaphthene				<8		
Acenaphthylene				<8		
Acetone	<10.0	<10.0	<10.0	<10.0		<10.0
Acetonitrile				<10		
Acetophenone				<8		
Acrolein				<10		
Acrylonitrile	<5	<5	<5	<5		<5
Aldrin				<.05		
Allyl chloride				<1		
Alpha-bhc				<.05		
Anthracene				<8		

* - The displayed value is the arithmetic mean of multiple database matches.

Table 2

Analytical Data Summary for MW-13

Constituents	Units	4/24/2014	10/15/2014	4/1/2015	10/2/2015	4/19/2016	10/10/2016	1/9/2017	4/4/2017
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2		<2
Arochlor 1016	ug/L		<.1						
Arochlor 1221	ug/L		<.2						
Arochlor 1232	ug/L		<.2						
Arochlor 1242	ug/L		<.2						
Arochlor 1248	ug/L		<.2						
Arochlor 1254	ug/L		<.1						
Arochlor 1260	ug/L		<.1						
Arsenic, total	ug/L	<4	<4	<4	<4	<4	<4		<4
Azobenzene	ug/L		<8						
Barium, total	ug/L	288	355	321	359	434	291		130
Benzene	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		<1.0
Benzo(a)anthracene	ug/L		<8						
Benzo(a)pyrene	ug/L		<8						
Benzo(b)fluoranthene	ug/L		<8						
Benzo(g,h,i)perylene	ug/L		<8						
Benzo(k)fluoranthene	ug/L		<8						
Benzyl alcohol	ug/L		<8						
Beryllium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0
Beta-bhc	ug/L		<.05						
Bis (2-chloroethoxy) methane	ug/L		<8						
Bis(2-chloroethyl) ether	ug/L		<8						
Bis(2-chloroisopropyl) ether	ug/L		<8						
Bis(2-ethylhexyl) phthalate	ug/L		<8						
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1		<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1		<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1		<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1		<1
Butyl benzyl phthalate	ug/L		<8						
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	8.7	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1		<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1		<1
Chlordane	ug/L		<.1						
Chlorobenzene	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		<1.0
Chlorobenzilate	ug/L		<8						
Chloroethane	ug/L	<1.0	<1.0	<1.0	1.1	<1.0	1.0		<1.0
Chloroform	ug/L	<1	<1	<1	<1	<1	<1		<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1		<1
Chloroprene	ug/L		<1						
Chromium, total	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0		<8.0
Chrysene	ug/L		<8						
Cis-1,2-dichloroethene	ug/L	<1.0	1.2	<1.0	<1.0	1.1	<1.0		<1.0
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1		<1
Cobalt, total	ug/L	<4.0	1.0	1.1	<.8	<.8	<.8		<.8
Copper, total	ug/L	<4.0	<4.0	<4.0	<4.0	4.2	<4.0		<4.0
Cyanide, total	mg/L		<.005						
Delta-bhc	ug/L		<.05						
Diallate	ug/L		<8						
Dibenzo(a,h)anthracene	ug/L		<8						
Dibenzofuran	ug/L		<8						
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1		<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1		<1
Dichlorodifluoromethane	ug/L		<1						
Dieldrin	ug/L		<.05						
Diethyl phthalate	ug/L		<8						
Dimethoate	ug/L		<.4	<.4	<.4				
Dimethylphthalate	ug/L		<8						
Di-n-butyl phthalate	ug/L		<8						
Di-n-octyl phthalate	ug/L		<8						
Dinoseb	ug/L		<.5						
Diphenylamine	ug/L		<8						
Disulfoton	ug/L		<.4	<.4	<.4				
Endosulfan i	ug/L		<.05						
Endosulfan ii	ug/L		<.05						
Endosulfan sulfate	ug/L		<.05						
Endrin	ug/L		<.05						
Endrin aldehyde	ug/L		<.05						
Ethyl methacrylate	ug/L		<10						
Ethyl methanesulfonate	ug/L		<8						
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1		<1
Famphur	ug/L		<.4	<.4	<.4				
Fluoranthene	ug/L		<8						
Fluorene	ug/L		<8						
Gamma-bhc (lindane)	ug/L		<.05						
Heptachlor	ug/L		<.05						
Heptachlor epoxide	ug/L		<.05						
Hexachlorobenzene	ug/L		<.05						

* - The displayed value is the arithmetic mean of multiple database matches.

Table 2

Analytical Data Summary for MW-13

Constituents	10/18/2017	1/12/2018	4/12/2018	10/23/2018	4/8/2019	10/4/2019	4/9/2020	10/1/2020	4/1/2021
Antimony, total	<2		<2	<2	<2	<2	<2	<2	<2
Arochlor 1016						<1			
Arochlor 1221						<2			
Arochlor 1232						<2			
Arochlor 1242						<2			
Arochlor 1248						<2			
Arochlor 1254						<1			
Arochlor 1260						<1			
Arsenic, total	<4		<4	<4	<4	<4	<4	<4	<4
Azobenzene						<8			
Barium, total	341	337	259	392	280	403	253	384	141
Benzene	<1.0		<1.0	1.8	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)anthracene						<8			
Benzo(a)pyrene						<8			
Benzo(b)fluoranthene						<8			
Benzo(g,h,i)perylene						<8			
Benzo(k)fluoranthene						<8			
Benzyl alcohol						<8			
Beryllium, total	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Beta-bhc						<.05			
Bis (2-chloroethoxy) methane						<8			
Bis(2-chloroethyl) ether						<8			
Bis(2-chloroisopropyl) ether						<8			
Bis(2-ethylhexyl) phthalate						<6			
Bromochloromethane	<1		<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1		<1	<1	<1	<1	<1	<1	<1
Bromoform	<1		<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1		<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate						<8			
Cadmium, total	<.8		<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1		<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1		<1	<1	<1	<1	<1	<1	<1
Chlordane						<1			
Chlorobenzene	<1.0		<1.0	2.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chlorobenzilate						<8			
Chloroethane	2.1		<1.0	2.0	<1.0	3.1	<1.0	2.0	<1.0
Chloroform	<1		<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1		<1	<1	<1	<1	<1	<1	<1
Chloroprene						<1			
Chromium, total	<8.0		<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Chrysene						<8			
Cis-1,2-dichloroethene	<1.0		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cis-1,3-dichloropropene	<1		<1	<1	<1	<1	<1	<1	<1
Cobalt, total	1.4		2.0	<.8	<.8	6.2	.7	11.8	<.4
Copper, total	<4.0		<4.0	6.2	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide, total						<.005			
Delta-bhc						<.05			
Diallate						<8			
Dibenzo(a,h)anthracene						<8			
Dibenzofuran						<8			
Dibromochloromethane	<1		<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1		<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane						<1			
Dieldrin						<.05			
Diethyl phthalate						<8			
Dimethoate			<.4						
Dimethylphthalate						<8			
Di-n-butyl phthalate						<8			
Di-n-octyl phthalate						<8			
Dinoseb						<.5			
Diphenylamine						<8			
Disulfoton			<.4						
Endosulfan i						<.05			
Endosulfan ii						<.05			
Endosulfan sulfate						<.05			
Endrin						<.05			
Endrin aldehyde						<.05			
Ethyl methacrylate						<10			
Ethyl methanesulfonate						<8			
Ethylbenzene	<1		<1	<1	<1	<1	<1	<1	<1
Famphur			<.4						
Fluoranthene						<8			
Fluorene						<8			
Gamma-bhc (lindane)						<.05			
Heptachlor						<.05			
Heptachlor epoxide						<.05			
Hexachlorobenzene						<.05			

* - The displayed value is the arithmetic mean of multiple database matches.

Table 2

Analytical Data Summary for MW-13

Constituents	10/4/2021	4/6/2022	10/4/2023	4/17/2024	4/3/2025	10/9/2025
Antimony, total	<2	<2	<2	<2		1
Arochlor 1016				<2		
Arochlor 1221				<2		
Arochlor 1232				<2		
Arochlor 1242				<2		
Arochlor 1248				<2		
Arochlor 1254				<2		
Arochlor 1260				<2		
Arsenic, total	<4	<4	<4	<4		<2
Azobenzene				<8		
Barium, total	358	352	334	434		584
Benzene	<1.0	<1.0	<1.0	<1.0		<1.0
Benzo(a)anthracene				<8		
Benzo(a)pyrene				<8		
Benzo(b)fluoranthene				<8		
Benzo(g,h,i)perylene				<8		
Benzo(k)fluoranthene				<8		
Benzyl alcohol				<8		
Beryllium, total	<4.0	<4.0	<4.0	<4.0		<5
Beta-bhc				<.05		
Bis (2-chloroethoxy) methane				<8		
Bis(2-chloroethyl) ether				<8		
Bis(2-chloroisopropyl) ether				<8		
Bis(2-ethylhexyl) phthalate				7	<6	
Bromochloromethane	<1	<1	<1	<1		<1
Bromodichloromethane	<1	<1	<1	<1		<1
Bromoform	<1	<1	<1	<1		<1
Bromomethane	<1	<1	<1	<1		<1
Butyl benzyl phthalate				<8		
Cadmium, total	<.8	<.8	<.8	<.8		.2
Carbon disulfide	<1	<1	<1	<1		<1
Carbon tetrachloride	<1	<1	<1	<1		<1
Chlordane				<.1		
Chlorobenzene	<1.0	<1.0	1.1	1.8		2.9
Chlorobenzilate				<8		
Chloroethane	<1.0	<1.0	<1.0	2.8		1.3
Chloroform	<1	<1	<1	<1		<1
Chloromethane	<1	<1	<1	<1		<1
Chloroprene				<1		
Chromium, total	<8.0	<8.0	<8.0	<8.0		1.1
Chrysene				<8		
Cis-1,2-dichloroethene	<1.0	<1.0	<1.0	<1.0		<1.0
Cis-1,3-dichloropropene	<1	<1	<1	<1		<1
Cobalt, total	9.5	3.9	10.6	11.6		18.8
Copper, total	<4.0	4.0	<4.0	<4.0		<5.0
Cyanide, total				<.005		
Delta-bhc				<.05		
Diallate				<8		
Dibenzo(a,h)anthracene				<8		
Dibenzofuran				<8		
Dibromochloromethane	<1	<1	<1	<1		<1
Dibromomethane	<1	<1	<1	<1		<1
Dichlorodifluoromethane				<1		
Dieldrin				<.05		
Diethyl phthalate				<8		
Dimethoate				<.4		
Dimethylphthalate				<8		
Di-n-butyl phthalate				<8		
Di-n-octyl phthalate				<8		
Dinoseb				<.5		
Diphenylamine				<8		
Disulfoton				<.4		
Endosulfan i				<.05		
Endosulfan ii				<.05		
Endosulfan sulfate				<.05		
Endrin				<.05		
Endrin aldehyde				<.05		
Ethyl methacrylate				<10		
Ethyl methanesulfonate				<8		
Ethylbenzene	<1	<1	<1	<1		<1
Famphur				<.4		
Fluoranthene				<8		
Fluorene				<8		
Gamma-bhc (lindane)				<.05		
Heptachlor				<.05		
Heptachlor epoxide				<.05		
Hexachlorobenzene				<.05		

* - The displayed value is the arithmetic mean of multiple database matches.

Table 2

Analytical Data Summary for MW-13

Constituents	Units	4/24/2014	10/15/2014	4/1/2015	10/2/2015	4/19/2016	10/10/2016	1/9/2017	4/4/2017
Hexachlorobutadiene	ug/L		<8						
Hexachlorocyclopentadiene	ug/L		<8						
Hexachloroethane	ug/L		<8						
Hexachloropropene	ug/L		<8						
Indeno(1,2,3-cd)pyrene	ug/L		<8						
Isobutanol	mg/L		<1						
Isodrin	ug/L		<8						
Isophorone	ug/L		<8						
Isosafrole	ug/L		<8						
Kepone	ug/L		<8						
Lead, total	ug/L	<4	<4	<4	<4	<4	<4		<4
Mercury, total	ug/L		<.5						
Methacrylonitrile	ug/L		<1						
Methapyrene	ug/L		<8						
Methoxychlor	ug/L		<.05						
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1		<1
Methyl methacrylate	ug/L		<1						
Methyl methanesulfonate	ug/L		<8						
Methyl parathion	ug/L		<.4	<.4	<.4				
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5		<5
Naphthalene	ug/L		<8						
Nickel, total	ug/L	67.6	85.7	76.7	67.3	67.6	38.8		<4.0
Nitrobenzene	ug/L		<8						
N-nitrosodiethylamine	ug/L		<8						
N-nitrosodimethylamine	ug/L		<8						
N-nitrosodi-n-butylamine	ug/L		<8						
N-nitroso-di-n-propylamine	ug/L		<8						
N-nitrosodiphenylamine	ug/L		<8						
N-nitrosomethylethylamine	ug/L		<8						
N-nitrosopiperidine	ug/L		<8						
N-nitrosopyrrolidine	ug/L		<8						
O,o,o-triethyl phosphorothioate	ug/L		<.4	<.4	<.4				
O-toluidine	ug/L		<8						
Parathion	ug/L		<.4	<.4	<.4				
P-dimethylaminoazobenzene	ug/L		<8						
Pentachlorobenzene	ug/L		<8						
Pentachloronitrobenzene (pcnb)	ug/L		<8						
Pentachlorophenol	ug/L		<8						
Phenacetin	ug/L		<8						
Phenanthrene	ug/L		<8						
Phenol	ug/L		<8						
Phorate	ug/L		2.0	<.4	.4	<.4	.8		<.4
Pronamide	ug/L		<8						
Propionitrile	ug/L		<10						
Pyrene	ug/L		<8						
Safrole	ug/L		<8						
Selenium, total	ug/L	<4	<4	<4	<4	<4	<4		<4
Silver, total	ug/L	<4	<4	<4	<4	<4	<4		<4
Solids, total suspended	mg/L		44	14					
Styrene	ug/L	<1	<1	<1	<1	<1	<1		<1
Sulfide, total	mg/L		<.10						
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1		<1
Thallium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0
Thionazin	ug/L		<.4	<.4	<.4				
Tin, total	ug/L		<20						
Toluene	ug/L	<1	<1	<1	<1	<1	<1		<1
Toxaphene	ug/L		<.2						
Trans-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1		<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1		<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5		<5
Trichloroethene	ug/L	<1	<1	<1	<1	<1	<1		<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1		<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20		<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5		<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1		<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2		<2
Zinc, total	ug/L	<8.0	<8.0	<8.0	<8.0	31.8	<8.0		<8.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 2

Analytical Data Summary for MW-13

Constituents	10/18/2017	1/12/2018	4/12/2018	10/23/2018	4/8/2019	10/4/2019	4/9/2020	10/1/2020	4/1/2021
Hexachlorobutadiene						<8			
Hexachlorocyclopentadiene						<8			
Hexachloroethane						<8			
Hexachloropropene						<8			
Indeno(1,2,3-cd)pyrene						<8			
Isobutanol						<1			
Isodrin						<8			
Isophorone						<8			
Isosafrole						<8			
Kepone						<8			
Lead, total	<4		<4	<4	<4	<4	<4	<4	<4
Mercury, total						<.5			
Methacrylonitrile						<1			
Methapyrilene						<8			
Methoxychlor						<.05			
Methyl iodide	<1		<1	<1	<1	<1	<1	<1	<1
Methyl methacrylate						<1			
Methyl methanesulfonate						<8			
Methyl parathion			<.4						
Methylene chloride	<5		<5	<5	<5	<5	<5	<5	<5
Naphthalene						<8			
Nickel, total	47.1	65.8	55.0	46.7	60.8	79.6	43.1	75.9	12.7
Nitrobenzene						<8			
N-nitrosodiethylamine						<8			
N-nitrosodimethylamine						<8			
N-nitrosodi-n-butylamine						<8			
N-nitroso-di-n-propylamine						<8			
N-nitrosodiphenylamine						<8			
N-nitrosomethylethylamine						<8			
N-nitrosopiperidine						<8			
N-nitrosopyrrolidine						<8			
O,o,o-triethyl phosphorothioate			<.4						
O-toluidine						<8			
Parathion			<.4						
P-dimethylaminoazobenzene						<8			
Pentachlorobenzene						<8			
Pentachloronitrobenzene (pcnb)						<8			
Pentachlorophenol						<8			
Phenacetin						<8			
Phenanthrene						<8			
Phenol						<8			
Phorate	<.4		<.4	<.4	<.4	<.4			
Pronamide						<8			
Propionitrile						<10			
Pyrene						<8			
Safrole						<8			
Selenium, total	<4		<4	<4	<4	<4	<4	<4	<4
Silver, total	<4		<4	<4	<4	<4	<4	<4	<4
Solids, total suspended									
Styrene	<1		<1	<1	<1	<1	<1	<1	<1
Sulfide, total						<.10			
Tetrachloroethene	<1		<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4.0		<4.0	<4.0	<2.0	<2.0	<2.0	<2.0	<2.0
Thionazin			<.4			<.4			
Tin, total						<20			
Toluene	<1		<1	<1	<1	<1	<1	<1	<1
Toxaphene						<.2			
Trans-1,2-dichloroethene	<1		<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1		<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5		<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1		<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1		<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20		<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5		<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1		<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2		<2	<2	<2	<2	<2	<2	<2
Zinc, total	<8.0		<8.0	35.5	19.5	26.2	<20.0	<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 2

Analytical Data Summary for MW-13

Constituents	10/4/2021	4/6/2022	10/4/2023	4/17/2024	4/3/2025	10/9/2025
Hexachlorobutadiene				<8		
Hexachlorocyclopentadiene				<8		
Hexachloroethane				<8		
Hexachloropropene				<8		
Indeno(1,2,3-cd)pyrene				<8		
Isobutanol				<1		
Isodrin				<8		
Isophorone				<8		
Isosafrole				<8		
Kepone				<8		
Lead, total	<4	<4	<4	<4		<1
Mercury, total				<.5		
Methacrylonitrile				<1		
Methapyrilene				<8		
Methoxychlor				<.05		
Methyl iodide	<1	<1	<1	<2		<1
Methyl methacrylate				<1		
Methyl methanesulfonate				<8		
Methyl parathion				<.4		
Methylene chloride	<5	<5	<5	<5		<5
Naphthalene				<8		
Nickel, total	67.8	106.0	75.4	89.9		151.0
Nitrobenzene				<8		
N-nitrosodiethylamine				<8		
N-nitrosodimethylamine				<8		
N-nitrosodi-n-butylamine				<8		
N-nitroso-di-n-propylamine				<8		
N-nitrosodiphenylamine				<8		
N-nitrosomethylethylamine				<8		
N-nitrosopiperidine				<8		
N-nitrosopyrrolidine				<8		
O,o,o-triethyl phosphorothioate				<.4		
O-toluidine				<8		
Parathion				<.4		
P-dimethylaminoazobenzene				<8		
Pentachlorobenzene				<8		
Pentachloronitrobenzene (pcnb)				<8		
Pentachlorophenol				<8		
Phenacetin				<8		
Phenanthrene				<8		
Phenol				<8		
Phorate				<.4		
Pronamide				<8		
Propionitrile				<10		
Pyrene				<8		
Safrole				<8		
Selenium, total	<4	<4	<4	<4		<2
Silver, total	<4	<4	<4	<4		<5
Solids, total suspended						
Styrene	<1	<1	<1	<1		<1
Sulfide, total				<.15		
Tetrachloroethene	<1	<1	<1	<1		<1
Thallium, total	<2.0	<2.0	<2.0	<2.0		<.5
Thionazin				<.4		
Tin, total				<20		
Toluene	<1	<1	<1	<1		<1
Toxaphene				<.2		
Trans-1,2-dichloroethene	<1	<1	<1	<1		<1
Trans-1,3-dichloropropene	<1	<1	<1	<1		<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5		<5
Trichloroethene	<1	<1	<1	<1		<1
Trichlorofluoromethane	<1	<1	<1	<1		<1
Vanadium, total	<20	<20	<20	<20		<2
Vinyl acetate	<5	<5	<5	<5		<5
Vinyl chloride	<1	<1	<1	<1		<1
Xylenes, total	<2	<2	<2	<2		<2
Zinc, total	<20.0	<20.0	<20.0	<20.0		<5.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 3

Analytical Data Summary for MW-14

Constituents	Units	4/24/2014	10/15/2014	4/1/2015	6/9/2015	10/2/2015	4/19/2016	10/10/2016	4/4/2017
(3,4)-methylphenol	ug/L		<8						
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,1-dichloroethene	ug/L	<1	<1	<1		<1	<1	<1	<1
1,1-dichloropropene	ug/L		<1						
1,2,3-trichloropropane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L		<8						
1,2,4-trichlorobenzene	ug/L		<1						
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1		<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,2-dinitrobenzene	ug/L		<8						
1,3,5-trinitrobenzene	ug/L		<8						
1,3-dichlorobenzene	ug/L		<1						
1,3-dichloropropane	ug/L		<1						
1,3-dinitrobenzene	ug/L		<8						
1,4-dichlorobenzene	ug/L	<1.0	<1.0	<1.0		<1.0	<1.0	<1.0	<1.0
1,4-naphthoquinone	ug/L		<8						
1,4-phenylenediamine	ug/L		<8						
1-naphthylamine	ug/L		<8						
2,2-dichloropropane	ug/L		<1						
2,3,4,6-tetrachlorophenol	ug/L		<8						
2,4,5-t	ug/L		<.5						
2,4,5-tp (silvex)	ug/L		<.5						
2,4,5-trichlorophenol	ug/L		<8						
2,4,6-trichlorophenol	ug/L		<8						
2,4-d	ug/L		<2						
2,4-dichlorophenol	ug/L		<8						
2,4-dimethylphenol	ug/L		<8						
2,4-dinitrophenol	ug/L		<8						
2,4-dinitrotoluene	ug/L		<8						
2,6-dichlorophenol	ug/L		<8						
2,6-dinitrotoluene	ug/L		<8						
2-acetylaminofluorene	ug/L		<8						
2-butanone	ug/L	<5	<5	<5		<5	<5	<5	<5
2-chloronaphthalene	ug/L		<8						
2-chlorophenol	ug/L		<8						
2-hexanone	ug/L	<5	<5	<5		<5	<5	<5	<5
2-methylnaphthalene	ug/L		<8						
2-methylphenol	ug/L		<8						
2-naphthylamine	ug/L		<8						
2-nitroaniline	ug/L		<8						
2-nitrophenol	ug/L		<8						
3,3'-dichlorobenzidine	ug/L		<8						
3,3'-dimethylbenzidine	ug/L		<8						
3-methylcholanthrene	ug/L		<8						
3-nitroaniline	ug/L		<8						
4,4'-ddd	ug/L		<.05						
4,4'-dde	ug/L		<.05						
4,4'-ddt	ug/L		<.05						
4,6-dinitro-2-methylphenol	ug/L		<8						
4-aminobiphenyl	ug/L		<8						
4-bromophenyl phenyl ether	ug/L		<8						
4-chloro-3-methylphenol	ug/L		<8						
4-chloroaniline	ug/L		<8						
4-chlorophenyl phenyl ether	ug/L		<8						
4-methyl-2-pentanone	ug/L	<5	<5	<5		<5	<5	<5	<5
4-nitroaniline	ug/L		<8						
4-nitrophenol	ug/L		<8						
5-nitro-o-toluidine	ug/L		<8						
7,12-dimethylbenz(a)anthracene	ug/L		<8						
Acenaphthene	ug/L		<8						
Acenaphthylene	ug/L		<8						
Acetone	ug/L	<10.0	<10.0	<10.0		<10.0	<10.0	<10.0	<10.0
Acetonitrile	ug/L		<10						
Acetophenone	ug/L		<8						
Acrolein	ug/L		<10						
Acrylonitrile	ug/L	<5	<5	<5		<5	<5	<5	<5
Aldrin	ug/L		<.05						
Allyl chloride	ug/L		<1						
Alpha-bhc	ug/L		<.05						
Anthracene	ug/L		<8						

* - The displayed value is the arithmetic mean of multiple database matches.

Table 3

Analytical Data Summary for MW-14

Constituents	10/18/2017	1/12/2018	4/12/2018	10/23/2018	4/8/2019	10/4/2019	4/9/2020	10/1/2020	4/1/2021
(3,4)-methylphenol						<8			
1,1,1,2-tetrachloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	<1		<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene						<1			
1,2,3-trichloropropane	<1		<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene						<8			
1,2,4-trichlorobenzene						<1			
1,2-dibromo-3-chloropropane	<1		<1	<1	<1	<1	<5	<5	<5
1,2-dibromoethane	<1		<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1		<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1		<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene						<8			
1,3,5-trinitrobenzene						<8			
1,3-dichlorobenzene						<1			
1,3-dichloropropane						<1			
1,3-dinitrobenzene						<8			
1,4-dichlorobenzene	1.1		<1.0	<1.0	<1.0	<1.0	1.1	<1.0	1.3
1,4-naphthoquinone						<8			
1,4-phenylenediamine						<8			
1-naphthylamine						<8			
2,2-dichloropropane						<1			
2,3,4,6-tetrachlorophenol						<8			
2,4,5-t						<5			
2,4,5-tp (silvex)						<5			
2,4,5-trichlorophenol						<8			
2,4,6-trichlorophenol						<8			
2,4-d						<2			
2,4-dichlorophenol						<8			
2,4-dimethylphenol						<8			
2,4-dinitrophenol						<8			
2,4-dinitrotoluene						<8			
2,6-dichlorophenol						<8			
2,6-dinitrotoluene						<8			
2-acetylaminofluorene						<8			
2-butanone	<5		<5	<5	<5	<5	<5	<5	<5
2-chloronaphthalene						<8			
2-chlorophenol						<8			
2-hexanone	<5		<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene						<8			
2-methylphenol						<8			
2-naphthylamine						<8			
2-nitroaniline						<8			
2-nitrophenol						<8			
3,3'-dichlorobenzidine						<8			
3,3'-dimethylbenzidine						<8			
3-methylcholanthrene						<8			
3-nitroaniline						<8			
4,4'-ddd						<.05			
4,4'-dde						<.05			
4,4'-ddt						<.05			
4,6-dinitro-2-methylphenol						<8			
4-aminobiphenyl						<8			
4-bromophenyl phenyl ether						<8			
4-chloro-3-methylphenol						<8			
4-chloroaniline						<8			
4-chlorophenyl phenyl ether						<8			
4-methyl-2-pentanone	<5		<5	<5	<5	<5	<5	<5	<5
4-nitroaniline						<8			
4-nitrophenol						<8			
5-nitro-o-toluidine						<8			
7,12-dimethylbenz(a)anthracene						<8			
Acenaphthene						<8			
Acenaphthylene						<8			
Acetone	18.6		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acetonitrile						<10			
Acetophenone						<8			
Acrolein						<10			
Acrylonitrile	<5		<5	<5	<5	<5	<5	<5	<5
Aldrin						<.05			
Allyl chloride						<1			
Alpha-bhc						<.05			
Anthracene						<8			

* - The displayed value is the arithmetic mean of multiple database matches.

Table 3

Analytical Data Summary for MW-14

Constituents	10/4/2021	4/6/2022	10/4/2023	4/17/2024	4/3/2025	10/9/2025
(3,4)-methylphenol				<8		
1,1,1,2-tetrachloroethane	<1	<1	<1	<1		<1
1,1,1-trichloroethane	<1	<1	<1	<1		<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1		<1
1,1,2-trichloroethane	<1	<1	<1	<1		<1
1,1-dichloroethane	<1	<1	<1	<1		<1
1,1-dichloroethene	<1	<1	<1	<1		<1
1,1-dichloropropene				<1		
1,2,3-trichloropropane	<1	<1	<1	<1		<1
1,2,4,5-tetrachlorobenzene				<8		
1,2,4-trichlorobenzene				<1		
1,2-dibromo-3-chloropropane	<5	<5	<5	<1		<5
1,2-dibromoethane	<1	<1	<1	<1		<1
1,2-dichlorobenzene	<1	<1	<1	<1		<1
1,2-dichloroethane	<1	<1	<1	<1		<1
1,2-dichloropropane	<1	<1	<1	<1		<1
1,2-dinitrobenzene				<8		
1,3,5-trinitrobenzene				<8		
1,3-dichlorobenzene				<1		
1,3-dichloropropane				<1		
1,3-dinitrobenzene				<8		
1,4-dichlorobenzene	1.0	1.0	<1.0	<1.0		1.3
1,4-naphthoquinone				<8		
1,4-phenylenediamine				<8		
1-naphthylamine				<8		
2,2-dichloropropane				<1		
2,3,4,6-tetrachlorophenol				<8		
2,4,5-t				<5		
2,4,5-tp (silvex)				<5		
2,4,5-trichlorophenol				<8		
2,4,6-trichlorophenol				<8		
2,4-d				<2		
2,4-dichlorophenol				<8		
2,4-dimethylphenol				<8		
2,4-dinitrophenol				<8		
2,4-dinitrotoluene				<8		
2,6-dichlorophenol				<8		
2,6-dinitrotoluene				<8		
2-acetylaminofluorene				<8		
2-butanone	<5	<10	<10	<5		<10
2-chloronaphthalene				<8		
2-chlorophenol				<8		
2-hexanone	<5	<5	<5	<5		<5
2-methylnaphthalene				<8		
2-methylphenol				<8		
2-naphthylamine				<8		
2-nitroaniline				<8		
2-nitrophenol				<8		
3,3'-dichlorobenzidine				<8		
3,3'-dimethylbenzidine				<8		
3-methylcholanthrene				<8		
3-nitroaniline				<8		
4,4'-ddd				<.05		
4,4'-dde				<.05		
4,4'-ddt				<.05		
4,6-dinitro-2-methylphenol				<8		
4-aminobiphenyl				<8		
4-bromophenyl phenyl ether				<8		
4-chloro-3-methylphenol				<8		
4-chloroaniline				<8		
4-chlorophenyl phenyl ether				<8		
4-methyl-2-pentanone	<5	<5	<5	<5		<5
4-nitroaniline				<8		
4-nitrophenol				<8		
5-nitro-o-toluidine				<8		
7,12-dimethylbenz(a)anthracene				<8		
Acenaphthene				<8		
Acenaphthylene				<8		
Acetone	<10.0	<10.0	<10.0	<10.0		<10.0
Acetonitrile				<10		
Acetophenone				<8		
Acrolein				<10		
Acrylonitrile	<5	<5	<5	<5		<5
Aldrin				<.05		
Allyl chloride				<1		
Alpha-bhc				<.05		
Anthracene				<8		

* - The displayed value is the arithmetic mean of multiple database matches.

Table 3

Analytical Data Summary for MW-14

Constituents	Units	4/24/2014	10/15/2014	4/1/2015	6/9/2015	10/2/2015	4/19/2016	10/10/2016	4/4/2017
Antimony, total	ug/L	<2	<2	<2		<2	<2	<2	<2
Arochlor 1016	ug/L		<.1						
Arochlor 1221	ug/L		<.2						
Arochlor 1232	ug/L		<.2						
Arochlor 1242	ug/L		<.2						
Arochlor 1248	ug/L		<.2						
Arochlor 1254	ug/L		<.1						
Arochlor 1260	ug/L		<.1						
Arsenic, total	ug/L	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0
Azobenzene	ug/L		<8						
Barium, total	ug/L	290.0	711.0	747.0	419.0	818.0	671.0	483.0	76.3
Benzene	ug/L	<1.0	1.6	<1.0		1.8	1.9	1.3	<1.0
Benzo(a)anthracene	ug/L		<8						
Benzo(a)pyrene	ug/L		<8						
Benzo(b)fluoranthene	ug/L		<8						
Benzo(g,h,i)perylene	ug/L		<8						
Benzo(k)fluoranthene	ug/L		<8						
Benzyl alcohol	ug/L		<8						
Beryllium, total	ug/L	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0
Beta-bhc	ug/L		<.05						
Bis (2-chloroethoxy) methane	ug/L		<8						
Bis(2-chloroethyl) ether	ug/L		<8						
Bis(2-chloroisopropyl) ether	ug/L		<8						
Bis(2-ethylhexyl) phthalate	ug/L		<8						
Bromochloromethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1		<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Butyl benzyl phthalate	ug/L		<8						
Cadmium, total	ug/L	<.8	<.8	<.8		<.8	1.7	<.8	1.3
Carbon disulfide	ug/L	<1	<1	<1		<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1		<1	<1	<1	<1
Chlordane	ug/L		<.1						
Chlorobenzene	ug/L	<1.0	4.7	1.1		5.3	6.1	4.4	<1.0
Chlorobenzilate	ug/L		<8						
Chloroethane	ug/L	<1.0	<1.0	<1.0		<1.0	<1.0	1.2	<1.0
Chloroform	ug/L	<1	<1	<1		<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Chloroprene	ug/L		<1						
Chromium, total	ug/L	<8.0	<8.0	<8.0		<8.0	<8.0	<8.0	<8.0
Chrysene	ug/L		<8						
Cis-1,2-dichloroethene	ug/L	<1	<1	<1		<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1		<1	<1	<1	<1
Cobalt, total	ug/L	<4.0	8.6	5.6		7.4	4.4	3.4	<.8
Copper, total	ug/L	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0
Cyanide, total	mg/L		<.005						
Delta-bhc	ug/L		<.05						
Diallate	ug/L		<8						
Dibenzo(a,h)anthracene	ug/L		<8						
Dibenzofuran	ug/L		<8						
Dibromochloromethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Dichlorodifluoromethane	ug/L		<1.0						
Dieldrin	ug/L		<.05						
Diethyl phthalate	ug/L		<8						
Dimethoate	ug/L		<.4	<.4		<.4			
Dimethylphthalate	ug/L		<8						
Di-n-butyl phthalate	ug/L		<8						
Di-n-octyl phthalate	ug/L		<8						
Dinoseb	ug/L		<.5						
Diphenylamine	ug/L		<8						
Disulfoton	ug/L		<.4	<.4		<.4			
Endosulfan i	ug/L		<.05						
Endosulfan ii	ug/L		<.05						
Endosulfan sulfate	ug/L		<.05						
Endrin	ug/L		<.05						
Endrin aldehyde	ug/L		<.05						
Ethyl methacrylate	ug/L		<10						
Ethyl methanesulfonate	ug/L		<8						
Ethylbenzene	ug/L	<1	<1	<1		<1	<1	<1	<1
Famphur	ug/L		<.4	<.4		<.4			
Fluoranthene	ug/L		<8						
Fluorene	ug/L		<8						
Gamma-bhc (lindane)	ug/L		<.05						
Heptachlor	ug/L		<.05						
Heptachlor epoxide	ug/L		<.05						
Hexachlorobenzene	ug/L		<.05						

* - The displayed value is the arithmetic mean of multiple database matches.

Table 3

Analytical Data Summary for MW-14

Constituents	10/18/2017	1/12/2018	4/12/2018	10/23/2018	4/8/2019	10/4/2019	4/9/2020	10/1/2020	4/1/2021
Antimony, total	<2		<2	<2	<2	<2	<2	<2	<2
Arochlor 1016						<1			
Arochlor 1221						<2			
Arochlor 1232						<2			
Arochlor 1242						<2			
Arochlor 1248						<2			
Arochlor 1254						<1			
Arochlor 1260						<1			
Arsenic, total	<4.0		<4.0	<4.0	4.1	<4.0	10.2	<4.0	<4.0
Azobenzene						<8			
Barium, total	1110.0	692.0	1130.0	368.0	809.0	903.0	986.0	717.0	714.0
Benzene	1.5		1.2	2.7	1.9	1.6	1.6	2.3	<1.0
Benzo(a)anthracene						<8			
Benzo(a)pyrene						<8			
Benzo(b)fluoranthene						<8			
Benzo(g,h,i)perylene						<8			
Benzo(k)fluoranthene						<8			
Benzyl alcohol						<8			
Beryllium, total	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Beta-bhc						<.05			
Bis (2-chloroethoxy) methane						<8			
Bis(2-chloroethyl) ether						<8			
Bis(2-chloroisopropyl) ether						<8			
Bis(2-ethylhexyl) phthalate						<6			
Bromochloromethane	<1		<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1		<1	<1	<1	<1	<1	<1	<1
Bromoform	<1		<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1		<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate						<8			
Cadmium, total	<.8		<.8	<.8	1.7	<.8	.9	<.8	<.8
Carbon disulfide	<1		<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1		<1	<1	<1	<1	<1	<1	<1
Chlordane						<1			
Chlorobenzene	6.8		5.7	8.2	9.3	7.5	8.7	9.1	6.2
Chlorobenzilate						<8			
Chloroethane	1.3		<1.0	<1.0	<1.0	1.7	<1.0	<1.0	<1.0
Chloroform	<1		<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1		<1	<1	<1	<1	<1	<1	<1
Chloroprene						<1			
Chromium, total	<8.0		<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Chrysene						<8			
Cis-1,2-dichloroethene	<1		<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1		<1	<1	<1	<1	<1	<1	<1
Cobalt, total	13.4	7.5	14.3	4.1	3.8	8.2	5.5	2.9	7.4
Copper, total	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide, total						<.005			
Delta-bhc						<.05			
Diallate						<8			
Dibenzo(a,h)anthracene						<8			
Dibenzofuran						<8			
Dibromochloromethane	<1		<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1		<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane						1.2			
Dieldrin						<.05			
Diethyl phthalate						<8			
Dimethoate			<.4						
Dimethylphthalate						<8			
Di-n-butyl phthalate						<8			
Di-n-octyl phthalate						<8			
Dinoseb						<.5			
Diphenylamine						<8			
Disulfoton			<.4						
Endosulfan i						<.05			
Endosulfan ii						<.05			
Endosulfan sulfate						<.05			
Endrin						<.05			
Endrin aldehyde						<.05			
Ethyl methacrylate						<10			
Ethyl methanesulfonate						<8			
Ethylbenzene	<1		<1	<1	<1	<1	<1	<1	<1
Famphur			<.4						
Fluoranthene						<8			
Fluorene						<8			
Gamma-bhc (lindane)						<.05			
Heptachlor						<.05			
Heptachlor epoxide						<.05			
Hexachlorobenzene						<.05			

* - The displayed value is the arithmetic mean of multiple database matches.

Table 3

Analytical Data Summary for MW-14

Constituents	10/4/2021	4/6/2022	10/4/2023	4/17/2024	4/3/2025	10/9/2025
Antimony, total	<2	<2	<2	<2		1
Arochlor 1016				<2		
Arochlor 1221				<2		
Arochlor 1232				<2		
Arochlor 1242				<2		
Arochlor 1248				<2		
Arochlor 1254				<2		
Arochlor 1260				<2		
Arsenic, total	30.5	<4.0	5.5	<4.0		4.8
Azobenzene				<8		
Barium, total	1530.0	1360.0	843.0	1040.0		949.0
Benzene	<1.0	<1.0	<1.0	<1.0		1.8
Benzo(a)anthracene				<8		
Benzo(a)pyrene				<8		
Benzo(b)fluoranthene				<8		
Benzo(g,h,i)perylene				<8		
Benzo(k)fluoranthene				<8		
Benzyl alcohol				<8		
Beryllium, total	<4.0	<4.0	<4.0	<4.0		<5
Beta-bhc				<.05		
Bis (2-chloroethoxy) methane				<8		
Bis(2-chloroethyl) ether				<8		
Bis(2-chloroisopropyl) ether				<8		
Bis(2-ethylhexyl) phthalate				72	<6	
Bromochloromethane	<1	<1	<1	<1		<1
Bromodichloromethane	<1	<1	<1	<1		<1
Bromoform	<1	<1	<1	<1		<1
Bromomethane	<1	<1	<1	<1		<1
Butyl benzyl phthalate				<8		
Cadmium, total	<.8	<.8	<.8	<.8		.5
Carbon disulfide	<1	<1	<1	<1		<1
Carbon tetrachloride	<1	<1	<1	<1		<1
Chlordane				<.1		
Chlorobenzene	3.9	5.3	<1.0	<1.0		10.9
Chlorobenzilate				<8		
Chloroethane	<1.0	<1.0	<1.0	<1.0		<1.0
Chloroform	<1	<1	<1	<1		<1
Chloromethane	<1	<1	<1	<1		<1
Chloroprene				<1		
Chromium, total	<8.0	<8.0	<8.0	<8.0		1.8
Chrysene				<8		
Cis-1,2-dichloroethene	<1	<1	<1	<1		<1
Cis-1,3-dichloropropene	<1	<1	<1	<1		<1
Cobalt, total	19.2	15.0	7.3	4.1		5.1
Copper, total	<4.0	<4.0	<4.0	<4.0		6.6
Cyanide, total				<.005		
Delta-bhc				<.05		
Diallate				<8		
Dibenzo(a,h)anthracene				<8		
Dibenzofuran				<8		
Dibromochloromethane	<1	<1	<1	<1		<1
Dibromomethane	<1	<1	<1	<1		<1
Dichlorodifluoromethane				<1.0		
Dieldrin				<.05		
Diethyl phthalate				<8		
Dimethoate				<.4		
Dimethylphthalate				<8		
Di-n-butyl phthalate				<8		
Di-n-octyl phthalate				<8		
Dinoseb				<.5		
Diphenylamine				<8		
Disulfoton				<.4		
Endosulfan i				<.05		
Endosulfan ii				<.05		
Endosulfan sulfate				<.05		
Endrin				<.05		
Endrin aldehyde				<.05		
Ethyl methacrylate				<10		
Ethyl methanesulfonate				<8		
Ethylbenzene	<1	<1	<1	<1		<1
Famphur				<.4		
Fluoranthene				<8		
Fluorene				<8		
Gamma-bhc (lindane)				<.05		
Heptachlor				<.05		
Heptachlor epoxide				<.05		
Hexachlorobenzene				<.05		

* - The displayed value is the arithmetic mean of multiple database matches.

Table 3

Analytical Data Summary for MW-14

Constituents	Units	4/24/2014	10/15/2014	4/1/2015	6/9/2015	10/2/2015	4/19/2016	10/10/2016	4/4/2017
Hexachlorobutadiene	ug/L		<8						
Hexachlorocyclopentadiene	ug/L		<8						
Hexachloroethane	ug/L		<8						
Hexachloropropene	ug/L		<8						
Indeno(1,2,3-cd)pyrene	ug/L		<8						
Isobutanol	mg/L		<1						
Isodrin	ug/L		<8						
Isophorone	ug/L		<8						
Isosafrole	ug/L		<8						
Kepone	ug/L		<8						
Lead, total	ug/L	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0
Mercury, total	ug/L		<.5						
Methacrylonitrile	ug/L		<1						
Methapyrilene	ug/L		<8						
Methoxychlor	ug/L		<.05						
Methyl iodide	ug/L	<1	<1	<1		<1	<1	<1	<1
Methyl methacrylate	ug/L		<1						
Methyl methanesulfonate	ug/L		<8						
Methyl parathion	ug/L		<.4	<.4		<.4			
Methylene chloride	ug/L	<5	<5	<5		<5	<5	<5	<5
Naphthalene	ug/L		<8						
Nickel, total	ug/L	22.2	69.2	54.2	31.8	76.9	67.7	33.0	<4.0
Nitrobenzene	ug/L		<8						
N-nitrosodiethylamine	ug/L		<8						
N-nitrosodimethylamine	ug/L		<8						
N-nitrosodi-n-butylamine	ug/L		<8						
N-nitroso-di-n-propylamine	ug/L		<8						
N-nitrosodiphenylamine	ug/L		<8						
N-nitrosomethylethylamine	ug/L		<8						
N-nitrosopiperidine	ug/L		<8						
N-nitrosopyrrolidine	ug/L		<8						
O,o,o-triethyl phosphorothioate	ug/L		<.4	<.4		<.4			
O-toluidine	ug/L		<8						
Parathion	ug/L		<.4	<.4		<.4			
P-dimethylaminoazobenzene	ug/L		<8						
Pentachlorobenzene	ug/L		<8						
Pentachloronitrobenzene (pcnb)	ug/L		<8						
Pentachlorophenol	ug/L		<8						
Phenacetin	ug/L		<8						
Phenanthrene	ug/L		<8						
Phenol	ug/L		<8						
Phorate	ug/L		7.1	<.4		2.8	<.4	2.7	<.4
Pronamide	ug/L		<8						
Propionitrile	ug/L		<10						
Pyrene	ug/L		<8						
Safrole	ug/L		<8						
Selenium, total	ug/L	<4	<4	<4		<4	<4	<4	<4
Silver, total	ug/L	<4	<4	<4		<4	<4	<4	<4
Solids, total suspended	mg/L		415	127					
Styrene	ug/L	<1	<1	<1		<1	<1	<1	<1
Sulfide, total	mg/L		<.10						
Tetrachloroethene	ug/L	<1	<1	<1		<1	<1	<1	<1
Thallium, total	ug/L	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0
Thionazin	ug/L		.5	<.4		<.4	<.4	<.4	<.4
Tin, total	ug/L		<20						
Toluene	ug/L	<1	<1	<1		<1	<1	<1	<1
Toxaphene	ug/L		<.2						
Trans-1,2-dichloroethene	ug/L	<1	<1	<1		<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1		<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5		<5	<5	<5	<5
Trichloroethene	ug/L	<1	<1	<1		<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Vanadium, total	ug/L	<20.0	<20.0	<20.0		<20.0	<20.0	<20.0	<20.0
Vinyl acetate	ug/L	<5	<5	<5		<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1		<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2		<2	<2	<2	<2
Zinc, total	ug/L	11.1	8.6	<8.0		<8.0	38.9	<8.0	<8.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 3

Analytical Data Summary for MW-14

Constituents	10/18/2017	1/12/2018	4/12/2018	10/23/2018	4/8/2019	10/4/2019	4/9/2020	10/1/2020	4/1/2021
Hexachlorobutadiene						<8			
Hexachlorocyclopentadiene						<8			
Hexachloroethane						<8			
Hexachloropropene						<8			
Indeno(1,2,3-cd)pyrene						<8			
Isobutanol						<1			
Isodrin						<8			
Isophorone						<8			
Isosafrole						<8			
Kepone						<8			
Lead, total	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Mercury, total						<.5			
Methacrylonitrile						<1			
Methapyrilene						<8			
Methoxychlor						<.05			
Methyl iodide	<1		<1	<1	<1	<1	<1	<1	<1
Methyl methacrylate						<1			
Methyl methanesulfonate						<8			
Methyl parathion			<.4						
Methylene chloride	<5		<5	<5	<5	<5	<5	<5	<5
Naphthalene						<8			
Nickel, total	44.4	61.3	46.3	19.4	55.8	42.5	61.0	50.6	23.3
Nitrobenzene						<8			
N-nitrosodiethylamine						<8			
N-nitrosodimethylamine						<8			
N-nitrosodi-n-butylamine						<8			
N-nitroso-di-n-propylamine						<8			
N-nitrosodiphenylamine						<8			
N-nitrosomethylethylamine						<8			
N-nitrosopiperidine						<8			
N-nitrosopyrrolidine						<8			
O,o,o-triethyl phosphorothioate			<.4						
O-toluidine						<8			
Parathion			<.4						
P-dimethylaminoazobenzene						<8			
Pentachlorobenzene						<8			
Pentachloronitrobenzene (pcnb)						<8			
Pentachlorophenol						<8			
Phenacetin						<8			
Phenanthrene						<8			
Phenol						<8			
Phorate	<.4		<.4	<.4	<.4	<.4			
Pronamide						<8			
Propionitrile						<10			
Pyrene						<8			
Safrole						<8			
Selenium, total	<4		<4	<4	<4	<4	<4	<4	<4
Silver, total	<4		<4	<4	<4	<4	<4	<4	<4
Solids, total suspended									
Styrene	<1		<1	<1	<1	<1	<1	<1	<1
Sulfide, total						<.10			
Tetrachloroethene	<1		<1	1	<1	<1	<1	<1	<1
Thallium, total	<4.0		<4.0	<4.0	<2.0	<2.0	<2.0	<2.0	<2.0
Thionazin	<.4		<.4	<.4	<.4	<.4			
Tin, total						<20			
Toluene	<1		<1	<1	<1	<1	<1	<1	<1
Toxaphene						<.2			
Trans-1,2-dichloroethene	<1		<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1		<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5		<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1		<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1		<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20.0		<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5		<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1		<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2		<2	<2	<2	<2	<2	<2	<2
Zinc, total	<8.0		<8.0	43.6	40.2	24.4	<20.0	<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 3

Analytical Data Summary for MW-14

Constituents	10/4/2021	4/6/2022	10/4/2023	4/17/2024	4/3/2025	10/9/2025
Hexachlorobutadiene				<8		
Hexachlorocyclopentadiene				<8		
Hexachloroethane				<8		
Hexachloropropene				<8		
Indeno(1,2,3-cd)pyrene				<8		
Isobutanol				<1		
Isodrin				<8		
Isophorone				<8		
Isosafrole				<8		
Kepone				<8		
Lead, total	5.1	<4.0	<4.0	<4.0		1.2
Mercury, total				<.5		
Methacrylonitrile				<1		
Methapyrilene				<8		
Methoxychlor				<.05		
Methyl iodide	<1	<1	<1	<2		<1
Methyl methacrylate				<1		
Methyl methanesulfonate				<8		
Methyl parathion				<.4		
Methylene chloride	<5	<5	<5	<5		<5
Naphthalene				<8		
Nickel, total	52.6	50.6	33.8	31.6		64.2
Nitrobenzene				<8		
N-nitrosodiethylamine				<8		
N-nitrosodimethylamine				<8		
N-nitrosodi-n-butylamine				<8		
N-nitroso-di-n-propylamine				<8		
N-nitrosodiphenylamine				<8		
N-nitrosomethylethylamine				<8		
N-nitrosopiperidine				<8		
N-nitrosopyrrolidine				<8		
O,o,o-triethyl phosphorothioate				<.4		
O-toluidine				<8		
Parathion				<.4		
P-dimethylaminoazobenzene				<8		
Pentachlorobenzene				<8		
Pentachloronitrobenzene (pcnb)				<8		
Pentachlorophenol				<8		
Phenacetin				<8		
Phenanthrene				<8		
Phenol				<8		
Phorate				<.4		
Pronamide				<8		
Propionitrile				<10		
Pyrene				<8		
Safrole				<8		
Selenium, total	<4	<4	<4	<4		<2
Silver, total	<4	<4	<4	<4		<5
Solids, total suspended						
Styrene	<1	<1	<1	<1		<1
Sulfide, total				<.15		
Tetrachloroethene	<1	<1	<1	<1		<1
Thallium, total	<2.0	<2.0	<2.0	<2.0		<.5
Thionazin				<.4		
Tin, total				<20		
Toluene	<1	<1	<1	<1		<1
Toxaphene				<.2		
Trans-1,2-dichloroethene	<1	<1	<1	<1		<1
Trans-1,3-dichloropropene	<1	<1	<1	<1		<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5		<5
Trichloroethene	<1	<1	<1	<1		<1
Trichlorofluoromethane	<1	<1	<1	<1		<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0		4.7
Vinyl acetate	<5	<5	<5	<5		<5
Vinyl chloride	<1	<1	<1	<1		<1
Xylenes, total	<2	<2	<2	<2		<2
Zinc, total	<20.0	<20.0	<20.0	<20.0		6.8

* - The displayed value is the arithmetic mean of multiple database matches.

Table 4

Analytical Data Summary for MW-15A

Constituents	Units	4/24/2014	10/15/2014	1/8/2015	4/1/2015	6/9/2015	10/2/2015	4/19/2016	10/10/2016	4/4/2017
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-hexanone	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Arsenic, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, total	ug/L	145.0	210.0	154.0	99.4	157.0	243.0	185.0	237.0	199.0
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Bis(2-ethylhexyl) phthalate	ug/L									
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	1.3
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	ug/L	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Cis-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<4.0	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Copper, total	ug/L	4.8	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	9.4	<4.0	<4.0	<4.0
Selenium, total	ug/L	7.6	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L		68		76					
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	11.3	<8.0	<8.0	<8.0	<20.0	<8.0	12.2	<8.0	<8.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 4

Analytical Data Summary for MW-15A

Constituents	10/18/2017	4/12/2018	10/23/2018	4/8/2019	10/4/2019	4/9/2020	10/1/2020	4/1/2021	10/4/2021
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<1	<1	<1	<1	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-hexanone	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	17.2	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	<2.0	<2.0	2.8	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Arsenic, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, total	249.0	190.0	239.0	212.0	270.0	205.0	225.0	154.0	202.0
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Bis(2-ethylhexyl) phthalate									
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<.8	<.8	<.8	<.8	<.8	<.4	<.4	.5	1.7
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	4.1	<4.0	<4.0
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Selenium, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended									
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4.0	<4.0	<4.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Toluene	<2	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	<8.0	<8.0	9.0	<8.0	8.7	<20.0	<20.0	<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 4

Analytical Data Summary for MW-15A

Constituents	4/6/2022	10/4/2023	4/17/2024	4/3/2025	10/9/2025
1,1,1,2-tetrachloroethane	<1	<1	<1		<1
1,1,1-trichloroethane	<1	<1	<1		<1
1,1,2,2-tetrachloroethane	<1	<1	<1		<1
1,1,2-trichloroethane	<1	<1	<1		<1
1,1-dichloroethane	<1	<1	<1		<1
1,1-dichloroethene	<1	<1	<1		<1
1,2,3-trichloropropane	<1	<1	<1		<1
1,2-dibromo-3-chloropropane	<5	<5	<5		<5
1,2-dibromoethane	<1	<1	<1		<1
1,2-dichlorobenzene	<1	<1	<1		<1
1,2-dichloroethane	<1	<1	<1		<1
1,2-dichloropropane	<1	<1	<1		<1
1,4-dichlorobenzene	<1	<1	<1		<1
2-butanone	<10	<10	<10		<10
2-hexanone	<5	<5	<5		<5
4-methyl-2-pentanone	<5	<5	<5		<5
Acetone	<10.0	<10.0	<10.0		<10.0
Acrylonitrile	<5	<5	<5		<5
Antimony, total	<2.0	<2.0	<2.0		1.0
Arsenic, total	<4	<4	<4		<2
Barium, total	289.0	166.0	73.0		217.0
Benzene	<1	<1	<1		<1
Beryllium, total	<4.0	<4.0	<4.0		<5
Bis(2-ethylhexyl) phthalate				10	
Bromochloromethane	<1	<1	<1		<1
Bromodichloromethane	<1	<1	<1		<1
Bromoform	<1	<1	<1		<1
Bromomethane	<1	<1	<1		<1
Cadmium, total	<.8	<.8	<.8		.2
Carbon disulfide	<1	<1	<1		<1
Carbon tetrachloride	<1	<1	<1		<1
Chlorobenzene	<1	<1	<1		<1
Chloroethane	<1	<1	<1		<1
Chloroform	<1	<1	<1		<1
Chloromethane	<1	<1	<1		<1
Chromium, total	<8.0	<8.0	<8.0		1.5
Cis-1,2-dichloroethene	<1	<1	<1		<1
Cis-1,3-dichloropropene	<1	<1	<1		<1
Cobalt, total	4.7	<.4	<.4		<.5
Copper, total	<4.0	<4.0	<4.0		<5.0
Dibromochloromethane	<1	<1	<1		<1
Dibromomethane	<1	<1	<1		<1
Ethylbenzene	<1	<1	<1		<1
Lead, total	<4	<4	<4		<1
Methyl iodide	<1	<1	<1		<1
Methylene chloride	<5	<5	<5		<5
Nickel, total	8.2	<4.0	<4.0		<5.0
Selenium, total	<4.0	<4.0	<4.0		<2.0
Silver, total	<4	<4	<4		<5
Solids, total suspended					
Styrene	<1	<1	<1		<1
Tetrachloroethene	<1	<1	<1		<1
Thallium, total	<2.0	<2.0	<2.0		<.5
Toluene	<1	<1	<1		<1
Trans-1,2-dichloroethene	<1	<1	<1		<1
Trans-1,3-dichloropropene	<1	<1	<1		<1
Trans-1,4-dichloro-2-butene	<5	<5	<5		<5
Trichloroethene	<1	<1	<1		<1
Trichlorofluoromethane	<1	<1	<1		<1
Vanadium, total	<20	<20	<20		<2
Vinyl acetate	<5	<5	<5		<5
Vinyl chloride	<1	<1	<1		<1
Xylenes, total	<2	<2	<2		<2
Zinc, total	<20.0	<20.0	<20.0		6.4

* - The displayed value is the arithmetic mean of multiple database matches.

Table 5

Analytical Data Summary for MW-18

Constituents	Units	4/24/2014	10/16/2014	4/1/2015	6/9/2015	10/2/2015	4/19/2016	10/10/2016	4/4/2017	10/18/2017
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-hexanone	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	16.3
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, total	ug/L	105.0	144.0	121.0	141.0	178.0	130.0	170.0	144.0	168.0
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	ug/L	1.1	2.2	<8	<8	<8	1.8	1.6	<8	<8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<4.0	11.6	<8	<8	<8	<8	<8	<8	<8
Copper, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	5.2	10.9	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	4.5
Selenium, total	ug/L	8.1	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended	mg/L		298	37						
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<4	<4	<4	<4	<4	<4	<4	<4	<4
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	12.6	12.8	<8.0	<20.0	<8.0	8.3	<8.0	<8.0	<8.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 5

Analytical Data Summary for MW-18

Constituents	4/12/2018	10/23/2018	4/8/2019	10/4/2019	4/9/2020	10/1/2020	4/1/2021	10/4/2021	4/6/2022
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<1	<1	<1	<5	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone	<5	<5	<5	<5	<5	<5	<5	<5	<10
2-hexanone	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, total	95.6	148.0	136.0	186.0	107.0	172.0	188.0	179.0	171.0
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<.8	<.8	<.8	<.8	<.4	<.4	<.4	.4	.4
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methyl iodide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	<4.0	<4.0	<4.0	5.4	<4.0	<4.0	<4.0	5.4	<4.0
Selenium, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended									
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4	<4	<2	<2	<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	<8.0	11.2	29.4	19.7	<20.0	<20.0	<20.0	<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 6

Analytical Data Summary for MW-9

Constituents	Units	4/24/2014	10/16/2014	4/1/2015	6/9/2015	10/2/2015	4/19/2016	10/10/2016	4/4/2017
(3,4)-methylphenol	ug/L		<8						
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,1-dichloroethene	ug/L	<1	<1	<1		<1	<1	<1	<1
1,1-dichloropropene	ug/L		<1						
1,2,3-trichloropropane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L		<8						
1,2,4-trichlorobenzene	ug/L		<1						
1,2-dibromo-3-chloropropane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,2-dibromoethane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1		<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1		<1	<1	<1	<1
1,2-dinitrobenzene	ug/L		<8						
1,3,5-trinitrobenzene	ug/L		<8						
1,3-dichlorobenzene	ug/L		<1						
1,3-dichloropropane	ug/L		<1						
1,3-dinitrobenzene	ug/L		<8						
1,4-dichlorobenzene	ug/L	1.4	<1.0	<1.0		1.2	<1.0	1.3	<1.0
1,4-naphthoquinone	ug/L		<8						
1,4-phenylenediamine	ug/L		<8						
1-naphthylamine	ug/L		<8						
2,2-dichloropropane	ug/L		<1						
2,3,4,6-tetrachlorophenol	ug/L		<8						
2,4,5-t	ug/L		<.5						
2,4,5-tp (silvex)	ug/L		<.5						
2,4,5-trichlorophenol	ug/L		<8						
2,4,6-trichlorophenol	ug/L		<8						
2,4-d	ug/L		<2						
2,4-dichlorophenol	ug/L		<8						
2,4-dimethylphenol	ug/L		<8						
2,4-dinitrophenol	ug/L		<8						
2,4-dinitrotoluene	ug/L		<8						
2,6-dichlorophenol	ug/L		<8						
2,6-dinitrotoluene	ug/L		<8						
2-acetylaminofluorene	ug/L		<8						
2-butanone	ug/L	<5	<5	<5		<5	<5	<5	<5
2-chloronaphthalene	ug/L		<8						
2-chlorophenol	ug/L		<8						
2-hexanone	ug/L	<5	<5	<5		<5	<5	<5	<5
2-methylnaphthalene	ug/L		<8						
2-methylphenol	ug/L		<8						
2-naphthylamine	ug/L		<8						
2-nitroaniline	ug/L		<8						
2-nitrophenol	ug/L		<8						
3,3'-dichlorobenzidine	ug/L		<8						
3,3'-dimethylbenzidine	ug/L		<8						
3-methylcholanthrene	ug/L		<8						
3-nitroaniline	ug/L		<8						
4,4'-ddd	ug/L		<.05						
4,4'-dde	ug/L		<.05						
4,4'-ddt	ug/L		<.05						
4,6-dinitro-2-methylphenol	ug/L		<8						
4-aminobiphenyl	ug/L		<8						
4-bromophenyl phenyl ether	ug/L		<8						
4-chloro-3-methylphenol	ug/L		<8						
4-chloroaniline	ug/L		<8						
4-chlorophenyl phenyl ether	ug/L		<8						
4-methyl-2-pentanone	ug/L	<5	<5	<5		<5	<5	<5	<5
4-nitroaniline	ug/L		<8						
4-nitrophenol	ug/L		<8						
5-nitro-o-toluidine	ug/L		<8						
7,12-dimethylbenz(a)anthracene	ug/L		<8						
Acenaphthene	ug/L		<8						
Acenaphthylene	ug/L		<8						
Acetone	ug/L	<10	<10	<10		<10	<10	<10	<10
Acetonitrile	ug/L		<10						
Acetophenone	ug/L		<8						
Acrolein	ug/L		<10						
Acrylonitrile	ug/L	<5	<5	<5		<5	<5	<5	<5
Aldrin	ug/L		<.05						
Allyl chloride	ug/L		<1						
Alpha-bhc	ug/L		<.05						
Anthracene	ug/L		<8						

* - The displayed value is the arithmetic mean of multiple database matches.

Table 6

Analytical Data Summary for MW-9

Constituents	10/18/2017	4/12/2018	10/23/2018	4/8/2019	10/4/2019	4/9/2020	10/1/2020	4/1/2021	10/4/2021
(3,4)-methylphenol					<8				
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene					<1				
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene					<8				
1,2,4-trichlorobenzene					<1				
1,2-dibromo-3-chloropropane	<1	<1	<1	<1	<1	<5	<5	<5	<5
1,2-dibromoethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene					<8				
1,3,5-trinitrobenzene					<8				
1,3-dichlorobenzene					<1				
1,3-dichloropropane					<1				
1,3-dinitrobenzene					<8				
1,4-dichlorobenzene	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1
1,4-naphthoquinone					<8				
1,4-phenylenediamine					<8				
1-naphthylamine					<8				
2,2-dichloropropane					<1				
2,3,4,6-tetrachlorophenol					<8				
2,4,5-t					<5				
2,4,5-tp (silvex)					<5				
2,4,5-trichlorophenol					<8				
2,4,6-trichlorophenol					<8				
2,4-d					<2				
2,4-dichlorophenol					<8				
2,4-dimethylphenol					<8				
2,4-dinitrophenol					<8				
2,4-dinitrotoluene					<8				
2,6-dichlorophenol					<8				
2,6-dinitrotoluene					<8				
2-acetylaminofluorene					<8				
2-butanone	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-chloronaphthalene					<8				
2-chlorophenol					<8				
2-hexanone	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene					<8				
2-methylphenol					<8				
2-naphthylamine					<8				
2-nitroaniline					<8				
2-nitrophenol					<8				
3,3'-dichlorobenzidine					<8				
3,3'-dimethylbenzidine					<8				
3-methylcholanthrene					<8				
3-nitroaniline					<8				
4,4'-ddd					<.05				
4,4'-dde					<.05				
4,4'-ddt					<.05				
4,6-dinitro-2-methylphenol					<8				
4-aminobiphenyl					<8				
4-bromophenyl phenyl ether					<8				
4-chloro-3-methylphenol					<8				
4-chloroaniline					<8				
4-chlorophenyl phenyl ether					<8				
4-methyl-2-pentanone	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline					<8				
4-nitrophenol					<8				
5-nitro-o-toluidine					<8				
7,12-dimethylbenz(a)anthracene					<8				
Acenaphthene					<8				
Acenaphthylene					<8				
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acetonitrile					<10				
Acetophenone					<8				
Acrolein					<10				
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin					<.05				
Allyl chloride					<1				
Alpha-bhc					<.05				
Anthracene					<8				

* - The displayed value is the arithmetic mean of multiple database matches.

Table 6

Analytical Data Summary for MW-9

Constituents	4/6/2022	10/4/2023	4/17/2024	4/3/2025	10/9/2025
(3,4)-methylphenol			<8		
1,1,1,2-tetrachloroethane	<1	<1	<1		<1
1,1,1-trichloroethane	<1	<1	<1		<1
1,1,2,2-tetrachloroethane	<1	<1	<1		<1
1,1,2-trichloroethane	<1	<1	<1		<1
1,1-dichloroethane	<1	<1	<1		<1
1,1-dichloroethene	<1	<1	<1		<1
1,1-dichloropropene			<1		
1,2,3-trichloropropane	<1	<1	<1		<1
1,2,4,5-tetrachlorobenzene			<8		
1,2,4-trichlorobenzene			<1		
1,2-dibromo-3-chloropropane	<5	<5	<1		<5
1,2-dibromoethane	<1	<1	<1		<1
1,2-dichlorobenzene	<1	<1	<1		<1
1,2-dichloroethane	<1	<1	<1		<1
1,2-dichloropropane	<1	<1	<1		<1
1,2-dinitrobenzene			<8		
1,3,5-trinitrobenzene			<8		
1,3-dichlorobenzene			<1		
1,3-dichloropropane			<1		
1,3-dinitrobenzene			<8		
1,4-dichlorobenzene	1.2	1.4	1.5		1.4
1,4-naphthoquinone			<8		
1,4-phenylenediamine			<8		
1-naphthylamine			<8		
2,2-dichloropropane			<1		
2,3,4,6-tetrachlorophenol			<8		
2,4,5-t			<.5		
2,4,5-tp (silvex)			<.5		
2,4,5-trichlorophenol			<8		
2,4,6-trichlorophenol			<8		
2,4-d			<2		
2,4-dichlorophenol			<8		
2,4-dimethylphenol			<8		
2,4-dinitrophenol			<8		
2,4-dinitrotoluene			<8		
2,6-dichlorophenol			<8		
2,6-dinitrotoluene			<8		
2-acetylaminofluorene			<8		
2-butanone	<10	<10	<5		<10
2-chloronaphthalene			<8		
2-chlorophenol			<8		
2-hexanone	<5	<5	<5		<5
2-methylnaphthalene			<8		
2-methylphenol			<8		
2-naphthylamine			<8		
2-nitroaniline			<8		
2-nitrophenol			<8		
3,3'-dichlorobenzidine			<8		
3,3'-dimethylbenzidine			<8		
3-methylcholanthrene			<8		
3-nitroaniline			<8		
4,4'-ddd			<.05		
4,4'-dde			<.05		
4,4'-ddt			<.05		
4,6-dinitro-2-methylphenol			<8		
4-aminobiphenyl			<8		
4-bromophenyl phenyl ether			<8		
4-chloro-3-methylphenol			<8		
4-chloroaniline			<8		
4-chlorophenyl phenyl ether			<8		
4-methyl-2-pentanone	<5	<5	<5		<5
4-nitroaniline			<8		
4-nitrophenol			<8		
5-nitro-o-toluidine			<8		
7,12-dimethylbenz(a)anthracene			<8		
Acenaphthene			<8		
Acenaphthylene			<8		
Acetone	<10	<10	<10		<10
Acetonitrile			<10		
Acetophenone			<8		
Acrolein			<10		
Acrylonitrile	<5	<5	<5		<5
Aldrin			<.05		
Allyl chloride			<1		
Alpha-bhc			<.05		
Anthracene			<8		

* - The displayed value is the arithmetic mean of multiple database matches.

Table 6

Analytical Data Summary for MW-9

Constituents	Units	4/24/2014	10/16/2014	4/1/2015	6/9/2015	10/2/2015	4/19/2016	10/10/2016	4/4/2017
Antimony, total	ug/L	<2	<2	<2		<2	<2	<2	<2
Arochlor 1016	ug/L		<.1						
Arochlor 1221	ug/L		<.2						
Arochlor 1232	ug/L		<.2						
Arochlor 1242	ug/L		<.2						
Arochlor 1248	ug/L		<.2						
Arochlor 1254	ug/L		<.1						
Arochlor 1260	ug/L		<.1						
Arsenic, total	ug/L	<4.0	5.4	<4.0		5.0	14.9	<4.0	<4.0
Azobenzene	ug/L		<8						
Barium, total	ug/L	522	651	742	789	862	932	652	917
Benzene	ug/L	1.4	<1.0	<1.0		<1.0	<1.0	<1.0	<1.0
Benzo(a)anthracene	ug/L		<8						
Benzo(a)pyrene	ug/L		<8						
Benzo(b)fluoranthene	ug/L		<8						
Benzo(g,h,i)perylene	ug/L		<8						
Benzo(k)fluoranthene	ug/L		<8						
Benzyl alcohol	ug/L		<8						
Beryllium, total	ug/L	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0
Beta-bhc	ug/L		<.05						
Bis (2-chloroethoxy) methane	ug/L		<8						
Bis(2-chloroethyl) ether	ug/L		<8						
Bis(2-chloroisopropyl) ether	ug/L		<8						
Bis(2-ethylhexyl) phthalate	ug/L	<10	<8	<10		<10	<10	<10	<10
Bromochloromethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1		<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Butyl benzyl phthalate	ug/L		<8						
Cadmium, total	ug/L	1.1	.9	<.8		<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1		<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1		<1	<1	<1	<1
Chlordane	ug/L		<.1						
Chlorobenzene	ug/L	6.2	3.8	<1.0		5.4	<1.0	5.9	2.6
Chlorobenzilate	ug/L		<8						
Chloroethane	ug/L	1.1	<1.0	<1.0		1.1	<1.0	<1.0	<1.0
Chloroform	ug/L	<1	<1	<1		<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Chloroprene	ug/L		<1						
Chromium, total	ug/L	<8.0	<8.0	<8.0		<8.0	<8.0	<8.0	<8.0
Chrysene	ug/L		<8						
Cis-1,2-dichloroethene	ug/L	<1	<1	<1		<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1		<1	<1	<1	<1
Cobalt, total	ug/L	<4.0	5.3	6.1		6.3	9.0	7.1	10.1
Copper, total	ug/L	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0
Cyanide, total	mg/L		<.005						
Delta-bhc	ug/L		<.05						
Diallate	ug/L		<8						
Dibenzo(a,h)anthracene	ug/L		<8						
Dibenzofuran	ug/L		<8						
Dibromochloromethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Dichlorodifluoromethane	ug/L		<1						
Dieldrin	ug/L		<.05						
Diethyl phthalate	ug/L		<8						
Dimethoate	ug/L		<.4	<.4		<.4			
Dimethylphthalate	ug/L		<8						
Di-n-butyl phthalate	ug/L		<8						
Di-n-octyl phthalate	ug/L		<8						
Dinoseb	ug/L		<.5						
Diphenylamine	ug/L		<8						
Disulfoton	ug/L		<.4	<.4		<.4			
Endosulfan i	ug/L		<.05						
Endosulfan ii	ug/L		<.05						
Endosulfan sulfate	ug/L		<.05						
Endrin	ug/L		<.05						
Endrin aldehyde	ug/L		<.05						
Ethyl methacrylate	ug/L		<10						
Ethyl methanesulfonate	ug/L		<8						
Ethylbenzene	ug/L	<1	<1	<1		<1	<1	<1	<1
Famphur	ug/L		<.4	<.4		<.4			
Fluoranthene	ug/L		<8						
Fluorene	ug/L		<8						
Gamma-bhc (lindane)	ug/L		<.05						
Heptachlor	ug/L		<.05						
Heptachlor epoxide	ug/L		<.05						
Hexachlorobenzene	ug/L		<.05						

* - The displayed value is the arithmetic mean of multiple database matches.

Table 6

Analytical Data Summary for MW-9

Constituents	10/18/2017	4/12/2018	10/23/2018	4/8/2019	10/4/2019	4/9/2020	10/1/2020	4/1/2021	10/4/2021
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arochlor 1016					<.1				
Arochlor 1221					<.2				
Arochlor 1232					<.2				
Arochlor 1242					<.2				
Arochlor 1248					<.2				
Arochlor 1254					<.1				
Arochlor 1260					<.1				
Arsenic, total	<4.0	4.5	<4.0	<4.0	5.4	<4.0	5.9	4.8	7.8
Azobenzene					<8				
Barium, total	638	691	721	717	616	707	630	839	773
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)anthracene					<8				
Benzo(a)pyrene					<8				
Benzo(b)fluoranthene					<8				
Benzo(g,h,i)perylene					<8				
Benzo(k)fluoranthene					<8				
Benzyl alcohol					<8				
Beryllium, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Beta-bhc					<.05				
Bis (2-chloroethoxy) methane					<8				
Bis(2-chloroethyl) ether					<8				
Bis(2-chloroisopropyl) ether					<8				
Bis(2-ethylhexyl) phthalate		<6	<6	<6	<6				
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate					<8				
Cadmium, total	.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlordane					<.1				
Chlorobenzene	3.9	<1.0	5.6	<1.0	2.4	1.4	3.0	3.6	5.4
Chlorobenzilate					<8				
Chloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene					<1				
Chromium, total	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Chrysene					<8				
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	5.8	5.9	4.8	5.1	6.2	6.6	4.0	6.6	5.6
Copper, total	<4.0	6.1	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide, total					<.005				
Delta-bhc					<.05				
Diallate					<8				
Dibenzo(a,h)anthracene					<8				
Dibenzofuran					<8				
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane					<1				
Dieldrin					<.05				
Diethyl phthalate					<8				
Dimethoate		<.4							
Dimethylphthalate					<8				
Di-n-butyl phthalate					<8				
Di-n-octyl phthalate					<8				
Dinoseb					<.5				
Diphenylamine					<8				
Disulfoton		<.4							
Endosulfan i					<.05				
Endosulfan ii					<.05				
Endosulfan sulfate					<.05				
Endrin					<.05				
Endrin aldehyde					<.05				
Ethyl methacrylate					<10				
Ethyl methanesulfonate					<8				
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur		<.4							
Fluoranthene					<8				
Fluorene					<8				
Gamma-bhc (lindane)					<.05				
Heptachlor					<.05				
Heptachlor epoxide					<.05				
Hexachlorobenzene					<.05				

* - The displayed value is the arithmetic mean of multiple database matches.

Table 6

Analytical Data Summary for MW-9

Constituents	4/6/2022	10/4/2023	4/17/2024	4/3/2025	10/9/2025
Antimony, total	<2	<2	<2		1
Arochlor 1016			<.2		
Arochlor 1221			<.2		
Arochlor 1232			<.2		
Arochlor 1242			<.2		
Arochlor 1248			<.2		
Arochlor 1254			<.2		
Arochlor 1260			<.2		
Arsenic, total	17.8	16.2	<4.0		6.3
Azobenzene			<8		
Barium, total	1120	855	965		796
Benzene	<1.0	<1.0	<1.0		<1.0
Benzo(a)anthracene			<8		
Benzo(a)pyrene			<8		
Benzo(b)fluoranthene			<8		
Benzo(g,h,i)perylene			<8		
Benzo(k)fluoranthene			<8		
Benzyl alcohol			<8		
Beryllium, total	<4.0	<4.0	<4.0		<.5
Beta-bhc			<.05		
Bis (2-chloroethoxy) methane			<8		
Bis(2-chloroethyl) ether			<8		
Bis(2-chloroisopropyl) ether			<8		
Bis(2-ethylhexyl) phthalate			8	<6	
Bromochloromethane	<1	<1	<1		<1
Bromodichloromethane	<1	<1	<1		<1
Bromoform	<1	<1	<1		<1
Bromomethane	<1	<1	<1		<1
Butyl benzyl phthalate			<8		
Cadmium, total	<.8	<.8	<.8		.2
Carbon disulfide	<1	<1	<1		<1
Carbon tetrachloride	<1	<1	<1		<1
Chlordane			<.1		
Chlorobenzene	4.4	3.6	1.4		4.8
Chlorobenzilate			<8		
Chloroethane	1.0	<1.0	<1.0		<1.0
Chloroform	<1	<1	<1		<1
Chloromethane	<1	<1	<1		<1
Chloroprene			<1		
Chromium, total	<8.0	<8.0	<8.0		1.6
Chrysene			<8		
Cis-1,2-dichloroethene	<1	<1	<1		<1
Cis-1,3-dichloropropene	<1	<1	<1		<1
Cobalt, total	8.5	4.4	10.8		6.7
Copper, total	<4.0	<4.0	<4.0		<5.0
Cyanide, total			<.005		
Delta-bhc			<.05		
Diallate			<8		
Dibenzo(a,h)anthracene			<8		
Dibenzofuran			<8		
Dibromochloromethane	<1	<1	<1		<1
Dibromomethane	<1	<1	<1		<1
Dichlorodifluoromethane			<1		
Dieldrin			<.05		
Diethyl phthalate			<8		
Dimethoate			<.4		
Dimethylphthalate			<8		
Di-n-butyl phthalate			<8		
Di-n-octyl phthalate			<8		
Dinoseb			<.5		
Diphenylamine			<8		
Disulfoton			<.4		
Endosulfan i			<.05		
Endosulfan ii			<.05		
Endosulfan sulfate			<.05		
Endrin			<.05		
Endrin aldehyde			<.05		
Ethyl methacrylate			<10		
Ethyl methanesulfonate			<8		
Ethylbenzene	<1	<1	<1		<1
Famphur			<.4		
Fluoranthene			<8		
Fluorene			<8		
Gamma-bhc (lindane)			<.05		
Heptachlor			<.05		
Heptachlor epoxide			<.05		
Hexachlorobenzene			<.05		

* - The displayed value is the arithmetic mean of multiple database matches.

Table 6

Analytical Data Summary for MW-9

Constituents	Units	4/24/2014	10/16/2014	4/1/2015	6/9/2015	10/2/2015	4/19/2016	10/10/2016	4/4/2017
Hexachlorobutadiene	ug/L		<8						
Hexachlorocyclopentadiene	ug/L		<8						
Hexachloroethane	ug/L		<8						
Hexachloropropene	ug/L		<8						
Indeno(1,2,3-cd)pyrene	ug/L		<8						
Isobutanol	mg/L		<1						
Isodrin	ug/L		<8						
Isophorone	ug/L		<8						
Isosafrole	ug/L		<8						
Kepone	ug/L		<8						
Lead, total	ug/L	<4	<4	<4		<4	<4	<4	<4
Mercury, total	ug/L		<.5						
Methacrylonitrile	ug/L		<1						
Methapyrilene	ug/L		<8						
Methoxychlor	ug/L		<.05						
Methyl iodide	ug/L	<1	<1	<1		<1	<1	<1	<1
Methyl methacrylate	ug/L		<1						
Methyl methanesulfonate	ug/L		<8						
Methyl parathion	ug/L		<.4	<.4		<.4			
Methylene chloride	ug/L	<5	<5	<5		<5	<5	<5	<5
Naphthalene	ug/L		<8						
Nickel, total	ug/L	16.7	23.4	24.0		53.1	32.2	26.9	32.4
Nitrobenzene	ug/L		<8						
N-nitrosodiethylamine	ug/L		<8						
N-nitrosodimethylamine	ug/L		<8						
N-nitrosodi-n-butylamine	ug/L		<8						
N-nitroso-di-n-propylamine	ug/L		<8						
N-nitrosodiphenylamine	ug/L		<8						
N-nitrosomethylethylamine	ug/L		<8						
N-nitrosopiperidine	ug/L		<8						
N-nitrosopyrrolidine	ug/L		<8						
O,o,o-triethyl phosphorothioate	ug/L		<.4	<.4		<.4			
O-toluidine	ug/L		<8						
Parathion	ug/L		<.4	<.4		<.4			
P-dimethylaminoazobenzene	ug/L		<8						
Pentachlorobenzene	ug/L		<8						
Pentachloronitrobenzene (pcnb)	ug/L		<8						
Pentachlorophenol	ug/L		<8						
Phenacetin	ug/L		<8						
Phenanthrene	ug/L		<8						
Phenol	ug/L		<8						
Phorate	ug/L		3.0	<.4		1.2	<.4	2.5	1.5
Pronamide	ug/L		<8						
Propionitrile	ug/L		<10						
Pyrene	ug/L		<8						
Safrole	ug/L		<8						
Selenium, total	ug/L	<4	<4	<4		<4	<4	<4	<4
Silver, total	ug/L	<4	<4	<4		<4	<4	<4	<4
Solids, total suspended	mg/L		35	43					
Styrene	ug/L	<1	<1	<1		<1	<1	<1	<1
Sulfide, total	mg/L		<.10						
Tetrachloroethene	ug/L	<1	<1	<1		<1	<1	<1	<1
Thallium, total	ug/L	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0
Thionazin	ug/L		<.4	<.4		<.4			
Tin, total	ug/L		<20						
Toluene	ug/L	<1	<1	<1		<1	<1	<1	<1
Toxaphene	ug/L		<.2						
Trans-1,2-dichloroethene	ug/L	<1	<1	<1		<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1		<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5		<5	<5	<5	<5
Trichloroethene	ug/L	<1	<1	<1		<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1		<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20		<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5		<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1		<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2		<2	<2	<2	<2
Zinc, total	ug/L	<8.0	13.2	<8.0		<8.0	12.5	<8.0	<8.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 6

Analytical Data Summary for MW-9

Constituents	10/18/2017	4/12/2018	10/23/2018	4/8/2019	10/4/2019	4/9/2020	10/1/2020	4/1/2021	10/4/2021
Hexachlorobutadiene					<8				
Hexachlorocyclopentadiene					<8				
Hexachloroethane					<8				
Hexachloropropene					<8				
Indeno(1,2,3-cd)pyrene					<8				
Isobutanol					<1				
Isodrin					<8				
Isophorone					<8				
Isosafrole					<8				
Kepone					<8				
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Mercury, total					<.5				
Methacrylonitrile					<1				
Methapyrene					<8				
Methoxychlor					<.05				
Methyl iodide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl methacrylate					<1				
Methyl methanesulfonate					<8				
Methyl parathion		<.4							
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene					<8				
Nickel, total	25.2	25.8	23.7	24.7	20.3	22.8	17.1	22.5	21.9
Nitrobenzene					<8				
N-nitrosodiethylamine					<8				
N-nitrosodimethylamine					<8				
N-nitrosodi-n-butylamine					<8				
N-nitroso-di-n-propylamine					<8				
N-nitrosodiphenylamine					<8				
N-nitrosomethylethylamine					<8				
N-nitrosopiperidine					<8				
N-nitrosopyrrolidine					<8				
O,o,o-triethyl phosphorothioate		<.4							
O-toluidine					<8				
Parathion		<.4							
P-dimethylaminoazobenzene					<8				
Pentachlorobenzene					<8				
Pentachloronitrobenzene (pcnb)					<8				
Pentachlorophenol					<8				
Phenacetin					<8				
Phenanthrene					<8				
Phenol					<8				
Phorate	<.4	<.4	<.4	<.4	<.4				
Pronamide					<8				
Propionitrile					<10				
Pyrene					<8				
Safrole					<8				
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Solids, total suspended									
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total					<.10				
Tetrachloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4.0	<4.0	<4.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Thionazin		<.4			<.4				
Tin, total					<20				
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toxaphene					<.2				
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20	<20	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	8.3	<8.0	25.6	21.8	20.0	<20.0	<20.0	<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 6

Analytical Data Summary for MW-9

Constituents	4/6/2022	10/4/2023	4/17/2024	4/3/2025	10/9/2025
Hexachlorobutadiene			<8		
Hexachlorocyclopentadiene			<8		
Hexachloroethane			<8		
Hexachloropropene			<8		
Indeno(1,2,3-cd)pyrene			<8		
Isobutanol			<1		
Isodrin			<8		
Isophorone			<8		
Isosafrole			<8		
Kepone			<8		
Lead, total	<4	<4	<4		<1
Mercury, total			<.5		
Methacrylonitrile			<1		
Methapyrene			<8		
Methoxychlor			<.05		
Methyl iodide	<1	<1	<2		<1
Methyl methacrylate			<1		
Methyl methanesulfonate			<8		
Methyl parathion			<.4		
Methylene chloride	<5	<5	<5		<5
Naphthalene			<8		
Nickel, total	30.9	19.1	46.2		26.4
Nitrobenzene			<8		
N-nitrosodiethylamine			<8		
N-nitrosodimethylamine			<8		
N-nitrosodi-n-butylamine			<8		
N-nitroso-di-n-propylamine			<8		
N-nitrosodiphenylamine			<8		
N-nitrosomethylethylamine			<8		
N-nitrosopiperidine			<8		
N-nitrosopyrrolidine			<8		
O,o,o-triethyl phosphorothioate			<.4		
O-toluidine			<8		
Parathion			<.4		
P-dimethylaminoazobenzene			<8		
Pentachlorobenzene			<8		
Pentachloronitrobenzene (pcnb)			<8		
Pentachlorophenol			<8		
Phenacetin			<8		
Phenanthrene			<8		
Phenol			<8		
Phorate			<.4		
Pronamide			<8		
Propionitrile			<10		
Pyrene			<8		
Safrole			<8		
Selenium, total	<4	<4	<4		<2
Silver, total	<4	<4	<4		<5
Solids, total suspended					
Styrene	<1	<1	<1		<1
Sulfide, total			<.15		
Tetrachloroethene	<1	<1	<1		<1
Thallium, total	<2.0	<2.0	<2.0		<.5
Thionazin			<.4		
Tin, total			<20		
Toluene	<1	<1	<1		<1
Toxaphene			<.2		
Trans-1,2-dichloroethene	<1	<1	<1		<1
Trans-1,3-dichloropropene	<1	<1	<1		<1
Trans-1,4-dichloro-2-butene	<5	<5	<5		<5
Trichloroethene	<1	<1	<1		<1
Trichlorofluoromethane	<1	<1	<1		<1
Vanadium, total	<20	<20	<20		<2
Vinyl acetate	<5	<5	<5		<5
Vinyl chloride	<1	<1	<1		<1
Xylenes, total	<2	<2	<2		<2
Zinc, total	<20.0	<20.0	<20.0		8.3

* - The displayed value is the arithmetic mean of multiple database matches.

Appendix D

Statistical Reports

Appendix D.1 –Statistical Evaluation Report

GROUND WATER STATISTICS
FOR GRUNDY COUNTY LANDFILL

Annual Monitoring Event in 2025

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INTRODUCTION

This report summarizes the results of the statistical analysis used to evaluate the ground water quality data obtained during the annual monitoring event in 2025 at Grundy County Landfill in Grundy Center, Iowa. The statistical plan was designed to detect a release from the facility at the earliest indication so that it is protective of human health and the environment. The interwell methodology is described and then applied to the Grundy County Landfill data. The statistical plan conforms with IAC 567, Chapter 113.10, USEPA Guidance document (“*Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance*”, March 2009), and the American Society for Testing and Materials (ASTM) standard D6312-98, *Developing Appropriate Statistical Approaches for Ground-Water Detection Monitoring Programs*.

Ground Water Monitoring Program

The groundwater monitoring network for Grundy County Landfill includes upgradient wells MW-15A and MW-18 and downgradient detection sample points MW-11, MW-13, MW-14, and MW-9. Each of the groundwater monitoring wells is to be sampled for now annually and analyzed for the detection monitoring parameters listed in 113.10(5), which includes 15 inorganic constituents and 47 organic compounds, summarized in Table 1 below.

Table 1: Detection monitoring constituents listed in Appendix I of IAC 567, Chapter 113.

Organic Compounds:

Acetone	<i>trans</i> -1,4-Dichloro-2-butene	Iodomethane
Acrylonitrile	1,1-Dichloroethane	4-Methyl-2-pentanone
Benzene	1,2-Dichloroethane	Styrene
Bromochloromethane	1,1-Dichloroethene	1,1,1,2-Tetrachloroethane
Bromodichloromethane	<i>cis</i> -1,2-Dichloroethene	1,1,2,2-Tetrachloroethane
Bromoform	<i>trans</i> -1,2-Dichloroethene	Tetrachloroethene
Carbon disulfide	1,2-Dichloropropane	Toluene
Carbon tetrachloride	<i>cis</i> -1,3-Dichloropropene	1,1,1-Trichloroethane
Chlorobenzene	<i>trans</i> -1,3-Dichloropropene	1,1,2-Trichloroethane
Chloroethane	Ethylbenzene	Trichloroethene
Chloroform	2-Hexanone	Trichlorofluoromethane
Dibromochloromethane	Bromomethane	1,2,3-Trichloropropane
1,2-Dibromo-3-chloropropane	Chloromethane	Vinyl acetate
1,2-Dibromoethane	Dibromomethane	Vinyl chloride
1,2-Dichlorobenzene	Methylene chloride	Xylenes (Total)
1,4-Dichlorobenzene	2-Butanone	

Inorganic constituents:

Antimony, Total	Chromium, Total	Selenium, Total
Arsenic, Total	Cobalt, Total	Silver, Total
Barium, Total	Copper, Total	Thallium, Total
Beryllium, Total	Lead, Total	Vanadium, Total
Cadmium, Total	Nickel, Total	Zinc, Total

The ground water data obtained during the annual monitoring event in 2025 are summarized in Attachment A.

STATISTICAL METHODOLOGIES FOR DETECTION MONITORING

IAC 567, Chapter 113.10(4) provides several options for statistically evaluating the ground water data at those wells that monitor the open cells or contiguous MSWLF units. The preferred methods for comparing ground water data are using either prediction limits or using control charts. The prediction limit method was applied to the Grundy County Landfill data using the DUMPStat[®] statistical program. Ground water statistics are to be done on the inorganic constituents listed. The organic constituents are compared to maximum contaminant levels (MCLs) or practical quantitation limits (PQLs), in lieu of statistical comparisons to historical concentrations.

Interwell Statistics: Upgradient versus Downgradient Comparisons

Interwell statistics are appropriate when the upgradient and downgradient wells monitor the same ground water formation and there is similar variability in the upgradient and downgradient zones. Site prediction limits are determined by pooling the historical ground water data from hydraulically upgradient wells. This statistical method compares the current downgradient determinations to site prediction limits and checks for exceedances. The type of prediction limit utilized (e.g., parametric or nonparametric) is based on the detection frequency and the data distribution of each parameter in the background data. The distribution of the background data is tested for normality using the Shapiro-Wilk test (Gibbons, 1994 and USEPA 1992). If the constituent is normally distributed, a normal prediction limit is used. If normality is rejected by the Shapiro-Wilk test, the background data is transformed by taking the natural logarithm. The Shapiro-Wilk test is then reapplied on the transformed data. If it is not rejected, lognormal prediction limits are used. If after transforming the data, normality is still rejected, nonparametric prediction limits are used for that analyte. The nonparametric prediction limit is the largest determination in the background measurements. For constituents where the background detection frequency is greater than 0% but less than 50%, nonparametric prediction limits will be used. If the detection frequency is 0% after thirteen samples have been collected, the practical quantitation limit (PQL) becomes the nonparametric prediction limit.

Results of the Interwell Statistics

The background data used in this statistical analysis includes the ground water data collected from ground water wells MW-15A and MW-18 during the period from October 2014 through the current data. A summary of the background data from monitoring wells MW-15A and MW-18 used to determine the site prediction limits, is listed in Attachment B, Table 1 “Upgradient Data”. This statistical method compares the current downgradient determinations to site prediction limits and checks for exceedances.

Table 2 “Most Current Downgradient Monitoring Data”, summarizes the current data from downgradient wells MW-11, MW-13, MW-14, and MW-9, compared to the site prediction limits. Prediction limit exceedances are flagged with asterisks. For the most current data, the site prediction limit exceedances detected are summarized in the Table below.

Summary of Prediction Limit Exceedances for the Annual Monitoring Event in 2025

Well	Trace Metal	Result	Prediction Limit	Prediction Limit Type	Verified or Awaiting Verification
MW-13	Barium, µg/L	584	297.9828	Normal	Verified
	Cobalt, µg/L	18.8	11.6000	Nonparametric	Awaiting Verification
	Nickel, µg/L	151	10.9000	Nonparametric	Verified
MW-14	Arsenic, µg/L	4.8	4.0000	Nonparametric	Awaiting Verification
	Barium, µg/L	949	297.9828	Normal	Verified
	Copper, µg/L	6.6	4.1000	Nonparametric	Awaiting Verification
	Nickel, µg/L	64.2	10.9000	Nonparametric	Verified
MW-9	Arsenic, µg/L	6.3	4.0000	Nonparametric	Awaiting Verification
	Barium, µg/L	796	297.9828	Normal	Verified
	Nickel, µg/L	26.4	10.9000	Nonparametric	Verified

The detection frequencies of the parameters in the up and down gradient monitoring wells are summarized in Table 3. For detection frequencies less than 50%, nonparametric site prediction limits are used for those trace metals.

Table 4 summarizes the results of the Shapiro-Wilk test. Table 5 is a summary of the statistics and prediction limits determined for the metals. Time series graphs of each of the parameters at each well with the corresponding prediction limits are attached.

A statistical power curve indicates the expected false assessments for the site as a whole. The false positive rate for interwell analyses is the percentage of failures when the upgradient versus downgradient true mean difference equals zero. False negative rate indicates the chance of missing contamination at a single well for a single constituent. The statistical power is a function of the number of wells included, the number of constituents compared, the detection frequencies, and the data distributions involved. For interwell analysis, the site-wide false positive rate is 2% and the test becomes sensitive to 3 standard deviation unit increases over background.

The verified exceedances and metals previously detected were evaluated against the ground water protection standards (GWPS) using confidence limits (Attachment C). The 95% lower confidence limit (LCL) for the mean of the historical data was used to evaluate whether the regulated unit is in compliance with the ground-water protection standards under 40 CFR 264 (e.g. whether the verified constituent is detected at a significant level above the GWPS). An exceedance is verified if the LCL is above the Regulatory GWPS.

The 95% LCL for cobalt at MW-13 (4.052 µg/L) exceeds the Iowa Statewide Standard of 2.1 µg/L.

The 95% LCL for cobalt at MW-9 (4.407 µg/L) exceeds the Iowa Statewide Standard of 2.1 µg/L, however the current concentration (6.7 µg/L) is less than the site prediction limit of 11.6 µg/L.

The calculated LCLs for the remainder of the verified trace metals are below GWPS.

Volatile Organic Compounds

Volatile Organic Compounds (VOCs) are generally man-made compounds not present in ambient ground water. If VOCs are detected above their statistical limit (i.e., the laboratory PQL or reporting limit), a verification resample will be conducted at the next scheduled sampling event. A statistical exceedance will be indicated if the VOC detection is confirmed by the subsequent monitoring. VOCs detected in the ground water at Grundy County Landfill during the annual monitoring event in 2025 are summarized below. Historical VOC detections are summarized in Attachment D.

Organic compounds detected during the annual monitoring event in 2025

Well	VOC Detected	Result, µg/L	Reporting Limit, µg/L	Verified/ Awaiting Verification	Groundwater Standard, µg/L
MW-13	1,4-Dichlorobenzene	5.4	1	Verified	75 ^a
	Chlorobenzene	2.9	1	Verified	100 ^a
	Chloroethane	1.3	1	Verified	2800 ^b
MW-14	1,4-Dichlorobenzene	1.3	1	Awaiting Verification	75 ^a
	Benzene	1.8	1	Awaiting Verification	5 ^a
	Chlorobenzene	10.9	1	Awaiting Verification	100 ^a
MW-9	1,4-Dichlorobenzene	1.4	1	Verified	75 ^a
	Chlorobenzene	4.8	1	Verified	100 ^a

a - USEPA MCL

b – Iowa Statewide Standard

1,4-Dichlorobenzene was previously detected at MW-14 in April 2022. Benzene was previously detected at MW-14 in October 2020. Chlorobenzene was previously detected at MW-14 in April 2022. The verified VOC detections were evaluated against the GWPS using confidence limits (Attachment E). The calculated LCLs for each of the VOCs are below GWPS.

CONCLUSIONS

This report summarizes the statistical analyses used to evaluate the ground water data obtained during the annual monitoring event in 2025 at Grundy County Landfill. The ground water data obtained during the annual monitoring event in 2025 was compared to background using prediction limits (interwell). For the most current data, there are verified site prediction limit exceedances detected for barium and nickel at MW-13, barium and nickel at MW-14, and barium, and nickel at MW-9.

The VOCs were compared to MCLs or PQLs, in lieu of statistical comparisons to historical concentrations. There are verified detections of 1,4-dichlorobenzene, chlorobenzene, and chloroethane at MW-13 and 1,4-dichlorobenzene and chlorobenzene at MW-9. The VOCs did not exceed GWPS.

Attachment A

Summary of the Data obtained during the Annual Monitoring Event in 2025

Table 1

Analytical Data Summary for 10/9/2025

Constituents	Units	MW-11	MW-13	MW-14	MW-15A	MW-9
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1
1,1-dichloroethene	ug/L	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<5	<5	<5	<5	<5
1,2-dibromoethane	ug/L	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1
1,2-dichloropropene	ug/L	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	<1.0	5.4	1.3	<1.0	1.4
2-butanone	ug/L	<10	<10	<10	<10	<10
2-hexanone	ug/L	<5	<5	<5	<5	<5
4-methyl-2-pentanone	ug/L	<5	<5	<5	<5	<5
Acetone	ug/L	<10	<10	<10	<10	<10
Acrylonitrile	ug/L	<5	<5	<5	<5	<5
Antimony, total	ug/L	1	1	1	1	1
Arsenic, total	ug/L	<2.0	<2.0	4.8	<2.0	6.3
Barium, total	ug/L	192	584	949	217	796
Benzene	ug/L	<1.0	<1.0	1.8	<1.0	<1.0
Beryllium, total	ug/L	<.5	<.5	<.5	<.5	<.5
Bromochloromethane	ug/L	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1
Cadmium, total	ug/L	.6	.2	.5	.2	.2
Carbon disulfide	ug/L	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<1.0	2.9	10.9	<1.0	4.8
Chloroethane	ug/L	<1.0	1.3	<1.0	<1.0	<1.0
Chloroform	ug/L	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1
Chromium, total	ug/L	1.0	1.1	1.8	1.5	1.6
Cis-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1
Cobalt, total	ug/L	5.0	18.8	5.1	<.5	6.7
Copper, total	ug/L	<5.0	<5.0	6.6	<5.0	<5.0
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1
Lead, total	ug/L	<1.0	<1.0	1.2	<1.0	<1.0
Methyl iodide	ug/L	<1	<1	<1	<1	<1
Methylene chloride	ug/L	<5	<5	<5	<5	<5
Nickel, total	ug/L	8.7	151.0	64.2	<5.0	26.4
Selenium, total	ug/L	<2	<2	<2	<2	<2
Silver, total	ug/L	<5	<5	<5	<5	<5
Styrene	ug/L	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1
Thallium, total	ug/L	<.5	<.5	<.5	<.5	<.5
Toluene	ug/L	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5
Trichloroethene	ug/L	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<2.0	<2.0	4.7	<2.0	<2.0
Vinyl acetate	ug/L	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2
Zinc, total	ug/L	<5.0	<5.0	6.8	6.4	8.3

* - The displayed value is the arithmetic mean of multiple database matches.

Attachment B

Summary Tables and Graphs for the Interwell Comparisons

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Antimony, total	ug/L	MW-15A	10/15/2014	ND	2.0000		
Antimony, total	ug/L	MW-15A	01/08/2015	ND	2.0000		
Antimony, total	ug/L	MW-15A	04/01/2015	ND	2.0000		
Antimony, total	ug/L	MW-15A	06/09/2015	ND	2.0000		
Antimony, total	ug/L	MW-15A	10/02/2015	ND	2.0000		
Antimony, total	ug/L	MW-15A	04/19/2016	ND	2.0000		
Antimony, total	ug/L	MW-15A	10/10/2016	ND	2.0000		
Antimony, total	ug/L	MW-15A	04/04/2017	ND	2.0000		
Antimony, total	ug/L	MW-15A	10/18/2017	ND	2.0000		
Antimony, total	ug/L	MW-15A	04/12/2018	ND	2.0000		
Antimony, total	ug/L	MW-15A	10/23/2018		2.8000		
Antimony, total	ug/L	MW-15A	04/08/2019	ND	2.0000		
Antimony, total	ug/L	MW-15A	10/04/2019	ND	2.0000		
Antimony, total	ug/L	MW-15A	04/09/2020	ND	2.0000		
Antimony, total	ug/L	MW-15A	10/01/2020	ND	2.0000		
Antimony, total	ug/L	MW-15A	04/01/2021	ND	2.0000		
Antimony, total	ug/L	MW-15A	10/04/2021	ND	2.0000		
Antimony, total	ug/L	MW-15A	04/06/2022	ND	2.0000		
Antimony, total	ug/L	MW-15A	10/04/2023	ND	2.0000		
Antimony, total	ug/L	MW-15A	04/17/2024	ND	2.0000		
Antimony, total	ug/L	MW-15A	10/09/2025		1.0000		
Arsenic, total	ug/L	MW-15A	10/15/2014	ND	4.0000		
Arsenic, total	ug/L	MW-15A	01/08/2015	ND	4.0000		
Arsenic, total	ug/L	MW-15A	04/01/2015	ND	4.0000		
Arsenic, total	ug/L	MW-15A	06/09/2015	ND	4.0000		
Arsenic, total	ug/L	MW-15A	10/02/2015	ND	4.0000		
Arsenic, total	ug/L	MW-15A	04/19/2016	ND	4.0000		
Arsenic, total	ug/L	MW-15A	10/10/2016	ND	4.0000		
Arsenic, total	ug/L	MW-15A	04/04/2017	ND	4.0000		
Arsenic, total	ug/L	MW-15A	10/18/2017	ND	4.0000		
Arsenic, total	ug/L	MW-15A	04/12/2018	ND	4.0000		
Arsenic, total	ug/L	MW-15A	10/23/2018	ND	4.0000		
Arsenic, total	ug/L	MW-15A	04/08/2019	ND	4.0000		
Arsenic, total	ug/L	MW-15A	10/04/2019	ND	4.0000		
Arsenic, total	ug/L	MW-15A	04/09/2020	ND	4.0000		
Arsenic, total	ug/L	MW-15A	10/01/2020	ND	4.0000		
Arsenic, total	ug/L	MW-15A	04/01/2021	ND	4.0000		
Arsenic, total	ug/L	MW-15A	10/04/2021	ND	4.0000		
Arsenic, total	ug/L	MW-15A	04/06/2022	ND	4.0000		
Arsenic, total	ug/L	MW-15A	10/04/2023	ND	4.0000		
Arsenic, total	ug/L	MW-15A	04/17/2024	ND	4.0000		
Arsenic, total	ug/L	MW-15A	10/09/2025	ND	2.0000	4.0000	**
Barium, total	ug/L	MW-15A	10/15/2014		210.0000		
Barium, total	ug/L	MW-15A	01/08/2015		154.0000		
Barium, total	ug/L	MW-15A	04/01/2015		99.4000		
Barium, total	ug/L	MW-15A	06/09/2015		157.0000		
Barium, total	ug/L	MW-15A	10/02/2015		243.0000		
Barium, total	ug/L	MW-15A	04/19/2016		185.0000		
Barium, total	ug/L	MW-15A	10/10/2016		237.0000		
Barium, total	ug/L	MW-15A	04/04/2017		199.0000		
Barium, total	ug/L	MW-15A	10/18/2017		249.0000		
Barium, total	ug/L	MW-15A	04/12/2018		190.0000		
Barium, total	ug/L	MW-15A	10/23/2018		239.0000		
Barium, total	ug/L	MW-15A	04/08/2019		212.0000		
Barium, total	ug/L	MW-15A	10/04/2019		270.0000		
Barium, total	ug/L	MW-15A	04/09/2020		205.0000		
Barium, total	ug/L	MW-15A	10/01/2020		225.0000		
Barium, total	ug/L	MW-15A	04/01/2021		154.0000		
Barium, total	ug/L	MW-15A	10/04/2021		202.0000		
Barium, total	ug/L	MW-15A	04/06/2022		289.0000		
Barium, total	ug/L	MW-15A	10/04/2023		166.0000		
Barium, total	ug/L	MW-15A	04/17/2024		73.0000		
Barium, total	ug/L	MW-15A	10/09/2025		217.0000		
Beryllium, total	ug/L	MW-15A	10/15/2014	ND	4.0000		
Beryllium, total	ug/L	MW-15A	01/08/2015	ND	4.0000		
Beryllium, total	ug/L	MW-15A	04/01/2015	ND	4.0000		
Beryllium, total	ug/L	MW-15A	06/09/2015	ND	4.0000		
Beryllium, total	ug/L	MW-15A	10/02/2015	ND	4.0000		
Beryllium, total	ug/L	MW-15A	04/19/2016	ND	4.0000		
Beryllium, total	ug/L	MW-15A	10/10/2016	ND	4.0000		
Beryllium, total	ug/L	MW-15A	04/04/2017	ND	4.0000		
Beryllium, total	ug/L	MW-15A	10/18/2017	ND	4.0000		
Beryllium, total	ug/L	MW-15A	04/12/2018	ND	4.0000		
Beryllium, total	ug/L	MW-15A	10/23/2018	ND	4.0000		

* - Outlier for that well and constituent.
 ** - ND value replaced with median RL.
 *** - ND value replaced with manual RL.
 ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Beryllium, total	ug/L	MW-15A	04/08/2019	ND	4.0000		
Beryllium, total	ug/L	MW-15A	10/04/2019	ND	4.0000		
Beryllium, total	ug/L	MW-15A	04/09/2020	ND	4.0000		
Beryllium, total	ug/L	MW-15A	10/01/2020	ND	4.0000		
Beryllium, total	ug/L	MW-15A	04/01/2021	ND	4.0000		
Beryllium, total	ug/L	MW-15A	10/04/2021	ND	4.0000		
Beryllium, total	ug/L	MW-15A	04/06/2022	ND	4.0000		
Beryllium, total	ug/L	MW-15A	10/04/2023	ND	4.0000		
Beryllium, total	ug/L	MW-15A	04/17/2024	ND	4.0000		
Beryllium, total	ug/L	MW-15A	10/09/2025	ND	0.5000	4.0000	**
Cadmium, total	ug/L	MW-15A	10/15/2014	ND	0.8000		
Cadmium, total	ug/L	MW-15A	01/08/2015	ND	0.8000		
Cadmium, total	ug/L	MW-15A	04/01/2015	ND	0.8000		
Cadmium, total	ug/L	MW-15A	06/09/2015	ND	0.8000		
Cadmium, total	ug/L	MW-15A	10/02/2015	ND	0.8000		
Cadmium, total	ug/L	MW-15A	04/19/2016	ND	0.8000		
Cadmium, total	ug/L	MW-15A	10/10/2016	ND	0.8000		
Cadmium, total	ug/L	MW-15A	04/04/2017		1.3000		
Cadmium, total	ug/L	MW-15A	10/18/2017	ND	0.8000		
Cadmium, total	ug/L	MW-15A	04/12/2018	ND	0.8000		
Cadmium, total	ug/L	MW-15A	10/23/2018	ND	0.8000		
Cadmium, total	ug/L	MW-15A	04/08/2019	ND	0.8000		
Cadmium, total	ug/L	MW-15A	10/04/2019	ND	0.8000		
Cadmium, total	ug/L	MW-15A	04/09/2020	ND	0.8000		
Cadmium, total	ug/L	MW-15A	10/01/2020	ND	0.8000		
Cadmium, total	ug/L	MW-15A	04/01/2021	ND	0.8000		
Cadmium, total	ug/L	MW-15A	10/04/2021	ND	0.8000		
Cadmium, total	ug/L	MW-15A	04/06/2022	ND	0.8000		
Cadmium, total	ug/L	MW-15A	10/04/2023	ND	0.8000		
Cadmium, total	ug/L	MW-15A	04/17/2024	ND	0.8000		
Cadmium, total	ug/L	MW-15A	10/09/2025		0.2000		
Chromium, total	ug/L	MW-15A	10/15/2014	ND	8.0000		
Chromium, total	ug/L	MW-15A	01/08/2015	ND	8.0000		
Chromium, total	ug/L	MW-15A	04/01/2015	ND	8.0000		
Chromium, total	ug/L	MW-15A	06/09/2015	ND	8.0000		
Chromium, total	ug/L	MW-15A	10/02/2015	ND	8.0000		
Chromium, total	ug/L	MW-15A	04/19/2016	ND	8.0000		
Chromium, total	ug/L	MW-15A	10/10/2016	ND	8.0000		
Chromium, total	ug/L	MW-15A	04/04/2017	ND	8.0000		
Chromium, total	ug/L	MW-15A	10/18/2017	ND	8.0000		
Chromium, total	ug/L	MW-15A	04/12/2018	ND	8.0000		
Chromium, total	ug/L	MW-15A	10/23/2018	ND	8.0000		
Chromium, total	ug/L	MW-15A	04/08/2019	ND	8.0000		
Chromium, total	ug/L	MW-15A	10/04/2019	ND	8.0000		
Chromium, total	ug/L	MW-15A	04/09/2020	ND	8.0000		
Chromium, total	ug/L	MW-15A	10/01/2020	ND	8.0000		
Chromium, total	ug/L	MW-15A	04/01/2021	ND	8.0000		
Chromium, total	ug/L	MW-15A	10/04/2021	ND	8.0000		
Chromium, total	ug/L	MW-15A	04/06/2022	ND	8.0000		
Chromium, total	ug/L	MW-15A	10/04/2023	ND	8.0000		
Chromium, total	ug/L	MW-15A	04/17/2024	ND	8.0000		
Chromium, total	ug/L	MW-15A	10/09/2025		1.5000		
Cobalt, total	ug/L	MW-15A	10/15/2014	ND	0.8000		
Cobalt, total	ug/L	MW-15A	01/08/2015	ND	0.8000		
Cobalt, total	ug/L	MW-15A	04/01/2015	ND	0.8000		
Cobalt, total	ug/L	MW-15A	06/09/2015	ND	0.8000		
Cobalt, total	ug/L	MW-15A	10/02/2015	ND	0.8000		
Cobalt, total	ug/L	MW-15A	04/19/2016	ND	0.8000		
Cobalt, total	ug/L	MW-15A	10/10/2016	ND	0.8000		
Cobalt, total	ug/L	MW-15A	04/04/2017	ND	0.8000		
Cobalt, total	ug/L	MW-15A	10/18/2017	ND	0.8000		
Cobalt, total	ug/L	MW-15A	04/12/2018	ND	0.8000		
Cobalt, total	ug/L	MW-15A	10/23/2018	ND	0.8000		
Cobalt, total	ug/L	MW-15A	04/08/2019	ND	0.8000		
Cobalt, total	ug/L	MW-15A	10/04/2019	ND	0.8000		
Cobalt, total	ug/L	MW-15A	04/09/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-15A	10/01/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-15A	04/01/2021		0.5000		
Cobalt, total	ug/L	MW-15A	10/04/2021		1.7000		
Cobalt, total	ug/L	MW-15A	04/06/2022		4.7000		
Cobalt, total	ug/L	MW-15A	10/04/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-15A	04/17/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-15A	10/09/2025	ND	0.5000	0.8000	**
Copper, total	ug/L	MW-15A	10/15/2014	ND	4.0000		

* - Outlier for that well and constituent.
 ** - ND value replaced with median RL.
 *** - ND value replaced with manual RL.
 ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Copper, total	ug/L	MW-15A	01/08/2015	ND	4.0000		
Copper, total	ug/L	MW-15A	04/01/2015	ND	4.0000		
Copper, total	ug/L	MW-15A	06/09/2015	ND	4.0000		
Copper, total	ug/L	MW-15A	10/02/2015	ND	4.0000		
Copper, total	ug/L	MW-15A	04/19/2016	ND	4.0000		
Copper, total	ug/L	MW-15A	10/10/2016	ND	4.0000		
Copper, total	ug/L	MW-15A	04/04/2017	ND	4.0000		
Copper, total	ug/L	MW-15A	10/18/2017	ND	4.0000		
Copper, total	ug/L	MW-15A	04/12/2018	ND	4.0000		
Copper, total	ug/L	MW-15A	10/23/2018	ND	4.0000		
Copper, total	ug/L	MW-15A	04/08/2019	ND	4.0000		
Copper, total	ug/L	MW-15A	10/04/2019	ND	4.0000		
Copper, total	ug/L	MW-15A	04/09/2020	ND	4.0000		
Copper, total	ug/L	MW-15A	10/01/2020		4.1000		
Copper, total	ug/L	MW-15A	04/01/2021	ND	4.0000		
Copper, total	ug/L	MW-15A	10/04/2021	ND	4.0000		
Copper, total	ug/L	MW-15A	04/06/2022	ND	4.0000		
Copper, total	ug/L	MW-15A	10/04/2023	ND	4.0000		
Copper, total	ug/L	MW-15A	04/17/2024	ND	4.0000		
Copper, total	ug/L	MW-15A	10/09/2025	ND	5.0000	4.0000	**
Lead, total	ug/L	MW-15A	10/15/2014	ND	4.0000		
Lead, total	ug/L	MW-15A	01/08/2015	ND	4.0000		
Lead, total	ug/L	MW-15A	04/01/2015	ND	4.0000		
Lead, total	ug/L	MW-15A	06/09/2015	ND	4.0000		
Lead, total	ug/L	MW-15A	10/02/2015	ND	4.0000		
Lead, total	ug/L	MW-15A	04/19/2016	ND	4.0000		
Lead, total	ug/L	MW-15A	10/10/2016	ND	4.0000		
Lead, total	ug/L	MW-15A	04/04/2017	ND	4.0000		
Lead, total	ug/L	MW-15A	10/18/2017	ND	4.0000		
Lead, total	ug/L	MW-15A	04/12/2018	ND	4.0000		
Lead, total	ug/L	MW-15A	10/23/2018	ND	4.0000		
Lead, total	ug/L	MW-15A	04/08/2019	ND	4.0000		
Lead, total	ug/L	MW-15A	10/04/2019	ND	4.0000		
Lead, total	ug/L	MW-15A	04/09/2020	ND	4.0000		
Lead, total	ug/L	MW-15A	10/01/2020	ND	4.0000		
Lead, total	ug/L	MW-15A	04/01/2021	ND	4.0000		
Lead, total	ug/L	MW-15A	10/04/2021	ND	4.0000		
Lead, total	ug/L	MW-15A	04/06/2022	ND	4.0000		
Lead, total	ug/L	MW-15A	10/04/2023	ND	4.0000		
Lead, total	ug/L	MW-15A	04/17/2024	ND	4.0000		
Lead, total	ug/L	MW-15A	10/09/2025	ND	1.0000	4.0000	**
Nickel, total	ug/L	MW-15A	10/15/2014	ND	4.0000		
Nickel, total	ug/L	MW-15A	01/08/2015	ND	4.0000		
Nickel, total	ug/L	MW-15A	04/01/2015	ND	4.0000		
Nickel, total	ug/L	MW-15A	06/09/2015	ND	4.0000		
Nickel, total	ug/L	MW-15A	10/02/2015		9.4000		
Nickel, total	ug/L	MW-15A	04/19/2016	ND	4.0000		
Nickel, total	ug/L	MW-15A	10/10/2016	ND	4.0000		
Nickel, total	ug/L	MW-15A	04/04/2017	ND	4.0000		
Nickel, total	ug/L	MW-15A	10/18/2017	ND	4.0000		
Nickel, total	ug/L	MW-15A	04/12/2018	ND	4.0000		
Nickel, total	ug/L	MW-15A	10/23/2018	ND	4.0000		
Nickel, total	ug/L	MW-15A	04/08/2019	ND	4.0000		
Nickel, total	ug/L	MW-15A	10/04/2019	ND	4.0000		
Nickel, total	ug/L	MW-15A	04/09/2020	ND	4.0000		
Nickel, total	ug/L	MW-15A	10/01/2020	ND	4.0000		
Nickel, total	ug/L	MW-15A	04/01/2021	ND	4.0000		
Nickel, total	ug/L	MW-15A	10/04/2021	ND	4.0000		
Nickel, total	ug/L	MW-15A	04/06/2022		8.2000		
Nickel, total	ug/L	MW-15A	10/04/2023	ND	4.0000		
Nickel, total	ug/L	MW-15A	04/17/2024	ND	4.0000		
Nickel, total	ug/L	MW-15A	10/09/2025	ND	5.0000	4.0000	**
Selenium, total	ug/L	MW-15A	10/15/2014	ND	4.0000		
Selenium, total	ug/L	MW-15A	01/08/2015	ND	4.0000		
Selenium, total	ug/L	MW-15A	04/01/2015	ND	4.0000		
Selenium, total	ug/L	MW-15A	06/09/2015	ND	4.0000		
Selenium, total	ug/L	MW-15A	10/02/2015	ND	4.0000		
Selenium, total	ug/L	MW-15A	04/19/2016	ND	4.0000		
Selenium, total	ug/L	MW-15A	10/10/2016	ND	4.0000		
Selenium, total	ug/L	MW-15A	04/04/2017	ND	4.0000		
Selenium, total	ug/L	MW-15A	10/18/2017	ND	4.0000		
Selenium, total	ug/L	MW-15A	04/12/2018	ND	4.0000		
Selenium, total	ug/L	MW-15A	10/23/2018	ND	4.0000		
Selenium, total	ug/L	MW-15A	04/08/2019	ND	4.0000		

* - Outlier for that well and constituent.
 ** - ND value replaced with median RL.
 *** - ND value replaced with manual RL.
 ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Selenium, total	ug/L	MW-15A	10/04/2019	ND	4.0000		
Selenium, total	ug/L	MW-15A	04/09/2020	ND	4.0000		
Selenium, total	ug/L	MW-15A	10/01/2020	ND	4.0000		
Selenium, total	ug/L	MW-15A	04/01/2021	ND	4.0000		
Selenium, total	ug/L	MW-15A	10/04/2021	ND	4.0000		
Selenium, total	ug/L	MW-15A	04/06/2022	ND	4.0000		
Selenium, total	ug/L	MW-15A	10/04/2023	ND	4.0000		
Selenium, total	ug/L	MW-15A	04/17/2024	ND	4.0000		
Selenium, total	ug/L	MW-15A	10/09/2025	ND	2.0000	4.0000	**
Silver, total	ug/L	MW-15A	10/15/2014	ND	4.0000		
Silver, total	ug/L	MW-15A	01/08/2015	ND	4.0000		
Silver, total	ug/L	MW-15A	04/01/2015	ND	4.0000		
Silver, total	ug/L	MW-15A	06/09/2015	ND	4.0000		
Silver, total	ug/L	MW-15A	10/02/2015	ND	4.0000		
Silver, total	ug/L	MW-15A	04/19/2016	ND	4.0000		
Silver, total	ug/L	MW-15A	10/10/2016	ND	4.0000		
Silver, total	ug/L	MW-15A	04/04/2017	ND	4.0000		
Silver, total	ug/L	MW-15A	10/18/2017	ND	4.0000		
Silver, total	ug/L	MW-15A	04/12/2018	ND	4.0000		
Silver, total	ug/L	MW-15A	10/23/2018	ND	4.0000		
Silver, total	ug/L	MW-15A	04/08/2019	ND	4.0000		
Silver, total	ug/L	MW-15A	10/04/2019	ND	4.0000		
Silver, total	ug/L	MW-15A	04/09/2020	ND	4.0000		
Silver, total	ug/L	MW-15A	10/01/2020	ND	4.0000		
Silver, total	ug/L	MW-15A	04/01/2021	ND	4.0000		
Silver, total	ug/L	MW-15A	10/04/2021	ND	4.0000		
Silver, total	ug/L	MW-15A	04/06/2022	ND	4.0000		
Silver, total	ug/L	MW-15A	10/04/2023	ND	4.0000		
Silver, total	ug/L	MW-15A	04/17/2024	ND	4.0000		
Silver, total	ug/L	MW-15A	10/09/2025	ND	5.0000	4.0000	**
Thallium, total	ug/L	MW-15A	10/15/2014	ND	4.0000		
Thallium, total	ug/L	MW-15A	01/08/2015	ND	4.0000		
Thallium, total	ug/L	MW-15A	04/01/2015	ND	4.0000		
Thallium, total	ug/L	MW-15A	06/09/2015	ND	4.0000		
Thallium, total	ug/L	MW-15A	10/02/2015	ND	4.0000		
Thallium, total	ug/L	MW-15A	04/19/2016	ND	4.0000		
Thallium, total	ug/L	MW-15A	10/10/2016	ND	4.0000		
Thallium, total	ug/L	MW-15A	04/04/2017	ND	4.0000		
Thallium, total	ug/L	MW-15A	10/18/2017	ND	4.0000		
Thallium, total	ug/L	MW-15A	04/12/2018	ND	4.0000		
Thallium, total	ug/L	MW-15A	10/23/2018	ND	4.0000		
Thallium, total	ug/L	MW-15A	04/08/2019	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW-15A	10/04/2019	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW-15A	04/09/2020	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW-15A	10/01/2020	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW-15A	04/01/2021	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW-15A	10/04/2021	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW-15A	04/06/2022	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW-15A	10/04/2023	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW-15A	04/17/2024	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW-15A	10/09/2025	ND	0.5000	4.0000	**
Vanadium, total	ug/L	MW-15A	10/15/2014	ND	20.0000		
Vanadium, total	ug/L	MW-15A	01/08/2015	ND	20.0000		
Vanadium, total	ug/L	MW-15A	04/01/2015	ND	20.0000		
Vanadium, total	ug/L	MW-15A	06/09/2015	ND	20.0000		
Vanadium, total	ug/L	MW-15A	10/02/2015	ND	20.0000		
Vanadium, total	ug/L	MW-15A	04/19/2016	ND	20.0000		
Vanadium, total	ug/L	MW-15A	10/10/2016	ND	20.0000		
Vanadium, total	ug/L	MW-15A	04/04/2017	ND	20.0000		
Vanadium, total	ug/L	MW-15A	10/18/2017	ND	20.0000		
Vanadium, total	ug/L	MW-15A	04/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-15A	10/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-15A	04/08/2019	ND	20.0000		
Vanadium, total	ug/L	MW-15A	10/04/2019	ND	20.0000		
Vanadium, total	ug/L	MW-15A	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-15A	10/01/2020	ND	20.0000		
Vanadium, total	ug/L	MW-15A	04/01/2021	ND	20.0000		
Vanadium, total	ug/L	MW-15A	10/04/2021	ND	20.0000		
Vanadium, total	ug/L	MW-15A	04/06/2022	ND	20.0000		
Vanadium, total	ug/L	MW-15A	10/04/2023	ND	20.0000		
Vanadium, total	ug/L	MW-15A	04/17/2024	ND	20.0000		
Vanadium, total	ug/L	MW-15A	10/09/2025	ND	2.0000	20.0000	**
Zinc, total	ug/L	MW-15A	10/15/2014	ND	8.0000		
Zinc, total	ug/L	MW-15A	01/08/2015	ND	8.0000		

* - Outlier for that well and constituent.
 ** - ND value replaced with median RL.
 *** - ND value replaced with manual RL.
 ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Zinc, total	ug/L	MW-15A	04/01/2015	ND	8.0000		
Zinc, total	ug/L	MW-15A	06/09/2015	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW-15A	10/02/2015	ND	8.0000		
Zinc, total	ug/L	MW-15A	04/19/2016		12.2000		
Zinc, total	ug/L	MW-15A	10/10/2016	ND	8.0000		
Zinc, total	ug/L	MW-15A	04/04/2017	ND	8.0000		
Zinc, total	ug/L	MW-15A	10/18/2017	ND	8.0000		
Zinc, total	ug/L	MW-15A	04/12/2018	ND	8.0000		
Zinc, total	ug/L	MW-15A	10/23/2018		9.0000		
Zinc, total	ug/L	MW-15A	04/08/2019	ND	8.0000		
Zinc, total	ug/L	MW-15A	10/04/2019		8.7000		
Zinc, total	ug/L	MW-15A	04/09/2020	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW-15A	10/01/2020	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW-15A	04/01/2021	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW-15A	10/04/2021	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW-15A	04/06/2022	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW-15A	10/04/2023	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW-15A	04/17/2024	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW-15A	10/09/2025		6.4000		
Antimony, total	ug/L	MW-18	10/16/2014	ND	2.0000		
Antimony, total	ug/L	MW-18	04/01/2015	ND	2.0000		
Antimony, total	ug/L	MW-18	06/09/2015	ND	2.0000		
Antimony, total	ug/L	MW-18	10/02/2015	ND	2.0000		
Antimony, total	ug/L	MW-18	04/19/2016	ND	2.0000		
Antimony, total	ug/L	MW-18	10/10/2016	ND	2.0000		
Antimony, total	ug/L	MW-18	04/04/2017	ND	2.0000		
Antimony, total	ug/L	MW-18	10/18/2017	ND	2.0000		
Antimony, total	ug/L	MW-18	04/12/2018	ND	2.0000		
Antimony, total	ug/L	MW-18	10/23/2018	ND	2.0000		
Antimony, total	ug/L	MW-18	04/08/2019	ND	2.0000		
Antimony, total	ug/L	MW-18	10/04/2019	ND	2.0000		
Antimony, total	ug/L	MW-18	04/09/2020	ND	2.0000		
Antimony, total	ug/L	MW-18	10/01/2020	ND	2.0000		
Antimony, total	ug/L	MW-18	04/01/2021	ND	2.0000		
Antimony, total	ug/L	MW-18	10/04/2021	ND	2.0000		
Antimony, total	ug/L	MW-18	04/06/2022	ND	2.0000		
Arsenic, total	ug/L	MW-18	10/16/2014	ND	4.0000		
Arsenic, total	ug/L	MW-18	04/01/2015	ND	4.0000		
Arsenic, total	ug/L	MW-18	06/09/2015	ND	4.0000		
Arsenic, total	ug/L	MW-18	10/02/2015	ND	4.0000		
Arsenic, total	ug/L	MW-18	04/19/2016	ND	4.0000		
Arsenic, total	ug/L	MW-18	10/10/2016	ND	4.0000		
Arsenic, total	ug/L	MW-18	04/04/2017	ND	4.0000		
Arsenic, total	ug/L	MW-18	10/18/2017	ND	4.0000		
Arsenic, total	ug/L	MW-18	04/12/2018	ND	4.0000		
Arsenic, total	ug/L	MW-18	10/23/2018	ND	4.0000		
Arsenic, total	ug/L	MW-18	04/08/2019	ND	4.0000		
Arsenic, total	ug/L	MW-18	10/04/2019	ND	4.0000		
Arsenic, total	ug/L	MW-18	04/09/2020	ND	4.0000		
Arsenic, total	ug/L	MW-18	10/01/2020	ND	4.0000		
Arsenic, total	ug/L	MW-18	04/01/2021	ND	4.0000		
Arsenic, total	ug/L	MW-18	10/04/2021	ND	4.0000		
Arsenic, total	ug/L	MW-18	04/06/2022	ND	4.0000		
Barium, total	ug/L	MW-18	10/16/2014		144.0000		
Barium, total	ug/L	MW-18	04/01/2015		121.0000		
Barium, total	ug/L	MW-18	06/09/2015		141.0000		
Barium, total	ug/L	MW-18	10/02/2015		178.0000		
Barium, total	ug/L	MW-18	04/19/2016		130.0000		
Barium, total	ug/L	MW-18	10/10/2016		170.0000		
Barium, total	ug/L	MW-18	04/04/2017		144.0000		
Barium, total	ug/L	MW-18	10/18/2017		168.0000		
Barium, total	ug/L	MW-18	04/12/2018		95.6000		
Barium, total	ug/L	MW-18	10/23/2018		148.0000		
Barium, total	ug/L	MW-18	04/08/2019		136.0000		
Barium, total	ug/L	MW-18	10/04/2019		186.0000		
Barium, total	ug/L	MW-18	04/09/2020		107.0000		
Barium, total	ug/L	MW-18	10/01/2020		172.0000		
Barium, total	ug/L	MW-18	04/01/2021		188.0000		
Barium, total	ug/L	MW-18	10/04/2021		179.0000		
Barium, total	ug/L	MW-18	04/06/2022		171.0000		
Beryllium, total	ug/L	MW-18	10/16/2014	ND	4.0000		
Beryllium, total	ug/L	MW-18	04/01/2015	ND	4.0000		
Beryllium, total	ug/L	MW-18	06/09/2015	ND	4.0000		
Beryllium, total	ug/L	MW-18	10/02/2015	ND	4.0000		

* - Outlier for that well and constituent.
 ** - ND value replaced with median RL.
 *** - ND value replaced with manual RL.
 ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Beryllium, total	ug/L	MW-18	04/19/2016	ND	4.0000		
Beryllium, total	ug/L	MW-18	10/10/2016	ND	4.0000		
Beryllium, total	ug/L	MW-18	04/04/2017	ND	4.0000		
Beryllium, total	ug/L	MW-18	10/18/2017	ND	4.0000		
Beryllium, total	ug/L	MW-18	04/12/2018	ND	4.0000		
Beryllium, total	ug/L	MW-18	10/23/2018	ND	4.0000		
Beryllium, total	ug/L	MW-18	04/08/2019	ND	4.0000		
Beryllium, total	ug/L	MW-18	10/04/2019	ND	4.0000		
Beryllium, total	ug/L	MW-18	04/09/2020	ND	4.0000		
Beryllium, total	ug/L	MW-18	10/01/2020	ND	4.0000		
Beryllium, total	ug/L	MW-18	04/01/2021	ND	4.0000		
Beryllium, total	ug/L	MW-18	10/04/2021	ND	4.0000		
Beryllium, total	ug/L	MW-18	04/06/2022	ND	4.0000		
Cadmium, total	ug/L	MW-18	10/16/2014		2.2000		
Cadmium, total	ug/L	MW-18	04/01/2015	ND	0.8000		
Cadmium, total	ug/L	MW-18	06/09/2015	ND	0.8000		
Cadmium, total	ug/L	MW-18	10/02/2015	ND	0.8000		
Cadmium, total	ug/L	MW-18	04/19/2016		1.8000		
Cadmium, total	ug/L	MW-18	10/10/2016		1.6000		
Cadmium, total	ug/L	MW-18	04/04/2017	ND	0.8000		
Cadmium, total	ug/L	MW-18	10/18/2017	ND	0.8000		
Cadmium, total	ug/L	MW-18	04/12/2018	ND	0.8000		
Cadmium, total	ug/L	MW-18	10/23/2018	ND	0.8000		
Cadmium, total	ug/L	MW-18	04/08/2019	ND	0.8000		
Cadmium, total	ug/L	MW-18	10/04/2019	ND	0.8000		
Cadmium, total	ug/L	MW-18	04/09/2020	ND	0.8000		
Cadmium, total	ug/L	MW-18	10/01/2020	ND	0.8000		
Cadmium, total	ug/L	MW-18	04/01/2021	ND	0.8000		
Cadmium, total	ug/L	MW-18	10/04/2021	ND	0.8000		
Cadmium, total	ug/L	MW-18	04/06/2022	ND	0.8000		
Chromium, total	ug/L	MW-18	10/16/2014	ND	8.0000		
Chromium, total	ug/L	MW-18	04/01/2015	ND	8.0000		
Chromium, total	ug/L	MW-18	06/09/2015	ND	8.0000		
Chromium, total	ug/L	MW-18	10/02/2015	ND	8.0000		
Chromium, total	ug/L	MW-18	04/19/2016	ND	8.0000		
Chromium, total	ug/L	MW-18	10/10/2016	ND	8.0000		
Chromium, total	ug/L	MW-18	04/04/2017	ND	8.0000		
Chromium, total	ug/L	MW-18	10/18/2017	ND	8.0000		
Chromium, total	ug/L	MW-18	04/12/2018	ND	8.0000		
Chromium, total	ug/L	MW-18	10/23/2018	ND	8.0000		
Chromium, total	ug/L	MW-18	04/08/2019	ND	8.0000		
Chromium, total	ug/L	MW-18	10/04/2019	ND	8.0000		
Chromium, total	ug/L	MW-18	04/09/2020	ND	8.0000		
Chromium, total	ug/L	MW-18	10/01/2020	ND	8.0000		
Chromium, total	ug/L	MW-18	04/01/2021	ND	8.0000		
Chromium, total	ug/L	MW-18	10/04/2021	ND	8.0000		
Chromium, total	ug/L	MW-18	04/06/2022	ND	8.0000		
Cobalt, total	ug/L	MW-18	10/16/2014		11.6000		
Cobalt, total	ug/L	MW-18	04/01/2015	ND	0.8000		
Cobalt, total	ug/L	MW-18	06/09/2015	ND	0.8000		
Cobalt, total	ug/L	MW-18	10/02/2015	ND	0.8000		
Cobalt, total	ug/L	MW-18	04/19/2016	ND	0.8000		
Cobalt, total	ug/L	MW-18	10/10/2016	ND	0.8000		
Cobalt, total	ug/L	MW-18	04/04/2017	ND	0.8000		
Cobalt, total	ug/L	MW-18	10/18/2017	ND	0.8000		
Cobalt, total	ug/L	MW-18	04/12/2018	ND	0.8000		
Cobalt, total	ug/L	MW-18	10/23/2018	ND	0.8000		
Cobalt, total	ug/L	MW-18	04/08/2019	ND	0.8000		
Cobalt, total	ug/L	MW-18	10/04/2019	ND	0.8000		
Cobalt, total	ug/L	MW-18	04/09/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-18	10/01/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-18	04/01/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW-18	10/04/2021		0.4000		
Cobalt, total	ug/L	MW-18	04/06/2022		0.4000		
Copper, total	ug/L	MW-18	10/16/2014	ND	4.0000		
Copper, total	ug/L	MW-18	04/01/2015	ND	4.0000		
Copper, total	ug/L	MW-18	06/09/2015	ND	4.0000		
Copper, total	ug/L	MW-18	10/02/2015	ND	4.0000		
Copper, total	ug/L	MW-18	04/19/2016	ND	4.0000		
Copper, total	ug/L	MW-18	10/10/2016	ND	4.0000		
Copper, total	ug/L	MW-18	04/04/2017	ND	4.0000		
Copper, total	ug/L	MW-18	10/18/2017	ND	4.0000		
Copper, total	ug/L	MW-18	04/12/2018	ND	4.0000		
Copper, total	ug/L	MW-18	10/23/2018	ND	4.0000		

* - Outlier for that well and constituent.
 ** - ND value replaced with median RL.
 *** - ND value replaced with manual RL.
 ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Copper, total	ug/L	MW-18	04/08/2019	ND	4.0000		
Copper, total	ug/L	MW-18	10/04/2019	ND	4.0000		
Copper, total	ug/L	MW-18	04/09/2020	ND	4.0000		
Copper, total	ug/L	MW-18	10/01/2020	ND	4.0000		
Copper, total	ug/L	MW-18	04/01/2021	ND	4.0000		
Copper, total	ug/L	MW-18	10/04/2021	ND	4.0000		
Copper, total	ug/L	MW-18	04/06/2022	ND	4.0000		
Lead, total	ug/L	MW-18	10/16/2014	ND	4.0000		
Lead, total	ug/L	MW-18	04/01/2015	ND	4.0000		
Lead, total	ug/L	MW-18	06/09/2015	ND	4.0000		
Lead, total	ug/L	MW-18	10/02/2015	ND	4.0000		
Lead, total	ug/L	MW-18	04/19/2016	ND	4.0000		
Lead, total	ug/L	MW-18	10/10/2016	ND	4.0000		
Lead, total	ug/L	MW-18	04/04/2017	ND	4.0000		
Lead, total	ug/L	MW-18	10/18/2017	ND	4.0000		
Lead, total	ug/L	MW-18	04/12/2018	ND	4.0000		
Lead, total	ug/L	MW-18	10/23/2018	ND	4.0000		
Lead, total	ug/L	MW-18	04/08/2019	ND	4.0000		
Lead, total	ug/L	MW-18	10/04/2019	ND	4.0000		
Lead, total	ug/L	MW-18	04/09/2020	ND	4.0000		
Lead, total	ug/L	MW-18	10/01/2020	ND	4.0000		
Lead, total	ug/L	MW-18	04/01/2021	ND	4.0000		
Lead, total	ug/L	MW-18	10/04/2021	ND	4.0000		
Lead, total	ug/L	MW-18	04/06/2022	ND	4.0000		
Nickel, total	ug/L	MW-18	10/16/2014		10.9000		
Nickel, total	ug/L	MW-18	04/01/2015	ND	4.0000		
Nickel, total	ug/L	MW-18	06/09/2015	ND	4.0000		
Nickel, total	ug/L	MW-18	10/02/2015	ND	4.0000		
Nickel, total	ug/L	MW-18	04/19/2016	ND	4.0000		
Nickel, total	ug/L	MW-18	10/10/2016	ND	4.0000		
Nickel, total	ug/L	MW-18	04/04/2017	ND	4.0000		
Nickel, total	ug/L	MW-18	10/18/2017		4.5000		
Nickel, total	ug/L	MW-18	04/12/2018	ND	4.0000		
Nickel, total	ug/L	MW-18	10/23/2018	ND	4.0000		
Nickel, total	ug/L	MW-18	04/08/2019	ND	4.0000		
Nickel, total	ug/L	MW-18	10/04/2019		5.4000		
Nickel, total	ug/L	MW-18	04/09/2020	ND	4.0000		
Nickel, total	ug/L	MW-18	10/01/2020	ND	4.0000		
Nickel, total	ug/L	MW-18	04/01/2021	ND	4.0000		
Nickel, total	ug/L	MW-18	10/04/2021		5.4000		
Nickel, total	ug/L	MW-18	04/06/2022	ND	4.0000		
Selenium, total	ug/L	MW-18	10/16/2014	ND	4.0000		
Selenium, total	ug/L	MW-18	04/01/2015	ND	4.0000		
Selenium, total	ug/L	MW-18	06/09/2015	ND	4.0000		
Selenium, total	ug/L	MW-18	10/02/2015	ND	4.0000		
Selenium, total	ug/L	MW-18	04/19/2016	ND	4.0000		
Selenium, total	ug/L	MW-18	10/10/2016	ND	4.0000		
Selenium, total	ug/L	MW-18	04/04/2017	ND	4.0000		
Selenium, total	ug/L	MW-18	10/18/2017	ND	4.0000		
Selenium, total	ug/L	MW-18	04/12/2018	ND	4.0000		
Selenium, total	ug/L	MW-18	10/23/2018	ND	4.0000		
Selenium, total	ug/L	MW-18	04/08/2019	ND	4.0000		
Selenium, total	ug/L	MW-18	10/04/2019	ND	4.0000		
Selenium, total	ug/L	MW-18	04/09/2020	ND	4.0000		
Selenium, total	ug/L	MW-18	10/01/2020	ND	4.0000		
Selenium, total	ug/L	MW-18	04/01/2021	ND	4.0000		
Selenium, total	ug/L	MW-18	10/04/2021	ND	4.0000		
Selenium, total	ug/L	MW-18	04/06/2022	ND	4.0000		
Silver, total	ug/L	MW-18	10/16/2014	ND	4.0000		
Silver, total	ug/L	MW-18	04/01/2015	ND	4.0000		
Silver, total	ug/L	MW-18	06/09/2015	ND	4.0000		
Silver, total	ug/L	MW-18	10/02/2015	ND	4.0000		
Silver, total	ug/L	MW-18	04/19/2016	ND	4.0000		
Silver, total	ug/L	MW-18	10/10/2016	ND	4.0000		
Silver, total	ug/L	MW-18	04/04/2017	ND	4.0000		
Silver, total	ug/L	MW-18	10/18/2017	ND	4.0000		
Silver, total	ug/L	MW-18	04/12/2018	ND	4.0000		
Silver, total	ug/L	MW-18	10/23/2018	ND	4.0000		
Silver, total	ug/L	MW-18	04/08/2019	ND	4.0000		
Silver, total	ug/L	MW-18	10/04/2019	ND	4.0000		
Silver, total	ug/L	MW-18	04/09/2020	ND	4.0000		
Silver, total	ug/L	MW-18	10/01/2020	ND	4.0000		
Silver, total	ug/L	MW-18	04/01/2021	ND	4.0000		
Silver, total	ug/L	MW-18	10/04/2021	ND	4.0000		

* - Outlier for that well and constituent.
 ** - ND value replaced with median RL.
 *** - ND value replaced with manual RL.
 ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Silver, total	ug/L	MW-18	04/06/2022	ND	4.0000		
Thallium, total	ug/L	MW-18	10/16/2014	ND	4.0000		
Thallium, total	ug/L	MW-18	04/01/2015	ND	4.0000		
Thallium, total	ug/L	MW-18	06/09/2015	ND	4.0000		
Thallium, total	ug/L	MW-18	10/02/2015	ND	4.0000		
Thallium, total	ug/L	MW-18	04/19/2016	ND	4.0000		
Thallium, total	ug/L	MW-18	10/10/2016	ND	4.0000		
Thallium, total	ug/L	MW-18	04/04/2017	ND	4.0000		
Thallium, total	ug/L	MW-18	10/18/2017	ND	4.0000		
Thallium, total	ug/L	MW-18	04/12/2018	ND	4.0000		
Thallium, total	ug/L	MW-18	10/23/2018	ND	4.0000		
Thallium, total	ug/L	MW-18	04/08/2019	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW-18	10/04/2019	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW-18	04/09/2020	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW-18	10/01/2020	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW-18	04/01/2021	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW-18	10/04/2021	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW-18	04/06/2022	ND	2.0000	4.0000	**
Vanadium, total	ug/L	MW-18	10/16/2014	ND	20.0000		
Vanadium, total	ug/L	MW-18	04/01/2015	ND	20.0000		
Vanadium, total	ug/L	MW-18	06/09/2015	ND	20.0000		
Vanadium, total	ug/L	MW-18	10/02/2015	ND	20.0000		
Vanadium, total	ug/L	MW-18	04/19/2016	ND	20.0000		
Vanadium, total	ug/L	MW-18	10/10/2016	ND	20.0000		
Vanadium, total	ug/L	MW-18	04/04/2017	ND	20.0000		
Vanadium, total	ug/L	MW-18	10/18/2017	ND	20.0000		
Vanadium, total	ug/L	MW-18	04/12/2018	ND	20.0000		
Vanadium, total	ug/L	MW-18	10/23/2018	ND	20.0000		
Vanadium, total	ug/L	MW-18	04/08/2019	ND	20.0000		
Vanadium, total	ug/L	MW-18	10/04/2019	ND	20.0000		
Vanadium, total	ug/L	MW-18	04/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW-18	10/01/2020	ND	20.0000		
Vanadium, total	ug/L	MW-18	04/01/2021	ND	20.0000		
Vanadium, total	ug/L	MW-18	10/04/2021	ND	20.0000		
Vanadium, total	ug/L	MW-18	04/06/2022	ND	20.0000		
Zinc, total	ug/L	MW-18	10/16/2014		12.8000		
Zinc, total	ug/L	MW-18	04/01/2015	ND	8.0000		
Zinc, total	ug/L	MW-18	06/09/2015	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW-18	10/02/2015	ND	8.0000		
Zinc, total	ug/L	MW-18	04/19/2016		8.3000		
Zinc, total	ug/L	MW-18	10/10/2016	ND	8.0000		
Zinc, total	ug/L	MW-18	04/04/2017	ND	8.0000		
Zinc, total	ug/L	MW-18	10/18/2017	ND	8.0000		
Zinc, total	ug/L	MW-18	04/12/2018	ND	8.0000		
Zinc, total	ug/L	MW-18	10/23/2018		11.2000		
Zinc, total	ug/L	MW-18	04/08/2019		29.4000		
Zinc, total	ug/L	MW-18	10/04/2019		19.7000		
Zinc, total	ug/L	MW-18	04/09/2020	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW-18	10/01/2020	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW-18	04/01/2021	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW-18	10/04/2021	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW-18	04/06/2022	ND	20.0000	8.0000	**

* - Outlier for that well and constituent.

** - ND value replaced with median RL.

*** - ND value replaced with manual RL.

ND = Not detected, Result = detection limit.

Table 2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Antimony, total	ug/L	MW-11	10/09/2025		1.0000		2.8000
Arsenic, total	ug/L	MW-11	10/09/2025	ND	2.0000		4.0000
Barium, total	ug/L	MW-11	10/09/2025		192.0000		297.9828
Beryllium, total	ug/L	MW-11	10/09/2025	ND	0.5000		4.0000
Cadmium, total	ug/L	MW-11	10/09/2025		0.6000		2.2000
Chromium, total	ug/L	MW-11	10/09/2025		1.0000		8.0000
Cobalt, total	ug/L	MW-11	10/09/2025		5.0000		11.6000
Copper, total	ug/L	MW-11	10/09/2025	ND	5.0000		4.1000
Lead, total	ug/L	MW-11	10/09/2025	ND	1.0000		4.0000
Nickel, total	ug/L	MW-11	10/09/2025		8.7000		10.9000
Selenium, total	ug/L	MW-11	10/09/2025	ND	2.0000		4.0000
Silver, total	ug/L	MW-11	10/09/2025	ND	5.0000		4.0000
Thallium, total	ug/L	MW-11	10/09/2025	ND	0.5000		4.0000
Vanadium, total	ug/L	MW-11	10/09/2025	ND	2.0000		20.0000
Zinc, total	ug/L	MW-11	10/09/2025	ND	5.0000		29.4000
Antimony, total	ug/L	MW-13	10/09/2025		1.0000		2.8000
Arsenic, total	ug/L	MW-13	10/09/2025	ND	2.0000		4.0000
Barium, total	ug/L	MW-13	10/09/2025		584.0000	***	297.9828
Beryllium, total	ug/L	MW-13	10/09/2025	ND	0.5000		4.0000
Cadmium, total	ug/L	MW-13	10/09/2025		0.2000		2.2000
Chromium, total	ug/L	MW-13	10/09/2025		1.1000		8.0000
Cobalt, total	ug/L	MW-13	10/09/2025		18.8000	*	11.6000
Copper, total	ug/L	MW-13	10/09/2025	ND	5.0000		4.1000
Lead, total	ug/L	MW-13	10/09/2025	ND	1.0000		4.0000
Nickel, total	ug/L	MW-13	10/09/2025		151.0000	***	10.9000
Selenium, total	ug/L	MW-13	10/09/2025	ND	2.0000		4.0000
Silver, total	ug/L	MW-13	10/09/2025	ND	5.0000		4.0000
Thallium, total	ug/L	MW-13	10/09/2025	ND	0.5000		4.0000
Vanadium, total	ug/L	MW-13	10/09/2025	ND	2.0000		20.0000
Zinc, total	ug/L	MW-13	10/09/2025	ND	5.0000		29.4000
Antimony, total	ug/L	MW-14	10/09/2025		1.0000		2.8000
Arsenic, total	ug/L	MW-14	10/09/2025		4.8000	*	4.0000
Barium, total	ug/L	MW-14	10/09/2025		949.0000	***	297.9828
Beryllium, total	ug/L	MW-14	10/09/2025	ND	0.5000		4.0000
Cadmium, total	ug/L	MW-14	10/09/2025		0.5000		2.2000
Chromium, total	ug/L	MW-14	10/09/2025		1.8000		8.0000
Cobalt, total	ug/L	MW-14	10/09/2025		5.1000		11.6000
Copper, total	ug/L	MW-14	10/09/2025		6.6000	*	4.1000
Lead, total	ug/L	MW-14	10/09/2025		1.2000		4.0000
Nickel, total	ug/L	MW-14	10/09/2025		64.2000	***	10.9000
Selenium, total	ug/L	MW-14	10/09/2025	ND	2.0000		4.0000
Silver, total	ug/L	MW-14	10/09/2025	ND	5.0000		4.0000
Thallium, total	ug/L	MW-14	10/09/2025	ND	0.5000		4.0000
Vanadium, total	ug/L	MW-14	10/09/2025		4.7000		20.0000
Zinc, total	ug/L	MW-14	10/09/2025		6.8000		29.4000
Antimony, total	ug/L	MW-9	10/09/2025		1.0000		2.8000
Arsenic, total	ug/L	MW-9	10/09/2025		6.3000	*	4.0000
Barium, total	ug/L	MW-9	10/09/2025		796.0000	***	297.9828
Beryllium, total	ug/L	MW-9	10/09/2025	ND	0.5000		4.0000
Cadmium, total	ug/L	MW-9	10/09/2025		0.2000		2.2000
Chromium, total	ug/L	MW-9	10/09/2025		1.6000		8.0000
Cobalt, total	ug/L	MW-9	10/09/2025		6.7000		11.6000
Copper, total	ug/L	MW-9	10/09/2025	ND	5.0000		4.1000
Lead, total	ug/L	MW-9	10/09/2025	ND	1.0000		4.0000
Nickel, total	ug/L	MW-9	10/09/2025		26.4000	***	10.9000
Selenium, total	ug/L	MW-9	10/09/2025	ND	2.0000		4.0000
Silver, total	ug/L	MW-9	10/09/2025	ND	5.0000		4.0000
Thallium, total	ug/L	MW-9	10/09/2025	ND	0.5000		4.0000
Vanadium, total	ug/L	MW-9	10/09/2025	ND	2.0000		20.0000
Zinc, total	ug/L	MW-9	10/09/2025		8.3000		29.4000

* - Current value failed - awaiting verification.
 ** - Current value passed - previous exceedance not verified.
 *** - Current value failed - exceedance verified.
 **** - Current value passed - awaiting one more verification.
 ***** - Insufficient background data to compute prediction limit.
 ND = Not Detected, Result = detection limit.

Table 3

Detection Frequencies in Upgradient and Downgradient Wells

Constituent	Detect	Upgradient N	Proportion	Detect	Downgradient N	Proportion
Antimony, total	2	38	0.053	5	137	0.036
Arsenic, total	0	38	0.000	42	135	0.311
Barium, total	38	38	1.000	158	158	1.000
Beryllium, total	0	38	0.000	0	103	0.000
Cadmium, total	5	38	0.132	33	127	0.260
Chromium, total	1	38	0.026	26	135	0.193
Cobalt, total	6	38	0.158	102	147	0.694
Copper, total	1	38	0.026	60	154	0.390
Lead, total	0	38	0.000	29	139	0.209
Nickel, total	6	38	0.158	153	158	0.968
Selenium, total	0	38	0.000	16	126	0.127
Silver, total	0	38	0.000	0	103	0.000
Thallium, total	0	38	0.000	2	133	0.015
Vanadium, total	0	38	0.000	16	134	0.119
Zinc, total	9	38	0.237	83	153	0.542

N = Total number of measurements in all wells.
 Detect = Total number of detections in all wells.
 Proportion = Detect/N.

Table 4

Shapiro-Wilk Multiple Group Test of Normality

Constituent	Detect	N	Detect Freq	G raw	G log	G cbrt	G sqrt	G sqr	G cub	Crit Value	Dist Form	Model Type
Antimony, total	2	38	0.053									nonpar
Arsenic, total	0	38	0.000									nonpar
Barium, total	38	38	1.000	0.456	2.726					2.326	normal	normal
Beryllium, total	0	38	0.000									nonpar
Cadmium, total	5	38	0.132	0.346	0.570					2.326	normal	nonpar
Chromium, total	1	38	0.026									nonpar
Cobalt, total	6	38	0.158	0.285	0.547					2.326	normal	nonpar
Copper, total	1	38	0.026									nonpar
Lead, total	0	38	0.000									nonpar
Nickel, total	6	38	0.158	1.753	1.220					2.326	normal	nonpar
Selenium, total	0	38	0.000									nonpar
Silver, total	0	38	0.000									nonpar
Thallium, total	0	38	0.000									nonpar
Vanadium, total	0	38	0.000									nonpar
Zinc, total	9	38	0.237	0.292	1.312					2.326	normal	nonpar

* - Distribution override for that constituent.

Fit to distribution is confirmed if G <= critical value.

Model type may not match distributional form when detection frequency < 50%.

Table 5

Summary Statistics and Prediction Limits

Constituent	Units	Detect	N	Mean	SD	alpha	Factor	Pred Limit	Type		Conf
Antimony, total	ug/L	2	38	177.7368	48.8191	0.0100	2.4631	2.8000	nonpar		0.99
Arsenic, total	ug/L	0	38					4.0000	nonpar	***	0.99
Barium, total	ug/L	38	38					297.9828	normal		
Beryllium, total	ug/L	0	38					4.0000	nonpar	***	0.99
Cadmium, total	ug/L	5	38					2.2000	nonpar		0.99
Chromium, total	ug/L	1	38					8.0000	nonpar	***	0.99
Cobalt, total	ug/L	6	38					11.6000	nonpar		0.99
Copper, total	ug/L	1	38					4.1000	nonpar		0.99
Lead, total	ug/L	0	38					4.0000	nonpar	***	0.99
Nickel, total	ug/L	6	38					10.9000	nonpar		0.99
Selenium, total	ug/L	0	38					4.0000	nonpar	***	0.99
Silver, total	ug/L	0	38					4.0000	nonpar	***	0.99
Thallium, total	ug/L	0	38					4.0000	nonpar	***	0.99
Vanadium, total	ug/L	0	38					20.0000	nonpar	***	0.99
Zinc, total	ug/L	9	38					29.4000	nonpar		0.99

Conf = confidence level for passing initial test or one verification resample at all downgradient wells for a single constituent (nonparametric test only).

* - Insufficient Data.

** - Calculated limit raised to Manual Reporting Limit.

*** - Nonparametric limit based on ND value.

For transformed data, mean and SD in transformed units and prediction limit in original units.

All sample sizes and statistics are based on outlier free data.

For nonparametric limits, median reporting limits are substituted for extreme reporting limit values.

Table 6

Dixon's Test Outliers
 1% Significance Level

Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
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N = Total number of independent measurements in background at each well.
 Date Range = Dates of the first and last measurements included in background at each well.
 Critical Value depends on the significance level and on N-1 when the two most extreme values are tested or N for the most extreme value.

Table 8

**Historical Downgradient Data for Constituent-Well Combinations
that Failed the Current Statistical Evaluation or
are in Verification Resampling Mode**

Constituent	Units	Well	Date		Result	Pred. Limit
Barium, total	ug/L	MW-13	10/17/2006		244.0000	297.9828
Barium, total	ug/L	MW-13	04/18/2007		178.0000	297.9828
Barium, total	ug/L	MW-13	10/03/2007		284.0000	297.9828
Barium, total	ug/L	MW-13	04/21/2008		16.6000	297.9828
Barium, total	ug/L	MW-13	10/06/2008		284.0000	297.9828
Barium, total	ug/L	MW-13	04/17/2009		171.0000	297.9828
Barium, total	ug/L	MW-13	06/25/2009		247.0000	297.9828
Barium, total	ug/L	MW-13	07/20/2009	*	366.0000	297.9828
Barium, total	ug/L	MW-13	10/12/2009		264.0000	297.9828
Barium, total	ug/L	MW-13	10/28/2009		227.0000	297.9828
Barium, total	ug/L	MW-13	04/14/2010		191.0000	297.9828
Barium, total	ug/L	MW-13	07/13/2010	*	315.0000	297.9828
Barium, total	ug/L	MW-13	09/23/2010	*	328.0000	297.9828
Barium, total	ug/L	MW-13	04/21/2011		119.0000	297.9828
Barium, total	ug/L	MW-13	11/03/2011		280.0000	297.9828
Barium, total	ug/L	MW-13	04/24/2012		216.0000	297.9828
Barium, total	ug/L	MW-13	09/19/2012		275.0000	297.9828
Barium, total	ug/L	MW-13	04/24/2013		193.0000	297.9828
Barium, total	ug/L	MW-13	10/08/2013	*	325.0000	297.9828
Barium, total	ug/L	MW-13	04/24/2014		288.0000	297.9828
Barium, total	ug/L	MW-13	10/15/2014	*	355.0000	297.9828
Barium, total	ug/L	MW-13	04/01/2015	*	321.0000	297.9828
Barium, total	ug/L	MW-13	10/02/2015	*	359.0000	297.9828
Barium, total	ug/L	MW-13	04/19/2016	*	434.0000	297.9828
Barium, total	ug/L	MW-13	10/10/2016		291.0000	297.9828
Barium, total	ug/L	MW-13	04/04/2017		130.0000	297.9828
Barium, total	ug/L	MW-13	10/18/2017	*	341.0000	297.9828
Barium, total	ug/L	MW-13	01/12/2018	*	337.0000	297.9828
Barium, total	ug/L	MW-13	04/12/2018		259.0000	297.9828
Barium, total	ug/L	MW-13	10/23/2018	*	392.0000	297.9828
Barium, total	ug/L	MW-13	04/08/2019		280.0000	297.9828
Barium, total	ug/L	MW-13	10/04/2019	*	403.0000	297.9828
Barium, total	ug/L	MW-13	04/09/2020		253.0000	297.9828
Barium, total	ug/L	MW-13	10/01/2020	*	384.0000	297.9828
Barium, total	ug/L	MW-13	04/01/2021		141.0000	297.9828
Barium, total	ug/L	MW-13	10/04/2021	*	358.0000	297.9828
Barium, total	ug/L	MW-13	04/06/2022	*	352.0000	297.9828
Barium, total	ug/L	MW-13	10/04/2023	*	334.0000	297.9828
Barium, total	ug/L	MW-13	04/17/2024	*	434.0000	297.9828
Barium, total	ug/L	MW-13	10/09/2025	*	584.0000	297.9828
Cobalt, total	ug/L	MW-13	10/17/2006	ND	10.0000	11.6000
Cobalt, total	ug/L	MW-13	04/18/2007	ND	10.0000	11.6000
Cobalt, total	ug/L	MW-13	10/03/2007	ND	10.0000	11.6000
Cobalt, total	ug/L	MW-13	04/21/2008	ND	10.0000	11.6000
Cobalt, total	ug/L	MW-13	10/06/2008		5.9000	11.6000
Cobalt, total	ug/L	MW-13	04/17/2009		6.0000	11.6000
Cobalt, total	ug/L	MW-13	06/25/2009		5.0000	11.6000
Cobalt, total	ug/L	MW-13	07/20/2009	ND	10.0000	11.6000
Cobalt, total	ug/L	MW-13	10/12/2009	ND	4.0000	11.6000
Cobalt, total	ug/L	MW-13	10/28/2009	ND	4.0000	11.6000
Cobalt, total	ug/L	MW-13	04/14/2010	ND	4.0000	11.6000
Cobalt, total	ug/L	MW-13	07/13/2010	ND	4.0000	11.6000
Cobalt, total	ug/L	MW-13	09/23/2010	ND	4.0000	11.6000
Cobalt, total	ug/L	MW-13	04/21/2011	ND	10.0000	11.6000
Cobalt, total	ug/L	MW-13	11/03/2011	ND	4.0000	11.6000
Cobalt, total	ug/L	MW-13	04/24/2012	ND	4.0000	11.6000
Cobalt, total	ug/L	MW-13	09/19/2012		4.0000	11.6000
Cobalt, total	ug/L	MW-13	04/24/2013	ND	4.0000	11.6000
Cobalt, total	ug/L	MW-13	10/08/2013		6.2000	11.6000
Cobalt, total	ug/L	MW-13	04/24/2014	ND	4.0000	11.6000
Cobalt, total	ug/L	MW-13	10/15/2014		1.0000	11.6000
Cobalt, total	ug/L	MW-13	04/01/2015		1.1000	11.6000
Cobalt, total	ug/L	MW-13	10/02/2015	ND	0.8000	11.6000
Cobalt, total	ug/L	MW-13	04/19/2016	ND	0.8000	11.6000
Cobalt, total	ug/L	MW-13	10/10/2016	ND	0.8000	11.6000
Cobalt, total	ug/L	MW-13	04/04/2017	ND	0.8000	11.6000
Cobalt, total	ug/L	MW-13	10/18/2017		1.4000	11.6000
Cobalt, total	ug/L	MW-13	04/12/2018		2.0000	11.6000
Cobalt, total	ug/L	MW-13	10/23/2018	ND	0.8000	11.6000
Cobalt, total	ug/L	MW-13	04/08/2019	ND	0.8000	11.6000
Cobalt, total	ug/L	MW-13	10/04/2019		6.2000	11.6000

* - Significantly increased over background.

** - Detect at limit for 100% NDs in background (NPPL only).

*** - Manual exclusion.

ND = Not Detected, Result = detection limit.

Table 8

**Historical Downgradient Data for Constituent-Well Combinations
that Failed the Current Statistical Evaluation or
are in Verification Resampling Mode**

Constituent	Units	Well	Date		Result	Pred. Limit
Cobalt, total	ug/L	MW-13	04/09/2020	ND	0.7000	11.6000
Cobalt, total	ug/L	MW-13	10/01/2020		11.8000 *	11.6000
Cobalt, total	ug/L	MW-13	04/01/2021		0.4000	11.6000
Cobalt, total	ug/L	MW-13	10/04/2021		9.5000	11.6000
Cobalt, total	ug/L	MW-13	04/06/2022		3.9000	11.6000
Cobalt, total	ug/L	MW-13	10/04/2023		10.6000	11.6000
Cobalt, total	ug/L	MW-13	04/17/2024		11.6000	11.6000
Cobalt, total	ug/L	MW-13	10/09/2025		18.8000 *	11.6000
Nickel, total	ug/L	MW-13	10/17/2006	ND	58.0000 *	10.9000
Nickel, total	ug/L	MW-13	04/18/2007		17.0000 *	10.9000
Nickel, total	ug/L	MW-13	10/03/2007		22.0000 *	10.9000
Nickel, total	ug/L	MW-13	04/21/2008		5.0000	10.9000
Nickel, total	ug/L	MW-13	10/06/2008		42.0000 *	10.9000
Nickel, total	ug/L	MW-13	04/17/2009		17.0000 *	10.9000
Nickel, total	ug/L	MW-13	06/25/2009		33.7000 *	10.9000
Nickel, total	ug/L	MW-13	07/20/2009		57.0000 *	10.9000
Nickel, total	ug/L	MW-13	10/12/2009		14.0000 *	10.9000
Nickel, total	ug/L	MW-13	10/28/2009		11.9000 *	10.9000
Nickel, total	ug/L	MW-13	04/14/2010		15.2000 *	10.9000
Nickel, total	ug/L	MW-13	07/13/2010		39.5000 *	10.9000
Nickel, total	ug/L	MW-13	09/23/2010		33.1000 *	10.9000
Nickel, total	ug/L	MW-13	04/21/2011		14.2000 *	10.9000
Nickel, total	ug/L	MW-13	11/03/2011		47.1000 *	10.9000
Nickel, total	ug/L	MW-13	04/24/2012		28.7000 *	10.9000
Nickel, total	ug/L	MW-13	09/19/2012		37.1000 *	10.9000
Nickel, total	ug/L	MW-13	04/24/2013		14.0000 *	10.9000
Nickel, total	ug/L	MW-13	10/08/2013		70.4000 *	10.9000
Nickel, total	ug/L	MW-13	04/24/2014		67.6000 *	10.9000
Nickel, total	ug/L	MW-13	10/15/2014		85.7000 *	10.9000
Nickel, total	ug/L	MW-13	04/01/2015		76.7000 *	10.9000
Nickel, total	ug/L	MW-13	10/02/2015		67.3000 *	10.9000
Nickel, total	ug/L	MW-13	04/19/2016		67.6000 *	10.9000
Nickel, total	ug/L	MW-13	10/10/2016		38.8000 *	10.9000
Nickel, total	ug/L	MW-13	04/04/2017		4.0000	10.9000
Nickel, total	ug/L	MW-13	10/18/2017		47.1000 *	10.9000
Nickel, total	ug/L	MW-13	01/12/2018		65.8000 *	10.9000
Nickel, total	ug/L	MW-13	04/12/2018		55.0000 *	10.9000
Nickel, total	ug/L	MW-13	10/23/2018		46.7000 *	10.9000
Nickel, total	ug/L	MW-13	04/08/2019		60.8000 *	10.9000
Nickel, total	ug/L	MW-13	10/04/2019		79.6000 *	10.9000
Nickel, total	ug/L	MW-13	04/09/2020		43.1000 *	10.9000
Nickel, total	ug/L	MW-13	10/01/2020		75.9000 *	10.9000
Nickel, total	ug/L	MW-13	04/01/2021		12.7000 *	10.9000
Nickel, total	ug/L	MW-13	10/04/2021		67.8000 *	10.9000
Nickel, total	ug/L	MW-13	04/06/2022		106.0000 *	10.9000
Nickel, total	ug/L	MW-13	10/04/2023		75.4000 *	10.9000
Nickel, total	ug/L	MW-13	04/17/2024		89.9000 *	10.9000
Nickel, total	ug/L	MW-13	10/09/2025		151.0000 *	10.9000
Arsenic, total	ug/L	MW-14	10/17/2006	ND	8.0000 *	4.0000
Arsenic, total	ug/L	MW-14	04/18/2007		11.0000 *	4.0000
Arsenic, total	ug/L	MW-14	10/03/2007		15.0000 *	4.0000
Arsenic, total	ug/L	MW-14	04/21/2008		7.0000 *	4.0000
Arsenic, total	ug/L	MW-14	10/06/2008		8.5000 *	4.0000
Arsenic, total	ug/L	MW-14	04/14/2009		119.0000 *	4.0000
Arsenic, total	ug/L	MW-14	04/17/2009		22.4000 *	4.0000
Arsenic, total	ug/L	MW-14	06/25/2009		9.6000 *	4.0000
Arsenic, total	ug/L	MW-14	07/20/2009		20.0000	4.0000
Arsenic, total	ug/L	MW-14	10/12/2009		20.0000	4.0000
Arsenic, total	ug/L	MW-14	10/28/2009		11.6000 *	4.0000
Arsenic, total	ug/L	MW-14	04/14/2010		4.1000 *	4.0000
Arsenic, total	ug/L	MW-14	07/13/2010		13.7000 *	4.0000
Arsenic, total	ug/L	MW-14	09/23/2010		13.1000 *	4.0000
Arsenic, total	ug/L	MW-14	04/21/2011		10.0000	4.0000
Arsenic, total	ug/L	MW-14	11/03/2011		16.4000 *	4.0000
Arsenic, total	ug/L	MW-14	04/24/2012		14.7000 *	4.0000
Arsenic, total	ug/L	MW-14	09/19/2012		10.1000 *	4.0000
Arsenic, total	ug/L	MW-14	04/24/2013		5.8000 *	4.0000
Arsenic, total	ug/L	MW-14	10/08/2013		4.0000	4.0000
Arsenic, total	ug/L	MW-14	04/24/2014		4.0000	4.0000
Arsenic, total	ug/L	MW-14	10/15/2014		4.0000	4.0000
Arsenic, total	ug/L	MW-14	04/01/2015		4.0000	4.0000

* - Significantly increased over background.

** - Detect at limit for 100% NDs in background (NPPL only).

*** - Manual exclusion.

ND = Not Detected, Result = detection limit.

Table 8

**Historical Downgradient Data for Constituent-Well Combinations
that Failed the Current Statistical Evaluation or
are in Verification Resampling Mode**

Constituent	Units	Well	Date		Result	Pred. Limit
Arsenic, total	ug/L	MW-14	10/02/2015	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-14	04/19/2016	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-14	10/10/2016	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-14	04/04/2017	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-14	10/18/2017	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-14	04/12/2018	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-14	10/23/2018	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-14	04/08/2019		4.1000 *	4.0000
Arsenic, total	ug/L	MW-14	10/04/2019	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-14	04/09/2020		10.2000 *	4.0000
Arsenic, total	ug/L	MW-14	10/01/2020	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-14	04/01/2021	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-14	10/04/2021		30.5000 *	4.0000
Arsenic, total	ug/L	MW-14	04/06/2022	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-14	10/04/2023		5.5000 *	4.0000
Arsenic, total	ug/L	MW-14	04/17/2024	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-14	10/09/2025		4.8000 *	4.0000
Barium, total	ug/L	MW-14	10/17/2006		883.0000 *	297.9828
Barium, total	ug/L	MW-14	04/18/2007		632.0000 *	297.9828
Barium, total	ug/L	MW-14	10/03/2007		1590.0000 *	297.9828
Barium, total	ug/L	MW-14	04/21/2008		366.0000 *	297.9828
Barium, total	ug/L	MW-14	10/06/2008		1090.0000 *	297.9828
Barium, total	ug/L	MW-14	04/14/2009		2320.0000 *	297.9828
Barium, total	ug/L	MW-14	04/17/2009		1560.0000 *	297.9828
Barium, total	ug/L	MW-14	06/25/2009		960.0000 *	297.9828
Barium, total	ug/L	MW-14	07/20/2009		1120.0000 *	297.9828
Barium, total	ug/L	MW-14	10/12/2009		1190.0000 *	297.9828
Barium, total	ug/L	MW-14	10/28/2009		959.0000 *	297.9828
Barium, total	ug/L	MW-14	04/14/2010		754.0000 *	297.9828
Barium, total	ug/L	MW-14	07/13/2010		885.0000 *	297.9828
Barium, total	ug/L	MW-14	09/23/2010		1020.0000 *	297.9828
Barium, total	ug/L	MW-14	04/21/2011		572.0000 *	297.9828
Barium, total	ug/L	MW-14	11/03/2011		1180.0000 *	297.9828
Barium, total	ug/L	MW-14	04/24/2012		1110.0000 *	297.9828
Barium, total	ug/L	MW-14	09/19/2012		917.0000 *	297.9828
Barium, total	ug/L	MW-14	04/24/2013		349.0000 *	297.9828
Barium, total	ug/L	MW-14	10/08/2013		533.0000 *	297.9828
Barium, total	ug/L	MW-14	04/24/2014		290.0000 *	297.9828
Barium, total	ug/L	MW-14	10/15/2014		711.0000 *	297.9828
Barium, total	ug/L	MW-14	04/01/2015		747.0000 *	297.9828
Barium, total	ug/L	MW-14	06/09/2015		419.0000 *	297.9828
Barium, total	ug/L	MW-14	10/02/2015		818.0000 *	297.9828
Barium, total	ug/L	MW-14	04/19/2016		671.0000 *	297.9828
Barium, total	ug/L	MW-14	10/10/2016		483.0000 *	297.9828
Barium, total	ug/L	MW-14	04/04/2017		76.3000 *	297.9828
Barium, total	ug/L	MW-14	10/18/2017		1110.0000 *	297.9828
Barium, total	ug/L	MW-14	01/12/2018		692.0000 *	297.9828
Barium, total	ug/L	MW-14	04/12/2018		1130.0000 *	297.9828
Barium, total	ug/L	MW-14	10/23/2018		368.0000 *	297.9828
Barium, total	ug/L	MW-14	04/08/2019		809.0000 *	297.9828
Barium, total	ug/L	MW-14	10/04/2019		903.0000 *	297.9828
Barium, total	ug/L	MW-14	04/09/2020		986.0000 *	297.9828
Barium, total	ug/L	MW-14	10/01/2020		717.0000 *	297.9828
Barium, total	ug/L	MW-14	04/01/2021		714.0000 *	297.9828
Barium, total	ug/L	MW-14	10/04/2021		1530.0000 *	297.9828
Barium, total	ug/L	MW-14	04/06/2022		1360.0000 *	297.9828
Barium, total	ug/L	MW-14	10/04/2023		843.0000 *	297.9828
Barium, total	ug/L	MW-14	04/17/2024		1040.0000 *	297.9828
Barium, total	ug/L	MW-14	10/09/2025		949.0000 *	297.9828
Copper, total	ug/L	MW-14	10/17/2006		12.0000 *	4.1000
Copper, total	ug/L	MW-14	04/18/2007		48.0000 *	4.1000
Copper, total	ug/L	MW-14	10/03/2007		106.0000 *	4.1000
Copper, total	ug/L	MW-14	04/21/2008		21.0000 *	4.1000
Copper, total	ug/L	MW-14	10/06/2008		27.1000 *	4.1000
Copper, total	ug/L	MW-14	04/14/2009	ND	4.0000 *	4.1000
Copper, total	ug/L	MW-14	04/17/2009		99.3000 *	4.1000
Copper, total	ug/L	MW-14	06/25/2009		52.5000 *	4.1000
Copper, total	ug/L	MW-14	07/20/2009		46.0000 *	4.1000
Copper, total	ug/L	MW-14	10/12/2009		22.1000 *	4.1000
Copper, total	ug/L	MW-14	10/28/2009		44.8000 *	4.1000
Copper, total	ug/L	MW-14	04/14/2010		43.2000 *	4.1000

* - Significantly increased over background.

** - Detect at limit for 100% NDs in background (NPPL only).

*** - Manual exclusion.

ND = Not Detected, Result = detection limit.

Table 8

**Historical Downgradient Data for Constituent-Well Combinations
that Failed the Current Statistical Evaluation or
are in Verification Resampling Mode**

Constituent	Units	Well	Date		Result		Pred. Limit
Copper, total	ug/L	MW-14	07/13/2010		49.5000	*	4.1000
Copper, total	ug/L	MW-14	09/23/2010		39.9000	*	4.1000
Copper, total	ug/L	MW-14	04/21/2011		36.2000	*	4.1000
Copper, total	ug/L	MW-14	11/03/2011		36.6000	*	4.1000
Copper, total	ug/L	MW-14	04/24/2012		17.4000	*	4.1000
Copper, total	ug/L	MW-14	09/19/2012		13.6000	*	4.1000
Copper, total	ug/L	MW-14	04/24/2013		22.9000	*	4.1000
Copper, total	ug/L	MW-14	10/08/2013		4.1000		4.1000
Copper, total	ug/L	MW-14	04/24/2014	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	10/15/2014	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	04/01/2015	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	10/02/2015	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	04/19/2016	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	10/10/2016	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	04/04/2017	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	10/18/2017	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	04/12/2018	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	10/23/2018	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	04/08/2019	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	10/04/2019	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	04/09/2020	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	10/01/2020	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	04/01/2021	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	10/04/2021	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	04/06/2022	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	10/04/2023	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	04/17/2024	ND	4.0000		4.1000
Copper, total	ug/L	MW-14	10/09/2025		6.6000	*	4.1000
Nickel, total	ug/L	MW-14	10/17/2006		68.0000	*	10.9000
Nickel, total	ug/L	MW-14	04/18/2007		53.0000	*	10.9000
Nickel, total	ug/L	MW-14	10/03/2007		134.0000	*	10.9000
Nickel, total	ug/L	MW-14	04/21/2008		27.0000	*	10.9000
Nickel, total	ug/L	MW-14	10/06/2008		83.3000	*	10.9000
Nickel, total	ug/L	MW-14	04/14/2009		39.8000	*	10.9000
Nickel, total	ug/L	MW-14	04/17/2009		153.0000	*	10.9000
Nickel, total	ug/L	MW-14	06/25/2009		130.0000	*	10.9000
Nickel, total	ug/L	MW-14	07/20/2009		109.0000	*	10.9000
Nickel, total	ug/L	MW-14	10/12/2009		108.0000	*	10.9000
Nickel, total	ug/L	MW-14	10/28/2009		159.0000	*	10.9000
Nickel, total	ug/L	MW-14	04/14/2010		97.7000	*	10.9000
Nickel, total	ug/L	MW-14	07/13/2010		105.0000	*	10.9000
Nickel, total	ug/L	MW-14	09/23/2010		111.0000	*	10.9000
Nickel, total	ug/L	MW-14	04/21/2011		60.5000	*	10.9000
Nickel, total	ug/L	MW-14	11/03/2011		123.0000	*	10.9000
Nickel, total	ug/L	MW-14	04/24/2012		68.8000	*	10.9000
Nickel, total	ug/L	MW-14	09/19/2012		53.7000	*	10.9000
Nickel, total	ug/L	MW-14	04/24/2013		57.5000	*	10.9000
Nickel, total	ug/L	MW-14	10/08/2013		58.7000	*	10.9000
Nickel, total	ug/L	MW-14	04/24/2014		22.2000	*	10.9000
Nickel, total	ug/L	MW-14	10/15/2014		69.2000	*	10.9000
Nickel, total	ug/L	MW-14	04/01/2015		54.2000	*	10.9000
Nickel, total	ug/L	MW-14	06/09/2015		31.8000	*	10.9000
Nickel, total	ug/L	MW-14	10/02/2015		76.9000	*	10.9000
Nickel, total	ug/L	MW-14	04/19/2016		67.7000	*	10.9000
Nickel, total	ug/L	MW-14	10/10/2016		33.0000	*	10.9000
Nickel, total	ug/L	MW-14	04/04/2017	ND	4.0000		10.9000
Nickel, total	ug/L	MW-14	10/18/2017		44.4000	*	10.9000
Nickel, total	ug/L	MW-14	01/12/2018		61.3000	*	10.9000
Nickel, total	ug/L	MW-14	04/12/2018		46.3000	*	10.9000
Nickel, total	ug/L	MW-14	10/23/2018		19.4000	*	10.9000
Nickel, total	ug/L	MW-14	04/08/2019		55.8000	*	10.9000
Nickel, total	ug/L	MW-14	10/04/2019		42.5000	*	10.9000
Nickel, total	ug/L	MW-14	04/09/2020		61.0000	*	10.9000
Nickel, total	ug/L	MW-14	10/01/2020		50.6000	*	10.9000
Nickel, total	ug/L	MW-14	04/01/2021		23.3000	*	10.9000
Nickel, total	ug/L	MW-14	10/04/2021		52.6000	*	10.9000
Nickel, total	ug/L	MW-14	04/06/2022		50.6000	*	10.9000
Nickel, total	ug/L	MW-14	10/04/2023		33.8000	*	10.9000
Nickel, total	ug/L	MW-14	04/17/2024		31.6000	*	10.9000
Nickel, total	ug/L	MW-14	10/09/2025		64.2000	*	10.9000
Arsenic, total	ug/L	MW-9	10/17/2006		10.0000	*	4.0000

* - Significantly increased over background.

** - Detect at limit for 100% NDs in background (NPPL only).

*** - Manual exclusion.

ND = Not Detected, Result = detection limit.

Table 8

**Historical Downgradient Data for Constituent-Well Combinations
that Failed the Current Statistical Evaluation or
are in Verification Resampling Mode**

Constituent	Units	Well	Date		Result	Pred. Limit
Arsenic, total	ug/L	MW-9	04/18/2007		8.0000 *	4.0000
Arsenic, total	ug/L	MW-9	10/03/2007	ND	20.0000	4.0000
Arsenic, total	ug/L	MW-9	04/21/2008	ND	20.0000	4.0000
Arsenic, total	ug/L	MW-9	10/06/2008	ND	20.0000	4.0000
Arsenic, total	ug/L	MW-9	04/13/2009	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-9	04/17/2009	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-9	06/25/2009	ND	20.0000	4.0000
Arsenic, total	ug/L	MW-9	07/20/2009	ND	20.0000	4.0000
Arsenic, total	ug/L	MW-9	10/12/2009	ND	20.0000	4.0000
Arsenic, total	ug/L	MW-9	10/28/2009	ND	20.0000	4.0000
Arsenic, total	ug/L	MW-9	04/24/2012		6.9000 *	4.0000
Arsenic, total	ug/L	MW-9	09/19/2012		11.8000 *	4.0000
Arsenic, total	ug/L	MW-9	04/24/2013		9.4000 *	4.0000
Arsenic, total	ug/L	MW-9	10/08/2013		6.9000 *	4.0000
Arsenic, total	ug/L	MW-9	04/24/2014	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-9	10/16/2014		5.4000 *	4.0000
Arsenic, total	ug/L	MW-9	04/01/2015	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-9	10/02/2015		5.0000 *	4.0000
Arsenic, total	ug/L	MW-9	04/19/2016		14.9000 *	4.0000
Arsenic, total	ug/L	MW-9	10/10/2016	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-9	04/04/2017	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-9	10/18/2017	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-9	04/12/2018		4.5000 *	4.0000
Arsenic, total	ug/L	MW-9	10/23/2018	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-9	04/08/2019	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-9	10/04/2019		5.4000 *	4.0000
Arsenic, total	ug/L	MW-9	04/09/2020	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-9	10/01/2020		5.9000 *	4.0000
Arsenic, total	ug/L	MW-9	04/01/2021		4.8000 *	4.0000
Arsenic, total	ug/L	MW-9	10/04/2021		7.8000 *	4.0000
Arsenic, total	ug/L	MW-9	04/06/2022		17.8000 *	4.0000
Arsenic, total	ug/L	MW-9	10/04/2023		16.2000 *	4.0000
Arsenic, total	ug/L	MW-9	04/17/2024	ND	4.0000	4.0000
Arsenic, total	ug/L	MW-9	10/09/2025		6.3000 *	4.0000
Barium, total	ug/L	MW-9	10/17/2006		923.0000 *	297.9828
Barium, total	ug/L	MW-9	04/18/2007		671.0000 *	297.9828
Barium, total	ug/L	MW-9	10/03/2007		609.0000 *	297.9828
Barium, total	ug/L	MW-9	04/21/2008		554.0000 *	297.9828
Barium, total	ug/L	MW-9	10/06/2008		555.0000 *	297.9828
Barium, total	ug/L	MW-9	04/13/2009		157.0000	297.9828
Barium, total	ug/L	MW-9	04/17/2009		596.0000 *	297.9828
Barium, total	ug/L	MW-9	06/25/2009		687.0000 *	297.9828
Barium, total	ug/L	MW-9	07/20/2009		579.0000 *	297.9828
Barium, total	ug/L	MW-9	10/12/2009		618.0000 *	297.9828
Barium, total	ug/L	MW-9	10/28/2009		622.0000 *	297.9828
Barium, total	ug/L	MW-9	04/14/2010		599.0000 *	297.9828
Barium, total	ug/L	MW-9	07/13/2010		719.0000 *	297.9828
Barium, total	ug/L	MW-9	09/23/2010		627.0000 *	297.9828
Barium, total	ug/L	MW-9	04/21/2011		212.0000	297.9828
Barium, total	ug/L	MW-9	11/03/2011		581.0000 *	297.9828
Barium, total	ug/L	MW-9	04/24/2012		619.0000 *	297.9828
Barium, total	ug/L	MW-9	09/19/2012		665.0000 *	297.9828
Barium, total	ug/L	MW-9	04/24/2013		597.0000 *	297.9828
Barium, total	ug/L	MW-9	10/08/2013		604.0000 *	297.9828
Barium, total	ug/L	MW-9	04/24/2014		522.0000 *	297.9828
Barium, total	ug/L	MW-9	10/16/2014		651.0000 *	297.9828
Barium, total	ug/L	MW-9	04/01/2015		742.0000 *	297.9828
Barium, total	ug/L	MW-9	06/09/2015		789.0000 *	297.9828
Barium, total	ug/L	MW-9	10/02/2015		862.0000 *	297.9828
Barium, total	ug/L	MW-9	04/19/2016		932.0000 *	297.9828
Barium, total	ug/L	MW-9	10/10/2016		652.0000 *	297.9828
Barium, total	ug/L	MW-9	04/04/2017		917.0000 *	297.9828
Barium, total	ug/L	MW-9	10/18/2017		638.0000 *	297.9828
Barium, total	ug/L	MW-9	04/12/2018		691.0000 *	297.9828
Barium, total	ug/L	MW-9	10/23/2018		721.0000 *	297.9828
Barium, total	ug/L	MW-9	04/08/2019		717.0000 *	297.9828
Barium, total	ug/L	MW-9	10/04/2019		616.0000 *	297.9828
Barium, total	ug/L	MW-9	04/09/2020		707.0000 *	297.9828
Barium, total	ug/L	MW-9	10/01/2020		630.0000 *	297.9828
Barium, total	ug/L	MW-9	04/01/2021		839.0000 *	297.9828
Barium, total	ug/L	MW-9	10/04/2021		773.0000 *	297.9828

* - Significantly increased over background.

** - Detect at limit for 100% NDs in background (NPPL only).

*** - Manual exclusion.

ND = Not Detected, Result = detection limit.

Table 8

**Historical Downgradient Data for Constituent-Well Combinations
that Failed the Current Statistical Evaluation or
are in Verification Resampling Mode**

Constituent	Units	Well	Date		Result		Pred. Limit
Barium, total	ug/L	MW-9	04/06/2022		1120.0000	*	297.9828
Barium, total	ug/L	MW-9	10/04/2023		855.0000	*	297.9828
Barium, total	ug/L	MW-9	04/17/2024		965.0000	*	297.9828
Barium, total	ug/L	MW-9	10/09/2025		796.0000	*	297.9828
Nickel, total	ug/L	MW-9	10/17/2006		41.0000	*	10.9000
Nickel, total	ug/L	MW-9	04/18/2007		23.0000	*	10.9000
Nickel, total	ug/L	MW-9	10/03/2007		39.0000	*	10.9000
Nickel, total	ug/L	MW-9	04/21/2008		19.0000	*	10.9000
Nickel, total	ug/L	MW-9	10/06/2008		19.0000	*	10.9000
Nickel, total	ug/L	MW-9	04/13/2009		21.9000	*	10.9000
Nickel, total	ug/L	MW-9	04/17/2009		21.8000	*	10.9000
Nickel, total	ug/L	MW-9	06/25/2009		24.4000	*	10.9000
Nickel, total	ug/L	MW-9	07/20/2009		21.0000	*	10.9000
Nickel, total	ug/L	MW-9	10/12/2009		16.8000	*	10.9000
Nickel, total	ug/L	MW-9	10/28/2009		19.2000	*	10.9000
Nickel, total	ug/L	MW-9	04/14/2010		19.1000	*	10.9000
Nickel, total	ug/L	MW-9	07/13/2010		25.2000	*	10.9000
Nickel, total	ug/L	MW-9	09/23/2010		19.8000	*	10.9000
Nickel, total	ug/L	MW-9	04/21/2011		33.0000	*	10.9000
Nickel, total	ug/L	MW-9	11/03/2011		17.7000	*	10.9000
Nickel, total	ug/L	MW-9	04/24/2012		23.6000	*	10.9000
Nickel, total	ug/L	MW-9	09/19/2012		16.3000	*	10.9000
Nickel, total	ug/L	MW-9	04/24/2013		31.6000	*	10.9000
Nickel, total	ug/L	MW-9	10/08/2013		21.7000	*	10.9000
Nickel, total	ug/L	MW-9	04/24/2014		16.7000	*	10.9000
Nickel, total	ug/L	MW-9	10/16/2014		23.4000	*	10.9000
Nickel, total	ug/L	MW-9	04/01/2015		24.0000	*	10.9000
Nickel, total	ug/L	MW-9	10/02/2015		53.1000	*	10.9000
Nickel, total	ug/L	MW-9	04/19/2016		32.2000	*	10.9000
Nickel, total	ug/L	MW-9	10/10/2016		26.9000	*	10.9000
Nickel, total	ug/L	MW-9	04/04/2017		32.4000	*	10.9000
Nickel, total	ug/L	MW-9	10/18/2017		25.2000	*	10.9000
Nickel, total	ug/L	MW-9	04/12/2018		25.8000	*	10.9000
Nickel, total	ug/L	MW-9	10/23/2018		23.7000	*	10.9000
Nickel, total	ug/L	MW-9	04/08/2019		24.7000	*	10.9000
Nickel, total	ug/L	MW-9	10/04/2019		20.3000	*	10.9000
Nickel, total	ug/L	MW-9	04/09/2020		22.8000	*	10.9000
Nickel, total	ug/L	MW-9	10/01/2020		17.1000	*	10.9000
Nickel, total	ug/L	MW-9	04/01/2021		22.5000	*	10.9000
Nickel, total	ug/L	MW-9	10/04/2021		21.9000	*	10.9000
Nickel, total	ug/L	MW-9	04/06/2022		30.9000	*	10.9000
Nickel, total	ug/L	MW-9	10/04/2023		19.1000	*	10.9000
Nickel, total	ug/L	MW-9	04/17/2024		46.2000	*	10.9000
Nickel, total	ug/L	MW-9	10/09/2025		26.4000	*	10.9000

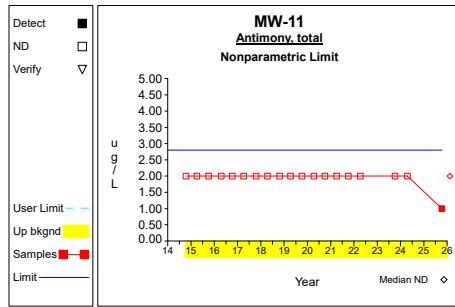
* - Significantly increased over background.

** - Detect at limit for 100% NDs in background (NPPL only).

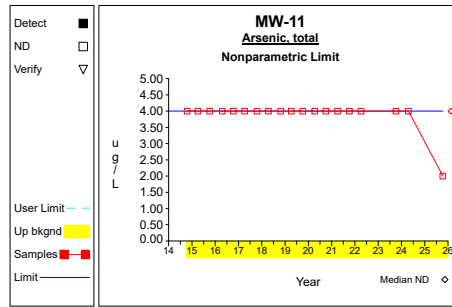
*** - Manual exclusion.

ND = Not Detected, Result = detection limit.

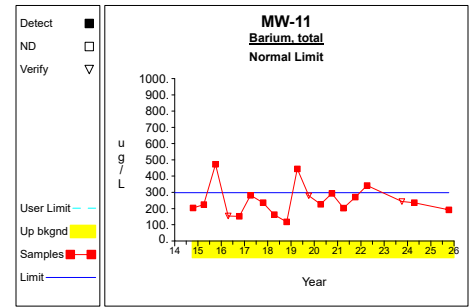
Up vs. Down Prediction Limits



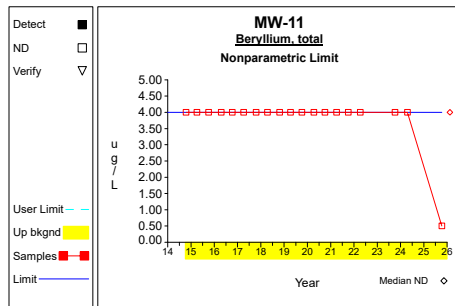
Graph 1



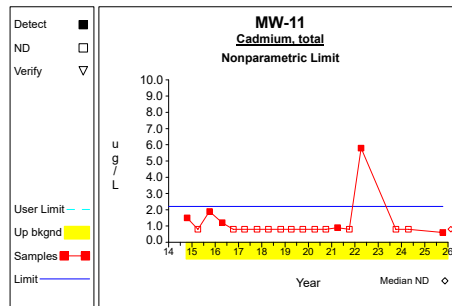
Graph 2



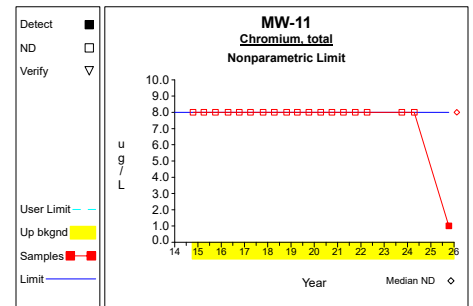
Graph 3



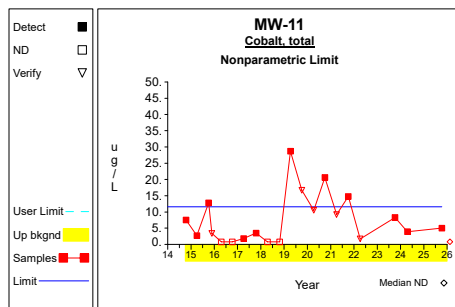
Graph 4



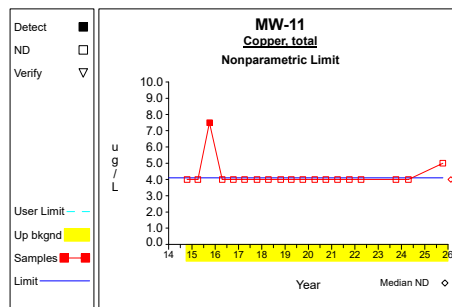
Graph 5



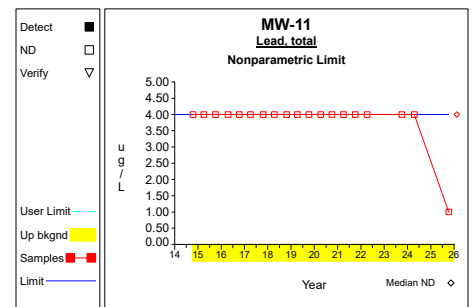
Graph 6



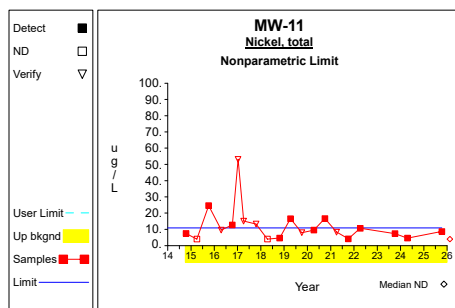
Graph 7



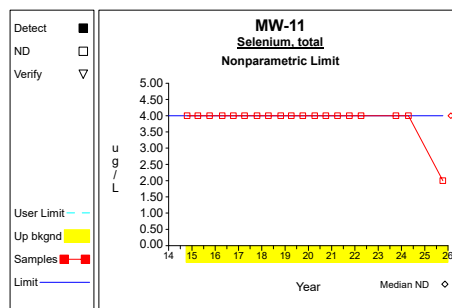
Graph 8



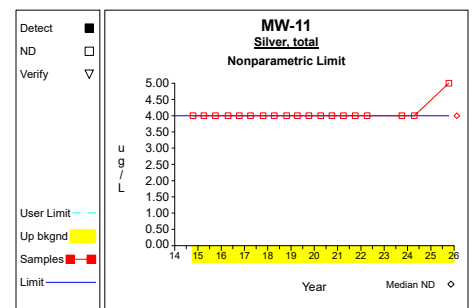
Graph 9



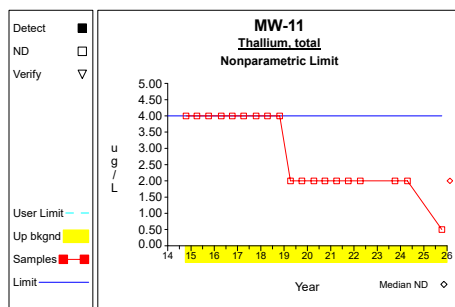
Graph 10



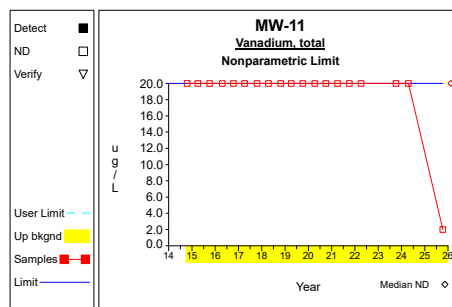
Graph 11



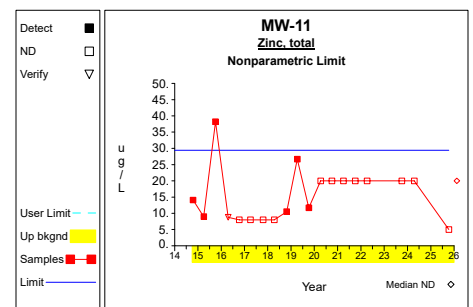
Graph 12



Graph 13

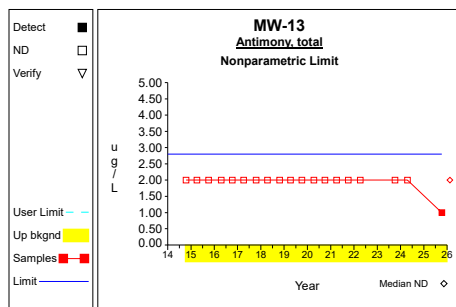


Graph 14

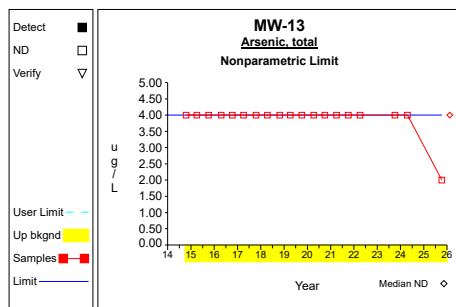


Graph 15

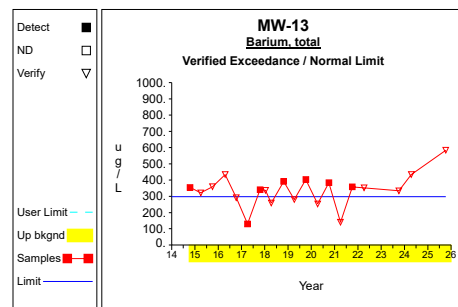
Up vs. Down Prediction Limits



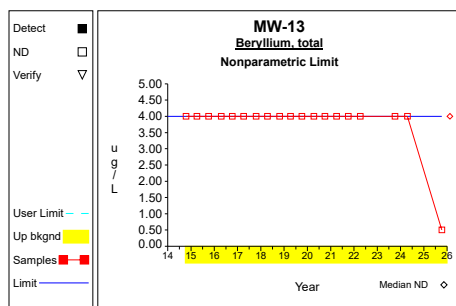
Graph 16



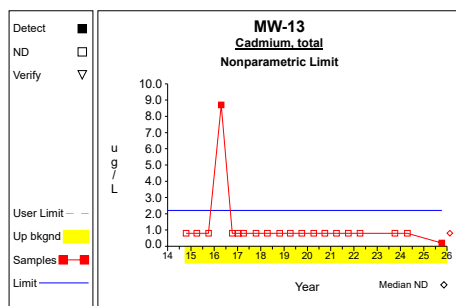
Graph 17



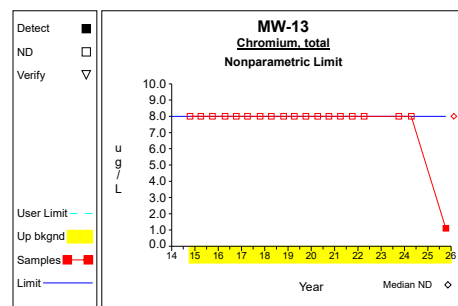
Graph 18



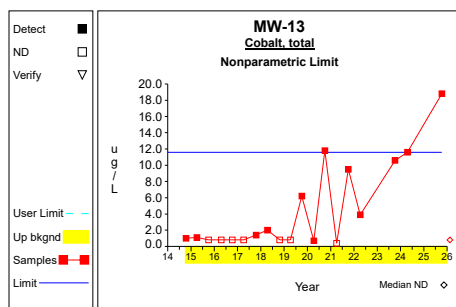
Graph 19



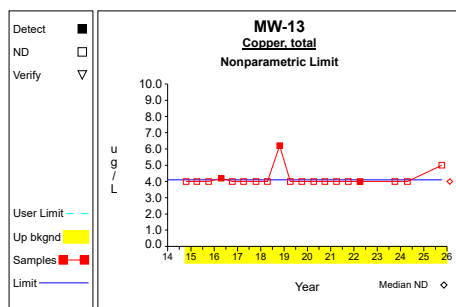
Graph 20



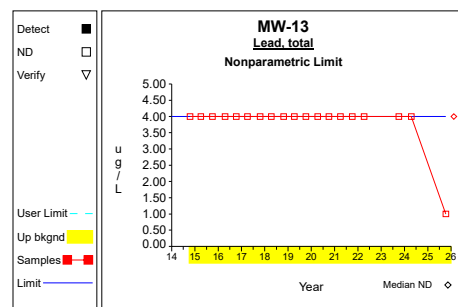
Graph 21



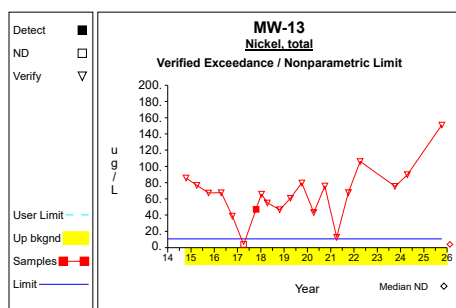
Graph 22



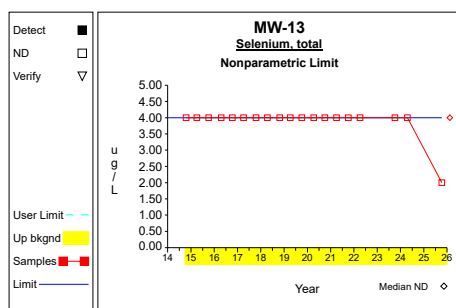
Graph 23



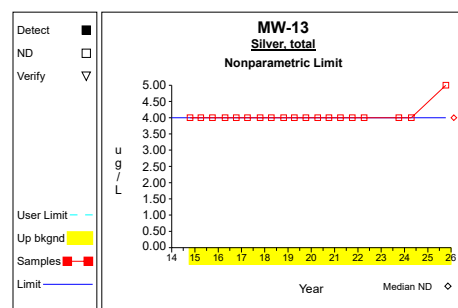
Graph 24



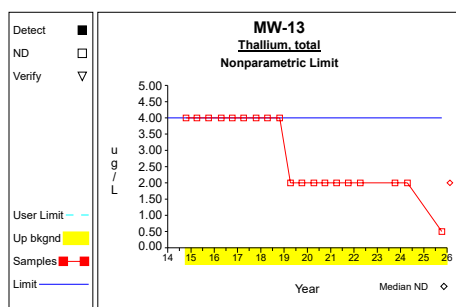
Graph 25



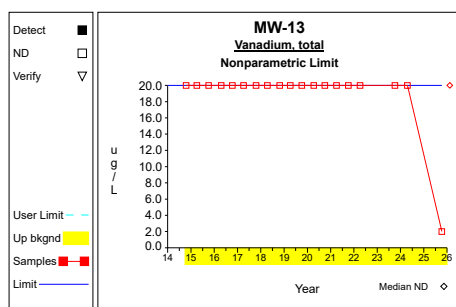
Graph 26



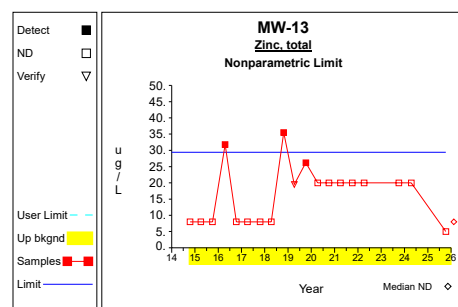
Graph 27



Graph 28

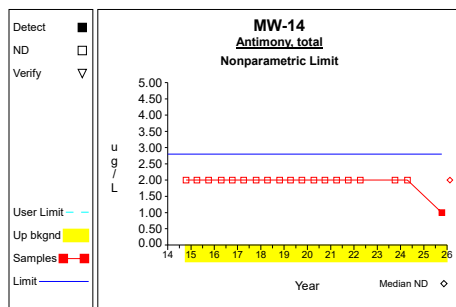


Graph 29

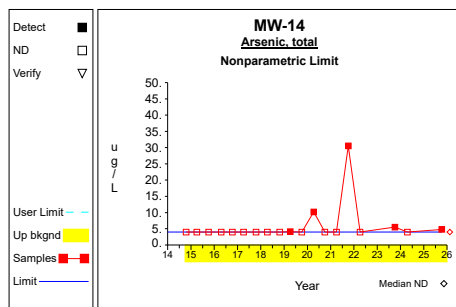


Graph 30

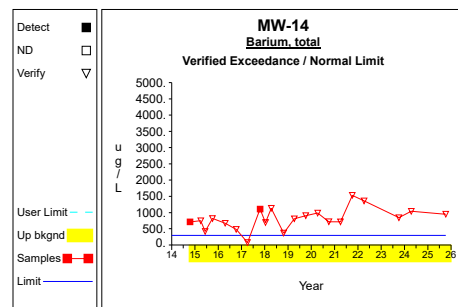
Up vs. Down Prediction Limits



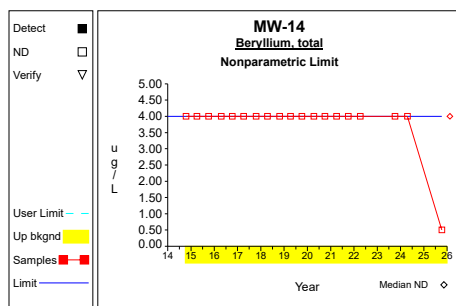
Graph 31



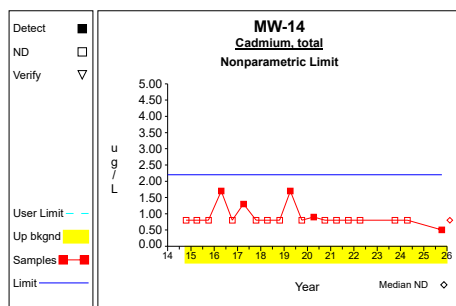
Graph 32



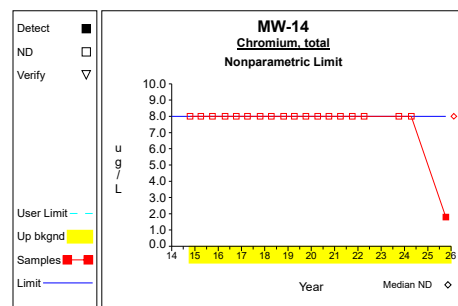
Graph 33



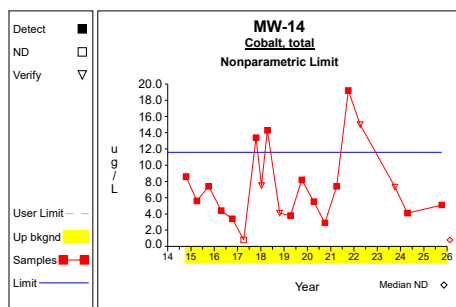
Graph 34



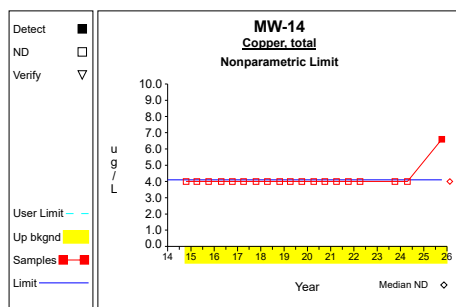
Graph 35



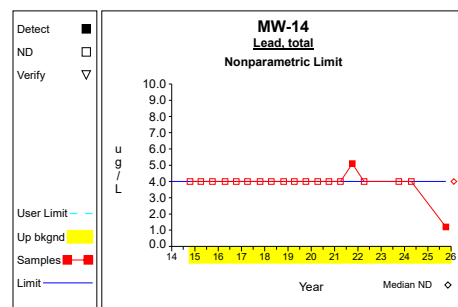
Graph 36



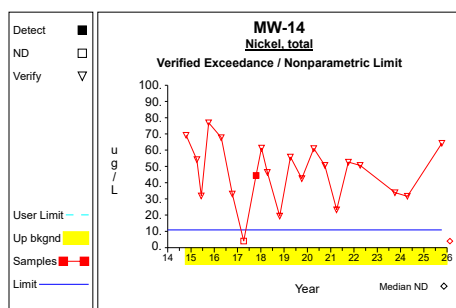
Graph 37



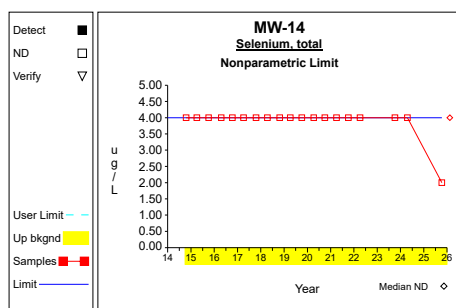
Graph 38



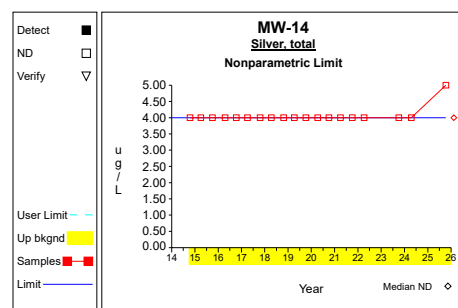
Graph 39



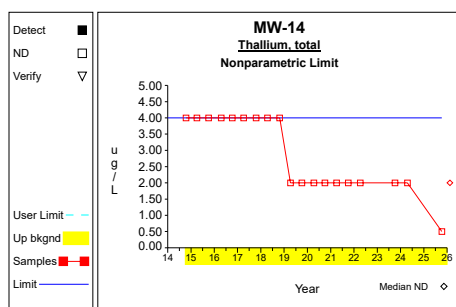
Graph 40



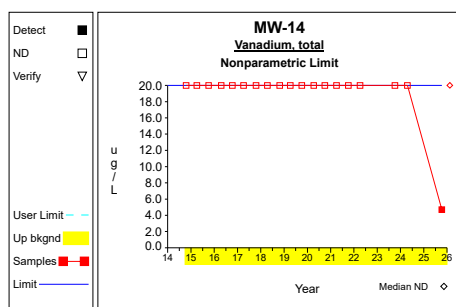
Graph 41



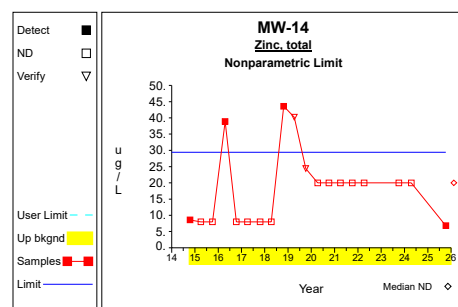
Graph 42



Graph 43

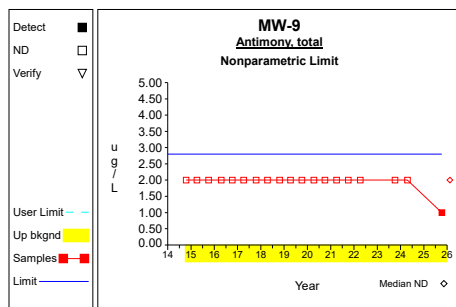


Graph 44

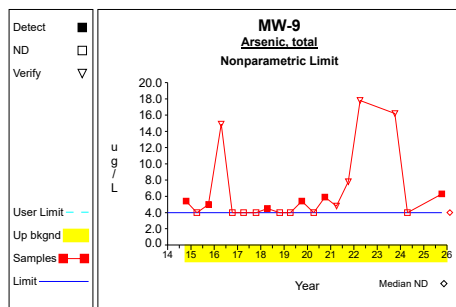


Graph 45

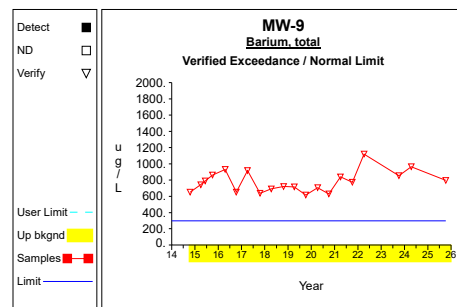
Up vs. Down Prediction Limits



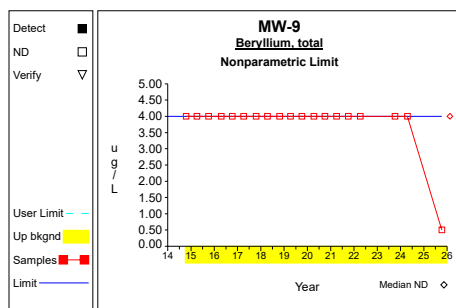
Graph 46



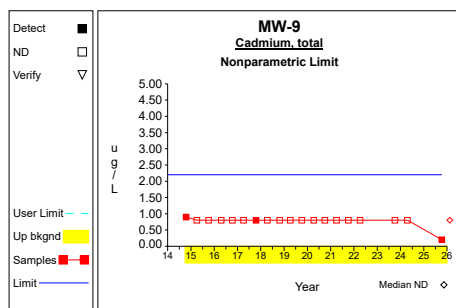
Graph 47



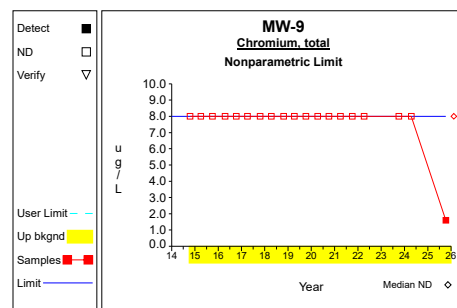
Graph 48



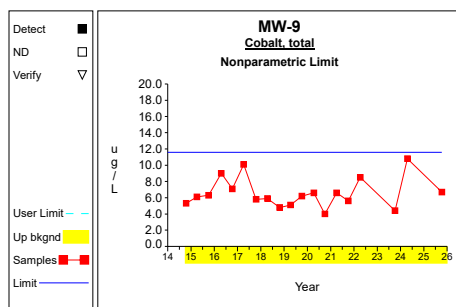
Graph 49



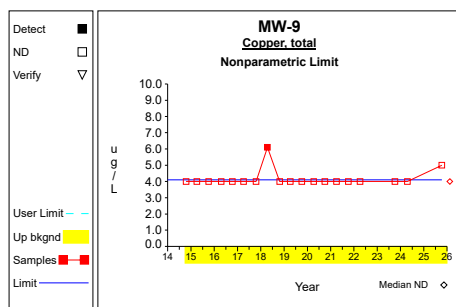
Graph 50



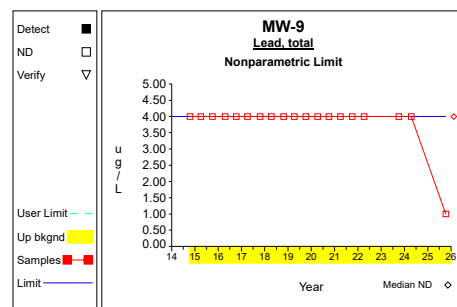
Graph 51



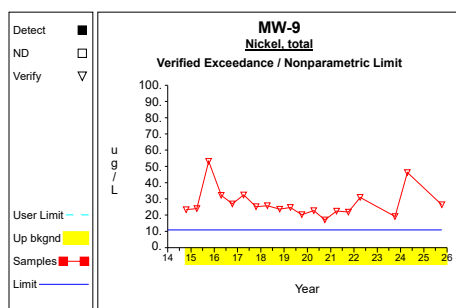
Graph 52



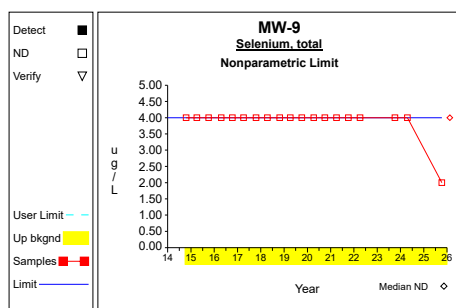
Graph 53



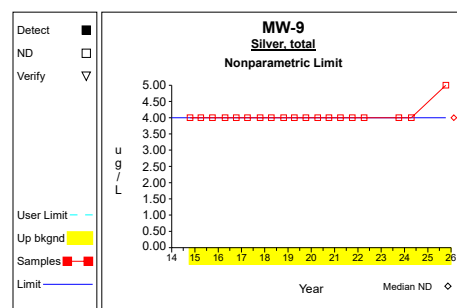
Graph 54



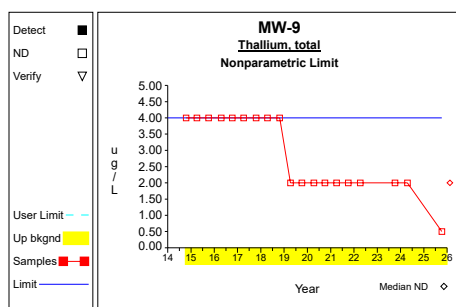
Graph 55



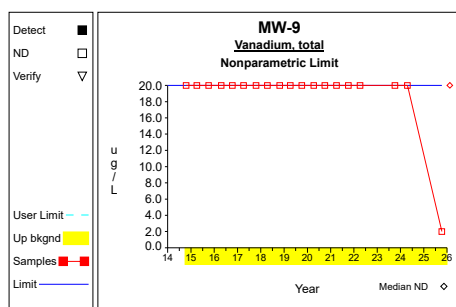
Graph 56



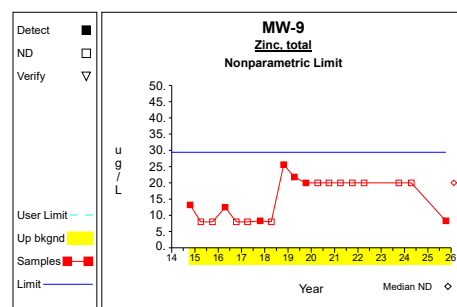
Graph 57



Graph 58

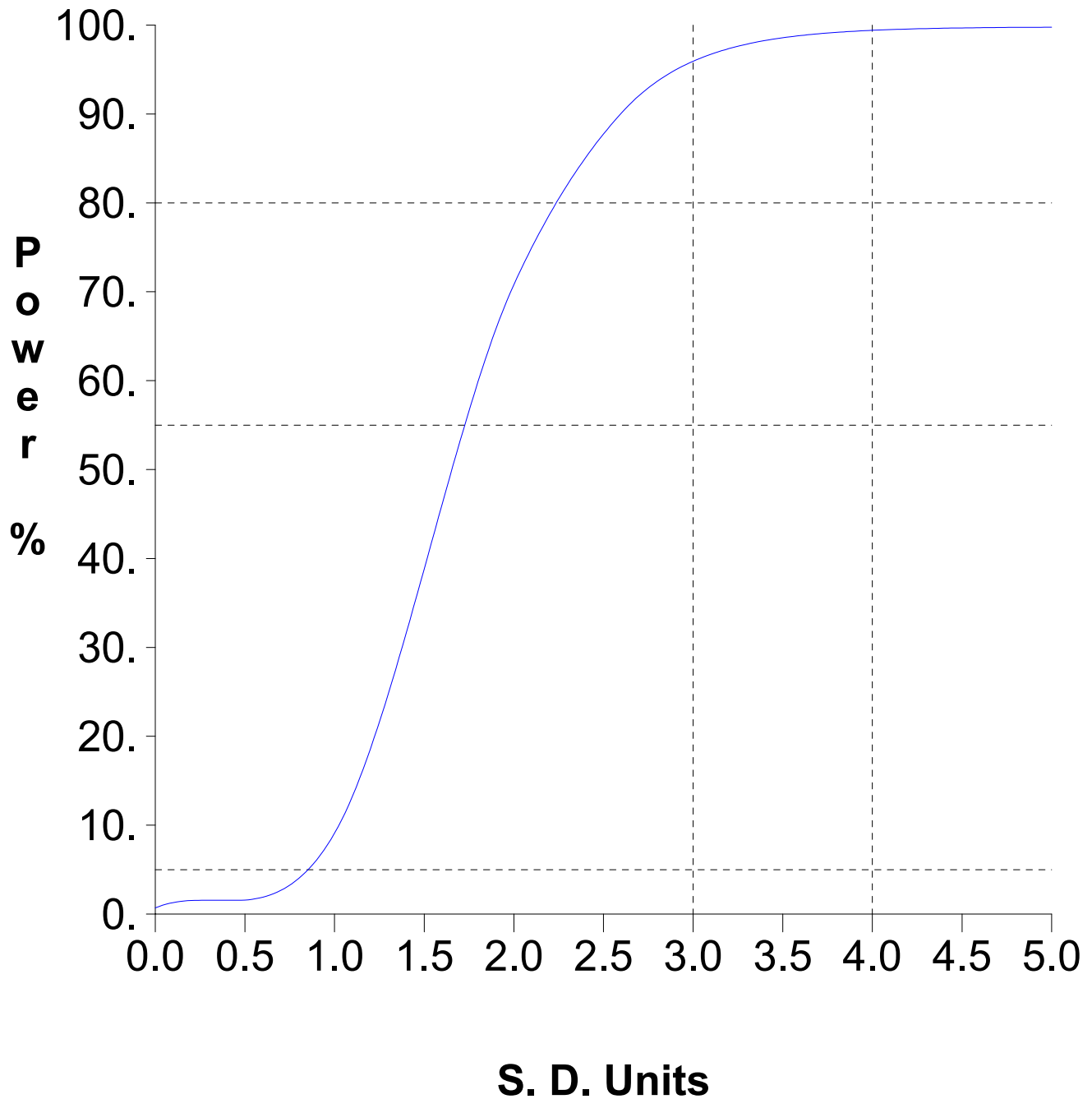


Graph 59



Graph 60

False Positive and False Negative Rates for Current Upgradient vs. Downgradient Monitoring Program



Attachment C

Assessment Statistics for Trace Metals

Table 1

**Confidence Intervals for Comparing the Mean of the Last
4 Measurements to an Assessment Monitoring Standard**

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend	
Arsenic, total	ug/L	MW-11	4	2.000	0.000	1.176	2.000	2.000	10.000		
Barium, total	ug/L	MW-11	4	253.250	63.327	1.176	178.760	327.740	2000.000		
Cobalt, total	ug/L	MW-11	4	4.725	2.750	1.176	1.490	7.960	2.100		
Copper, total	ug/L	MW-11	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-11	4	7.850	2.557	1.176	4.843	10.857	100.000		
Arsenic, total	ug/L	MW-13	4	2.000	0.000	1.176	2.000	2.000	10.000		
Barium, total	ug/L	MW-13	4	426.000	113.971	1.176	291.938	560.062	2000.000		**
Cobalt, total	ug/L	MW-13	4	11.225	6.098	1.176	4.052	18.398	2.100		
Copper, total	ug/L	MW-13	4	2.500	1.000	1.176	1.324	3.676	1300.000		
Nickel, total	ug/L	MW-13	4	105.575	32.761	1.176	67.039	144.111	100.000		
Arsenic, total	ug/L	MW-14	4	3.575	1.841	1.176	1.409	5.741	10.000		
Barium, total	ug/L	MW-14	4	1048.000	223.035	1.176	785.646	1310.354	2000.000		
Cobalt, total	ug/L	MW-14	4	7.875	4.934	1.176	2.071	13.679	2.100		
Copper, total	ug/L	MW-14	4	3.150	2.300	1.176	0.445	5.855	1300.000		
Nickel, total	ug/L	MW-14	4	45.050	15.330	1.176	27.018	63.082	100.000		
Arsenic, total	ug/L	MW-15A	4	2.000	0.000	1.176	2.000	2.000	10.000		
Barium, total	ug/L	MW-15A	4	186.250	90.809	1.176	79.433	293.067	2000.000		
Cobalt, total	ug/L	MW-15A	4	1.475	2.150	1.176	0.000	4.004	2.100		
Copper, total	ug/L	MW-15A	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-15A	4	3.550	3.100	1.176	0.000	7.196	100.000		
Arsenic, total	ug/L	MW-9	4	10.575	7.652	1.176	1.574	19.576	10.000		
Barium, total	ug/L	MW-9	4	934.000	142.410	1.176	766.485	1101.515	2000.000		**
Cobalt, total	ug/L	MW-9	4	7.600	2.714	1.176	4.407	10.793	2.100		
Copper, total	ug/L	MW-9	4	2.000	0.000	1.176	2.000	2.000	1300.000		
Nickel, total	ug/L	MW-9	4	30.650	11.450	1.176	17.181	44.119	100.000		

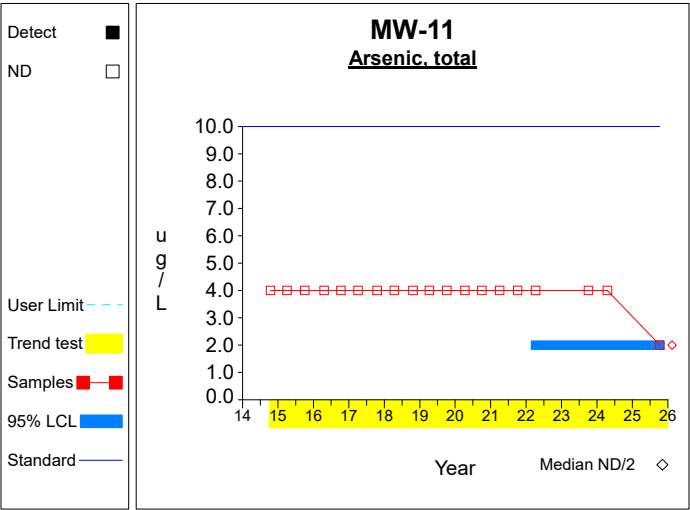
* - Insufficient Data

** - Significant Exceedance

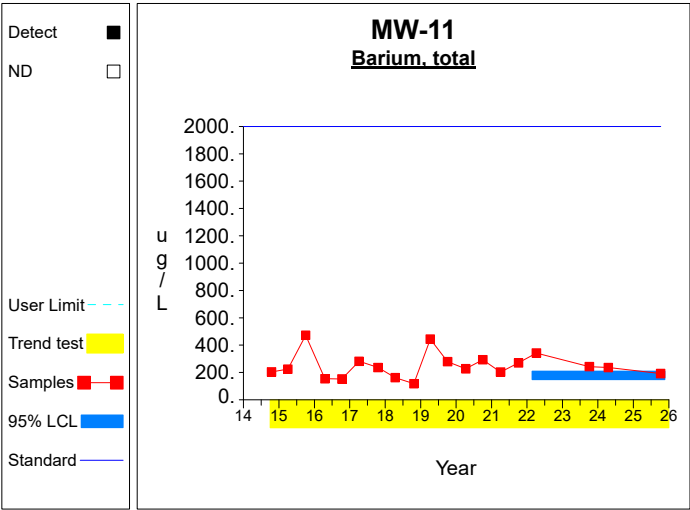
LCL = Lower Confidence Limit

UCL = Upper Confidence Limit

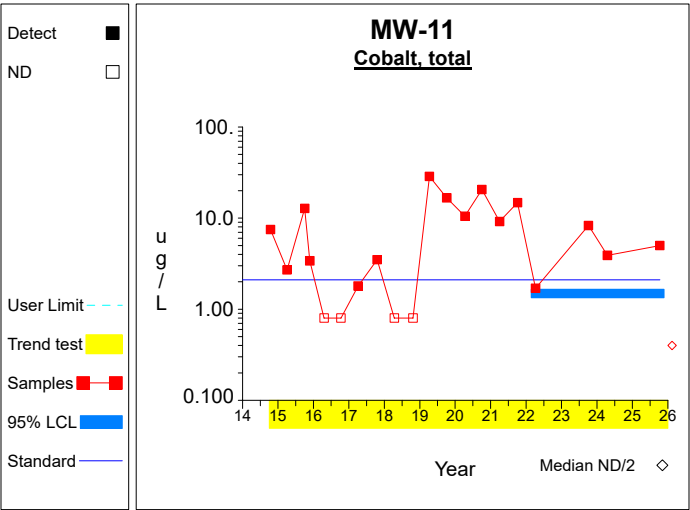
Confidence Limits (Assessment)



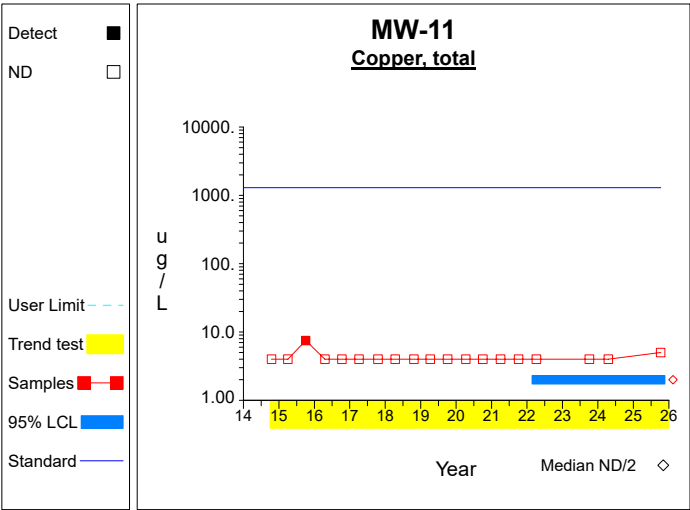
Graph 1



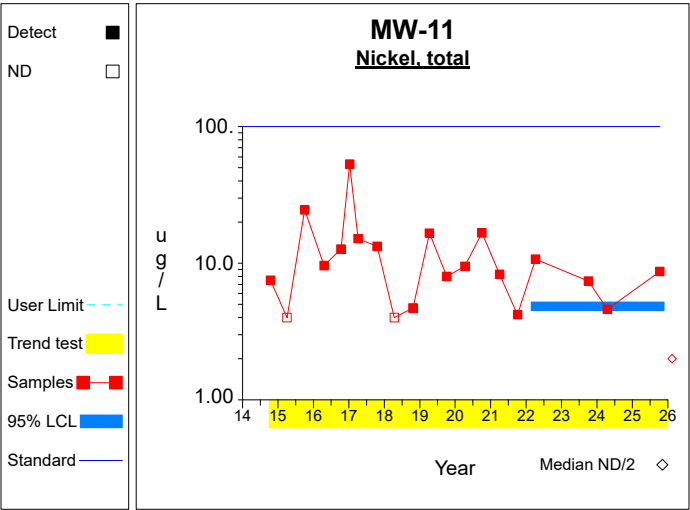
Graph 2



Graph 3

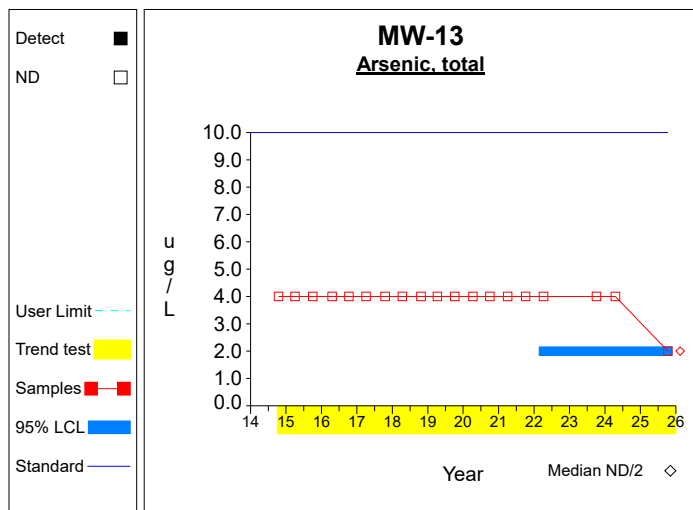


Graph 4

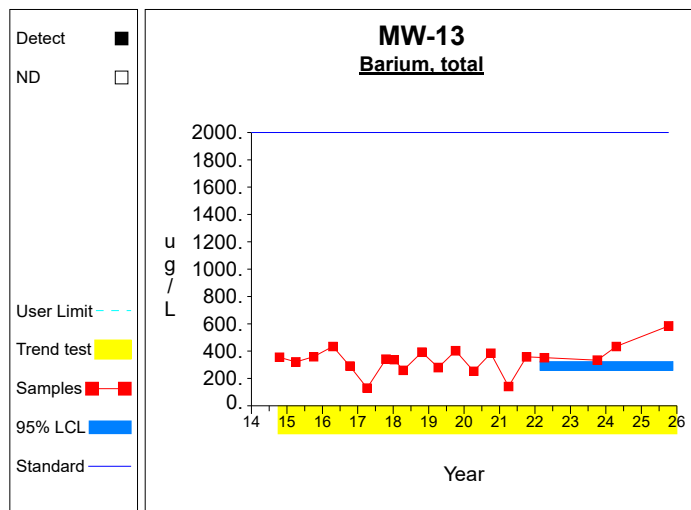


Graph 5

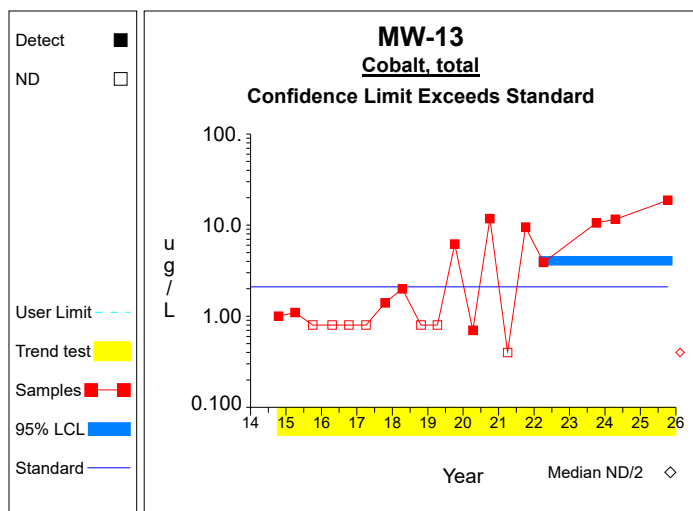
Confidence Limits (Assessment)



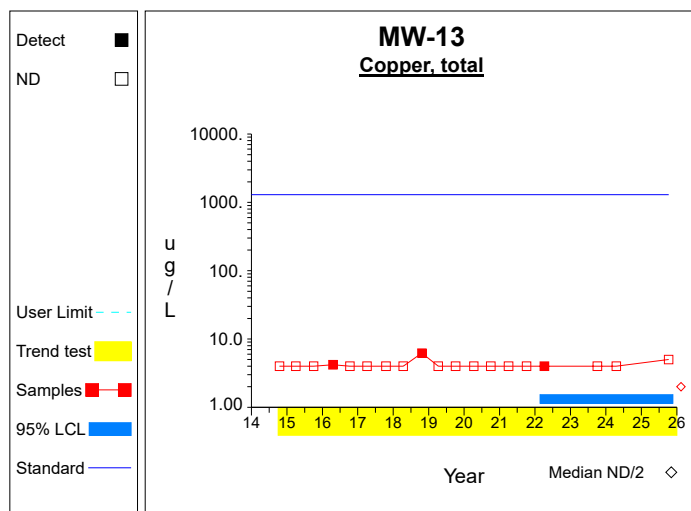
Graph 6



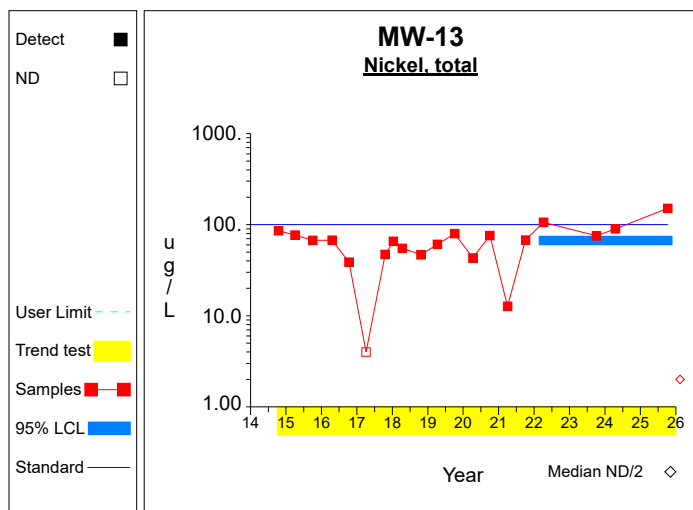
Graph 7



Graph 8

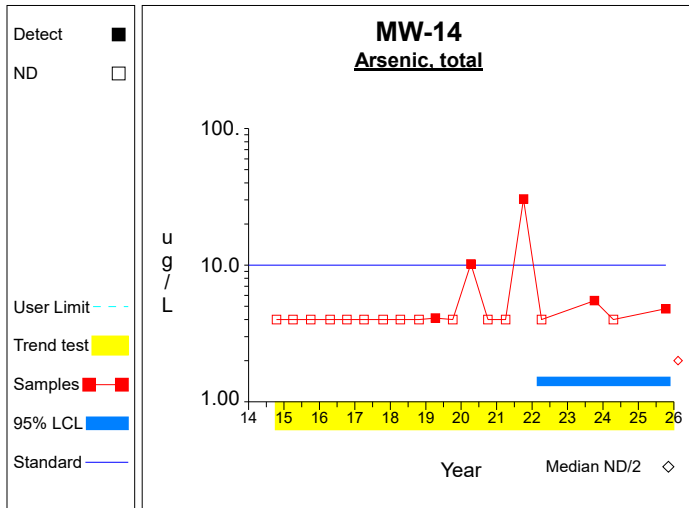


Graph 9

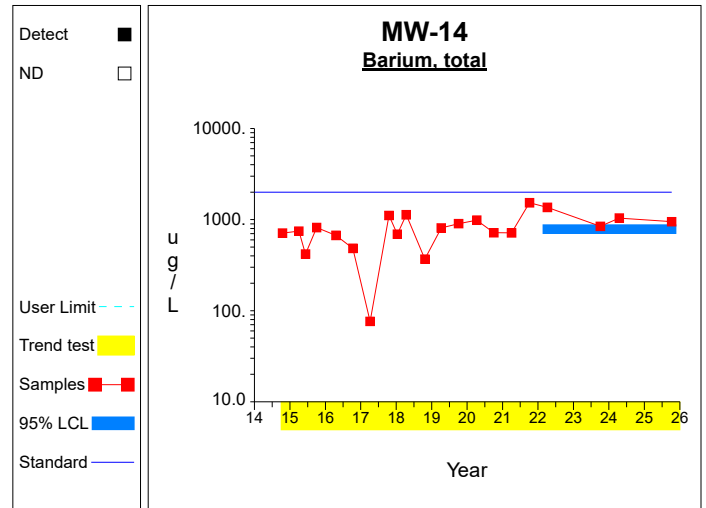


Graph 10

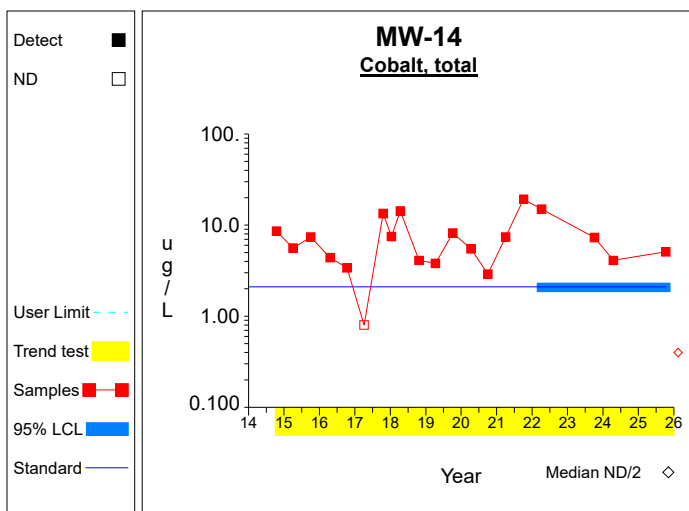
Confidence Limits (Assessment)



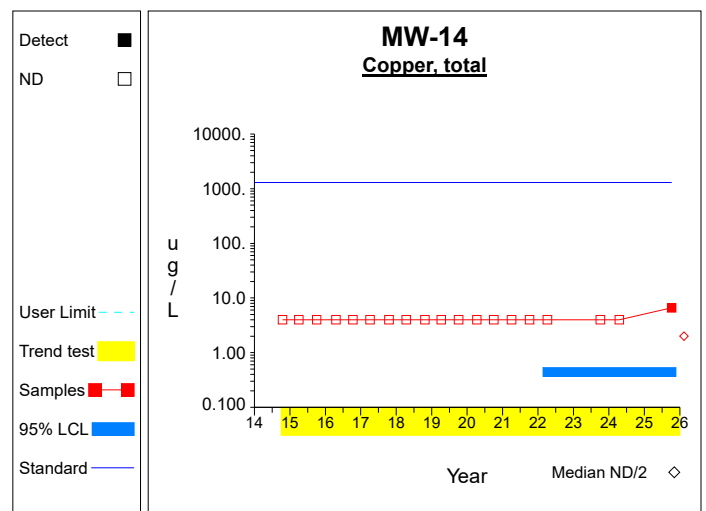
Graph 11



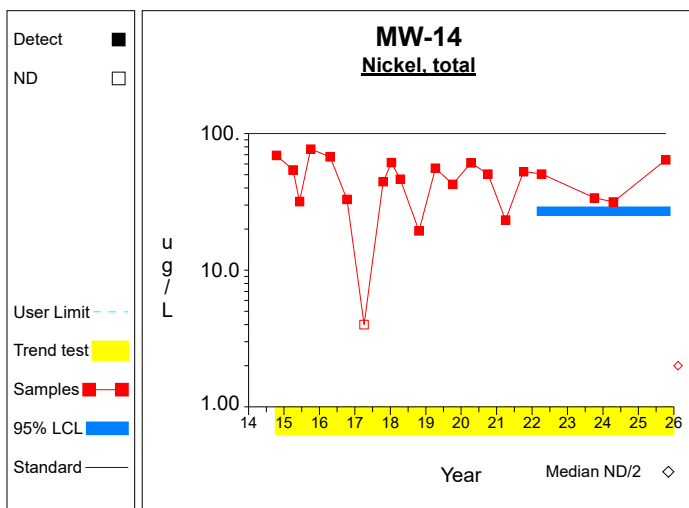
Graph 12



Graph 13

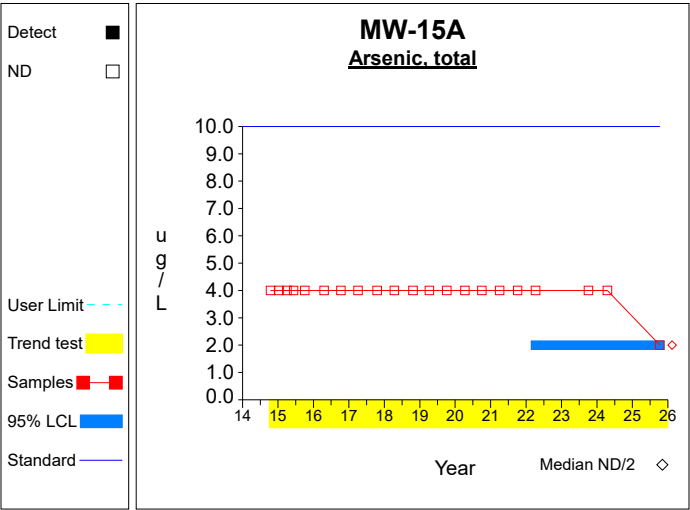


Graph 14

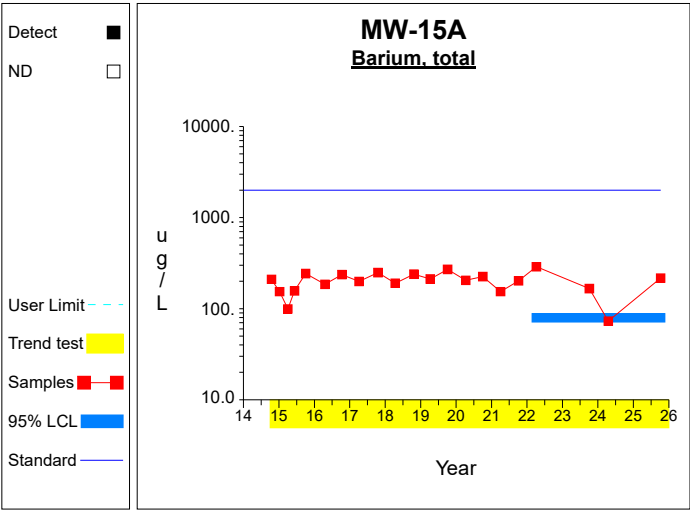


Graph 15

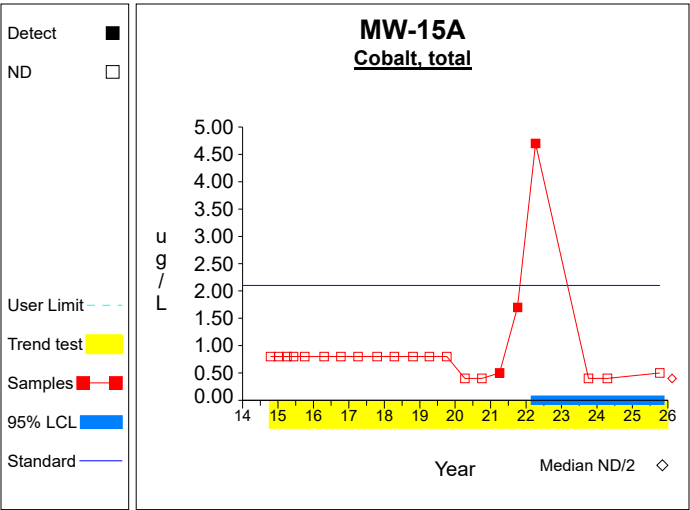
Confidence Limits (Assessment)



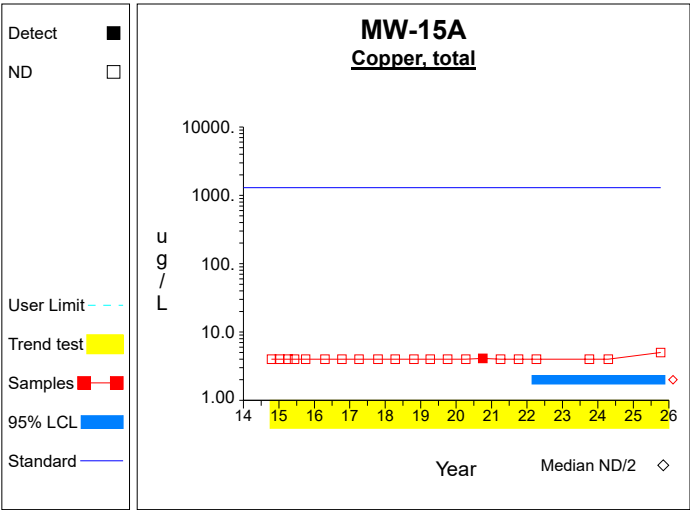
Graph 16



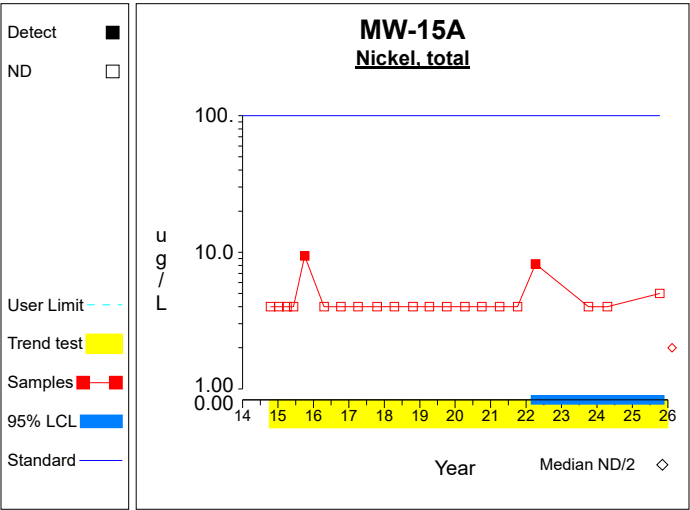
Graph 17



Graph 18

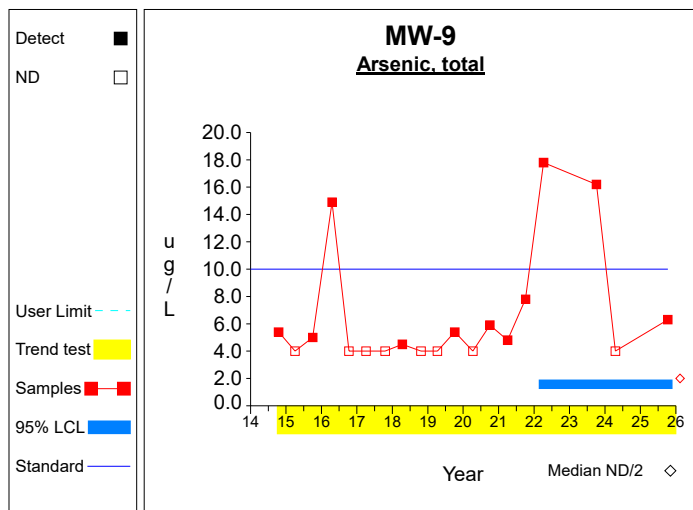


Graph 19

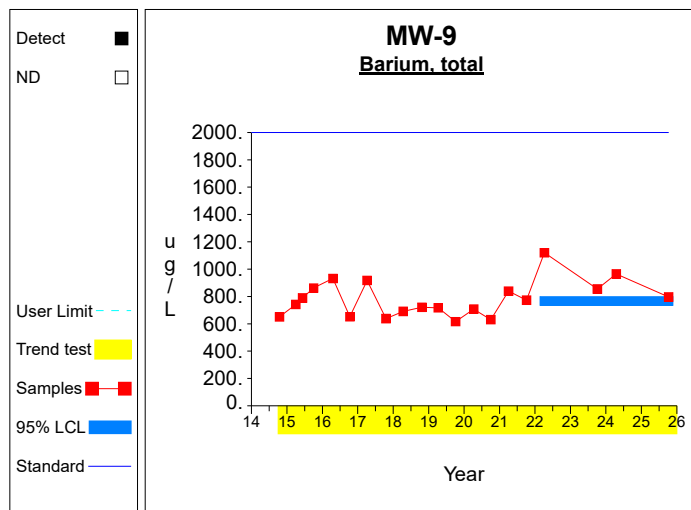


Graph 20

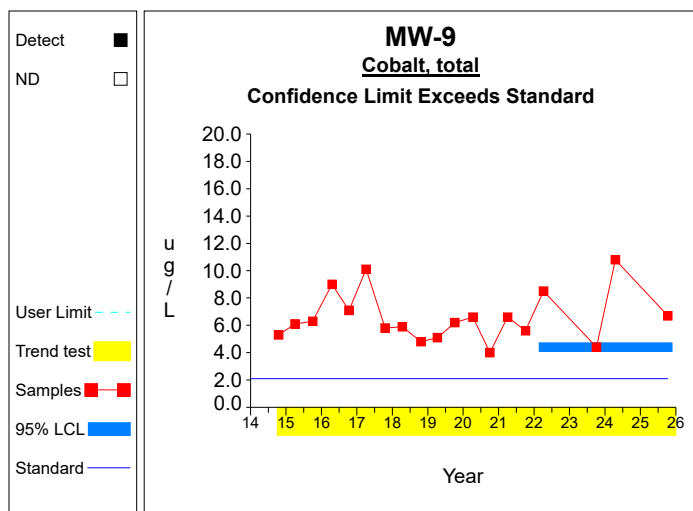
Confidence Limits (Assessment)



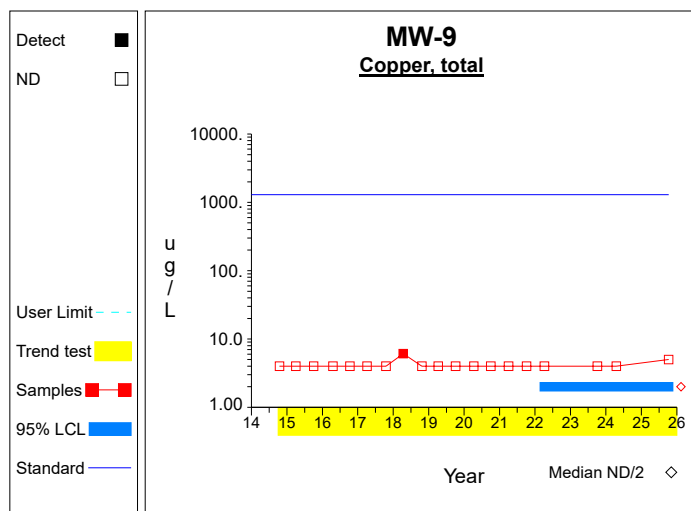
Graph 21



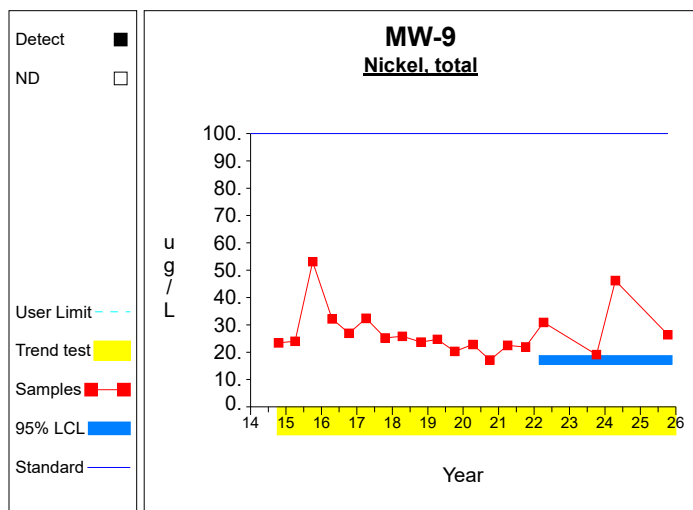
Graph 22



Graph 23



Graph 24



Graph 25

Attachment D

Summary Table of Historical VOC Detections

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Bis(2-ethylhexyl) phthalate	MW-10	4/12/2018		13	6	ug/L
Phorate	MW-10	4/04/2017		.5	.4	ug/L
Bis(2-ethylhexyl) phthalate	MW-11	4/12/2018		23	6	ug/L
Bis(2-ethylhexyl) phthalate	MW-11	10/04/2023		9	6	ug/L
Chlorobenzene	MW-11	4/17/2009		1.0	1.0	ug/L
Chlorobenzene	MW-11	10/28/2009		1.0	1.0	ug/L
Chlorobenzene	MW-11	4/14/2010		1.6	1.0	ug/L
Chlorobenzene	MW-11	7/13/2010		1.4	1.0	ug/L
Chlorobenzene	MW-11	4/21/2011		1.6	1.0	ug/L
Chlorobenzene	MW-11	4/24/2012		1.2	1.0	ug/L
Chlorobenzene	MW-11	10/18/2017		2.1	1.0	ug/L
Phorate	MW-11	4/04/2017		2.4	.4	ug/L
1,1-dichloroethane	MW-13	10/17/2006		3.0	1.0	ug/L
1,1-dichloroethane	MW-13	10/03/2007		1.0	1.0	ug/L
1,1-dichloroethane	MW-13	11/03/2011		1.2	1.0	ug/L
1,1-dichloroethane	MW-13	9/19/2012		1.0	1.0	ug/L
1,1-dichloroethane	MW-13	10/08/2013		1.3	1.0	ug/L
1,1-dichloroethane	MW-13	4/24/2014		1.0	1.0	ug/L
1,4-dichlorobenzene	MW-13	10/02/2015		2.7	1.0	ug/L
1,4-dichlorobenzene	MW-13	4/19/2016		3.5	1.0	ug/L
1,4-dichlorobenzene	MW-13	10/10/2016		2.5	1.0	ug/L
1,4-dichlorobenzene	MW-13	10/18/2017		2.0	1.0	ug/L
1,4-dichlorobenzene	MW-13	10/23/2018		5.9	1.0	ug/L
1,4-dichlorobenzene	MW-13	4/08/2019		3.7	1.0	ug/L
1,4-dichlorobenzene	MW-13	10/04/2019		4.1	1.0	ug/L
1,4-dichlorobenzene	MW-13	4/09/2020		1.9	1.0	ug/L
1,4-dichlorobenzene	MW-13	10/01/2020		2.7	1.0	ug/L
1,4-dichlorobenzene	MW-13	10/04/2021		2.3	1.0	ug/L
1,4-dichlorobenzene	MW-13	4/06/2022		1.4	1.0	ug/L
1,4-dichlorobenzene	MW-13	10/04/2023		2.6	1.0	ug/L
1,4-dichlorobenzene	MW-13	4/17/2024		2.4	1.0	ug/L
1,4-dichlorobenzene	MW-13	10/09/2025		5.4	1.0	ug/L
Acetone	MW-13	10/18/2017		17.7	10.0	ug/L
Benzene	MW-13	10/23/2018		1.8	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-13	4/17/2024		7	6	ug/L
Chlorobenzene	MW-13	10/23/2018		2.0	1.0	ug/L
Chlorobenzene	MW-13	10/04/2023		1.1	1.0	ug/L
Chlorobenzene	MW-13	4/17/2024		1.8	1.0	ug/L
Chlorobenzene	MW-13	10/09/2025		2.9	1.0	ug/L
Chloroethane	MW-13	10/17/2006		1.0	1.0	ug/L
Chloroethane	MW-13	10/03/2007		3.1	1.0	ug/L
Chloroethane	MW-13	9/23/2010		1.6	1.0	ug/L
Chloroethane	MW-13	11/03/2011		1.8	1.0	ug/L
Chloroethane	MW-13	9/19/2012		1.5	1.0	ug/L
Chloroethane	MW-13	10/08/2013		2.7	1.0	ug/L
Chloroethane	MW-13	10/02/2015		1.1	1.0	ug/L
Chloroethane	MW-13	10/10/2016		1.0	1.0	ug/L
Chloroethane	MW-13	10/18/2017		2.1	1.0	ug/L
Chloroethane	MW-13	10/23/2018		2.0	1.0	ug/L
Chloroethane	MW-13	10/04/2019		3.1	1.0	ug/L
Chloroethane	MW-13	10/01/2020		2.0	1.0	ug/L
Chloroethane	MW-13	4/17/2024		2.8	1.0	ug/L
Chloroethane	MW-13	10/09/2025		1.3	1.0	ug/L
Cis-1,2-dichloroethene	MW-13	10/17/2006		2.0	1.0	ug/L
Cis-1,2-dichloroethene	MW-13	10/03/2007		2.3	1.0	ug/L
Cis-1,2-dichloroethene	MW-13	9/23/2010		1.0	1.0	ug/L
Cis-1,2-dichloroethene	MW-13	11/03/2011		1.4	1.0	ug/L
Cis-1,2-dichloroethene	MW-13	10/08/2013		1.2	1.0	ug/L
Cis-1,2-dichloroethene	MW-13	10/15/2014		1.2	1.0	ug/L
Cis-1,2-dichloroethene	MW-13	4/19/2016		1.1	1.0	ug/L
Phorate	MW-13	10/15/2014		2.0	.4	ug/L
Phorate	MW-13	10/02/2015		.4	.4	ug/L
Phorate	MW-13	10/10/2016		.8	.4	ug/L
1,4-dichlorobenzene	MW-14	10/18/2017		1.1	1.0	ug/L
1,4-dichlorobenzene	MW-14	4/09/2020		1.1	1.0	ug/L
1,4-dichlorobenzene	MW-14	4/01/2021		1.3	1.0	ug/L
1,4-dichlorobenzene	MW-14	10/04/2021		1.0	1.0	ug/L
1,4-dichlorobenzene	MW-14	4/06/2022		1.0	1.0	ug/L
1,4-dichlorobenzene	MW-14	10/09/2025		1.3	1.0	ug/L
Acetone	MW-14	4/24/2013		10.2	10.0	ug/L
Acetone	MW-14	10/18/2017		18.6	10.0	ug/L
Benzene	MW-14	10/03/2007		1.1	1.0	ug/L
Benzene	MW-14	4/14/2009		2.2	1.0	ug/L
Benzene	MW-14	10/15/2014		1.6	1.0	ug/L
Benzene	MW-14	10/02/2015		1.8	1.0	ug/L
Benzene	MW-14	4/19/2016		1.9	1.0	ug/L

Detections are shown for the constituents and sample points selected for the analysis
The Limit column refers to the laboratory reporting limit

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Benzene	MW-14	10/10/2016		1.3	1.0	ug/L
Benzene	MW-14	10/18/2017		1.5	1.0	ug/L
Benzene	MW-14	4/12/2018		1.2	1.0	ug/L
Benzene	MW-14	10/23/2018		2.7	1.0	ug/L
Benzene	MW-14	4/08/2019		1.9	1.0	ug/L
Benzene	MW-14	10/04/2019		1.6	1.0	ug/L
Benzene	MW-14	4/09/2020		1.6	1.0	ug/L
Benzene	MW-14	10/01/2020		2.3	1.0	ug/L
Benzene	MW-14	10/09/2025		1.8	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-14	4/17/2024		72	6	ug/L
Chlorobenzene	MW-14	10/03/2007		2.8	1.0	ug/L
Chlorobenzene	MW-14	4/14/2009		1.0	1.0	ug/L
Chlorobenzene	MW-14	4/16/2009		1.6	1.0	ug/L
Chlorobenzene	MW-14	4/17/2009		1.6	1.0	ug/L
Chlorobenzene	MW-14	7/20/2009		1.2	1.0	ug/L
Chlorobenzene	MW-14	10/12/2009		3.4	1.0	ug/L
Chlorobenzene	MW-14	10/28/2009		1.3	1.0	ug/L
Chlorobenzene	MW-14	4/14/2010		1.0	1.0	ug/L
Chlorobenzene	MW-14	4/14/2010		1.0	1.0	ug/L
Chlorobenzene	MW-14	7/13/2010		1.6	1.0	ug/L
Chlorobenzene	MW-14	7/13/2010		1.6	1.0	ug/L
Chlorobenzene	MW-14	9/23/2010		2.1	1.0	ug/L
Chlorobenzene	MW-14	9/23/2010		2.1	1.0	ug/L
Chlorobenzene	MW-14	11/03/2011		1.9	1.0	ug/L
Chlorobenzene	MW-14	4/24/2012		2.0	1.0	ug/L
Chlorobenzene	MW-14	9/19/2012		2.5	1.0	ug/L
Chlorobenzene	MW-14	10/08/2013		3.0	1.0	ug/L
Chlorobenzene	MW-14	10/15/2014		4.7	1.0	ug/L
Chlorobenzene	MW-14	4/01/2015		1.1	1.0	ug/L
Chlorobenzene	MW-14	10/02/2015		5.3	1.0	ug/L
Chlorobenzene	MW-14	4/19/2016		6.1	1.0	ug/L
Chlorobenzene	MW-14	10/10/2016		4.4	1.0	ug/L
Chlorobenzene	MW-14	10/18/2017		6.8	1.0	ug/L
Chlorobenzene	MW-14	4/12/2018		5.7	1.0	ug/L
Chlorobenzene	MW-14	10/23/2018		8.2	1.0	ug/L
Chlorobenzene	MW-14	4/08/2019		9.3	1.0	ug/L
Chlorobenzene	MW-14	10/04/2019		7.5	1.0	ug/L
Chlorobenzene	MW-14	4/09/2020		8.7	1.0	ug/L
Chlorobenzene	MW-14	10/01/2020		9.1	1.0	ug/L
Chlorobenzene	MW-14	4/01/2021		6.2	1.0	ug/L
Chlorobenzene	MW-14	10/04/2021		3.9	1.0	ug/L
Chlorobenzene	MW-14	4/06/2022		5.3	1.0	ug/L
Chlorobenzene	MW-14	10/09/2025		10.9	1.0	ug/L
Chloroethane	MW-14	10/03/2007		2.8	1.0	ug/L
Chloroethane	MW-14	4/14/2009		1.2	1.0	ug/L
Chloroethane	MW-14	4/16/2009		1.3	1.0	ug/L
Chloroethane	MW-14	4/17/2009		1.3	1.0	ug/L
Chloroethane	MW-14	10/12/2009		1.4	1.0	ug/L
Chloroethane	MW-14	10/28/2009		1.5	1.0	ug/L
Chloroethane	MW-14	7/13/2010		1.4	1.0	ug/L
Chloroethane	MW-14	7/13/2010		1.4	1.0	ug/L
Chloroethane	MW-14	9/23/2010		1.2	1.0	ug/L
Chloroethane	MW-14	9/23/2010		1.2	1.0	ug/L
Chloroethane	MW-14	10/10/2016		1.2	1.0	ug/L
Chloroethane	MW-14	10/18/2017		1.3	1.0	ug/L
Chloroethane	MW-14	10/04/2019		1.7	1.0	ug/L
Cis-1,2-dichloroethene	MW-14	10/03/2007		1.4	1.0	ug/L
Cis-1,2-dichloroethene	MW-14	6/25/2009		1.1	1.0	ug/L
Dichlorodifluoromethane	MW-14	10/04/2019		1.2	1.0	ug/L
Ethylbenzene	MW-14	4/14/2009		12.6	1.0	ug/L
Phorate	MW-14	10/15/2014		7.1	.4	ug/L
Phorate	MW-14	10/02/2015		2.8	.4	ug/L
Phorate	MW-14	10/10/2016		2.7	.4	ug/L
Tetrachloroethene	MW-14	10/23/2018		1	1	ug/L
Thionazin	MW-14	10/15/2014		.5	.4	ug/L
Vinyl chloride	MW-14	4/14/2009		1.3	1.0	ug/L
Xylenes, total	MW-14	4/14/2009		2.4	2.0	ug/L
Acetone	MW-15A	10/18/2017		17.2	10.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-15A	4/03/2025		10	6	ug/L
Acetone	MW-16	10/18/2017		18.3	10.0	ug/L
Benzene	MW-16	4/24/2012		1	1	ug/L
Carbon disulfide	MW-16	10/17/2006		2	1	ug/L
Chlorobenzene	MW-16	10/12/2009		5.2	1.0	ug/L
Chlorobenzene	MW-16	11/03/2011		3.3	1.0	ug/L
Chlorobenzene	MW-16	4/24/2012		3.8	1.0	ug/L
Chlorobenzene	MW-16	9/19/2012		2.2	1.0	ug/L

Detections are shown for the constituents and sample points selected for the analysis
The Limit column refers to the laboratory reporting limit

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Chlorobenzene	MW-16	10/18/2017		1.7	1.0	ug/L
Chloroethane	MW-16	10/12/2009		1.8	1.0	ug/L
Chloroethane	MW-16	11/03/2011		1.1	1.0	ug/L
Chloroethane	MW-16	4/24/2012		1.1	1.0	ug/L
Cis-1,2-dichloroethene	MW-16	10/12/2009		2.1	1.0	ug/L
Cis-1,2-dichloroethene	MW-16	11/03/2011		1.5	1.0	ug/L
Cis-1,2-dichloroethene	MW-16	4/24/2012		1.0	1.0	ug/L
Cis-1,2-dichloroethene	MW-16	9/19/2012		1.3	1.0	ug/L
Phorate	MW-16	10/02/2015		.7	.4	ug/L
Phorate	MW-16	10/10/2016		.7	.4	ug/L
1,4-dichlorobenzene	MW-18	4/24/2012		2.1	1.0	ug/L
Acetone	MW-18	10/18/2017		16.3	10.0	ug/L
Benzene	MW-18	4/24/2012		1.2	1.0	ug/L
Chlorobenzene	MW-18	4/21/2008		11	1	ug/L
Chlorobenzene	MW-18	4/24/2012		9	1	ug/L
Chloroethane	MW-18	4/24/2012		1.2	1.0	ug/L
1,4-dichlorobenzene	MW-19	10/17/2006		1.3	1.0	ug/L
1,4-dichlorobenzene	MW-19	4/18/2007		1.5	1.0	ug/L
1,4-dichlorobenzene	MW-19	10/03/2007		1.5	1.0	ug/L
1,4-dichlorobenzene	MW-19	4/16/2009		1.2	1.0	ug/L
1,4-dichlorobenzene	MW-19	4/14/2010		1.7	1.0	ug/L
1,4-dichlorobenzene	MW-19	9/23/2010		1.3	1.0	ug/L
1,4-dichlorobenzene	MW-19	4/21/2011		1.1	1.0	ug/L
1,4-dichlorobenzene	MW-19	9/19/2012		2.4	1.0	ug/L
1,4-dichlorobenzene	MW-19	10/08/2013		1.4	1.0	ug/L
1,4-dichlorobenzene	MW-19	10/02/2015		2.0	1.0	ug/L
1,4-dichlorobenzene	MW-19	4/19/2016		1.7	1.0	ug/L
1,4-dichlorobenzene	MW-19	10/10/2016		2.3	1.0	ug/L
1,4-dichlorobenzene	MW-19	4/04/2017		1.9	1.0	ug/L
1,4-dichlorobenzene	MW-19	10/18/2017		2.1	1.0	ug/L
Bis(2-ethylhexyl) phthalate	MW-19	10/16/2014		21	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-19	4/01/2015		11	10	ug/L
Chlorobenzene	MW-19	10/17/2006		2.7	1.0	ug/L
Chlorobenzene	MW-19	4/18/2007		6.4	1.0	ug/L
Chlorobenzene	MW-19	10/03/2007		6.4	1.0	ug/L
Chlorobenzene	MW-19	4/21/2008		2.6	1.0	ug/L
Chlorobenzene	MW-19	10/06/2008		5.9	1.0	ug/L
Chlorobenzene	MW-19	4/16/2009		1.3	1.0	ug/L
Chlorobenzene	MW-19	4/16/2009		1.3	1.0	ug/L
Chlorobenzene	MW-19	6/25/2009		1.5	1.0	ug/L
Chlorobenzene	MW-19	7/20/2009		3.6	1.0	ug/L
Chlorobenzene	MW-19	10/12/2009		4.0	1.0	ug/L
Chlorobenzene	MW-19	10/28/2009		5.4	1.0	ug/L
Chlorobenzene	MW-19	4/14/2010		8.2	1.0	ug/L
Chlorobenzene	MW-19	4/14/2010		8.2	1.0	ug/L
Chlorobenzene	MW-19	7/13/2010		3.5	1.0	ug/L
Chlorobenzene	MW-19	7/13/2010		3.5	1.0	ug/L
Chlorobenzene	MW-19	9/23/2010		7.2	1.0	ug/L
Chlorobenzene	MW-19	9/23/2010		7.2	1.0	ug/L
Chlorobenzene	MW-19	4/21/2011		3.8	1.0	ug/L
Chlorobenzene	MW-19	4/21/2011		3.8	1.0	ug/L
Chlorobenzene	MW-19	11/03/2011		4.4	1.0	ug/L
Chlorobenzene	MW-19	9/19/2012		9.8	1.0	ug/L
Chlorobenzene	MW-19	4/24/2013		3.6	1.0	ug/L
Chlorobenzene	MW-19	10/08/2013		7.4	1.0	ug/L
Chlorobenzene	MW-19	4/24/2014		1.9	1.0	ug/L
Chlorobenzene	MW-19	10/16/2014		5.8	1.0	ug/L
Chlorobenzene	MW-19	4/01/2015		3.4	1.0	ug/L
Chlorobenzene	MW-19	10/02/2015		6.9	1.0	ug/L
Chlorobenzene	MW-19	10/10/2016		8.6	1.0	ug/L
Chlorobenzene	MW-19	4/04/2017		8.1	1.0	ug/L
Chlorobenzene	MW-19	10/18/2017		9.3	1.0	ug/L
Chloroethane	MW-19	10/17/2006		1.3	1.0	ug/L
Chloroethane	MW-19	4/18/2007		2.0	1.0	ug/L
Chloroethane	MW-19	10/03/2007		2.7	1.0	ug/L
Chloroethane	MW-19	4/16/2009		1.0	1.0	ug/L
Chloroethane	MW-19	4/14/2010		1.3	1.0	ug/L
Chloroethane	MW-19	9/23/2010		1.4	1.0	ug/L
Chloroethane	MW-19	9/19/2012		1.1	1.0	ug/L
Chloroethane	MW-19	10/10/2016		1.1	1.0	ug/L
Phorate	MW-19	10/16/2014		3.3	.4	ug/L
Phorate	MW-19	10/02/2015		1.0	.4	ug/L
Phorate	MW-19	10/10/2016		2.2	.4	ug/L
Phorate	MW-19	4/04/2017		2.5	.4	ug/L
Acetone	MW-3	10/18/2017		15.6	10.0	ug/L
1,1-dichloroethane	MW-5	4/24/2012		1.2	1.0	ug/L

Detections are shown for the constituents and sample points selected for the analysis
The Limit column refers to the laboratory reporting limit

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
1,1-dichloroethane	MW-5	9/19/2012		1.2	1.0	ug/L
1,4-dichlorobenzene	MW-5	4/24/2012		1.0	1.0	ug/L
1,4-dichlorobenzene	MW-5	9/19/2012		2.3	1.0	ug/L
1,4-dichlorobenzene	MW-5	10/08/2013		1.3	1.0	ug/L
1,4-dichlorobenzene	MW-5	10/18/2017		1.9	1.0	ug/L
1,4-dichlorobenzene	MW-5	10/04/2019		6.4	1.0	ug/L
1,4-dichlorobenzene	MW-5	4/01/2021		2.4	1.0	ug/L
1,4-dichlorobenzene	MW-5	10/04/2021		1.9	1.0	ug/L
2-butanone	MW-5	4/24/2014		9.6	5.0	ug/L
Acetone	MW-5	4/24/2014		32.4	10.0	ug/L
Benzene	MW-5	9/19/2012		2.2	1.0	ug/L
Benzene	MW-5	10/08/2013		1.7	1.0	ug/L
Benzene	MW-5	4/24/2014		1.5	1.0	ug/L
Benzene	MW-5	10/04/2019		2.7	1.0	ug/L
Chlorobenzene	MW-5	4/16/2009		1.4	1.0	ug/L
Chlorobenzene	MW-5	4/16/2009		1.4	1.0	ug/L
Chlorobenzene	MW-5	10/12/2009		2.9	1.0	ug/L
Chlorobenzene	MW-5	9/23/2010		3.4	1.0	ug/L
Chlorobenzene	MW-5	9/23/2010		3.4	1.0	ug/L
Chlorobenzene	MW-5	11/03/2011		7.5	1.0	ug/L
Chlorobenzene	MW-5	4/24/2012		12.2	1.0	ug/L
Chlorobenzene	MW-5	9/19/2012		36.1	1.0	ug/L
Chlorobenzene	MW-5	4/24/2013		4.6	1.0	ug/L
Chlorobenzene	MW-5	10/08/2013		17.5	1.0	ug/L
Chlorobenzene	MW-5	4/24/2014		7.3	1.0	ug/L
Chlorobenzene	MW-5	10/15/2014		1.2	1.0	ug/L
Chlorobenzene	MW-5	10/18/2017		15.7	1.0	ug/L
Chlorobenzene	MW-5	1/12/2018		1.6	1.0	ug/L
Chlorobenzene	MW-5	4/12/2018		1.4	1.0	ug/L
Chlorobenzene	MW-5	10/23/2018		2.6	1.0	ug/L
Chlorobenzene	MW-5	4/08/2019		9.8	1.0	ug/L
Chlorobenzene	MW-5	10/04/2019		33.4	1.0	ug/L
Chlorobenzene	MW-5	10/01/2020		3.4	1.0	ug/L
Chlorobenzene	MW-5	4/01/2021		12.1	1.0	ug/L
Chlorobenzene	MW-5	10/04/2021		7.3	1.0	ug/L
Chloroethane	MW-5	4/16/2009		1.1	1.0	ug/L
Chloroethane	MW-5	4/16/2009		1.1	1.0	ug/L
Chloroethane	MW-5	10/12/2009		1.9	1.0	ug/L
Chloroethane	MW-5	11/03/2011		1.9	1.0	ug/L
Chloroethane	MW-5	4/24/2012		2.2	1.0	ug/L
Chloroethane	MW-5	9/19/2012		3.4	1.0	ug/L
Chloroethane	MW-5	10/08/2013		1.2	1.0	ug/L
Chloroethane	MW-5	4/24/2014		2.4	1.0	ug/L
Chloroethane	MW-5	10/04/2019		1.8	1.0	ug/L
Cis-1,2-dichloroethene	MW-5	4/24/2012		5.5	1.0	ug/L
Cis-1,2-dichloroethene	MW-5	9/19/2012		5.1	1.0	ug/L
Cis-1,2-dichloroethene	MW-5	4/24/2013		1.8	1.0	ug/L
Cis-1,2-dichloroethene	MW-5	4/24/2014		2.3	1.0	ug/L
Thionazin	MW-5	10/15/2014		.7	.4	ug/L
Vinyl chloride	MW-5	4/16/2009		1.5	1.0	ug/L
Vinyl chloride	MW-5	4/16/2009		1.5	1.0	ug/L
Vinyl chloride	MW-5	10/12/2009		3.4	1.0	ug/L
Vinyl chloride	MW-5	9/23/2010		1.7	1.0	ug/L
Vinyl chloride	MW-5	9/23/2010		1.7	1.0	ug/L
Vinyl chloride	MW-5	11/03/2011		2.0	1.0	ug/L
Vinyl chloride	MW-5	4/24/2012		2.8	1.0	ug/L
Vinyl chloride	MW-5	9/19/2012		4.2	1.0	ug/L
Vinyl chloride	MW-5	10/08/2013		1.1	1.0	ug/L
Vinyl chloride	MW-5	4/24/2014		2.1	1.0	ug/L
1,4-dichlorobenzene	MW-9	10/17/2006		1.6	1.0	ug/L
1,4-dichlorobenzene	MW-9	4/18/2007		1.2	1.0	ug/L
1,4-dichlorobenzene	MW-9	4/21/2008		1.6	1.0	ug/L
1,4-dichlorobenzene	MW-9	4/16/2009		1.1	1.0	ug/L
1,4-dichlorobenzene	MW-9	4/14/2010		1.2	1.0	ug/L
1,4-dichlorobenzene	MW-9	4/21/2011		1.1	1.0	ug/L
1,4-dichlorobenzene	MW-9	4/24/2013		1.4	1.0	ug/L
1,4-dichlorobenzene	MW-9	4/24/2014		1.4	1.0	ug/L
1,4-dichlorobenzene	MW-9	10/02/2015		1.2	1.0	ug/L
1,4-dichlorobenzene	MW-9	10/10/2016		1.3	1.0	ug/L
1,4-dichlorobenzene	MW-9	10/18/2017		1.0	1.0	ug/L
1,4-dichlorobenzene	MW-9	10/04/2021		1.1	1.0	ug/L
1,4-dichlorobenzene	MW-9	4/06/2022		1.2	1.0	ug/L
1,4-dichlorobenzene	MW-9	10/04/2023		1.4	1.0	ug/L
1,4-dichlorobenzene	MW-9	4/17/2024		1.5	1.0	ug/L
1,4-dichlorobenzene	MW-9	10/09/2025		1.4	1.0	ug/L
Benzene	MW-9	4/24/2014		1.4	1.0	ug/L

Detections are shown for the constituents and sample points selected for the analysis
The Limit column refers to the laboratory reporting limit

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
Bis(2-ethylhexyl) phthalate	MW-9	4/24/2013		8	8	ug/L
Bis(2-ethylhexyl) phthalate	MW-9	4/17/2024		8	6	ug/L
Chlorobenzene	MW-9	10/17/2006		4.4	1.0	ug/L
Chlorobenzene	MW-9	4/18/2007		3.7	1.0	ug/L
Chlorobenzene	MW-9	10/03/2007		4.0	1.0	ug/L
Chlorobenzene	MW-9	4/21/2008		3.7	1.0	ug/L
Chlorobenzene	MW-9	10/06/2008		3.9	1.0	ug/L
Chlorobenzene	MW-9	4/16/2009		1.0	1.0	ug/L
Chlorobenzene	MW-9	4/17/2009		1.0	1.0	ug/L
Chlorobenzene	MW-9	6/25/2009		3.0	1.0	ug/L
Chlorobenzene	MW-9	7/20/2009		2.0	1.0	ug/L
Chlorobenzene	MW-9	10/12/2009		2.3	1.0	ug/L
Chlorobenzene	MW-9	10/28/2009		1.8	1.0	ug/L
Chlorobenzene	MW-9	4/14/2010		1.3	1.0	ug/L
Chlorobenzene	MW-9	4/14/2010		1.3	1.0	ug/L
Chlorobenzene	MW-9	7/13/2010		3.3	1.0	ug/L
Chlorobenzene	MW-9	7/13/2010		3.3	1.0	ug/L
Chlorobenzene	MW-9	9/23/2010		4.1	1.0	ug/L
Chlorobenzene	MW-9	9/23/2010		4.1	1.0	ug/L
Chlorobenzene	MW-9	4/21/2011		2.1	1.0	ug/L
Chlorobenzene	MW-9	4/21/2011		2.1	1.0	ug/L
Chlorobenzene	MW-9	11/03/2011		3.2	1.0	ug/L
Chlorobenzene	MW-9	4/24/2012		2.8	1.0	ug/L
Chlorobenzene	MW-9	9/19/2012		2.4	1.0	ug/L
Chlorobenzene	MW-9	4/24/2013		1.9	1.0	ug/L
Chlorobenzene	MW-9	10/08/2013		2.8	1.0	ug/L
Chlorobenzene	MW-9	4/24/2014		6.2	1.0	ug/L
Chlorobenzene	MW-9	10/16/2014		3.8	1.0	ug/L
Chlorobenzene	MW-9	10/02/2015		5.4	1.0	ug/L
Chlorobenzene	MW-9	10/10/2016		5.9	1.0	ug/L
Chlorobenzene	MW-9	4/04/2017		2.6	1.0	ug/L
Chlorobenzene	MW-9	10/18/2017		3.9	1.0	ug/L
Chlorobenzene	MW-9	10/23/2018		5.6	1.0	ug/L
Chlorobenzene	MW-9	10/04/2019		2.4	1.0	ug/L
Chlorobenzene	MW-9	4/09/2020		1.4	1.0	ug/L
Chlorobenzene	MW-9	10/01/2020		3.0	1.0	ug/L
Chlorobenzene	MW-9	4/01/2021		3.6	1.0	ug/L
Chlorobenzene	MW-9	10/04/2021		5.4	1.0	ug/L
Chlorobenzene	MW-9	4/06/2022		4.4	1.0	ug/L
Chlorobenzene	MW-9	10/04/2023		3.6	1.0	ug/L
Chlorobenzene	MW-9	4/17/2024		1.4	1.0	ug/L
Chlorobenzene	MW-9	10/09/2025		4.8	1.0	ug/L
Chloroethane	MW-9	10/17/2006		1.8	1.0	ug/L
Chloroethane	MW-9	4/18/2007		1.4	1.0	ug/L
Chloroethane	MW-9	10/03/2007		2.0	1.0	ug/L
Chloroethane	MW-9	4/21/2008		1.4	1.0	ug/L
Chloroethane	MW-9	9/23/2010		1.1	1.0	ug/L
Chloroethane	MW-9	11/03/2011		1.0	1.0	ug/L
Chloroethane	MW-9	4/24/2012		1.2	1.0	ug/L
Chloroethane	MW-9	4/24/2014		1.1	1.0	ug/L
Chloroethane	MW-9	10/02/2015		1.1	1.0	ug/L
Chloroethane	MW-9	4/06/2022		1.0	1.0	ug/L
Phorate	MW-9	10/16/2014		3.0	.4	ug/L
Phorate	MW-9	10/02/2015		1.2	.4	ug/L
Phorate	MW-9	10/10/2016		2.5	.4	ug/L
Phorate	MW-9	4/04/2017		1.5	.4	ug/L

Detections are shown for the constituents and sample points selected for the analysis
The Limit column refers to the laboratory reporting limit

Attachment E

Assessment Statistics for Detected VOCs

Table 1

**Confidence Intervals for Comparing the Mean of the Last
4 Measurements to an Assessment Monitoring Standard**

Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend
1,4-dichlorobenzene	ug/L	MW-11	4	0.500	0.000	1.176	0.500	0.500	75.000	
Benzene	ug/L	MW-11	4	0.500	0.000	1.176	0.500	0.500	5.000	
Chlorobenzene	ug/L	MW-11	4	0.500	0.000	1.176	0.500	0.500	100.000	
Chloroethane	ug/L	MW-11	4	0.500	0.000	1.176	0.500	0.500	2800.000	
1,4-dichlorobenzene	ug/L	MW-13	4	2.950	1.716	1.176	0.932	4.968	75.000	
Benzene	ug/L	MW-13	4	0.500	0.000	1.176	0.500	0.500	5.000	
Chlorobenzene	ug/L	MW-13	4	1.575	1.031	1.176	0.363	2.787	100.000	
Chloroethane	ug/L	MW-13	4	1.275	1.084	1.176	0.000	2.551	2800.000	
1,4-dichlorobenzene	ug/L	MW-14	4	0.825	0.395	1.176	0.361	1.289	75.000	
Benzene	ug/L	MW-14	4	0.825	0.650	1.176	0.060	1.590	5.000	
Chlorobenzene	ug/L	MW-14	4	4.300	4.948	1.176	0.000	10.120	100.000	inc
Chloroethane	ug/L	MW-14	4	0.500	0.000	1.176	0.500	0.500	2800.000	
1,4-dichlorobenzene	ug/L	MW-9	4	1.375	0.126	1.176	1.227	1.523	75.000	
Benzene	ug/L	MW-9	4	0.500	0.000	1.176	0.500	0.500	5.000	
Chlorobenzene	ug/L	MW-9	4	3.550	1.518	1.176	1.765	5.335	100.000	
Chloroethane	ug/L	MW-9	4	0.625	0.250	1.176	0.331	0.919	2800.000	

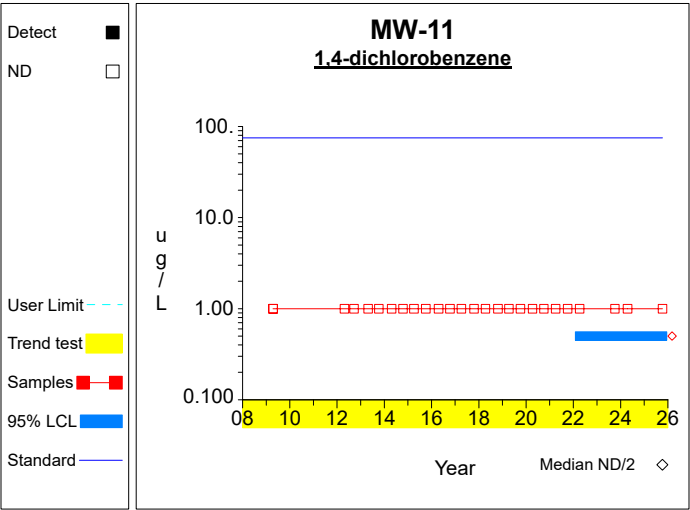
* - Insufficient Data

** - Significant Exceedance

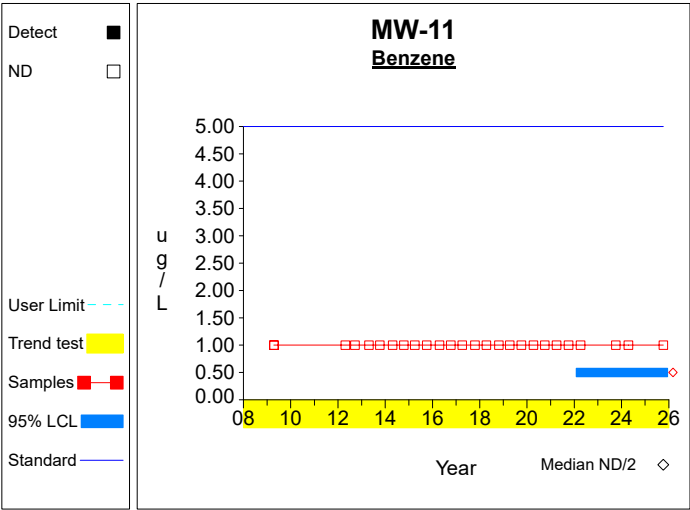
LCL = Lower Confidence Limit

UCL = Upper Confidence Limit

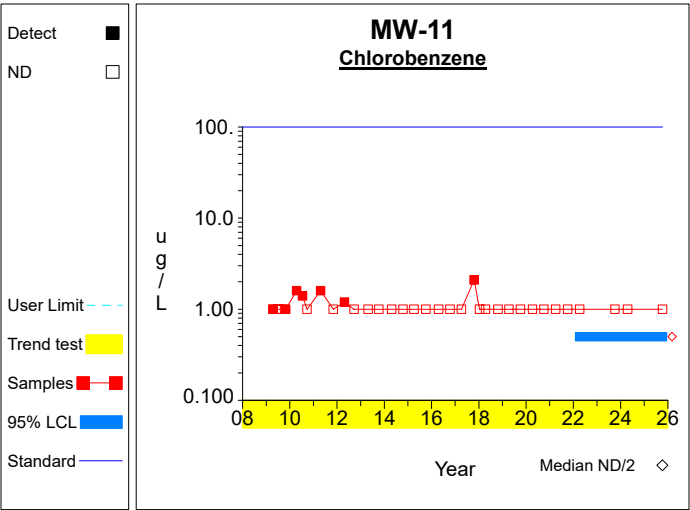
Confidence Limits (Assessment)



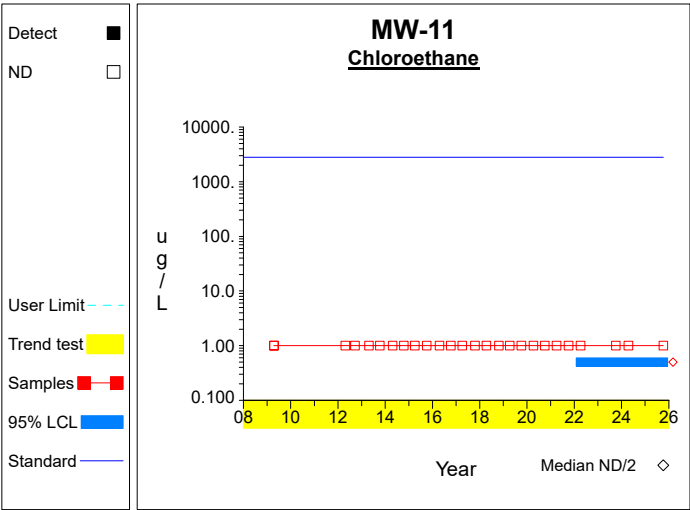
Graph 1



Graph 2

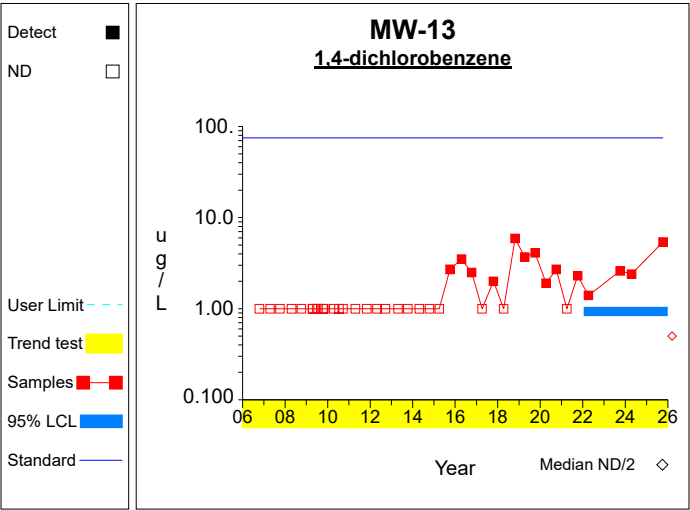


Graph 3

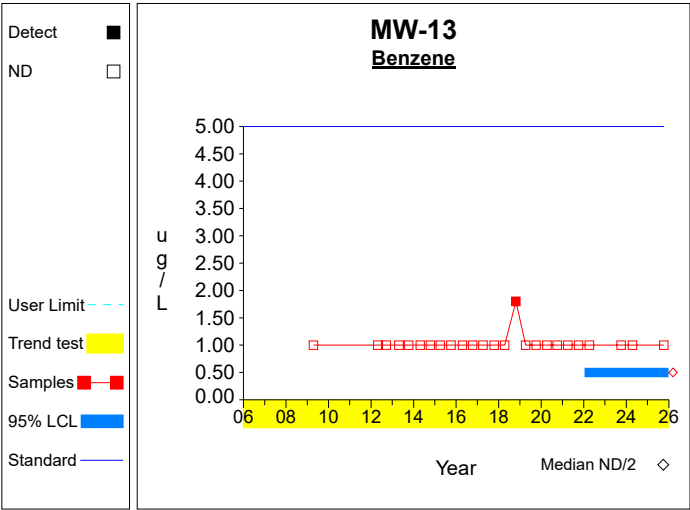


Graph 4

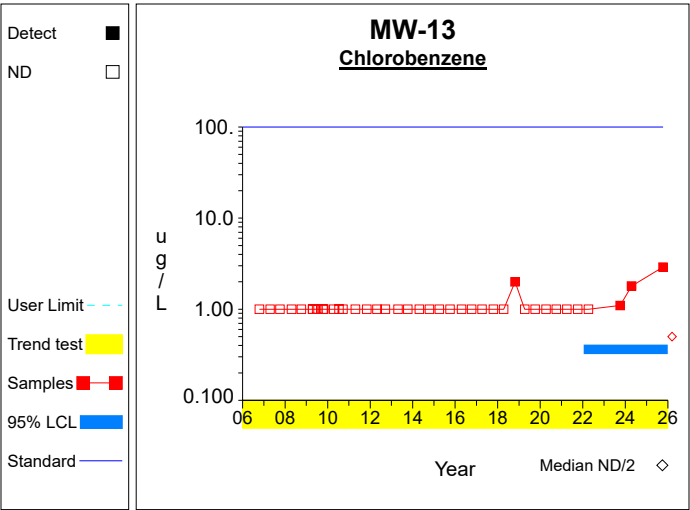
Confidence Limits (Assessment)



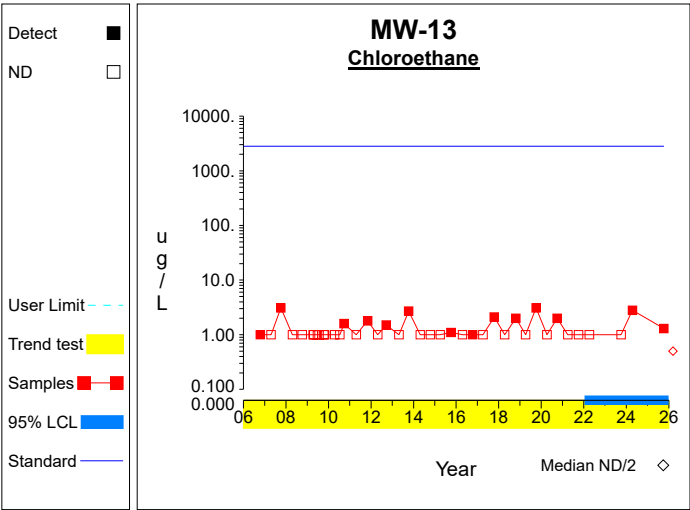
Graph 5



Graph 6

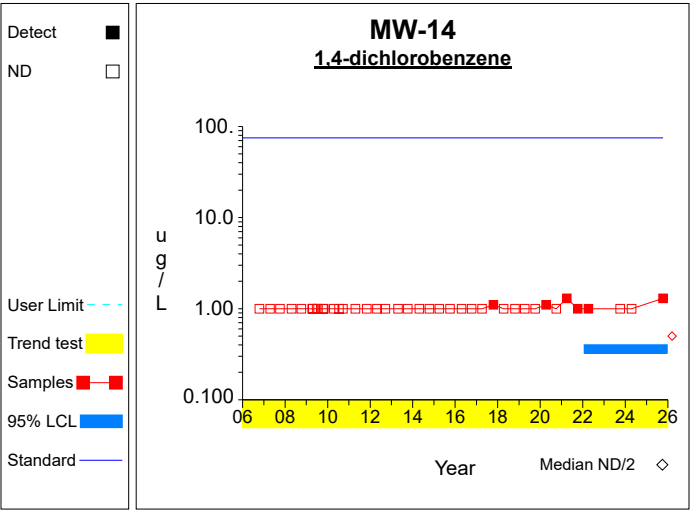


Graph 7

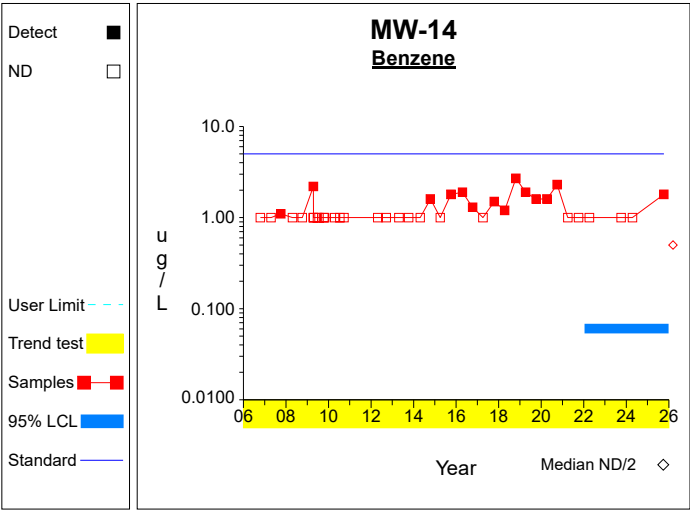


Graph 8

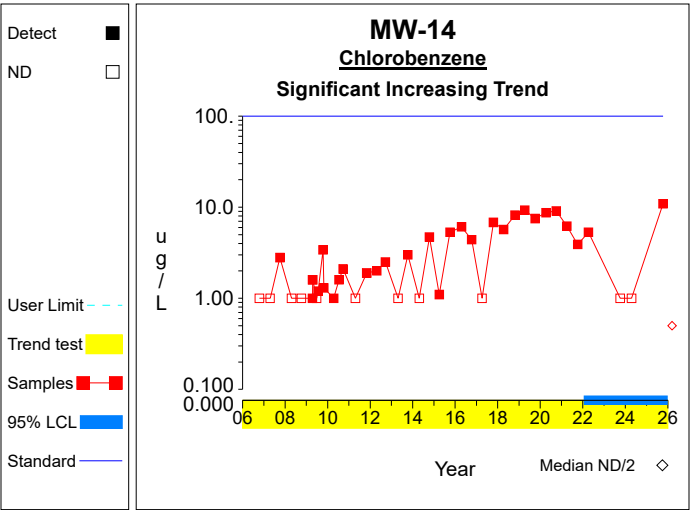
Confidence Limits (Assessment)



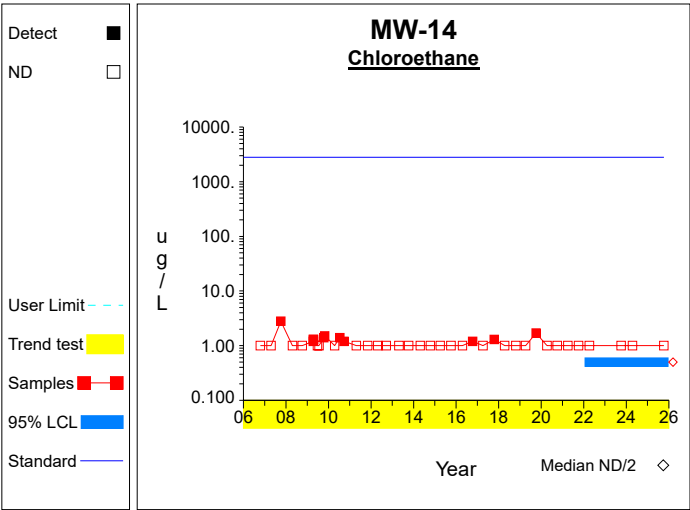
Graph 9



Graph 10

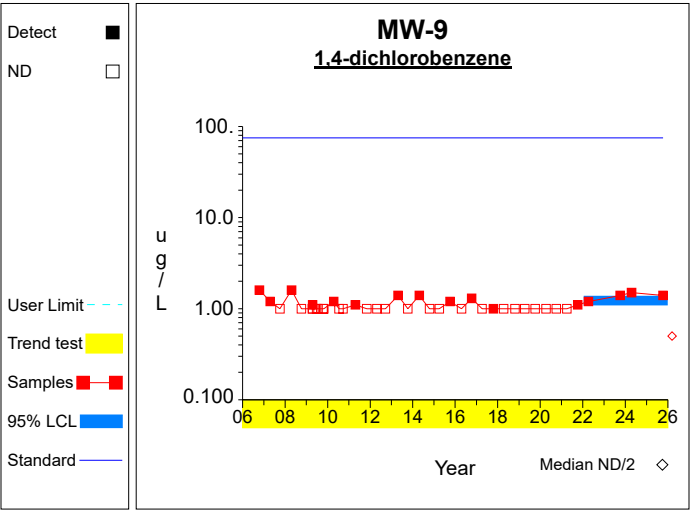


Graph 11

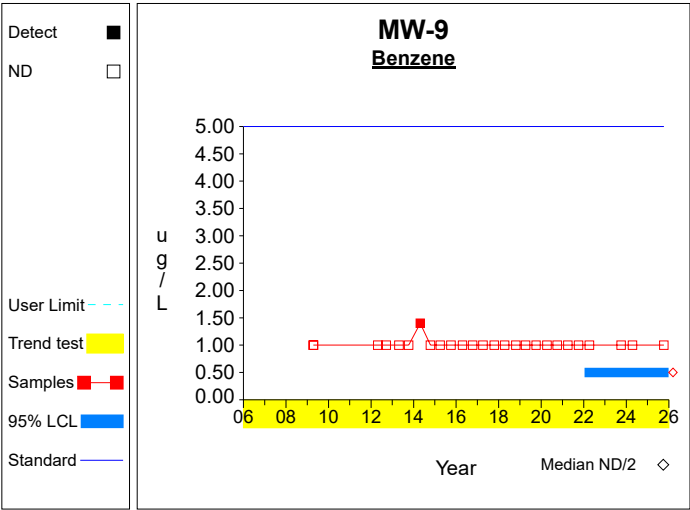


Graph 12

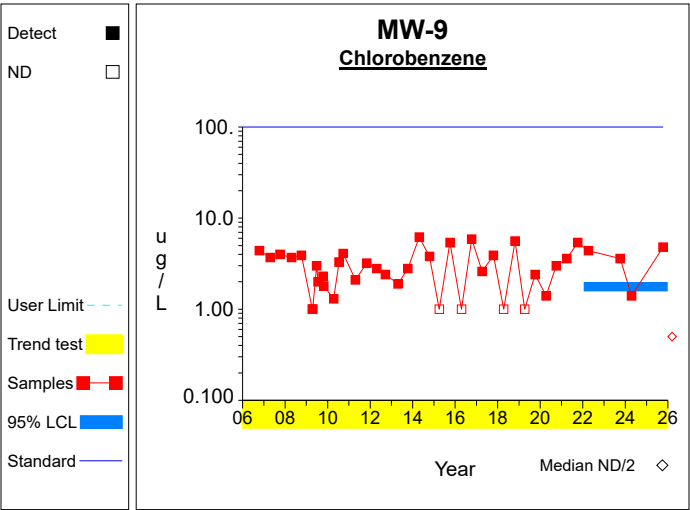
Confidence Limits (Assessment)



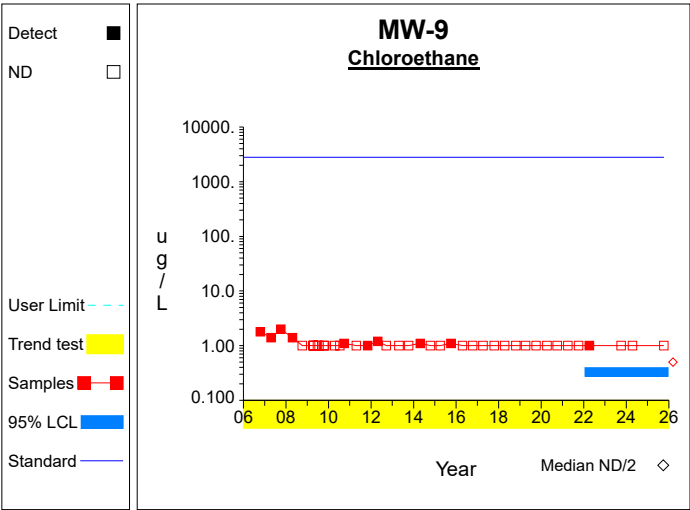
Graph 13



Graph 14



Graph 15



Graph 16

Appendix D.2 – Field Turbidity Summary

Grundy County Sanitary Landfill

Field Turbidity Over Time

No-Purge Sampling

	10/15/14	1/8/15	4/1/15	6/9/15	10/2/15	11/24/15	4/19/16	10/10/16	1/9/17	4/4/17
<u>Well</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>
3	4.21		1.2		1.82		1.7	1.97		16.5
4	5.51		3.2		0.96		22	1.37	28.5	7.5
5	1.38		5.16		2.11		2.61	1.45		0.67
9	2.25		16.6	4.13	2.87		88.1	1.84		16.3
10	3.09		3.22		0.61		7.69	2.58		1.59
11	3.57		2.38		6.02		1.36	0.77	6.5	0.89
12	1.55		43.2		21.8	19.02	22.4	2.52		20.6
13	2.13		2.47		1.24		2.73	1.02	3.17	1.5
14	1.39		2.8	2.13	1.3		1.51	0.85		4
15A (b)	0.76	4.34	1.65	0.6	10.3		9.93	1.28		0.42
18 (b)	1.87		1.89	0.29	0.94		0.91	0.89		0.96
Max	16.60	4.34	43.20	4.13	21.80	19.02	88.10	3.56	28.50	20.60
Min	0.76	4.34	1.03	0.29	0.61	19.02	0.91	0.77	3.17	0.36
Median	2.00	4.34	3.00	1.37	1.65	19.02	2.67	1.37	9.10	1.64
Average	3.33	4.34	8.86	1.79	3.87	19.02	15.67	1.60	12.47	5.64

Grundy C

Field Turbic

No-Purge S

	10/11/17	1/12/18	4/12/18	10/23/18	1/15/19	4/8/19	10/4/19	4/9/20	10/1/20	4/1/21
<u>Well</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>
3	1.04		0.47	1.19	8.52	2.9	0.55	0.49	1.87	0.69
4	79		19.28	1.57		1.97	0.6	2.54	2.03	1.9
5	1.33	9.61	0.58	0.97		1.05	1.26	1.29	1.18	1.53
9	1.13		86.19	0.86		2.14	0.52	24.5	4.91	41.1
10	4.11		2.78	3.65		10	5.78	7.46	7.62	7.82
11	3.96	24.41	0.97	1.56		24.2	4.73	43.2	6.7	31.7
12	2.69	4.23	1.04	0.8	34.82	1.69	7.17	4.58	5.04	4.7
13	0.91	1.57	0.79	1.25		0.89	0.45	1.15	1.09	0.86
14	4.25	27.71	4.41	0.45		1.75	0.98	92.2	5.44	7.77
15A (b)	8.38		0.37	0.48		0.62	0.7	4.3	1.27	9.63
18 (b)	1.48		1.2	0.55		1.56	0.85	0.67	0.9	0.89
Max	79.00	27.71	86.19	3.65	34.82	24.20	7.17	92.20	7.62	41.10
Min	0.91	1.57	0.37	0.45	8.52	0.62	0.45	0.49	0.90	0.69
Median	1.41	10.14	1.04	0.97	21.67	1.75	0.85	4.30	2.03	4.70
Average	8.01	13.03	10.73	1.21	21.67	4.43	2.14	16.58	3.46	9.87

Grundy (

Field Turbic

No-Purge S

	10/4/21	4/6/22	10/4/23	4/17/24	10/9/25	Max	Min	Ave	Std Dev
<u>Well</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>	<u>NTU</u>				
3	1.08	4.84				16.50	0.47	3.00	4.04
4	1.71	1.48				79.00	0.60	10.65	19.53
5	1.06	1.22				9.61	0.58	2.03	2.22
9	1.92	344	78.08	29.19	4.53	344.00	0.52	37.56	77.86
10	8.86	5.83				10.00	0.61	5.17	2.83
11	9.96	1.9	4.19	2.96	2.02	43.20	0.77	8.76	11.75
12	1.34	12.6				43.20	0.80	11.15	12.47
13	0.98	2.34	1.68	4.67	6.53	6.53	0.45	1.88	1.46
14	149.9	11.5	33.36	4.24	38.1	149.90	0.45	18.86	36.85
15A (b)	4.14	271	2.63	3.6	5.52	271.00	0.37	16.28	58.46
18 (b)	0.86	1.27				1.89	0.29	1.06	0.44
Max	149.90	344.00	78.08	29.19	38.10				
Min	0.86	1.22	1.68	2.96	2.02				
Median	1.71	4.84	4.19	4.24	5.52				
Average	16.53	59.82	23.99	8.93	11.34				

Appendix D.3 – Running Summary of Prediction Limit Exceedances

Spring 2014†		Fall 2014†	
MW-5**	2-butanone	MW-5**	Chlorobenzene
	Acetone		
	Benzene		
	Chlorobenzene		
	Chloroethane		
	cis-1,2-dichloroethene		
	Vinyl chloride		
MW-9**	1,4-dichlorobenzene	MW-9**	Chlorobenzene
	Benzene		Barium
	Chlorobenzene		
	Chloroethane		
MW-13**	1,1-dichloroethane	MW-13**	cis-1,2-dichloroethene
			Nickel
MW-14**	None	MW-14**	Benzene
			Chlorobenzene
			Barium
			Nickel

Spring 2015†		Fall 2015†	
MW-9**	Barium	MW-9**	Barium
			Nickel
			1,4-dichlorobenzene
			Chlorobenzene
			Chloroethane
MW-13**	Nickel	MW-13**	Nickel
			1,4-dichlorobenzene
			Chloroethane
MW-14**	Chlorobenzene	MW-14**	Barium
			Nickel
			Benzene
			Chlorobenzene

Spring 2016†		Fall 2016	
MW-4	None	MW-4	Arsenic
MW-5**	None.	MW-5**	Selenium
MW-9**	Barium	MW-9**	Barium
	Cobalt		Nickel
	Nickel		1,4-dichlorobenzene
			Chlorobenzene
			Phorate
MW-10	None	MW-10**	Nickel
MW-11	None	MW-11	Nickel
MW-13**	Cadmium	MW-13**	Barium
	Nickel		Nickel
	1,4-dichlorobenzene		1,4-dichlorobenzene
	Cis-1,2-dichloroethene		Chloroethane
			Phorate
MW-14**	Barium	MW-14**	Barium
	Nickel		Nickel
	Benzene		Benzene
	Chlorobenzene		Chlorobenzene
			Chloroethane
			Phorate

Spring 2017		Fall 2017	
MW-4**	Arsenic	MW-4**	Barium
	Barium		
MW-5**	Selenium	MW-5**	Nickel*
			Chlorobenzene*
MW-9**	Barium	MW-9**	Barium
	Nickel		Nickel
	Chlorobenzene		1,4-dichlorobenzene
	Phorate		Chlorobenzene
MW-10**	Nickel	MW-10**	Nickel
	Phorate		
MW-11**	Nickel	MW-11**	Nickel
MW-13**	None	MW-13**	Barium*
			Nickel*
			1,4-dichlorobenzene
			Chloroethane
MW-14**	None	MW-14**	Barium*
			Nickel*
			1,4-dichlorobenzene
			Benzene
			Chlorobenzene
			Chloroethane

Spring 2018		Fall 2018	
MW-5**	Chlorobenzene	MW-5**	Chlorobenzene
			Selenium
MW-9**	Arsenic	MW-9**	Barium
	Barium		Nickel
	Copper		Zinc
	Nickel		Chlorobenzene
MW-10**	Nickel	MW-10**	Barium
	bis (2-ethylhexyl)phthalate		Nickel
			Zinc
MW-11**	bis (2-ethylhexyl)phthalate	MW-11**	None
MW-13**	Nickel	MW-13**	Barium
			Copper
			Nickel
			Zinc
			1,4-dichlorobenzene
			Benzene
			Chlorobenzene
			Chloroethane
MW-14**	Barium	MW-14**	Barium
	Cobalt		Nickel*
	Nickel		Zinc
	Benzene		Benzene
	Chlorobenzene		Chlorobenzene
			Tetrachloroethene

†Predates validated background data.

* verified by resample.

** Monitoring well is an Assessment monitoring point and water quality is compared to GWPS, rather than site prediction limits.

Spring 2019		Fall 2019	
MW-4**	None	MW-4**	Barium
MW-5**	Chlorobenzene	MW-5**	Nickel
			1,4-dichlorobenzene
			Benzene
			Chlorobenzene
			Chloroethane
MW-9**	Barium	MW-9**	Arsenic
	Nickel		Barium
			Nickel
			Chlorobenzene
MW-10**	Nickel	MW-10**	Nickel
	Zinc		
MW-11**	Barium	MW-11**	Cobalt
	Cobalt		
	Nickel		
MW-13**	Nickel	MW-13**	Barium
	1,4-dichlorobenzene		Nickel
			1,4-dichlorobenzene
			Chloroethane
MW-14**	Arsenic	MW-14**	Barium
	Barium		Nickel
	Nickel		Benzene
	Zinc		Chlorobenzene
	Benzene		Chloroethane
	Chlorobenzene		Dichlorodifluoromethane

Spring 2020		Fall 2020	
MW-4**	None	MW-4**	None
MW-5**	Selenium	MW-5**	Selenium
			Chlorobenzene
MW-9**	Barium	MW-9**	Arsenic
	Nickel		Barium
	Chlorobenzene		Nickel
			Chlorobenzene
MW-10**	Nickel	MW-10**	Barium
			Nickel
MW-11**	None	MW-11**	Cobalt
			Nickel
MW-13**	Nickel	MW-13**	Barium
	1,4-dichlorobenzene		Cobalt
			Nickel
			1,4-dichlorobenzene
			Chloroethane
MW-14**	Arsenic	MW-14**	Barium
	Barium		Nickel
	Nickel		Benzene
	1,4-dichlorobenzene		Chlorobenzene
	Benzene		
	Chlorobenzene		

* verified by resample.

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Spring 2021		Fall 2021	
MW-4**	None	MW-4**	None
MW-5**	Barium	MW-5**	Copper
	Cobalt		Nickel
	Nickel		1,4-dichlorobenzene
	1,4-dichlorobenzene		Chlorobenzene
	Chlorobenzene		
MW-9**	Arsenic	MW-9**	Arsenic
	Barium		Barium
	Nickel		Nickel
	Chlorobenzene		1,4-dichlorobenzene
			Chlorobenzene
MW-10**	Barium	MW-10**	Barium
	Nickel		Nickel
MW-11**	None	MW-11**	Cobalt
MW-13**	Nickel	MW-13**	Barium
			Nickel
			1,4-dichlorobenzene
MW-14**	Barium	MW-14**	Arsenic
	Nickel		Barium
	1,4-dichlorobenzene		Cobalt
	Chlorobenzene		Lead
			Nickel
			1,4-dichlorobenzene
			Chlorobenzene

* verified by resample.

** Monitoring well is an Assessment monitoring point and water quality is compared to GWPS, rather than site prediction limits

Spring 2022	
MW-5**	None
MW-9**	Arsenic
	Barium
	Nickel
	1,4-dichlorobenzene
	Chlorobenzene
	Chloroethane
MW-10**	Nickel
MW-11**	Barium
	Cadmium
MW-13**	Barium
	Nickel
	1,4-dichlorobenzene
MW-14**	Barium
	Cobalt
	Nickel
	1,4-dichlorobenzene
	Chlorobenzene

** Monitoring well is an Assessment monitoring point and water quality is compared to GWPS, rather than site prediction limits.

2023	
MW-9**	Arsenic
	Barium
	Nickel
	1,4-dichlorobenzene
	Chlorobenzene
MW-11**	bis (2-ethylhexyl)phthalate
MW-13**	Barium
	Nickel
	1,4-dichlorobenzene
	Chlorobenzene
MW-14**	Arsenic
	Barium
	Nickel

*** Monitoring well is an Assessment monitoring point and water quality is compared to GWPS, rather than site prediction limits.*

Table 2 – Compounds Exceeding a Prediction Limit

2024	
MW-9**	Barium
	Nickel
	1,4-dichlorobenzene
	bis (2-ethylhexyl)phthalate
	Chlorobenzene
MW-11**	none
MW-13**	Barium
	Nickel
	1,4-dichlorobenzene
	bis (2-ethylhexyl)phthalate
	Chlorobenzene
	Chloroethane
MW-14**	Barium
	Nickel
	bis (2-ethylhexyl)phthalate

*** Monitoring well is an Assessment monitoring point and water quality is compared to GWPS, rather than site prediction limits.*

**Table 2 – Compounds Exceeding a Prediction Limit
2025**

MW-9**	Arsenic
	Barium
	Nickel
	1,4-dichlorobenzene
	Chlorobenzene
MW-11**	none
MW-13**	Barium
	Cobalt
	Nickel
	1,4-dichlorobenzene
	Chlorobenzene
	Chloroethane
MW-14**	Arsenic
	Barium
	Copper
	Nickel
	1,4-dichlorobenzene
	Benzene
	Chlorobenzene

*** Monitoring well is an Assessment monitoring point and water quality is compared to GWPS, rather than site prediction limits.*

Appendix D.4 –Updated Trend Analysis Tables & Graphs

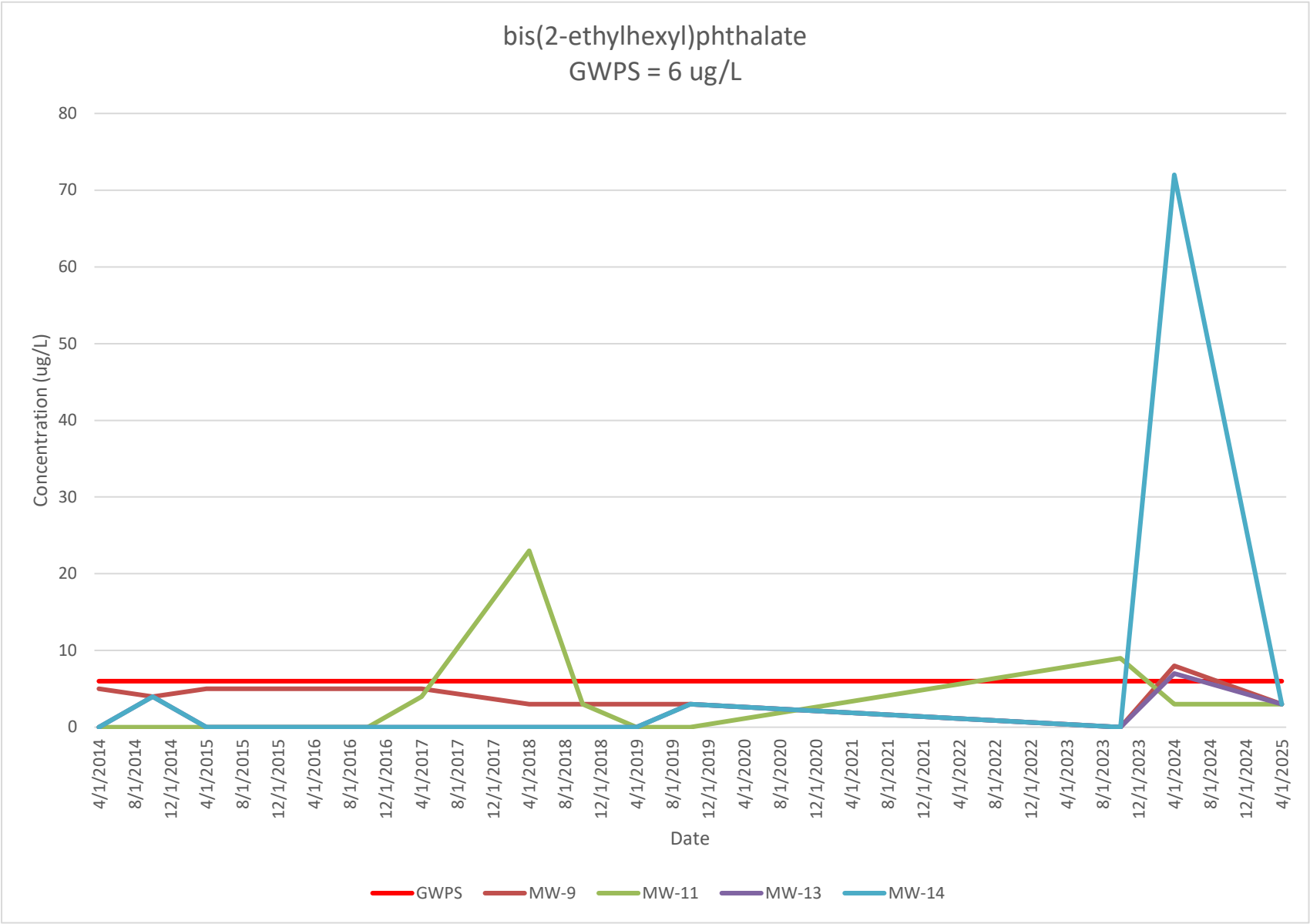
Times Series Graphs
Grundy County Sanitary Landfill
38-SDP-01-75C

0.5 = Red text represent undetected values that are reported at one-half of the MRL

Date	Compound (ug/L)	GWPS	MW-9	MW-11	MW-13	MW-14
4/24/2014	bis(2-ethylhexyl)phthalate	6	5.0	NA	NA	NA
10/15/2014	bis(2-ethylhexyl)phthalate	6	4.0	NA	4.0	4.0
4/1/2015	bis(2-ethylhexyl)phthalate	6	5.0	NA	NA	NA
10/2/2015	bis(2-ethylhexyl)phthalate	6	5.0	NA	NA	NA
4/19/2016	bis(2-ethylhexyl)phthalate	6	5.0	NA	NA	NA
10/10/2016	bis(2-ethylhexyl)phthalate	6	5.0	NA	NA	NA
4/4/2017	bis(2-ethylhexyl)phthalate	6	5.0	4.0	NA	NA
4/12/2018	bis(2-ethylhexyl)phthalate	6	3.0	23.0	NA	NA
10/23/2018	bis(2-ethylhexyl)phthalate	6	3.0	3.0	NA	NA
4/8/2019	bis(2-ethylhexyl)phthalate	6	3.0	NA	NA	NA
10/4/2019	bis(2-ethylhexyl)phthalate	6	3.0	NA	3.0	3.0
10/4/2023	bis(2-ethylhexyl)phthalate	6	NA	9.0	NA	NA
4/17/2024	bis(2-ethylhexyl)phthalate	6	8.0	3.0	7.0	72.0
4/3/2025	bis(2-ethylhexyl)phthalate	6	3.0	3.0	3.0	3.0

Sample size = 8	8	8	8	8
Mean value	4.00	7.50	4.33	26.00
standard deviation	1.77	7.25	1.89	32.53
95% Confidence Z(0.95)	1.895	1.895	1.895	1.895
Standard Error (ST Dev/√8)	0.626783171	2.56377001	0.6666667	11.5
Margin of Error	1.187754108	4.85834417	1.2633333	21.7925
95% UCL (mean + Margin of Error)	5.19	12.36	5.60	47.79
95% LCL (mean - Margin of Error)	2.81	2.64	3.07	4.21
GWPS (ug/L)	6.0	6.0	6.0	6.0
Does 95% LCL Value exceed GWPS?	No	No	No	No

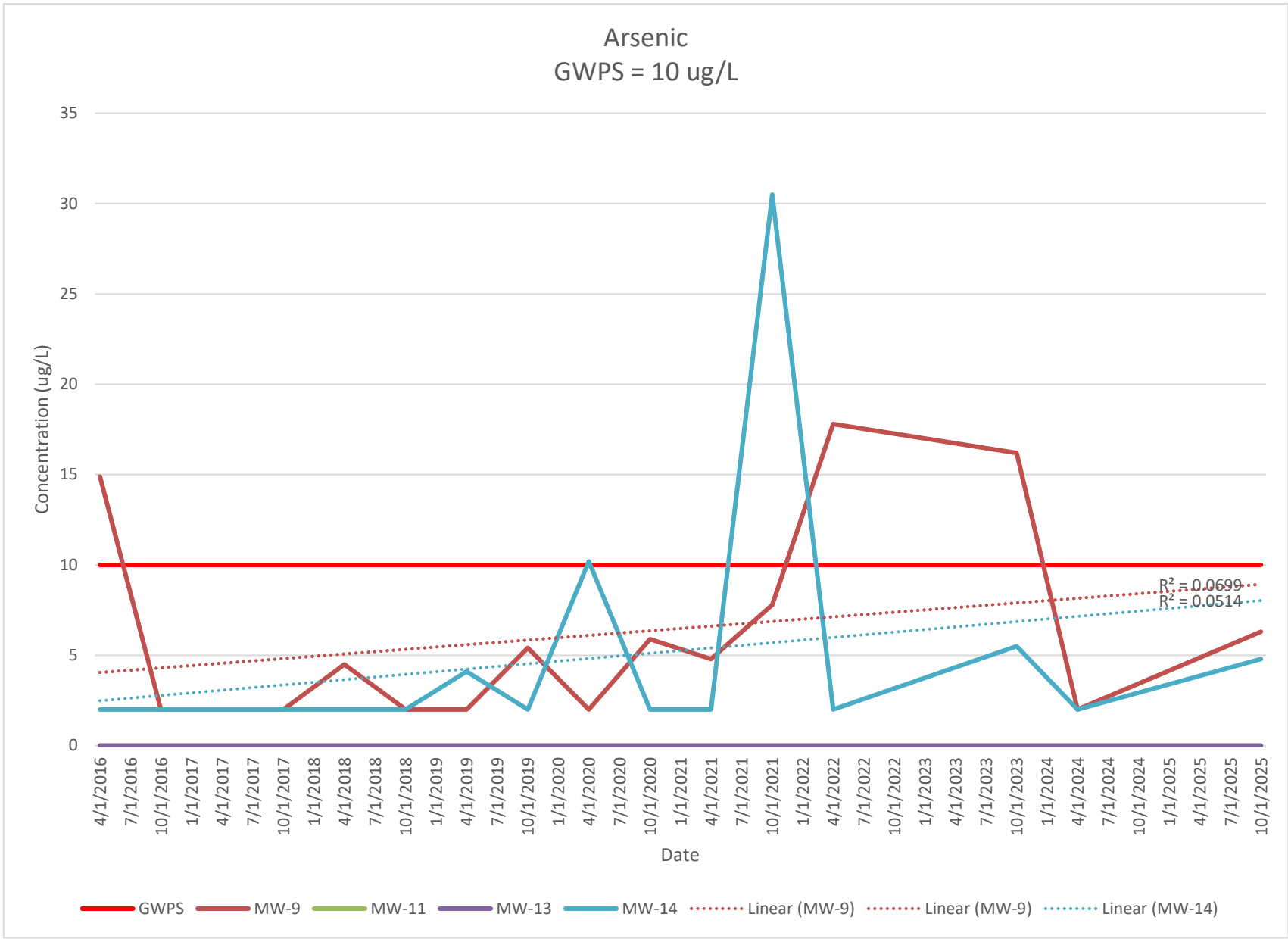
If so, then SSL



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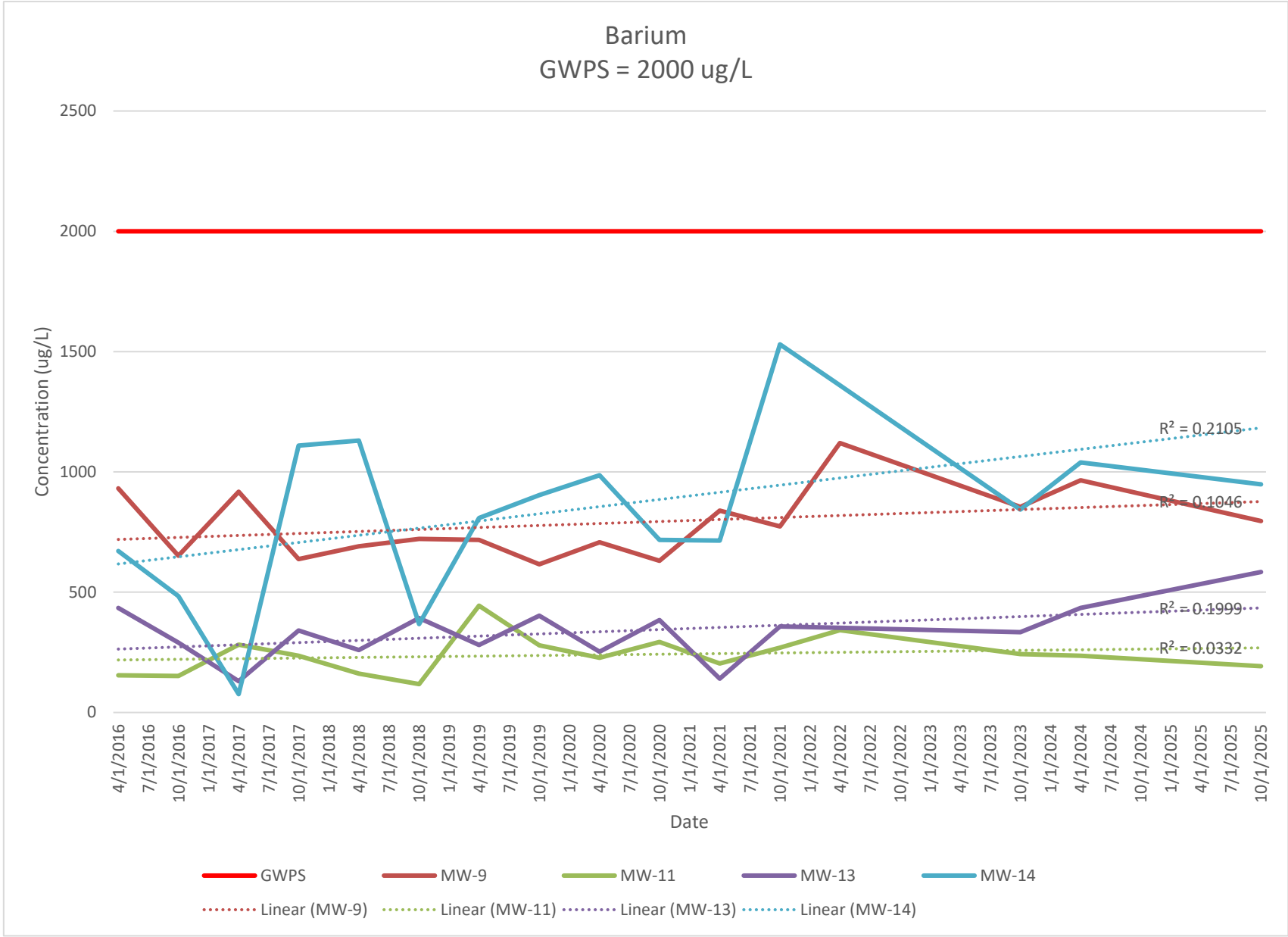
Date	Compound (ug/L)	GWPS	MW-9	MW-11	MW-13	MW-14
4/19/2016	Arsenic	10	14.9	NA	NA	2.0
10/10/2016	Arsenic	10	2.0	NA	NA	2.0
4/4/2017	Arsenic	10	2.0	NA	NA	2.0
10/18/2017	Arsenic	10	2.0	NA	NA	2.0
4/12/2018	Arsenic	10	4.5	NA	NA	2.0
10/23/2018	Arsenic	10	2.0	NA	NA	2.0
4/8/2019	Arsenic	10	2.0	NA	NA	4.1
10/4/2019	Arsenic	10	5.4	NA	NA	2.0
4/9/2020	Arsenic	10	2.0	NA	NA	10.2
10/1/2020	Arsenic	10	5.9	NA	NA	2.0
4/1/2021	Arsenic	10	4.8	NA	NA	2.0
10/4/2021	Arsenic	10	7.8	NA	NA	30.5
4/6/2022	Arsenic	10	17.8	NA	NA	2.0
10/4/2023	Arsenic	10	16.2	NA	NA	5.5
4/17/2024	Arsenic	10	2.0	NA	NA	2.0
10/9/2025	Arsenic	10	6.3	NA	NA	4.8
Sample size = 8			8	8	8	8
Mean value			7.9	#DIV/0!	#DIV/0!	7.375
standard deviation			5.620053381	#DIV/0!	#DIV/0!	9.140944973
95% Confidence Z(0.95)			1.895	1.895	1.895	1.895
Standard Error (ST Dev/√8)			1.986988928	#DIV/0!	#DIV/0!	3.231812088
Margin of Error			3.765344019	#DIV/0!	#DIV/0!	6.124283908
95% UCL (mean + Margin of Error)			11.62	#DIV/0!	#DIV/0!	13.50
95% LCL (mean - Margin of Error)			4.08	#DIV/0!	#DIV/0!	1.25
GWPS (ug/L)			10.0	10.0	10.0	10.0
Does 95% LCL Value exceed GWPS?	If so, then SSL		No	#DIV/0!	#DIV/0!	No



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38-SDP-01-75C

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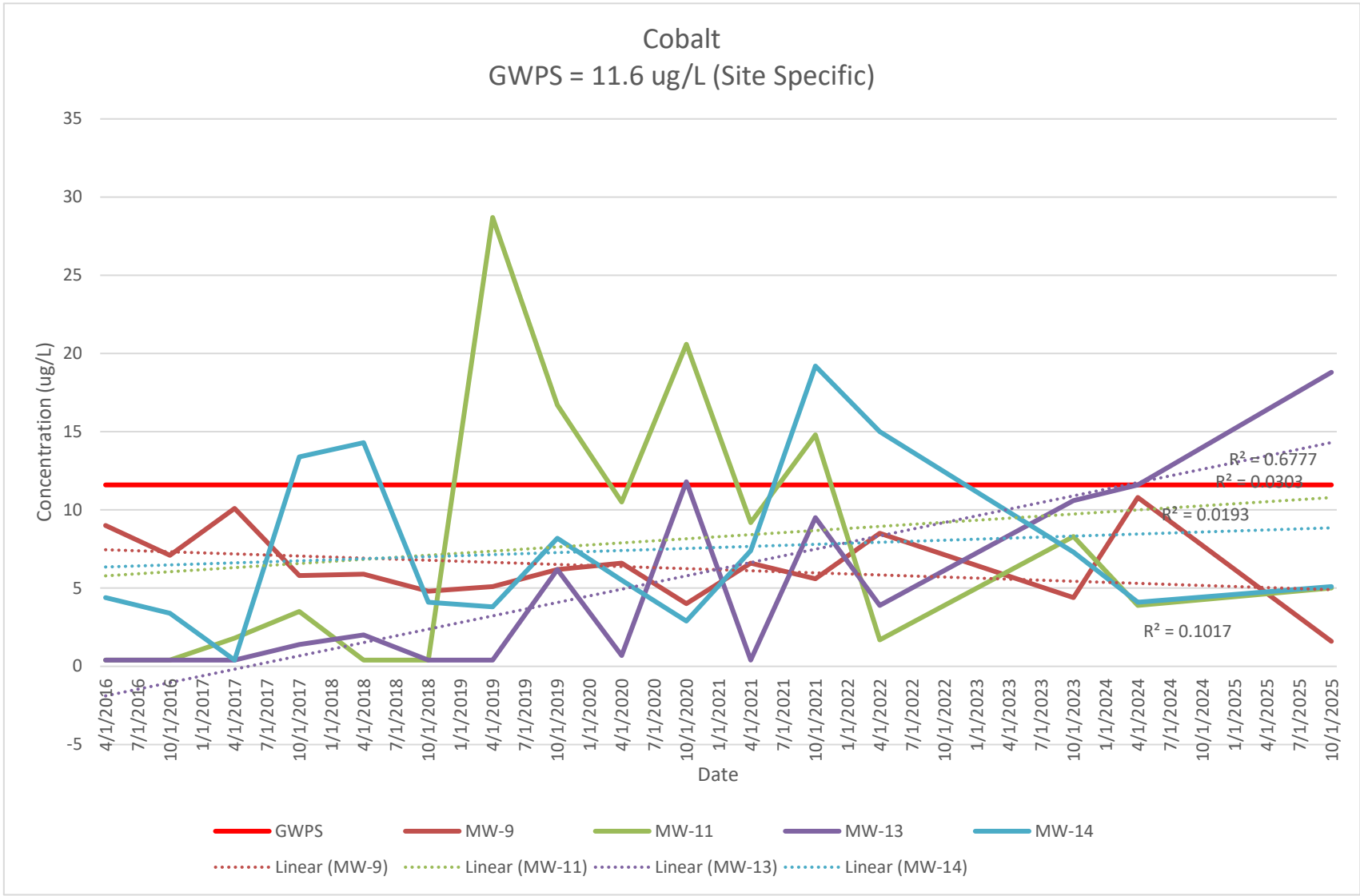
Date	Compound (ug/L)	GWPS	MW-9	MW-11	MW-13	MW-14
4/19/2016	Barium	2000	932	154	434	671.0
10/10/2016	Barium	2000	652	152	291	483.0
4/4/2017	Barium	2000	917	282	130	76.3
10/18/2017	Barium	2000	638	236	341	1110.0
4/12/2018	Barium	2000	691	162	259	1130.0
10/23/2018	Barium	2000	721	118	392	368.0
4/8/2019	Barium	2000	717	444	280	809
10/4/2019	Barium	2000	616	279	403	903.0
4/9/2020	Barium	2000	707	227	253	986
10/1/2020	Barium	2000	630	293	384	717.0
4/1/2021	Barium	2000	839	203	141	714.0
10/4/2021	Barium	2000	773	270	358	1530
4/6/2022	Barium	2000	1120	342	352	1360.0
10/4/2023	Barium	2000	855	243	334	843
4/17/2024	Barium	2000	965	236	434	1040.0
10/9/2025	Barium	2000	796	192	584	949.0
Sample size = 8			8	8	8	8
Mean value			836	250.75	355	1017.4
standard deviation			142.439406	46.17290872	120.510373	273.6365918
95% Confidence Z(0.95)			1.895	1.895	1.895	1.895
Standard Error (ST Dev/√8)			50.35993494	16.32458843	42.60685097	96.74514482
Margin of Error			95.43207671	30.93509508	80.7399826	183.3320494
95% UCL (mean + Margin of Error)			931.06	281.69	435.74	1200.71
95% LCL (mean - Margin of Error)			740.19	219.81	274.26	834.04
GWPS (ug/L)			2000.0	2000.0	2000.0	2000.0
Does 95% LCL Value exceed GWPS?	If so, then SSL		No	No	No	No



Times Series Graphs
Grundy County Sanitary Landfill
38-SDP-01-75C

0.5 = Red text represent undetected values that are reported at one-half of the MRL

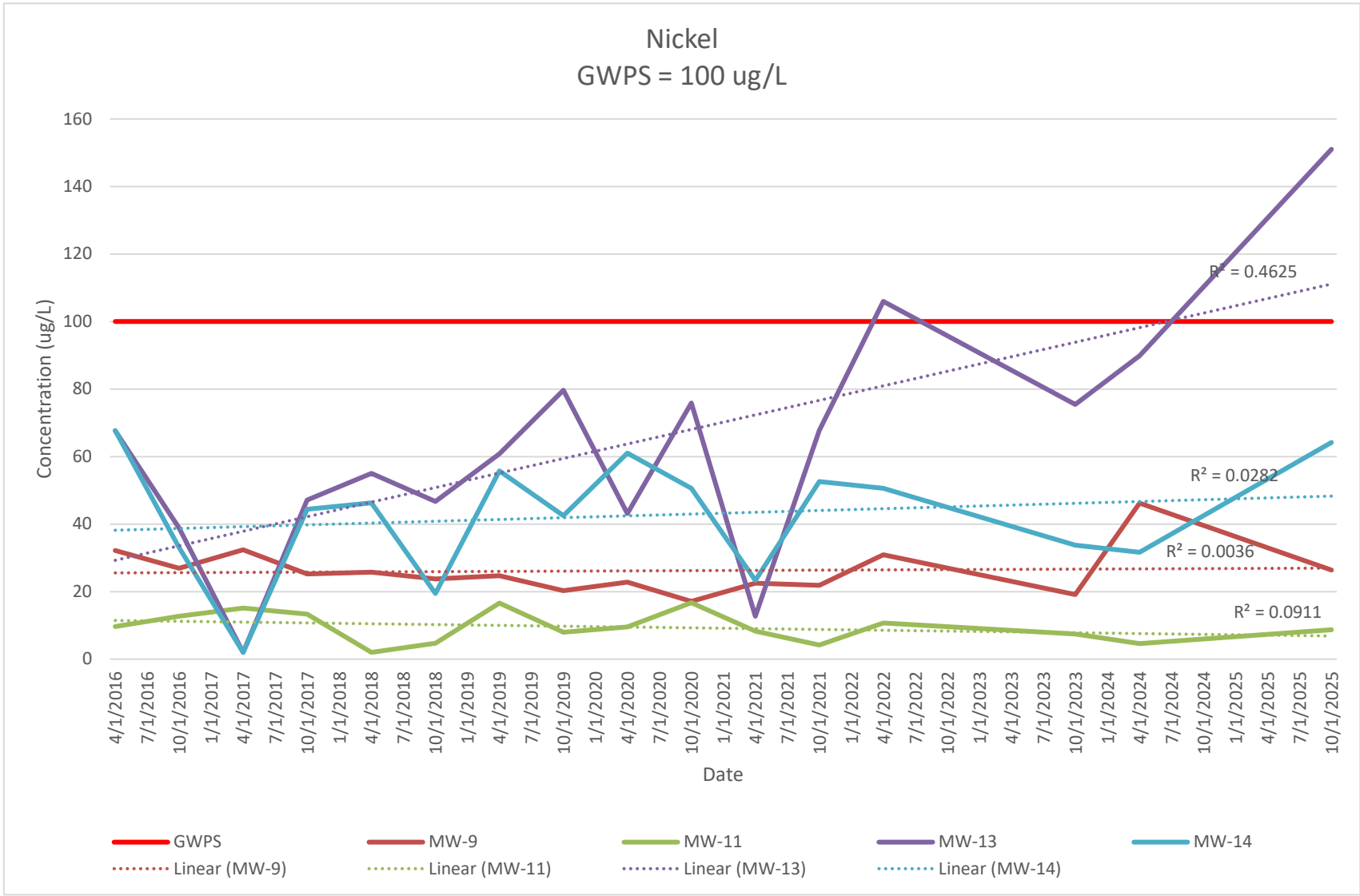
Date	Compound (ug/L)	GWPS	MW-9	MW-11	MW-13	MW-14
4/19/2016	Cobalt	11.6	9.0	0.4	0.4	4.4
10/10/2016	Cobalt	11.6	7.1	0.4	0.4	3.4
4/4/2017	Cobalt	11.6	10.1	1.8	0.4	0.4
10/18/2017	Cobalt	11.6	5.8	3.5	1.4	13.4
4/12/2018	Cobalt	11.6	5.9	0.4	2	14.3
10/23/2018	Cobalt	11.6	4.8	0.4	0.4	4.1
4/8/2019	Cobalt	11.6	5.1	28.7	0.4	3.8
10/4/2019	Cobalt	11.6	6.2	16.7	6.2	8.2
4/9/2020	Cobalt	11.6	6.6	10.5	0.7	5.5
10/1/2020	Cobalt	11.6	4.0	20.6	11.8	2.9
4/1/2021	Cobalt	11.6	6.6	9.2	0.4	7.4
10/4/2021	Cobalt	11.6	5.6	14.8	9.5	19.2
4/6/2022	Cobalt	11.6	8.5	1.7	3.9	15.0
10/4/2023	Cobalt	11.6	4.4	8.3	10.6	7.3
4/17/2024	Cobalt	11.6	10.8	3.9	11.6	4.1
10/9/2025	Cobalt	11.6	1.6	5	18.8	5.1
(site specific GWPS)						
Sample size = 8		8	8	8	8	
Mean value		6.01	9.25	8.41	8.31	
standard deviation		2.65	5.76	5.91	5.37	
95% Confidence Z(0.95)		1.895	1.895	1.895	1.895	
Standard Error (ST Dev/√8)		0.936155286	2.037845063	2.089963928	1.897320273	
Margin of Error		1.774014266	3.861716394	3.960481643	3.595421918	
95% UCL (mean + Margin of Error)		7.79	13.11	12.37	11.91	
95% LCL (mean - Margin of Error)		4.24	5.39	4.45	4.72	
GWPS (ug/L)		11.6	11.6	11.6	11.6	
Does 95% LCL Value exceed GWPS?	If so, then SSL	No	No	No	No	



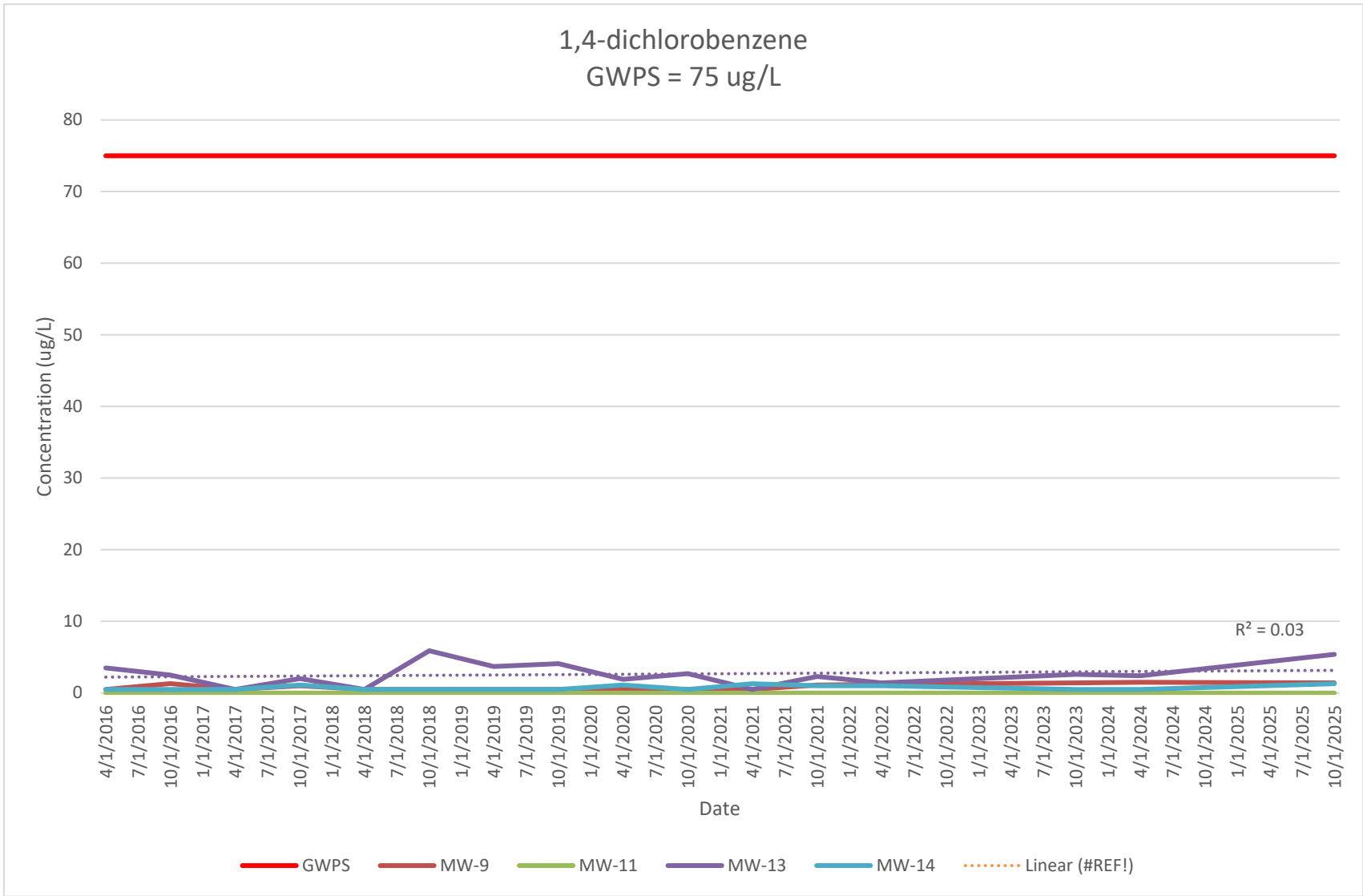
Times Series Graphs
Grundy County Sanitary Landfill
38-SDP-01-75C

0.5 = Red text represent undetected values that are reported at one-half of the MRL

Date	Compound (ug/L)	GWPS	MW-9	MW-11	MW-13	MW-14
4/19/2016	Nickel	100	32.2	9.6	67.6	67.7
10/10/2016	Nickel	100	26.9	12.7	38.8	33.0
4/4/2017	Nickel	100	32.4	15.1	2.0	2.0
10/18/2017	Nickel	100	25.2	13.3	47.1	44.4
4/12/2018	Nickel	100	25.8	2.0	55	46.3
10/23/2018	Nickel	100	23.7	4.7	46.7	19.4
4/8/2019	Nickel	100	24.7	16.6	60.8	55.8
10/4/2019	Nickel	100	20.3	8	79.6	42.5
4/9/2020	Nickel	100	22.8	9.5	43.1	61
10/1/2020	Nickel	100	17.1	16.7	75.9	50.6
4/1/2021	Nickel	100	22.5	8.3	12.7	23.3
10/4/2021	Nickel	100	21.9	4.2	67.8	52.6
4/6/2022	Nickel	100	30.9	10.7	106	50.6
10/4/2023	Nickel	100	19.1	7.4	75.4	33.8
4/17/2024	Nickel	100	46.2	4.6	89.9	31.6
10/9/2025	Nickel	100	26.4	8.7	151	64.2
Sample size = 8			8	8	8	8
Mean value			25.86	8.76	77.73	45.96
standard deviation			8.65	3.67	38.49	13.75
95% Confidence Z(0.95)			1.895	1.895	1.895	1.895
Standard Error (ST Dev/ $\sqrt{8}$)			3.057211633	1.296140605	13.60796814	4.863124558
Margin of Error			5.793416044	2.456186447	25.78709962	9.215621038
95% UCL (mean + Margin of Error)			31.66	11.22	103.51	55.18
95% LCL (mean - Margin of Error)			20.07	6.31	51.94	36.75
GWPS (ug/L)			100	100	100	100
Does 95% LCL Value exceed GWPS?	If so, then SSL		No	No	No	No



Times Series Graphs						
Grundy County Sanitary Landfill						
38-SDP-01-75C						
0.5 = Red text represent undetected values that are reported at one-half of the MRL						
Date	Compound (ug/L)	GWPS	MW-9	MW-11	MW-13	MW-14
4/19/2016	1,4 - dichlorobenzene	75	0.5	NA	3.5	0.5
10/10/2016	1,4 - dichlorobenzene	75	1.3	NA	2.5	0.5
4/4/2017	1,4 - dichlorobenzene	75	0.5	NA	0.5	0.5
10/18/2017	1,4 - dichlorobenzene	75	1.0	NA	2	1.1
4/12/2018	1,4 - dichlorobenzene	75	0.5	NA	0.5	0.5
10/23/2018	1,4 - dichlorobenzene	75	0.5	NA	5.9	0.5
4/8/2019	1,4 - dichlorobenzene	75	0.5	NA	3.7	0.5
10/4/2019	1,4 - dichlorobenzene	75	0.5	NA	4.1	0.5
4/9/2020	1,4 - dichlorobenzene	75	0.5	NA	1.9	1.1
10/1/2020	1,4 - dichlorobenzene	75	0.5	NA	2.7	0.5
4/1/2021	1,4 - dichlorobenzene	75	0.5	NA	0.5	1.3
10/4/2021	1,4 - dichlorobenzene	75	1.1	NA	2.3	1.0
4/6/2022	1,4 - dichlorobenzene	75	1.2	NA	1.4	1.0
10/4/2023	1,4 - dichlorobenzene	75	1.4	NA	2.6	0.5
4/17/2024	1,4 - dichlorobenzene	75	1.5	NA	2.4	0.5
10/9/2025	1,4 - dichlorobenzene	75	1.4	NA	5.4	1.3
Sample size = 8			8	8	8	8
Mean value			1.01	#DIV/0!	2.40	0.90
standard deviation			0.41	#DIV/0!	1.32	0.33
95% Confidence Z(0.95)			1.895	1.895	1.895	1.895
Standard Error (ST Dev/V8)			0.146241987	#DIV/0!	0.467707173	0.115920231
Margin of Error			0.277128565	#DIV/0!	0.886305093	0.219668838
95% UCL (mean + Margin of Error)			1.29	#DIV/0!	3.29	1.12
95% LCL (mean - Margin of Error)			0.74	#DIV/0!	1.51	0.68
GWPS (ug/L)			75	75	75	75
Does 95% LCL Value exceed GWPS?			No	#DIV/0!	No	No
If so, then SSL						



0.5 = Red text represent undetected values that are reported at one-half of the MRL

benzene
GWPS = 5 ug/L

Concentration (ug/L)

Date

GWPS MW-9 MW-11 MW-13 MW-14 Linear (MW-13) Linear (MW-14)

$R^2 = 0.0964$

$R^2 = 0.0205$

0.5 = Red text represent undetected values that are reported at one-half of the MRL

chlorobenzene
GWPS = 100 ug/L

Concentration (ug/L)

Date

GWPS MW-9 MW-11 MW-13 MW-14 Linear (MW-14) Linear (MW-14) Linear (#REF!)

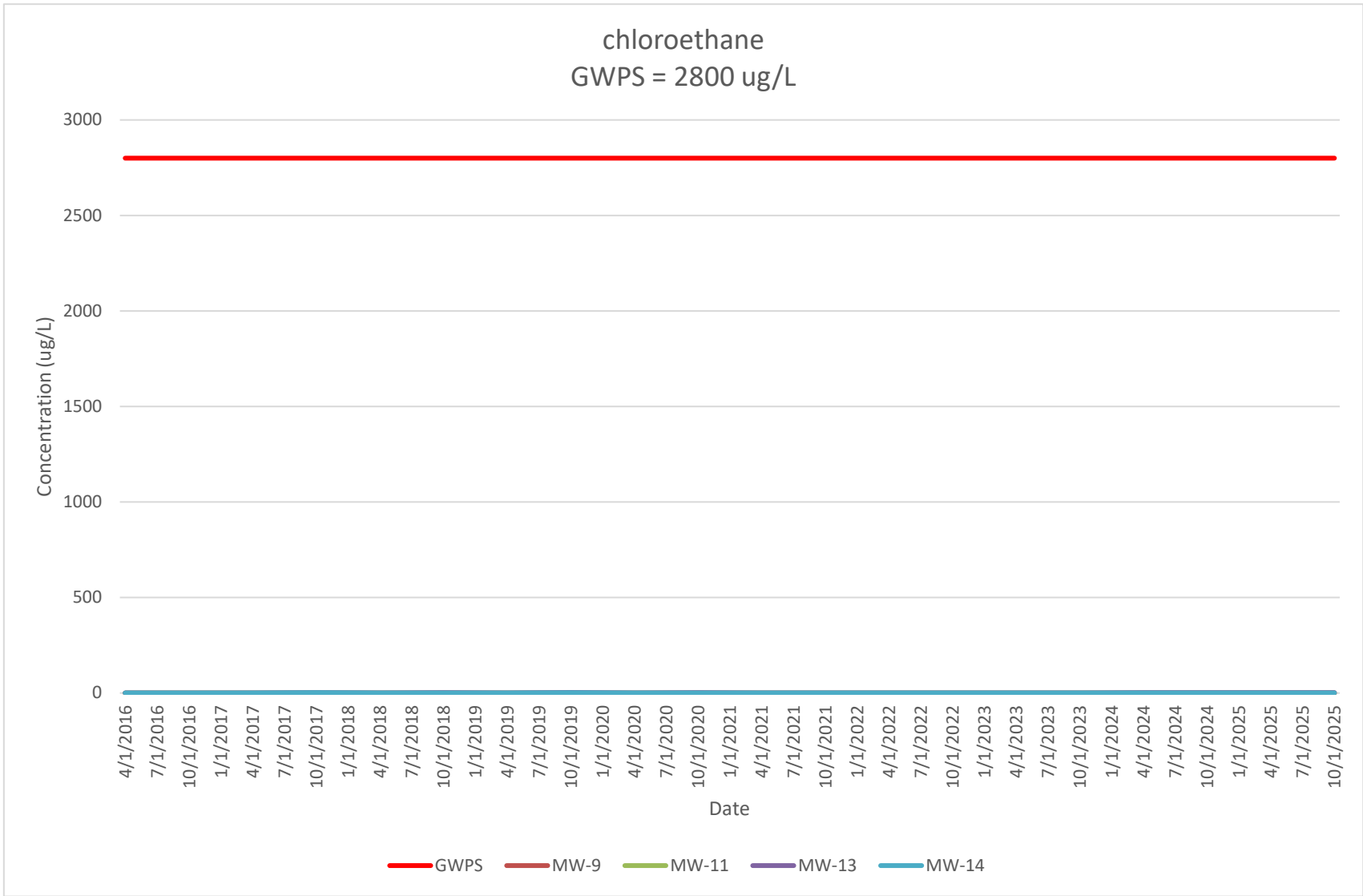
$R^2 = 0.0009$

$R^2 = 0.0586$

Times Series Graphs
Grundy County Sanitary Landfill
38-SDP-01-75C

0.5 = Red text represent undetected values that are reported at one-half of the MRL

Date	Compound (ug/L)	GWPS	MW-9	MW-11	MW-13	MW-14
4/19/2016	chloroethane	2800	NA	NA	0.5	0.5
10/10/2016	chloroethane	2800	NA	NA	1.0	1.2
4/4/2017	chloroethane	2800	NA	NA	0.5	0.5
10/18/2017	chloroethane	2800	NA	NA	2.1	1.3
4/12/2018	chloroethane	2800	NA	NA	0.5	0.5
10/23/2018	chloroethane	2800	NA	NA	2.0	0.5
4/8/2019	chloroethane	2800	NA	NA	0.5	0.5
10/4/2019	chloroethane	2800	NA	NA	3.1	1.7
4/9/2020	chloroethane	2800	NA	NA	0.5	0.5
10/1/2020	chloroethane	2800	NA	NA	2.0	0.5
4/1/2021	chloroethane	2800	NA	NA	0.5	0.5
10/4/2021	chloroethane	2800	NA	NA	0.5	0.5
4/6/2022	chloroethane	2800	NA	NA	0.5	0.5
10/4/2023	chloroethane	2800	NA	NA	0.5	0.5
4/17/2024	chloroethane	2800	NA	NA	2.8	0.5
10/9/2025	chloroethane	2800	NA	NA	1.3	0.5
Sample size = 8			8	8	8	8
Mean value			#DIV/0!	#DIV/0!	1.08	0.50
standard deviation			#DIV/0!	#DIV/0!	0.83	0.00
95% Confidence Z(0.95)			1.895	1.895	1.895	1.895
Standard Error (ST Dev/V8)			#DIV/0!	#DIV/0!	0.294082259	0
Margin of Error			#DIV/0!	#DIV/0!	0.557285881	0
95% UCL (mean + Margin of Error)			#DIV/0!	#DIV/0!	1.63	0.50
95% LCL (mean - Margin of Error)			#DIV/0!	#DIV/0!	0.52	0.50
GWPS (ug/L)		2800	2800	2800	2800	2800
Does 95% LCL Value exceed GWPS?	If so, then SSL		#DIV/0!	#DIV/0!	No	No



Appendix E

Laboratory Reports for Reporting Period *With Chain of Custody*



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1ID0778

Project Description

6033

For:

Todd Whipple

HLW Engineering

204 West Broad St

Story City, IA 50248

Heather Tisdale

Customer Relationship Specialist

Wednesday, April 16, 2025

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc., Newton. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1ID0778

HLW Engineering

Todd Whipple
204 West Broad St
Story City, IA 50248

Project Name: 6033

Project / PO Number: N/A
Received: 04/04/2025
Reported: 04/16/2025

Sample Summary Report

<u>Sample Name</u>	<u>Laboratory ID</u>	<u>Client Matrix</u>	<u>Sample Type</u>	<u>Sample Begin</u>	<u>Sample Taken</u>	<u>Lab Received</u>
92MW-15A	1ID0778-01	Aqueous	GRAB		04/03/25 08:25	04/04/25 10:33
MW-9	1ID0778-02	Aqueous	GRAB		04/03/25 09:28	04/04/25 10:33
MW-11	1ID0778-03	Aqueous	GRAB		04/03/25 09:07	04/04/25 10:33
MW-13	1ID0778-04	Aqueous	GRAB		04/03/25 08:57	04/04/25 10:33
MW-14	1ID0778-05	Aqueous	GRAB		04/03/25 08:45	04/04/25 10:33



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11D0778

Analytical Testing Parameters

Client Sample ID:	92MW-15A	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	04/03/2025 8:25
Lab Sample ID:	11D0778-01		

Determination of Base/Neutral Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8270C								
Bis(2-Ethylhexyl) Phthalate	10	6	ug/L	1		04/08/25 1057	04/14/25 1524	EPP
Surrogate: Nitrobenzene-d5	75.1	Limit: 17-154	% Rec	1		04/08/25 1057	04/14/25 1524	EPP
Surrogate: 2-Fluorobiphenyl	67.0	Limit: 15-150	% Rec	1		04/08/25 1057	04/14/25 1524	EPP
Surrogate: Terphenyl-dl4	61.3	Limit: 10-179	% Rec	1		04/08/25 1057	04/14/25 1524	EPP

Client Sample ID:	MW-9	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	04/03/2025 9:28
Lab Sample ID:	11D0778-02		

Determination of Base/Neutral Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8270C								
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L	1		04/08/25 1057	04/14/25 1548	EPP
Surrogate: Nitrobenzene-d5	75.0	Limit: 17-154	% Rec	1		04/08/25 1057	04/14/25 1548	EPP
Surrogate: 2-Fluorobiphenyl	78.9	Limit: 15-150	% Rec	1		04/08/25 1057	04/14/25 1548	EPP
Surrogate: Terphenyl-dl4	62.7	Limit: 10-179	% Rec	1		04/08/25 1057	04/14/25 1548	EPP

Client Sample ID:	MW-11	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	04/03/2025 9:07
Lab Sample ID:	11D0778-03		

Determination of Base/Neutral Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8270C								
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L	1		04/08/25 1057	04/14/25 1612	EPP
Surrogate: Nitrobenzene-d5	93.6	Limit: 17-154	% Rec	1		04/08/25 1057	04/14/25 1612	EPP
Surrogate: 2-Fluorobiphenyl	97.3	Limit: 15-150	% Rec	1		04/08/25 1057	04/14/25 1612	EPP
Surrogate: Terphenyl-dl4	105	Limit: 10-179	% Rec	1		04/08/25 1057	04/14/25 1612	EPP

Client Sample ID:	MW-13	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	04/03/2025 8:57
Lab Sample ID:	11D0778-04		

Determination of Base/Neutral Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8270C								
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L	1		04/08/25 1057	04/14/25 1701	EPP
Surrogate: Nitrobenzene-d5	84.2	Limit: 17-154	% Rec	1		04/08/25 1057	04/14/25 1701	EPP
Surrogate: 2-Fluorobiphenyl	110	Limit: 15-150	% Rec	1		04/08/25 1057	04/14/25 1701	EPP
Surrogate: Terphenyl-dl4	95.2	Limit: 10-179	% Rec	1		04/08/25 1057	04/14/25 1701	EPP

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11D0778

Client Sample ID:	MW-14	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	04/03/2025 8:45
Lab Sample ID:	11D0778-05		

Determination of Base/Neutral Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8270C								
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L	1		04/08/25 1057	04/14/25 1637	EPP
Surrogate: Nitrobenzene-d5	81.5	Limit: 17-154	% Rec	1		04/08/25 1057	04/14/25 1637	EPP
Surrogate: 2-Fluorobiphenyl	86.9	Limit: 15-150	% Rec	1		04/08/25 1057	04/14/25 1637	EPP
Surrogate: Terphenyl-dl4	87.3	Limit: 10-179	% Rec	1		04/08/25 1057	04/14/25 1637	EPP



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1ID0778

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8270C	1ID0358	1ID0358-BLK1	
		1ID0358-BS1	
		1ID0358-BSD1	
		1ID0358-SRM1	
		1ID0778-01	92MW-15A
		1ID0778-02	MW-9
		1ID0778-03	MW-11
		1ID0778-05	MW-14
		1ID0778-04	MW-13

Batch Quality Control Summary: Microbac Laboratories, Inc., Newton

Determination of Base/Neutral Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0358 - EPA 625 BNA - EPA 8270C									
Blank (1ID0358-BLK1)				Prepared: 04/08/25 10:57 Analyzed: 04/14/25 11:28					
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L						
Surrogate: Nitrobenzene-d5	14.9		ug/L	20.6		72.4		17-154	
Surrogate: 2-Fluorobiphenyl	14.9		ug/L	19.5		76.2		15-150	
Surrogate: Terphenyl-dl4	21.8		ug/L	20.6		106		10-179	
LCS (1ID0358-BS1)				Prepared: 04/08/25 10:57 Analyzed: 04/14/25 11:53					
Bis(2-Ethylhexyl) Phthalate	14.0	6	ug/L	10.0		140		32-180	
Surrogate: Nitrobenzene-d5	17.7		ug/L	20.6		85.9		34-138	
Surrogate: 2-Fluorobiphenyl	19.7		ug/L	19.5		101		42-129	
Surrogate: Terphenyl-dl4	21.9		ug/L	20.6		106		46-154	
LCS Dup (1ID0358-BSD1)				Prepared: 04/08/25 10:57 Analyzed: 04/14/25 12:17					
Bis(2-Ethylhexyl) Phthalate	12.6	6	ug/L	10.0		126	32-180	10.6	30
Surrogate: Nitrobenzene-d5	17.9		ug/L	20.6		86.9	34-138		
Surrogate: 2-Fluorobiphenyl	17.5		ug/L	19.5		89.5	42-129		
Surrogate: Terphenyl-dl4	21.7		ug/L	20.6		105	46-154		
Reference (1ID0358-SRM1)				Prepared: 04/08/25 10:57 Analyzed: 04/14/25 13:30					
Bis(2-Ethylhexyl) Phthalate	10.3	6	ug/L	10.0		103	80-120		
Surrogate: Nitrobenzene-d5	23.4		ug/L	20.6		114	17-154		
Surrogate: 2-Fluorobiphenyl	22.8		ug/L	19.5		117	15-150		
Surrogate: Terphenyl-dl4	24.2		ug/L	20.6		117	10-179		



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1ID0778

Definitions

RL: Reporting Limit
RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 0.5°C

Cooler Inspection Checklist

Custody Seals	No	Containers Intact	Yes
COC/Labels Agree	Yes	Preservation Confirmed	No
Received On Ice	Yes		

Report Comments

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Heather Tisdale
Customer Relationship Specialist
04/16/25 10:31



600 East 17th Street S
Newton, IA 50208
641-792-8451

CHAIN OF



1 I D O 7 7 8

HLW Engineering
PM: Heather Murphy

Page 1 of

Printed: 3/20/2025 11:30:26A

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Page 7 of 7

SITE INFORMATION

Sampler: IGH
Project: Grundy Co. Landfill - New Regs
6033

REPORT TO

Todd Whipple
HLW Engineering
204 West Broad St
Story City, IA 50248

INVOICE TO

Environmental Manager
Grundy County Landfill
20434 220th Street
Grundy Center, IA 50638

SPECIAL INSTRUCTIONS

None

Turn Around Time

☒ Standard ☐ RUSH, need by ___/___/___

LAB USE ONLY

Work Order 11D0778

Temperature 0.5

Turn-Cooler: No

☐ Custody Seal
☒ Containers Intact
☒ COC/Labels Agree
☒ Preservation Confirmed
☒ Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	92MW-15A	Aqueous	GRAB	4/3/25	8:25	1	8270-110	01
-001	MW-9	Aqueous	GRAB	4/3/25	9:28	1	8270-110	02
-001	MW-11	Aqueous	GRAB	4/3/25	9:07	1	8270-110	03
-001	MW-13	Aqueous	GRAB	4/3/25	8:57	1	8270-110	04
-001	MW-14	Aqueous	GRAB	4/3/25	8:45	1	8270-110	05
-001	Duplicate	Aqueous	GRAB	1/1			8270-110	

J. COLE 4/4/25
Relinquished By Date/Time

Received By Date/Time

Relinquished By Date/Time
Scholar 4/4/25 10:33
Received for Lab By Date/Time

Original - Lab Copy Yellow - Sampler Copy

Remarks:



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1IJ1227

Project Description

6033

For:

Todd Whipple

HLW Engineering

204 West Broad St

Story City, IA 50248

Heather Murphy

Customer Relationship Specialist

Friday, October 17, 2025

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc., Newton. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1IJ1227

HLW Engineering

Todd Whipple
204 West Broad St
Story City, IA 50248

Project Name: 6033

Project / PO Number: N/A
Received: 10/13/2025
Reported: 10/17/2025

Sample Summary Report

<u>Sample Name</u>	<u>Laboratory ID</u>	<u>Client Matrix</u>	<u>Sample Type</u>	<u>Sample Begin</u>	<u>Sample Taken</u>	<u>Lab Received</u>
92MW-15A	1IJ1227-01	Aqueous	GRAB		10/09/25 09:47	10/13/25 10:56
MW-9	1IJ1227-02	Aqueous	GRAB		10/09/25 11:20	10/13/25 10:56
MW-11	1IJ1227-03	Aqueous	GRAB		10/09/25 10:55	10/13/25 10:56
MW-13	1IJ1227-04	Aqueous	GRAB		10/09/25 10:40	10/13/25 10:56
MW- 14	1IJ1227-05	Aqueous	GRAB		10/09/25 10:22	10/13/25 10:56
Duplicate	1IJ1227-06	Aqueous	GRAB		10/09/25 10:40	10/13/25 10:56



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1IJ1227

Analytical Testing Parameters

Client Sample ID: 92MW-15A
Sample Matrix: Aqueous
Lab Sample ID: 1IJ1227-01

Collected By: JGH
Collection Date: 10/09/2025 9:47

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Bromomethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Chloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Acetone	<10.0	10.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Chloroform	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Benzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Dibromomethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Toluene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Chlorobenzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Xylenes, total	<2.0	2.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Styrene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF

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Page 3 of 24



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1IJ1227

Client Sample ID: 92MW-15A
Sample Matrix: Aqueous
Lab Sample ID: 1IJ1227-01

Collected By: JGH
Collection Date: 10/09/2025 9:47

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
Bromoform	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
1,4-Dichlorobenzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1114	RAF
Surrogate: Dibromofluoromethane	96.6	Limit: 75-136	% Rec		10/14/25 0000	10/14/25 1114	RAF
Surrogate: Dibromofluoromethane	96.6	Limit: 57-128	% Rec		10/14/25 0000	10/14/25 1114	RAF
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 49-135	% Rec		10/14/25 0000	10/14/25 1114	RAF
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec		10/14/25 0000	10/14/25 1114	RAF
Surrogate: Toluene-d8	97.9	Limit: 82-121	% Rec		10/14/25 0000	10/14/25 1114	RAF
Surrogate: Toluene-d8	97.9	Limit: 82-116	% Rec		10/14/25 0000	10/14/25 1114	RAF
Surrogate: 4-Bromofluorobenzene	109	Limit: 80-116	% Rec		10/14/25 0000	10/14/25 1114	RAF
Surrogate: 4-Bromofluorobenzene	109	Limit: 77-114	% Rec		10/14/25 0000	10/14/25 1114	RAF

Determination of Total Metals	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony, total	0.0010	0.0010	mg/L		10/14/25 1329	10/15/25 1733	RVV
Arsenic, total	<0.0020	0.0020	mg/L		10/14/25 1329	10/15/25 1733	RVV
Barium, total	0.217	0.0010	mg/L		10/14/25 1329	10/15/25 1733	RVV
Beryllium, total	<0.0005	0.0005	mg/L		10/14/25 1329	10/15/25 1733	RVV
Cadmium, total	0.0002	0.0002	mg/L		10/14/25 1329	10/15/25 1733	RVV
Chromium, total	0.0015	0.0010	mg/L		10/14/25 1329	10/15/25 1733	RVV
Cobalt, total	<0.0005	0.0005	mg/L		10/14/25 1329	10/15/25 1733	RVV
Copper, total	<0.0050	0.0050	mg/L		10/14/25 1329	10/15/25 1733	RVV
Lead, total	<0.0010	0.0010	mg/L		10/14/25 1329	10/15/25 1733	RVV
Nickel, total	<0.0050	0.0050	mg/L		10/14/25 1329	10/15/25 1733	RVV
Selenium, total	<0.0020	0.0020	mg/L		10/14/25 1329	10/15/25 1733	RVV
Silver, total	<0.0050	0.0050	mg/L		10/14/25 1329	10/15/25 1733	RVV
Thallium, total	<0.0005	0.0005	mg/L		10/14/25 1329	10/15/25 1733	RVV
Vanadium, total	<0.0020	0.0020	mg/L		10/14/25 1329	10/15/25 1733	RVV
Zinc, total	0.0064	0.0050	mg/L		10/14/25 1329	10/15/25 1733	RVV

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CERTIFICATE OF ANALYSIS

1IJ1227

Client Sample ID: MW-9
Sample Matrix: Aqueous
Lab Sample ID: 1IJ1227-02

Collected By: JGH
Collection Date: 10/09/2025 11:20

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Bromomethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Chloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Acetone	<10.0	10.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Chloroform	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Benzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Dibromomethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Toluene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Chlorobenzene	4.8	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Xylenes, total	<2.0	2.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Styrene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Bromoform	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF

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CERTIFICATE OF ANALYSIS

1IJ1227

Client Sample ID: MW-9
Sample Matrix: Aqueous
Lab Sample ID: 1IJ1227-02

Collected By: JGH
Collection Date: 10/09/2025 11:20

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
1,4-Dichlorobenzene	1.4	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1137	RAF
Surrogate: Dibromofluoromethane	96.8	Limit: 57-128	% Rec		10/14/25 0000	10/14/25 1137	RAF
Surrogate: Dibromofluoromethane	96.8	Limit: 75-136	% Rec		10/14/25 0000	10/14/25 1137	RAF
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 49-135	% Rec		10/14/25 0000	10/14/25 1137	RAF
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 61-142	% Rec		10/14/25 0000	10/14/25 1137	RAF
Surrogate: Toluene-d8	98.0	Limit: 82-116	% Rec		10/14/25 0000	10/14/25 1137	RAF
Surrogate: Toluene-d8	98.0	Limit: 82-121	% Rec		10/14/25 0000	10/14/25 1137	RAF
Surrogate: 4-Bromofluorobenzene	106	Limit: 77-114	% Rec		10/14/25 0000	10/14/25 1137	RAF
Surrogate: 4-Bromofluorobenzene	106	Limit: 80-116	% Rec		10/14/25 0000	10/14/25 1137	RAF

Determination of Total Metals	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony, total	0.0010	0.0010	mg/L		10/14/25 1329	10/15/25 1749	RVV
Arsenic, total	0.0063	0.0020	mg/L		10/14/25 1329	10/15/25 1749	RVV
Barium, total	0.796	0.0010	mg/L		10/14/25 1329	10/15/25 1749	RVV
Beryllium, total	<0.0005	0.0005	mg/L		10/14/25 1329	10/15/25 1749	RVV
Cadmium, total	0.0002	0.0002	mg/L		10/14/25 1329	10/15/25 1749	RVV
Chromium, total	0.0016	0.0010	mg/L		10/14/25 1329	10/15/25 1749	RVV
Cobalt, total	0.0067	0.0005	mg/L		10/14/25 1329	10/15/25 1749	RVV
Copper, total	<0.0050	0.0050	mg/L		10/14/25 1329	10/15/25 1749	RVV
Lead, total	<0.0010	0.0010	mg/L		10/14/25 1329	10/15/25 1749	RVV
Nickel, total	0.0264	0.0050	mg/L		10/14/25 1329	10/15/25 1749	RVV
Selenium, total	<0.0020	0.0020	mg/L		10/14/25 1329	10/15/25 1749	RVV
Silver, total	<0.0050	0.0050	mg/L		10/14/25 1329	10/15/25 1749	RVV
Thallium, total	<0.0005	0.0005	mg/L		10/14/25 1329	10/15/25 1749	RVV
Vanadium, total	<0.0020	0.0020	mg/L		10/14/25 1329	10/15/25 1749	RVV
Zinc, total	0.0083	0.0050	mg/L		10/14/25 1329	10/15/25 1749	RVV

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CERTIFICATE OF ANALYSIS

1IJ1227

Client Sample ID: MW-11
Sample Matrix: Aqueous
Lab Sample ID: 1IJ1227-03

Collected By: JGH
Collection Date: 10/09/2025 10:55

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Bromomethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Chloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Acetone	<10.0	10.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Chloroform	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Benzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Dibromomethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Toluene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Chlorobenzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Xylenes, total	<2.0	2.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Styrene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Bromoform	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF

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CERTIFICATE OF ANALYSIS

1IJ1227

Client Sample ID: MW-11
Sample Matrix: Aqueous
Lab Sample ID: 1IJ1227-03

Collected By: JGH
Collection Date: 10/09/2025 10:55

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
1,4-Dichlorobenzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1200	RAF
Surrogate: Dibromofluoromethane	97.3	Limit: 57-128	% Rec		10/14/25 0000	10/14/25 1200	RAF
Surrogate: Dibromofluoromethane	97.3	Limit: 75-136	% Rec		10/14/25 0000	10/14/25 1200	RAF
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 61-142	% Rec		10/14/25 0000	10/14/25 1200	RAF
Surrogate: 1,2-Dichloroethane-d4	102	Limit: 49-135	% Rec		10/14/25 0000	10/14/25 1200	RAF
Surrogate: Toluene-d8	96.6	Limit: 82-116	% Rec		10/14/25 0000	10/14/25 1200	RAF
Surrogate: Toluene-d8	96.6	Limit: 82-121	% Rec		10/14/25 0000	10/14/25 1200	RAF
Surrogate: 4-Bromofluorobenzene	106	Limit: 77-114	% Rec		10/14/25 0000	10/14/25 1200	RAF
Surrogate: 4-Bromofluorobenzene	106	Limit: 80-116	% Rec		10/14/25 0000	10/14/25 1200	RAF

Determination of Total Metals	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony, total	0.0010	0.0010	mg/L		10/14/25 1329	10/15/25 1751	RVV
Arsenic, total	<0.0020	0.0020	mg/L		10/14/25 1329	10/15/25 1751	RVV
Barium, total	0.192	0.0010	mg/L		10/14/25 1329	10/15/25 1751	RVV
Beryllium, total	<0.0005	0.0005	mg/L		10/14/25 1329	10/15/25 1751	RVV
Cadmium, total	0.0006	0.0002	mg/L		10/14/25 1329	10/15/25 1751	RVV
Chromium, total	0.0010	0.0010	mg/L		10/14/25 1329	10/15/25 1751	RVV
Cobalt, total	0.0050	0.0005	mg/L		10/14/25 1329	10/15/25 1751	RVV
Copper, total	<0.0050	0.0050	mg/L		10/14/25 1329	10/15/25 1751	RVV
Lead, total	<0.0010	0.0010	mg/L		10/14/25 1329	10/15/25 1751	RVV
Nickel, total	0.0087	0.0050	mg/L		10/14/25 1329	10/15/25 1751	RVV
Selenium, total	<0.0020	0.0020	mg/L		10/14/25 1329	10/15/25 1751	RVV
Silver, total	<0.0050	0.0050	mg/L		10/14/25 1329	10/15/25 1751	RVV
Thallium, total	<0.0005	0.0005	mg/L		10/14/25 1329	10/15/25 1751	RVV
Vanadium, total	<0.0020	0.0020	mg/L		10/14/25 1329	10/15/25 1751	RVV
Zinc, total	<0.0050	0.0050	mg/L		10/14/25 1329	10/15/25 1751	RVV

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CERTIFICATE OF ANALYSIS

1IJ1227

Client Sample ID: MW-13
Sample Matrix: Aqueous
Lab Sample ID: 1IJ1227-04

Collected By: JGH
Collection Date: 10/09/2025 10:40

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Bromomethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Chloroethane	1.3	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Acetone	<10.0	10.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Chloroform	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Benzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Dibromomethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Toluene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Chlorobenzene	2.9	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Xylenes, total	<2.0	2.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Styrene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Bromoform	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF

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CERTIFICATE OF ANALYSIS

1IJ1227

Client Sample ID: MW-13
Sample Matrix: Aqueous
Lab Sample ID: 1IJ1227-04

Collected By: JGH
Collection Date: 10/09/2025 10:40

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
1,4-Dichlorobenzene	5.4	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1223	RAF
Surrogate: Dibromofluoromethane	96.6	Limit: 57-128	% Rec		10/14/25 0000	10/14/25 1223	RAF
Surrogate: Dibromofluoromethane	96.6	Limit: 75-136	% Rec		10/14/25 0000	10/14/25 1223	RAF
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 49-135	% Rec		10/14/25 0000	10/14/25 1223	RAF
Surrogate: 1,2-Dichloroethane-d4	101	Limit: 61-142	% Rec		10/14/25 0000	10/14/25 1223	RAF
Surrogate: Toluene-d8	98.5	Limit: 82-116	% Rec		10/14/25 0000	10/14/25 1223	RAF
Surrogate: Toluene-d8	98.5	Limit: 82-121	% Rec		10/14/25 0000	10/14/25 1223	RAF
Surrogate: 4-Bromofluorobenzene	106	Limit: 77-114	% Rec		10/14/25 0000	10/14/25 1223	RAF
Surrogate: 4-Bromofluorobenzene	106	Limit: 80-116	% Rec		10/14/25 0000	10/14/25 1223	RAF

Determination of Total Metals	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony, total	0.0010	0.0010	mg/L		10/14/25 1329	10/15/25 1754	RVV
Arsenic, total	<0.0020	0.0020	mg/L		10/14/25 1329	10/15/25 1754	RVV
Barium, total	0.584	0.0010	mg/L		10/14/25 1329	10/15/25 1754	RVV
Beryllium, total	<0.0005	0.0005	mg/L		10/14/25 1329	10/15/25 1754	RVV
Cadmium, total	0.0002	0.0002	mg/L		10/14/25 1329	10/15/25 1754	RVV
Chromium, total	0.0011	0.0010	mg/L		10/14/25 1329	10/15/25 1754	RVV
Cobalt, total	0.0188	0.0005	mg/L		10/14/25 1329	10/15/25 1754	RVV
Copper, total	<0.0050	0.0050	mg/L		10/14/25 1329	10/15/25 1754	RVV
Lead, total	<0.0010	0.0010	mg/L		10/14/25 1329	10/15/25 1754	RVV
Nickel, total	0.151	0.0050	mg/L		10/14/25 1329	10/15/25 1754	RVV
Selenium, total	<0.0020	0.0020	mg/L		10/14/25 1329	10/15/25 1754	RVV
Silver, total	<0.0050	0.0050	mg/L		10/14/25 1329	10/15/25 1754	RVV
Thallium, total	<0.0005	0.0005	mg/L		10/14/25 1329	10/15/25 1754	RVV
Vanadium, total	<0.0020	0.0020	mg/L		10/14/25 1329	10/15/25 1754	RVV
Zinc, total	<0.0050	0.0050	mg/L		10/14/25 1329	10/15/25 1754	RVV

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CERTIFICATE OF ANALYSIS

1IJ1227

Client Sample ID: MW- 14
Sample Matrix: Aqueous
Lab Sample ID: 1IJ1227-05

Collected By: JGH
Collection Date: 10/09/2025 10:22

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Vinyl Chloride	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Bromomethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Chloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Acetone	<10.0	10.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Methyl Iodide	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Carbon Disulfide	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Methylene Chloride	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Acrylonitrile	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Vinyl Acetate	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Bromochloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Chloroform	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Benzene	1.8	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Trichloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Dibromomethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Bromodichloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Toluene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Dibromochloromethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Chlorobenzene	10.9	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Ethylbenzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Xylenes, total	<2.0	2.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Styrene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Bromoform	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF

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CERTIFICATE OF ANALYSIS

1IJ1227

Client Sample ID: MW- 14
Sample Matrix: Aqueous
Lab Sample ID: 1IJ1227-05

Collected By: JGH
Collection Date: 10/09/2025 10:22

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
1,4-Dichlorobenzene	1.3	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		10/14/25 0000	10/14/25 1246	RAF
Surrogate: Dibromofluoromethane	97.3	Limit: 75-136	% Rec		10/14/25 0000	10/14/25 1246	RAF
Surrogate: Dibromofluoromethane	97.3	Limit: 57-128	% Rec		10/14/25 0000	10/14/25 1246	RAF
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 61-142	% Rec		10/14/25 0000	10/14/25 1246	RAF
Surrogate: 1,2-Dichloroethane-d4	103	Limit: 49-135	% Rec		10/14/25 0000	10/14/25 1246	RAF
Surrogate: Toluene-d8	97.5	Limit: 82-121	% Rec		10/14/25 0000	10/14/25 1246	RAF
Surrogate: Toluene-d8	97.5	Limit: 82-116	% Rec		10/14/25 0000	10/14/25 1246	RAF
Surrogate: 4-Bromofluorobenzene	106	Limit: 80-116	% Rec		10/14/25 0000	10/14/25 1246	RAF
Surrogate: 4-Bromofluorobenzene	106	Limit: 77-114	% Rec		10/14/25 0000	10/14/25 1246	RAF

Determination of Total Metals	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony, total	0.0010	0.0010	mg/L		10/14/25 1329	10/15/25 1756	RVV
Arsenic, total	0.0048	0.0020	mg/L		10/14/25 1329	10/15/25 1756	RVV
Barium, total	0.949	0.0010	mg/L		10/14/25 1329	10/15/25 1756	RVV
Beryllium, total	<0.0005	0.0005	mg/L		10/14/25 1329	10/15/25 1756	RVV
Cadmium, total	0.0005	0.0002	mg/L		10/14/25 1329	10/15/25 1756	RVV
Chromium, total	0.0018	0.0010	mg/L		10/14/25 1329	10/15/25 1756	RVV
Cobalt, total	0.0051	0.0005	mg/L		10/14/25 1329	10/15/25 1756	RVV
Copper, total	0.0066	0.0050	mg/L		10/14/25 1329	10/15/25 1756	RVV
Lead, total	0.0012	0.0010	mg/L		10/14/25 1329	10/15/25 1756	RVV
Nickel, total	0.0642	0.0050	mg/L		10/14/25 1329	10/15/25 1756	RVV
Selenium, total	<0.0020	0.0020	mg/L		10/14/25 1329	10/15/25 1756	RVV
Silver, total	<0.0050	0.0050	mg/L		10/14/25 1329	10/15/25 1756	RVV
Thallium, total	<0.0005	0.0005	mg/L		10/14/25 1329	10/15/25 1756	RVV
Vanadium, total	0.0047	0.0020	mg/L		10/14/25 1329	10/15/25 1756	RVV
Zinc, total	0.0068	0.0050	mg/L		10/14/25 1329	10/15/25 1756	RVV

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CERTIFICATE OF ANALYSIS

1IJ1227

Client Sample ID: Duplicate
Sample Matrix: Aqueous
Lab Sample ID: 1IJ1227-06

Collected By: JGH
Collection Date: 10/09/2025 10:40

Determination of Total Metals	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony, total	0.0010	0.0010	mg/L		10/14/25 1329	10/15/25 1759	RVV
Arsenic, total	<0.0020	0.0020	mg/L		10/14/25 1329	10/15/25 1759	RVV
Barium, total	0.593	0.0010	mg/L		10/14/25 1329	10/15/25 1759	RVV
Beryllium, total	<0.0005	0.0005	mg/L		10/14/25 1329	10/15/25 1759	RVV
Cadmium, total	<0.0002	0.0002	mg/L		10/14/25 1329	10/15/25 1759	RVV
Chromium, total	0.0010	0.0010	mg/L		10/14/25 1329	10/15/25 1759	RVV
Cobalt, total	0.0202	0.0005	mg/L		10/14/25 1329	10/15/25 1759	RVV
Copper, total	<0.0050	0.0050	mg/L		10/14/25 1329	10/15/25 1759	RVV
Lead, total	<0.0010	0.0010	mg/L		10/14/25 1329	10/15/25 1759	RVV
Nickel, total	0.156	0.0050	mg/L		10/14/25 1329	10/15/25 1759	RVV
Selenium, total	<0.0020	0.0020	mg/L		10/14/25 1329	10/15/25 1759	RVV
Silver, total	<0.0050	0.0050	mg/L		10/14/25 1329	10/15/25 1759	RVV
Thallium, total	<0.0005	0.0005	mg/L		10/14/25 1329	10/15/25 1759	RVV
Vanadium, total	<0.0020	0.0020	mg/L		10/14/25 1329	10/15/25 1759	RVV
Zinc, total	<0.0050	0.0050	mg/L		10/14/25 1329	10/15/25 1759	RVV

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CERTIFICATE OF ANALYSIS

1IJ1227

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1IJ0809	1IJ0809-BLK1	
		1IJ0809-BS1	
		1IJ1227-01	92MW-15A
		1IJ0809-MS1	1IJ1227-01
		1IJ0809-MSD1	1IJ1227-01
		1IJ0809-PS1	1IJ1227-01
		1IJ1227-02	MW-9
		1IJ1227-03	MW-11
		1IJ1227-04	MW-13
		1IJ1227-05	MW- 14
		1IJ1227-06	Duplicate
Method	Batch	Laboratory ID	Client / Source ID
EPA 8260D	1IJ0840	1IJ0840-BS1	
		1IJ0840-BSD1	
		1IJ0840-BLK1	
		1IJ1227-01	92MW-15A
		1IJ1227-02	MW-9
		1IJ1227-03	MW-11
		1IJ1227-04	MW-13
		1IJ1227-05	MW- 14
		1IJ0840-MS1	1IJ1227-01
		1IJ0840-MSD1	1IJ1227-01

Batch Quality Control Summary: Microbac Laboratories, Inc., Newton

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1IJ0840 - EPA 5030B - EPA 8260D										
Blank (1IJ0840-BLK1)				Prepared: 10/14/25 00:00 Analyzed: 10/14/25 10:29						
Chloromethane	<1.0	1.0	ug/L							
Vinyl Chloride	<1.0	1.0	ug/L							
Bromomethane	<1.0	1.0	ug/L							
Chloroethane	<1.0	1.0	ug/L							
Trichlorofluoromethane	<1.0	1.0	ug/L							
1,1-Dichloroethylene	<1.0	1.0	ug/L							
Acetone	<10.0	10.0	ug/L							
Methyl Iodide	<1.0	1.0	ug/L							
Carbon Disulfide	<1.0	1.0	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
Acrylonitrile	<5.0	5.0	ug/L							
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L							
1,1-Dichloroethane	<1.0	1.0	ug/L							
Vinyl Acetate	<5.0	5.0	ug/L							
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Bromochloromethane	<1.0	1.0	ug/L							

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11J1227

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11J0840 - EPA 5030B - EPA 8260D										
Blank (11J0840-BLK1)										
Prepared: 10/14/25 00:00 Analyzed: 10/14/25 10:29										
Chloroform	<1.0	1.0	ug/L							
1,1,1-Trichloroethane	<1.0	1.0	ug/L							
Carbon Tetrachloride	<1.0	1.0	ug/L							
Benzene	<1.0	1.0	ug/L							
1,2-Dichloroethane	<1.0	1.0	ug/L							
Trichloroethylene	<1.0	1.0	ug/L							
1,2-Dichloropropane	<1.0	1.0	ug/L							
Dibromomethane	<1.0	1.0	ug/L							
Bromodichloromethane	<1.0	1.0	ug/L							
cis-1,3-Dichloropropene	<1.0	1.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L							
Toluene	<1.0	1.0	ug/L							
trans-1,3-Dichloropropene	<1.0	1.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							
2-Hexanone (MBK)	<5.0	5.0	ug/L							
Dibromochloromethane	<1.0	1.0	ug/L							
1,2-Dibromoethane	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Xylenes, total	<2.0	2.0	ug/L							
Styrene	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
1,2,3-Trichloropropane	<1.0	1.0	ug/L							
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,4-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L							
Surrogate: Dibromofluoromethane	48.3		ug/L	50.2		96.2	57-128			
Surrogate: Dibromofluoromethane	48.3		ug/L	50.2		96.2	75-136			
Surrogate: 1,2-Dichloroethane-d4	50.3		ug/L	50.4		100	49-135			
Surrogate: 1,2-Dichloroethane-d4	50.3		ug/L	50.4		100	61-142			
Surrogate: Toluene-d8	48.7		ug/L	50.5		96.6	82-116			
Surrogate: Toluene-d8	48.7		ug/L	50.5		96.6	82-121			
Surrogate: 4-Bromofluorobenzene	53.5		ug/L	50.2		107	77-114			
Surrogate: 4-Bromofluorobenzene	53.5		ug/L	50.2		107	80-116			
LCS (11J0840-BS1)										
Prepared: 10/14/25 00:00 Analyzed: 10/14/25 09:20										
Chloromethane	26.75	1.0	ug/L	30.3		88.2	63-155			
Vinyl Chloride	26.26	1.0	ug/L	30.2		86.8	70-154			
Bromomethane	22.26	1.0	ug/L	30.1		73.9	52-176			
Chloroethane	23.93	1.0	ug/L	30.3		78.9	72-148			

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CERTIFICATE OF ANALYSIS

11J1227

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11J0840 - EPA 5030B - EPA 8260D										
LCS (11J0840-BS1)										
Prepared: 10/14/25 00:00 Analyzed: 10/14/25 09:20										
Trichlorofluoromethane	32.12	1.0	ug/L	30.3		106	70-152			
1,1-Dichloroethylene	53.63	1.0	ug/L	50.1		107	70-148			
Acetone	106.1	10.0	ug/L	100		106	43-172			
Methyl Iodide	116.0	1.0	ug/L	100		116	69-170			
Carbon Disulfide	99.10	1.0	ug/L	100		99.1	72-162			
Methylene Chloride	47.43	5.0	ug/L	50.1		94.7	68-142			
Acrylonitrile	56.73	5.0	ug/L	50.4		113	33-163			
trans-1,2-Dichloroethylene	52.67	1.0	ug/L	50.1		105	66-148			
1,1-Dichloroethane	49.43	1.0	ug/L	50.1		98.7	66-143			
Vinyl Acetate	137.5	5.0	ug/L	142		96.5	43-153			
cis-1,2-Dichloroethylene	49.13	1.0	ug/L	50.4		97.6	71-149			
2-Butanone (MEK)	104.7	10.0	ug/L	100		105	52-159			
Bromochloromethane	50.83	1.0	ug/L	50.4		101	69-143			
Chloroform	47.65	1.0	ug/L	50.1		95.1	69-144			
1,1,1-Trichloroethane	50.88	1.0	ug/L	50.1		102	62-129			
Carbon Tetrachloride	54.75	1.0	ug/L	50.1		109	63-141			
Benzene	49.21	1.0	ug/L	50.4		97.6	71-134			
1,2-Dichloroethane	51.42	1.0	ug/L	50.1		103	72-132			
Trichloroethylene	53.28	1.0	ug/L	50.1		106	71-135			
1,2-Dichloropropane	49.63	1.0	ug/L	50.1		99.1	69-136			
Dibromomethane	44.17	1.0	ug/L	50.4		87.7	73-147			
Bromodichloromethane	50.19	1.0	ug/L	50.1		100	68-129			
cis-1,3-Dichloropropene	43.14	1.0	ug/L	50.1		86.1	65-134			
4-Methyl-2-pentanone (MIBK)	105.6	5.0	ug/L	100		106	58-147			
Toluene	48.90	1.0	ug/L	50.5		96.9	72-133			
trans-1,3-Dichloropropene	47.90	1.0	ug/L	50.1		95.7	67-130			
1,1,2-Trichloroethane	50.95	1.0	ug/L	50.1		102	69-135			
Tetrachloroethylene	51.84	1.0	ug/L	50.1		103	69-130			
2-Hexanone (MBK)	103.0	5.0	ug/L	100		103	55-144			
Dibromochloromethane	44.47	1.0	ug/L	50.1		88.8	73-127			
1,2-Dibromoethane	49.94	1.0	ug/L	50.2		99.4	67-132			
Chlorobenzene	48.15	1.0	ug/L	50.1		96.1	72-123			
1,1,1,2-Tetrachloroethane	46.64	1.0	ug/L	50.3		92.6	73-127			
Ethylbenzene	48.44	1.0	ug/L	50.2		96.6	71-127			
Xylenes, total	147.8	2.0	ug/L	151		97.8	74-127			
Styrene	47.42	1.0	ug/L	50.4		94.1	66-126			
Bromoform	48.96	1.0	ug/L	50.1		97.7	68-130			
1,2,3-Trichloropropane	49.82	1.0	ug/L	50.3		99.0	63-136			
trans-1,4-Dichloro-2-butene	88.18	5.0	ug/L	100		88.2	54-134			
1,1,2,2-Tetrachloroethane	45.43	1.0	ug/L	50.1		90.7	61-131			
1,4-Dichlorobenzene	49.49	1.0	ug/L	50.1		98.7	70-129			
1,2-Dichlorobenzene	48.16	1.0	ug/L	50.1		96.1	69-126			
1,2-Dibromo-3-chloropropane	47.54	5.0	ug/L	50.1		94.8	50-143			

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CERTIFICATE OF ANALYSIS

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Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11J0840 - EPA 5030B - EPA 8260D										
LCS (11J0840-BS1) Prepared: 10/14/25 00:00 Analyzed: 10/14/25 09:20										
Surrogate: Dibromofluoromethane	48.7		ug/L	50.2		97.0	57-128			
Surrogate: Dibromofluoromethane	48.7		ug/L	50.2		97.0	75-136			
Surrogate: 1,2-Dichloroethane-d4	49.7		ug/L	50.4		98.7	61-142			
Surrogate: 1,2-Dichloroethane-d4	49.7		ug/L	50.4		98.7	49-135			
Surrogate: Toluene-d8	48.8		ug/L	50.5		96.6	82-116			
Surrogate: Toluene-d8	48.8		ug/L	50.5		96.6	82-121			
Surrogate: 4-Bromofluorobenzene	54.1		ug/L	50.2		108	77-114			
Surrogate: 4-Bromofluorobenzene	54.1		ug/L	50.2		108	80-116			
LCS Dup (11J0840-BSD1) Prepared: 10/14/25 00:00 Analyzed: 10/14/25 09:43										
Chloromethane	27.00	1.0	ug/L	30.3		89.0	63-155	0.930	24	
Vinyl Chloride	26.61	1.0	ug/L	30.2		88.0	70-154	1.32	25	
Bromomethane	22.09	1.0	ug/L	30.1		73.3	52-176	0.767	27	
Chloroethane	24.42	1.0	ug/L	30.3		80.5	72-148	2.03	25	
Trichlorofluoromethane	32.03	1.0	ug/L	30.3		106	70-152	0.281	26	
1,1-Dichloroethylene	54.21	1.0	ug/L	50.1		108	70-148	1.08	24	
Acetone	107.7	10.0	ug/L	100		108	43-172	1.51	30	
Methyl Iodide	117.1	1.0	ug/L	100		117	69-170	0.875	30	
Carbon Disulfide	98.52	1.0	ug/L	100		98.5	72-162	0.587	24	
Methylene Chloride	46.25	5.0	ug/L	50.1		92.3	68-142	2.52	21	
Acrylonitrile	56.69	5.0	ug/L	50.4		113	33-163	0.0705	28	
trans-1,2-Dichloroethylene	52.57	1.0	ug/L	50.1		105	66-148	0.190	27	
1,1-Dichloroethane	49.67	1.0	ug/L	50.1		99.1	66-143	0.484	24	
Vinyl Acetate	137.7	5.0	ug/L	142		96.6	43-153	0.138	30	
cis-1,2-Dichloroethylene	47.82	1.0	ug/L	50.4		95.0	71-149	2.70	26	
2-Butanone (MEK)	101.4	10.0	ug/L	100		101	52-159	3.20	27	
Bromochloromethane	50.85	1.0	ug/L	50.4		101	69-143	0.0393	23	
Chloroform	46.71	1.0	ug/L	50.1		93.3	69-144	1.99	23	
1,1,1-Trichloroethane	50.52	1.0	ug/L	50.1		101	62-129	0.710	24	
Carbon Tetrachloride	56.02	1.0	ug/L	50.1		112	63-141	2.29	25	
Benzene	48.55	1.0	ug/L	50.4		96.3	71-134	1.35	24	
1,2-Dichloroethane	50.28	1.0	ug/L	50.1		100	72-132	2.24	24	
Trichloroethylene	53.80	1.0	ug/L	50.1		107	71-135	0.971	24	
1,2-Dichloropropane	48.74	1.0	ug/L	50.1		97.3	69-136	1.81	24	
Dibromomethane	42.24	1.0	ug/L	50.4		83.9	73-147	4.47	25	
Bromodichloromethane	49.49	1.0	ug/L	50.1		98.8	68-129	1.40	22	
cis-1,3-Dichloropropene	42.21	1.0	ug/L	50.1		84.3	65-134	2.18	23	
4-Methyl-2-pentanone (MIBK)	104.9	5.0	ug/L	100		105	58-147	0.694	27	
Toluene	48.33	1.0	ug/L	50.5		95.8	72-133	1.17	24	
trans-1,3-Dichloropropene	47.33	1.0	ug/L	50.1		94.5	67-130	1.20	24	
1,1,2-Trichloroethane	49.86	1.0	ug/L	50.1		99.5	69-135	2.16	23	
Tetrachloroethylene	52.42	1.0	ug/L	50.1		105	69-130	1.11	25	
2-Hexanone (MBK)	102.9	5.0	ug/L	100		103	55-144	0.0971	25	
Dibromochloromethane	43.71	1.0	ug/L	50.1		87.3	73-127	1.72	22	

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CERTIFICATE OF ANALYSIS

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Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11J0840 - EPA 5030B - EPA 8260D										
LCS Dup (11J0840-BSD1)				Prepared: 10/14/25 00:00 Analyzed: 10/14/25 09:43						
1,2-Dibromoethane	48.89	1.0	ug/L	50.2		97.3	67-132	2.12	24	
Chlorobenzene	47.60	1.0	ug/L	50.1		95.0	72-123	1.15	23	
1,1,1,2-Tetrachloroethane	46.48	1.0	ug/L	50.3		92.3	73-127	0.344	24	
Ethylbenzene	48.21	1.0	ug/L	50.2		96.1	71-127	0.476	26	
Xylenes, total	146.1	2.0	ug/L	151		96.7	74-127	1.16	25	
Styrene	46.90	1.0	ug/L	50.4		93.1	66-126	1.10	23	
Bromoform	47.76	1.0	ug/L	50.1		95.3	68-130	2.48	23	
1,2,3-Trichloropropane	48.94	1.0	ug/L	50.3		97.2	63-136	1.78	24	
trans-1,4-Dichloro-2-butene	86.54	5.0	ug/L	100		86.5	54-134	1.88	27	
1,1,1,2-Tetrachloroethane	46.17	1.0	ug/L	50.1		92.2	61-131	1.62	29	
1,4-Dichlorobenzene	49.68	1.0	ug/L	50.1		99.1	70-129	0.383	24	
1,2-Dichlorobenzene	48.25	1.0	ug/L	50.1		96.3	69-126	0.187	26	
1,2-Dibromo-3-chloropropane	48.56	5.0	ug/L	50.1		96.9	50-143	2.12	30	
Surrogate: Dibromofluoromethane	48.1		ug/L	50.2		95.9	57-128			
Surrogate: Dibromofluoromethane	48.1		ug/L	50.2		95.9	75-136			
Surrogate: 1,2-Dichloroethane-d4	48.5		ug/L	50.4		96.3	49-135			
Surrogate: 1,2-Dichloroethane-d4	48.5		ug/L	50.4		96.3	61-142			
Surrogate: Toluene-d8	48.5		ug/L	50.5		96.1	82-116			
Surrogate: Toluene-d8	48.5		ug/L	50.5		96.1	82-121			
Surrogate: 4-Bromofluorobenzene	53.7		ug/L	50.2		107	77-114			
Surrogate: 4-Bromofluorobenzene	53.7		ug/L	50.2		107	80-116			
Matrix Spike (11J0840-MS1)				Source: 11J1227-01		Prepared: 10/14/25 00:00 Analyzed: 10/14/25 15:26				
Chloromethane	293.1	10.0	ug/L	303	ND	96.7	61-152			
Vinyl Chloride	284.5	10.0	ug/L	302	ND	94.1	66-149			
Bromomethane	228.4	10.0	ug/L	301	ND	75.8	43-171			
Chloroethane	264.1	10.0	ug/L	303	ND	87.1	69-148			
Trichlorofluoromethane	333.1	10.0	ug/L	303	ND	110	62-163			
1,1-Dichloroethylene	571.4	10.0	ug/L	501	ND	114	70-148			
Acetone	1223	100	ug/L	1000	ND	122	45-173			
Methyl Iodide	1079	10.0	ug/L	1000	ND	108	62-167			
Carbon Disulfide	1008	10.0	ug/L	1000	ND	101	71-163			
Methylene Chloride	487.5	50.0	ug/L	501	ND	97.3	69-140			
Acrylonitrile	579.2	50.0	ug/L	504	ND	115	32-159			
trans-1,2-Dichloroethylene	553.2	10.0	ug/L	501	ND	110	69-144			
1,1-Dichloroethane	525.3	10.0	ug/L	501	ND	105	70-138			
Vinyl Acetate	507.0	50.0	ug/L	1420	ND	35.6	58-142			M2
cis-1,2-Dichloroethylene	509.5	10.0	ug/L	504	ND	101	68-151			
2-Butanone (MEK)	1126	100	ug/L	1000	ND	113	50-160			
Bromochloromethane	520.2	10.0	ug/L	504	ND	103	65-143			
Chloroform	501.0	10.0	ug/L	501	ND	100	71-143			
1,1,1-Trichloroethane	535.3	10.0	ug/L	501	ND	107	63-133			
Carbon Tetrachloride	562.8	10.0	ug/L	501	ND	112	63-142			
Benzene	529.4	10.0	ug/L	504	ND	105	69-133			

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CERTIFICATE OF ANALYSIS

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Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11J0840 - EPA 5030B - EPA 8260D										
Matrix Spike (11J0840-MS1) Source: 11J1227-01 Prepared: 10/14/25 00:00 Analyzed: 10/14/25 15:26										
1,2-Dichloroethane	540.2	10.0	ug/L	501	ND	108	63-138			
Trichloroethylene	569.8	10.0	ug/L	501	ND	114	71-133			
1,2-Dichloropropane	518.7	10.0	ug/L	501	ND	104	69-132			
Dibromomethane	459.8	10.0	ug/L	504	ND	91.3	70-147			
Bromodichloromethane	529.1	10.0	ug/L	501	ND	106	67-130			
cis-1,3-Dichloropropene	444.4	10.0	ug/L	501	ND	88.7	61-126			
4-Methyl-2-pentanone (MIBK)	1141	50.0	ug/L	1000	ND	114	55-147			
Toluene	527.7	10.0	ug/L	505	ND	105	71-133			
trans-1,3-Dichloropropene	489.0	10.0	ug/L	501	ND	97.7	63-124			
1,1,2-Trichloroethane	540.6	10.0	ug/L	501	ND	108	69-133			
Tetrachloroethylene	551.9	10.0	ug/L	501	ND	110	70-124			
2-Hexanone (MBK)	1146	50.0	ug/L	1000	ND	115	53-141			
Dibromochloromethane	452.8	10.0	ug/L	501	ND	90.4	74-122			
1,2-Dibromoethane	518.2	10.0	ug/L	502	ND	103	66-127			
Chlorobenzene	510.7	10.0	ug/L	501	ND	102	76-116			
1,1,1,2-Tetrachloroethane	488.6	10.0	ug/L	503	ND	97.1	77-121			
Ethylbenzene	516.0	10.0	ug/L	502	ND	103	73-124			
Xylenes, total	1554	20.0	ug/L	1510	ND	103	75-123			
Styrene	502.9	10.0	ug/L	504	ND	99.8	70-120			
Bromoform	494.1	10.0	ug/L	501	ND	98.6	70-124			
1,2,3-Trichloropropane	506.3	10.0	ug/L	503	ND	101	62-135			
trans-1,4-Dichloro-2-butene	907.6	50.0	ug/L	1000	ND	90.8	50-120			
1,1,2,2-Tetrachloroethane	493.7	10.0	ug/L	501	ND	98.5	63-126			
1,4-Dichlorobenzene	520.1	10.0	ug/L	501	ND	104	72-119			
1,2-Dichlorobenzene	506.4	10.0	ug/L	501	ND	101	71-117			
1,2-Dibromo-3-chloropropane	497.0	50.0	ug/L	501	ND	99.1	49-134			
Surrogate: Dibromofluoromethane	475		ug/L	502		94.6	57-128			
Surrogate: Dibromofluoromethane	475		ug/L	502		94.6	75-136			
Surrogate: 1,2-Dichloroethane-d4	490		ug/L	504		97.2	49-135			
Surrogate: 1,2-Dichloroethane-d4	490		ug/L	504		97.2	61-142			
Surrogate: Toluene-d8	491		ug/L	505		97.3	82-116			
Surrogate: Toluene-d8	491		ug/L	505		97.3	82-121			
Surrogate: 4-Bromofluorobenzene	543		ug/L	502		108	77-114			
Surrogate: 4-Bromofluorobenzene	543		ug/L	502		108	80-116			
Matrix Spike Dup (11J0840-MSD1) Source: 11J1227-01 Prepared: 10/14/25 00:00 Analyzed: 10/14/25 15:49										
Chloromethane	287.8	10.0	ug/L	303	ND	94.9	61-152	1.82	26	
Vinyl Chloride	280.0	10.0	ug/L	302	ND	92.6	66-149	1.59	23	
Bromomethane	231.5	10.0	ug/L	301	ND	76.9	43-171	1.35	29	
Chloroethane	259.2	10.0	ug/L	303	ND	85.5	69-148	1.87	25	
Trichlorofluoromethane	327.9	10.0	ug/L	303	ND	108	62-163	1.57	25	
1,1-Dichloroethylene	559.1	10.0	ug/L	501	ND	112	70-148	2.18	22	
Acetone	1215	100	ug/L	1000	ND	121	45-173	0.640	30	
Methyl Iodide	1124	10.0	ug/L	1000	ND	112	62-167	4.06	24	

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CERTIFICATE OF ANALYSIS

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Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11J0840 - EPA 5030B - EPA 8260D										
Matrix Spike Dup (11J0840-MSD1) Source: 11J1227-01 Prepared: 10/14/25 00:00 Analyzed: 10/14/25 15:49										
Carbon Disulfide	1018	10.0	ug/L	1000	ND	102	71-163	0.987	22	
Methylene Chloride	481.6	50.0	ug/L	501	ND	96.1	69-140	1.22	19	
Acrylonitrile	589.4	50.0	ug/L	504	ND	117	32-159	1.75	30	
trans-1,2-Dichloroethylene	543.0	10.0	ug/L	501	ND	108	69-144	1.86	22	
1,1-Dichloroethane	511.4	10.0	ug/L	501	ND	102	70-138	2.68	20	
Vinyl Acetate	534.9	50.0	ug/L	1420	ND	37.5	58-142	5.36	24	M2
cis-1,2-Dichloroethylene	504.2	10.0	ug/L	504	ND	100	68-151	1.05	22	
2-Butanone (MEK)	1122	100	ug/L	1000	ND	112	50-160	0.338	23	
Bromochloromethane	521.4	10.0	ug/L	504	ND	103	65-143	0.230	22	
Chloroform	484.8	10.0	ug/L	501	ND	96.8	71-143	3.29	21	
1,1,1-Trichloroethane	514.3	10.0	ug/L	501	ND	103	63-133	4.00	23	
Carbon Tetrachloride	564.8	10.0	ug/L	501	ND	113	63-142	0.355	22	
Benzene	515.7	10.0	ug/L	504	ND	102	69-133	2.62	18	
1,2-Dichloroethane	545.1	10.0	ug/L	501	ND	109	63-138	0.903	20	
Trichloroethylene	562.5	10.0	ug/L	501	ND	112	71-133	1.29	23	
1,2-Dichloropropane	509.9	10.0	ug/L	501	ND	102	69-132	1.71	20	
Dibromomethane	455.7	10.0	ug/L	504	ND	90.5	70-147	0.896	22	
Bromodichloromethane	522.1	10.0	ug/L	501	ND	104	67-130	1.33	21	
cis-1,3-Dichloropropene	438.8	10.0	ug/L	501	ND	87.6	61-126	1.27	21	
4-Methyl-2-pentanone (MIBK)	1108	50.0	ug/L	1000	ND	111	55-147	2.97	23	
Toluene	516.6	10.0	ug/L	505	ND	102	71-133	2.13	19	
trans-1,3-Dichloropropene	489.5	10.0	ug/L	501	ND	97.8	63-124	0.102	21	
1,1,2-Trichloroethane	534.6	10.0	ug/L	501	ND	107	69-133	1.12	19	
Tetrachloroethylene	542.8	10.0	ug/L	501	ND	108	70-124	1.66	24	
2-Hexanone (MBK)	1096	50.0	ug/L	1000	ND	110	53-141	4.51	24	
Dibromochloromethane	456.8	10.0	ug/L	501	ND	91.2	74-122	0.880	21	
1,2-Dibromoethane	514.9	10.0	ug/L	502	ND	103	66-127	0.639	23	
Chlorobenzene	506.0	10.0	ug/L	501	ND	101	76-116	0.925	21	
1,1,1,2-Tetrachloroethane	484.6	10.0	ug/L	503	ND	96.3	77-121	0.822	25	
Ethylbenzene	505.2	10.0	ug/L	502	ND	101	73-124	2.12	20	
Xylenes, total	1552	20.0	ug/L	1510	ND	103	75-123	0.0901	20	
Styrene	498.9	10.0	ug/L	504	ND	99.0	70-120	0.799	23	
Bromoform	503.0	10.0	ug/L	501	ND	100	70-124	1.79	22	
1,2,3-Trichloropropane	511.6	10.0	ug/L	503	ND	102	62-135	1.04	28	
trans-1,4-Dichloro-2-butene	918.8	50.0	ug/L	1000	ND	91.9	50-120	1.23	26	
1,1,2,2-Tetrachloroethane	484.5	10.0	ug/L	501	ND	96.7	63-126	1.88	24	
1,4-Dichlorobenzene	514.2	10.0	ug/L	501	ND	103	72-119	1.14	24	
1,2-Dichlorobenzene	502.6	10.0	ug/L	501	ND	100	71-117	0.753	24	
1,2-Dibromo-3-chloropropane	476.4	50.0	ug/L	501	ND	95.0	49-134	4.23	28	
Surrogate: Dibromofluoromethane	464		ug/L	502		92.5	57-128			
Surrogate: Dibromofluoromethane	464		ug/L	502		92.5	75-136			
Surrogate: 1,2-Dichloroethane-d4	483		ug/L	504		95.9	49-135			
Surrogate: 1,2-Dichloroethane-d4	483		ug/L	504		95.9	61-142			

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CERTIFICATE OF ANALYSIS

11J1227

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11J0840 - EPA 5030B - EPA 8260D										
Matrix Spike Dup (11J0840-MSD1)		Source: 11J1227-01		Prepared: 10/14/25 00:00 Analyzed: 10/14/25 15:49						
Surrogate: Toluene-d8	483		ug/L	505		95.7	82-116			
Surrogate: Toluene-d8	483		ug/L	505		95.7	82-121			
Surrogate: 4-Bromofluorobenzene	544		ug/L	502		108	77-114			
Surrogate: 4-Bromofluorobenzene	544		ug/L	502		108	80-116			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11J0809 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (11J0809-BLK1)		Prepared: 10/14/25 13:29 Analyzed: 10/15/25 17:28								
Antimony, total	<0.0010	0.0010	mg/L							
Arsenic, total	<0.0020	0.0020	mg/L							
Barium, total	<0.0010	0.0010	mg/L							
Beryllium, total	<0.0005	0.0005	mg/L							
Cadmium, total	<0.0002	0.0002	mg/L							
Chromium, total	<0.0010	0.0010	mg/L							
Cobalt, total	<0.0005	0.0005	mg/L							
Copper, total	<0.0050	0.0050	mg/L							
Lead, total	<0.0010	0.0010	mg/L							
Nickel, total	<0.0050	0.0050	mg/L							
Selenium, total	<0.0020	0.0020	mg/L							
Silver, total	<0.0050	0.0050	mg/L							
Thallium, total	<0.0005	0.0005	mg/L							
Vanadium, total	<0.0020	0.0020	mg/L							
Zinc, total	<0.0050	0.0050	mg/L							

LCS (11J0809-BS1)		Prepared: 10/14/25 13:29 Analyzed: 10/15/25 17:31								
Antimony, total	0.0982	0.0040	mg/L	0.100		98.2	80-120			
Arsenic, total	0.0949	0.0080	mg/L	0.100		94.9	80-120			
Barium, total	0.0998	0.0040	mg/L	0.100		99.8	80-120			
Beryllium, total	0.0949	0.0020	mg/L	0.100		94.9	80-120			
Cadmium, total	0.0947	0.0008	mg/L	0.100		94.7	80-120			
Chromium, total	0.0933	0.0040	mg/L	0.100		93.3	80-120			
Cobalt, total	0.0948	0.0020	mg/L	0.100		94.8	80-120			
Copper, total	0.0956	0.0200	mg/L	0.100		95.6	80-120			
Lead, total	0.0934	0.0040	mg/L	0.100		93.4	80-120			
Nickel, total	0.0942	0.0200	mg/L	0.100		94.2	80-120			
Selenium, total	0.0980	0.0080	mg/L	0.100		98.0	80-120			
Silver, total	0.0963	0.0200	mg/L	0.100		96.3	80-120			
Thallium, total	0.0931	0.0020	mg/L	0.100		93.1	80-120			
Vanadium, total	0.0927	0.0080	mg/L	0.100		92.7	80-120			
Zinc, total	0.0957	0.0200	mg/L	0.100		95.7	80-120			

Matrix Spike (11J0809-MS1)	Source: 11J1227-01	Prepared: 10/14/25 13:29 Analyzed: 10/15/25 17:36
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CERTIFICATE OF ANALYSIS

1IJ1227

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1IJ0809 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Matrix Spike (1IJ0809-MS1) Source: 1IJ1227-01 Prepared: 10/14/25 13:29 Analyzed: 10/15/25 17:36										
Antimony, total	0.0973	0.0040	mg/L	0.100	ND	97.3	75-125			
Arsenic, total	0.0930	0.0080	mg/L	0.100	ND	93.0	75-125			
Barium, total	0.305	0.0040	mg/L	0.100	0.217	87.7	75-125			
Beryllium, total	0.0975	0.0020	mg/L	0.100	ND	97.5	75-125			
Cadmium, total	0.0931	0.0008	mg/L	0.100	ND	93.1	75-125			
Chromium, total	0.0952	0.0040	mg/L	0.100	ND	95.2	75-125			
Cobalt, total	0.0951	0.0020	mg/L	0.100	0.0003	94.8	75-125			
Copper, total	0.0964	0.0200	mg/L	0.100	ND	96.4	75-125			
Lead, total	0.0943	0.0040	mg/L	0.100	0.0006	94.3	75-125			
Nickel, total	0.0943	0.0200	mg/L	0.100	0.0024	91.9	75-125			
Selenium, total	0.0967	0.0080	mg/L	0.100	ND	96.7	75-125			
Silver, total	0.0955	0.0200	mg/L	0.100	ND	95.5	75-125			
Thallium, total	0.0931	0.0020	mg/L	0.100	ND	93.1	75-125			
Vanadium, total	0.0942	0.0080	mg/L	0.100	ND	94.2	75-125			
Zinc, total	0.100	0.0200	mg/L	0.100	ND	100	75-125			
Matrix Spike Dup (1IJ0809-MSD1) Source: 1IJ1227-01 Prepared: 10/14/25 13:29 Analyzed: 10/15/25 17:44										
Antimony, total	0.0987	0.0040	mg/L	0.100	ND	98.7	75-125	1.46	20	
Arsenic, total	0.0979	0.0080	mg/L	0.100	ND	97.9	75-125	5.05	20	
Barium, total	0.318	0.0040	mg/L	0.100	0.217	101	75-125	4.35	20	
Beryllium, total	0.0977	0.0020	mg/L	0.100	ND	97.7	75-125	0.279	20	
Cadmium, total	0.0957	0.0008	mg/L	0.100	ND	95.7	75-125	2.75	20	
Chromium, total	0.0962	0.0040	mg/L	0.100	ND	96.2	75-125	1.07	20	
Cobalt, total	0.0963	0.0020	mg/L	0.100	0.0003	95.9	75-125	1.20	20	
Copper, total	0.101	0.0200	mg/L	0.100	ND	101	75-125	4.46	20	
Lead, total	0.0983	0.0040	mg/L	0.100	0.0006	98.3	75-125	4.12	20	
Nickel, total	0.0984	0.0200	mg/L	0.100	0.0024	96.0	75-125	4.22	20	
Selenium, total	0.0999	0.0080	mg/L	0.100	ND	99.9	75-125	3.27	20	
Silver, total	0.0982	0.0200	mg/L	0.100	ND	98.2	75-125	2.83	20	
Thallium, total	0.0977	0.0020	mg/L	0.100	ND	97.7	75-125	4.82	20	
Vanadium, total	0.0956	0.0080	mg/L	0.100	ND	95.6	75-125	1.54	20	
Zinc, total	0.106	0.0200	mg/L	0.100	ND	106	75-125	5.36	20	
Post Spike (1IJ0809-PS1) Source: 1IJ1227-01 Prepared: 10/14/25 13:29 Analyzed: 10/15/25 17:46										
Antimony, total	0.0216		mg/L	0.0200	0.0010	103	80-120			
Arsenic, total	0.0206		mg/L	0.0200	0.0004	101	80-120			
Barium, total	0.226		mg/L	0.0200	0.217	47.4	80-120			M2
Beryllium, total	0.0204		mg/L	0.0200	0.00002	102	80-120			
Cadmium, total	0.0195		mg/L	0.0200	0.0002	96.6	80-120			
Chromium, total	0.0209		mg/L	0.0200	0.0015	96.8	80-120			
Cobalt, total	0.0192		mg/L	0.0200	0.0003	94.2	80-120			
Copper, total	0.0228		mg/L	0.0200	0.0036	96.0	80-120			
Lead, total	0.0204		mg/L	0.0200	0.0006	98.9	80-120			
Nickel, total	0.0214		mg/L	0.0200	0.0024	94.8	80-120			
Selenium, total	0.0202		mg/L	0.0200	-0.0002	101	80-120			

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CERTIFICATE OF ANALYSIS

1IJ1227

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1IJ0809 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Post Spike (1IJ0809-PS1) Source: 1IJ1227-01 Prepared: 10/14/25 13:29 Analyzed: 10/15/25 17:46										
Silver, total	0.0202		mg/L	0.0200	0.0003	99.4	80-120			
Thallium, total	0.0202		mg/L	0.0200	0.00004	101	80-120			
Vanadium, total	0.0205		mg/L	0.0200	0.0010	97.7	80-120			
Zinc, total	0.0260		mg/L	0.0200	0.0064	98.2	80-120			

Definitions

M2: Matrix spike recovery is below acceptance limits.
RL: Reporting Limit
RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 6.3°C

Cooler Inspection Checklist

Custody Seals	No	Containers Intact	Yes
COC/Labels Agree	Yes	Preservation Confirmed	No
Received On Ice	Yes		

Report Comments

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
10/17/25 16:54

CHAIN OF CUSTODY RECORD



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Page 1 of 1

Printed: 9/23/2025 8:39:50AM

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SITE INFORMATION

Sampler: JGH

Project: Grundy Co. Landfill - New Regs
6033

REPORT TO

Todd Whipple
HLW Engineering
204 West Broad St
Story City, IA 50248

INVOICE TO

Environmental Manager
Grundy County Landfill
20434 220th Street
Grundy Center, IA 50638

SPECIAL INSTRUCTIONS

None

Turn Around Time

☒ Standard ☐ RUSH, need by ___/___/___

LAB USE ONLY



1 I J 1 2 2 7

HLW Engineering
PM: Heather Murphy

Temperature: 6.3 °C✓ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	# Containers	Analyses	Lab Sample Number
01-001	92MW-15A	Aqueous	GRAB	10/9/25	9:47	7	Indfll-app1-metals-602ndfill-app1-voc-group	01
02-001	MW-9	Aqueous	GRAB	10/9/25	11:20	7	Indfll-app1-metals-602ndfill-app1-voc-group	02
03-001	MW-11	Aqueous	GRAB	10/9/25	10:55	7	Indfll-app1-metals-602ndfill-app1-voc-group	03
04-001	MW-13	Aqueous	GRAB	10/9/25	10:40	7	Indfll-app1-metals-602ndfill-app1-voc-group	04
05-001	MW-14	Aqueous	GRAB	10/9/25	10:22	7	Indfll-app1-metals-602ndfill-app1-voc-group	05
06-001	Duplicate	Aqueous	GRAB	10/9/25	10:40	1	Indfll-app1-metals-6020	06

Relinquished By JGHDate/Time 10/13/25Relinquished By Heather MurphyDate/Time 10/13/25 10:56

Received By

Date/Time

Received for Lab By

Date/Time

Remarks:

Appendix F

Summary Tables – SSI & Comparison of Confidence Interval to the GWPS

Well	Date	Compound	Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	95% UCL (ug/L)	GWPS (ug/L)
MW-9	4/19/16	Arsenic	14.9	4.0	3.365	14.285	10.0
MW-9	10/10/16	Arsenic	<4.0	4.0	5.221	14.729	10.0
MW-9	4/4/17	Arsenic	<4.0	4.0	5.221	14.729	10.0
MW-9	10/18/17	Arsenic	<4.0	4.0	0.000	12.812	10.0
MW-9	4/12/18	Arsenic	4.5	4.0	1.155	4.095	10.0
MW-9	10/23/18	Arsenic	<4.0	4.0	1.155	4.095	10.0
MW-9	4/8/2019	Arsenic	<4.0	4.0	1.155	4.095	10.0
MW-9	10/4/2019	Arsenic	5.4	4.0	1.425	5.525	10.0
MW-9	4/9/2020	Arsenic	<4.0	4.0	0.850	4.850	10.0
MW-9	10/1/2020	Arsenic	5.9	4.0	1.335	6.315	10.0
MW-9	4/1/2021	Arsenic	4.8	4.0	2.475	6.575	10.0
MW-9	10/4/2021	Arsenic	7.8	4.0	2.274	7.976	10.0
MW-9	4/6/2022	Arsenic	17.8	4.0	2.079	16.071	10.0
MW-9	10/4/2023	Arsenic	16.2	4.0	4.202	19.098	10.0
MW-9	4/17/2024	Arsenic	<4.0	4.0	2.239	19.661	10.0
MW-9	10/9/2025	Arsenic	6.3	4.0	1.574	19.576	10.0
MW-9	4/19/16	Barium	932.0	290.2810	733.194	929.306	2000.0
MW-9	10/10/16	Barium	652.0	290.2810	667.944	949.556	2000.0
MW-9	4/4/17	Barium	917.0	290.2810	688.560	992.940	2000.0
MW-9	10/18/17	Barium	638.0	290.2810	594.677	974.823	2000.0
MW-9	4/12/18	Barium	691.0	290.2810	571.256	877.744	2000.0
MW-9	10/23/18	Barium	721.0	290.2810	598.515	884.985	2000.0
MW-9	4/8/2019	Barium	717.0	288.4665	646.790	736.710	2000.0
MW-9	10/4/2019	Barium	616.0	296.5237	628.982	743.518	2000.0
MW-9	4/9/2020	Barium	707.0	295.3072	631.613	748.887	2000.0
MW-9	10/1/2020	Barium	630.0	294.2483	606.495	728.505	2000.0
MW-9	4/1/2021	Barium	839.0	289.9072	577.830	818.170	2000.0
MW-9	10/4/2021	Barium	773.0	287.2576	631.933	842.567	2000.0
MW-9	4/6/2022	Barium	1120.0	296.4947	598.488	1082.512	2000.0
MW-9	10/4/2023	Barium	855.0	294.3691	716.770	1076.730	2000.0
MW-9	4/17/2024	Barium	965.0	297.6737	751.693	1104.807	2000.0
MW-9	10/9/2025	Barium	796.0	297.9828	766.485	1101.515	2000.0
MW-9	4/19/16	Cobalt	9.0	11.6	4.782	8.568	11.6
MW-9	10/10/16	Cobalt	7.1	11.6	5.569	8.681	11.6
MW-9	4/4/17	Cobalt	10.1	11.6	6.082	10.168	11.6
MW-9	10/18/17	Cobalt	5.8	11.6	5.741	10.259	11.6
MW-9	4/12/18	Cobalt	5.9	11.6	4.866	9.584	11.6
MW-9	10/23/18	Cobalt	4.8	11.6	3.882	9.418	11.6
MW-9	4/8/2019	Cobalt	5.1	11.6	4.770	6.030	11.6
MW-9	10/4/2019	Cobalt	6.2	11.6	4.726	6.274	11.6
MW-9	4/9/2020	Cobalt	6.6	11.6	4.661	6.689	11.6
MW-9	10/1/2020	Cobalt	4.0	11.6	4.099	6.851	11.6

MW-9	4/1/2021	Cobalt	6.6	11.6	4.382	7.318	11.6
MW-9	10/4/2021	Cobalt	5.6	11.6	4.256	7.144	11.6
MW-9	4/6/2022	Cobalt	8.5	11.6	3.959	8.391	11.6
MW-9	10/4/2023	Cobalt	4.4	11.6	4.234	8.316	11.6
MW-9	4/17/2024	Cobalt	10.8	11.6	3.930	10.720	11.6
MW-9	10/9/2025	Cobalt	6.7	11.6	4.407	10.793	11.6
MW-9	4/19/16	Copper	<4.0	4.0	2.000	2.000	1300
MW-9	10/10/16	Copper	<4.0	4.0	2.000	2.000	1300
MW-9	4/4/17	Copper	<4.0	4.0	2.000	2.000	1300
MW-9	10/18/17	Copper	<4.0	4.0	2.000	2.000	1300
MW-9	4/12/18	Copper	6.1	4.0	0.614	5.436	1300
MW-9	10/23/18	Copper	<4.0	4.0	0.614	5.436	1300
MW-9	4/8/2019	Copper	<4.0	4.0	0.614	5.436	1300
MW-9	10/4/2019	Copper	<4.0	4.0	0.614	5.436	1300
MW-9	4/9/2020	Copper	<4.0	4.0	2.000	2.000	1300
MW-9	10/1/2020	Copper	<4.0	4.0	2.000	2.000	1300
MW-9	4/1/2021	Copper	<4.0	4.0	2.000	2.000	1300
MW-9	10/4/2021	Copper	<4.0	4.0	2.000	2.000	1300
MW-9	4/6/2022	Copper	<4.0	4.0	2.000	2.000	1300
MW-9	10/4/2023	Copper	<4.0	4.1	2.000	2.000	1300
MW-9	4/17/2024	Copper	<4.0	4.1	2.000	2.000	1300
MW-9	10/9/2025	Copper	<5.0	4.1	2.000	2.000	1300
MW-9	4/19/16	Nickel	32.2	10.9	16.852	49.498	100.0
MW-9	10/10/16	Nickel	26.9	10.9	18.587	49.513	100.0
MW-9	4/4/17	Nickel	32.4	10.9	22.525	49.775	100.0
MW-9	10/18/17	Nickel	25.2	10.9	24.852	33.498	100.0
MW-9	4/12/18	Nickel	25.8	10.9	23.702	31.448	100.0
MW-9	10/23/18	Nickel	23.7	10.9	22.243	31.307	100.0
MW-9	4/8/2019	Nickel	24.7	10.9	23.804	25.896	100.0
MW-9	10/4/2019	Nickel	20.3	10.9	20.829	26.421	100.0
MW-9	4/9/2020	Nickel	22.8	10.9	20.659	25.091	100.0
MW-9	10/1/2020	Nickel	17.1	10.9	17.538	25.092	100.0
MW-9	4/1/2021	Nickel	22.5	10.9	17.580	23.77	100.0
MW-9	10/4/2021	Nickel	21.9	10.9	17.927	24.223	100.0
MW-9	4/6/2022	Nickel	30.9	10.9	16.355	29.845	100.0
MW-9	10/4/2023	Nickel	19.1	10.9	17.616	29.584	100.0
MW-9	4/17/2024	Nickel	46.2	10.9	15.170	43.880	100.0
MW-9	10/9/2025	Nickel	26.4	10.9	17.181	44.119	100.0
MW-9	4/19/16	Zinc	12.5	12.8	2.405	14.445	2000.0
MW-9	10/10/16	Zinc	<8.0	12.8	1.126	11.124	2000.0
MW-9	4/4/17	Zinc	<8.0	12.8	1.126	11.124	2000.0
MW-9	10/18/17	Zinc	8.3	12.8	2.408	11.992	2000.0
MW-9	4/12/18	Zinc	<8.0	12.8	2.546	7.604	2000.0
MW-9	10/23/18	Zinc	25.6	12.8	0.000	22.573	2000.0

MW-9	4/8/2019	Zinc	21.8	29.4	2.692	27.158	2000.0
MW-9	10/4/2019	Zinc	20.0	29.4	6.647	29.053	2000.0
MW-9	4/9/2020	Zinc	<20.0	29.4	6.647	29.053	2000.0
MW-9	10/1/2020	Zinc	<20.0	29.4	10.000	10.000	2000.0
MW-9	4/1/2021	Zinc	<20.0	29.4	10.000	10.000	2000.0
MW-9	10/4/2021	Zinc	<20.0	29.4	10.000	10.000	2000.0
MW-9	4/6/2022	Zinc	<20.0	29.4	10.000	10.000	2000.0
MW-9	10/4/2023	Zinc	<20.0	29.4	10.000	10.000	2000.0
MW-9	4/17/2024	Zinc	<20.0	29.4	10.000	10.000	2000.0
MW-9	10/9/2025	Zinc	8.3	29.4	10.000	10.000	2000.0
MW-9	4/19/16	1,4 - dichlorobenzene	<1.0	1.0	0.263	1.087	75.0
MW-9	10/10/16	1,4 - dichlorobenzene	1.3	1.0	0.363	1.387	75.0
MW-9	4/4/17	1,4 - dichlorobenzene	<1.0	1.0	0.363	1.387	75.0
MW-9	10/18/17	1,4 - dichlorobenzene	1.0	1.0	0.361	1.289	75.0
MW-9	4/12/18	1,4 - dichlorobenzene	<1.0	1.0	0.361	1.289	75.0
MW-9	10/23/18	1,4 - dichlorobenzene	<1.0	1.0	0.331	0.919	75.0
MW-9	4/8/2019	1,4 - dichlorobenzene	<1.0	1.0	0.331	0.919	75.0
MW-9	10/4/2019	1,4 - dichlorobenzene	<1.0	1.0	0.500	0.500	75.0
MW-9	4/9/2020	1,4 - dichlorobenzene	<1.0	1.0	0.500	0.500	75.0
MW-9	10/1/2020	1,4 - dichlorobenzene	<1.0	1.0	0.500	0.500	75.0
MW-9	4/1/2021	1,4 - dichlorobenzene	<1.0	1.0	0.500	0.500	75.0
MW-9	10/4/2021	1,4 - dichlorobenzene	1.1	1.0	0.297	1.003	75.0
MW-9	4/6/2022	1,4 - dichlorobenzene	1.2	1.0	0.381	1.269	75.0
MW-9	10/4/2023	1,4 - dichlorobenzene	1.4	1.0	0.594	1.506	75.0
MW-9	4/17/2024	1,4 - dichlorobenzene	1.5	1.0	1.085	1.515	75.0
MW-9	10/9/2025	1,4 - dichlorobenzene	1.4	1.0	1.227	1.523	75.0
MW-9	4/19/16	Bis(2-ethylhexyl)phthalate	<10	6.0	5.000	5.000	6.0
MW-9	10/10/16	Bis(2-ethylhexyl)phthalate	<10	6.0	5.000	5.000	6.0
MW-9	4/4/17	Bis(2-ethylhexyl)phthalate	<10	6.0	5.000	5.000	6.0
MW-9	10/18/17	Bis(2-ethylhexyl)phthalate	NT	6.0	5.000	5.000	6.0
MW-9	4/12/18	Bis(2-ethylhexyl)phthalate	<6	6.0	3.000	3.000	6.0
MW-9	10/23/18	Bis(2-ethylhexyl)phthalate	<6	6.0	3.000	3.000	6.0
MW-9	4/8/2019	Bis(2-ethylhexyl)phthalate	<6	6.0	3.000	3.000	6.0
MW-9	10/4/2019	Bis(2-ethylhexyl)phthalate	<6	6.0	3.000	3.000	6.0
MW-9	4/9/2020	Bis(2-ethylhexyl)phthalate	NT	6.0	3.000	3.000	6.0
MW-9	10/1/2020	Bis(2-ethylhexyl)phthalate	NT	6.0	3.000	3.000	6.0
MW-9	4/1/2021	Bis(2-ethylhexyl)phthalate	NT	6.0	3.000	3.000	6.0
MW-9	10/4/2021	Bis(2-ethylhexyl)phthalate	NT	6.0	3.000	3.000	6.0
MW-9	4/6/2022	Bis(2-ethylhexyl)phthalate	NT	6.0	3.000	3.000	6.0
MW-9	10/4/2023	Bis(2-ethylhexyl)phthalate	NT	6.0	3.000	3.000	6.0
MW-9	4/17/2024	Bis(2-ethylhexyl)phthalate	8.0	6.0	3.986	7.514	6.0
MW-9	4/3/2025	Bis(2-ethylhexyl)phthalate	<6	6.0	2.647	7.353	6.0
MW-9	4/19/16	chlorobenzene	<1.0	1.0	0.000	5.439	100.0
MW-9	10/10/16	chlorobenzene	5.9	1.0	0.000	6.581	100.0

MW-9	4/4/17	chlorobenzene	2.6	1.0	0.629	6.571	100.0
MW-9	10/18/17	chlorobenzene	3.9	1.0	0.558	5.892	100.0
MW-9	4/12/18	chlorobenzene	<1.0	1.0	0.558	5.892	100.0
MW-9	10/23/18	chlorobenzene	5.6	1.0	0.619	5.681	100.0
MW-9	4/8/2019	chlorobenzene	<1.0	1.0	0.000	5.625	100.0
MW-9	10/4/2019	chlorobenzene	2.4	1.0	0.000	5.080	100.0
MW-9	4/9/2020	chlorobenzene	1.4	1.0	0.000	5.090	100.0
MW-9	10/1/2020	chlorobenzene	3.0	1.0	0.528	3.122	100.0
MW-9	4/1/2021	chlorobenzene	3.6	1.0	1.497	3.703	100.0
MW-9	10/4/2021	chlorobenzene	5.4	1.0	1.406	5.294	100.0
MW-9	4/6/2022	chlorobenzene	4.4	1.0	2.878	5.322	100.0
MW-9	10/4/2023	chlorobenzene	3.6	1.0	3.245	5.255	100.0
MW-9	4/17/2024	chlorobenzene	1.4	1.0	1.699	5.701	100.0
MW-9	10/9/2025	chlorobenzene	4.8	1.0	1.765	5.335	100.0
MW-9	4/19/16	phorate	<0.4	0.4	0.000	2.703	1.4
MW-9	10/10/16	phorate	2.5	0.4	0.000	2.308	1.4
MW-9	4/4/17	phorate	1.5	0.4	0.236	2.464	1.4
MW-9	10/18/17	phorate	<0.4	0.4	0.000	2.413	1.4
MW-9	4/12/18	phorate	<0.4	0.4	0.000	2.413	1.4
MW-9	10/23/18	phorate	<0.4	0.4	0.000	1.290	1.4
MW-9	4/8/2019	phorate	<0.4	0.4	0.200	0.200	1.4
MW-9	10/4/2019	phorate	<0.4	0.4	0.200	0.200	1.4
MW-9	4/9/2020	phorate	NT	0.4	0.200	0.200	1.4
MW-9	10/1/2020	phorate	NT	0.4	0.200	0.200	1.4
MW-9	4/1/2021	phorate	NT	0.4	0.200	0.200	1.4
MW-9	10/4/2021	phorate	NT	0.4	0.200	0.200	1.4
MW-9	4/6/2022	phorate	NT	0.4	0.200	0.200	1.4
MW-9	10/4/2023	phorate	NT	0.4	0.200	0.200	1.4
MW-9	4/17/2024	phorate	<0.4	0.4	0.200	0.200	1.4
MW-9	10/9/2025	phorate	NT	0.4	0.200	0.200	1.4

Well	Date	Compound	Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	95% UCL (ug/L)	GWPS (ug/L)
MW-11	4/19/16	Barium	154.0	290.2810	96.369	430.631	2000.0
MW-11	10/10/16	Barium	152.0	290.2810	72.393	428.607	2000.0
MW-11	4/4/17	Barium	282.0	290.2810	87.608	442.392	2000.0
MW-11	10/18/17	Barium	236.0	290.2810	130.693	281.307	2000.0
MW-11	4/12/18	Barium	162.0	290.2810	135.133	280.867	2000.0
MW-11	10/23/18	Barium	118.0	290.2810	113.095	285.905	2000.0
MW-11	4/8/2019	Barium	444.0	288.4665	70.082	409.918	2000.0
MW-11	10/4/2019	Barium	279.0	296.5237	79.422	422.078	2000.0
MW-11	4/9/2020	Barium	227.0	295.3072	107.334	426.666	2000.0
MW-11	10/1/2020	Barium	293.0	294.2483	201.048	420.452	2000.0
MW-11	4/1/2021	Barium	203.0	289.9072	200.470	300.530	2000.0
MW-11	10/4/2021	Barium	270.0	287.2576	200.350	296.150	2000.0
MW-11	4/6/2022	Barium	342.0	296.4947	209.067	344.933	2000.0
MW-11	10/4/2023	Barium	243.0	294.3691	195.639	333.361	2000.0
MW-11	4/17/2024	Barium	236.0	297.6737	215.773	329.727	2000.0
MW-11	10/9/2025	Barium	192.0	297.9828	178.760	327.740	2000.0
MW-11	4/19/16	Cobalt	<0.8	11.6	0.000	11.203	11.6
MW-11	10/10/16	Cobalt	<0.8	11.6	0.000	11.177	11.6
MW-11	4/4/17	Cobalt	1.8	11.6	1.430	3.170	11.6
MW-11	10/18/17	Cobalt	3.5	11.6	1.397	3.253	11.6
MW-11	4/12/18	Cobalt	<0.8	11.6	1.397	3.253	11.6
MW-11	10/23/18	Cobalt	<0.8	11.6	1.397	3.253	11.6
MW-11	4/8/2019	Cobalt	28.7	11.6	0.000	24.482	11.6
MW-11	10/4/2019	Cobalt	16.7	11.6	0.000	27.543	11.6
MW-11	4/9/2020	Cobalt	10.5	11.6	0.148	28.002	11.6
MW-11	10/1/2020	Cobalt	20.6	11.6	10.163	28.087	11.6
MW-11	4/1/2021	Cobalt	9.2	11.6	7.956	20.544	11.6
MW-11	10/4/2021	Cobalt	14.8	11.6	7.728	19.822	11.6
MW-11	4/6/2022	Cobalt	1.7	11.6	2.091	21.059	11.6
MW-11	10/4/2023	Cobalt	8.3	11.6	2.185	14.815	11.6
MW-11	4/17/2024	Cobalt	3.9	11.6	0.380	19.970	11.6
MW-11	10/9/2025	Cobalt	5.0	11.6	1.490	7.960	11.6
MW-11	4/19/16	Nickel	9.6	10.9	0.000	22.292	100.0
MW-11	10/10/16	Nickel	12.7	10.9	1.174	23.276	100.0
MW-11	4/4/17	Nickel	15.1	10.9	0.000	46.670	100.0
MW-11	10/18/17	Nickel	13.3	10.9	0.346	46.754	100.0
MW-11	4/12/18	Nickel	<4.0	10.9	0.000	47.050	100.0
MW-11	10/23/18	Nickel	4.7	10.9	1.243	16.307	100.0
MW-11	4/8/2019	Nickel	16.6	10.9	1.010	17.290	100.0
MW-11	10/4/2019	Nickel	8.0	10.9	0.363	15.287	100.0
MW-11	4/9/2020	Nickel	9.5	10.9	3.797	15.603	100.0
MW-11	10/1/2020	Nickel	16.7	10.9	7.287	18.113	100.0

MW-11	4/1/2021	Nickel	8.3	10.9	5.800	15.450	100.0
MW-11	10/4/2021	Nickel	4.2	10.9	3.553	15.979	100.0
MW-11	4/6/2022	Nickel	10.7	10.9	3.829	16.121	100.0
MW-11	10/4/2023	Nickel	7.4	10.9	4.487	10.813	100.0
MW-11	4/17/2024	Nickel	4.6	10.9	3.187	10.263	100.0
MW-11	10/9/2025	Nickel	8.7	10.9	4.843	10.857	100.0
MW-11	4/19/16	Bis(2-ethylhexyl)phthalate	NT	6	---	---	6
MW-11	10/10/16	Bis(2-ethylhexyl)phthalate	NT	6	---	---	6
MW-11	4/4/17	Bis(2-ethylhexyl)phthalate	<8	6	---	---	6
MW-11	10/18/17	Bis(2-ethylhexyl)phthalate	NT	6	---	---	6
MW-11	4/12/18	Bis(2-ethylhexyl)phthalate	23.0	6	---	---	6
MW-11	10/23/18	Bis(2-ethylhexyl)phthalate	<6	6	0.000	19.925	6
MW-11	4/8/2019	Bis(2-ethylhexyl)phthalate	NT	6	0.000	19.925	6
MW-11	10/4/2019	Bis(2-ethylhexyl)phthalate	NT	6	0.000	19.925	6
MW-11	4/9/2020	Bis(2-ethylhexyl)phthalate	NT	6	0.000	19.925	6
MW-11	10/1/2020	Bis(2-ethylhexyl)phthalate	NT	6	0.000	19.925	6
MW-11	4/1/2021	Bis(2-ethylhexyl)phthalate	NT	6	0.000	19.925	6
MW-11	10/4/2021	Bis(2-ethylhexyl)phthalate	NT	6	0.000	19.925	6
MW-11	4/6/2022	Bis(2-ethylhexyl)phthalate	NT	6	0.000	19.925	6
MW-11	10/4/2023	Bis(2-ethylhexyl)phthalate	9.0	6	0.000	20.565	6
MW-11	4/17/2024	Bis(2-ethylhexyl)phthalate	<6	6	0.000	20.597	6
MW-11	4/3/2025	Bis(2-ethylhexyl)phthalate	<6	6	0.971	8.029	6
MW-11	4/19/16	phorate	NT	0.4	---	---	1.4
MW-11	10/10/16	phorate	NT	0.4	---	---	1.4
MW-11	4/4/17	phorate	2.4	0.4	Insufficient data	Insufficient data	1.4
MW-11	10/18/17	phorate	<0.4	0.4	Insufficient data	Insufficient data	1.4
MW-11	4/12/18	phorate	<0.4	0.4	0.000	2.044	1.4
MW-11	10/23/18	phorate	<0.4	0.4	0.000	2.044	1.4
MW-11	4/8/2019	phorate	<0.4	0.4	0.200	0.200	1.4
MW-11	10/4/2019	phorate	<0.4	0.4	0.200	0.200	1.4
MW-11	4/9/2020	phorate	NT	0.4	0.200	0.200	1.4
MW-11	10/1/2020	phorate	NT	0.4	0.200	0.200	1.4
MW-11	4/1/2021	phorate	NT	0.4	0.200	0.200	1.4
MW-11	10/4/2021	phorate	NT	0.4	0.200	0.200	1.4
MW-11	4/6/2022	phorate	NT	0.4	0.200	0.200	1.4
MW-11	10/4/2023	phorate	<0.4	0.4	0.200	0.200	1.4
MW-11	4/17/2024	phorate	NT	0.4	0.200	0.200	1.4
MW-11	10/9/2025	phorate	NT	0.4	0.200	0.200	1.4

Well	Date	Compound	Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	95% UCL (ug/L)	GWPS (ug/L)
MW-13	4/19/16	Barium	434.0	290.2810	311.195	423.305	2000.0
MW-13	10/10/16	Barium	291.0	290.2810	278.571	423.929	2000.0
MW-13	4/4/17	Barium	130.0	290.2810	151.082	455.918	2000.0
MW-13	10/18/17	Barium	341.0	290.2810	149.261	448.739	2000.0
MW-13	4/12/18	Barium	259.0	290.2810	150.683	382.817	2000.0
MW-13	10/23/18	Barium	392.0	290.2810	267.698	396.802	2000.0
MW-13	4/8/2019	Barium	280.0	288.4665	246.560	387.440	2000.0
MW-13	10/4/2019	Barium	403.0	296.5237	245.829	421.171	2000.0
MW-13	4/9/2020	Barium	253.0	295.3072	241.939	422.061	2000.0
MW-13	10/1/2020	Barium	384.0	294.2483	242.305	417.695	2000.0
MW-13	4/1/2021	Barium	141.0	289.9072	151.081	439.419	2000.0
MW-13	10/4/2021	Barium	358.0	287.2576	153.568	414.432	2000.0
MW-13	4/6/2022	Barium	352.0	296.4947	176.191	441.309	2000.0
MW-13	10/4/2023	Barium	334.0	294.3691	173.915	418.585	2000.0
MW-13	4/17/2024	Barium	434.0	297.6737	317.517	421.483	2000.0
MW-13	10/9/2025	Barium	584.0	297.9828	291.938	560.062	2000.0
MW-13	4/19/16	Cadmium	8.7	2.2	0.000	7.357	5.0
MW-13	10/10/16	Cadmium	<0.8	2.2	0.000	7.357	5.0
MW-13	4/4/17	Cadmium	<0.8	2.2	0.000	7.357	5.0
MW-13	10/18/17	Cadmium	<0.8	2.2	0.400	0.400	5.0
MW-13	4/12/18	Cadmium	<0.8	2.2	0.400	0.400	5.0
MW-13	10/23/18	Cadmium	<0.8	2.2	0.400	0.400	5.0
MW-13	4/8/2019	Cadmium	<0.8	2.2	0.400	0.400	5.0
MW-13	10/4/2019	Cadmium	<0.8	2.2	0.400	0.400	5.0
MW-13	4/9/2020	Cadmium	<0.8	2.2	0.400	0.400	5.0
MW-13	10/1/2020	Cadmium	<0.8	2.2	0.400	0.400	5.0
MW-13	4/1/2021	Cadmium	<0.8	2.2	0.400	0.400	5.0
MW-13	10/4/2021	Cadmium	<0.8	2.2	0.400	0.400	5.0
MW-13	4/6/2022	Cadmium	<0.8	2.2	0.400	0.400	5.0
MW-13	10/4/2023	Cadmium	<0.8	2.2	0.400	0.400	5.0
MW-13	4/17/2024	Cadmium	<0.8	2.2	0.400	0.400	5.0
MW-13	10/9/2025	Cadmium	0.2	2.2	0.400	0.400	5.0
MW-13	4/19/16	Cobalt	<0.8	11.6	0.400	0.400	11.6
MW-13	10/10/16	Cobalt	<0.8	11.6	0.400	0.400	11.6
MW-13	4/4/17	Cobalt	<0.8	11.6	0.400	0.400	11.6
MW-13	10/18/17	Cobalt	1.4	11.6	1.497	2.203	11.6
MW-13	4/12/18	Cobalt	2.0	11.6	1.497	2.203	11.6
MW-13	10/23/18	Cobalt	<0.8	11.6	1.497	2.203	11.6
MW-13	4/8/2019	Cobalt	<0.8	11.6	1.497	2.203	11.6
MW-13	10/4/2019	Cobalt	6.2	11.6	0.580	5.520	11.6
MW-13	4/9/2020	Cobalt	0.7	11.6	0.000	5.282	11.6
MW-13	10/1/2020	Cobalt	11.8	11.6	0.000	11.114	11.6

MW-13	4/1/2021	Cobalt	<0.4	11.6	0.000	11.114	11.6
MW-13	10/4/2021	Cobalt	9.5	11.6	0.000	12.549	11.6
MW-13	4/6/2022	Cobalt	3.9	11.6	0.287	12.513	11.6
MW-13	10/4/2023	Cobalt	10.6	11.6	0.453	11.747	11.6
MW-13	4/17/2024	Cobalt	11.6	11.6	4.851	12.949	11.6
MW-13	10/9/2025	Cobalt	18.8	11.6	4.052	18.398	11.6
MW-13	4/19/16	Copper	4.2	4.0	1.256	3.844	1300
MW-13	10/10/16	Copper	<4.0	4.0	1.256	3.844	1300
MW-13	4/4/17	Copper	<4.0	4.0	1.256	3.844	1300
MW-13	10/18/17	Copper	<4.0	4.0	1.256	3.844	1300
MW-13	4/12/18	Copper	<4.0	4.0	2.0	2.0	1300
MW-13	10/23/18	Copper	6.2	4.0	0.580	5.520	1300
MW-13	4/8/2019	Copper	<4.0	4.0	0.580	5.520	1300
MW-13	10/4/2019	Copper	<4.0	4.0	0.580	5.520	1300
MW-13	4/9/2020	Copper	<4.0	4.0	0.580	5.520	1300
MW-13	10/1/2020	Copper	<4.0	4.0	2.000	2.000	1300
MW-13	4/1/2021	Copper	<4.0	4.0	2.000	2.000	1300
MW-13	10/4/2021	Copper	<4.0	4.0	2.000	2.000	1300
MW-13	4/6/2022	Copper	<4.0	4.0	2.000	2.000	1300
MW-13	10/4/2023	Copper	<4.0	4.0	2.000	2.000	1300
MW-13	4/17/2024	Copper	<4.0	4.0	2.000	2.000	1300
MW-13	10/9/2025	Copper	<5.0	4.0	1.324	3.676	1300
MW-13	4/19/16	Nickel	67.6	10.9	64.034	84.616	100.0
MW-13	10/10/16	Nickel	38.8	10.9	43.244	81.956	100.0
MW-13	4/4/17	Nickel	<4.0	10.9	7.410	80.440	100.0
MW-13	10/18/17	Nickel	47.1	10.9	6.643	71.107	100.0
MW-13	4/12/18	Nickel	55.0	10.9	9.479	75.471	100.0
MW-13	10/23/18	Nickel	46.7	10.9	43.115	64.185	100.0
MW-13	4/8/2019	Nickel	60.8	10.9	47.424	66.726	100.0
MW-13	10/4/2019	Nickel	79.6	10.9	44.091	76.959	100.0
MW-13	4/9/2020	Nickel	43.1	10.9	38.064	77.036	100.0
MW-13	10/1/2020	Nickel	75.9	10.9	45.295	84.405	100.0
MW-13	4/1/2021	Nickel	12.7	10.9	15.914	89.736	100.0
MW-13	10/4/2021	Nickel	67.8	10.9	16.421	83.329	100.0
MW-13	4/6/2022	Nickel	106.0	10.9	19.833	111.367	100.0
MW-13	10/4/2023	Nickel	75.4	10.9	19.759	111.191	100.0
MW-13	4/17/2024	Nickel	89.9	10.9	64.942	104.608	100.0
MW-13	10/9/2025	Nickel	151.0	10.9	67.039	144.111	100.0
MW-13	4/19/16	Zinc	31.8	12.8	0.000	27.300	2000.0
MW-13	10/10/16	Zinc	<8.0	12.8	0.000	27.300	2000.0
MW-13	4/4/17	Zinc	<8.0	12.8	0.000	27.300	2000.0
MW-13	10/18/17	Zinc	<8.0	12.8	0.000	27.300	2000.0
MW-13	4/12/18	Zinc	<8.0	12.8	4.000	4.000	2000.0
MW-13	10/23/18	Zinc	35.5	12.8	0.000	30.402	2000.0

MW-13	4/8/2019	Zinc	19.5	29.4	0.000	33.463	2000.0
MW-13	10/4/2019	Zinc	26.2	29.4	5.692	36.908	2000.0
MW-13	4/9/2020	Zinc	<20	29.4	5.692	36.908	2000.0
MW-13	10/1/2020	Zinc	<20	29.4	5.692	36.908	2000.0
MW-13	4/1/2021	Zinc	<20	29.4	5.692	36.908	2000.0
MW-13	10/4/2021	Zinc	<20	29.4	10.000	10.000	2000.0
MW-13	4/6/2022	Zinc	<20	29.4	10.000	10.000	2000.0
MW-13	10/4/2023	Zinc	<20	29.4	10.000	10.000	2000.0
MW-13	4/17/2024	Zinc	<20	29.4	10.000	10.000	2000.0
MW-13	10/9/2025	Zinc	<5	29.4	10.000	10.000	2000.0
MW-13	4/19/16	1,4 - dichlorobenzene	3.5	1.0	0.000	3.607	75.0
MW-13	10/10/16	1,4 - dichlorobenzene	2.5	1.0	0.800	3.800	75.0
MW-13	4/4/17	1,4 - dichlorobenzene	<1.0	1.0	0.800	3.800	75.0
MW-13	10/18/17	1,4 - dichlorobenzene	2.0	1.0	0.655	3.595	75.0
MW-13	4/12/18	1,4 - dichlorobenzene	<1.0	1.0	0.163	2.587	75.0
MW-13	10/23/18	1,4 - dichlorobenzene	5.9	1.0	0.000	5.225	75.0
MW-13	4/8/2019	1,4 - dichlorobenzene	3.7	1.0	0.296	5.754	75.0
MW-13	10/4/2019	1,4 - dichlorobenzene	4.1	1.0	0.907	6.193	75.0
MW-13	4/9/2020	1,4 - dichlorobenzene	1.9	1.0	1.970	5.830	75.0
MW-13	10/1/2020	1,4 - dichlorobenzene	2.7	1.0	1.932	4.268	75.0
MW-13	4/1/2021	1,4 - dichlorobenzene	<1.0	1.0	0.529	4.071	75.0
MW-13	10/4/2021	1,4 - dichlorobenzene	2.3	1.0	0.724	2.976	75.0
MW-13	4/6/2022	1,4 - dichlorobenzene	1.4	1.0	0.571	2.879	75.0
MW-13	10/4/2023	1,4 - dichlorobenzene	2.6	1.0	0.584	2.816	75.0
MW-13	4/17/2024	1,4 - dichlorobenzene	2.4	1.0	1.550	2.800	75.0
MW-13	10/9/2025	1,4 - dichlorobenzene	5.4	1.0	0.932	4.968	75.0
MW-13	4/19/16	Benzene	<1.0	1.0	0.500	0.500	5.0
MW-13	10/10/16	Benzene	<1.0	1.0	0.500	0.500	5.0
MW-13	4/4/17	Benzene	<1.0	1.0	0.500	0.500	5.0
MW-13	10/18/17	Benzene	<1.0	1.0	0.500	0.500	5.0
MW-13	4/12/18	Benzene	<1.0	1.0	0.500	0.500	5.0
MW-13	10/23/18	Benzene	1.8	1.0	0.060	1.590	5.0
MW-13	4/8/2019	Benzene	<1.0	1.0	0.060	1.590	5.0
MW-13	10/4/2019	Benzene	<1.0	1.0	0.060	1.590	5.0
MW-13	4/9/2020	Benzene	<1.0	1.0	0.060	1.590	5.0
MW-13	10/1/2020	Benzene	<1.0	1.0	0.500	0.500	5.0
MW-13	4/1/2021	Benzene	<1.0	1.0	0.500	0.500	5.0
MW-13	10/4/2021	Benzene	<1.0	1.0	0.500	0.500	5.0
MW-13	4/6/2022	Benzene	<1.0	1.0	0.500	0.500	5.0
MW-13	10/4/2023	Benzene	<1.0	1.0	0.500	0.500	5.0
MW-13	4/17/2024	Benzene	<1.0	1.0	0.500	0.500	5.0
MW-13	10/9/2025	Benzene	<1.0	1.0	0.500	0.500	5.0
MW-13	4/19/16	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-13	10/10/16	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0

MW-13	4/4/17	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-13	10/18/17	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-13	4/12/18	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-13	10/23/18	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-13	4/8/2019	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-13	10/4/2019	Bis(2-ethylhexyl)phthalate	<6	6.0	---	---	6.0
MW-13	4/9/2020	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-13	10/1/2020	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-13	4/1/2021	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-13	10/4/2021	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-13	4/6/2022	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-13	10/4/2023	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-13	4/17/2024	Bis(2-ethylhexyl)phthalate	7.0	6.0	2.986	6.514	6.0
MW-13	4/3/2025	Bis(2-ethylhexyl)phthalate	<6	6.0	1.647	6.353	6.0
MW-13	4/19/16	Chlorobenzene	<1.0	1.0	0.500	0.500	100.0
MW-13	10/10/16	Chlorobenzene	<1.0	1.0	0.500	0.500	100.0
MW-13	4/4/17	Chlorobenzene	<1.0	1.0	0.500	0.500	100.0
MW-13	10/18/17	Chlorobenzene	<1.0	1.0	0.500	0.500	100.0
MW-13	4/12/18	Chlorobenzene	<1.0	1.0	0.500	0.500	100.0
MW-13	10/23/18	Chlorobenzene	2.0	1.0	0.000	1.757	100.0
MW-13	4/8/2019	Chlorobenzene	<1.0	1.0	0.000	1.757	100.0
MW-13	10/4/2019	Chlorobenzene	<1.0	1.0	0.000	1.757	100.0
MW-13	4/9/2020	Chlorobenzene	<1.0	1.0	0.000	1.757	100.0
MW-13	10/1/2020	Chlorobenzene	<1.0	1.0	0.500	0.500	100.0
MW-13	4/1/2021	Chlorobenzene	<1.0	1.0	0.500	0.500	100.0
MW-13	10/4/2021	Chlorobenzene	<1.0	1.0	0.500	0.500	100.0
MW-13	4/6/2022	Chlorobenzene	<1.0	1.0	0.500	0.500	100.0
MW-13	10/4/2023	Chlorobenzene	1.1	1.0	0.297	1.003	100.0
MW-13	4/17/2024	Chlorobenzene	1.8	1.0	0.248	1.702	100.0
MW-13	10/9/2025	Chlorobenzene	2.9	1.0	0.363	2.787	100.0
MW-13	4/19/16	chloroethane	<1.0	1.0	0.297	1.003	2800.0
MW-13	10/10/16	chloroethane	1.0	1.0	0.398	1.152	2800.0
MW-13	4/4/17	chloroethane	<1.0	1.0	0.398	1.152	2,800.0
MW-13	10/18/17	chloroethane	2.1	1.0	0.138	1.912	2,800.0
MW-13	4/12/18	chloroethane	<1.0	1.0	0.138	1.912	2,800.0
MW-13	10/23/18	chloroethane	2.0	1.0	0.221	2.329	2,800.0
MW-13	4/8/2019	chloroethane	<1.0	1.0	0.221	2.329	2,800.0
MW-13	10/4/2019	chloroethane	3.1	1.0	0.036	3.014	2,800.0
MW-13	4/9/2020	chloroethane	<1.0	1.0	0.036	3.014	2,800.0
MW-13	10/1/2020	chloroethane	2.0	1.0	0.036	3.014	2,800.0
MW-13	4/1/2021	chloroethane	<1.0	1.0	0.036	3.014	2,800.0
MW-13	10/4/2021	chloroethane	<1.0	1.0	0.000	1.757	2,800.0
MW-13	4/6/2022	chloroethane	<1.0	1.0	0.000	1.757	2,800.0
MW-13	10/4/2023	chloroethane	<1.0	1.0	0.500	0.500	2,800.0

MW-13	4/17/2024	chloroethane	2.8	1.0	0.000	2.428	2,800.0
MW-13	10/9/2025	chloroethane	1.3	1.0	0.000	2.551	2,800.0
MW-13	4/19/16	cis-1,2-dichloroethene	1.1	1.0	0.381	1.269	70.0
MW-13	10/10/16	cis-1,2-dichloroethene	<1.0	1.0	0.297	1.003	70.0
MW-13	4/4/17	cis-1,2-dichloroethene	<1.0	1.0	0.297	1.003	70.0
MW-13	10/18/17	cis-1,2-dichloroethene	<1.0	1.0	0.297	1.003	70.0
MW-13	4/12/18	cis-1,2-dichloroethene	<1.0	1.0	0.500	0.500	70.0
MW-13	10/23/18	cis-1,2-dichloroethene	<1.0	1.0	0.500	0.500	70.0
MW-13	4/8/2019	cis-1,2-dichloroethene	<1.0	1.0	0.500	0.500	70.0
MW-13	10/4/2019	cis-1,2-dichloroethene	<1.0	1.0	0.500	0.500	70.0
MW-13	4/9/2020	cis-1,2-dichloroethene	<1.0	1.0	0.500	0.500	70.0
MW-13	10/1/2020	cis-1,2-dichloroethene	<1.0	1.0	0.500	0.500	70.0
MW-13	4/1/2021	cis-1,2-dichloroethene	<1.0	1.0	0.500	0.500	70.0
MW-13	10/4/2021	cis-1,2-dichloroethene	<1.0	1.0	0.500	0.500	70.0
MW-13	4/6/2022	cis-1,2-dichloroethene	<1.0	1.0	0.500	0.500	70.0
MW-13	10/4/2023	cis-1,2-dichloroethene	<1.0	1.0	0.500	0.500	70.0
MW-13	4/17/2024	cis-1,2-dichloroethene	<1.0	1.0	0.500	0.500	70.0
MW-13	10/9/2025	cis-1,2-dichloroethene	<1.0	1.0	0.500	0.500	70.0
MW-13	4/19/16	phorate	<0.4	0.4	0.000	1.725	1.4
MW-13	10/10/16	phorate	0.8	0.4	0.067	0.733	1.4
MW-13	4/4/17	phorate	<0.4	0.4	0.067	0.733	1.4
MW-13	10/18/17	phorate	<0.4	0.4	0.000	0.703	1.4
MW-13	4/12/18	phorate	<0.4	0.4	0.000	0.703	1.4
MW-13	10/23/18	phorate	<0.4	0.4	0.200	0.200	1.4
MW-13	4/8/2019	phorate	<0.4	0.4	0.200	0.200	1.4
MW-13	10/4/2019	phorate	<0.4	0.4	0.200	0.200	1.4
MW-13	4/9/2020	phorate	NT	0.4	0.200	0.200	1.4
MW-13	10/1/2020	phorate	NT	0.4	0.200	0.200	1.4
MW-13	4/1/2021	phorate	NT	0.4	0.200	0.200	1.4
MW-13	10/4/2021	phorate	NT	0.4	0.200	0.200	1.4
MW-13	4/6/2022	phorate	NT	0.4	0.200	0.200	1.4
MW-13	10/4/2023	phorate	NT	0.4	0.200	0.200	1.4
MW-13	4/17/2024	phorate	<0.4	0.4	0.200	0.200	1.4
MW-13	10/9/2025	phorate	NT	0.4	0.200	0.200	1.4

Well	Date	Compound	Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	95% UCL (ug/L)	GWPS (ug/L)
MW-14	4/19/16	Arsenic	<4.0	4.0	2.000	2.000	10.0
MW-14	10/10/16	Arsenic	<4.0	4.0	2.000	2.000	10.0
MW-14	4/4/17	Arsenic	<4.0	4.0	2.000	2.000	10.0
MW-14	10/18/17	Arsenic	<4.0	4.0	2.000	2.000	10.0
MW-14	4/12/18	Arsenic	<4.0	4.0	2.000	2.000	10.0
MW-14	10/23/18	Arsenic	<4.0	4.0	2.000	2.000	10.0
MW-14	4/8/2019	Arsenic	4.1	4.0	1.290	3.760	10.0
MW-14	10/4/2019	Arsenic	<4.0	4.0	1.290	3.760	10.0
MW-14	4/9/2020	Arsenic	10.2	4.0	0.013	9.137	10.0
MW-14	10/1/2020	Arsenic	<4.0	4.0	0.013	9.137	10.0
MW-14	4/1/2021	Arsenic	<4.0	4.0	0.000	8.873	10.0
MW-14	10/4/2021	Arsenic	30.5	4.0	0.000	26.997	10.0
MW-14	4/6/2022	Arsenic	<4.0	4.0	0.000	25.887	10.0
MW-14	10/4/2023	Arsenic	5.5	4.0	0.000	26.193	10.0
MW-14	4/17/2024	Arsenic	<4.0	4.0	0.000	26.193	10.0
MW-14	10/9/2025	Arsenic	4.8	4.0	1.409	5.741	10.0
MW-14	4/19/16	Barium	671.0	290.2810	459.244	868.256	2000.0
MW-14	10/10/16	Barium	483.0	290.2810	384.072	811.428	2000.0
MW-14	4/4/17	Barium	76.3	290.2810	134.200	889.950	2000.0
MW-14	10/18/17	Barium	1110.0	290.2810	80.412	1089.738	2000.0
MW-14	4/12/18	Barium	1130.0	290.2810	171.342	1332.808	2000.0
MW-14	10/23/18	Barium	368.0	290.2810	395.057	1254.943	2000.0
MW-14	4/8/2019	Barium	809.0	288.4665	379.534	1119.966	2000.0
MW-14	10/4/2019	Barium	903.0	296.5237	426.708	1178.292	2000.0
MW-14	4/9/2020	Barium	986.0	295.3072	442.632	1090.368	2000.0
MW-14	10/1/2020	Barium	717.0	294.2483	716.877	990.623	2000.0
MW-14	4/1/2021	Barium	714.0	289.9072	669.446	990.554	2000.0
MW-14	10/4/2021	Barium	1530.0	287.2576	535.101	1438.399	2000.0
MW-14	4/6/2022	Barium	1360.0	296.4947	578.141	1582.359	2000.0
MW-14	10/4/2023	Barium	843.0	294.3691	647.653	1575.847	2000.0
MW-14	4/17/2024	Barium	1040.0	297.6737	829.191	1557.309	2000.0
MW-14	10/9/2025	Barium	949.0	297.9828	785.646	1310.354	2000.0
MW-14	4/19/16	Cobalt	4.4	11.6	4.306	8.694	11.6
MW-14	10/10/16	Cobalt	3.4	11.6	3.176	7.224	11.6
MW-14	4/4/17	Cobalt	<0.8	11.6	0.504	7.296	11.6
MW-14	10/18/17	Cobalt	13.4	11.6	0.000	11.984	11.6
MW-14	4/12/18	Cobalt	14.3	11.6	1.349	16.451	11.6
MW-14	10/23/18	Cobalt	4.1	11.6	4.103	15.547	11.6
MW-14	4/8/2019	Cobalt	3.8	11.6	1.684	13.166	11.6
MW-14	10/4/2019	Cobalt	8.2	11.6	1.840	13.360	11.6
MW-14	4/9/2020	Cobalt	5.5	11.6	3.038	7.762	11.6
MW-14	10/1/2020	Cobalt	2.9	11.6	2.358	7.842	11.6

MW-14	4/1/2021	Cobalt	7.4	11.6	3.228	8.772	11.6
MW-14	10/4/2021	Cobalt	19.2	11.6	0.273	17.227	11.6
MW-14	4/6/2022	Cobalt	15.0	11.6	2.488	19.762	11.6
MW-14	10/4/2023	Cobalt	7.3	11.6	5.303	19.147	11.6
MW-14	4/17/2024	Cobalt	4.1	11.6	3.253	19.547	11.6
MW-14	10/9/2025	Cobalt	5.1	11.6	2.071	13.679	11.6
MW-14	4/19/16	Lead	<4.0	4.0	2.000	2.000	15.0
MW-14	10/10/16	Lead	<4.0	4.0	2.000	2.000	15.0
MW-14	4/4/17	Lead	<4.0	4.0	2.000	2.000	15.0
MW-14	10/18/17	Lead	<4.0	4.0	2.000	2.000	15.0
MW-14	4/12/18	Lead	<4.0	4.0	2.000	2.000	15.0
MW-14	10/23/18	Lead	<4.0	4.0	2.000	2.000	15.0
MW-14	4/8/2019	Lead	<4.0	4.0	2.000	2.000	15.0
MW-14	10/4/2019	Lead	<4.0	4.0	2.000	2.000	15.0
MW-14	4/9/2020	Lead	<4.0	4.0	2.000	2.000	15.0
MW-14	10/1/2020	Lead	<4.0	4.0	2.000	2.000	15.0
MW-14	4/1/2021	Lead	<4.0	4.0	2.000	2.000	15.0
MW-14	10/4/2021	Lead	5.1	4.0	0.952	4.598	15.0
MW-14	4/6/2022	Lead	<4.0	4.0	0.952	4.598	15.0
MW-14	10/4/2023	Lead	<4.0	4.0	0.952	4.598	15.0
MW-14	4/17/2024	Lead	<4.0	4.0	0.952	4.598	15.0
MW-14	10/9/2025	Lead	1.2	4.0	2.000	2.000	15.0
MW-14	4/19/16	Nickel	67.7	10.9	34.603	80.697	100.0
MW-14	10/10/16	Nickel	33.0	10.9	24.889	79.811	100.0
MW-14	4/4/17	Nickel	<4.0	10.9	4.574	85.226	100.0
MW-14	10/18/17	Nickel	44.4	10.9	4.647	68.903	100.0
MW-14	4/12/18	Nickel	46.3	10.9	8.528	68.472	100.0
MW-14	10/23/18	Nickel	19.4	10.9	22.424	63.276	100.0
MW-14	4/8/2019	Nickel	55.8	10.9	23.826	67.574	100.0
MW-14	10/4/2019	Nickel	42.5	10.9	22.828	59.172	100.0
MW-14	4/9/2020	Nickel	61.0	10.9	22.839	66.511	100.0
MW-14	10/1/2020	Nickel	50.6	10.9	43.194	61.756	100.0
MW-14	4/1/2021	Nickel	23.3	10.9	25.593	63.107	100.0
MW-14	10/4/2021	Nickel	52.6	10.9	27.643	66.107	100.0
MW-14	4/6/2022	Nickel	50.6	10.9	27.789	60.761	100.0
MW-14	10/4/2023	Nickel	33.8	10.9	23.601	56.594	100.0
MW-14	4/17/2024	Nickel	31.6	10.9	29.235	55.065	100.0
MW-14	10/9/2025	Nickel	64.2	10.9	27.018	63.082	100.0
MW-14	4/19/16	Zinc	38.9	12.8	0.000	33.664	2000.0
MW-14	10/10/16	Zinc	<8.0	12.8	0.000	33.251	2000.0
MW-14	4/4/17	Zinc	<8.0	12.8	0.000	33.251	2000.0
MW-14	10/18/17	Zinc	<8.0	12.8	0.000	33.251	2000.0
MW-14	4/12/18	Zinc	<8.0	12.8	4.000	4.000	2000.0
MW-14	10/23/18	Zinc	43.6	12.8	0.000	37.191	2000.0

MW-14	4/8/2019	Zinc	40.2	29.4	0.000	48.741	2000.0
MW-14	10/4/2019	Zinc	24.4	29.4	6.777	49.323	2000.0
MW-14	4/9/2020	Zinc	<20	29.4	6.777	49.323	2000.0
MW-14	10/1/2020	Zinc	<20	29.4	6.777	49.323	2000.0
MW-14	4/1/2021	Zinc	<20	29.4	6.777	49.323	2000.0
MW-14	10/4/2021	Zinc	<20	29.4	10.000	10.000	2000.0
MW-14	4/6/2022	Zinc	<20	29.4	10.000	10.000	2000.0
MW-14	10/4/2023	Zinc	<20	29.4	10.000	10.000	2000.0
MW-14	4/17/2024	Zinc	<20	29.4	10.000	10.000	2000.0
MW-14	10/9/2025	Zinc	6.8	29.4	10.000	10.000	2000.0
MW-14	4/19/16	1,4 - dichlorobenzene	<1.0	1.0	0.500	0.500	75.0
MW-14	10/10/16	1,4 - dichlorobenzene	<1.0	1.0	0.500	0.500	75.0
MW-14	4/4/17	1,4 - dichlorobenzene	<1.0	1.0	0.500	0.500	75.0
MW-14	10/18/17	1,4 - dichlorobenzene	1.1	1.0	0.297	1.003	75.0
MW-14	4/12/18	1,4 - dichlorobenzene	<1.0	1.0	0.297	1.003	75.0
MW-14	10/23/18	1,4 - dichlorobenzene	<1.0	1.0	0.297	1.003	75.0
MW-14	4/8/2019	1,4 - dichlorobenzene	<1.0	1.0	0.297	1.003	75.0
MW-14	10/4/2019	1,4 - dichlorobenzene	<1.0	1.0	0.500	0.500	75.0
MW-14	4/9/2020	1,4 - dichlorobenzene	1.1	1.0	0.297	1.003	75.0
MW-14	10/1/2020	1,4 - dichlorobenzene	<1.0	1.0	0.297	1.003	75.0
MW-14	4/1/2021	1,4 - dichlorobenzene	1.3	1.0	0.365	1.335	75.0
MW-14	10/4/2021	1,4 - dichlorobenzene	1.0	1.0	0.575	1.375	75.0
MW-14	4/6/2022	1,4 - dichlorobenzene	1.0	1.0	0.560	1.340	75.0
MW-14	10/4/2023	1,4 - dichlorobenzene	<1.0	1.0	0.560	1.340	75.0
MW-14	4/17/2024	1,4 - dichlorobenzene	<1.0	1.0	0.410	1.090	75.0
MW-14	10/9/2025	1,4 - dichlorobenzene	1.3	1.0	0.361	1.289	75.0
MW-14	4/19/16	benzene	1.9	1.0	0.691	2.209	5.0
MW-14	10/10/16	benzene	1.3	1.0	0.623	2.127	5.0
MW-14	4/4/17	benzene	<1.0	1.0	0.623	2.127	5.0
MW-14	10/18/17	benzene	1.5	1.0	0.607	1.993	5.0
MW-14	4/12/18	benzene	1.2	1.0	0.613	1.637	5.0
MW-14	10/23/18	benzene	2.7	1.0	0.395	2.555	5.0
MW-14	4/8/2019	benzene	1.9	1.0	1.060	2.590	5.0
MW-14	10/4/2019	benzene	1.6	1.0	1.013	2.597	5.0
MW-14	4/9/2020	benzene	1.6	1.0	1.339	2.561	5.0
MW-14	10/1/2020	benzene	2.3	1.0	1.460	2.240	5.0
MW-14	4/1/2021	benzene	<1.0	1.0	0.625	2.375	5.0
MW-14	10/4/2021	benzene	<1.0	1.0	0.184	2.266	5.0
MW-14	4/6/2022	benzene	<1.0	1.0	0.000	2.009	5.0
MW-14	10/4/2023	benzene	<1.0	1.0	0.500	0.500	5.0
MW-14	4/17/2024	benzene	<1.0	1.0	0.500	0.500	5.0
MW-14	10/9/2025	benzene	1.8	1.0	0.060	1.590	5.0
MW-14	4/19/16	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-14	10/10/16	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0

MW-14	4/4/17	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-14	10/18/17	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-14	4/12/18	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-14	10/23/18	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-14	4/8/2019	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-14	10/4/2019	Bis(2-ethylhexyl)phthalate	<6	6.0	---	---	6.0
MW-14	4/9/2020	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-14	10/1/2020	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-14	4/1/2021	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-14	10/4/2021	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-14	4/6/2022	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-14	10/4/2023	Bis(2-ethylhexyl)phthalate	NT	6.0	---	---	6.0
MW-14	4/17/2024	Bis(2-ethylhexyl)phthalate	72.0	6.0	0.000	60.994	6.0
MW-14	4/3/2025	Bis(2-ethylhexyl)phthalate	<6	6.0	0.000	60.832	6.0
MW-14	4/19/16	chlorobenzene	6.1	1.0	1.701	6.899	100.0
MW-14	10/10/16	chlorobenzene	4.4	1.0	1.642	6.808	100.0
MW-14	4/4/17	chlorobenzene	<1.0	1.0	1.155	6.995	100.0
MW-14	10/18/17	chlorobenzene	6.8	1.0	1.133	7.767	100.0
MW-14	4/12/18	chlorobenzene	5.7	1.0	1.118	7.582	100.0
MW-14	10/23/18	chlorobenzene	8.2	1.0	1.348	9.252	100.0
MW-14	4/8/2019	chlorobenzene	9.3	1.0	5.645	9.355	100.0
MW-14	10/4/2019	chlorobenzene	7.5	1.0	5.898	9.452	100.0
MW-14	4/9/2020	chlorobenzene	8.7	1.0	7.527	9.323	100.0
MW-14	10/1/2020	chlorobenzene	9.1	1.0	7.702	9.598	100.0
MW-14	4/1/2021	chlorobenzene	6.2	1.0	6.337	9.413	100.0
MW-14	10/4/2021	chlorobenzene	3.9	1.0	4.130	9.820	100.0
MW-14	4/6/2022	chlorobenzene	5.3	1.0	3.540	8.710	100.0
MW-14	10/4/2023	chlorobenzene	<1.0	1.0	1.031	6.919	100.0
MW-14	4/17/2024	chlorobenzene	<1.0	1.0	0.000	5.414	100.0
MW-14	10/9/2025	chlorobenzene	10.9	1.0	0.000	10.120	100.0
MW-14	4/19/16	chloroethane	<1.0	1.0	0.500	0.500	2800.0
MW-14	10/10/16	chloroethane	1.2	1.0	0.263	1.087	2800.0
MW-14	4/4/17	chloroethane	<1.0	1.0	0.263	1.087	2,800.0
MW-14	10/18/17	chloroethane	1.3	1.0	0.363	1.387	2,800.0
MW-14	4/12/18	chloroethane	<1.0	1.0	0.363	1.387	2,800.0
MW-14	10/23/18	chloroethane	<1.0	1.0	0.229	1.171	2,800.0
MW-14	4/8/2019	chloroethane	<1.0	1.0	0.229	1.171	2,800.0
MW-14	10/4/2019	chloroethane	1.7	1.0	0.094	1.506	2,800.0
MW-14	4/9/2020	chloroethane	<1.0	1.0	0.094	1.506	2,800.0
MW-14	10/1/2020	chloroethane	<1.0	1.0	0.094	1.506	2,800.0
MW-14	4/1/2021	chloroethane	<1.0	1.0	0.094	1.506	2,800.0
MW-14	10/4/2021	chloroethane	<1.0	1.0	0.500	0.500	2,800.0
MW-14	4/6/2022	chloroethane	<1.0	1.0	0.500	0.500	2,800.0
MW-14	10/4/2023	chloroethane	<1.0	1.0	0.500	0.500	2,800.0

MW-14	4/17/2024	chloroethane	<1.0	1.0	0.500	0.500	2,800.0
MW-14	10/9/2025	chloroethane	<1.0	1.0	0.500	0.500	2,800.0
MW-14	4/19/16	dichlorodifluoromethane	<1.0	1.0	0.500	0.500	1,000.0
MW-14	10/10/16	dichlorodifluoromethane	<1.0	1.0	0.500	0.500	1,000.0
MW-14	4/4/17	dichlorodifluoromethane	<1.0	1.0	0.500	0.500	1,000.0
MW-14	10/18/17	dichlorodifluoromethane	<1.0	1.0	0.500	0.500	1,000.0
MW-14	4/12/18	dichlorodifluoromethane	<1.0	1.0	0.500	0.500	1,000.0
MW-14	10/23/18	dichlorodifluoromethane	<1.0	1.0	0.500	0.500	1,000.0
MW-14	4/8/2019	dichlorodifluoromethane	<1.0	1.0	0.500	0.500	1,000.0
MW-14	10/4/2019	dichlorodifluoromethane	1.2	1.0	0.263	1.087	1,000.0
MW-14	4/9/2020	dichlorodifluoromethane	<1.0	1.0	0.263	1.087	1,000.0
MW-14	10/1/2020	dichlorodifluoromethane	<1.0	1.0	0.263	1.087	1,000.0
MW-14	4/1/2021	dichlorodifluoromethane	<1.0	1.0	0.263	1.087	1,000.0
MW-14	10/4/2021	dichlorodifluoromethane	<1.0	1.0	0.500	0.500	1,000.0
MW-14	4/6/2022	dichlorodifluoromethane	<1.0	1.0	0.500	0.500	1,000.0
MW-14	10/4/2023	dichlorodifluoromethane	<1.0	1.0	0.500	0.500	1,000.0
MW-14	4/17/2024	dichlorodifluoromethane	<1.0	1.0	0.500	0.500	1,000.0
MW-14	10/9/2025	dichlorodifluoromethane	NT	1.0	0.500	0.500	1,000.0
MW-14	4/19/16	phorate	<0.4	0.4	0.000	6.405	1.4
MW-14	10/10/16	phorate	2.8	0.4	0.000	3.207	1.4
MW-14	4/4/17	phorate	<0.4	0.4	0.000	3.207	1.4
MW-14	10/18/17	phorate	<0.4	0.4	0.000	2.295	1.4
MW-14	4/12/18	phorate	<0.4	0.4	0.000	2.295	1.4
MW-14	10/23/18	phorate	<0.4	0.4	0.200	0.200	1.4
MW-14	4/8/2019	phorate	<0.4	0.4	0.200	0.200	1.4
MW-14	10/4/2019	phorate	<0.4	0.4	0.200	0.200	1.4
MW-14	4/9/2020	phorate	NT	0.4	0.200	0.200	1.4
MW-14	10/1/2020	phorate	NT	0.4	0.200	0.200	1.4
MW-14	4/1/2021	phorate	NT	0.4	0.200	0.200	1.4
MW-14	10/4/2021	phorate	NT	0.4	0.200	0.200	1.4
MW-14	4/6/2022	phorate	NT	0.4	0.200	0.200	1.4
MW-14	10/4/2023	phorate	<0.4	0.4	0.200	0.200	1.4
MW-14	4/17/2024	phorate	<0.4	0.4	0.200	0.200	1.4
MW-14	10/9/2025	phorate	NT	0.4	0.200	0.200	1.4
MW-14	4/19/16	Tetrachloroethene	<1.0	1.0	---	---	5.0
MW-14	10/10/16	Tetrachloroethene	<1.0	1.0	---	---	5.0
MW-14	4/4/17	Tetrachloroethene	<1.0	1.0	---	---	5.0
MW-14	10/18/17	Tetrachloroethene	<1.0	1.0	0.500	0.500	5.0
MW-14	4/12/18	Tetrachloroethene	<1.0	1.0	0.500	0.500	5.0
MW-14	10/23/18	Tetrachloroethene	1.0	1.0	0.331	0.919	5.0
MW-14	4/8/2019	Tetrachloroethene	<1.0	1.0	0.331	0.919	5.0
MW-14	10/4/2019	Tetrachloroethene	<1.0	1.0	0.331	0.919	5.0
MW-14	4/9/2020	Tetrachloroethene	<1.0	1.0	0.331	0.919	5.0
MW-14	10/1/2020	Tetrachloroethene	<1.0	1.0	0.500	0.500	5.0

MW-14	4/1/2021	Tetrachloroethene	<1.0	1.0	0.500	0.500	5.0
MW-14	10/4/2021	Tetrachloroethene	<1.0	1.0	0.500	0.500	5.0
MW-14	4/6/2022	Tetrachloroethene	<1.0	1.0	0.500	0.500	5.0
MW-14	10/4/2023	Tetrachloroethene	<1.0	1.0	0.500	0.500	5.0
MW-14	4/17/2024	Tetrachloroethene	<1.0	1.0	0.500	0.500	5.0
MW-14	10/9/2025	Tetrachloroethene	<1.0	1.0	0.500	0.500	5.0

Appendix G

Leachate Collection System Performance Evaluation Report

Leachate Collection System Performance Evaluation Report

Leachate System Performance

As per Special Provision X.11 of the Closure Permit dated August 27, 2008, the Grundy County Sanitary Landfill is exempt from installing a leachate collection system based on the completed and certified site risk assessment. However, to control persistent historic leachate seeps a groundwater/leachate collection system has been installed. The first phase of the leachate collection system, installed in 1994, consisted of two leachate collection trenches, a leachate collection lateral with collection headers, and a 10,000 gallon capacity underground leachate storage tank. The second phase of the groundwater/leachate collection system, installed in 1995, consisted of an additional collection lateral installed in the approximate center of the southern half of the landfill. A map is included in Appendix G.1 showing the approximate locations of the leachate collection system.

As stated in the HLW letter dated January 29, 2016 (Doc #85310), landfill staff operate the components of the leachate seep control system manually. IDNR requested a schedule for pump operation and level measurements in the letter dated November 21, 2016. A bi-weekly schedule for level measurements was proposed in the HLW letter dated December 23, 2016 (Doc #88086). IDNR concurred with this recommendation in the letter dated January 26, 2017. The measurement documentation, which includes dates of pump operation, is provided in Appendix G.2.

In 2025, approximately 96,800 gallons of leachate (Appendix G.3) were hauled to the Grundy Center POTW.

Leachate level measurements were completed semi-annually, as per the Revised Permit dated September 28, 2023 (Doc # 107802). Measurements for 2013 through 2025 are included in Appendix G.4. PZ-5 and PZ-8 have been recorded as dry since 2013 and levels at PZ-1 and PZ-2 are fairly consistent documenting minimal fluctuation in leachate levels at PZ-1 and PZ-2.

Leachate Line Cleaning

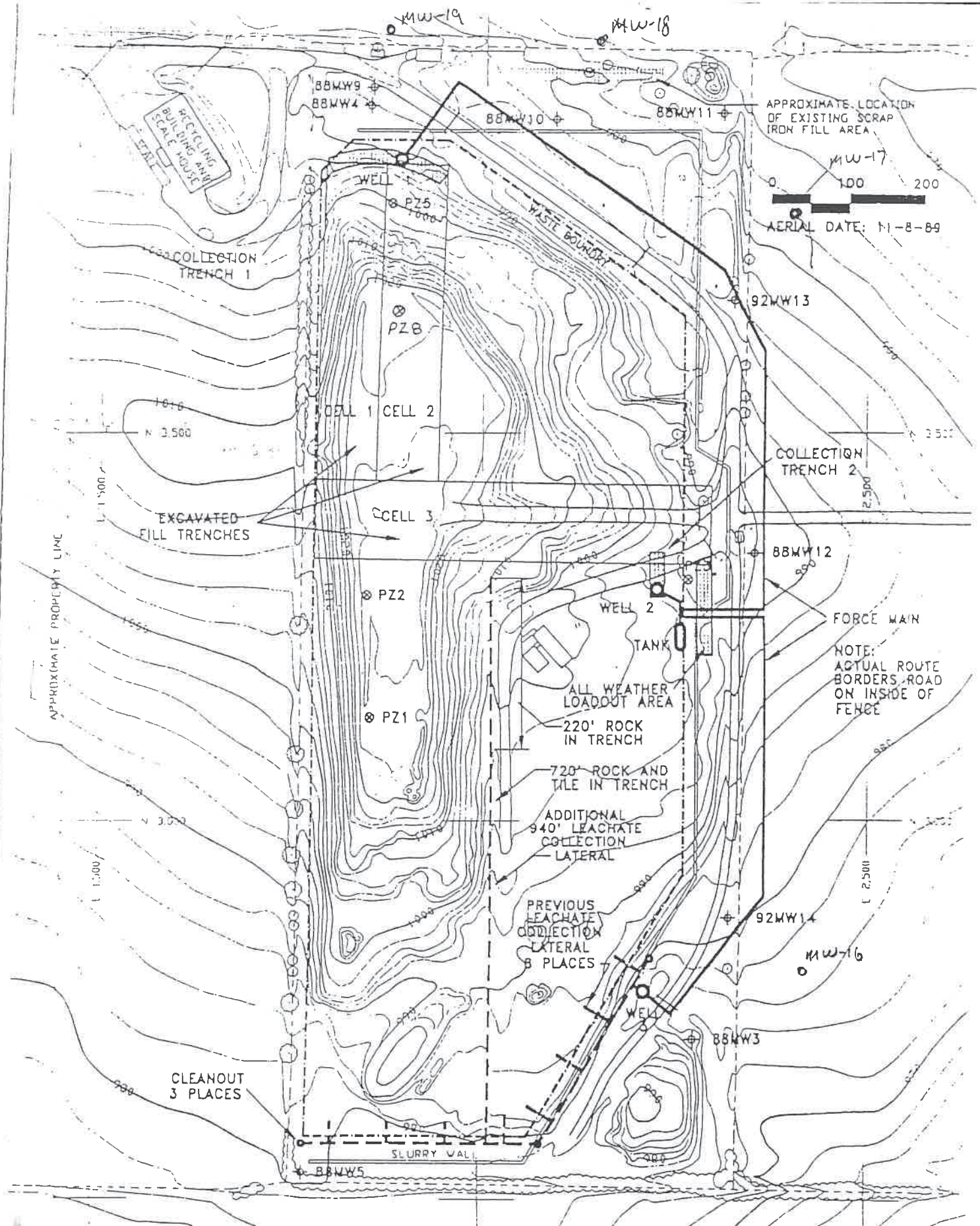
The leachate lines were cleaned on August 17, 2023. As per IDNR regulations, the lines should be cleaned every 3 years (next cleaning will be tentatively scheduled for 2026).

Leachate Treatment and Testing

The Grundy County Landfill has a Treatment Agreement in place with the City of Grundy Center under the City's Permit Number 3833001. The NPDES Permit is included in Appendix G.5. The Grundy County Landfill also has an agreement with Waterloo for emergency assistance related to leachate disposal. The Grundy County Landfill is currently negotiating with the City of Dike to develop a Treatment Agreement for supplemental leachate disposal.

Leachate samples are collected in accordance with the Treatment Agreement. Test results from the annual leachate sample are included in Appendix G.6. Test results from the leachate grab samples are included in Appendix G.7.

Appendix G.1 – Leachate Treatment System Map



Appendix G.2 – Leachate Well Check and Tank Level

BI-WEEKLY LEACHATE WELL CHECK AND TANK LEVEL

DATE	NORTH WELL	CENTER WELL	SOUTH WELL	COLLECTION TANK LEVEL
01-02-25	OK	OK	OK	3,234 gal
01-07-25	OK	OK	OK	3,234 gal
01-14-25	OK	OK	OK	3,234 gal
01-21-25	OK	OK	OK	3,234 gal
01-28-25	OK	OK	OK	3,234 gal
02-04-25	OK	OK	OK	3,234 gal
02-06-25	OK	OK	OK	3,234 gal
02-11-25	OK	OK	OK	3,234 gal
02-18-25	OK	OK	OK	3,234 gal
02-27-25	OK	OK	OK	3,234 gal
03-04-25	OK	OK	OK	3,234 gal
03-06-25	OK	OK	OK	3,234 gal
03-11-25	OK	OK	OK	3,234 gal
03-13-25	OK	OK	OK	3,234 gal
03-18-25	OK	OK	OK	3,234 gal
03-20-25	OK	OK	OK	3,234 gal
03-25-25	Pumped	OK	Pumped	8,464 gal
03-27-25	OK	OK	OK	8,464 gal
04-03-25	OK	OK	OK	8,464 gal
04-09-25	OK	Hauled 1,200 gal	OK	7,172 gal
04-10-25	OK	Hauled 1,200 gal	OK	6,143 gal
04-11-25	OK	Hauled 1,200 gal	OK	4,947 gal
04-15-25	Pumped	Hauled 1,200 gal	Pumped	6,404 gal
04-16-25	OK	Hauled 1,200 gal	OK	5,214 gal
04-17-25	OK	Hauled 1,200 gal	Pumped	4,813 gal
04-21-25	OK	Hauled 1,200 gal	OK	3,492 gal
04-22-25	Pumped	Hauled 1,200 gal	OK	10,000 gal
04-23-25	OK	Hauled 1,200 gal	OK	8,985 gal
04-29-25	OK	Hauled 1,200 gal	OK	7,663 gal

04-30-25	OK	Hauled 1,200 gal	OK	6,404 gal
05-01-25	OK	Hauled 1,200 gal	OK	5,263 gal
05-02-25	Pumped	Hauled 1,200 gal	Pumped	4,679 gal
05-03-25	OK	Hauled 1,200 gal	Pumped	6,404 gal
05-05-25	OK	Hauled 1,200 gal	OK	5,214 gal
05-06-25	Pumped	Hauled 1,200 gal	OK	5,080 gal
05-07-25	OK	Hauled 1,200 gal	OK	3,752 gal
05-08-25	Pumped	Hauled 1,200 gal	Pumped	9,352 gal
05-13-25	Pumped	Hauled 1,200 gal	OK	8,247 gal
05-14-25	OK	Hauled 1,200 gal	OK	7,046 gal
05-15-25	OK	Hauled 1,200 gal	OK	5,746 gal
05-16-25	OK	Hauled 1,200 gal	OK	4,679 gal
05-20-25	OK	OK	OK	4,679 gal
05-22-25	Pumped	Hauled 1,200 gal	OK	8,576 gal
05-23-25	OK	Hauled 1,200 gal	OK	7,296 gal
05-27-25	Pumped	Hauled 1,200 gal	Pumped	7,783 gal
05-28-25	OK	Hauled 1,200 gal	OK	6,534 gal
05-29-25	Pumped	Hauled 1,200 gal	Pumped	6,797 gal
06-02-25	OK	Hauled 1,200 gal	OK	5,480 gal
06-03-25	OK	Hauled 1,200 gal	OK	4,280 gal
06-04-25	OK	Hauled 1,200 gal	OK	2,979 gal
06-05-25	Pumped	Hauled 1,200 gal	Pumped	5,614 gal
06-10-25	OK	Hauled 1,200 gal	OK	4,413 gal
06-17-25	Pumped	Hauled 1,200 gal	Pumped	5,480 gal
06-19-25	OK	Hauled 1,200 gal	OK	4,148 gal
06-24-25	Pumped	Pumped	Pumped	9,081 gal
06-26-25	OK	OK	OK	9,081 gal
07-01-25	OK	Hauled 1,000 gal	OK	8,018 gal
07-03-25	OK	Hauled 1,000 gal	OK	6,919 gal
07-08-25	OK	Hauled 1,000 gal	OK	5,879 gal
07-09-25	OK	Hauled 1,000 gal	OK	4,947 gal
07-10-25	Pumped	Pumped	Pumped	9,264 gal

07-15-25	OK	Hauled 1,000 gal	OK	8,247 gal
07-17-25	OK	Hauled 1,000 gal	OK	7,172 gal
07-22-25	OK	Hauled 1,000 gal	OK	6,534 gal
07-24-25	Pumped	Hauled 1,000 gal	OK	8,018 gal
07-29-25	OK	Hauled 1,000 gal	OK	6,916 gal
07-31-25	OK	Hauled 1,000 gal	Pumped	6,143 gal
08-05-25	Pumped	Hauled 1,000 gal	Pumped	10,000 gal
08-06-25	OK	Hauled 1,000 gal	OK	9,081 gal
08-07-25	OK	Hauled 1,000 gal	OK	8,018 gal
08-08-25	OK	Hauled 1,000 gal	OK	6,919 gal
08-12-25	Pumped	Hauled 1,000 gal	Pumped	9,976 gal
08-13-25	OK	Hauled 1,000 gal	OK	8,985 gal
08-14-25	OK	Hauled 1,000 gal	OK	7,901 gal
08-15-25	OK	Hauled 1,000 gal	OK	6,919 gal
08-19-25	Pumped	Hauled 1,000 gal	Pumped	9,731 gal
08-20-25	OK	Hauled 1,000 gal	OK	8,785 gal
08-21-25	OK	Hauled 1,000 gal	Pumped	7,663 gal
08-22-25	OK	Hauled 1,000 gal	OK	6,534 gal
08-26-25	OK	Hauled 1,000 gal	Pumped	6,143 gal
08-27-25	OK	Hauled 1,000 gal	OK	5,080 gal
08-28-25	Pumped	Hauled 1,000 gal	Pumped	9,683 gal
08-29-25	OK	Hauled 1,000 gal	OK	8,682 gal
09-02-25	Pumped	Hauled 1,000 gal	Pumped	9,264 gal
09-03-25	OK	Hauled 1,000 gal	OK	8,133 gal
09-04-25	Pumped	Hauled 1,000 gal	OK	8,886 gal
09-05-25	OK	Hauled 1,000 gal	OK	7,783 gal
09-09-25	OK	Hauled 1,000 gal	OK	6,792 gal
09-10-25	OK	Hauled 1,000 gal	OK	5,614 gal
09-11-25	Pumped	Hauled 1,000 gal	Pumped	7,783 gal
09-12-25	OK	Hauled 1,000 gal	OK	6,792 gal
09-16-25	Pumped	Hauled 1,000 gal	Pumped	6,919 gal
09-18-25	Pumped	Hauled 1,000 gal	Pumped	8,018 gal

09-19-25	OK	Hauled 1,000 gal	OK	7,046 gal
09-23-25	OK	Hauled 1,000 gal	Pumped	7,046 gal
09-24-25	OK	Hauled 1,000 gal	OK	6,011 gal
09-25-25	Pumped	Hauled 1,000 gal	OK	9,793 gal
09-26-25	OK	Hauled 1,000 gal	OK	8,682 gal
09-30-25	OK	Hauled 1,000 gal	OK	7,542 gal
10-02-25	Pumped	Hauled 1,000 gal	Pumped	8,018 gal
10-03-25	OK	Hauled 1,000 gal	OK	6,919 gal
10-07-25	OK	Hauled 1,000 gal	OK	5,879 gal
10-08-25	OK	Hauled 1,000 gal	OK	4,818 gal
10-09-25	Pumped	Hauled 1,000 gal	Pumped	6,274 gal
10-10-25	OK	Hauled 1,000 gal	OK	5,214 gal
10-14-25	OK	Hauled 1,000 gal	OK	4,280 gal
10-16-25	Pumped	Hauled 1,000 gal	Pumped	5,214 gal
10-17-25	OK	Hauled 1,000 gal	OK	4,148 gal
10-21-25	OK	Hauled 1,000 gal	OK	3,106 gal
10-23-25	Pumped	Hauled 1,000 gal	Pumped	2,240 gal
10-28-25	Pumped	Hauled 1,000 gal	Pumped	2,604 gal
10-30-25	OK	Hauled 1,000 gal	OK	1,663 gal
11-04-25	Pumped	Hauled 1,000 gal	Pumped	2,728 gal
11-06-25	OK	OK	OK	2,728 gal
11-13-25	OK	OK	OK	2,728 gal
11-18-25	OK	OK	OK	2,728 gal
11-25-25	OK	OK	OK	2,728 gal
12-02-25	OK	OK	OK	2,728 gal
12-09-25	OK	OK	OK	2,728 gal
12-11-25	OK	OK	OK	2,728 gal
12-16-25	OK	OK	OK	2,728 gal
12-18-25	OK	OK	OK	2,728 gal
12-23-25	OK	OK	OK	2,728 gal
12-30-25	OK	OK	OK	2,728 gal

Appendix G.3- Leachate Volumes Hauled to Grundy Center POTW

	Leachate Collection	
	Grundy County Sanitary Landfill	
	2025	
	Leachate Volume	
Date	(gallons)	Hauled to
04-09-25	1200 gal.	GCWWTP
04-10-25	1200 gal.	GCWWTP
04-11-25	1200 gal.	GCWWTP
04-15-25	1200 gal.	GCWWTP
04-16-25	1200 gal.	GCWWTP
04-17-25	1200 gal.	GCWWTP
04-21-25	1200 gal.	GCWWTP
04-22-25	1200 gal.	GCWWTP
04-23-25	1200 gal.	GCWWTP
04-29-25	1200 gal.	GCWWTP
04-30-25	1200 gal.	GCWWTP
05-01-25	1200 gal.	GCWWTP
05-02-25	1200 gal.	GCWWTP
05-03-25	1200 gal.	GCWWTP
05-05-25	1200 gal.	GCWWTP
05-06-25	1200 gal.	GCWWTP
05-07-25	1200 gal.	GCWWTP
05-08-25	1200 gal.	GCWWTP
05-13-25	1200 gal.	GCWWTP
05-14-25	1200 gal.	GCWWTP
05-15-25	1200 gal.	GCWWTP
05-16-25	1200 gal.	GCWWTP
05-22-25	1200 gal.	GCWWTP
05-23-25	1200 gal.	GCWWTP
05-27-25	1200 gal.	GCWWTP
05-28-25	1200 gal.	GCWWTP
05-29-25	1200 gal.	GCWWTP
06-02-25	1200 gal.	GCWWTP

	Leachate Collection	
	Grundy County Sanitary Landfill	
	2025	
	Leachate Volume	
Date	(gallons)	Hauled to
06-03-25	1200 gal.	GCWWTP
06-04-25	1200 gal.	GCWWTP
06-05-25	1200 gal.	GCWWTP
06-10-25	1200 gal.	GCWWTP
06-17-25	1200 gal.	GCWWTP
06-19-25	1200 gal.	GCWWTP
07-01-25	1000 gal.	GCWWTP
07-03-25	1000 gal.	GCWWTP
07-08-25	1000 gal.	GCWWTP
07-09-25	1000 gal.	GCWWTP
07-15-25	1000 gal.	GCWWTP
07-17-25	1000 gal.	GCWWTP
07-22-25	1000 gal.	GCWWTP
07-24-25	1000 gal.	GCWWTP
07-29-25	1000 gal.	GCWWTP
07-31-25	1000 gal.	GCWWTP
08-05-25	1000 gal.	GCWWTP
08-06-25	1000 gal.	GCWWTP
08-07-25	1000 gal.	GCWWTP
08-08-25	1000 gal.	GCWWTP
08-12-25	1000 gal.	GCWWTP
08-13-25	1000 gal.	GCWWTP
08-14-25	1000 gal.	GCWWTP
08-15-25	1000 gal.	GCWWTP
08-19-25	1000 gal.	GCWWTP
08-20-25	1000 gal.	GCWWTP
08-21-25	1000 gal.	GCWWTP
08-22-25	1000 gal.	GCWWTP

	Leachate Collection	
	Grundy County Sanitary Landfill	
	2025	
	Leachate Volume	
Date	(gallons)	Hauled to
08-26-25	1000 gal.	GCWWTP
08-27-25	1000 gal.	GCWWTP
08-28-25	1000 gal.	GCWWTP
08-29-25	1000 gal.	GCWWTP
09-02-25	1000 gal.	GCWWTP
09-03-25	1000 gal.	GCWWTP
09-04-25	1000 gal.	GCWWTP
09-05-25	1000 gal.	GCWWTP
09-09-25	1000 gal.	GCWWTP
09-10-25	1000 gal.	GCWWTP
09-11-25	1000 gal.	GCWWTP
09-12-25	1000 gal.	GCWWTP
09-16-25	1000 gal.	GCWWTP
09-18-25	1000 gal.	GCWWTP
09-19-25	1000 gal.	GCWWTP
09-23-25	1000 gal.	GCWWTP
09-24-25	1000 gal.	GCWWTP
09-25-25	1000 gal.	GCWWTP
09-26-25	1000 gal.	GCWWTP
09-30-25	1000 gal.	GCWWTP
10-02-25	1000 gal.	GCWWTP
10-03-25	1000 gal.	GCWWTP
10-07-25	1000 gal.	GCWWTP
10-08-25	1000 gal.	GCWWTP
10-09-25	1000 gal.	GCWWTP
10-10-25	1000 gal.	GCWWTP
10-14-25	1000 gal.	GCWWTP
10-16-25	1000 gal.	GCWWTP

	Leachate Collection	
	Grundy County Sanitary Landfill	
	2025	
	Leachate Volume	
Date	(gallons)	Hauled to
10-17-25	1000 gal.	GCWWTP
10-21-25	1000 gal.	GCWWTP
10-23-25	1000 gal.	GCWWTP
10-28-25	1000 gal.	GCWWTP
10-30-25	1000 gal.	GCWWTP
11-04-25	1000 gal.	GCWWTP
	96800 gal.	

Appendix G.4 - Leachate Level Measurements

Leachate Elevation Data
Grundy County Sanitary Landfill
38-SDP-1-75C

Well/TOC	PZ-1 1024				PZ-2 1027				PZ-5 1003.12				PZ-8 1024			
	Leachate Depth	Leachate Elevation	Well Bottom Elevation	Leachate Thickness (ft)	Leachate Depth	Leachate Elevation	Well Bottom Elevation	Leachate Thickness (ft)	Leachate Depth	Leachate Elevation	Well Bottom Elevation	Leachate Thickness (ft)	Leachate Depth	Leachate Elevation	Well Bottom Elevation	Leachate Thickness (ft)
04/04/13	23.00	1001.00	995	6.00	18.07	1008.93	999	9.93	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
05/07/13	22.40	1001.60	995	6.60	17.65	1009.35	999	10.35	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
06/06/13	22.28	1001.72	995	6.72	16.40	1010.60	999	11.60	11.18	991.94	979.00	12.94	Dry	Dry	981.00	Dry
07/02/13	22.35	1001.65	995	6.65	18.50	1008.50	999	9.50	11.40	991.72	979.00	12.72	Dry	Dry	981.00	Dry
08/06/13	22.45	1001.55	995	6.55	18.82	1008.18	999	9.18	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
09/13/13	22.63	1001.37	995	6.37	19.25	1007.75	999	8.75	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
10/18/13	22.75	1001.25	995	6.25	19.26	1007.74	999	8.74	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
11/14/13	22.85	1001.15	995	6.15	19.27	1007.73	999	8.73	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
12/17/13	22.81	1001.19	995	6.19	19.25	1007.75	999	8.75	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
01/16/14	22.86	1001.14	995	6.14	Frozen	Frozen	Frozen	Frozen	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
02/13/14	22.90	1001.10	995	6.10	Frozen	Frozen	Frozen	Frozen	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
03/17/14	22.95	1001.05	995	6.05	19.40	1007.60	999	8.60	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
04/12/14	23.02	1000.98	995	5.98	19.61	1007.39	999	8.39	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
05/20/14	22.80	1001.20	995	6.20	18.23	1008.77	999	9.77	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
06/17/14	22.55	1001.45	995	6.45	18.38	1008.62	999	9.62	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
07/10/14	22.40	1001.60	995	6.60	18.47	1008.53	999	9.53	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
08/12/14	22.47	1001.53	995	6.53	18.49	1008.51	999	9.51	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
09/11/14	22.49	1001.51	995	6.51	18.52	1008.48	999	9.48	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
10/09/14	22.72	1001.28	995	6.28	19.50	1007.5	999	8.50	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
11/13/14	22.78	1001.22	995	6.22	19.53	1007.47	999	8.47	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
12/11/14	22.80	1001.20	995	6.20	19.57	1007.43	999	8.43	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
01/20/15	22.83	1001.17	995	6.17	19.70	1007.3	999	8.30	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
02/17/15	22.86	1001.14	995	6.14	19.76	1007.24	999	8.24	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
03/19/15	22.88	1001.12	995	6.12	19.79	1007.21	999	8.21	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
04/07/15	22.89	1001.11	995	6.11	19.53	1007.47	999	8.47	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
05/12/15	22.55	1001.45	995	6.45	18.90	1008.10	999	9.10	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
06/16/15	22.43	1001.57	995	6.57	18.80	1008.2	999	9.20	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
07/09/15	22.35	1001.65	995	6.65	18.72	1008.28	999	9.28	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
08/11/15	22.38	1001.62	995	6.62	18.75	1008.25	999	9.25	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
09/15/15	22.40	1001.60	995	6.60	18.82	1008.18	999	9.18	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
10/06/15	22.47	1001.53	995	6.53	18.85	1008.15	999	9.15	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
11/05/15	22.50	1001.50	995	6.50	19.20	1007.8	999	8.80	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
12/29/15	22.41	1001.59	995	6.59	19.15	1007.85	999	8.85	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
01/14/16	21.80	1002.20	995	7.20	17.80	1009.2	999	10.20	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
02/16/16	21.77	1002.23	995	7.23	17.21	1009.79	999	10.79	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
03/17/16	21.73	1002.27	995	7.27	17.12	1009.88	999	10.88	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
04/14/16	21.74	1002.26	995	7.26	17.04	1009.96	999	10.96	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
05/10/16	21.90	1002.10	995	7.10	17.28	1009.72	999	10.72	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
06/07/16	22.15	1001.85	995	6.85	17.55	1009.45	999	10.45	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
07/19/16	22.24	1001.76	995	6.76	17.62	1009.38	999	10.38	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
08/09/16	22.30	1001.70	995	6.70	17.67	1009.33	999	10.33	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
09/15/16	22.27	1001.73	995	6.73	17.65	1009.35	999	10.35	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
10/06/16	22.20	1001.80	995	6.80	17.55	1009.45	999	10.45	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
11/17/16	22.25	1001.75	995	6.75	17.58	1009.42	999	10.42	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
12/15/16	22.29	1001.71	995	6.71	17.63	1009.37	999	10.37	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
01/19/17	22.37	1001.63	995	6.63	18.53	1008.47	999	9.47	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
02/16/17	22.55	1001.45	995	6.45	18.90	1008.1	999	9.10	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
03/21/17	22.30	1001.70	995	6.70	18.25	1008.75	999	9.75	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
04/11/17	22.10	1001.90	995	6.90	17.45	1009.55	999	10.55	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
05/16/17	21.92	1002.08	995	7.08	16.79	1010.21	999	11.21	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
06/20/17	22.00	1002.00	995	7.00	17.56	1009.44	999	10.44	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
07/11/17	22.20	1001.80	995	6.80	18.22	1008.78	999	9.78	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
08/08/17	22.32	1001.68	995	6.68	18.40	1008.6	999	9.60	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
09/12/17	22.38	1001.62	995	6.62	18.52	1008.48	999	9.48	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
10/05/17	22.50	1001.50	995	6.50	18.62	1008.38	999	9.38	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
11/16/17	22.36	1001.64	995	6.64	18.10	1008.9	999	9.90	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
12/19/17	22.30	1001.70	995	6.70	17.85	1009.15	999	10.15	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
01/16/18	22.38	1001.62	995	6.62	17.79	1009.21	999	10.21	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
02/22/18	22.46	1001.54	995	6.54	17.62	1009.38	999	10.38	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
03/15/18	22.58	1001.42	995	6.42	17.42	1009.58	999	10.58	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
04/17/18	22.35	1001.65	995	6.65	17.10	1009.9	999	10.90	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
05/10/18	22.18	1001.82	995	6.82	16.86	1010.14	999	11.14	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
06/12/18	22.13	1001.87	995	6.87	16.50	1010.5	999	11.50	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
07/05/18	22.00	1002.00	995	7.00	15.73	1011.27	999	12.27	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
08/14/18	21.97	1002.03	995	7.03	15.92	1011.08	999	12.08	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
09/13/18	21.93	1002.07	995	7.07	16.58	1010.42	999	11.42	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
10/18/18	21.85	1002.15	995	7.15	17.88	1009.12	999	10.12	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
11/06/18	21.60	1002.40	995	7.40	17.38	1009.62	999	10.62	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
12/06/18	21.13	1002.87	995	7.87	17.11	1009.89	999	10.89	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry

Leachate Elevation Data
Grundy County Sanitary Landfill
38-SDP-1-75C

Well/TOC	PZ-1 1024				PZ-2 1027				PZ-5 1003.12				PZ-8 1024			
	Leachate Depth	Leachate Elevation	Well Bottom Elevation	Leachate Thickness (ft)	Leachate Depth	Leachate Elevation	Well Bottom Elevation	Leachate Thickness (ft)	Leachate Depth	Leachate Elevation	Well Bottom Elevation	Leachate Thickness (ft)	Leachate Depth	Leachate Elevation	Well Bottom Elevation	Leachate Thickness (ft)
01/16/19	22.34	1001.66	995	6.66	18.20	1008.8	999	9.80	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
02/01/19	22.48	1001.52	995	6.52	17.80	1009.2	999	10.20	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
03/01/19	22.26	1001.74	995	6.74	17.62	1009.38	999	10.38	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
04/08/19	21.98	1002.02	995	7.02	16.87	1010.13	999	11.13	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
05/01/19	21.70	1002.30	995	7.30	16.52	1010.48	999	11.48	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
06/01/19	21.88	1002.12	995	7.12	16.57	1010.43	999	11.43	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
07/11/19	22.06	1001.94	995	6.94	16.60	1010.4	999	11.40	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
08/01/19	22.23	1001.77	995	6.77	16.68	1010.32	999	11.32	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
09/01/19	22.45	1001.55	995	6.55	16.79	1010.21	999	11.21	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
10/04/19	22.48	1001.52	995	6.52	16.48	1010.52	999	11.52	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
11/01/19	22.45	1001.55	995	6.55	16.80	1010.2	999	11.20	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
12/01/19	22.41	1001.59	995	6.59	16.74	1010.26	999	11.26	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
01/01/20	22.35	1001.65	995	6.65	16.71	1010.29	999	11.29	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
02/01/20	22.05	1001.95	995	6.95	16.60	1010.4	999	11.40	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
03/01/20	21.95	1002.05	995	7.05	15.85	1011.15	999	12.15	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
04/01/20	21.60	1002.40	995	7.40	15.35	1011.65	999	12.65	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
05/01/20	21.68	1002.32	995	7.32	15.70	1011.3	999	12.30	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
06/01/20	21.73	1002.27	995	7.27	16.02	1010.98	999	11.98	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
07/01/20	22.04	1001.96	995	6.96	16.41	1010.59	999	11.59	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
08/01/20	22.07	1001.93	995	6.93	16.79	1010.21	999	11.21	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
09/01/20	22.01	1001.99	995	6.99	17.02	1009.98	999	10.98	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
10/01/20	21.95	1002.05	995	7.05	16.90	1010.1	999	11.10	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
11/01/20	21.97	1002.03	995	7.03	19.94	1007.06	999	8.06	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
12/01/20	22.03	1001.97	995	6.97	17.00	1010	999	11.00	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
01/01/21	22.40	1001.60	995	6.60	16.80	1010.2	999	11.20	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
02/01/21	22.20	1001.80	995	6.80	16.73	1010.27	999	11.27	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
03/01/21	21.97	1002.03	995	7.03	16.35	1010.65	999	11.65	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
04/01/21	22.35	1001.65	995	6.65	16.69	1010.31	999	11.31	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
05/01/21	22.70	1001.30	995	6.30	16.89	1010.11	999	11.11	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
06/01/21	22.73	1001.27	995	6.27	17.05	1009.95	999	10.95	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
07/01/21	22.80	1001.20	995	6.20	18.10	1008.9	999	9.90	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
08/01/21	22.93	1001.07	995	6.07	18.37	1008.63	999	9.63	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
09/01/21	22.10	1001.90	995	6.90	18.03	1008.97	999	9.97	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
10/01/21	21.95	1002.05	995	7.05	17.83	1009.17	999	10.17	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
11/01/21	21.87	1002.13	995	7.13	18.00	1009	999	10.00	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
12/01/21	22.47	1001.53	995	6.53	18.10	1008.9	999	9.90	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
01/01/22	21.73	1002.27	995	7.27	17.97	1009.03	999	10.03	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
02/01/22	22.29	1001.71	995	6.71	18.23	1008.77	999	9.77	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
03/01/22	22.57	1001.43	995	6.43	17.92	1009.08	999	10.08	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
04/01/22	22.63	1001.37	995	6.37	18.15	1008.85	999	9.85	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
05/01/22	22.75	1001.25	995	6.25	17.83	1009.17	999	10.17	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
06/01/22	22.70	1001.30	995	6.30	17.87	1009.13	999	10.13	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
07/01/22	22.45	1001.55	995	6.55	17.67	1009.33	999	10.33	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
08/01/22	21.98	1002.02	995	7.02	17.59	1009.41	999	10.41	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
09/01/22	22.28	1001.72	995	6.72	17.35	1009.65	999	10.65	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
10/01/22	22.50	1001.50	995	6.50	17.40	1009.6	999	10.60	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
11/01/22	21.80	1002.20	995	7.20	17.38	1009.62	999	10.62	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
12/01/22	22.10	1001.90	995	6.90	17.69	1009.31	999	10.31	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
01/01/23	22.34	1001.66	995	6.66	18.00	1009	999	10.00	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
02/01/23	22.79	1001.21	995	6.21	18.77	1008.23	999	9.23	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
03/01/23	22.73	1001.27	995	6.27	18.35	1008.65	999	9.65	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
04/01/23	22.91	1001.09	995	6.09	18.21	1008.79	999	9.79	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
05/01/23	23.56	1000.44	995	5.44	18.65	1008.35	999	9.35	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
06/01/23	23.41	1000.59	995	5.59	18.37	1008.63	999	9.63	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
07/01/23	22.87	1001.13	995	6.13	18.31	1008.69	999	9.69	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
08/01/23	23.87	1000.13	995	5.13	18.92	1008.08	999	9.08	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
10/04/23	---	---	---	---	19.70	1007.3	999	8.30	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
04/17/24	24.98	999.02	995	4.02	13.60	1013.4	999	14.40	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
10/22/24	Dry	Dry	995	Dry	21.27	1005.73	999	6.73	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
04/03/25	Dry	Dry	995	Dry	16.90	1010.1	999	11.10	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry
10/09/25	Dry	Dry	995	Dry	19.42	1007.58	999	8.58	Dry	Dry	979.00	Dry	Dry	Dry	981.00	Dry

Frequency of leachate head level measurements changed to semi-annually in the Revised Closure Permit dated September 28, 2023

Appendix G.5 - Leachate Treatment Agreement

Renewal Application
was filed May, 2024



**STATE OF IOWA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROGRAM
AMENDMENT TO NPDES PERMIT**

Iowa NPDES Permit #:	3833001
Date of Issuance:	September 1, 2019
Date of Expiration:	August 31, 2024
Date of this Amendment:	September 2, 2019
EPA Number:	IA0024511

Name and Mailing Address of Applicant:

CITY OF GRUNDY CENTER
703 F AVENUE
GRUNDY CENTER, IA 50638-1450

Identity and Location of Facility:

GRUNDY CENTER CITY OF STP
Township 87N, Range 16W, Section 07, Grundy County

Pursuant to the authority Iowa Code Section 455B.174, and of Rule 567--64.3, Iowa Administrative Code, the Director of the Iowa Department of Natural Resources has issued the above referenced permit. Pursuant to the same authority the Director hereby amends said permit as set forth below:

The permit is amended to correct typographical errors on the Additional Monitoring Requirements – Grundy County Landfill page. Please remove page #14 from the NPDES permit and replace it with the enclosed page #14.

For the Department of Natural Resources:

By _____
Karen Lodden
NPDES Section
ENVIRONMENTAL SERVICES DIVISION

c: FO 2

IOWA DEPARTMENT OF NATURAL RESOURCES

National Pollutant Discharge Elimination System (NPDES) Permit

OWNER NAME & ADDRESS
CITY OF GRUNDY CENTER
703 F AVENUE
GRUNDY CENTER, IA 50638-1450

FACILITY NAME & ADDRESS
GRUNDY CENTER CITY OF STP
EAST OF TOWN OFF C AVENUE
GRUNDY CENTER, IA 50638-1450

Section 7, T87N, R16W
Grundy County

IOWA NPDES PERMIT NUMBER: 3833001
DATE OF ISSUANCE: 09/01/2019
DATE OF EXPIRATION: 08/31/2024

**YOU ARE REQUIRED TO FILE FOR RENEWAL
OF THIS PERMIT BY:** 03/04/2024
EPA NUMBER: IA0024511

This permit is issued pursuant to the authority of section 402(b) of the Clean Water Act (33 U.S.C 1342(b)), Iowa Code section 455B.174, and rule 567-64.3, Iowa Administrative Code. You are authorized to operate the disposal system and to discharge the pollutants specified in this permit in accordance with the effluent limitations, monitoring requirements and other terms set forth in this permit.

You may appeal any condition of this permit by filing a written notice of appeal and request for administrative hearing with the director of this department within 30 days of your receipt of this permit.

Any existing unexpired Iowa operation permit or Iowa NPDES permit previously issued by the department for the facility identified above is revoked by the issuance of this permit. This provision does not apply to any authorization to discharge under the terms and conditions of a general permit issued by the department or to any permit issued exclusively for the discharge of stormwater.

FOR THE DEPARTMENT OF NATURAL RESOURCES

By _____

Karen Lodden
NPDES Section
ENVIRONMENTAL SERVICES DIVISION

Facility Name: GRUNDY CENTER CITY OF STP

Permit Number: 3833001

Outfall No.: 001 DISCHARGE FROM SEQUENCING BATCH REACTOR WASTEWATER TREATMENT FACILITY WITH UV DISINFECTION.

Receiving Stream: BLACK HAWK CREEK

Route of Flow: BLACK HAWK CREEK

Class A2 waters are secondary contact recreational use waters in which recreational or other uses may result in contact with the water that is either incidental or accidental. During the recreational use, the probability of ingesting appreciable quantities of water is minimal. Class A2 uses include fishing, commercial and recreational boating, any limited contact incidental to shoreline activities and activities in which users do not swim or float in the water body while on a boating activity.

Waters designated Class B(WW2) are those in which flow or other physical characteristics are capable of supporting a resident aquatic community that includes a variety of native nongame fish and invertebrate species. The flow and other physical characteristics limit the maintenance of warm water game fish populations. These waters generally consist of small perennially flowing streams.

Outfall No.: 002 BYPASS FROM MAIN TREATMENT PLANT.

Receiving Stream: BLACK HAWK CREEK

Route of Flow: BLACK HAWK CREEK

Class A2 waters are secondary contact recreational use waters in which recreational or other uses may result in contact with the water that is either incidental or accidental. During the recreational use, the probability of ingesting appreciable quantities of water is minimal. Class A2 uses include fishing, commercial and recreational boating, any limited contact incidental to shoreline activities and activities in which users do not swim or float in the water body while on a boating activity.

Waters designated Class B(WW2) are those in which flow or other physical characteristics are capable of supporting a resident aquatic community that includes a variety of native nongame fish and invertebrate species. The flow and other physical characteristics limit the maintenance of warm water game fish populations. These waters generally consist of small perennially flowing streams.

Outfall No.: 003 BYPASS FROM EQUALIZATION BASIN.

Receiving Stream: BLACK HAWK CREEK

Route of Flow: BLACK HAWK CREEK

Class A2 waters are secondary contact recreational use waters in which recreational or other uses may result in contact with the water that is either incidental or accidental. During the recreational use, the probability of ingesting appreciable quantities of water is minimal. Class A2 uses include fishing, commercial and recreational boating, any limited contact incidental to shoreline activities and activities in which users do not swim or float in the water body while on a boating activity.

Waters designated Class B(WW2) are those in which flow or other physical characteristics are capable of supporting a resident aquatic community that includes a variety of native nongame fish and invertebrate species. The flow and other physical characteristics limit the maintenance of warm water game fish populations. These waters generally consist of small perennially flowing streams.

Bypasses from any portion of a treatment facility or from a sanitary sewer collection system designed to carry only sewage are prohibited.

Facility Name: GRUNDY CENTER CITY OF STP
Permit Number: 3833001

Effluent Limitations:

You are prohibited from discharging pollutants except in compliance with the following effluent limitations:

001 DISCHARGE FROM SEQUENCING BATCH REACTOR WASTEWATER TREATMENT FACILITY WITH UV DISINFECTION.

Outfall: 001 Effective Dates: 09/01/2019 to 08/31/2024			
Parameter	Season	Limit Type	Limits
CBOD5			
	Yearly	7 Day Average	40 MG/L 400 LBS/DAY
	Yearly	30 Day Average	25 MG/L 250 LBS/DAY
TOTAL SUSPENDED SOLIDS			
	Yearly	7 Day Average	45 MG/L 450 LBS/DAY
	Yearly	30 Day Average	30 MG/L 300 LBS/DAY
AMMONIA NITROGEN (N)			
	JAN	30 Day Average	6.7 MG/L 45.2 LBS/DAY
	JAN	Daily Maximum	13.5 MG/L 108 LBS/DAY
	FEB	30 Day Average	7.6 MG/L 52.3 LBS/DAY
	FEB	Daily Maximum	13.5 MG/L 108 LBS/DAY
	MAR	30 Day Average	3.4 MG/L 27.9 LBS/DAY
	MAR	Daily Maximum	6.1 MG/L 49.6 LBS/DAY
	APR	30 Day Average	3.0 MG/L 20.2 LBS/DAY
	APR	Daily Maximum	6.1 MG/L 49.6 LBS/DAY
	MAY	30 Day Average	3.4 MG/L 23.0 LBS/DAY
	MAY	Daily Maximum	6.1 MG/L 49.6 LBS/DAY
	JUN	30 Day Average	2.5 MG/L 17.3 LBS/DAY
	JUN	Daily Maximum	6.1 MG/L 49.6 LBS/DAY
	JUL	30 Day Average	2.0 MG/L 13.3 LBS/DAY
	JUL	Daily Maximum	5.7 MG/L 45.3 LBS/DAY
	AUG	30 Day Average	1.9 MG/L 12.6 LBS/DAY
	AUG	Daily Maximum	5.7 MG/L 45.3 LBS/DAY
	SEP	30 Day Average	2.1 MG/L 14.0 LBS/DAY
	SEP	Daily Maximum	6.1 MG/L 49.6 LBS/DAY

Facility Name: GRUNDY CENTER CITY OF STP

Permit Number: 3833001

Outfall: 001 Effective Dates: 09/01/2019 to 08/31/2024			
Parameter	Season	Limit Type	Limits
AMMONIA NITROGEN (N)			
	OCT	30 Day Average	3.1 MG/L 20.6 LBS/DAY
	OCT	Daily Maximum	6.1 MG/L 49.6 LBS/DAY
	NOV	30 Day Average	3.4 MG/L 27.9 LBS/DAY
	NOV	Daily Maximum	6.1 MG/L 49.6 LBS/DAY
	DEC	30 Day Average	3.4 MG/L 27.9 LBS/DAY
	DEC	Daily Maximum	6.1 MG/L 49.6 LBS/DAY
NITROGEN, TOTAL (AS N)			
	Yearly	30 Day Average	64 LBS/DAY
	Yearly	Daily Maximum	110 LBS/DAY
ACUTE TOXICITY, CERIODAPHNIA			
	Yearly	Daily Maximum	1 NO TOXICITY
ACUTE TOXICITY, PIMEPHALES			
	Yearly	Daily Maximum	1 NO TOXICITY
DISSOLVED OXYGEN			
	Yearly	Daily Minimum	4.8 MG/L
PH			
	Yearly	Daily Maximum	9.0 STD UNITS
	Yearly	Daily Minimum	6.5 STD UNITS
E. COLI			
	MAR	Geometric Mean	521 #/100 ML
	APR	Geometric Mean	521 #/100 ML
	MAY	Geometric Mean	521 #/100 ML
	JUN	Geometric Mean	521 #/100 ML
	JUL	Geometric Mean	521 #/100 ML
	AUG	Geometric Mean	521 #/100 ML
	SEP	Geometric Mean	521 #/100 ML
	OCT	Geometric Mean	521 #/100 ML
	NOV	Geometric Mean	521 #/100 ML

Facility Name: GRUNDY CENTER CITY OF STP
Permit Number: 3833001

Outfall: 001 Effective Dates: 09/01/2019 to 08/31/2024			
Parameter	Season	Limit Type	Limits
ANNUAL AVERAGE NITROGEN DISCHARGED (AS N)			
	Yearly	Annual Average	62 LBS/DAY
ANNUAL AVERAGE PHOSPHORUS DISCHARGED (AS P)			
	Yearly	Annual Average	17 LBS/DAY

Facility Name: GRUNDY CENTER CITY OF STP

Permit Number: 3833001

Monitoring and Reporting Requirements

- (a) Samples and measurements taken shall be representative of the volume and nature of the monitored wastewater.
- (b) Analytical and sampling methods specified in 40 CFR Part 136 or other methods approved in writing by the department shall be utilized. Samples collected for operational testing need not be analyzed by approved analytical methods; however, commonly accepted test methods should be used.
- (c) You are required to report all data including calculated results needed to determine compliance with the limitations contained in this permit. The results of any monitoring not specified in this permit performed at the compliance monitoring point and analyzed according to 40 CFR Part 136 shall be included in the calculation and reporting of any data submitted in accordance with this permit. This includes daily maximums and minimums and 30-day and 7-day averages for all parameters that have concentration (mg/l) and mass (lbs/day) limits. In addition, flow data shall be reported in million gallons per day (MGD).
- (d) Results of all monitoring shall be recorded on forms provided by, or approved by, the department, and shall be submitted to the appropriate regional field office of the department by the fifteenth day following the close of the reporting period. Your reporting period is on a MONTHLY basis, ending on the last day of each reporting period.
- (e) Any records of monitoring activities and results shall include for all samples: the date, exact place and time of the sampling; the dates the analyses were performed; who performed the analyses; the analytical techniques or methods used; and the results of such analyses.
- (f) Chapter 63 of the Iowa Administrative Code contains further explanation of these monitoring requirements.

Facility Name: GRUNDY CENTER CITY OF STP

Permit Number: 3833001

Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
The following monitoring requirements shall be in effect from 09/01/2019 to 08/31/2024				
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	2 TIMES PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	RAW WASTE
001	NITROGEN, TOTAL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	NITROGEN, TOTAL KJELDAHL (AS N)	1 EVERY MONTH	24 HOUR COMPOSITE	RAW WASTE
001	PH	2 TIMES PER WEEK	GRAB	RAW WASTE
001	PHOSPHORUS, TOTAL (AS P)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	TEMPERATURE	2 TIMES PER WEEK	GRAB	RAW WASTE
001	TOTAL SUSPENDED SOLIDS	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	ANNUAL AVERAGE NITROGEN DISCHARGED (AS N)	1 EVERY 12 MONTHS	CALCULATED	FINAL EFFLUENT
001	ANNUAL AVERAGE PHOSPHORUS DISCHARGED (AS P)	1 EVERY 12 MONTHS	CALCULATED	FINAL EFFLUENT
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	FINAL EFFLUENT
001	ACUTE TOXICITY, CERIODAPHNIA	1 EVERY 12 MONTHS	24 HOUR COMPOSITE	EFFLUENT PRIOR TO DISINFECTION
001	ACUTE TOXICITY, PIMEPHALES	1 EVERY 12 MONTHS	24 HOUR COMPOSITE	EFFLUENT PRIOR TO DISINFECTION
001	AMMONIA NITROGEN (N)	2 TIMES PER WEEK	24 HOUR COMPOSITE	EFFLUENT PRIOR TO DISINFECTION
001	CBOD5	2 TIMES PER WEEK	24 HOUR COMPOSITE	EFFLUENT PRIOR TO DISINFECTION
001	NITROGEN, TOTAL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT PRIOR TO DISINFECTION
001	PHOSPHORUS, TOTAL (AS P)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT PRIOR TO DISINFECTION
001	TOTAL SUSPENDED SOLIDS	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT PRIOR TO DISINFECTION
001	DISSOLVED OXYGEN	2 TIMES PER WEEK	GRAB	EFFLUENT AFTER DISINFECTION
001	E. COLI	GEO. MEAN 1/3 MONTHS	GRAB	EFFLUENT AFTER DISINFECTION
001	PH	2 TIMES PER WEEK	GRAB	EFFLUENT AFTER DISINFECTION
001	TEMPERATURE	2 TIMES PER WEEK	GRAB	EFFLUENT AFTER DISINFECTION

Facility Name: GRUNDY CENTER CITY OF STP
Permit Number: 3833001

Special Monitoring Requirements

Outfall #	Description
001	NITROGEN, TOTAL (AS N) Total nitrogen shall be determined by testing for Total Kjeldahl Nitrogen (TKN) and nitrate + nitrite nitrogen and reporting the sum of the TKN and nitrate + nitrite results (reported as N). Nitrate + nitrite can be analyzed together or separately. E. COLI The limit for E. coli of 521 org/100 ml for outfall 001 is a geometric mean. The disinfection season is established in the Iowa Administrative Code, Subparagraph 567 IAC 61.3(3)“a”(1), and is in effect from March 15 to November 15. Any disinfection system (chlorine, UV light, etc.) shall be operated to comply with the limit during the entire disinfection season whenever wastewater is being discharged from outfall 001. The facility must collect and analyze a minimum of five samples in one calendar month during each 3-month period from March 15 to November 15. The 3-month periods are March – May, June – August, and September – November. The collection of five samples in each 3-month period will result in a minimum of 15 samples being collected during a calendar year. For example, for the first 3-month period, the operator may choose April as the calendar month to collect the 5 individual E. coli samples to determine compliance with the limits. The operator may also choose the months of March or May as well, as long as each of the 5 samples is collected during a single calendar month. The same principle applies to the other two 3-month periods during the disinfection season. The following requirements apply to the individual samples collected in one calendar month: Samples must be spaced over one calendar month. No more than one sample can be collected on any one day. There must be a minimum of two days between each sample. No more than two samples may be collected in a period of seven consecutive days.

If the effluent has been disinfected using chlorine, ultraviolet light (UV), or any other process intended to disrupt the biological integrity of the E. coli, the samples shall be analyzed using the Most Probable Number method found in Standard Method 9223B (Colilert® or Colilert-18® made by IDEXX Laboratories, Inc.). If the effluent has not been disinfected the samples may be analyzed using either the MPN method above or EPA Method 1603: Escherichia coli (E. coli) in water by membrane filtration using modified membrane-thermotolerant E. coli agar (modified mTEC) or mColiBlue-24® made by the Hach Company.

The geometric mean must be calculated using all valid sample results collected during a month. The geometric mean formula is as follows:
Geometric Mean = (Sample one * Sample two * Sample three * Sample four * Sample five... Sample N)^{1/N}, which is the Nth root of the result of the multiplication of all of the sample results where N = the number of samples. If a sample result is a less than value, the value reported by the lab without the less than sign should be used in the geometric mean calculation.

The geometric mean can be calculated in one of the following ways:
Use a scientific calculator that can calculate the powers of numbers.
Enter the samples in Microsoft Excel and use the function “GEOMEAN” to perform the calculation.
Use the geometric mean calculator on the Iowa DNR webpage at: <http://www.iowadnr.gov/Environmental-Protection/Water-Quality/NPDES-Wastewater-Permitting/NPDES-Operator-Information/Bacteria-Sampling>

Facility Name: GRUNDY CENTER CITY OF STP

Permit Number: 3833001

ANNUAL AVERAGE NITROGEN DISCHARGED (AS N)

Annually from March 1, calculate the average of all total nitrogen mass (lbs/day) sample results from the previous 12 months. report the annual average in the April Discharge Monitoring Report (DMR) each year.

Calculation: Sum of all mass measurements (lbs/day) in the last 12 months divided by the total number of measurements in the last 12 months.

ANNUAL AVERAGE PHOSPHORUS DISCHARGED (AS P)

Annually from March 1, calculate the average of all total phosphorus mass (lbs/day) sample results from the previous 12 months. Report the annual average in the April Discharge Monitoring Report (DMR) each year.

Calculation: Sum of all mass measurements (lbs/day) in the last 12 months divided by the total number of measurements in the last 12 months.

Facility Name: GRUNDY CENTER CITY OF STP
Permit Number: 3833001

Significant Industrial User Discharges:

Significant Industrial User: RICHELIEU FOODS, L.L.C.

Outfall # Outfall Description

001 EFFLUENT (WASTE) PRIOR TO DISCHARGE TO THE MUNICIPAL COLLECTION SYSTEM.

Significant Industrial User Effluent Limitations

You are prohibited from discharging pollutants except in compliance with the following effluent limitations:

RICHELIEU FOODS, L.L.C.			
Outfall: 001 Effective Dates: 09/01/2019 to 08/31/2024			
<u>Parameter</u>	<u>Season</u>	<u>Limit Type</u>	<u>Limit Values</u>
FLOW			
	Yearly	30 Day Average	0.06 MGD
	Yearly	DAILY MAXIMUM	0.08 MGD
BIOCHEMICAL OXYGEN DEMAND (BOD5)			
	Yearly	30 Day Average	867 LBS/DAY
	Yearly	DAILY MAXIMUM	1000 LBS/DAY
TOTAL SUSPENDED SOLIDS			
	Yearly	30 Day Average	266 LBS/DAY
	Yearly	DAILY MAXIMUM	532 LBS/DAY
OIL AND GREASE			
	Yearly	30 Day Average	300 MG/L
	Yearly	DAILY MAXIMUM	600 MG/L
PH			
	Yearly	DAILY MAXIMUM	11.0 STD UNITS
	Yearly	DAILY MINIMUM	5.5 STD UNITS

Facility Name: GRUNDY CENTER CITY OF STP
Permit Number: 3833001

Monitoring and Reporting Requirements

- (a) Samples and measurements taken shall be representative of the volume and nature of the monitored wastewater.
- (b) Analytical and sampling methods specified in 40 CFR Part 136 or other methods approved in writing by the department shall be utilized. Samples collected for operational testing need not be analyzed by approved analytical methods; however, commonly accepted test methods should be used.
- (c) You are required to report all data including calculated results needed to determine compliance with the limitations contained in this permit. The results of any monitoring not specified in this permit performed at the compliance monitoring point and analyzed according to 40 CFR Part 136 shall be included in the calculation and reporting of any data submitted in accordance with this permit. This includes daily maximums and minimums and 30-day and 7-day averages for all parameters that have concentration (mg/l) and mass (lbs/day) limits. In addition, flow data shall be reported in million gallons per day (MGD).
- (d) Results of all monitoring shall be recorded on forms provided by, or approved by, the department, and shall be submitted to the appropriate regional field office of the department by the fifteenth day following the close of the reporting period. Your reporting period is on a MONTHLY basis, ending on the last day of each reporting period.
- (e) Any records of monitoring activities and results shall include for all samples: the date, exact place and time of the sampling; the dates the analyses were performed; who performed the analyses; the analytical techniques or methods used; and the results of such analyses.
- (f) Chapter 63 of the Iowa Administrative Code contains further explanation of these monitoring requirements.

RICHELIEU FOODS, L.L.C.				
Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	2 TIMES PER WEEK	24 HOUR COMPOSITE	PRIOR TO DISCHARGE TO CITY SEWER
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	PRIOR TO DISCHARGE TO CITY SEWER
001	OIL AND GREASE	1 EVERY 2 WEEKS	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	PH	2 TIMES PER WEEK	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	TOTAL SUSPENDED SOLIDS	1 TIME PER WEEK	24 HOUR COMPOSITE	PRIOR TO DISCHARGE TO CITY SEWER

Facility Name: GRUNDY CENTER CITY OF STP
Permit Number: 3833001

Significant Industrial User Discharges:

Significant Industrial User: GRUNDY COUNTY LANDFILL

Outfall # Outfall Description

001 SANITARY LANDFILL LEACHATE TRUCKED TO CITY WASTEWATER TREATMENT PLANT

Significant Industrial User Effluent Limitations

You are prohibited from discharging pollutants except in compliance with the following effluent limitations:

GRUNDY COUNTY LANDFILL			
Outfall: 001 Effective Dates: 09/01/2019 to 08/31/2024			
<u>Parameter</u>	<u>Season</u>	<u>Limit Type</u>	<u>Limit Values</u>
FLOW			
	Yearly	30 Day Average	0.0010 MGD
	Yearly	DAILY MAXIMUM	0.0015 MGD
BIOCHEMICAL OXYGEN DEMAND (BOD5)			
	Yearly	30 Day Average	8.4 LBS/DAY
	Yearly	DAILY MAXIMUM	25 LBS/DAY
TOTAL SUSPENDED SOLIDS			
	Yearly	30 Day Average	4.2 LBS/DAY
	Yearly	DAILY MAXIMUM	12.5 LBS/DAY
AMMONIA NITROGEN (N)			
	Yearly	30 Day Average	2.0 LBS/DAY
	Yearly	DAILY MAXIMUM	3.5 LBS/DAY
NITROGEN, TOTAL KJELDAHL (AS N)			
	Yearly	30 Day Average	1.3 LBS/DAY
	Yearly	DAILY MAXIMUM	3.7 LBS/DAY
PH			
	Yearly	DAILY MAXIMUM	9.0 STD UNITS
	Yearly	DAILY MINIMUM	6.0 STD UNITS

Facility Name: GRUNDY CENTER CITY OF STP
Permit Number: 3833001

Monitoring and Reporting Requirements

- (a) Samples and measurements taken shall be representative of the volume and nature of the monitored wastewater.
- (b) Analytical and sampling methods specified in 40 CFR Part 136 or other methods approved in writing by the department shall be utilized. Samples collected for operational testing need not be analyzed by approved analytical methods; however, commonly accepted test methods should be used.
- (c) You are required to report all data including calculated results needed to determine compliance with the limitations contained in this permit. The results of any monitoring not specified in this permit performed at the compliance monitoring point and analyzed according to 40 CFR Part 136 shall be included in the calculation and reporting of any data submitted in accordance with this permit. This includes daily maximums and minimums and 30-day and 7-day averages for all parameters that have concentration (mg/l) and mass (lbs/day) limits. In addition, flow data shall be reported in million gallons per day (MGD).
- (d) Results of all monitoring shall be recorded on forms provided by, or approved by, the department, and shall be submitted to the appropriate regional field office of the department by the fifteenth day following the close of the reporting period. Your reporting period is on a MONTHLY basis, ending on the last day of each reporting period.
- (e) Any records of monitoring activities and results shall include for all samples: the date, exact place and time of the sampling; the dates the analyses were performed; who performed the analyses; the analytical techniques or methods used; and the results of such analyses.
- (f) Chapter 63 of the Iowa Administrative Code contains further explanation of these monitoring requirements.

GRUNDY COUNTY LANDFILL				
Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
001	AMMONIA NITROGEN (N)	1 EVERY MONTH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	1 EVERY 6 MONTHS	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	PRIOR TO DISCHARGE TO CITY SEWER
001	NITROGEN, TOTAL KJELDAHL (AS N)	1 EVERY MONTH	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	PH	1 EVERY 3 MONTHS	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	SANITARY LANDFILL LEACHATE	1 EVERY 12 MONTHS	GRAB	PRIOR TO DISCHARGE TO CITY SEWER
001	TOTAL SUSPENDED SOLIDS	1 EVERY 3 MONTHS	GRAB	PRIOR TO DISCHARGE TO CITY SEWER

Facility Name: GRUNDY CENTER CITY OF STP
 Permit Number: 3833001

ADDITIONAL MONITORING REQUIREMENTS – GRUNDY COUNTY LANDFILL

The permittee shall analyze a representative sample of the leachate discharge from the Grundy County Landfill at least annually for each of the pollutants listed below. Also, the permittee shall monitor the volume of waste discharged and BOD₅, TSS, pH and Total Kjeldahl Nitrogen at the frequencies specified on page 13 of this permit.

Conventional Pollutants and Metals	Volatile Compounds	Acid Extractable Compounds
Biochemical Oxygen Demand (BOD ₅) Total Organic Carbon Total Dissolved Solids Total Suspended Solids Ammonia Nitrogen pH Arsenic, Total (as As) Barium, Total (as Ba) Cadmium, Total (as Cd) Chromium, Total (as Cr) Copper, Total (as Cu) Iron, Total (as Fe) Lead, Total (as Pb) Mercury, Total (as Hg) Nickel, Total (as Ni) Selenium, Total (as Se) Silver, Total (as Ag) Zinc, Total (as Zn)	Method of Analysis: EPA Methods 624 or 1624 Chloromethane (methyl chloride) Bromomethane (methyl bromide) Vinyl chloride Chloroethane (ethyl chloride) Methylene chloride (dichloromethane) 1,1-Dichloroethene (1,1-dichloroethylene) 1,1-Dichloroethane 1,2-Dichloroethene (1,2-dichloroethylene) Chloroform 1,2-Dichloroethane 1,1,1-Trichloroethane (methyl chloroform) Carbon tetrachloride Bromodichloromethane 1,1,2,2-Tetrachloroethane 1,2-Dichloropropane 1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane Benzene 2-Chloroethyl vinyl ether Bromoform Tetrachloroethene Toluene Chlorobenzene Ethylbenzene	Method of Analysis: EPA Methods 625 or 1625 2-Chlorophenol 2-Nitrophenol 2,4-Dimethylphenol Benzoic acid 2,4-Dichlorophenol 4-Chloro-3-methylphenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2,4-Dinitrophenol 4-Nitrophenol 4,6-Dinitro-2-methylphenol Pentachlorophenol

Facility Name: GRUNDY CENTER CITY OF STP
 Permit Number: 3833001

Chlorinated Hydrocarbon Insecticides	Base/Neutral Compounds	Base/Neutral Compounds - continued
<u>Methods of Analysis: EPA Methods 608 or 625</u> Beta BHC Delta BHC Gamma BHC Heptachlor Aldrin Heptachlor epoxide Endosulfan Dieldrin 4,4'-DDE Endrin Endosulfan II 4,4'-DDD Endosulfan sulfate 4,4'-DDT Endrin aldehyde Chlordane Toxaphene	<u>Methods of Analysis: EPA Methods 625 or 1625</u> bis (2-chloroethyl) ether 1,3-Dichlorobenzene 1,4-Dichlorobenzene Benzyl alcohol 1,2-Dichlorobenzene bis (2-chloroisopropyl) ether N-Nitroso-dipropylamine Hexachloroethane Nitrobenzene Isophorone bis (2-chloroethoxy) methane 1,2,4-Trichlorobenzene Naphthalene Hexachlorobutadiene Hexachlorocyclopentadiene 2-Chloronaphthalene Dimethyl phthalate Acenaphthylene Acenaphthene Dibenzofuran 2,4-Dinitrotoluene 2,6-Dinitrotoluene Diethyl phthalate 4-Chlorophenyl phenyl ether Fluorene N-Nitrosodiphenylamine 4-Bromophenyl phenyl ether Hexachlorobenzene Phenanthrene Anthracene	Di-n-butyl phthalate Fluoranthene Pyrene Butyl benzyl phthalate 3,3'-Dichlorobenzidine Benzo (a) anthracene bis (2-ethylhexyl) phthalate Chrysene Di-n-octyl phthalate Benzo (b) fluoranthene Benzo (k) fluoranthene Benzo (a) pyrene Indeno (1,2,3-cd) pyrene Dibenzo (a,h) anthracene Benzo (g,h,i) perylene
Polychlorinated Biphenyls		
<u>Methods of Analysis: EPA Methods 608 or 625</u> Arochlor-1016 Arochlor-1221 Arochlor-1232 Arochlor-1242 Arochlor-1248 Arochlor-1254 Arochlor-1260		

Facility Name: GRUNDY CENTER CITY OF STP

Permit Number: 3833001

Outfall Number: 001

Ceriodaphnia and Pimephales Toxicity Effluent Testing

1. For facilities that have not been required to conduct toxicity testing by a previous NPDES permit, the initial annual toxicity test shall be conducted within three (3) months of permit issuance. For facilities that have been required to conduct toxicity testing by a previous NPDES permit, the initial annual toxicity test shall be conducted within twelve months (12) of the last toxicity test.
2. The test organisms that are to be used for acute toxicity testing shall be *Ceriodaphnia dubia* and *Pimephales promelas*. The acute toxicity testing procedures used to demonstrate compliance with permit limits shall be those listed in 40 CFR Part 136 and adopted by reference in rule 567--63.1(1). The method for measuring acute toxicity is specified in USEPA, October 2002, *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., EPA 821-R-02-012.
3. The diluted effluent sample must contain a minimum of 98.20 % effluent and no more than 1.80 % of culture water.
4. One valid positive toxicity result will require, at a minimum, quarterly testing for effluent toxicity until three successive tests are determined not to be positive.
5. Two successive valid positive toxicity results or three positive results out of five successive valid effluent toxicity tests will require a toxicity reduction evaluation to be completed to eliminate the toxicity.
6. A non-toxic test result shall be indicated as a "1" on the monthly operation report. A toxic test result shall be indicated as a "2" on the monthly operation report. DNR Form 542-1381 shall also be submitted to the DNR field office along with the monthly operation report.

Ceriodaphnia and Pimephales Toxicity Effluent Limits

The maximum limit of "1" for the parameters Acute Toxicity, *Ceriodaphnia* and Acute Toxicity, *Pimephales* means no positive toxicity results.

Definition: "Positive toxicity result" means a statistical difference of mortality rate between the control and the diluted effluent sample. For more information see USEPA, October 2002, *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, U.S. Environmental Protection Agency, Office of Water, Washington, D.C., EPA 821-R-02-012.

Facility Name: GRUNDY CENTER CITY OF STP

Permit Number: 3833001

Design Capacity

Design: 1

The design capacity for the treatment works is specified in Construction Permit Number 88048, issued Wednesday, December 09, 1987.

The treatment plant is designed to treat:

- * An average dry weather (ADW) flow of 0.4000 Million Gallons Per Day (MGD).
- * An average wet weather (AWW) flow of 1.2000 Million Gallons Per Day (MGD).
- * A maximum wet weather (MWW) flow of 3.0000 Million Gallons Per Day (MGD).
- * A design 5-day biochemical oxygen demand (BOD5) load of 1300 lbs/day.

Operator Certification Type/Grade: WW/III

Wastes in such volumes or quantities as to exceed the design capacity of the treatment works or reduce the effluent quality below that specified in the operation permit of the treatment works are considered to be a waste which interferes with the operation or performance of the treatment works and are prohibited by subrule IAC 567-62.1(7).

Facility Name: GRUNDY CENTER CITY OF STP

Permit Number: 3833001

SEWAGE SLUDGE HANDLING AND DISPOSAL REQUIREMENTS

"Sewage sludge" is solid, semisolid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge does not include the grit and screenings generated during preliminary treatment.

1. The permittee shall comply with all existing Federal and State laws and regulations that apply to the use and disposal of sewage sludge and with technical standards developed pursuant to Section 405(d) of the Clean Water Act when such standards are promulgated. If an applicable numerical limit or management practice for pollutants in sewage sludge is promulgated after issuance of this permit that is more stringent than a sludge pollutant limit or management practice specified in existing Federal or State laws or regulations, this permit shall be modified, or revoked and reissued, to conform to the regulations promulgated under Section 405(d) of the Clean Water Act. The permittee shall comply with the limitation no later than the compliance deadline specified in the applicable regulations.
2. The permittee shall provide written notice to the Department of Natural Resources prior to any planned changes in sludge disposal practices.
3. Land application of sewage sludge shall be conducted in accordance with criteria established in rule IAC 567--67.1 through 67.11 (455B).

Facility Name: GRUNDY CENTER CITY OF STP

Permit Number: 3833001

MAJOR CONTRIBUTING INDUSTRIES LIMITATIONS, MONITORING AND REPORTING REQUIREMENTS

1. You are required to notify the department, in writing, of any of the following:

(a) 180 days prior to the introduction of pollutants to your facility from a significant industrial user. A significant industrial user means an industrial user of a treatment works that:

(1) Discharges an average of 25,000 gallons per day or more of process wastewater excluding sanitary, noncontact cooling and boiler blowdown wastewater;

(2) Contributes a process waste stream which makes up five percent or more of the average dry weather hydraulic or organic capacity of the publicly-owned treatment works;

(3) Is subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; or

(4) Is designated by the department as a significant industrial user on the basis that the contributing industry, either singly or in combination with other contributing industries, has a reasonable potential for adversely affecting the operation of or effluent quality from the publicly-owned treatment works or for violating any pretreatment standards or requirements.

(b) 60 days prior to a proposed expansion, production increase or process modification that may result in the discharge of a new pollutant or a discharge in excess of limitations stated in the existing treatment agreement.

(c) 10 days prior to any commitment by you to accept waste from any new significant industrial user. Your written notification must include a new or revised treatment agreement in accordance with rule 64.3(5)(455B).

2. You shall require all users of your facility to comply with Sections 204(b), 307 and 308 of the Clean Water Act.

Section 204(b) requires that all users of the treatment works constructed with funds provided under Sections 201(g) or 601 of the Act to pay their proportionate share of the costs of operation, maintenance and replacement of the treatment works.

Section 307 of the Act requires users to comply with pretreatment standards promulgated by EPA for pollutants that would cause interference with the treatment process or would pass through the treatment works.

Section 308 of the Act requires users to allow access at reasonable times to state and EPA inspectors for the purpose of sampling the discharge and reviewing and copying records.

3. You shall limit and monitor pollutants for each significant industrial user as required elsewhere in this permit, and submit sample results to the department monthly. Your report shall be submitted by the fifteenth day of the following month.

Revised: June 16, 2009 CAC

STANDARD CONDITIONS

1. ADMINISTRATIVE RULES

Rules of this Department that govern the operation of your facility in connection with this permit are published in Part 567 of the Iowa Administrative Code (IAC) in Chapters 60-65, 67, and 121. Reference to the term “rule” in this permit means the designated provision of Part 567 of the IAC. Reference to the term “CFR” means the Code of Federal Regulations.

2. DEFINITIONS

- (a) 7 day average means the sum of the total daily discharges by mass, volume, or concentration during a 7 consecutive day period, divided by the total number of days during the period that measurements were made. Four 7 consecutive day periods shall be used each month to calculate the 7-day average. The first 7-day period shall begin with the first day of the month.
- (b) 30 day average means the sum of the total daily discharges by mass, volume, or concentration during a calendar month, divided by the total number of days during the month that measurements were made.
- (c) Daily maximum means the total discharge by mass, volume, or concentration during a twenty-four hour period.

3. DUTY TO PROVIDE INFORMATION

You must furnish to the Director, within a reasonable time, any information the Director may request to determine compliance with this permit or determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, in accordance with 567 IAC 64.3(11)“c”. You must also furnish to the Director, upon request, copies of any records required to be kept by this permit.

4. MONITORING AND RECORDS OF OPERATION

- (a) Maintenance of records. You shall retain for a minimum of three years all paper and electronic records of monitoring activities and results including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records. *{See 567 IAC 63.2(3)}*
- (b) Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than two years, or both. *{See 40 CFR 122.41(f)(5)}*

5. SIGNATORY REQUIREMENTS

Applications, reports or other information submitted to the Department in connection with this permit must be signed and certified in accordance with 567 IAC 64.3(8).

6. OTHER INFORMATION

Where you become aware that you failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, you must promptly submit such facts or information. Where you become aware that you failed to submit any relevant facts in the submission of in any report to the director, including records of operation, you shall promptly submit such facts or information. *{See 567 IAC 60.4(2)“a” and 567 IAC 63.7}*

7. TRANSFER OF TITLE OR OWNER ADDRESS CHANGE

If title to your facility, or any part of it, is transferred the new owner shall be subject to this permit. You are required to notify the new owner of the requirements of this permit in writing prior to any transfer of title. The Director shall be notified in writing within 30 days of the transfer. No transfer of the authorization to discharge from the facility represented by the permit shall take place prior to notifying the department of the transfer of title. Whenever the address of the owner is changed, the department shall be notified in writing within 30 days of the address change. Electronic notification is not sufficient; all title transfers or address changes must be reported to the department by mail. *{See 567 IAC 64.14}*

8. PROPER OPERATION AND MAINTENANCE

All facilities and control systems shall be operated as efficiently as possible and maintained in good working order. A sufficient number of staff, adequately trained and knowledgeable in the operation of your facility shall be retained at all times and adequate laboratory controls and appropriate quality assurance procedures shall be provided to maintain compliance with the conditions of this permit. *{See 40 CFR 122.41(e) and 567 IAC 64.7(f)“f”}*

9. PERMIT MODIFICATION, SUSPENSION OR REVOCATION

- (a) This permit may be modified, suspended, or revoked and reissued for cause including but not limited to those specified in 567 IAC 64.3(11).
- (b) This permit may be modified due to conditions or information on which this permit is based, including any new standard the department may adopt that would change the required effluent limits. *{See 567 IAC 64.3(11)}*
- (c) If a toxic pollutant is present in your discharge and more stringent standards for toxic pollutants are established under Section 307(a) of the Clean Water Act, this permit will be modified in accordance with the new standards. *{See 40 CFR 122.62(a)(6) and 567 IAC 64.7(f)“g”}*

The filing of a request for a permit modification, revocation or suspension, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

10. DUTY TO REAPPLY AND PERMIT CONTINUATION

If you wish to continue to discharge after the expiration date of this permit, you must file a complete application for reissuance at least 180 days prior to the expiration date of this permit. If a timely and sufficient application is submitted, this permit will remain in effect until the Department makes a final determination on the permit application. *{See 567 IAC 64.8(1) and Iowa Code 17A.18}*

11. DUTY TO COMPLY

You must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Issuance of this permit does not relieve you of the responsibility to comply with all local, state and federal laws, ordinances, regulations or other legal requirements applying to the operation of your facility. *{See 40 CFR 122.41(a) and 567 IAC 64.7(4)“e”}*

STANDARD CONDITIONS

12. DUTY TO MITIGATE

You shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. **{See 40 CFR 122.41(d) and 567 IAC 64.7(7)“f”}**

13. TWENTY-FOUR HOUR REPORTING

You shall report any noncompliance that may endanger human health or the environment, including, but not limited to, violations of maximum daily limits for any toxic pollutant (listed as toxic under 307(a)(1) of the Clean Water Act) or hazardous substance (as designated in 40 CFR Part 116 pursuant to 311 of the Clean Water Act). Information shall be provided orally within 24 hours from the time you become aware of the circumstances. A written submission that includes a description of noncompliance and its cause; the period of noncompliance including exact dates and times, whether the noncompliance has been corrected or the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent a reoccurrence of the noncompliance must be provided within 5 days of the occurrence. **{See 567 IAC 63.12}**

14. OTHER NONCOMPLIANCE

You shall report all instances of noncompliance not reported under Condition #13 at the time monitoring reports are submitted. You shall give advance notice to the appropriate regional field office of the department of any planned activity which may result in noncompliance with permit requirements. **{See 567 IAC 63.14}**

15. INSPECTION OF PREMISES, RECORDS, EQUIPMENT, METHODS AND DISCHARGES

You are required to permit authorized personnel to:

- (a) Enter upon the premises where a regulated facility or activity is located or conducted or where records are kept under conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment, practices or operations regulated or required under this permit; and
- (d) Sample or monitor, at reasonable times, to assure compliance or as otherwise authorized by the Clean Water Act.

16. FAILURE TO SUBMIT FEES

This permit may be revoked, in whole or in part, if the appropriate permit fees are not submitted within thirty (30) days of the date of notification that such fees are due. **{See 567 IAC 64.16(1)}**

17. NEED TO HALT OR REDUCE ACTIVITY

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. **{See 40 CFR 122.41(c) and 567 IAC 64.7(7)“j”}**

18. NOTICE OF CHANGED CONDITIONS

You are required to notify the director of any changes in existing conditions or information on which this permit is based. This includes, but is not limited to, the following:

- (a) If your facility is a publicly owned treatment works (POTW) or otherwise may accept waste for treatment from an indirect discharger or industrial contributor (See 567 IAC 64.3(5) for further notice requirements).
- (b) If your facility is a POTW and there is any substantial change in the volume or character of pollutants being introduced to the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit. **{See 40 CFR 122.42(b)}**
- (c) As soon as you know or have reason to believe that any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in this permit. **{See 40 CFR 122.42(a)}**
- (d) If you have begun or will begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

19. PLANNED CHANGES

The permittee shall give notice to the appropriate regional field office of the department 30 days prior to any planned physical alterations or additions to the permitted facility. Notice is required only when:

- (a) Notice has not been given to any other section of the department. (Note: Facility expansions, production increases, or process modifications which may result in new or increased discharges of pollutants must be reported to the Director in advance. If such discharges will exceed effluent limitations, your report must include an application for a new permit. If any modification of, addition to, or construction of a disposal system is to be made, you must first obtain a written permit from this Department. In addition, no construction activity that will result in disturbance of one acre or more shall be initiated without first obtaining coverage under NPDES General Permit No. 2 for “Storm water discharge associated with construction activity.”) **{See 567 IAC 64.7(7)“a” and 64.2}**
- (b) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as defined in 567 IAC 60.2;
- (c) The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices; or
- (d) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in the permit. **{See 567 IAC 63.13 and 63.14}**

20. USE OF CERTIFIED LABORATORIES

Analyses of wastewater, groundwater or sewage sludge that are required to be submitted to the department as a result of this permit must be performed by a laboratory certified by the State of Iowa. Routine, on-site monitoring for pH, temperature, dissolved oxygen, total residual chlorine and other pollutants that must be analyzed immediately upon sample collection, settleable solids, physical measurements, and operational monitoring tests specified in 567 IAC 63.3(4) are excluded from this requirement.

STANDARD CONDITIONS

21. BYPASSES

- (a) Definition. "Bypass" means the diversion of waste streams from any portion of a treatment facility or collection system. A bypass does not include internal operational waste stream diversions that are part of the design of the treatment facility, maintenance diversions where redundancy is provided, diversions of wastewater from one point in a collection system to another point in a collection lateral or private sewer line.
- (b) Prohibitions.
- Bypasses from any portion of a treatment facility or from a sanitary sewer collection system designed to carry only sewage are prohibited.
 - Bypass is prohibited and the department may not assess a civil penalty against a permittee for bypass if the permittee has complied with all of the following:
 - Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and
 - There were no feasible alternatives to the bypass such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - The permittee submitted notices as required by paragraph (d) of this section.
 - The Director may approve an anticipated bypass after considering its adverse effects if the Director determines that it will meet the three conditions listed above and a request for bypass has been submitted to the Department in accordance with 567 IAC 63.6(2).
 - Reporting bypasses. Bypasses shall be reported in accordance with 567 IAC 63.6.

22. UPSET PROVISION

- (a) Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- (b) Effect of an upset. An upset constitutes an affirmative defense in an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph "c" of this condition are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

- (c) Conditions necessary for demonstration of an upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate through properly signed operating logs or other relevant evidence that:
- An upset occurred and that the permittee can identify the cause(s) of the upset;
 - The permitted facility was at the time being properly operated;
 - The permittee submitted notice of the upset to the Department in accordance with 567 IAC 63.6(3); and
 - The permittee complied with any remedial measures required in accordance with 567 IAC 63.6(6)"b".
- (d) Burden of Proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

23. PROPERTY RIGHTS

This permit does not convey any property rights of any sort or any exclusive privilege. *{See 567 IAC 64.4(3)"b"}*

24. EFFECT OF A PERMIT

Compliance with a permit during its term constitutes compliance, for purposes of enforcement, with Sections 301, 302, 306, 307, 318, 403 and 405(a)-(b) of the Clean Water Act, and equivalent limitations and standards set out in 567 IAC Chapters 61 and 62. *{See 567 IAC 64.4(3)"a"}*

25. SEVERABILITY

The provisions of this permit are severable and if any provision or application of any provision to any circumstance is found to be invalid by this department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding.

Appendix G.6 - Analytical Reports - Leachate Annual Sample



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1ID0758

Project Description

Leachate

For:

Todd Whipple

HLW Engineering

204 West Broad St

Story City, IA 50248

Heather Tisdale

Customer Relationship Specialist

Thursday, June 19, 2025

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc., Newton. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

Microbac Laboratories, Inc.

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1ID0758

HLW Engineering

Todd Whipple
204 West Broad St
Story City, IA 50248

Project Name: Leachate

Project / PO Number: N/A
Received: 04/04/2025
Reported: 06/19/2025

Sample Summary Report

<u>Sample Name</u>	<u>Laboratory ID</u>	<u>Client Matrix</u>	<u>Sample Type</u>	<u>Sample Begin</u>	<u>Sample Taken</u>	<u>Lab Received</u>
Leachate	1ID0758-01	Aqueous	GRAB		04/03/25 10:20	04/04/25 10:33



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11D0758

Analytical Testing Parameters

Client Sample ID:	Leachate	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	04/03/2025 10:20
Lab Sample ID:	11D0758-01		

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 624.1							
Chloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
Vinyl Chloride	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
Bromomethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
Chloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
Methylene Chloride	<5.0	5.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
1,1-Dichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
Chloroform	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
Benzene	3.5	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
Trichloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
Bromodichloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
2-Chloroethylvinyl ether	<10.0	10.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
Toluene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
Dibromochloromethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
Chlorobenzene	13.6	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
Ethylbenzene	2.6	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
Bromoform	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		04/11/25 0000	04/11/25 1418	RAF
Surrogate: 1,2-Dichloroethane-d4	81.1	Limit: 56-130	% Rec		04/11/25 0000	04/11/25 1418	RAF
Surrogate: Toluene-d8	103	Limit: 85-113	% Rec		04/11/25 0000	04/11/25 1418	RAF
Surrogate: 4-Bromofluorobenzene	96.1	Limit: 82-112	% Rec		04/11/25 0000	04/11/25 1418	RAF

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 625.1							
Bis(2-Chloroethyl) Ether	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
2-Chlorophenol	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
1,3-Dichlorobenzene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
1,4-Dichlorobenzene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Benzyl Alcohol	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
1,2-Dichlorobenzene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP

Microbac Laboratories, Inc., Newton

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11D0758

Client Sample ID: Leachate
Sample Matrix: Aqueous
Lab Sample ID: 11D0758-01

Collected By: JGH
Collection Date: 04/03/2025 10:20

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
Bis[2-Chloroisopropyl]ether	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
n-Nitroso-di-n-propylamine	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Hexachloroethane	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Nitrobenzene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Isophorone	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
2-Nitrophenol	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
2,4-Dimethylphenol	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Bis (2-Chloroethoxy) Methane	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Benzoic acid	<50	50	ug/L		04/08/25 1057	04/14/25 1726	EPP
2,4-Dichlorophenol	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
1,2,4-Trichlorobenzene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Naphthalene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Hexachlorobutadiene	<20	20	ug/L		04/08/25 1057	04/14/25 1726	EPP
4-Chloro-3-methylphenol	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Hexachlorocyclopentadiene	<20	20	ug/L	Q8	04/08/25 1057	04/14/25 1726	EPP
2,4,6-Trichlorophenol	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
2,4,5-Trichlorophenol	<50	50	ug/L		04/08/25 1057	04/14/25 1726	EPP
2-Chloronaphthalene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Dimethylphthalate	<15	15	ug/L		04/08/25 1057	04/14/25 1726	EPP
Acenaphthylene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
2,6-Dinitrotoluene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Acenaphthene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
2,4-Dinitrophenol	<20	20	ug/L	Q8	04/08/25 1057	04/14/25 1726	EPP
Dibenzofuran	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
2,4-Dinitrotoluene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
4-Nitrophenol	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Diethyl Phthalate	<30	30	ug/L		04/08/25 1057	04/14/25 1726	EPP
Fluorene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
4-Chlorophenyl Phenyl Ether	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
4,6-Dinitro-2-methylphenol	<20	20	ug/L	Q3, Q8	04/08/25 1057	04/14/25 1726	EPP
N-Nitrosodiphenylamine	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
4-Bromophenyl Phenyl Ether	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Hexachlorobenzene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Pentachlorophenol	<20	20	ug/L		04/08/25 1057	04/14/25 1726	EPP
Phenanthrene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Anthracene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Di-n-butyl Phthalate	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Fluoranthene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Pyrene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Butyl Benzyl Phthalate	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Benzo(a)anthracene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Chrysene	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Bis(2-Ethylhexyl) Phthalate	<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11D0758

Client Sample ID: Leachate
Sample Matrix: Aqueous
Lab Sample ID: 11D0758-01

Collected By: JGH
Collection Date: 04/03/2025 10:20

Determination of Base/Neutral/Acid Extractable Compounds		Result	RL	Units	Note	Prepared	Analyzed	Analyst
Di-n-octyl Phthalate		<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Indeno(1,2,3-cd)Pyrene		<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
3,3'-Dichlorobenzidine		<20	20	ug/L		04/08/25 1057	04/14/25 1726	EPP
Benzo(b)Fluoranthene		<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Benzo(k)Fluoranthene		<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Benzo(a)Pyrene		<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Dibenzo(a,h)anthracene		<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Benzo(g,h,i)perylene		<10	10	ug/L		04/08/25 1057	04/14/25 1726	EPP
Surrogate: 2-Fluorophenol	74.7	Limit: 16-140	% Rec			04/08/25 1057	04/14/25 1726	EPP
Surrogate: Phenol-d6	81.3	Limit: 13-147	% Rec			04/08/25 1057	04/14/25 1726	EPP
Surrogate: Nitrobenzene-d5	83.1	Limit: 17-150	% Rec			04/08/25 1057	04/14/25 1726	EPP
Surrogate: 2-Fluorobiphenyl	89.0	Limit: 15-134	% Rec			04/08/25 1057	04/14/25 1726	EPP
Surrogate: 2,4,6-Tribromophenol	119	Limit: 20-158	% Rec			04/08/25 1057	04/14/25 1726	EPP
Surrogate: Terphenyl-dl4	56.2	Limit: 12-157	% Rec			04/08/25 1057	04/14/25 1726	EPP

Determination of Organochlorine Insecticides & PCBs		Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 608.3 GC-ECD								
Gamma-BHC [Lindane]		<0.05	0.05	ug/L		04/08/25 1051	04/11/25 1856	PDS
Beta-BHC		<0.05	0.05	ug/L		04/08/25 1051	04/11/25 1856	PDS
Heptachlor		<0.05	0.05	ug/L		04/08/25 1051	04/11/25 1856	PDS
Delta-BHC		<0.05	0.05	ug/L		04/08/25 1051	04/11/25 1856	PDS
Aldrin		<0.05	0.05	ug/L		04/08/25 1051	04/11/25 1856	PDS
Heptachlor Epoxide		<0.05	0.05	ug/L		04/08/25 1051	04/11/25 1856	PDS
Endosulfan I		<0.05	0.05	ug/L		04/08/25 1051	04/11/25 1856	PDS
4,4'-DDE		<0.05	0.05	ug/L		04/08/25 1051	04/11/25 1856	PDS
Dieldrin		<0.05	0.05	ug/L		04/08/25 1051	04/11/25 1856	PDS
Endrin		<0.05	0.05	ug/L		04/08/25 1051	04/11/25 1856	PDS
4,4'-DDD		<0.05	0.05	ug/L		04/08/25 1051	04/11/25 1856	PDS
Endosulfan II		<0.05	0.05	ug/L		04/08/25 1051	04/11/25 1856	PDS
4,4'-DDT		<0.05	0.05	ug/L	Q8	04/08/25 1051	04/11/25 1856	PDS
Endrin Aldehyde		<0.05	0.05	ug/L		04/08/25 1051	04/11/25 1856	PDS
Endosulfan Sulfate		<0.05	0.05	ug/L		04/08/25 1051	04/11/25 1856	PDS
Chlordane		<0.10	0.10	ug/L		04/08/25 1051	04/11/25 1856	PDS
Toxaphene		<0.20	0.20	ug/L		04/08/25 1051	04/11/25 1856	PDS
Arochlor 1016		<0.20	0.20	ug/L		04/08/25 1051	04/11/25 1856	PDS
Arochlor 1221		<0.20	0.20	ug/L		04/08/25 1051	04/11/25 1856	PDS
Arochlor 1232		<0.20	0.20	ug/L		04/08/25 1051	04/11/25 1856	PDS
Arochlor 1242		<0.20	0.20	ug/L		04/08/25 1051	04/11/25 1856	PDS
Arochlor 1248		<0.20	0.20	ug/L		04/08/25 1051	04/11/25 1856	PDS
Arochlor 1254		<0.20	0.20	ug/L		04/08/25 1051	04/11/25 1856	PDS
Arochlor 1260		<0.20	0.20	ug/L		04/08/25 1051	04/11/25 1856	PDS
Surrogate: Decachlorobiphenyl	60.1	Limit: 10-148	% Rec			04/08/25 1051	04/11/25 1856	PDS
Surrogate: Tetrachloro-m-xylene	69.5	Limit: 10-144	% Rec			04/08/25 1051	04/11/25 1856	PDS

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11D0758

Client Sample ID: Leachate
Sample Matrix: Aqueous
Lab Sample ID: 11D0758-01

Collected By: JGH
Collection Date: 04/03/2025 10:20

Determination of Conventional Chemistry Parameters	Result	RL	Units	Note	Prepared	Analyzed	Analyst
5310B							
Total Organic Carbon	66.1	0.50	mg/L		04/07/25 0000	04/07/25 1447	CSM
SM 4500-H+ B-2011							
pH	7.1	0.5	pH	H4		04/11/25 1539	BSS
SM 5210 B-2016							
BOD (5 day)	14	6	mg/L		04/04/25 1544	04/04/25 1810	MND
TIMBERLINE							
Nitrogen, Ammonia	119	1.00	mg/L		04/08/25 1157	04/08/25 1504	SDF
USGS I-1750-85							
Total Dissolved Solids (TDS)	1420	5	mg/L		04/08/25 0742	04/09/25 1130	LAW
USGS I-3765-85							
Total Suspended Solids (TSS)	20	20	mg/L		04/08/25 1418	04/09/25 1051	RDH
Determination of Total Metals	Result	RL	Units	Note	Prepared	Analyzed	Analyst
200.7							
Iron, total	9.68	0.100	mg/L		04/09/25 1539	04/12/25 0256	JAR
245.1							
Mercury, total	<0.00050	0.00050	mg/L		04/15/25 1311	04/16/25 1228	JAR
EPA 200.8, Rv. 5.4 (1994)							
Arsenic, total	0.0051	0.0010	mg/L		04/18/25 1607	06/16/25 1744	RVV
Barium, total	0.333	0.0010	mg/L		04/18/25 1607	06/16/25 1744	RVV
Cadmium, total	<0.0002	0.0002	mg/L		04/18/25 1607	06/16/25 1744	RVV
Chromium, total	0.0029	0.0020	mg/L		04/18/25 1607	06/16/25 1744	RVV
Copper, total	<0.0050	0.0050	mg/L		04/18/25 1607	06/16/25 1744	RVV
Lead, total	0.0017	0.0005	mg/L		04/18/25 1607	06/16/25 1744	RVV
Nickel, total	0.0289	0.0020	mg/L		04/18/25 1607	06/16/25 1744	RVV
Selenium, total	<0.0020	0.0020	mg/L		04/18/25 1607	06/16/25 1744	RVV
Silver, total	<0.0050	0.0050	mg/L		04/18/25 1607	06/16/25 1744	RVV
Zinc, total	0.0208	0.0200	mg/L		04/18/25 1607	06/16/25 1744	RVV



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1ID0758

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
SM 5210 B-2016	1ID0234	1ID0234-BLK1	
		1ID0234-SRM1	
		1ID0234-DUP1	1ID0732-01
		1ID0758-01	Leachate
Method	Batch	Laboratory ID	Client / Source ID
USGS I-1750-85	1ID0333	1ID0758-01	Leachate
		1ID0333-BS1	
		1ID0333-DUP1	1ID0783-01
		1ID0333-BLK1	
Method	Batch	Laboratory ID	Client / Source ID
5310B	1ID0343	1ID0343-BS1	
		1ID0343-BSD1	
		1ID0343-BLK1	
		1ID0758-01	Leachate
		1ID0343-MS1	1ID0700-01
		1ID0343-MSD1	1ID0700-01
Method	Batch	Laboratory ID	Client / Source ID
EPA 608.3 GC-ECD	1ID0354	1ID0354-BLK1	
		1ID0354-BS1	
		1ID0354-BSD1	
		1ID0354-SRM1	
		1ID0758-01	Leachate
Method	Batch	Laboratory ID	Client / Source ID
EPA 625.1	1ID0358	1ID0358-BLK1	
		1ID0358-BS1	
		1ID0358-BSD1	
		1ID0358-SRM1	
		1ID0758-01	Leachate
Method	Batch	Laboratory ID	Client / Source ID
TIMBERLINE	1ID0369	1ID0369-BLK1	
		1ID0369-BS1	
		1ID0369-MS1	1ID0719-02
		1ID0369-MSD1	1ID0719-02
		1ID0758-01	Leachate
Method	Batch	Laboratory ID	Client / Source ID



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1ID0758

USGS I-3765-85

1ID0388

1ID0388-BLK1

1ID0388-BS1

1ID0758-01

Leachate

1ID0388-DUP1

1ID0706-01

Method	Batch	Laboratory ID	Client / Source ID
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200.7

1ID0497

1ID0497-BLK1

1ID0497-BS1

1ID0497-MS1

1ID0673-01

1ID0497-MSD1

1ID0673-01

1ID0497-PS1

1ID0673-01

1ID0758-01

Leachate

Method	Batch	Laboratory ID	Client / Source ID
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SM 4500-H+ B-2011

1ID0643

1ID0643-DUP1

1ID0710-01

1ID0758-01

Leachate

1ID0643-SRM1

1ID0643-SRM2

Method	Batch	Laboratory ID	Client / Source ID
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EPA 624.1

1ID0671

1ID0671-BS1

1ID0671-BSD1

1ID0671-BLK1

1ID0758-01

Leachate

1ID0758-01

Leachate

1ID0671-MS1

1ID0969-01

1ID0671-MSD1

1ID0969-01

Method	Batch	Laboratory ID	Client / Source ID
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245.1

1ID0783

1ID0783-BLK1

1ID0783-BS1

1ID0783-MS1

1ID0700-01

1ID0783-MSD1

1ID0700-01

1ID0758-01

Leachate

Method	Batch	Laboratory ID	Client / Source ID
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EPA 200.8, Rv. 5.4 (1994)

1ID1041

1ID1041-MSD1

1ID0622-01

1ID1041-BLK1

1ID1041-MS1

1ID0622-01

1ID1041-BS1

1ID1041-MSD1

1ID0622-01

1ID1041-MS1

1ID0622-01

1ID1041-BLK1

1ID1041-BS1

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CERTIFICATE OF ANALYSIS

1ID0758

EPA 200.8, Rv. 5.4 (1994)	1ID1041	1ID1041-MS1	1ID0622-01
		1ID1041-MSD1	1ID0622-01
		1ID1041-BS1	
		1ID1041-BLK1	
		1ID1041-MSD1	1ID0622-01
		1ID1041-BS1	
		1ID1041-MS1	1ID0622-01
		1ID1041-BLK1	
		1ID1041-BS1	
		1ID1041-BLK1	
		1ID1041-MSD1	1ID0622-01
		1ID1041-MS1	1ID0622-01
		1ID1041-BLK2	
		1ID1041-BS2	
		1ID1041-MS2	1ID0622-01
		1ID1041-MSD2	1ID0622-01
		1ID1041-PS1	1ID0622-01
		1ID0758-01	Leachate

Batch Quality Control Summary: Microbac Laboratories, Inc., Newton

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0671 - EPA 5030B - EPA 624.1										
Blank (1ID0671-BLK1)				Prepared: 04/11/25 00:00 Analyzed: 04/11/25 12:26						
Chloromethane	<1.0	1.0	ug/L							
Vinyl Chloride	<1.0	1.0	ug/L							
Bromomethane	<1.0	1.0	ug/L							
Chloroethane	<1.0	1.0	ug/L							
1,1-Dichloroethylene	<1.0	1.0	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L							
1,1-Dichloroethane	<1.0	1.0	ug/L							
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L							
Chloroform	<1.0	1.0	ug/L							
1,1,1-Trichloroethane	<1.0	1.0	ug/L							
Carbon Tetrachloride	<1.0	1.0	ug/L							
Benzene	<1.0	1.0	ug/L							
1,2-Dichloroethane	<1.0	1.0	ug/L							
Trichloroethylene	<1.0	1.0	ug/L							
1,2-Dichloropropane	<1.0	1.0	ug/L							
Bromodichloromethane	<1.0	1.0	ug/L							
2-Chloroethylvinyl ether	<10.0	10.0	ug/L							
cis-1,3-Dichloropropene	<1.0	1.0	ug/L							
Toluene	<1.0	1.0	ug/L							

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CERTIFICATE OF ANALYSIS

1ID0758

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0671 - EPA 5030B - EPA 624.1										
Blank (1ID0671-BLK1)										
Prepared: 04/11/25 00:00 Analyzed: 04/11/25 12:26										
trans-1,3-Dichloropropene	<1.0	1.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							
Dibromochloromethane	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
Surrogate: 1,2-Dichloroethane-d4	39.3		ug/L	50.1		78.5	56-130			
Surrogate: Toluene-d8	50.3		ug/L	50.4		99.9	85-113			
Surrogate: 4-Bromofluorobenzene	43.8		ug/L	50.1		87.3	82-112			
LCS (1ID0671-BS1)										
Prepared: 04/11/25 00:00 Analyzed: 04/11/25 11:19										
Chloromethane	28.85	1.0	ug/L	30.3		95.1	5-205			
Vinyl Chloride	29.54	1.0	ug/L	30.2		97.7	5-195			
Bromomethane	27.10	1.0	ug/L	30.1		90.0	15-185			
Chloroethane	29.96	1.0	ug/L	30.3		98.8	40-160			
1,1-Dichloroethylene	60.99	1.0	ug/L	50.1		122	50-150			
Methylene Chloride	46.19	5.0	ug/L	50.1		92.2	60-140			
trans-1,2-Dichloroethylene	60.04	1.0	ug/L	50.1		120	70-130			
1,1-Dichloroethane	57.42	1.0	ug/L	50.1		115	70-130			
cis-1,2-Dichloroethylene	55.07	1.0	ug/L	50.4		109	57-148			
2-Butanone (MEK)	111.0	10.0	ug/L	100		111	44-134			
Chloroform	56.03	1.0	ug/L	50.1		112	70-135			
1,1,1-Trichloroethane	59.07	1.0	ug/L	50.1		118	70-130			
Carbon Tetrachloride	58.42	1.0	ug/L	50.1		117	70-130			
Benzene	51.57	1.0	ug/L	50.4		102	65-135			
1,2-Dichloroethane	55.07	1.0	ug/L	50.1		110	70-130			
Trichloroethylene	56.02	1.0	ug/L	50.1		112	65-135			
1,2-Dichloropropane	52.42	1.0	ug/L	50.1		105	35-165			
Dibromomethane	55.29	1.0	ug/L	50.4		110	71-139			
Bromodichloromethane	55.55	1.0	ug/L	50.1		111	65-135			
2-Chloroethylvinyl ether	103.1	10.0	ug/L	100		103	5-225			
cis-1,3-Dichloropropene	52.18	1.0	ug/L	50.1		104	25-175			
Toluene	54.95	1.0	ug/L	50.5		109	70-130			
trans-1,3-Dichloropropene	51.05	1.0	ug/L	50.1		102	50-150			
1,1,2-Trichloroethane	48.54	1.0	ug/L	50.1		96.9	70-130			
Tetrachloroethylene	56.19	1.0	ug/L	50.1		112	70-130			
Dibromochloromethane	54.66	1.0	ug/L	50.1		109	70-135			
Chlorobenzene	51.35	1.0	ug/L	50.1		103	65-135			
Ethylbenzene	56.57	1.0	ug/L	50.2		113	60-140			
Xylenes, total	165.9	2.0	ug/L	151		110	79-126			
Bromoform	50.98	1.0	ug/L	50.1		102	70-130			

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CERTIFICATE OF ANALYSIS

11D0758

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11D0671 - EPA 5030B - EPA 624.1										
LCS (11D0671-BS1) Prepared: 04/11/25 00:00 Analyzed: 04/11/25 11:19										
1,1,2,2-Tetrachloroethane	51.12	1.0	ug/L	50.1		102	60-140			
1,3-Dichlorobenzene	51.00	1.0	ug/L	50.1		102	70-130			
1,4-Dichlorobenzene	47.35	1.0	ug/L	50.1		94.5	65-135			
1,2-Dichlorobenzene	44.61	1.0	ug/L	50.1		89.1	65-135			
Surrogate: Dibromofluoromethane	50.0		ug/L	50.2		99.6	59-123			
Surrogate: 1,2-Dichloroethane-d4	49.0		ug/L	50.1		97.9	56-130			
Surrogate: Toluene-d8	48.5		ug/L	50.4		96.2	85-113			
Surrogate: 4-Bromofluorobenzene	47.8		ug/L	50.1		95.3	82-112			
LCS Dup (11D0671-BSD1) Prepared: 04/11/25 00:00 Analyzed: 04/11/25 11:41										
Chloromethane	29.24	1.0	ug/L	30.3		96.4	5-205	1.34	19	
Vinyl Chloride	29.57	1.0	ug/L	30.2		97.8	5-195	0.102	26	
Bromomethane	28.37	1.0	ug/L	30.1		94.2	15-185	4.58	20	
Chloroethane	30.06	1.0	ug/L	30.3		99.1	40-160	0.333	22	
1,1-Dichloroethylene	56.56	1.0	ug/L	50.1		113	50-150	7.54	19	
Methylene Chloride	46.20	5.0	ug/L	50.1		92.2	60-140	0.0217	17	
trans-1,2-Dichloroethylene	55.23	1.0	ug/L	50.1		110	70-130	8.35	17	
1,1-Dichloroethane	52.46	1.0	ug/L	50.1		105	70-130	9.03	17	
cis-1,2-Dichloroethylene	51.24	1.0	ug/L	50.4		102	57-148	7.21	21	
2-Butanone (MEK)	99.12	10.0	ug/L	100		99.1	44-134	11.4	30	
Chloroform	51.35	1.0	ug/L	50.1		103	70-135	8.72	17	
1,1,1-Trichloroethane	54.67	1.0	ug/L	50.1		109	70-130	7.74	30	
Carbon Tetrachloride	53.72	1.0	ug/L	50.1		107	70-130	8.38	19	
Benzene	49.95	1.0	ug/L	50.4		99.0	65-135	3.19	17	
1,2-Dichloroethane	51.27	1.0	ug/L	50.1		102	70-130	7.15	15	
Trichloroethylene	52.53	1.0	ug/L	50.1		105	65-135	6.43	18	
1,2-Dichloropropane	50.06	1.0	ug/L	50.1		99.9	35-165	4.61	17	
Dibromomethane	50.23	1.0	ug/L	50.4		99.7	71-139	9.59	27	
Bromodichloromethane	53.03	1.0	ug/L	50.1		106	65-135	4.64	14	
2-Chloroethylvinyl ether	101.0	10.0	ug/L	100		101	5-225	2.01	26	
cis-1,3-Dichloropropene	49.63	1.0	ug/L	50.1		99.1	25-175	5.01	30	
Toluene	54.81	1.0	ug/L	50.5		109	70-130	0.255	17	
trans-1,3-Dichloropropene	48.50	1.0	ug/L	50.1		96.9	50-150	5.12	20	
1,1,2-Trichloroethane	46.55	1.0	ug/L	50.1		92.9	70-130	4.19	18	
Tetrachloroethylene	55.49	1.0	ug/L	50.1		111	70-130	1.25	16	
Dibromochloromethane	51.93	1.0	ug/L	50.1		104	70-135	5.12	13	
Chlorobenzene	50.90	1.0	ug/L	50.1		102	65-135	0.880	18	
Ethylbenzene	57.29	1.0	ug/L	50.2		114	60-140	1.26	17	
Xylenes, total	168.0	2.0	ug/L	151		111	79-126	1.25	18	
Bromoform	50.17	1.0	ug/L	50.1		100	70-130	1.60	21	
1,1,2,2-Tetrachloroethane	51.79	1.0	ug/L	50.1		103	60-140	1.30	30	
1,3-Dichlorobenzene	51.39	1.0	ug/L	50.1		103	70-130	0.762	15	
1,4-Dichlorobenzene	48.31	1.0	ug/L	50.1		96.4	65-135	2.01	15	

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CERTIFICATE OF ANALYSIS

1ID0758

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0671 - EPA 5030B - EPA 624.1										
LCS Dup (1ID0671-BSD1)				Prepared: 04/11/25 00:00 Analyzed: 04/11/25 11:41						
1,2-Dichlorobenzene	45.16	1.0	ug/L	50.1		90.1	65-135	1.23	15	
Surrogate: Dibromofluoromethane	45.3		ug/L	50.2		90.3	59-123			
Surrogate: 1,2-Dichloroethane-d4	45.2		ug/L	50.1		90.2	56-130			
Surrogate: Toluene-d8	48.8		ug/L	50.4		97.0	85-113			
Surrogate: 4-Bromofluorobenzene	46.5		ug/L	50.1		92.8	82-112			
Matrix Spike (1ID0671-MS1)				Source: 1ID0969-01 Prepared: 04/11/25 00:00 Analyzed: 04/11/25 15:35						
Chloromethane	263.3	10.0	ug/L	303	ND	86.8	5-273			
Vinyl Chloride	269.4	10.0	ug/L	302	ND	89.1	5-251			
Bromomethane	253.8	10.0	ug/L	301	ND	84.3	5-242			
Chloroethane	279.3	10.0	ug/L	303	ND	92.1	14-230			
1,1-Dichloroethylene	590.1	10.0	ug/L	501	ND	118	5-235			
Methylene Chloride	438.7	50.0	ug/L	501	ND	87.6	5-221			
trans-1,2-Dichloroethylene	585.7	10.0	ug/L	501	ND	117	54-156			
1,1-Dichloroethane	555.6	10.0	ug/L	501	ND	111	59-155			
cis-1,2-Dichloroethylene	541.0	10.0	ug/L	504	ND	107	42-168			
2-Butanone (MEK)	1146	100	ug/L	1000	ND	115	57-133			
Chloroform	542.9	10.0	ug/L	501	ND	108	51-138			
1,1,1-Trichloroethane	578.7	10.0	ug/L	501	ND	115	52-162			
Carbon Tetrachloride	572.6	10.0	ug/L	501	ND	114	70-140			
Benzene	488.7	10.0	ug/L	504	ND	96.9	37-151			
1,2-Dichloroethane	530.7	10.0	ug/L	501	ND	106	59-155			
Trichloroethylene	528.2	10.0	ug/L	501	ND	105	70-157			
1,2-Dichloropropane	512.5	10.0	ug/L	501	ND	102	5-210			
Dibromomethane	510.2	10.0	ug/L	504	ND	101	62-141			
Bromodichloromethane	540.0	10.0	ug/L	501	ND	108	35-155			
2-Chloroethylvinyl ether	864.1	100	ug/L	1000	ND	86.4	5-305			
cis-1,3-Dichloropropene	498.6	10.0	ug/L	501	ND	99.6	5-227			
Toluene	507.8	10.0	ug/L	505	ND	101	47-150			
trans-1,3-Dichloropropene	474.6	10.0	ug/L	501	ND	94.8	17-183			
1,1,2-Trichloroethane	458.4	10.0	ug/L	501	ND	91.5	52-150			
Tetrachloroethylene	533.8	10.0	ug/L	501	ND	107	64-148			
Dibromochloromethane	506.4	10.0	ug/L	501	ND	101	53-149			
Chlorobenzene	476.1	10.0	ug/L	501	ND	95.1	37-160			
Ethylbenzene	520.8	10.0	ug/L	502	ND	104	79-119			
Xylenes, total	1510	20.0	ug/L	1510	ND	99.9	80-120			
Bromoform	454.7	10.0	ug/L	501	ND	90.7	45-169			
1,1,2,2-Tetrachloroethane	486.5	10.0	ug/L	501	ND	97.1	46-157			
1,3-Dichlorobenzene	452.5	10.0	ug/L	501	ND	90.3	59-156			
1,4-Dichlorobenzene	423.6	10.0	ug/L	501	ND	84.5	18-190			
1,2-Dichlorobenzene	373.3	10.0	ug/L	501	ND	74.5	18-190			
Surrogate: Dibromofluoromethane	521		ug/L	502		104	59-123			
Surrogate: 1,2-Dichloroethane-d4	515		ug/L	501		103	56-130			

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CERTIFICATE OF ANALYSIS

11D0758

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11D0671 - EPA 5030B - EPA 624.1										
Matrix Spike (11D0671-MS1)		Source: 11D0969-01		Prepared: 04/11/25 00:00 Analyzed: 04/11/25 15:35						
Surrogate: Toluene-d8	482		ug/L	504		95.7	85-113			
Surrogate: 4-Bromofluorobenzene	446		ug/L	501		88.9	82-112			
Matrix Spike Dup (11D0671-MSD1)		Source: 11D0969-01		Prepared: 04/11/25 00:00 Analyzed: 04/11/25 15:58						
Chloromethane	285.8	10.0	ug/L	303	ND	94.3	5-273	8.20	60	
Vinyl Chloride	286.7	10.0	ug/L	302	ND	94.8	5-251	6.22	66	
Bromomethane	280.2	10.0	ug/L	301	ND	93.0	5-242	9.89	61	
Chloroethane	289.1	10.0	ug/L	303	ND	95.4	14-230	3.45	78	
1,1-Dichloroethylene	569.7	10.0	ug/L	501	ND	114	5-235	3.52	32	
Methylene Chloride	488.5	50.0	ug/L	501	ND	97.5	5-221	10.7	60	
trans-1,2-Dichloroethylene	554.3	10.0	ug/L	501	ND	111	54-156	5.51	45	
1,1-Dichloroethane	550.7	10.0	ug/L	501	ND	110	59-155	0.886	40	
cis-1,2-Dichloroethylene	542.3	10.0	ug/L	504	ND	108	42-168	0.240	28	
2-Butanone (MEK)	1122	100	ug/L	1000	ND	112	57-133	2.11	30	
Chloroform	539.2	10.0	ug/L	501	ND	108	51-138	0.684	54	
1,1,1-Trichloroethane	552.3	10.0	ug/L	501	ND	110	52-162	4.67	36	
Carbon Tetrachloride	542.6	10.0	ug/L	501	ND	108	70-140	5.38	41	
Benzene	501.3	10.0	ug/L	504	ND	99.4	37-151	2.55	61	
1,2-Dichloroethane	560.5	10.0	ug/L	501	ND	112	59-155	5.46	49	
Trichloroethylene	514.9	10.0	ug/L	501	ND	103	70-157	2.55	48	
1,2-Dichloropropane	521.8	10.0	ug/L	501	ND	104	5-210	1.80	55	
Dibromomethane	547.8	10.0	ug/L	504	ND	109	62-141	7.11	11	
Bromodichloromethane	564.5	10.0	ug/L	501	ND	113	35-155	4.44	56	
2-Chloroethylvinyl ether	701.8	100	ug/L	1000	ND	70.2	5-305	20.7	71	
cis-1,3-Dichloropropene	532.0	10.0	ug/L	501	ND	106	5-227	6.48	58	
Toluene	535.4	10.0	ug/L	505	ND	106	47-150	5.29	41	
trans-1,3-Dichloropropene	533.4	10.0	ug/L	501	ND	107	17-183	11.7	86	
1,1,2-Trichloroethane	506.9	10.0	ug/L	501	ND	101	52-150	10.0	45	
Tetrachloroethylene	498.2	10.0	ug/L	501	ND	99.4	64-148	6.90	39	
Dibromochloromethane	537.6	10.0	ug/L	501	ND	107	53-149	5.98	50	
Chlorobenzene	494.3	10.0	ug/L	501	ND	98.7	37-160	3.75	53	
Ethylbenzene	528.8	10.0	ug/L	502	ND	105	79-119	1.52	63	
Xylenes, total	1582	20.0	ug/L	1510	ND	105	80-120	4.65	12	
Bromoform	530.5	10.0	ug/L	501	ND	106	45-169	15.4	42	
1,1,2,2-Tetrachloroethane	526.0	10.0	ug/L	501	ND	105	46-157	7.80	61	
1,3-Dichlorobenzene	489.1	10.0	ug/L	501	ND	97.7	59-156	7.77	43	
1,4-Dichlorobenzene	473.0	10.0	ug/L	501	ND	94.4	18-190	11.0	57	
1,2-Dichlorobenzene	451.4	10.0	ug/L	501	ND	90.1	18-190	18.9	57	
Surrogate: Dibromofluoromethane	515		ug/L	502		103	59-123			
Surrogate: 1,2-Dichloroethane-d4	499		ug/L	501		99.6	56-130			
Surrogate: Toluene-d8	499		ug/L	504		99.1	85-113			
Surrogate: 4-Bromofluorobenzene	490		ug/L	501		97.7	82-112			

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CERTIFICATE OF ANALYSIS

1ID0758

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0358 - EPA 625 BNA - EPA 625.1									
Blank (1ID0358-BLK1)				Prepared: 04/08/25 10:57 Analyzed: 04/14/25 11:28					
Bis(2-Chloroethyl) Ether	<10	10	ug/L						
2-Chlorophenol	<10	10	ug/L						
1,3-Dichlorobenzene	<10	10	ug/L						
1,4-Dichlorobenzene	<10	10	ug/L						
Benzyl Alcohol	<10	10	ug/L						
1,2-Dichlorobenzene	<10	10	ug/L						
Bis[2-Chloroisopropyl]ether	<10	10	ug/L						
n-Nitroso-di-n-propylamine	<10	10	ug/L						
Hexachloroethane	<10	10	ug/L						
Nitrobenzene	<10	10	ug/L						
Isophorone	<10	10	ug/L						
2-Nitrophenol	<10	10	ug/L						
2,4-Dimethylphenol	<10	10	ug/L						
Bis (2-Chloroethoxy) Methane	<10	10	ug/L						
Benzoic acid	<50	50	ug/L						
2,4-Dichlorophenol	<10	10	ug/L						
1,2,4-Trichlorobenzene	<10	10	ug/L						
Naphthalene	<10	10	ug/L						
Hexachlorobutadiene	<20	20	ug/L						
4-Chloro-3-methylphenol	<10	10	ug/L						
Hexachlorocyclopentadiene	<20	20	ug/L						
2,4,6-Trichlorophenol	<10	10	ug/L						
2,4,5-Trichlorophenol	<50	50	ug/L						
2-Chloronaphthalene	<10	10	ug/L						
Dimethylphthalate	<15	15	ug/L						
Acenaphthylene	<10	10	ug/L						
2,6-Dinitrotoluene	<10	10	ug/L						
Acenaphthene	<10	10	ug/L						
2,4-Dinitrophenol	<20	20	ug/L						
Dibenzofuran	<10	10	ug/L						
2,4-Dinitrotoluene	<10	10	ug/L						
4-Nitrophenol	<10	10	ug/L						
Diethyl Phthalate	<30	30	ug/L						
Fluorene	<10	10	ug/L						
4-Chlorophenyl Phenyl Ether	<10	10	ug/L						
4,6-Dinitro-2-methylphenol	<20	20	ug/L						
N-Nitrosodiphenylamine	<10	10	ug/L						
4-Bromophenyl Phenyl Ether	<10	10	ug/L						
Hexachlorobenzene	<10	10	ug/L						
Pentachlorophenol	<20	20	ug/L						
Phenanthrene	<10	10	ug/L						
Anthracene	<10	10	ug/L						

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CERTIFICATE OF ANALYSIS

11D0758

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 11D0358 - EPA 625 BNA - EPA 625.1									
Blank (11D0358-BLK1)									
Prepared: 04/08/25 10:57 Analyzed: 04/14/25 11:28									
Di-n-butyl Phthalate	<10	10	ug/L						
Fluoranthene	<10	10	ug/L						
Pyrene	<10	10	ug/L						
Butyl Benzyl Phthalate	<10	10	ug/L						
Benzo(a)anthracene	<10	10	ug/L						
Chrysene	<10	10	ug/L						
Bis(2-Ethylhexyl) Phthalate	<10	10	ug/L						
Di-n-octyl Phthalate	<10	10	ug/L						
Indeno(1,2,3-cd)Pyrene	<10	10	ug/L						
3,3'-Dichlorobenzidine	<20	20	ug/L						
Benzo(b)Fluoranthene	<10	10	ug/L						
Benzo(k)Fluoranthene	<10	10	ug/L						
Benzo(a)Pyrene	<10	10	ug/L						
Dibenzo(a,h)anthracene	<10	10	ug/L						
Benzo(g,h,i)perylene	<10	10	ug/L						
Surrogate: 2-Fluorophenol	14.0		ug/L	20.6		67.8	16-140		
Surrogate: Phenol-d6	14.2		ug/L	19.6		72.3	13-147		
Surrogate: Nitrobenzene-d5	14.9		ug/L	20.6		72.4	17-150		
Surrogate: 2-Fluorobiphenyl	14.9		ug/L	19.5		76.2	15-134		
Surrogate: 2,4,6-Tribromophenol	18.6		ug/L	20.0		92.6	20-158		
Surrogate: Terphenyl-d14	21.8		ug/L	20.6		106	12-157		
LCS (11D0358-BS1)									
Prepared: 04/08/25 10:57 Analyzed: 04/14/25 11:53									
Bis(2-Chloroethyl) Ether	<10	10	ug/L	10.0		73.5	43-126		
2-Chlorophenol	<10	10	ug/L	10.0		75.3	36-120		
1,3-Dichlorobenzene	<10	10	ug/L	10.0		64.5	18-95		
1,4-Dichlorobenzene	<10	10	ug/L	10.0		65.9	18-99		
Benzyl Alcohol	<10	10	ug/L	10.0		64.0	10-125		
1,2-Dichlorobenzene	<10	10	ug/L	10.0		68.4	20-100		
Bis[2-Chloroisopropyl]ether	<10	10	ug/L	10.0		74.4	63-139		
n-Nitroso-di-n-propylamine	<10	10	ug/L	10.0		82.0	14-198		
Hexachloroethane	<10	10	ug/L	10.0		60.0	55-120		
Nitrobenzene	<10	10	ug/L	10.0		80.0	54-158		
Isophorone	<10	10	ug/L	10.0		86.6	47-180		
2-Nitrophenol	<10	10	ug/L	10.0		75.9	45-167		
2,4-Dimethylphenol	<10	10	ug/L	10.0		84.4	42-120		
Bis (2-Chloroethoxy) Methane	<10	10	ug/L	10.0		61.2	49-165		
2,4-Dichlorophenol	<10	10	ug/L	10.0		81.2	53-122		
1,2,4-Trichlorobenzene	<10	10	ug/L	10.0		65.1	57-130		
Naphthalene	<10	10	ug/L	10.0		72.3	36-120		
Hexachlorobutadiene	<20	20	ug/L	10.0		55.3	38-120		
4-Chloro-3-methylphenol	<10	10	ug/L	10.0		88.2	41-128		
Hexachlorocyclopentadiene	<20	20	ug/L	10.0		24.8	10-107		

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CERTIFICATE OF ANALYSIS

1ID0758

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0358 - EPA 625 BNA - EPA 625.1									
LCS (1ID0358-BS1)									
Prepared: 04/08/25 10:57 Analyzed: 04/14/25 11:53									
2,4,6-Trichlorophenol	<10	10	ug/L	10.0		97.6	52-129		
2,4,5-Trichlorophenol	<50	50	ug/L	10.0		103	50-121		
2-Chloronaphthalene	<10	10	ug/L	10.0		77.7	65-120		
Dimethylphthalate	<15	15	ug/L	10.0		97.3	1-120		
Acenaphthylene	<10	10	ug/L	10.0		71.7	54-126		
2,6-Dinitrotoluene	<10	10	ug/L	10.0		91.5	68-137		
Acenaphthene	<10	10	ug/L	10.0		75.9	60-132		
2,4-Dinitrophenol	<20	20	ug/L	10.0		57.8	1-172		
Dibenzofuran	<10	10	ug/L	10.0		79.2	49-108		
2,4-Dinitrotoluene	<10	10	ug/L	10.0		86.6	48-127		
4-Nitrophenol	<10	10	ug/L	10.0		98.0	13-129		
Diethyl Phthalate	<30	30	ug/L	10.0		102	1-120		
Fluorene	<10	10	ug/L	10.0		82.0	70-120		
4-Chlorophenyl Phenyl Ether	<10	10	ug/L	10.0		80.5	38-145		
4,6-Dinitro-2-methylphenol	<20	20	ug/L	10.0		51.6	53-130		Q3
N-Nitrosodiphenylamine	<10	10	ug/L	10.0		52.3	29-136		
4-Bromophenyl Phenyl Ether	<10	10	ug/L	10.0		75.6	44-127		
Hexachlorobenzene	<10	10	ug/L	10.0		80.4	8-142		
Pentachlorophenol	<20	20	ug/L	10.0		60.3	38-152		
Phenanthrene	<10	10	ug/L	10.0		88.5	65-120		
Anthracene	<10	10	ug/L	10.0		85.6	43-120		
Di-n-butyl Phthalate	<10	10	ug/L	10.0		96.2	8-120		
Fluoranthene	<10	10	ug/L	10.0		91.8	42-121		
Pyrene	<10	10	ug/L	10.0		88.5	70-120		
Butyl Benzyl Phthalate	<10	10	ug/L	10.0		90.2	1-140		
Benzo(a)anthracene	<10	10	ug/L	10.0		90.0	42-133		
Chrysene	<10	10	ug/L	10.0		93.1	44-140		
Bis(2-Ethylhexyl) Phthalate	14.0	10	ug/L	10.0		140	29-137		Q2
Di-n-octyl Phthalate	11.1	10	ug/L	10.0		111	19-132		
Indeno(1,2,3-cd)Pyrene	10.0	10	ug/L	10.0		100	1-151		
Benzo(b)Fluoranthene	10.3	10	ug/L	10.0		103	42-140		
Benzo(k)Fluoranthene	11.0	10	ug/L	10.0		110	27-168		
Benzo(a)Pyrene	<10	10	ug/L	10.0		94.8	32-148		
Dibenzo(a,h)anthracene	10.2	10	ug/L	10.0		102	1-200		
Benzo(g,h,i)perylene	<10	10	ug/L	10.0		95.8	1-195		
Surrogate: 2-Fluorophenol	15.9		ug/L	20.6		77.0	16-140		
Surrogate: Phenol-d6	15.6		ug/L	19.6		79.6	13-147		
Surrogate: Nitrobenzene-d5	17.7		ug/L	20.6		85.9	17-150		
Surrogate: 2-Fluorobiphenyl	19.7		ug/L	19.5		101	15-134		
Surrogate: 2,4,6-Tribromophenol	22.0		ug/L	20.0		110	20-158		
Surrogate: Terphenyl-d14	21.9		ug/L	20.6		106	12-157		

LCS Dup (1ID0358-BSD1)

Prepared: 04/08/25 10:57 Analyzed: 04/14/25 12:17

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CERTIFICATE OF ANALYSIS

1ID0758

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD Limit	Notes
Batch 1ID0358 - EPA 625 BNA - EPA 625.1								
LCS Dup (1ID0358-BSD1)				Prepared: 04/08/25 10:57 Analyzed: 04/14/25 12:17				
Bis(2-Chloroethyl) Ether	<10	10	ug/L	10.0	75.7	43-126	2.95	65
2-Chlorophenol	<10	10	ug/L	10.0	70.9	36-120	6.02	37
1,3-Dichlorobenzene	<10	10	ug/L	10.0	70.0	18-95	8.18	30
1,4-Dichlorobenzene	<10	10	ug/L	10.0	72.0	18-99	8.85	30
Benzyl Alcohol	<10	10	ug/L	10.0	62.1	10-125	3.01	30
1,2-Dichlorobenzene	<10	10	ug/L	10.0	74.9	20-100	9.07	30
Bis[2-Chloroisopropyl]ether	<10	10	ug/L	10.0	82.6	63-139	10.4	46
n-Nitroso-di-n-propylamine	<10	10	ug/L	10.0	78.1	14-198	4.87	52
Hexachloroethane	<10	10	ug/L	10.0	63.2	55-120	5.19	32
Nitrobenzene	<10	10	ug/L	10.0	85.9	54-158	7.11	37
Isophorone	<10	10	ug/L	10.0	84.8	47-180	2.10	56
2-Nitrophenol	<10	10	ug/L	10.0	70.1	45-167	7.95	33
2,4-Dimethylphenol	<10	10	ug/L	10.0	87.3	42-120	3.38	35
Bis (2-Chloroethoxy) Methane	<10	10	ug/L	10.0	74.6	49-165	19.7	32
2,4-Dichlorophenol	<10	10	ug/L	10.0	75.8	53-122	6.88	30
1,2,4-Trichlorobenzene	<10	10	ug/L	10.0	68.1	57-130	4.50	30
Naphthalene	<10	10	ug/L	10.0	75.9	36-120	4.86	39
Hexachlorobutadiene	<20	20	ug/L	10.0	61.7	38-120	10.9	38
4-Chloro-3-methylphenol	<10	10	ug/L	10.0	85.4	41-128	3.23	44
Hexachlorocyclopentadiene	<20	20	ug/L	10.0	24.0	10-107	3.28	30
2,4,6-Trichlorophenol	<10	10	ug/L	10.0	79.2	52-129	20.8	35
2,4,5-Trichlorophenol	<50	50	ug/L	10.0	83.8	50-121	20.2	25
2-Chloronaphthalene	<10	10	ug/L	10.0	73.5	65-120	5.56	26
Dimethylphthalate	<15	15	ug/L	10.0	95.8	1-120	1.55	110
Acenaphthylene	<10	10	ug/L	10.0	78.0	54-126	8.42	45
2,6-Dinitrotoluene	<10	10	ug/L	10.0	90.6	68-137	0.988	29
Acenaphthene	<10	10	ug/L	10.0	79.4	60-132	4.51	29
2,4-Dinitrophenol	<20	20	ug/L	10.0	34.6	1-172	50.2	79
Dibenzofuran	<10	10	ug/L	10.0	83.1	49-108	4.81	26
2,4-Dinitrotoluene	<10	10	ug/L	10.0	88.8	48-127	2.51	25
4-Nitrophenol	<10	10	ug/L	10.0	80.4	13-129	19.7	79
Diethyl Phthalate	<30	30	ug/L	10.0	100	1-120	1.09	60
Fluorene	<10	10	ug/L	10.0	85.6	70-120	4.30	23
4-Chlorophenyl Phenyl Ether	<10	10	ug/L	10.0	84.7	38-145	5.08	36
4,6-Dinitro-2-methylphenol	<20	20	ug/L	10.0	41.7	53-130	21.2	122 Q3
N-Nitrosodiphenylamine	<10	10	ug/L	10.0	70.3	29-136	29.4	30
4-Bromophenyl Phenyl Ether	<10	10	ug/L	10.0	78.8	44-127	4.15	30
Hexachlorobenzene	<10	10	ug/L	10.0	84.2	8-142	4.62	33
Pentachlorophenol	<20	20	ug/L	10.0	48.6	38-152	21.5	52
Phenanthrene	<10	10	ug/L	10.0	91.3	65-120	3.11	24
Anthracene	<10	10	ug/L	10.0	90.0	43-120	5.01	40
Di-n-butyl Phthalate	<10	10	ug/L	10.0	95.8	8-120	0.417	28

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CERTIFICATE OF ANALYSIS

11D0758

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 11D0358 - EPA 625 BNA - EPA 625.1									
LCS Dup (11D0358-BSD1)									
				Prepared: 04/08/25 10:57 Analyzed: 04/14/25 12:17					
Fluoranthene	<10	10	ug/L	10.0	92.8	42-121	1.08	40	
Pyrene	<10	10	ug/L	10.0	93.4	70-120	5.39	30	
Butyl Benzyl Phthalate	<10	10	ug/L	10.0	95.6	1-140	5.81	37	
Benzo(a)anthracene	<10	10	ug/L	10.0	91.2	42-133	1.32	32	
Chrysene	<10	10	ug/L	10.0	93.6	44-140	0.536	53	
Bis(2-Ethylhexyl) Phthalate	12.6	10	ug/L	10.0	126	29-137	10.6	50	
Di-n-octyl Phthalate	10.0	10	ug/L	10.0	100	19-132	10.4	42	
Indeno(1,2,3-cd)Pyrene	<10	10	ug/L	10.0	90.0	1-151	10.6	60	
Benzo(b)Fluoranthene	<10	10	ug/L	10.0	91.5	42-140	11.5	38	
Benzo(k)Fluoranthene	<10	10	ug/L	10.0	97.8	27-168	11.8	30	
Benzo(a)Pyrene	<10	10	ug/L	10.0	88.5	32-148	6.87	43	
Dibenzo(a,h)anthracene	<10	10	ug/L	10.0	89.5	1-200	12.7	75	
Benzo(g,h,i)perylene	<10	10	ug/L	10.0	88.5	1-195	7.92	61	
Surrogate: 2-Fluorophenol	14.3		ug/L	20.6	69.4	16-140			
Surrogate: Phenol-d6	14.6		ug/L	19.6	74.5	13-147			
Surrogate: Nitrobenzene-d5	17.9		ug/L	20.6	86.9	17-150			
Surrogate: 2-Fluorobiphenyl	17.5		ug/L	19.5	89.5	15-134			
Surrogate: 2,4,6-Tribromophenol	19.2		ug/L	20.0	95.5	20-158			
Surrogate: Terphenyl-d14	21.7		ug/L	20.6	105	12-157			
Reference (11D0358-SRM1)									
				Prepared: 04/08/25 10:57 Analyzed: 04/14/25 13:30					
Bis(2-Chloroethyl) Ether	<10	10	ug/L	10.0	94.0	80-120			
2-Chlorophenol	10.3	10	ug/L	10.0	103	80-120			
1,3-Dichlorobenzene	10.2	10	ug/L	10.0	102	80-120			
1,4-Dichlorobenzene	10.1	10	ug/L	10.0	101	80-120			
Benzyl Alcohol	<10	10	ug/L	10.0	67.0	80-120			S
1,2-Dichlorobenzene	10.2	10	ug/L	10.0	102	80-120			
Bis[2-Chloroisopropyl]ether	10.0	10	ug/L	10.0	99.6	80-120			
n-Nitroso-di-n-propylamine	<10	10	ug/L	10.0	95.4	80-120			
Hexachloroethane	<10	10	ug/L	10.0	98.7	80-120			
Nitrobenzene	10.7	10	ug/L	10.0	107	80-120			
Isophorone	10.1	10	ug/L	10.0	101	80-120			
2-Nitrophenol	10.7	10	ug/L	10.0	107	80-120			
2,4-Dimethylphenol	10.7	10	ug/L	10.0	107	80-120			
Bis (2-Chloroethoxy) Methane	<10	10	ug/L	10.0	99.2	80-120			
2,4-Dichlorophenol	10.5	10	ug/L	10.0	105	80-120			
1,2,4-Trichlorobenzene	10.0	10	ug/L	10.0	99.9	80-120			
Naphthalene	10.0	10	ug/L	10.0	100	80-120			
Hexachlorobutadiene	<20	20	ug/L	10.0	107	80-120			
4-Chloro-3-methylphenol	<10	10	ug/L	10.0	96.9	80-120			
Hexachlorocyclopentadiene	<20	20	ug/L	10.0	69.5	80-120			S
2,4,6-Trichlorophenol	10.7	10	ug/L	10.0	107	80-120			
2,4,5-Trichlorophenol	<50	50	ug/L	10.0	106	80-120			

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CERTIFICATE OF ANALYSIS

1ID0758

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0358 - EPA 625 BNA - EPA 625.1									
Reference (1ID0358-SRM1)				Prepared: 04/08/25 10:57 Analyzed: 04/14/25 13:30					
2-Chloronaphthalene	<10	10	ug/L	10.0		98.9 80-120			
Dimethylphthalate	<15	15	ug/L	10.0		106 80-120			
Acenaphthylene	10.1	10	ug/L	10.0		101 80-120			
2,6-Dinitrotoluene	10.1	10	ug/L	10.0		101 80-120			
Acenaphthene	10.2	10	ug/L	10.0		102 80-120			
2,4-Dinitrophenol	<20	20	ug/L	10.0		67.2 80-120			S
Dibenzofuran	10.2	10	ug/L	10.0		102 80-120			
2,4-Dinitrotoluene	<10	10	ug/L	10.0		96.0 80-120			
4-Nitrophenol	10.2	10	ug/L	10.0		102 80-120			
Diethyl Phthalate	<30	30	ug/L	10.0		113 80-120			
Fluorene	10.8	10	ug/L	10.0		108 80-120			
4-Chlorophenyl Phenyl Ether	10.8	10	ug/L	10.0		108 80-120			
4,6-Dinitro-2-methylphenol	<20	20	ug/L	10.0		78.3 80-120			S
N-Nitrosodiphenylamine	10.3	10	ug/L	10.0		103 80-120			
4-Bromophenyl Phenyl Ether	10.6	10	ug/L	10.0		106 80-120			
Hexachlorobenzene	10.6	10	ug/L	10.0		106 80-120			
Pentachlorophenol	<20	20	ug/L	10.0		73.9 80-120			S
Phenanthrene	10.2	10	ug/L	10.0		102 80-120			
Anthracene	10.0	10	ug/L	10.0		99.9 80-120			
Di-n-butyl Phthalate	10.1	10	ug/L	10.0		101 80-120			
Fluoranthene	10.1	10	ug/L	10.0		101 80-120			
Pyrene	10.0	10	ug/L	10.0		100 80-120			
Butyl Benzyl Phthalate	10.3	10	ug/L	10.0		103 80-120			
Benzo(a)anthracene	<10	10	ug/L	10.0		99.4 80-120			
Chrysene	10.1	10	ug/L	10.0		101 80-120			
Bis(2-Ethylhexyl) Phthalate	10.3	10	ug/L	10.0		103 80-120			
Di-n-octyl Phthalate	10.7	10	ug/L	10.0		107 80-120			
Indeno(1,2,3-cd)Pyrene	10.1	10	ug/L	10.0		101 80-120			
3,3'-Dichlorobenzidine	<20	20	ug/L	10.0		78.6 80-120			S
Benzo(b)Fluoranthene	<10	10	ug/L	10.0		96.6 80-120			
Benzo(k)Fluoranthene	10.2	10	ug/L	10.0		102 80-120			
Benzo(a)Pyrene	10.2	10	ug/L	10.0		102 80-120			
Dibenzo(a,h)anthracene	10.0	10	ug/L	10.0		100 80-120			
Benzo(g,h,i)perylene	10.2	10	ug/L	10.0		102 80-120			

Surrogate: 2-Fluorophenol	22.7	ug/L	20.6	110 16-140
Surrogate: Phenol-d6	20.7	ug/L	19.6	106 13-147
Surrogate: Nitrobenzene-d5	23.4	ug/L	20.6	114 17-150
Surrogate: 2-Fluorobiphenyl	22.8	ug/L	19.5	117 15-134
Surrogate: 2,4,6-Tribromophenol	26.4	ug/L	20.0	132 20-158
Surrogate: Terphenyl-d14	24.2	ug/L	20.6	117 12-157

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CERTIFICATE OF ANALYSIS

1ID0758

Determination of Organochlorine Insecticides & PCBs	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0354 - EPA 608 OC/PCB - EPA 608.3 GC-ECD									
Blank (1ID0354-BLK1)				Prepared: 04/08/25 10:51 Analyzed: 04/11/25 17:28					
Gamma-BHC [Lindane]	<0.05	0.05	ug/L						
Beta-BHC	<0.05	0.05	ug/L						
Heptachlor	<0.05	0.05	ug/L						
Delta-BHC	<0.05	0.05	ug/L						
Aldrin	<0.05	0.05	ug/L						
Heptachlor Epoxide	<0.05	0.05	ug/L						
Endosulfan I	<0.05	0.05	ug/L						
4,4'-DDE	<0.05	0.05	ug/L						
Dieldrin	<0.05	0.05	ug/L						
Endrin	<0.05	0.05	ug/L						
4,4'-DDD	<0.05	0.05	ug/L						
Endosulfan II	<0.05	0.05	ug/L						
4,4'-DDT	<0.05	0.05	ug/L						
Endrin Aldehyde	<0.05	0.05	ug/L						
Endosulfan Sulfate	<0.05	0.05	ug/L						
Chlordane	<0.10	0.10	ug/L						
Toxaphene	<0.20	0.20	ug/L						
Arochlor 1016	<0.20	0.20	ug/L						
Arochlor 1221	<0.20	0.20	ug/L						
Arochlor 1232	<0.20	0.20	ug/L						
Arochlor 1242	<0.20	0.20	ug/L						
Arochlor 1248	<0.20	0.20	ug/L						
Arochlor 1254	<0.20	0.20	ug/L						
Arochlor 1260	<0.20	0.20	ug/L						
Surrogate: Tetrachloro-m-xylene	0.420		ug/L	0.600		69.9 10-144			
Surrogate: Decachlorobiphenyl	0.0989		ug/L	0.600		16.5 10-148			
LCS (1ID0354-BS1)				Prepared: 04/08/25 10:51 Analyzed: 04/11/25 18:11					
Gamma-BHC [Lindane]	0.203	0.05	ug/L	0.250		81.4 49-129			
Beta-BHC	0.198	0.05	ug/L	0.250		79.0 46-119			
Heptachlor	0.204	0.05	ug/L	0.250		81.7 58-130			
Delta-BHC	0.198	0.05	ug/L	0.250		79.2 51-145			
Aldrin	0.199	0.05	ug/L	0.250		79.5 51-113			
Heptachlor Epoxide	0.195	0.05	ug/L	0.250		78.0 50-130			
Endosulfan I	0.217	0.05	ug/L	0.250		86.9 49-137			
4,4'-DDE	0.199	0.05	ug/L	0.250		79.5 55-123			
Dieldrin	0.218	0.05	ug/L	0.250		87.3 32-135			
Endrin	0.228	0.05	ug/L	0.250		91.3 18-171			
4,4'-DDD	0.214	0.05	ug/L	0.250		85.6 56-129			
Endosulfan II	0.220	0.05	ug/L	0.250		88.0 41-140			
4,4'-DDT	0.210	0.05	ug/L	0.250		84.2 52-143			
Endrin Aldehyde	0.212	0.05	ug/L	0.250		84.9 43-131			

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CERTIFICATE OF ANALYSIS

11D0758

Determination of Organochlorine Insecticides & PCBs	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 11D0354 - EPA 608 OC/PCB - EPA 608.3 GC-ECD									
LCS (11D0354-BS1)				Prepared: 04/08/25 10:51 Analyzed: 04/11/25 18:11					
Endosulfan Sulfate	0.216	0.05	ug/L	0.250		86.2 58-123			
Surrogate: Tetrachloro-m-xylene	0.394		ug/L	0.600		65.7 10-144			
Surrogate: Decachlorobiphenyl	0.0921		ug/L	0.600		15.3 10-148			
LCS Dup (11D0354-BSD1)				Prepared: 04/08/25 10:51 Analyzed: 04/11/25 18:26					
Gamma-BHC [Lindane]	0.212	0.05	ug/L	0.250		84.7 49-129	4.03	30	
Beta-BHC	0.189	0.05	ug/L	0.250		75.6 46-119	4.43	30	
Heptachlor	0.212	0.05	ug/L	0.250		84.7 58-130	3.53	30	
Delta-BHC	0.204	0.05	ug/L	0.250		81.5 51-145	2.79	30	
Aldrin	0.206	0.05	ug/L	0.250		82.3 51-113	3.45	30	
Heptachlor Epoxide	0.203	0.05	ug/L	0.250		81.4 50-130	4.21	30	
Endosulfan I	0.229	0.05	ug/L	0.250		91.7 49-137	5.47	30	
4,4'-DDE	0.215	0.05	ug/L	0.250		85.9 55-123	7.69	30	
Dieldrin	0.230	0.05	ug/L	0.250		92.0 32-135	5.18	30	
Endrin	0.243	0.05	ug/L	0.250		97.1 18-171	6.19	30	
4,4'-DDD	0.223	0.05	ug/L	0.250		89.1 56-129	3.96	30	
Endosulfan II	0.232	0.05	ug/L	0.250		92.6 41-140	5.14	30	
4,4'-DDT	0.220	0.05	ug/L	0.250		88.2 52-143	4.65	30	
Endrin Aldehyde	0.219	0.05	ug/L	0.250		87.8 43-131	3.34	30	
Endosulfan Sulfate	0.228	0.05	ug/L	0.250		91.1 58-123	5.50	30	
Surrogate: Tetrachloro-m-xylene	0.391		ug/L	0.600		65.2 10-144			
Surrogate: Decachlorobiphenyl	0.0997		ug/L	0.600		16.6 10-148			
Reference (11D0354-SRM1)				Prepared: 04/08/25 10:51 Analyzed: 04/11/25 18:41					
Gamma-BHC [Lindane]	0.222	0.05	ug/L	0.250		88.7 80-120			
Beta-BHC	0.231	0.05	ug/L	0.250		92.4 80-120			
Heptachlor	0.237	0.05	ug/L	0.250		94.7 80-120			
Delta-BHC	0.225	0.05	ug/L	0.250		89.9 80-120			
Aldrin	0.235	0.05	ug/L	0.250		94.1 80-120			
Heptachlor Epoxide	0.216	0.05	ug/L	0.250		86.4 80-120			
Endosulfan I	0.241	0.05	ug/L	0.250		96.3 80-120			
4,4'-DDE	0.226	0.05	ug/L	0.250		90.4 80-120			
Dieldrin	0.235	0.05	ug/L	0.250		94.1 80-120			
Endrin	0.247	0.05	ug/L	0.250		98.9 80-120			
4,4'-DDD	0.234	0.05	ug/L	0.250		93.8 80-120			
Endosulfan II	0.244	0.05	ug/L	0.250		97.4 80-120			
4,4'-DDT	0.237	0.05	ug/L	0.250		95.0 80-120			
Endrin Aldehyde	0.257	0.05	ug/L	0.250		103 80-120			
Endosulfan Sulfate	0.238	0.05	ug/L	0.250		95.4 80-120			
Surrogate: Tetrachloro-m-xylene	0.508		ug/L	0.600		84.7 10-144			
Surrogate: Decachlorobiphenyl	0.511		ug/L	0.600		85.1 10-148			

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CERTIFICATE OF ANALYSIS

1ID0758

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0234 - General Prep Micro - SM 5210 B-2016									
Blank (1ID0234-BLK1)	Prepared: 04/04/25 15:44 Analyzed: 04/04/25 17:25								
BOD (5 day)	<2	2	mg/L						AC, K1
Duplicate (1ID0234-DUP1)	Source: 1ID0732-01 Prepared: 04/04/25 15:44 Analyzed: 04/04/25 17:44								
BOD (5 day)	68.5	24	mg/L		72.9		6.23	30	
Reference (1ID0234-SRM1)	Prepared: 04/04/25 15:44 Analyzed: 04/04/25 17:32								
BOD (5 day)	192	100	mg/L	198		96.8 84.6-115.4			
Batch 1ID0333 - Wet Chem Preparation - USGS I-1750-85									
Blank (1ID0333-BLK1)	Prepared: 04/08/25 07:42 Analyzed: 04/09/25 11:30								
Total Dissolved Solids (TDS)	<5	5	mg/L						
LCS (1ID0333-BS1)	Prepared: 04/08/25 07:42 Analyzed: 04/09/25 11:30								
Total Dissolved Solids (TDS)	97	5	mg/L	100		96.9 83-110			
Duplicate (1ID0333-DUP1)	Source: 1ID0783-01 Prepared: 04/08/25 07:42 Analyzed: 04/09/25 11:30								
Total Dissolved Solids (TDS)	1030	5	mg/L	1080			5.19	20	
Batch 1ID0343 - TOC/DOC - 5310B									
Blank (1ID0343-BLK1)	Prepared: 04/07/25 00:00 Analyzed: 04/07/25 10:58								
Total Organic Carbon	<0.50	0.50	mg/L						
LCS (1ID0343-BS1)	Prepared: 04/07/25 00:00 Analyzed: 04/07/25 10:28								
Total Organic Carbon	5.42	0.50	mg/L	5.00		108 89-116			
LCS Dup (1ID0343-BSD1)	Prepared: 04/07/25 00:00 Analyzed: 04/07/25 10:43								
Total Organic Carbon	5.30	0.50	mg/L	5.00		106 89-116	2.15	10	
Matrix Spike (1ID0343-MS1)	Source: 1ID0700-01 Prepared: 04/07/25 00:00 Analyzed: 04/07/25 18:15								
Total Organic Carbon	15.13	0.50	mg/L	5.00	10.04	102 50-133			
Matrix Spike Dup (1ID0343-MSD1)	Source: 1ID0700-01 Prepared: 04/07/25 00:00 Analyzed: 04/07/25 18:29								
Total Organic Carbon	15.03	0.50	mg/L	5.00	10.04	99.8 50-133	0.663	10	
Batch 1ID0369 - General Prep HPLC/IC - TIMBERLINE									
Blank (1ID0369-BLK1)	Prepared: 04/08/25 11:57 Analyzed: 04/08/25 13:30								
Nitrogen, Ammonia	<0.10	0.10	mg/L						
LCS (1ID0369-BS1)	Prepared: 04/08/25 11:57 Analyzed: 04/08/25 13:32								
Nitrogen, Ammonia	5.06	0.10	mg/L	5.00		101 90-114			
Matrix Spike (1ID0369-MS1)	Source: 1ID0719-02 Prepared: 04/08/25 11:57 Analyzed: 04/08/25 13:33								
Nitrogen, Ammonia	5.64	0.10	mg/L	5.00	0.140	110 84-115			
Matrix Spike Dup (1ID0369-MSD1)	Source: 1ID0719-02 Prepared: 04/08/25 11:57 Analyzed: 04/08/25 13:35								
Nitrogen, Ammonia	5.64	0.10	mg/L	5.00	0.140	110 84-115	0.0124	20	
Batch 1ID0388 - Wet Chem Preparation - USGS I-3765-85									



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CERTIFICATE OF ANALYSIS

1ID0758

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0388 - Wet Chem Preparation - USGS I-3765-85										
Blank (1ID0388-BLK1)				Prepared: 04/08/25 14:18 Analyzed: 04/09/25 10:51						
Total Suspended Solids (TSS)	<1	1	mg/L							
LCS (1ID0388-BS1)				Prepared: 04/08/25 14:18 Analyzed: 04/09/25 10:51						
Total Suspended Solids (TSS)	13.8	1	mg/L	15.0		92.0	73-110			
Duplicate (1ID0388-DUP1)				Source: 1ID0706-01 Prepared: 04/08/25 14:18 Analyzed: 04/09/25 10:51						
Total Suspended Solids (TSS)	151	8	mg/L		146			3.77	30	
Batch 1ID0643 - Wet Chem Preparation - SM 4500-H+ B-2011										
Duplicate (1ID0643-DUP1)				Source: 1ID0710-01 Prepared & Analyzed: 04/11/25 15:39						
pH	8.1	0.5	pH	8.1				0.0369	10	
Reference (1ID0643-SRM1)				Prepared & Analyzed: 04/11/25 15:39						
pH	7.0	0.5	pH	7.00		100	98.6-101.4			
Reference (1ID0643-SRM2)				Prepared & Analyzed: 04/11/25 15:39						
pH	7.0	0.5	pH	7.00		100	98.6-101.4			
Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID0497 - EPA 200.2 Total ICP-OES (200.7) - 200.7										
Blank (1ID0497-BLK1)				Prepared: 04/09/25 15:39 Analyzed: 04/12/25 00:14						
Iron, total	<0.100	0.100	mg/L							
LCS (1ID0497-BS1)				Prepared: 04/09/25 15:39 Analyzed: 04/12/25 00:20						
Iron, total	2.44	0.100	mg/L	2.20		111	85-115			
Matrix Spike (1ID0497-MS1)				Source: 1ID0673-01 Prepared: 04/09/25 15:39 Analyzed: 04/12/25 00:41						
Iron, total	4.34	0.100	mg/L	2.20	1.86	112	70-130			
Matrix Spike Dup (1ID0497-MSD1)				Source: 1ID0673-01 Prepared: 04/09/25 15:39 Analyzed: 04/12/25 01:04						
Iron, total	4.61	0.100	mg/L	2.20	1.86	125	70-130	6.01	20	
Post Spike (1ID0497-PS1)				Source: 1ID0673-01 Prepared: 04/09/25 15:39 Analyzed: 04/12/25 01:13						
Iron, total	11.0		mg/L	8.80	1.86	104	85-115			
Batch 1ID0783 - EPA 7470A Hg Water - 245.1										
Blank (1ID0783-BLK1)				Prepared: 04/15/25 13:11 Analyzed: 04/16/25 12:12						
Mercury, total	<0.00050	0.00050	mg/L							
LCS (1ID0783-BS1)				Prepared: 04/15/25 13:11 Analyzed: 04/16/25 12:14						
Mercury, total	0.00254	0.00050	mg/L	0.00250		101	85-115			
Matrix Spike (1ID0783-MS1)				Source: 1ID0700-01 Prepared: 04/15/25 13:11 Analyzed: 04/16/25 12:23						
Mercury, total	0.00262	0.00050	mg/L	0.00250	ND	105	70-130			
Matrix Spike Dup (1ID0783-MSD1)				Source: 1ID0700-01 Prepared: 04/15/25 13:11 Analyzed: 04/16/25 12:25						
Mercury, total	0.00271	0.00050	mg/L	0.00250	ND	108	70-130	3.29	10	



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CERTIFICATE OF ANALYSIS

1ID0758

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID1041 - EPA 200.2 Total ICP-MS - EPA 200.8, Rv. 5.4 (1994)										
Blank (1ID1041-BLK1)			Prepared: 04/18/25 16:07 Analyzed: 04/28/25 16:33							
Arsenic, total	<0.0200	0.0200	mg/L							ACa
Cadmium, total	<0.0004	0.0004	mg/L							ACa
Copper, total	<0.0020	0.0020	mg/L							ACa
Lead, total	<0.0010	0.0010	mg/L							ACa
Silver, total	<0.0020	0.0020	mg/L							ACa
Blank (1ID1041-BLK2)			Prepared: 04/18/25 16:07 Analyzed: 06/16/25 17:18							
Arsenic, total	<0.0010	0.0010	mg/L							
Barium, total	<0.0010	0.0010	mg/L							
Cadmium, total	<0.0002	0.0002	mg/L							
Chromium, total	<0.0020	0.0020	mg/L							
Copper, total	<0.0050	0.0050	mg/L							
Lead, total	<0.0005	0.0005	mg/L							
Nickel, total	<0.0020	0.0020	mg/L							
Selenium, total	<0.0020	0.0020	mg/L							
Silver, total	<0.0050	0.0050	mg/L							
Zinc, total	<0.0200	0.0200	mg/L							
LCS (1ID1041-BS1)			Prepared: 04/18/25 16:07 Analyzed: 04/28/25 16:33							
Arsenic, total	0.0982	0.0200	mg/L	0.100		98.2	85-115			ACa
Cadmium, total	0.103	0.0004	mg/L	0.100		103	85-115			ACa
Copper, total	0.105	0.0020	mg/L	0.100		105	85-115			ACa
Lead, total	0.105	0.0010	mg/L	0.100		105	85-115			ACa
Silver, total	0.107	0.0020	mg/L	0.100		107	85-115			ACa
LCS (1ID1041-BS2)			Prepared: 04/18/25 16:07 Analyzed: 06/16/25 17:21							
Arsenic, total	0.103	0.0010	mg/L	0.100		103	85-115			
Barium, total	0.119	0.0010	mg/L	0.100		119	85-115			Q1
Cadmium, total	0.105	0.0002	mg/L	0.100		105	85-115			
Chromium, total	0.110	0.0010	mg/L	0.100		110	85-115			
Copper, total	0.100	0.0050	mg/L	0.100		100	85-115			
Lead, total	0.102	0.0005	mg/L	0.100		102	85-115			
Nickel, total	0.101	0.0010	mg/L	0.100		101	85-115			
Selenium, total	0.103	0.0020	mg/L	0.100		103	85-115			
Silver, total	0.113	0.0050	mg/L	0.100		113	85-115			
Zinc, total	0.103	0.0200	mg/L	0.100		103	85-115			
Matrix Spike (1ID1041-MS1)			Source: 1ID0622-01	Prepared: 04/18/25 16:07 Analyzed: 04/28/25 16:33						
Arsenic, total	0.206	0.0200	mg/L	0.200	ND	103	70-130			ACa
Cadmium, total	0.201	0.0004	mg/L	0.200	ND	100	70-130			ACa
Copper, total	0.254	0.0020	mg/L	0.200	0.0598	97.2	70-130			ACa
Lead, total	0.202	0.0010	mg/L	0.200	0.0001	101	70-130			ACa
Silver, total	0.204	0.0020	mg/L	0.200	ND	102	70-130			ACa
Matrix Spike (1ID1041-MS2)			Source: 1ID0622-01	Prepared: 04/18/25 16:07 Analyzed: 06/16/25 17:25						
Arsenic, total	0.109	0.0005	mg/L	0.100	0.0009	108	70-130			
Barium, total	0.119	0.0005	mg/L	0.100	0.0034	116	70-130			

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1ID0758

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1ID1041 - EPA 200.2 Total ICP-MS - EPA 200.8, Rv. 5.4 (1994)										
Matrix Spike (1ID1041-MS2) Source: 1ID0622-01 Prepared: 04/18/25 16:07 Analyzed: 06/16/25 17:25										
Cadmium, total	0.102	0.0001	mg/L	0.100	ND	102	70-130			
Copper, total	0.128	0.0025	mg/L	0.100	0.0598	68.5	70-130			M2
Lead, total	0.0996	0.0002	mg/L	0.100	0.0001	99.4	70-130			
Selenium, total	0.0987	0.0010	mg/L	0.100	0.0008	97.9	70-130			
Silver, total	0.105	0.0025	mg/L	0.100	ND	105	70-130			
Matrix Spike Dup (1ID1041-MSD1) Source: 1ID0622-01 Prepared: 04/18/25 16:07 Analyzed: 04/28/25 16:33										
Arsenic, total	0.0996	0.0200	mg/L	0.100	ND	99.6	70-130	69.6	20	ACa, R1
Cadmium, total	0.0953	0.0004	mg/L	0.100	ND	95.3	70-130	71.3	20	ACa, R1
Copper, total	0.147	0.0020	mg/L	0.100	0.0598	87.4	70-130	53.3	20	ACa, R1
Lead, total	0.107	0.0010	mg/L	0.100	0.0001	107	70-130	61.1	20	ACa, R1
Silver, total	0.0948	0.0020	mg/L	0.100	ND	94.8	70-130	73.0	20	ACa, R1
Matrix Spike Dup (1ID1041-MSD2) Source: 1ID0622-01 Prepared: 04/18/25 16:07 Analyzed: 06/16/25 17:27										
Arsenic, total	0.103	0.0010	mg/L	0.100	0.0009	102	70-130	6.03	20	
Barium, total	0.121	0.0010	mg/L	0.100	0.0034	117	70-130	1.44	20	
Cadmium, total	0.102	0.0002	mg/L	0.100	ND	102	70-130	0.115	20	
Copper, total	0.156	0.0050	mg/L	0.100	0.0598	96.1	70-130	19.4	20	
Lead, total	0.0970	0.0005	mg/L	0.100	ND	97.0	70-130	2.65	20	
Selenium, total	0.101	0.0020	mg/L	0.100	ND	101	70-130	1.88	20	
Silver, total	0.108	0.0050	mg/L	0.100	ND	108	70-130	2.51	20	
Post Spike (1ID1041-PS1) Source: 1ID0622-01 Prepared: 04/18/25 16:07 Analyzed: 06/16/25 17:30										
Arsenic, total	0.0204		mg/L	0.0200	0.0009	97.8	70-130			
Barium, total	0.0234		mg/L	0.0200	0.0034	100	70-130			
Cadmium, total	0.0194		mg/L	0.0200	0.00001	96.8	70-130			
Copper, total	0.0795		mg/L	0.0200	0.0586	105	70-130			
Lead, total	0.0182		mg/L	0.0200	0.0001	90.5	70-130			
Selenium, total	0.0200		mg/L	0.0200	0.0008	95.9	70-130			
Silver, total	0.0196		mg/L	0.0200	0.0003	96.3	70-130			

Microbac Laboratories, Inc., Newton

600 East 17th Street South | Newton, IA 50208 | 641-792-8451 p | www.microbac.com



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1ID0758

Definitions

AC:	BOD blank = 0.40mg/L
ACa:	Sample was prepared and digested at Microbac Labs - Newton and analyzed by Iowa certified lab #396
H4:	The test was performed outside of the EPA recommended holding time of 15 minutes.
K1:	Unseeded dilution blank depletion exceeds 0.2 mg/L.
M2:	Matrix spike recovery is below acceptance limits.
Q1:	LCS recovery is above acceptance limits. The reported value is estimated.
Q2:	LCS recovery is above acceptance limits.
Q3:	LCS recovery is below acceptance limits. The reported value is estimated.
Q8:	CCV recovery is below acceptance limits. The reported value is estimated.
R1:	Duplicate RPD is outside acceptance criteria.
RL:	Reporting Limit
RPD:	Relative Percent Difference
S:	Spike recovery outside of acceptance limits.

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 2.1°C

Cooler Inspection Checklist

Custody Seals	No	Containers Intact	Yes
COC/Labels Agree	Yes	Preservation Confirmed	No
Received On Ice	Yes		

Report Comments

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. **The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.**

Reviewed and Approved By:

Heather Tisdale
Customer Relationship Specialist
06/19/25 08:43



600 East 17th Street South
Newton, IA 50208
641-792-8451

CHAIN OF CUSTODY RECORD



HLW Engineering
PM: Heather Murphy

Page 1 of
Printed: 3/24/2025 10:11:53A

www.keystonelabs.com

Page 27 of 27

SITE INFORMATION

Sampler: LGH
Project: Grundy Co. Landfill - Leachate
Leachate

REPORT TO

Todd Whipple
HLW Engineering
204 West Broad St
Story City, IA 50248

INVOICE TO

Environmental Manager
Grundy County Landfill
20434 220th Street
Grundy Center, IA 50638

SPECIAL INSTRUCTIONS

None

Turn Around Time

☒ Standard ☐ RUSH, need by ___/___/___

LAB USE ONLY

Work Order 1 ID 0758
Temperature 2.1
Turn-Cooler: No

☐ Custody Seal
☒ Containers Intact
☒ COC/Labels Agree
☐ Preservation Confirmed
☒ Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses		Lab Sample Number
-001	<u>LEACHATE</u>	Aqueous	GRAB	<u>4/3/25</u>	<u>10:20</u>	<u>12</u>	608-107	624@dibromochloromethane	<u>01</u>
							624-105	625-116	
							ag-t-200.8	as-t-200.8	
							ba-t-200.8	bod-5210	
							cd-t-200.8	cr-t-200.8	
							cu-t-200.8	fe-t-200.7	
							hg-t-245.1	mb3-timberline	
							ni-t-200.8	pb-t-200.8	
							ph-4500	se-t-200.8	
							tds-i-1750-85	toc-5310b	
							iss-i-3765-85	zu-t-200.8	

Relinquished By 5.078 Date/Time 4/4/25

Received By _____ Date/Time _____

Relinquished By _____ Date/Time _____

Received for Lab By Heather Date/Time 4/4/25 10:33

Original - Lab Copy Yellow - Sampler Copy

Remarks:

Appendix G.7 - Analytical Reports - Leachate Grab Samples

Water Analysis



Submitted By: EW50638702
GRUNDY CO LANDFILL
20434 220th St
Grundy Center, IA 50638

Laboratory Sample #
DD01788 - DD01790
3870-51 - 3870-53
Information Sheet #
WW0327-51

Date Received:
03/27/2025

Date Reported:
04/02/2025

IA Lab ID Number 061
EPA Lab ID Number 46

NPDES

Test Name (Contaminant ID)	Method	Results	Units	LOQ	Dilution Factor	Prep Date	Test Date	Analyst
Sample #: DD01788 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 03/26/2025 03:15 PM				Collection Point: Sample Date:		
Carb Biochem Oxygen Demand (5 day)	SM5210 B	13	mg/L	4 LOD	1	03/28/25	04/02/25	MEF
pH (1925)	EPA 150.1	6.98	S.U.	NA	NA	NA	03/27/25	MEF
Total Suspended Solids	USGS I 3765-85	56	mg/L	4.000	NA	NA	03/31/25	JSP
Sample #: DD01789 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 03/26/2025 03:15 PM				Collection Point: Sample Date:		
Ammonia (1003)	ATP Case No. N08-0004	118	mg/L	0.8290	5	NA	03/28/25 04:07PM	CB
Sample #: DD01790 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 03/26/2025 03:15 PM				Collection Point: Sample Date:		
Total Kjeldahl Nitrogen	SM4500NH3c/NorgC ATP Case No. N08-0004	114	mg/L	6.0745	5	NA	03/31/25	CB

Report Authorized by:

Life A. Johnson IV

Date: 04/02/2025

LOQ units are the same as Result units and are adjusted to reflect dilution.

LOQ = Limit of Quantitation

RL = Reporting Limit

NA = Not Applicable

DISCLAIMER: The results issued on this report only reflect the analysis of the sample(s) submitted at our lab and may not be construed as an endorsement of the sampling method employed. This report shall not be reproduced except in full, without written approval of the laboratory. The accuracy of these results are limited by the integrity of the sample and the accuracy of the test method. Reports are kept on file for five years.

Water Analysis



Submitted By: EW50638702
GRUNDY CO LANDFILL
20434 220th St
Grundy Center, IA 50638

Laboratory Sample #
DD99139 - DD99141
6870-60 - 6870-62
Information Sheet #
WW0508-60

Date Received:
05/08/2025

Date Reported:
05/16/2025

IA Lab ID Number 061
EPA Lab ID Number 46

NPDES

Test Name (Contaminant ID)	Method	Results	Units	LOQ	Dilution Factor	Prep Date	Test Date	Analyst
Sample #: DD99139 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 05/07/2025 01:50 PM		Collection Point: Sample Date:				
Carb Biochem Oxygen Demand (5 day)	SM5210 B	11	mg/L	4 LOD	1	05/08/25	05/13/25	MEF
pH (1925)	EPA 150.1	6.72	S.U.	NA	NA	NA	05/08/25	MEF/JSP
Total Suspended Solids	USGS I 3765-85	41	mg/L	4.000	NA	NA	05/13/25	JSP
Sample #: DD99140 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 05/07/2025 01:50 PM		Collection Point: Sample Date:				
Ammonia (1003)	ATP Case No. N08-0004	116	mg/L	0.8290	5	NA	05/13/25 06:03PM	CB
Sample #: DD99141 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 05/07/2025 01:50 PM		Collection Point: Sample Date:				
Total Kjeldahl Nitrogen	SM4500NH3c/NorgC ATP Case No. N08-0004	109	mg/L	6.0745	5	NA	05/15/25	CB

Report Authorized by:

Life A. Johnson IV

Date: 05/16/2025

LOQ units are the same as Result units and are adjusted to reflect dilution.

LOQ = Limit of Quantitation

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NA = Not Applicable

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Water Analysis



Submitted By: EW50638702
GRUNDY CO LANDFILL
20434 220th St
Grundy Center, IA 50638

Laboratory Sample #
DE75578 - DE75580
9270-25 - 9270-27
Information Sheet #
WW0612-25

Date Received:
06/12/2025

Date Reported:
06/19/2025

IA Lab ID Number 061
EPA Lab ID Number 46

NPDES

Test Name (Contaminant ID)	Method	Results	Units	LOQ	Dilution Factor	Prep Date	Test Date	Analyst
Sample #: DE75578 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 06/11/2025 03:15 PM				Collection Point: Sample Date:		
Carb Biochem Oxygen Demand (5 day)	SM5210 B	16	mg/L	4 LOD	1	06/12/25	06/17/25	MEF
pH (1925)	EPA 150.1	6.86	S.U.	NA	NA	NA	06/12/25	MEF
Total Suspended Solids	USGS I 3765-85	60	mg/L	4.000	NA	NA	06/16/25	JSP
Sample #: DE75579 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 06/11/2025 03:15 PM				Collection Point: Sample Date:		
Ammonia (1003)	ATP Case No. N08-0004	165	mg/L	1.6580	10	NA	06/19/25 01:59PM	CB
Sample #: DE75580 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 06/11/2025 03:15 PM				Collection Point: Sample Date:		
Total Kjeldahl Nitrogen	SM4500NH3c/NorgC ATP Case No. N08-0004	162	mg/L	12	10	NA	06/16/25	CB

Report Authorized by:

Life A. Johnson IV

Date: 06/19/2025

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NA = Not Applicable

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Water Analysis



Submitted By: EW50638702

GRUNDY CO LANDFILL

20434 220th St

Grundy Center, IA 50638

Laboratory Sample #

DF31216 - DF31218

1770-71 - 1770-73

Information Sheet #

WW0717-71

Date Received:

07/17/2025

Date Reported:

07/25/2025

IA Lab ID Number 061

EPA Lab ID Number 46

NPDES

Test Name (Contaminant ID)	Method	Results	Units	LOQ	Dilution Factor	Prep Date	Test Date	Analyst
Sample #: DF31216 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 07/16/2025 03:15 PM				Collection Point: Sample Date:		
Carb Biochem Oxygen Demand (5 day)	SM5210 B	24	mg/L	4 LOD	1	07/17/25	07/22/25	MEF
pH (1925)	EPA 150.1	6.66	S.U.	NA	NA	NA	07/17/25	JSP
Total Suspended Solids	USGS I 3765-85	49	mg/L	4.000	NA	NA	07/21/25	JSP
Sample #: DF31217 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 07/16/2025 03:15 PM				Collection Point: Sample Date:		
Ammonia (1003)	ATP Case No. N08-0004	155	mg/L	1.6580	10	NA	07/18/25 11:52AM	CB
Sample #: DF31218 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 07/16/2025 03:15 PM				Collection Point: Sample Date:		
Total Kjeldahl Nitrogen	SM4500NH3c/NorgC ATP Case No. N08-0004	158	mg/L	12	10	NA	07/24/25	CB

Report Authorized by:

Life A. Johnson IV

Date: 07/25/2025

LOQ units are the same as Result units and are adjusted to reflect dilution.

LOQ = Limit of Quantitation

RL = Reporting Limit

NA = Not Applicable

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Page 1 of 1

Water Analysis



Submitted By: EW50638702

GRUNDY CO LANDFILL

20434 220th St

Grundy Center, IA 50638

Laboratory Sample #

DF61033 - DF61035

4270-58 - 4270-60

Information Sheet #

WW0821-58

Date Received:

08/21/2025

Date Reported:

09/03/2025

IA Lab ID Number 061

EPA Lab ID Number 46

NPDES

Test Name (Contaminant ID)	Method	Results	Units	LOQ	Dilution Factor	Prep Date	Test Date	Analyst
Sample #: DF61033 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 08/20/2025 02:00 PM				Collection Point: Sample Date:		
Carb Biochem Oxygen Demand (5 day)	SM5210 B	14	mg/L	4 LOD	1	08/21/25	08/26/25	MEF
pH (1925)	EPA 150.1	6.89	S.U.	NA	NA	NA	08/21/25	MEF
Total Suspended Solids	USGS I 3765-85	38	mg/L	4.000	NA	NA	08/25/25	MEF
Sample #: DF61034 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 08/20/2025 02:00 PM				Collection Point: Sample Date:		
Ammonia (1003)	ATP Case No. N08-0004	123	mg/L	5.5660	10	NA	08/25/25 03:06PM	CB
Sample #: DF61035 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 08/20/2025 02:00 PM				Collection Point: Sample Date:		
Total Kjeldahl Nitrogen	SM4500NH3c/NorgC ATP Case No. N08-0004	106	mg/L	7.3600	5	NA	08/29/25	CB

Report Authorized by:

Life A. Johnson IV

Date: 09/03/2025

LOQ units are the same as Result units and are adjusted to reflect dilution.

LOQ = Limit of Quantitation

RL = Reporting Limit

NA = Not Applicable

DISCLAIMER: The results issued on this report only reflect the analysis of the sample(s) submitted at our lab and may not be construed as an endorsement of the sampling method employed. This report shall not be reproduced except in full, without written approval of the laboratory. The accuracy of these results are limited by the integrity of the sample and the accuracy of the test method. Reports are kept on file for five years.

Page 1 of 1

Water Analysis



Submitted By: EW50638702

GRUNDY CO LANDFILL

20434 220th St

Grundy Center, IA 50638

Laboratory Sample #

DF81770 - DF81772

5671-02 - 5671-04

Information Sheet #

WW0911-102

Date Received:

09/11/2025

Date Reported:

09/18/2025

IA Lab ID Number 061

EPA Lab ID Number 46

NPDES

Test Name (Contaminant ID)	Method	Results	Units	LOQ	Dilution Factor	Prep Date	Test Date	Analyst
Sample #: DF81770 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 09/11/2025 03:30 PM				Collection Point: Sample Date:		
Biochemical Oxygen Demand (5 day)	SM5210 B	29	mg/L	4 LOD	1	09/12/25	09/17/25	MEF
Total Suspended Solids	USGS I 3765-85	34	mg/L	4.000	NA	NA	09/15/25	JSP
Sample #: DF81771 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 09/11/2025 03:30 PM				Collection Point: Sample Date:		
Ammonia (1003)	ATP Case No. N08-0004	133	mg/L	5.5660	10	NA	09/12/25 12:32PM	CB
Sample #: DF81772 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 09/11/2025 03:30 PM				Collection Point: Sample Date:		
Total Kjeldahl Nitrogen	SM4500NH3c/NorgC ATP Case No. N08-0004	120	mg/L	7.3600	5	NA	09/17/25	CB

Report Authorized by:

Life A. Johnson IV

Date: 09/18/2025

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NA = Not Applicable

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Water Analysis



Submitted By: EW50638702
GRUNDY CO LANDFILL
20434 220th St
Grundy Center, IA 50638

Laboratory Sample #
DG80683 - DG80685
8270-80 - 8270-82
Information Sheet #
WW1016-80

Date Received:
10/16/2025

Date Reported:
10/28/2025

IA Lab ID Number 061
EPA Lab ID Number 46

NPDES

Test Name (Contaminant ID)	Method	Results	Units	LOQ	Dilution Factor	Prep Date	Test Date	Analyst
Sample #: DG80683 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 10/16/2025 08:30 AM				Collection Point: Sample Date:		
Biochemical Oxygen Demand (5 day)	SM5210 B	25	mg/L	4 LOD	1	10/17/25	10/22/25	MEF
Total Suspended Solids	USGS I 3765-85	42	mg/L	4.000	NA	NA	10/20/25	JSP
Sample #: DG80684 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 10/16/2025 08:30 AM				Collection Point: Sample Date:		
Ammonia (1003)	ATP Case No. N08-0004	174	mg/L	5.5660	10	NA	10/17/25 11:03AM	CB
Sample #: DG80685 Type: GRAB Collector: CHAD BROWN		Sample Location: COLLECTION TANK Date/Time Collected: 10/16/2025 08:30 AM				Collection Point: Sample Date:		
Total Kjeldahl Nitrogen	SM4500NH3c/NorgC ATP Case No. N08-0004	166	mg/L	15	10	NA	10/23/25	CB

Report Authorized by:

Life A. Johnson IV

Date: 10/28/2025

LOQ units are the same as Result units and are adjusted to reflect dilution.

LOQ = Limit of Quantitation
RL = Reporting Limit
NA = Not Applicable

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11I0423

Project Description

Leachate

For:

Todd Whipple

HLW Engineering

204 West Broad St

Story City, IA 50248

Heather Murphy

Customer Relationship Specialist

Tuesday, September 16, 2025

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc., Newton. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

Microbac Laboratories, Inc.

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11I0423

HLW Engineering

Todd Whipple
204 West Broad St
Story City, IA 50248

Project Name: Leachate

Project / PO Number: N/A
Received: 09/04/2025
Reported: 09/16/2025

Sample Summary Report

<u>Sample Name</u>	<u>Laboratory ID</u>	<u>Client Matrix</u>	<u>Sample Type</u>	<u>Sample Begin</u>	<u>Sample Taken</u>	<u>Lab Received</u>
Grundy Leachate Tank	11I0423-01	Aqueous	GRAB		09/03/25 09:15	09/04/25 12:15



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11I0423

Analytical Testing Parameters

Client Sample ID:	Grundy Leachate Tank	Collected By:	Brown, Chad
Sample Matrix:	Aqueous	Collection Date:	09/03/2025 9:15
Lab Sample ID:	11I0423-01		

Determination of Total Metals	Result	RL	Units	Note	Prepared	Analyzed	Analyst
200.7							
Potassium, total	85.8	1.00	mg/L		09/05/25 1612	09/09/25 0454	JAR
245.1							
Mercury, total	<0.00050	0.00050	mg/L		09/04/25 1548	09/05/25 1339	JAR
EPA 200.8, Rv. 5.4 (1994)							
Cadmium, total	<0.0002	0.0002	mg/L		09/04/25 1552	09/05/25 1842	RVV
Chromium, total	0.0047	0.0010	mg/L		09/04/25 1552	09/05/25 1842	RVV
Copper, total	<0.0050	0.0050	mg/L		09/11/25 1524	09/12/25 1921	JAR
Lead, total	0.0029	0.0005	mg/L		09/04/25 1552	09/05/25 1842	RVV
Molybdenum, total	0.0012	0.0010	mg/L		09/04/25 1552	09/05/25 1842	RVV
Nickel, total	0.0330	0.0020	mg/L		09/04/25 1552	09/05/25 1842	RVV
Selenium, total	<0.0020	0.0020	mg/L		09/04/25 1552	09/05/25 1842	RVV
Silver, total	<0.0050	0.0050	mg/L		09/04/25 1552	09/05/25 1842	RVV
Zinc, total	<0.0200	0.0200	mg/L		09/04/25 1552	09/05/25 1842	RVV



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11I0423

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
245.1	11I0269	11I0269-BLK1	
		11I0269-BS1	
		11I0269-MS1	11H2761-01
		11I0269-MSD1	11H2761-01
		11I0423-01	Grundy Leachate Tank
Method	Batch	Laboratory ID	Client / Source ID
EPA 200.8, Rv. 5.4 (1994)	11I0273	11I0273-BLK1	
		11I0273-BS1	
		11I0273-MS1	11I0317-01
		11I0273-MSD1	11I0317-01
		11I0273-PS1	11I0317-01
		11I0423-01	Grundy Leachate Tank
Method	Batch	Laboratory ID	Client / Source ID
200.7	11I0358	11I0358-BLK1	
		11I0358-BS1	
		11I0358-MS1	11I0286-01
		11I0358-MSD1	11I0286-01
		11I0358-PS1	11I0286-01
		11I0423-01	Grundy Leachate Tank
Method	Batch	Laboratory ID	Client / Source ID
EPA 200.8, Rv. 5.4 (1994)	11I0676	11I0676-BLK1	
		11I0676-BS1	
		11I0676-MS1	11I0317-01RE1
		11I0676-MSD1	11I0317-01RE1
		11I0676-PS1	11I0317-01RE1
		11I0423-01RE1	Grundy Leachate Tank

Batch Quality Control Summary: Microbac Laboratories, Inc., Newton

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11I0269 - EPA 7470A Hg Water - 245.1										
Blank (11I0269-BLK1)				Prepared: 09/04/25 15:48 Analyzed: 09/05/25 13:19						
Mercury, total	<0.00050	0.00050	mg/L							
LCS (11I0269-BS1)				Prepared: 09/04/25 15:48 Analyzed: 09/05/25 13:21						
Mercury, total	0.00253	0.00050	mg/L	0.00250		101	85-115			
Matrix Spike (11I0269-MS1)				Source: 11H2761-01 Prepared: 09/04/25 15:48 Analyzed: 09/05/25 13:30						
Mercury, total	0.00251	0.00050	mg/L	0.00250	ND	100	70-130			



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

11I0423

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11I0269 - EPA 7470A Hg Water - 245.1										
Matrix Spike Dup (11I0269-MSD1)		Source: 11H2761-01		Prepared: 09/04/25 15:48 Analyzed: 09/05/25 13:32						
Mercury, total	0.00246	0.00050	mg/L	0.00250	ND	98.4	70-130	2.01	10	
Batch 11I0273 - EPA 200.2 Total ICP-MS - EPA 200.8, Rv. 5.4 (1994)										
Blank (11I0273-BLK1)		Prepared: 09/04/25 15:52 Analyzed: 09/05/25 17:52								
Cadmium, total	<0.0002	0.0002	mg/L							
Chromium, total	<0.0010	0.0010	mg/L							
Copper, total	<0.0050	0.0050	mg/L							
Lead, total	<0.0005	0.0005	mg/L							
Molybdenum, total	<0.0010	0.0010	mg/L							
Nickel, total	<0.0020	0.0020	mg/L							
Selenium, total	<0.0020	0.0020	mg/L							
Silver, total	<0.0050	0.0050	mg/L							
Zinc, total	<0.0200	0.0200	mg/L							
LCS (11I0273-BS1)		Prepared: 09/04/25 15:52 Analyzed: 09/05/25 17:55								
Cadmium, total	0.107	0.0002	mg/L	0.100		107	85-115			
Chromium, total	0.115	0.0010	mg/L	0.100		115	85-115			
Copper, total	0.115	0.0050	mg/L	0.100		115	85-115			
Lead, total	0.108	0.0005	mg/L	0.100		108	85-115			
Molybdenum, total	0.105	0.0010	mg/L	0.100		105	85-115			
Nickel, total	0.106	0.0020	mg/L	0.100		106	85-115			
Selenium, total	0.106	0.0020	mg/L	0.100		106	85-115			
Silver, total	0.107	0.0050	mg/L	0.100		107	85-115			
Zinc, total	0.114	0.0200	mg/L	0.100		114	85-115			
Matrix Spike (11I0273-MS1)		Source: 11I0317-01		Prepared: 09/04/25 15:52 Analyzed: 09/05/25 17:59						
Cadmium, total	0.107	0.0002	mg/L	0.100	ND	107	70-130			
Chromium, total	0.125	0.0010	mg/L	0.100	0.0127	113	70-130			
Copper, total	0.168	0.0050	mg/L	0.100	0.163	5.02	70-130			M2
Lead, total	0.111	0.0005	mg/L	0.100	0.0010	110	70-130			
Molybdenum, total	0.118	0.0010	mg/L	0.100	0.0037	114	70-130			
Nickel, total	0.116	0.0020	mg/L	0.100	0.0112	105	70-130			
Selenium, total	0.108	0.0020	mg/L	0.100	0.0040	104	70-130			
Silver, total	0.107	0.0050	mg/L	0.100	ND	107	70-130			
Zinc, total	0.137	0.0200	mg/L	0.100	0.0292	108	70-130			
Matrix Spike Dup (11I0273-MSD1)		Source: 11I0317-01		Prepared: 09/04/25 15:52 Analyzed: 09/05/25 18:07						
Cadmium, total	0.108	0.0002	mg/L	0.100	ND	108	70-130	1.04	20	
Chromium, total	0.127	0.0010	mg/L	0.100	0.0127	114	70-130	1.43	20	
Copper, total	0.256	0.0050	mg/L	0.100	0.163	93.2	70-130	41.6	20	R1
Lead, total	0.111	0.0005	mg/L	0.100	0.0010	110	70-130	0.403	20	
Molybdenum, total	0.118	0.0010	mg/L	0.100	0.0037	114	70-130	0.0246	20	
Nickel, total	0.116	0.0020	mg/L	0.100	0.0112	105	70-130	0.357	20	
Selenium, total	0.106	0.0020	mg/L	0.100	0.0040	102	70-130	1.45	20	
Silver, total	0.108	0.0050	mg/L	0.100	ND	108	70-130	0.326	20	
Zinc, total	0.143	0.0200	mg/L	0.100	0.0292	114	70-130	4.15	20	

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CERTIFICATE OF ANALYSIS

11I0423

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 11I0273 - EPA 200.2 Total ICP-MS - EPA 200.8, Rv. 5.4 (1994)										
Post Spike (11I0273-PS1)	Source: 11I0317-01		Prepared: 09/04/25 15:52 Analyzed: 09/05/25 18:09							
Cadmium, total	0.0211		mg/L	0.0200	0.00006	105	70-130			
Chromium, total	0.0335		mg/L	0.0200	0.0127	104	70-130			
Copper, total	0.177		mg/L	0.0200	0.163	70.4	70-130			
Lead, total	0.0215		mg/L	0.0200	0.0010	102	70-130			
Molybdenum, total	0.0258		mg/L	0.0200	0.0037	110	70-130			
Nickel, total	0.0315		mg/L	0.0200	0.0112	102	70-130			
Selenium, total	0.0237		mg/L	0.0200	0.0040	98.5	70-130			
Silver, total	0.0207		mg/L	0.0200	0.0002	103	70-130			
Zinc, total	0.0487		mg/L	0.0200	0.0292	97.5	70-130			
Batch 11I0358 - EPA 200.2 Total ICP-OES (200.7) - 200.7										
Blank (11I0358-BLK1)	Prepared: 09/05/25 16:12 Analyzed: 09/09/25 03:39									
Potassium, total	<1.00	1.00	mg/L							B
LCS (11I0358-BS1)	Prepared: 09/05/25 16:12 Analyzed: 09/09/25 03:47									
Potassium, total	4.21	1.00	mg/L	4.00		105	85-115			
Matrix Spike (11I0358-MS1)	Source: 11I0286-01 Prepared: 09/05/25 16:12 Analyzed: 09/09/25 04:10									
Potassium, total	20.9	1.00	mg/L	4.00	16.8	102	70-130			
Matrix Spike Dup (11I0358-MSD1)	Source: 11I0286-01 Prepared: 09/05/25 16:12 Analyzed: 09/09/25 04:16									
Potassium, total	21.9	1.00	mg/L	4.00	16.8	128	70-130	4.78	20	
Post Spike (11I0358-PS1)	Source: 11I0286-01 Prepared: 09/05/25 16:12 Analyzed: 09/09/25 04:22									
Potassium, total	33.0		mg/L	16.0	16.8	101	85-115			
Batch 11I0676 - EPA 200.2 Total ICP-MS - EPA 200.8, Rv. 5.4 (1994)										
Blank (11I0676-BLK1)	Prepared: 09/11/25 15:24 Analyzed: 09/12/25 18:51									
Copper, total	<0.0050	0.0050	mg/L							
LCS (11I0676-BS1)	Prepared: 09/11/25 15:24 Analyzed: 09/12/25 18:53									
Copper, total	0.0971	0.0050	mg/L	0.100		97.1	85-115			
Matrix Spike (11I0676-MS1)	Source: 11I0317-01RE1 Prepared: 09/11/25 15:24 Analyzed: 09/12/25 18:58									
Copper, total	0.0993	0.0050	mg/L	0.100	0.0021	99.3	70-130			
Matrix Spike Dup (11I0676-MSD1)	Source: 11I0317-01RE1 Prepared: 09/11/25 15:24 Analyzed: 09/12/25 19:01									
Copper, total	0.103	0.0050	mg/L	0.100	0.0021	103	70-130	3.55	20	
Post Spike (11I0676-PS1)	Source: 11I0317-01RE1 Prepared: 09/11/25 15:24 Analyzed: 09/12/25 19:03									
Copper, total	0.0210		mg/L	0.0200	0.0020	94.7	70-130			

Definitions

B:	The target analyte was detected in the blank at or above the method acceptance criteria.
M2:	Matrix spike recovery is below acceptance limits.
R1:	Duplicate RPD is outside acceptance criteria.
RL:	Reporting Limit
RPD:	Relative Percent Difference



Microbac Laboratories, Inc., Newton
CERTIFICATE OF ANALYSIS
11I0423

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 2.1°C

Cooler Inspection Checklist

Custody Seals	No	Containers Intact	Yes
COC/Labels Agree	Yes	Preservation Confirmed	No
Received On Ice	Yes		

Report Comments

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.

Reviewed and Approved By:

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09/16/25 16:58

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PAGE 1 OF 1

Page 8 of 8

PRINT OR TYPE INFORMATION BELOW

SAMPLER: ~~FORD WHITE~~ CHAD BROWN
SITE NAME: Grundy Co SLF
ADDRESS: _____
CITY/ST/ZIP: Grunway Center, IA
PHONE: _____

REPORT TO:

NAME: TODD WHIPPLE
COMPANY NAME: HLW Group LLC
ADDRESS: P.O Box 314
CITY/ST/ZIP: STORY City, IA 50248
PHONE: 515-733-4144
FAX: -4146

BILL TO:

NAME: Kevin Nederhott, Secretary
COMPANY NAME: Grundy County Landfill Comm.
ADDRESS: 20434 220th Street
CITY/ST/ZIP: ~~P.O. Box 336~~
PHONE: Grundy Center, IA 50638

Keystone Quote No: _____

[illegible]

Relinquished by: (Signature)

Date	9/3/25
Time	0930

Received by: (Signature)

Received for Lab by (Signature)
Sandra L. Vetterback
9/3/25 10086

Date 9/3/25
Time 0930

Turn-Around:

 Standard

 Rush

Contact Lab Prior to Submission

Relinquished by: (Signature)

Date 9/7/25
Time 1008

Received for Lab by (Signature)

Date
Time

Remarks:

marks: Received by Amy Hochstetler
9/4/25 12:15 2.1 ice ✓

Original - Lab Copy

- Yellow - Sampler Copy

FORM: CCR 7-97

Appendix H

Gas Monitoring Report

Gas Monitoring Report

A request was filed with IDNR on August 17, 2022 (Doc #103858) to reduce the frequency of gas monitoring to semi-annually at subsurface gas probes GP-1 through GP-8 and at the Equipment Building and the Recycling Building. Approval was received from IDNR on January 23, 2023 (Doc #105563).

Explosive gas monitoring was performed semi-annually at the facility in 2025. Figure 1 illustrates the locations of the subsurface gas monitoring points.

Explosive gas concentrations were undetected or below regulatory action levels during the 2025 monitoring episodes. Summary tables of gas monitoring are included in Appendix H.1.

Appendix H.1- Gas Monitoring Data

**Annual Methane Gas Evaluation Report
Grundy County Sanitary Landfill
2025**

Location/Date	4/3/25	10/9/25
	% LEL	% LEL
Ambient Air - Breathing Zone		
#1*	0	0
#2*	0	0
#3*	0	0
#4*	0	0
#5*	0	0
#6*	0	0
#7*	0	0
Equipment Bldg	0	0
Recycle Bldg	0	0
Subsurface		
GP-1	0	0
GP-2	0	0
GP-3 (MW-16)	0	0
GP-4 (MW-14)	0	0
GP-5 (MW-13)	0	0
GP-6 (MW-17)	0	0
GP-7 (MW-18)	0	0
GP-8 (MW-19)	0	0

*Explosive gas concentrations were recorded continuously.
The concentrations are reported at each referenced location for ease in presentation of data.

Frequency of gas monitoring changed to semi-annually in the Revised Closure Permit dated January 23, 2023